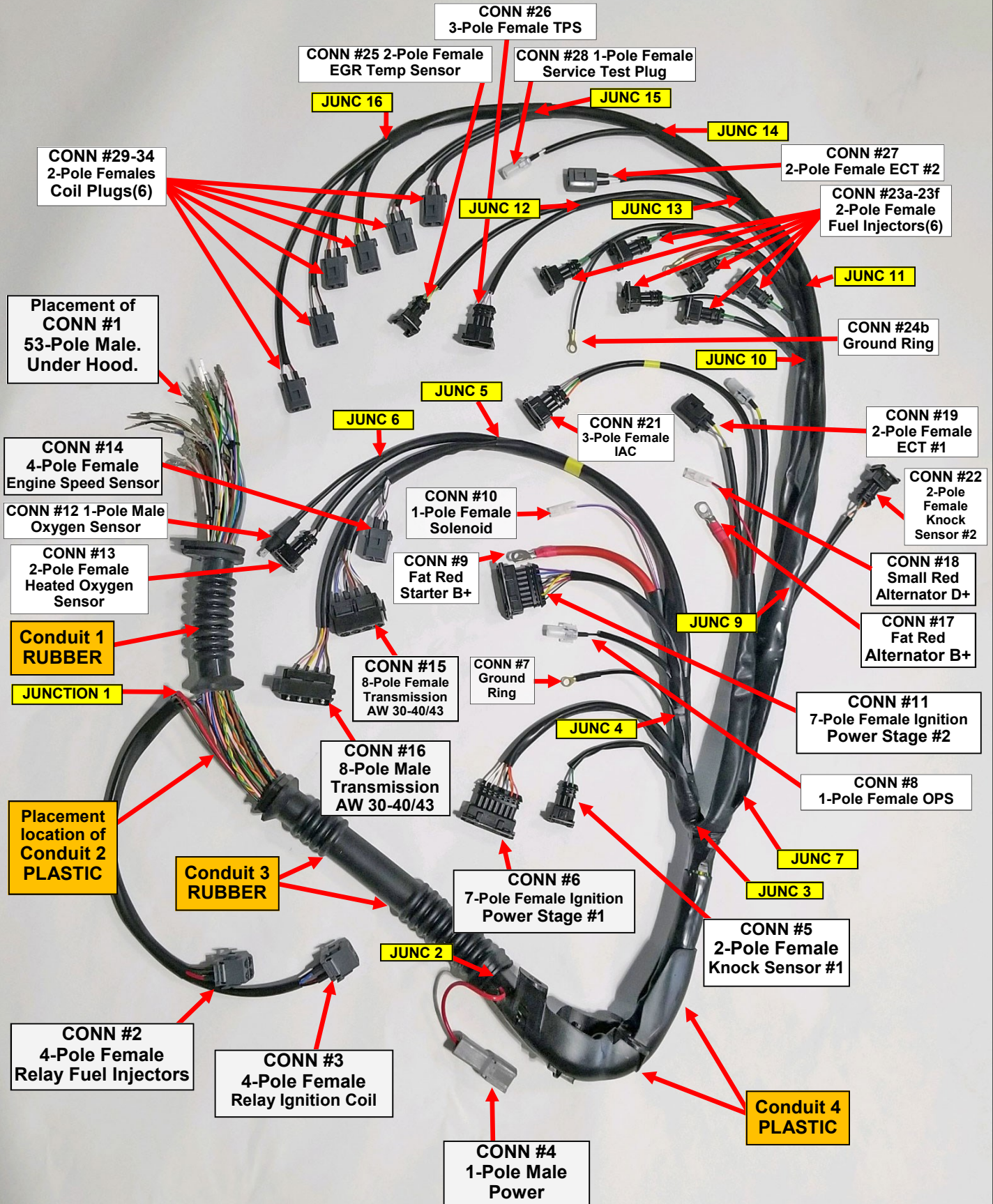
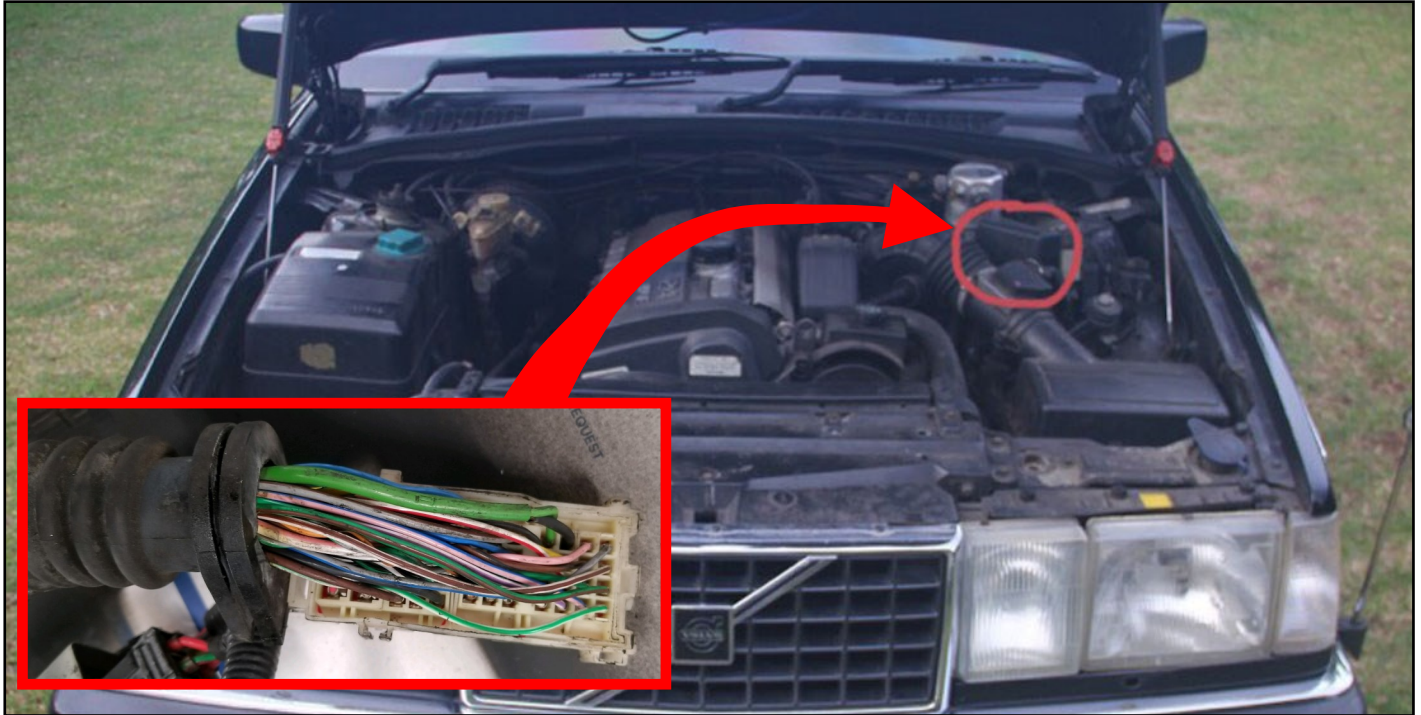


