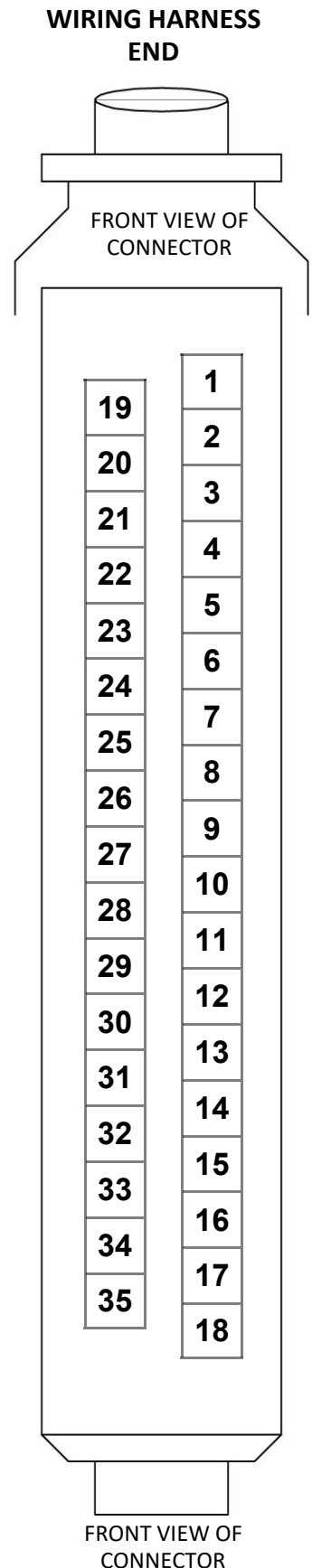


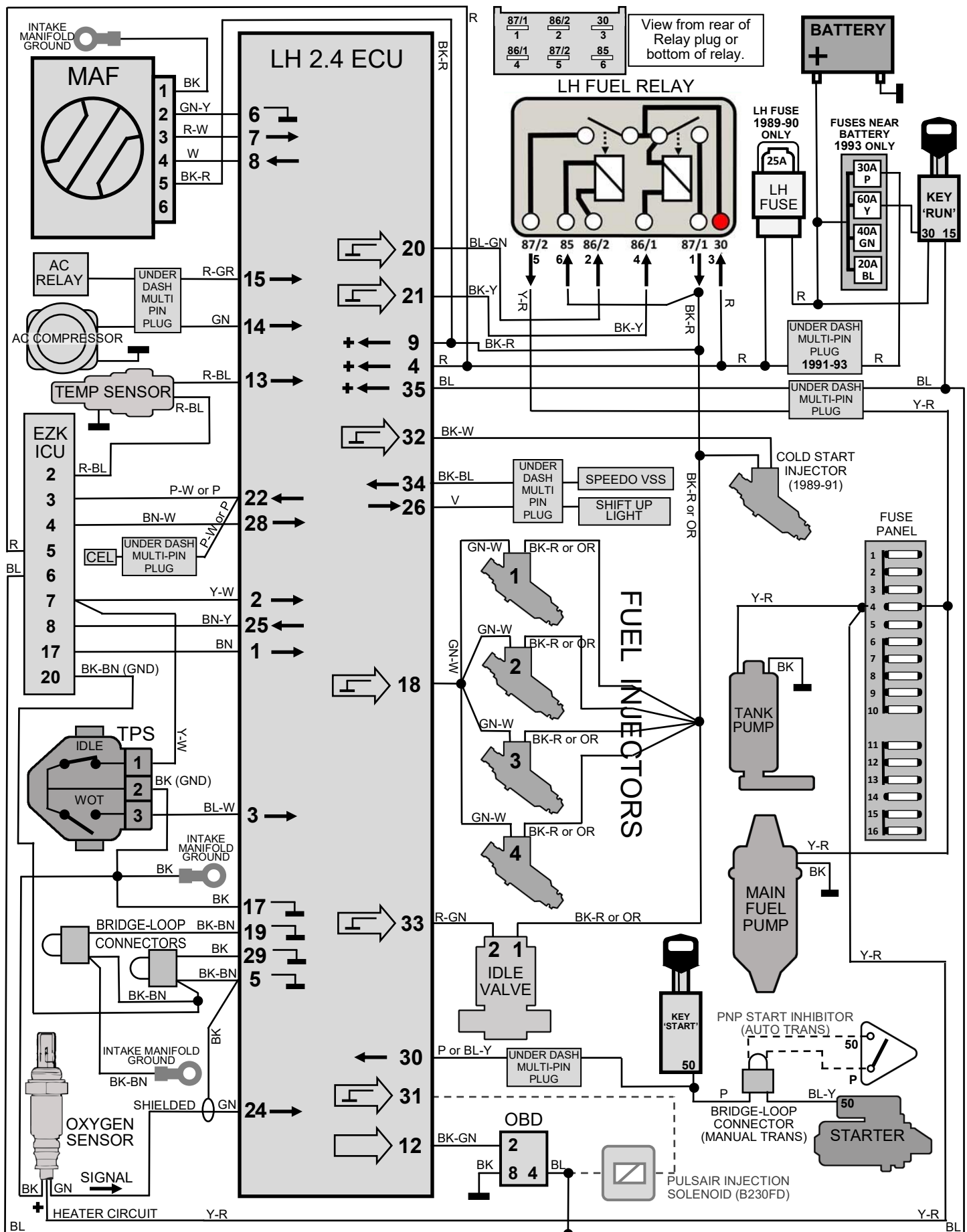
LH 2.4 240 ECU PIN FUNCTIONS

BK or SB - BLACK	W - WHITE	OR - ORANGE	VO - VIOLET
GN - GREEN	GR - GRAY	BL - BLUE	P - PINK
BN - BROWN	R - RED	Y - YELLOW	

- (BN) Engine speed signal input from EZK. Notifies ECU that engine is turning.
- (Y-W) Input signal from TPS, throttle closed (IDLE).
- (BL-W) Input signal from TPS, full throttle (WOT). Not used on B230FT.
- (R) 12v input constant (terminal 30).
- (BK-BN) Ground (signal ground shield for oxygen sensor).
- (GN-Y) Ground for MAF sensor.
- (R-W) Input signal from MAF sensor.
- (W) Control signal output for MAF sensor burn off.
- (BK-R) 12v switched power from main fuel system relay.
- (Some models: Engine cooling fan, low speed).
- (Some models: Engine cooling fan, high speed, triggered by AC relay).
- (BK-GN) Diagnostic signal lead.
- (R-BL) Input signal from coolant temp sensor (ECT) PN 0280130032. This sensor provides a resistance signal between ground and ONE of the two sensor pins. The other sensor pin provides an identical signal to EZK pin 2.
- (GN) Input signal (12v) from AC (compressor on). Elevates idle about 100 rpm.
- (R-GR) Input signal (12v) from AC (AC starting). Elevates idle about 100rpm.
- (Some models: Diagnostic signal lead, pin 2).
