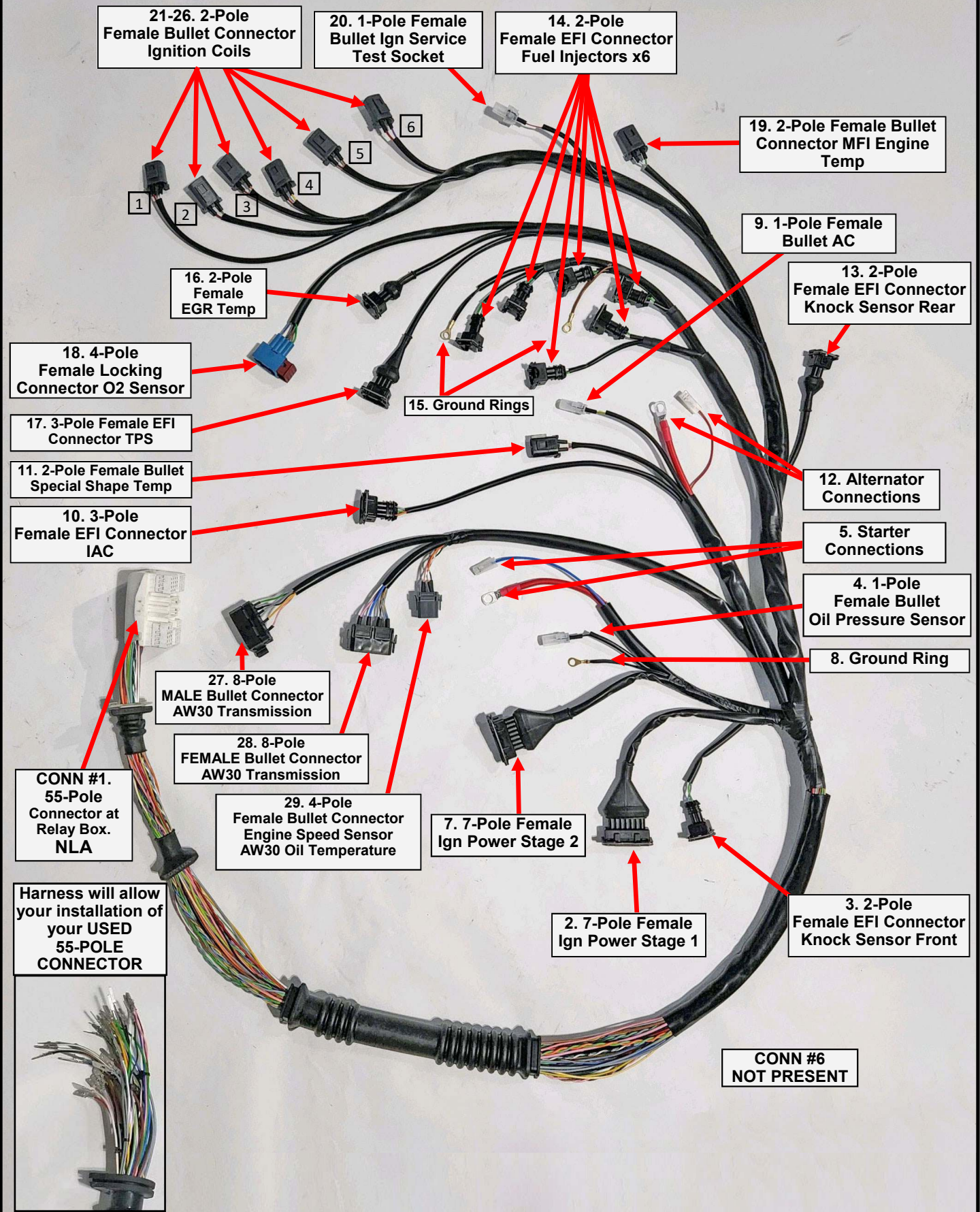
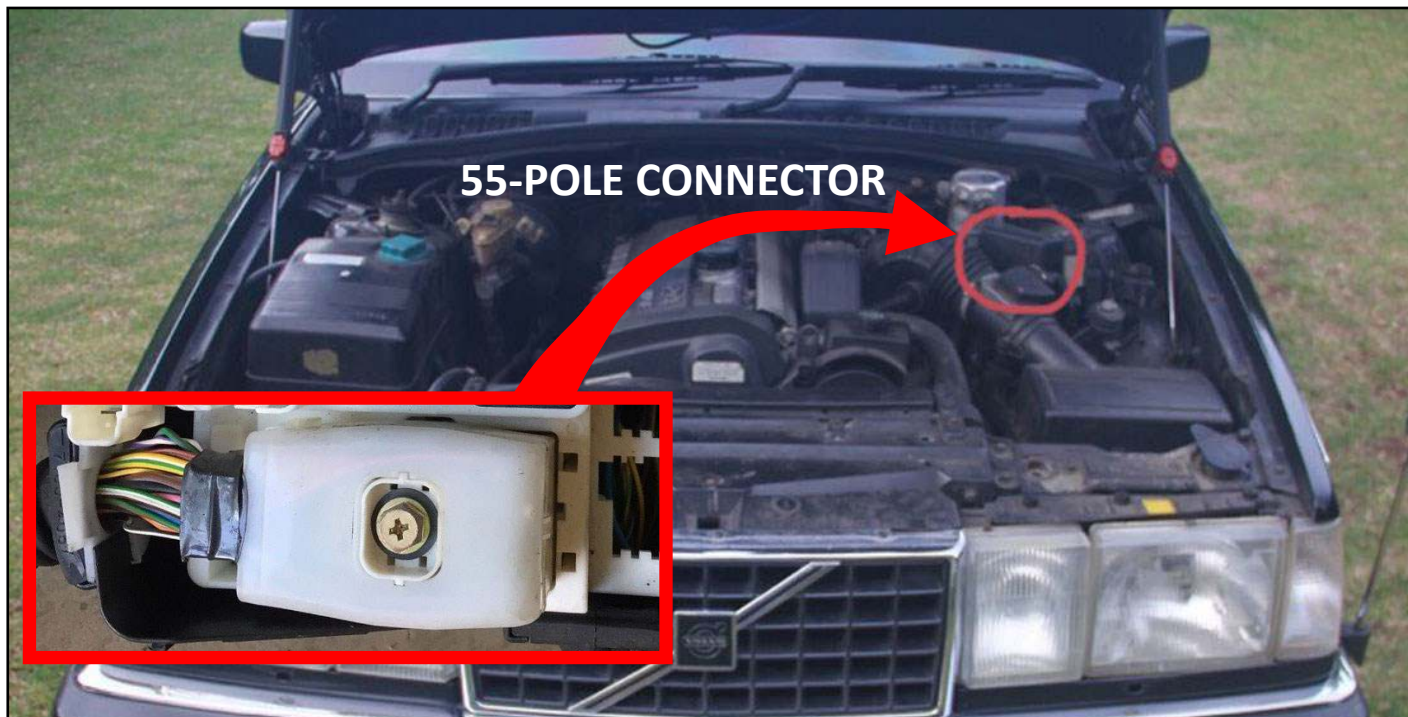


1995 960 Engine Wire Harness, PN 9128165, using 55-Pole Connector. Motronic Multiport Fuel Injection (MFI) with EGR.



1995 960 Engine Wire Harness, PN 9128165, with 55-Pole Connector. Motronic Multiport Fuel Injection (MFI) with EGR

The large 55-pole female harness connector at the beginning of this harness is **NO LONGER AVAILABLE**. The only possible way to complete this harness installation is for a customer to install a USED PLUG, or provide a used plug to us before the harness build takes place. This connector is found under the hood under the **black plastic cover** shown below.



As an option, a customer may send a used connector and it can be installed for you on a new harness before shipping to you. If you send a used connector, it should be sent complete, with all wires still installed, with wires cut in a convenient place several inches from the connector. You should not remove terminals or disassemble the connector if you're sending one to be installed.

