

# LH 2.4 EZK CONV: Volvo 240 Turbo or Non-Turbo to LH 2.4, EZK 116, Hi or Lo Injectors

**EZK Circuits  
are in BLUE**

18: 1-Pole Coolant  
Temp Sender

16: 2-Pole Female  
Cold Start Injector

12: 2-Pole Female  
LH Coolant Temp  
Sensor

21: 8-Pole Female  
OBD

20: to  
Starter

15: Ground  
Rings

11: 8-Pole  
Female  
Firewall Plug

19: 2-Pole Female  
Idle Valve

17: 2-Pole Female  
Knock Sensor

23: 1-Pole  
Coil  
Connections

10: 3-Pole Female  
Crank Position  
Sensor

14: 2-Pole Female  
Fuel Injectors

13: 3-Pole Female  
TPS Plug

27: 6-Pole plug for  
Optional Fuel  
Injector Ballast  
Resistor

24: LH Fuse  
Battery Power

25: Alternator  
Connections

9a, 9b: O2  
Sensor Plugs

26: Oil Pressure Sender  
with Adapter.  
Plus Green Wire.

6a, 6b: 2-Pole  
and 8-Pole Plug

Firewall  
Grommet

1: 35-Pole Female  
LH ECU Plug

22: 7-Pole Female  
Ignition Powerstage  
Plug

2a, 2b:  
Loop Plugs

3: Plug #3  
Not Present

5: Plug #5  
Not Present

4: 6-Pole Female  
Fuel Pump Relay  
Plug

7: 25-Pole Female  
EZK ICU Plug

8: 6-Pole Female MAF.  
For Turbo or non-turbo.  
Length: 50".



**Volvo Conversion Harness for 240 Turbo or Non-Turbo.**  
**Conversion to LH 2.4, EZK 116,**  
**with optional use of High or Low Impedance Fuel Injectors.**  
**Circuits related to the EZK system are in BLUE text.**

### Understanding Diagram Wire Locations in These Pages

You will see information such as shown below for each connector in this harness. In the event that you need to know where any wire goes, this will explain how to read it these diagrams.

8



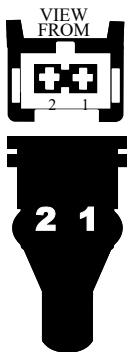
The number at left is a CONNECTOR NUMBER.  
You will see numbers like this for each connector listed.

#### The below example shows a plug with two wires.

The #1 **Black** wire shows **13**, which means the OTHER end on this wire goes to Connector 13 (which is a Ground Ring).

The #2 **Blue** wire shows **1/2**, which means the OTHER end of this wire goes to Connector 1, Position 2. Connector #1 is the ECU, so this circuit goes to ECU Pin 2.

8



#### Wire Colors:

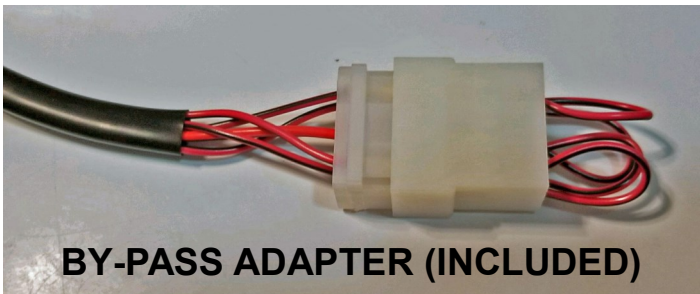
- |          |     |                 |
|----------|-----|-----------------|
| 1. Black | 13  | to ground ring. |
| 2. Blue  | 1/2 | to ECU pin 2.   |

### RESISTOR PACK PLUG

This harness is equipped with the below CONNECTOR and BY-PASS ADAPTER shown in these diagrams as Connector #27 (6-pole plug).

With no changes and with by-pass plug in place, this harness will support  
High Impedance Injectors.

If you decide to use Low Impedance Injectors, you must unplug the by-pass adapter and instead plug in any standard **Volvo 740 Turbo fuel injector Ballast Resistor Pack**. Using low impedance injectors with an LH 2.4 ECU **without this resistor pack can damage your ECU.**