- (BK) Ground (to engine). Used for injector and idle valve control signal.
- (GN-W) Control signal output (ground) for fuel injectors.
- (BK-BN) Ground. (Chassis ground. Separate from control signal ground).
- (BL-GN) Control signal output (ground) to fuel pump relay.
- (BK-Y) Control signal output (ground) to main fuel system relay.
- (P-W) Output signal to check engine light (CEL).
- (Some models: input signal, EGR temp sensor).
- (GN) Input signal from oxygen sensor (shielded).
- (BN-Y) MAF load signal output to EZK.
- (V) Shift up indicator output signal (manual trans).
- (Charcoal canister purge valve control signal . B234F only).
- (BN-W) Input signal from EZK (knock sensor). B230FT only.
- (BK) Ground. (Some models: Code input).
- (P) Input signal from starter terminal 50 (12v signal is present when starter is engaged). ECU provides additional fuel when starting. Circuit also to Park-Neutral Position (PNP) switch for auto trans. When PNP is placed in D, 1, 2, 3 or R, breaking circuit to terminal 50, idle is elevated.
- (Some models: Control signal output, Pulsair Injection Solenoid (B230FD only).
- (GR-BK) Control signal output to cold start injector (1989-91).
- (R-GN) Control signal output to idle valve.
- (BK-BL) Input VSS signal from speedometer.
- (BL) 12v input switched (terminal 15).

