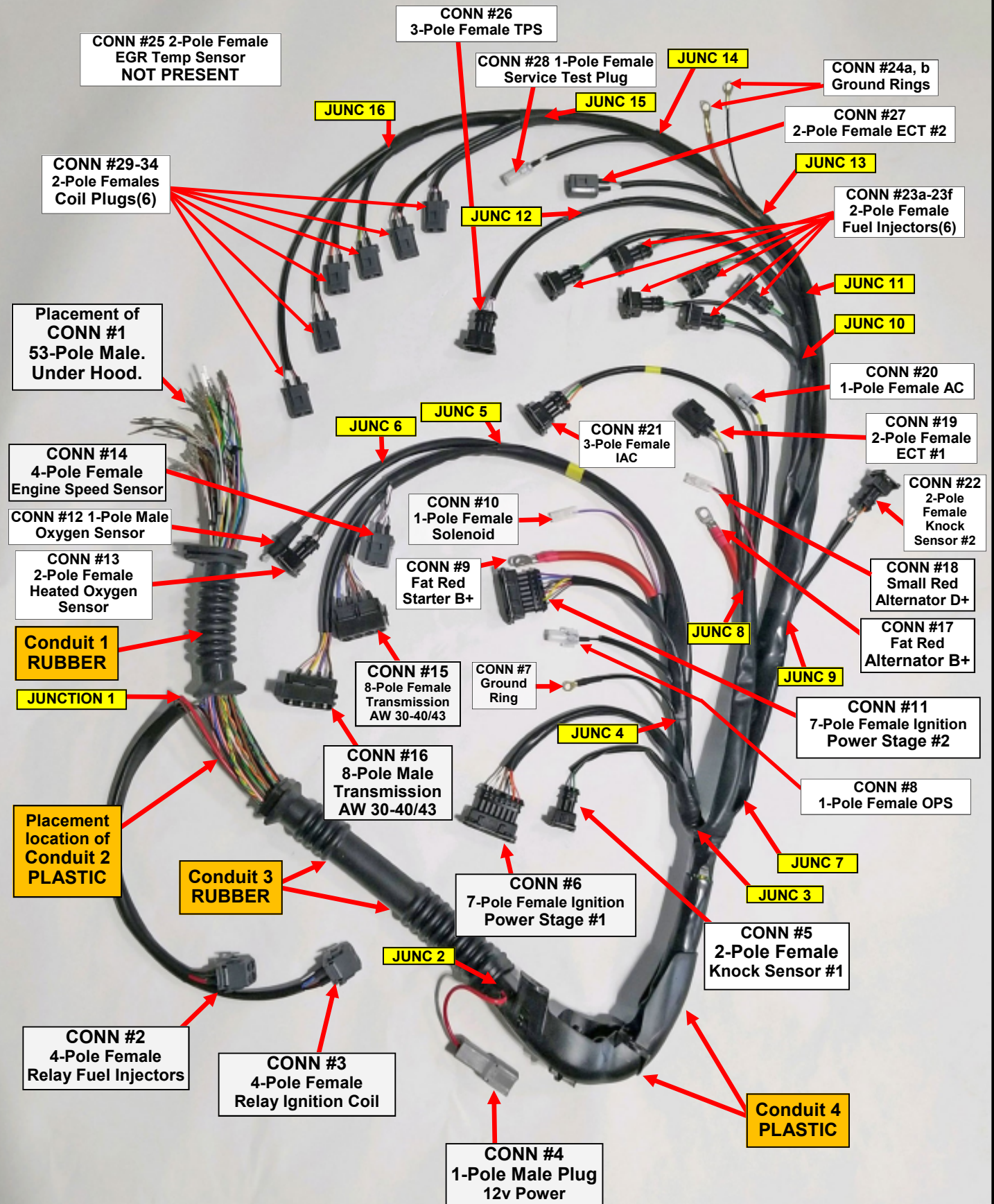