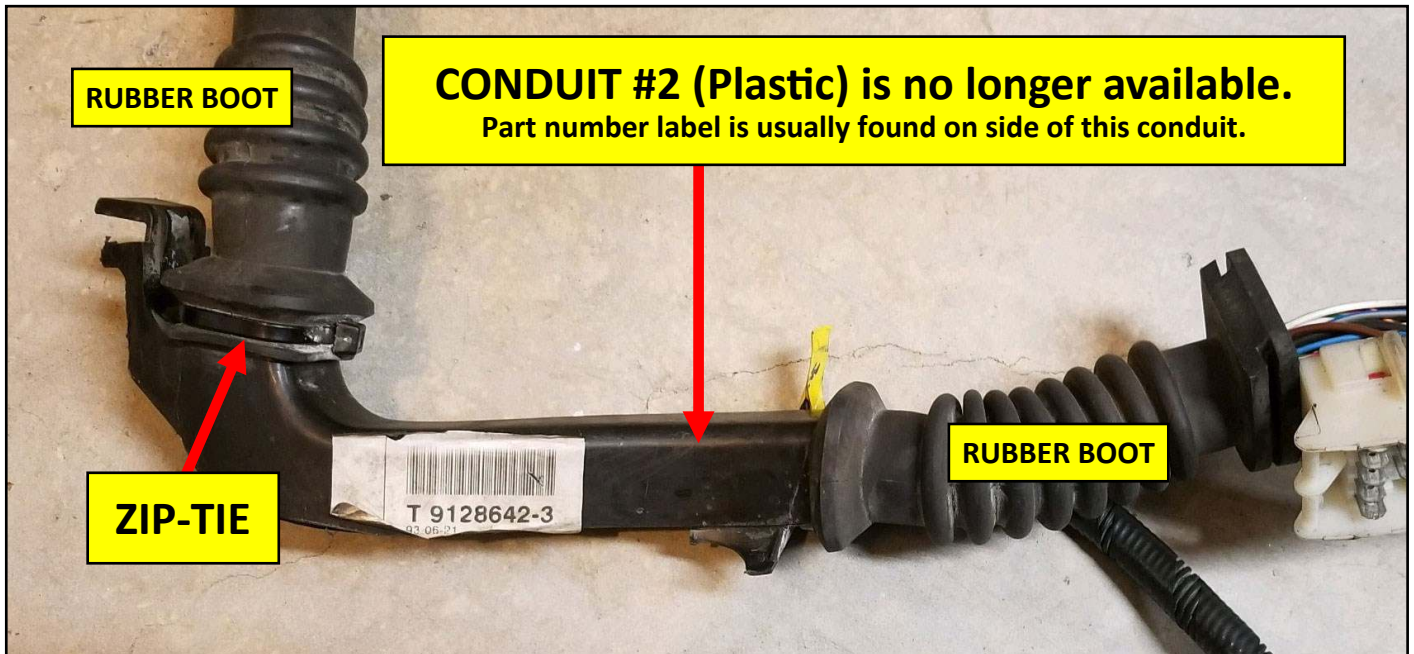


1995 960 Engine Wire Harness, PN 9128165, with 53-Pole Connector. Motronic Multiport Fuel Injection (MFI) with EGR.

Plastic Conduit

At this time ONE of the conduits used on this harness is **no longer available** from Volvo or any other source (except as a used part). For this reason, **this harness will not come with the plastic conduit shown below.**

When you receive your new harness, you will need to re-use your old conduit from your car. It's made to split apart, so it can be removed and then reassembled on the new harness and then secured with a nylon zip-tie as it was originally secured.



Understanding Diagram Wire Locations shown 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 a wire goes, this will explain how to read it.

19



The number at left is a CONNECTOR NUMBER.

You will see a number like this for each connector listed in this guide.

The below example shows a connector with two wires. The **1. Grn/Gry** wire shows a destination of **1/E10**, which means the OTHER end of this wire goes to **Connector 1, Position E10**, which is in the large 55-pole connector (Conn 1).

The **2. Grn/Wht** wire shows a destination of **1/E5**, which means the OTHER end of this wire goes to **Connector 1, Position E5**, which is also in the large 55-pole connector (Conn 1).

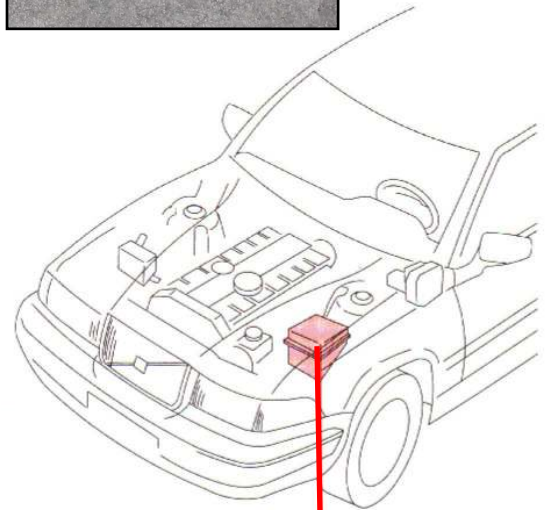
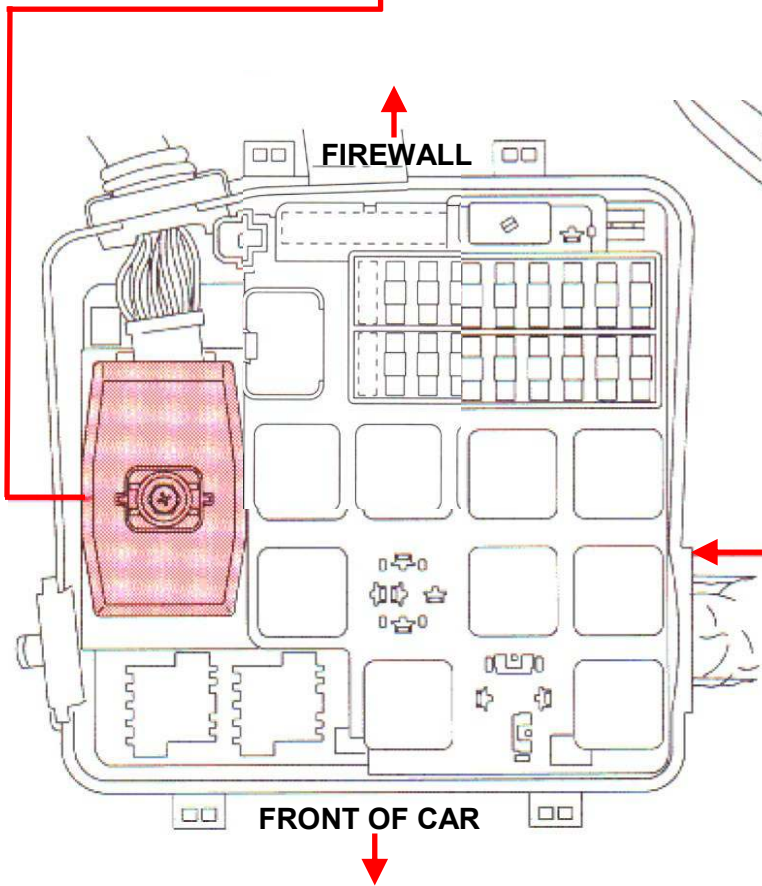
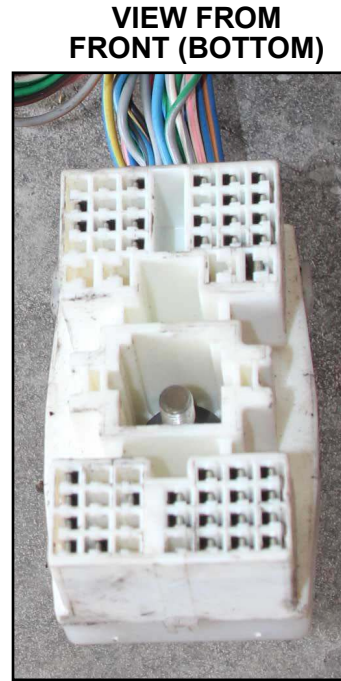
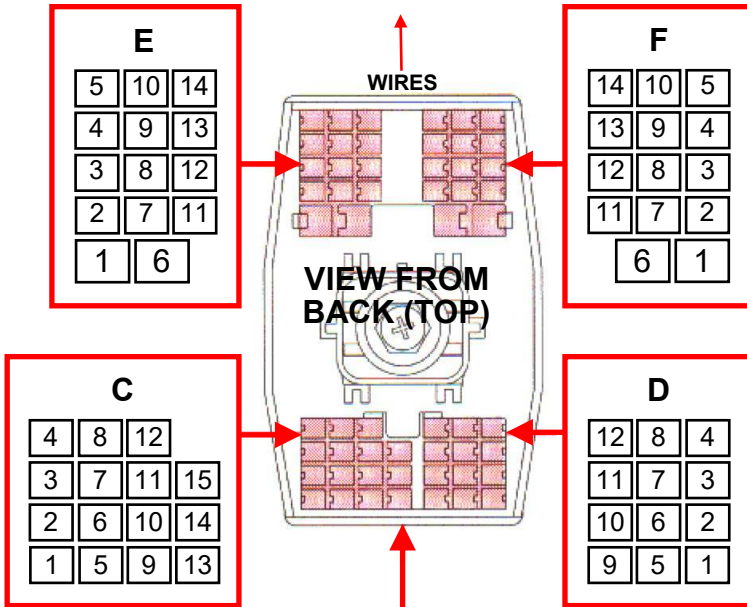