960 Engine Wire Harness, PN 9128642, with 53-Pole Male Connector Motronic Multiport Fuel Injection (MFI) with EGR.

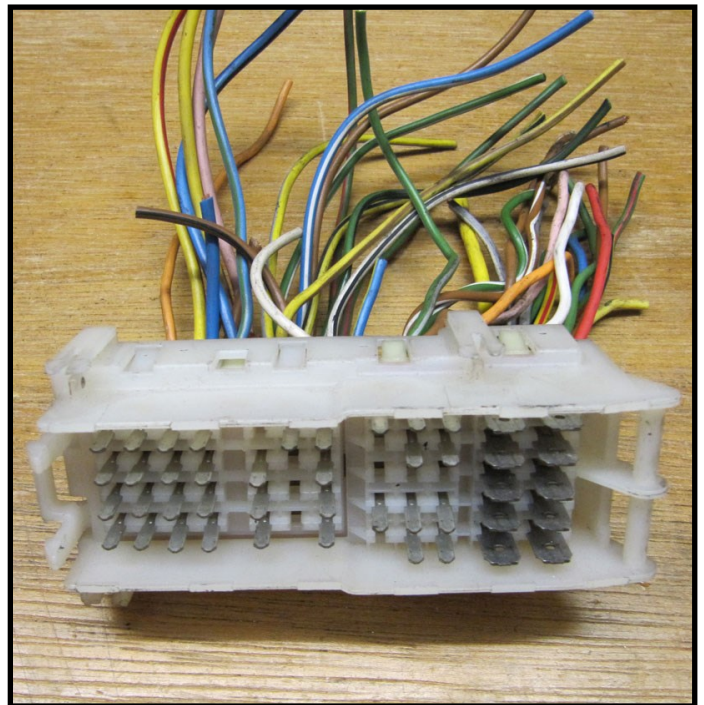
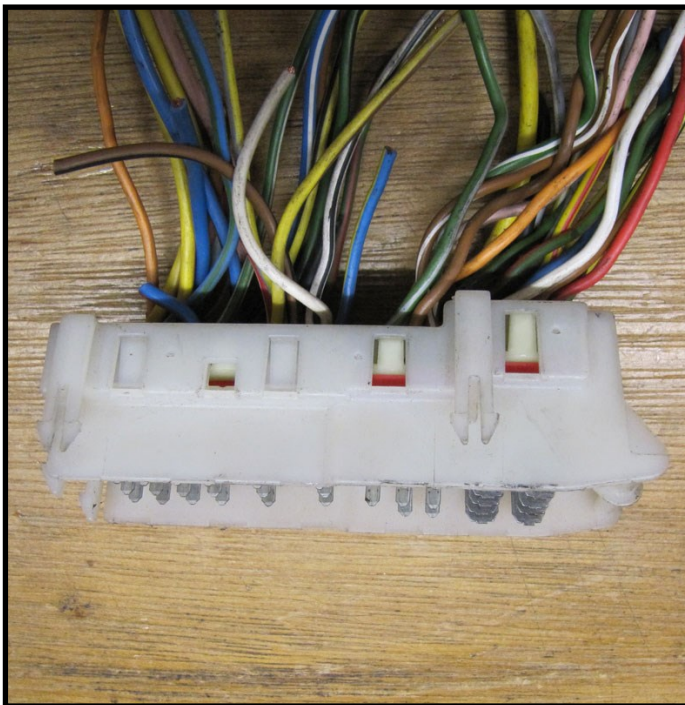


960 Engine Wire Harness, PN 9128642, with 53-Pole Male Connector. Motronic Multiport Fuel Injection (MFI) with EGR. 53-Pole Connector Exchange

The large 53-pole male harness connector at the head of this harness is **NO LONGER AVAILABLE**. The only possible way to complete this harness build is for a customer installed a USED PLUG. This connector is found under the hood under the **black plastic cover** shown here. See page 4 for wire order.