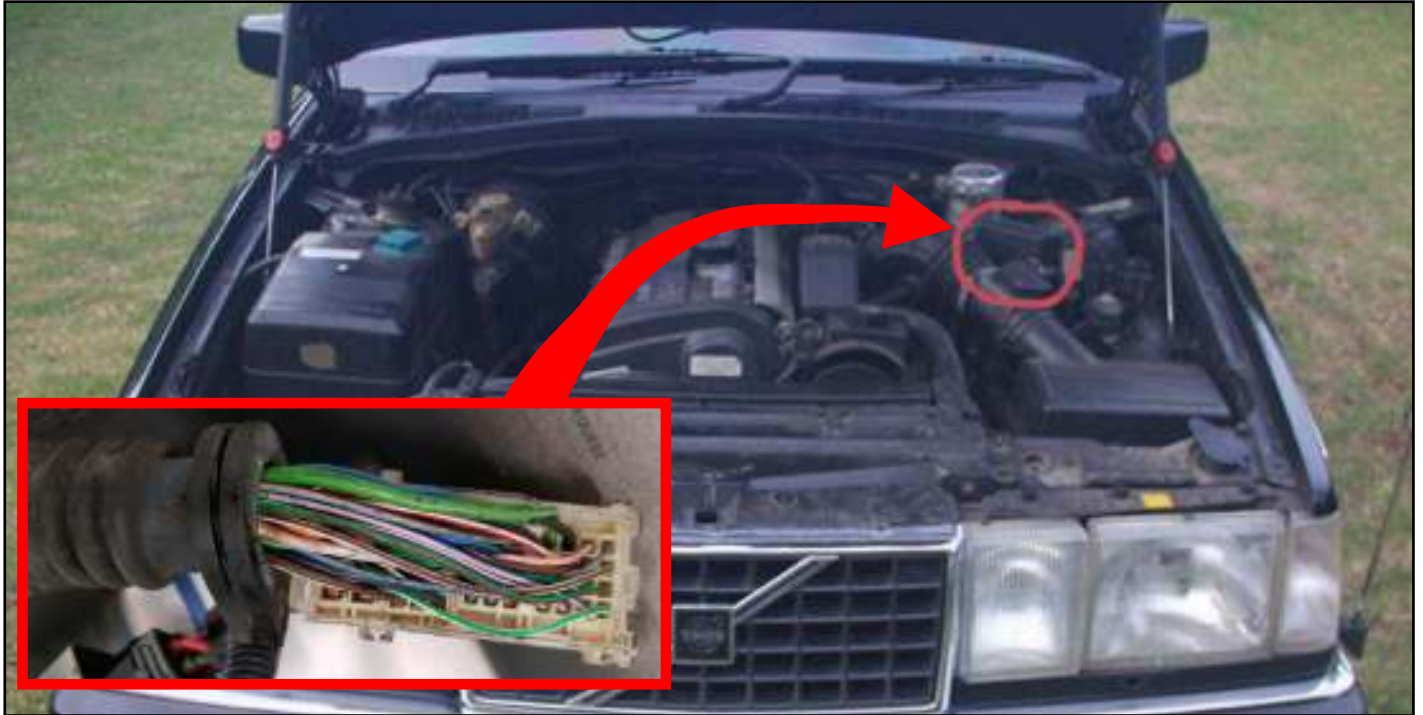