WIRES:

- | | | |
|-------------------|--------------|-------------------------|
| 1. Grn/Gry | 1/E10 | 55-pole pin E10. |
| 2. Gry/Wht | 1/E5 | 55-pole pin E5. |

Main Harness Connector in Engine Compartment at Relay/Fuse Box

This illustration shows details of the 55-pole connector. It has four sections (C, D, E & F). The pole or pins locations of all wire circuits are shown in the following pages.



1

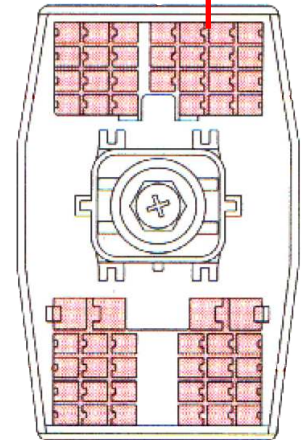
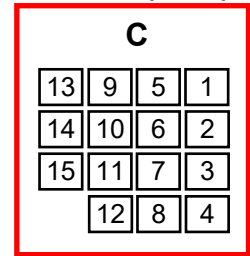
Connector #1 55-pole Female (A3)

Main female harness connector found under hood.

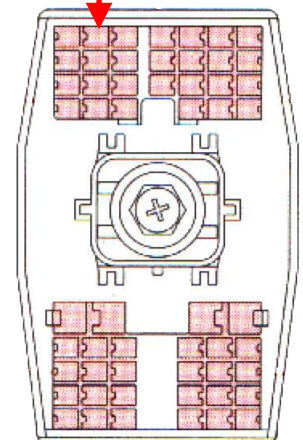
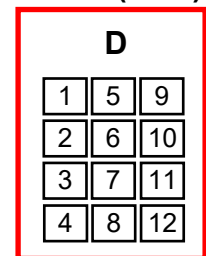
NOTE: The connector diagram drawings on this page have been turned 180 degrees compared to page 4, which means the wires will exit **DOWNWARD** in these drawings.

Pos.	Color	To Wire Location
C 1	Wht/Blk	C29 A35 4-pole pin1 (for Engine Speed Sensor).
C 2	Grn/Blk	C29 A35 4-pole pin2 (for Engine Speed Sensor).
C 3	Red/Wht	C29 A35 4-pole pin3 (for Oil Temp Sensor AW30).
C 4	Org/Wht	C29 A35 4-pole pin4 (for Oil Temp Sensor AW30).
C 5	Blu/Gry	C28 B5 8-pole fem pin5 (for gear position sensor AW30).
C 6	Brn/Wht	C28 B5 8-pole fem pin6 (for gear position sensor AW30).
C 7	Grn/Brn	C28 B5 8-pole fem pin7 (for gear position sensor AW30).
C 8	Grn/Wht	C28 B5 8-pole fem pin8 (for gear position sensor AW30).
C 9	Grn	C27 B4 8-pole male pin1 (for solenoid AW30).
C 10	Gry/Org	C27 B4 8-pole male pin2 (for solenoid AW30).
C 11	Yel	C27 B4 8-pole male pin3 (for solenoid AW30).
C 12	Pnk	C27 B4 8-pole male pin4 (for solenoid AW30).
C 13	Brn/Blk	C27 B4 8-pole male pin5 (for solenoid AW30).
C 14	Blu/Yel-1.5	C28 B5 8-pole fem pin1 (for gear position sensor AW30).
C 15	Gry/Blk-1.5	C28 B5 8-pole fem pin2 (for gear position sensor AW30).
D 1	Blu/Pnk-1.5	C28 B5 8-pole fem pin4. (starter circuit to start inhibit switch).
D 2	Red	C12 Alternator D+. Also conn A1/B pin2 at left A-post.
D 3	Brn/Org	C13 Knock sensor rear pin1.
D 4	Grn/Gry	C13 Knock sensor rear pin2.
D 5	Grn/Yel	C9 1p fem bullet AC compressor.
D 6		
D 7		
D 8	Vio/Wht	C16 EGR temp sensor pin1. Twist with D12
D 9	Brn/Pnk	C11 2p fem Volvo Spec bullet pin1. For instrument temp gauge.
D 10	Yel/Wht	C11 2p fem Volvo Spec bullet pin2. For instrument temp gauge.
D 11	Blk	C4 1p fem bullet Oil Pressure Sender.
D 12	Grn/Gry	C16 EGR temp sensor pin2. Twist with D8

VIEW FROM BACK (TOP)



VIEW FROM BACK (TOP)



1

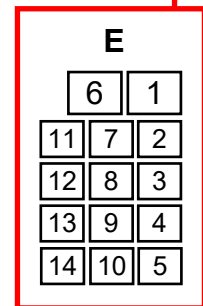
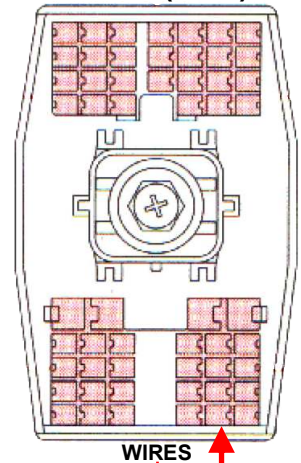
(Continued)

Connector #1 55-pole Female (A3)

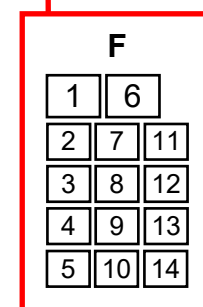
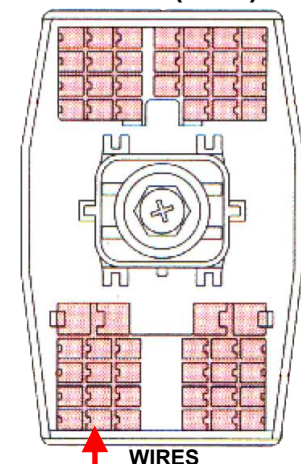
NOTE: The connector diagram drawings on this page have been turned 180 degrees compared to page 4, which means the wires will exit down in these drawings.