As an option, a customer may send a used connector and it will be installed for you. If you send it, it should be sent complete, with all wires cut in a convenient place as shown below. You should not remove terminals or disassemble the connector if you're sending one to be installed.



960 Engine Wire Harness, PN 9128642, with 53-Pole Male Connector. Motronic Multiport Fuel Injection (MFI) with EGR.

Plastic Conduits

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 this conduit from your car. It's made to split apart, so it can be reassembled on the new harness and then secured with a nylon zip-tie as originally done.



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.

8



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

The below example shows two wires. The Blk/Wht wire shows a destination of 11/3, which means the OTHER end of this wire goes to Connector 11, Position 3, which is at Ignition Power Stage 2.

The Grn/Red wire shows a destination of 3/3, which means the OTHER end of this wire goes to Connector 3, Position 3, which is at the 4-Pole Connector for Relay Ignition Coil.



WIRES:

- | | | |
|------------|------|-------------------------------|
| 1. Blk/Wht | 11/3 | Ignition Power Stage 2 |
| 2. Grn/Red | 3/3 | 4-Pole Female Relay Connector |

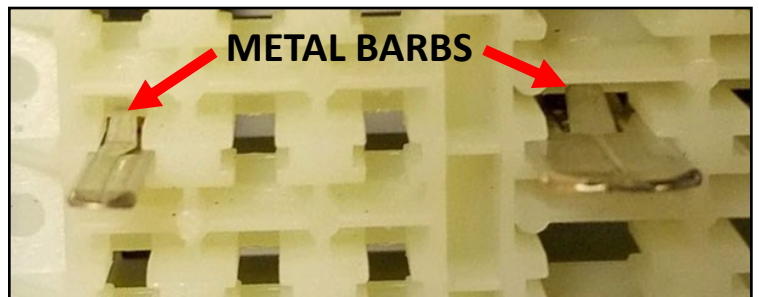
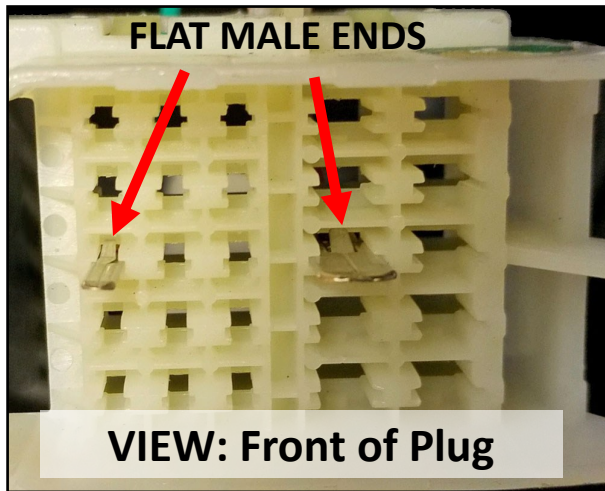
REMOVING TERMINALS FROM THE 53-POLE CONNECTOR

Inspect your connector and note the variety of wire colors. Note that there are a few colors that are the **same for two or more wires**. For those wires, you should **tag them with tape** so you'll know what position they belong to.

Duplicate Colors: 11 Pink(fat) and 46 Pink(thin). 16 Grn/Gray, 28 Grn/Gry, 33 Grn/Gry, and 36 Grn Gry. 19 Red/Wht and 44 Red/Wht. 20 Blu and 26 Blu. 22 Blk, 25 Blk(fat), 39 Blk, and 42 Blk. 37 Blk/Wht, 41 Blk/Wht, and 51 Blk/Wht. 38 Grn(fat) and 48 Grn. **If a wire destination needs to be checked, you can use an Ohm meter to check continuity to the noted destination.**

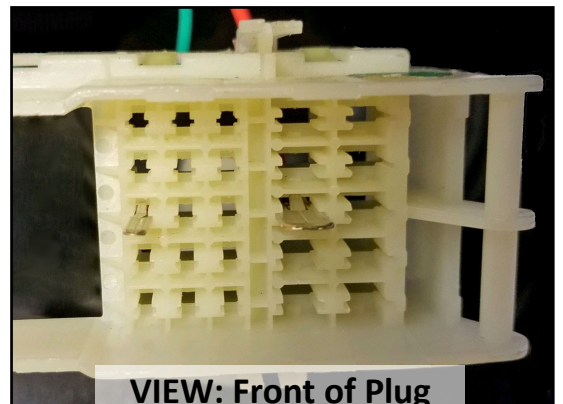
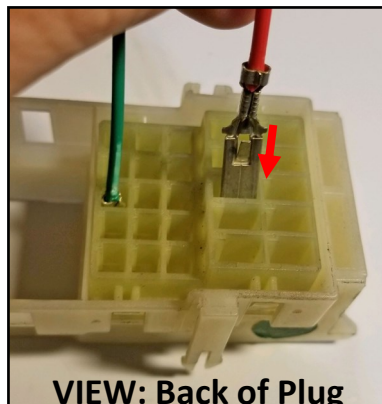
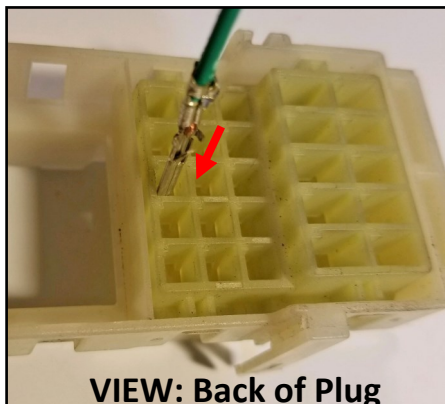
View the FRONT of the connector so you can see the flat male ends of the terminals. You will see that there are **two different sizes of terminals**. Each terminal has a metal barb or hook, which holds or locks the terminal in the connect- or housing. Using a sharp pick tool, insert it into one of the terminal holes from the FRONT (shown below) and gently depress the barb of a terminal, while at the same time gently pulling on the wire from the REAR. There is one barb sticking up on each terminal. When a barb is depressed, that terminal will be released and may be removed.

