

VOLVO
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VOLVO **WIRING DIAGRAM**

S60/S60R/S80
V70/V70R/XC70/XC90

TP 3985202

2005 SUPPLEMENT

Vehicles with SRS (Airbag)/SIPS bag/IC (Inflatable curtain)

Warning!

Extra caution must be exercised when working on vehicles equipped with SRS/SIPS bag/IC in order to avoid:

1. Personal injuries when performing repair work.
2. Damage or malfunction of the SRS/SIPS bag/IC system.

Work involving the SRS/SIPS bag/IC systems or other components in the vehicle that may affect the SRS/SIPS bag/IC systems must always be performed by an authorized Volvo workshop.

In case of doubt, consult the SRS and SIPS bag/IC service manual.

Is the vehicle equipped with SRS/SIPS bag/IC?

Vehicles with SRS are most easily recognized by the letters SRS in the center of the steering wheel. If the vehicle also has a passenger side airbag, the letters SRS are stamped on the dashboard above the glove compartment. SRS vehicles from 1993 and onward also have explosive seat belt tensioners. SIPS bags are only installed on SRS vehicles from 1995 and onward. SIPS bag decals are located on the windshield and seat compartment. Vehicles with IC can be recognized by the letters IC on the C/D panel (4 door) or the B panel (5 door).

General recommendations

- Be especially careful when working on or around SRS, SIPS, and IC components.
- Make sure that no wires are pinched, frayed, or pierced.
- Never fit accessories by the sensors.
- Where applicable, work on the steering wheel, steering shaft, or steering gear must be done in accordance with the methods in the SRS section of VADIS.
- Certain components of the aforementioned systems must be grounded while working. Read the appropriate sections in VADIS.
- Do not install any accessories in the areas between the A and B-pillars, the B and C-pillars, and the C and D-pillars.

Test terminal

Fuse in cargo compartment auxiliary fuse box.

Modifications introduced up to August 2004

Any changes made to the vehicle after this date are not included in the manual. If necessary, refer to service bulletins.

Volvo models are sold in versions adapted for different markets. These adaptations depend on factors such as legal requirements, taxation, and market demands.

This manual may therefore include illustrations and text that do not apply to the vehicles in your country.

Order number TP 3985202

This publication contains updated information for model year 2005 late edition. For other electrical systems, see publication TP 3977202, which is found in Electronic Wiring Diagram (EWD) TP 3983003 or later.

We retain the right to make modifications.

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Explanations Abbreviations

Groups

Group 23	= Fuel system
Group 26	= Cooling system
Group 27	= Engine controls
Group 32	= Generator and voltage regulator
Group 33	= Starting system
Group 35	= Lighting
Group 36	= Additional electrical equipment
Group 37	= Wiring and fuses
Group 38	= Instruments
Group 39	= Other
Group 43	= Transmission
Group 59	= Brake system
Group 64	= Steering
Group 76	= Shock absorbers
Group 83	= Doors and openings
Group 84	= Exterior decorative elements etc.
Group 85	= Interior equipment
Group 87	= Climate controls
Group 88	= Internal equipment

Ignition switch symbols

X	= Accessories (audio position)
S	= Powered upon insertion of key
15	= The switch remains connected during start
15I	= Contact is broken while starting
30	= Constant power from the battery
50	= Start

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
ISR	= Israel
J	= Japan
KOR	= Korea
N	= Norway
NL	= Netherlands
S	= Sweden
USA	= United States of America
WEU	= Western Europe

Other

ACC	= Accessory
AMP	= Amplifier
AUDIO	= Audio system
AUTO	= Automatic transmission
Bi-X	= Bi-Xenon
BLIS	= Blind spot information system
CEM	= Central Electronic Module
DRL	= Daytime Running Lights
DSTC	= Dynamic Stability Traction Control
ECC	= Electronic climate control system
ECPS	= Electronic power steering
EXC	= Exclusive
EXT. D	= Extended electrical distribution
HISPEED	= High speed data bus
LH	= Left-hand side
LHD	= Left-hand drive
LOSPEED	= Low speed data bus
MAN	= Manual transmission
OPN	= Option (factory-installed)
PCL	= Power Child Lock
PETROL	= Gasoline
REM	= Rear Electronic Module
RH	= Right-hand side
RHD	= Right-hand drive
RTI	= Road Traffic Information
SRS	= Airbag
SUBWOOF	= Bass speaker
SULEV	= Super Ultra Low Emission Vehicle
SUM	= Suspension Module (SUM)
T	= Turbo engine
ULEV	= Ultra Low Emission Vehicle
W/O	= Without
5CYL	= 5-cylinder engine
6CYL	= 6-cylinder engine
8CYL	= 8-cylinder engine

Colors

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

How to use the wiring diagrams 1:2

The descriptions below apply in general to all wiring diagram manuals, although not all sections are necessarily contained in this manual.

A. Component designation

Every component has a component designation that consists of two parts.

The first part is a type number that describes the type of component in question, for example 3/xx.

The second part of the designation is a serial number, e.g. x/2.

Combined these give a component designation, for example 3/2.

At the end of the manual is a list of components, where, with the help of the component designation, you can read off the name of the component, for example, 3/2 = light switch.

List of type numbers

The list shows which type of component that respective type numbers refer to, for example, 3/x = switch, 6/x = electric motor, etc.

1	Battery
2	Relay
3	Switch
4	Control module
5	Driver Information Module
6	Electric motor
7	Sensor
8	Actuator
9	Heating element
10	Light
11	Fuse
15	Electrical distribution rail/box
16	Audio
17	Service/diagnostics
18	Contact reel
19	Meter
20	Ignition component/shunt
26	Converter
27	Optics
31	Ground connection
53	Junction point
54	Connector

B. Junction points

The wiring diagrams contain numbered junction points, e.g. 53/352.

This manual contains a section with a list of junction points. This list shows all the components which are connected to each junction point.

The location of the junction points is shown in the "Cable harness routing in vehicle" section.

C. Connectors

Connectors provide a bridge between two cable harnesses and are described in the "Connectors" section.

D. Electrical distribution

Operation of the fuses and relays is shown in the "Electrical distribution" section.

E. Data communication

Today's cars are equipped with CAN, LIN & MOST networks that transmit information. Connections to these networks are shown in their entirety on the respective wiring diagram. Complete information on Data communication can be found in the section entitled "Control modules".

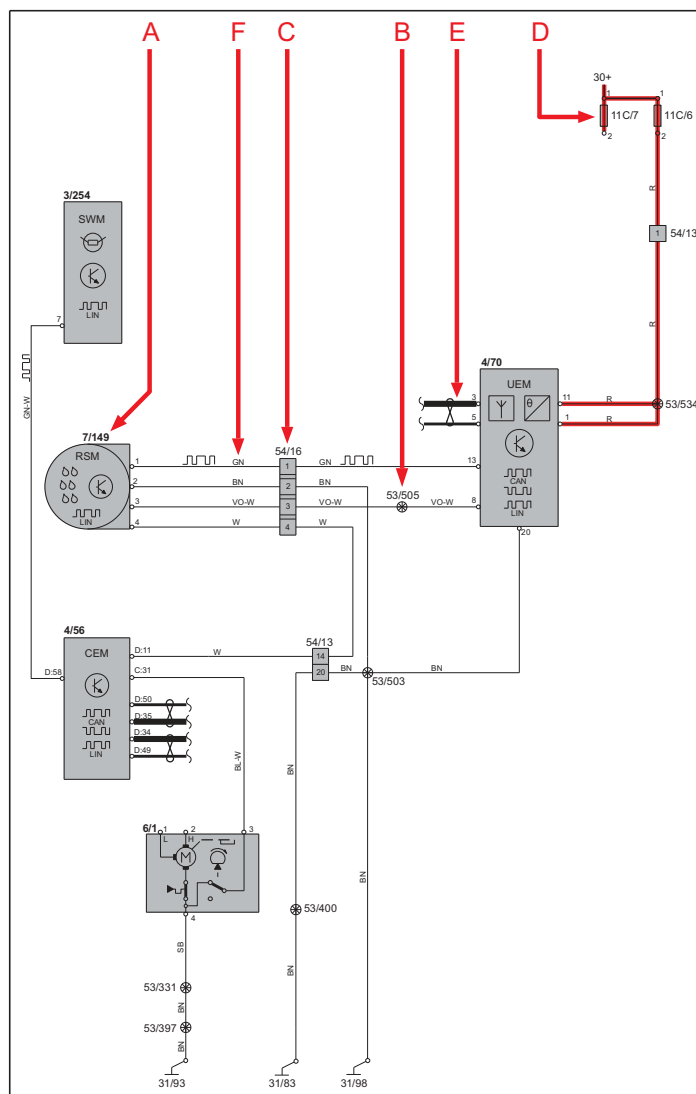
F. Abbreviations

A number of different abbreviations are used in the manual. These are explained in the section "Abbreviations".

G. Component location

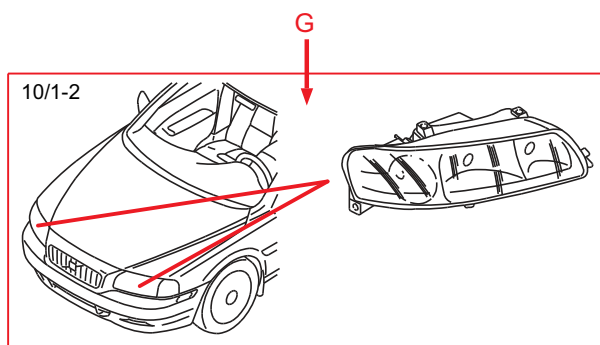
There is a section at the end of the manual in which the appearance and location of components is described in numerical order.

How to use the wiring diagrams 2:2

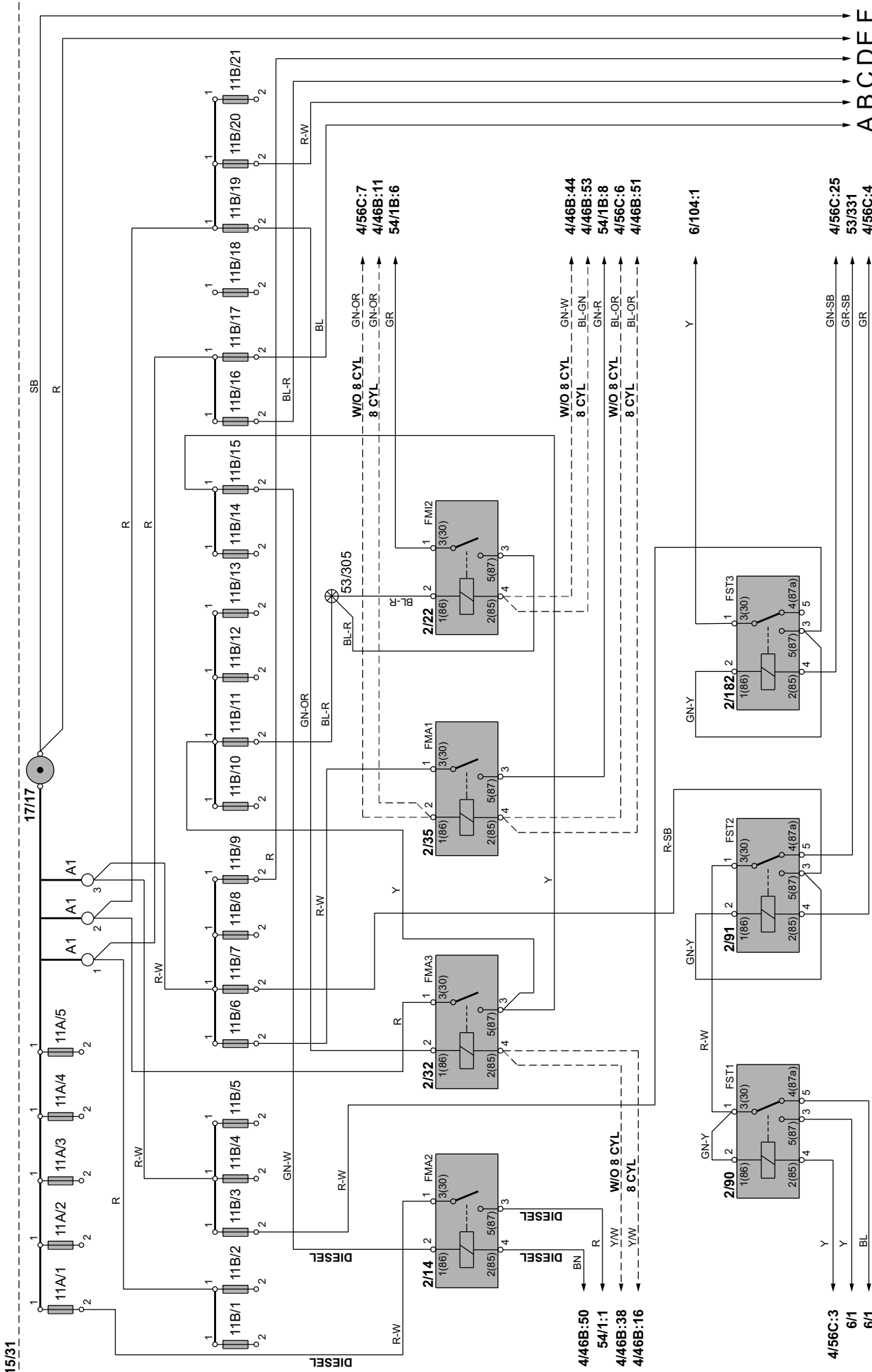


List of symbols

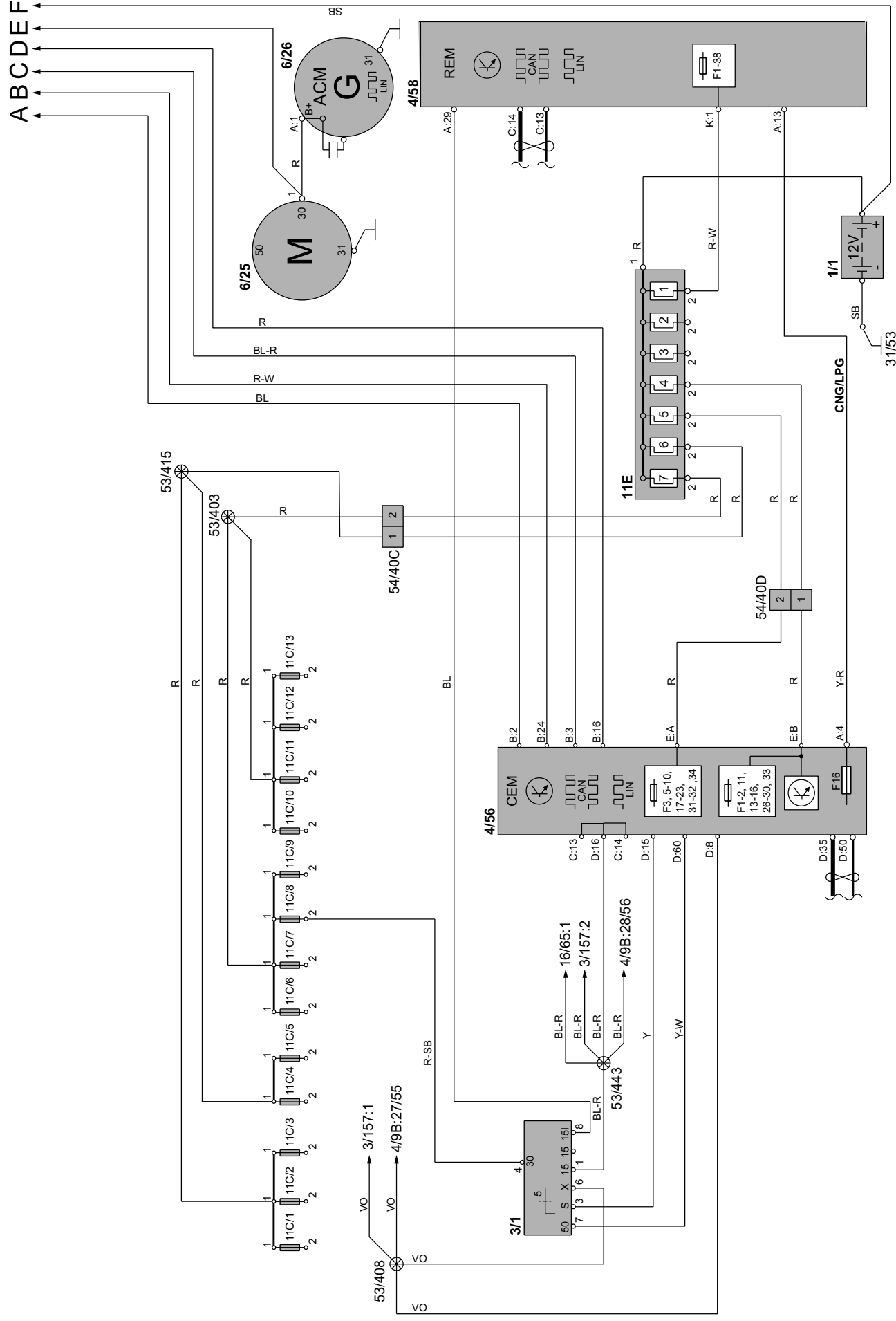
- = System voltage
- = Ground connection via wiring
- = Ground connection in component/chassis
- = Screened wire
- = Junction point
- = Twisted cable
- = Electrical connection
- = Variant
- = CAN communication
- = CAN high data signal (CAN H)
- = CAN low data signal (CAN L)
- = LIN communication
- = LIN communication
- = DIN cable, coaxial cable, etc.
- = Data communication
- = CAN communication
- = MOST communication
- = MOST communication
- = Connection with distribution box
- = Further connection to...
- = Connector between cable harnesses
- = Connector connected in component



Electrical Overview

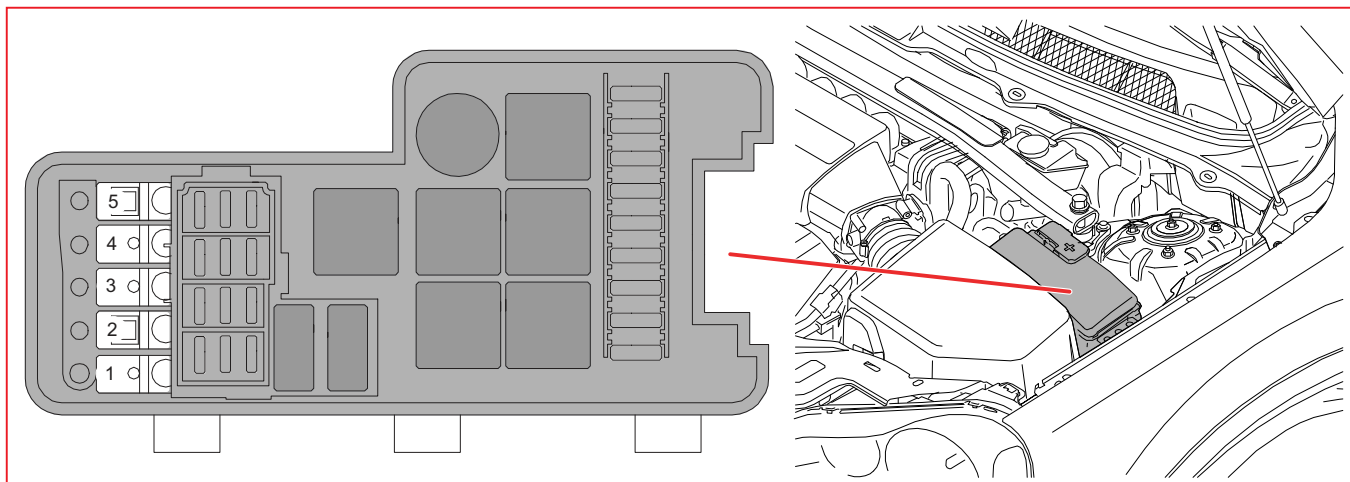


Electrical distribution 2:2 XC90 Overview



Fuses

Engine compartment 11A/1-5

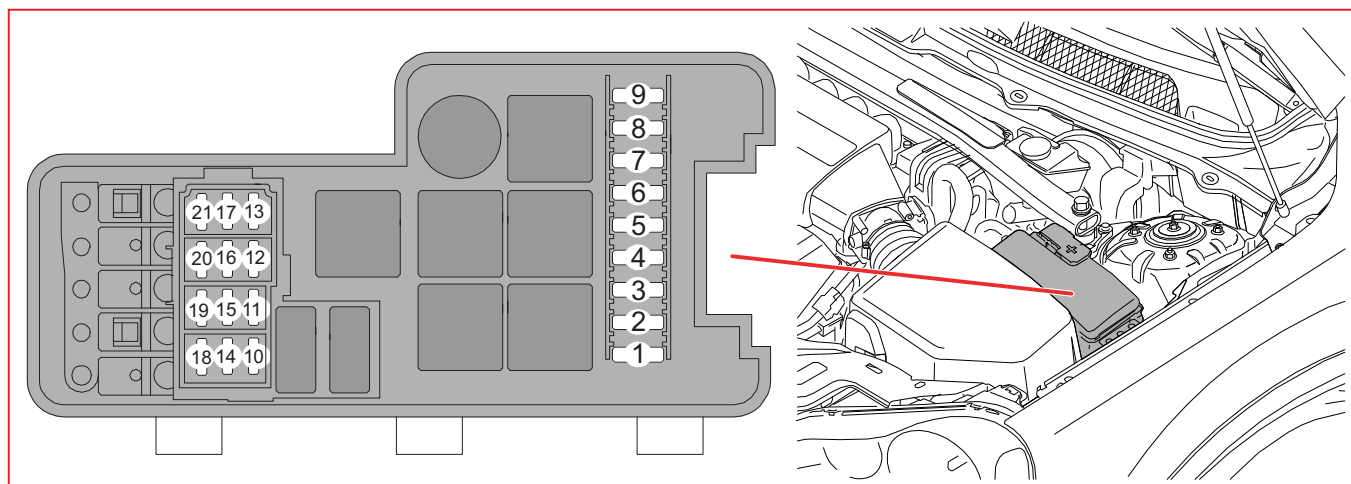


11A Fuses in engine compartment XC90

No.	Fuse function	via	A
1	20/22-26 Glow plug	2/14	60
2	6/29 Motor, cooling fan	4/71	60
3	-	-	-
4	-	-	-
5	-	-	-

Fuses

Engine compartment 11B/1-12

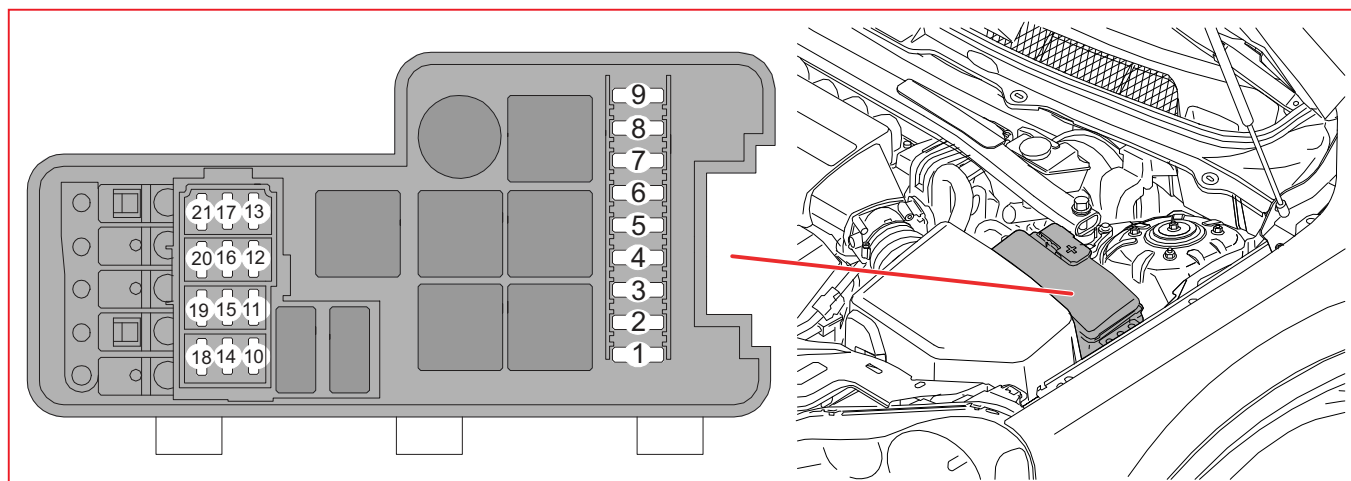


11B Fuses in engine compartment XC90

No.	Fuse function	via	A
1	4/16 Brake Control Module (BCM)	-	30
2	4/16 Brake Control Module (BCM)	-	30
3	6/104 High pressure headlight washer	2/182	35
4	6/35 Fuel pump, auxiliary heater 6/73 Coolant pump, auxiliary heater 9/30 Auxiliary heater	4/7 4/7 4/7	25
5	54/8 Connector cable harness extra lights, 30-feed	-	20
6	6/25 Starter motor	2/35	35
7	2/90 Relay, windshield wiper, low/high speed 2/91 Relay, intermittent wiping 6/1 Windshield wiper motor	- - 2/90, 2/91	25
8	4/28 Transmission Control Module (TCM), TF-80SC AWD	-	15
9	6/33 Fuel pump	4/56	15
10	20/3-8 Spark plug and ignition coil 20/12-13 Spark plug and ignition coil 20/14 Condenser, ignition coils, 8-cyl. 8/111 Solenoid valve, high-pressure, Diesel 4/46 Engine Control Module (ECM), Diesel	- - - - -	20
11	6/44 Cooling fan, electrics box, engine compartment 7/51 Accelerator pedal sensor 8/3 Electromagnetic clutch, climate control system	- - 2/22	10
12	7/17 Mass airflow sensor (MAF), Diesel 4/46 Engine Control Module (ECM), Gasoline 7/17 Mass airflow sensor (MAF), Gasoline 8/6-11 Injectors, Gasoline 8/115-116 Injectors, Gasoline	- - - - -	5 15
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Fuses

Engine compartment 11B/13-15



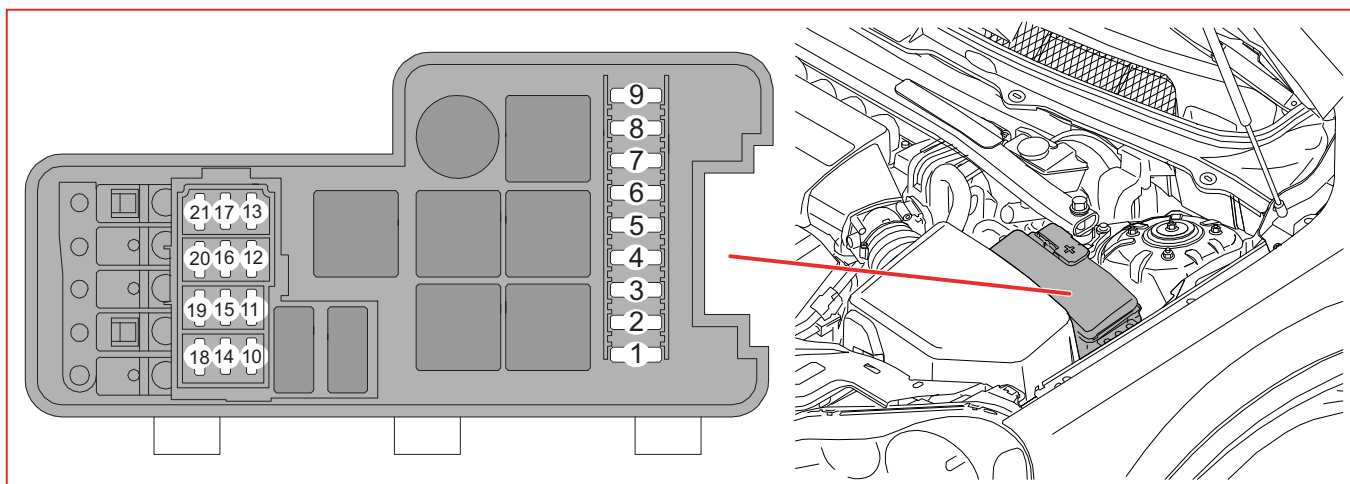
11B Fuses in engine compartment XC90

No.	Fuse function	via	A
13	4/46 Engine Control Module (ECM), 8-cyl.	-	10
14	7//15 Heated oxygen sensor	-	20
	7/15 Front heated oxygen sensor, bank A, 8-cyl.	-	
	7/82 Heated oxygen sensor, diagnosis 1	-	
	7/82 Front heated oxygen sensor, bank B, 8-cyl.	-	
	7/103 Heated oxygen sensor 3	-	
	7/103 Rear heated oxygen sensor, bank A, 8-cyl.	-	
	7/104 Rear heated oxygen sensor, bank B, 8-cyl.	-	
15	2/14 Relay, glow plug unit	-	10
	6/67 Pump, fuel leakage control	-	
	8/17 EGR valve, Diesel	-	
	8/18 EVAP valve	-	
	8/19 Solenoid, variable valve timing intake	-	
	8/28 Turbo control valve	-	
	8/64 Solenoid valve, engine mounting, Diesel	-	
	8/81 Solenoid, variable valve timing outlet	-	
	8/82 Solenoid, variable turbo geometry, Diesel	-	
	9/32 PTC resistor - air preheating	-	
	4/46 Engine Control Module (ECM), 8-cyl.	-	15
	6/67 Pump, fuel leakage control, 8-cyl.	-	
	7/17 Mass air flow sensor (MAF), 8-cyl.	-	
	8/3 Electromagnetic clutch, climate control system, 8-cyl.	2/22	
	8/18 EVAP valve, 8-cyl.	-	
	8/19 Solenoid, variable valve timing intake, bank A, 8-cyl.	-	
	8/81 Solenoid, variable valve timing outlet, bank A, 8-cyl.	-	
	8/107 Valve, variable intake, 8-cyl.	-	
	8/117 Solenoid, variable valve timing intake, bank B, 8-cyl.	-	
	8/118 Solenoid, variable valve timing outlet, bank B, 8-cyl.	-	