960 Engine Wire Harness, PN 9130428, with 53-Pole Male Connector Motronic Multiport Fuel Injection (MFI) without EGR.

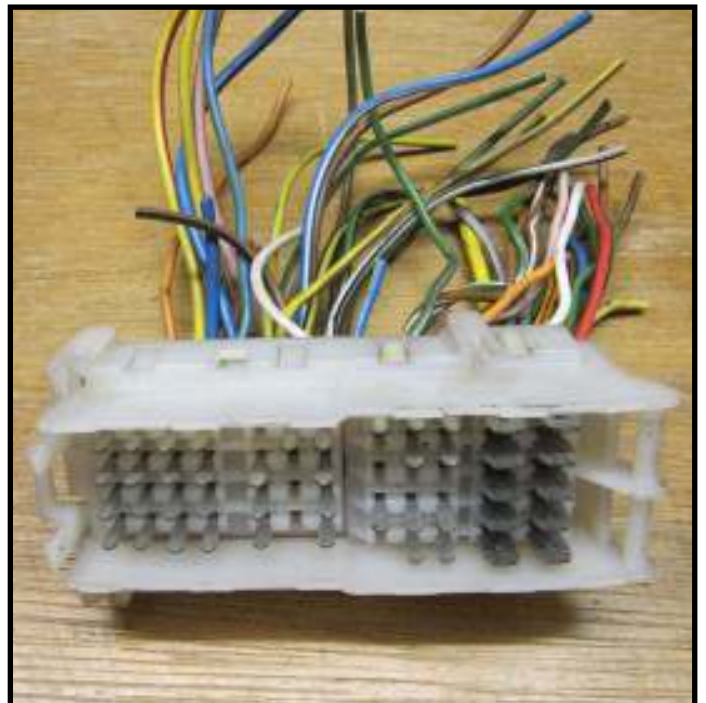
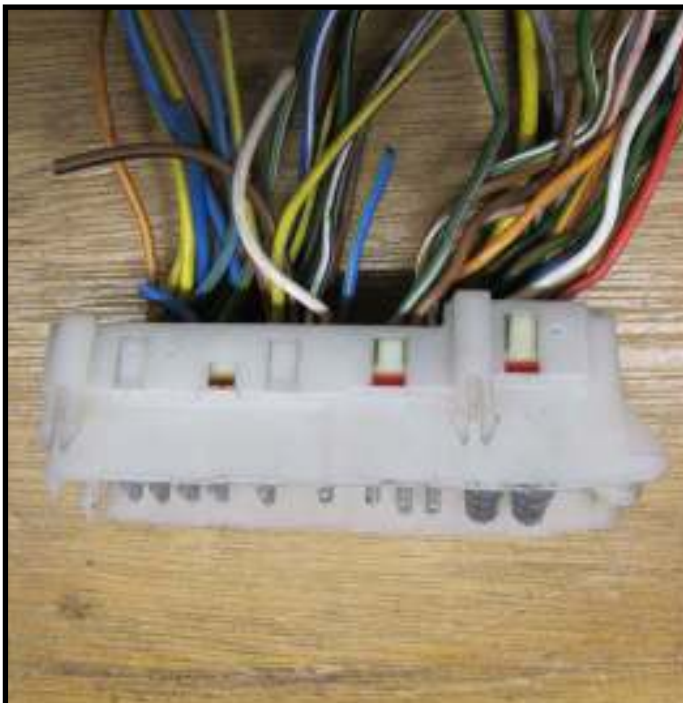


960 Engine Wire Harness, PN 9128642, with 53-Pole Male Connector. Motronic Multiport Fuel Injection (MFI) with EGR. 53-Pole Connector Exchange

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 |

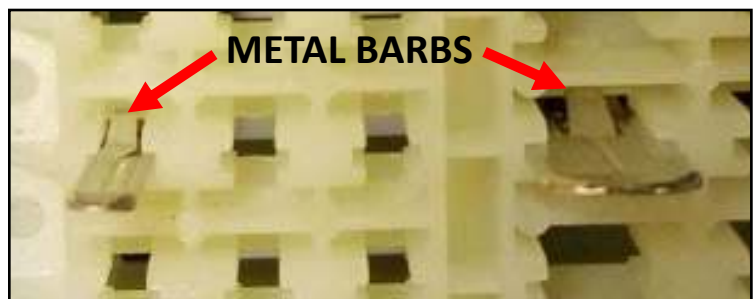
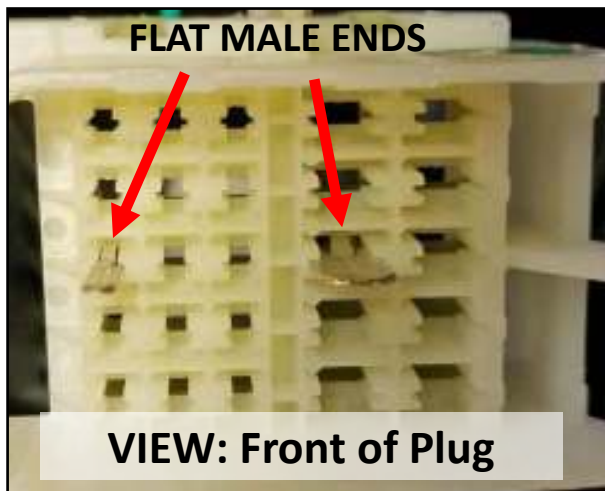
REMOVING TERMINALS FROM THE 53-POLE CONNECTOR