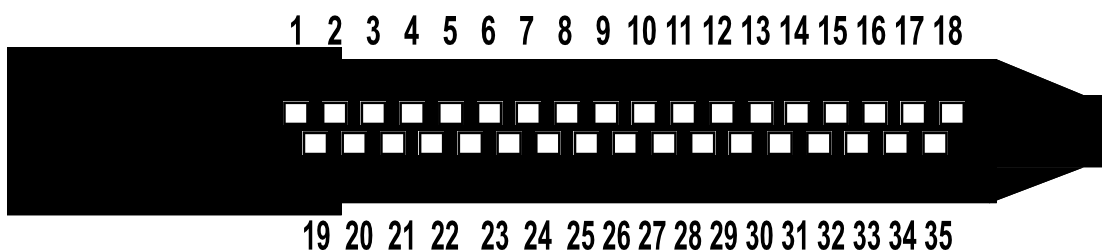
**BY-PASS ADAPTER (INCLUDED)**



**RESISTOR PACK  
(Not Included)**

1

## 35-Pole White Fuel Injection ECU Connector — Under Dash



**VIEW FROM FRONT FACE— USE POLE NUMBER MARKINGS ON PLUG**

WIRE COLOR	DESTINATION	DESTINATION DESCRIPTION	ECU FUNCTION
1. Brown:	to 7/17	ICU pin 17.	Engine speed signal input from ICU.
2. Yell/White:	to 7/7, 13/1	ICU pin 7, TPS pin 1.	Input signal from TPS when throttle is closed (idle).
3. Blk/White:	to 13/3	TPS pin 3.	Input signal from TPS for full throttle. Not used on B230FT (SEE NOTE BELOW).
4. Red (2 wires):	to 4/3, 7/5, 20	Fuel Relay pin 3, ICU pin 5, LH 25A fuse.	12v power constant (terminal 30).
5. Blk/Brown:	to 2a2	2-pole loop 2a2.	
6. Black:		Shield for 1/24 Green.	Ground for shield (Oxygen Sensor).
7. Grn/Yell:	to 8/2	MAF pin 2.	Ground for MAF.
8. Red/Wht:	to 8/3	MAF pin 3.	Input signal from MAF.
9. White:	to 8/4	MAF pin 4.	Control signal to MAF for burn off.
10. Blk/Red (2 wires):	to 4/1, 4/6	Fuel Relay pin 1, pin 6.	12v power supply from relay pin 1.
11. Empty			
12. Blk/Green:	to 21/2	8-pole OBD pin 2.	Diagnostic signal lead.
13. Blue/Red:	to 12/2	Temp Sens pin 2.	Input signal from Coolant Temp Sensor (ECT).
14. Green:	to 6A2	White 8-pole plug.	Input signal from AC (compressor on).
15. Red/Gray:	to 6A1	White 8-pole plug.	Input signal from AC (AC starting).
16. Empty			
17. Black:	to 15c	Ground Ring c.	Ground.
18. Green/Wht:	to 14/2	Fuel Inj pin 2.	Control signal for fuel injectors.
19. Blk/Brn:	to 2b1	2-pole loop 2b1.	Ground
20. Blue/Green:	to 4/2	Fuel Relay pin 2.	Control signal to fuel pump relay function.
21. Blk/Yell:	to 4/4	Fuel Relay pin 4.	Control signal to main fuel relay function.
22. Pink/Wht:	to 6B6	White 8-pole plug.	Signal to Check Engine Light (CEL).
23. Empty			
24. Green (shielded):	to 9a	Oxygen Sensor.	Input from Oxygen Sensor.
25. Brn/Yell:	to 7/8	ICU pin 8.	MAF load signal output to ICU.
26. Violet:	to 6B5	White 8-pole plug.	Shift up output signal (manual).
27. Empty			
28. Brown/Wht:	to 7/4	ICU pin 4.	Input signal from ICU (Knock Sensor).
29. Black:	to 2a1	2-pole loop 2a1.	Ground.
30. Pink:	to 6B7	White 8-pole plug.	Input signal from Park-Neutral Position (PNP) Switch (auto trans) for use with idle control.
31. Empty			
32. Black/Wht:	to 16/2	Cold Start Inj pin 2.	Control signal output to Cold Start Valve.
33. Green/Red:	to 19/2	Idle Valve pin 2.	Control signal output to Idle Valve.
34. Black/Blue:	to 6B4	White 8-pole plug.	Input VSS signal from speedometer.
35. Blue:	to 6B1, 7/6	White 2-pole plug, ICU pin 6.	12v power switched (terminal 15).

**PIN 3 NOTE:** If you're using a Turbo ECU see **Diagram 13 Throttle Position Sensor** for needed modification.

**2a**

**2-Pole Female 6.3 mm plug with Male Loop Connector.**

Near ECU Under Right Side Dash



**WIRE COLORS**

1. Black: to 1/29 ECU pin 29.
2. Blk/Brn (2 wires): to 1/5, 2b2 ECU pin 5, 2-pole loop 2b2.

**2b**

**2-Pole Female 6.3 mm plug with Male Loop Connector.**

Near ECU Under Right Side Dash



**WIRE COLORS**

1. Blk/Brn: to 1/19 ECU pin 19.
2. Blk/Brn(2 wires): to 2a2, 15b 2-pole loop 2a2, Ground Ring b.

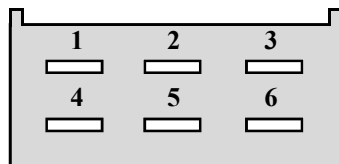
**3**

**Connector Not Present**

4

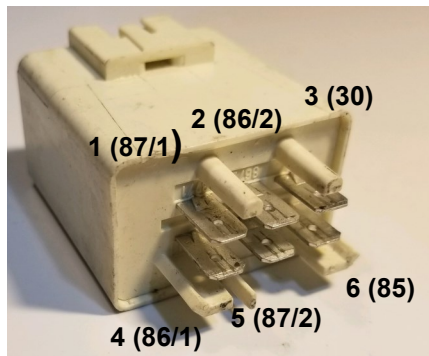
## 6-Pole Female 6.3 mm Fuel Relay Connector.

Under Passenger Dash



VIEW FROM REAR OF PLUG

<<< Connector for white FUEL PUMP RELAY PN 3523608.



RELAY PIN	WIRE COLOR	DESTINATION	DESTINATION DESCRIPTION
1. 87/1	Blk/Red(fat):	to 1/9, 4/6, 8/5	ECU pin 9, Relay pin 6, MAF pin 5.
2. 86/2	Blue/Grn:	to 1/20	ECU pin 20 (control signal output).
3. 30	Red (fat):	to 1/4, 7/5, 23	ECU pin 4, <b>ICU pin 5</b> , (power input from LH Fuse).
4. 86/1	Blk/Yell:	to 1/21	ECU pin 21 (control signal output).
5. 87/2	Red/Yell(2 wires):	to 6B2, 9b1	Output to white 8-pole plug pin B2, O2 Plug pin b1.
6. 85	Blk/Red(fat):	to 1/9, 4/1, 27/A2	ECU pin 9, Relay pin 1, Injector Ballast Resistor plug pin A2.