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Fuses

Engine compartment 11B/16-20

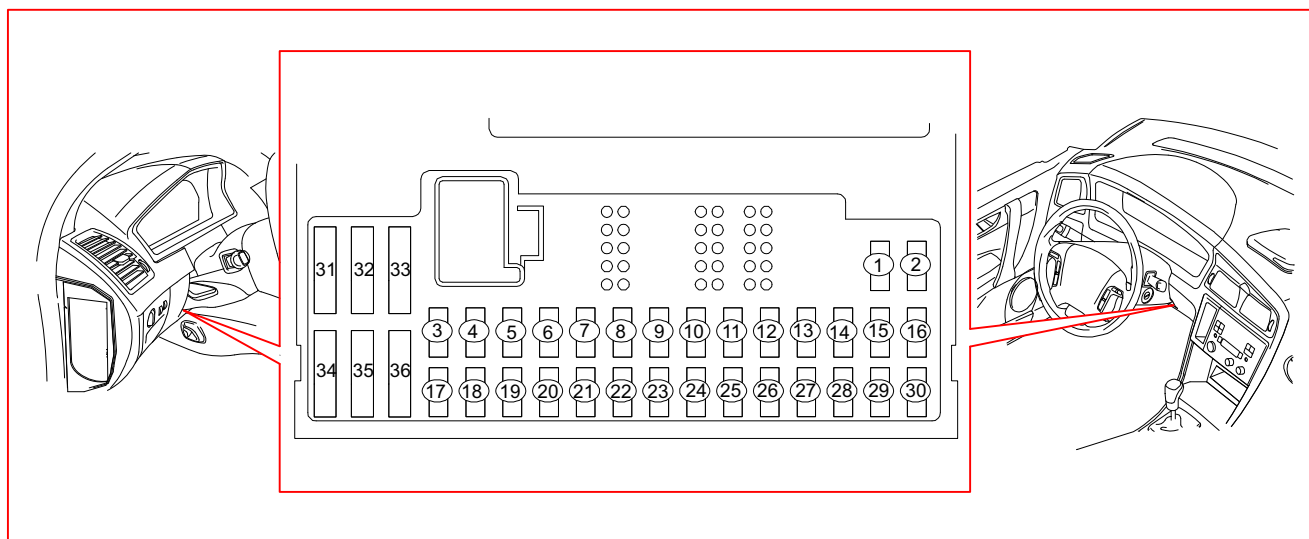


11B Fuses in engine compartment XC90

No.	Fuse function		via	A
16	10/1	Left front lamp housing, daytime running lights	4/56	20
	10/70	Left-hand low beam	4/56	
17	10/2	Right front lamp housing, daytime running lights	4/56	20
	10/66	Right-hand low beam	4/56	
19	2/32	Main relay, engine management system	-	5
	4/46	Engine Control Module (ECM)	-	
20	10/11	Front left parking light	4/56	15
	10/12	Front right parking light	4/56	
	10/71	Side running light, front left	4/56	
	10/73	Side running light, front right	4/56	

Fuses

Central Electronic Module (CEM) F1-F14

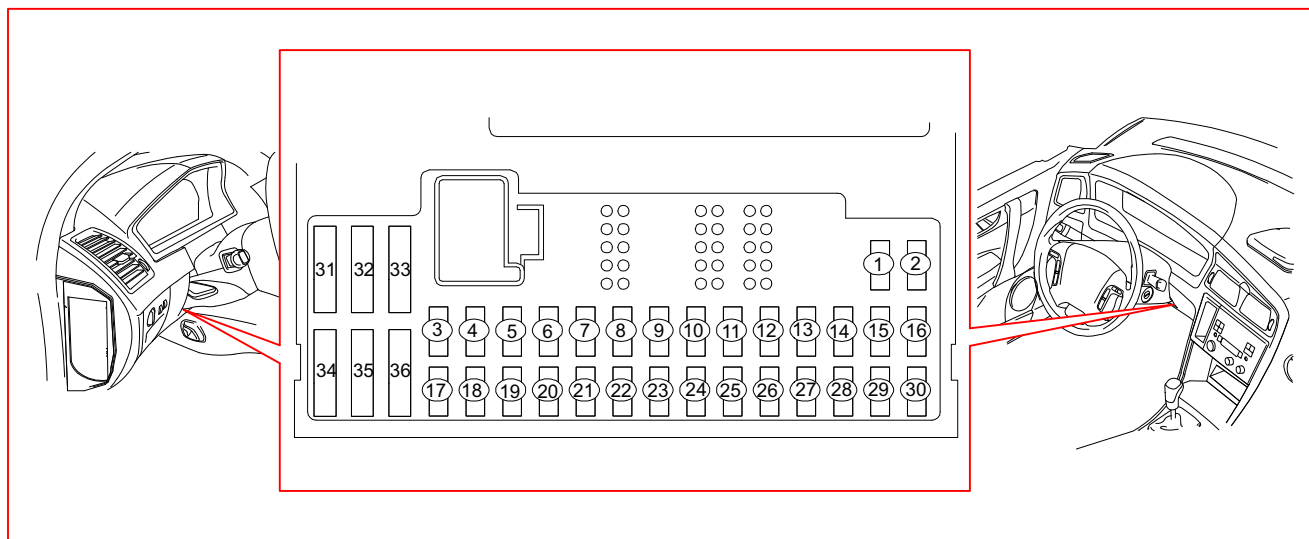


4/56 Central Electronic Module (CEM)

No.	Fuse function	via	A
F1	9/13 Seat Heater Module (SHM), right-hand	-	15
F2	9/12 Seat Heater Module (SHM), left-hand	-	15
F3	16/10 Horn 1 16/11 Horn 2	- -	15
F5	16/46 Multimedia display, XC90 16/94 Infotainment Control Module (ICM), XC90 16/106 Control module, CD player (MP2), XC90 16/107 Control module, MD player (MP1), XC90 16/108 Multimedia module (MMM), XC90 54/112 Connector cable harness Infotainment, increased D-feed, XC90	- - - - - -	10
F8	16/35 Siren Control Module (SCM)	-	5
F9	3/9 Brake light contact	-	5
F10	3/112 Climate Control Module (CCM) 4/7 Combustion Preheater Module (CPM) 4/52 Power Seat Module (PSM) 5/1 Driver Information Module (DIM) 6/48 Damper Motor Module (DMM), recirculation 6/69 Damper Motor Module (DMM), ventilation/floor/defroster 6/95 Damper Motor Module (DMM), temperature, left-hand side 6/96 Damper Motor Module (DMM), temperature, right-hand side 6/102 Damper Motor Module (DMM), defroster 6/103 Damper Motor Module (DMM), floor/ventilation 7/93 Occupant Weight Sensor (OWS) 7/159 Air Quality Sensor (AQS)	- - - - - - - - - - - -	10
F11	9/1 Outlet 12V front 9/25 Outlet 12V rear 11 F/2 Fuse in cargo compartment auxiliary fuse box	- - -	15
F14	6/3 Right-hand headlight wiper motor 6/4 Left-hand headlight wiper motor	- -	15

Fuses

Central Electronic Module (CEM) F15-F34

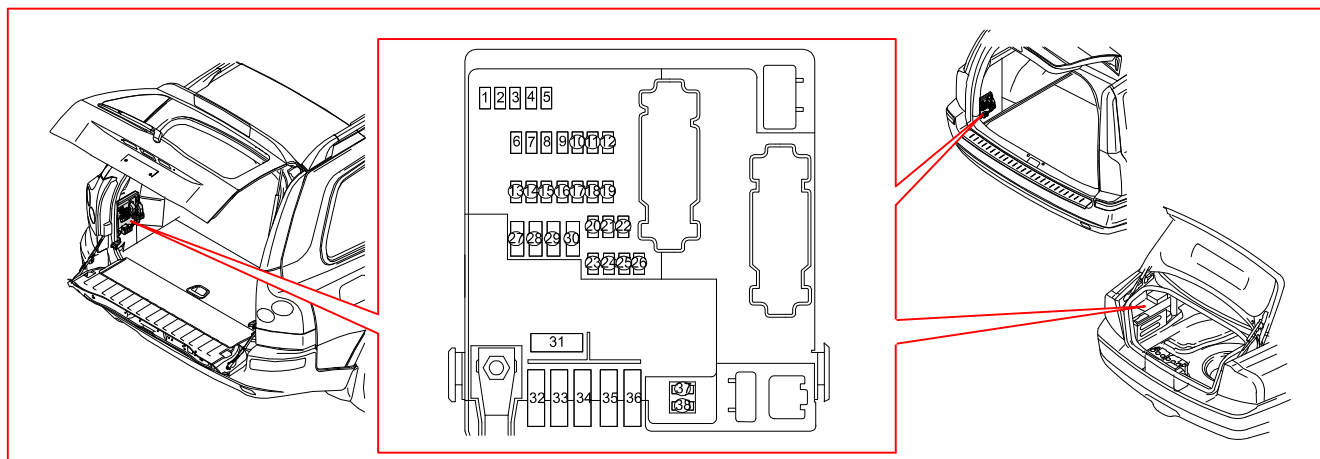


4/56 Central Electronic Module (CEM)

No.	Fuse function	via	A
F15	4/16 Brake Control Module (BCM)	-	5
F16	4/99 Electronic power steering control module	-	10
	6/38 Left-hand headlight level adjustment motor	-	
	6/39 Right-hand headlight adjustment motor	-	
	8/76 Gas tank valve, Bi-Fuel	4/58	
	8/88 Solenoid, fuel tank CNG rear, Bi-Fuel	4/58	
	8/89 Solenoid, fuel tank CNG front left, Bi-Fuel	4/58	
	8/90 Solenoid, fuel tank CNG front right, Bi-Fuel	4/58	
	10/1 Left front lamp housing, Bi-Xenon	-	
	10/2 Right front lamp housing, Bi-Xenon	-	
F17	10/5 Front left fog light	-	7.5
F18	10/6 Front right fog light	-	7.5
F20	6/113 Coolant pump, 8-cyl.	-	5
F21	3/156 Gear Selector Module (GSM)	-	10
	4/28 Transmission Control Module (TCM)	-	
	8/36 Shift lock solenoid	3/156	
	8/134 Solenoid, reverse interlock, manual	-	
F22	10/68 Left-hand high beam	-	10
F23	10/64 Right-hand high beam	-	10
F28	3/27 Power passenger seat module	-	5
	16/1 Audio Module (AUM)	-	
	16/46 RTI display, accessory	-	
	16/93 Control module, cellular telephone handsfree	-	
F30	27/3 Left-hand Camera Module (LCM)	-	5
	27/4 Right-hand Camera Module (RCM)	-	
F33	6/114 Vacuum pump	8/84	20
F34	6/3 Right-hand headlight wiper motor	-	15
	6/4 Left-hand headlight wiper motor	-	
	6/127 Washer motor	-	

Fuses

Rear Electronic Module (REM) F1-F6

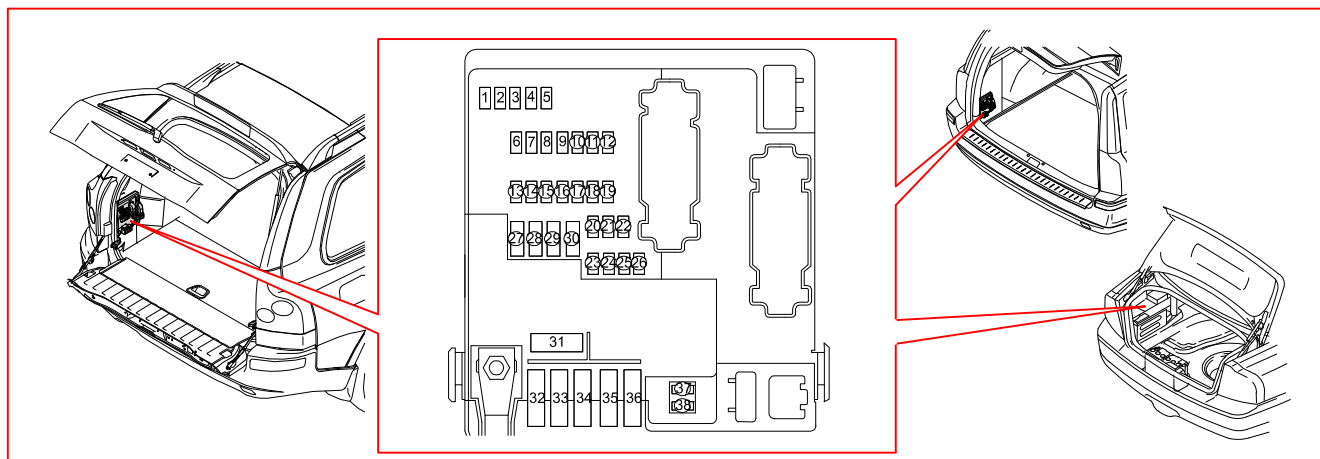


4/58 Rear Electronic Module (REM)

No.	Fuse function	via	A
F1	10/48 Right-hand reversing light	-	10
	10/55 Left-hand reversing light	-	
F2	10/3 License plate lighting	-	20
	10/19 Auxiliary brake light	-	
	10/42 Rear right parking light	-	
	10/44 Right-hand tail light lamp 1	-	
	10/45 Right-hand tail light lamp 2	-	
	10/46 Fog light, right rear	-	
	10/49 Rear left parking light	-	
	10/51 Left-hand tail light lamp 1	-	
	10/52 Left-hand tail light lamp 2	-	
	10/53 Fog light, left rear	-	
	10/127 Lighting, cargo compartment, left-hand side	-	
	10/128 Lighting, cargo compartment, right-hand side	-	
	10/173 Cargo compartment lighting, tailgate, XC90	-	
F3	4/78 Accessory Electronic Module (AEM)	-	15
	4/106 Control module, remote parking heater start	-	
F5	4/58 Rear Electronic Module (REM)	-	10
F6	16/15 CD changer	-	7.5
	16/36 TV receiver	16/45	
	16/45 Road Traffic Information (RTI)	-	
	16/46 RTI display, accessory	-	
	16/149 MP3 player	-	
	16/110 Antenna control module (ATM), XC90	-	
	54/98 Connector cable harness Rear Seat Entertainment, 30-feed, XC90	-	

Fuses

Rear Electronic Module (REM) F7-F27

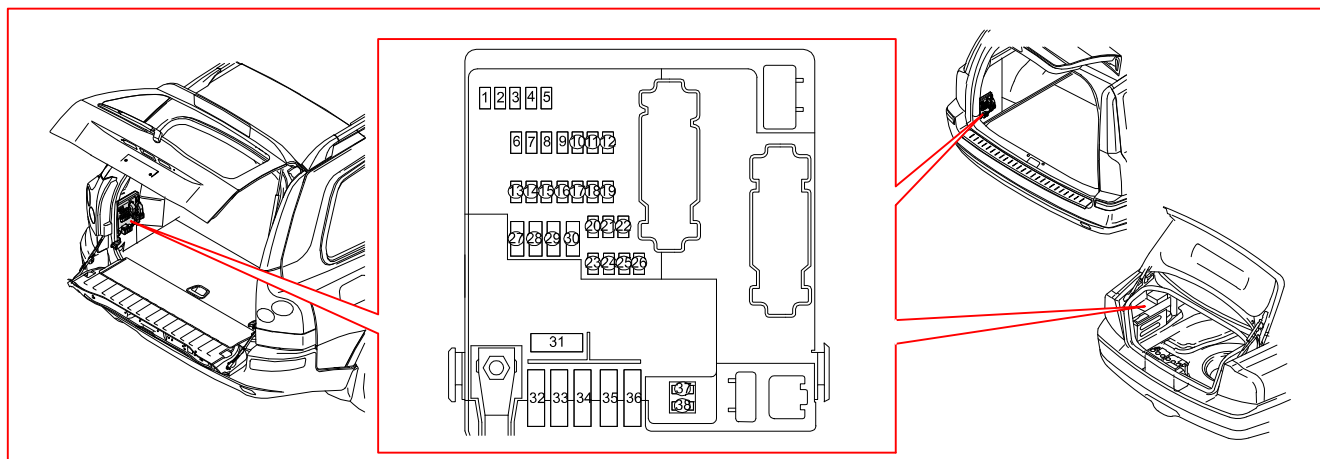


4/58 Rear Electronic Module (REM)

No.	Fuse function	via	A
F7	17/39 13-pin outlet, tow hitch cable harness	-	15
F8	17/19 12V outlet, cargo compartment	-	15
F9	2/139 Deadlock relay, right-hand rear door 3/86 Rear right door power window switch 6/93 Motor, rear right power window	- - 3/86	20
F10	2/138 Deadlock relay, left-hand rear door 3/85 Rear left door power window switch 6/92 Motor, rear left power window	- - 3/85	20
F13	8/85 Thermostatic switch and fuel filter heating	-	15
F14	16/79 Bass speaker 6/76 Climate control system, rear XC90 16/79 Subwoofer Module (SUB), XC90	- - -	15
F17	16/145 Satellite radio receiver	-	5
F19	6/32 Rear window wiper motor 8/59 Rear left head restraint solenoid 8/60 Rear right head restraint solenoid	- - -	15
F20	17/38 7-pin outlet, tow hitch cable harness 17/39 13-pin outlet, tow hitch cable harness	- -	20
F23	4/82 Differential Electronic Module (DEM)	-	7.5
F24	4/84 Suspension Module (SUM)	-	15
F26	4/86 Parking Assistance Module (PAM)	-	5
F27	Main fuse for F20, F23, F24, F26	-	30

Fuses

Rear Electronic Module (REM) F28-F38

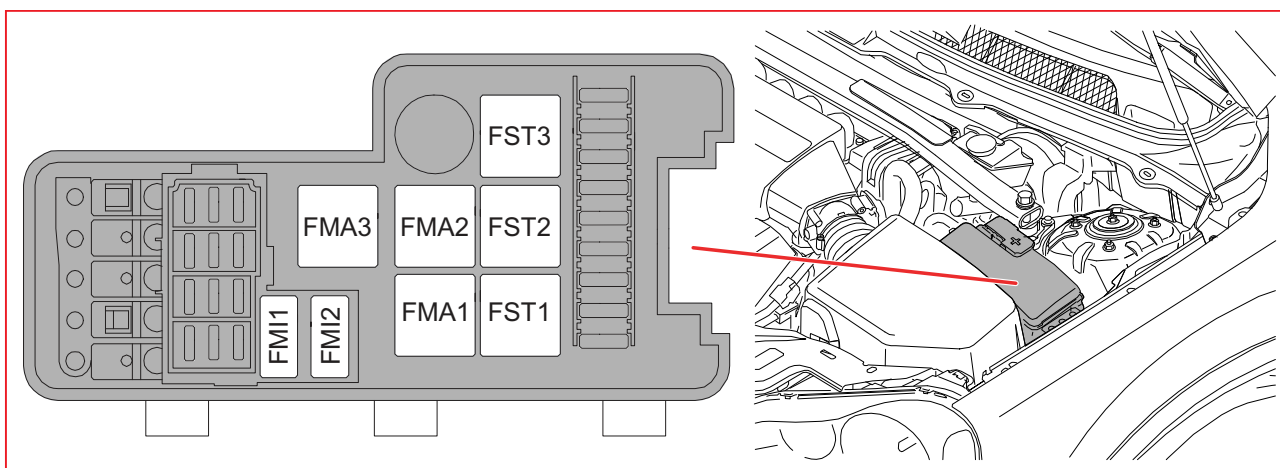


4/58 Rear Electronic Module (REM)

No.	Fuse function	via	A
F28	3/76 Left-hand rear door lock unit	-	15
	3/77 Right-hand rear door lock unit	-	
	3/78 Trunk lid lock unit	-	
	6/37 Lock motor, fuel filler cover	-	
F29	4/110 Trailer Module	-	25
	- position lights	-	
	- left-hand direction indicator	-	
	26/4 Converter cable harness tow hitch	-	
F30	- position lights	-	25
	- left-hand direction indicator	-	
	4/110 Trailer Module	-	
	- brake lights	-	
F31	- fog lights	-	40
	- right-hand direction indicator	-	
	Main fuse for F37-F38	-	
F37	9/2 Heated rear window	-	20
F38	9/2 Heated rear window	-	20

Relays

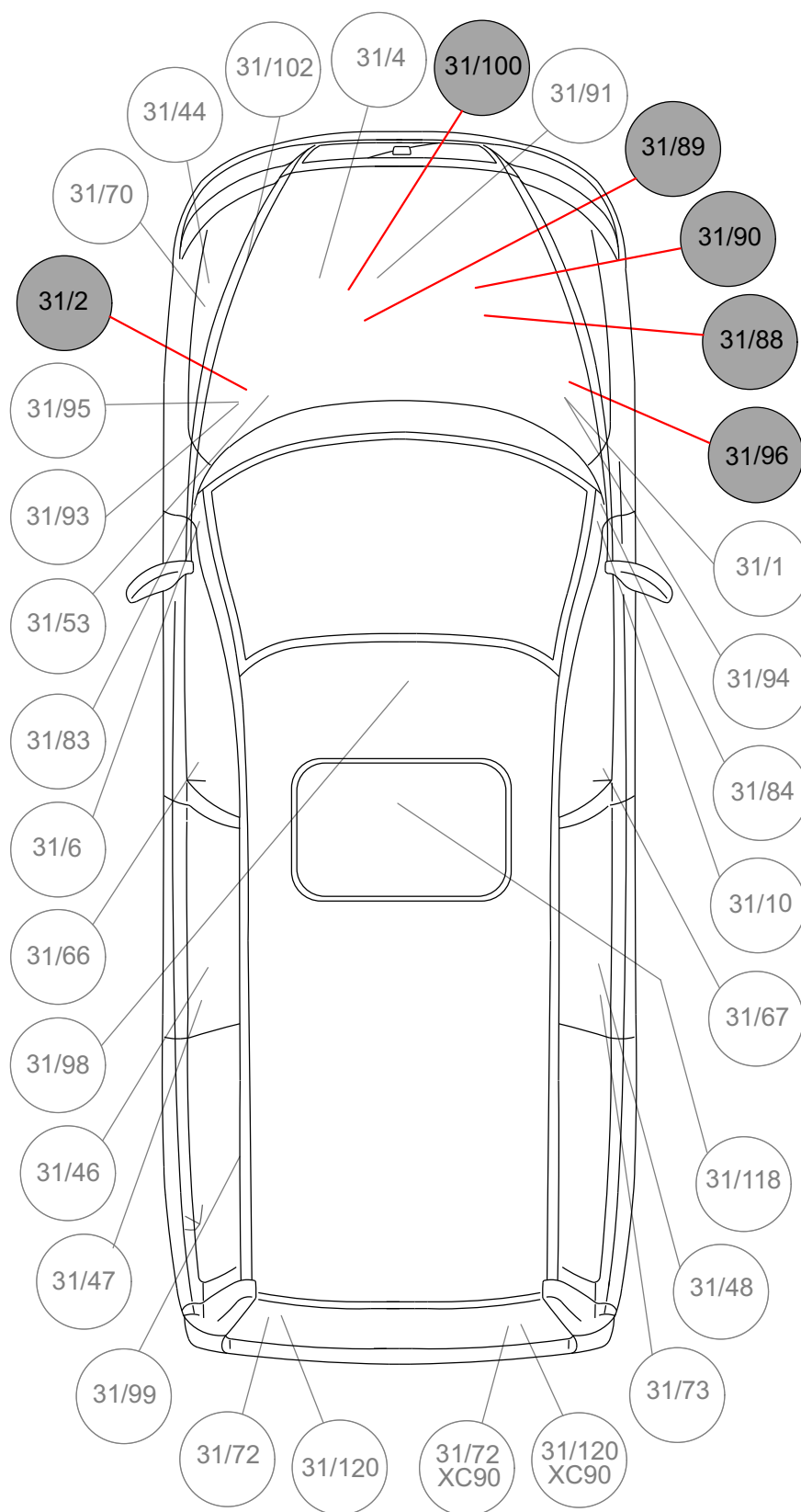
Engine compartment FMA1 - FST3



Relays in engine compartment XC90

Pos	Relay function	
FMA1	2/35	Starter motor relay
FMA2	2/14	Relay, glow plug unit
FMA3	2/32	Main relay, engine management system
FMI2	2/22	Relay, climate control system
FST1	2/90	Relay, windshield wiper, low/high speed
FST2	2/91	Relay, intermittent wiping
FST3	2/182	Relay, high pressure headlight washer motor

Ground connections Overview



Ground connection

31/2 - 31/100

31/2	Left MacPherson strut tower
4/46	Engine Control Module (ECM), 8-cyl.
4/71	Cooling fan control module, not 8-cyl.

31/88	Engine ignition coils
20/3	Spark plug and ignition coil
20/4	Spark plug and ignition coil, not 8-cyl.
20/5	Spark plug with ignition coil, 8-cyl.

31/89	Engine ignition coils
20/5	Spark plug and ignition coil, not 8-cyl.
20/6	Spark plug and ignition coil, not 8-cyl.
20/7	Spark plug and ignition coil
20/8	Spark plug and ignition coil, not 8-cyl.
20/12	Spark plug with ignition coil, 8-cyl.
20/14	Condenser, ignition coils, 8-cyl.