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.**

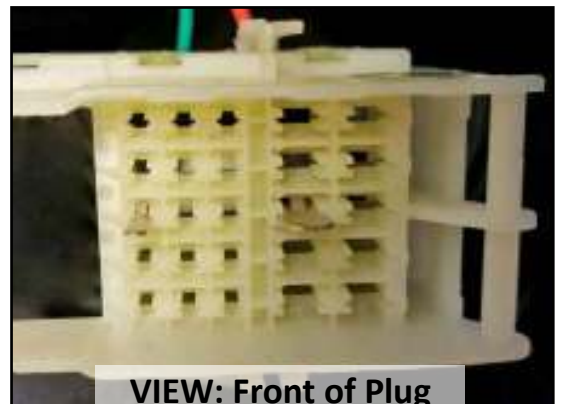
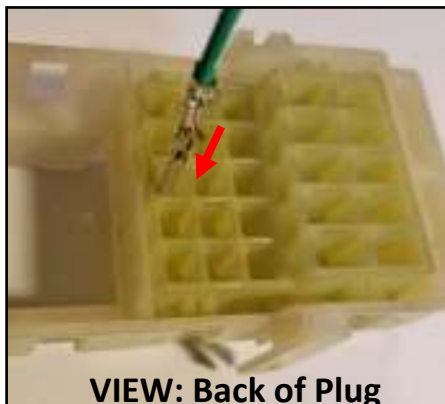
View the **FRONT** of the connector so you can see the flat male ends of the terminals. You will see that there are **two different sizes of terminals**. Each terminal has a metal barb or hook, which holds or locks the terminal in the connect- or housing. Using a sharp pick tool, insert it into one of 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 pages.



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		
7		
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 (thin)	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. To injector 3, 5, 6 GRAY wire (pin 2).
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		Not used. Optional 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. To injector 1, 2, 4 GRAY wire (pin 2).
35	Blk/Blu	15/1 8-Pole Female (Reverse Light Switch AW30-40/43).
36		Not used. Optional Grn/Gray 25/1 EGR Temp Sensor.
37	Blk/Wht	6/2 Ignition Power Stage 1.

53-Pole Male 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	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 wire colors that are the **same for two or more wires**. If you are assembling this connector, for those wires you may need to more closely inspect and **tag them with tape** so you'll know for certain which position they belong to.

Duplicate Colors:

11 Pink(fat wire) and 46 Pink(thin wire).

14 Brn and 15 Brn (2 wires) are interchangeable. Both go to same ground ring.

16 Grn/Gray, 28 Grn/Gry, 33 Grn/Gry.

19 Red/Wht and 44 Red/Wht.

20 Blu and 26 Blu.

22 Blk, 25 Blk(fat), 39 Blk, 42 Blk.

37 Blk/Wht, 41 Blk/Wht, 51 Blk/Wht.

38 Grn and 48 Grn.

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

The following pages will offer some additional guidance for installing new wires into a 53-pole connector.

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	

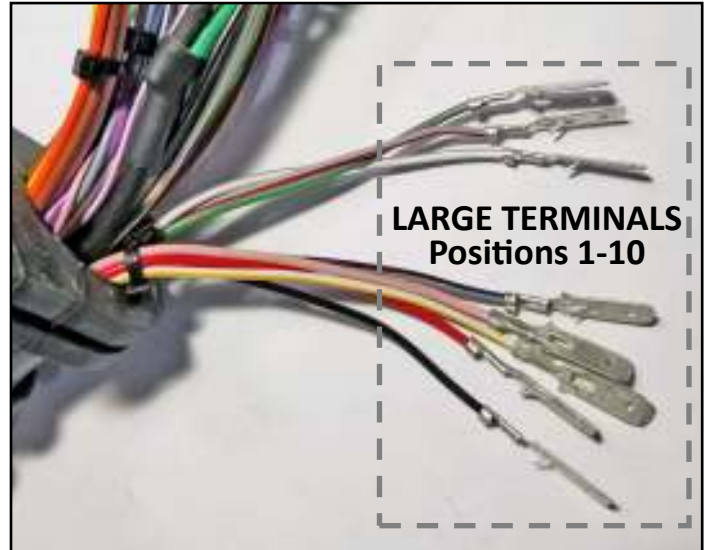
Guide for 53-Pole Male Connector



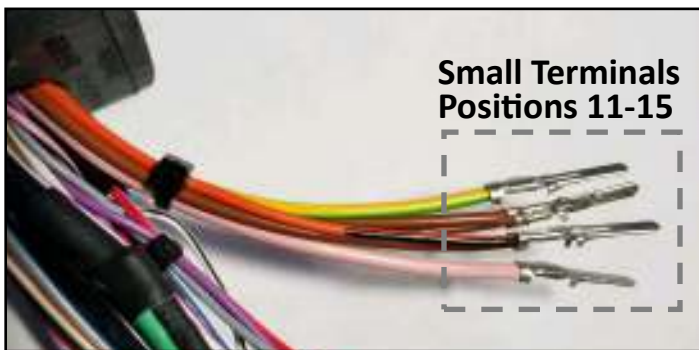
ZIP-TIED GROUPS

If you have received the harness with some wires that are grouped together with some zip-ties, as shown here, These groups will be near each other when inserting to your connector.