**NOTE: Pin 3 is main voltage from battery via the LH fuse.  
Pin 5 is output power to fuel pumps via white 8-pole plug, pin B2.**

5

Connector Not Present

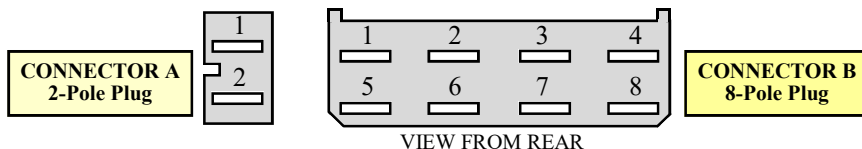
6

## White 2-Pole Female Plug with 6.3 mm Terminals.

These are wires that need to be connected from this conversion harness to various locations under your dash.

Plug A

Connector A (2-pole) **on this page** is only relevant to air conditioning if you have it.  
Connector B (8-pole) on next page is relevant to all other connections.



### HARNESS CONNECTIONS PLUG A (Origin)

A1. Red/Gray: from 1/15 ECU pin 15.

A2. Green: from 1/14 ECU pin 14.

### CAR CONNECTIONS (Destination)

This wire brings input to your ECU **from the AC relay** pin D+/61 or AC control switch (Red/Gray). It allows the ECU to compensate the idle speed when AC is activated.

This wire brings input to your ECU from the AC compressor. It tells the ECU that your AC compressor is engaged. It's used to keep the idle speed stable when compressor starts.

6

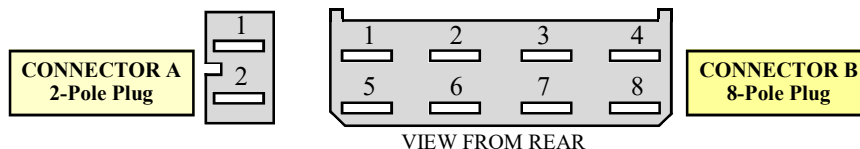
## Plug B

### White 8-Pole Female Plug with 6.3 mm Terminals.

These are wires that need to be connected from this conversion harness to various locations under your dash.

Connector A (2-pole) on previous page is only relevant to air conditioning if you have it.

Connector B (8-pole) **on this page** is relevant to all other connections.



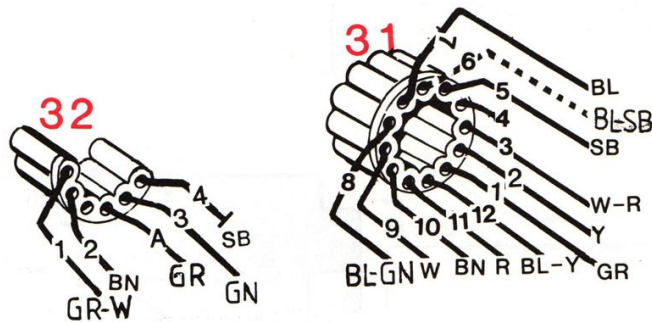
#### HARNESS CONNECTIONS PLUG B (Origin)

#### CAR CONNECTIONS (Destination)

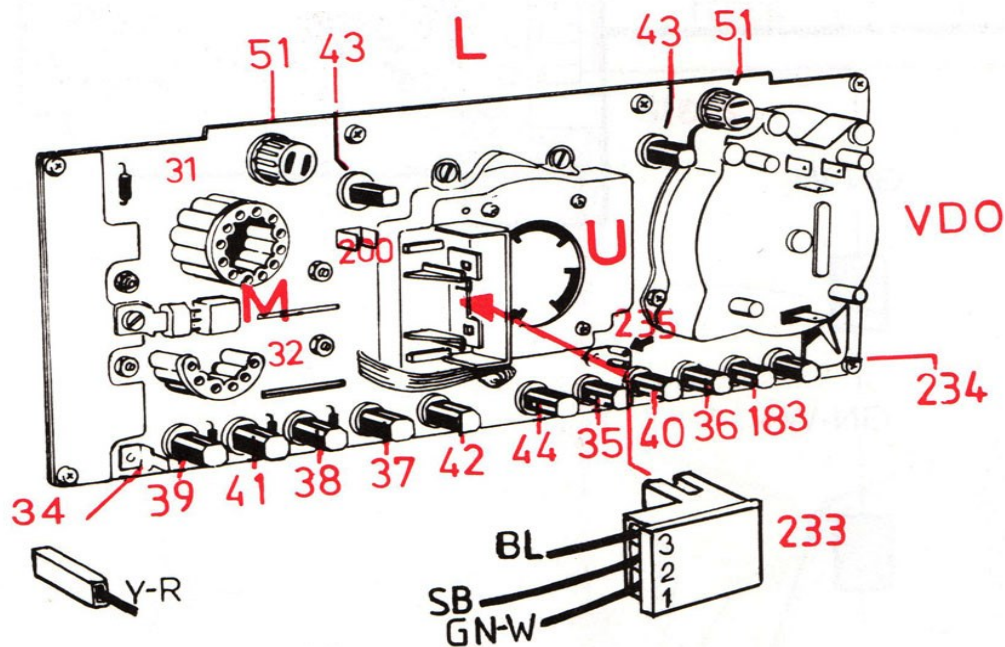
B1. Blue:	from 7/6, 1/35	ICU pin 6, ECU pin 35.	Connect this to <b>switched power</b> from ignition switch Terminal 15 (or any 12v circuit "ON" with Ignition Switch in the "RUN" position). This source may usually be tapped from the input of fuse 11, 12 or 13 for a late 240 (or fuse 3, 4 or 5 for 1978 and older 240). <b>This circuit may be combined with wire B3 Blue.</b> Ensure the 12v connection used also remains "ON" when the key is turned to the "CRANK" position.
B2. Red/Yell (fat):	from 4/5	Fuel Relay pin 5.	This is the output from the Fuel Pump Relay to supply power to the fuel pumps. This wire should be connected at the fuse panel to the INPUT side of the fuse for the fuel pump power. You can choose from the following fuses: 1979 -84: Fuse 5. 1985 and later: Fuse 4. For pre-1979, you can choose any fuse that is not currently being used, such as fuse 10, or install an in-line fuse and then connect to pumps.
B3. Blue (fat):	from 23b	Coil +.	Connect this to <b>switched power</b> from ignition switch Terminal 15 (any 12v circuit "ON" with Ignition Switch in the "RUN" position). This source may usually be tapped from the input of fuse 11, 12 or 13 (or fuse 3, 4 or 5 for 1978 and older 240). <b>This circuit may be combined with wire B1 Blue.</b> Ensure the 12v connection used also remains "ON" when the key is turned to the "CRANK" position.
B4. Blk/Blue:	from 1/34	ECU pin 34.	Connect to pulse signal from LH 2.4 speedometer pin 31/6 (in round plug). This signal is produced by an LH 2.4 compatible speedo that is connected to the differential VSS. <b>See NEXT DIAGRAM for pin 31/6 on cluster.</b>
B5. Violet:	from 1/26	ECU pin 26.	May be connected for Shift Light for a manual transmission car. To pin 34 of LH 2.4 compatible instrument cluster. <b>See NEXT DIAGRAM for pin 34 on cluster.</b>
B6. Pink/Wht (2 wires):	from 1/22, 7/3	ECU pin 22, ICU pin 3.	Check engine light (CEL). Connect to pin 32/3 or pin 235 of an LH 2.4 compatible instrument cluster. <b>See NEXT DIAGRAM for these instrument cluster pins.</b>
B7. Pink:	from 1/30	ECU pin 30.	Supplies LH ECU pin 30 with momentary power when starter is engaged for idle enhancement. If used, connect this wire to starter solenoid circuit. The starter solenoid circuit is normally the Blue/Yellow wire in the under dash multi-pin plug or 8-pole firewall plug.
B8 Red/White	from 22/1	Ign Powerstage pin 1.	Output to tachometer lead if needed for your tach or any other device. You may connect this wire to your tach input spade shown in the next diagram. <b>See NEXT DIAGRAM for tach spade connection.</b>