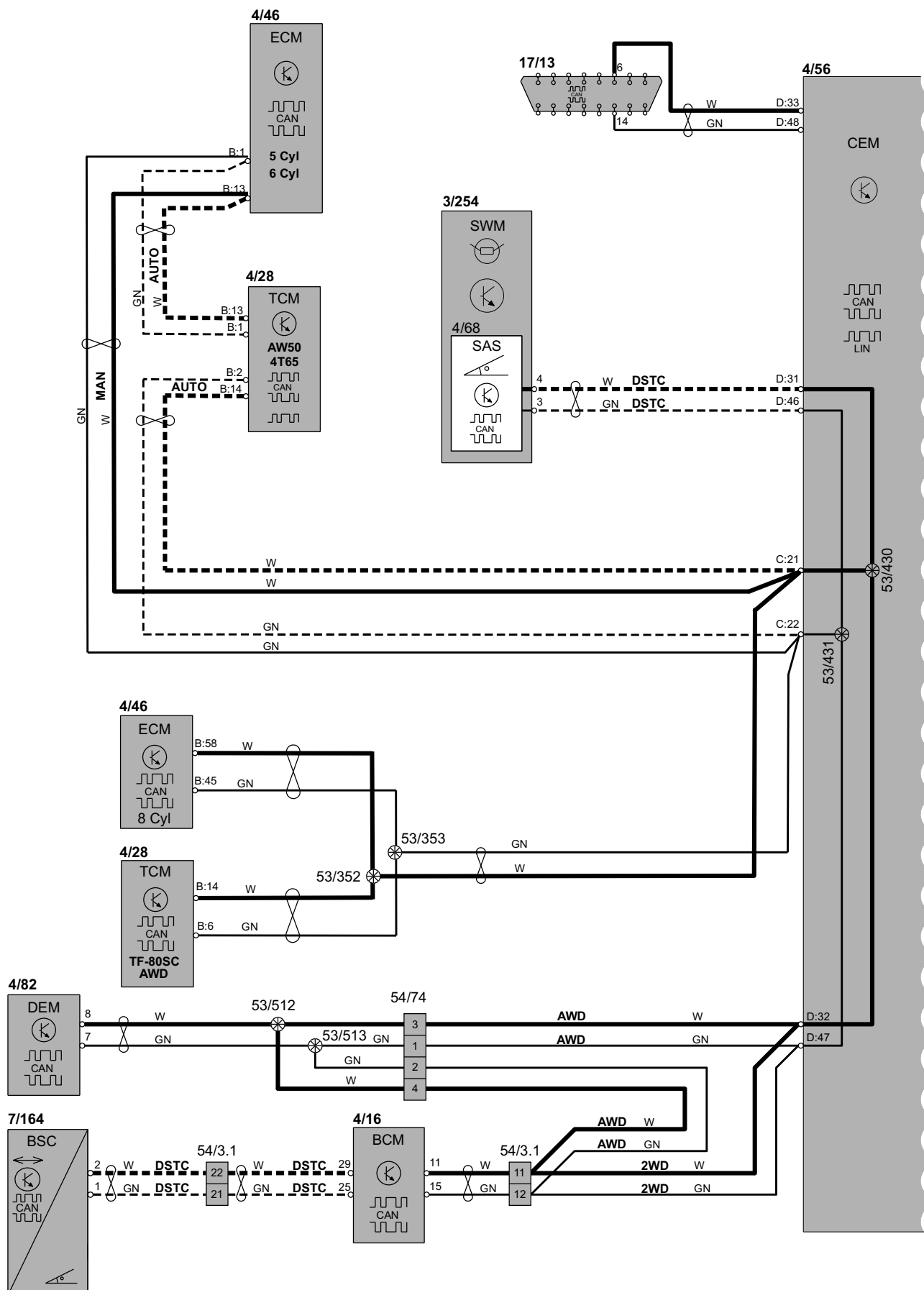
31/90	Ground connection, engine
20/4	Spark plug with ignition coil, 8-cyl.
20/6	Spark plug with ignition coil, 8-cyl.

31/96	Right MacPherson strut tower
4/46	Engine Control Module (ECM), not 8-cyl.
4/71	Cooling fan control module, 8-cyl.
6/105	Fuel distributor gas, Bi-Fuel
9/32	PTC resistor - air preheating

31/100	Ground connection, engine
20/8	Spark plug with ignition coil, 8-cyl.
20/13	Spark plug with ignition coil, 8-cyl.

