

Service Manual Cars

Section 3 (39)
Wiring diagram
C70/S70/V70 1999

TP 3941202

Cars with SRS (Air bag)/SIPS bag

Warning!

Cars equipped with a Supplemental Restraint System (SRS)/SIPS bag must be treated extra carefully when repairs are being made. This is to help prevent:

1. Injuries when carrying out a repair.
2. Damage or malfunction of the SRS/SIPS bag system.

Repair to either the SRS/SIPS bag itself or a related system or component must be carried out by an authorized Volvo workshop. Refer to the appropriate SRS and SIPS bag service manual for complete system information.

Is the car equipped with SRS?

Cars with SRS are most easily recognized by the SRS letters on the steering wheel pad. If the car is also equipped with an air bag on the passenger side, the letters 'SRS' will be embossed on the instrument panel above the glove compartment. On models from 1993 on, cars with SRS will also be equipped with pyrotechnical seat belt tensioners in the B-posts.

The SIPS bags are only installed in cars equipped with SRS systems, 1995-. Cars with SIPS bags can be recognized by the identifying labels on the windshield and on seat storage tray.

Dashboard or around steering column

Take care to avoid the SRS wiring being pinched, frayed or pierced by screws when working on the firewall, knee bolster, ignition switch, steering column casings, glove compartment, instrument panel, door sills and B-posts.

Center console

The SRS collision sensor is located between the handbrake and gear lever (selector) in the center console. Never install accessories on or near the sensor.

Repairs to steering gear and column

When carrying out repairs to the steering wheel, steering gear or column always follow the repair procedures given in the appropriate SRS service manual. Read the relevant section! The contact reel in the steering column will be damaged if the steering wheel is turned more than three turns in either direction.

Seats

The SIPS bag sensor is located in the front section of the seat storage tray. The SIPS-bag can be activated by a blow or pressure on the tray or if an object is caught between the tray and the door when the door is closed. Refer to the SIPS bag Service manual when carrying out work on the front seats.

Test terminal

Data Link Connector socket in passenger compartment.

Modifications carried out up to and including January 1999

Any modifications made to the car after this date are not included in this manual. Refer to the Service Bulletins if necessary.

Volvos are sold in versions adapted for different markets. These adaptations depend on many factors including legal, taxation and market requirements. This manual may therefore show illustrations and text which do not apply to cars in your country.

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This manual deals with the electronic functions specific to the C70, S70 and V70 of model year 1999, late version. Service Manual TP3938202 can be referred to when dealing with other parts of the electrical system.

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Supersedes book TP 3941201

We reserve the right to make alterations without prior notification

How to use the diagrams

A. Component designation

Each component has a component designation. This consists of a type number and a component number.

There is a list of component designations at the end of the book where you can obtain the components names.

B. Type number

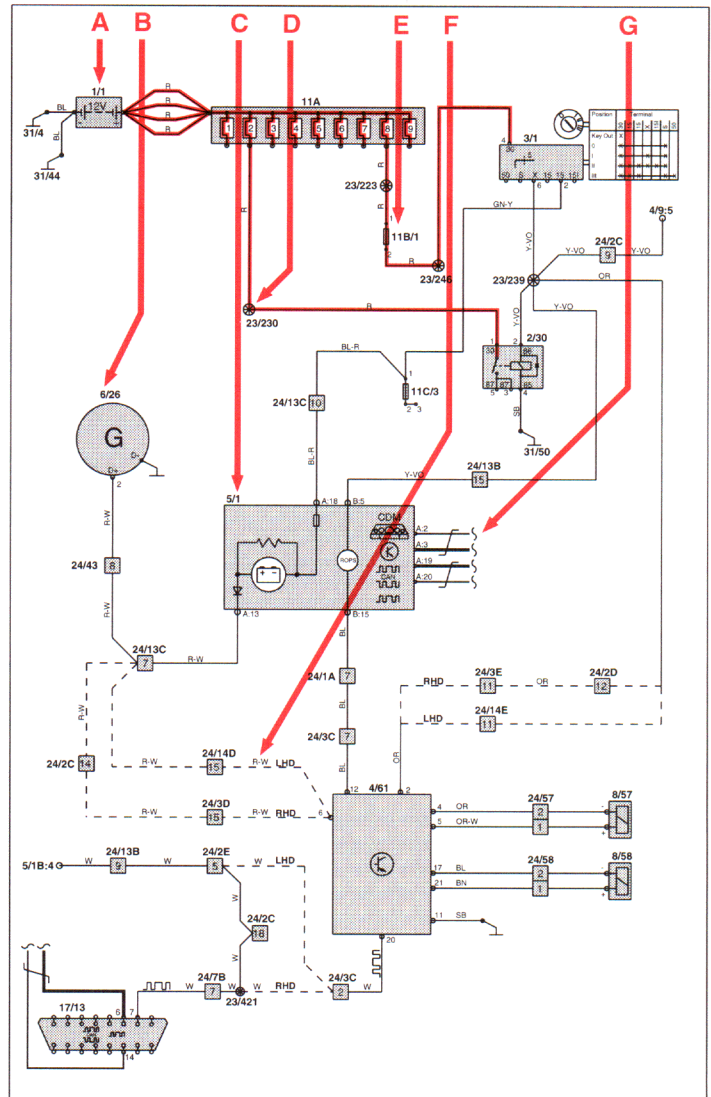
The first part of the component designation indicates which type of component it is, for example switch, electric motor, etc.

List of type numbers:

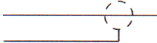
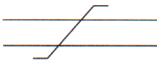
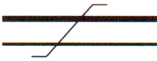
- 1 Battery
- 2 Relay
- 3 Electrical switch
- 4 Control module
- 5 Combined instrument panel
- 6 Electric motor
- 7 Sensor
- 8 Actuator
- 9 Heater element
- 10 Lamp
- 11 Fuse
- 15 Distribution rail, power supply
- 16 Radio
- 17 Service / On board diagnostic system (OBD)
- 18 Contact Reel
- 19 Gauge
- 20 Ignition components / resistor
- 23 Junction point
- 24 Connector
- 31 Ground terminal
- 34 Terminal block / -bridge
- C Connector

C. Component number

The second part of the component designation indicates which specific component it is, light switch, central locking motor, etc.



Explanation of symbols

- | | |
|---|----------------------------|
|  | = System voltage |
|  | = Ground terminal |
|  | = Screened cable |
|  | = Junction point |
|  | = Twinned cables |
|  | = Electrical connection |
|  | = No electrical connection |
|  | = Variant |
|  | = CAN-communication |
|  | = CAN high signal (CAN H) |
|  | = CAN low signal (CAN L) |

Abbreviations

There are a number of abbreviations in the book. These are explained below.

Countries/Markets:

A	= Austria
AUS	= Australia
B	= Belgium
CDN	= Canada
CH	= Switzerland
D	= Germany
DK	= Denmark
E	= Spain
EU/OS	= Markets outside USA and Canada:
FIN	= Finland
GB	= Great Britain
J	= Japan
KOR	= Korea
N	= Norway
NL	= Holland
S	= Sweden
WEU	= Western Europe

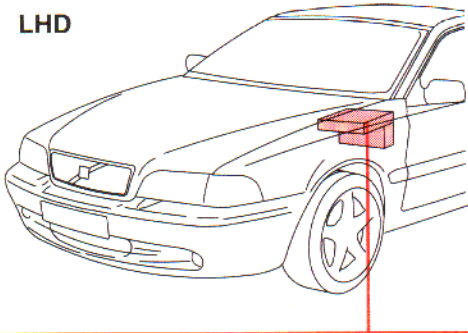
Colors:

BL	= Blue
BN	= Brown
GN	= Green
GR	= Gray
OR	= Orange
P	= Pink
R	= Red
SB	= Black
VO	= Violet
W	= White
Y	= Yellow

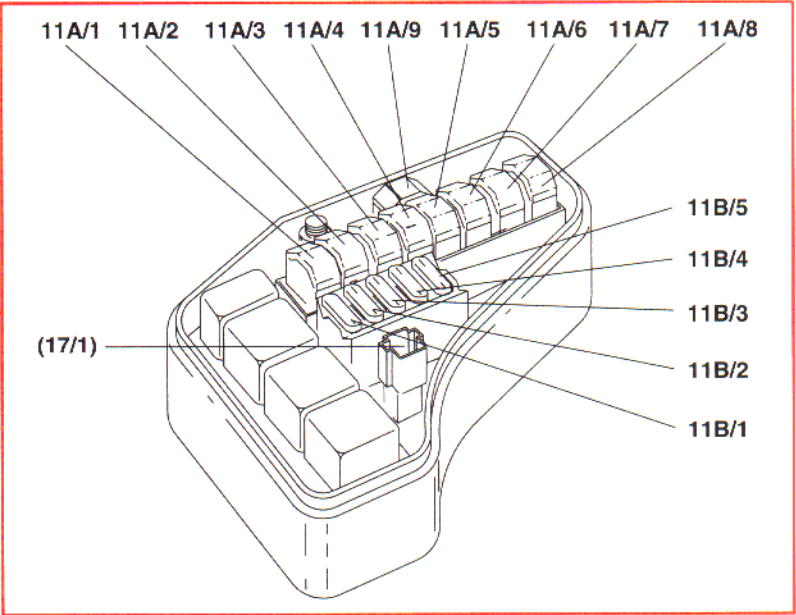
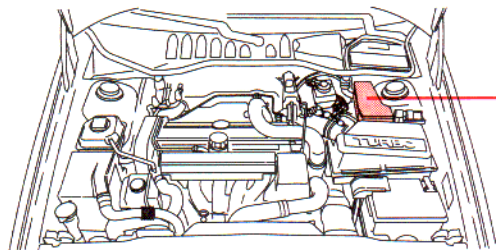
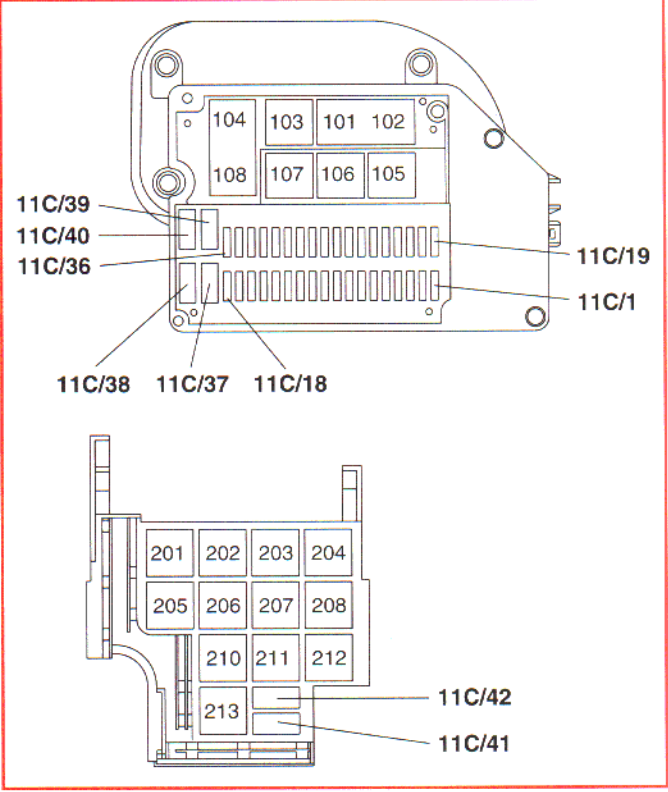
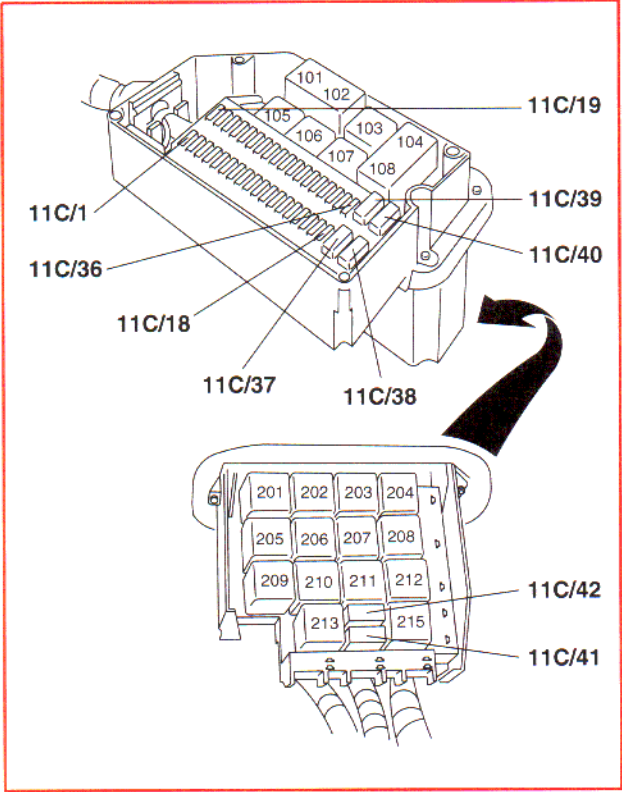
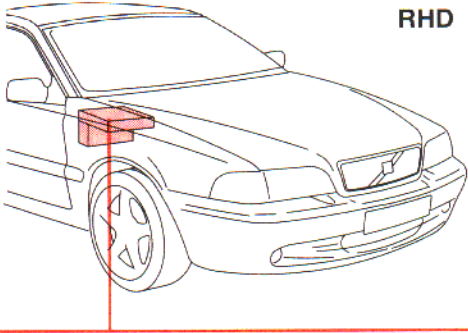
Other:

ALTER	= Alternatively
AUTO	= Automatic transmission
AWD	= Four wheel drive
BIFUEL	= Compressed natural gas (CNG) / gasoline powered
CAN	= CAN-communication
CONV	= C70 convertible
COUP	= C70 coupé
DENSO	= 5 cylinders / 20 valves without turbocharger (TC)
EARLY	= Early version
EXC	= Exclusive
FENIX	= 5 cylinders / 10 valves
IMMO	= Immobilizer
LATE	= Late version
LH	= Left-hand side
LHD	= Left-hand drive
MAN	= Manual transmission
MSA	= Diesel
OTHERS	= Others
ME7	= 5 cylinders / 20 valves with turbocharger (TC)
RH	= Right-hand side
RHD	= Right hand drive
RTI	= Road Traffic information
W/O	= Without

LHD



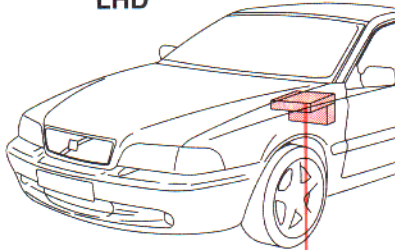
RHD



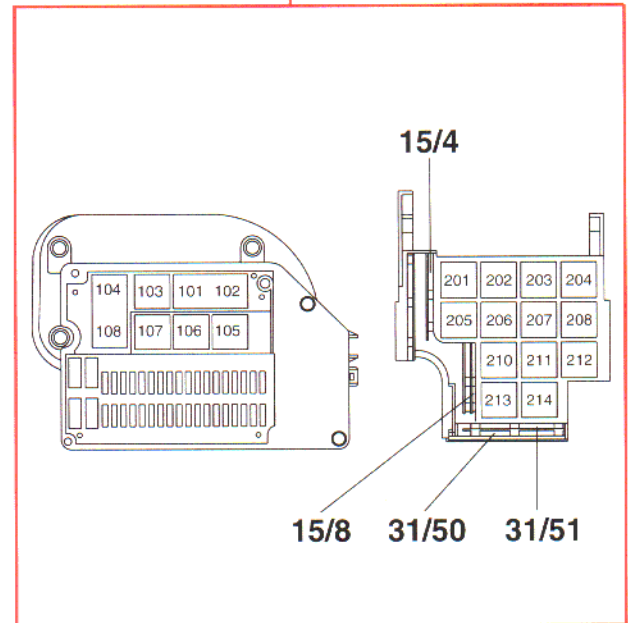
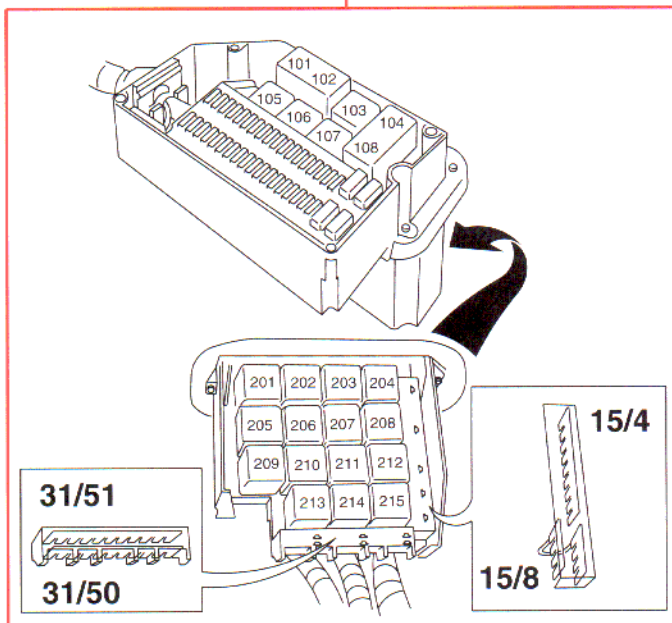
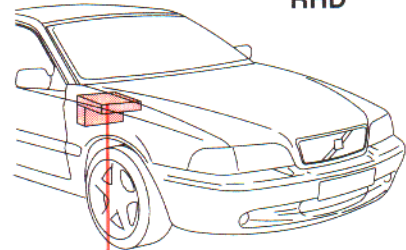
Rails in the central electrical unit

- 15/4 15l-rail
- 15/8 X-rail
- 31/50 Ground connection rail (power ground)
- 31/51 Ground connection rail (signal ground)

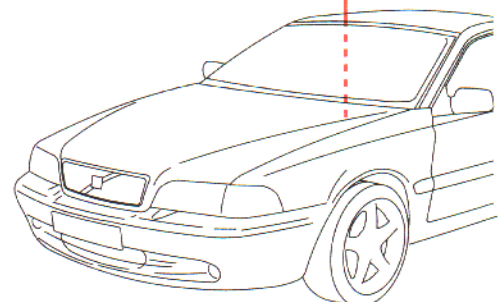
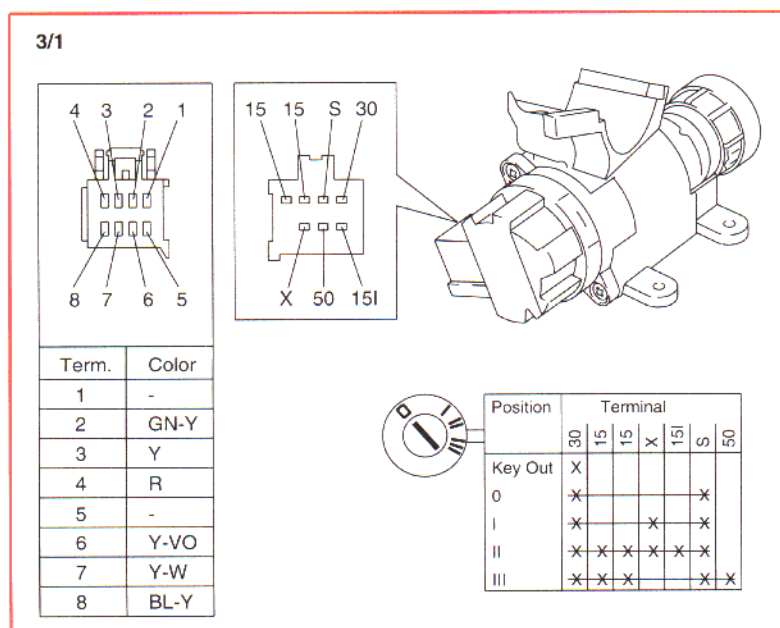
LHD



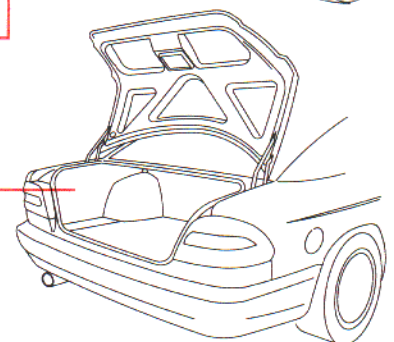
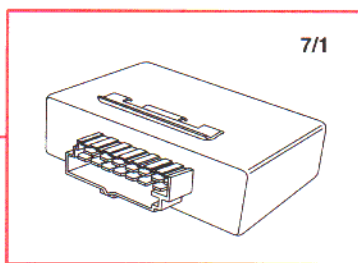
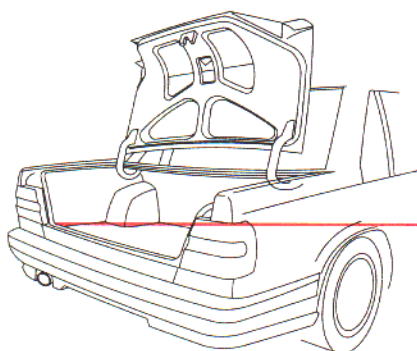
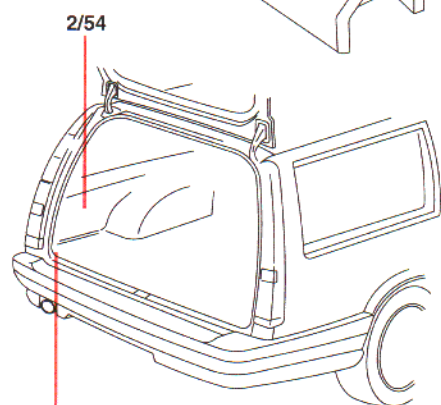
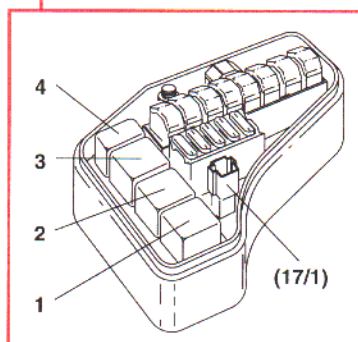
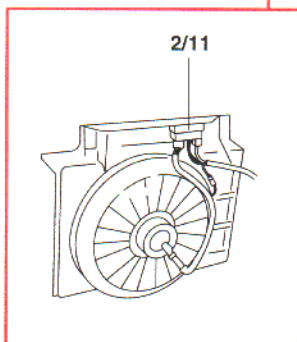
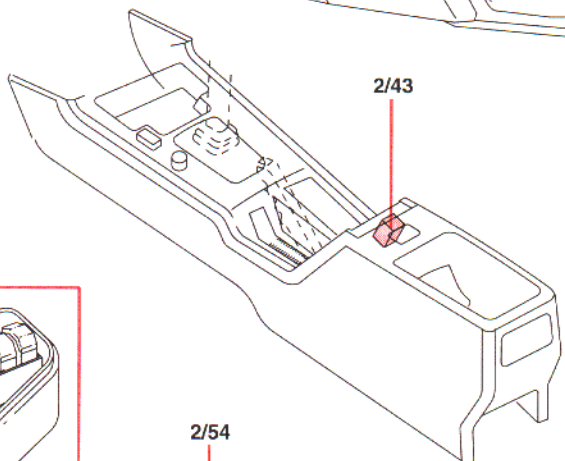
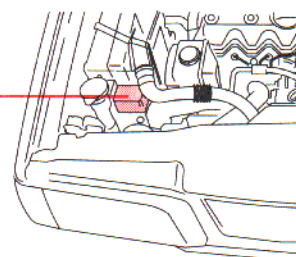
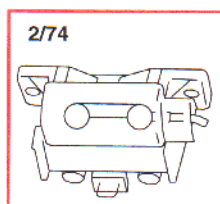
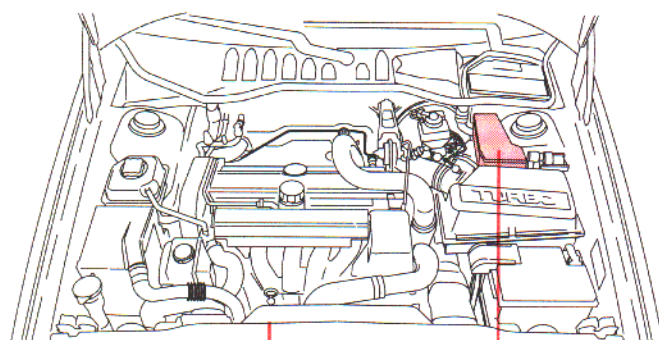
RHD



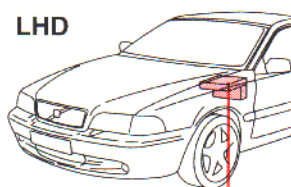
Ignition switch



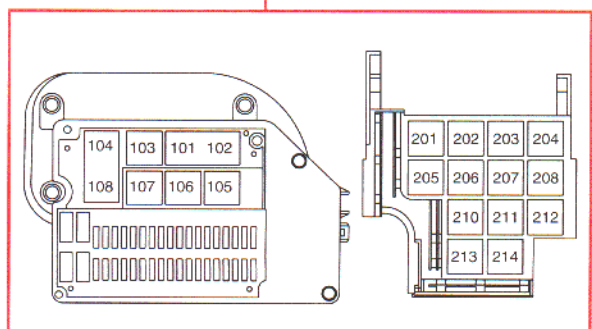
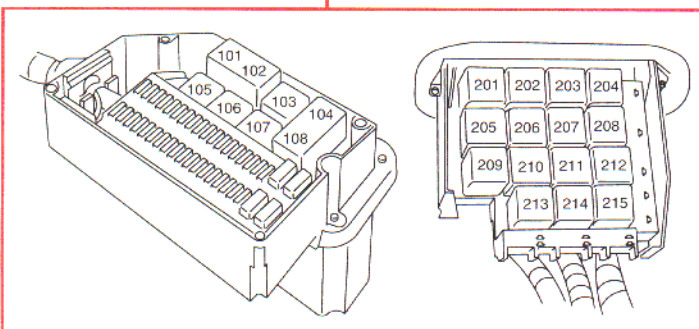
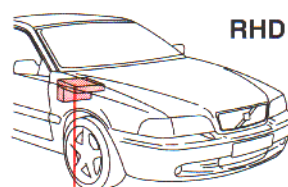
Relays



LHD

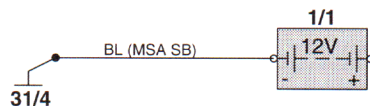


RHD

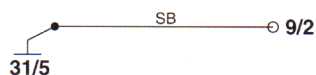


Ground terminals

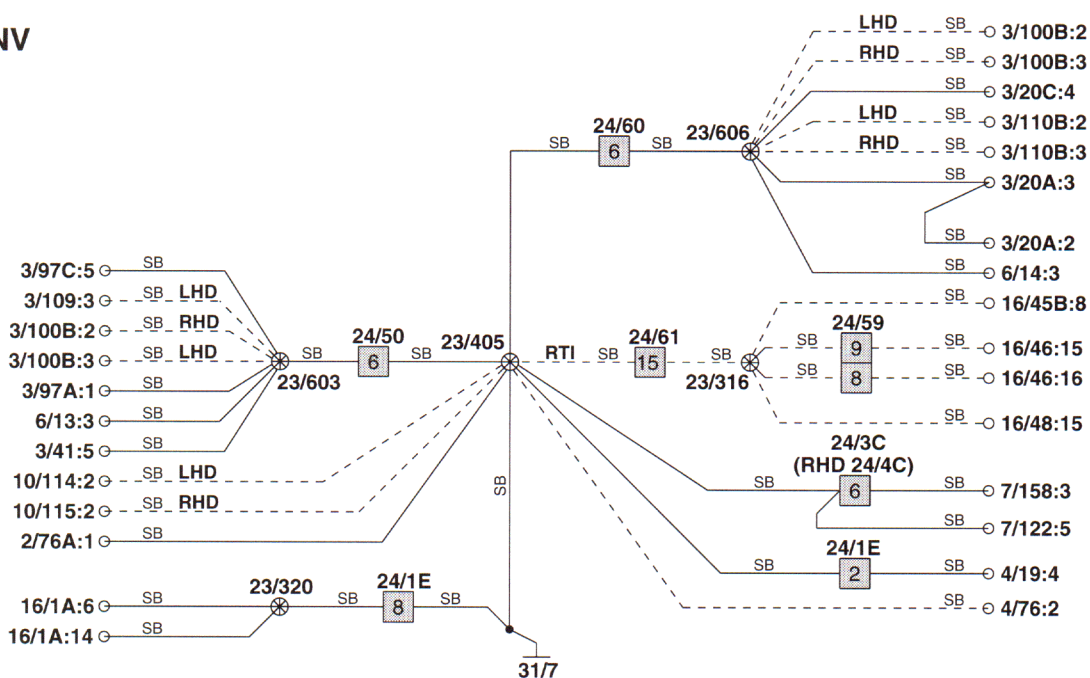
31/4



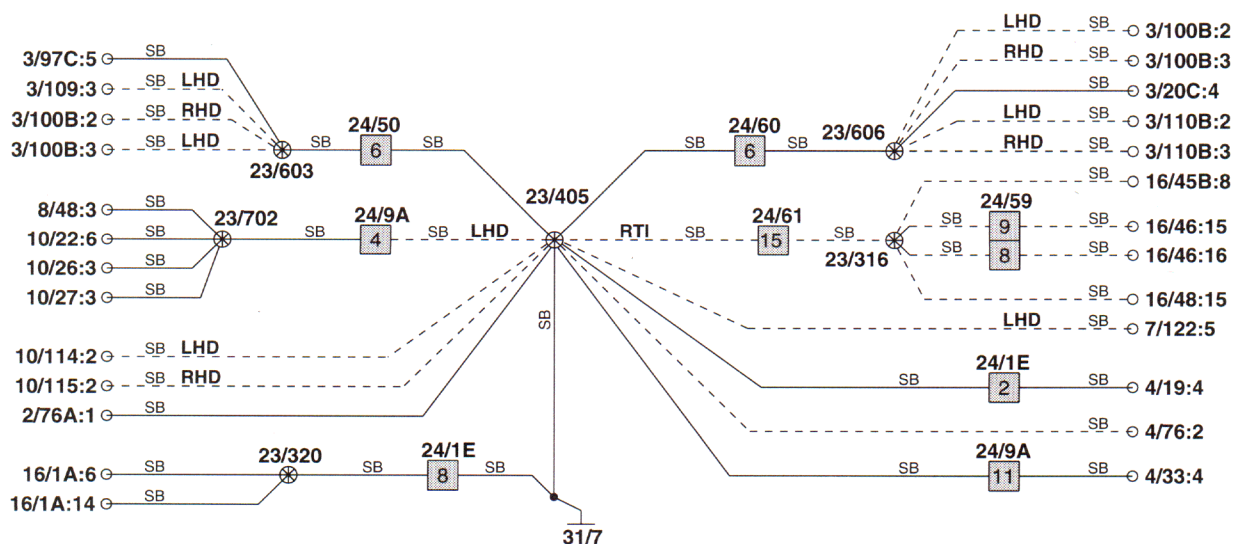
31/5



31/7
CONV



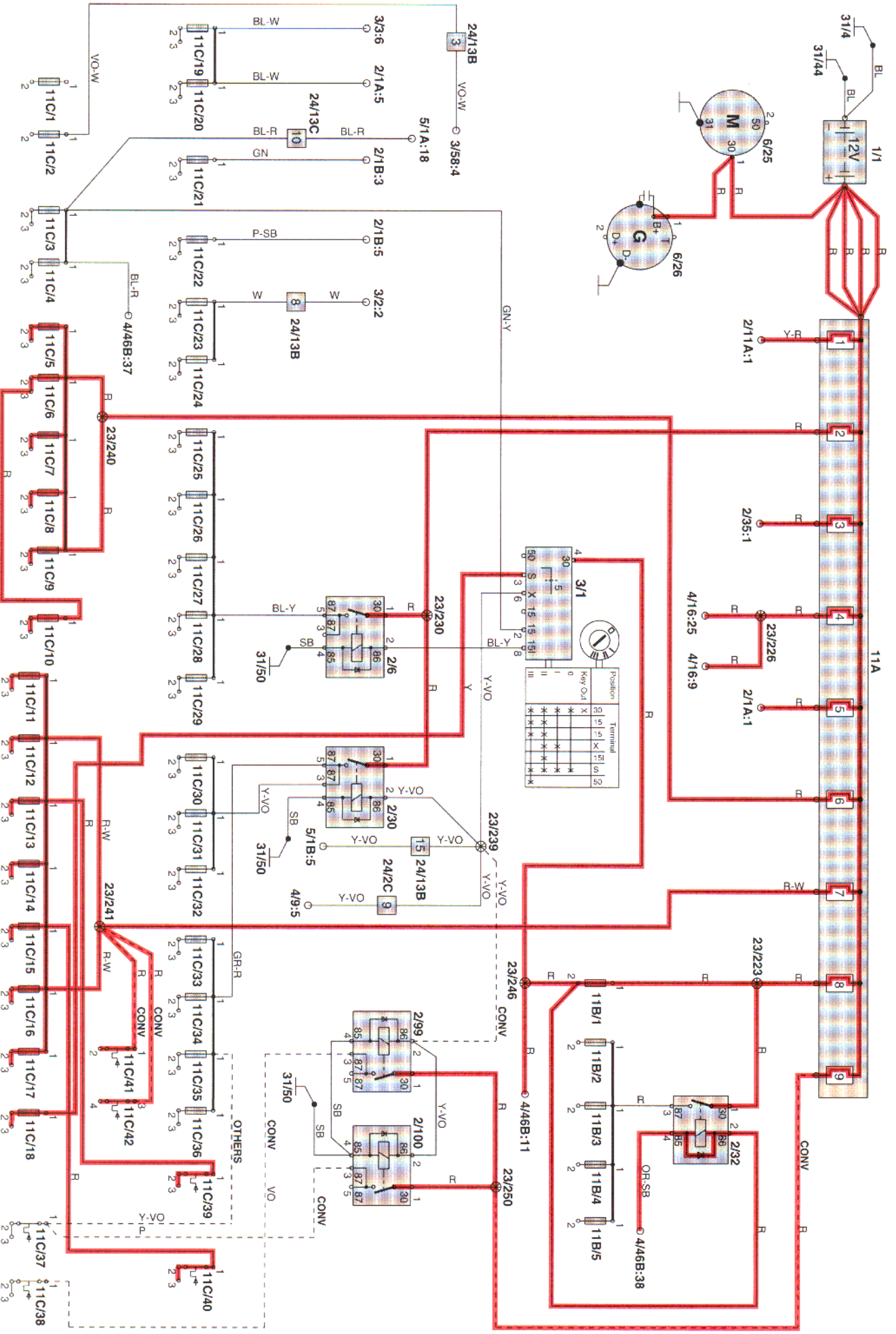
31/7
COUP



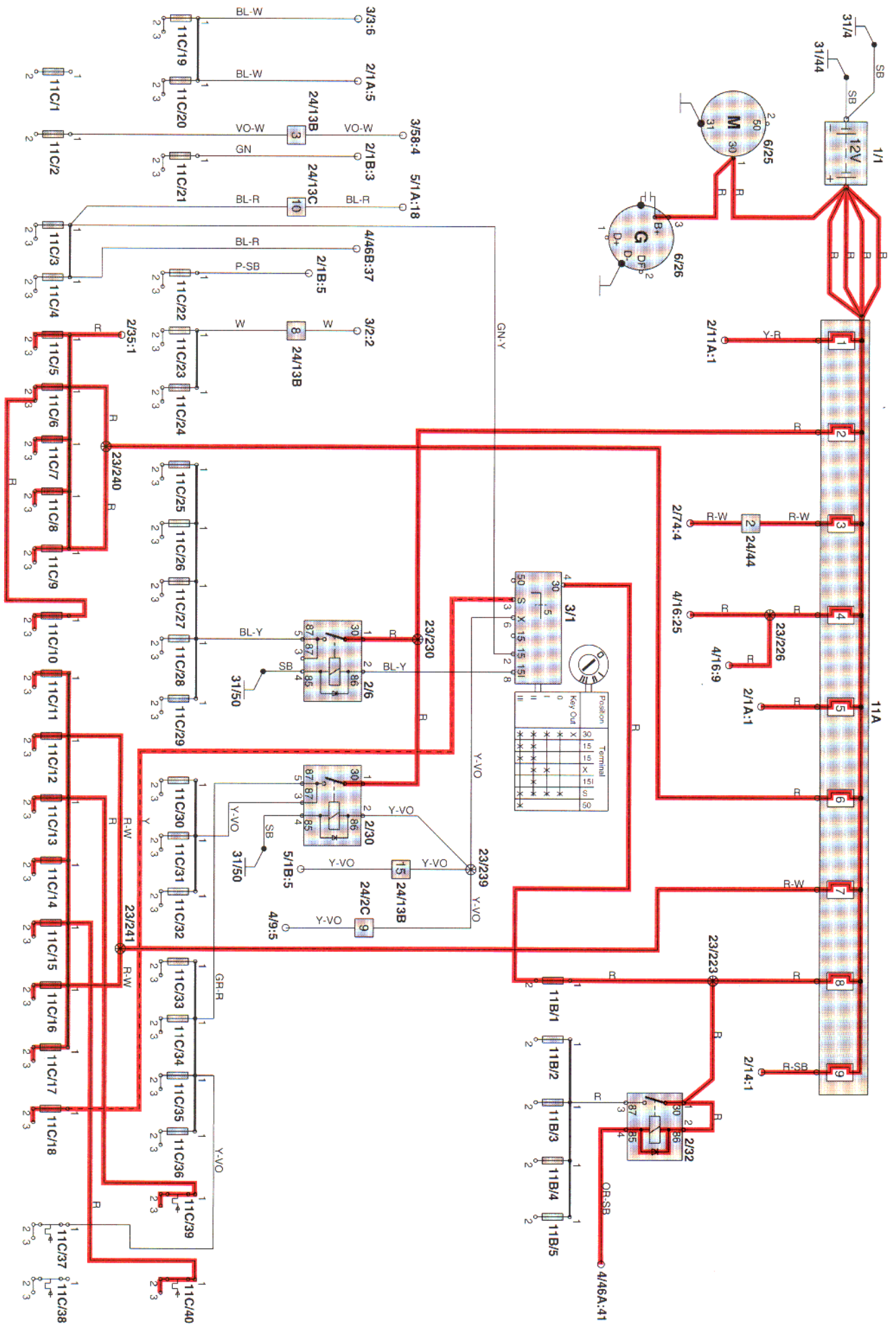
The diagram illustrates the electrical system for a vehicle, showing the connection between the battery, relays, switches, fuses, and lights. The components are labeled with their respective part numbers and terminal connections. The wiring is color-coded and labeled with various codes such as BL-W, BL-R, GN-Y, Y-V, and R-W. A table of terminal positions is included in the diagram.

Position	Terminal
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	11
11	12
12	13
13	14
14	15
15	16
16	17
17	18
18	19
19	20
20	21
21	22
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35	36
36	37
37	38
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47	48
48	49
49	50

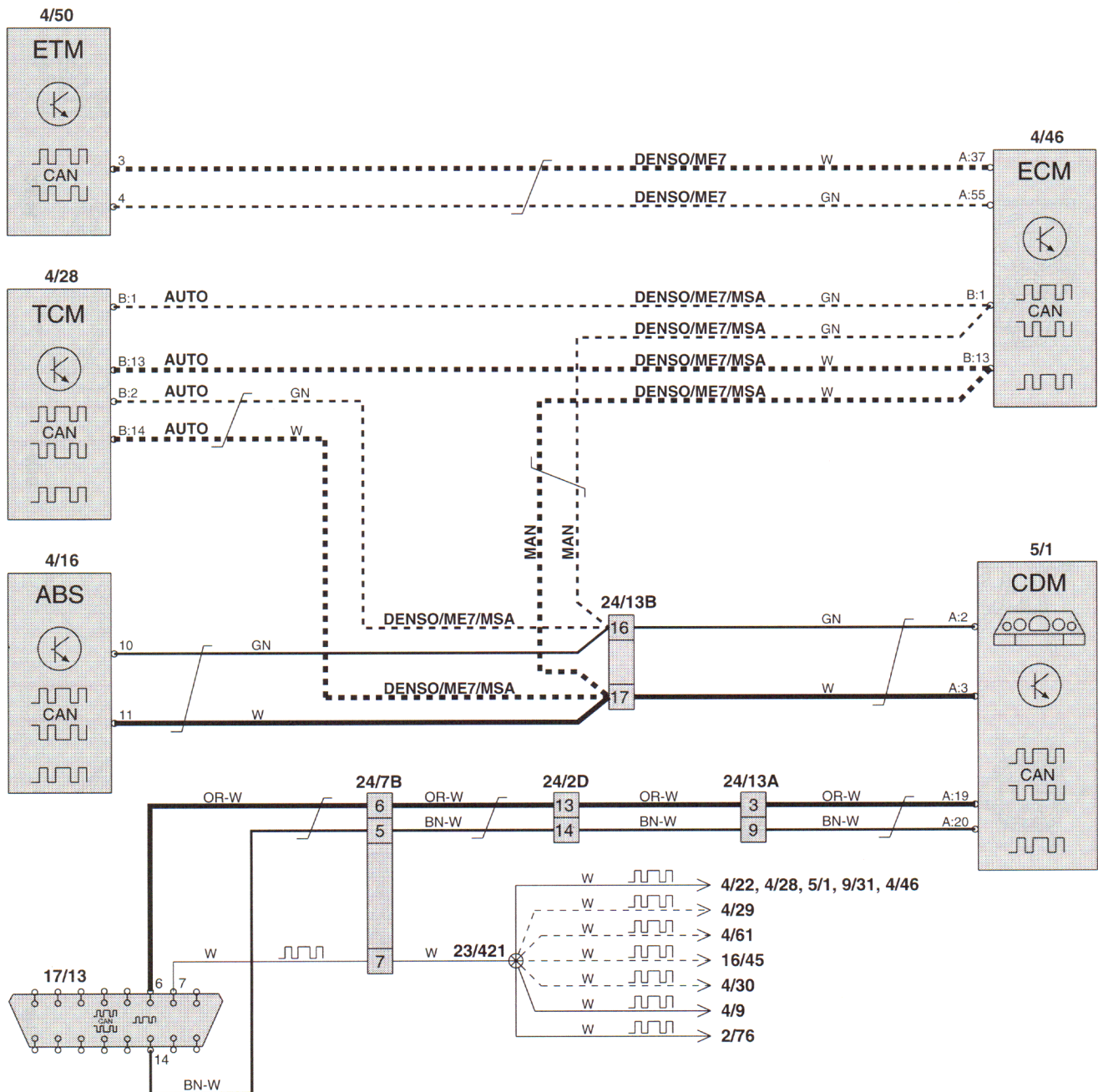
Electrical distribution Denso/ME7



Electrical distribution MSA 15.8

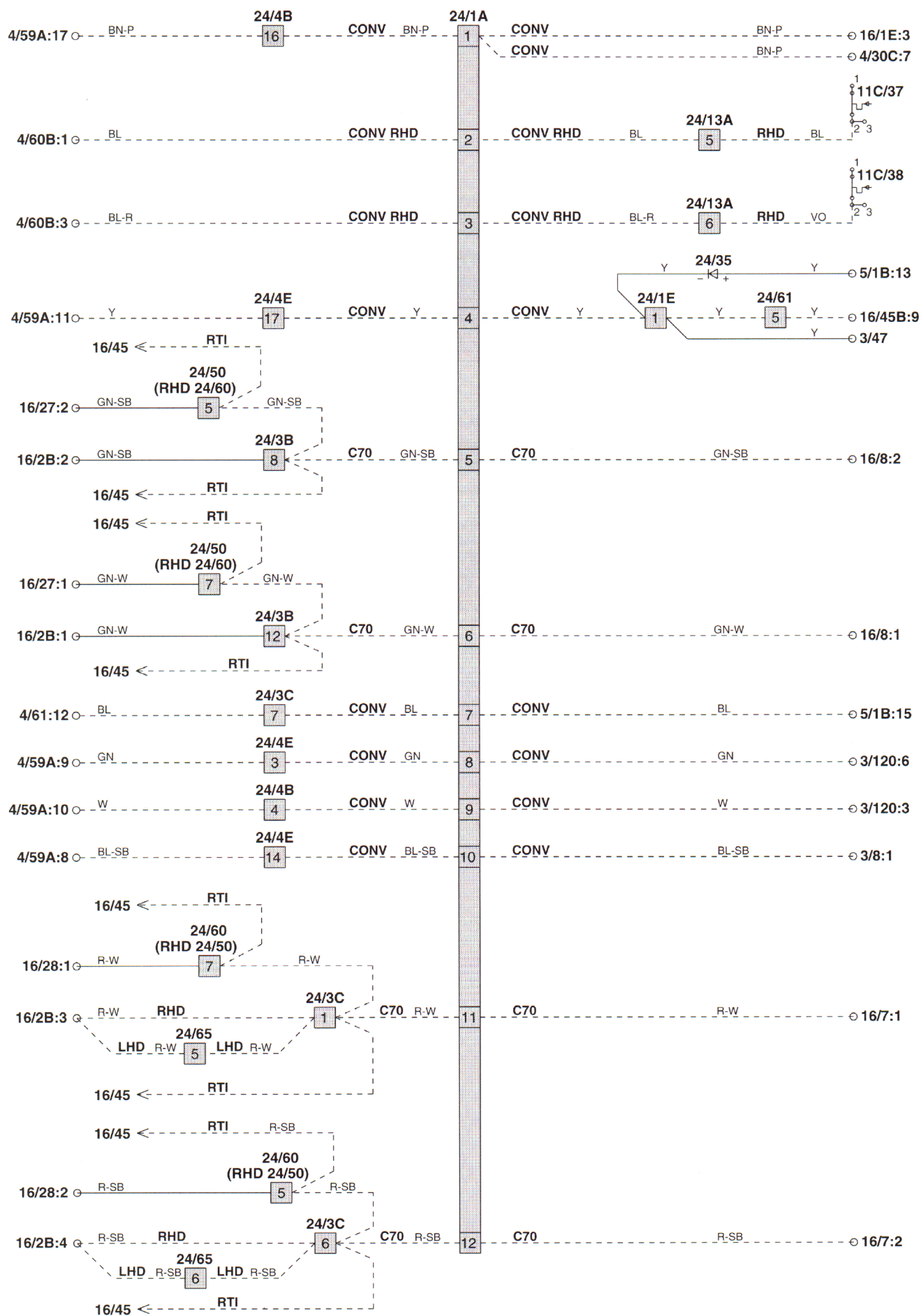


Data communication

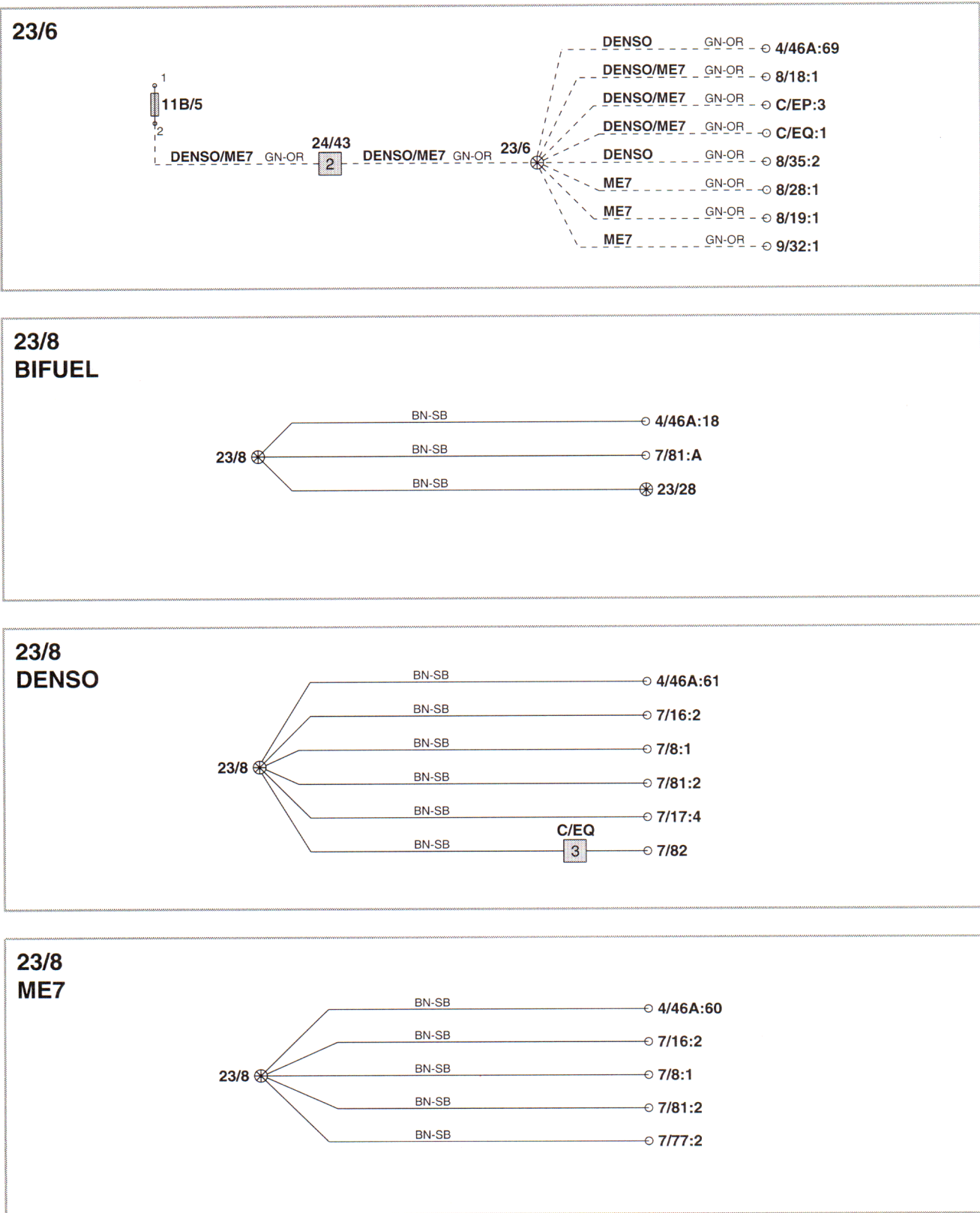


Connector 24/1

24/1A Green 12-pin (male - female) Firewall cable harness - Instrument panel cable harness



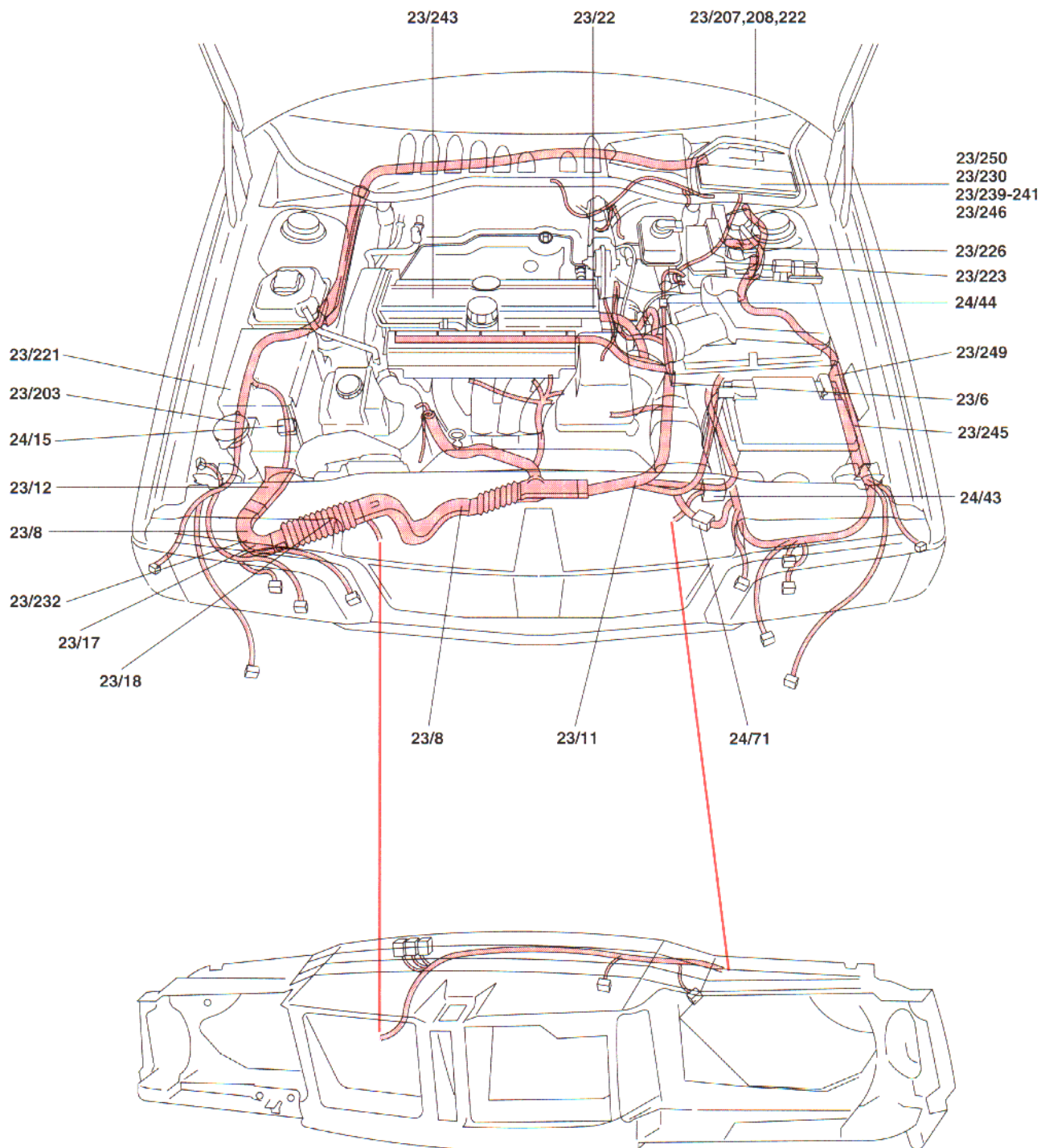
- 23/6 (Engine cable harness, DENSO/ME7)
- 23/8 (Engine cable harness, BIFUEL)
- 23/8 (Engine cable harness, DENSO)
- 23/8 (Engine cable harness, ME7)