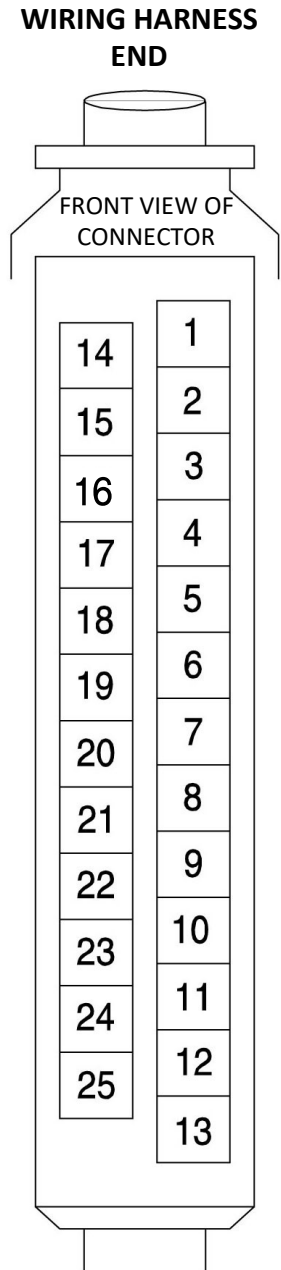


LH 2.4 ECU PIN FUNCTIONS 1989-93 240.



EZ 116K IGNITION CONTROL UNIT PIN FUNCTIONS

1. (W) Output signal to OBD diagnostic socket.
2. (R-BL) Input signal from coolant temp sensor (ECT) PN 0280130032. This sensor provides a resistance signal between ground and ONE of the two sensor pins. The other sensor pin provides an identical signal to the LH ECU pin 13.
3. (P-W) Output signal to check engine light (CEL).
4. (BN-W) Output signal to ECU pin 28 (knock sensor signal).
5. (R) 12v input constant (terminal 30).
6. (BL) 12v input switched (terminal 15).
7. (Y-W) Input signal from TPS, throttle closed (IDLE/DECEL).
8. (BN-Y) MAF sensor load input signal from ECU.
9. —
10. (BL-Y) Input signal from crank position sensor (CPS).
11. (BK) Ground (signal ground SHIELD for CPS).
12. (BK) Ground (signal ground SHIELD for knock sensor).
13. (GN) Input signal from knock sensor (shielded).
14. — (BK) EGR models only. Ground to engine.
15. — (W-BK) EGR models only. Control signal output to EGR vacuum solenoid.
16. (GR) Ignition pulse output signal to ignition amplifier power stage. Shielded (shield is at power stage pin 3).
17. (BN) Engine speed signal output to ECU. 6.5=cranking, >8=idle.
18. — (Other use: Selector wire. Signals: 5v=disabled, grounded=enabled)
19. — (Other use: Selector wire. Signals: 5v=disabled, grounded=enabled)
20. (BK-BN) Ground to engine (signal ground).
21. — (Other use: Selector wire. Signals: 5v=disabled, grounded=enabled)
- 22.
23. — (V) EGR models only. Input signal from EGR temp sensor.
24. (R-Y) Input signal from crank position sensor (CPS).
25. — (Other use: Selector wire. Signals: 5v=disabled, grounded=enabled)