Release and remove all terminals and wires from the connector.



INSERTING NEW TERMINALS

You may now begin inserting new wire terminals from your new harness into the **BACK** of the plug as shown below. **When each terminal is inserted fully, it will click and lock into place.** It will not make a difference which direction the barb is facing. Follow the wire color order on the next page.



1

960 Engine Wire Harness PN 9128642 Connector #1 53-Pole Male

Main male harness connector found under hood.

VIEW FROM FRONT

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	
30	31	32	33	
34	35	36	37	
38	39	40	41	
42	43	44	45	
46	47	48	49	
50	51	52	53	

VIEW FROM BACK
(WIRES)

5	4	3	2	1
10	9	8	7	6
15	14	13	12	11
20	19	18	17	16
25	24	23	22	21
29	28	27	26	
33	32	31	30	
37	36	35	34	
41	40	39	38	
45	44	43	42	
49	48	47	46	
53	52	51	50	

Pos.	Color	To Wire Location
1	Pink (thin)	13/1 Heated Oxygen Sensor.
2	Yel/Wht	19/1 Coolant Sensor (ECT).
3	Brn/Gry	19/2 Coolant Sensor (ECT).
4	Blk (thin)	8 Oil Pressure Sender.
5	Red	18 Alternator D+.
6	not used	
7	not used	
8	Gry/Wht	27/2 Coolant Sensor (ECT).
9	Grn/Gry	27/1 Coolant Sensor (ECT).
10	Red/Gry	21/1 Idle Air Control Valve (IAC).
11	Pink (fat)	15/3 8-Pole Female (Start Inhibitor Switch AW30-40/43).
12	Blk/Org	21/3 Idle Air Control Valve (IAC).
13	Grn/Yel (fat)	20 AC Compressor.
14	Brn	24a Ground Ring.
15	Brn	24a Ground Ring.
16	Grn/Gry	26/1 Throttle Position Sensor (TPS).
17	Violet	26/3 Throttle Position Sensor (TPS).
18	Blu/Wht	6/5 Ignition Power Stage 1.
19	Red/Wht	6/7 Ignition Power Stage 1.
20	Blu	11/2 Ignition Power Stage 2.
21	Red	11/5 Ignition Power Stage 2.
22	Blk	11/7 Ignition Power Stage 2.
23	Blk/Pink	26/2 Throttle Position Sensor (TPS).
24	Pink/Wht (fat)	23a/2, 23b/2, 23d/2 Fuel Injectors (Cyl 3, 5 and 6).
25	Blk (fat)	24b Ground Ring.
26	Blu	3/1 Relay Ignition Coil.
27	Gry	5/1 Knock Sensor 1.
28	Grn/Gry	5/2 Knock Sensor 1
29	Brn/Org	22/1 Knock Sensor 2.
30	Blk/Gry	15/2 8-Pole Female (Reverse Light Switch AW30-40/43).
31	Red/Grn (fat)	2/4 Relay Fuel Injectors.
32	Blk/Yel	25/2 EGR Temp Sensor.
33	Grn/Gry	22/2 Knock Sensor 2.
34	Brn/Gry (fat)	23c/2, 23e/2, 23f/2 Fuel Injectors (Cyl 1, 2 and 4)
35	Blk/Blu	15/1 8-Pole Female (Reverse Light Switch AW30-40/43).
36	Grn/Gry	25/1 EGR Temp Sensor.
37	Blk/Wht	6/2 Ignition Power Stage 1.

1

53-Pole Connector (continued)

Male harness connector found under hood.

VIEW FROM FRONT

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	
30	31	32	33	
34	35	36	37	
38	39	40	41	
42	43	44	45	
46	47	48	49	
50	51	52	53	

Pos.	Color	To Wire Location
38	Grn (fat)	12 Oxygen Sensor (shielded wire)
39	Blk	2/1 Relay Fuel Injectors.
40	Blk/Grn	14/2 Engine Speed Sensor.
41	Blk/Wht	14/1 Engine Speed Sensor.
42	Blk	Shield for 38 Grn Shielded Wire.
43	Yel	16/3 8-Pole Male (Lock Up Solenoid AW30-40/43).
44	Red/Wht	14/3 Engine Speed Sensor.
45	Viol/Wht	14/4 Engine Speed Sensor.
46	Pink	16/4 8-Pole Male (System Pressure Solenoid AW30-40/43).
47	Blk/Brn	16/5 8-Pole Male (System Pressure Solenoid AW30-40/43).
48	Grn	16/1 8-Pole Male (Gearchange Solenoid 1 AW30-40/43).
49	Blu/Pink	16/2 8-Pole Male (Gearchange Solenoid 2 AW30-40/43).
50	Blu/Gry	15/5 8-Pole Female (Electr. Control Gear Selector AW30-40/43).
51	Brn/Wht	15/6 8-Pole Female (Electr. Control Gear Selector AW30-40/43).
52	Brn/Grn	15/7 8-Pole Female (Electr. Control Gear Selector AW30-40/43).
53	Grn/Wht	15/8 8-Pole Female (Electr. Control Gear Selector AW30-40/43).