**Notes for pins B4, B5 and B6 from previous page. Locations of instrument cluster pins.**



Some wires and wire colors changed year to year. See my Gauge Electrical Page at:  
[www.240turbo.com/240gaugewiring.html](http://www.240turbo.com/240gaugewiring.html).

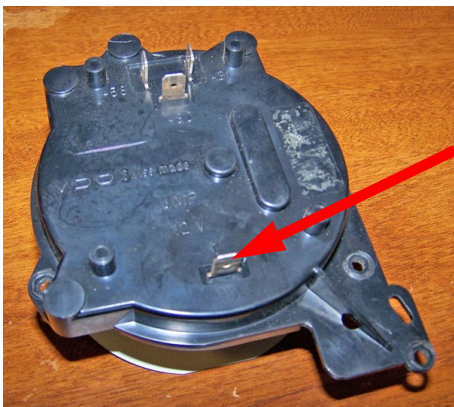


**Notes for Check Engine Light (CEL).** It has been found that some EARLY LH 2.4 instrument clusters used pin 32/3 for the CEL (for USA and Canada 240s) and pin 235 for Non-USA cars. Some early USA/CAN LH 2.4 clusters have been found to NOT have a pin 235.

Later LH 2.4 clusters changed pin 32/3 to an ABS lamp, so in those clusters the CEL was connected through pin 235.

**If you're using an earlier (pre-1989) instrument cluster,** you can connect the CEL circuit to any unused warning lamp you wish to use, such as a Lambda Sond lamp, EGR lamp or Choke lamp. For detailed information about 240 instrument cluster pinouts I have created a **240 Gauge Electrical Page** at:

[www.240turbo.com/240gaugewiring.html](http://www.240turbo.com/240gaugewiring.html).



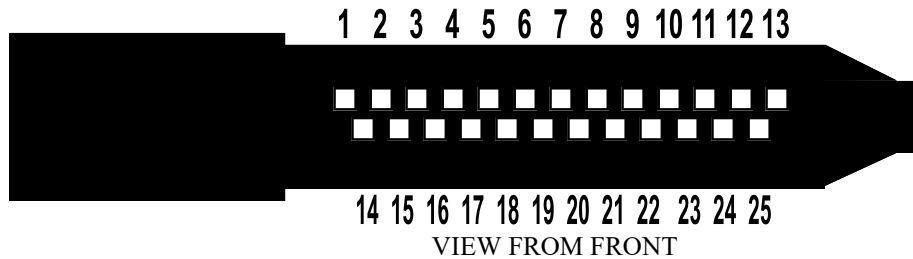
**Notes for pin B8 Red/White tach wire from previous page.**

<<< Back of tachometer.

**Red/White wire connects here.** Don't goof and connect this Red/White wire anywhere else or you risk damage to your ignition control unit. If your tach has **two spades at the bottom here**, you may connect to either one.