Pos.	Color	To Wire Location
E 1	Grn/Red-1.5	La common Ign. Coils (C21-26 all) pin2.
E 2	Red/Blk-0.5	C2 Ign Power Stage-1 pin2. Shielded with E3, E4.
E 3	Blu/Grn-0.5	C2 Ign Power Stage-1 pin5. Shielded with E2, E4.
E 4	Blu/Red-0.5	C2 Ign power stage-1 pin7. Shielded with E2, E3.
E 5	Gry/Wht	C19 Engine Temp MFI pin2. Twist with E10.
E 6		
E 7	Blu/Wht-0.5	C7 Ign Power Stage-2 pin2. Shielded with E8, E9.
E 8	Blu/Brn-0.5	C7 Ign Power Stage-2 pin5. Shielded with E7, E9.
E 9	Wht-0.5	C7 Ign Power Stage-2 pin7. Shielded with E7, E8.
E 10	Grn/Gry	C19 Engine Temp MFI pin1. Twist with E5.
E 11	Org/Blk	C10 IAC pin3.
E 12	Gry/Red	C10 IAC pin1.
E 13	Brn (SHIELD)	La common. Shield for C2 and C7 Ign Power Stages.
E 14	Grn-1.5	La common C14 all Fuel Injectors pin1.
F 1	Blk	C15 Ground ring.
F 2	Grn	C18 Special 4-pole fem pin4. O2 Sensor. Twist with F7.
F 3	Gry	C3 Knock Sensor Front pin1. Twist with F4.
F 4	Grn/Gry	C3 Knock Sensor Front pin2. Twist with F3.
F 5		
F 6		
F 7	Brn	C18 Special 4-pole fem pin 3. O2 Sensor. Twist with F2.
F 8	Grn/Gry	C17 TPS pin1. Twist with F11, F12.
F 9	Blu/Org-0.5	C18 Special 4-pole fem pin1. O2 Sensor.
F 10	Brn/Grn-1.5	Common. C14 Fuel Injectors 1, 2 and 4 , pin2.
F 11	Yel/Blk	C17 TPS pin3. Twist with F8, F12.
F 12	Blu/Blk	C17 TPS pin2. Twist with F8, F11.
F 13		
F 14	Pnk/Wht	Common. C14 Fuel Injectors 3, 5 and 6, pin2.

VIEW FROM BACK (TOP)



VIEW FROM BACK (TOP)

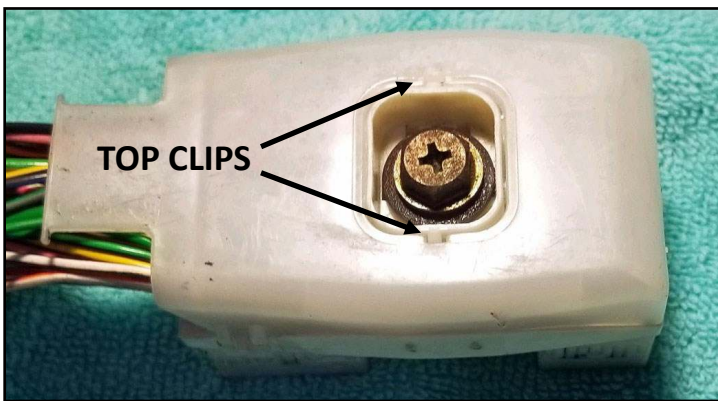
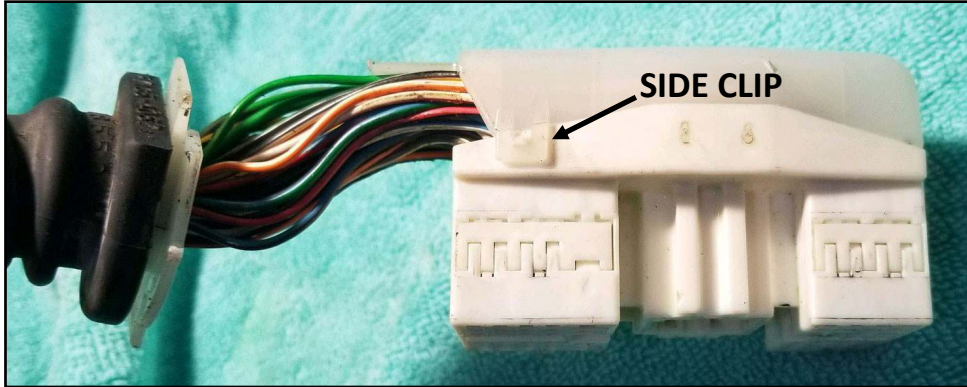


Note that there will be a **DUPLICATE WIRE COLOR** that is the same for two wires in SECTION F above (two GRN/GRY wires at pins F4 and F8). You should be aware of this before installing wires in the 55-pole connector. For any wire destination that needs to be checked or confirmed, you can use an Ohm meter to check continuity to the noted destination connector and pin.

REMOVING TERMINALS FROM THE 55-POLE CONNECTOR

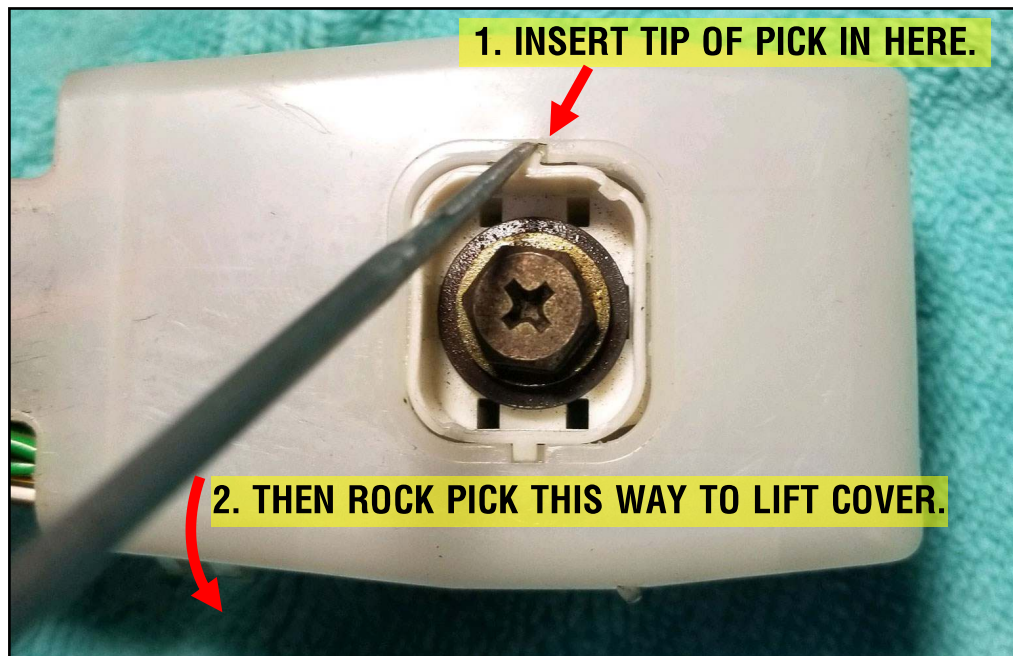
CAUTION: Be gentle with this connector. It may be a bit brittle after years of engine heat and parts can be broken if you exert force. The first task will be to remove the top white cover. It's secured by a several clips.

One on each side, one of the end and two on the top.

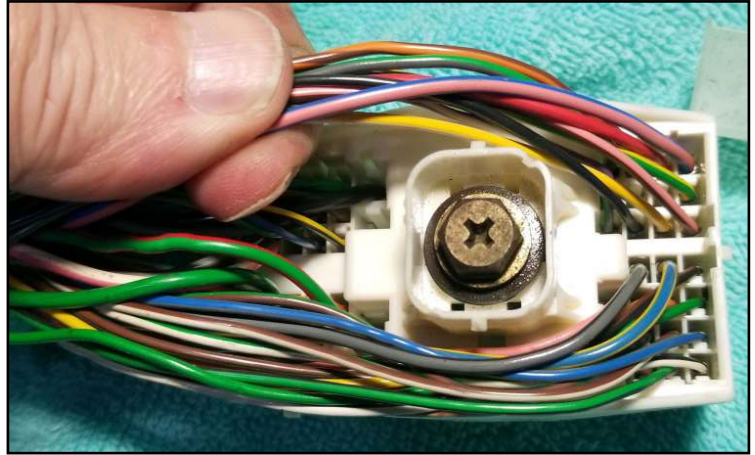
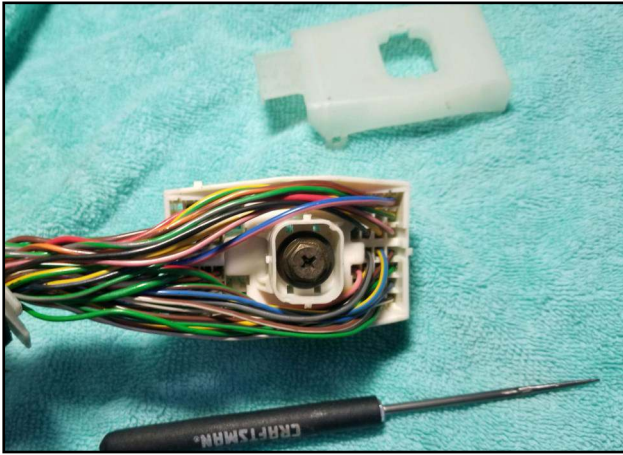


These two picks above are the tools that I most commonly use for this kind of work. The Craftsman pick was ground down a bit thinner than normal to make it sharper and thinner. Plus the Delphi pick is helpful for very small hole access.