Note that there are a few colors that are the **same for two or more wires**. For those wires, you should **tag them with tape** so you'll know what position they belong to.

Duplicate Colors:

- 11 Pink(fat) and 46 Pink(thin).
- 16 Grn/Gray, 28 Grn/Gry, 33 Grn/Gry, and 36 Grn Gry.
- 19 Red/Wht and 44 Red/Wht.
- 20 Blu and 26 Blu.
- 22 Blk, 25 Blk(fat), 39 Blk, and 42 Blk.
- 37 Blk/Wht, 41 Blk/Wht, and 51 Blk/Wht.
- 38 Grn(fat) and 48 Grn.

If a wire destination needs to be checked, you can use an Ohm meter to check continuity to the noted destination.

VIEW FROM BACK
(WIRES)

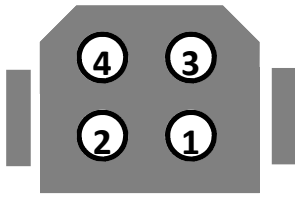
5	4	3	2	1
10	9	8	7	6
15	14	13	12	11
20	19	18	17	16
25	24	23	22	21
29	28	27	26	
33	32	31	30	
37	36	35	34	
41	40	39	38	
45	44	43	42	
49	48	47	46	
53	52	51	50	

2

4-Pole Female Bullet Relay Connector 2

Relay Fuel Injectors 3544322

Near Junction 1.



VIEW FROM REAR

WIRES:

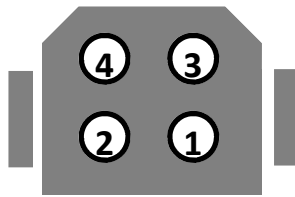
- | | | |
|------------------|-------------|---|
| 1. Blk | 1/39 | 53-Pole Connector |
| 2. Red (fat) | 2/3, 4 | 1-Pole Male Power Connector |
| 3. Red (fat) | 2/2, 4, 3/4 | 1-Pole Male Power, 4-Pole Relay Connector 3 |
| 4. Red/Grn (fat) | 1/31 | 53-Pole Connector |

3

4-Pole Female Bullet Relay Connector 3

Relay Ignition Coil 3544322

Near Junction 1.



VIEW FROM REAR

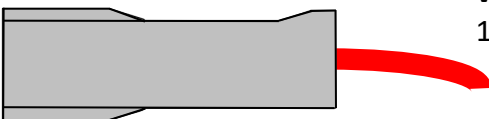
WIRES:

- | | | |
|------------------|------------------------------------|--------------------------|
| 1. Blu | 1/26 | 53-Pole Connector |
| 2. Blk | 7 | Ground Ring |
| 3. Red/Grn (fat) | 29/2, 30/2, 31/2, 32/2, 33/2, 34/2 | Coils (x6) |
| 4. Red (fat) | 2/3 | 4-Pole Relay Connector 2 |

4

1-Pole Male Power Connector

Near Junction 2.



WIRE:

- | | | |
|--------------|---------------|--------------------------------|
| 1. Red (fat) | 2/2, 2/3, 3/4 | 4-Pole Relay Connector 2 and 3 |
|--------------|---------------|--------------------------------|

5

2-Pole Female EFI Connector

Knock Sensor 1

Near Junction 3.



VIEW FROM REAR

WIRES:

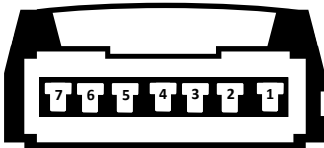
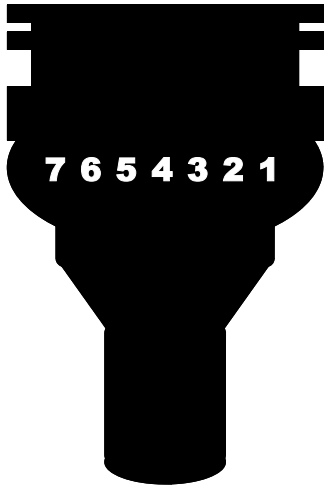
- | | | |
|------------|------|-------------------|
| 1. Gry | 1/27 | 53-Pole Connector |
| 2. Grn/Gry | 1/28 | 53-Pole Connector |

6

7-Pole Female EFI Connector

Ignition Power Stage 1

Near Junction 3.



VIEW FROM REAR

WIRES:

- 1. Red/Wht 28 1-Pole Test Connector, 34/1 Coil #1
- 2. Blk/Wht 1/37 53-Pole Connector
- 3. Brn/Yel 30/1 Coil #5
- 4. Blk 7 Ground Ring
- 5. Blu/Wht 1/18 53-Pole Connector
- 6. Org 32/1 Coil #3
- 7. Red/Wht 1/19 53-Pole Connector

7

Ground Ring (6 mm)

Near Junction 4.



WIRE:

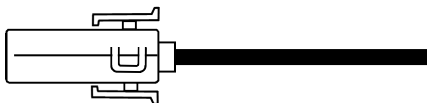
- 1. Blk (fat) 3/2 4-Pole Relay Plug 3
- 6/4 7-Pole Female Connector, Power Stage 1
- 11/4 7-Pole Female Connector, Power Stage 2
- 13/2 2-Pole Female Connector, Heated Oxygen Sens.

8

1-Pole Female Bullet with Insulator

Oil Pressure Sender

Near Junction 4.