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### 25-Pole Ignition Control Unit (ICU) Connector



**VIEW FROM FRONT FACE— USE POLE NUMBER MARKINGS ON PLUG**

WIRE COLOR	DESTINATION	DESTINATION DESCRIPTION	ICU FUNCTION
1. White:	to 21/6	8-pole OBD pin 6.	Signal output to diagnostic socket.
2. Blue/Red:	to 12/1	Temp Sens pin 1.	Signal input from Coolant Temp. (CLT).
3. Pink/Wht:	to 1/22, 6B6	ECU pin 22, White 8-pole plug pin B6.	Signal to Check Engine Light (CEL).
4. Brown/Wht:	to 1/28	ECU pin 28.	Knock Sensor output to ECU.
5. Red:	to 1/4, 4/3, 20	ECU pin 4, Relay pin 3, LH fuse.	12v power constant (terminal 30).
6. Blue(2 wires):	to 1/35, 6B1	ECU pin 35, White 2-pole plug pin B1.	12v switched (terminal 15).
7. Yell/White (2 wires):	to 1/2, 13/1	ECU pin 2, TPS pin 1.	Input signal from TPS when throttle is closed (idle).
8. Brn/Yell:	to 1/25	ECU pin 25.	Load signal input from MAF via ECU.
9. Empty			
10. Blue (shielded):	to 10/1	Crank Pos Sens pin 1.	Input from Crank Position Sens (CPS).
11. Blk (shield for 10 & 23):	to 10/3	Crank Pos Sens pin 3.	Shield for CPS (both wires).
12. Blk (shield for 13):	to 17/2	Knock Sens pin 2.	Shield for Knock Sensor.
13. Green (shielded):	to 17/1	Knock Sens pin 1.	Input signal from Knock Sensor.
14. Empty (relevant to EGR Ground)			
15. Empty (relevant to EGR Control)			
16. Gray (shielded):	to 22/5	Ign Powerstage pin 5, (Shield is at Diag. 22/3)	Ignition pulse output to Powerstage.
17. Brown:	to 1/1	ECU pin 1.	Engine speed signal output to ECU.
18. Empty			
19. Empty			
20. Blk/Brown:	to 15b	Ground Ring b.	Ground for ICU.
21. Empty			
22. Empty (relevant to EGR Temp Sensor)			
23. Red (shielded):	to 10/2	Crank Pos Sens pin 2.	Input from Crank Position Sens (CPS).
24. Empty			
25. Empty			

8

### 6-Pole Female Mass Air Flow (MAF) Sensor EFI Connector. 50" lead from firewall junction for reach to Turbo or non-turbo position.



#### WIRE COLORS:

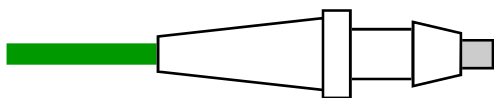
1. Blk/Brn:	to 15a	Ground Ring a
2. Green/Yell:	to 1/6	ECU pin 6.
3. Red/Wht:	to 1/7	ECU pin 7.
4. White:	to 1/8	ECU pin 8.
5. Blk/Red:	to 4/1	Fuel Relay pin 1.
6. empty		

\*\*Number markings embossed on plug.  
Peel back rubber boot to see.



9a

### 1-Pole Male Oxygen Sensor Connector.



Green (shielded): to 1/24 ECU pin 24.

9b

### 2-Pole Female EFI Connector. For Oxygen Sensor Heater Circuit



Wire Colors:

- |                      |             |   |
|----------------------|-------------|---|
| 1. Red/Yellow (fat): | to 6b2, 4/5 | Multi-pin plug, Fuel Relay pin 5 (12v). |
| 2. Black:            | to 15a      | Ground Ring a.                          |

10

### 3-Pole Female EFI Connector. Crank Position Sensor.



WIRE COLORS\*

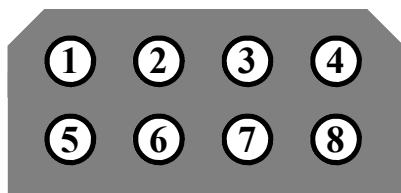
- |           |                            |             |
|-----------|----------------------------|-------------|
| 1. Blue:  | to 7/10 (shielded wire)    | ICU pin 10. |
| 2. Red:   | to 7/23 (shielded wire)    | ICU pin 23. |
| 3. Black: | to 7/11 (shield for above) | ICU pin 11. |

Blue/Yell and Red/Yell are shielded pair with Black connected to the shield.

11

## 8-Pole Female BULLET Connector.

LEFT (driver side) Firewall



VIEW FROM REAR

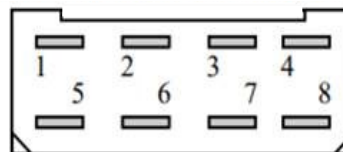
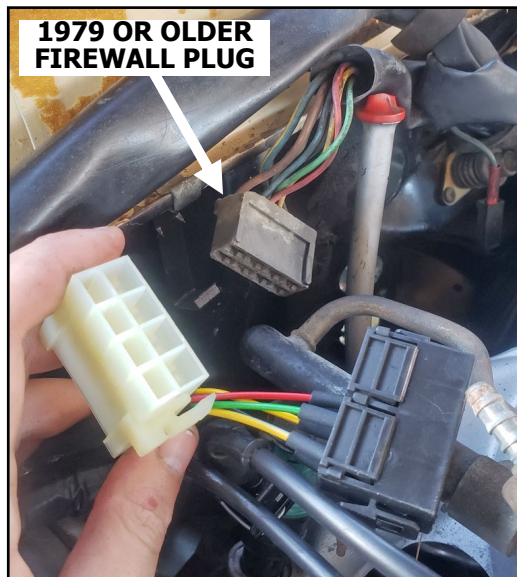
### WIRE COLORS:

1. Black:	to 26a	Oil Press Sender.
2. Yellow:	to 18	Coolant Temp Sender.
3. Red:	to 25b	Alternator D+.
4. empty		
5. Blue/Yellow:	to 20b	Starter Solenoid.
6. Green:	to 26b	Oil Press Sender #2 - see note.
7. empty		
8. empty		

**GREEN WIRE NOTE:** The GREEN wire in pin 6 is not normally found in a 240 LH 2.4 engine harness. It has been added to this harness for the convenience of a 240 Turbo owner or other 240 model that will use this green wire for a 2-pole oil pressure sender (type for use with separate oil pressure gauge). Some non-turbo 240s may have a different color wire in pin 6 going through the firewall. If you are adding new wiring an oil pressure gauge, it will be important to make sure this wire goes to the oil pressure gauge pin "G" (a 240 Turbo will already be wired for this gauge).