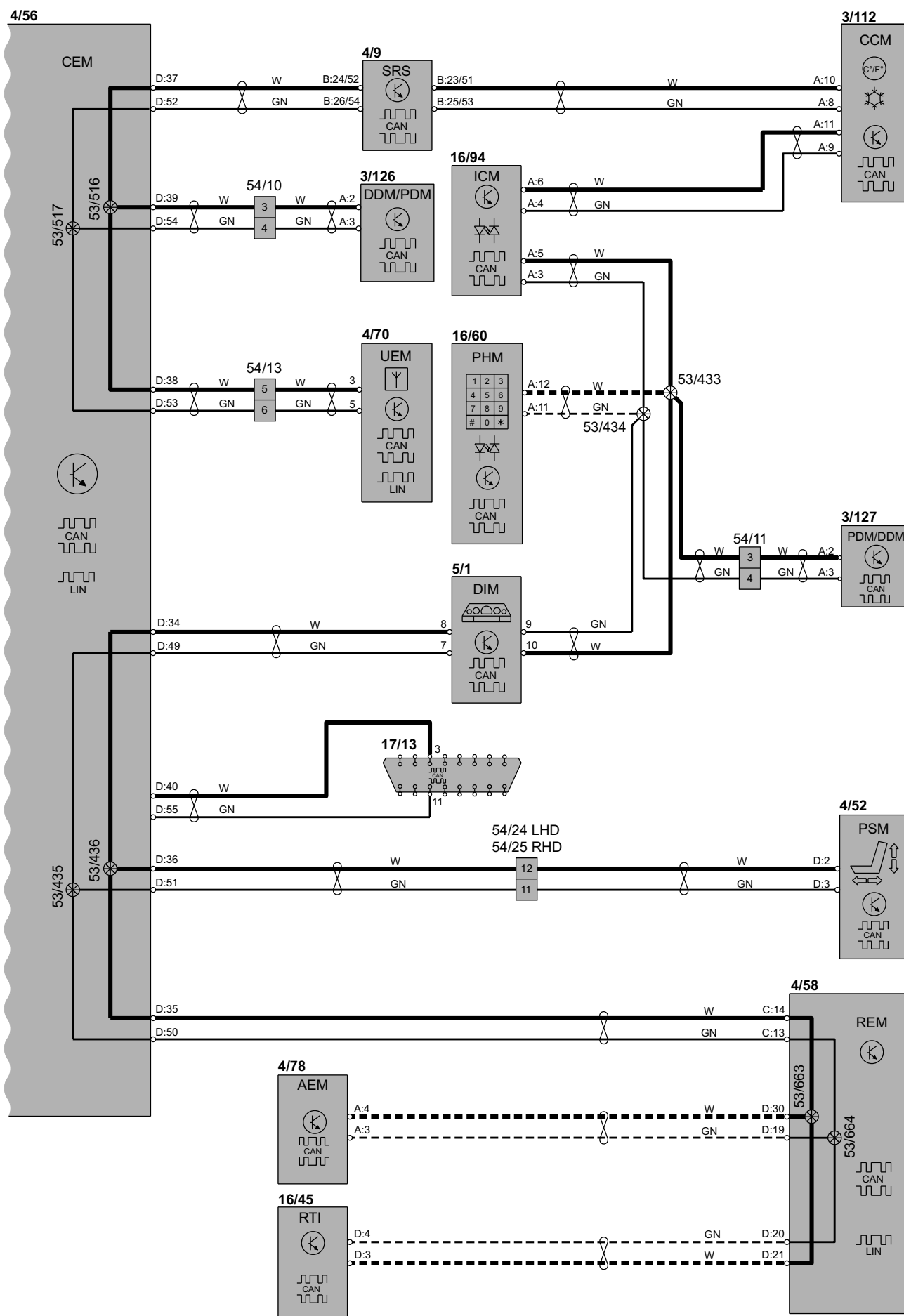
Control modules

Data communication, high speed CAN XC90



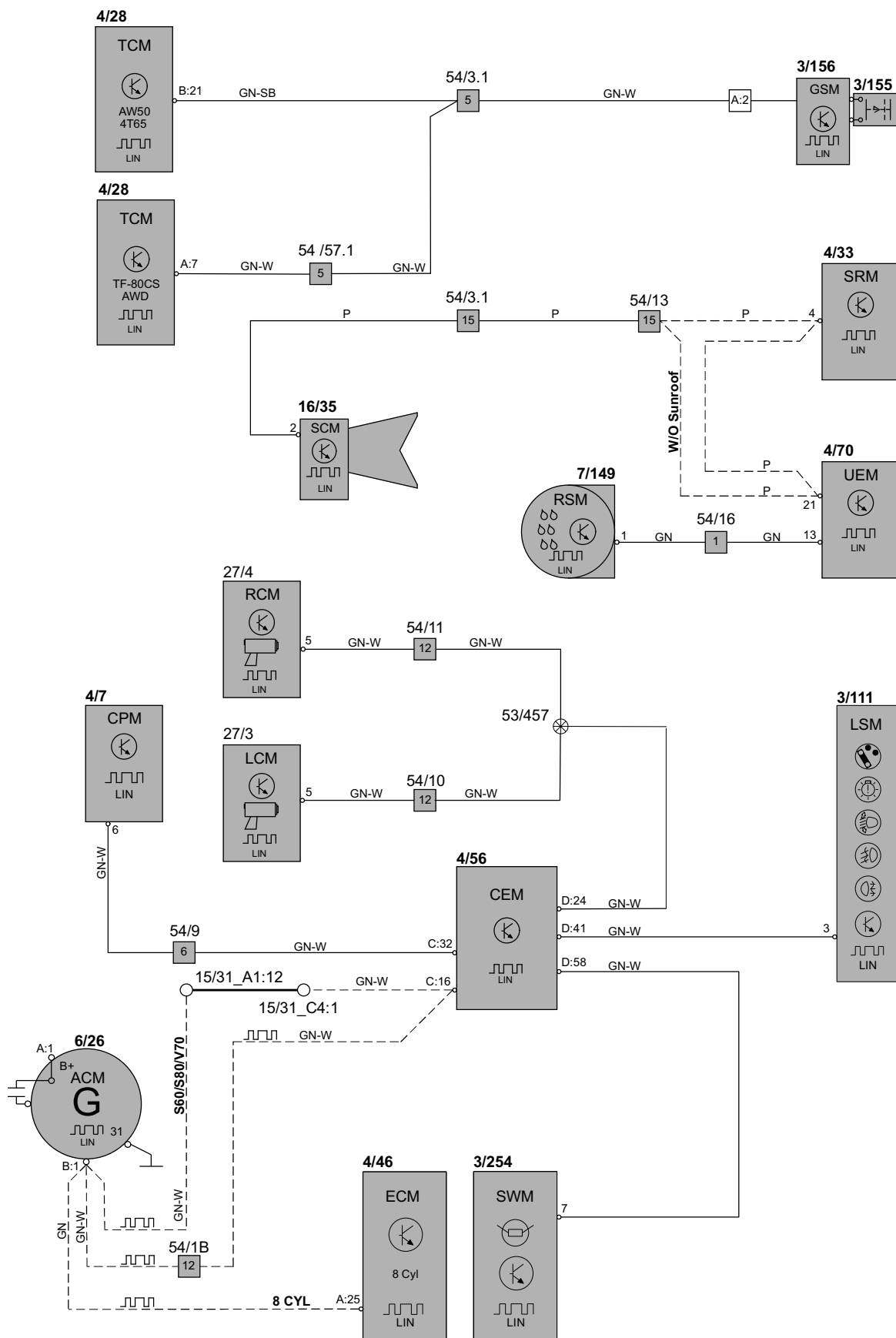
Control modules

Data communication, low speed CAN XC90



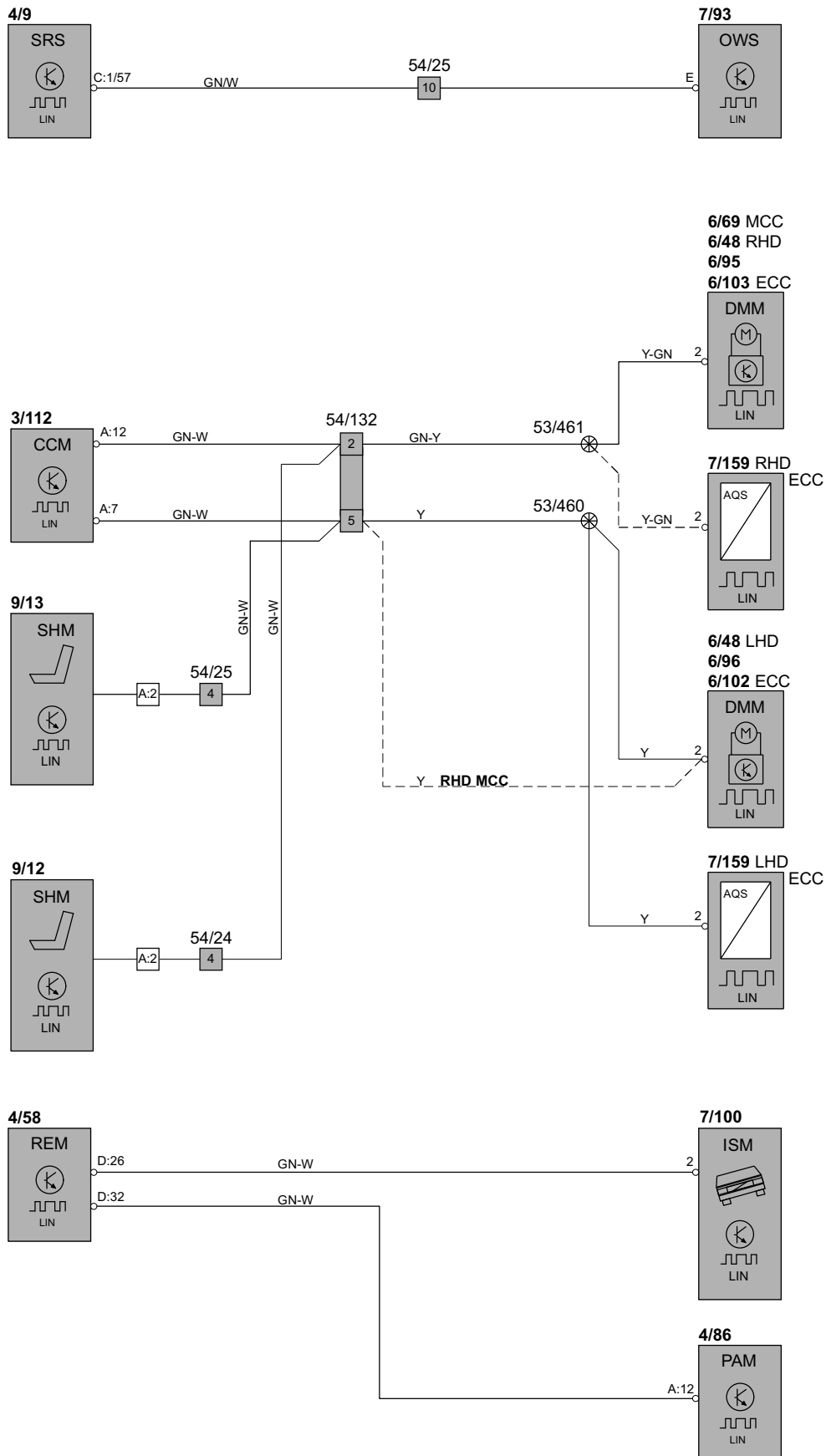
Control modules

LIN data communication 1:2



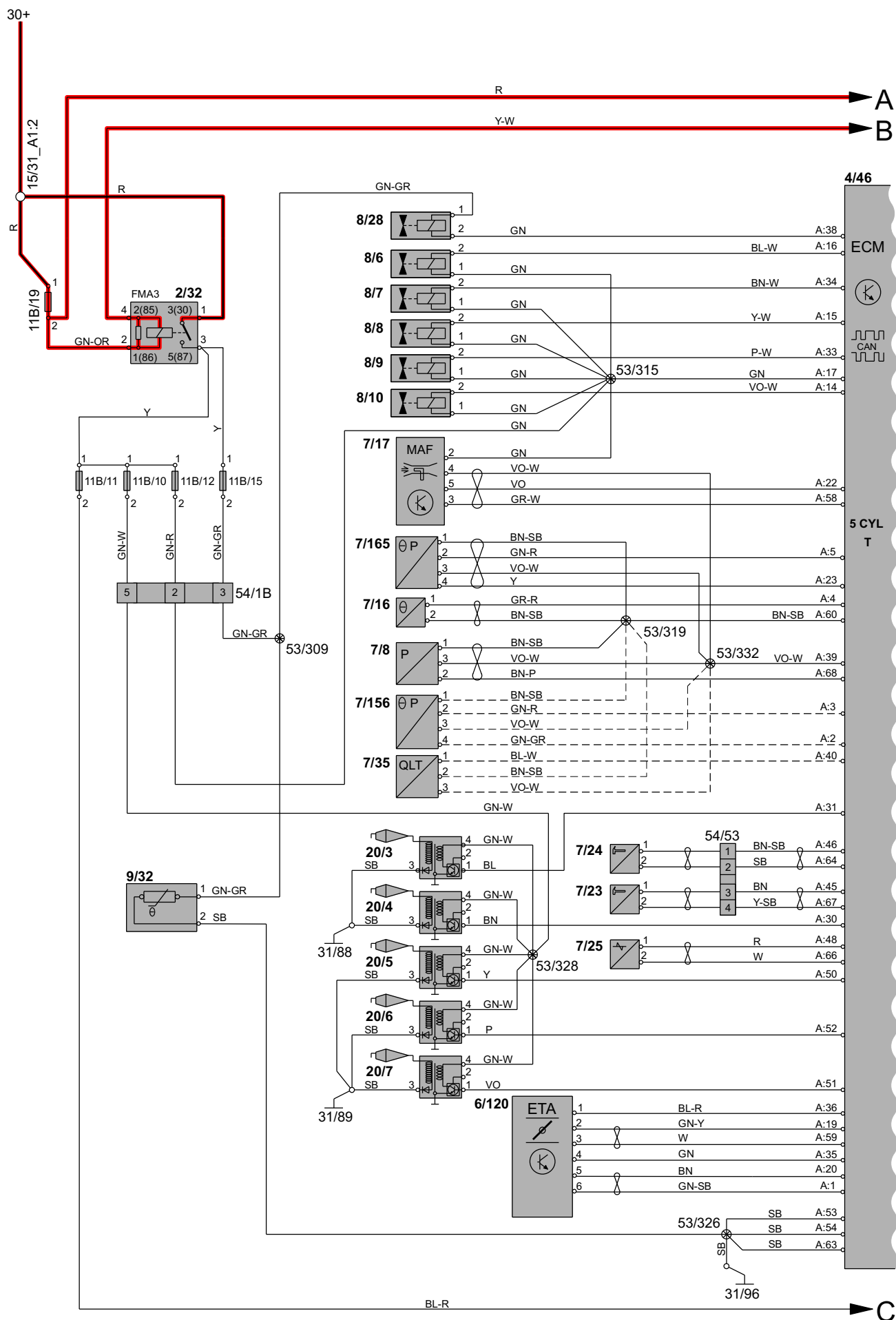
Control modules

LIN data communication 2:2



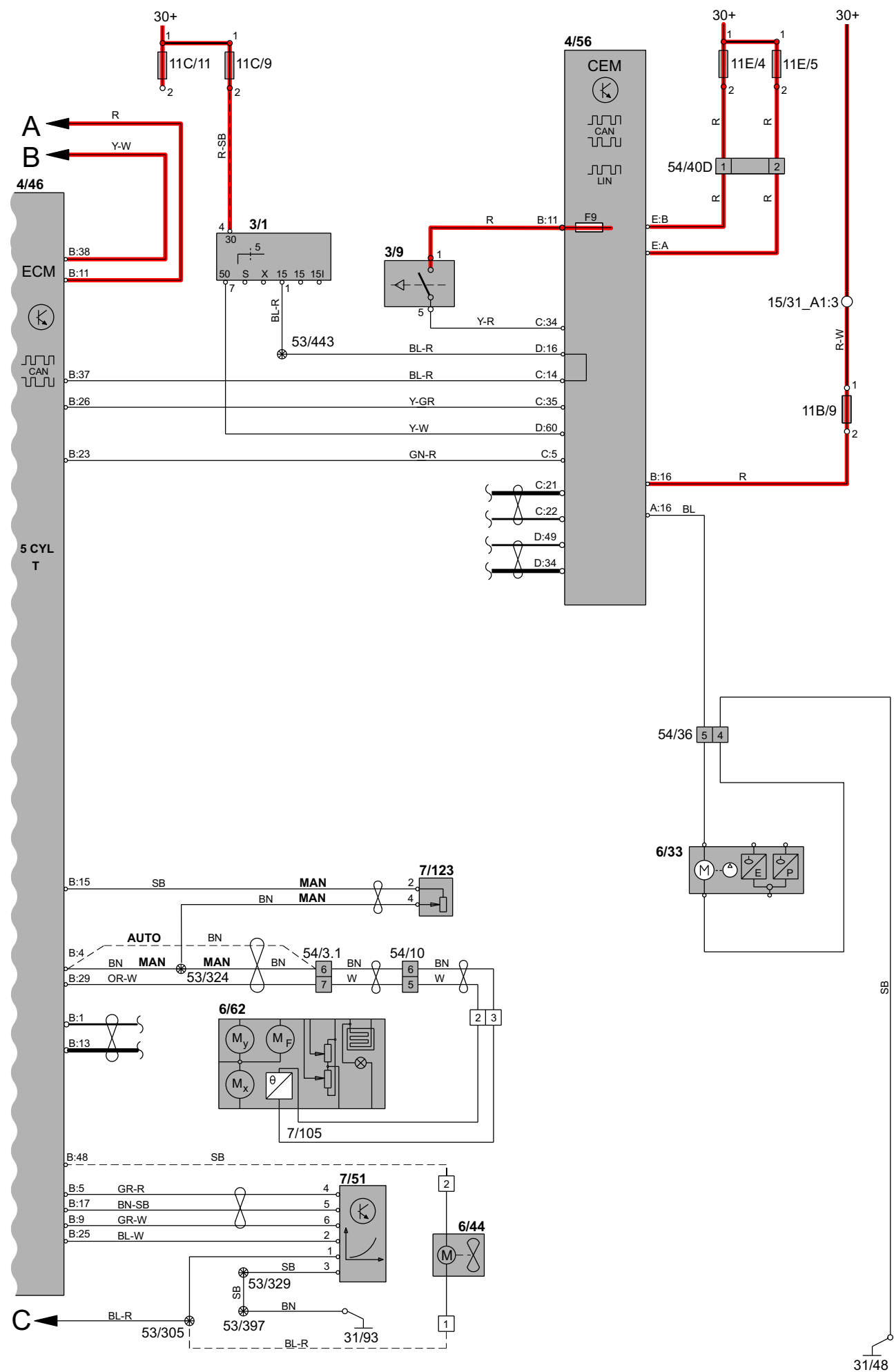
Group 23 Fuel system

Engine management system, 5-cyl. XC90 1:2



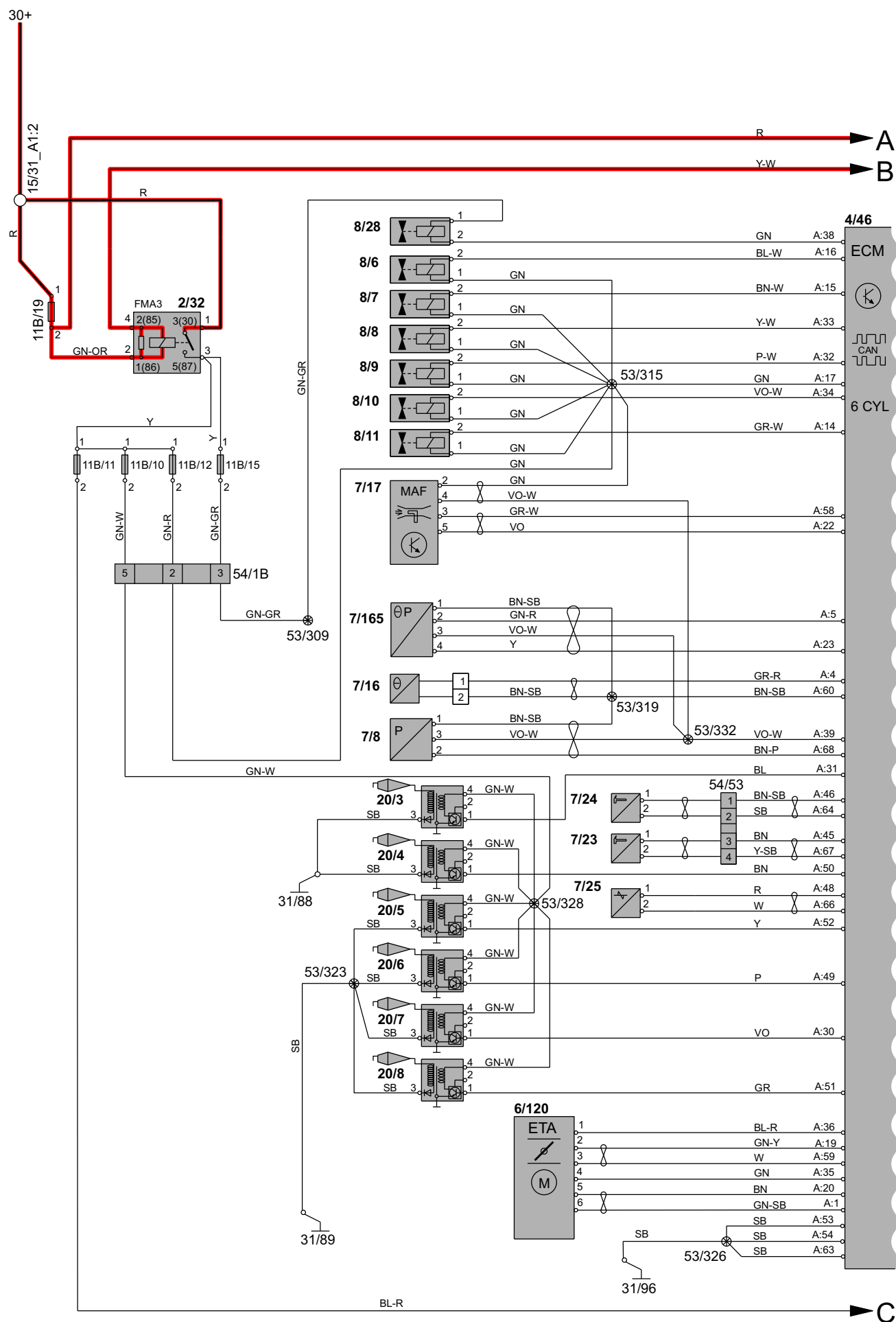
Group 23 Fuel system

Engine management system, 5-cyl. XC90 2:2



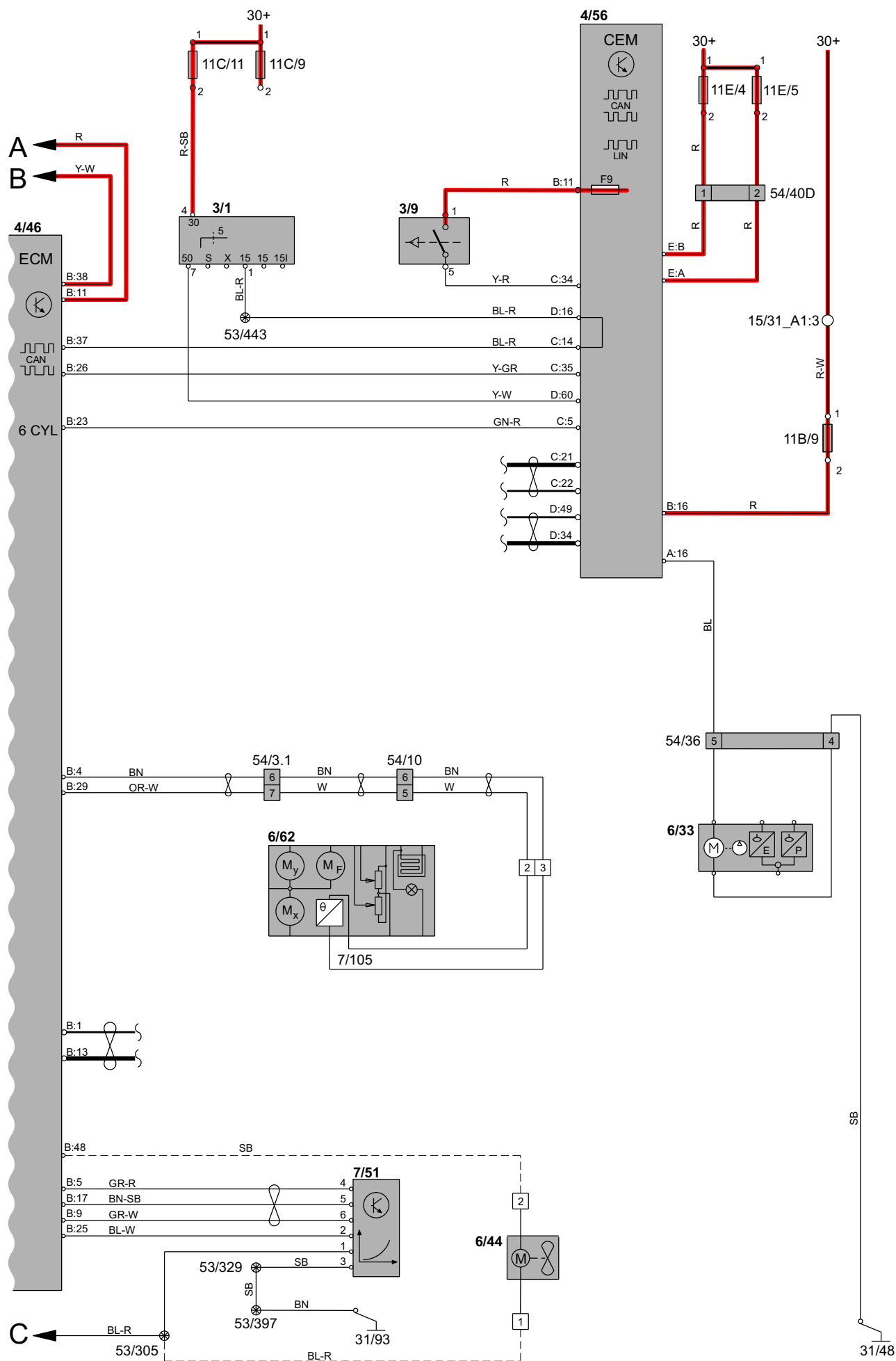
Group 23 Fuel system

Engine management system, 6-cyl. XC90 1:2



Group 23 Fuel system

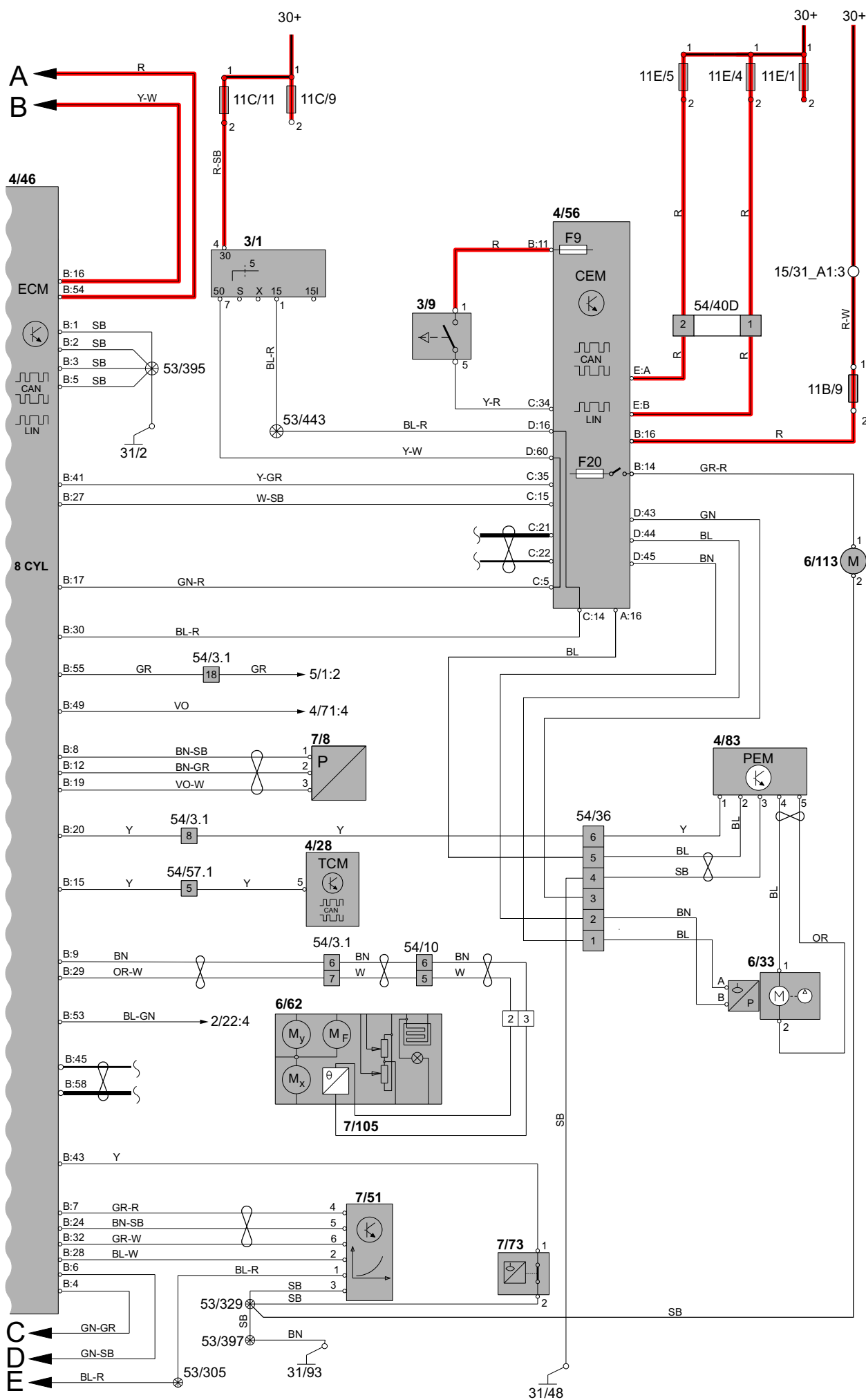
Engine management system, 6-cyl. XC90 2:2