WIRE:

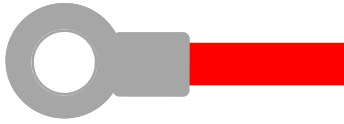
- 1. Blk 1/4 53-Pole Connector

9

Fat Starter Cable with 8 mm Ring

Starter B+

Near Junction 4.



WIRE:

- 1. Red (fat) 17 Alternator B+

10

6 mm Female Terminal with Insulator

Starter Solenoid

Near Junction 4.



WIRE:

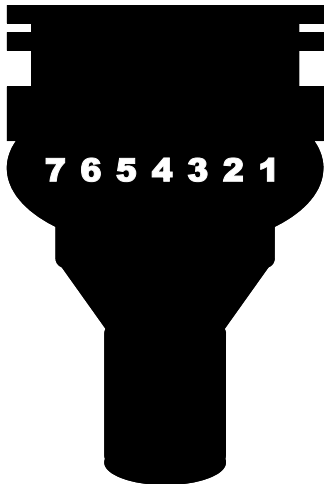
- 1. Blu/Pink 15/4 8-Pole Female Connector

11

7-Pole Female EFI Connector

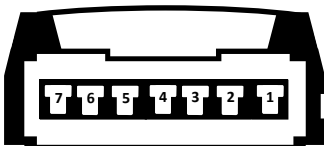
Ignition Power Stage 2

Near Junction 4.



WIRES:

- 1. Violet 29/1 Coil #6
- 2. Blu 1/20 53-Pole Connector
- 3. Blk/Wht 33/1 Coil #2
- 4. Blk 7 Ground Ring
- 5. Red 1/21 53-Pole Connector
- 6. Grn/Yell 31/1 Coil #4
- 7. Blk 1/22 53-Pole Connector

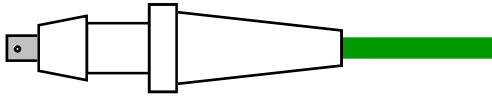


VIEW FROM REAR

12

Oxygen Sensor Male Connector

Near Junction 5.



WIRE:

- 1. Grn (fat) (shielded) 1/38 53-Pole Connector

13

2-Pole Female EFI Connector

Oxygen Sensor Heater

Near Junction 5.



VIEW FROM REAR

WIRES:

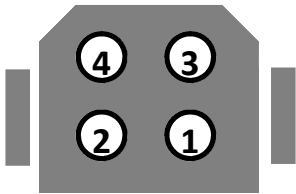
- 1. Pink 1/1 53-Pole Connector
- 2. Blk 7 Ground Ring

14

4-Pole Female Bullet Connector

Engine Speed Sensor

Near Junction 6.



VIEW FROM REAR

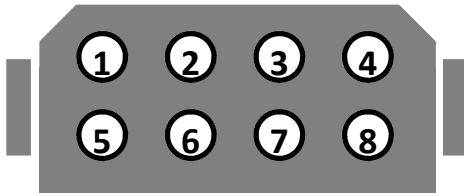
WIRES:

- 1. Blk/Wht 1/41 53-Pole Connector
- 2. Blk/Grn 1/40 53-Pole Connector
- 3. Red/Wht 1/44 53-Pole Connector
- 4. Viol/Wht 1/45 53-Pole Connector

15

8-Pole FEMALE Bullet Connector Transmission Connector AW 30-40/43

Near Junction 6.



VIEW FROM REAR

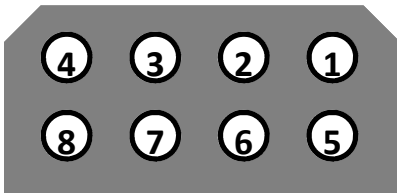
WIRES:

1. Blk/Blu	1/35	53-Pole Connector
2. Blk/Gry	1/30	53-Pole Connector
3. Pink (fat)	1/11	53-Pole Connector
4. Blu/Pink (fat)	10	Starter Solenoid
5. Blu/Gry	1/50	53-Pole Connector
6. Brn/Wht	1/51	53-Pole Connector
7. Brn/Grn	1/52	53-Pole Connector
8. Grn/Wht	1/53	53-Pole Connector

16

8-Pole MALE Bullet Connector Transmission Connector AW 30-40/43

Near Junction 6.



VIEW FROM REAR

WIRES:

1. Grn	1/48	53-Pole Connector
2. Blu/Pink	1/49	53-Pole Connector
3. Yel	1/42	53-Pole Connector
4. Pink	1/46	53-Pole Connector
5. Blk/Brn	1/47	53-Pole Connector
6. empty		
7. empty		
8. empty		

17

Fat Alternator Cable with 8 mm Ring Alternator B+

Near Junction 8.



WIRE:

1. Red (fat)	9	Starter B+
--------------	---	------------

18

6 mm Female Terminal with Insulator

Alternator D+

Near Junction 8.



WIRE:

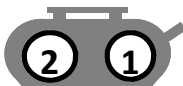
- | | | |
|--------|------|-------------------------|
| 1. Red | 15/4 | 8-Pole Female Connector |
|--------|------|-------------------------|

19

2-Pole Female Bullet Connector (Special Shape)

Coolant Temp Sensor 1

Near Junction 8.



VIEW FROM REAR



WIRES:

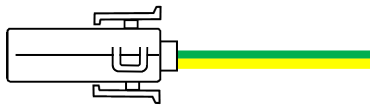
- | | | |
|------------|-----|-------------------|
| 1. Wht/Yel | 1/2 | 53-Pole Connector |
| 2. Brn/Gry | 1/3 | 53-Pole Connector |

20

1-Pole Female Bullet with Insulator

Air Conditioning Compressor

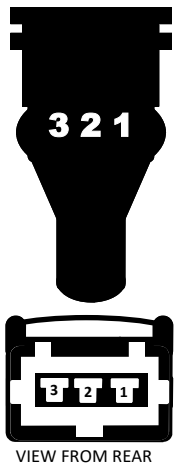
Near Junction 8.