Note that **positions 1 through 10** are larger than the others and these positions will receive the below 8 larger terminals.



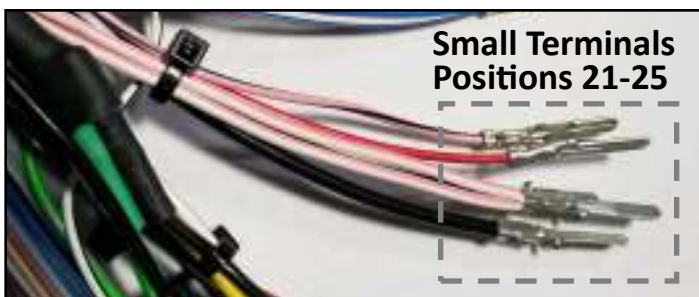
**LARGE TERMINALS
Positions 1-10**



**Small Terminals
Positions 11-15**

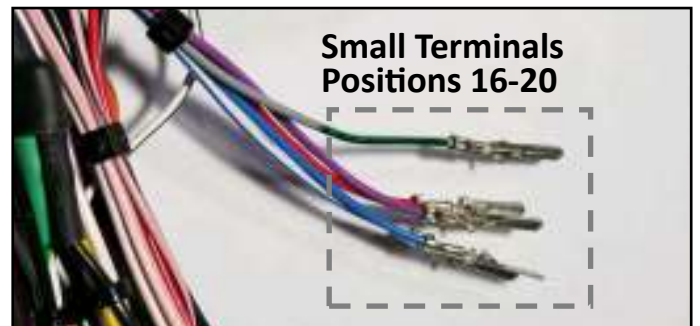
<<< Locate this bundle of 5 wires containing a **FAT PINK wire** and **BROWN wires**. These will be the smaller terminals going to **positions 11-15**.

Locate this next bundle of 5 wires **BELOW** containing a **VIOLET wire** (not Vio/Wht). These will be the smaller terminals going to **positions 16-20**.



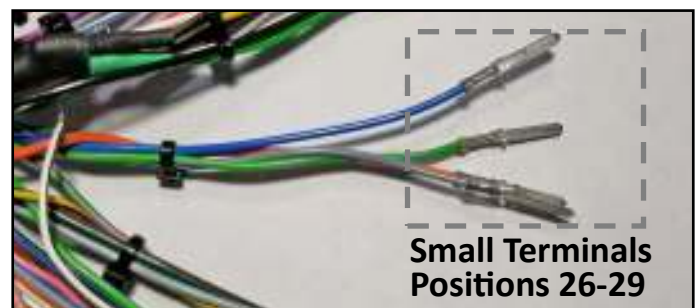
**Small Terminals
Positions 21-25**

Locate this next bundle of 5 wires **BELOW** containing **PINK/WHITE wires**. These will be the smaller terminals going to **positions 21-25**.



**Small Terminals
Positions 16-20**

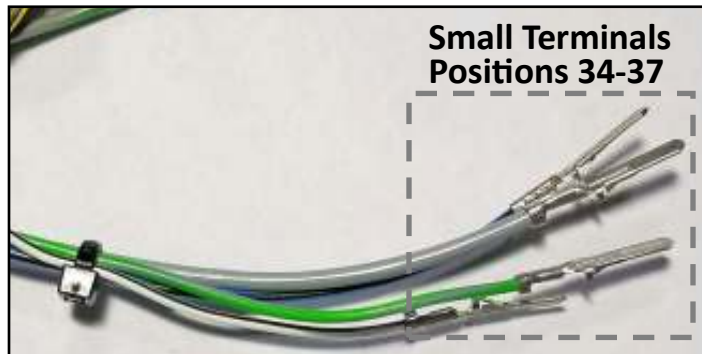
Locate this next bundle of 4 wires **to the RIGHT >>>** containing an **ORANGE/BROWN wire**. These will be the smaller terminals going to **positions 26-29**.