30+

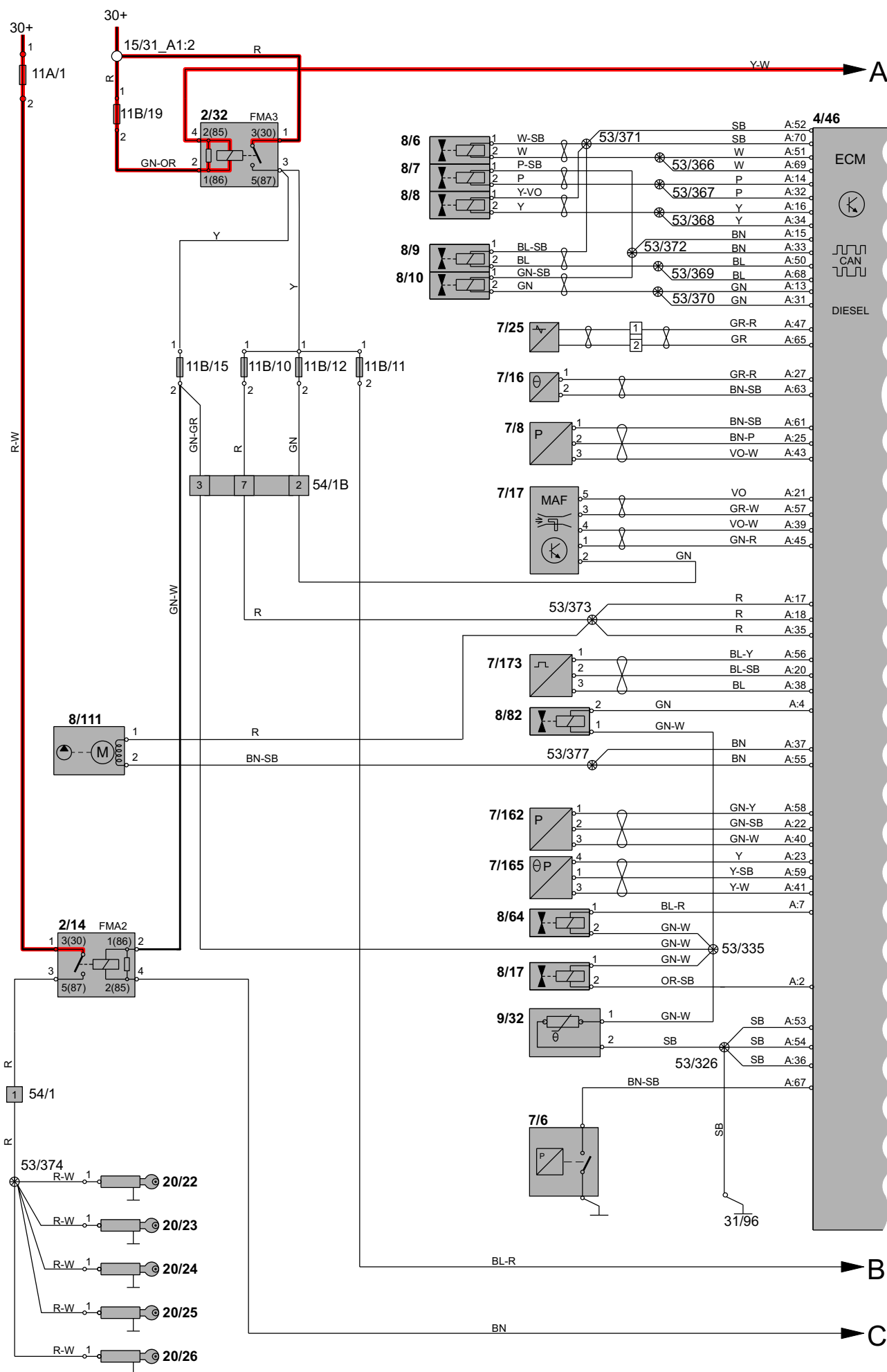
Group 23 Fuel system

Engine management system, 8-cyl. XC90 2:2



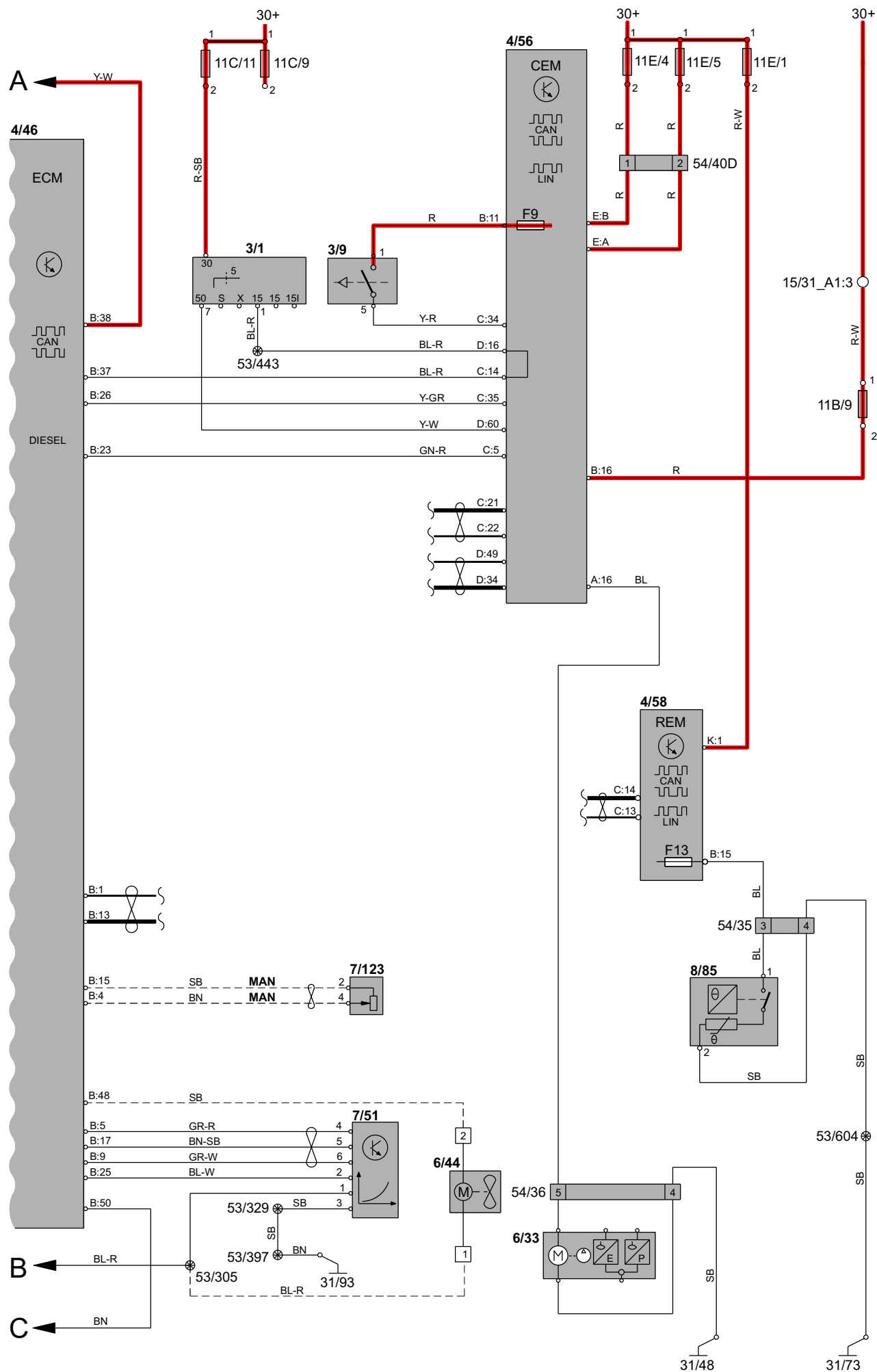
Group 23 Fuel system

Engine management system, Diesel XC90 1:2

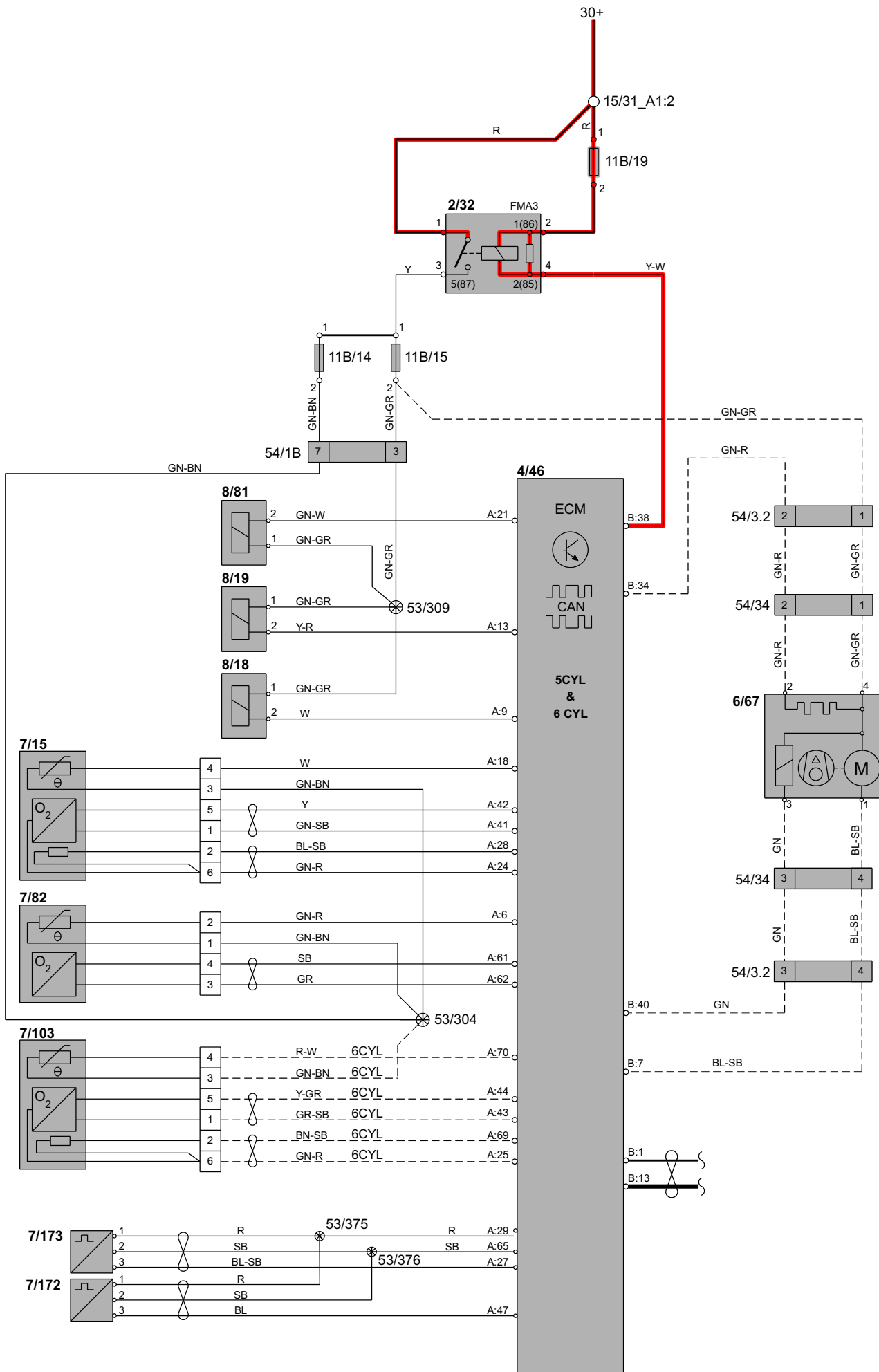


Group 23 Fuel system

Engine management system, Diesel XC90 2:2

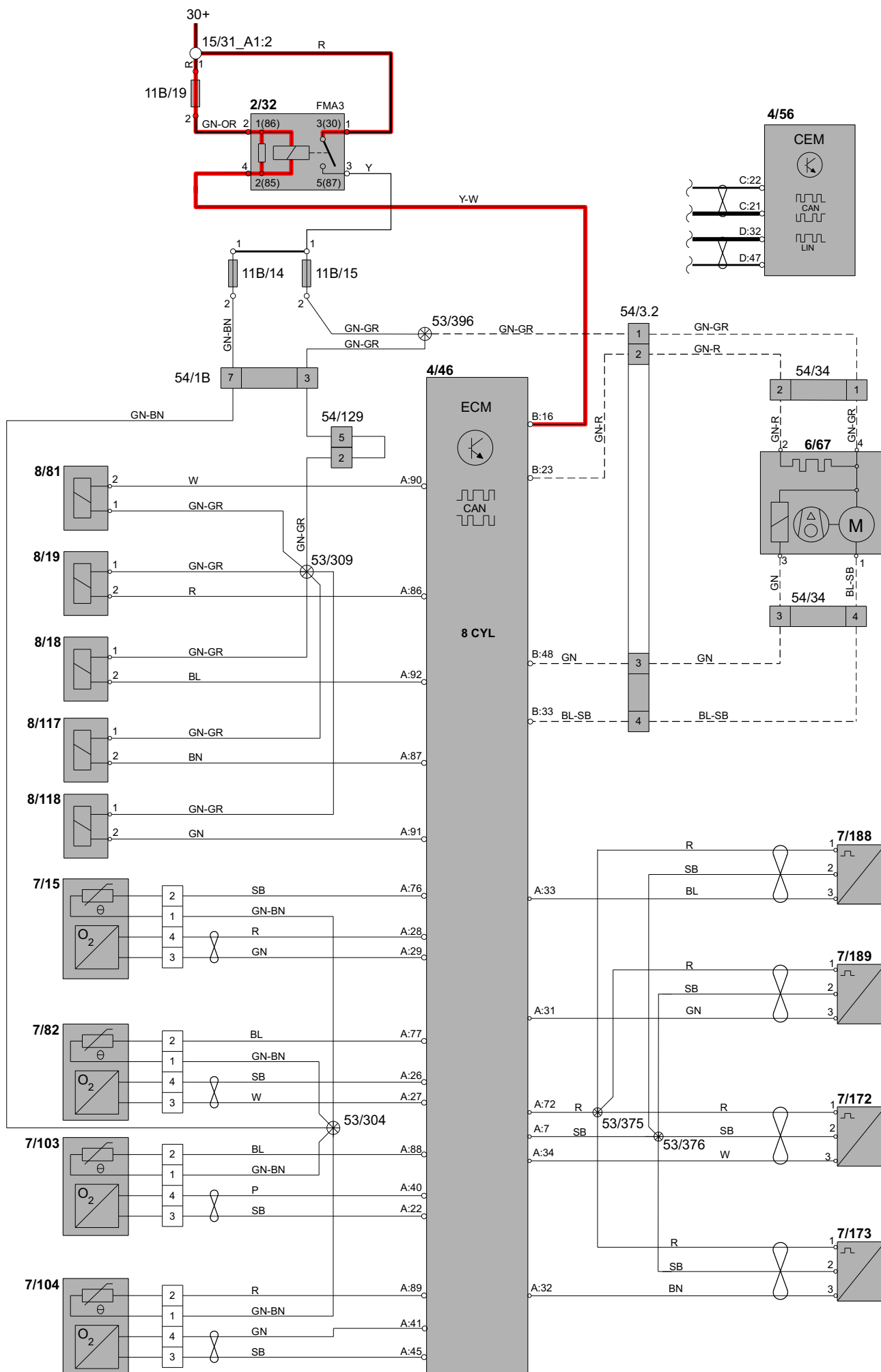


Emission control 5 & 6-cyl. XC90



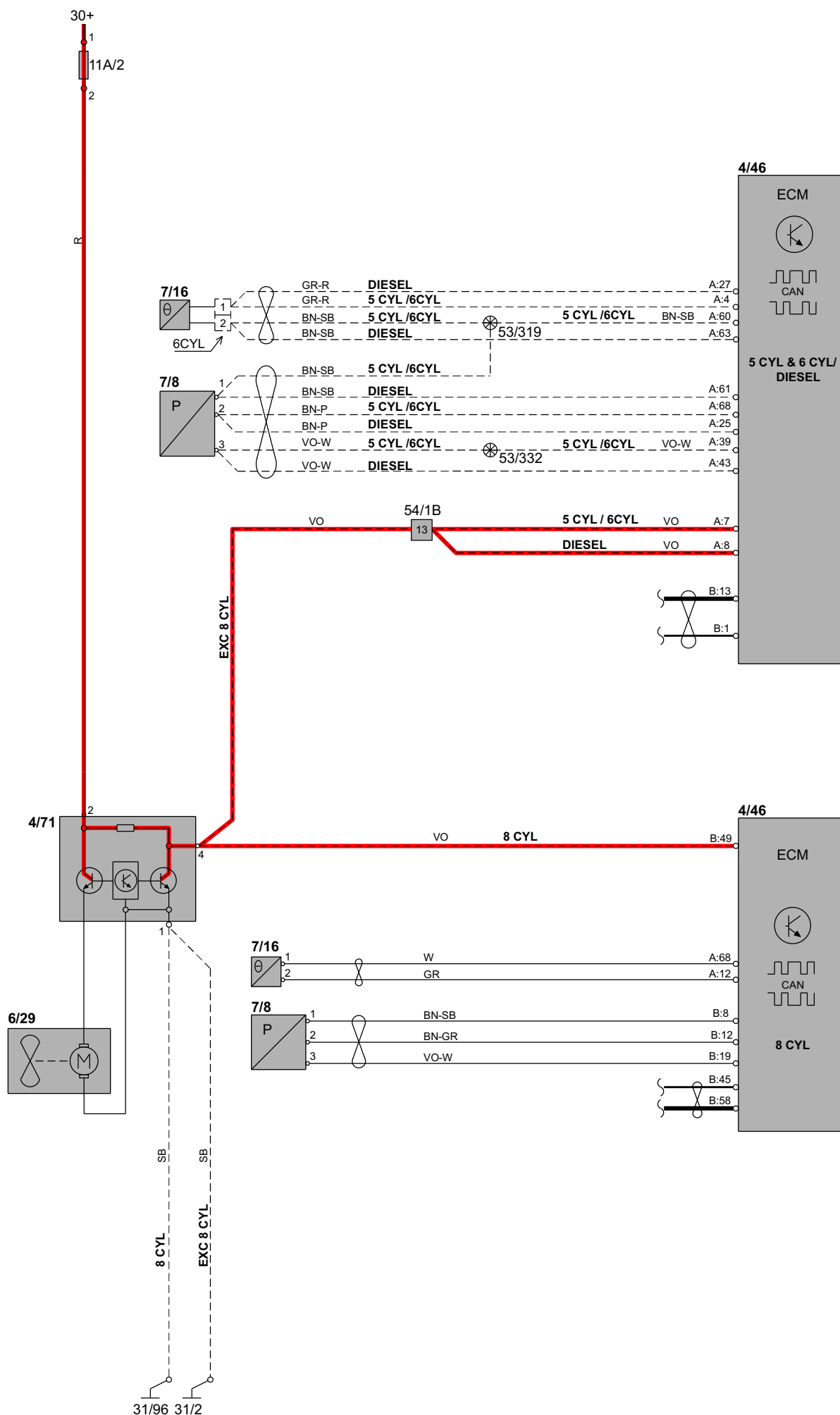
Group 23 Fuel system

Emission control 8-cyl. XC90

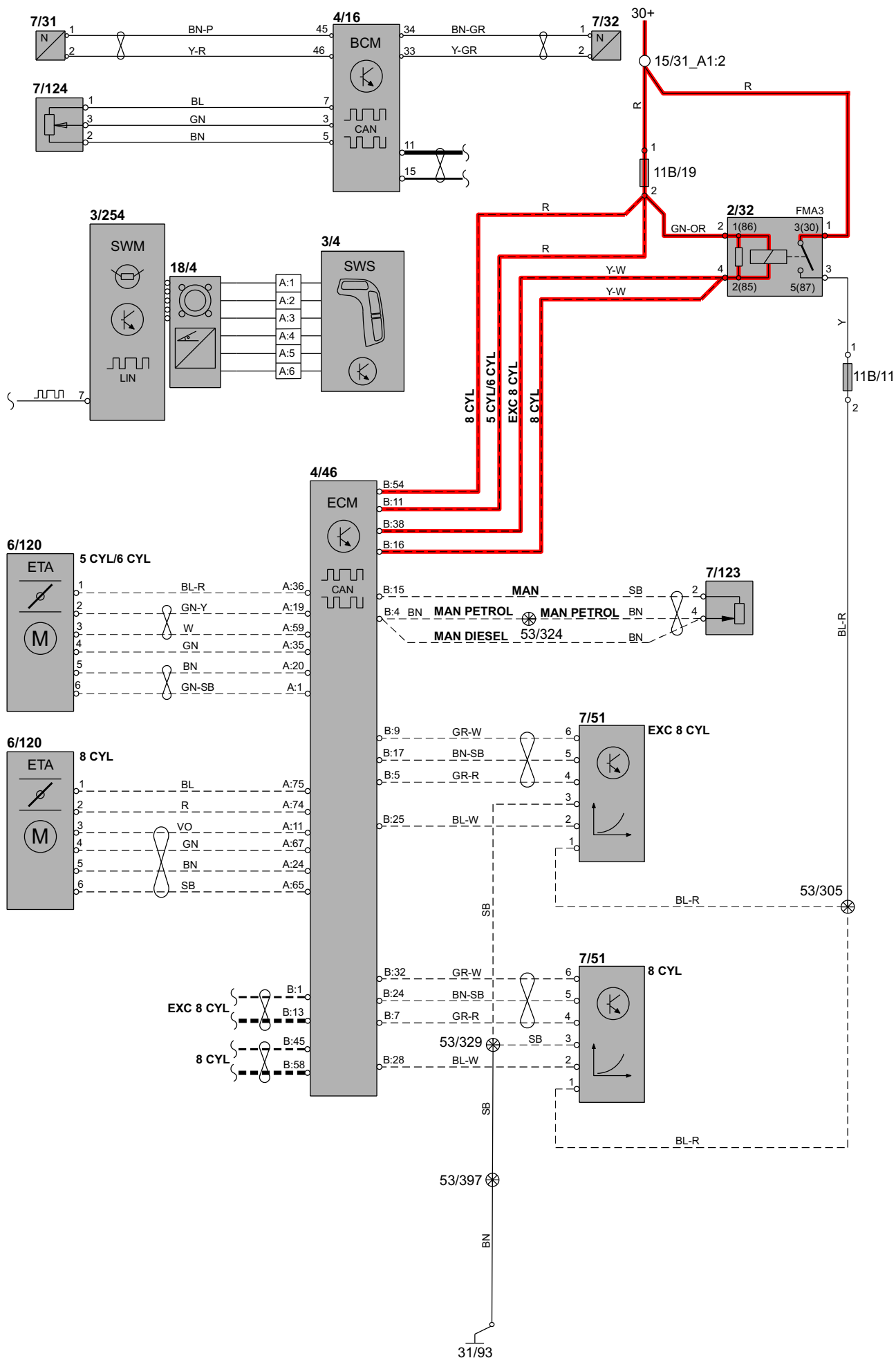


Group 26 Cooling system

Electric cooling fan XC90

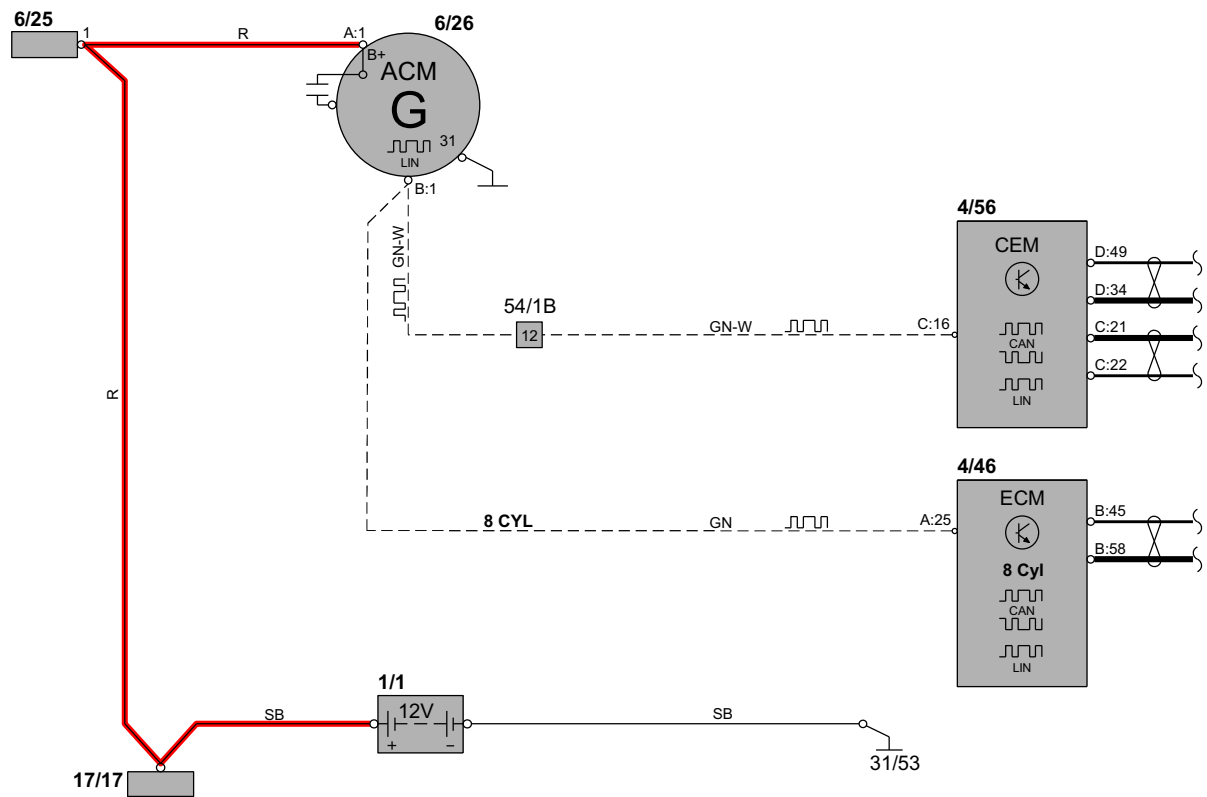


Group 27 Engine control Cruise control XC90



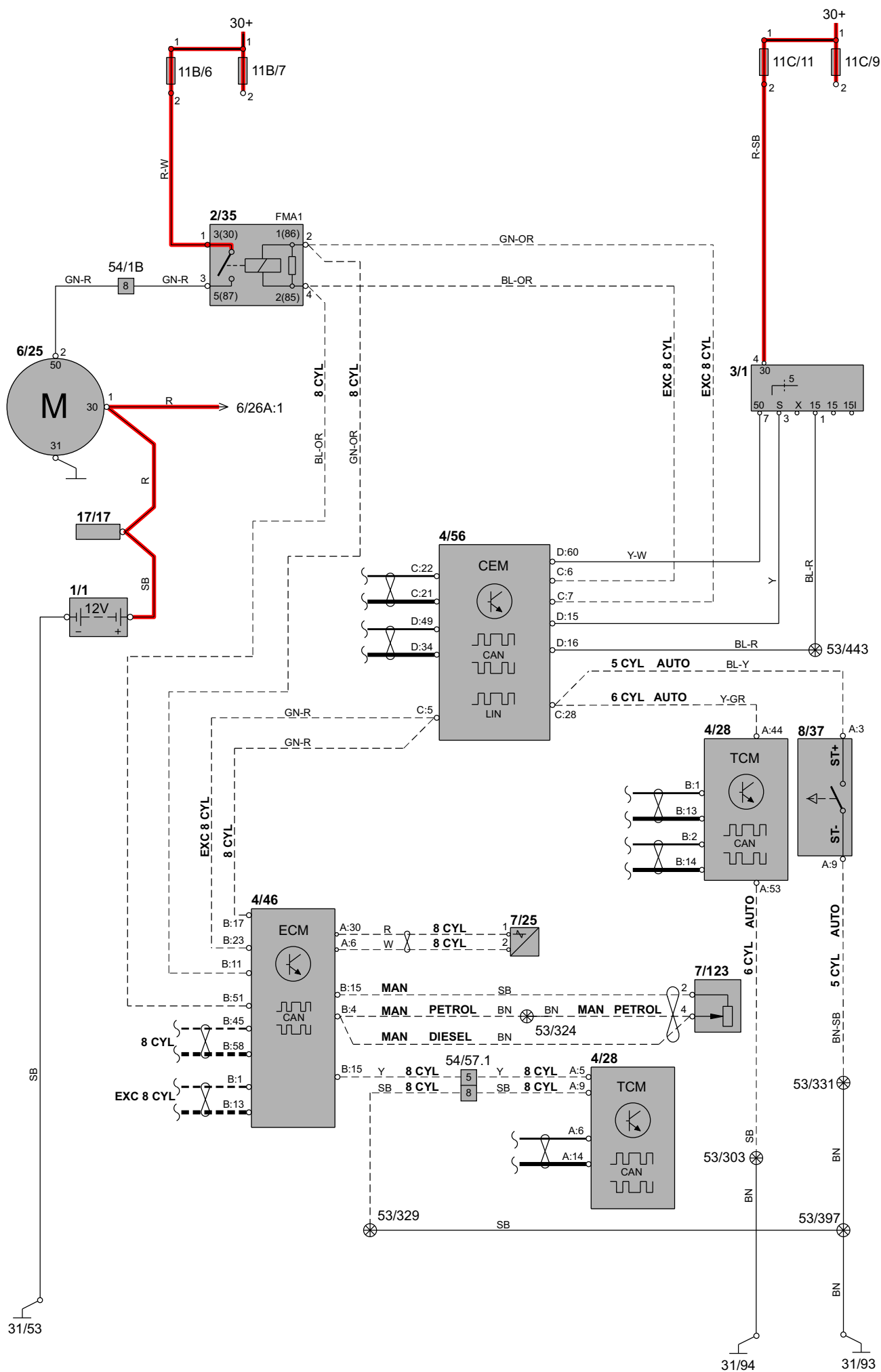
Group 32 Generator and voltage regulator

Power supply XC90



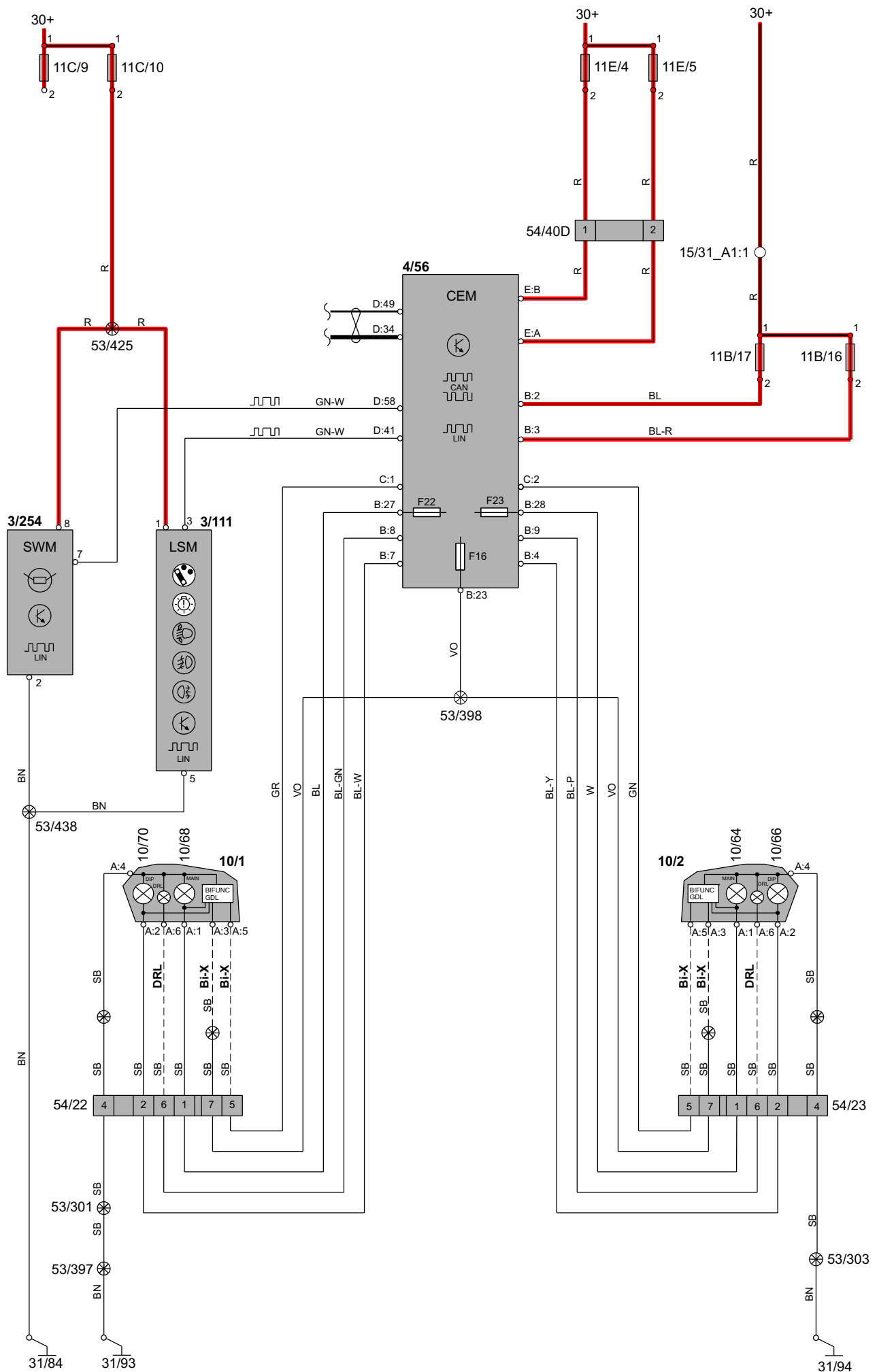
Group 33 Starting system

Starter system XC90

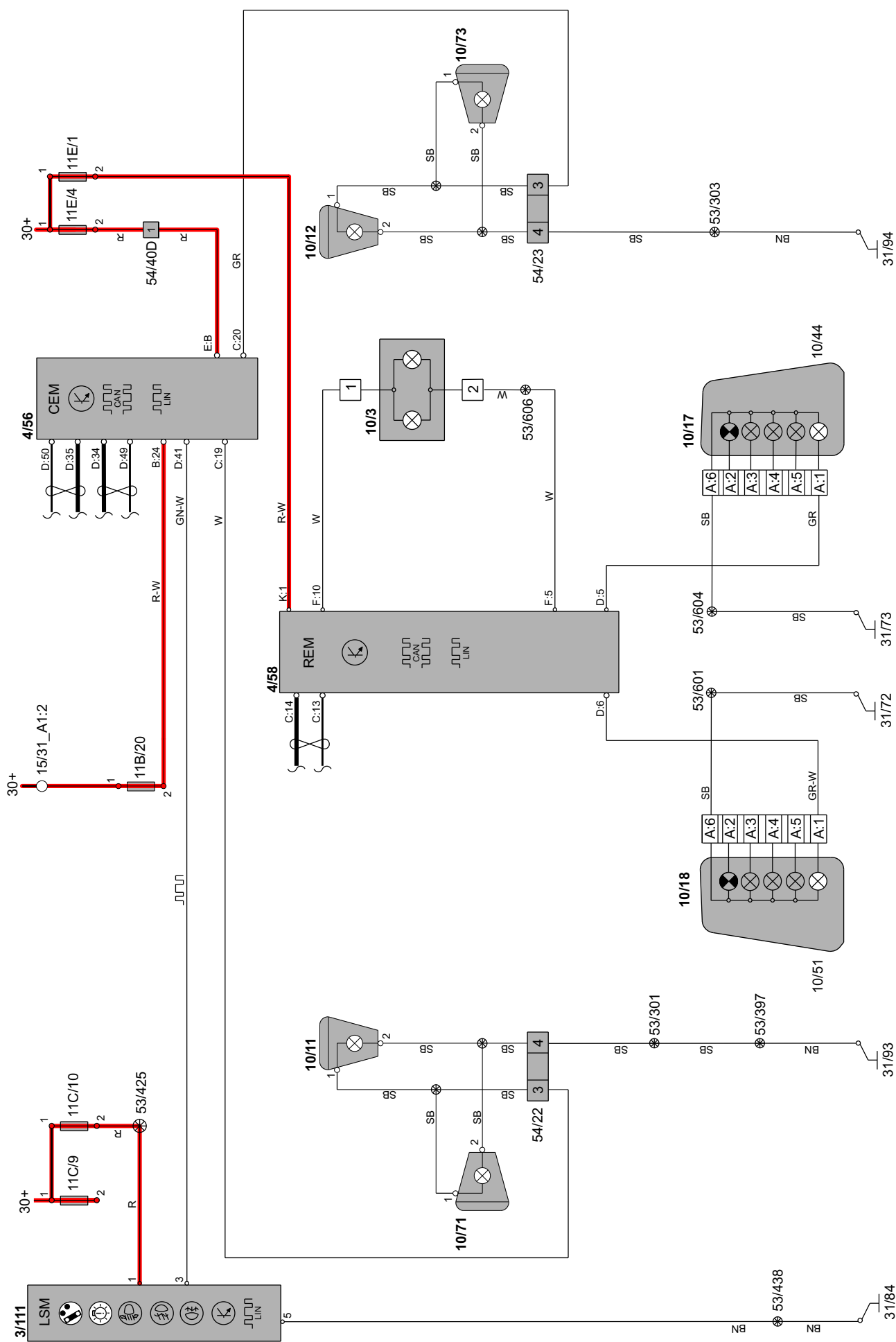


Group 35 Lighting

High and low beams/Bi-Xenon & Daytime running lights XC90

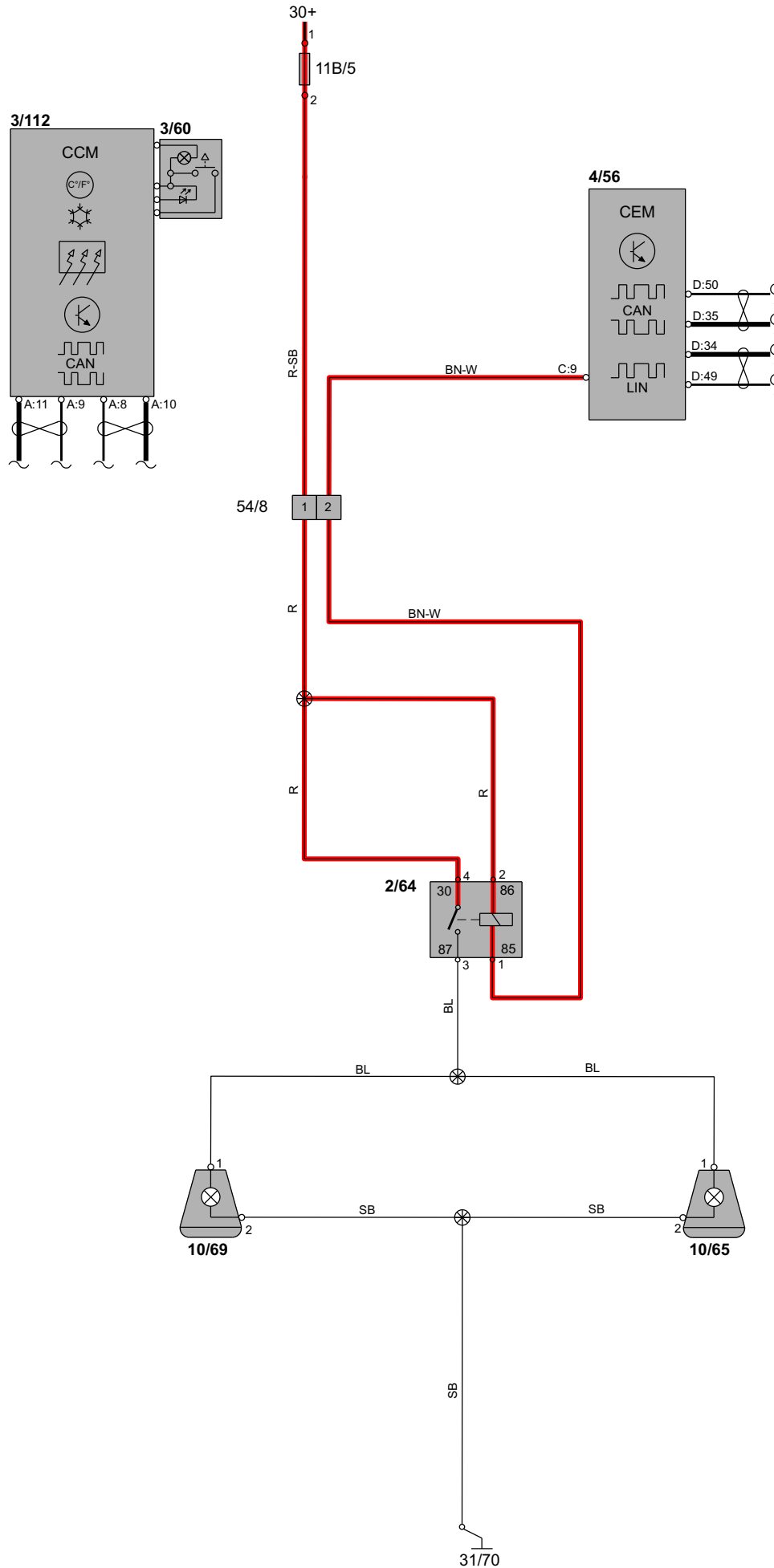


Group 35 Lighting
Position/parking lights, tail lights & license plate lighting XC90



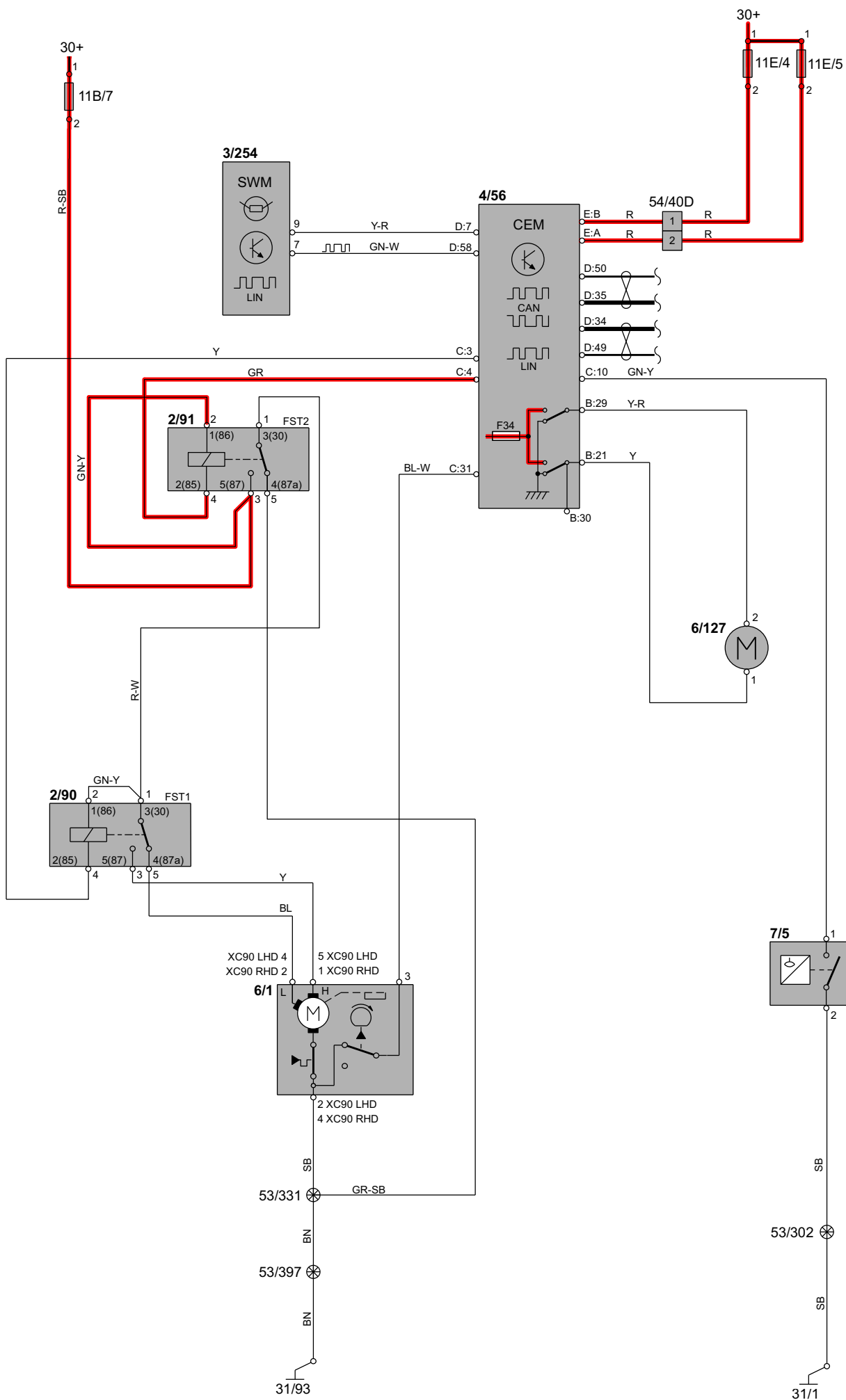
Group 35 Lighting, Accessories

Auxiliary lights XC90



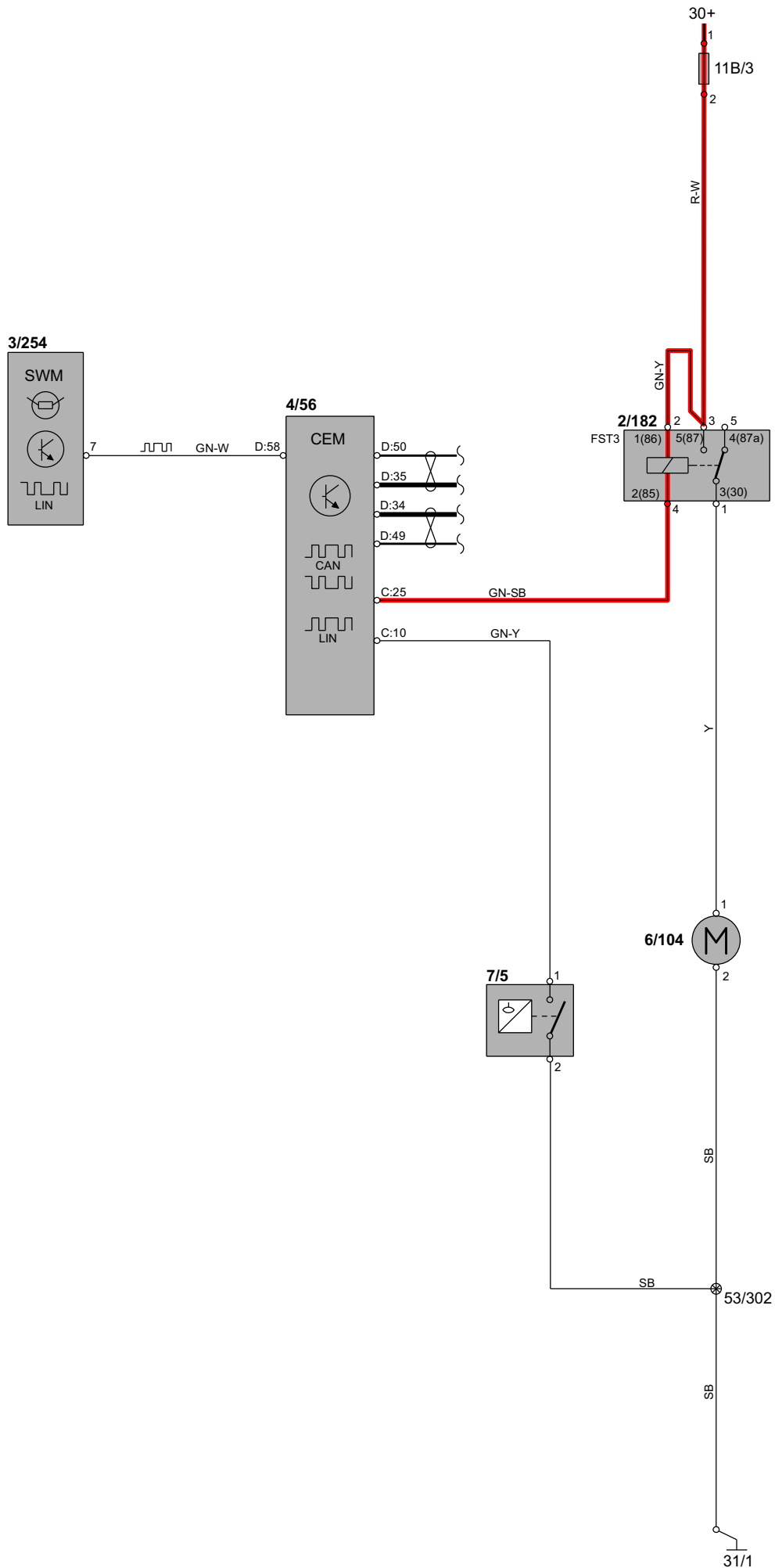
Group 36 Additional electrical equipment