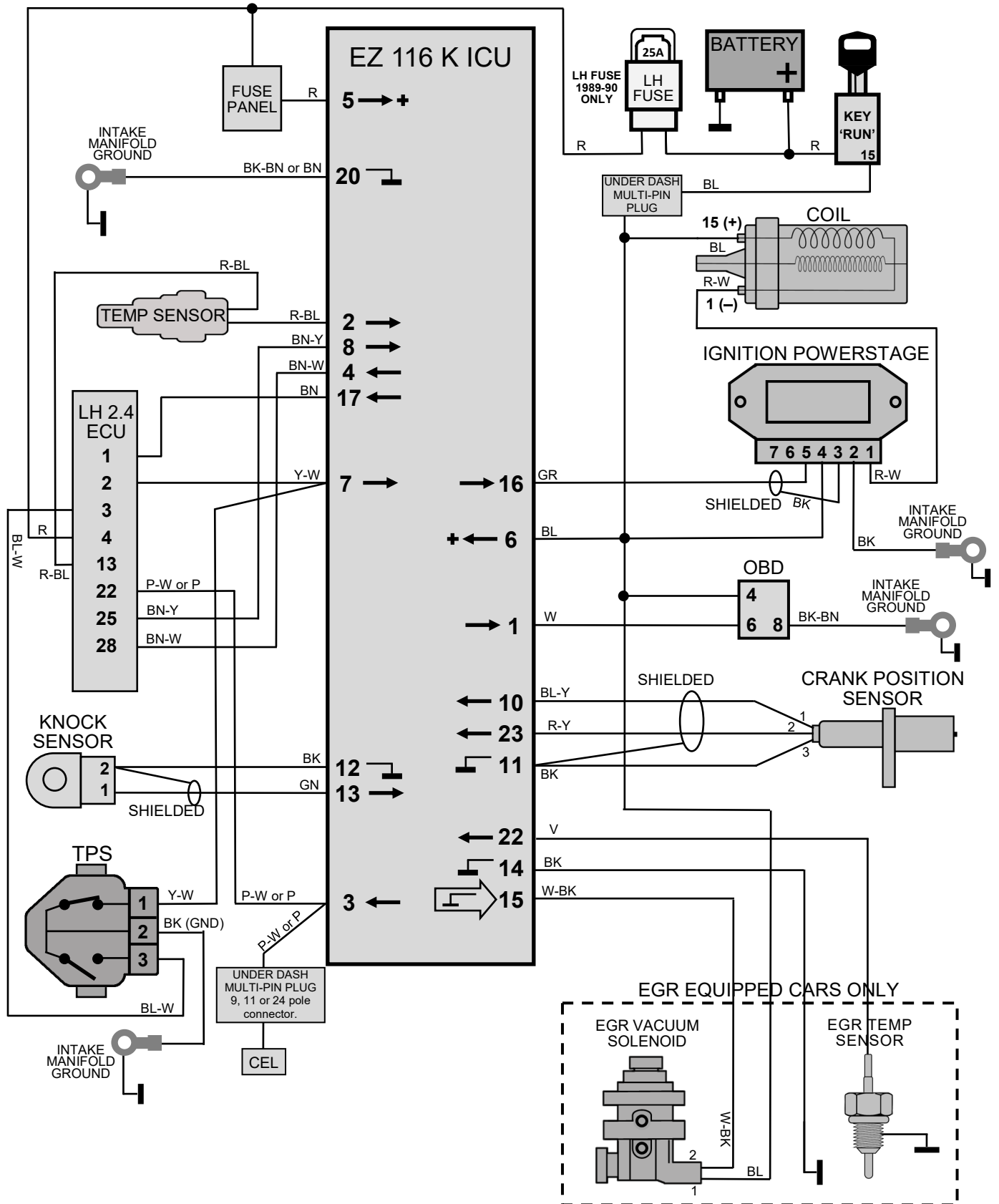
Notes for EZK PINS 18, 19, 21 and 25:

These pins have specific functions for altering timing, which can be enabled by grounding them individually or in combination with other pins. For example, grounding PIN 18 will retard static timing by 3 degrees (except for idle). Grounding PIN 19 will retard static timing by 6 degrees. Grounding both PINS 18 and 19 will advance static timing by 3 degrees. More information may be found at:

Advance/retard timing on EZ116K thread: <https://forums.turbobricks.com/showthread.php?t=75838>

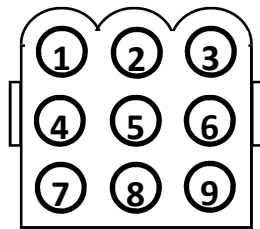
EZ 116K IGNITION CONTROL UNIT PIN FUNCTIONS

1989-93 Volvo 240

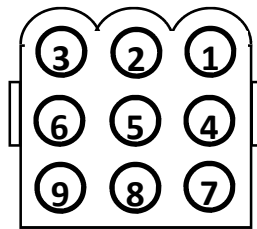


240 UNDER DASH MULTI-PIN PLUG CHANGES

1989-90 240 White 9-Pole Bullet Connector. Under Dash.
(MALE plug) On main engine harness. (FEMALE plug) On dash harness.



MALE
VIEW FROM REAR



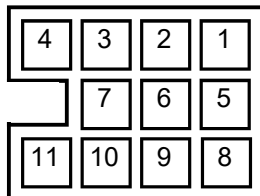
FEMALE
VIEW FROM REAR

The LH system fuse shown at right is found on a 1989-90 240, located under the hood on the left inner fender a short distance from the battery. It provides main battery power to the fuel system.

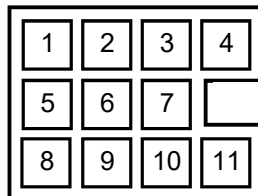


WIRE	ENGINE HARNESS DESTINATION	FUNCTION
1. Blue:	to ECU-35, EZK-6, OBD-4	Switched power from ignition switch.
2. Red/Gray:	to ECU-15	A/C relay.
3. Red/Yell (fat):	to FP Relay-5	12V power to Fuel Pump Relay.
4. Green:	to ECU-14	A/C pressure switch or compressor.
5. Blk/Blue:	to ECU-34	Pulse signal from speedometer.
6. Violet:	to ECU-26	Shift light for manual transmission.
7. Pink (2 wires):	to ECU-22, EZK-3	Check Engine Light (CEL).
8. Red/Yell:	to O2 Sensor	12V power for oxygen sensor.
9. Blue/Yell:	to ECU-30	Momentary power from starter when cranking, idle control.