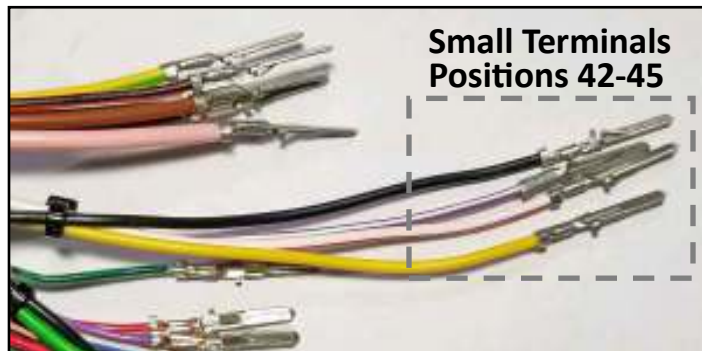
**Small Terminals
Positions 26-29**

Locate this next bundle of 4 wires **to the RIGHT >>>** containing a **FAT RED/GREEN wire**. These will be the smaller terminals going to **positions 30-33**.

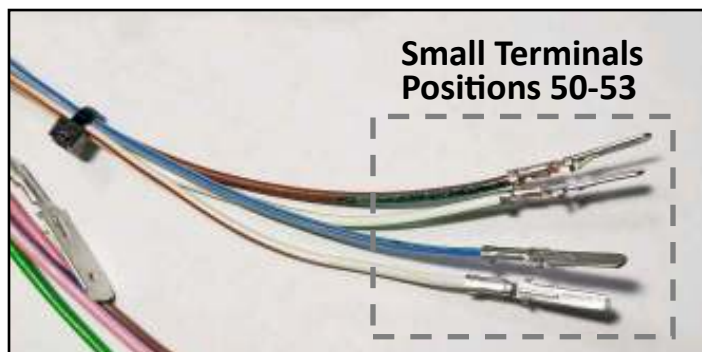
Locate this next bundle of 4 wires **BELOW** containing a **FAT BROWN/GRAY wire**. These will be the smaller terminals going to **positions 34-37**.



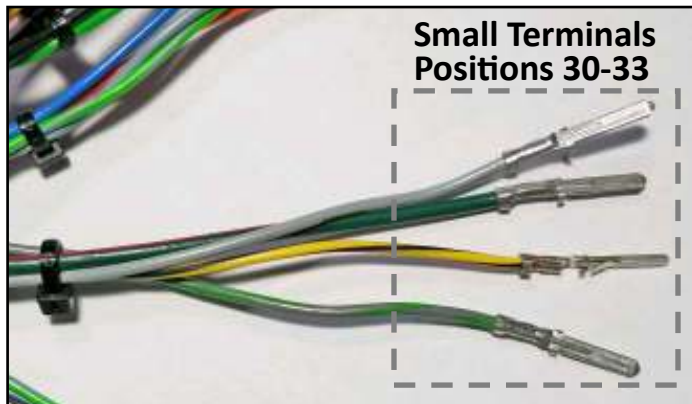
Locate this next bundle of 4 wires **BELOW** containing colors: **GREEN, BLACK, BLACK/BROWN and BLACK/WHITE**. These will be the smaller terminals going to **positions 42-45**.



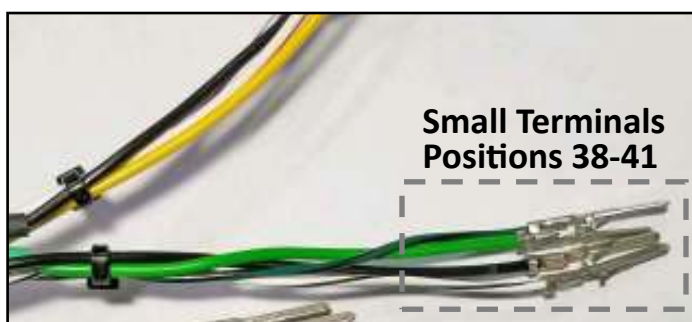
Locate this next bundle of 4 wires **BELOW** containing colors: **BLUE/GRAY, BROWN/WHITE, BROWN/GREEN and GREEN/WHITE**. These will be the smaller terminals going to **positions 50-53**.



Small Terminals Positions 30-33

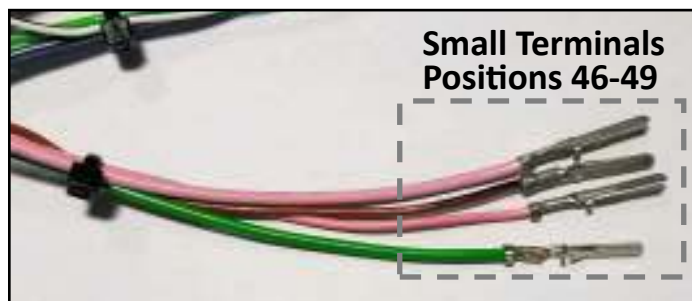


Locate this next bundle of 4 wires **BELOW** containing colors: **GREEN, BLACK, BLACK/BROWN and BLACK/WHITE**. These will be the smaller terminals going to **positions 38-41**.