**CAUTION:** If you have a 240 non-turbo you may find an already existing GREEN wire in your 8-pole firewall plug. That GREEN wire may be the wire Volvo used for an optional engine compartment light. In this case, that wire goes to the fuse panel and is connected to power. DO NOT use this circuit for the oil pressure sender. If needed, you may remove this bullet from the 8-pole plugs and reconnect outside the plug housings if you plan to continue using the light.

## INFORMATION FOR 1979 OR OLDER 240.



VIEW FROM REAR

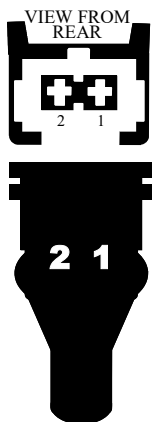
### Typical WIRE COLORS for 1979 or older Firewall Plug:

1. Black:	Oil Pressure Sender.
2. Yellow:	Coolant Temp Sender.
3. Red:	Alternator D+.
4. Empty (or White):	If White is present, it may be ignored (K-Jet).
5. Blue/Yellow:	Starter Solenoid.
6. Empty (or Green):	See Green Wire Note above.
7. Blue/Red:	K-Jet function. May be ignored.
8. Brown:	Early ignition function. May be ignored.

The above wire color information will help you to match the wires in the conversion harness. You have the choice of keeping the older spade type 8-pole firewall plug, but if you do, you will need to cut off and replace the plug on the conversion harness.

The (female) plug on the conversion harness is the newer style SEALED bullet connector that Volvo began using for all 1980 and later 240s. It's a better connector due to being water resistant. If you will be using it, the you'll need to cut off and replace the older 8-pole plug on the firewall with a matching (male) 8-pole bullet plug. This newer style plug and the wire pigtail inserts are available separately.

12



### 2-Pole Female EFI Connector. Coolant Temperature Sensor

Wire Colors:

- |              |         |             |
|--------------|---------|-------------|
| 1. Blue/Red: | to 7/2  | ICU pin 2.  |
| 2. Blue/Red: | to 1/13 | ECU pin 13. |

13



### 3-Pole Female EFI Connector. Throttle Position Sensor (TPS)

WIRE COLORS

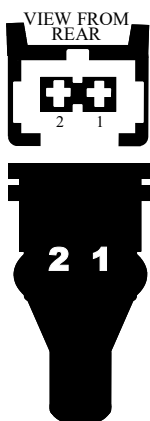
- |                |             |  |
|----------------|-------------|--|
| 1. Yell/White: | to 7/7, 1/2 | ICU pin 7, ECU pin 2 (idle signal).    |
| 2. Black:      | to 15c      | Ground Ring c.                         |
| 3. Blk/White:  | to 1/3      | ECU pin 3 (WOT). <b>SEE NOTE BELOW</b> |

**PIN 3 NOTE:** Pin 3 Blk/White wire above goes to ECU pin 3. It's a Wide Open Throttle (WOT) signal used for the B230F only. This circuit is NOT used in a TURBO ECU. So if you're using a TURBO ECU, it is advisable to cut or disconnect this Blk/White wire.

\*\*Number markings on plug

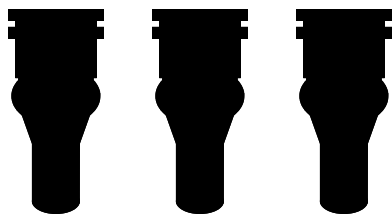
**NOTE: BLUE TAPE**

14



WIRE COLORS

- |               |                              |   |
|---------------|------------------------------|---|
| 1. Blk/Red:   | to 19/1, 27/A1, A3, A4 or A6 | Idle Valve pin 1, Injector Ballast Resistor Plug pins A1, A3, A4 or A6. |
| 2. Grn/White: | to 1/18                      | ECU pin 18 (control signal from ECU).                                   |



All four injector connectors are wired the same. The leads are different lengths so they may be routed for best fit.

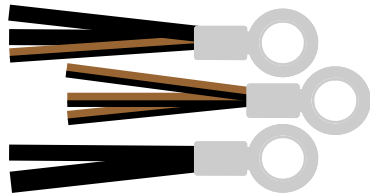


15

a, b, c

## Two or Three Ground Rings.

Bolted to Intake Manifold



### WIRE COLORS

15a. Blk/Brn, Black(2 wires): to 8/1, 9b2, **22/2**

MAF pin 1, O2 Sens 9 pin b2,  
**Ign Powerstage pin 2.**

15b. Blk/Brn (3 wires): to 2b2, **7/20**, 21/8

2-pole loop 2 pin b2, **ICU pin 20**,  
8-pole OBD pin 8.

15c. Black (thin): thin to 13/2  
Black (fat): fat to 1/17

TPS pin 2.  
ECU pin 17.

16



## 2-Pole Female EFI Connector. Cold Start Injector. BLUE TAPE

This Injector is Optional. It came on 700 Turbo versions. It was not present on 240 models, but it may be used if you're using a Turbo ECU.

1. Blk/Red: to 27/A2
2. Blk/White: to 1/32

Fuel Inj Ballast Resistor Plug pin A2.  
ECU pin 32 (control signal).