All of these clips need to be released at about the same time to remove the top cover, so it might take a few tries. The side and end clips are easily released using a pick. The top clips require a tricky move to release. See below photo.

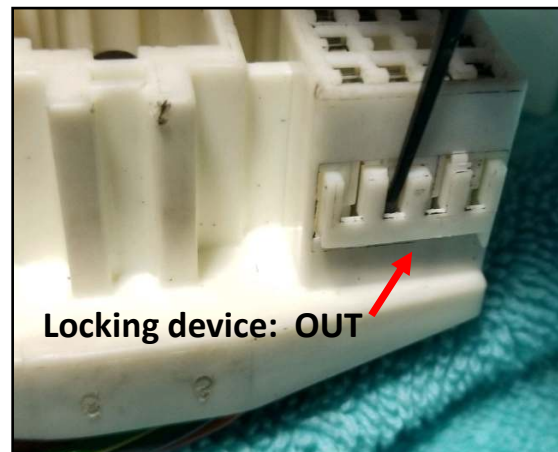
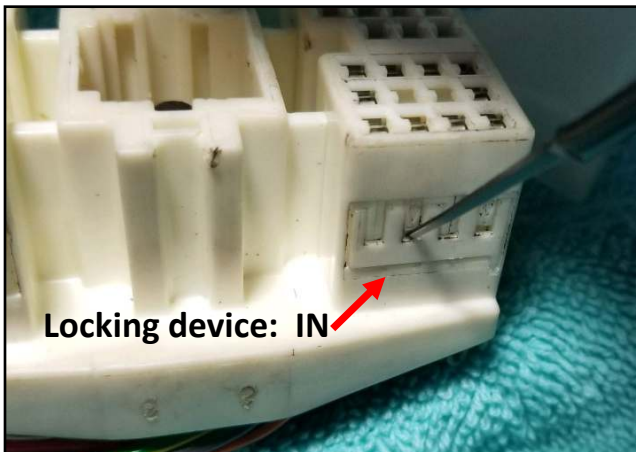


3. TURN CONNECTOR AROUND AND DO THIS FOR THE OTHER TOP CLIP.

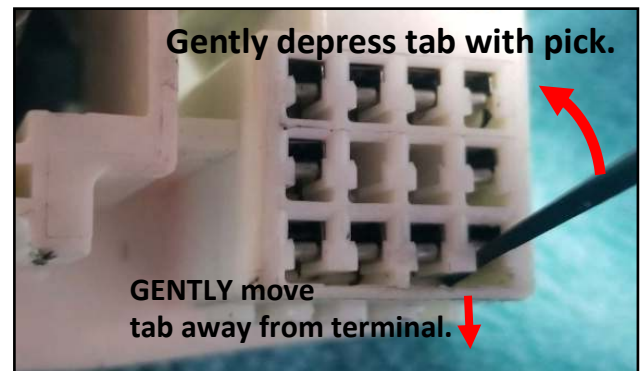
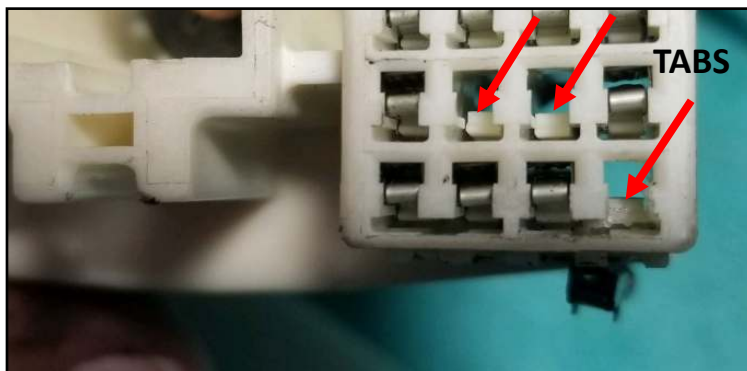


Have a look at the wires and become familiar with the various colors and color combinations. **This connector is divided into FOUR sections**, so it would probably be a good idea to work on one section at a time. You can keep the four sections separate by placing some tape or a zip tie around wires for each section.

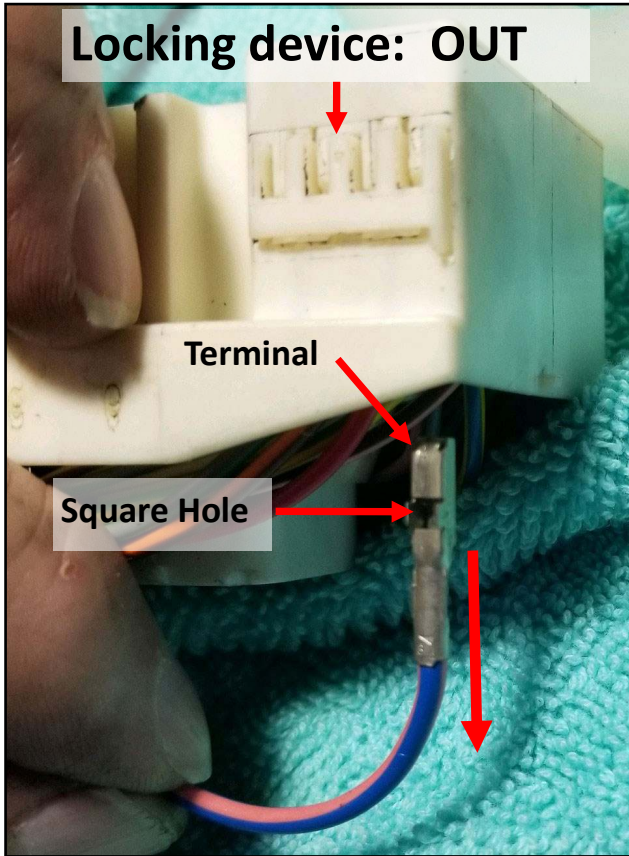
RELEASING THE OLD TERMINALS



Locate the **FOUR** locking devices on the sides of the connector. There is one locking device for each section. Using a pick, pull one device **OUTWARD** a short distance. This locking device retains the terminals in one section of the connector. Once the locking device is pulled **OUTWARD**, the terminals in that section may be released. In the next steps, you'll be releasing terminals. Periodically check that this locking device stays in the **OUT** position, or it will become impossible to release terminals.



Look into a connector housing hole and find an **inner white plastic tab shown above**. Three of them can be seen pretty well in the three empty holes in the **above left photo**. **Keep in mind these plastic tabs may be fragile**. Where a terminal exists in a hole, a tab needs to be gently pushed away from the terminal. No force is needed for this as long as the locking device is in the **OUT** position. Once the tab is pushed and the terminal is released, you may then pull the terminal out from the back of the connector by pulling on the wire. Very little force should be needed to pull it out. If it seems stuck, you need to try again.



Locking device: OUT

Terminal

Square Hole

Once the terminals have been removed, you may begin inserting the new terminals.