Routing of cable harnesses in the car

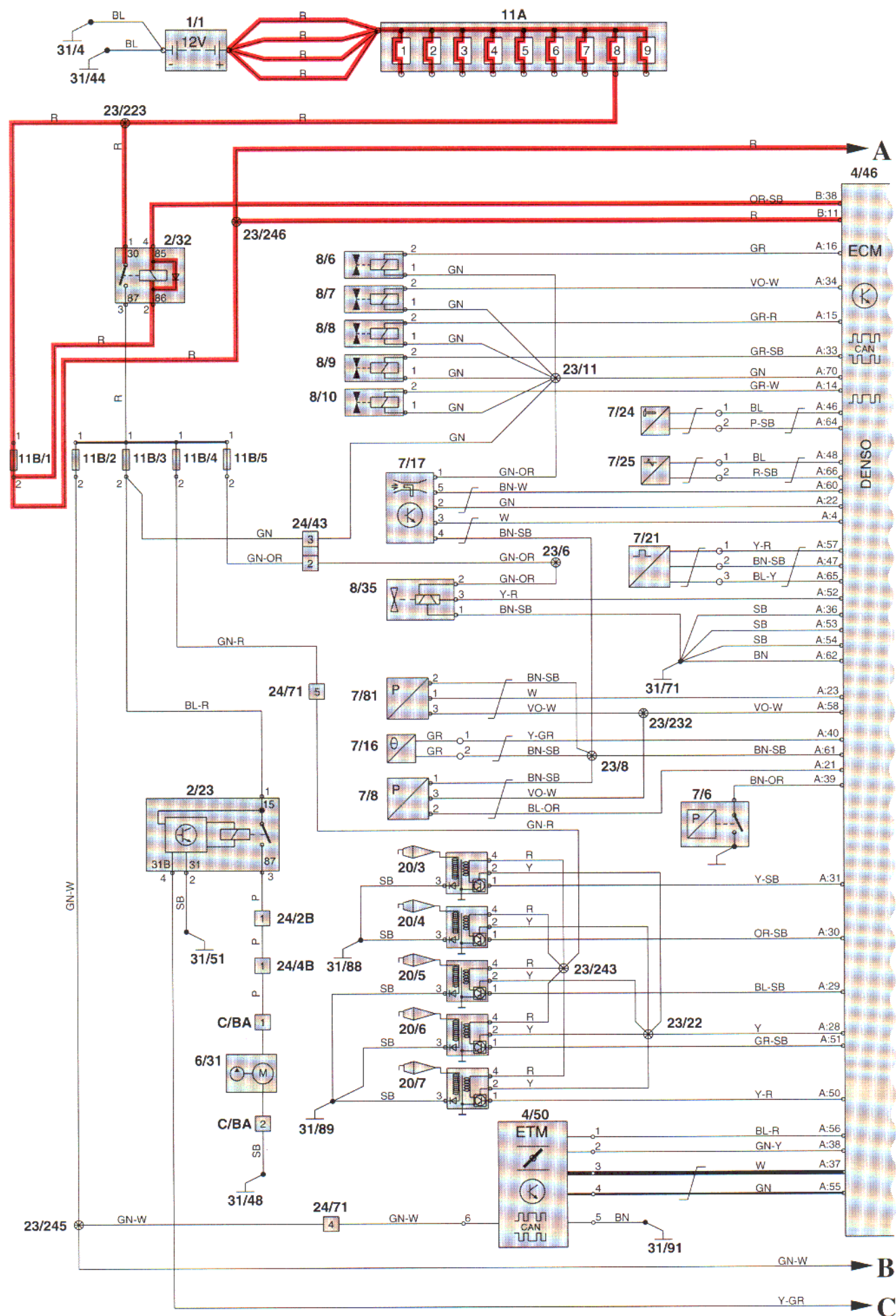
Engine compartment cable harness

Engine cable harness



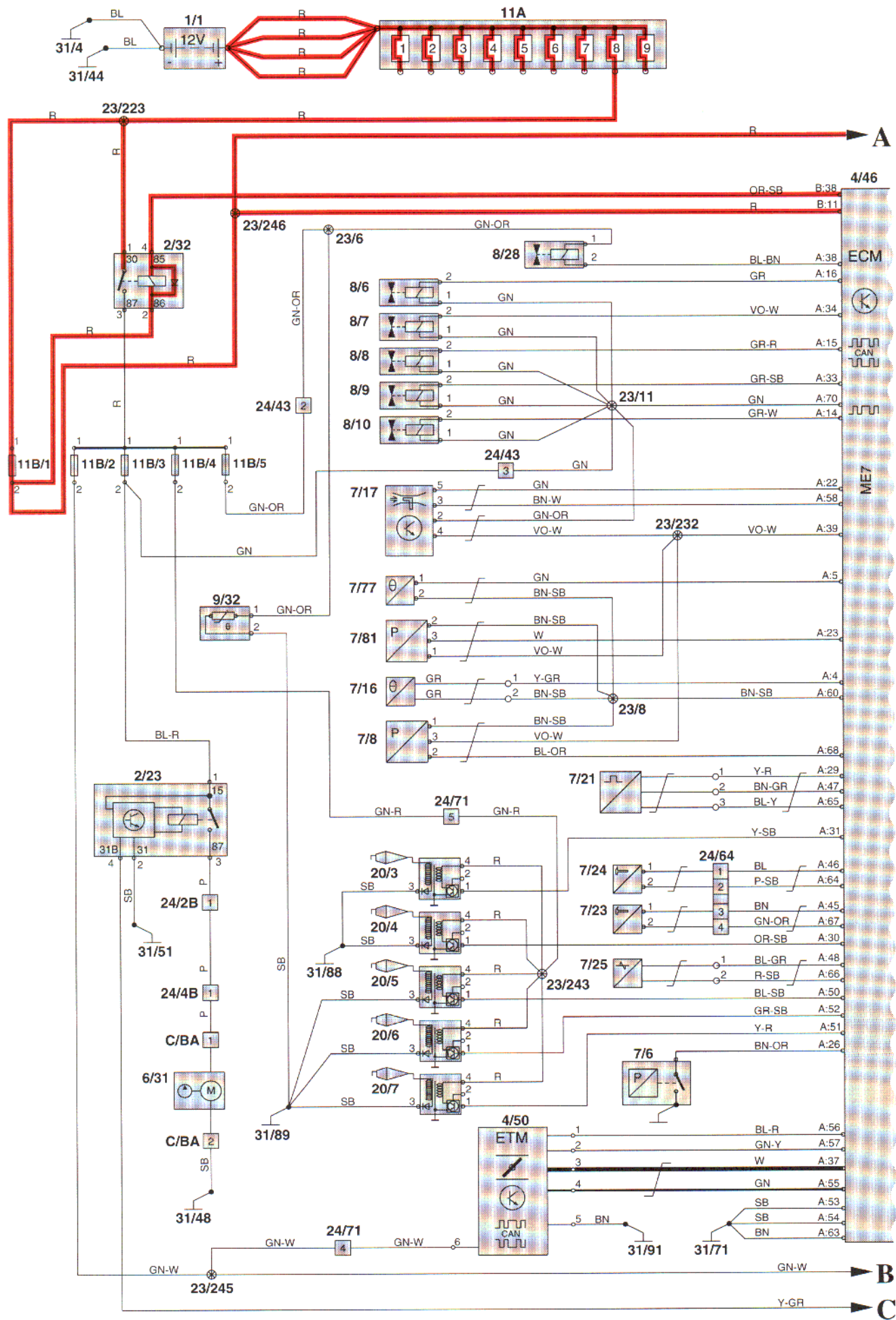
Engine management system

Denso



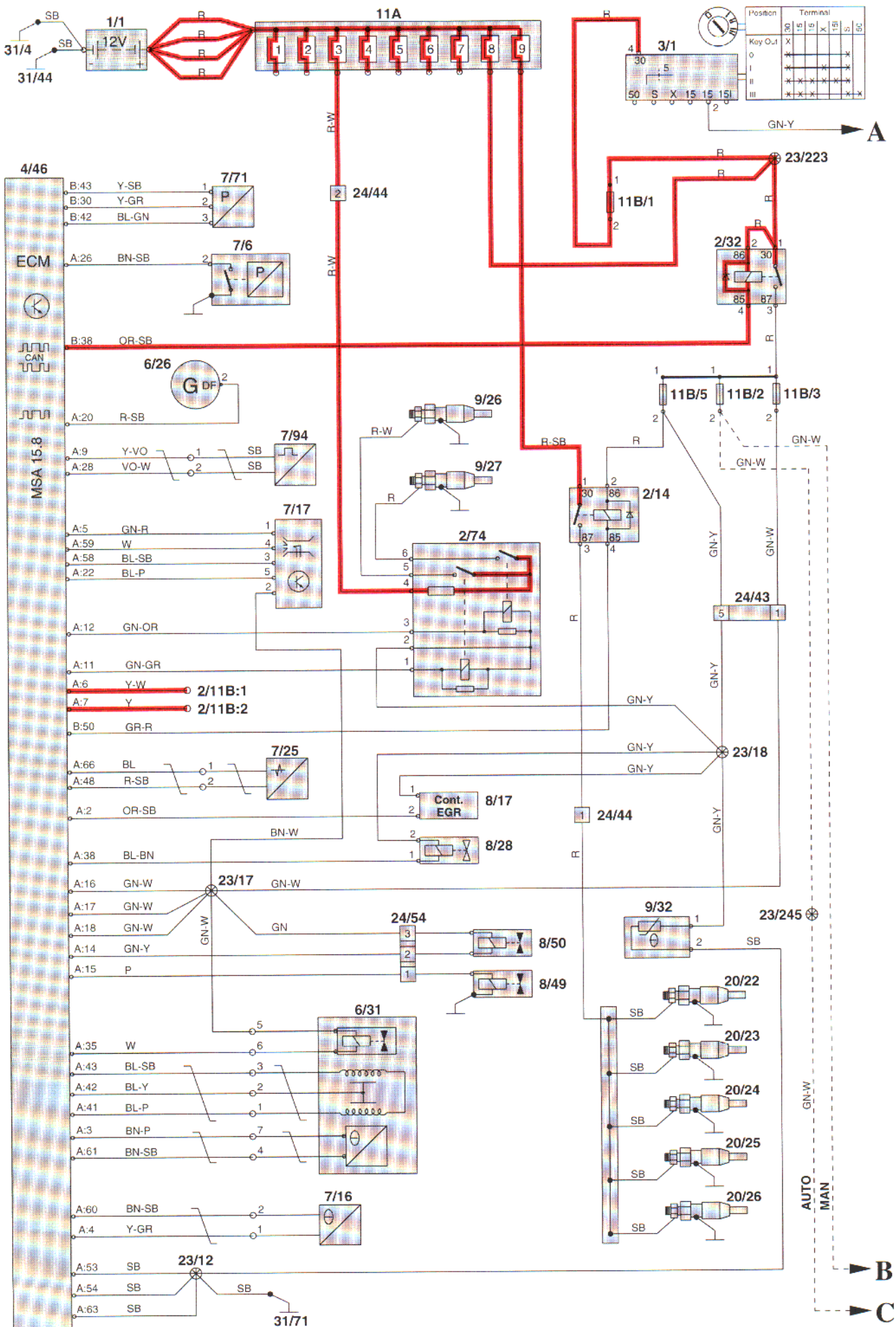
Engine management system

ME7

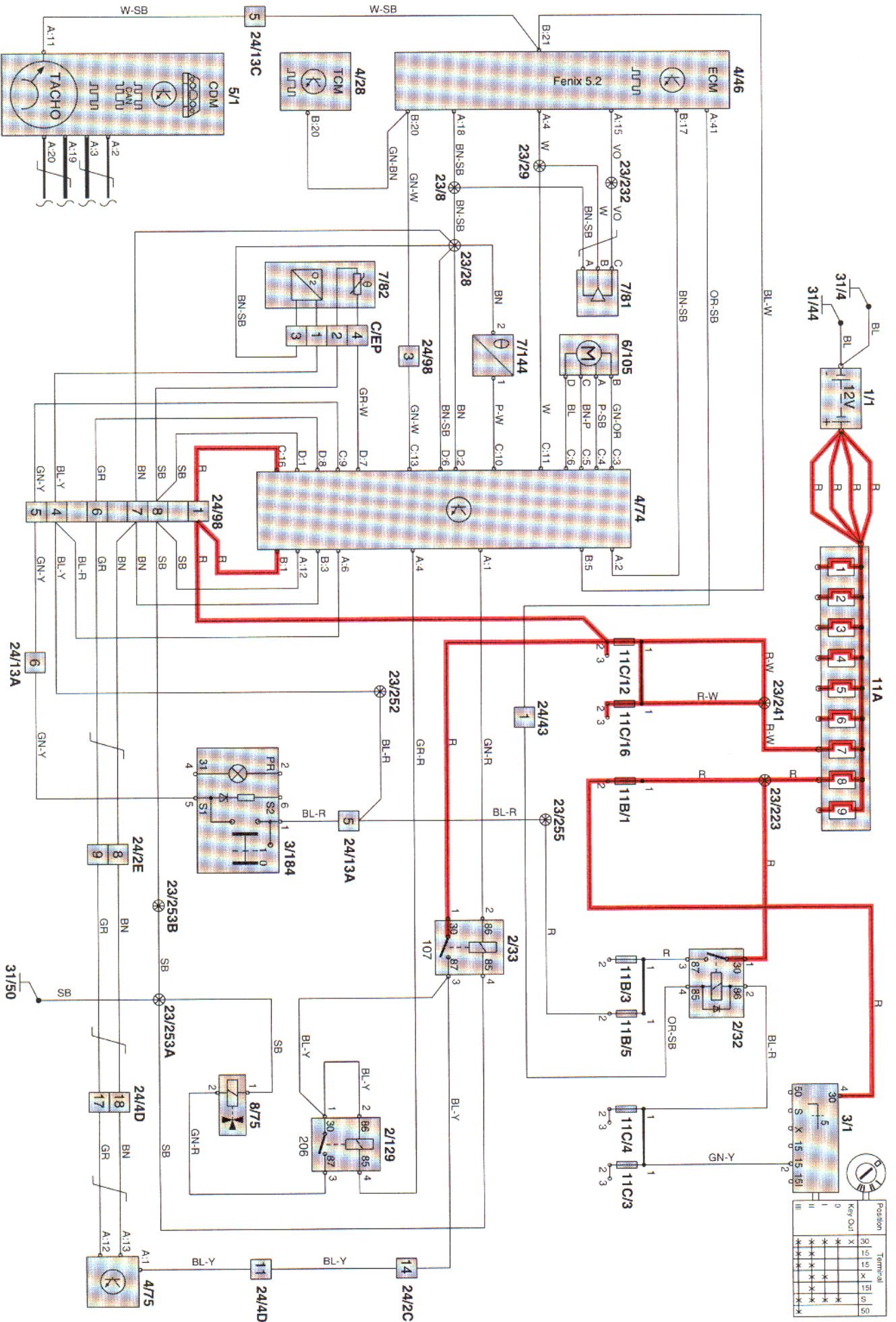


Engine management system

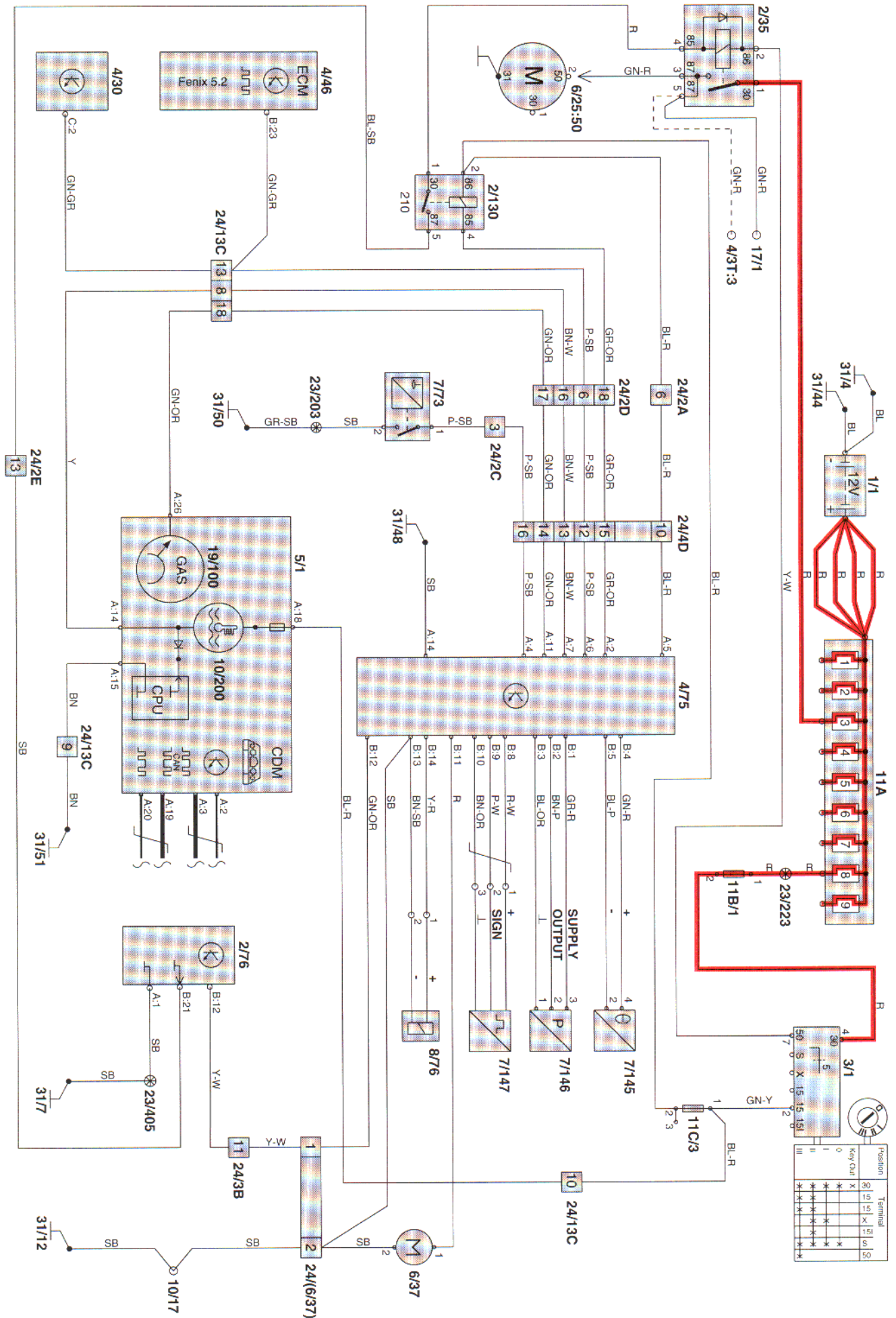
MSA 15.8



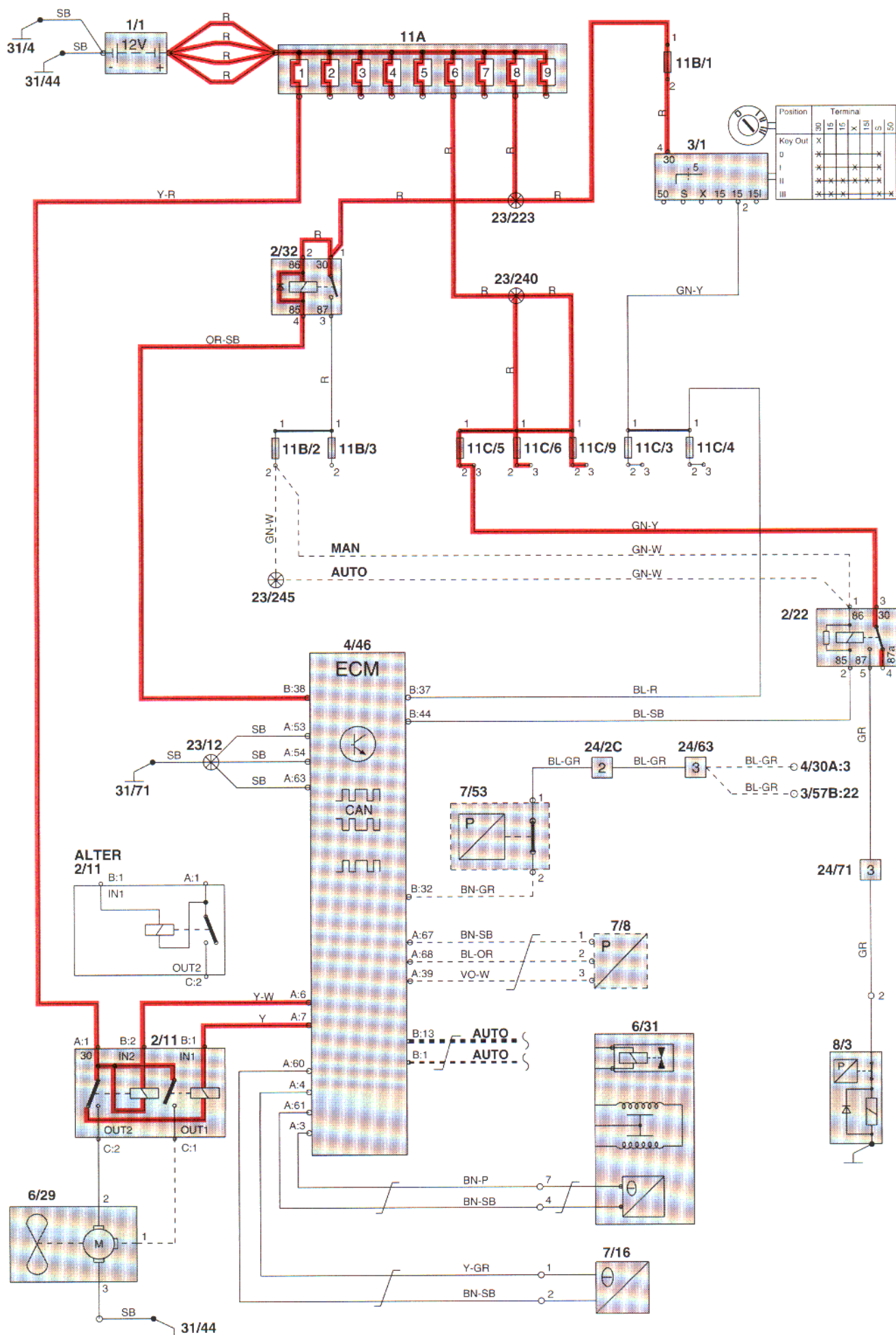
Engine management system Bifuel



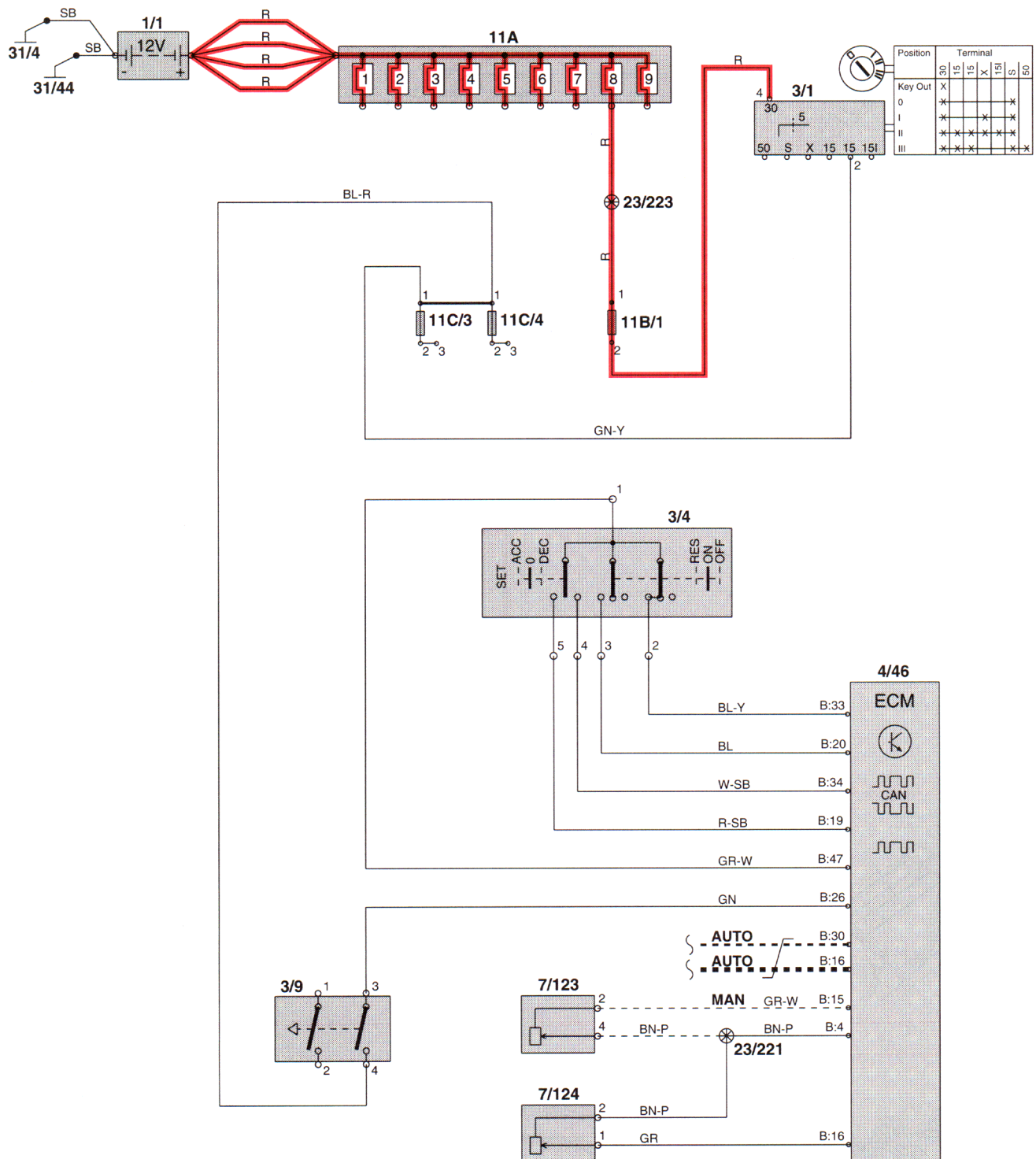
Electronic module Bifuel



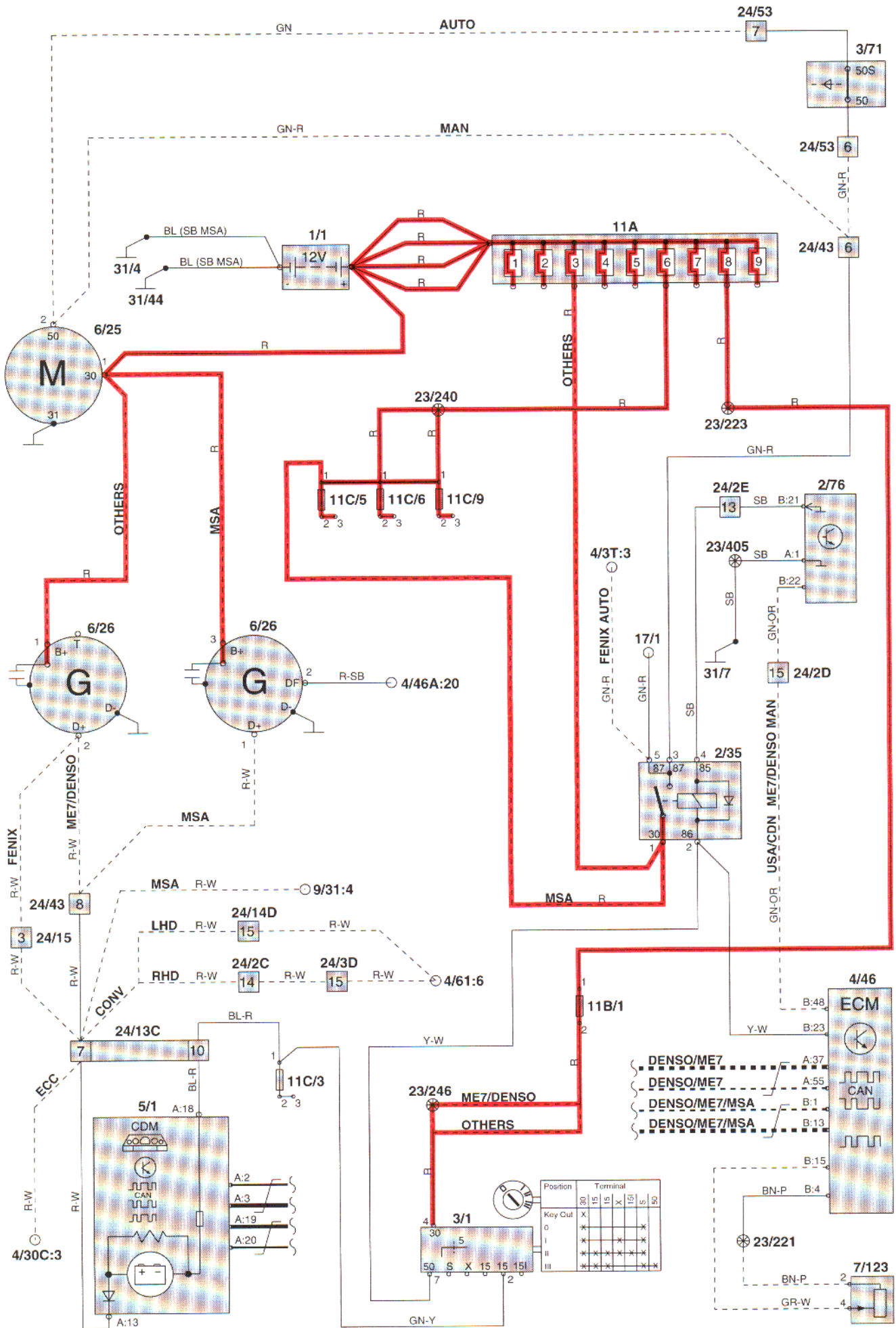
Engine cooling fan (FC)
MSA 15.8



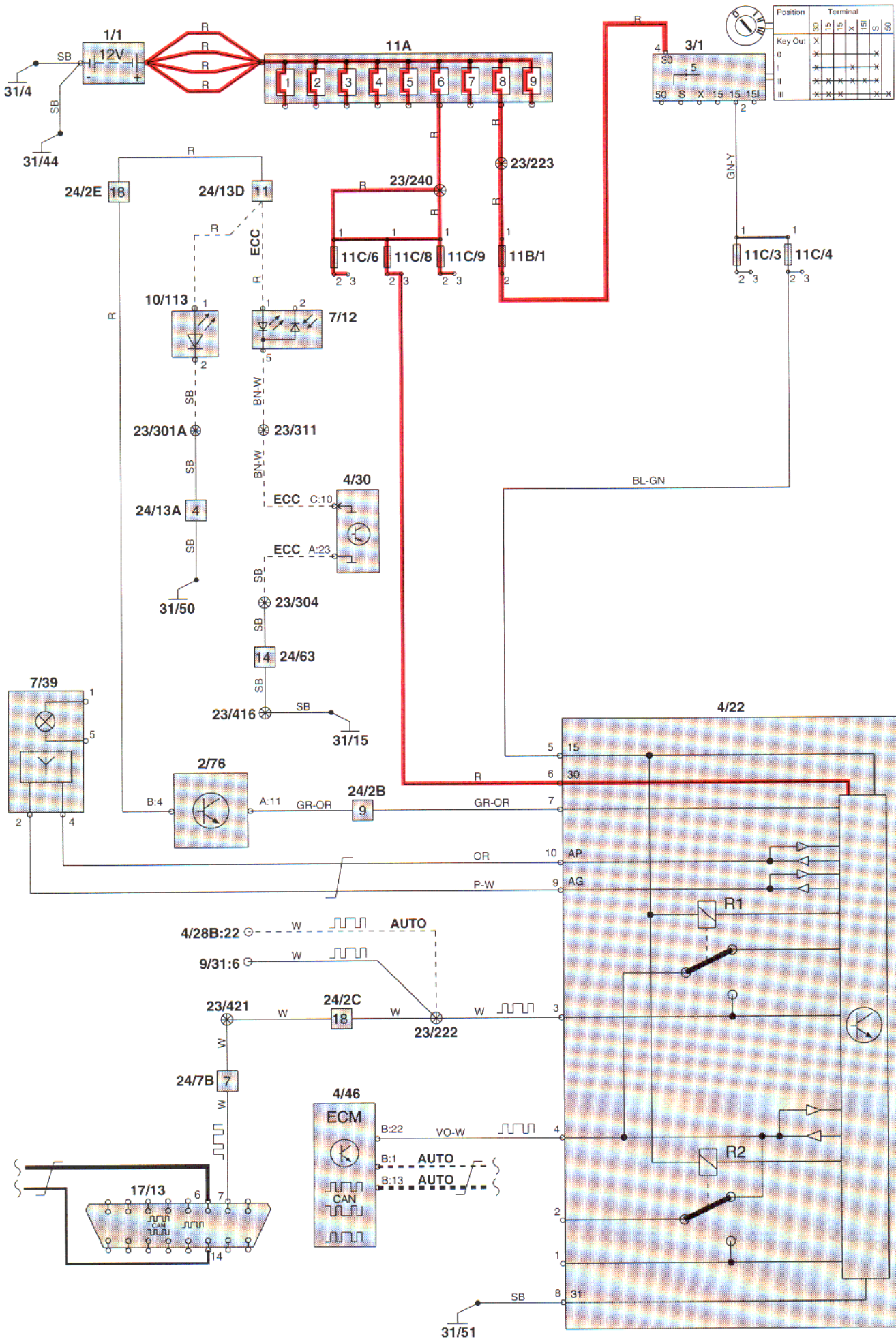
Cruise control MSA 15.8



Power supply and starter system



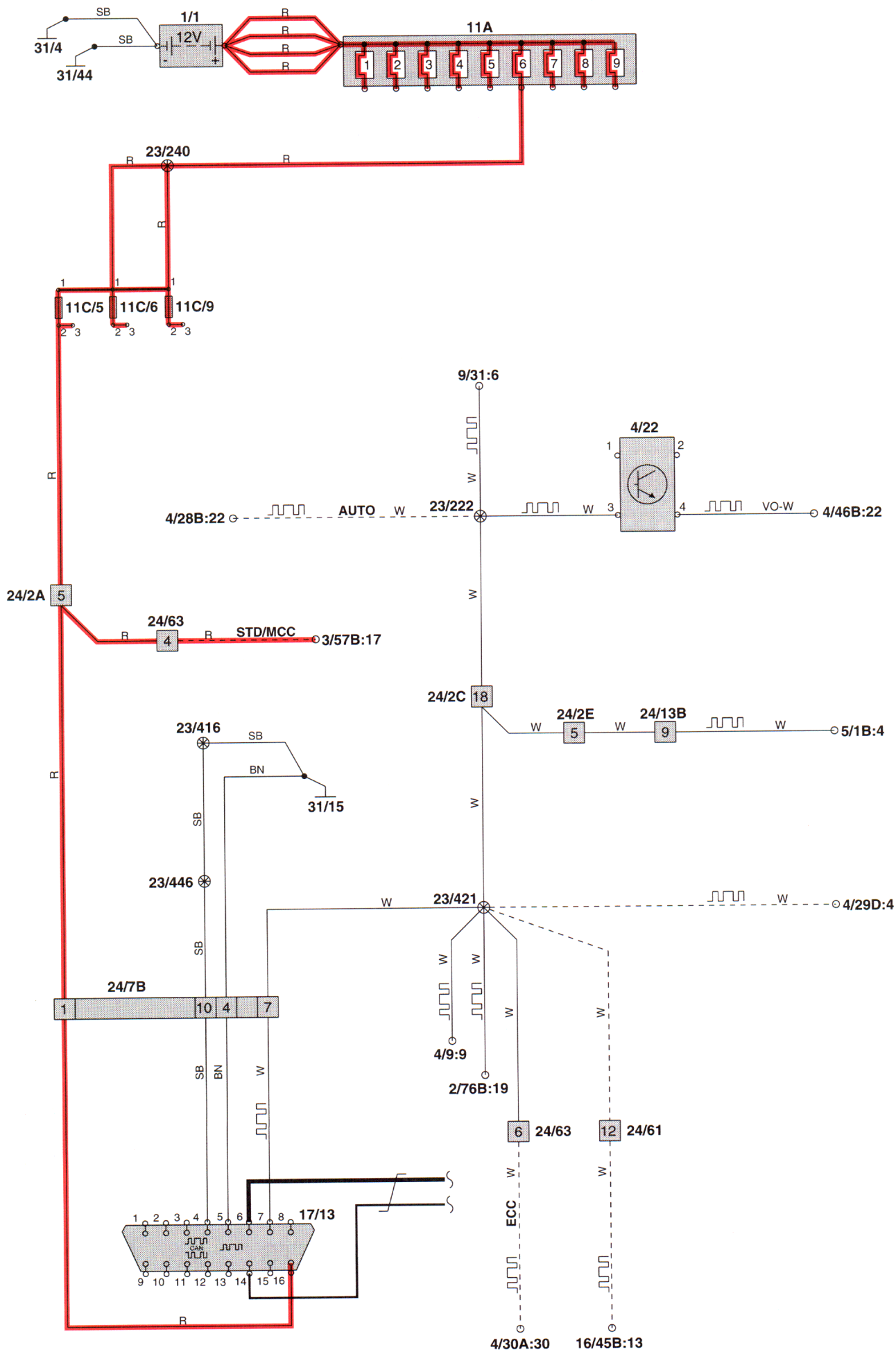
Immobilizer MSA 15.8

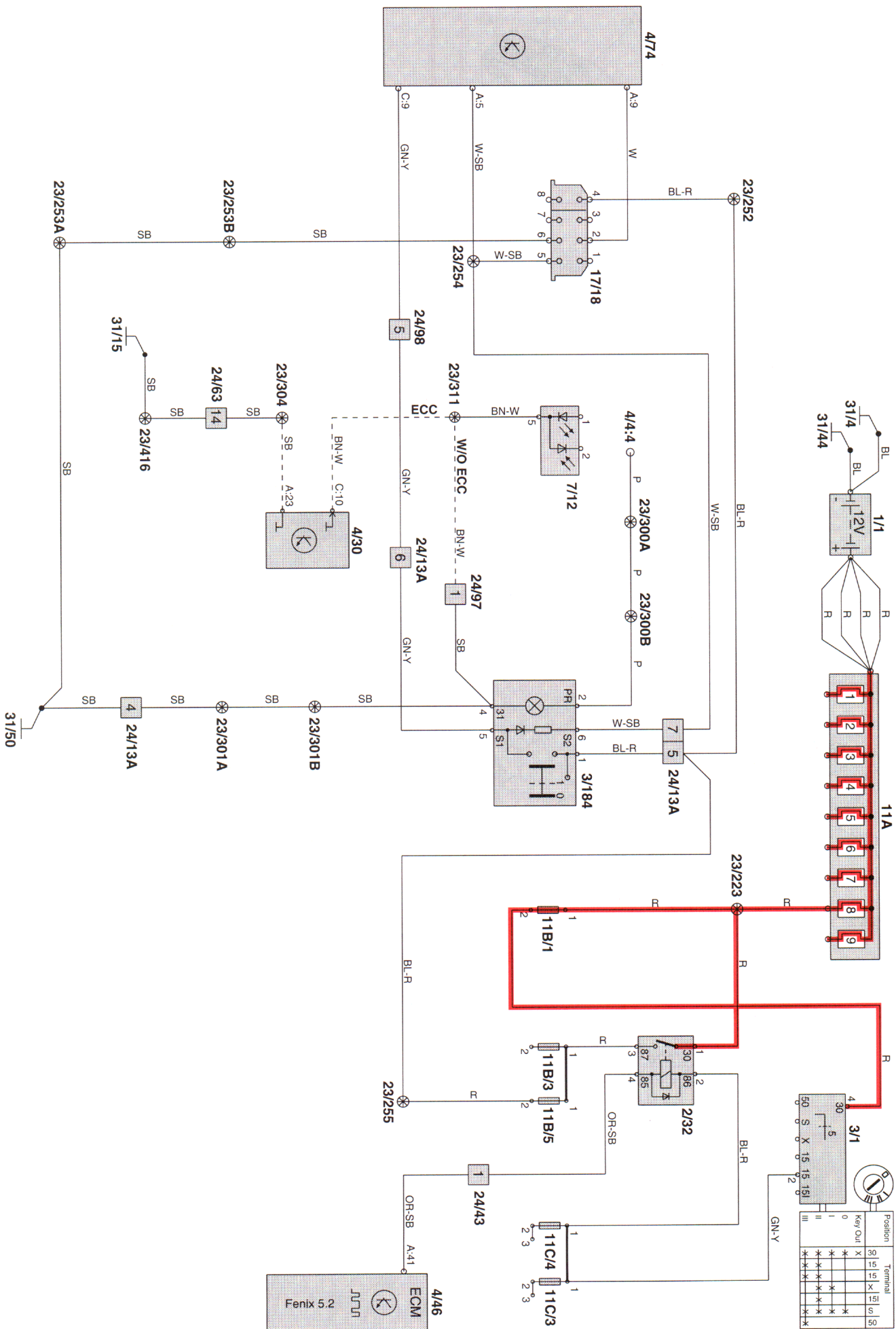


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Diagnostics

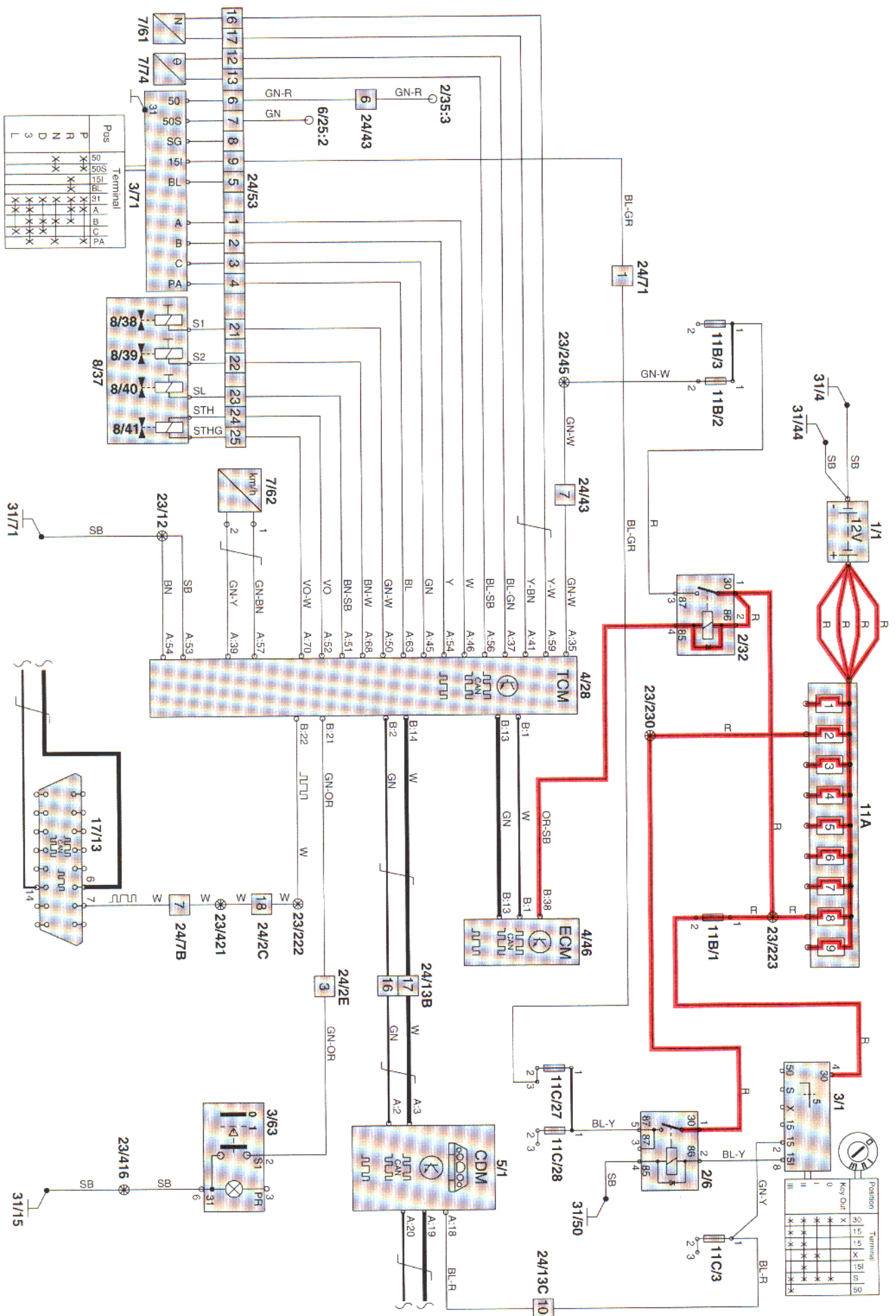
MSA 15.8





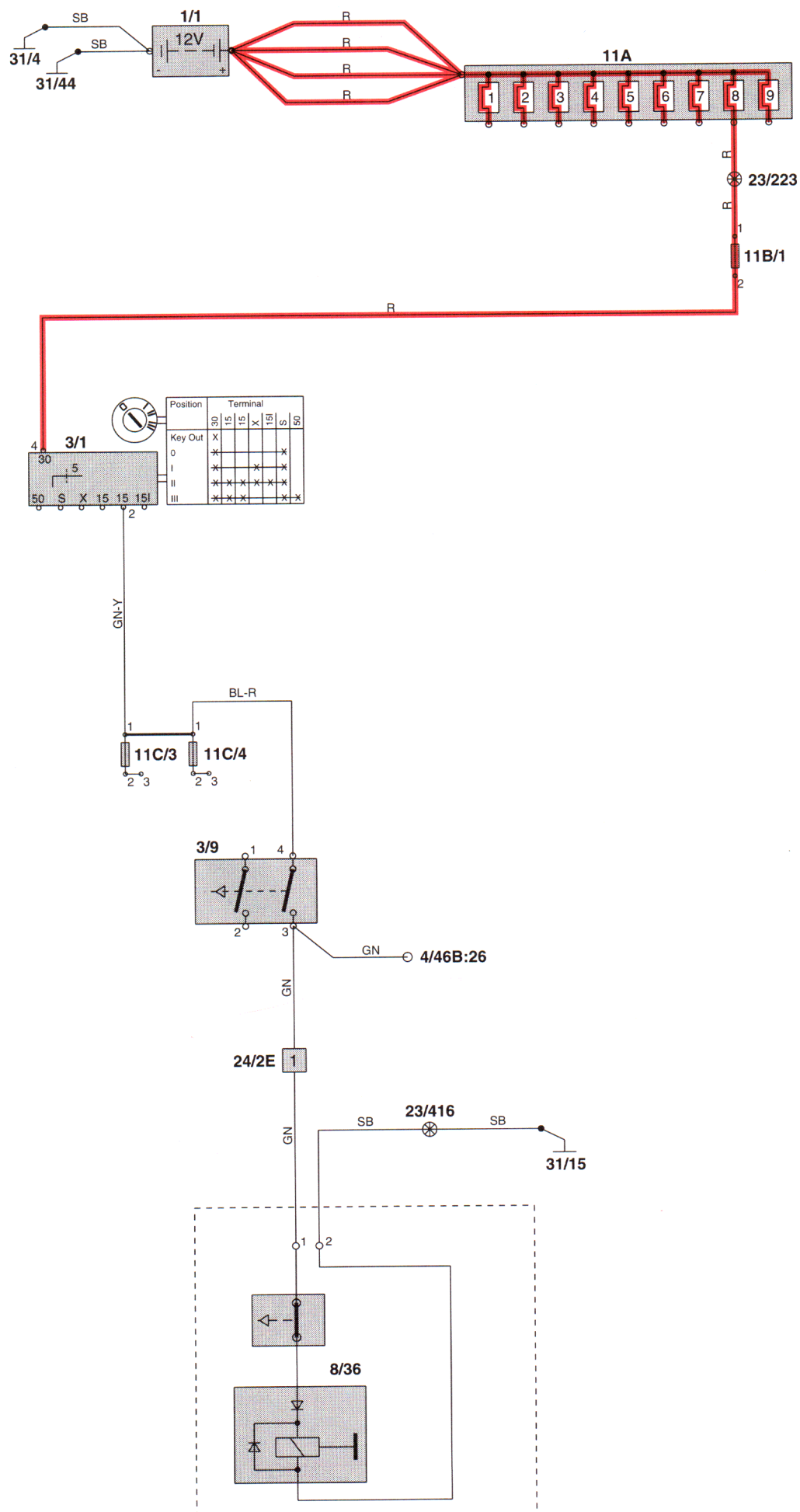
Electronically controlled automatic transmission AW 50-42

MSA 15.8

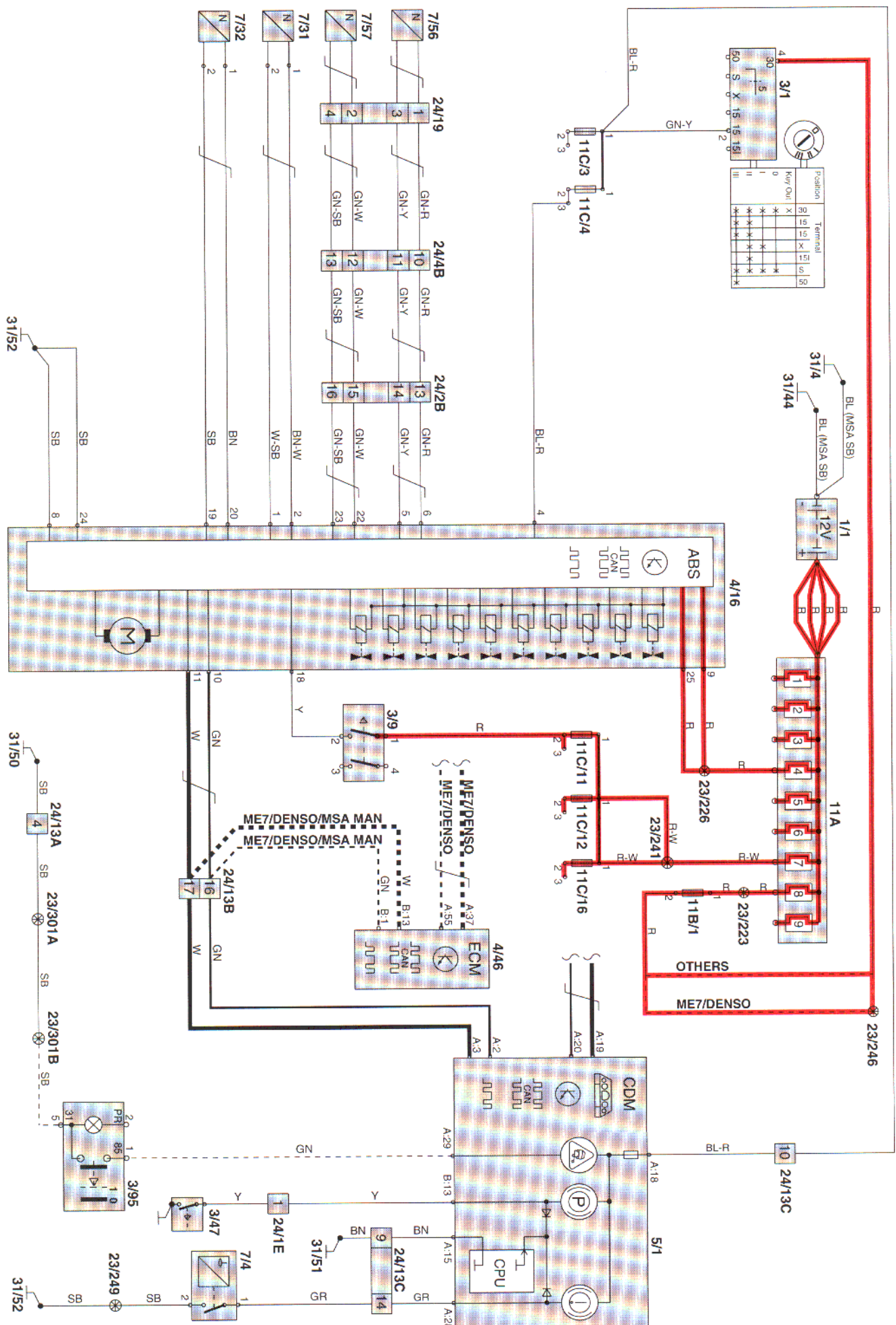


P-shift lock automatic transmission

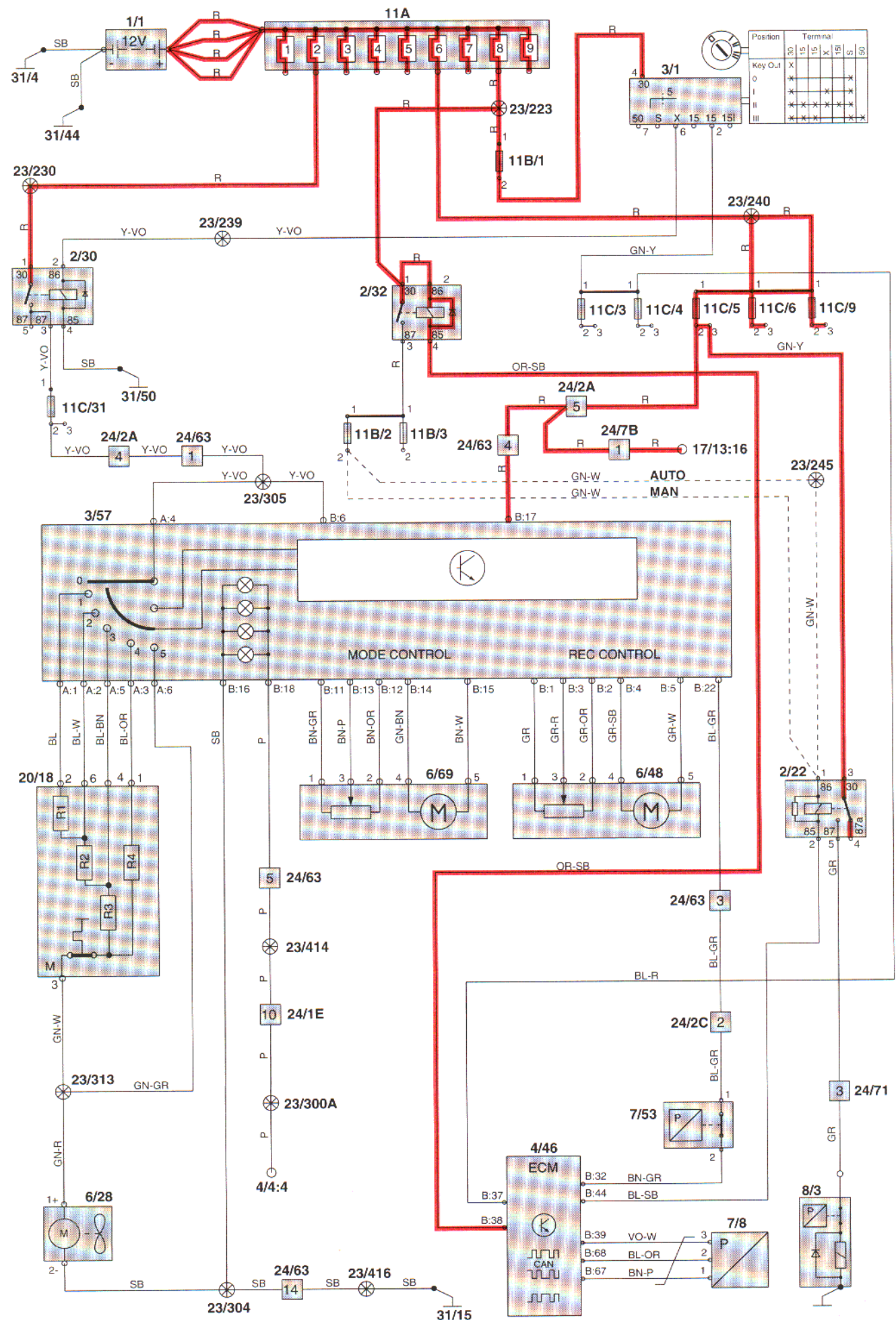
MSA 15.8



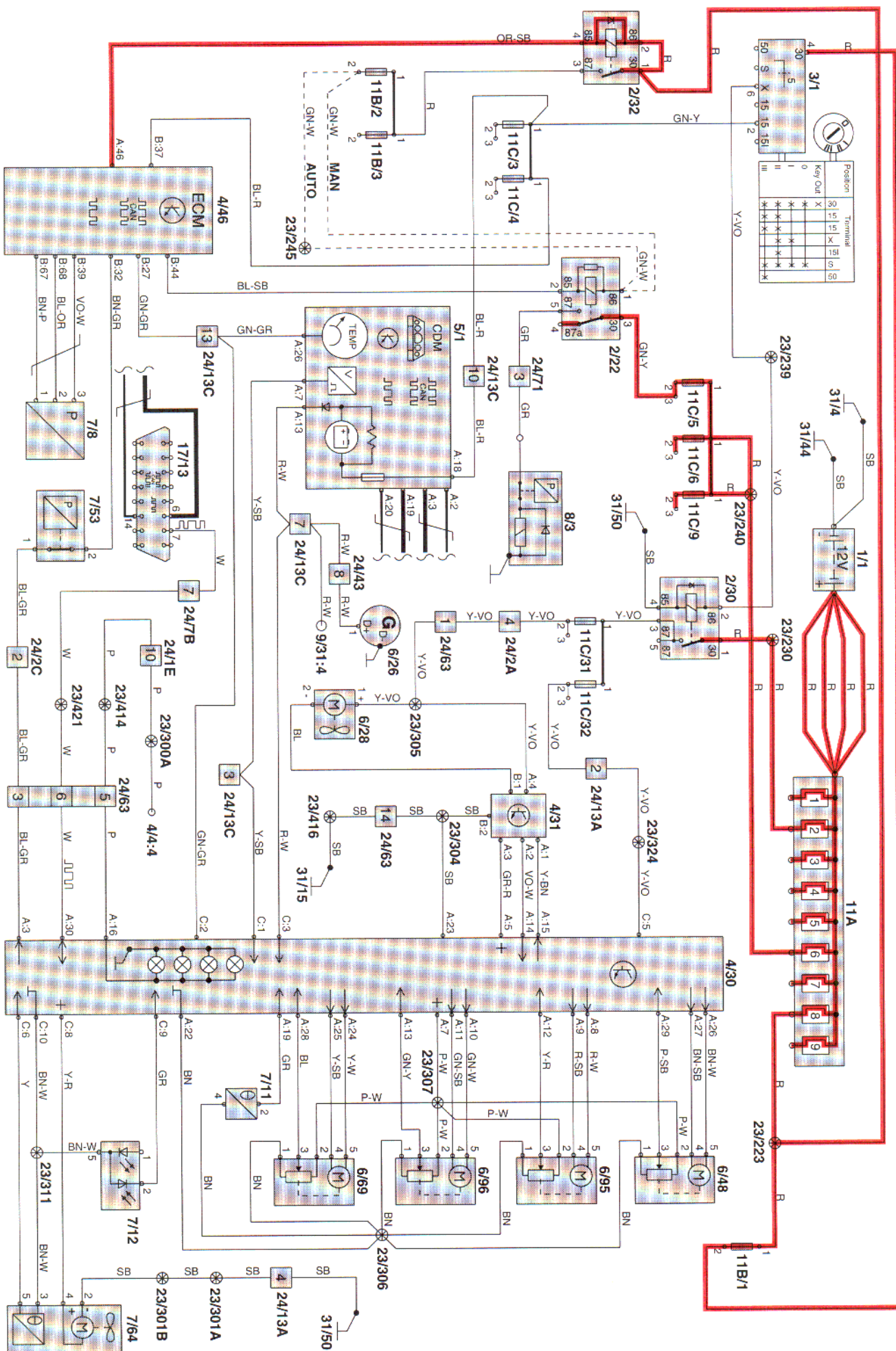
ABS Anti-lock braking system



Manual climate control MCC MSA 15.8

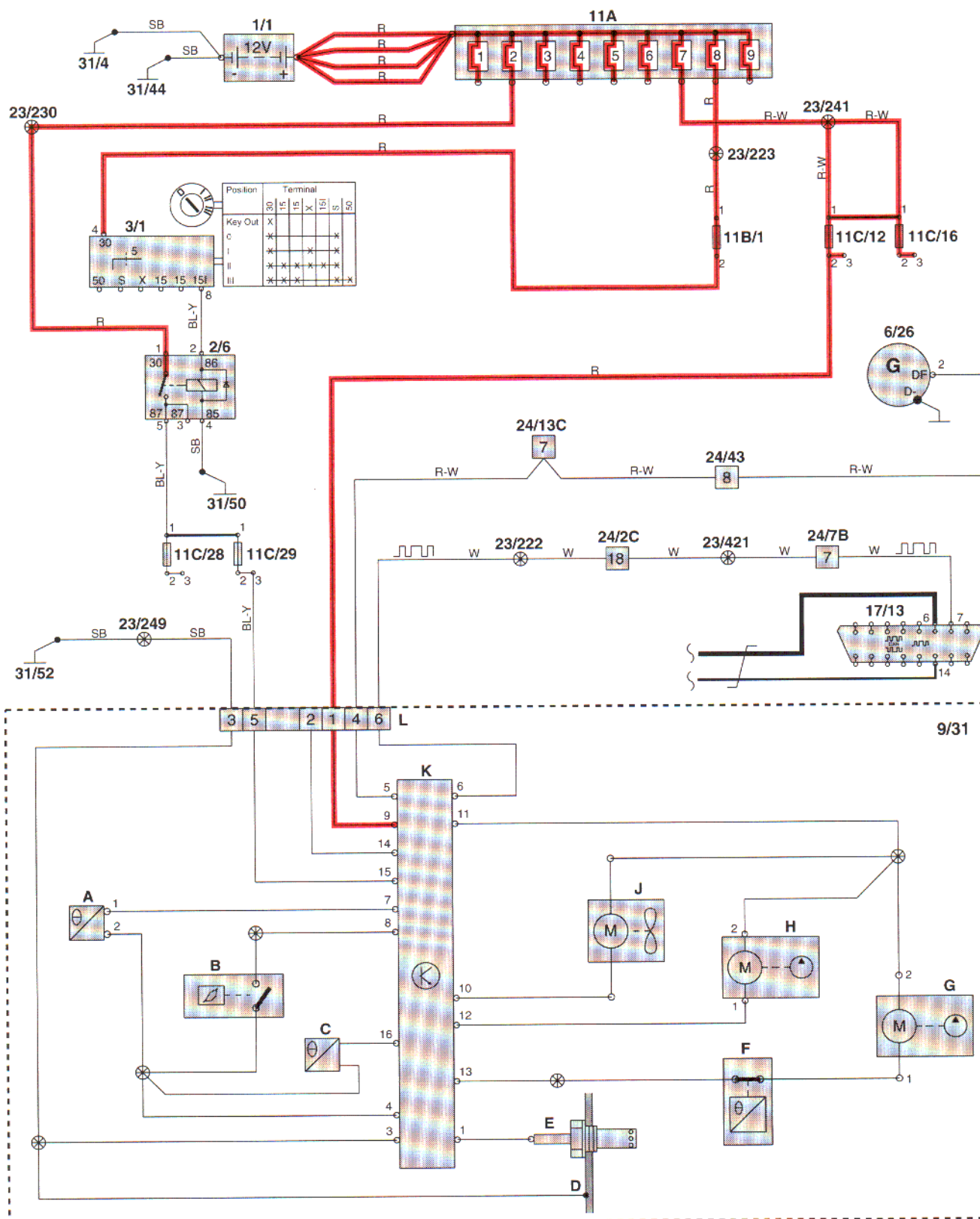


Electronic climate control ECC
MSA 15.8



Additional heater

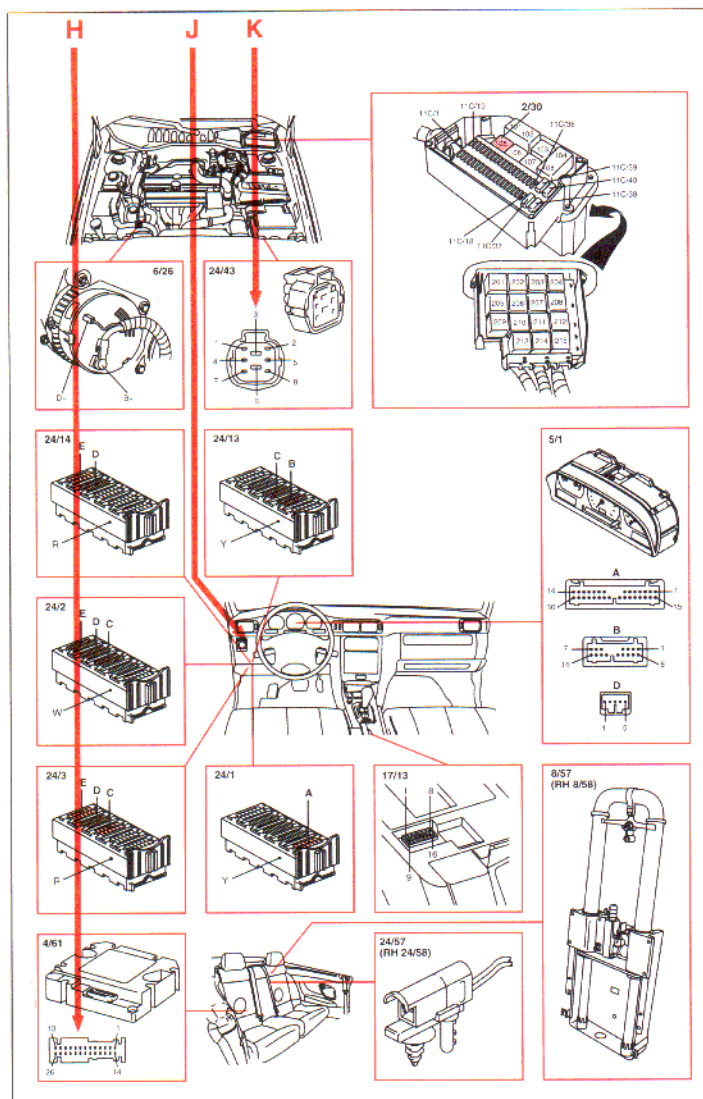
- | | | | |
|---|---|---|----------------------------|
| A | Outside temperature sensor | G | Fuel pump (FP) |
| B | Flame sensor | H | Coolant pump |
| C | Engine coolant temperature (ECT) sensor | J | Combustion fan |
| D | Ground terminal, glow plugs | K | Control module |
| E | Glow plugs | L | Connector on heater, 6-pin |
| F | Overheat protection thermostat | M | Timer |



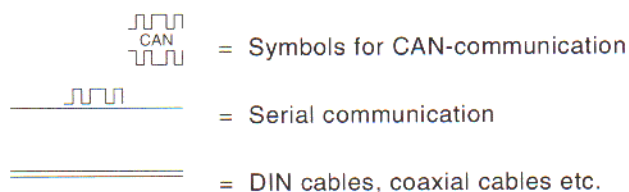
Component list

1/1	Battery	3/97	Power window switch driver's door
2/1	Main lighting relay with bulb failure warning sensor	3/99	Front fog lamps switch
2/2	Fog lamp relay	3/100	Lock unit driver's door
2/4	Windshield wiper intermittent relay	3/109	Switch trunk lid / fuel tank filler cover
2/5	Relay seat belt reminder / ignition warning	3/110	Lock unit passenger door
2/6	Overload relay 15l-supply	3/120	Soft-top switch
2/11	Engine cooling fan relay	3/144	Lock unit trunk
2/14	Glow plug relay	3/146	Rear bass speakers switch
2/16	Tailgate wiper intermittent relay	3/157	Airbag disconnection contact breaker passenger side
2/22	Relay A/C	3/160	Interior lighting switch
2/23	Fuel pump relay	3/161	Vanity mirror lighting switch left-hand side
2/30	Overload relay X-supply	3/162	Vanity mirror lighting switch right-hand side
2/32	Main relay fuel system	3/171	Retractable power door mirrors switch
2/33	Main relay compressed natural gas (CNG) powered	3/184	Switch compressed natural gas (CNG) / gasoline powered
2/35	Starter motor relay		
2/43	Heated rear seat relay	4/3	Control module cruise control
2/44	Heated rear window / door mirrors relay	4/4	Rheostat
2/54	Relay 30-supply cargo compartment	4/9	SRS control module
2/67	Trunk lid opening relay	4/16	ABS control module
2/74	Relay heating plugs coolant	4/19	Remote-controlled central locking / anti-theft alarm
2/76	Control module central locking / anti-theft alarm	4/22	Immobilizer
2/77	Relay alarm horn	4/28	Transmission control module (TCM)
2/99	Relay left-hand side window lift mechanism	4/29	Seat control module
2/100	Relay right-hand side window lift mechanism	4/30	Control module ECC
2/129	Relay fuel shut-off system	4/31	Blower fan control module
2/130	Relay start inhibitor	4/33	Control module power sunroof
3/1	Ignition switch	4/44	Ignition Discharge Module (power stage) and ignition coil
3/2	Light switch	4/46	Engine control module (ECM)
3/3	Turn indicator / high-low beam switch	4/50	Electronic throttle module (ETM)
3/4	Electrical switch module cruise control	4/59	Soft-top control module
3/6	Hazard warning signal flasher switch	4/60	Power windows control module
3/8	Heated rear window / door mirrors switch	4/61	Control module roll-over bar
3/9	Stop (brake) lamp switch	4/74	Ignition control module (ICM) compressed natural gas (CNG) powered
3/10	Back-up (reversing) lamps switch	4/75	Electronic module
3/13	Tailgate wiper and washer switch	4/76	Remote control module garage door opener
3/20	Power window switch front passenger door		
3/25	Power sun roof switch	5/1	Combined instrument panel (CDM)
3/38	Brake pedal switch	6/4	Left headlamp washer motor
3/39	Clutch pedal switch	6/13	Power door mirror driver side
3/41	Power door mirrors switch	6/14	Power door mirror passenger side
3/44	Seat belt lock switch driver's seat	6/15	Power sunroof motor
3/45	Seat belt lock switch passenger seat	6/25	Starter motor
3/47	Parking brake switch	6/26	Generator
3/57	Climate control	6/28	Blower fan
3/58	Fog tail lamps switch	6/29	Engine cooling fan (FC)
3/59	Beam height control	6/30	Tailgate washer motor
3/61	Controls trip computer	6/31	Fuel injection pump / fuel pump
3/62	Alarm switch hood	6/32	Tailgate wiper motor
3/63	Mode selector AW 50-42	6/33	Fuel level sensor
3/65	Electrically heated rear seat switch	6/33L	Left fuel level sensor
3/71	Gear-shift position sensor	6/33R	Right fuel level sensor
3/72	Kickdown switch throttle control	6/34	Power antenna
3/76	Lock unit left rear door	6/37	Central locking motor fuel tank filler cover
3/77	Lock unit right rear door	6/38	Left actuator motor headlamp range adjustment
3/78	Lock unit trunk	6/39	Right actuator motor headlamp range adjustment
3/84	Cargo compartment fans switch	6/48	Servo motor recirculation shutter
3/85	Power window switch left rear door		
3/86	Power window switch right rear door		
3/91	Heated seat left switch		
3/92	Heated seat right switch		
3/95	Switch TC/STC		

How to use the diagrams



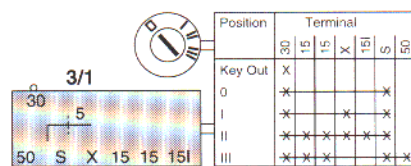
Explanation of symbols , continued



Table

Certain multi-point switches are described using a table, see the example below. The table is used to read off when the terminals are electrically connected to each other.

Example. In position III, terminal 30 is connected to terminals 15A, S, and 50.



D. Junction points

The junction points are numbered. There is a list of the different junction points in the manual. It shows which other components the junction points are joined to. The locations are shown in the section "Routing of cable harnesses in the car".

E. Electrical distribution

Supply to the fuse is displayed in its entirety in the section "Electrical distribution".

F. Abbreviations

There are a number of abbreviations used in the book. These are explained in the section "Abbreviations".

Example. R-W = Red-white

G. CAN-communication

Cables which are drawn as broken lines are displayed in their entirety in the section "Data communication".

H. Components

This shows which different positions the different cables are connected to on the relevant component.

J. Location of components

It shows where the function components are located.

K. Connectors

Connectors which are an interface between two cable harnesses are described in the section "Connectors".