Windshield wipers/washer XC90

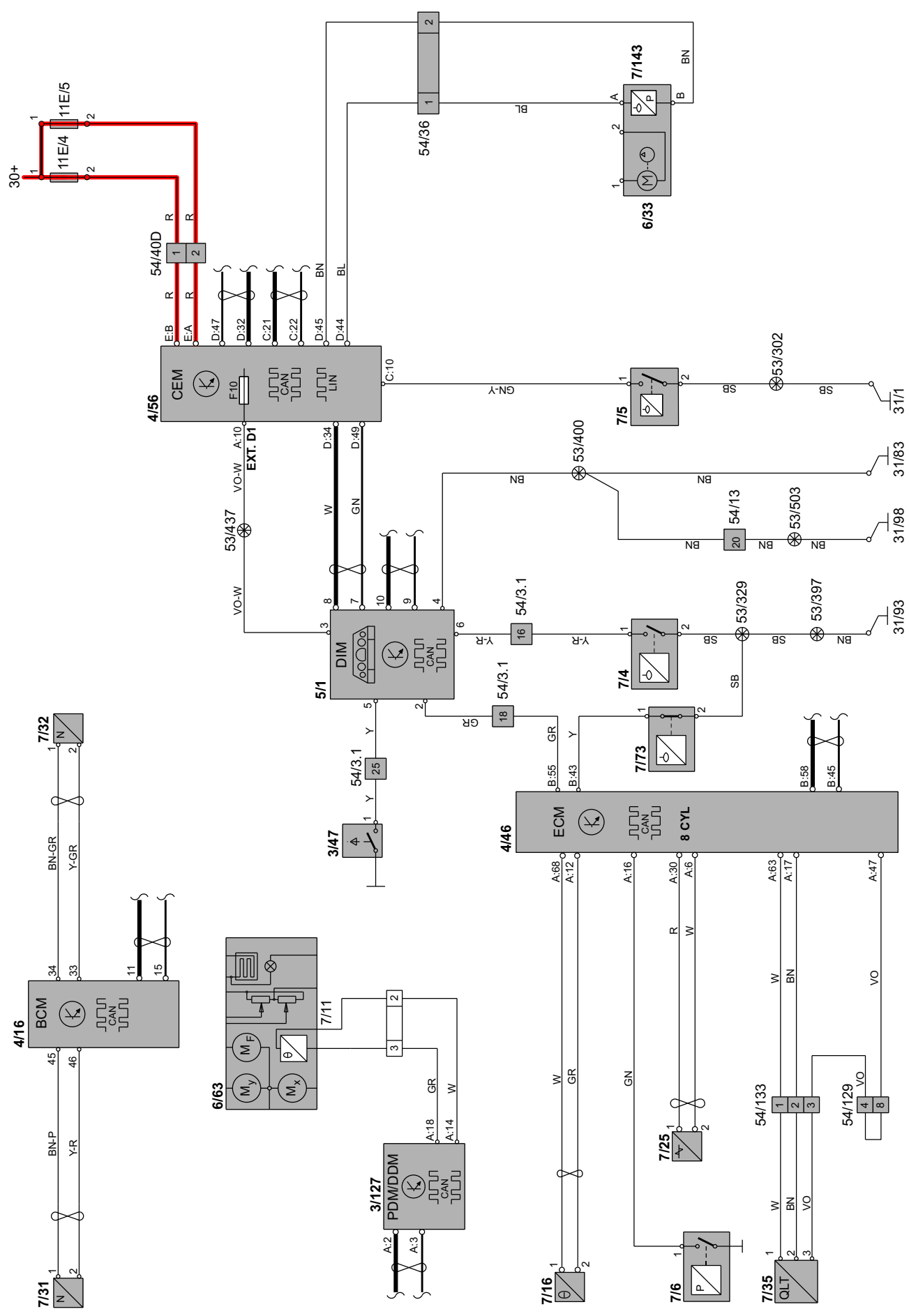


Group 36 Additional electrical equipment

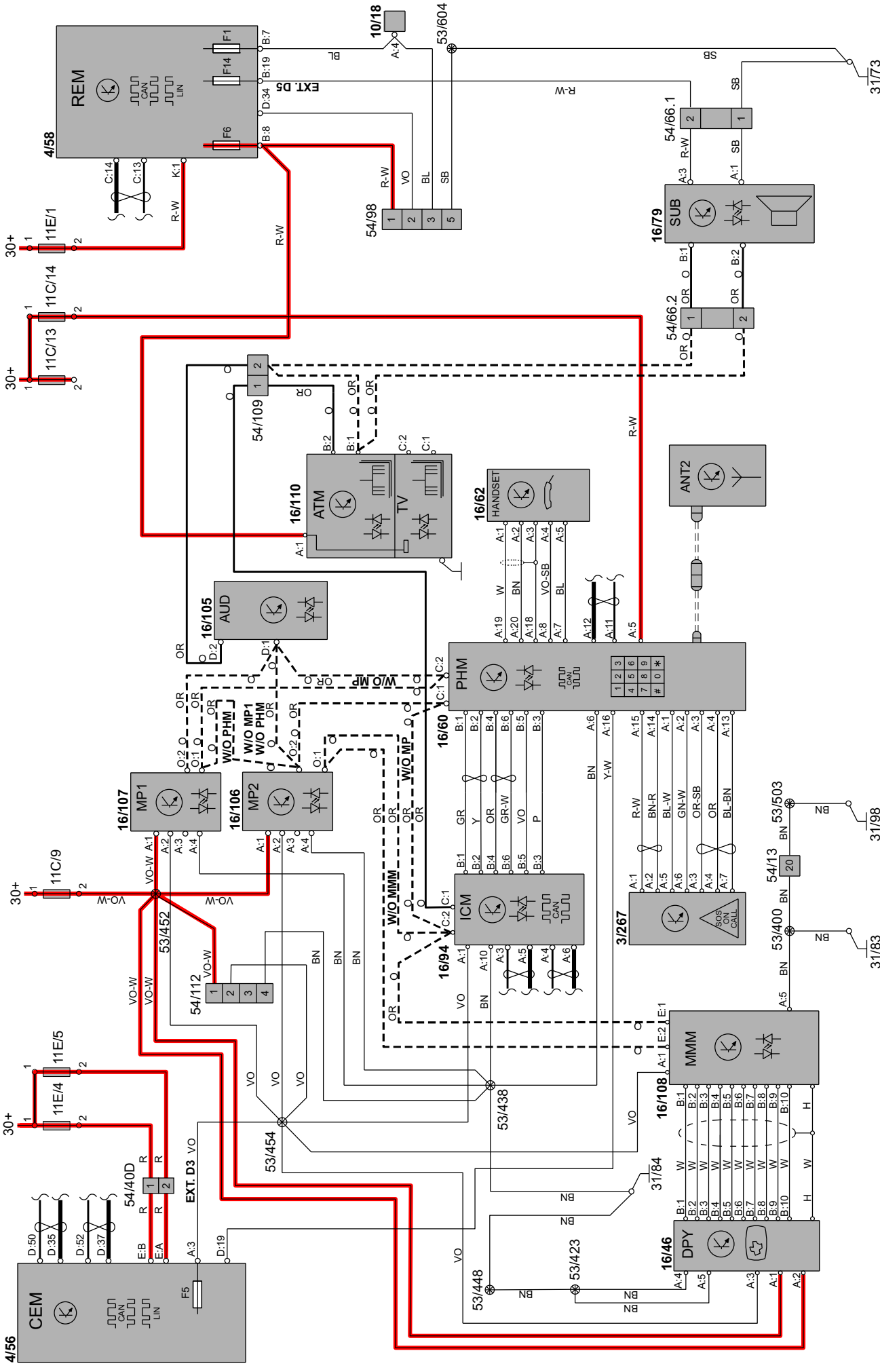
High pressure headlight washer XC90



Group 38 Instruments Driver information module, 8-cyl. XC90

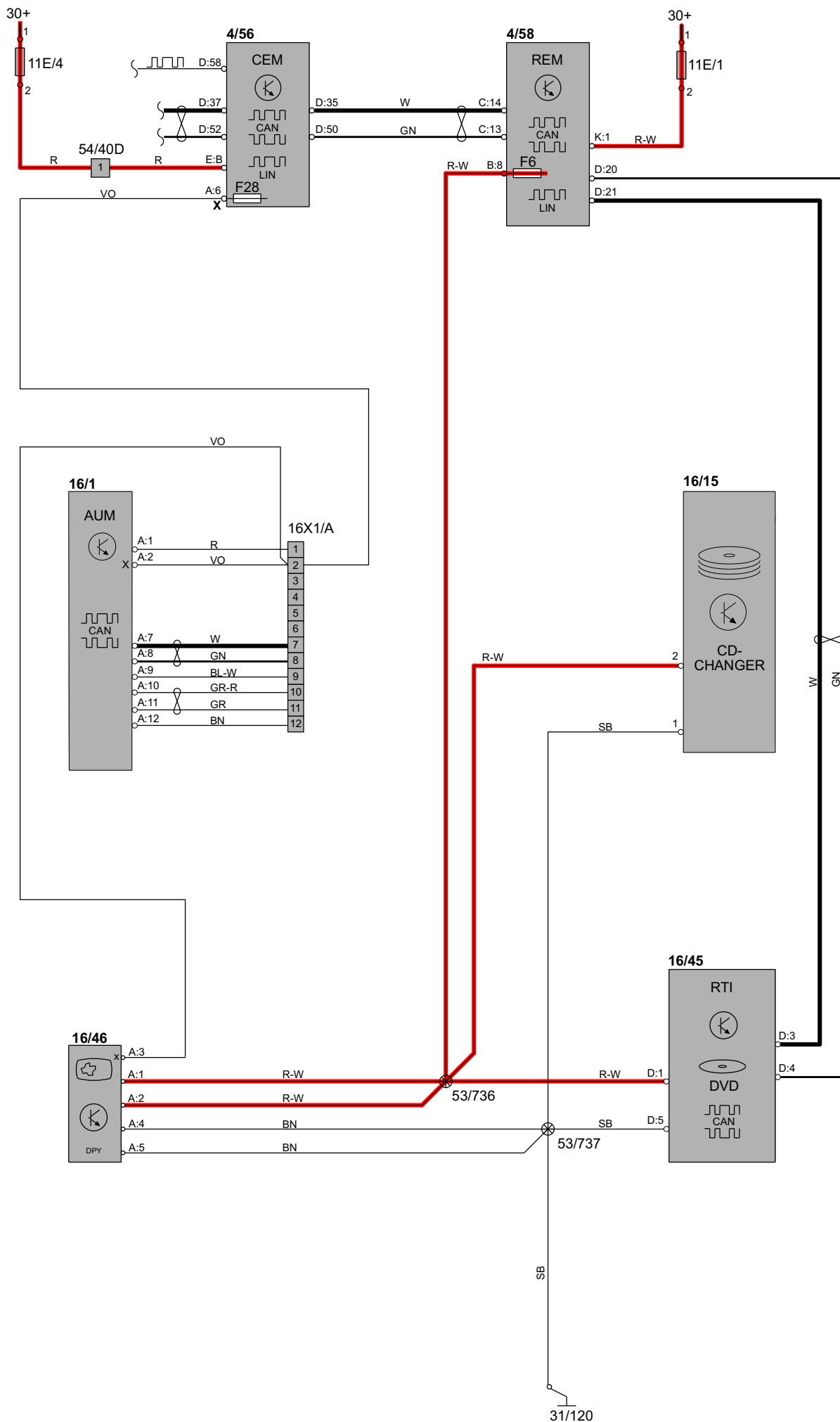


Group 39 Other



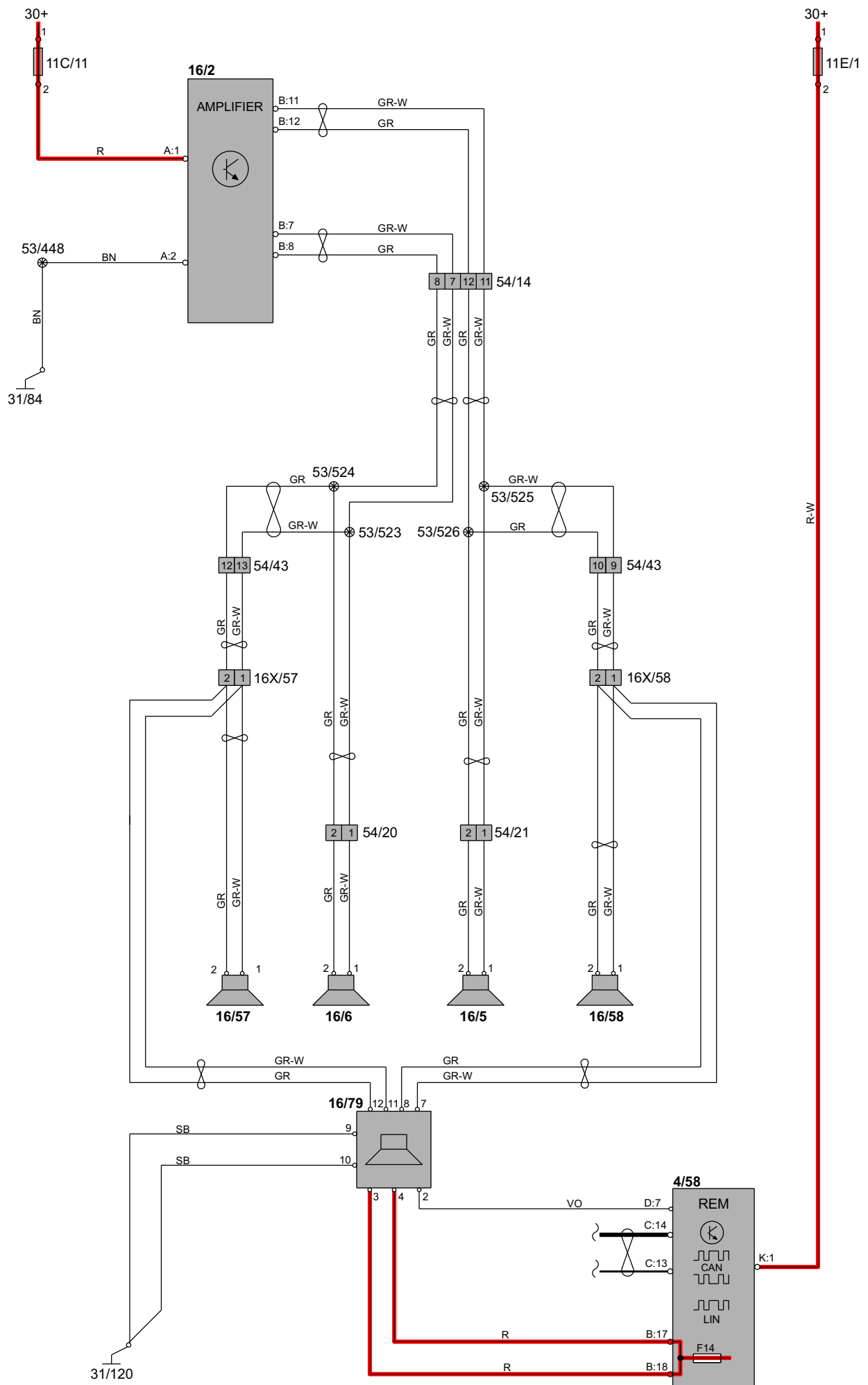
Group 39 Other, Accessories

Road Traffic Information (RTI) & CD changer S60/S80/V70



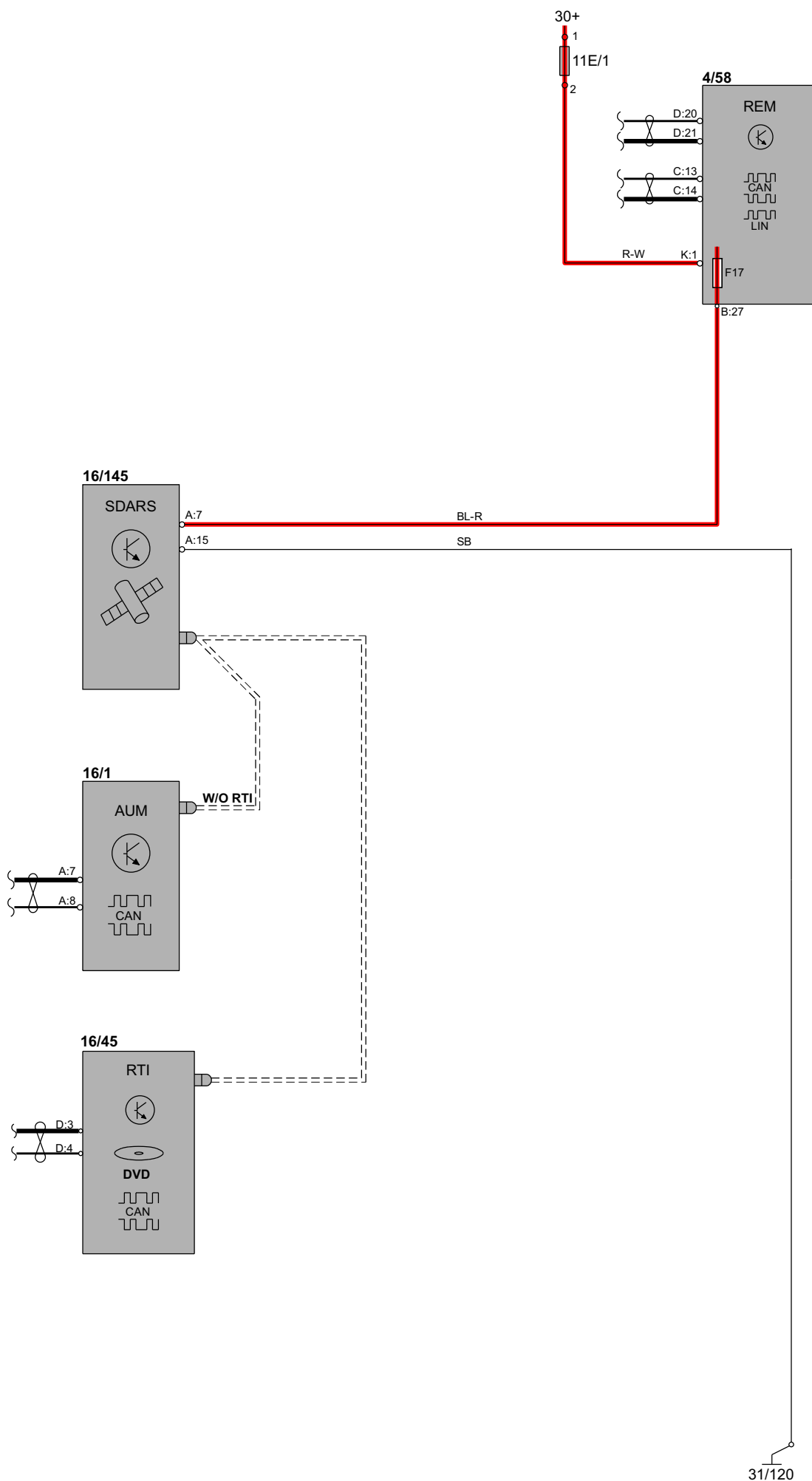
Group 39 Other, Accessories

Subwoofer V70



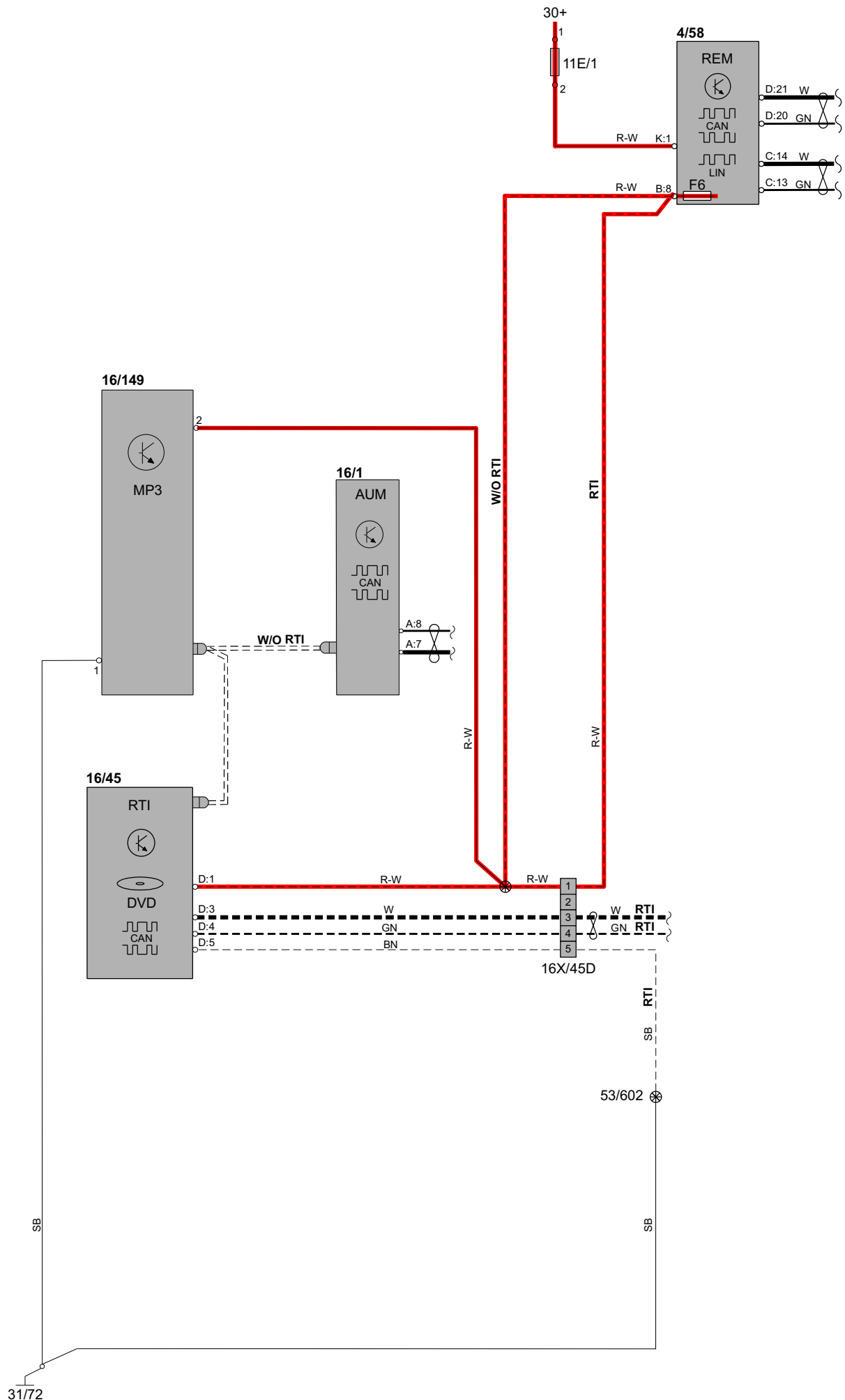
Group 39 Other, Accessories

Satellite radio S60/S80/V70

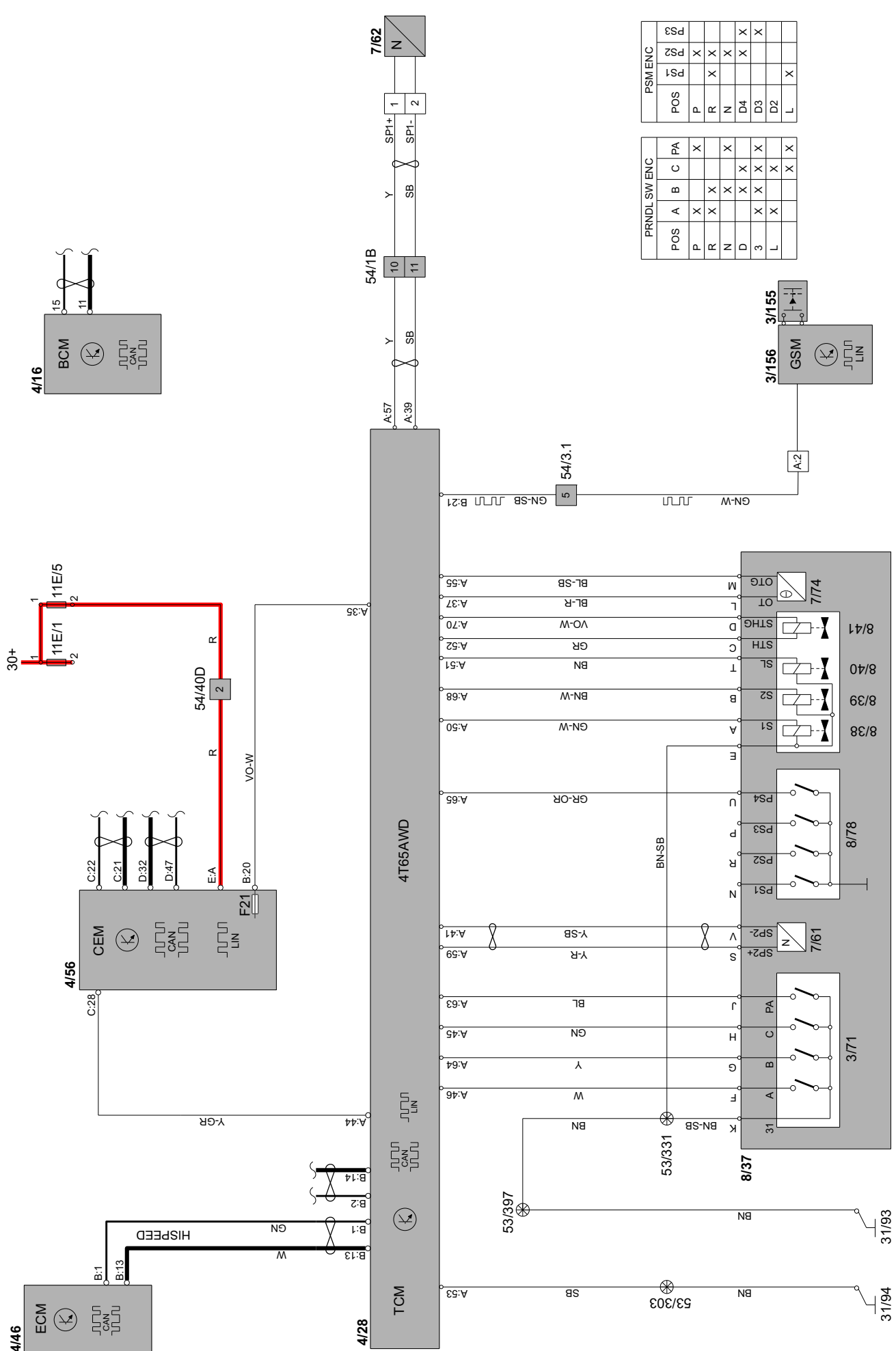


Group 39 Other, Accessories

MP3 player S60/S80/V70

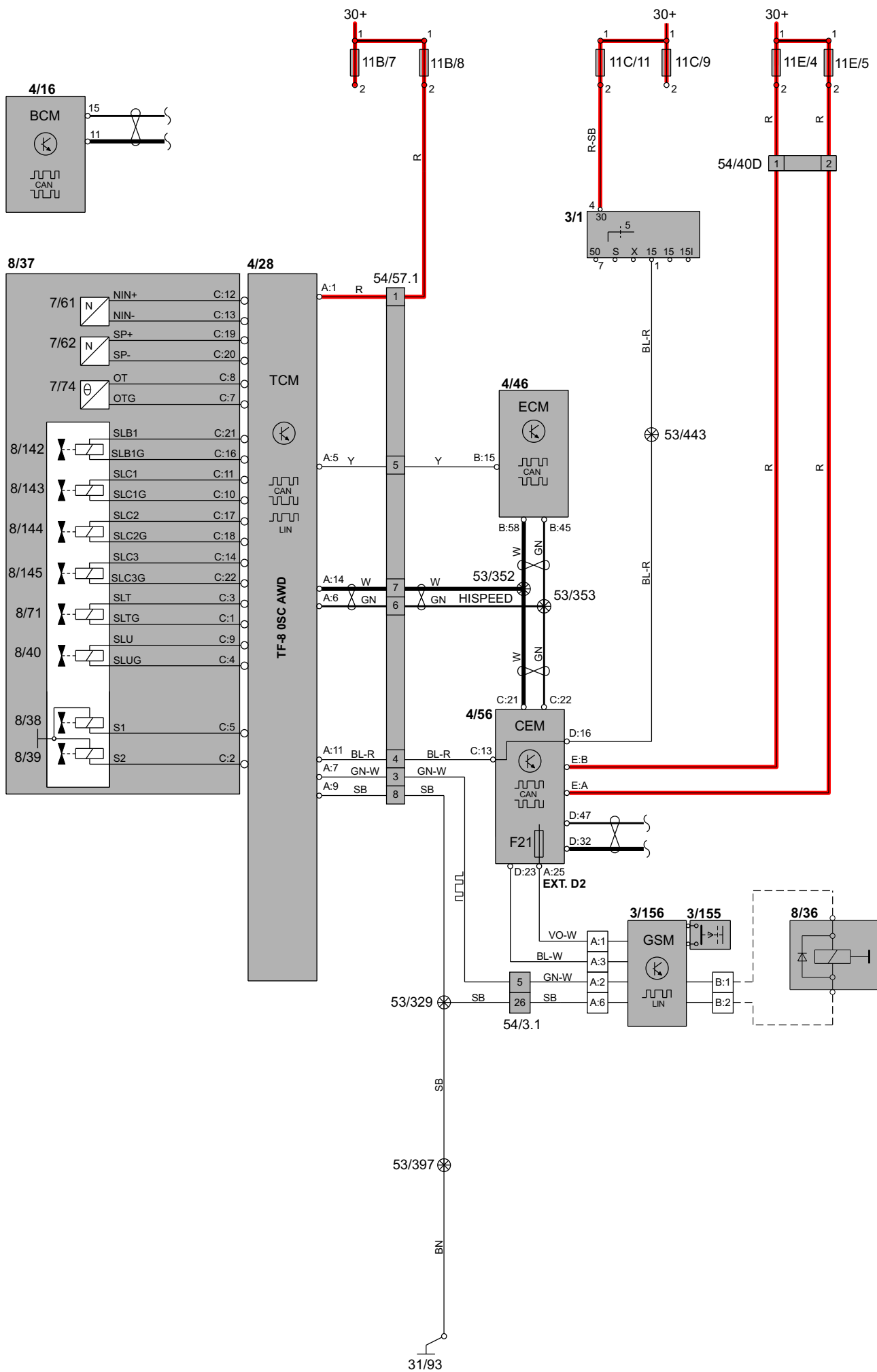


Group 43 Transmission
Automatic transmission 4T65AWD XC90

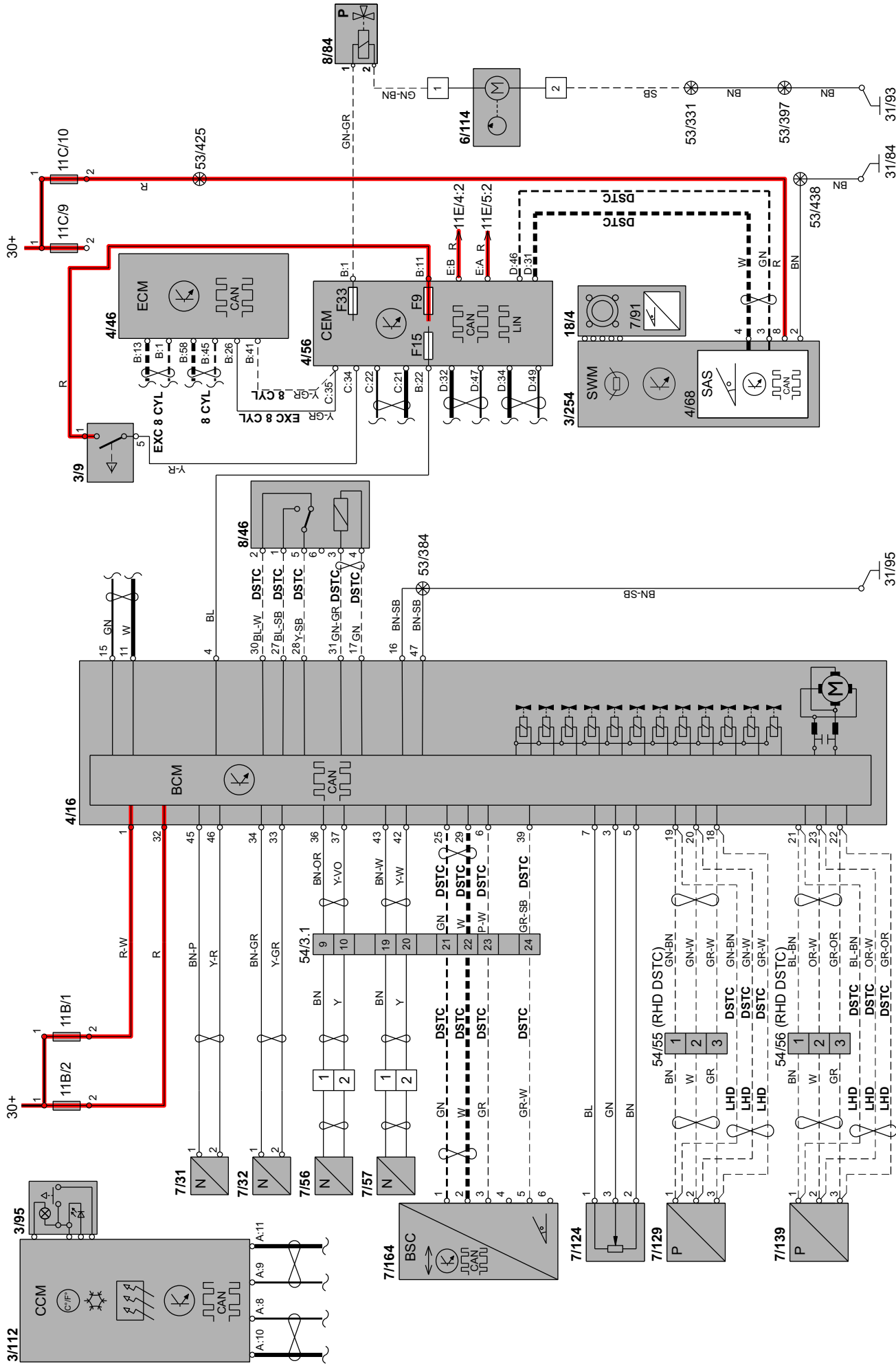


PRNDL SW ENC				PSM ENC			
POS	A	B	C	PA	POS	P1	P2
P	X	X		X	P	X	X
R	X	X		X	R	X	X
N				X	N		
D				X	D4		
3	X	X	X	X	D3		
L	X	X		X	D2		
				X	L	X	

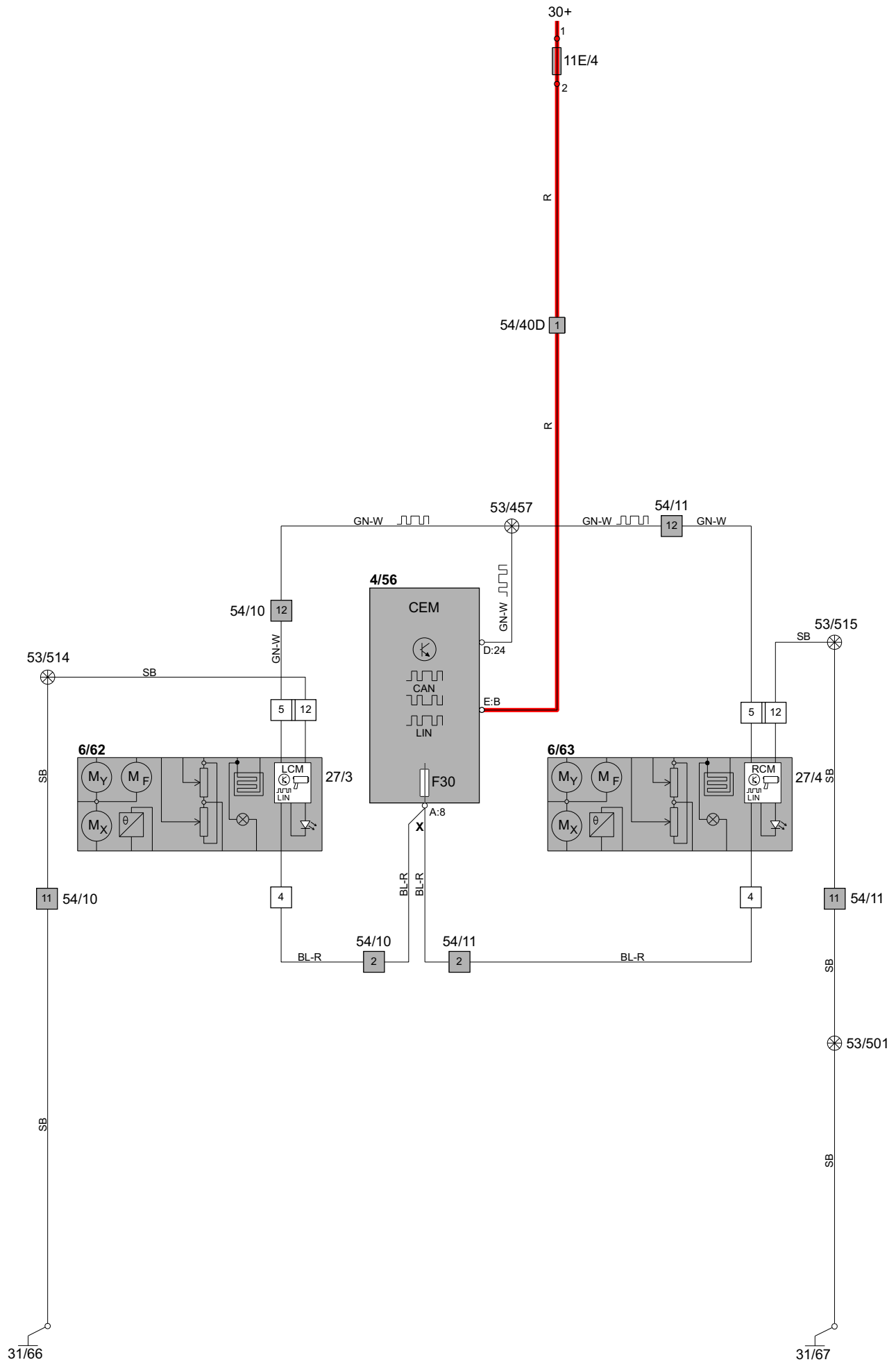
Automatic transmission TF-80SC AWD XC90



Group 59 Brake system Brake control system XC90

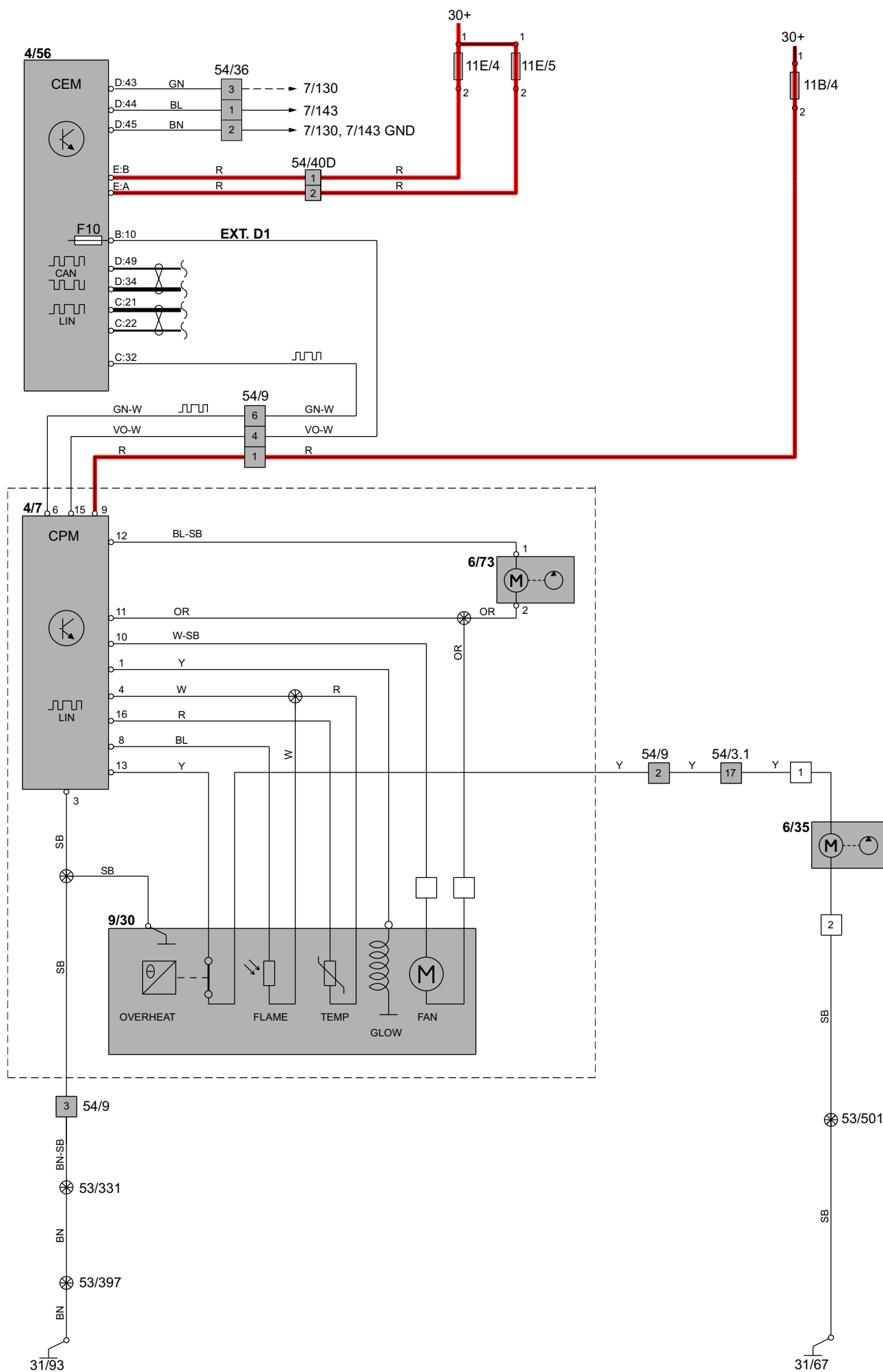


Group 84 Exterior decorative elements etc. Power door mirrors with camera function

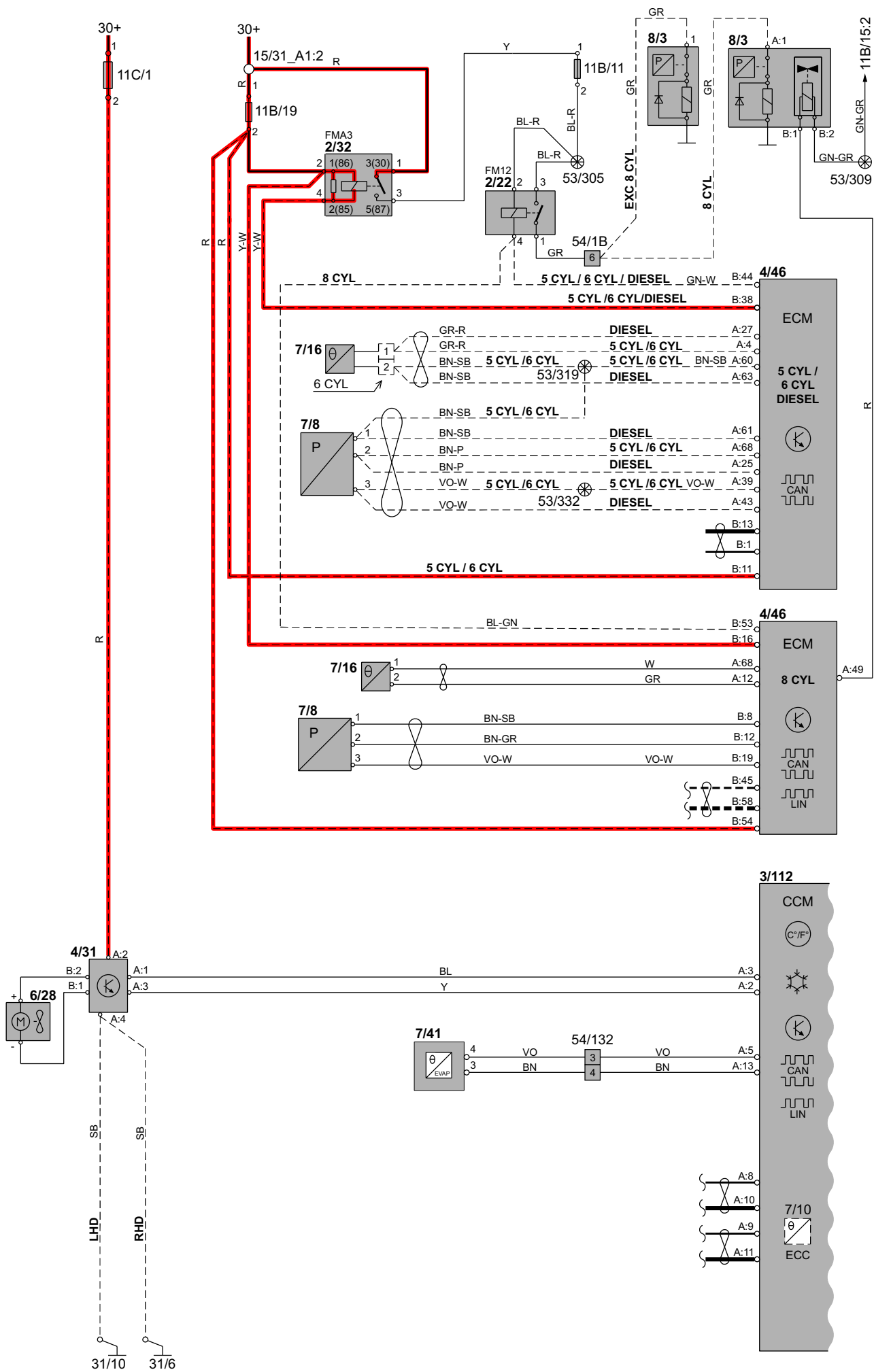


Group 87 Climate controls

Parking heater, auxiliary heater XC90

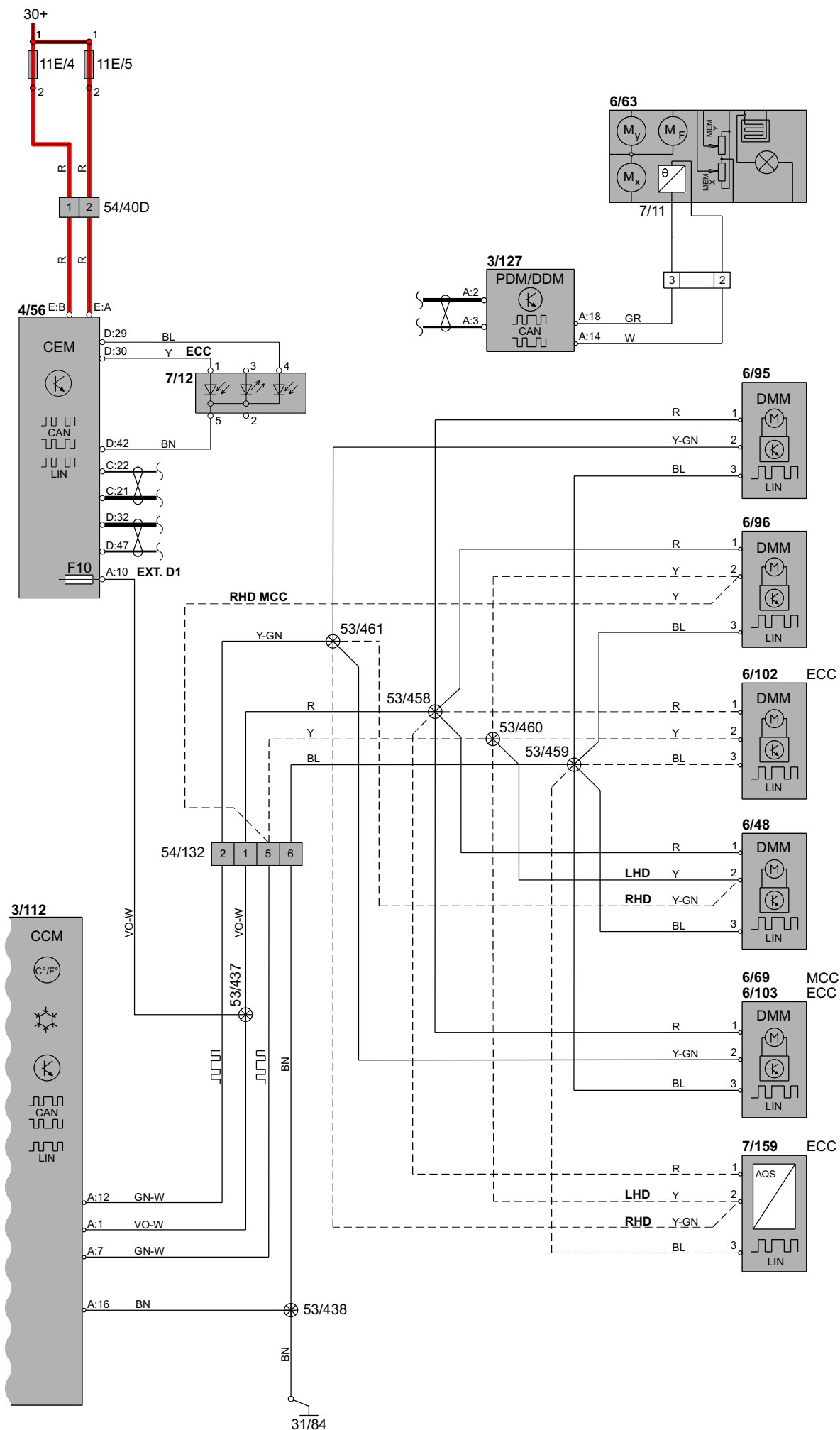


Climate control system XC90 1:2



Group 87 Climate controls

Climate control system XC90 2:2



Connectors

54/1B - 54/57.1

54/1B 14-pin gray

No.	Engine harness			Engine compartment harness		
1	-		-	-		-
2	53/315 7/17:4 54/99:11	Junction point, 5 & 6-cyl. Mass airflow sensor (MAF), Diesel Connector, 8-cyl.	GN	11B/12:2 11B/12:2	Fuses in engine compartment fuse box Fuses in engine compartment fuse box	GN-R GN
3	54/129:5 53/309 53/335	Connector, 8-cyl. Junction point Junction point, Diesel	GN-GR GN-W	53/396 11B/15:2	Junction point Fuses in engine compartment fuse box	GN-GR