Take notice of the small square hole in the side of the terminal in this photo at LEFT. All terminals have this square hole. The tab that you depressed to release the terminal is what holds the terminal in place. A part of that tab goes into that square hole. So keep this in mind when inserting new terminals. **Each new terminal must be inserted so the square hole faces the tab.**

Also note that **terminals E1 and F1 are larger** terminals than all the others. Removal and installation is the same for these.

If you have only two hands like most people you may have trouble keeping the locking device in the OUT position while working. I have found that inserting a pick or small wire or maybe a paperclip can hold the locking device in the OUT position for you.



INSERTING NEW TERMINALS

You may now begin inserting new wire terminals from your new harness into the BACK of the plug. **Be sure to periodically check that the locking device on the side of the connector for the section you're working on is still in the OUT position.**

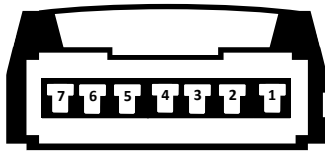
Follow the wire color order in this guide. If your harness came with the wires for this connector separated into FOUR groups with zip-ties, insert them one group at a time. After checking your work, then you may cut off the zip ties before replacing the top cover.

COMMON CIRCUITS 1 - GROUNDS

Com	La	Brn-1.5	C1 55-pole pin E13.
	Lb	Wht/Brn	shield.
	Lc	Wht/Brn	shield.
	R	Brn-1.5	C15a ground ring.

2

7-Pole Female EFI Connector Ignition Power Stage No. 1



VIEW FROM REAR

WIRES:

1. Red/Wht	26/1	C26 Ign coil Cyl 1 pin 1.
2. Red/Blk-0.5	1/E2	55-pole pin E2 (shielded).
3. Yel/Brn	22/1	C22 Ign coil Cyl 5 pin 1.
4. Blk	8	C8 Ground.
5. Blu/Grn-0.5	1/E3	55-pole pin E3 (shielded).
6. Org	24/1	C24 Ign coil Cyl 3 pin 1.
7. Blu/Red-0.5	1/E4	55-pole pin E4 (shielded).

3

2-Pole Female EFI Connector Knock Sensor FRONT



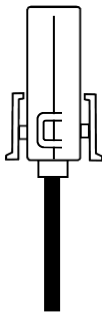
VIEW FROM REAR

WIRES:

1. Gry	1/F3	55-pole pin F3.
2. Grn/Gry	1/F4	55-pole pin F4.

4

1-Pole Female Bullet Connector Oil Pressure Sender



WIRES:

1. Blk	1/D11	55-pole pin D11.
--------	-------	------------------

5

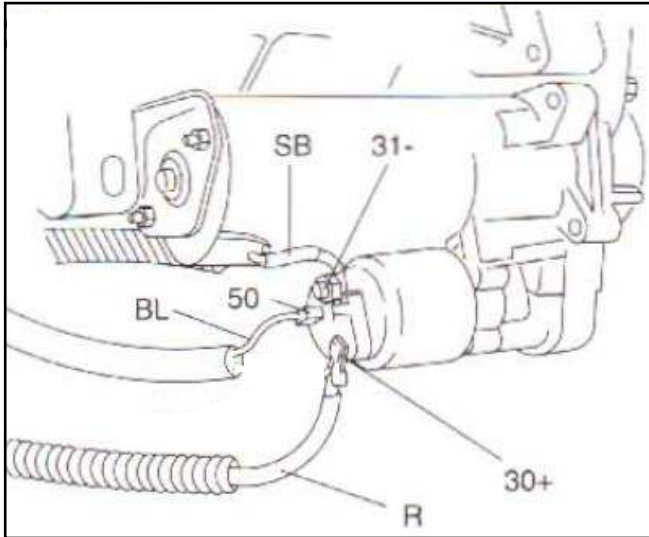
a: Starter B+ (30) with 8 mm ring.
b: Starter Solenoid blue wire (50).



WIRES:
Red-10 12 C12 Alternator B+ ring.



Blu-1.5 28/3 8-pole pin 3.

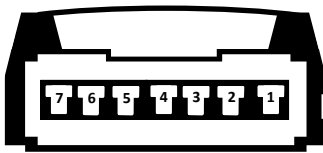


6

Connector not present.

7

7-Pole Female EFI Connector
Ignition Power Stage No. 2



VIEW FROM REAR

WIRES:		
1. Vio	21/1	C21 Ign coil Cyl 6 pin 1.
2. Blu/Wht-0.5	1/E7	55-pole pin E7 (shielded).
3. Wht/Blk	25/1	C25 Ign coil Cyl 2 pin 1.
4. Blk	8	C8 Ground.
5. Blu/Brn-0.5	1/E8	55-pole pin E8 (shielded).
6. Grn/Yel	23/1	C23 Ign coil Cyl 4 pin 1.
7. Wht-0.5	1/E9	55-pole pin E9 (shielded).

8



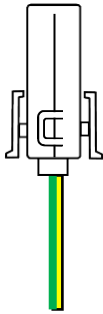
Ground Ring 6 mm

Ground ring closest to Ignition Power Stage connectors

WIRES:

- | | | |
|--------|-----|-----------------------------|
| 1. Blk | 2/4 | C2 Ign power stage-1 pin 4. |
| 2. Blk | 7/4 | C7 Ign power stage-2 pin 4. |

9



1-Pole Female Bullet Connector

AC compressor.

WIRES:

- | | | |
|------------|------|-----------------|
| 1. Yel/Grn | 1/D5 | 55-pole pin D5. |
|------------|------|-----------------|

10



3-Pole Female EFI Connector

Idle Air Control Valve (IAC)

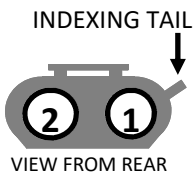
WIRES:

- | | | |
|------------|-------|------------------|
| 1. Gry/Red | 1/E12 | 55-pole pin E12. |
| 2. Grn | Lb | Common. |
| 3. Org/Blk | 1/E11 | 55-pole pin E11. |

VIEW FROM REAR

11

2-Pole Female (Special Shape) Bullet Connector Coolant Temperature Sensor (instrument cluster temp gauge).

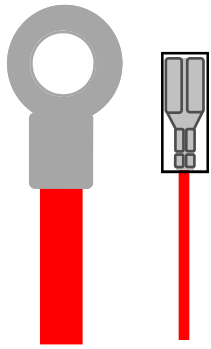


WIRES:

- | | | |
|------------|-------|------------------|
| 1. Wht/Yel | 1/D10 | 55-pole pin D10. |
| 2. Pnk/Brn | 1/D9 | 55-pole pin D9. |

Note regarding the indexing tail on this connector. Some mating connectors require an indexing tail in a different place. If this connector will not insert, the tail may be trimmed off.

12

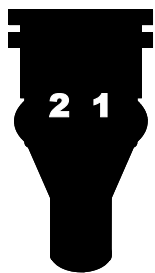


Alternator B+ 8 mm Ring. Alternator D+ wire.

WIRES:

- | | | |
|-----------------|------|-----------------------------|
| 1. Red-10 (fat) | 5 | Starter B+ ring. |
| 2. Red (thin) | 1/D2 | 55-pole pin D2 (D+ circuit) |

13



2-Pole Female EFI Connector Knock Sensor REAR

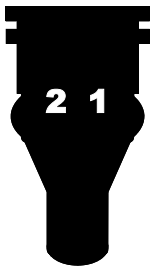
WIRES:

- | | | |
|------------|------|-----------------|
| 1. Org/Brn | 1/D3 | 55-pole pin D3. |
| 2. Grn/Gry | 1/D4 | 55-pole pin D4. |



VIEW FROM REAR

14



2-Pole Female EFI Connectors Fuel Injectors (x6).