Fuses

Fuses, 11A/1-9, in the relay / fuse box in the engine compartment

No.	Fuse function	A
11A/1	Engine cooling fan (FC)	60
11A/2	Fuses 11C/25-29 via overload relay 15I, Fuses 11C/30-37 (CONV 11C/30-36) via overload relay X	50
11A/3	Starter motor (Not MSA), Heater plugs coolant (MSA)	50
11A/4	ABS control module	50
11A/5	Main lamp relay with bulb failure warning sensor	50
11A/6	Fuses 11C/5-10, Starter motor (MSA)	60
11A/7	Fuses 11C/11-17, 11C/39-40 and 11C/41-42 (CONV)	50
11A/8	Fuse 11B/1, Fuses 11B/2-5 via main relay fuel injection system	60
11A/9	Glow plugs 1-5 via Glow plug relay (diesels) (MSA), Fuse 11C/37 via relay window lift mechanisms right-hand side (CONV), Fuse 11C/38 via relay window lift mechanisms left-hand side (CONV)	60

Fuses, 11B/1-5, in relay / fusebox in engine compartment

No.	Fuse function	A
11B/1	Ignition lock, Engine management system (DENSO/ME7), Emission control (DENSO/ME7), Engine cooling fan (FC) (DENSO/ME7), Electronically controlled automatic transmission AW 50-42 (Not MSA), Cruise control (DENSO/ME7), Electronic climate control ECC (DENSO/ME7)	10 (15 S70/V70 DENSO/ME7)
11B/2	Engine management system (Not BIFUEL), Engine cooling fan (FC) (Not FENIX), Cruise control (DENSO/ME7), Electronically controlled automatic transmission AW 50-42 (Not FENIX), Manual climate control MCC (Not FENIX), Electronic climate control ECC (Not FENIX)	15 (10 FENIX/ MSA)
11B/3	Engine management system	15 (20 FENIX)
11B/4	Electronically controlled automatic transmission AW 50-42(FENIX), Engine management system (DENSO/ME7)	15 (10 FENIX/ MSA)
11B/5	Engine management system, Engine cooling fan (FC) (FENIX), Manual climate control MCC (FENIX), Electronic climate control ECC (FENIX), Emissions control, Diagnostics (BIFUEL)	20 (10 FENIX/ MSA)

Fuses, 11C/1-24, in the central electrical unit

No.	Fuse function	A
11C/1	Central locking (C70), Soft-top operation	10
11C/2	Fog lamps, Tow hitch wiring, Combined instrument panel	10 (15 CONV)
11C/3	Electronic module (BIFUEL), RTI Road Traffic Information, Anti-theft alarm, Interior lighting, Central locking, Electronically controlled automatic transmission AW 50-42 (FENIX)	10 (15 CONV)
11C/4	Engine management system (DENSO/ME7), Immobilizer, Shift-lock automatic transmission, ABS brake system	10
11C/5	Engine cooling fan (FC), Diagnostics, Standard heater, Manual climate control MCC, Electronic climate control ECC	15
11C/6	Anti-theft alarm, Interior lighting, Central locking	20
11C/7	Radio, Radio with 4x50 W extra amplifier (S70/V70)	15 (20 S70/V70 DENSO/ME7)
11C/8	Light switch, Instrument and control panel lighting, Immobilizer, Combined instrument panel	15
11C/9	Radio (C70), Heated rear seat	20 (30 C70)
11C/10	Anti-theft alarm, Central locking	10
11C/11	Stop (brake) lamp, Cruise control (FENIX), Electronically controlled automatic transmission AW 50-42 (FENIX), ABS Brake system, Tow hitch wiring	10 (15 S70/V70 DENSO/ME7)
11C/12	engine management system (BIFUEL), Radio (C70), Additional heater	30 (20 MSA)
11C/13	High and low beam, Anti-theft alarm, Turn signal lamps and hazard warning signal flashers, Central locking, Interior lighting (S70/V70)	20 (15 C70)
11C/14	Electrical retracting door mirrors, rear demist and electrically heated door mirrors	30 (40 COUP)
11C/15	Interior lighting, Seat belt reminder, Seat belt reminder and ignition warning, RTI Road Traffic Information, Power windows (CONV)	10
11C/16	Radio, Towing hitch cable harness, Accessory wiring, Cool box wiring, Radio with 4x50 W extra amplifier (S70/V70)	30
11C/17	Fog lamps	20
11C/18	Seat belt reminder and ignition warning, High and low beam	10
11C/19	High beam, Accessory wiring	15
11C/20	High beam, Combined instrument panel	15
11C/21	Low beam	15
11C/22	Low beam	15
11C/23	Fog lamps (EU/OS), Parking lamps, Tail lamps and license plate lighting, Tow hitch wiring	10
11C/24	Parking lamps, Tail lamps and license plate lighting, Tow hitch wiring	10

Fuses

Fuses, 11C/25-42, in the central electrical unit

No.	Fuse function	A
11C/25	-	10
11C/26	Light switch, Instrument and control panel lighting	15
11C/27	Back-up (reversing) lamps, Turn signal lamps and hazard warning signal flashers, RTI Road Traffic Information, Electronically controlled automatic transmission AW 50-42, Rear view mirror with automatic dimming	15
11C/28	Heated seats, Heated rear seat	25
11C/29	15I-rail (15/4): Cruise control (FENIX/MSA), Parking lamps, Tail lamp and license plate lighting, Stop (brake) lamp, Anti theft alarm, Cool box wiring, Seat belt reminder, Seat belt reminder and key warning, Rear demist and electrically heated door mirrors, Electrical retracting door mirrors, Additional heater, Towing hitch cable harness, Soft-top operation	10
11C/30	Cigarette lighter/12V outlet	15 (20 S70/V70 DENSO/ME7)
11C/31	Standard heater STD, Manual climate control MCC, Electronic climate control ECC	25
11C/32	Instrument- and control panel lighting, Radio, Radio with 4x50 W extra amplifier (S70/V70), Power sun roof, Electrical retracting door mirrors, Electronic climate control ECC, Central locking (CONV), Soft-top operation	10
11C/33	X-rail (15/8): Headlamp range adjustment, Tailgate washer	15
11C/34	Horn, Windshield and headlamp washer	25
11C/35	Interior lighting, Accessory wiring, Road Traffic Information RTI, Power seat without memory, Cargo compartment fans, Remote controlled garage door opener, Power windows (CONV), Soft-top operation, Rear view mirror with automatic dimming, Rear demist and electrically heated door mirrors (CONV), Power door mirrors (CONV), Electrical retracting door mirrors (CONV)	10
11C/36	Seat belt reminder, Seat belt reminder and ignition reminder, Supplemental Restraint System SRS	15 (10 S70/V70 DENSO/ME7)

Automatic fuses

11C/37	Power windows, Power sun roof, Power door mirrors (Not CONV), Power retracting door mirrors (Not CONV), Rear demist and electrically heated door mirrors (Not CONV)
11C/38	Power windows (C70)
11C/39	Power seats (LH)
11C/40	Power seats (RH)
11C/41	Soft-top operation (CONV)
11C/42	Soft-top operation (CONV)

Relays in the relay / fusebox in the engine compartment

1	Main relay fuel injection system (2/32)
2	Glow plug relay (diesels) (2/14) (MSA)
3	Relay starter motor (2/35)
4	Air conditioning (A/C) relay (2/22)

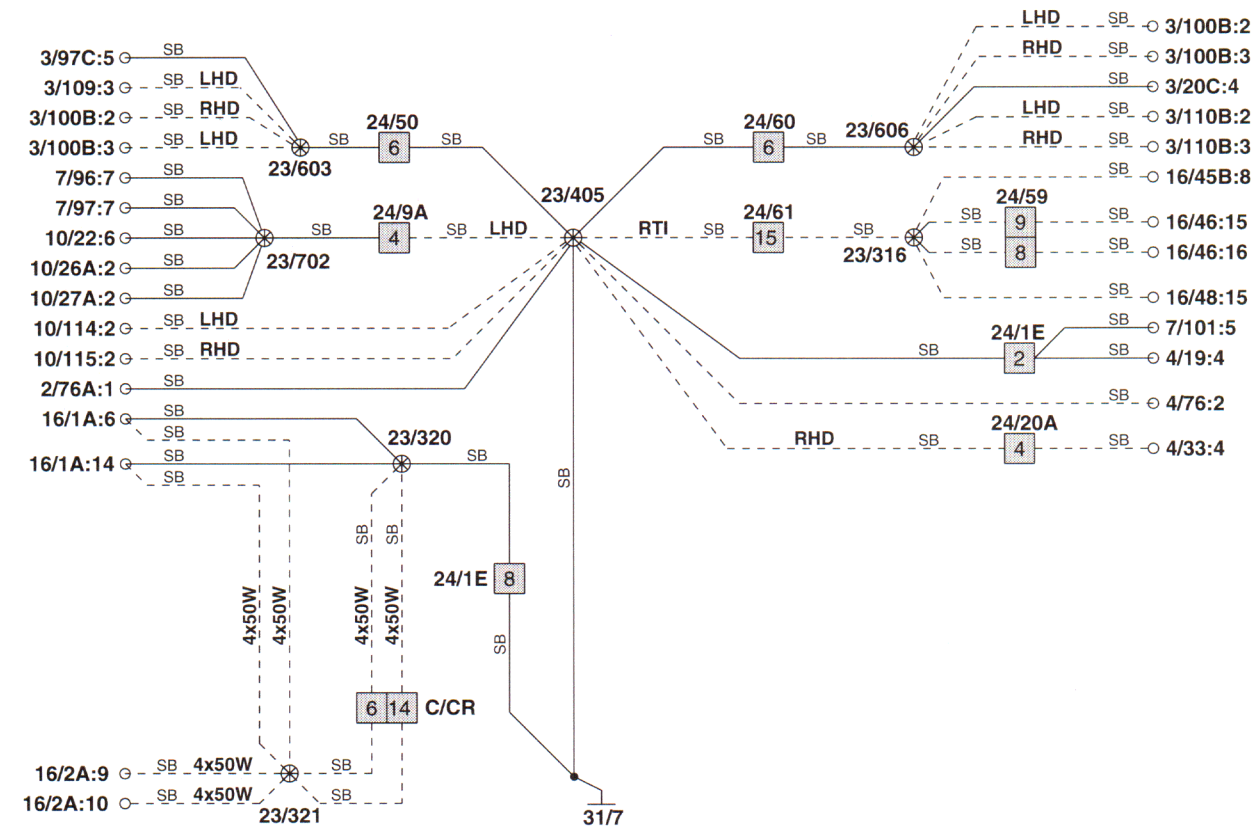
Relays in the central electrical unit

101-102	Control module cruise control (4/3) (FENIX)
103	Relay fuel pump (FP) (2/23) (Not MSA)
104, 108	Headlamp relay with bulb failure warning sensor (2/1)
105	Overload relay X-supply (2/30)
106	Overload relay 15I-supply (2/6)
107	Main relay compressed natural gas (CNG) powered (2/33)
201	Fog lamp relay (2/2)
202	Alarm horn relay (2/77)
203	Intermittent wiper relay (2/4)
204	Rear window intermittent wiper relay (2/16) (S70/V70) Audible acknowledgement signal soft-top (7/117) (CONV)
205	Rear hatch opening relay (2/67) (CONV)
206	Window lift mechanisms relay left-hand side (2/99) (CONV) Relay fuel shut-off system (2/129) (BIFUEL)
208	Switch heated rear window / door mirrors (2/44)
210	Window lift mechanisms relay right-hand side (2/100) (CONV) Relay start inhibitor (2/130) (BIFUEL)
212	Relay seat belt reminder / ignition warning (2/5)
214	Automatic fuses 11C/41-42 (CONV)

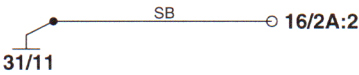
Other relays

- 2/11 Engine cooling fan relay
- 2/43 Heated rear seat relay (S70/V70)
- 2/54 Coolbox relay (V70)
- 2/74 Heating plugs coolant relay (MSA)
- 7/1 Bulb failure warning sensor rear

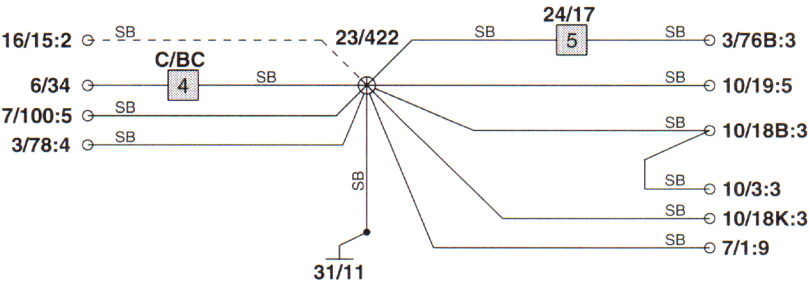
31/7
S70/V70



31/11
C70

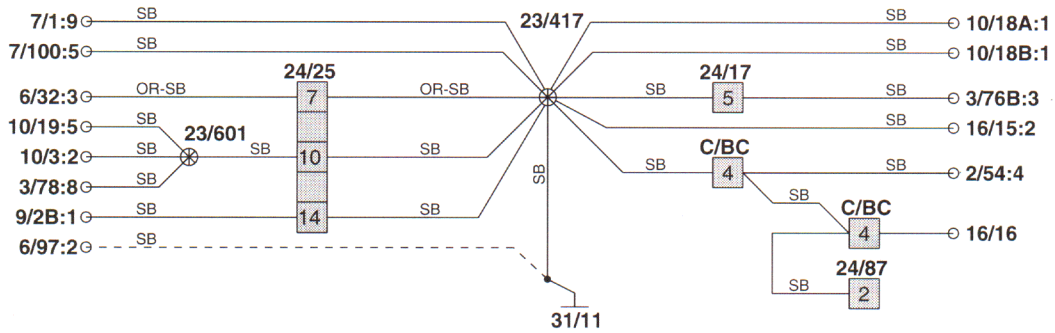


31/11
S70

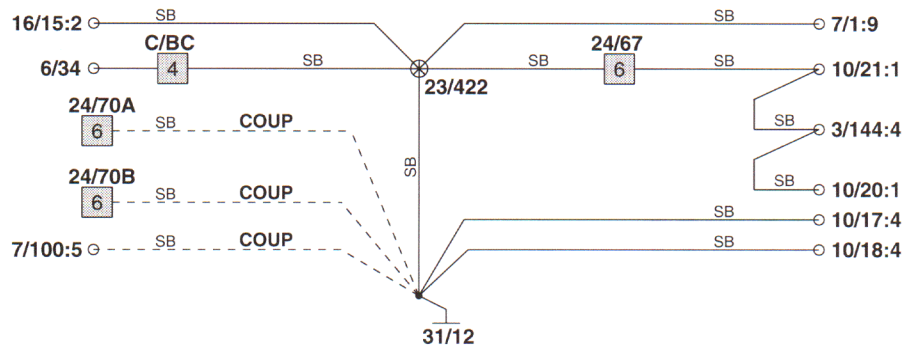


Ground terminals

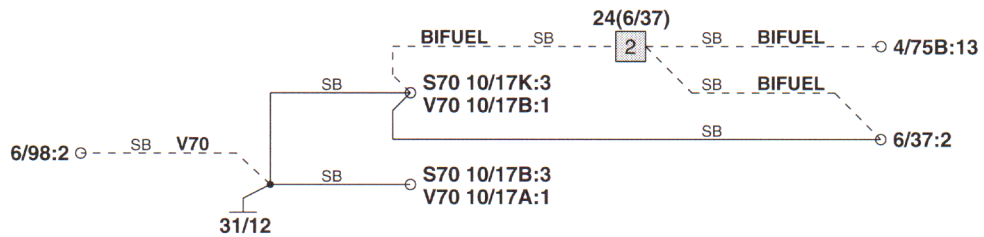
31/11 V70



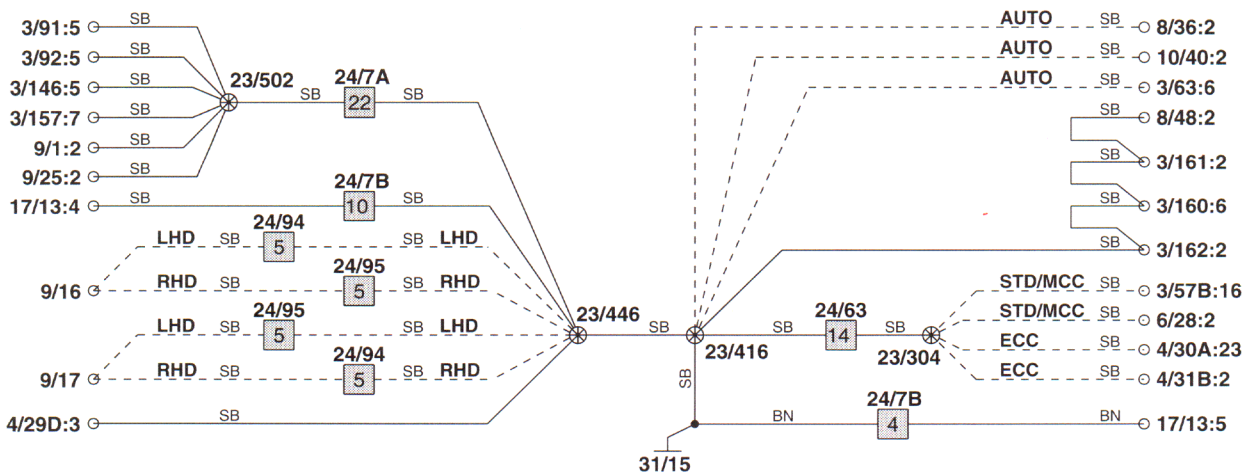
31/12 C70



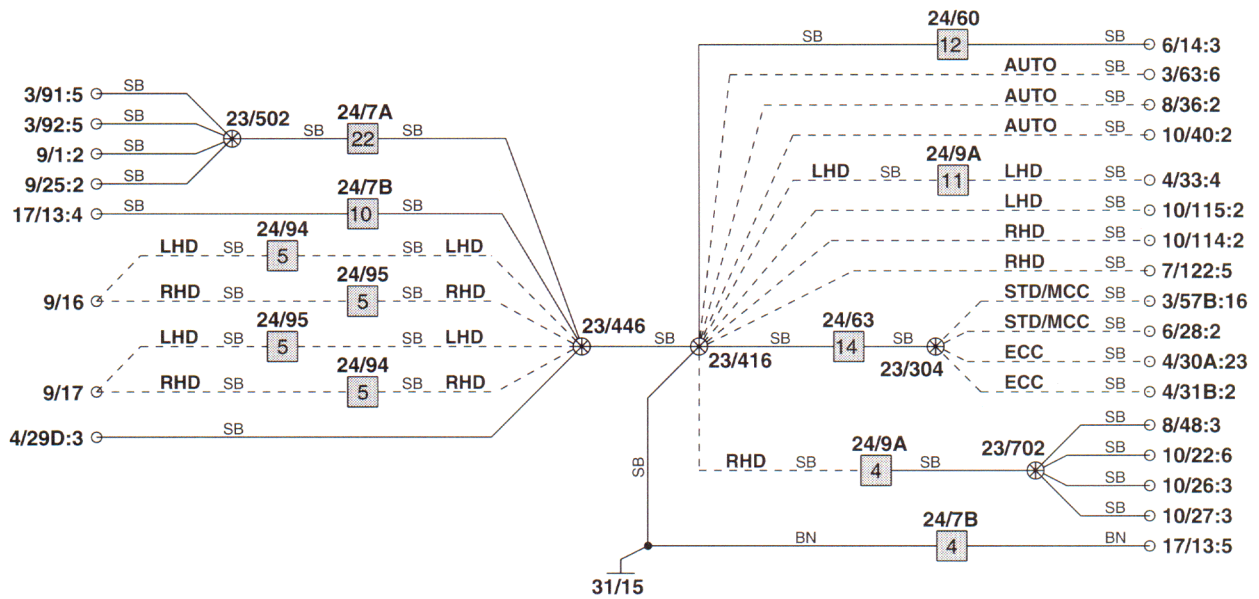
31/12 S70/V70



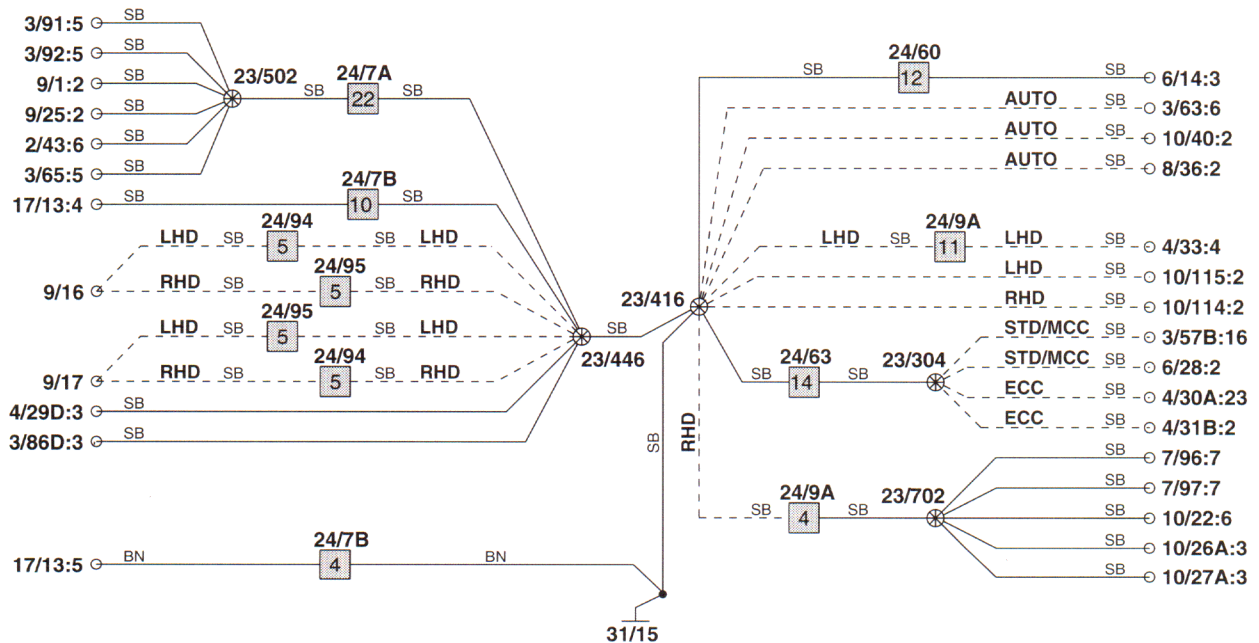
31/15 CONV



31/15 COUP

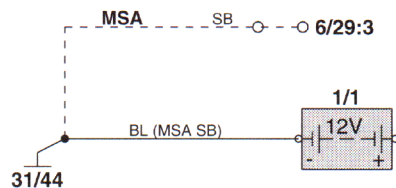


31/15 S70/V70

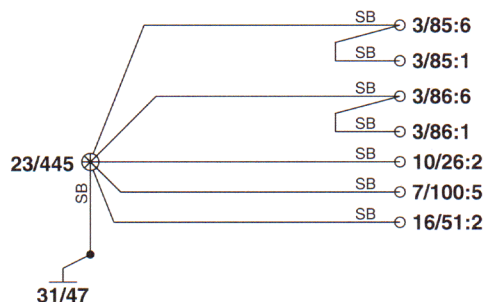


Ground terminals

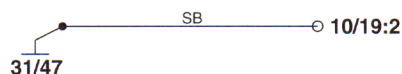
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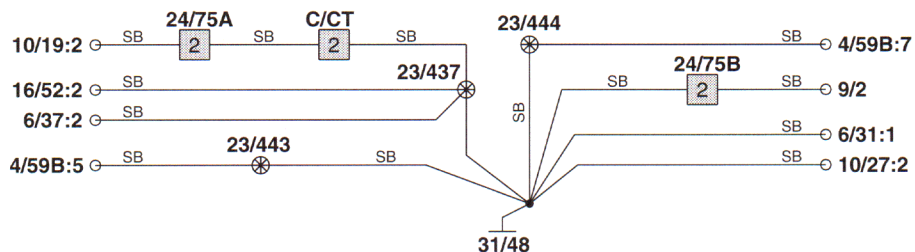
31/47
CONV



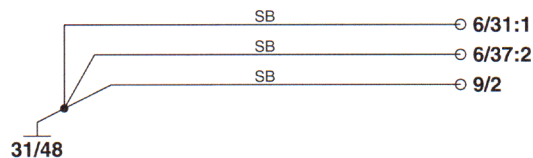
31/47
COUP



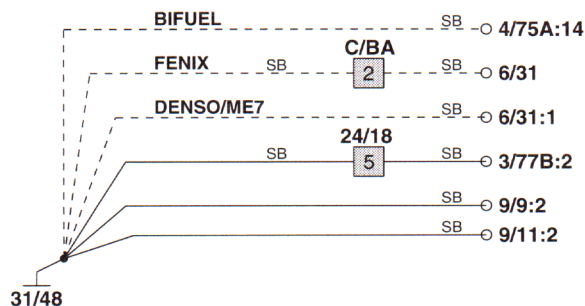
31/48
CONV



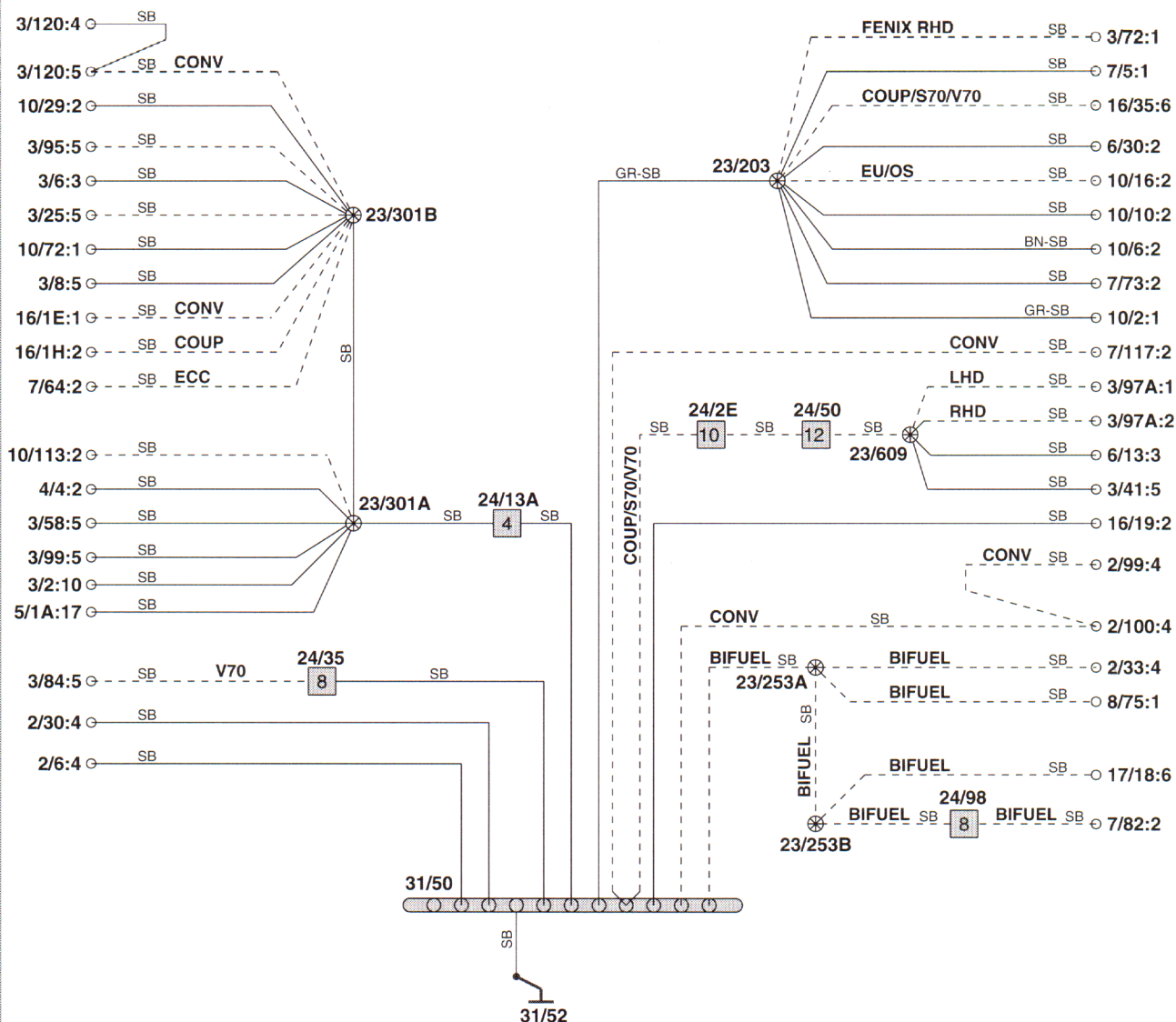
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COUP



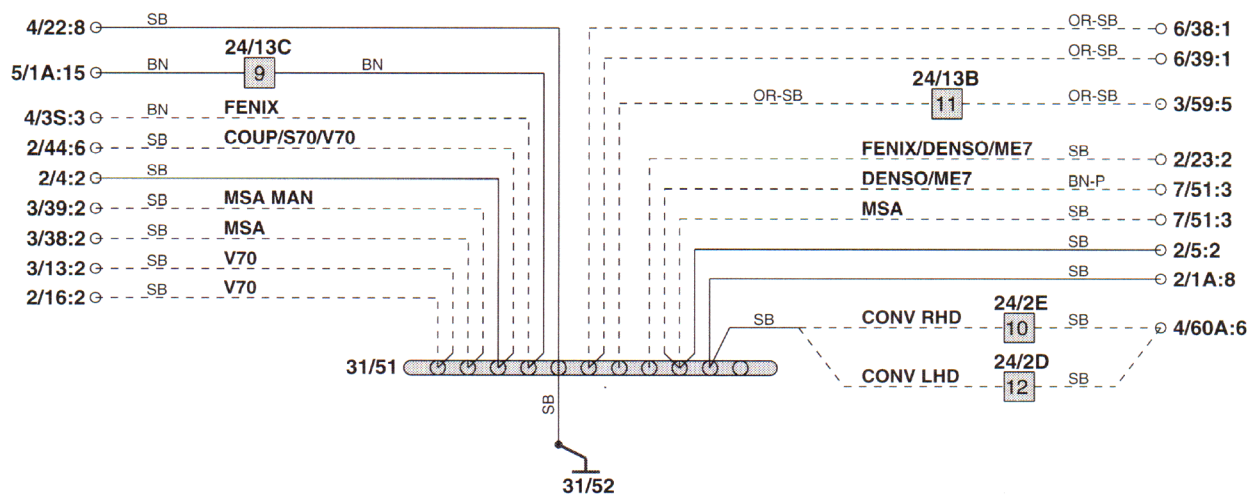
31/48
S70/V70



31/50

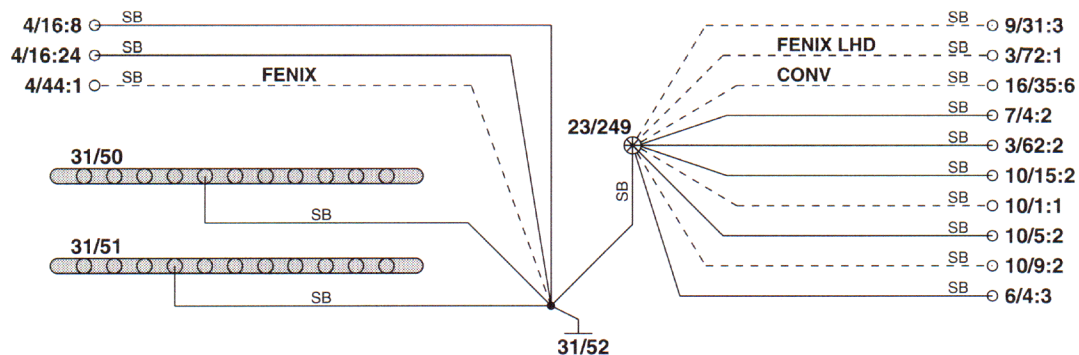


31/51



Ground terminals

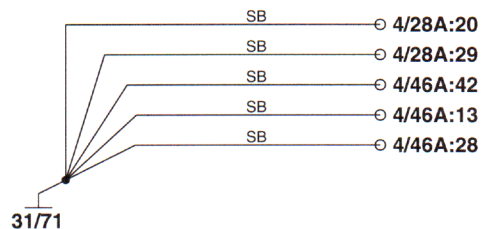
31/52



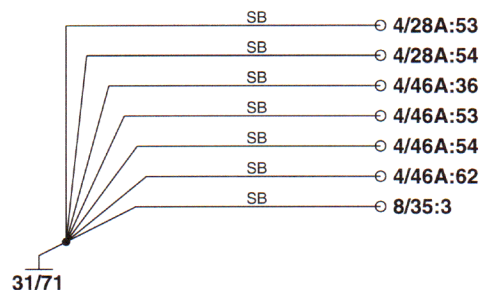
31/55



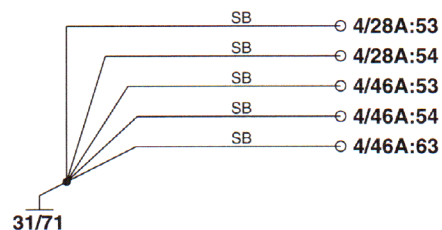
**31/71
FENIX**



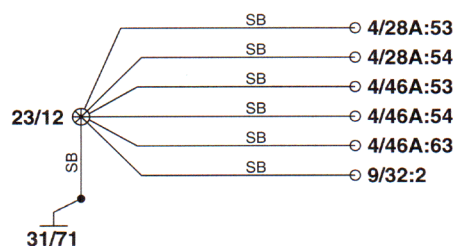
**31/71
DENSO**



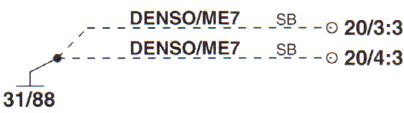
**31/71
ME7**



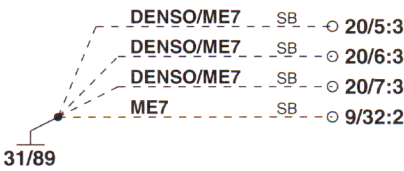
**31/71
MSA**



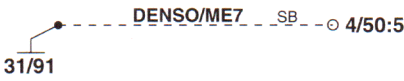
31/88



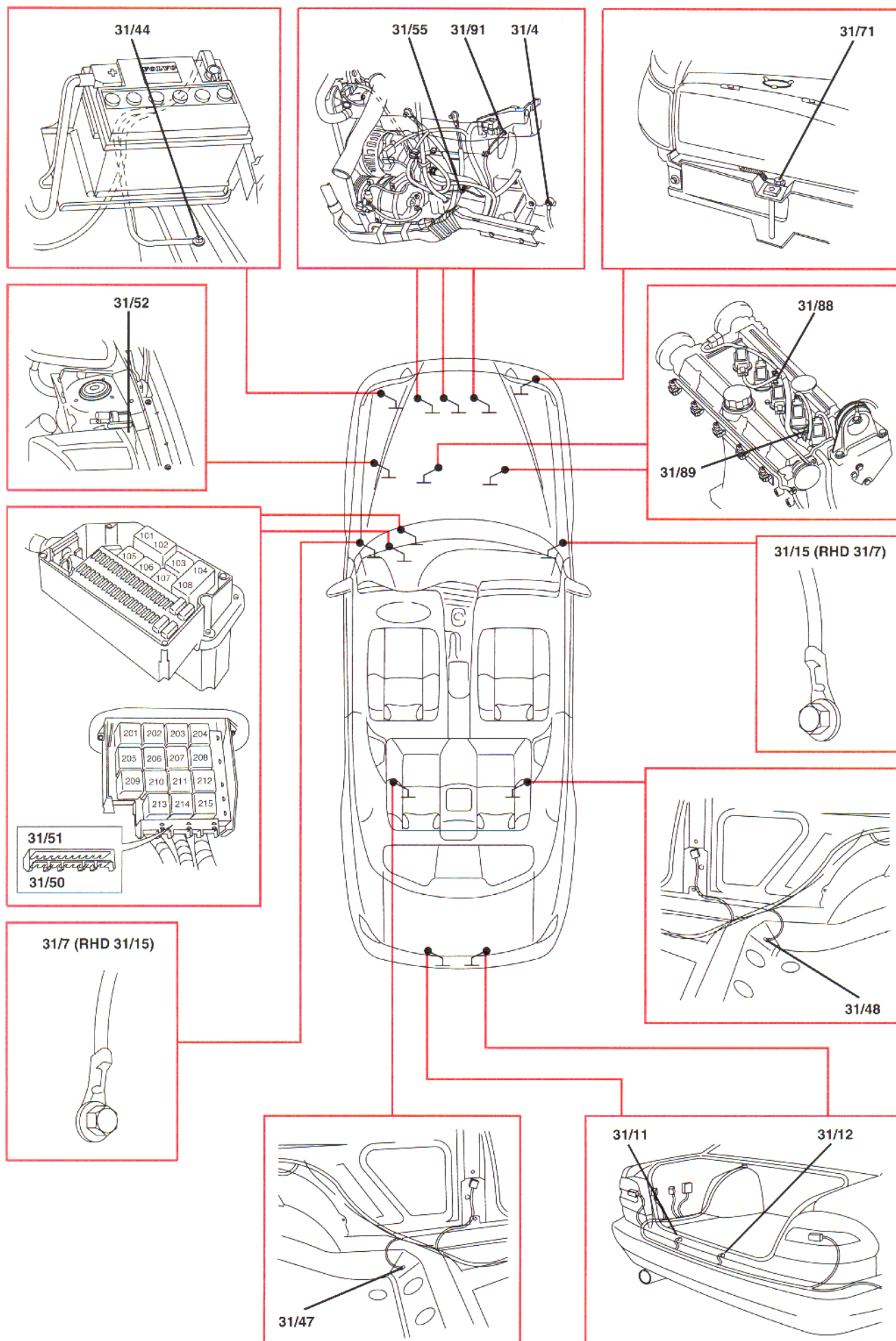
31/89



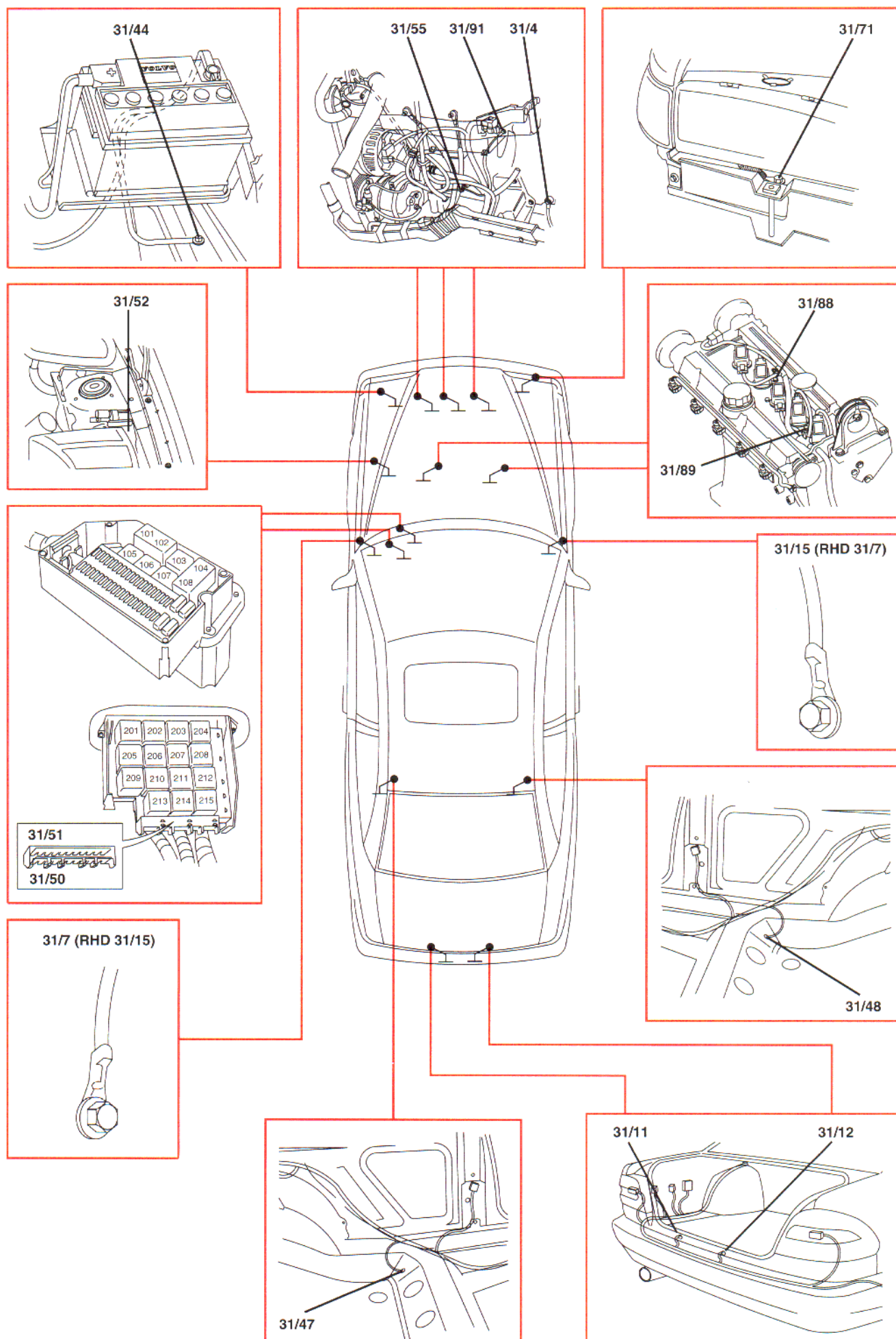
31/91



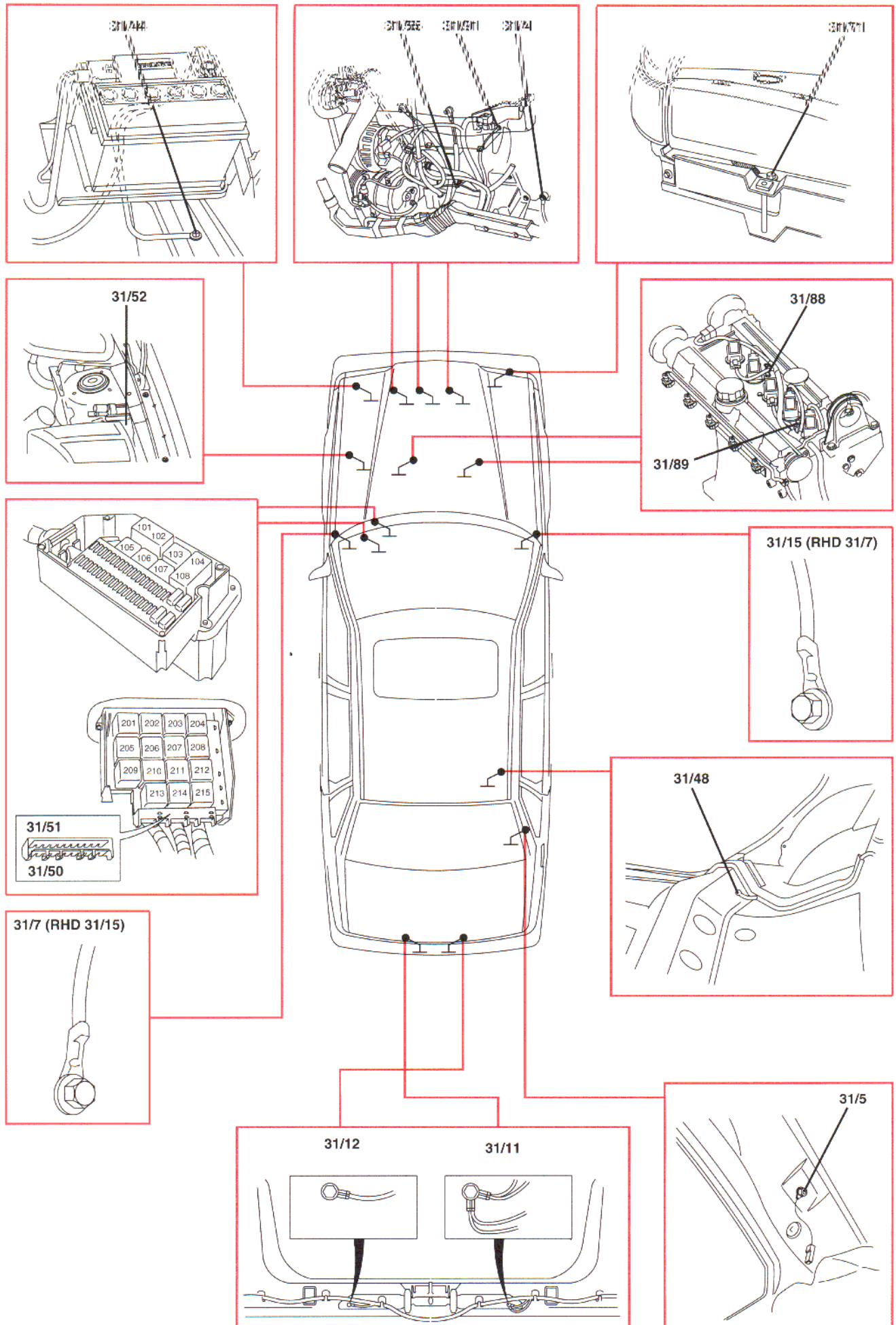
Ground terminals C70 convertible



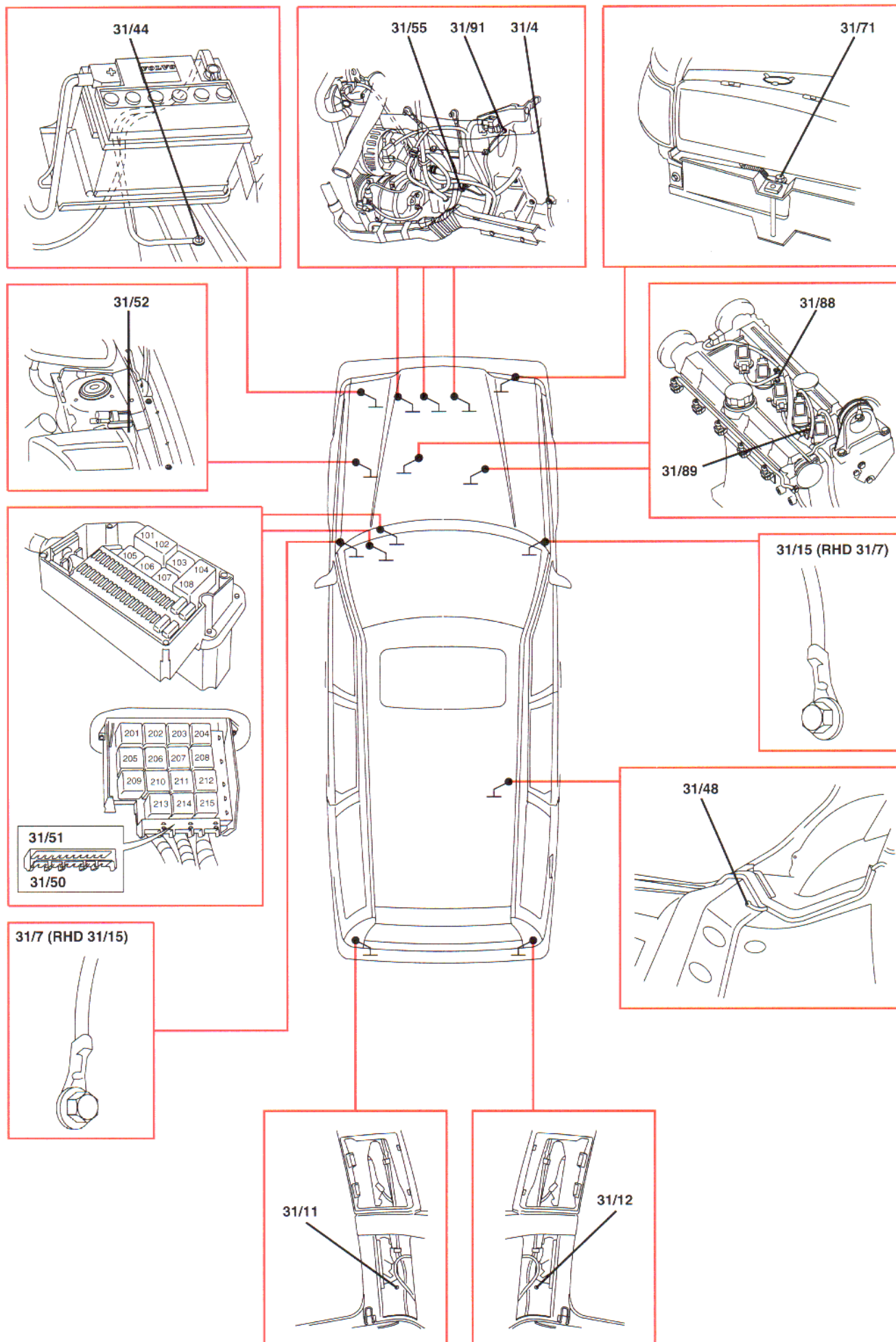
Ground terminals C70 coupé

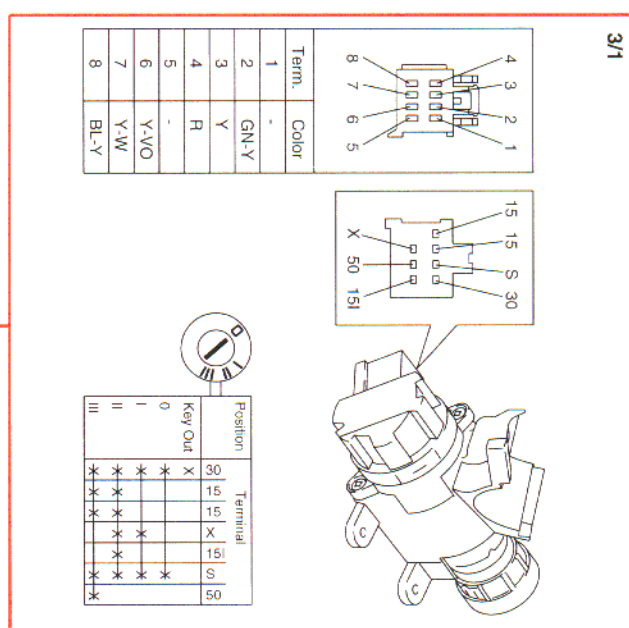
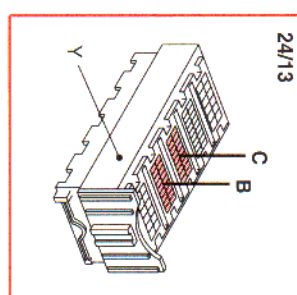
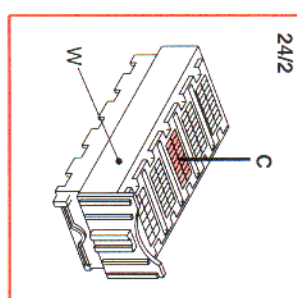
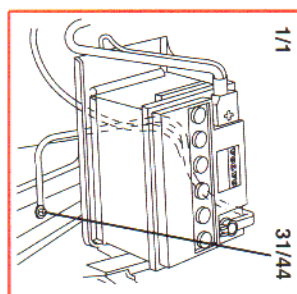
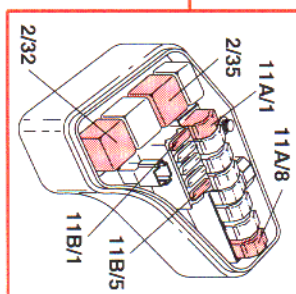
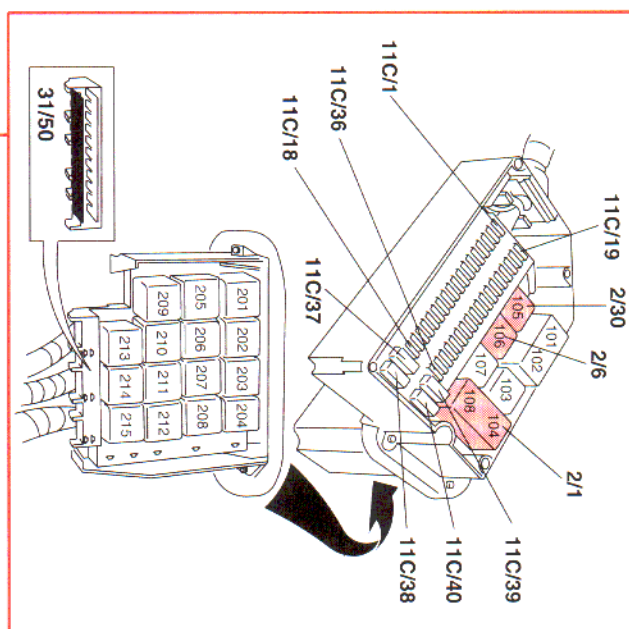
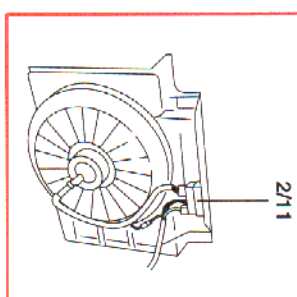
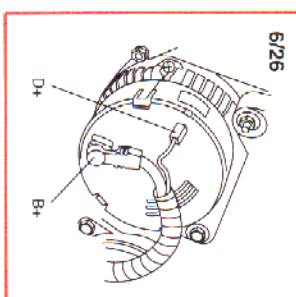
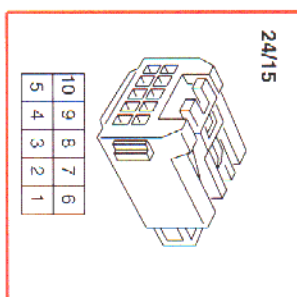
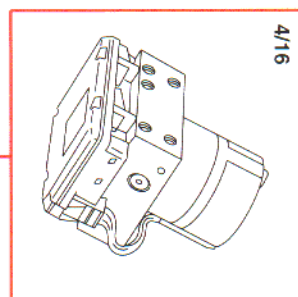
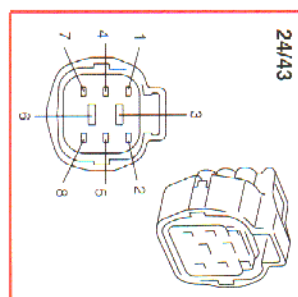


Ground terminals S70

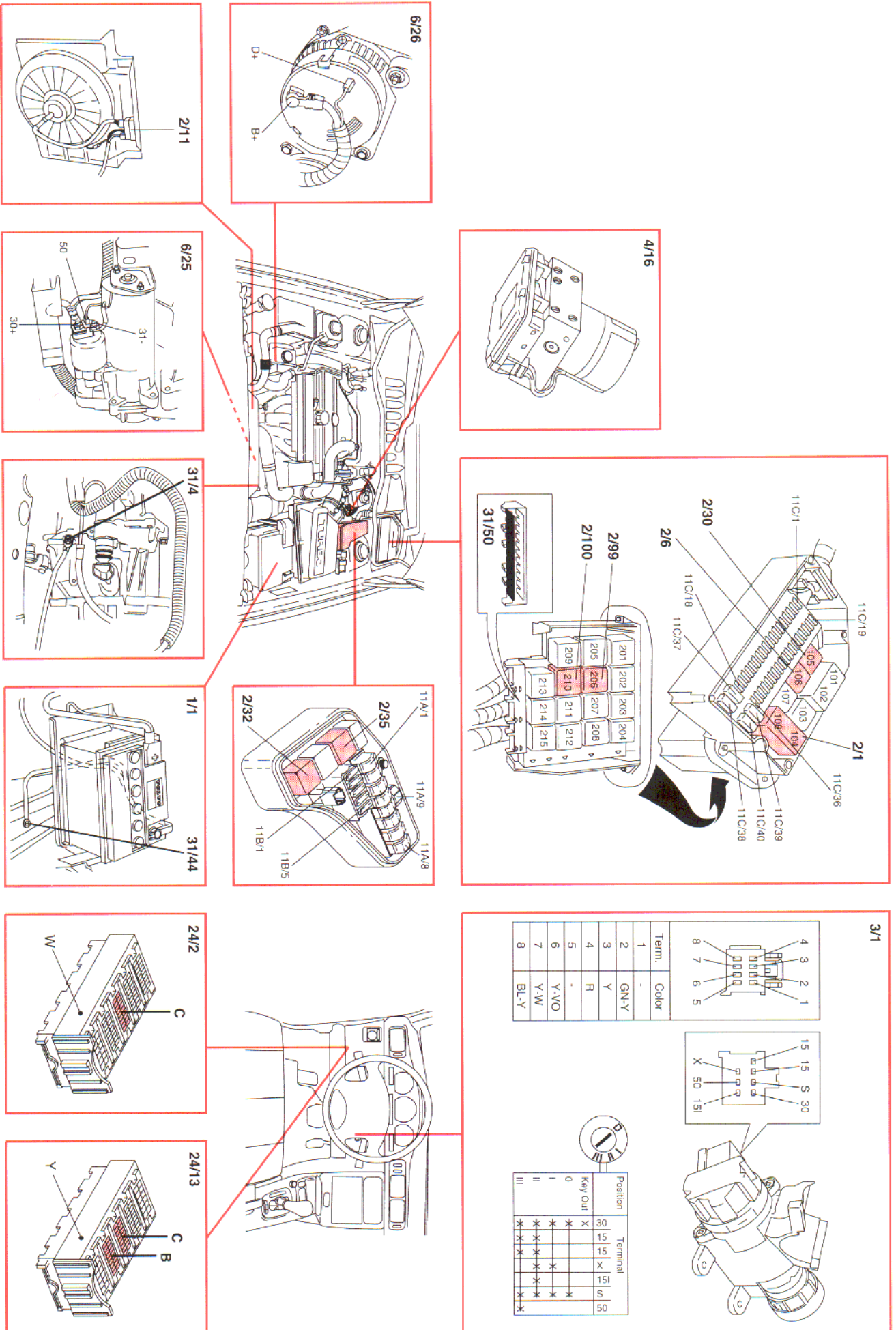


Ground terminals V70



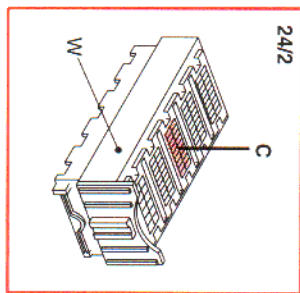
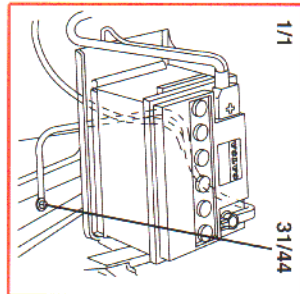
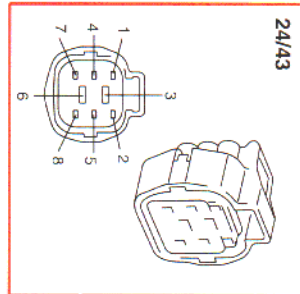
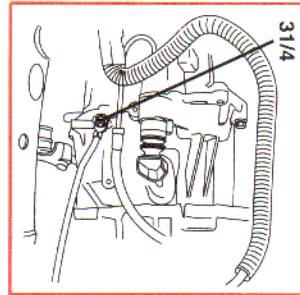
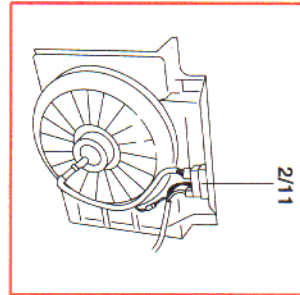
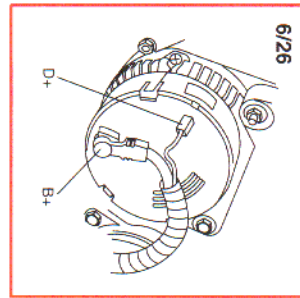
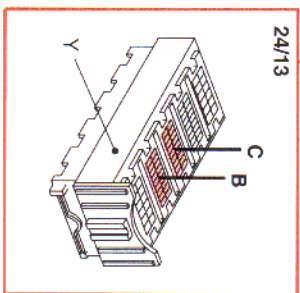
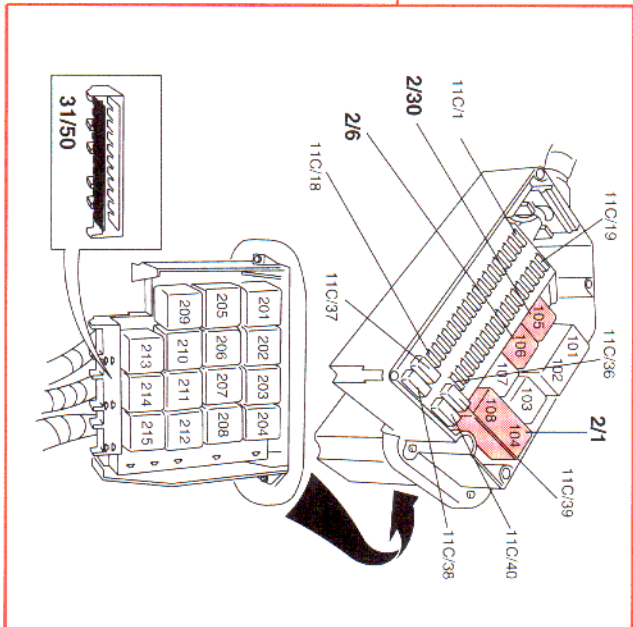
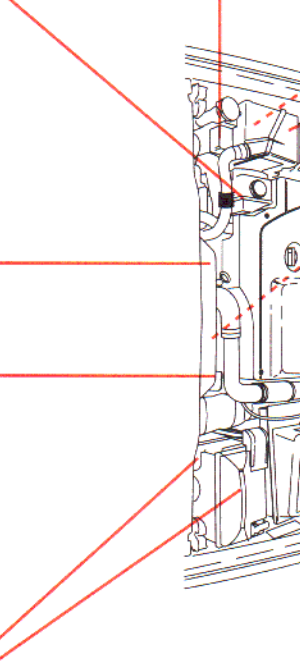
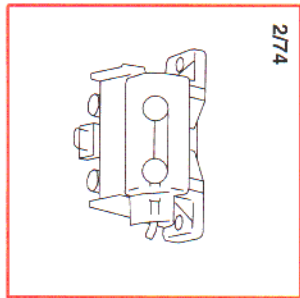
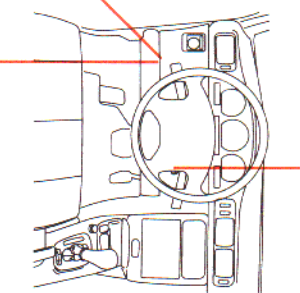
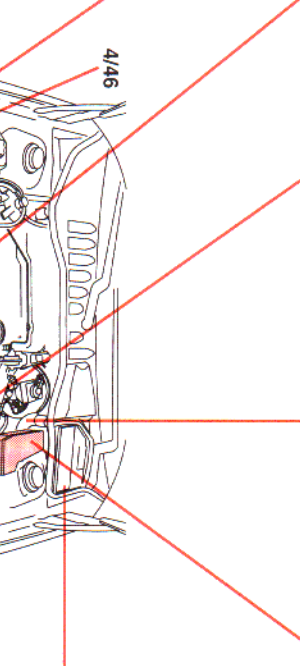
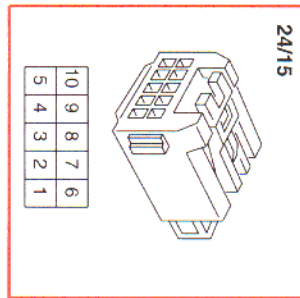
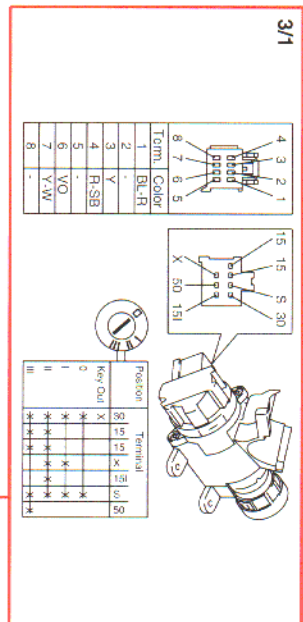
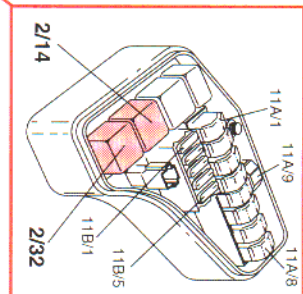
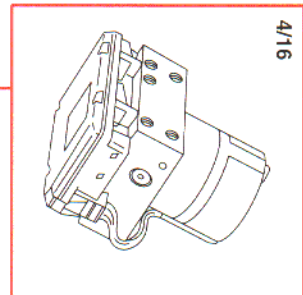
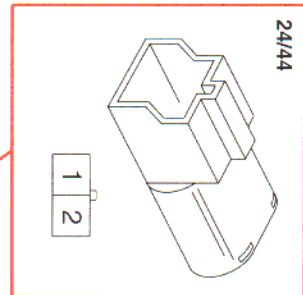
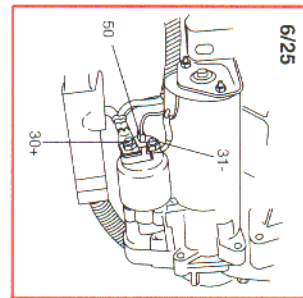