WIRE:

- | | | |
|------------------|------|-------------------|
| 1. Grn/Yel (fat) | 1/13 | 53-Pole Connector |
|------------------|------|-------------------|

21



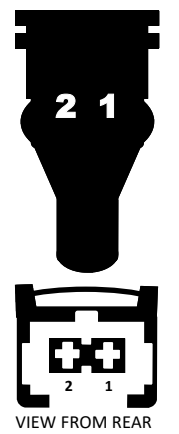
**3-Pole Female EFI Connector
Idle Air Control Valve (IAC)**

Near Junction 8.

WIRES:

- | | | |
|------------|----------------------|---------------------|
| 1. Red/Gry | 1/10 | 53-Pole Connector |
| 2. Grn | 23a, b, c, d, e, f/1 | Fuel Injectors (x6) |
| 3. Blk/Org | 1/12 | 53-Pole Connector |

22



2-Pole Female EFI Connector

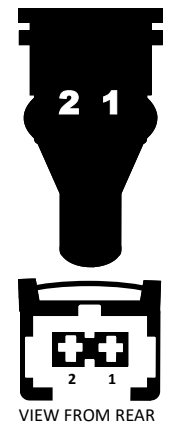
Knock Sensor 2

Near Junction 9.

WIRES:

- | | | |
|------------|------|-------------------|
| 1. Brn/Org | 1/29 | 53-Pole Connector |
| 2. Grn/Gry | 1/33 | 53-Pole Connector |

23



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

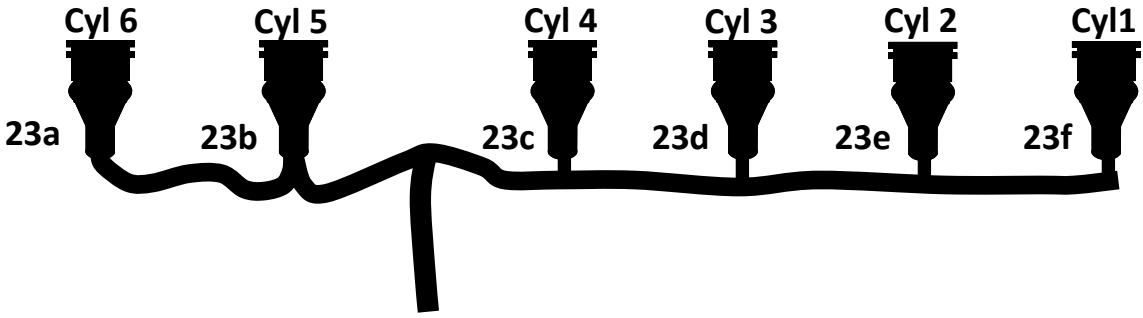
Near Junction 10

WIRES (Cylinders 1, 2 and 4):

- | | | |
|--------|------|-------------------|
| 1. Grn | 21/2 | IAC valve |
| 2. Gry | 1/34 | 53-Pole Connector |

WIRES (Cylinders 3, 5 and 6):

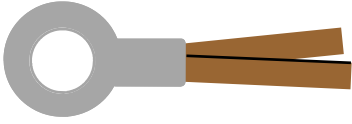
- | | | |
|--------|------|-------------------|
| 1. Grn | 21/2 | IAC valve |
| 2. Gry | 1/24 | 53-Pole Connector |



24

Ground Rings

Connector 24a:



WIRES (x2):

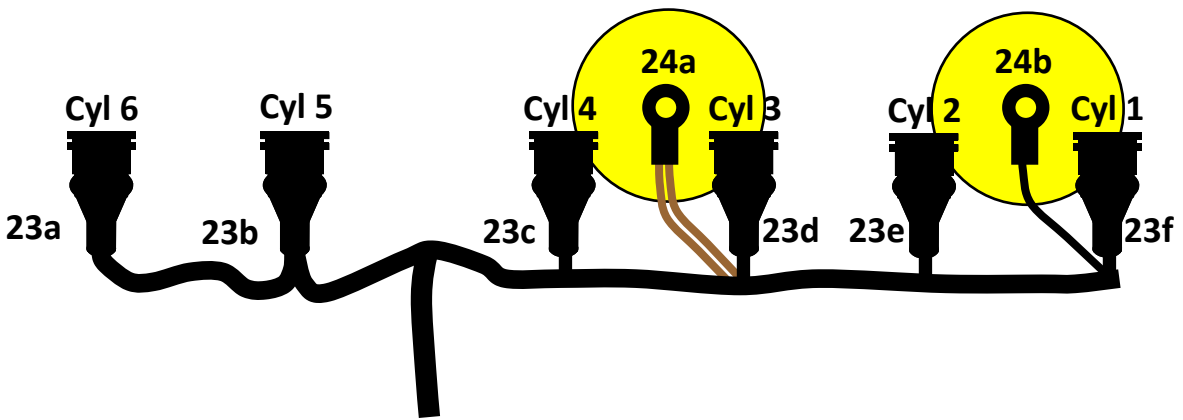
- 1. Brn (fat) 1/14 53-Pole Connector
- 2. Brn (fat) 1/15 53-Pole Connector

Connector 24b:



WIRE:

- 1. Blk (fat) 1/25 53-Pole Connector

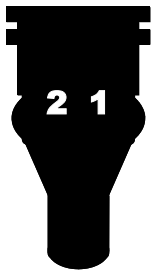


25

2-Pole Female EFI Connector

EGR Temperature Sensor

Near Junction 12.