Cylinders 1, 2 and 4 (x3):

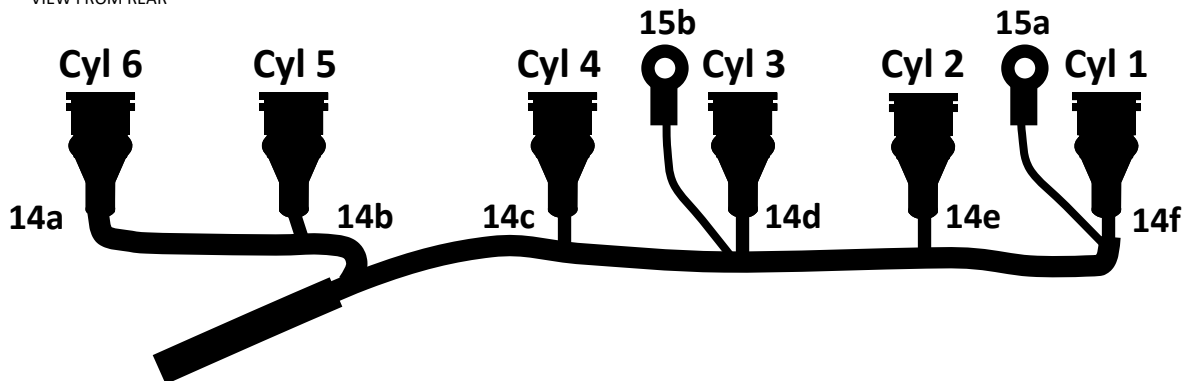
- | | | |
|------------|-------|------------------------|
| 1. Grn | Com | Common + IAC-2, MAF-5. |
| 2. Brn/Grn | 1/F10 | 55-pole pin F10. |

Cylinders 3, 5 and 6 (x3):

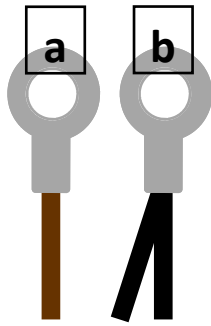
- | | | |
|------------|-------|------------------------|
| 1. Grn | Com | Common + IAC-2, MAF-5. |
| 2. Pnk/Wht | 1/F14 | 55-pole pin F14. |



VIEW FROM REAR



15



Ground Rings 6 mm

Ground rings near Fuel Injector connectors.

WIRES:

a. Brn-1.5	1/E13	C1 55-pole pin E13.
b. Blk-2	1/F1	C1 55-pole pin F1.
Blk	18/2	C18 pin 2 . O2 sensor.

COMMON CIRCUITS 2 - IGNITION

Com

La	Red/Wht	2/1	C2 Ign power stage-1 pin 1, +C20 service socket.
Ra	Red/Wht	20	Service-test socket.
Rb	Red/Wht	26/2	Ign coil 1.

COMMON CIRCUITS 3 - IGNITION COILS

Com

La	Red/Grn-2.5	1/E1	55-pole pin E1.
Ra	Red/Grn	21/2	Ign coil 6.
Rb	Red/Grn	22/2	Ign coil 5.
Rc	Red/Grn	23/2	Ign coil 4.
Rd	Red/Grn	24/2	Ign coil 3.
Re	Red/Grn	25/2	Ign coil 2.
Rf	Red/Grn	26/2	Ign coil 1.

COMMON CIRCUITS 4 - FUEL INJECTORS

Com

La	Grn-2	1/E14	55-pole pin E14 Fuel injection.
Lb	Grn	10/2	C10 IAC pin 2.
Ra	Grn	14a/1	C14a Injector 6 pin 1.
Rb	Grn	14b/1	C14b Injector 5 pin 1.
Rc	Grn	14c/1	C14c Injector 4 pin 1.
Rd	Grn	14d/1	C14d Injector 3 pin 1.
Re	Grn	14e/1	C14e Injector 2 pin 1.
Rf	Grn	14f/1	C14f Injector 1 pin 1.

COMMON CIRCUITS 5 - FUEL INJECTORS

Com

La	Pnk/Wht-2	1/F14	55-pole pin F14.
Ra	Pnk/Wht	14a/2	C14a Injector 6 pin 2.
Rb	Pnk/Wht	14b/2	C14b Injector 5 pin 2.
Rc	Pnk/Wht	14d/2	C14d Injector 3 pin 2.

COMMON CIRCUITS 6 - FUEL INJECTORS

Com

La	Brn/Grn-2	1/F10	55-pole pin F10.
Ra	Brn/Grn	14c/2	C14c Injector 4 pin 2.
Rb	Brn/Grn	14e/2	C14e Injector 2 pin 2.
Rc	Brn/Grn	14f/2	C14f Injector 1 pin 2.

16

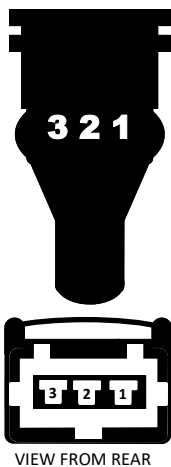


2-Pole Female EFI Connector EGR Temperature Sensor

WIRES:

1. Vio/Wht	1/D8	55-pole pin D8.
2. Grn/Gry	1/D12	55-pole pin D12.

17



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

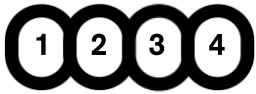
WIRES:

1. Grn/Gry	1/F8	55-pole pin F8.
2. Blu/Blk	1/F12	55-pole pin F12.
3. Yel/Blk	1/F11	55-pole pin F11.

18

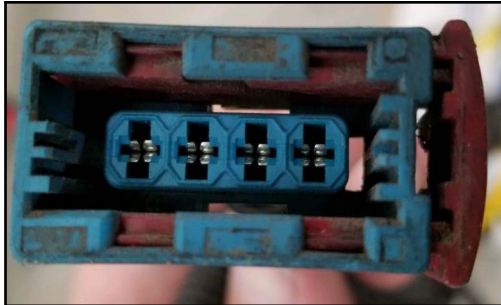
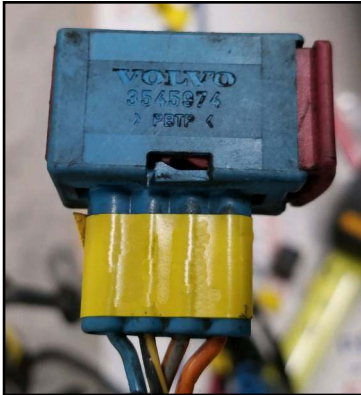
4-Pole Female Special Blue Locking Connector Oxygen Sensor

VIEW FROM REAR WIRES



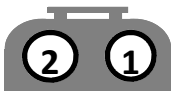
WIRES:

- | | | |
|----------------|------|-------------------|
| 1. Blu/Org-0.5 | 1/F9 | 55-pole pin F9. |
| 2. Blk | 15b | C15b Ground ring. |
| 3. Brn | 1/F7 | 55-pole pin F7. |
| 4. Grn | 1/F2 | 55-pole pin F2. |



19

2-Pole Female Bullet Connector Engine Temperature Sensor MFI

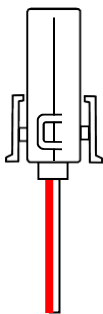


VIEW FROM REAR

WIRES:

- | | | |
|------------|-------|-------------------------|
| 1. Grn/Gry | 1/E10 | 55-pole pin E10. Twist. |
| 2. Gry/Wht | 1/E5 | 55-pole pin E5. Twist. |

20



1-Pole Female Bullet Connector Service Test Socket near Ignition Coils. Not used during installation.