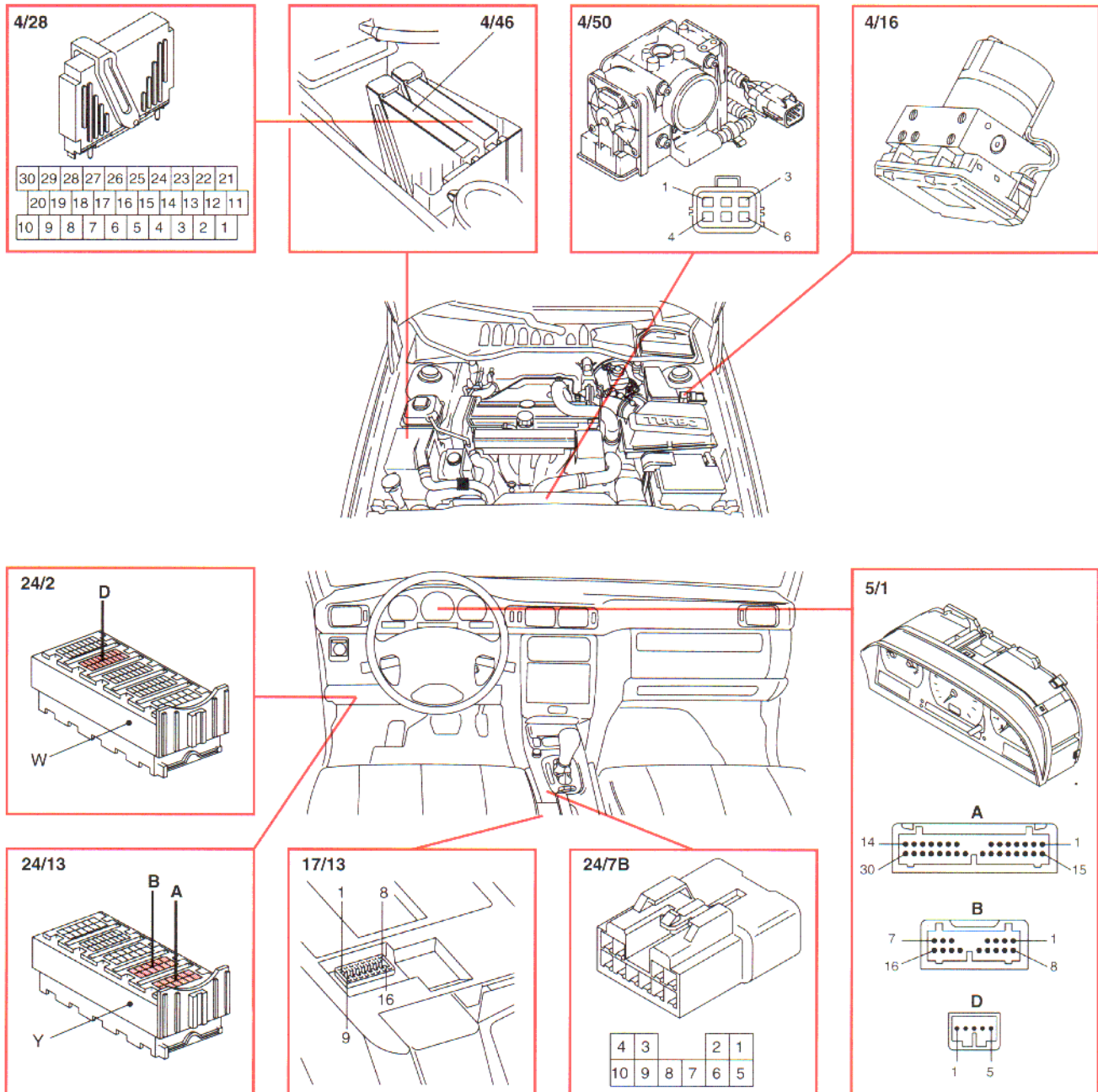
Electrical distribution Denso/ME7



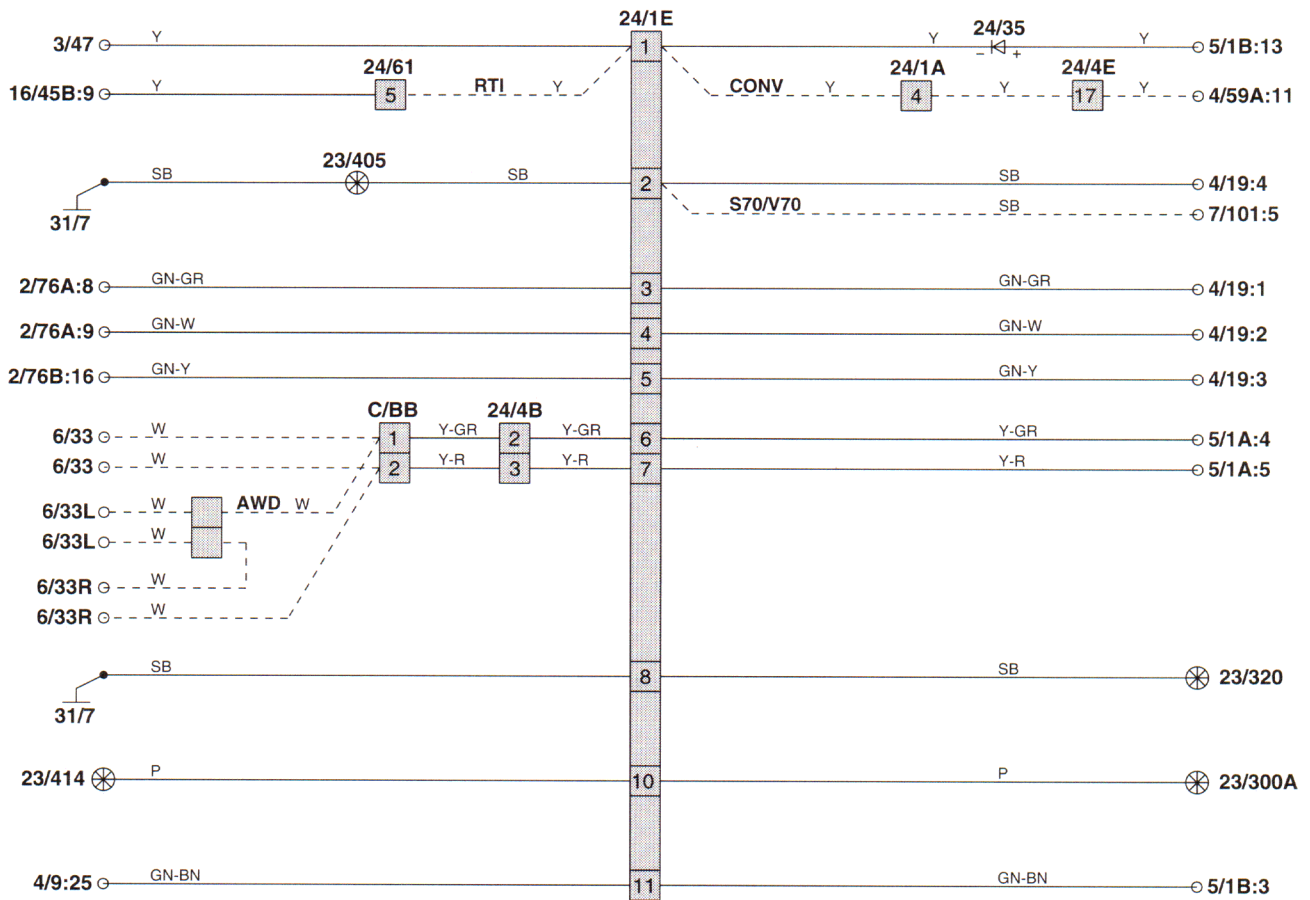
Electrical distribution

MSA 15.8



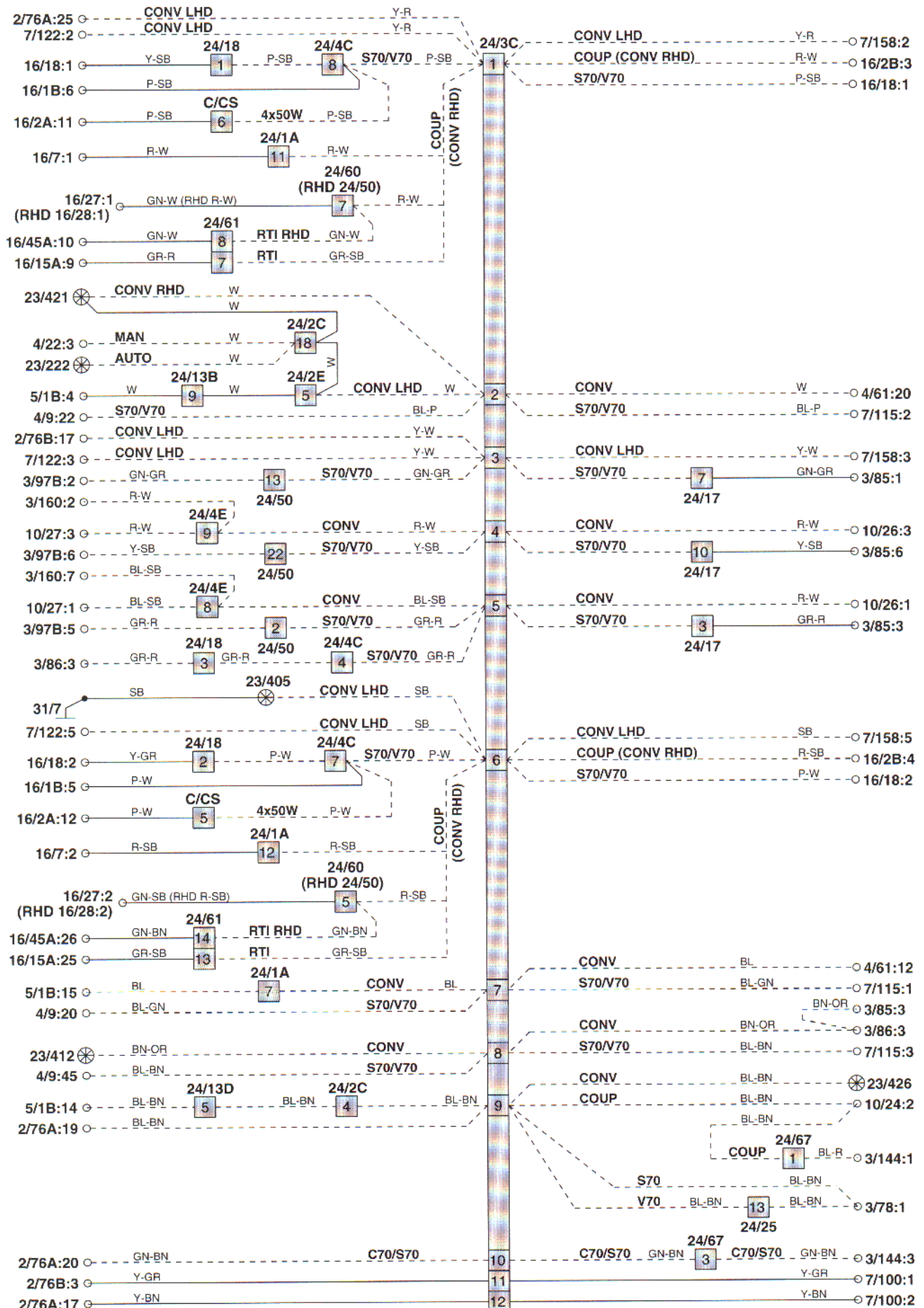


24/1E White 12-pin (male - female) Firewall cable harness - Instrument panel cable harness

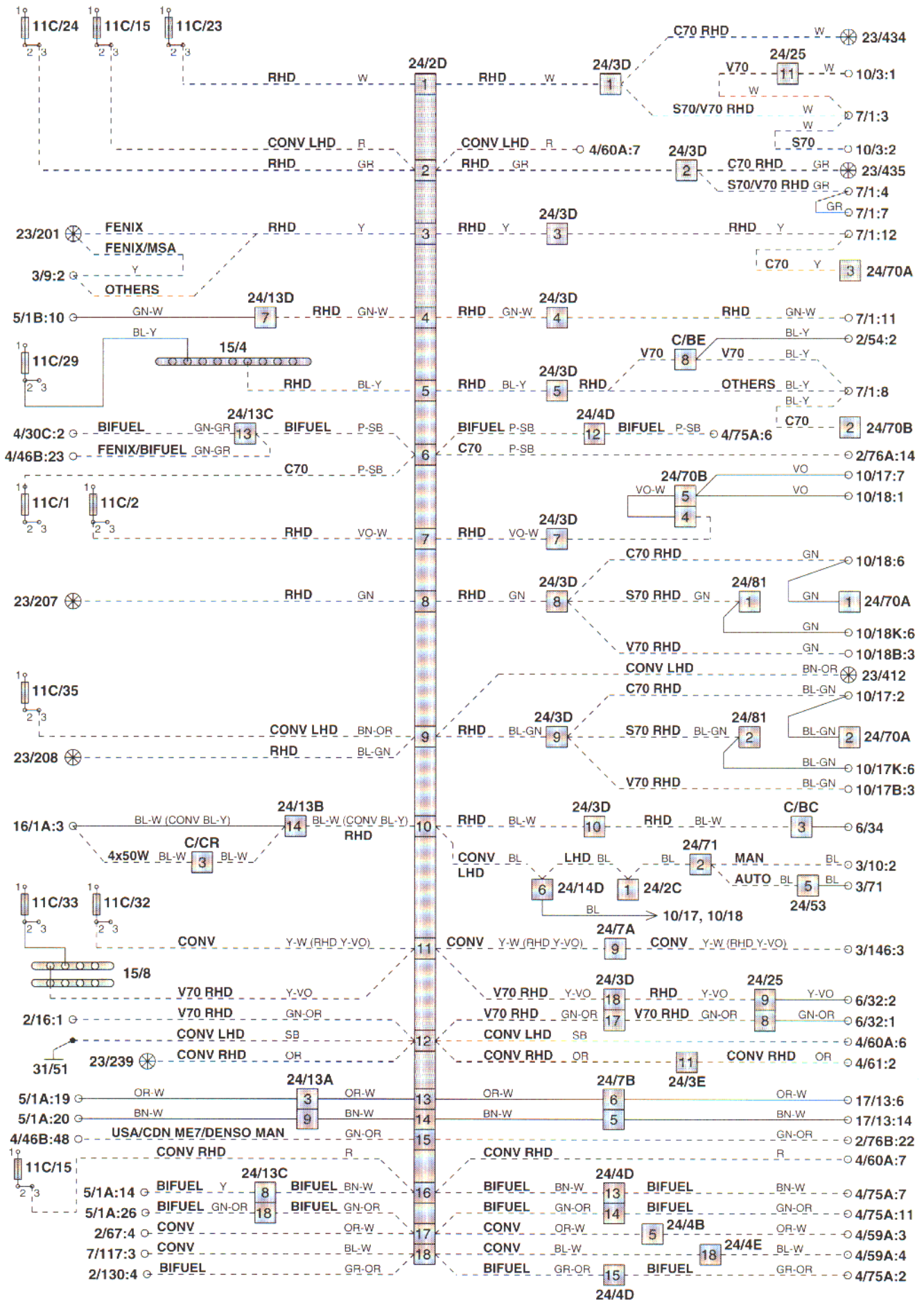


Connector 24/2

24/2A Green 12-pin (male - female) Engine compartment cable harness - Firewall cable harness

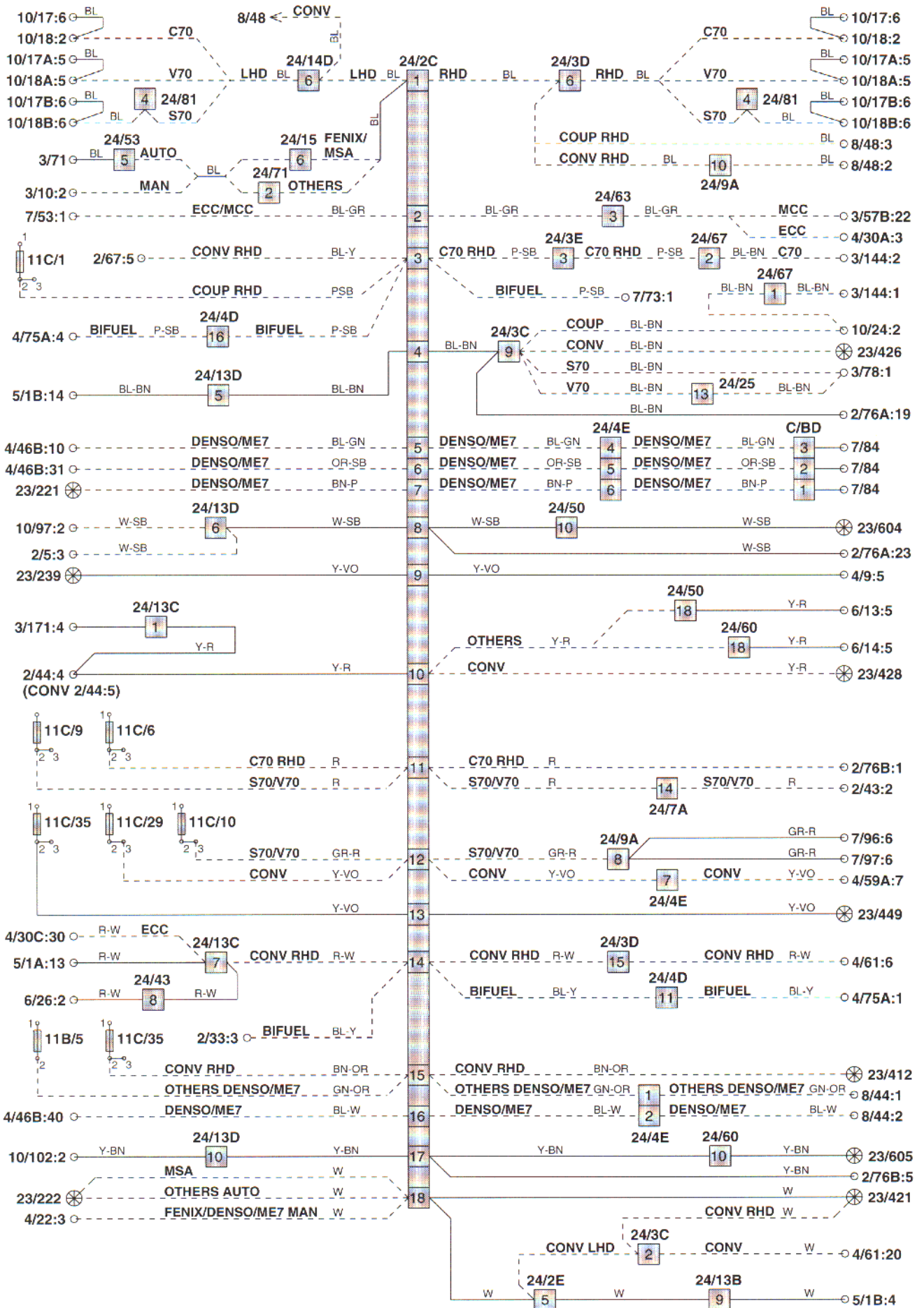


24/2B Light blue 18-pin (male - female)
Engine compartment cable harness - Firewall cable harness

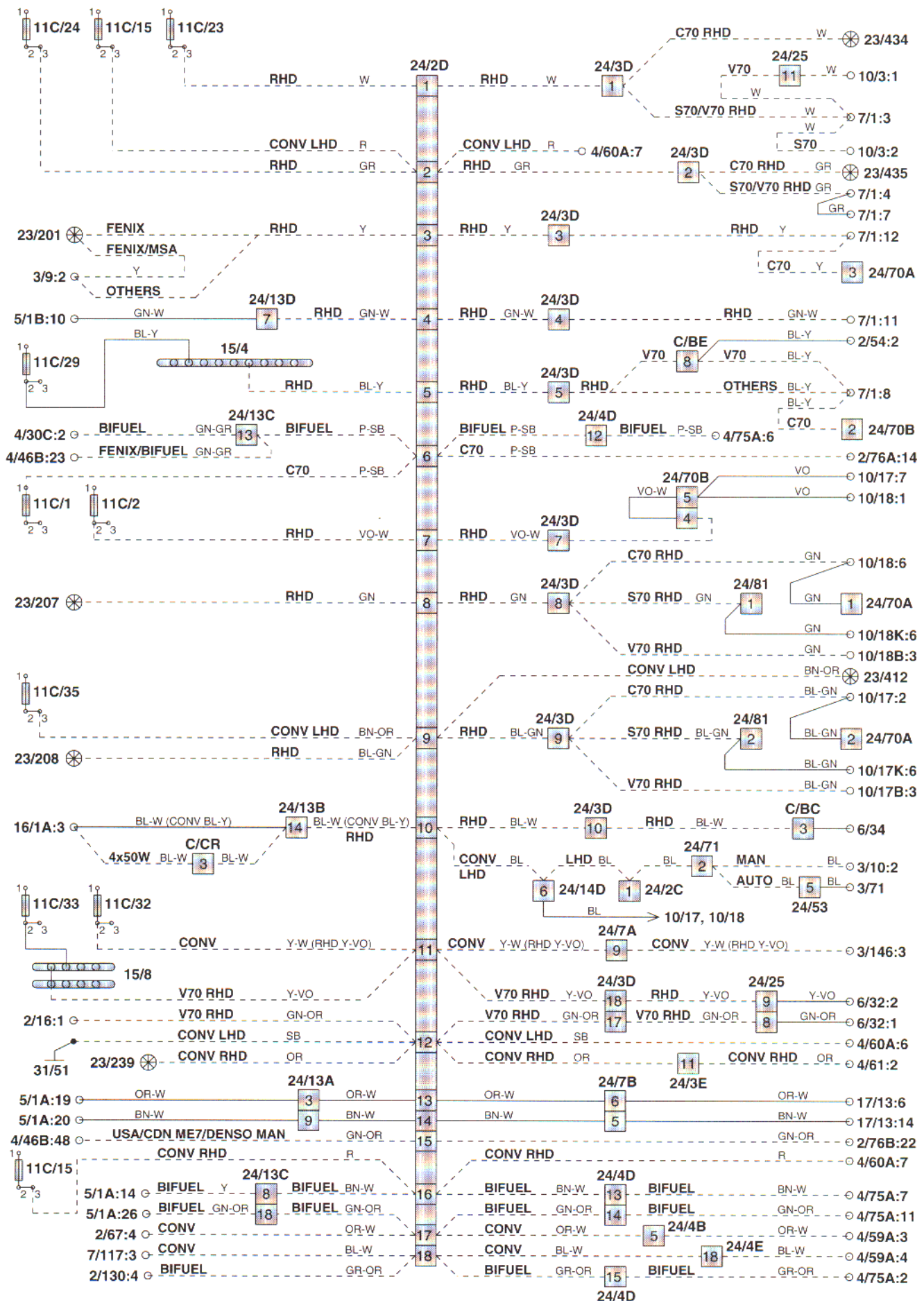


Connector 24/2

24/2C Yellow 18-pin (male - female)
Engine compartment cable harness - Firewall cable harness

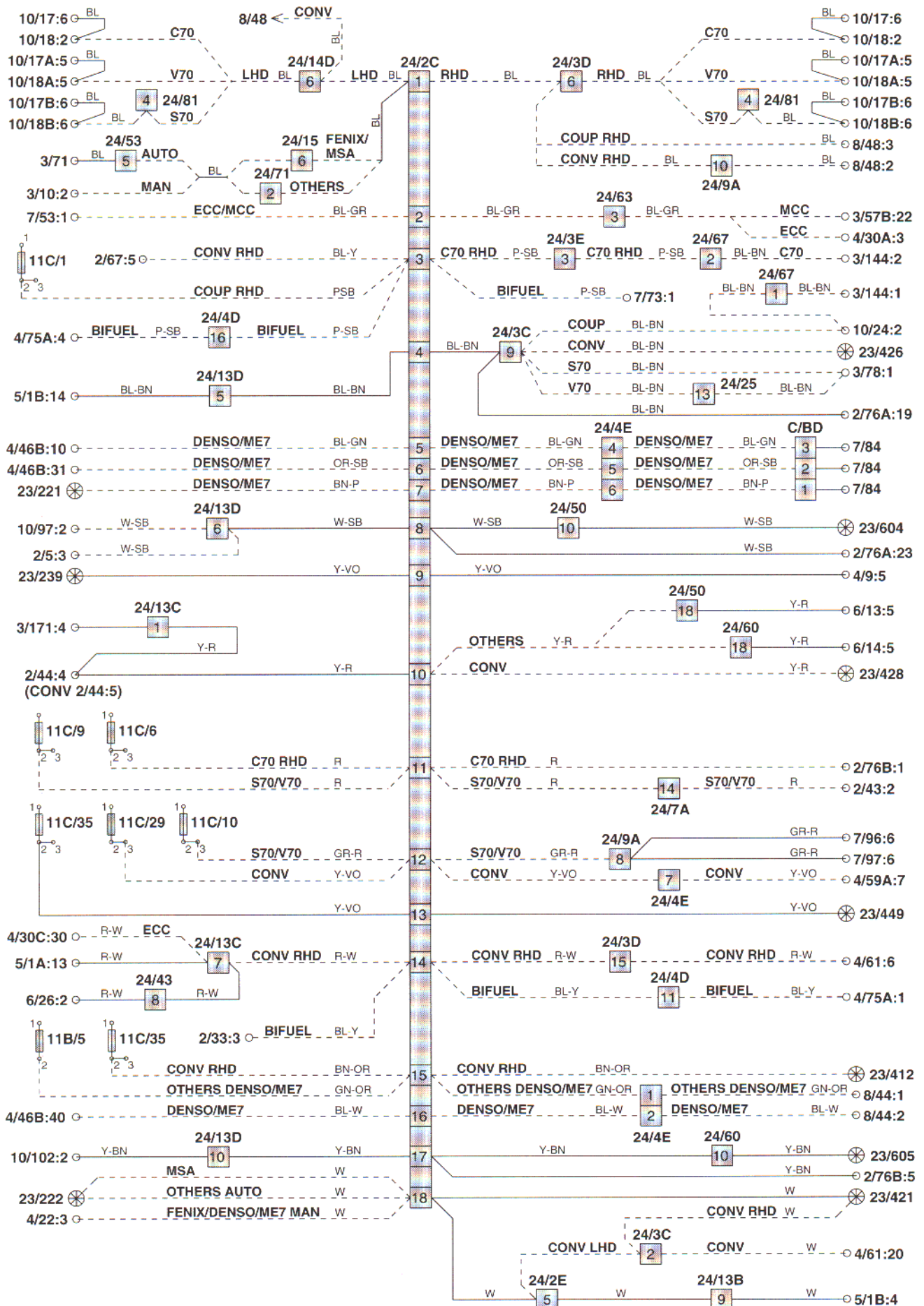


**24/2D Red 18-pin (male - female)
Engine compartment cable harness - Firewall cable harness**

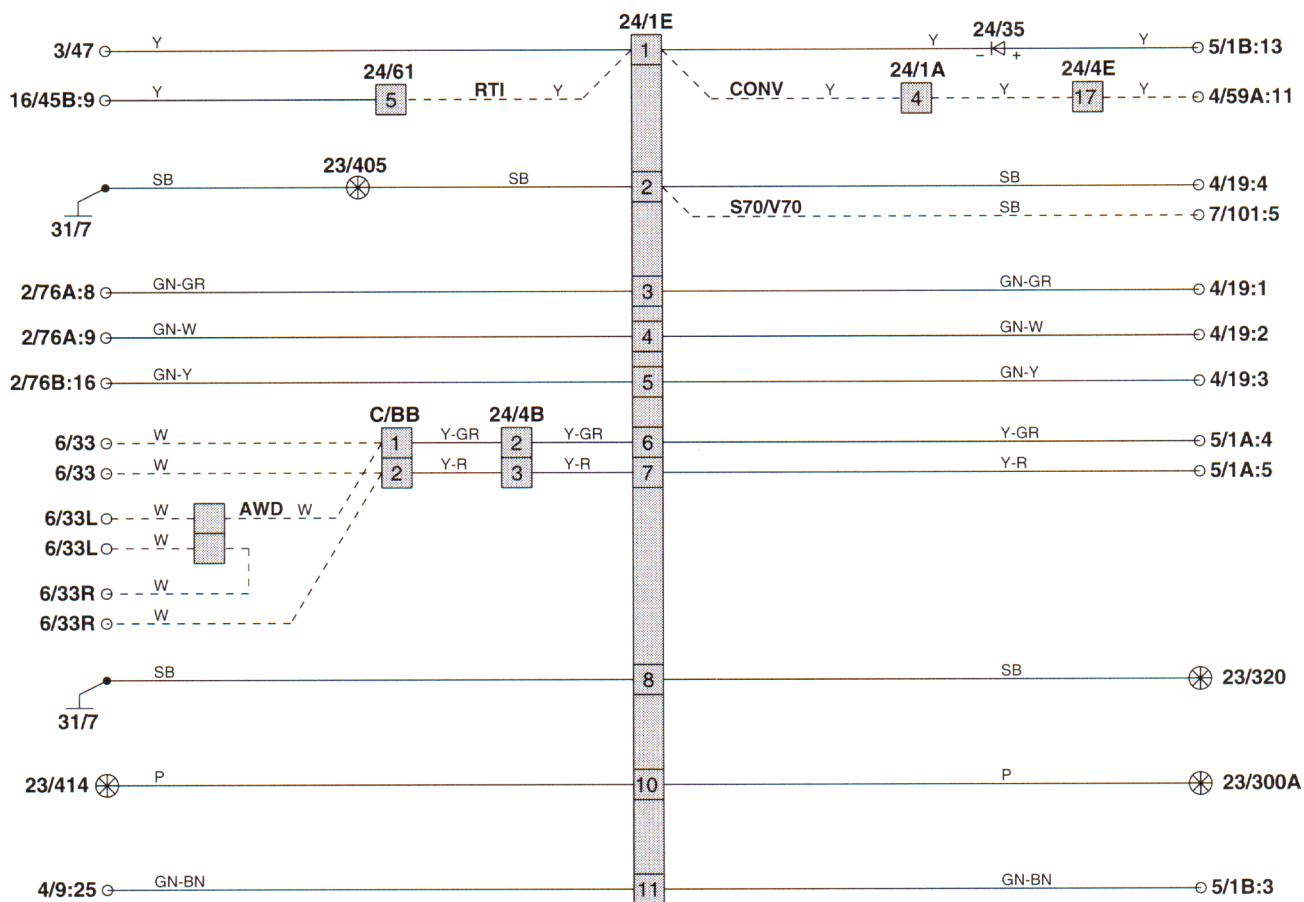


Connector 24/2

24/2E White 18-pin (male - female) Engine compartment cable harness - Firewall cable harness

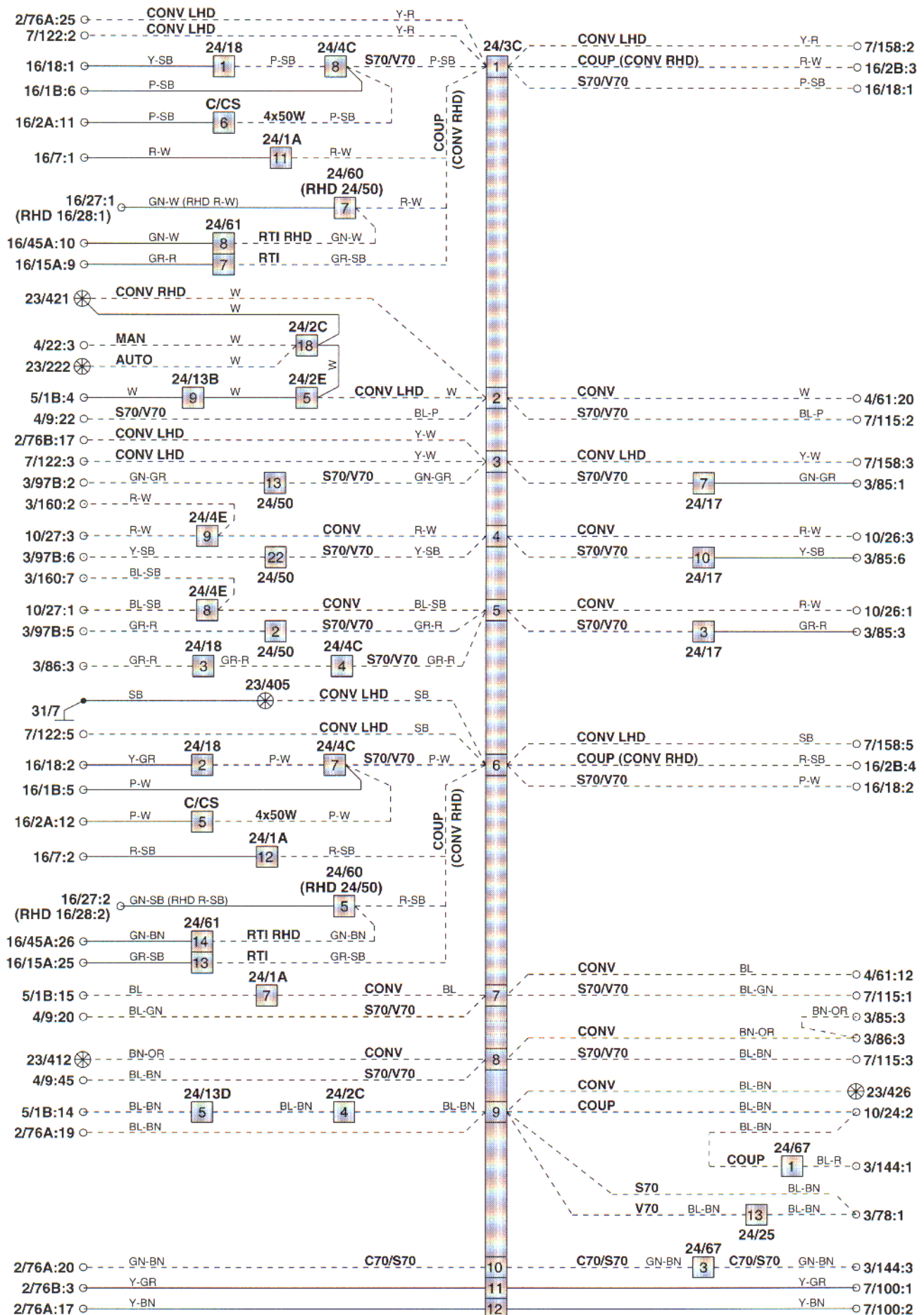


24/3B Light blue 12-pin (male - female) Firewall cable harness - Left door sill cable harness

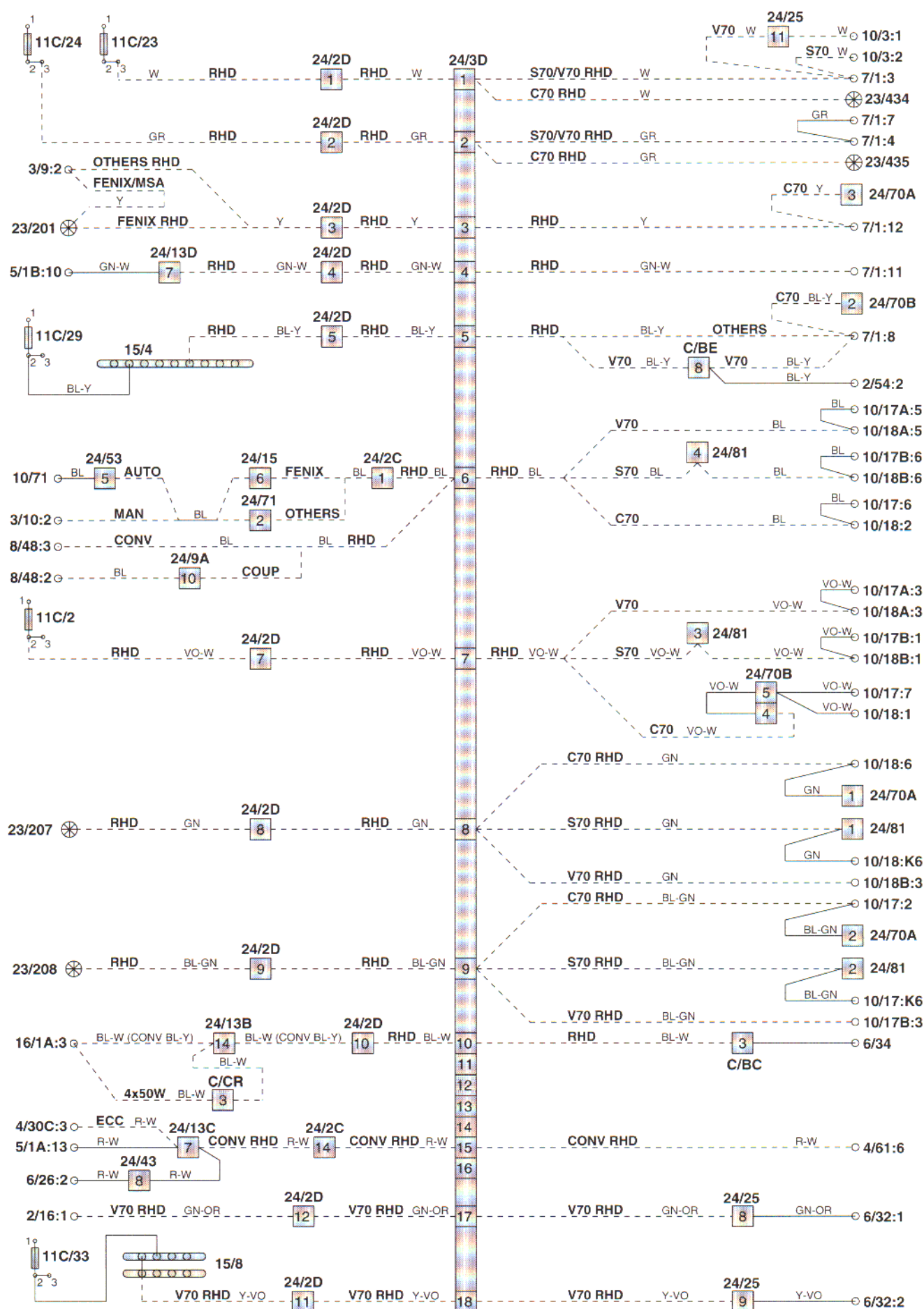


Connector 24/3

24/3C Yellow 12-pin (male - female) Firewall cable harness - Left door sill cable harness

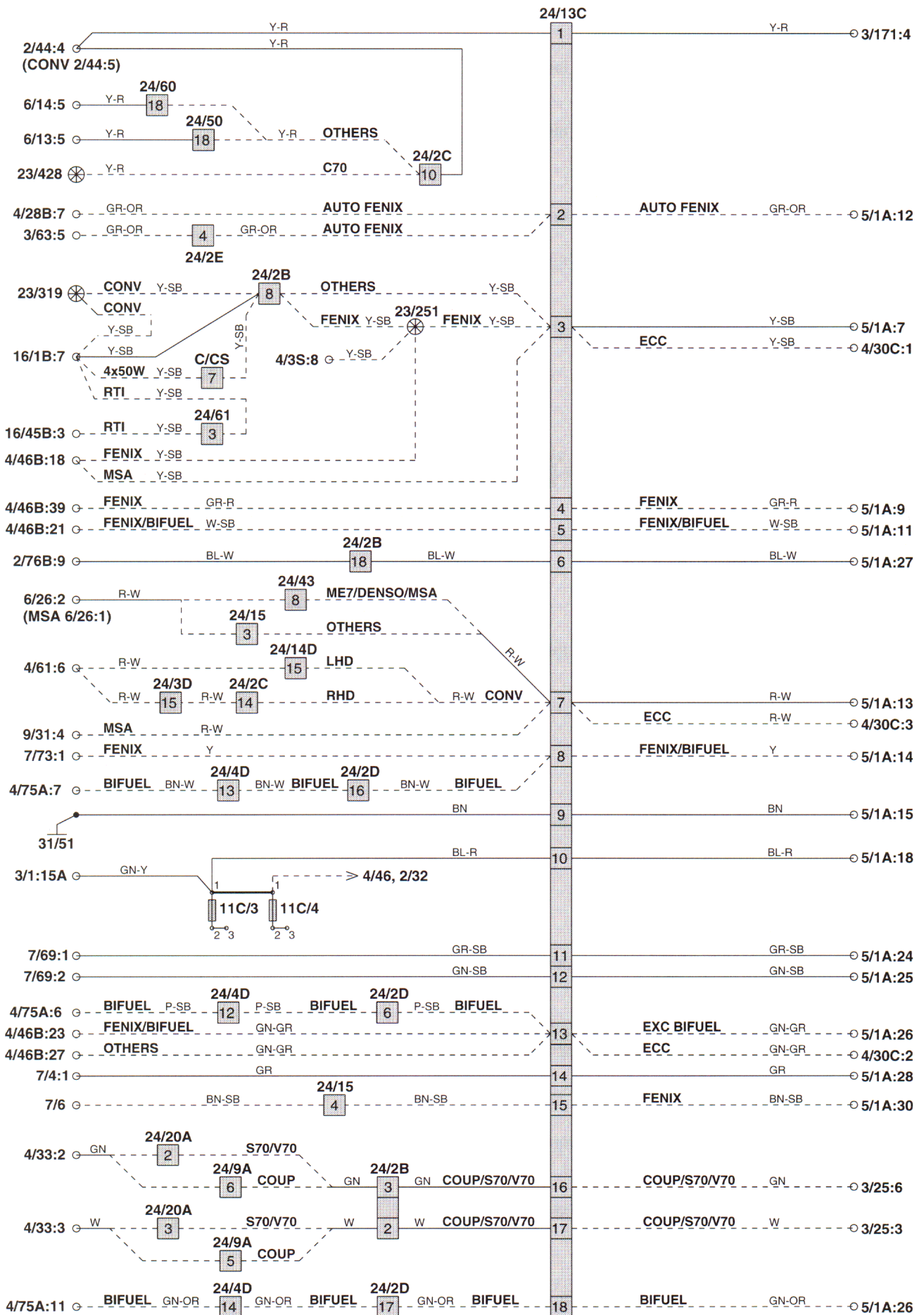


24/3D Red 18-pin (male - female) Firewall cable harness - Left door sill cable harness

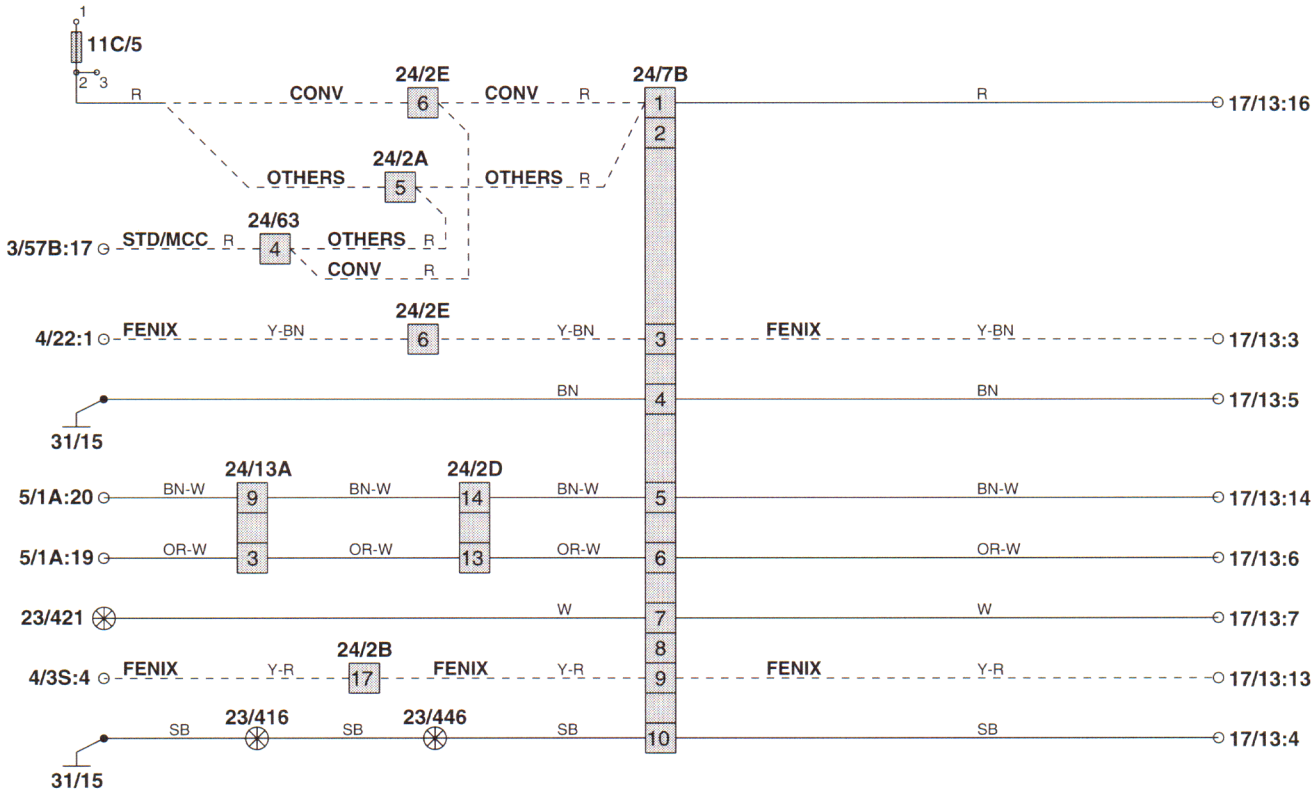


Connector 24/4

24/4B Light blue 18-pin (male - female) Firewall cable harness - Right door sill cable harness

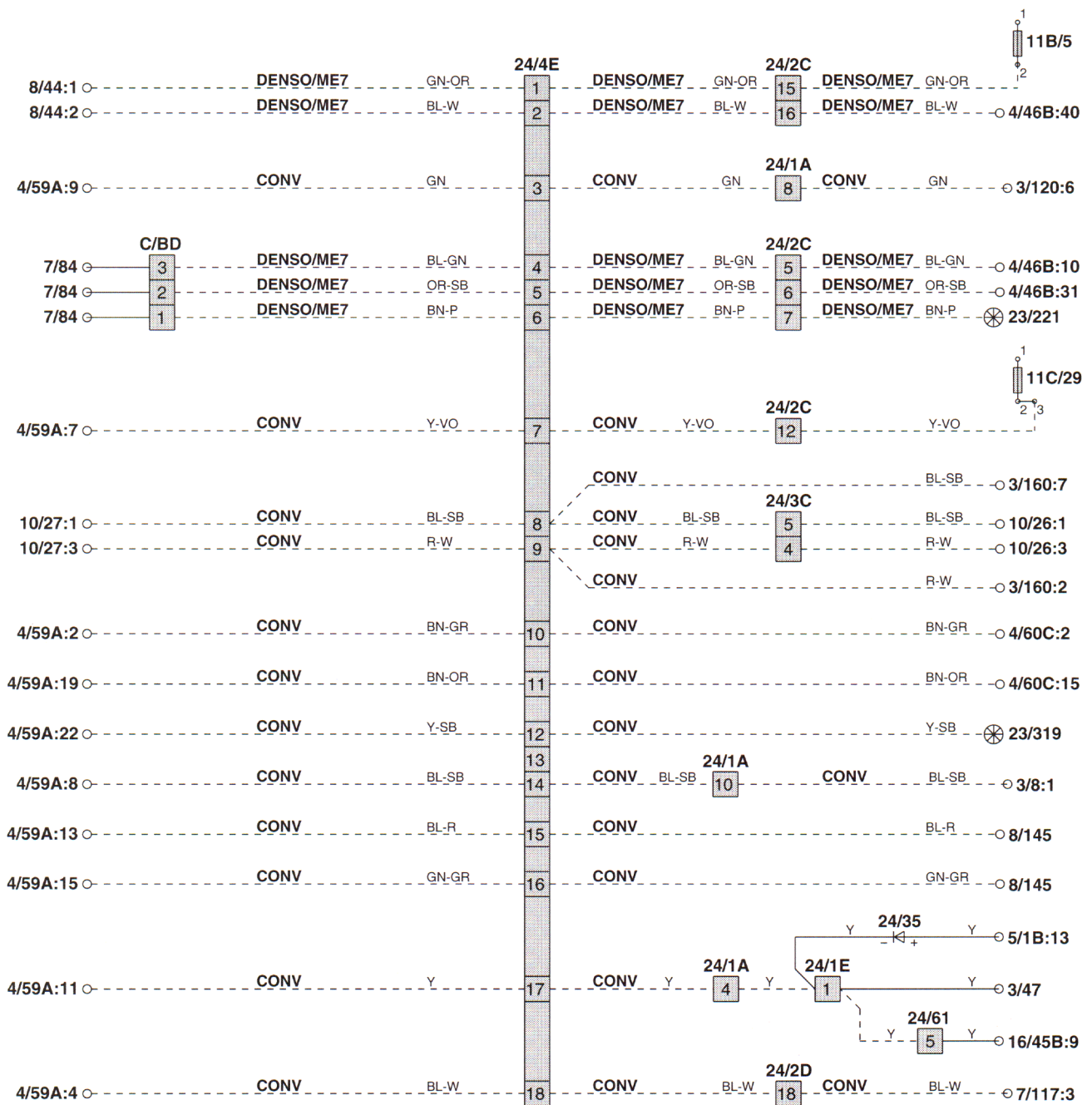


24/4D Red 18-pin (male - female)
Firewall cable harness - Right door sill cable harness

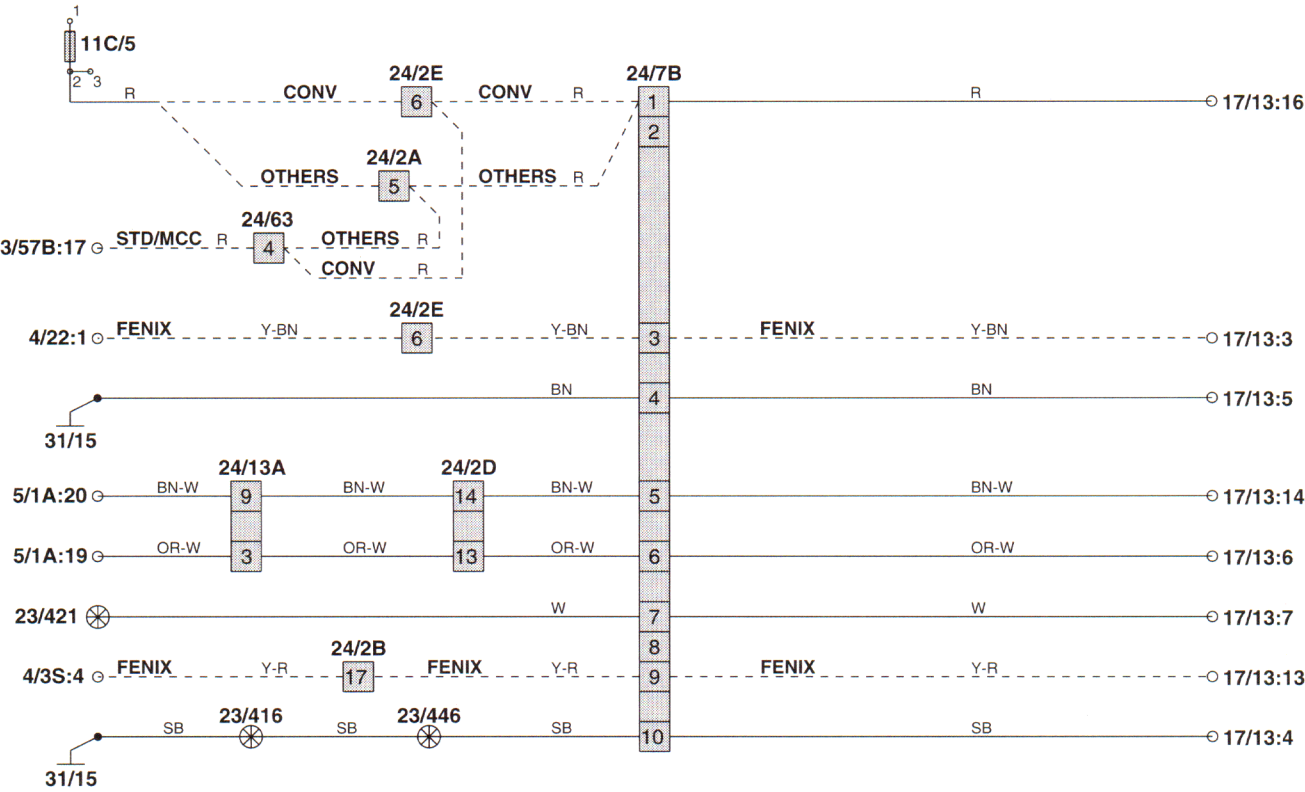


Connector 24/4

24/4E White 18-pin (male - female) Firewall cable harness - Right door sill cable harness

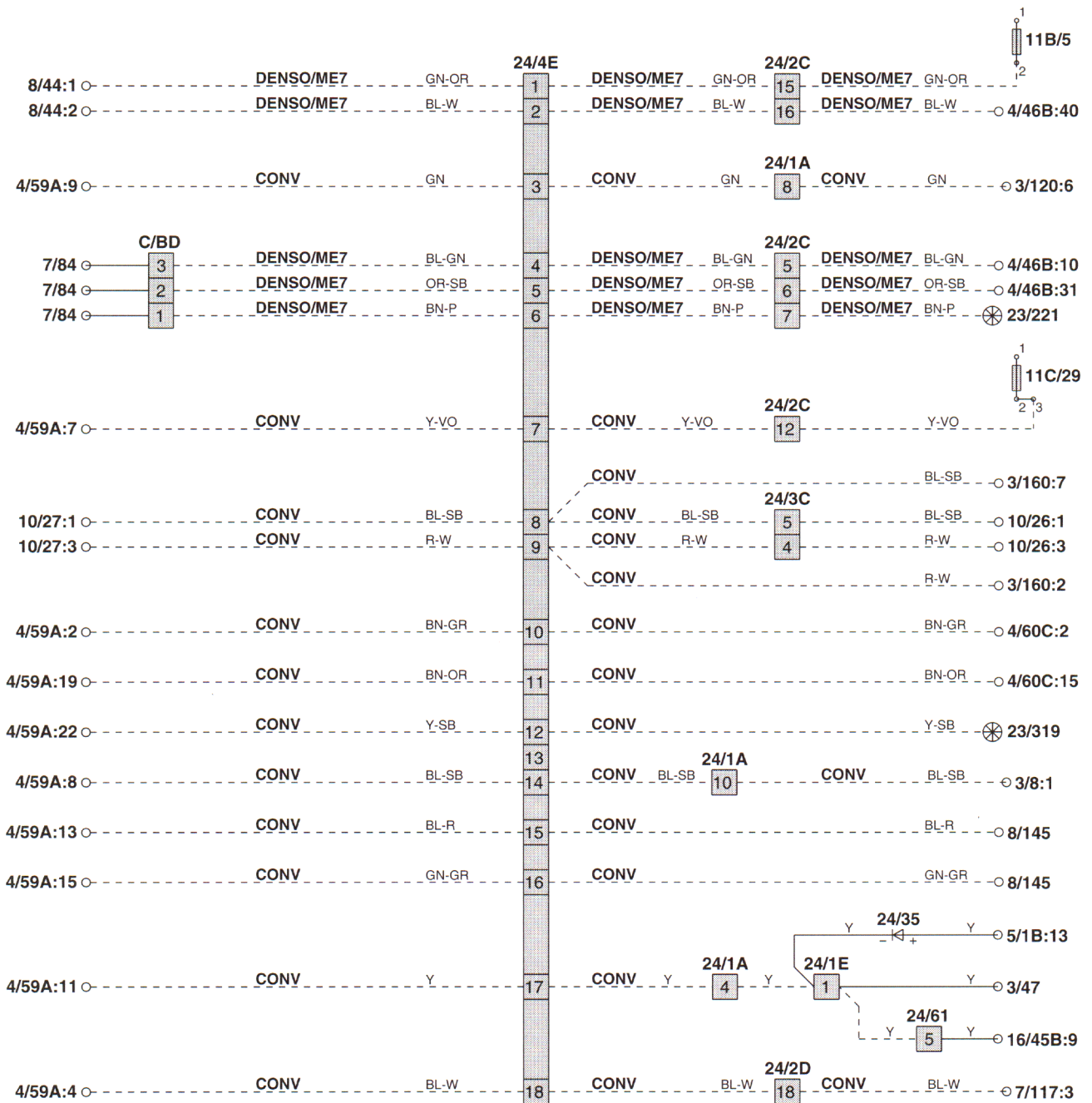


24/7B Natural 10-pin (male - female)
Firewall cable harness - Tunnel cable harness

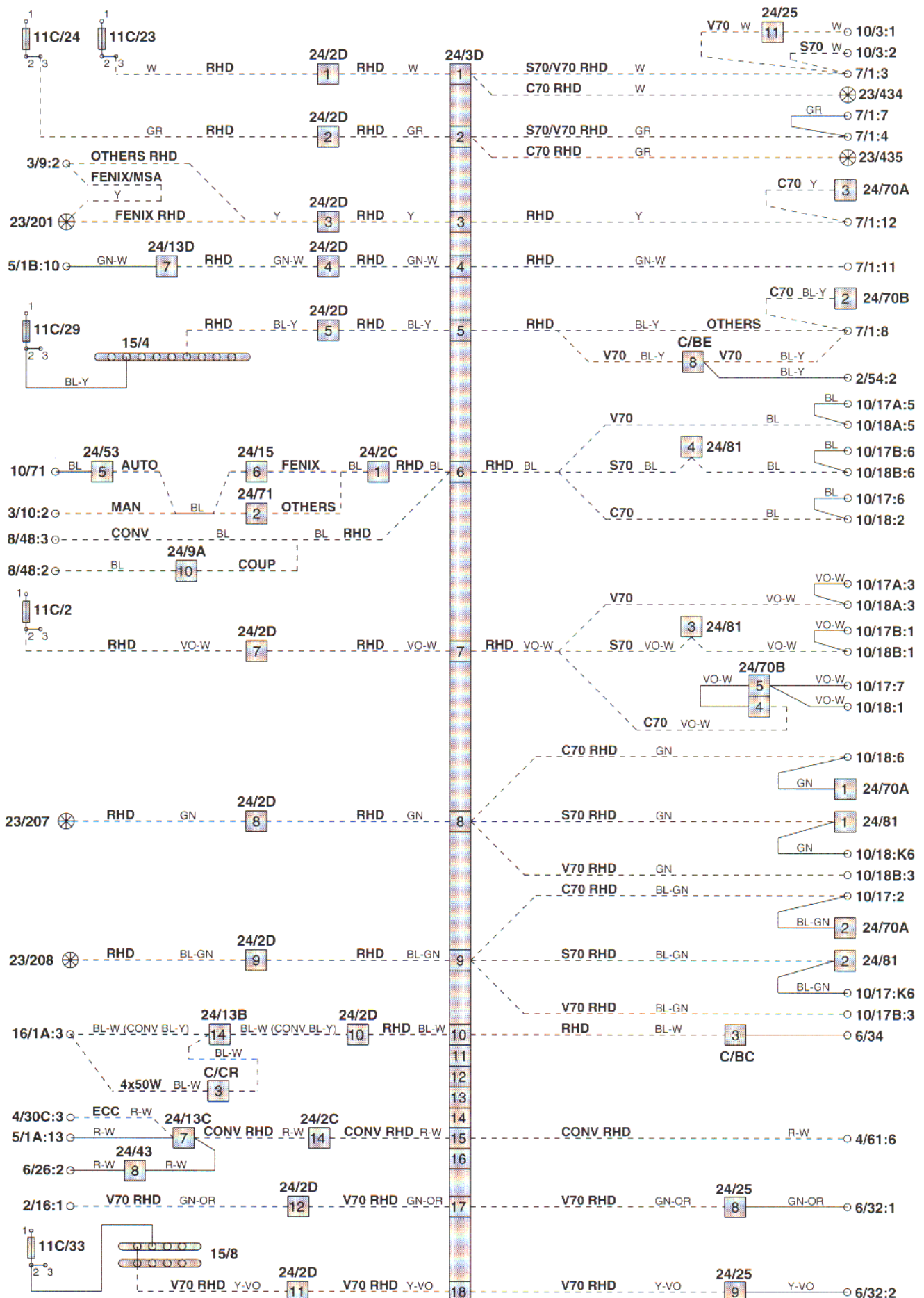


Connector 24/13

24/13A Green 12-pin (male - female) Engine compartment cable harness - Instrument panel cable harness

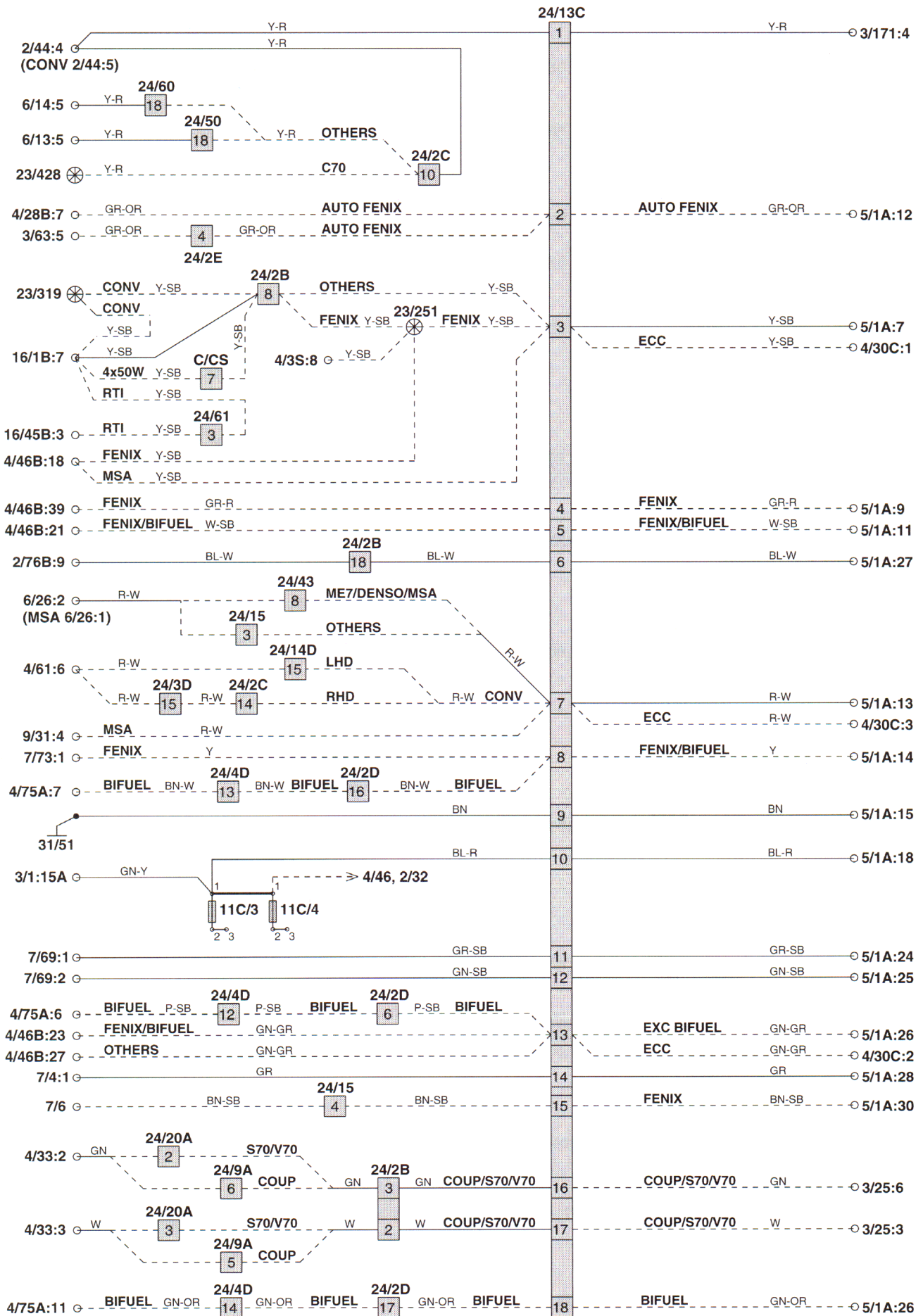


24/13B Light blue 18-pin (male - female) Engine compartment cable harness - Instrument panel cable harness