1991-92 240 White 11-Pole Connector. Under Dash.
(FEMALE) On main engine harness. (MALE) On dash harness.



FEMALE
VIEW FROM REAR



MALE
VIEW FROM REAR

Beginning in 1991, the LH system fuse shown above was eliminated. Main battery power to the fuel system was changed to TWO RED wires, which go through this 11-pole connector.

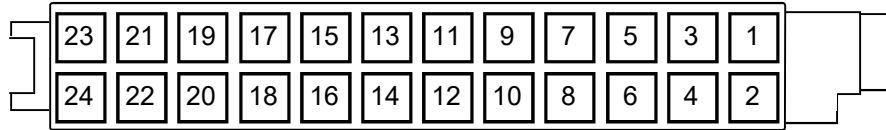
WIRE	ENGINE HARNESS DESTINATION	FUNCTION
1. Blue:	ECU-35, EZK-6, OBD-4	Switched power from ignition switch.
2. Red/Gray:	ECU-15	AC relay.
3. Red/Yell (fat):	FP Relay-5	12V power to Fuel Pump Relay.
4. Green:	ECU-14	AC pressure switch or compressor.
5. Blk/Blue:	ECU-34	Pulse signal from speedometer.
6. Violet:	ECU-26	Shift light for manual transmission.
7. Pink/Wht(2 wires):	ECU-22, EZK-3	Check Engine Light (CEL).
8. Red/Yell:	O2 Sensor	12v power for oxygen sensor.
9. Blu/Yell:	ECU-30	Momentary power from starter when cranking, idle control.
10. Red (fat):	EZK-5, FP Relay-3	12V main power for LH/EZK system.
11. Red (fat):	EZK-5, FP Relay-3	12V main power for LH/EZK system.

240 UNDER DASH MULTI-PIN PLUG - 1993

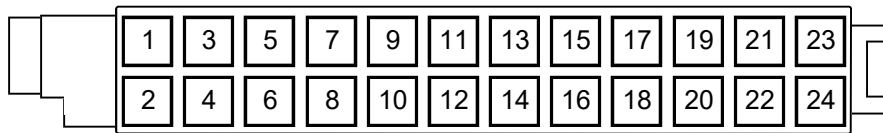
For the 1993 240 Volvo eliminated the familiar **8-pole firewall connector** normally found in the engine bay behind the intake manifold. The wires normally used in that 8-pole plug were moved to this new 24-pole plug (pins 17, 18, 19 and 21). This new 24-pole plug is found under the right side dash near the ECU.

1993 240 White 24-Pole Connector.

(FEMALE plug) found on main engine harness. (MALE plug) found on dash harness.



FEMALE - VIEW FROM REAR



MALE - VIEW FROM REAR

WIRE	ENGINE HARNESS DESTINATION	FUNCTION
1. Blue:	ECU-35,EZK-6, OBD-4	Switched power from ignition key switch.
2. Red/Gray:	ECU-15	AC relay.
3. Red/Yell (fat):	FP Relay-5	12V power to Fuel Pump Relay.
4. Green (2 wires):	ECU-14, Grn female bullet	AC pressure switch or AC compressor.
5. Blk/Blu:	ECU-34	Pulse signal from speedometer.
6. Violet:	ECU-26	Shift light for manual transmission.
7. Pink/Wht (2 wires):	ECU-22, ICU-3	Check Engine Light (CEL).
8. Red/Yell:	O2 Sensor	12v power for oxygen sensor.
9. Pink:	ECU-30	Momentary power from starter when cranking, idle control.
10. Empty		
11. Empty		
12. Empty		
13. Empty		
14. Empty		
15. Empty		
16. Empty		
17. Black:	OPS	Dash oil pressure warning lamp.
18. Yell:	Coolant temp sender	Dash engine temp gauge.
19. Red:	Alternator D+	Dash charging warning lamp.
20. Empty		
21. Blu/Yell (fat):	Starter solenoid	12v power from Ignition key switch 50 "START" position.
22. Empty		
23. Empty		
24. Empty		

Beginning in 1993, the LH system power distribution changed again. A new fuse panel with four fuses was placed near the battery.