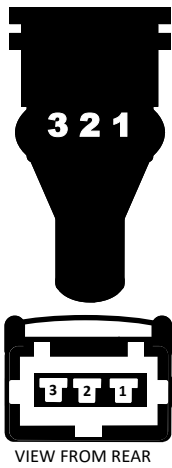


VIEW FROM REAR

WIRES:

- 1. Grn/Gry 1/36 53-Pole Connector
- 2. Blk/Yel 1/32 53-Pole Connector

26



3-Pole Female EFI Connector

Throttle Position Sensor (TPS)

Near Junction 12.

WIRES:

- | | | |
|-------------|------|-------------------|
| 1. Grn/Gry | 1/16 | 53-Pole Connector |
| 2. Blk/Pink | 1/23 | 53-Pole Connector |
| 3. Violet | 1/17 | 53-Pole Connector |

27



2-Pole Female Bullet Connector

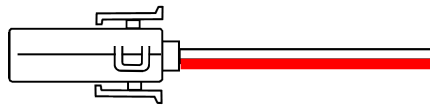
Coolant Temp Sensor 2

Near Junction 13.

WIRES:

- | | | |
|------------|-----|-------------------|
| 1. Grn/Gry | 1/9 | 53-Pole Connector |
| 2. Wht/Gry | 1/8 | 53-Pole Connector |

28



1-Pole Female Bullet with Insulator

Service Test Plug for Cylinder 1

Near Junction 14.

WIRE:

- | | | |
|------------|-----|------------------------|
| 1. Red/Wht | 6/1 | Ignition Power Stage 1 |
|------------|-----|------------------------|

29

2-Pole Female Bullet Connector

Ignition Coil #6

Near Junction 15.



WIRES:

- | | | |
|------------|------|---------------------------------|
| 1. Violet | 11/1 | Ignition Power Stage 2 |
| 2. Grn/Red | 3/3 | 4-Pole Female Relay Connector 3 |

30

2-Pole Female Bullet Connector

Ignition Coil #5

Near Junction 15.



WIRES:

- | | | |
|------------|-----|---------------------------------|
| 1. Brn/Yel | 6/3 | Ignition Power Stage 1 |
| 2. Grn/Red | 3/3 | 4-Pole Female Relay Connector 3 |

31

2-Pole Female Bullet Connector

Ignition Coil #4

Near Junction 16.



WIRES:

- | | | |
|------------|------|---------------------------------|
| 1. Grn/Yel | 11/6 | Ignition Power Stage 2 |
| 2. Grn/Red | 3/3 | 4-Pole Female Relay Connector 3 |

32

2-Pole Female Bullet Connector

Ignition Coil #3

Near Junction 16.



WIRES:

- | | | |
|------------|-----|---------------------------------|
| 1. Org | 6/6 | Ignition Power Stage 1 |
| 2. Grn/Red | 3/3 | 4-Pole Female Relay Connector 3 |

33

2-Pole Female Bullet Connector

Ignition Coil #2

Near Junction 16.



WIRES:

- | | | |
|------------|------|---------------------------------|
| 1. Blk/Wht | 11/3 | Ignition Power Stage 2 |
| 2. Grn/Red | 3/3 | 4-Pole Female Relay Connector 3 |

34

2-Pole Female Bullet Connector

Ignition Coil #1

Near Junction 16.



WIRES:

- | | | |
|------------|---------|-----------------------------------|
| 1. Red/Wht | 6/6, 28 | Ignition Power Stage 1, Test Plug |
| 2. Grn/Red | 3/3 | 4-Pole Female Relay Connector 3 |

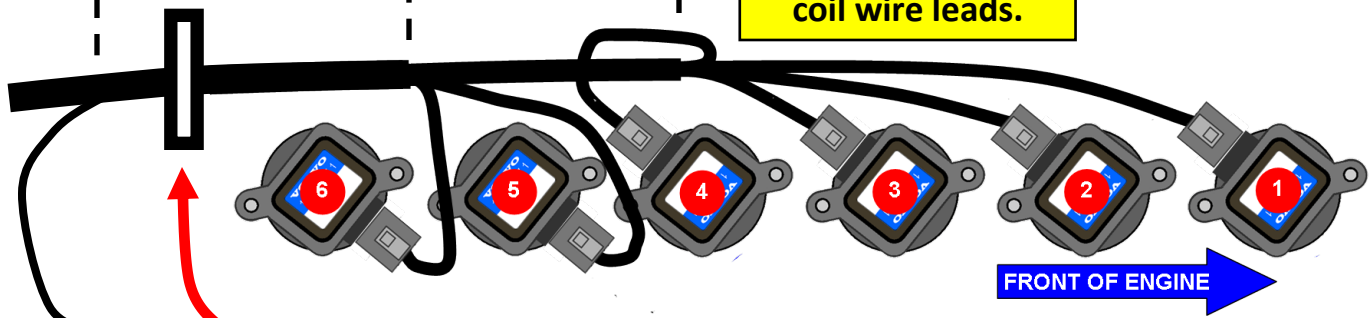
Coil Harness Grommet and Junctions

Junc 14

Junc 15

Junc 16

Correct routing of coil wire leads.



Your Grommet is to be re-used.

Grommet

Approximately 1 inch (25 mm) from Junction 14