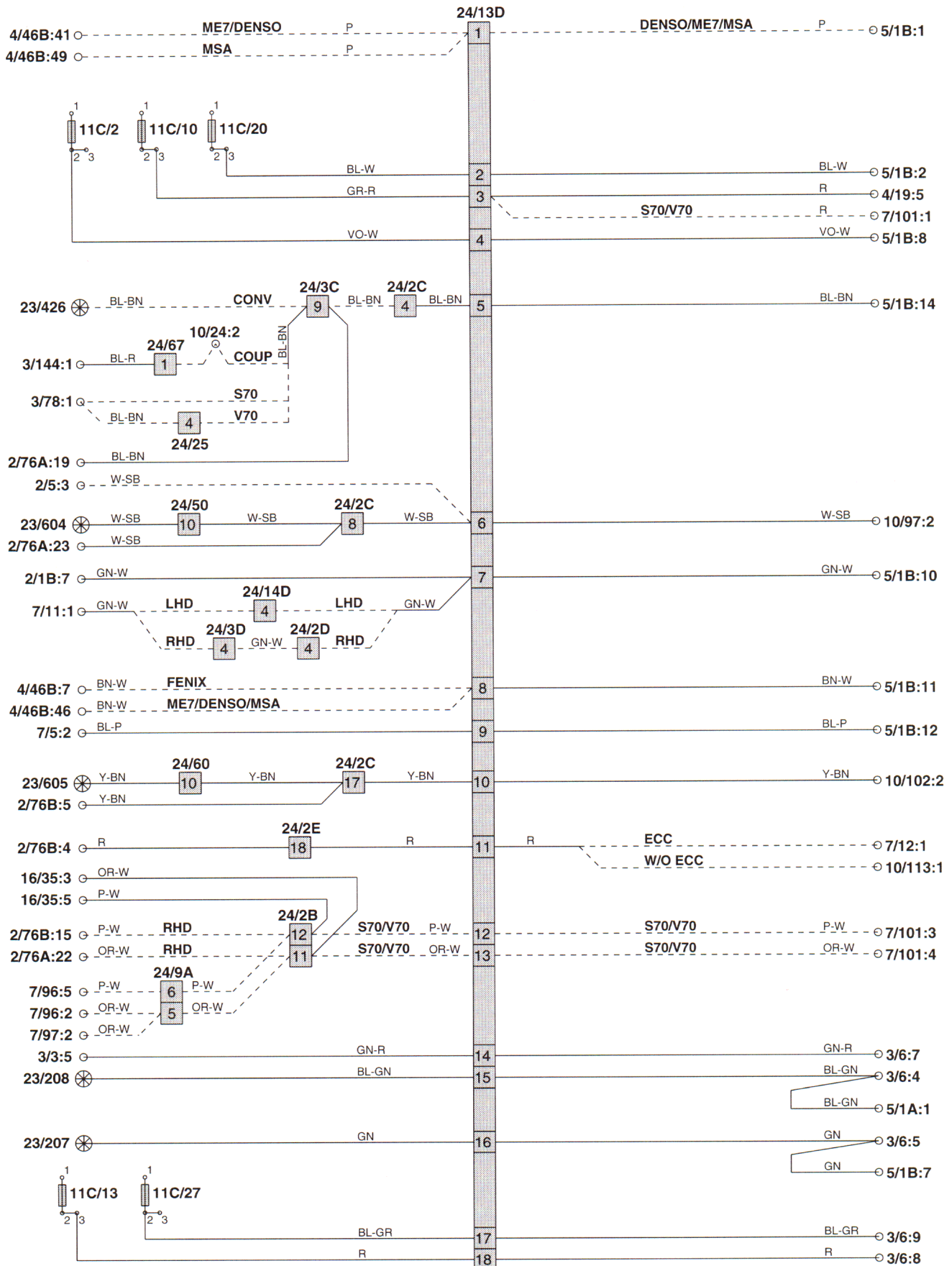


Connector 24/13

**24/13C Yellow 18-pin (male - female)
Engine compartment cable harness - Instrument panel cable harness**

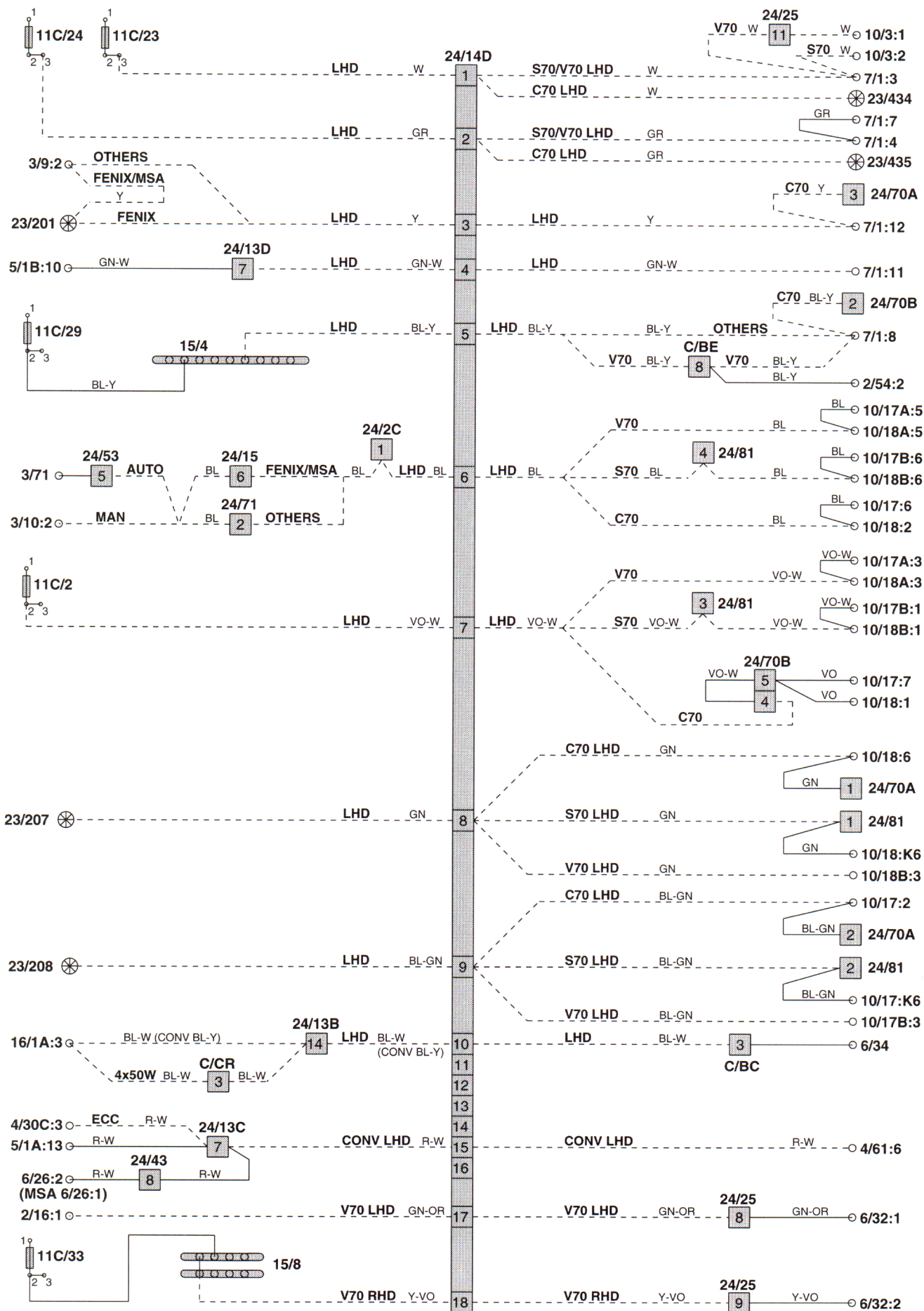


24/13D Red 18-pin (male - female) Engine compartment cable harness - Instrument panel cable harness

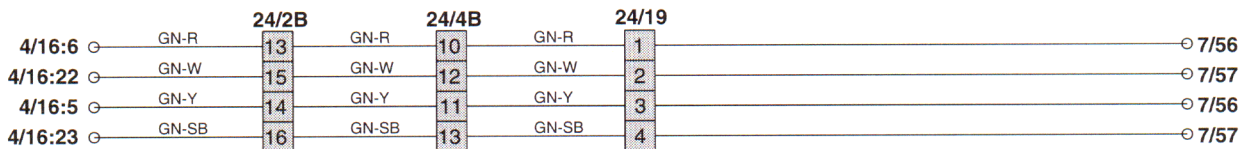
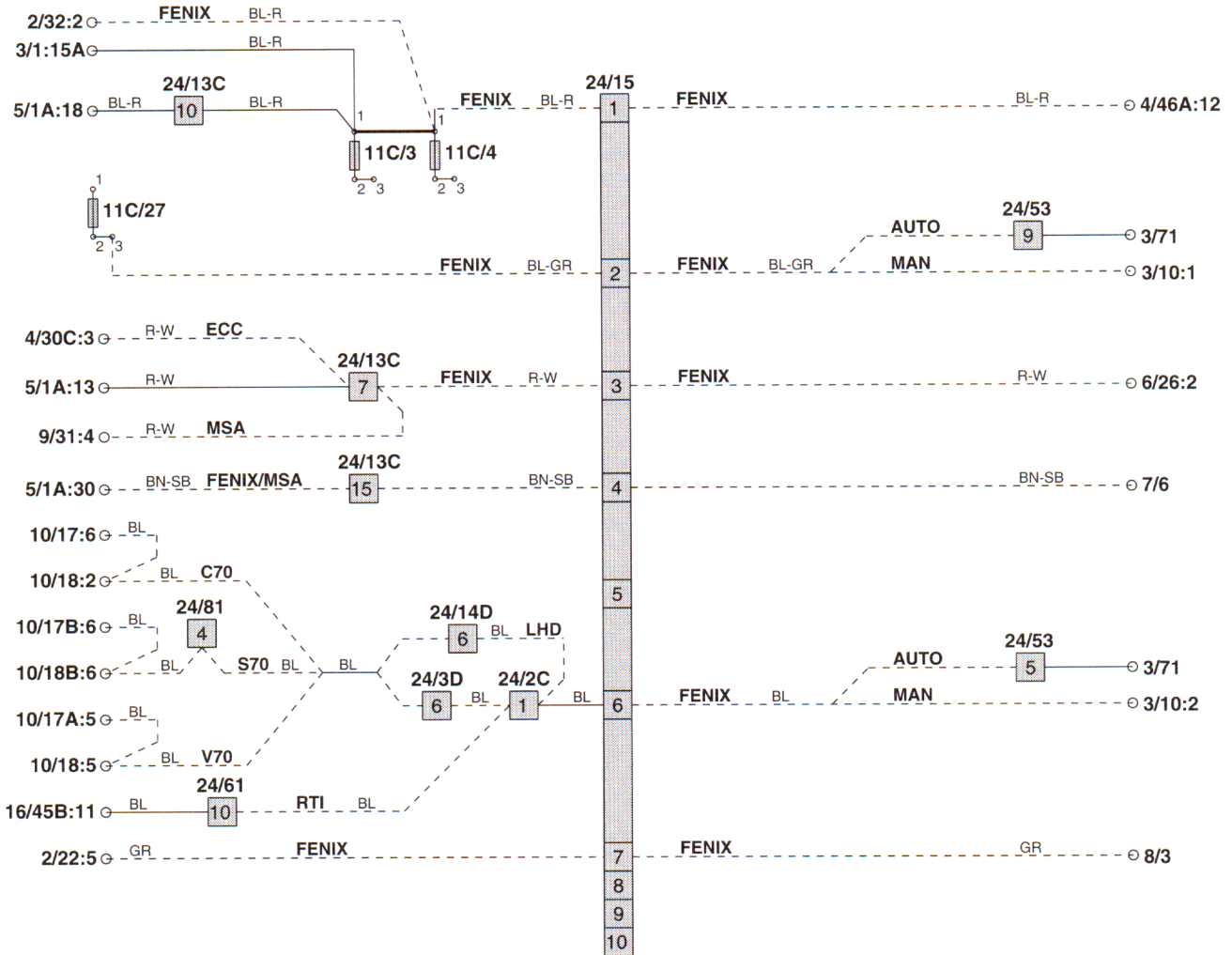


Connector 24/14

24/14D Red 18-pin (male - female) Engine compartment cable harness - Left door sill cable harness

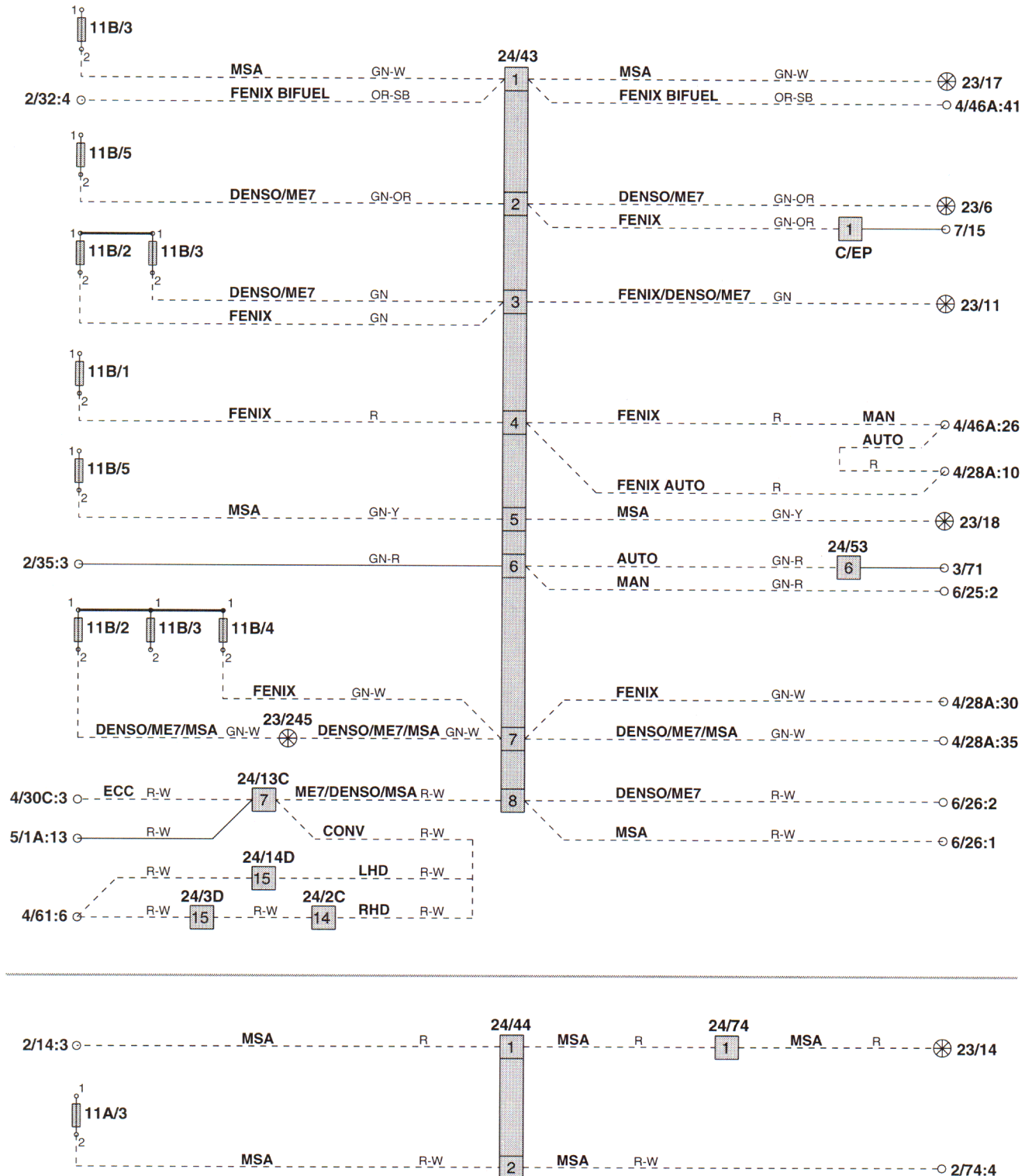


- 24/15** Light Grey 10-pin (female - male)
Engine compartment cable harness - Engine cable harness
- 24/19** Yellow 4-pin (female - male)
Right door sill cable harness - Rear wheel sensor cable harness

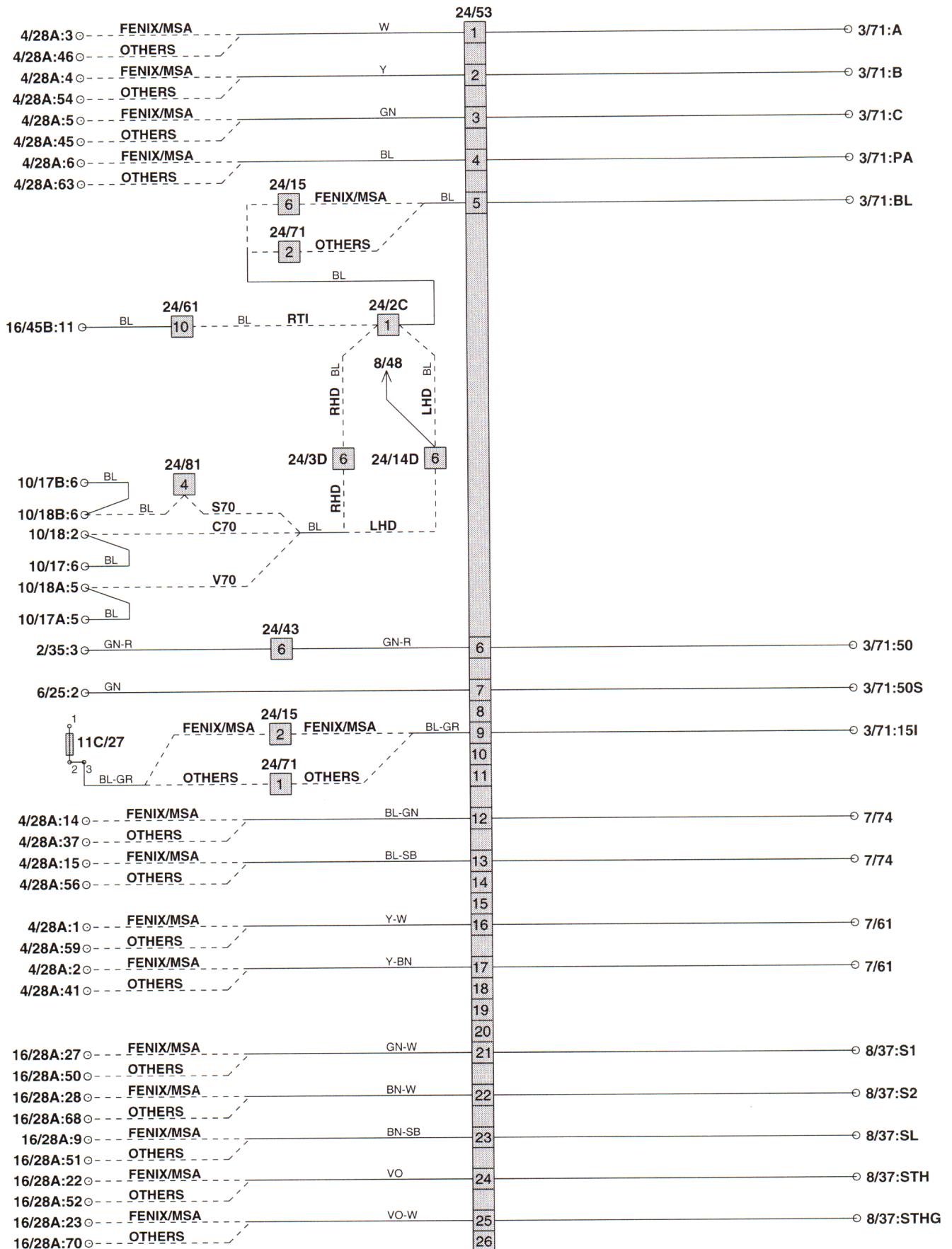


Connectors 24/43 and 24/44

- 24/43** **Black 8-pin (female - male)**
Engine compartment cable harness - Engine cable harness
- 24/44** **Gray 2-pin (female - male)**
Engine compartment cable harness - Engine cable harness

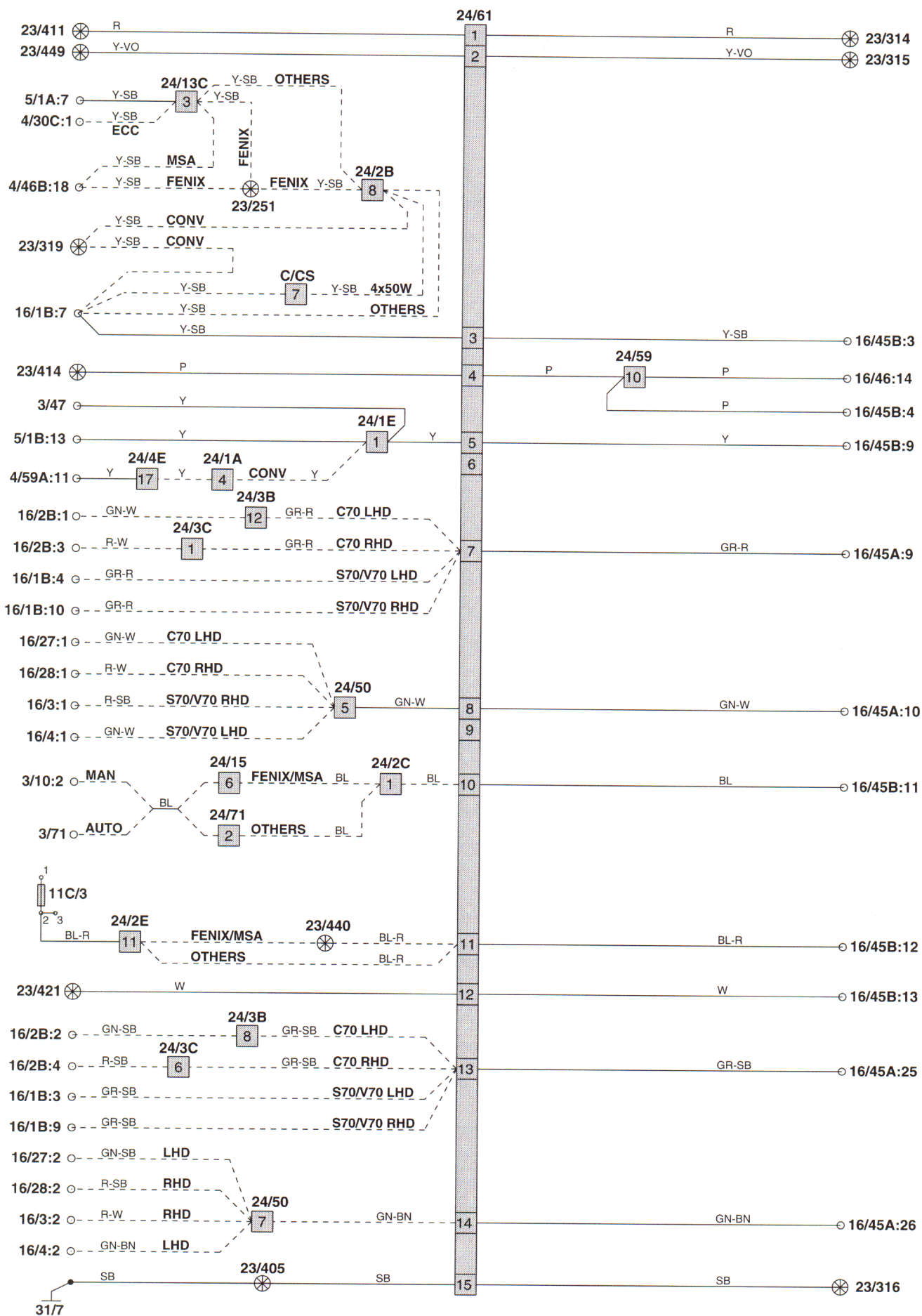


**24/53 Black 26-pin (female - male)
Engine cable harness - AW 50-42**

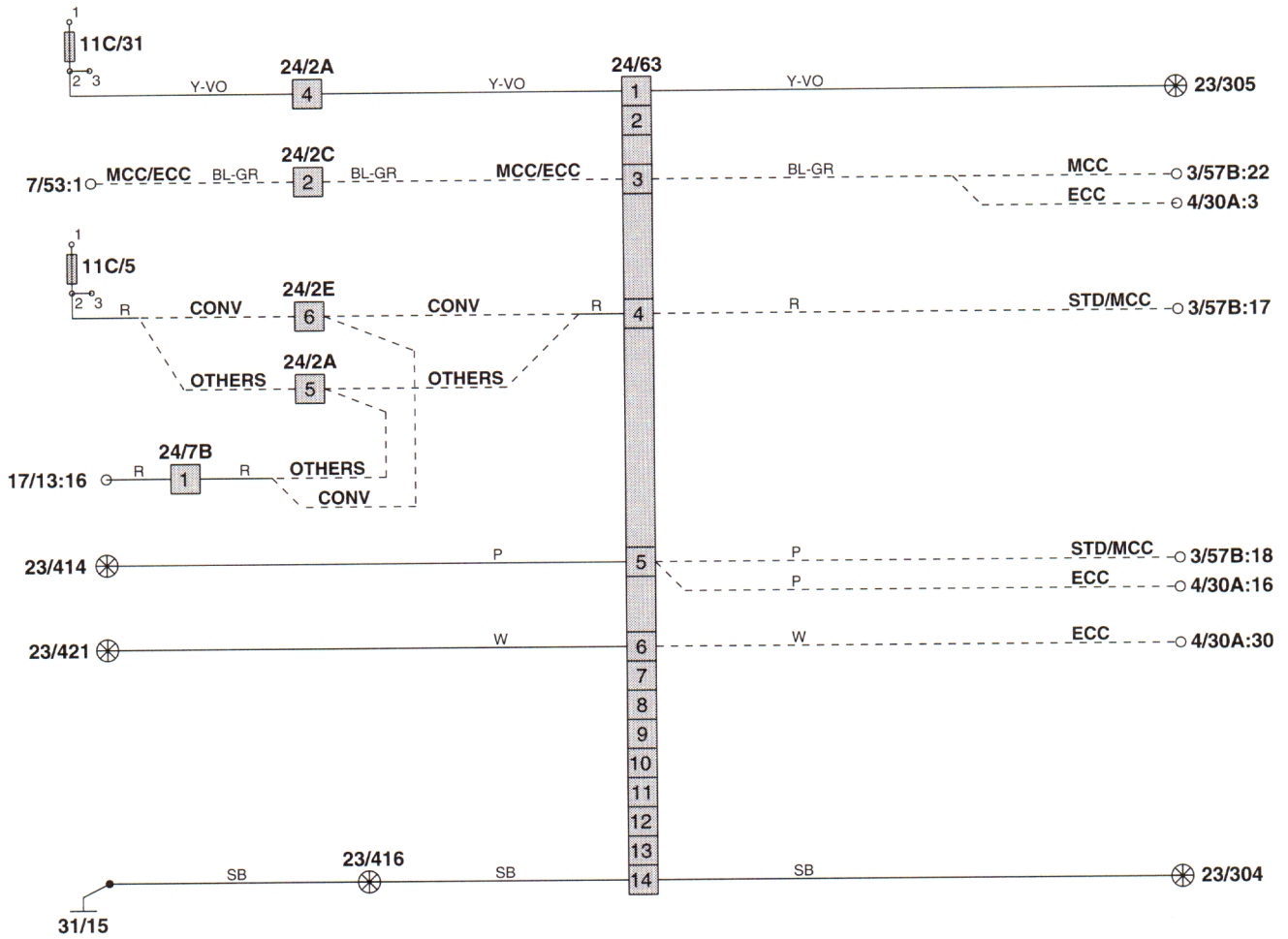


Connector 24/61

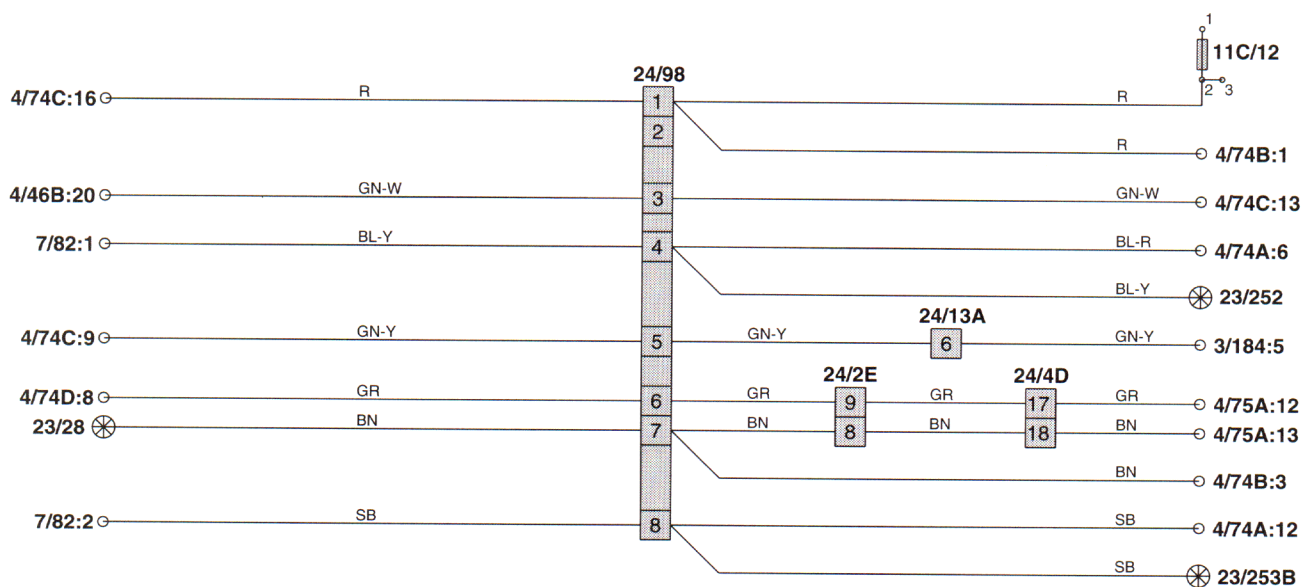
**24/61 White 15-pin (female - male)
Firewall cable harness - RTI cable harness**

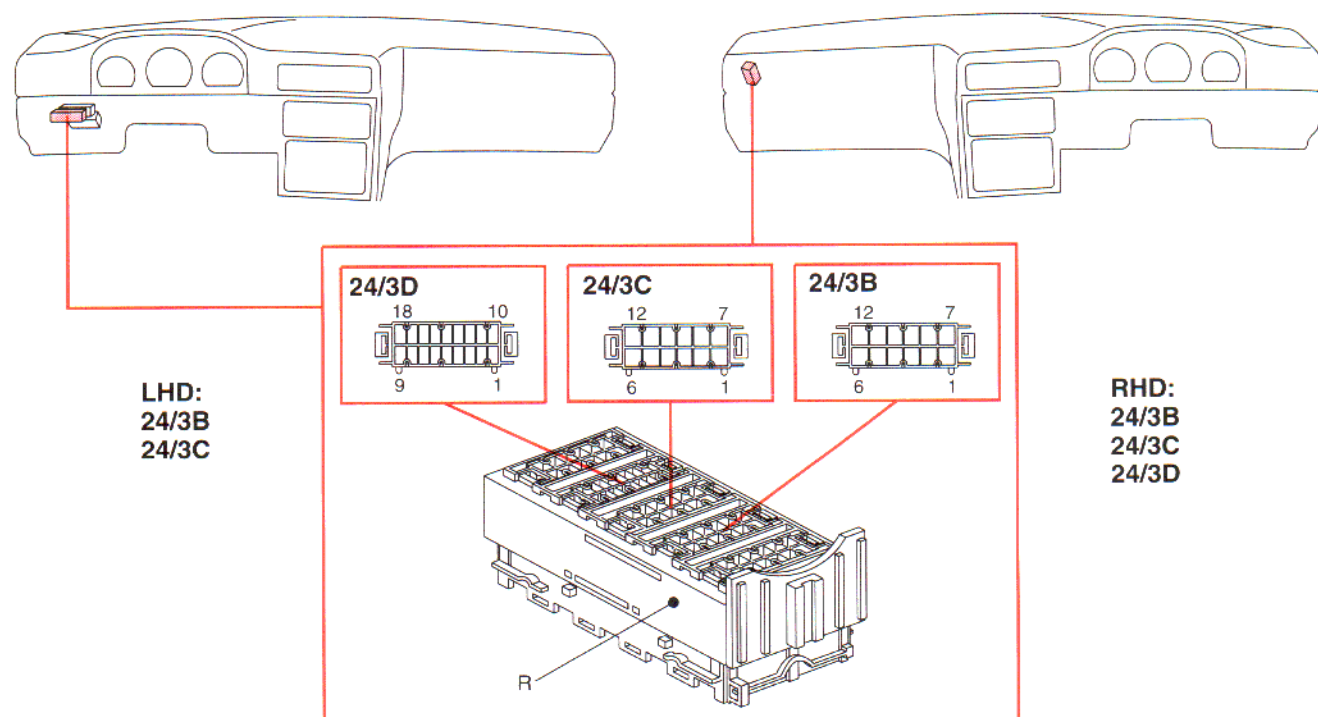
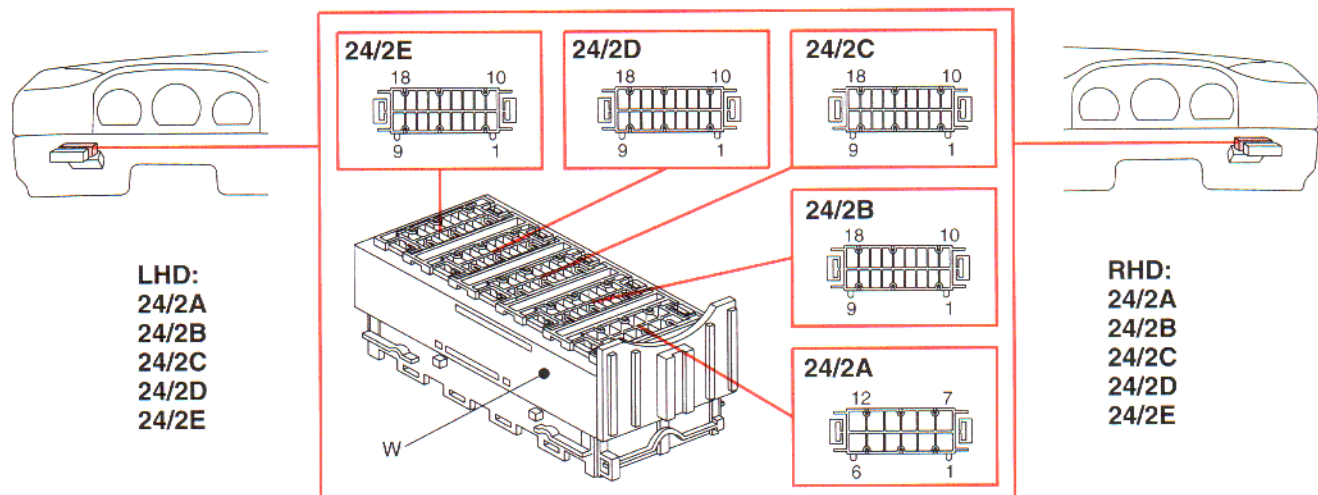
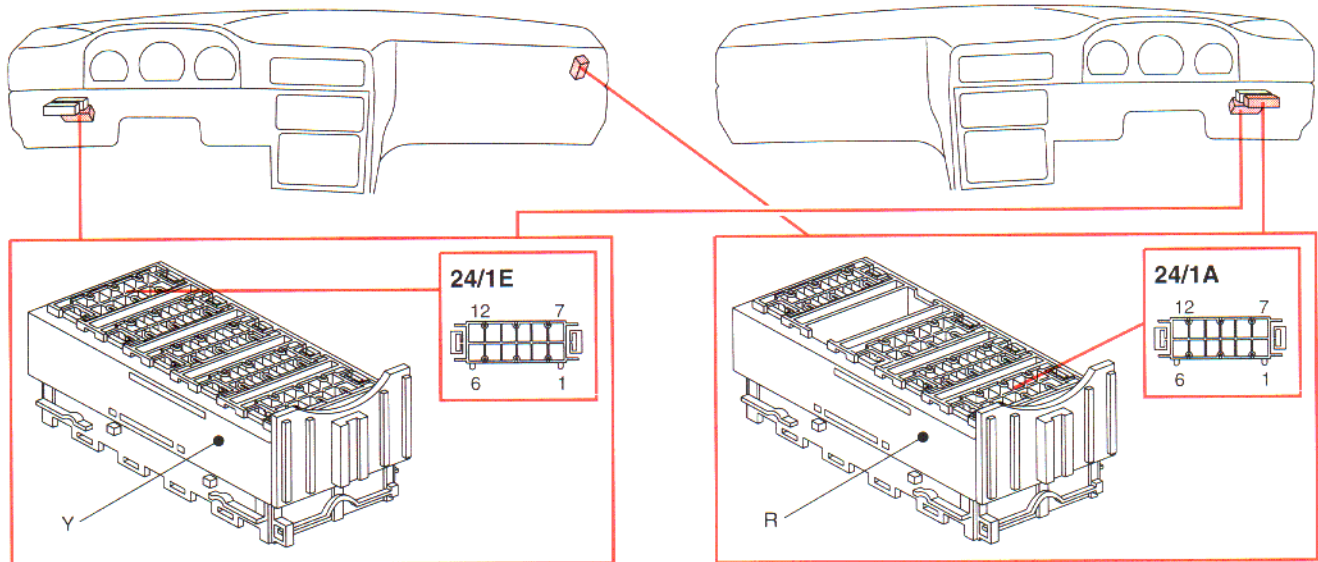


24/63 Light Grey 14-pin (female - male) Firewall cable harness - A/C cable harness

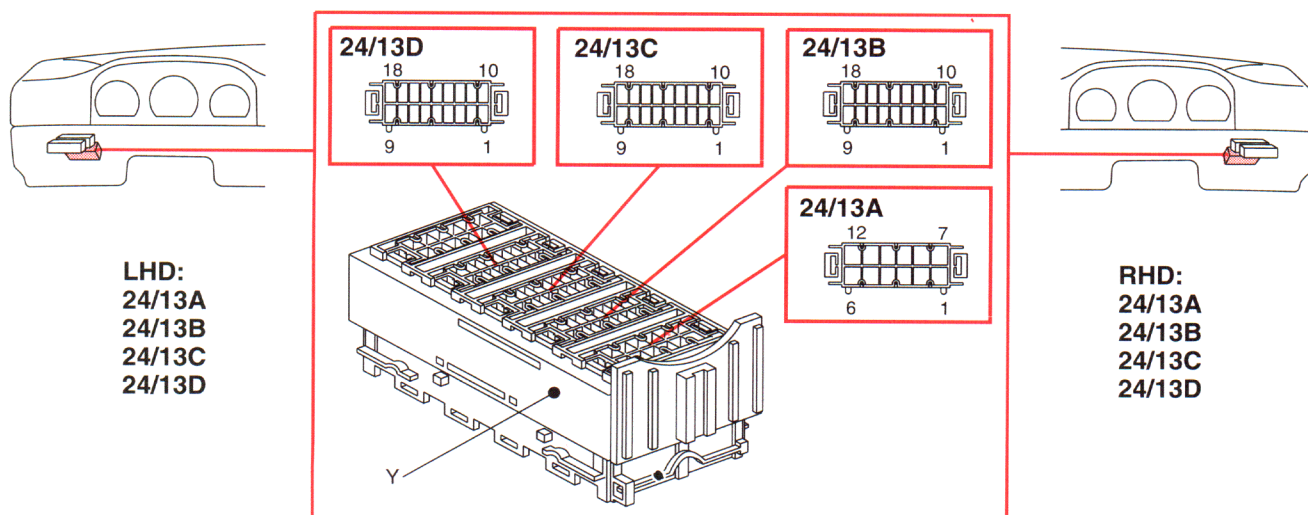
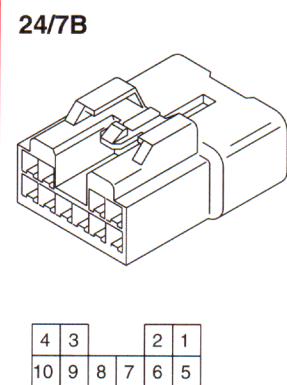
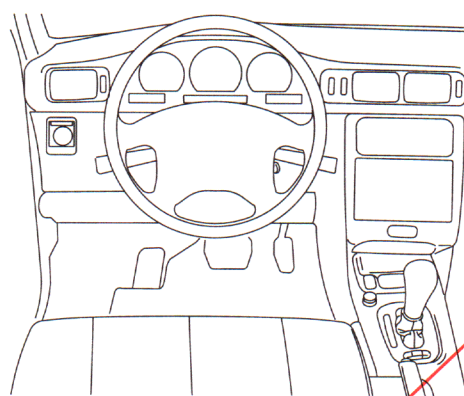
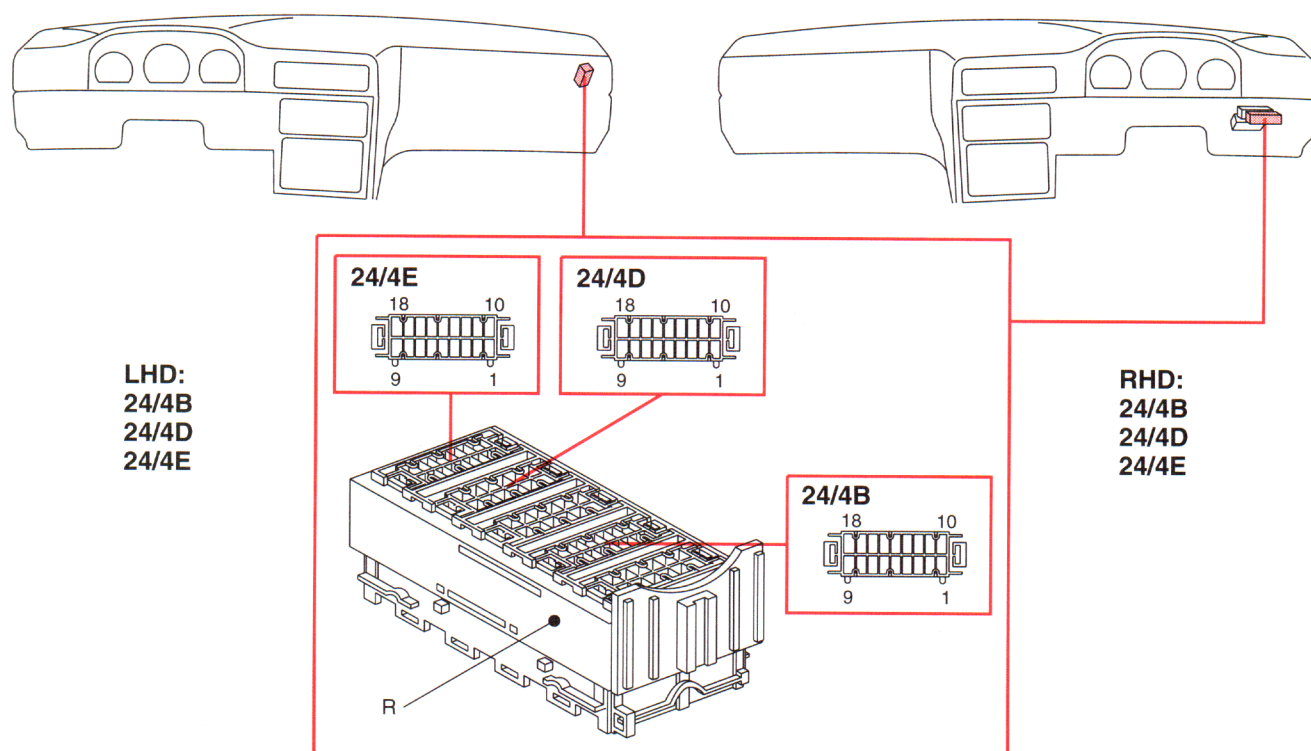


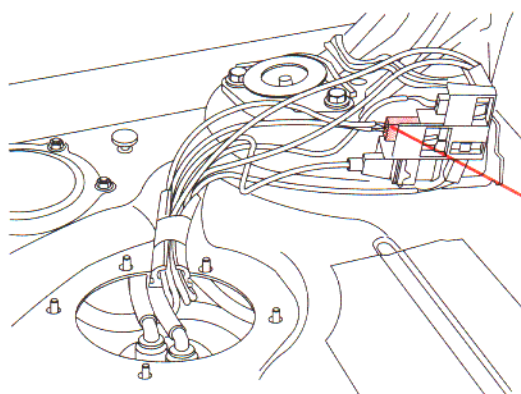
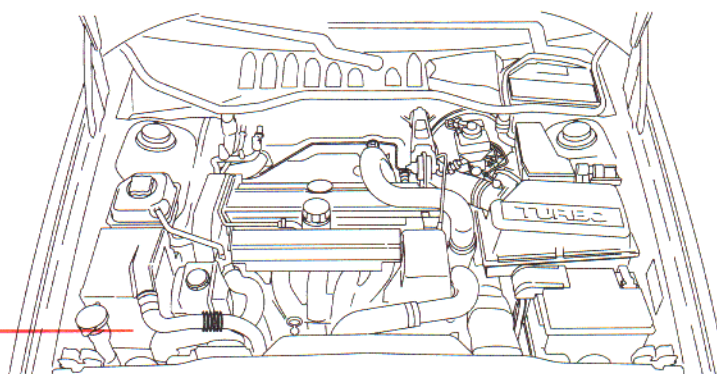
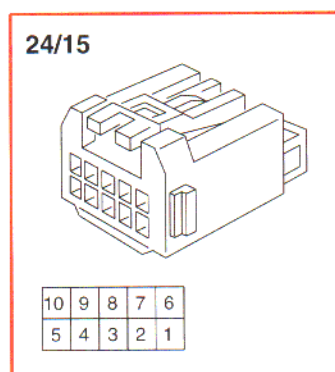
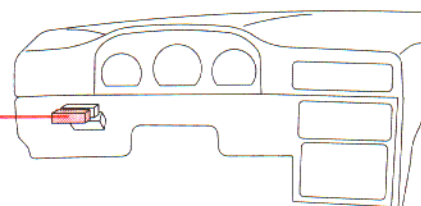
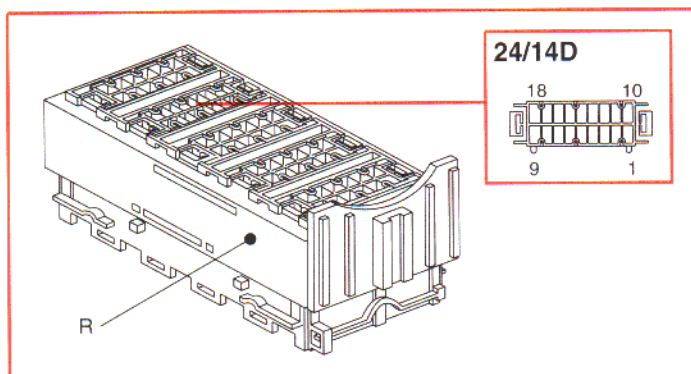
24/71	Gray 6-pin (female - male) Engine compartment cable harness - Engine cable harness left side
24/98	Light Grey 8-pin (female - male) Engine compartment cable harness - Engine cable harness





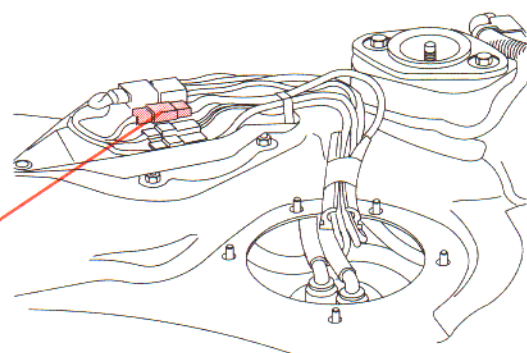
Connectors



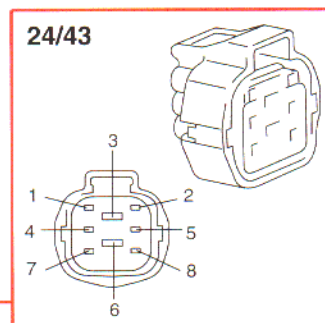
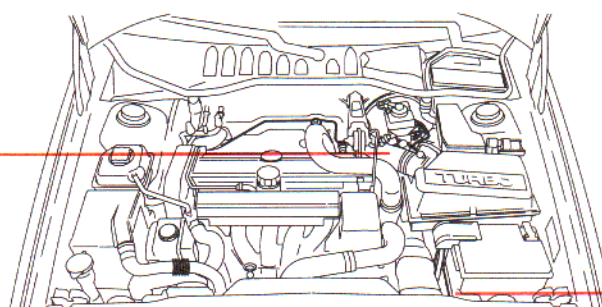
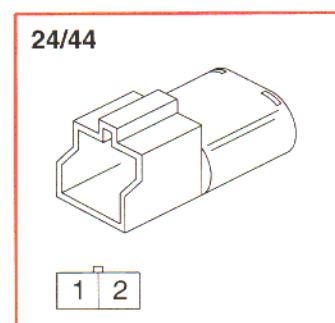


S70, C70

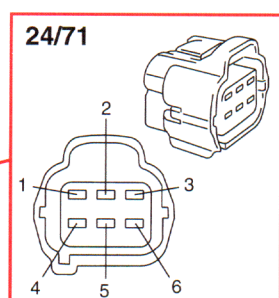
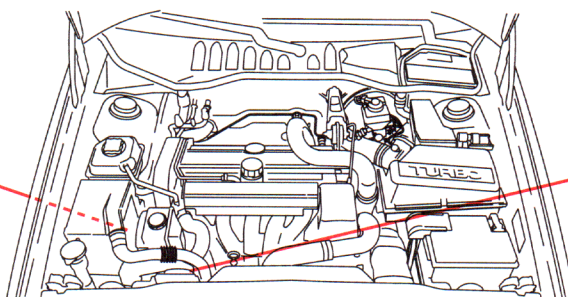
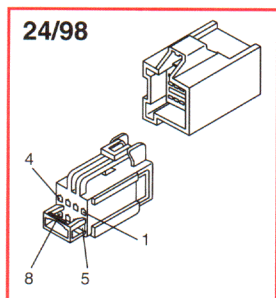
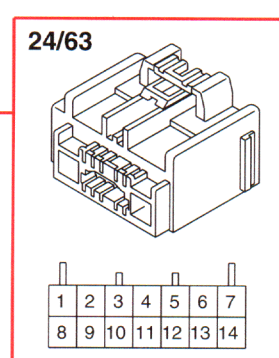
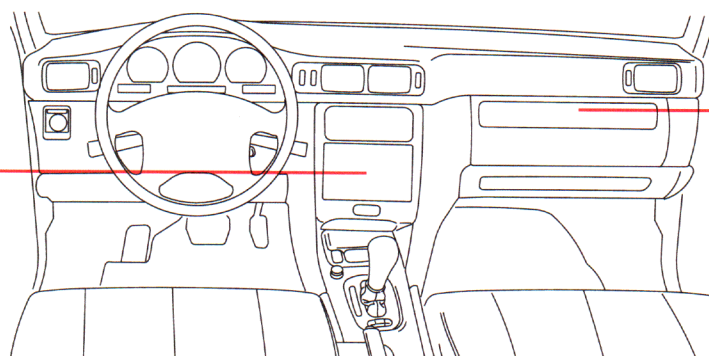
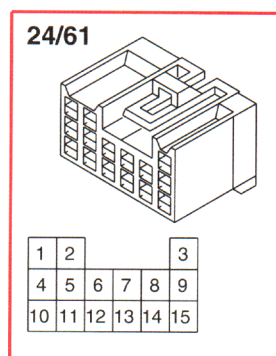
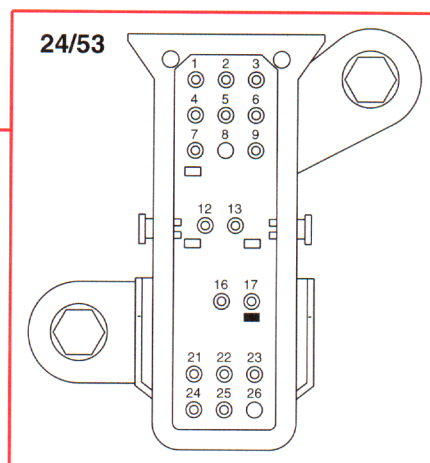
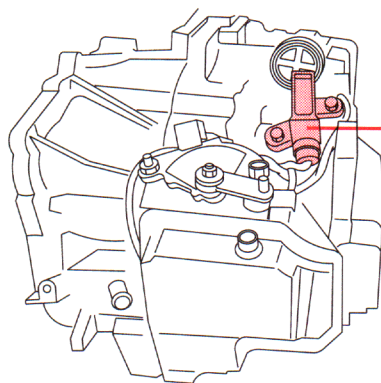
24/19



V70



Connectors



Junction points

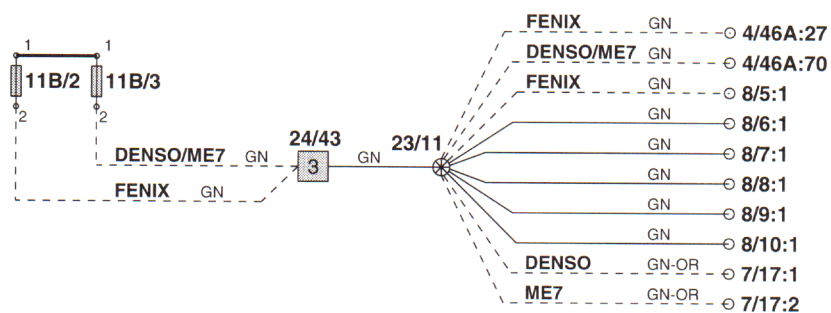
23/11 (Engine cable harness, FENIX/DENSO/ME7)

23/12 (Engine cable harness, MSA)

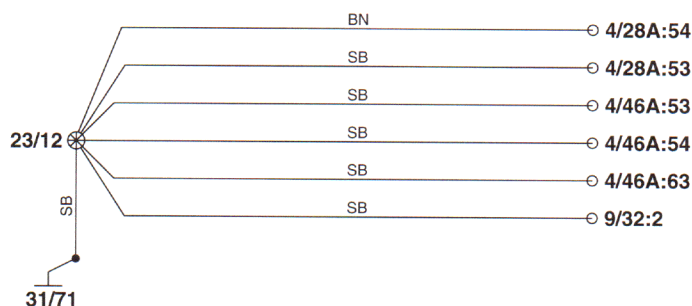
23/17 (Engine cable harness, MSA)

23/18 (Engine cable harness, MSA)

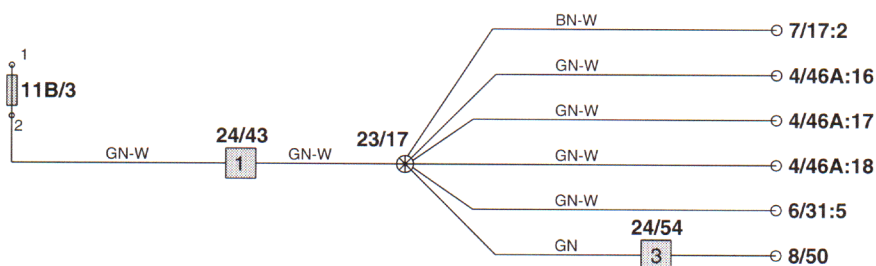
23/11 FENIX/DENSO/ME7



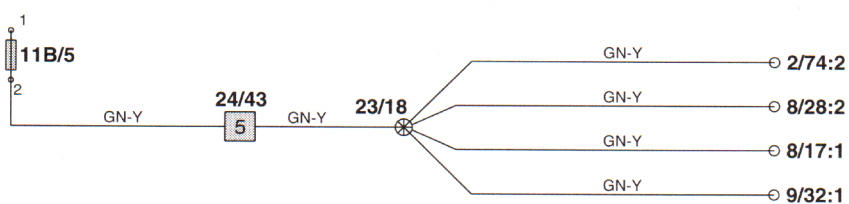
23/12 MSA



23/17 MSA

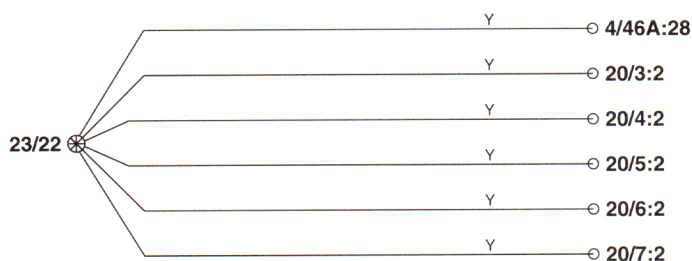


23/18 MSA

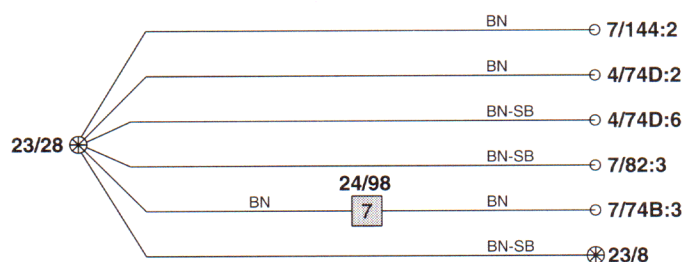


23/22 (Engine cable harness, DENSO)
 23/28 (Engine cable harness, BIFUEL)
 23/29 (Engine cable harness, BIFUEL)
 23/203 (Engine compartment cable harness)

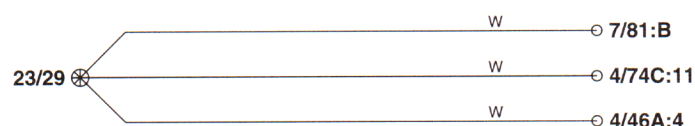
23/22 DENSO



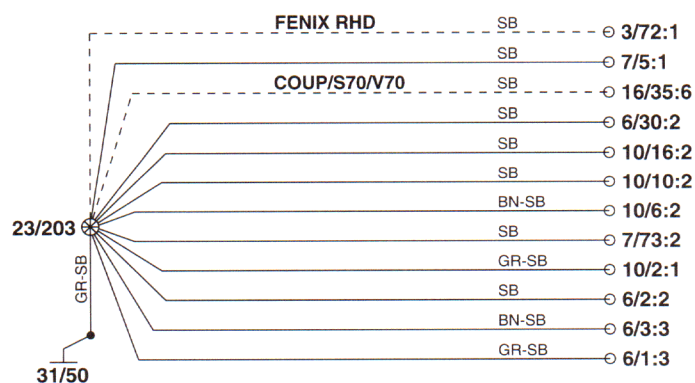
23/28 BIFUEL



23/29 BIFUEL



23/203



Junction points

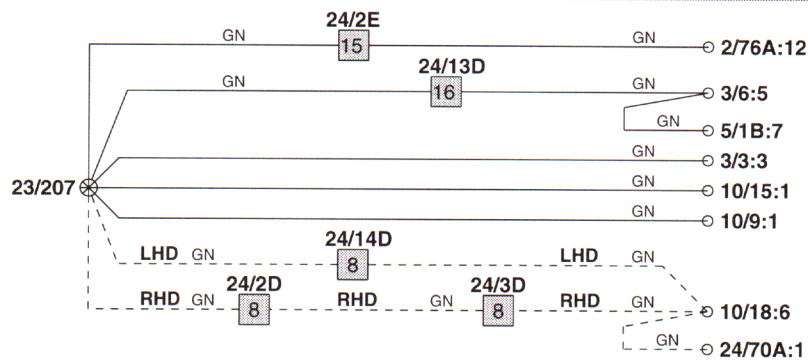
23/207 (Engine compartment cable harness, C70)

23/207 (Engine compartment cable harness, S70)

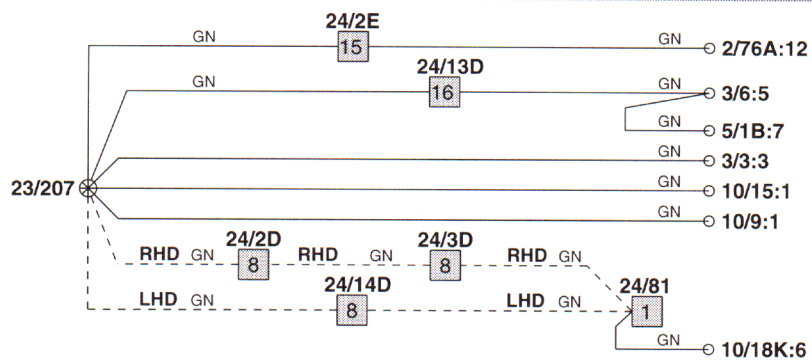
23/207 (Engine compartment cable harness, V70)

23/208 (Engine compartment cable harness, C70)