NOTE: Blk/Red wire for this connector is joined to four Blk/Red Fuel Injectors through the ballast resistor plug (Connector 27).

17



## 2-Pole Female EFI Connector. Ignition Knock Sensor.

Knock sensor needs to be Bosch style.

1. Green: to 7/13 (shielded wire) ICU pin 13.
2. Black: to 7/12 (shield for above) ICU pin 12.

18

## 6.3 mm Female Terminal with Insulator.

Coolant Temperature Sender (dash temp. gauge) located on left side of head  
240 style 1-wire Coolant Sender is required.



Yellow: to 11/2

8-pole black gray firewall plug pin 2.

19



### 2-Pole Female EFI Connector. Idle Valve. LH 2.4 compatible type.

1. Blk/Red: to 4/6, 27/A2 Fuel Relay pin 6, Fuel Inj. Ballast Resistor Plug pin A2.
2. Green/Red: to 1/33 ECU pin 33 (control signal).

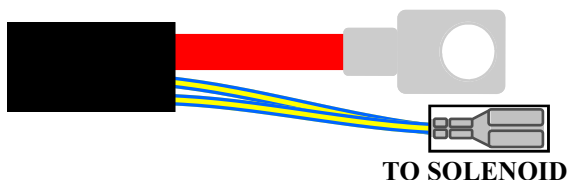
\*\*Number markings on plug  
are under rubber boot.

NOTE: Blk/Red wire for this Idle Valve is joined to four Blk/Red Fuel Injectors through the ballast resistor plug (Connector 27).

20

a, b

### STARTER MOTOR CONNECTIONS



Wire Colors:

- 20a. Red fat cable: to 25a Alternator B+.
- 20b. Blue/Yell: to 11/5 8-pole black firewall plug pin 5.

FENDER

20a. LARGE CABLE  
STUD

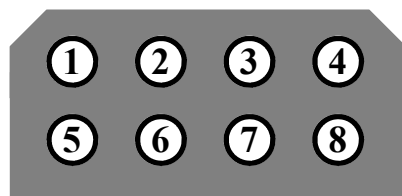
NOT USED

20b. SOLENOID

VIEW FRONT OF STARTER

21

### 8-Pole Female Bullet Connector. For On Board Diagnostic (OBD).



VIEW FROM REAR

WIRE COLORS:

1. Empty
2. Blk/Green: to 1/12 ECU pin 12.
3. Empty
4. Blue: to 7/6 **ICU pin 6.**
5. Empty
6. White: to 7/1 **ICU pin 1.**
7. Empty
8. Blk/Brown: to 15b Ground Ring b.

**22****7-Pole Female EFI Connector. Ignition Power Stage.**

Left front fender. The lead for this connector has been made long enough to place the Power Stage in the factory 240 location at the front left. It is generally thought that Volvo placed it there for best cooling.



- |                         |                  |   |
|-------------------------|------------------|---|
| 1. Red/White (2 wires): | to 6b8, 23a      | White 8-pole plug pin b8, Ign Coil Neg.       |
| 2. Black:               | to 15a           | Ground Ring a.                                |
| 3. Gray (Shield)        |                  | Shield ground for 22/5 below.                 |
| 4. Blue (fat):          | to 6B3, 7/6, 23b | Multi-pin plug, ICU pin 6, Ign Coil Positive. |
| 5. Gray (shielded):     | to 7/16          | ICU pin 16.                                   |
| 6. Empty                |                  |   |
| 7. Empty                |                  |   |

\*\*Number markings embossed on plug are under rubber boot.

**23****6.3 mm Female Terminals with Insulators. EZK Connections to Coil.**

Red/White connects to Coil terminal 1 (Neg). Blue connects to Coil terminal 15 (Pos).

a, b



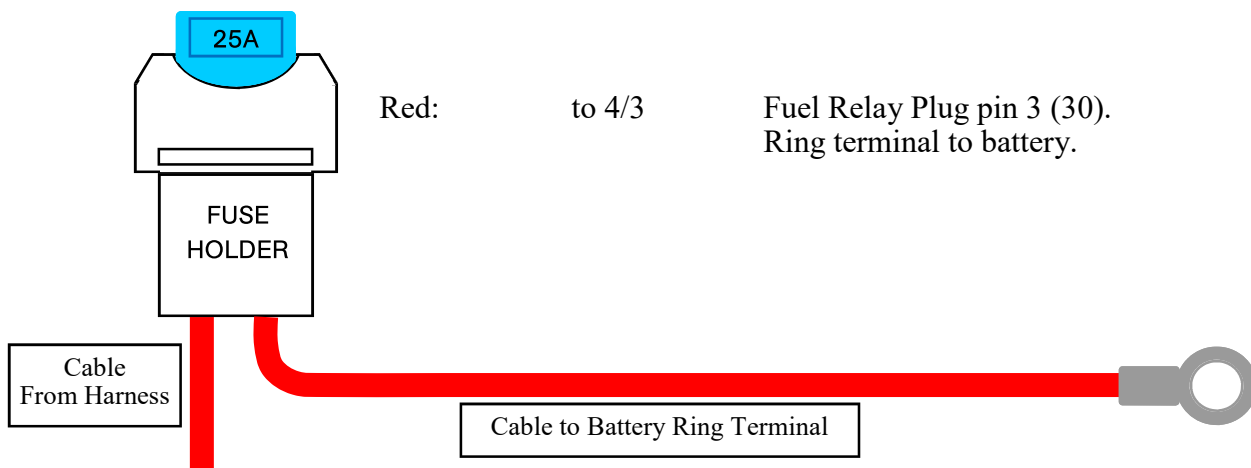
a. Red/White: to 22/1 Ign Power Stage pin 1.



b. Blue: to 6B3, 22/4 Multi-pin plug, Power Stage pin 4.