4	-		-	-		-
5	53/328	Junction point	GN-W	11B/10:2	Fuses in engine compartment fuse box	GN-W
6	8/3:1 8/3A:1	Electromagnetic clutch, cli- mate control system Electromagnetic clutch, cli- mate control system, 8-cyl.	GR	2/22:1	Relay, climate control system	GR
7	53/304 53/373	Junction point Junction point, Diesel	GN-BN R	11B/14:2 11B/10	Fuses in engine compartment fuse box Fuses in engine compartment fuse box	GN-BN R
8	6/25:2	Starter motor	GN-R	2/35:3	Starter motor relay	GN-R
9	-		-	-		-
10	7/62:1	Output speed sensor	Y	4/28A:57	Transmission Control Module (TCM)	Y
11	7/62:2	Output speed sensor	SB	4/28A:36	Transmission Control Module (TCM)	SB
12	6/26B:1	Alternator Control Module (ACM)	GN-W	4/56C:16	Central Electronic Module (CEM)	GN-W
13	4/71:4	Cooling fan control module	VO	4/46A:7 4/46A:8	Engine Control Module (ECM) Engine Control Module (ECM), Diesel	VO
14	-		-	-		-

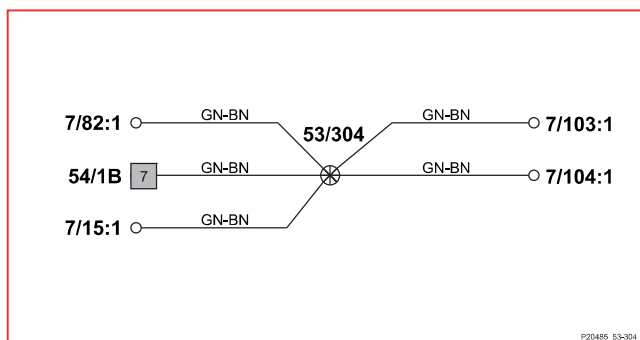
54/57.1 8-pin gray

No.	Automatic transmission harness			Engine compartment harness		
1	4/28A:1	Transmission Control Module (TCM)	R	11B/8:2	Fuses in engine compartment fuse box	R
2	-		-	-		-
3	4/28A:7	Transmission Control Module (TCM)	GN-W	54/3.1:5	Connector	GN-W
4	4/28A:11	Transmission Control Module (TCM)	BL-R	4/56C:13	Central Electronic Module (CEM)	BL-R
5	4/28A:5	Transmission Control Module (TCM)	Y	4/56B:15	Central Electronic Module (CEM)	Y
6	4/28A:6	Transmission Control Module (TCM)	GN	53/353	Junction point	GN
7	4/28A:14	Transmission Control Module (TCM)	W	53/352	Junction point	W
8	4/28A:9	Transmission Control Module (TCM)	SB	53/329	Junction point	SB

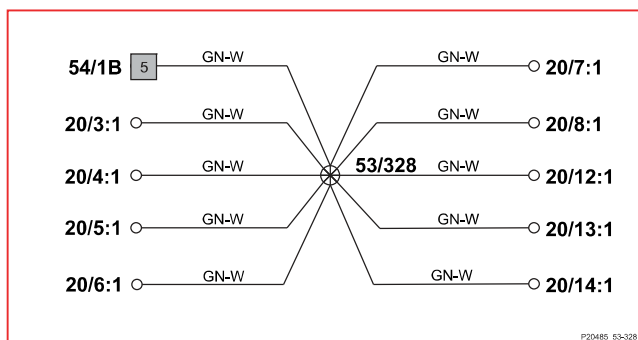
Junction points

53/304 - 53/353

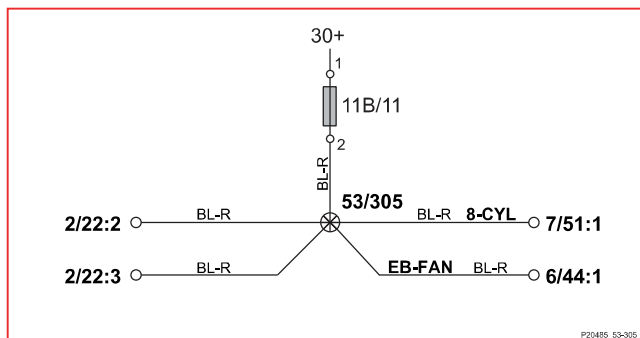
53/304 8-cyl.



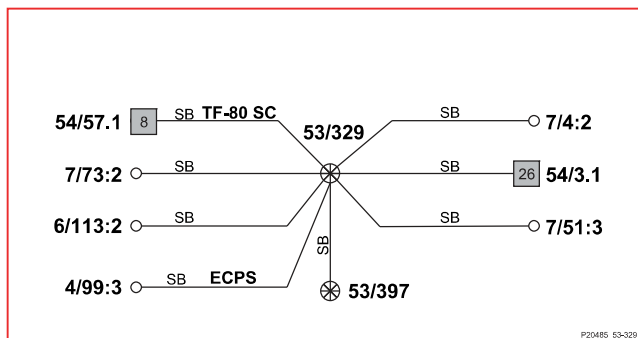
53/328 8-cyl.



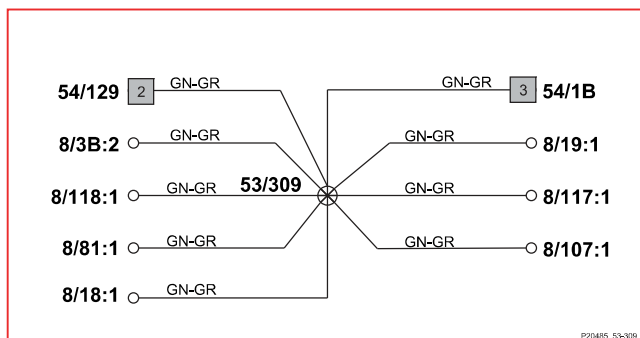
53/305



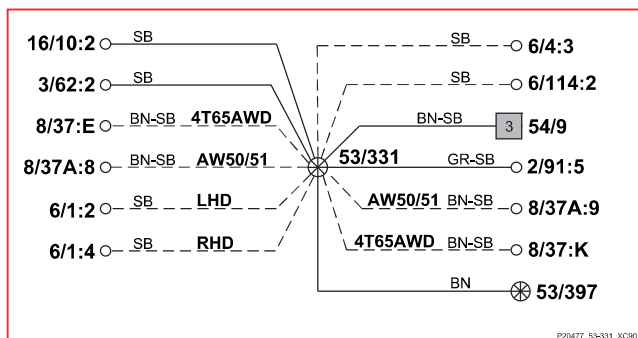
53/329



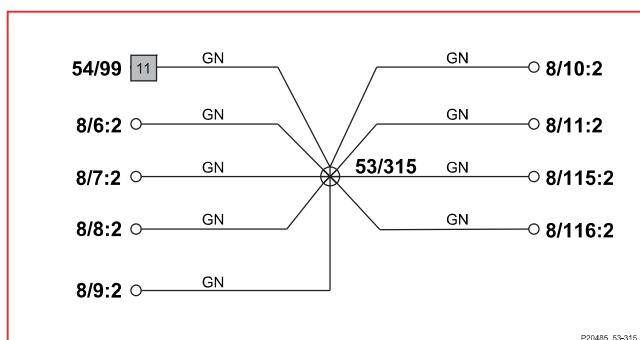
53/309 8-cyl.