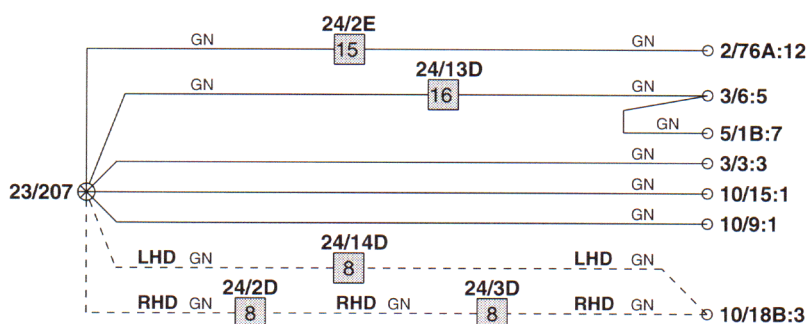
**23/207
C70**



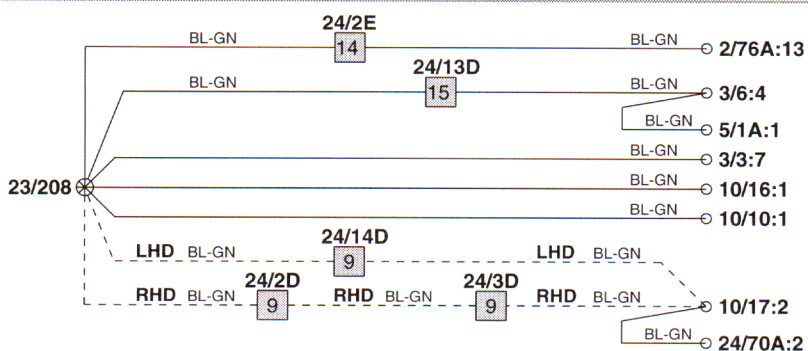
**23/207
S70**



**23/207
V70**



**23/208
C70**

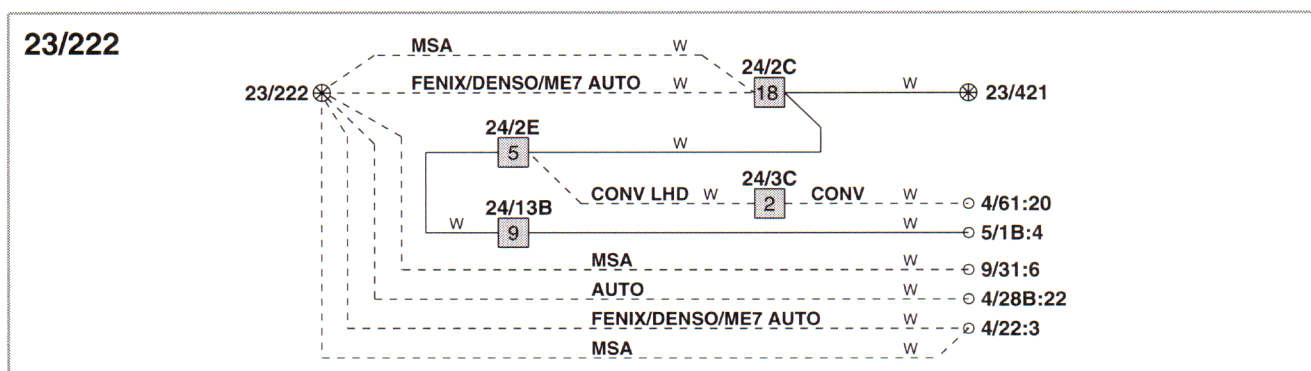
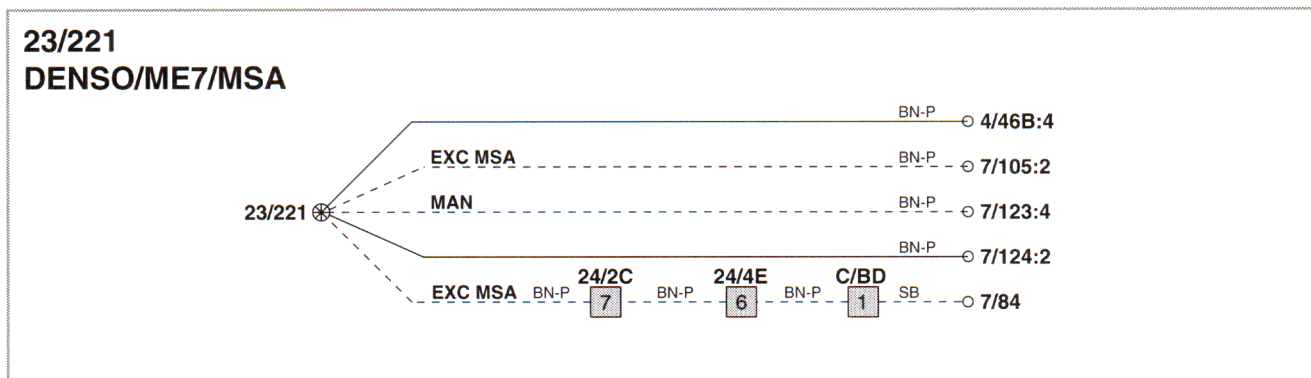
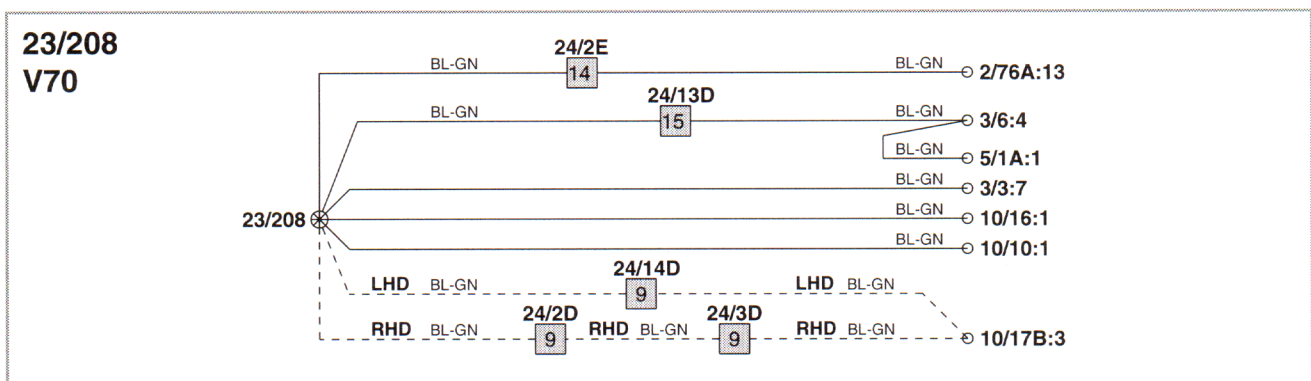
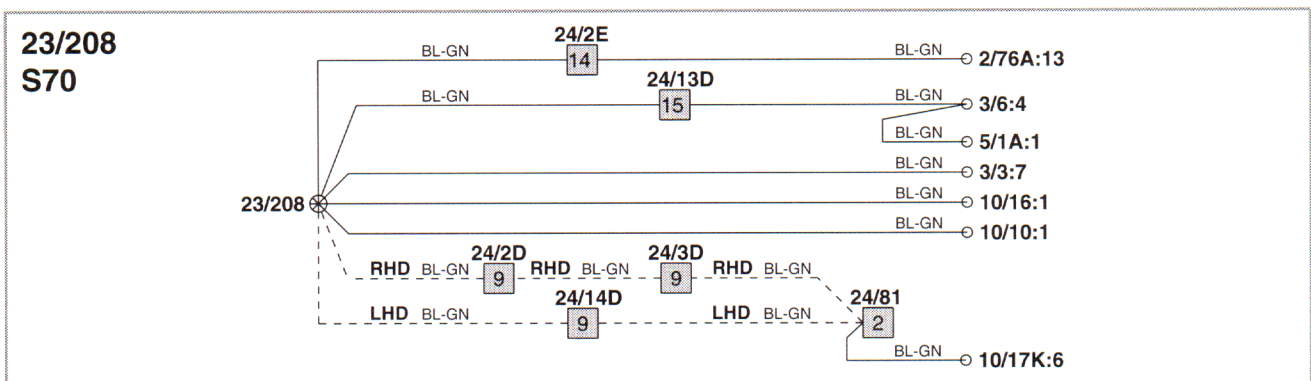


23/208 (Engine compartment cable harness, S70)

23/208 (Engine compartment cable harness, V70)

23/221 (Engine cable harness, DENSO/ME7/MSA)

23/222 (Engine compartment cable harness)



Junction points

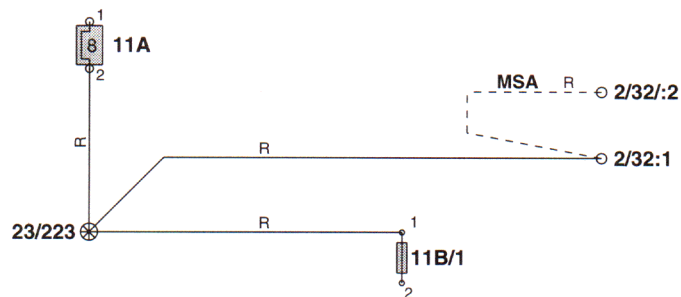
23/223 (Engine compartment cable harness)

23/226 (Engine compartment cable harness)

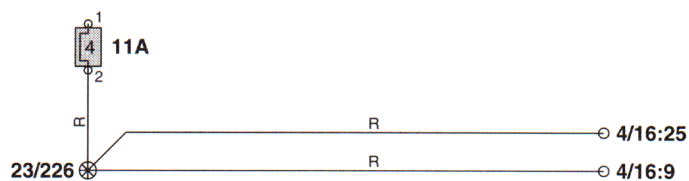
23/230 (Engine compartment cable harness)

23/232 (Engine cable harness, FENIX/BIFUEL)

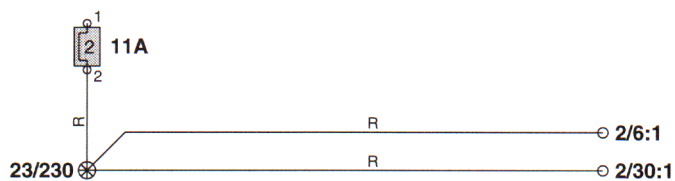
23/223



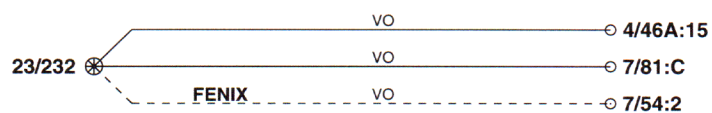
23/226



23/230



23/232 FENIX/BIFUEL



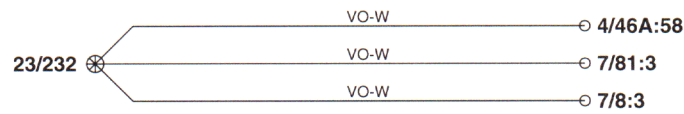
23/232 (Engine cable harness, DENSO)

23/232 (Engine cable harness, ME7)

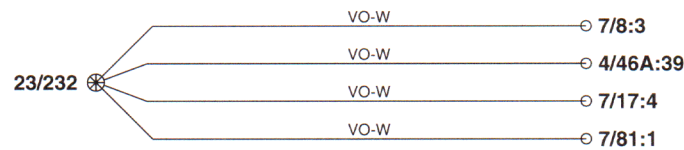
23/239 (Engine compartment cable harness)

23/240 (Engine compartment cable harness)

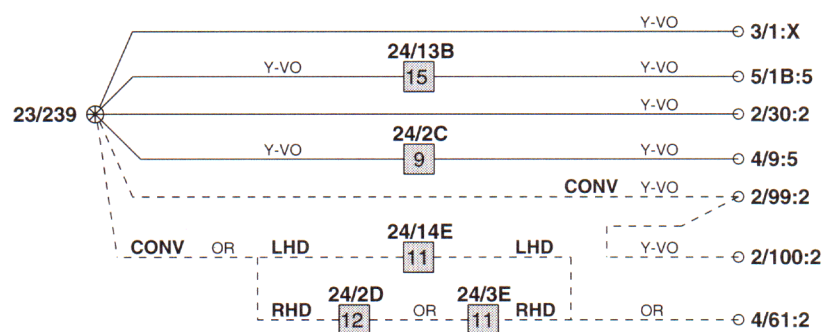
23/232 DENSO



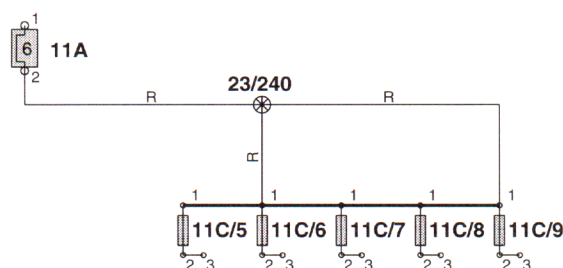
23/232 ME7



23/239



23/240



Junction points

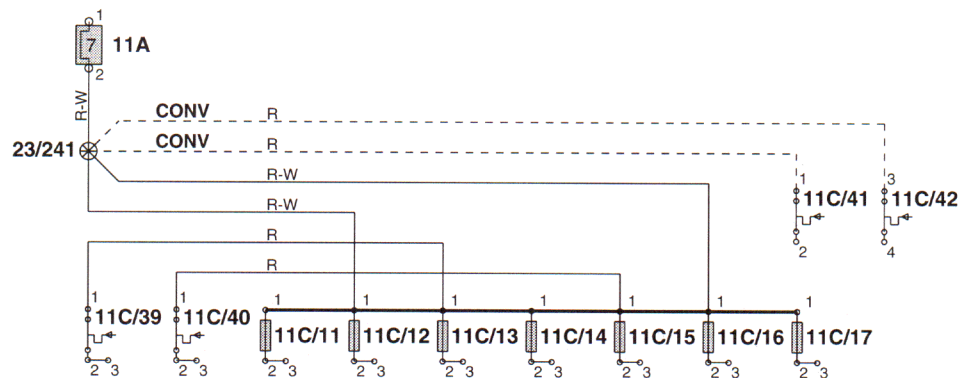
23/241 (Engine compartment cable harness)

23/243 (Engine cable harness, DENSO/ME7)

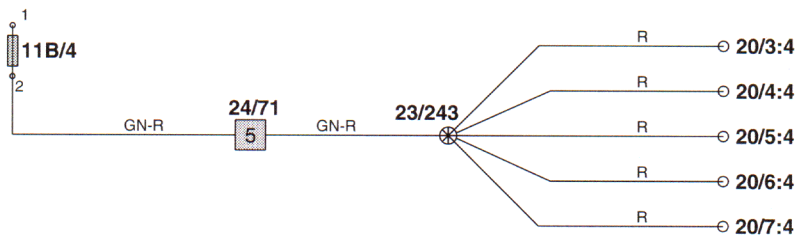
23/245 (Engine compartment cable harness, DENSO/ME7)

23/245 (Engine cable harness, MSA AUTO)

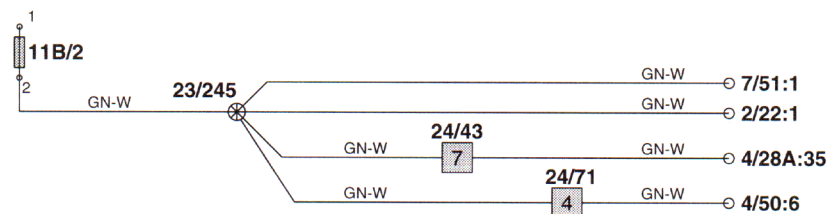
23/241



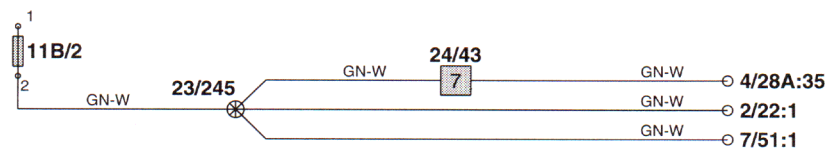
23/243 DENSO/ME7



23/245 DENSO/ME7



23/245 MSA AUTO



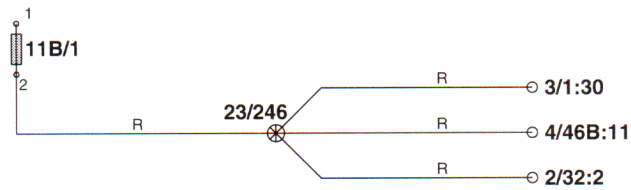
23/246 (Engine compartment cable harness, DENSO/ME7)

23/249 (Engine compartment cable harness)

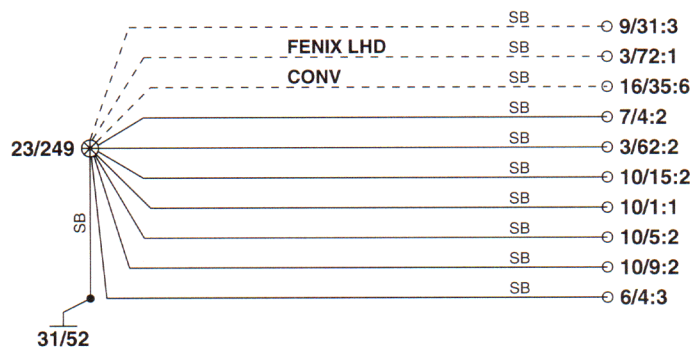
23/250 (Engine compartment cable harness, CONV)

23/252 (Engine compartment cable harness, BIFUEL)

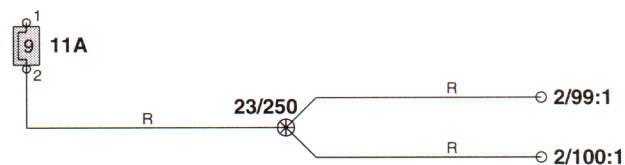
23/246 DENSO/ME7



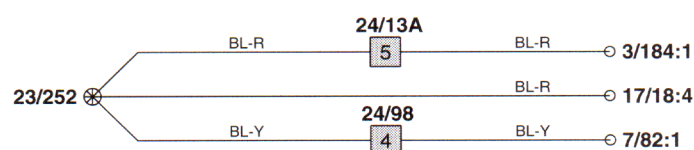
23/249



23/250 CONV



23/252 BIFUEL



Junction points

23/253A (Engine compartment cable harness, BIFUEL)

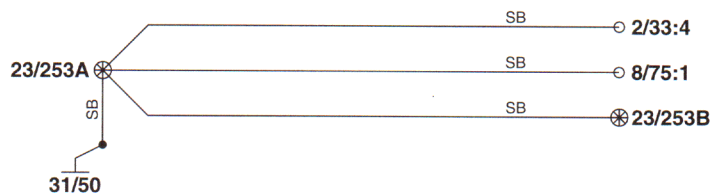
23/253B (Engine compartment cable harness, BIFUEL)

23/254 (Engine compartment cable harness, BIFUEL)

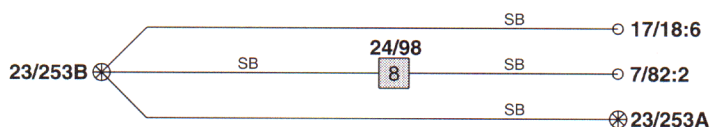
23/255 (Engine compartment cable harness, BIFUEL)

23/300A (Dashboard cable harness)

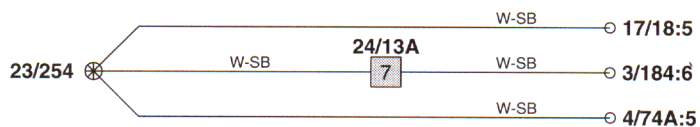
23/253A BIFUEL



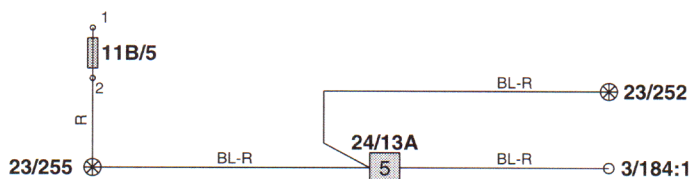
23/253B BIFUEL



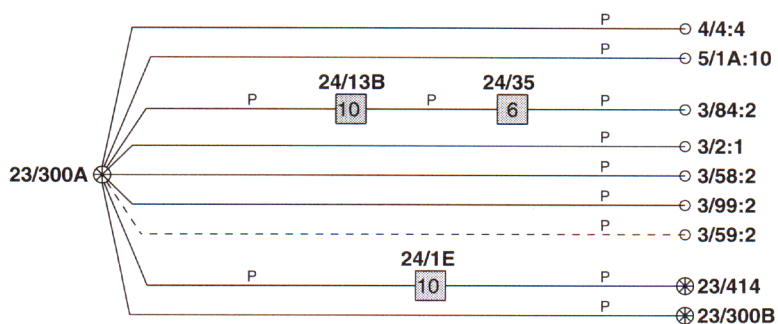
23/254 BIFUEL



23/255 BIFUEL

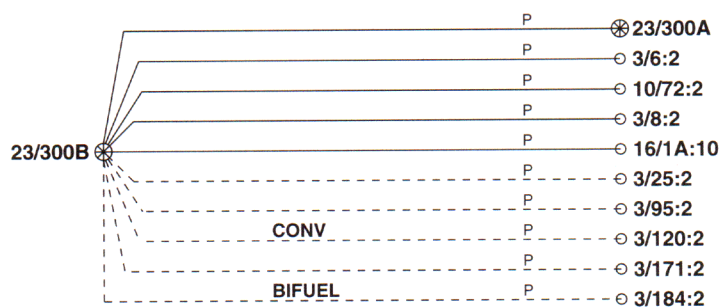


23/300A

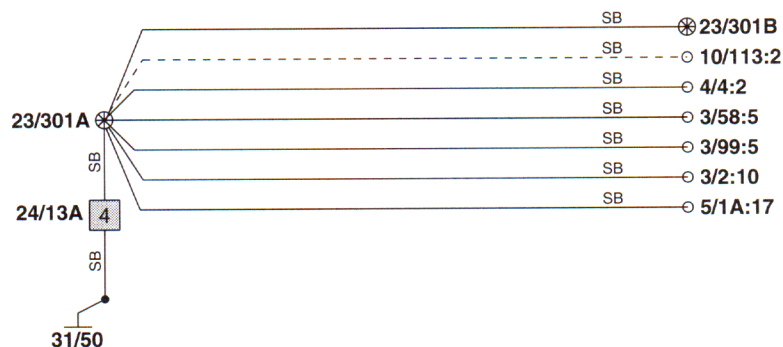


- 23/300B (Dashboard cable harness)
- 23/301A (Dashboard cable harness)
- 23/301B (Dashboard cable harness)
- 23/304 (Climate control cable harness)

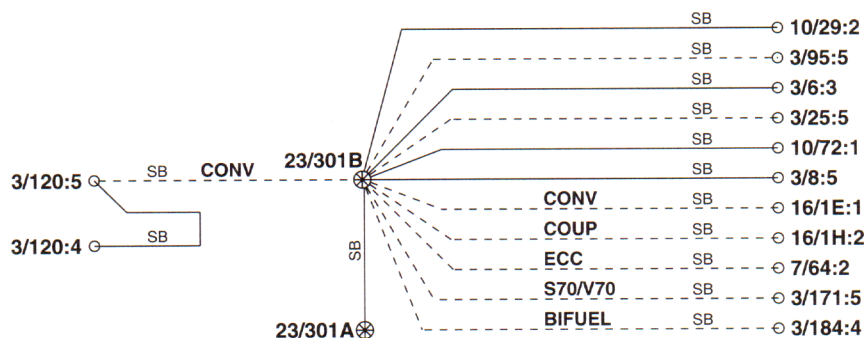
23/300B



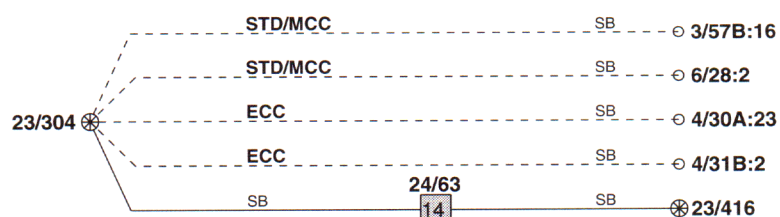
23/301A



23/301B

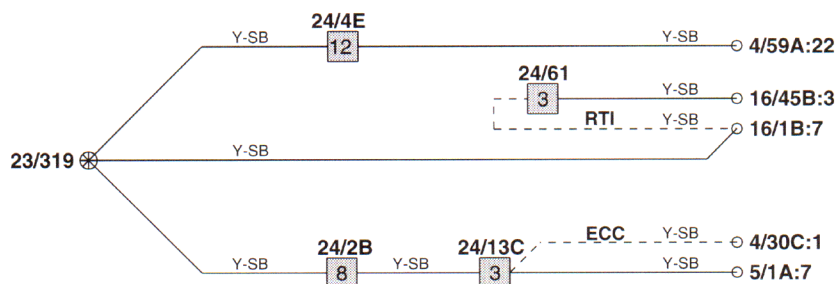


23/304

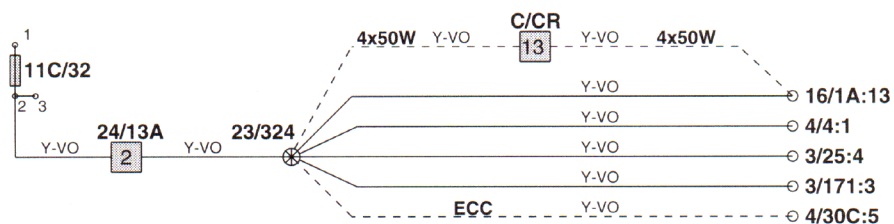


- 23/319 (Firewall cable harness, CONV)
- 23/324 (Instrument panel cable harness)
- 23/405 (Firewall cable harness, CONV)
- 23/405 (Firewall cable harness, COUP/S70/V70)

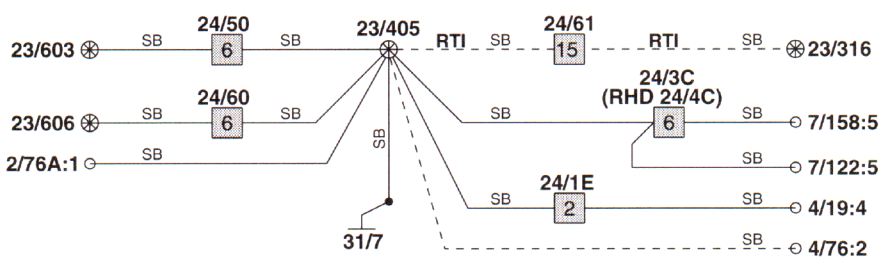
23/319 CONV



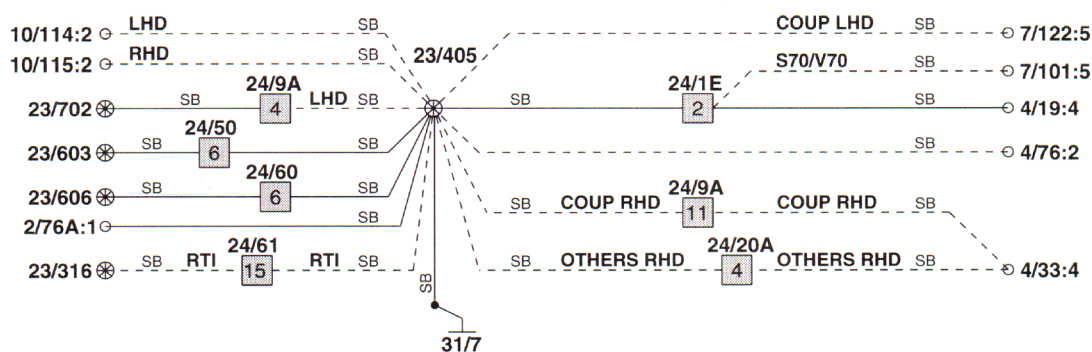
23/324



23/405 CONV



23/405 COUP/ S70/V70



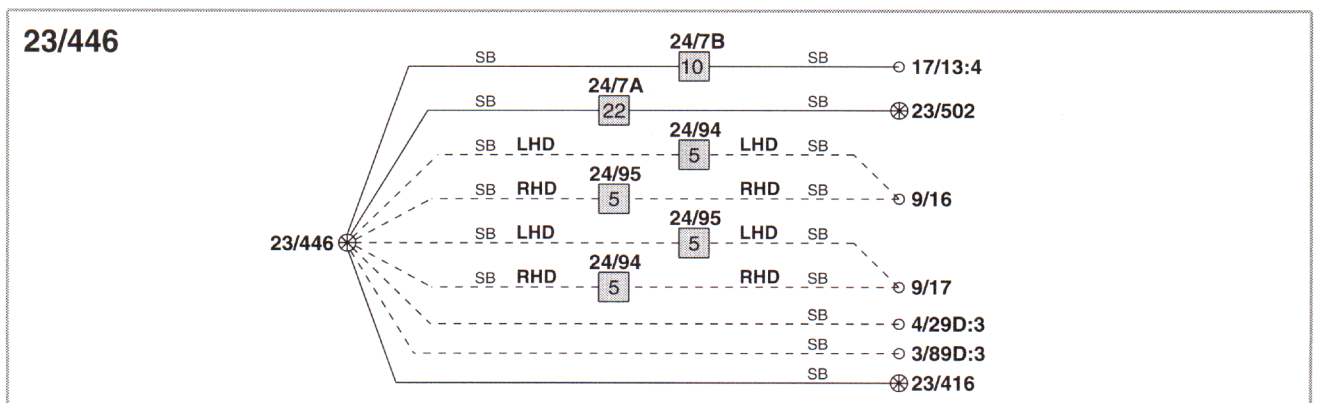
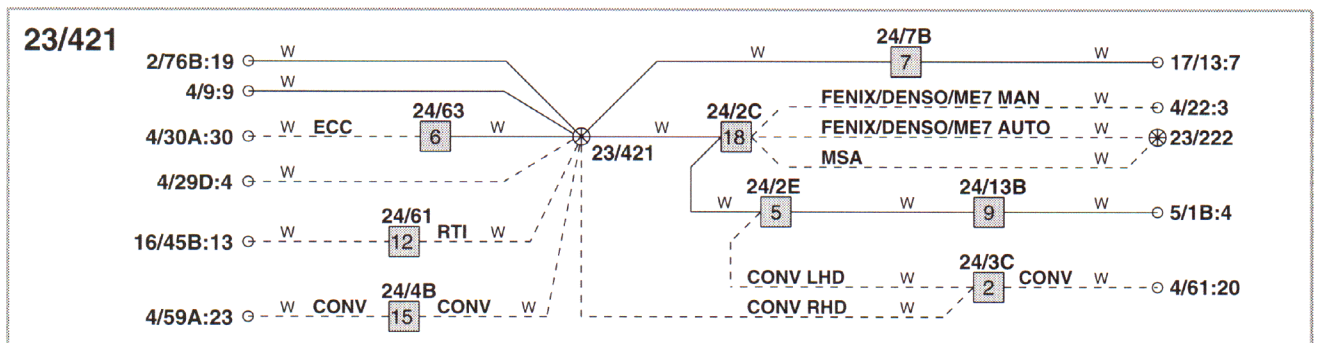
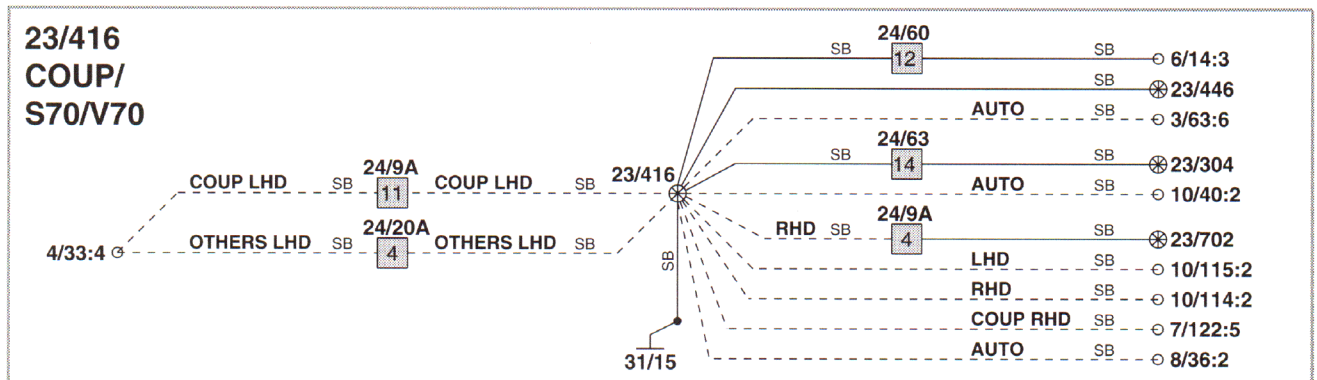
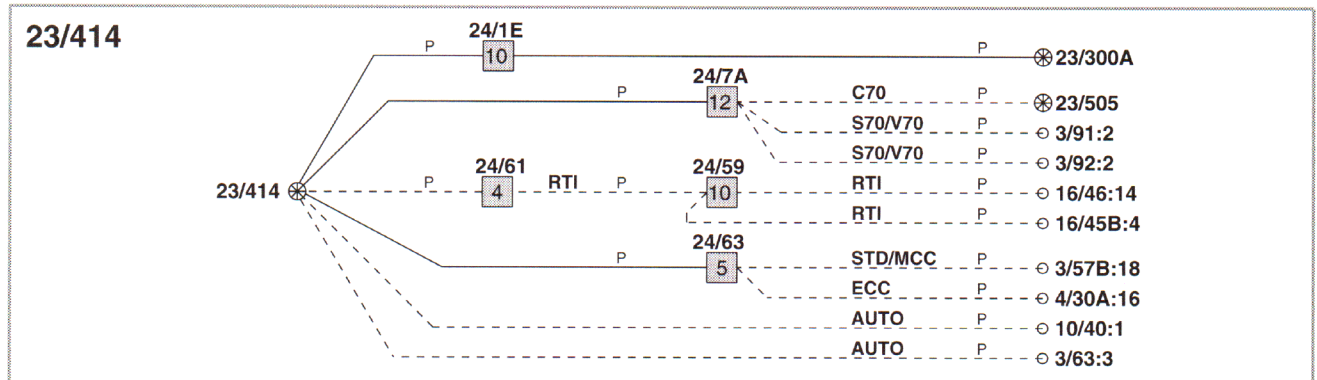
Junction points

23/414 (Firewall cable harness)

23/416 (Firewall cable harness, COUP/S70/V70)

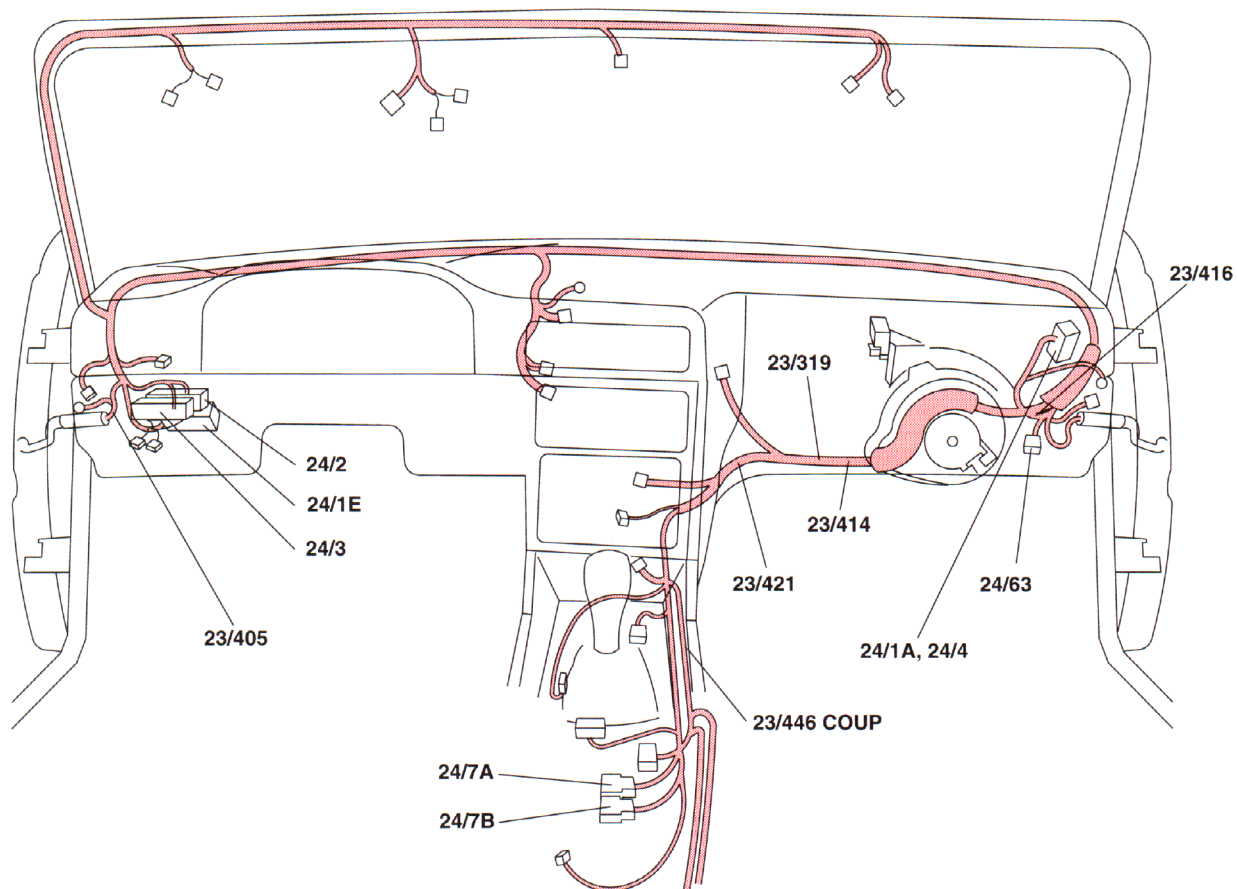
23/421 (Firewall cable harness)

23/446 (Firewall cable harness)