**24****Red Cable to White Fuse Holder and Cable to Battery Ring Terminal.**

Left Fender Near Ignition Coil





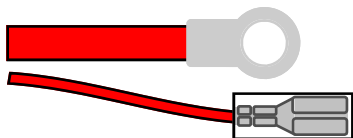
25

a, b

### Alternator Connections.

Heavy Red cable (B+).

Red wire (D+) 6.3 mm terminal with insulator.



- |                    |         |                                  |
|--------------------|---------|----------------------------------|
| a. (B+) Red Cable: | to 20a  | Starter.                         |
| b. (D+) Red:       | to 11/3 | 8-pole firewall connector pin 3. |

26

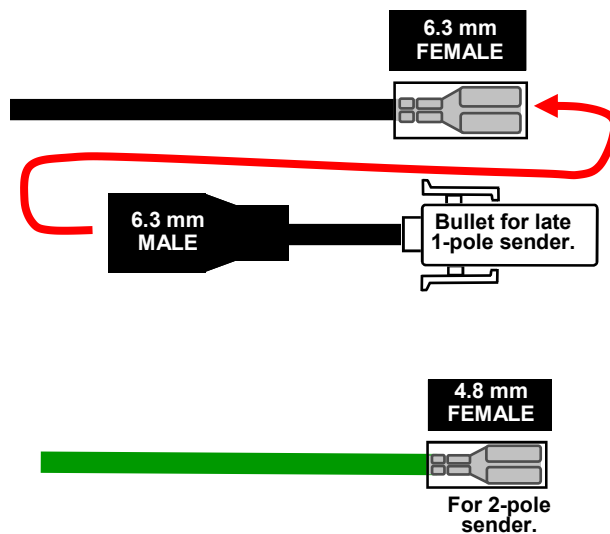
### Oil Pressure Sender (OPS)

Also see NOTE about OPS wires in Diagram 11.

**26a: (Black wire) 6.3 mm FEMALE terminal.** Used by itself only with early style 1-pole oil pressure sender that has a flat spade. Also used for a 2-pole oil pressure sender (accessory OP gauge) in conjunction with the below green wire.

**Short adapter: (Black wire)** This is a 6.3 mm MALE terminal with a FEMALE BULLET plug on other end. This adapter is plugged into the above black wire and used for a LATER style 1-pole oil pressure sender using a bullet connector.

**26b: (Green wire) 4.8 mm FEMALE terminal.** Used only with a 2-pole oil pressure sender for an accessory oil pressure gauge.



#### WIRE COLORS:

26a. Black: to 11/1 8-pole black firewall plug pin 1.

26b. Green: to 11/6 8-pole black firewall plug pin 6.

27

## 6-Pole Female Connector For RESISTOR PACK PLUG

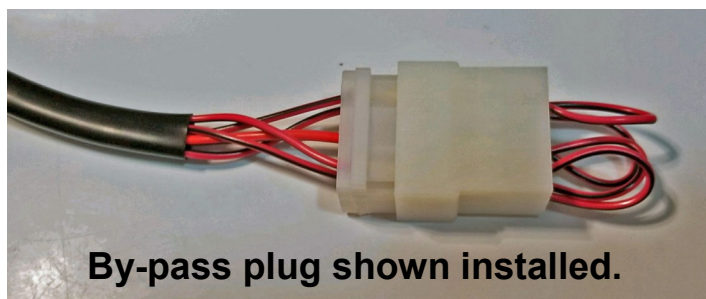
This harness is equipped with the below CONNECTOR and included BY-PASS ADAPTER.

Using the by-pass adapter this harness will support **High Impedance Injectors**.

If you decide to use **Low Impedance Injectors**, you must unplug the by-pass adapter and instead plug in any standard **Volvo 740 Turbo fuel injector Ballast Resistor Pack**.

### CAUTION:

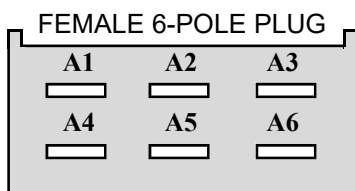
Using low impedance injectors **WITHOUT** a ballast resistor pack can **DAMAGE** your LH 2.4 ECU.



By-pass plug shown installed.



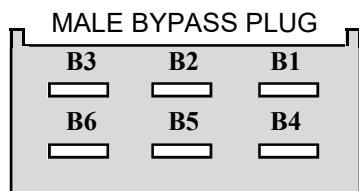
RESISTOR PACK for low impedance injectors (not included)



VIEW FROM REAR OF PLUG

### 6-POLE PLUG WIRE CONNECTIONS:

Pin A1: BLK-RED	to 14/1	Fuel Injector plug pin 1.
Pin A2: BLK-RED (fat)	to 4/1, 4/6	Fuel Relay plug pins 1 & 6 (12v source).
Pin A3: BLK-RED	to 14/1	Fuel Injector plug pin 1.
Pin A4: BLK-RED	to 14/1	Fuel Injector plug pin 1.
Pin A5: empty		
Pin A6: BLK-RED	to 14/1	Fuel Injector plug pin 1.



VIEW FROM REAR OF PLUG

**6-Pole MALE Connector BYPASS Plug.**  
This bypass plug should be in place when **HIGH Impedance Injectors** are to be installed.



### BYPASS PLUG WIRE CONNECTIONS:

Pin B1: BLK-RED	to pin 2, 4
Pin B2: BLK-RED	to pin 1, 3, 4, 6
Pin B3: BLK-RED	to pin 2, 6
Pin B4: BLK-RED	to pin 1, 2
Pin B5: empty	
Pin B6: BLK-RED	to pin 2, 3