Small Terminals Positions 38-41

Locate this next bundle of 4 wires **BELOW** containing colors: **PINK, BLACK/BROWN, GREEN and BLUE/PINK**. These will be the smaller terminals going to **positions 46-49**.



Small Terminals Positions 46-49

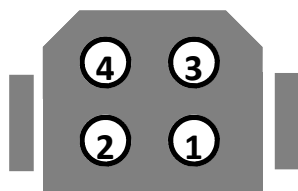
2

4-Pole Female Bullet Relay Connector 2

Relay Fuel Injectors 3544322

Near Junction 1.

FEMALE



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 |

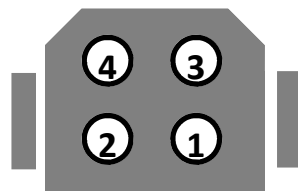
3

4-Pole Female Bullet Relay Connector 3

Relay Ignition Coil 3544322

Near Junction 1.

FEMALE



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.

MALE



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:

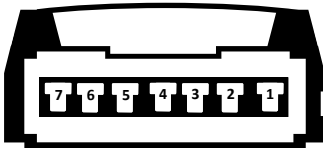
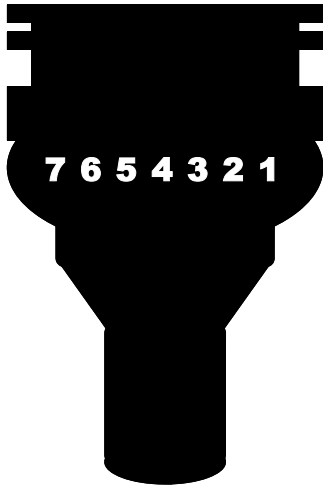
- | | | |
|------------|------|-------------------|
| 1. Gry | 1/27 | 53-Pole Connector |
| 2. Grn/Gry | 1/28 | 53-Pole Connector |

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+ (Terminal 30) Near Junction 4.



WIRE:

1. Red (fat) 17 Alternator B+

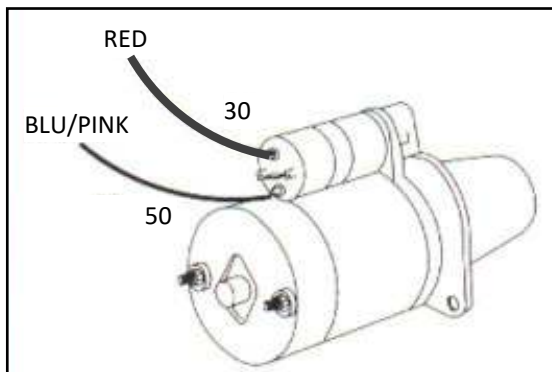
10

6.3 mm Female Terminal with Insulator Starter Solenoid (Terminal 50) Near Junction 4.



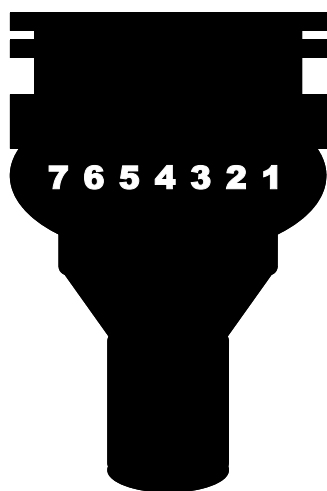
WIRE:

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



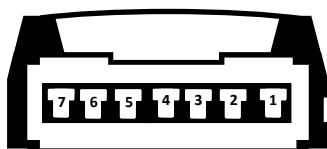
11

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

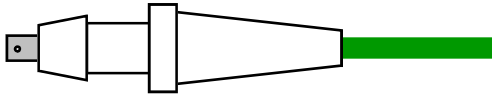


VIEW FROM REAR

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

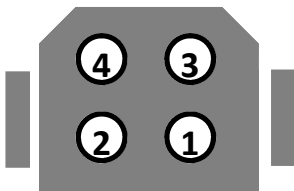
14

4-Pole Female Bullet Connector

Engine Speed Sensor

Near Junction 6.