WIRES:

- | | | |
|------------|--------|---|
| 1. Red/Wht | Com Ra | C26 Ign coil 1 pin 1, C2 Power stage-1 pin 1. |
|------------|--------|---|

21

2-Pole Female Bullet Connector Ignition Coil Cyl 6



WIRES:

- | | | |
|------------|--------|-----------------------------------|
| 1. Vio | 7/1 | C7 Ign power stage 2 pin 1. |
| 2. Grn/Red | Ra Com | 55-pole pin E1 + Grn/Red commons. |

22

2-Pole Female Bullet Connector Ignition Coil Cyl 5



WIRES:

- | | | |
|------------|--------|-----------------------------------|
| 1. Yel/Brn | 2/3 | C2 Ign power stage 1 pin 3. |
| 2. Grn/Red | Rb Com | 55-pole pin E1 + Grn/Red commons. |

23

2-Pole Female Bullet Connector Ignition Coil Cyl 4



WIRES:

- | | | |
|------------|--------|-----------------------------------|
| 1. Grn/Yel | 7/6 | C7 Ign power stage 2 pin 6. |
| 2. Grn/Red | Rc Com | 55-pole pin E1 + Grn/Red commons. |

24

2-Pole Female Bullet Connector Ignition Coil Cyl 3



WIRES:

- | | | |
|------------|--------|-----------------------------------|
| 1. Org | 2/6 | C2 Ign power stage 1 pin 6. |
| 2. Grn/Red | Rd Com | 55-pole pin E1 + Grn/Red commons. |

25

2-Pole Female Bullet Connector Ignition Coil Cyl 2



WIRES:

- | | | |
|------------|--------|-----------------------------------|
| 1. Wht/Blk | 7/3 | C7 Ign power stage 2 pin 3. |
| 2. Grn/Red | Re Com | 55-pole pin E1 + Grn/Red commons. |

26

2-Pole Female Bullet Connector Ignition Coil Cyl 1

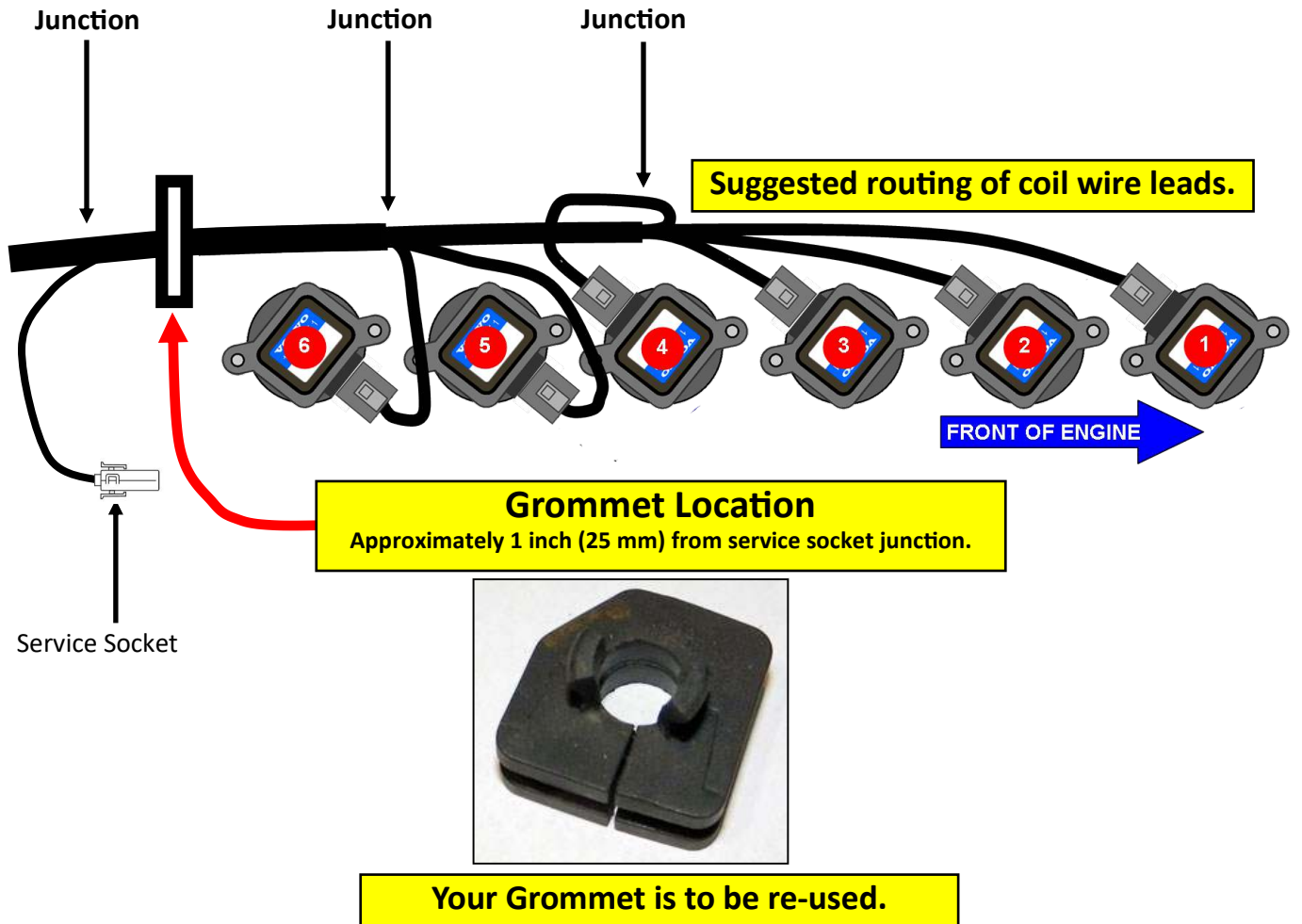


WIRES:

- 1. Red/Wht 2/1
- 2. Grn/Red Re Com

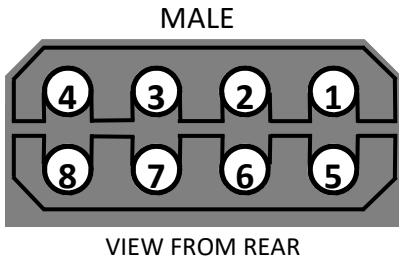
C2 Ign power stage 2 pin 1.
55-pole pin E1 + Grn/Red commons.

Ignition Coil Harness Routing and Grommet



27

8-Pole MALE Bullet Connector (B4) Connector for Automatic Transmission.

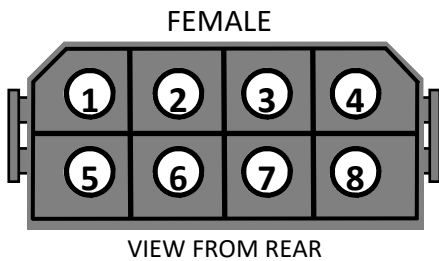


WIRES:

- | | | |
|------------|-------|------------------|
| 1. Grn | 1/C9 | 55-pole pin C9. |
| 2. Gry/Org | 1/C10 | 55-pole pin C10. |
| 3. Yel | 1/C11 | 55-pole pin C11. |
| 4. Pnk | 1/C12 | 55-pole pin C12. |
| 5. Brn/Blk | 1/C13 | 55-pole pin C13. |
| 6. — | | |
| 7. — | | |
| 8. — | | |

28

8-Pole FEMALE Bullet Connector (B5) Connector for Automatic Transmission.

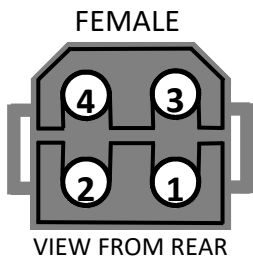


WIRES:

- | | | |
|----------------|-------|-------------------------|
| 1. Blu/Yel-1.5 | 1/C14 | 55-pole pin C14. |
| 2. Gry/Blk-1.5 | 1/C15 | 55-pole pin C15. |
| 3. Blu | 5b | 5b Starter 50 terminal. |
| 4. Blu/Pnk-1.5 | 1/D1 | 55-pole pin D1. |
| 5. Blu/Gry | 1/C5 | 55-pole pin C5. |
| 6. Brn/Wht | 1/C6 | 55-pole pin C6. |
| 7. Grn/Brn | 1/C7 | 55-pole pin C7. |
| 8. Grn/Wht | 1/C8 | 55-pole pin C8. |

29

4-Pole Female Bullet Connector (A35) For Engine Speed Sensor and AW30 Oil Temp Sensor.



WIRES:

- | | | |
|------------|------|--|
| 1. Blk/Wht | 1/C1 | 55-pole pin C1 (for Engine speed sensor). |
| 2. Grn/Blk | 1/C2 | 55-pole pin C2 (for Engine speed sensor). |
| 3. Red/Wht | 1/C3 | 55-pole pin C3 (for Oil temp sensor AW30). |
| 4. Org/Wht | 1/C4 | 55-pole pin C4 (for Oil temp sensor AW30). |