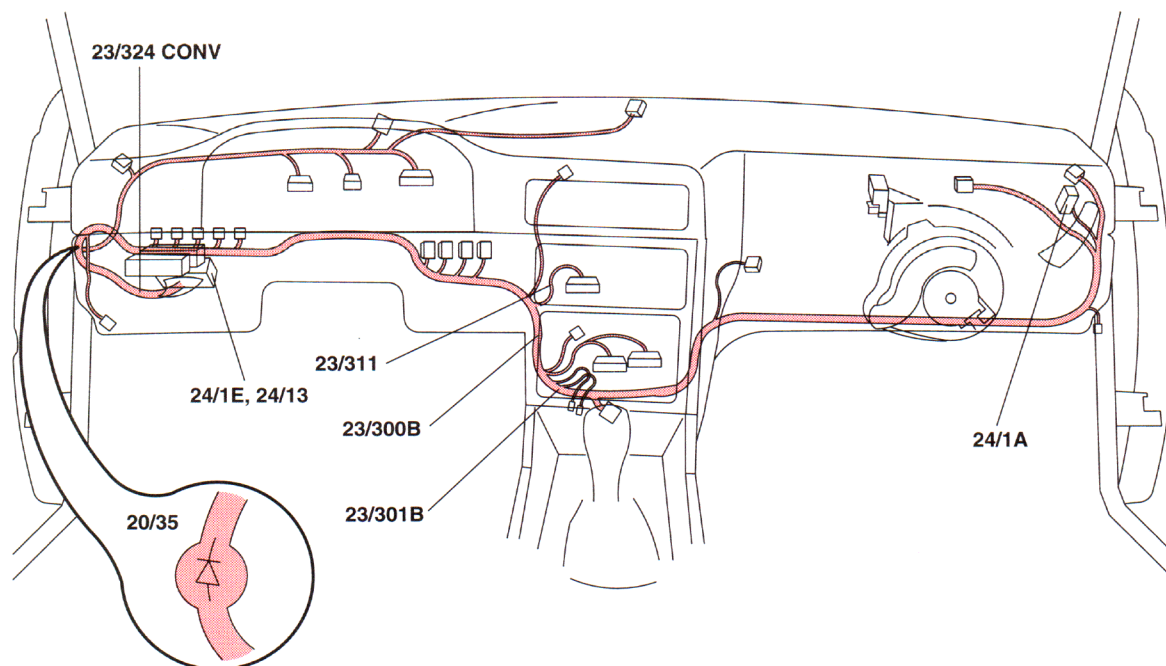


Routing of cable harnesses in the car

Firewall cable harness

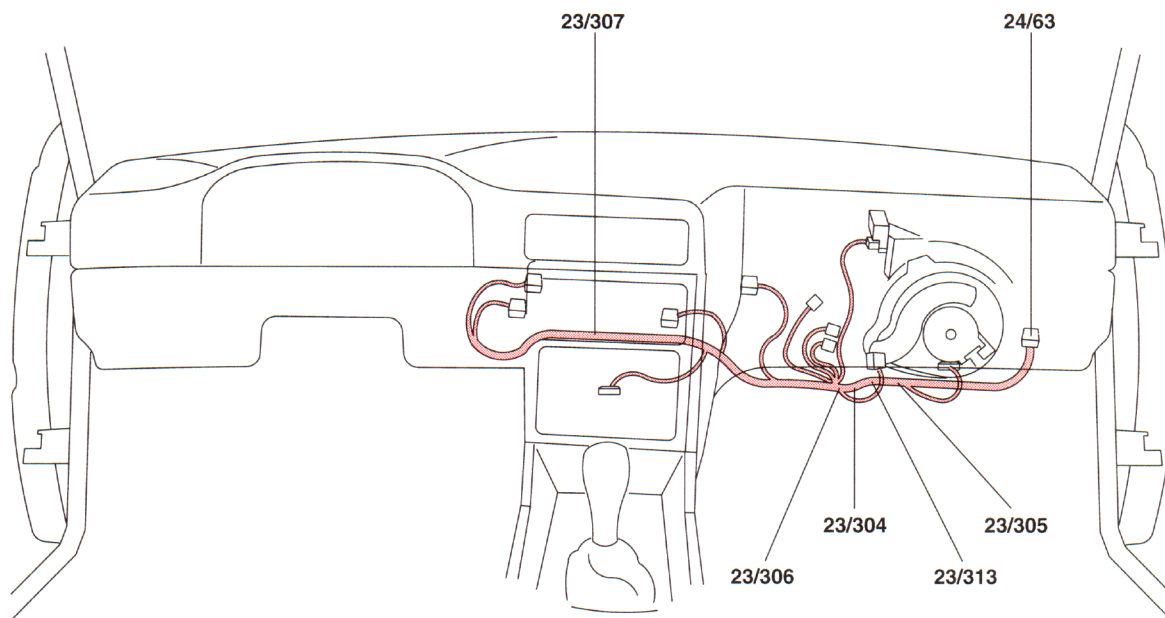


Instrument panel cable harness

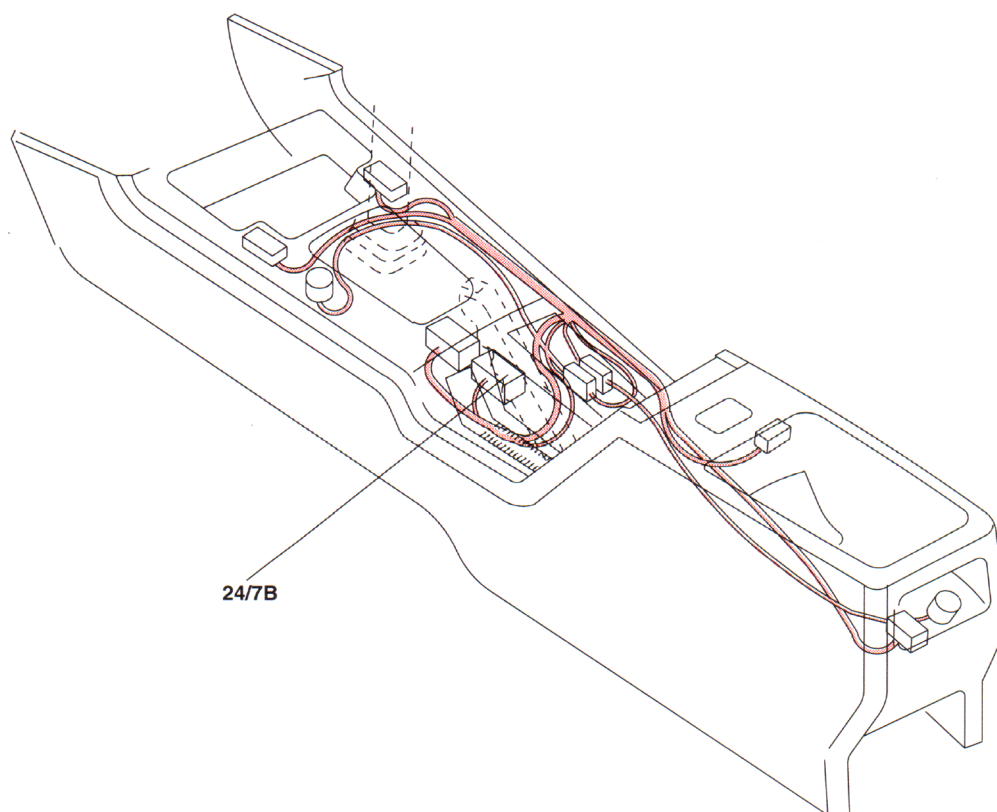


Routing of cable harnesses in the car

Climate control cable harness

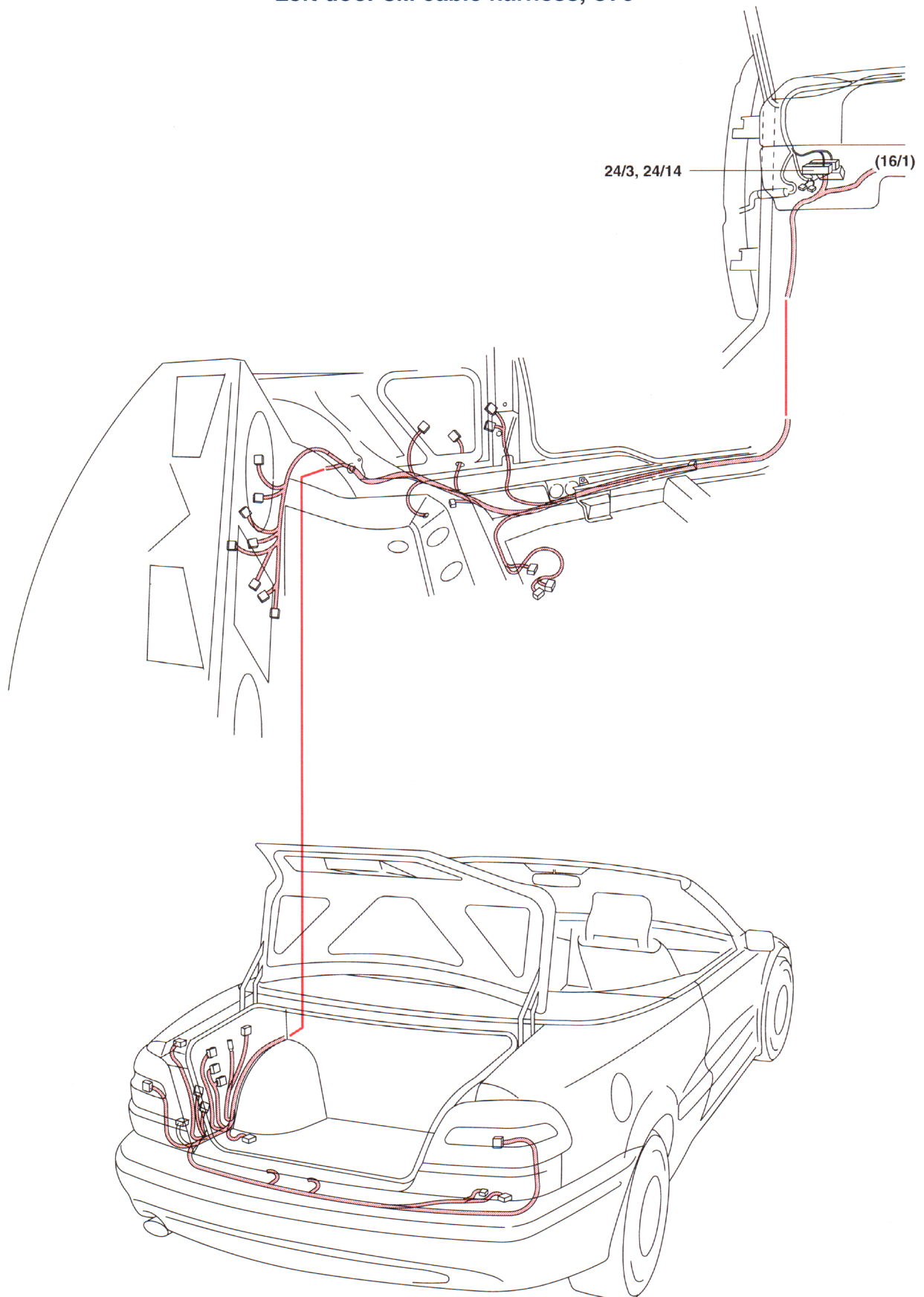


Tunnel cable harness



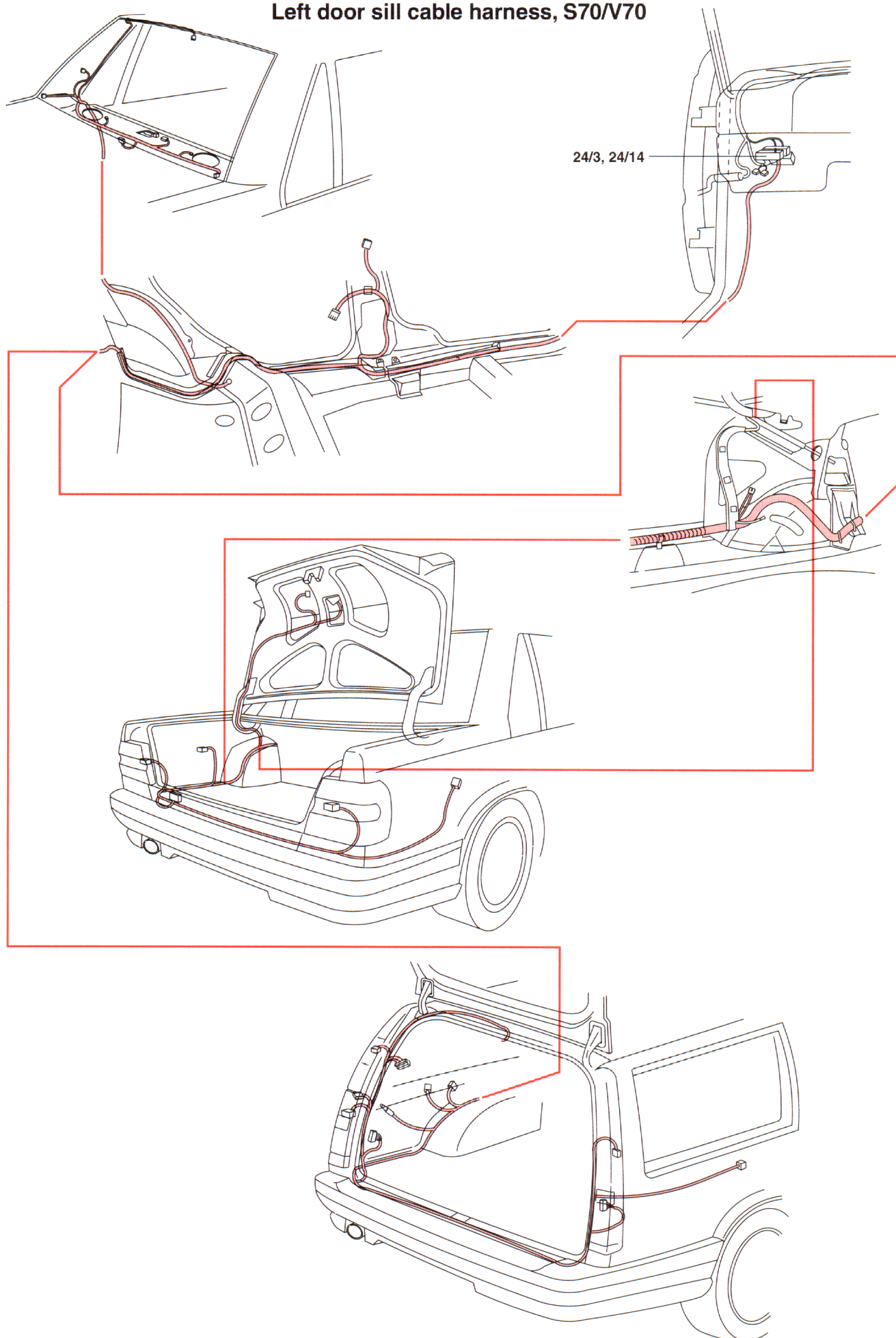
Routing of cable harnesses in the car

Left door sill cable harness, C70

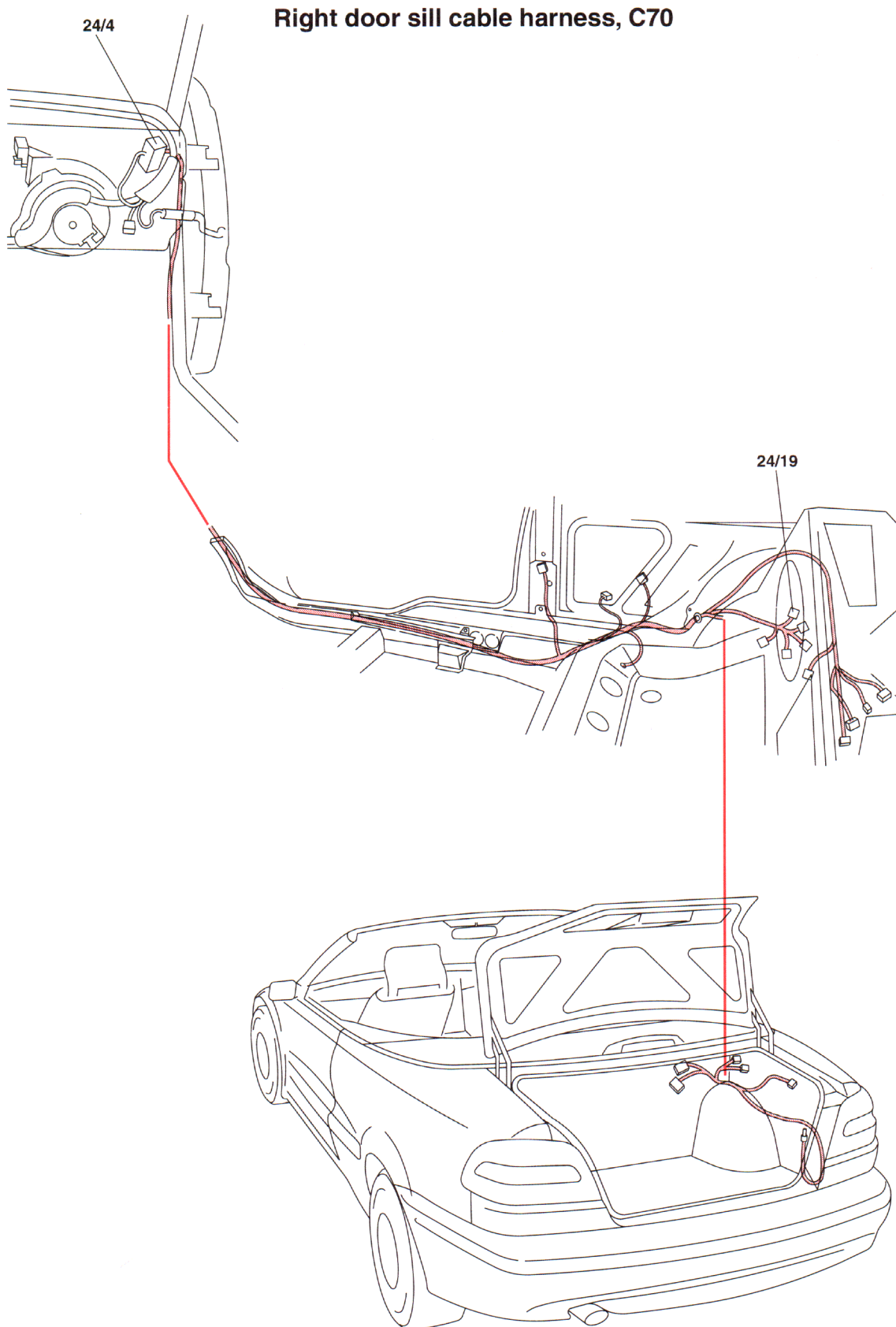


Routing of cable harnesses in the car

Left door sill cable harness, S70/V70

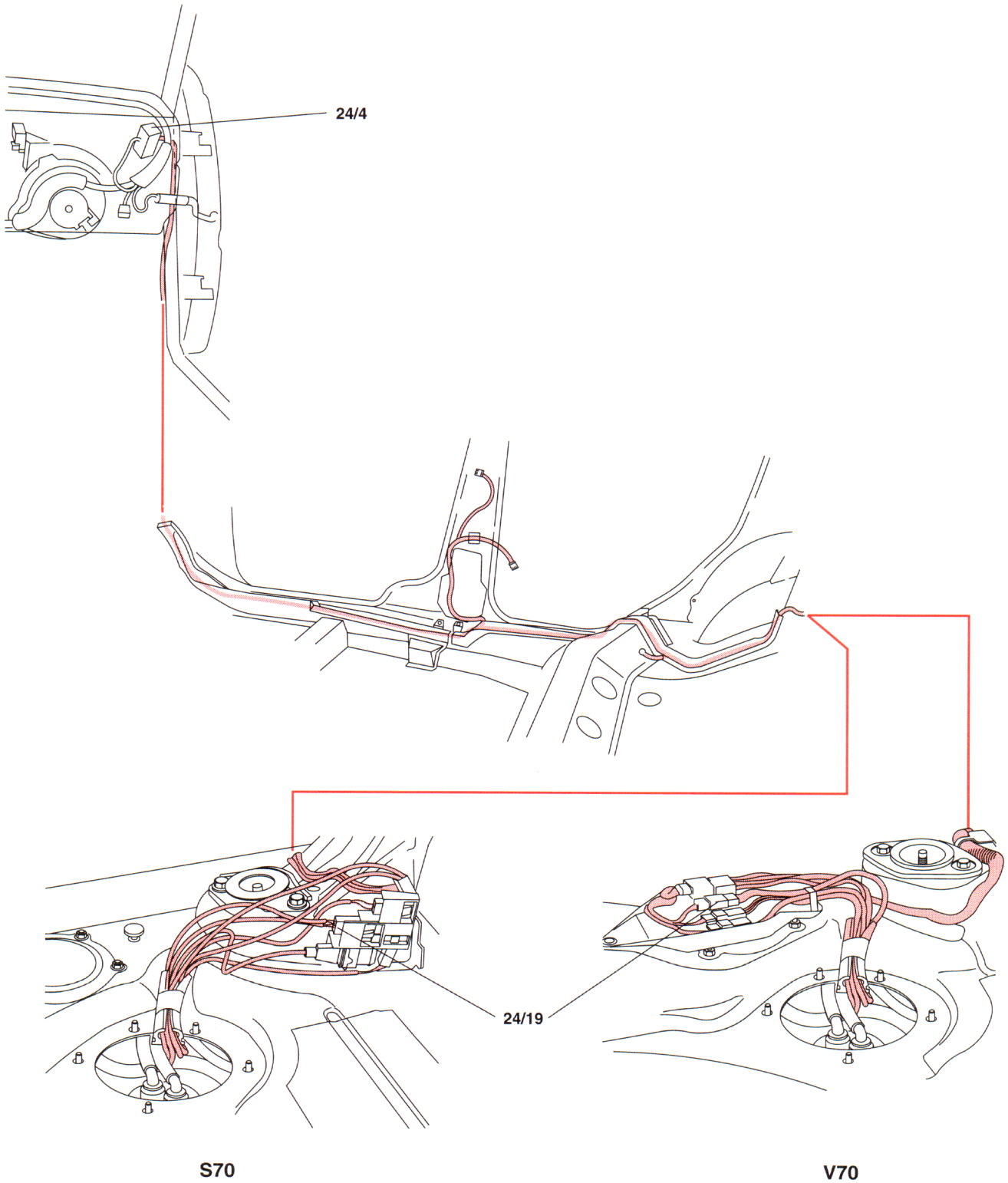


Routing of cable harnesses in the car



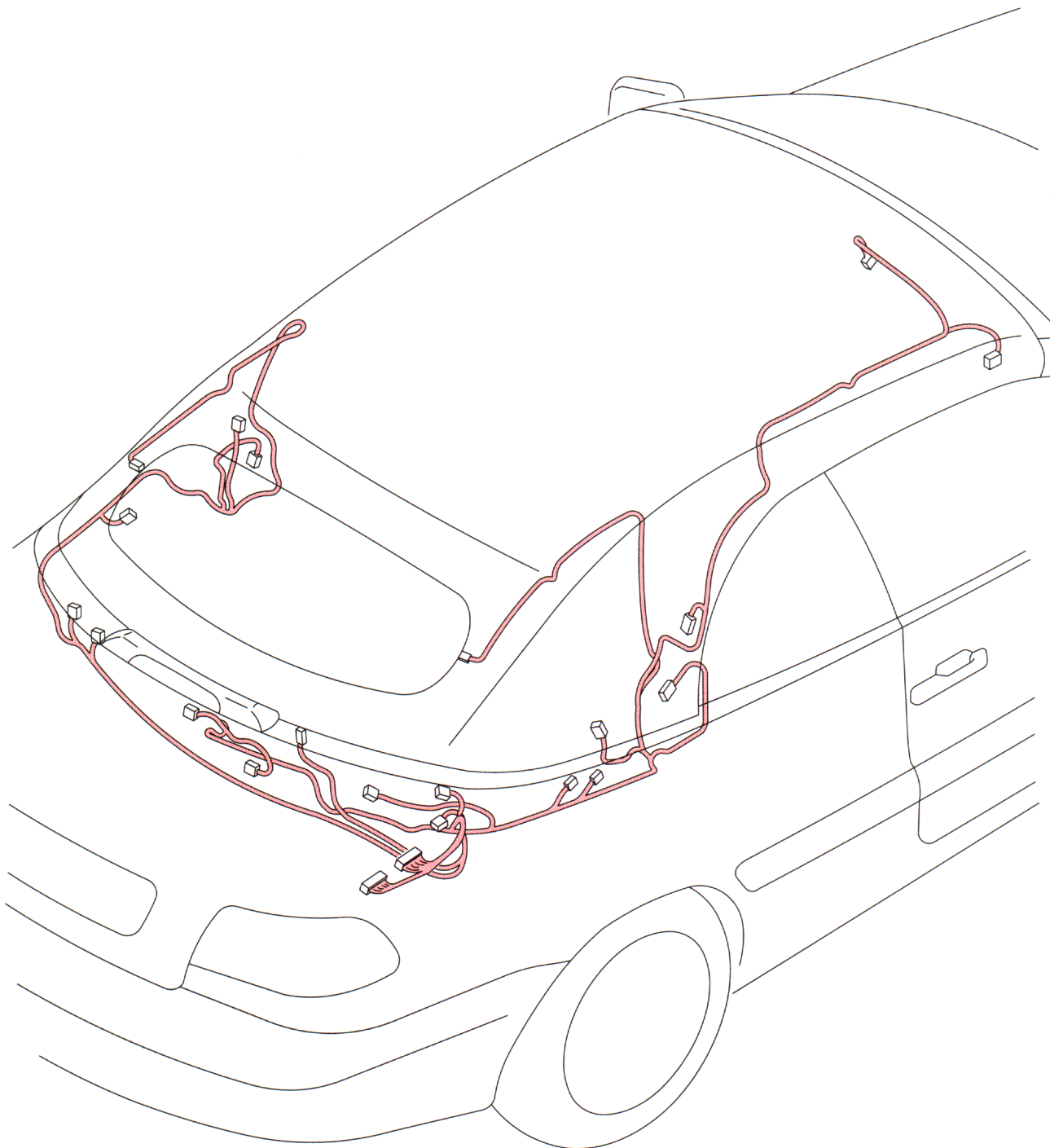
Routing of cable harnesses in the car

Right door sill cable harness, S70/V70



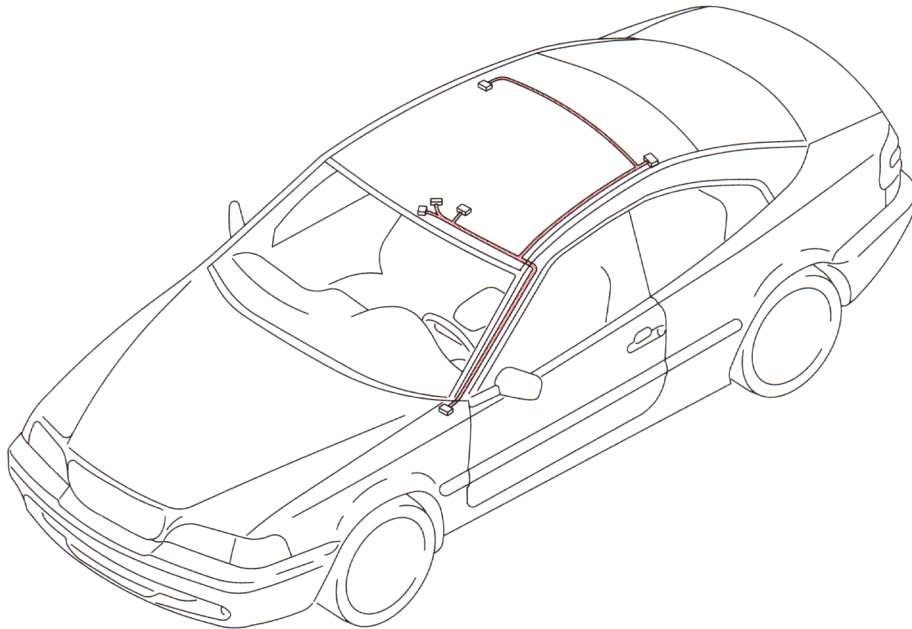
Routing of cable harnesses in the car

Soft-top cable harness



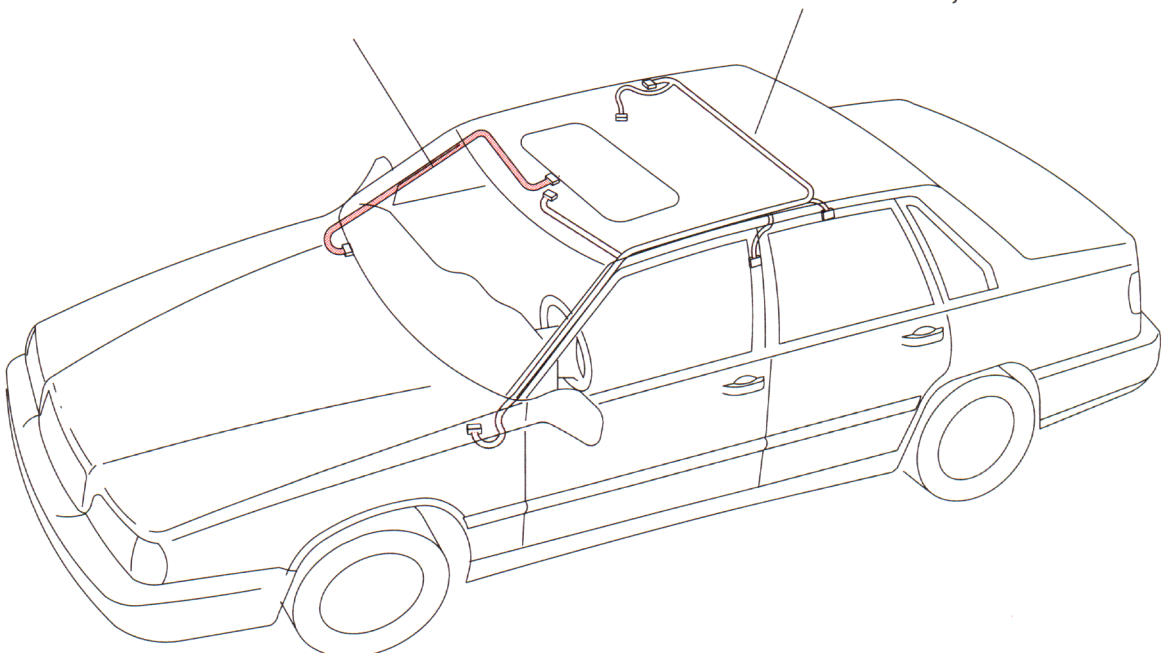
Routing of cable harnesses in the car

Roof cable harness, C70 coupé

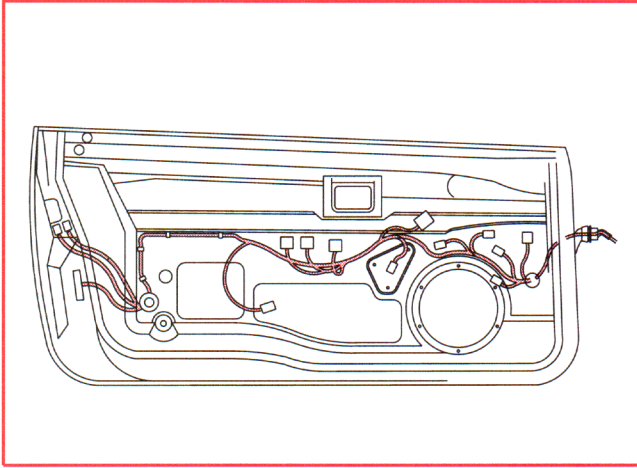


Power sunroof cable harness

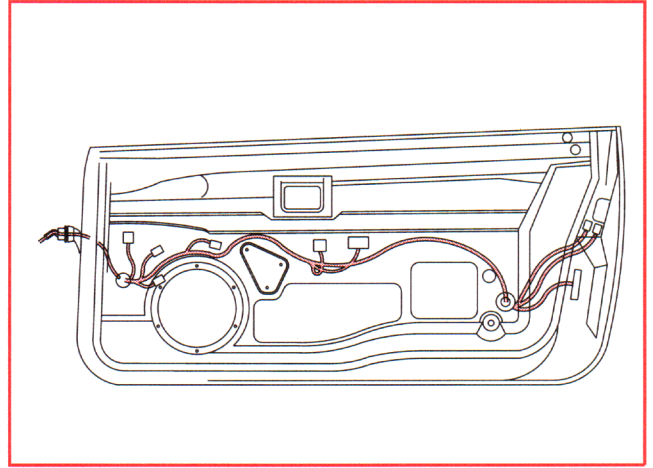
Roof cable harness, S70/V70



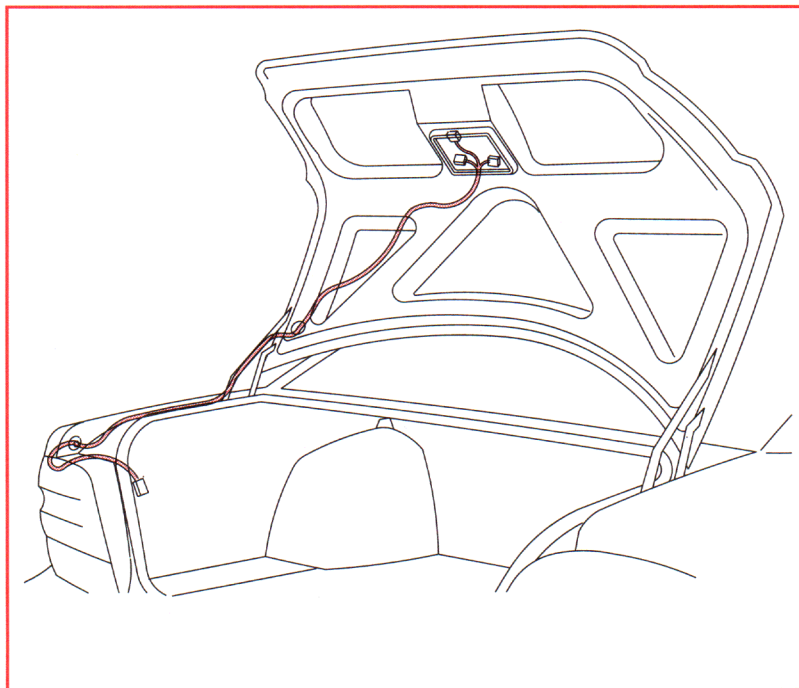
Routing of cable harnesses in the car



Driver door cable harness

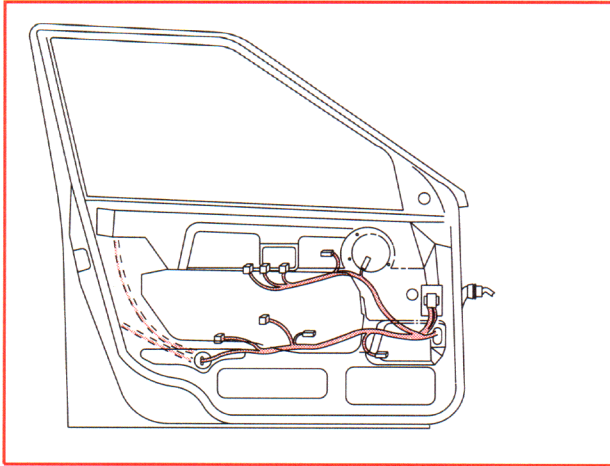


Passenger door cable harness

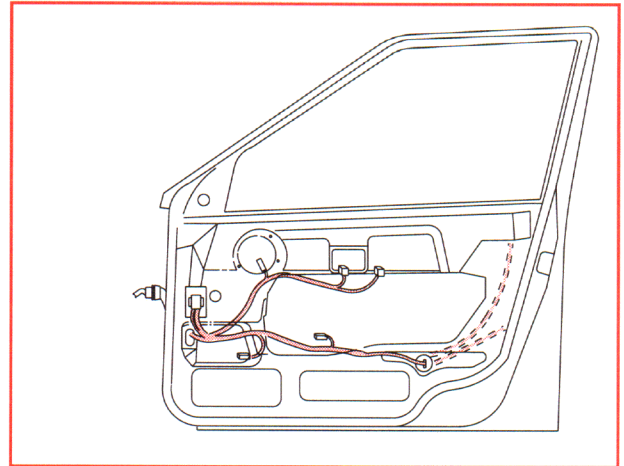


Trunk lid cable harness

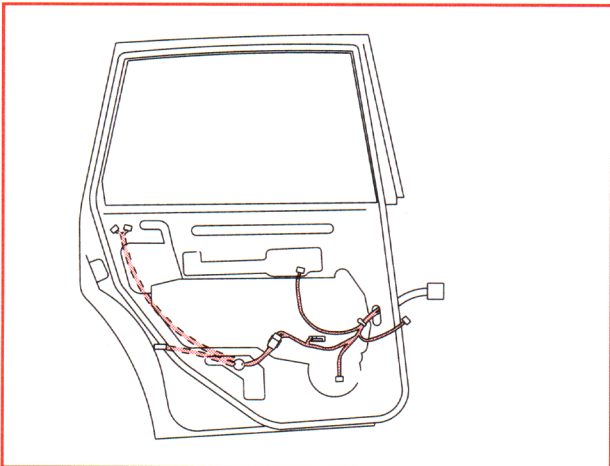
Routing of cable harnesses in the car



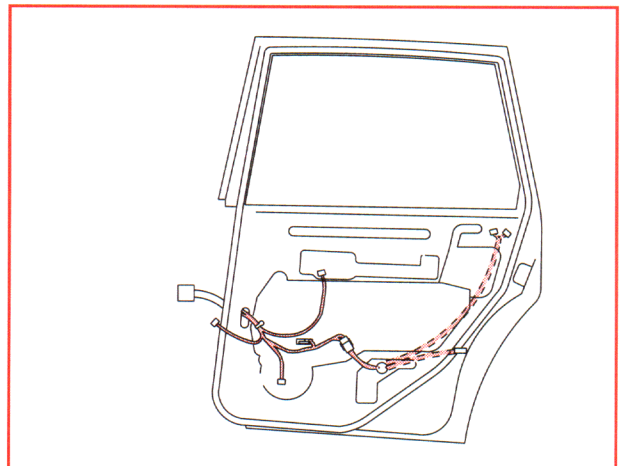
Driver door cable harness



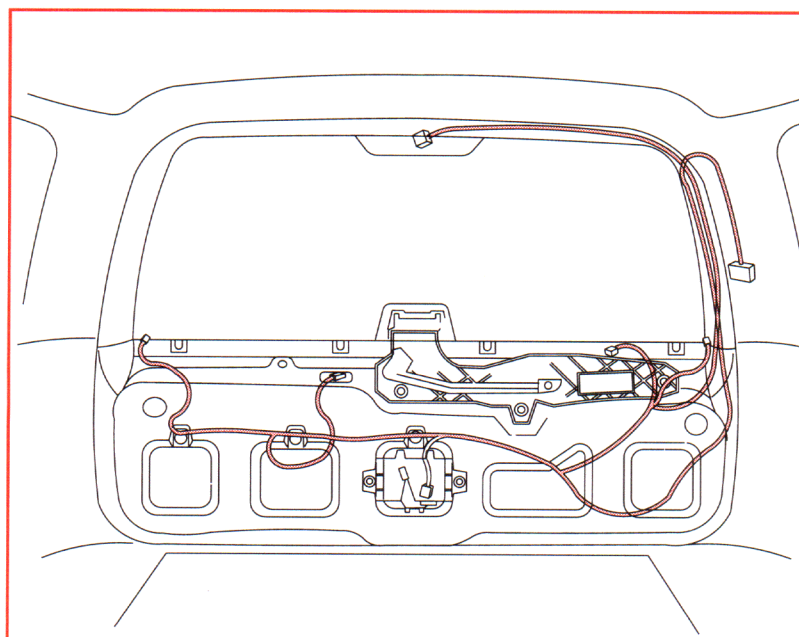
Passenger door cable harness



Left rear door cable harness



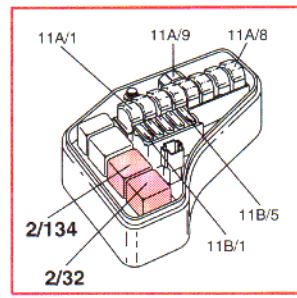
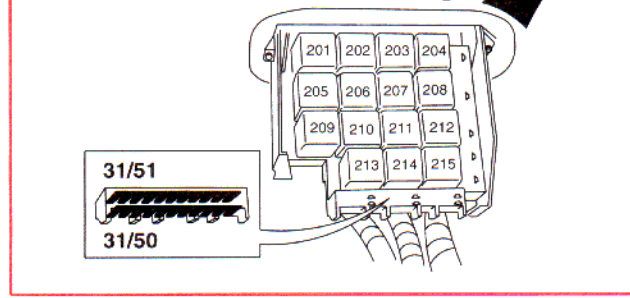
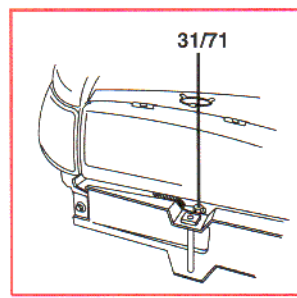
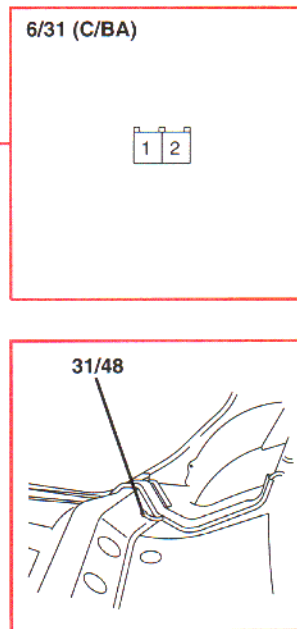
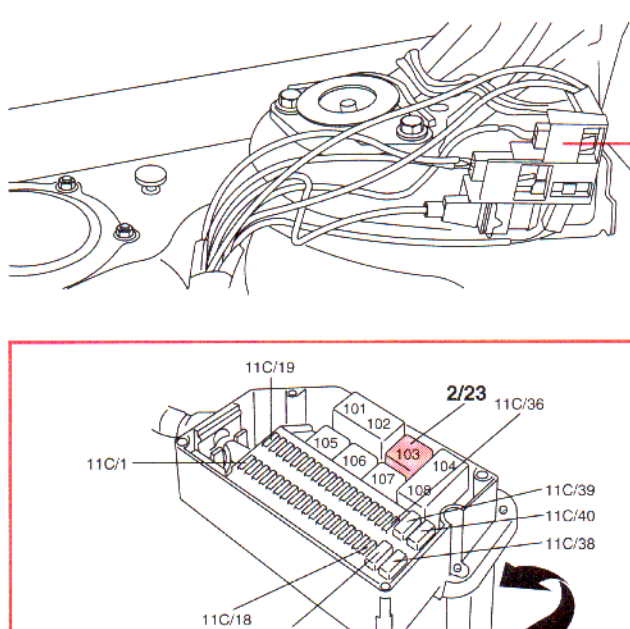
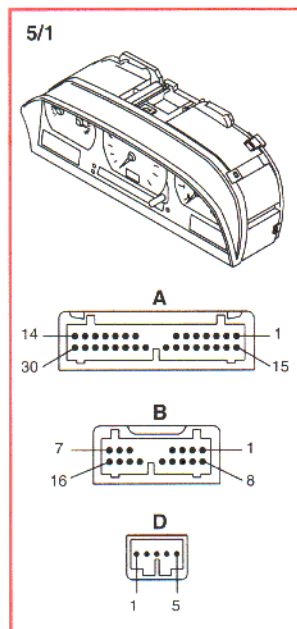
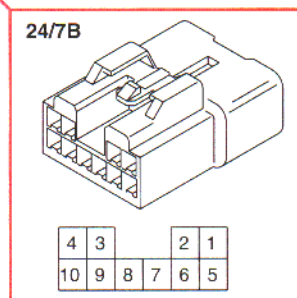
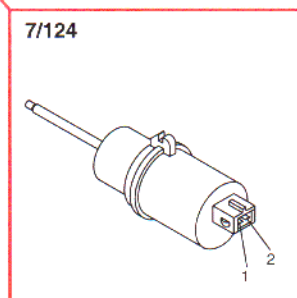
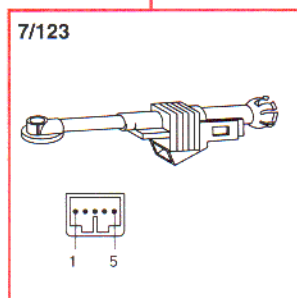
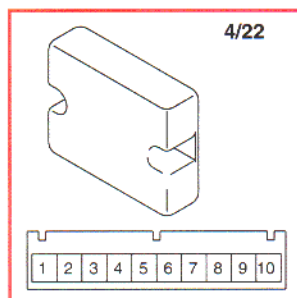
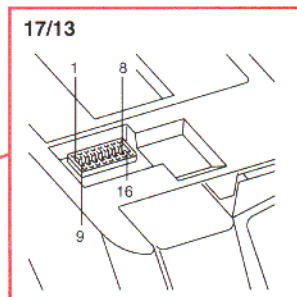
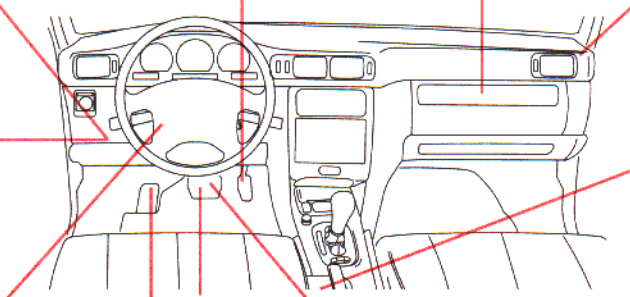
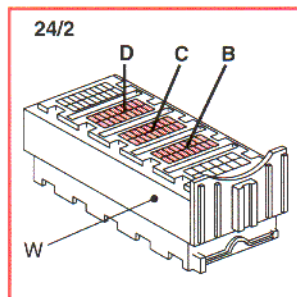
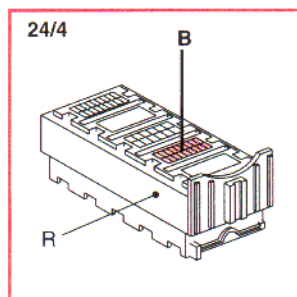
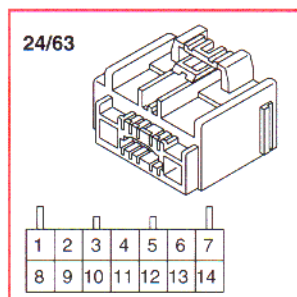
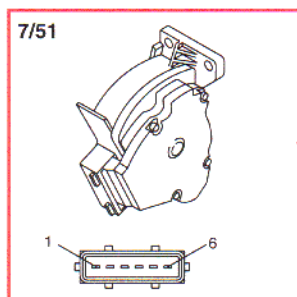
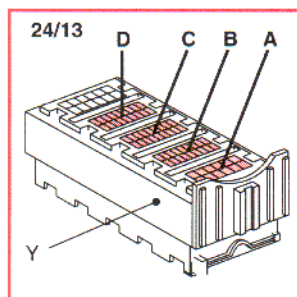
Right rear door cable harness



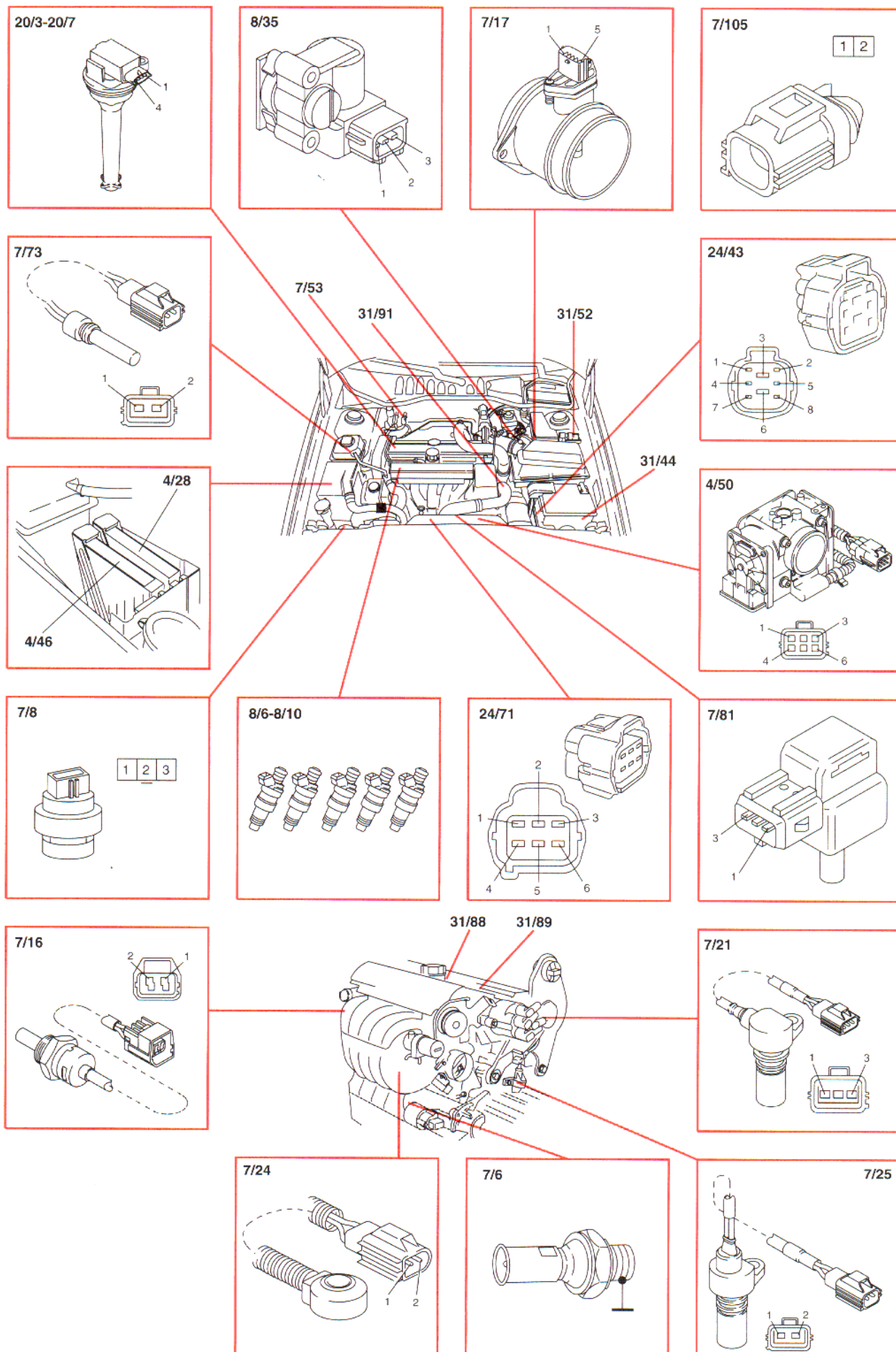
Trunk lid cable harness



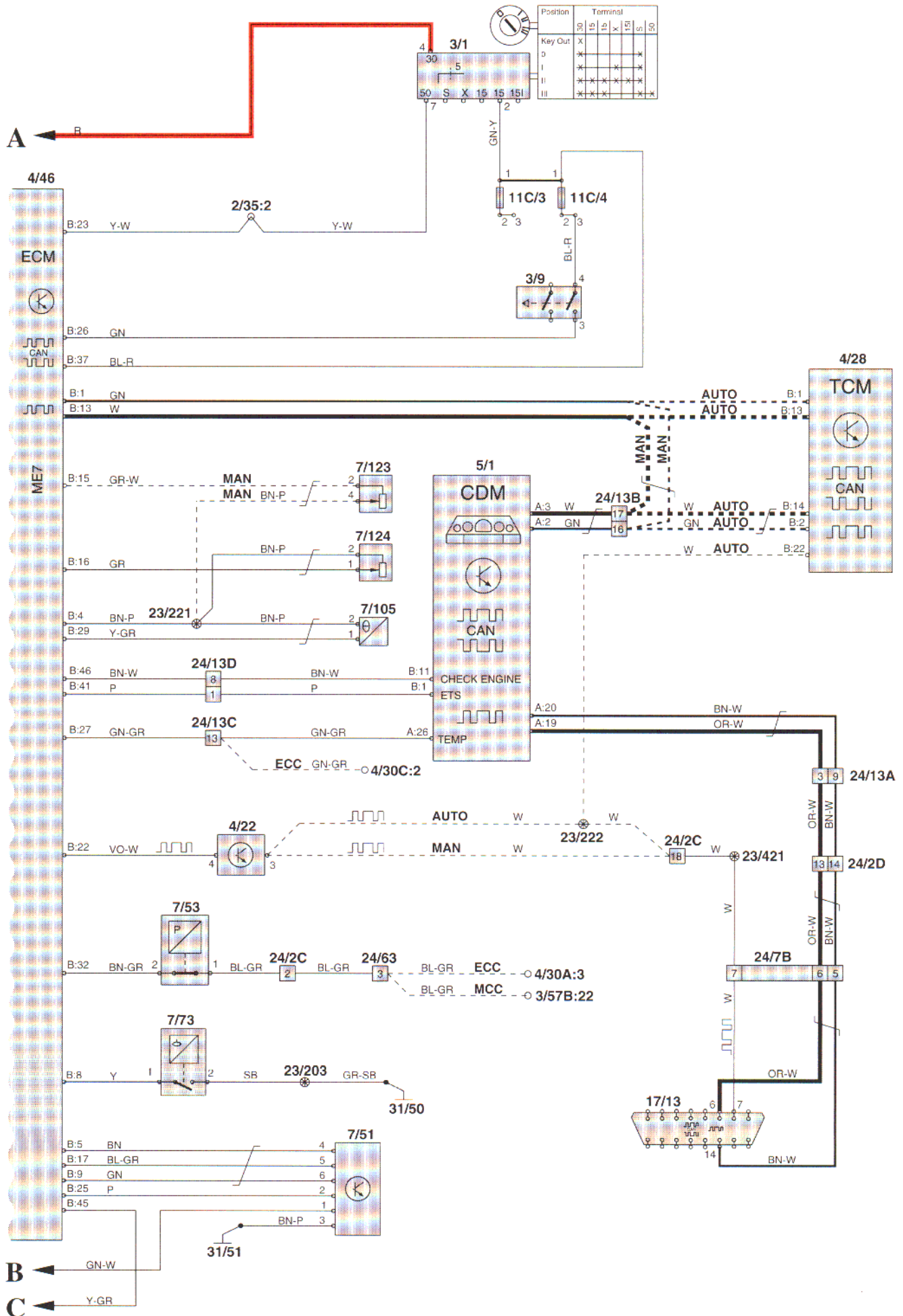
Engine management system Denso



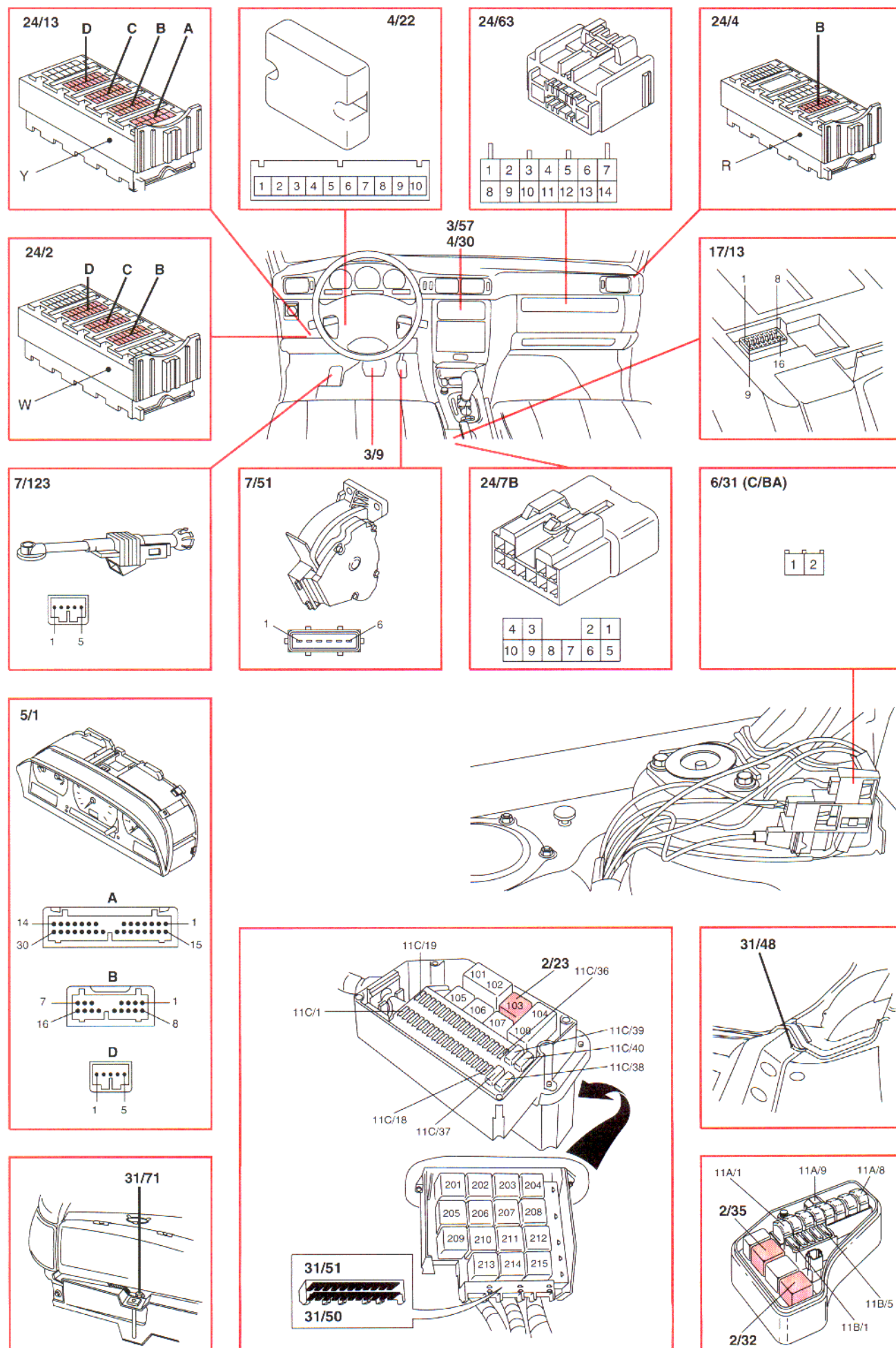
Engine management system Denso



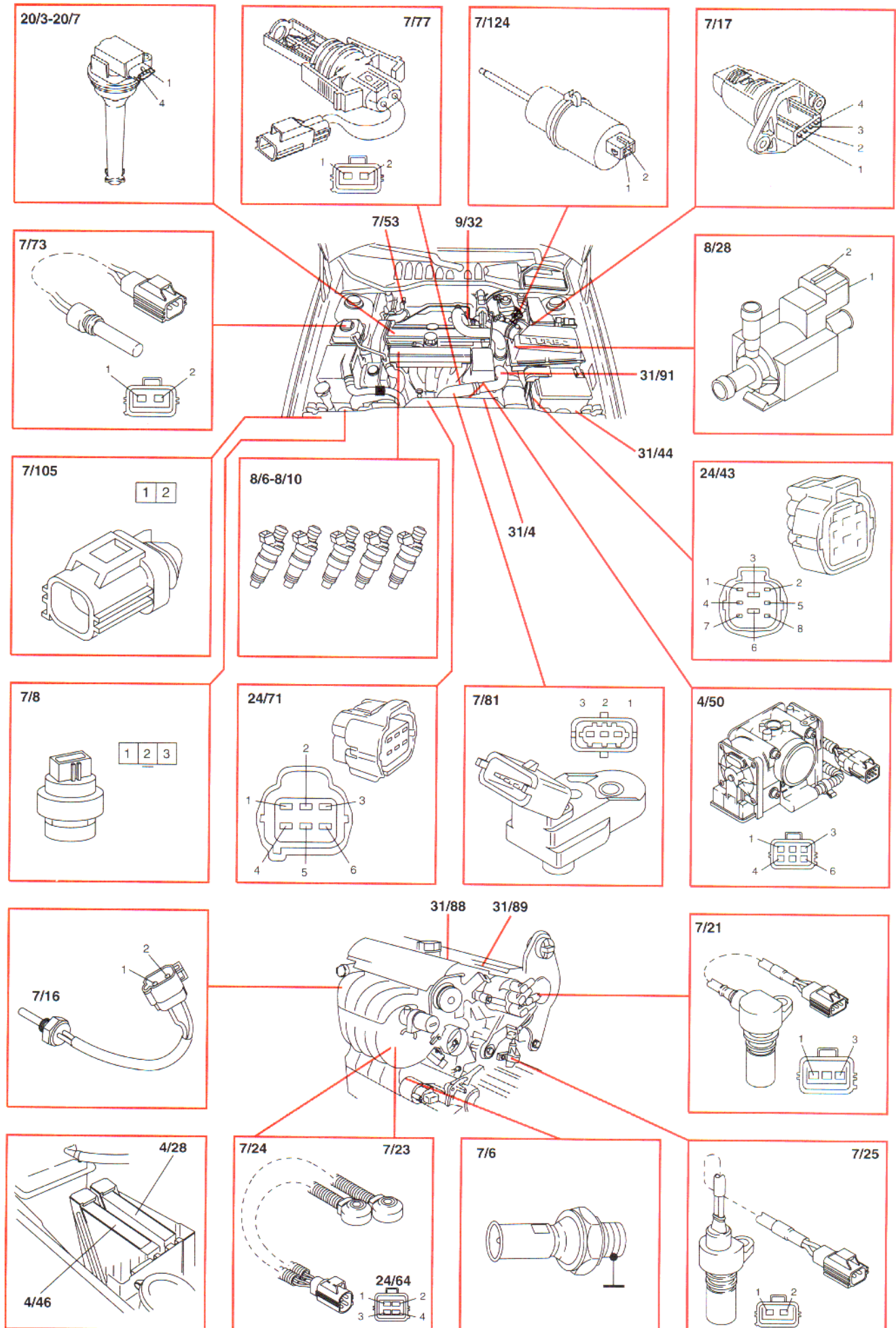
Engine management system ME7



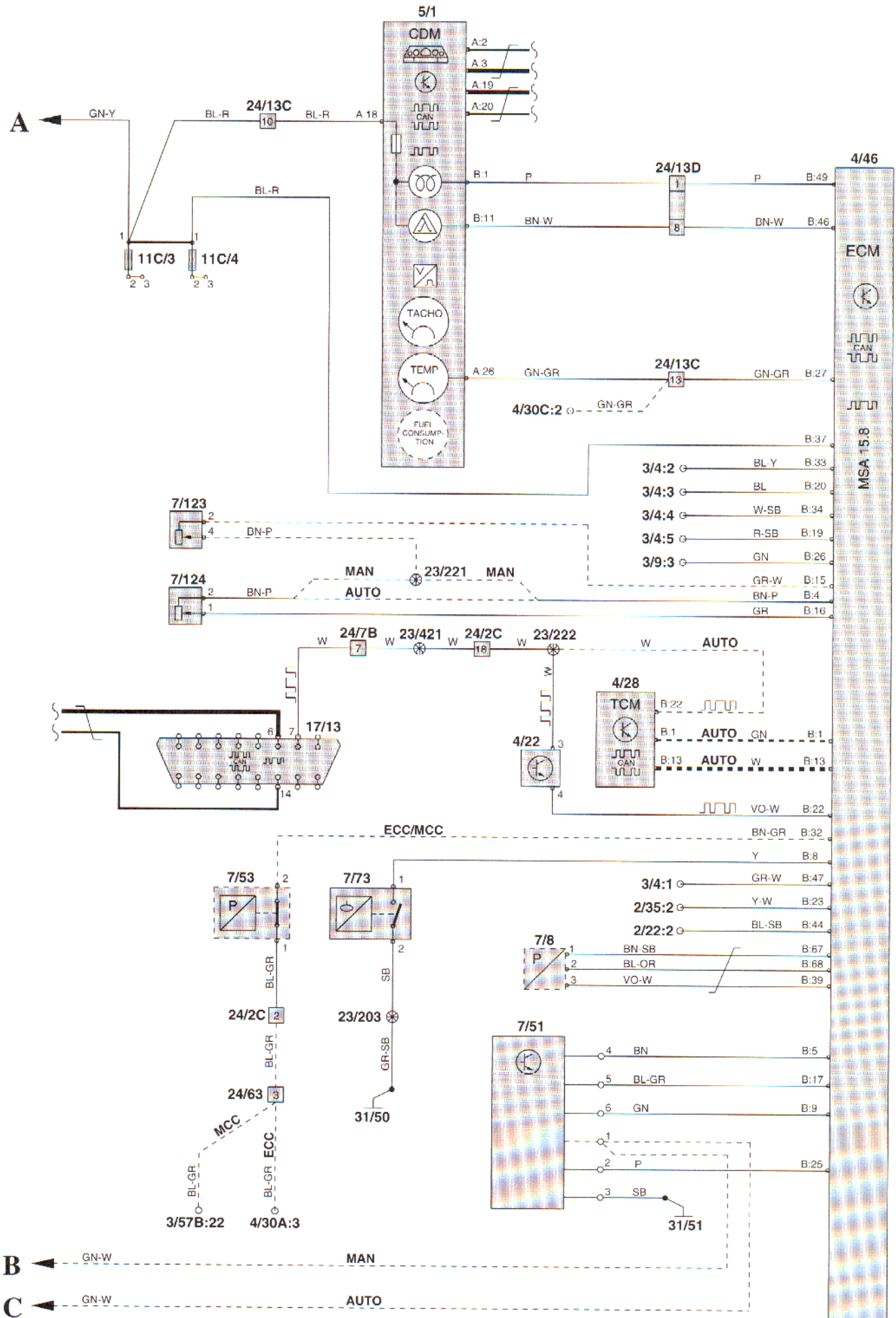
Engine management system ME7



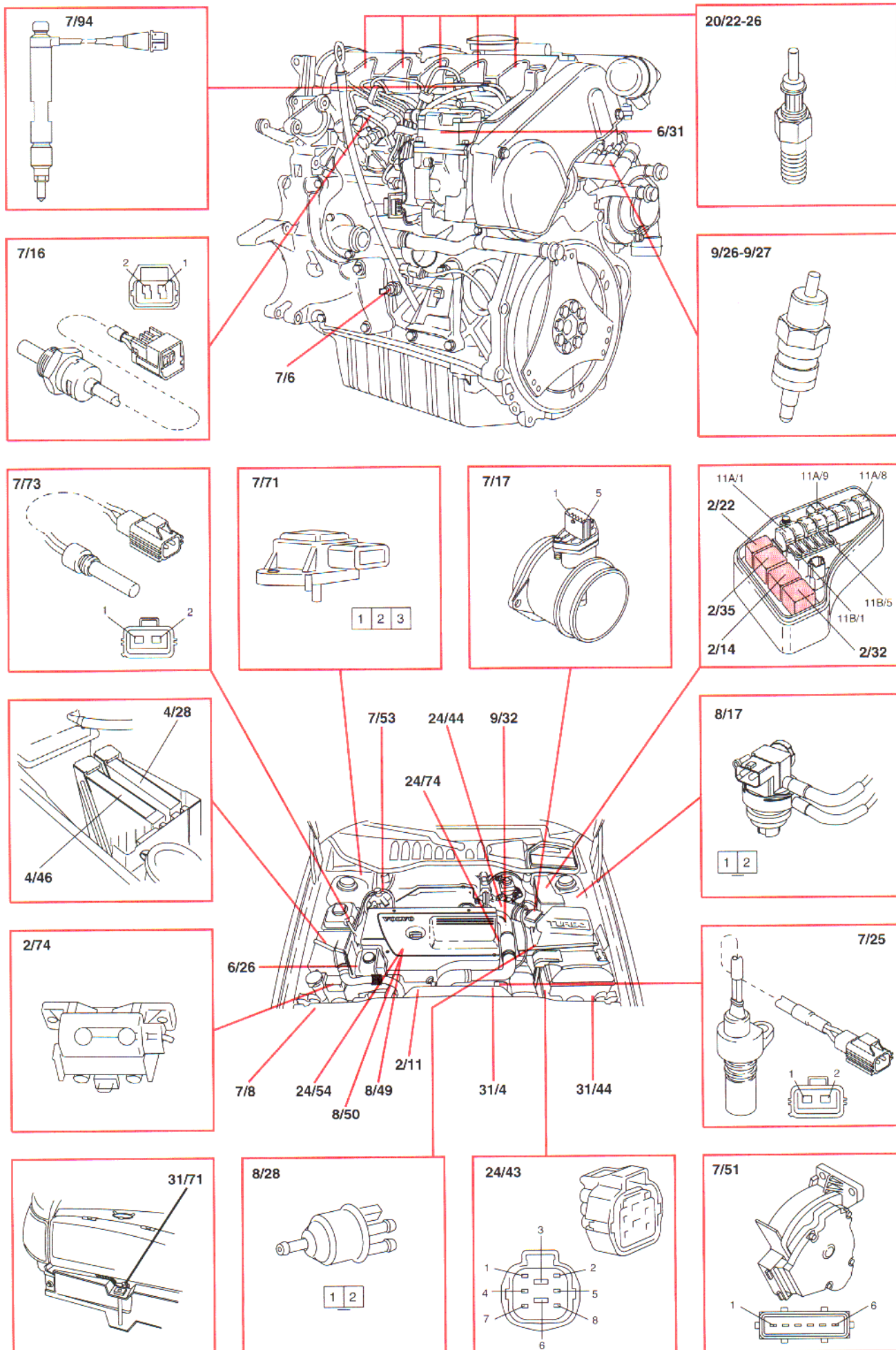
Engine management system ME7



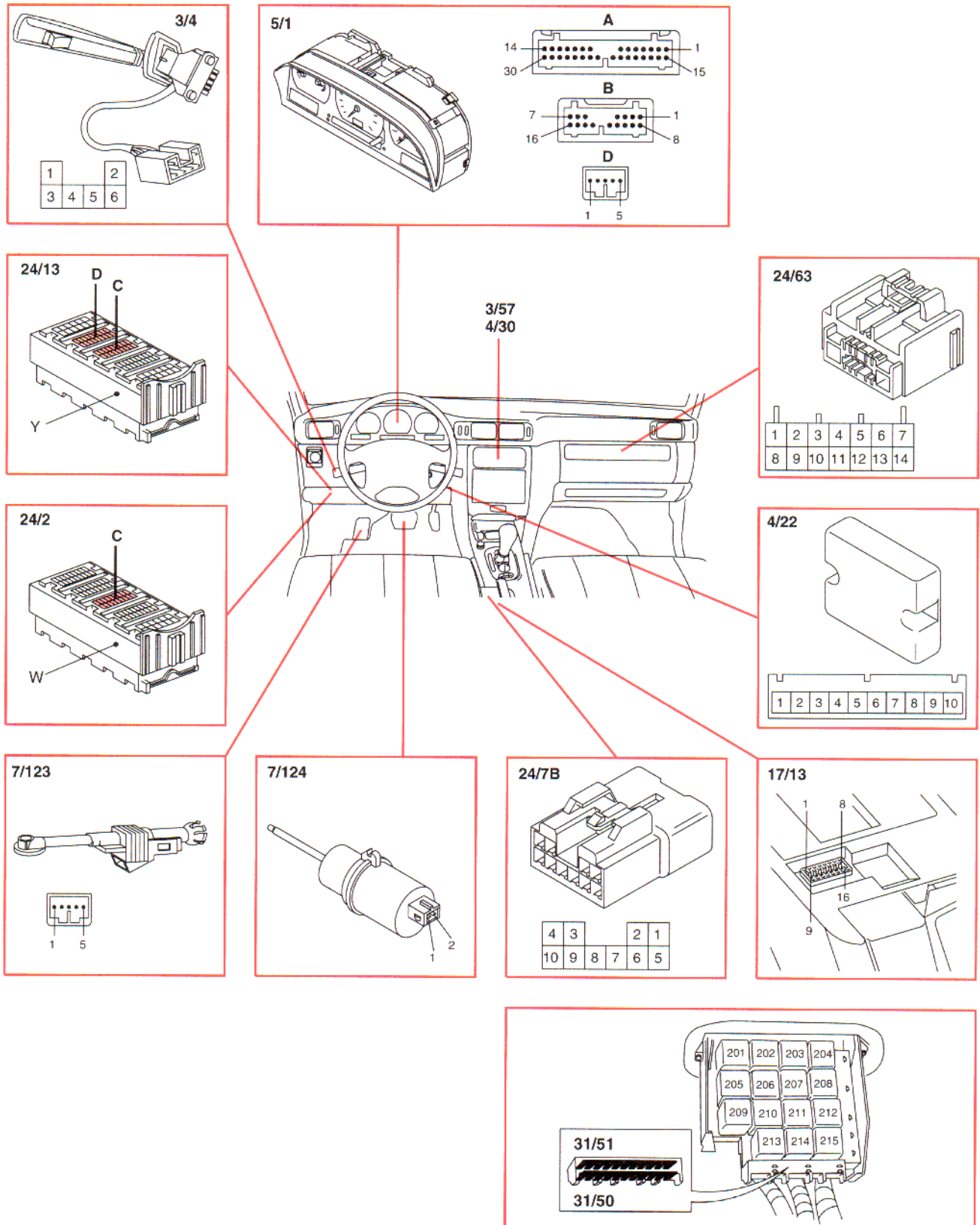
Engine management system
MSA 15.8



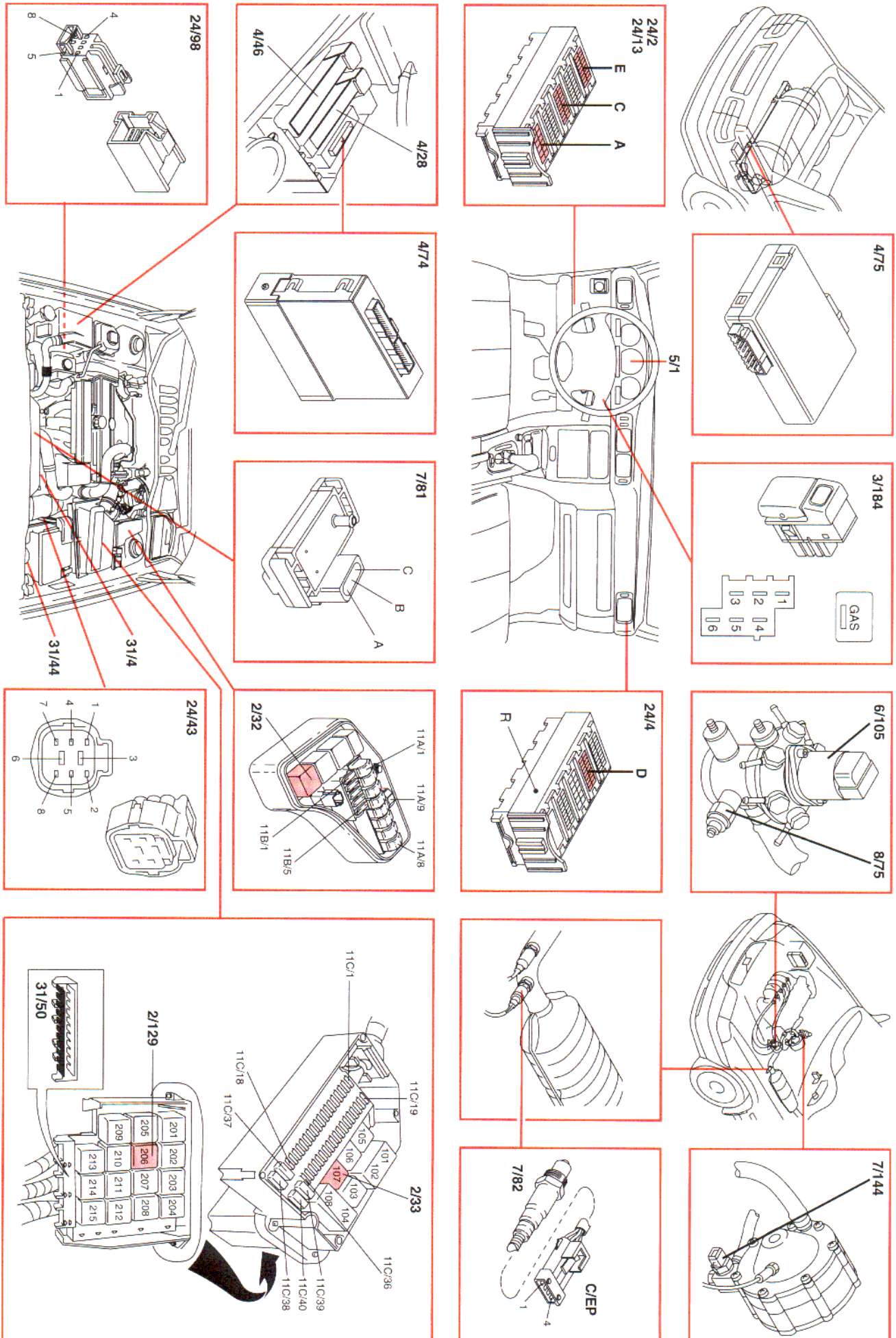
Engine management system MSA 15.8



Engine management system MSA 15.8

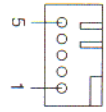


Engine management system Bifuel

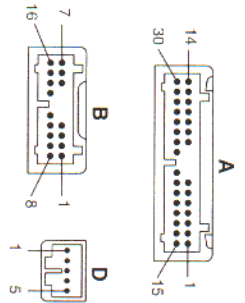
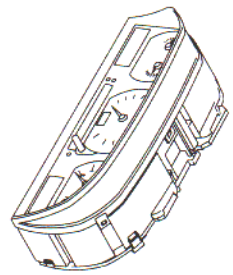


Electronic module Bifuel

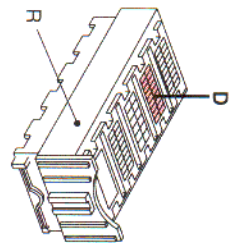
27/6



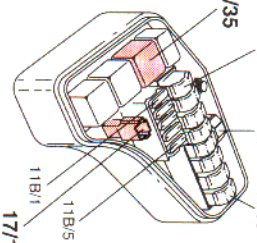
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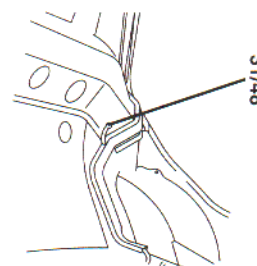
24/4



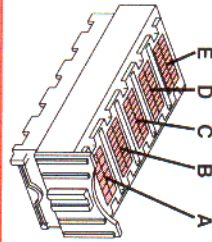
2/35



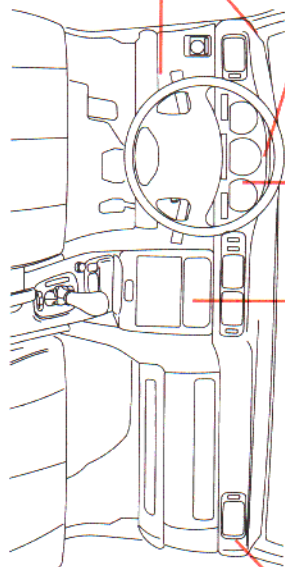
31/48



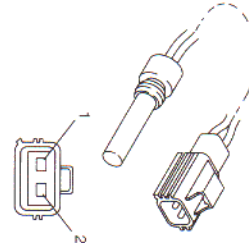
24/2
24/3
24/13



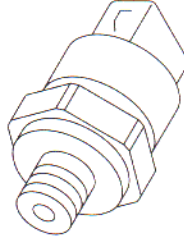
31/77



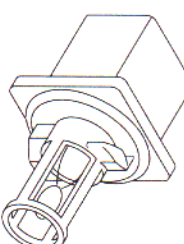
77/3



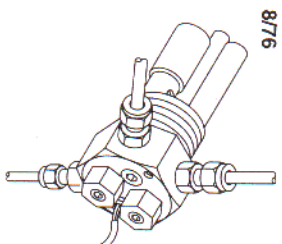
71/46



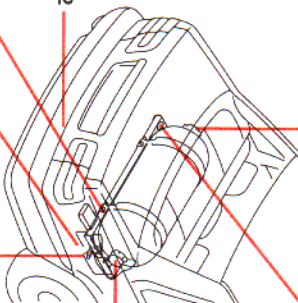
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87/6

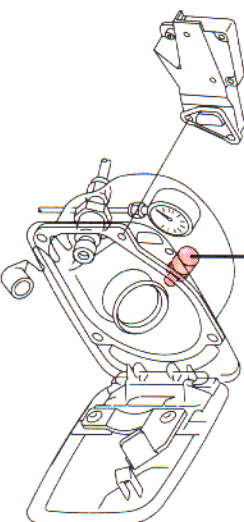


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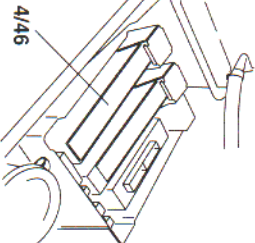
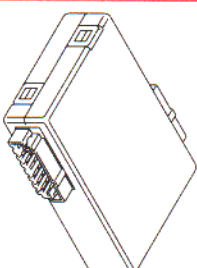


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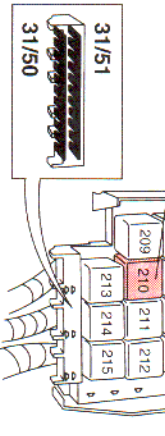
6/37



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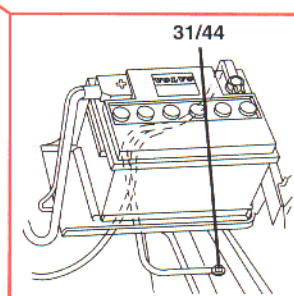
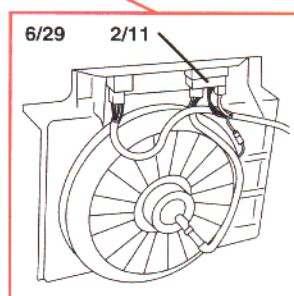
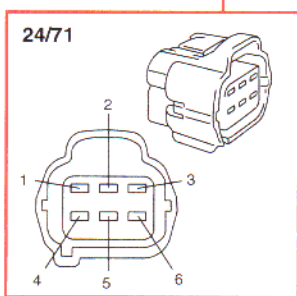
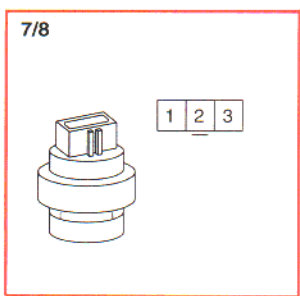
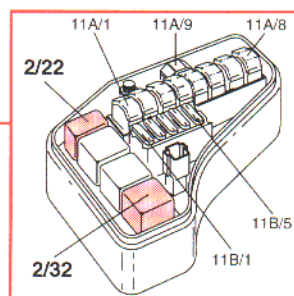
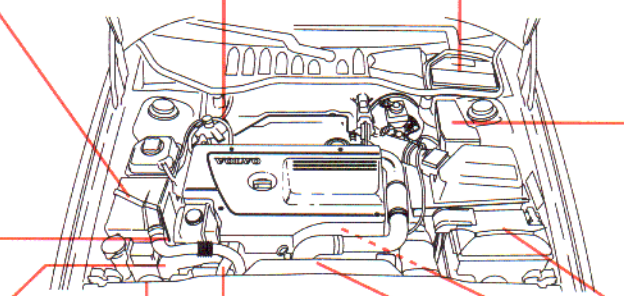
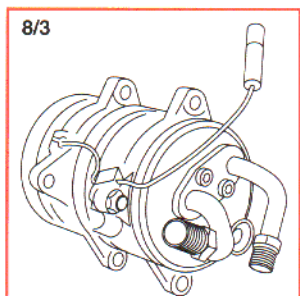
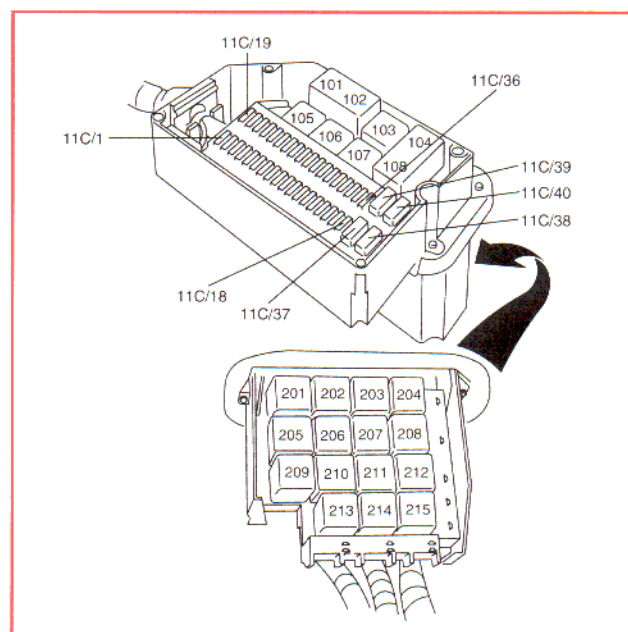
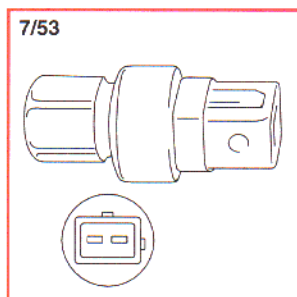
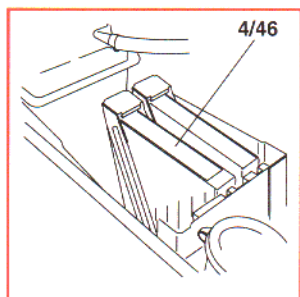
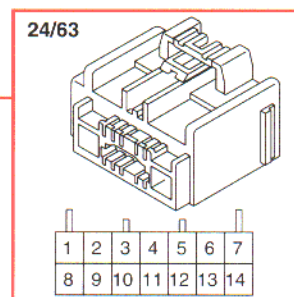
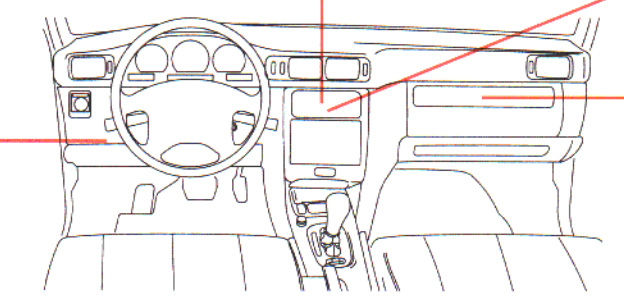
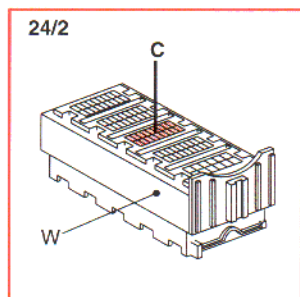
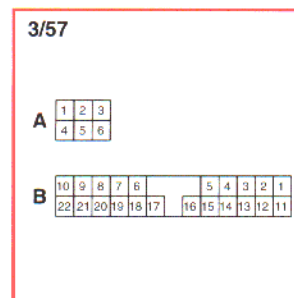
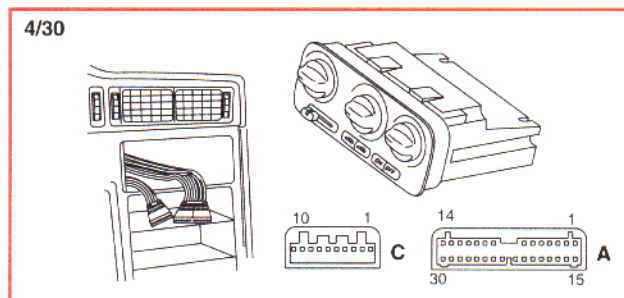
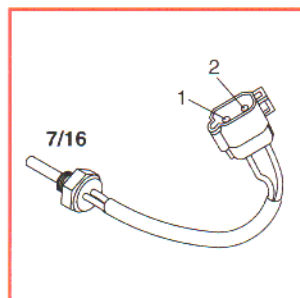
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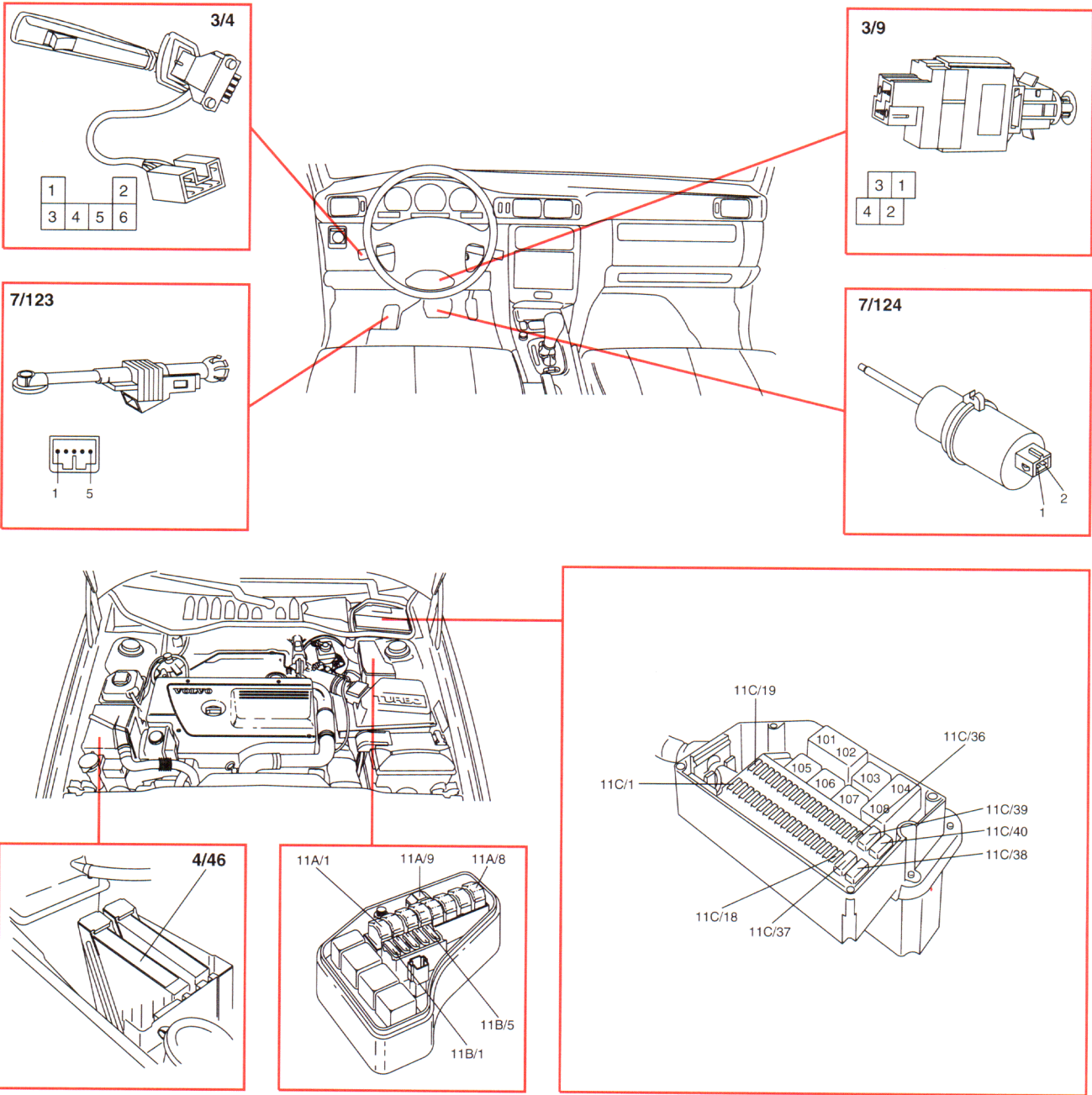
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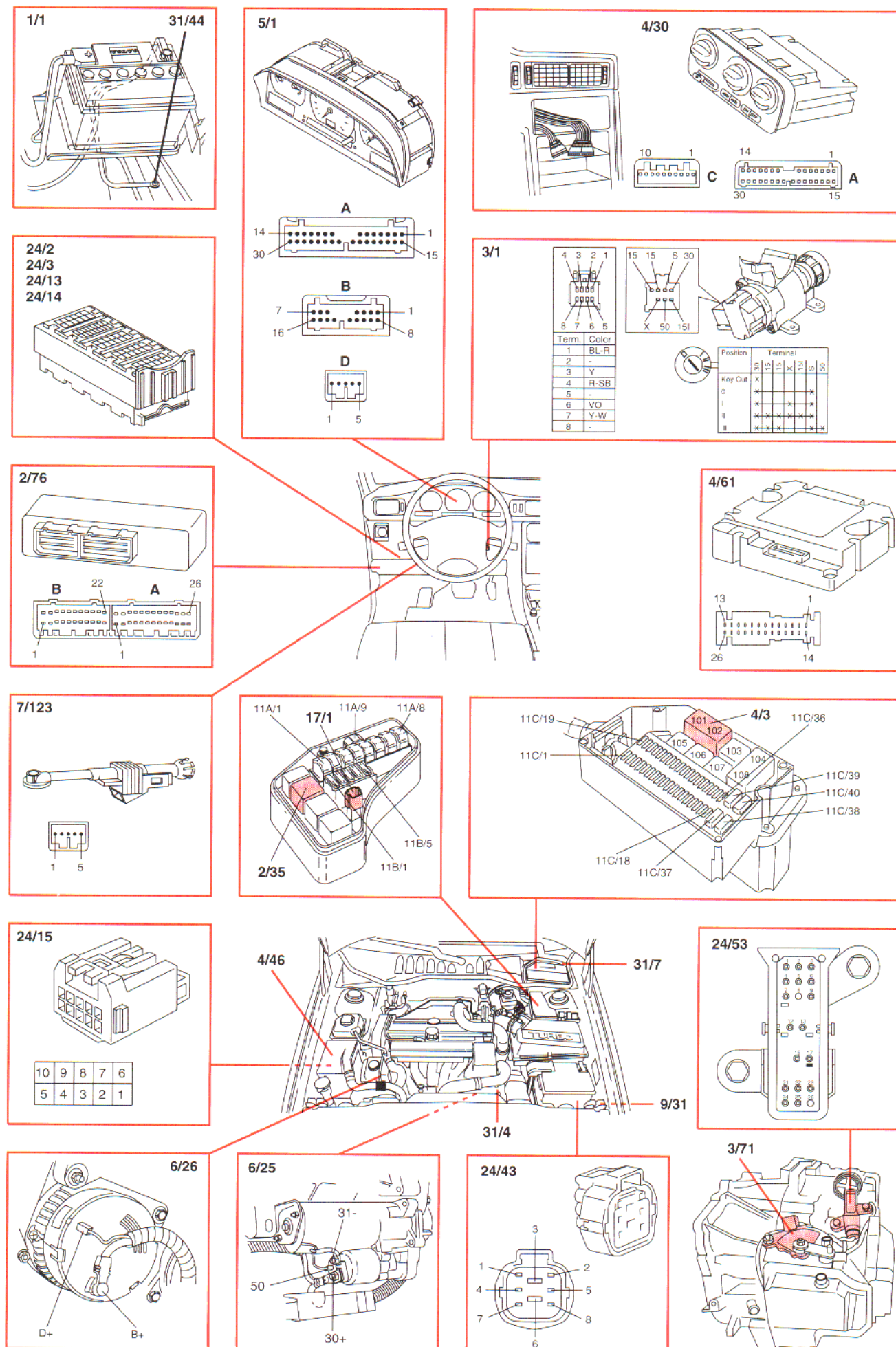
Engine cooling fan (FC) MSA 15.8