FEMALE



VIEW FROM REAR

WIRES:

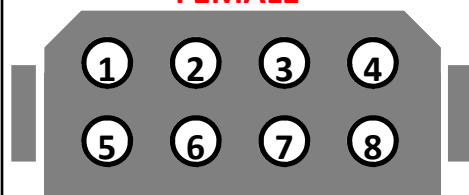
1. Blk/Wht	1/41	53-Pole Connector
2. Blk/Grn	1/40	53-Pole Connector
3. Red/Wht	1/44	53-Pole Connector
4. Viol/Wht	1/45	53-Pole Connector

15

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

Near Junction 6.

FEMALE



VIEW FROM REAR

WIRES:

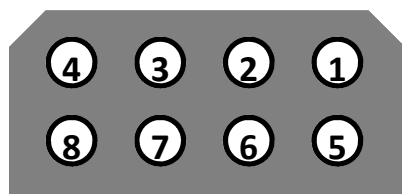
1. Blk/Blu	1/35	53-Pole Connector
2. Blk/Gry	1/30	53-Pole Connector
3. Pink (fat)	1/11	53-Pole Connector
4. Blu/Pink (fat)	10	Starter Solenoid
5. Blu/Gry	1/50	53-Pole Connector
6. Brn/Wht	1/51	53-Pole Connector
7. Brn/Grn	1/52	53-Pole Connector
8. Grn/Wht	1/53	53-Pole Connector

16

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

Near Junction 6.

MALE



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.



WIRES:

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

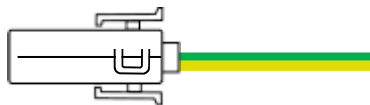
Note the TAIL sticking out of the side of this special connector. In some circumstances that tail is on the wrong side, which means this plug may not insert into the mating plug. In this case it will be best to trim off that tail.

20

1-Pole Female Bullet with Insulator

Air Conditioning Compressor

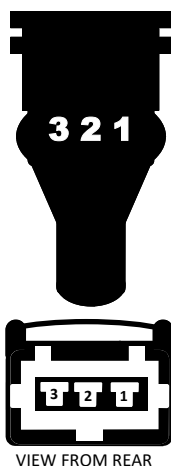
Near Junction 8.



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

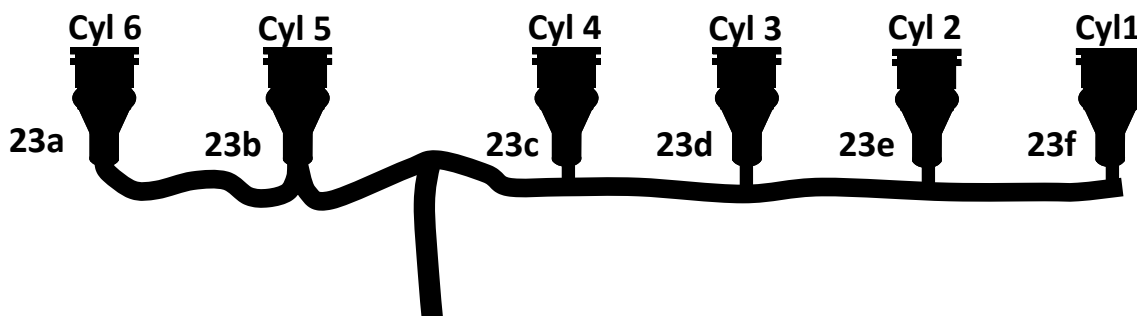
Near Junction 10

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

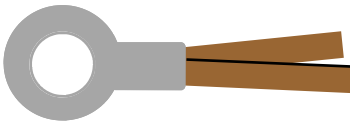
Ground Rings

Near Junction 13.

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 (CONNECTOR NOT PRESENT)

Near Junction 12.

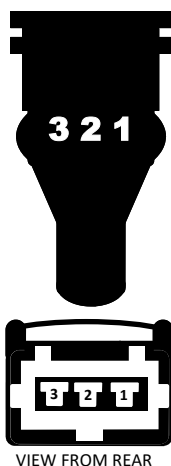
WIRES:

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



VIEW FROM REAR

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

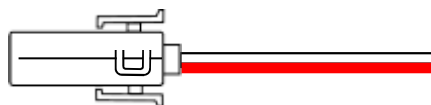
Coolant Temp Sensor 2

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