Cruise control
MSA 15.8

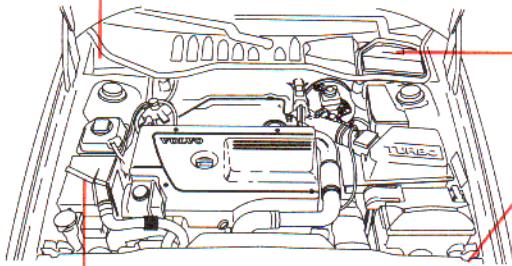
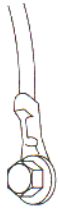


Power supply and starter system

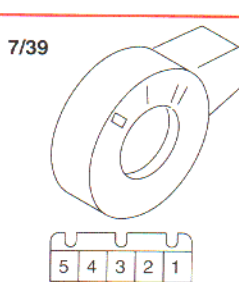
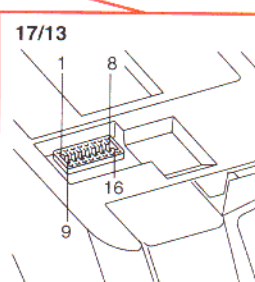
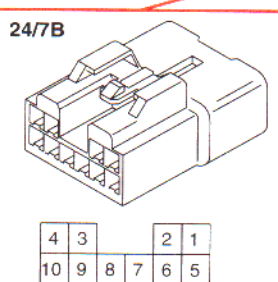
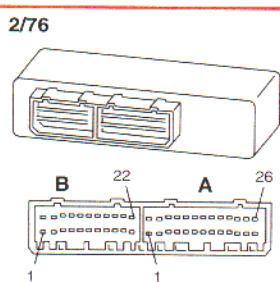
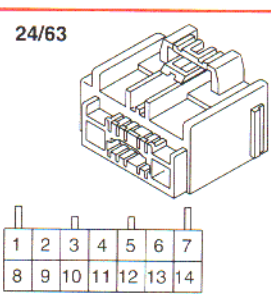
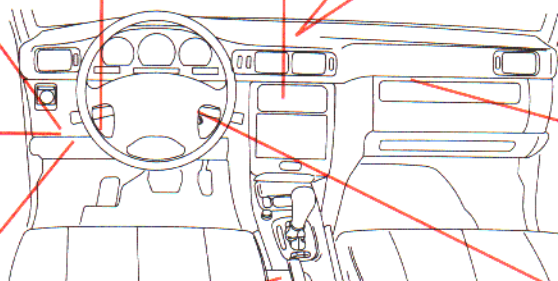
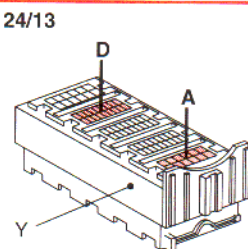
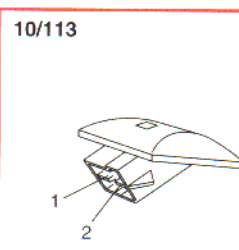
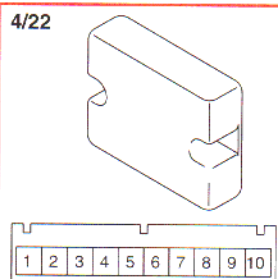
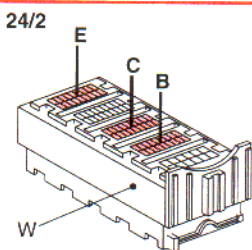
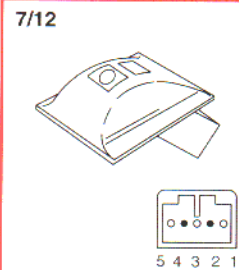
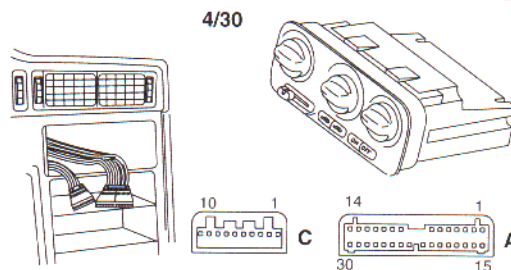
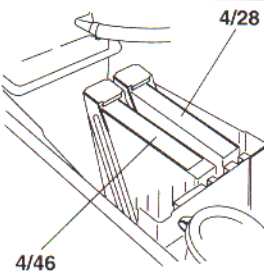
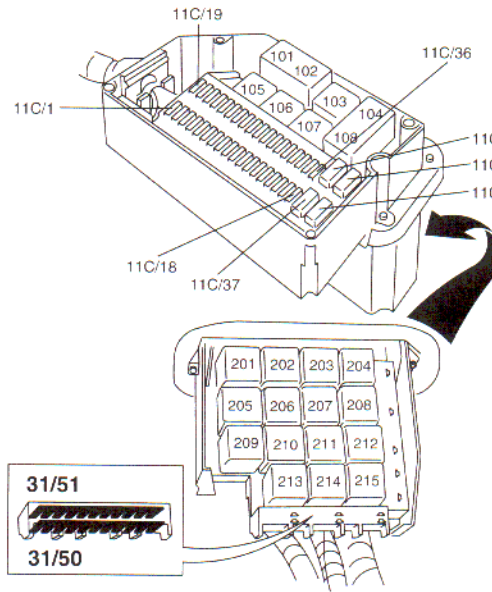


Immobilizer MSA 15.8

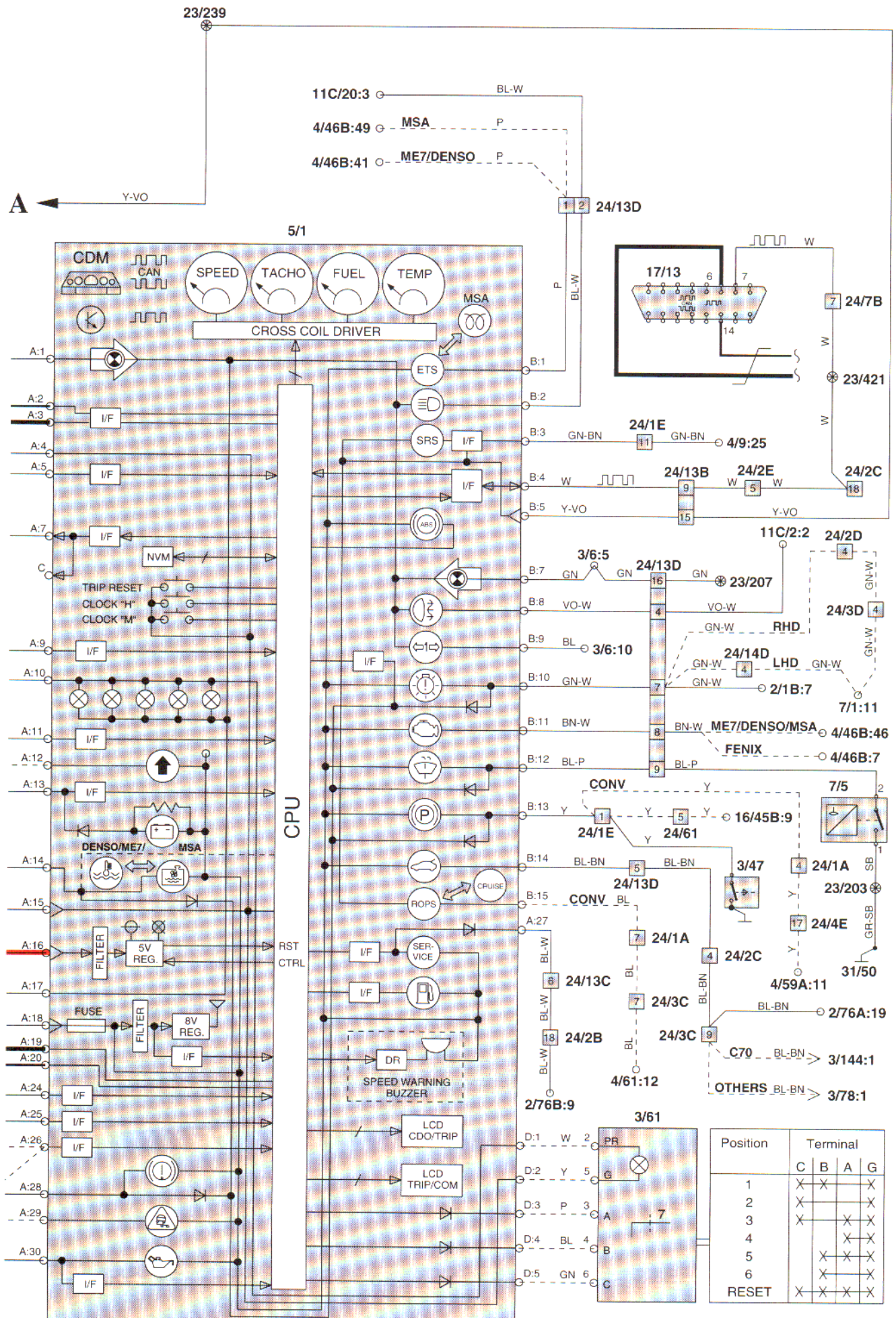
31/15



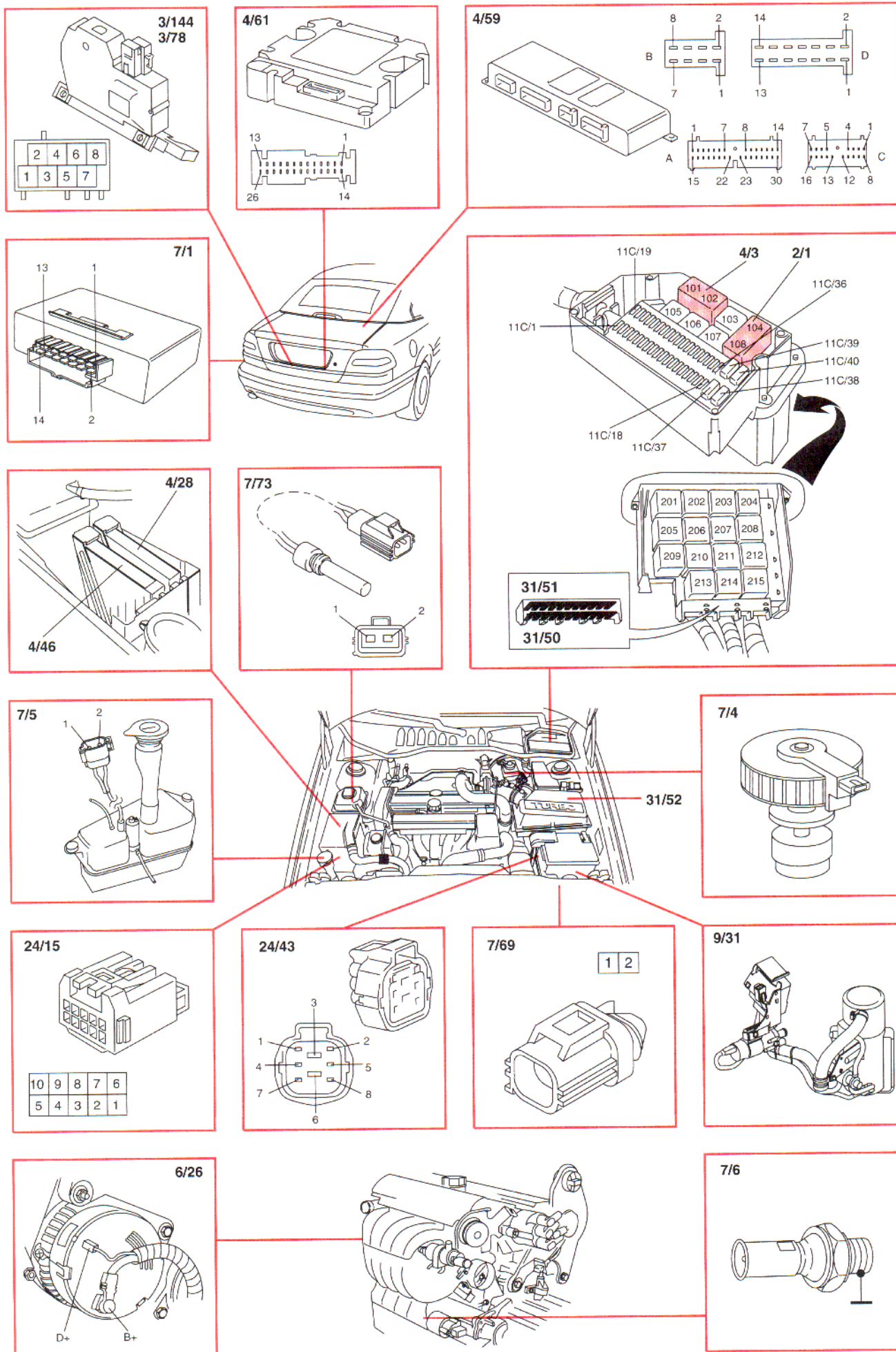
9/31



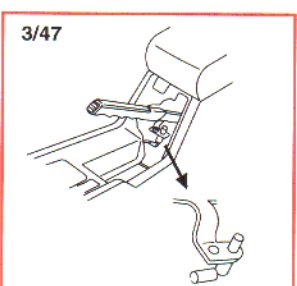
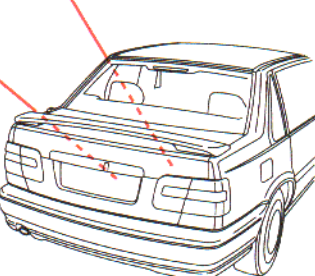
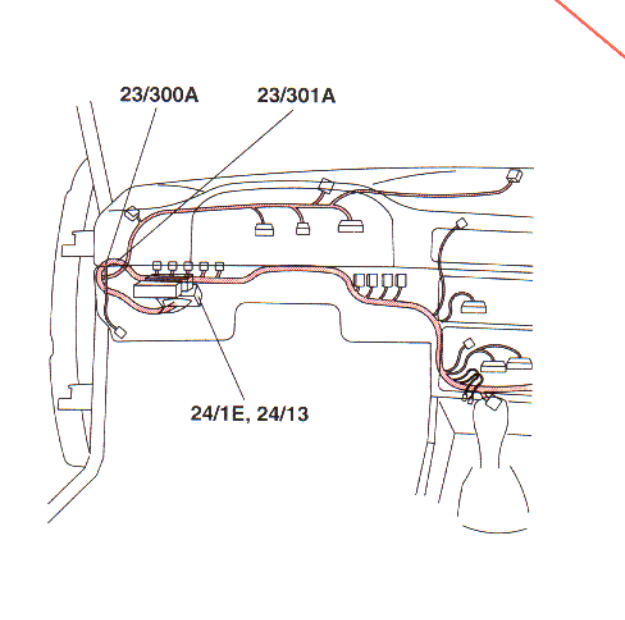
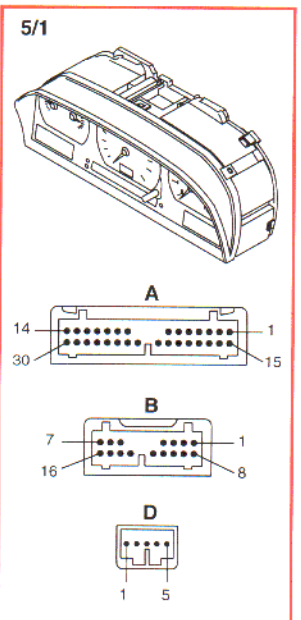
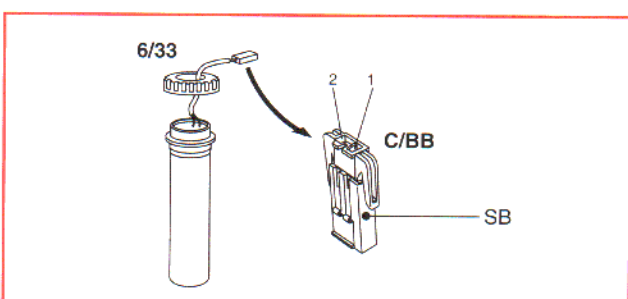
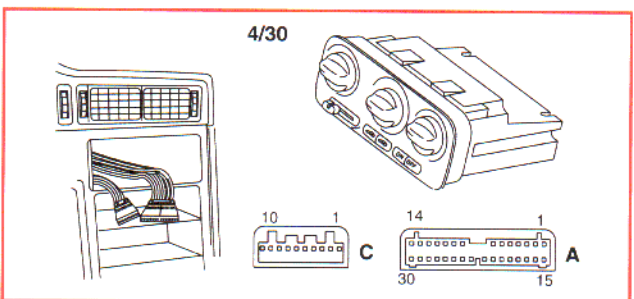
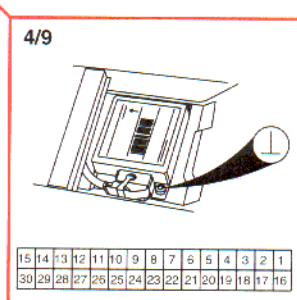
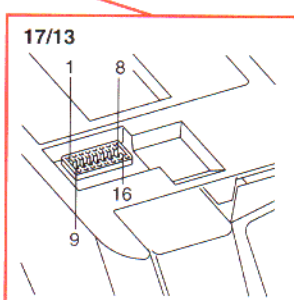
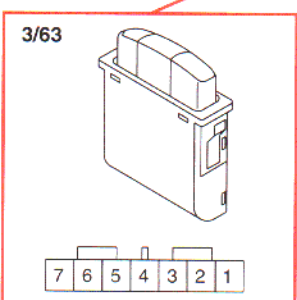
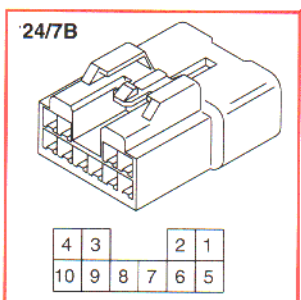
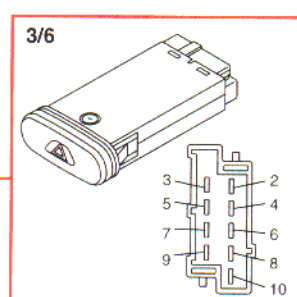
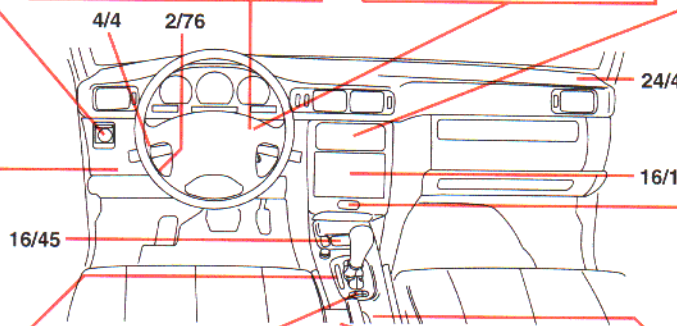
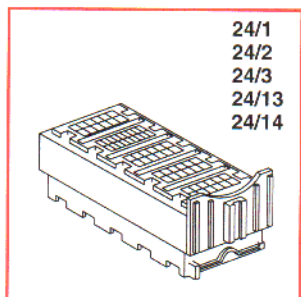
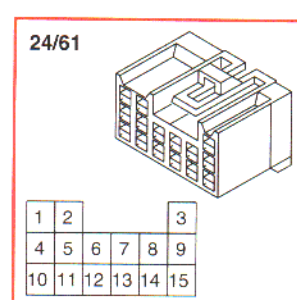
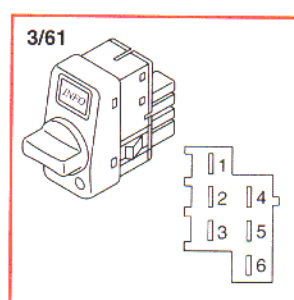
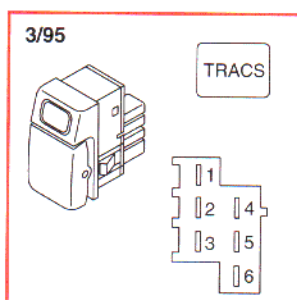
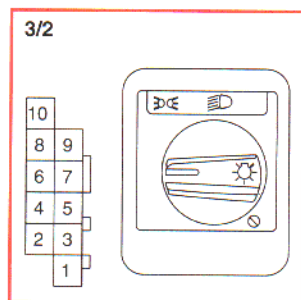
Combined instrument panel



Combined instrument panel



Combined instrument panel



Combined instrument panel

Connectors in combined instrument panel

A 30-pin connector

1	Turn signal lamp, right (+)
2	CAN-communication
3	CAN-communication
4	Fuel level sensor (-)
5	Fuel level sensor (+)
6	-
7	Digital speedometer output, 12 pulses / revolution
8	-
9	Fuel consumption
10	Rheostat, instrument lighting (+)
11	Tachometer, input signal
12	Winter program and low gear selection (automatic transmission)
13	Generator signal, D+
14	Engine coolant level switch (via 4/75 on BIFUEL)
15	Signal horn (31/51)
16	30-supply
17	Power ground (31/50)
18	15-supply
19	CAN-communication
20	CAN-communication
21-23	-
24	Outside temperature sensor (+)
25	Outside temperature sensor (-)
26	Engine coolant temperature (ECT) sensor (via 4/75 on BIFUEL)
27	-
28	Brake fluid level sensor (-)
29	TRACS
30	Oil pressure sensor (-)

B 16-pin connector

1	ETS / Diesel preheating
2	Brake (stop) lamps (+)
3	SRS sensor unit
4	Data Link Connector (DLC)
5	X-supply
6	ABS Anti-lock braking system
7	Turn signal lamp left (+)
8	Tail lamps (+)
9	Turn signal lamps trailer (+)
10	Bulb failure warning sensor (-)
11	Check engine (-)
12	Brake fluid level sensor (-)
13	Parking brake switch (-)
14	Trunk lid open
15	Control module rollover bar (-) / Cruise control
16	-

C 1-pin connector

Digital speedometer output, 12 pulses / revolution (for accessories)

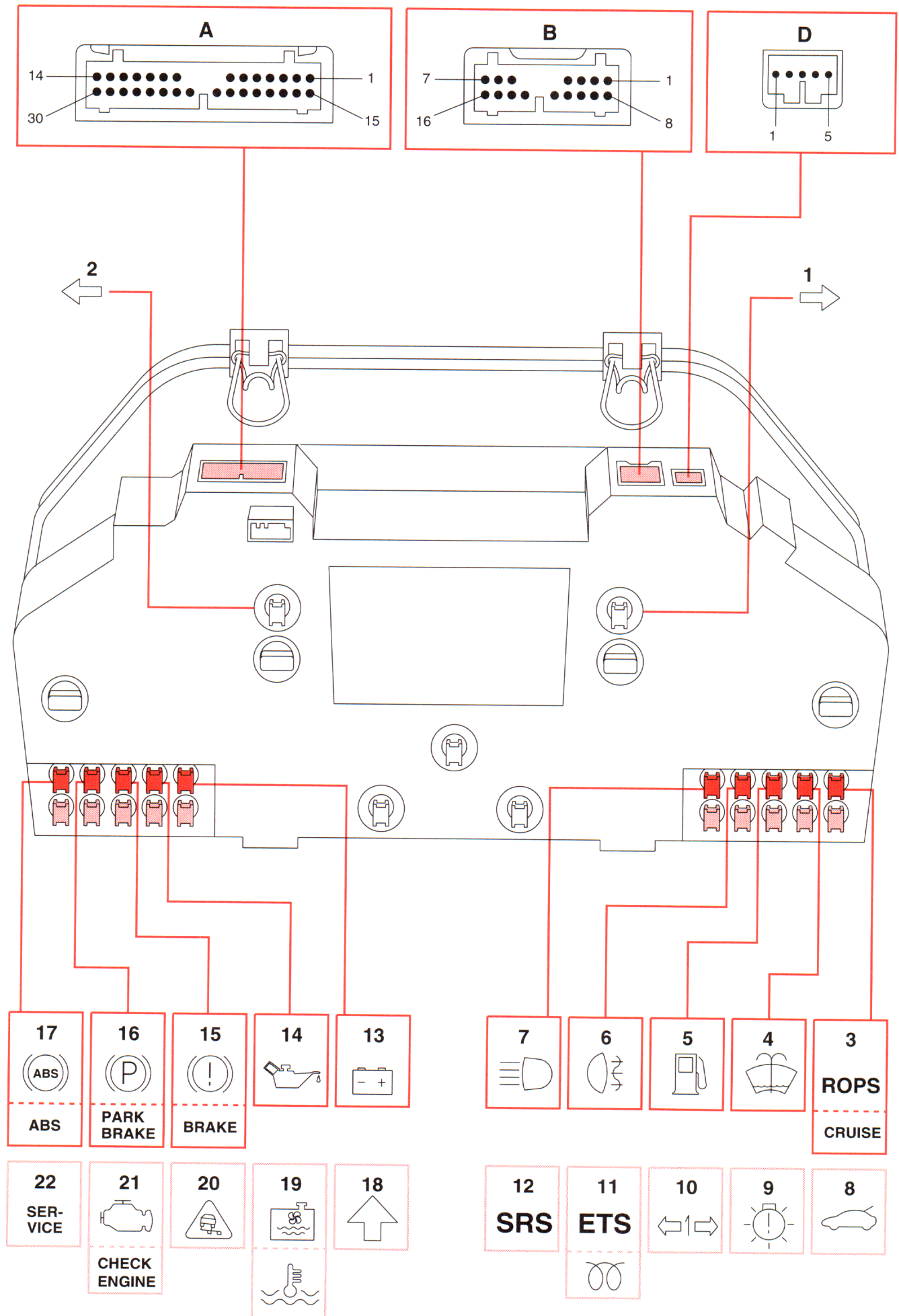
D 5-pin connector

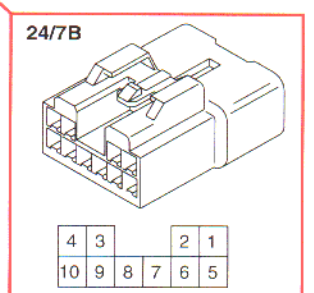
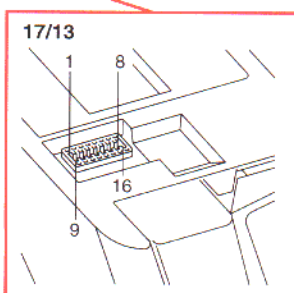
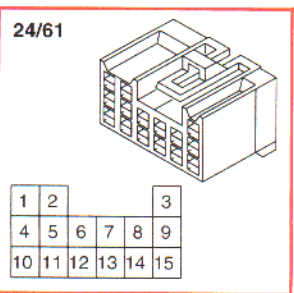
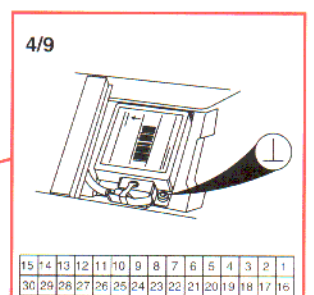
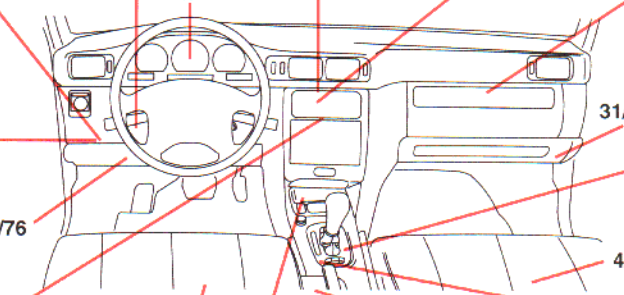
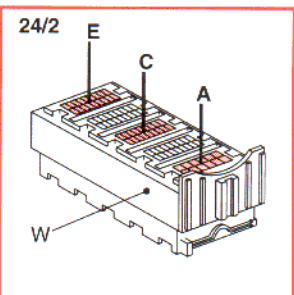
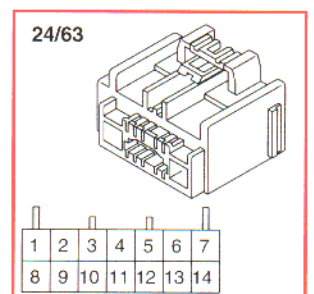
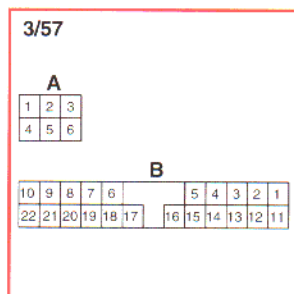
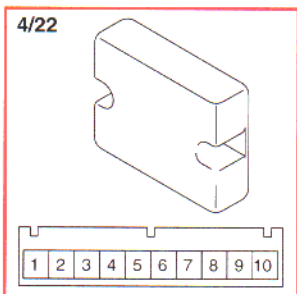
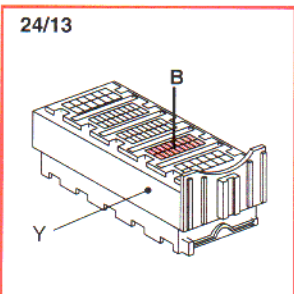
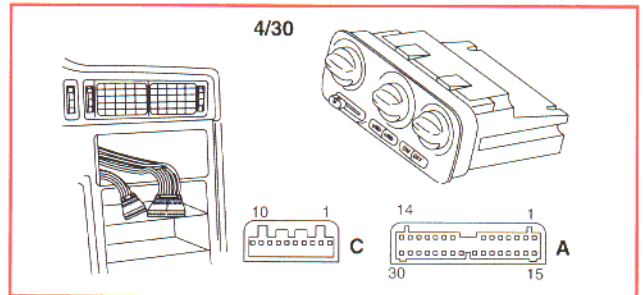
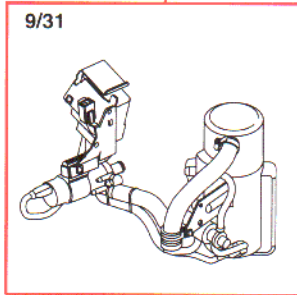
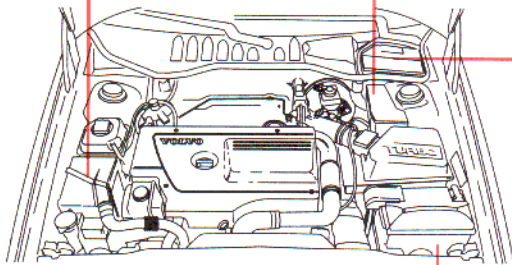
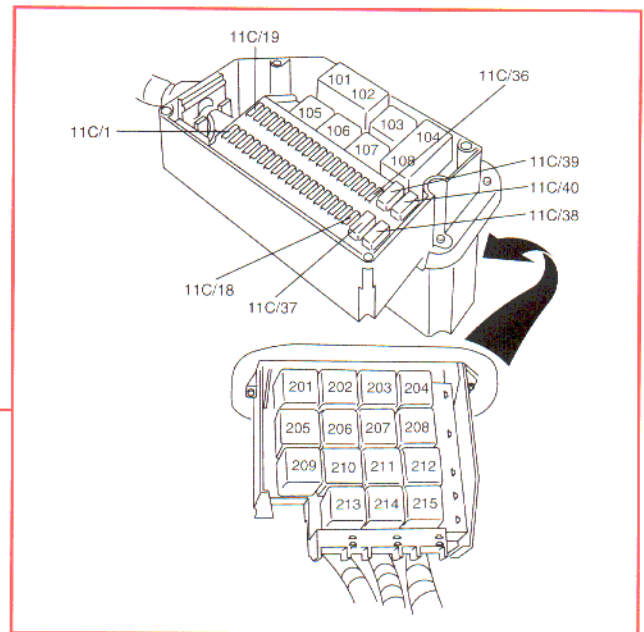
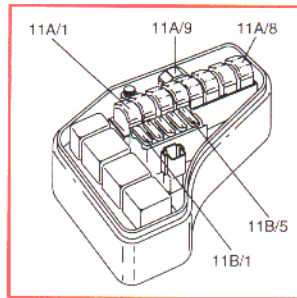
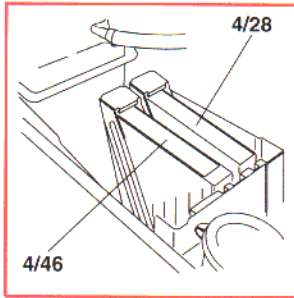
1	Rheostat, instrument lighting (+)
2	Signal horn (31/51)
3	Function signal
4	Function signal
5	Function signal

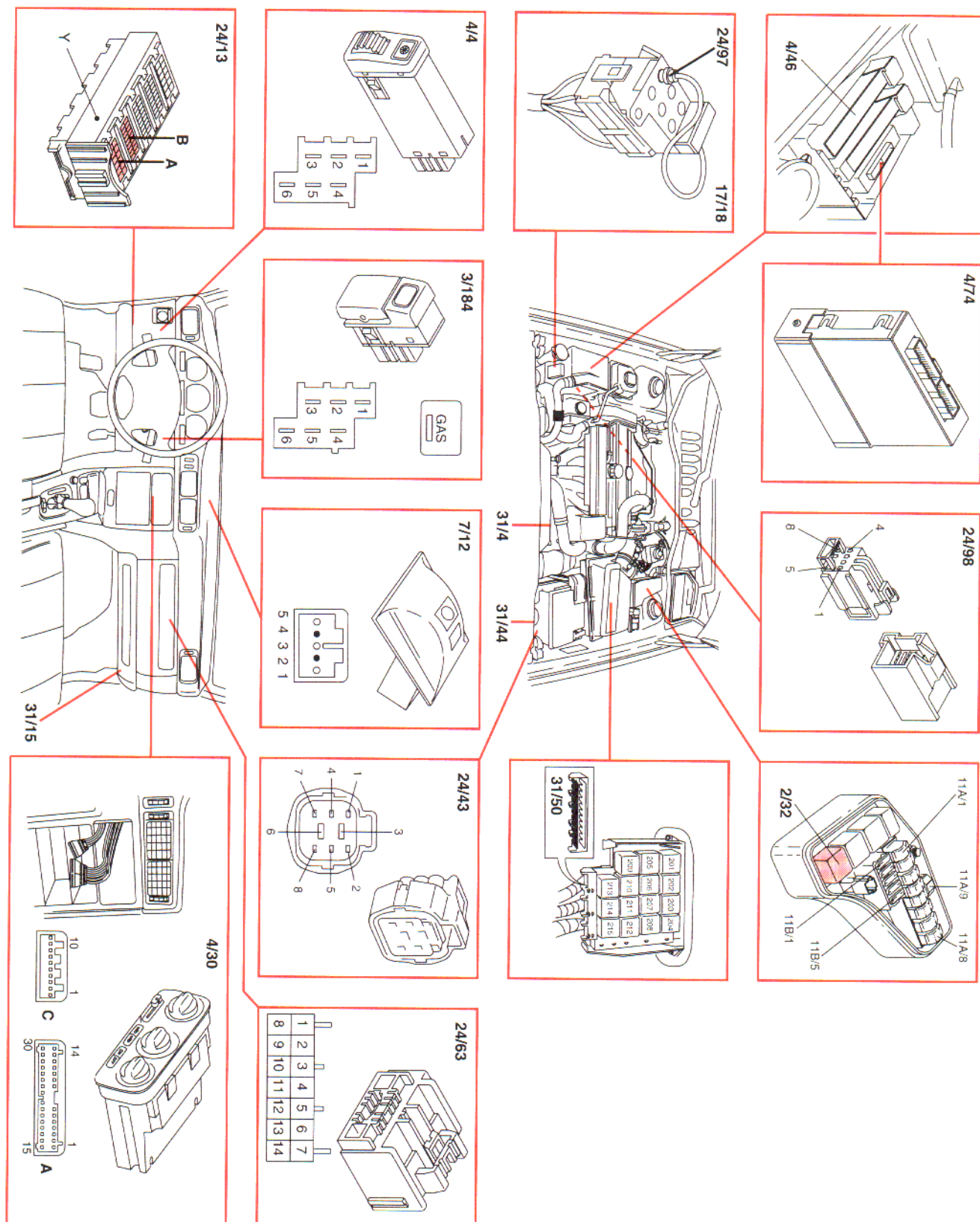
Instrument lamps

1	Left turn signal lamp	13	Warning lamp charging
2	Right turn signal lamp	14	Fuel level indicator lamp
3	ROPS indicator lamp (CONV) Cruise control indicator lamp (Not CONV)	15	Brake warning lamp
4	Windshield washer reservoir level indicator lamp	16	Warning lamp parking brake
5	Fuel level indicator lamp	17	Warning lamp ABS
6	Fog tail lamps indicator lamp	18	Winter program indicator lamp / shift indicator
7	High beam warning lamp	19	Engine coolant level indicator lamp (Not BIFUEL) Engine coolant level indicator lamp and engine coolant temperature (ECT) (BIFUEL)
8	Tailgate indicator lamp	20	Warning lamp TRACS
9	Bulb failure warning lamp	21	Warning lamp Check engine
10	Warning lamp trailer	22	Service reminder indicator (SRI)
11	Diesel preheating indicator lamp (MSA) ETS indicator lamp (Not MSA)		
12	Warning lamp SRS		

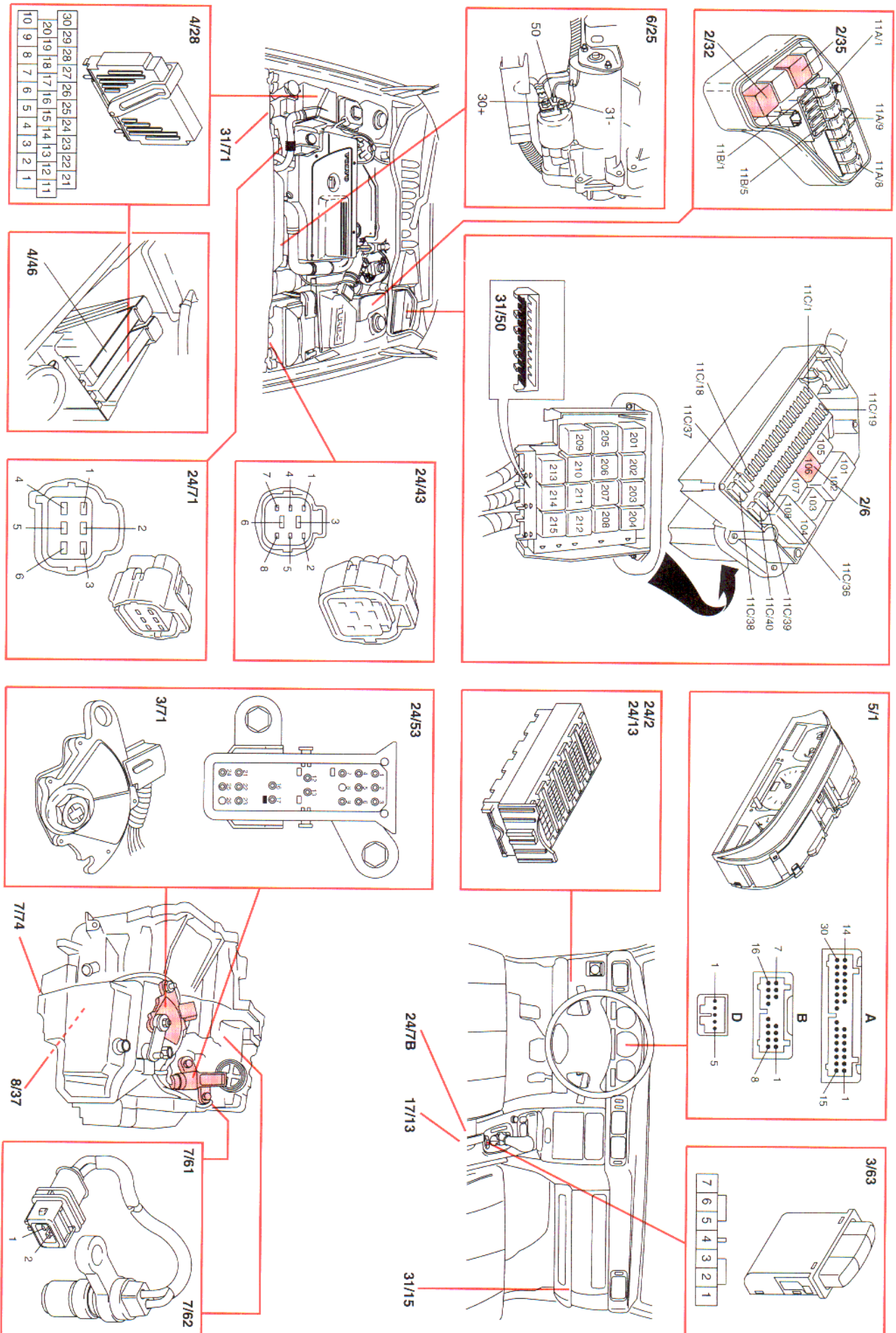
Combined instrument panel



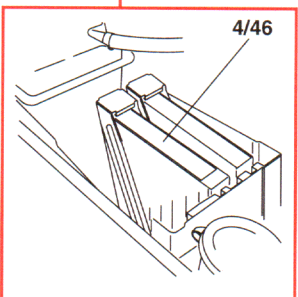
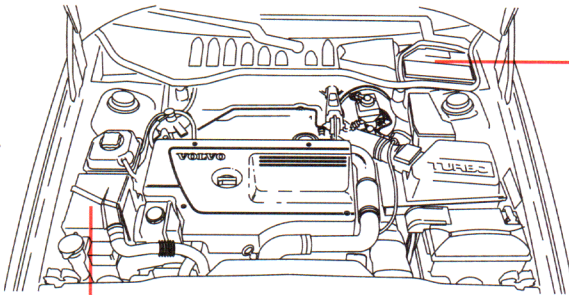
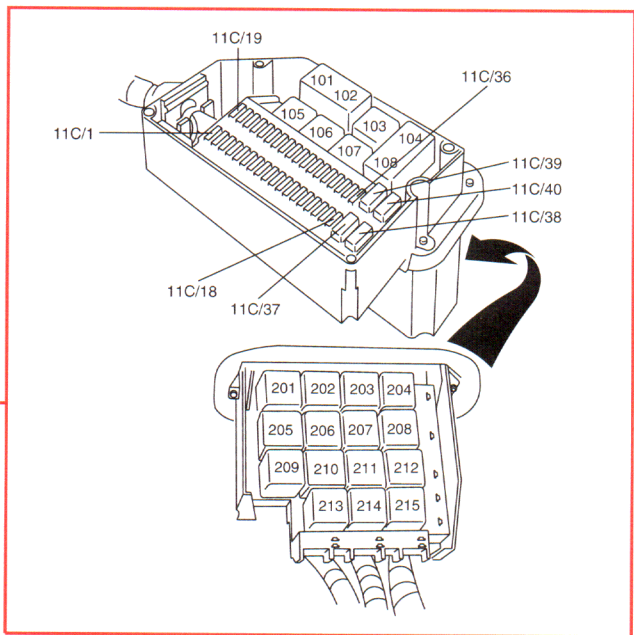
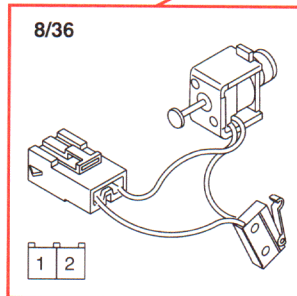
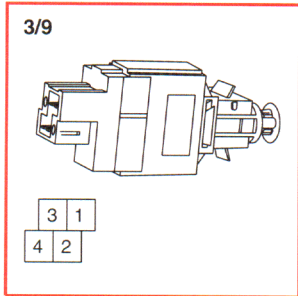
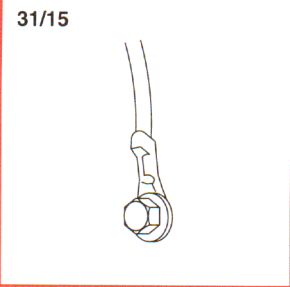
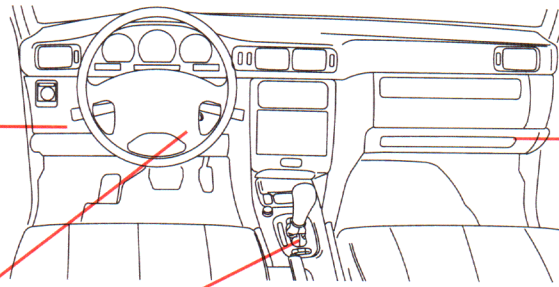
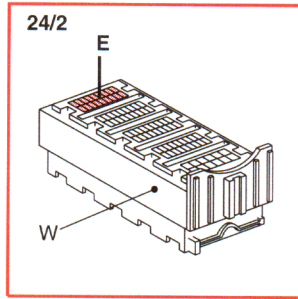




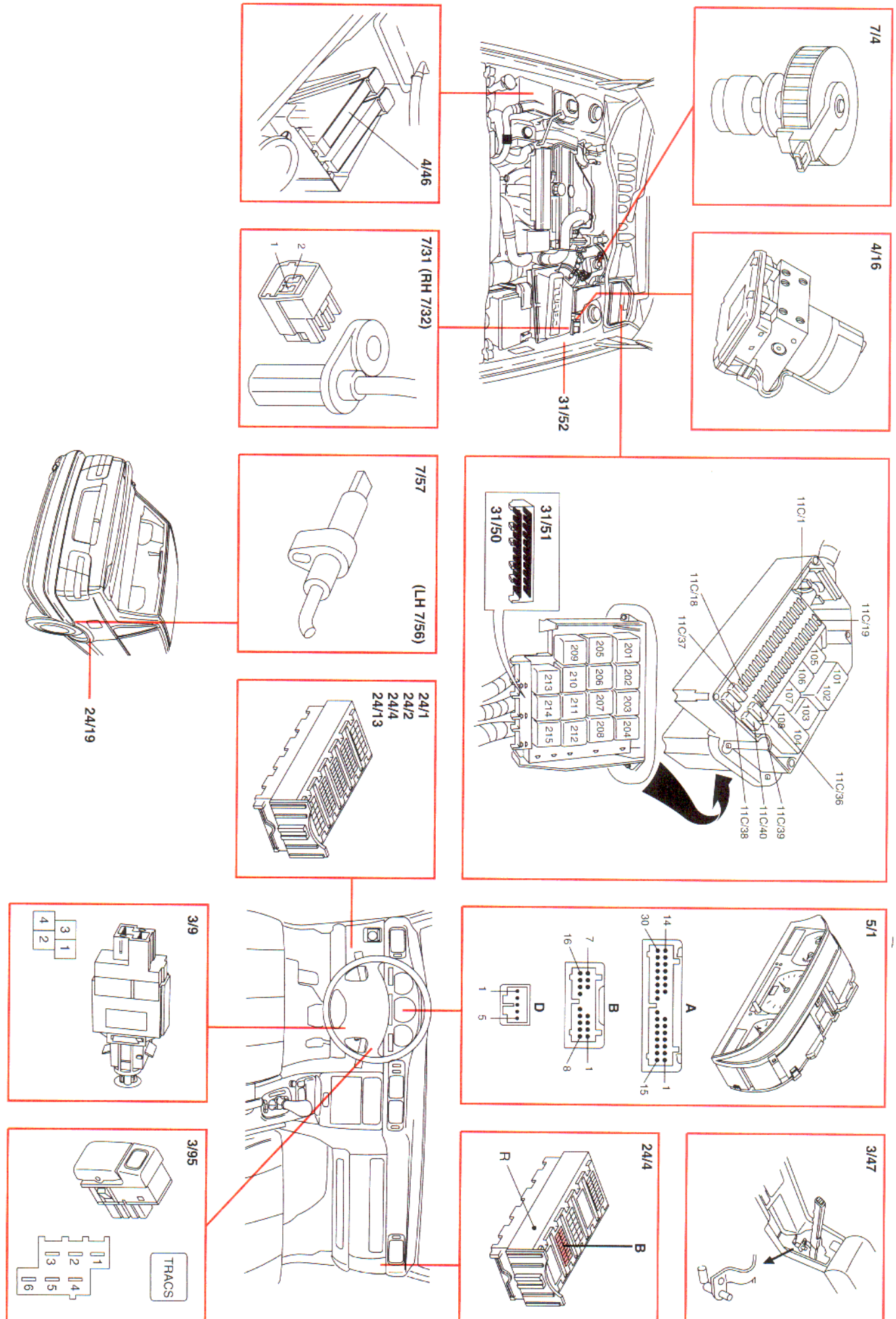
Electronically controlled automatic transmission AW 50-42 MSA 15.8



P-shift lock automatic transmission MSA 15.8



ABS Anti-lock braking system



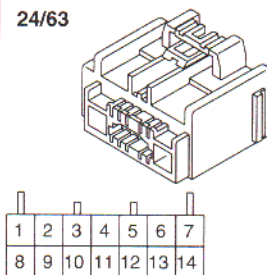
Manual climate control MCC MSA 15.8

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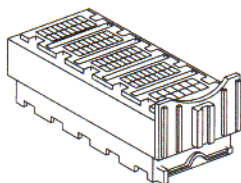
A					
1	2	3			
4	5	6			

B											
10	9	8	7	6			5	4	3	2	1
22	21	20	19	18	17		16	15	14	13	11

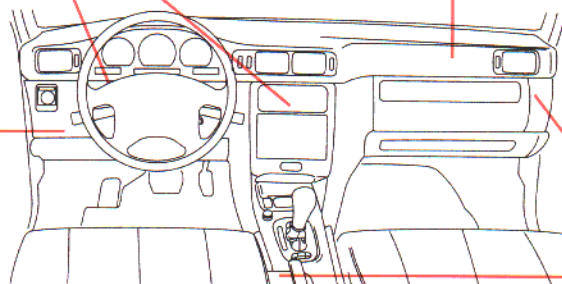
24/63



24/1
24/2

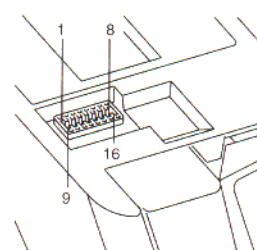


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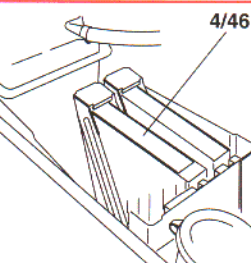
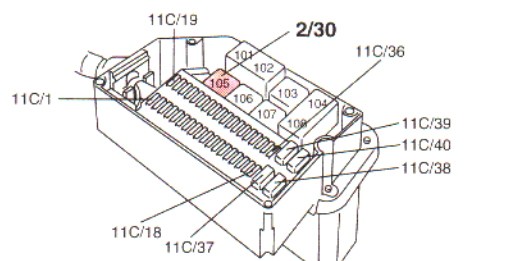
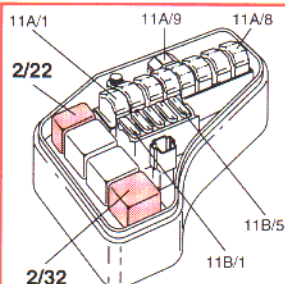
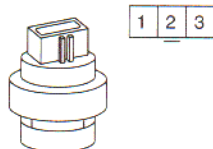
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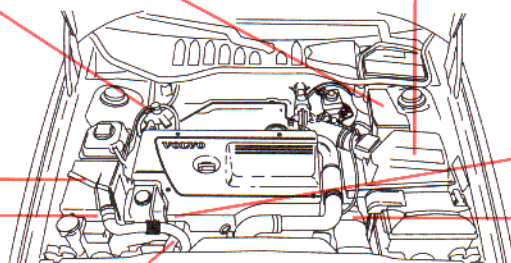


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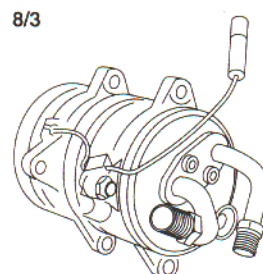
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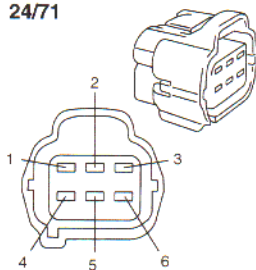
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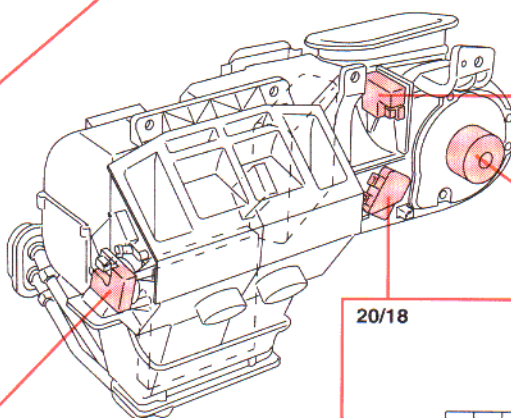


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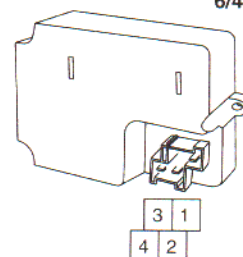
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1	3	5



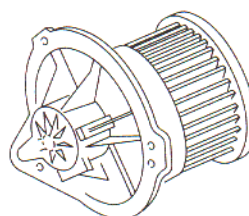
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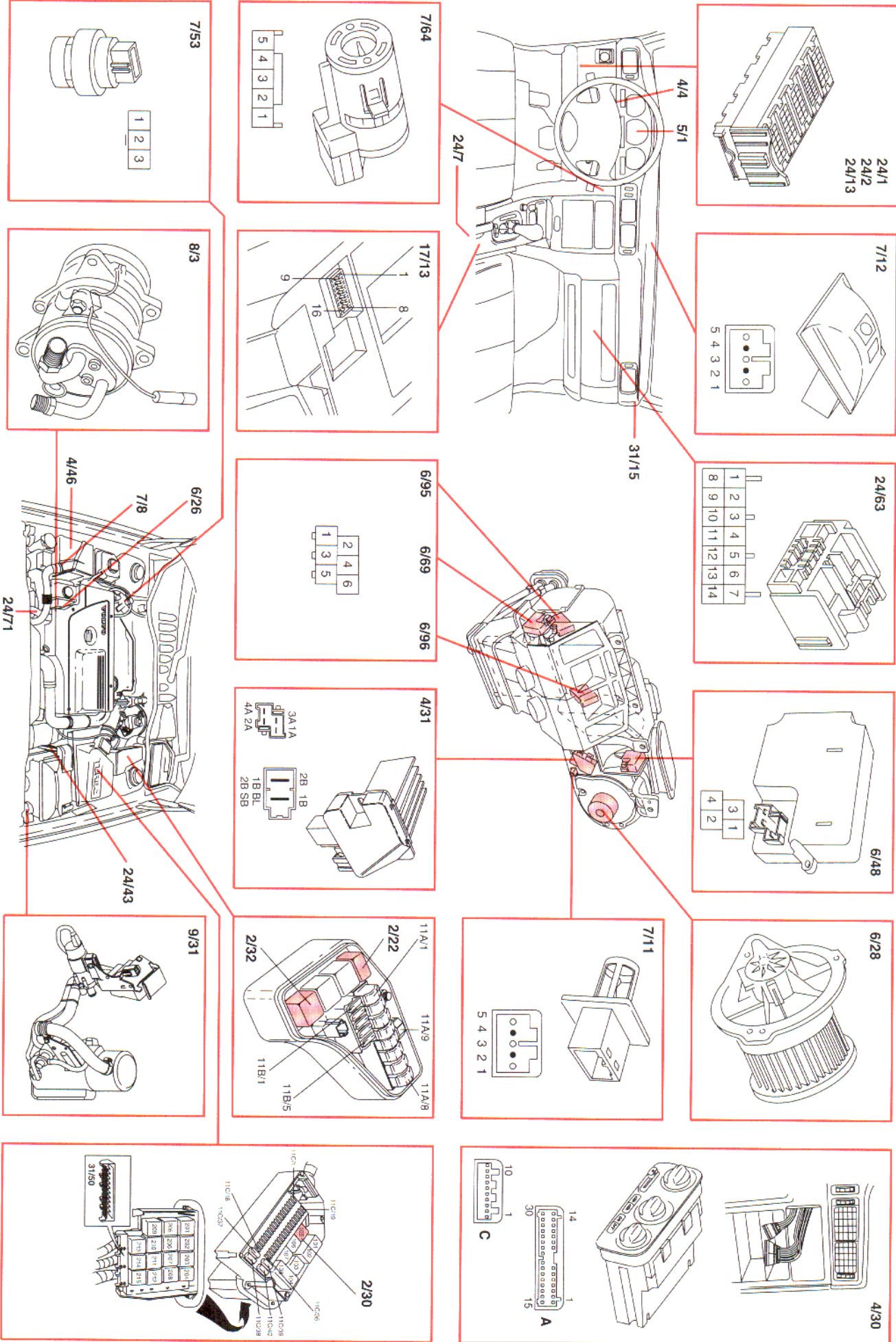
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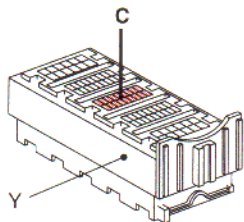


Electronic climate control ECC
MSA 15.8

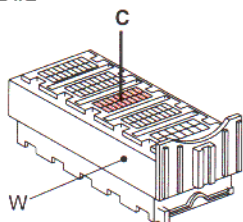


Additional heater

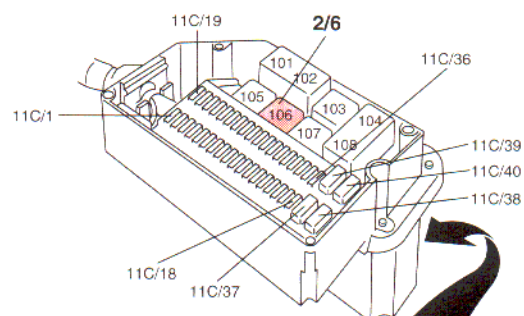
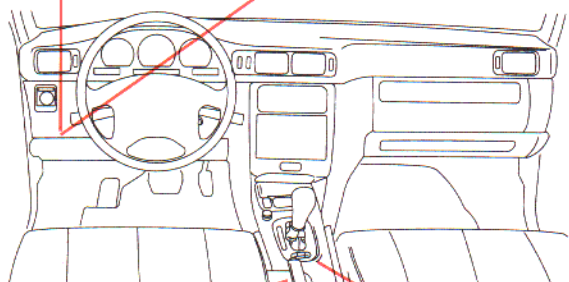
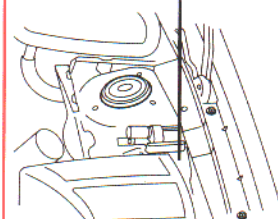
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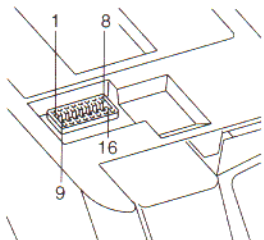
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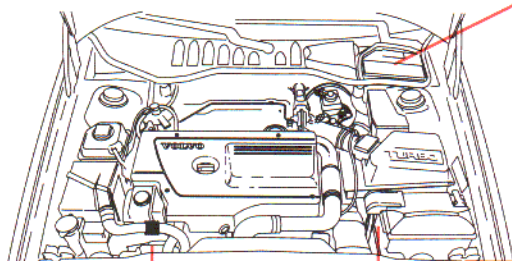
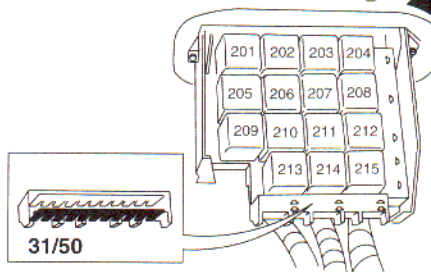
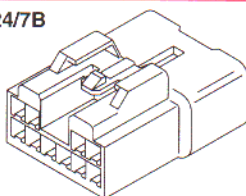
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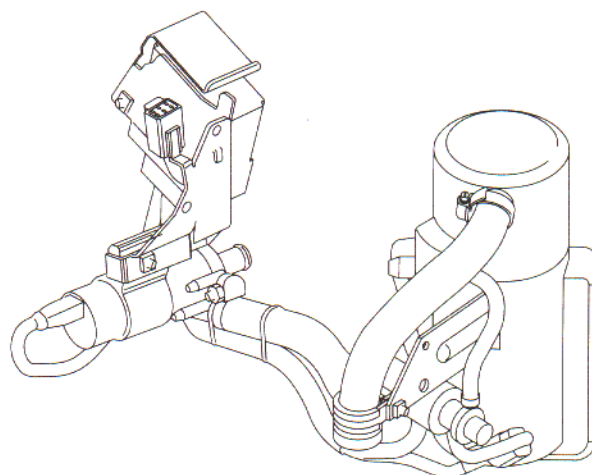
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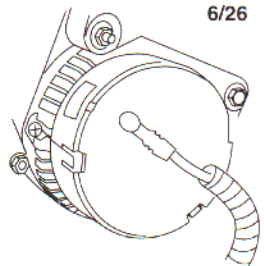
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