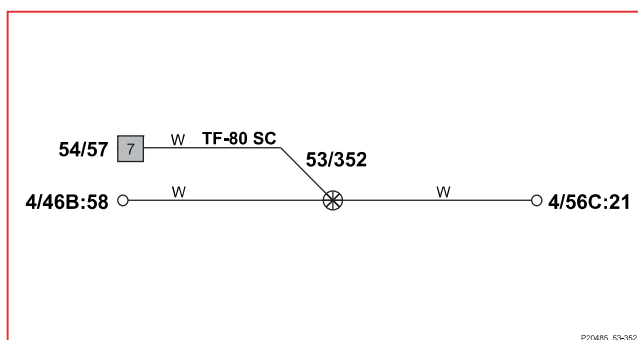
53/331



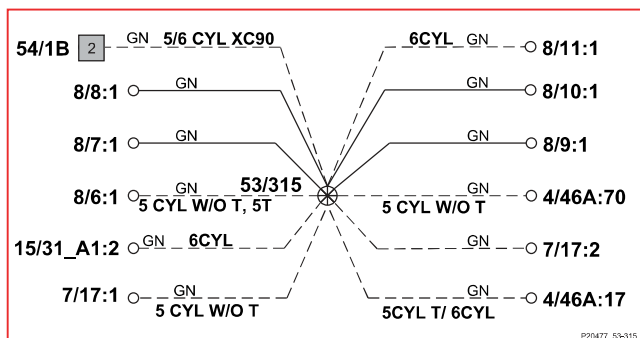
53/315 8-cyl.



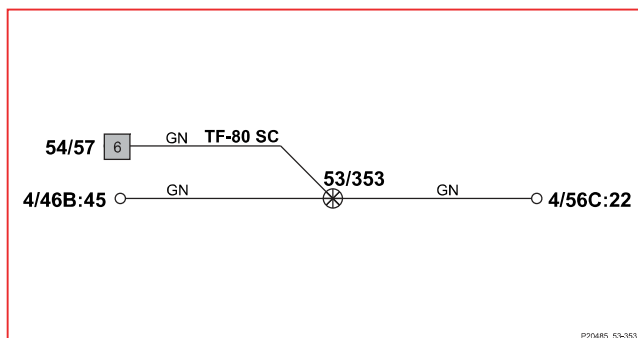
53/352



53/315

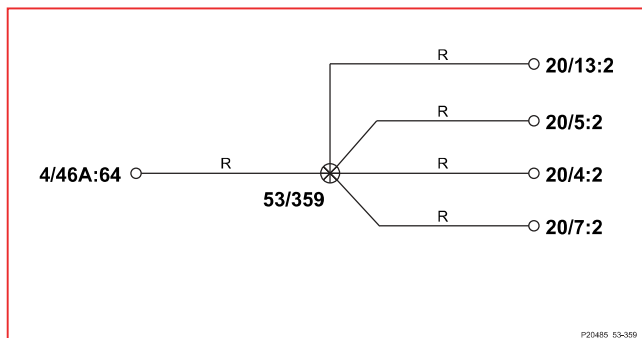


53/353

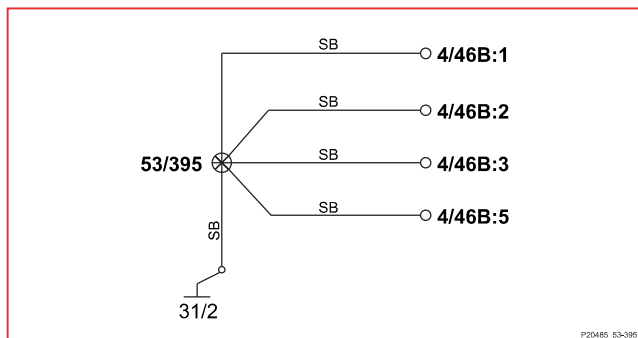


Junction points 53/359 - 53/514

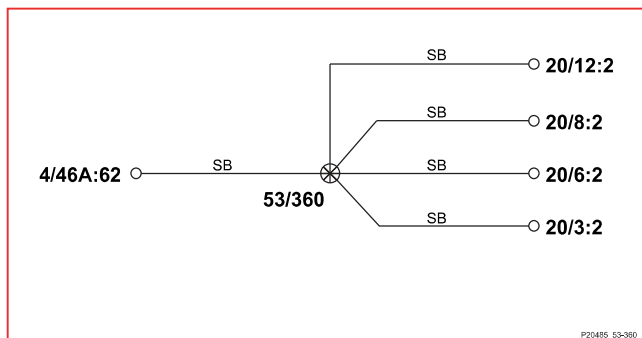
53/359 8-cyl.



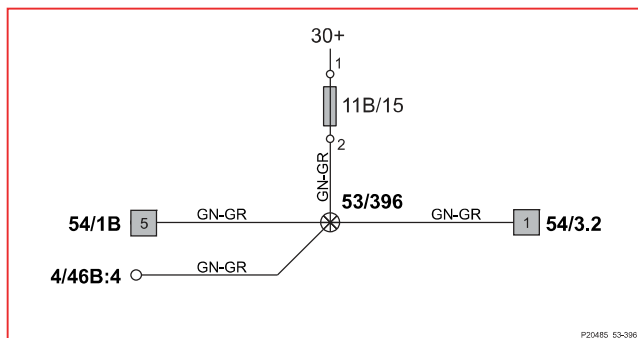
53/395 8-cyl.



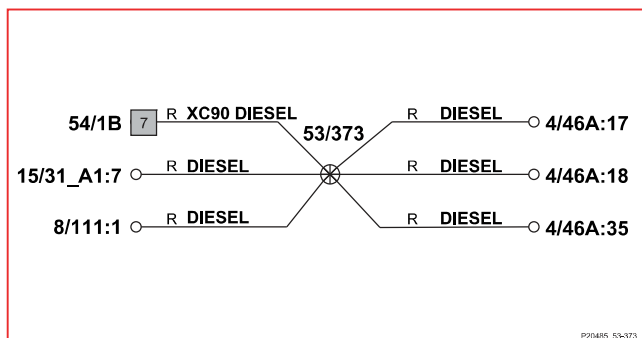
53/360 8-cyl.



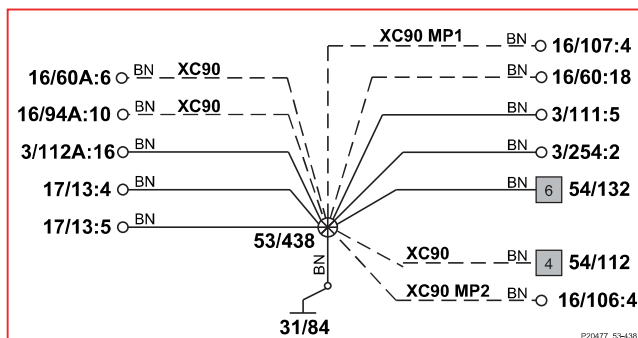
53/396 8-cyl.



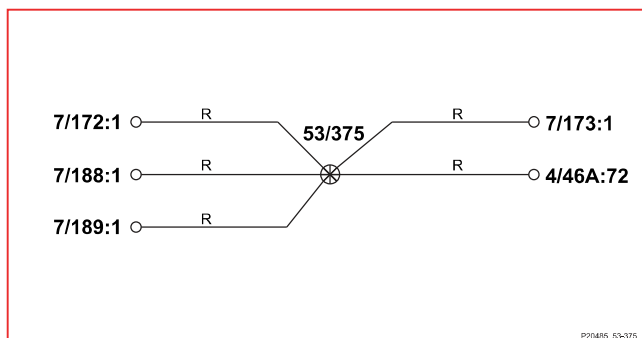
53/373



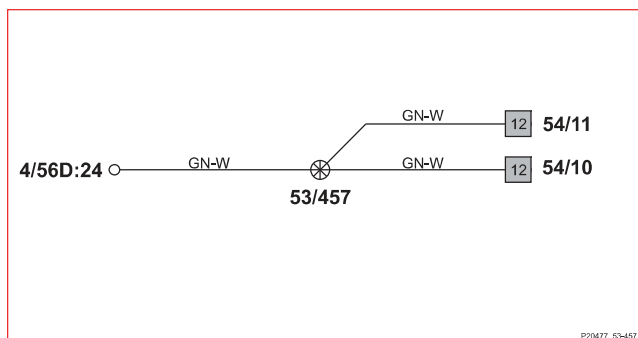
53/438



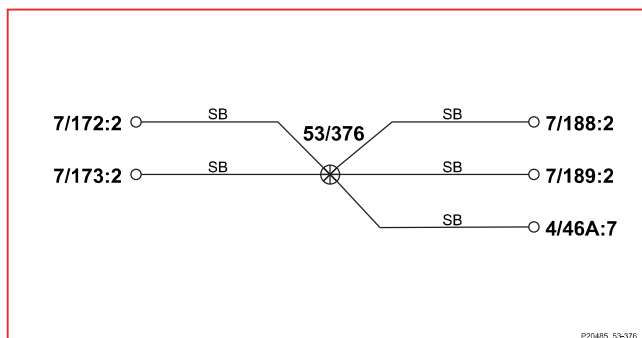
53/375 8-cyl.



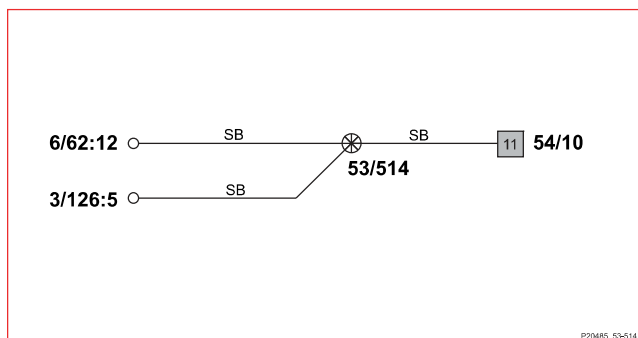
53/457 BLIS



53/376 8-cyl.



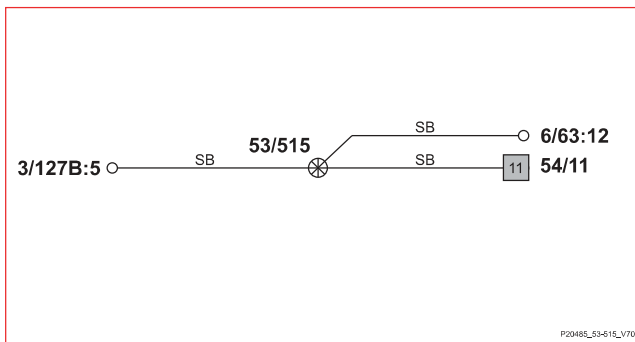
53/514 BLIS



Junction points

53/515

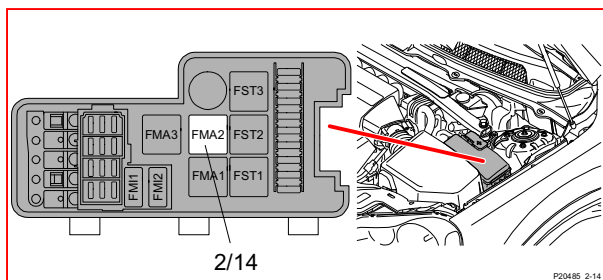
53/515 BLIS



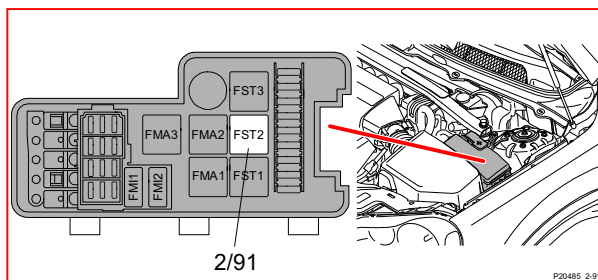
Component illustrations

2/14 - 6/113

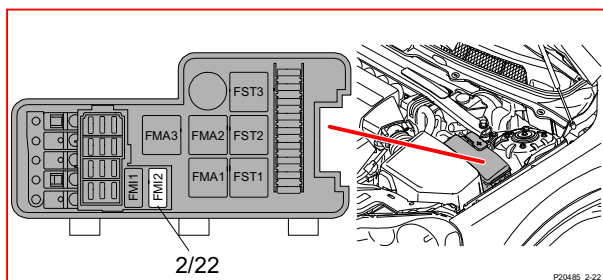
2/14 Relay, glow plug unit, XC90



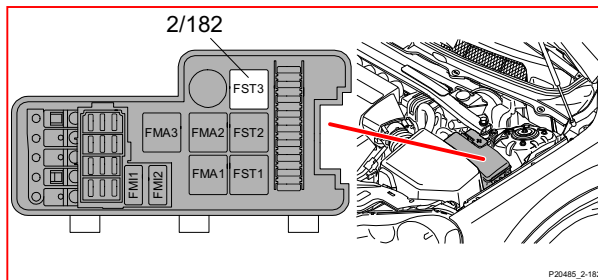
2/91 Relay, intermittent wiping, XC90



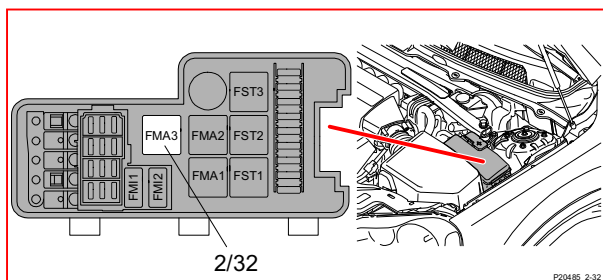
2/22 Relay, climate control system XC90



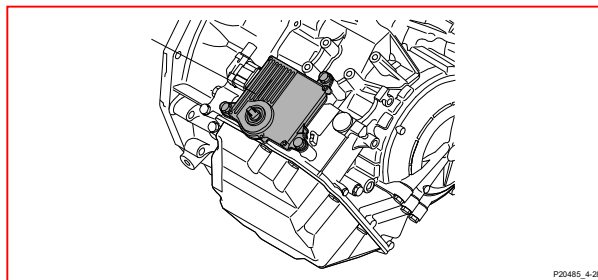
2/182 Relay, high pressure headlight washer motor, XC90



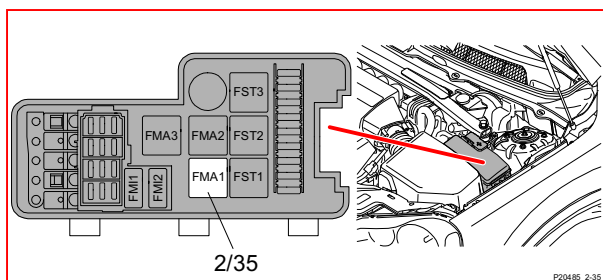
2/32 Main relay, engine management system, XC90



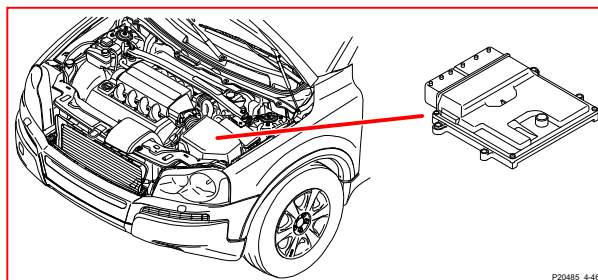
4/28 Transmission Control Module (TCM), TF80-SC AWD



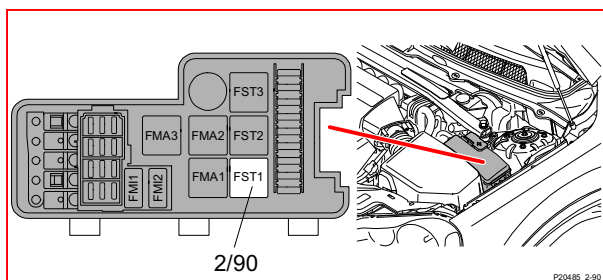
2/35 Relay, starter motor, XC90



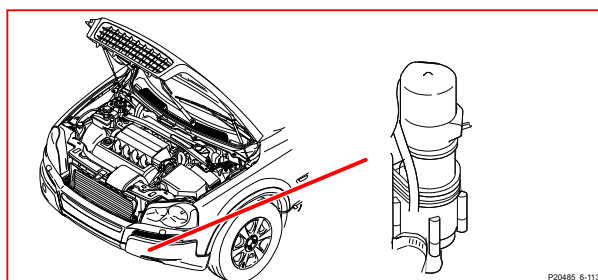
4/46 Engine Control Module (ECM), 8-cyl.



2/90 Relay, windshield wiper, low/high speed, XC90



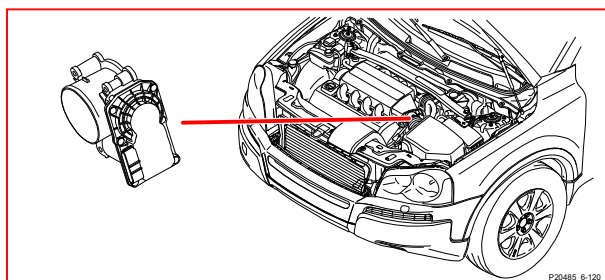
6/113 Coolant pump, 8-cyl.



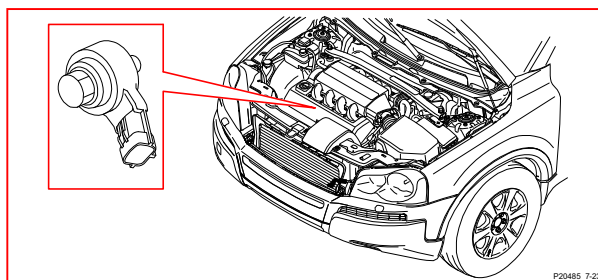
Component illustrations

6/120 - 7/62

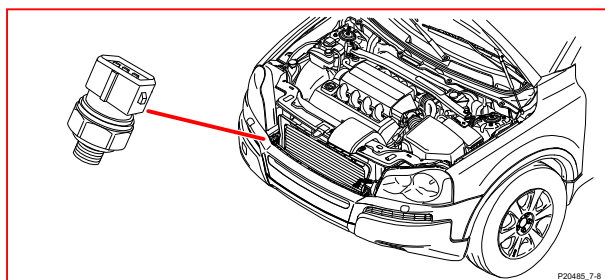
6/120 Motor, throttle body, 8-cyl.



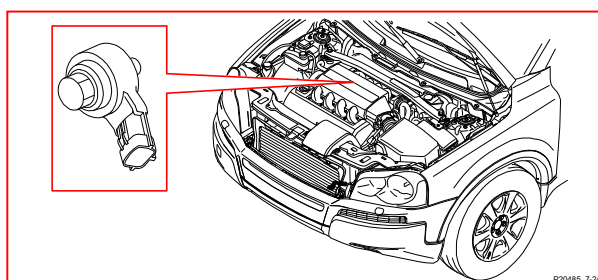
7/23 Knock sensor, bank B, 8-cyl.



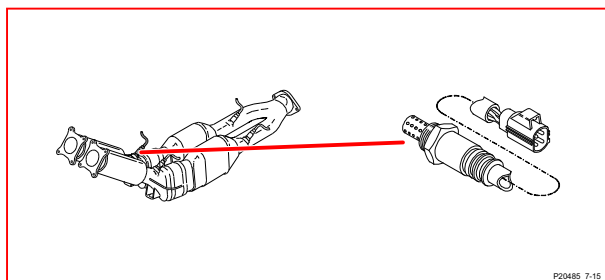
7/8 Pressure sensor, climate control system, 8-cyl.



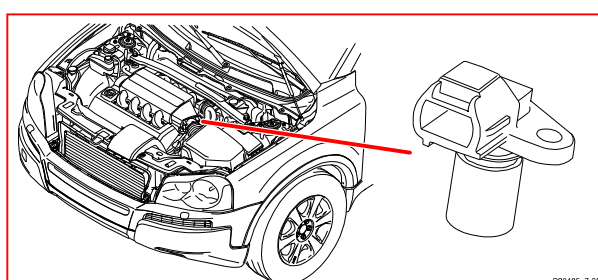
7/24 Knock sensor, bank A, 8-cyl.



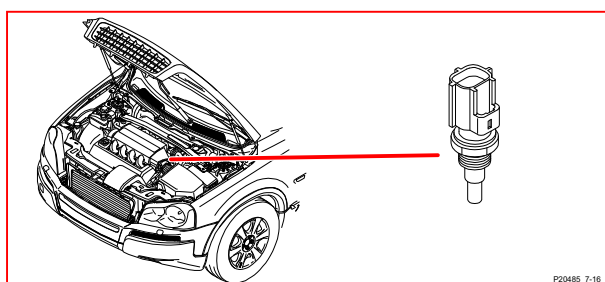
7/15 Front heated oxygen sensor, bank A, 8-cyl.



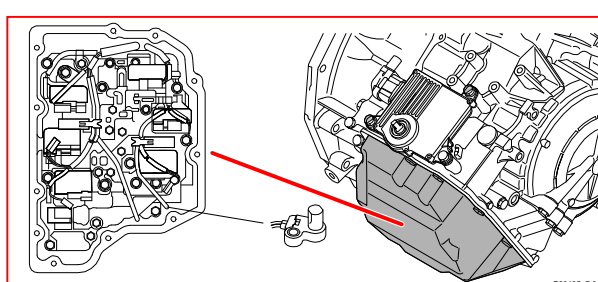
7/25 Impulse sensor, 8-cyl.



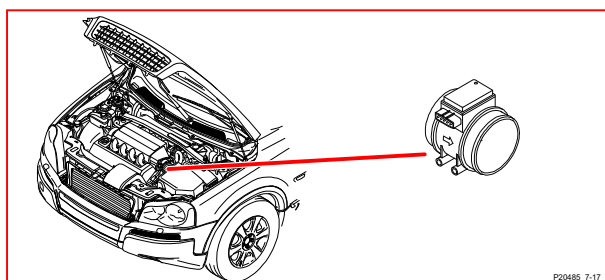
7/16 Coolant temperature sensor, 8-cyl.



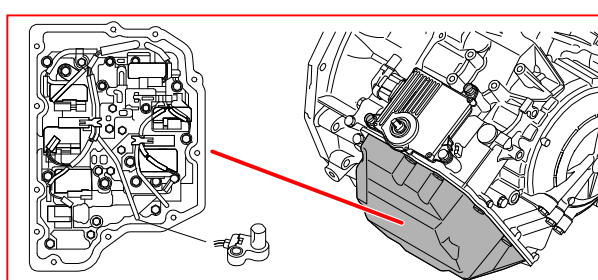
7/61 Input speed sensor, TF-80SC AWD



7/17 Mass air flow sensor (MAF), 8-cyl.



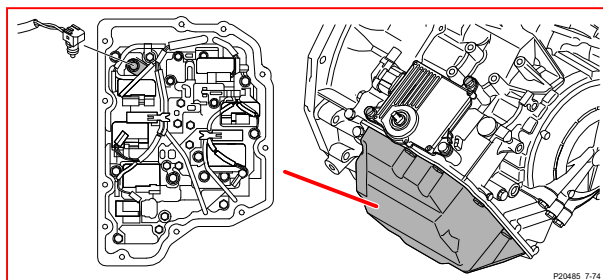
7/62 Output speed sensor, TF-80SC AWD



Component illustrations

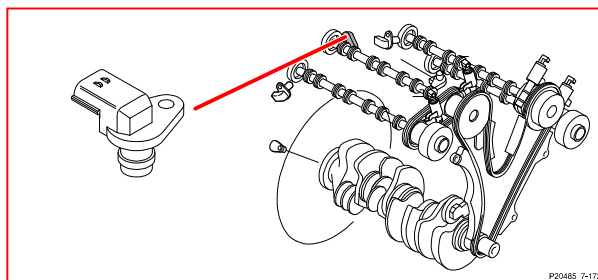
7/74 - 8/3

7/74 Fluid temperature sensor, automatic transmission, TF-80SC AWD



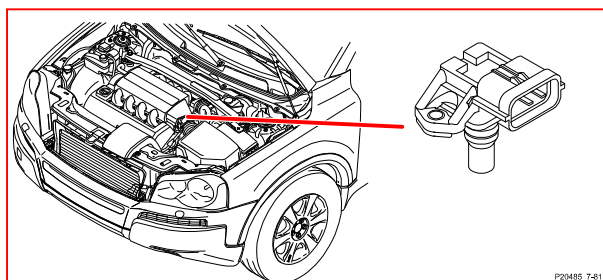
P20485_7-74

7/172 Intake camshaft position sensor, bank A, 8-cyl.



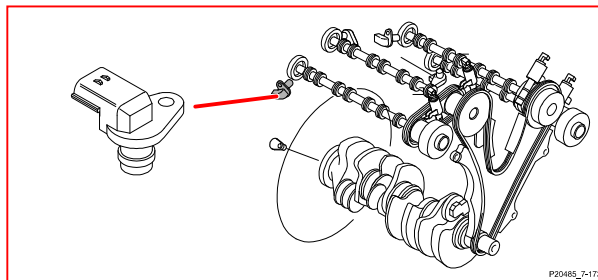
P20485_7-172

7/81 Pressure sensor, intake pipe, 8-cyl.



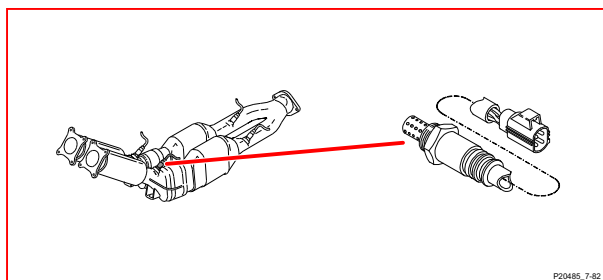
P20485_7-81

7/173 Exhaust camshaft position sensor, bank A, 8-cyl.



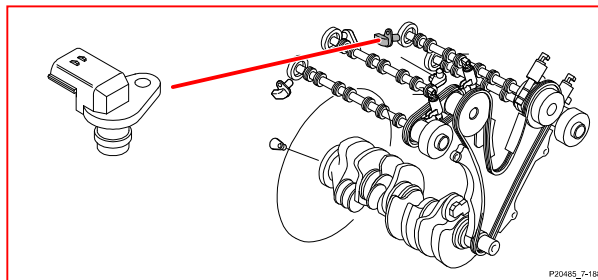
P20485_7-173

7/82 Front heated oxygen sensor, bank B, 8-cyl.



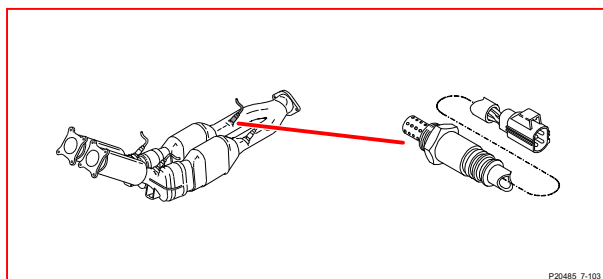
P20485_7-82

7/188 Intake camshaft position sensor, bank B, 8-cyl.



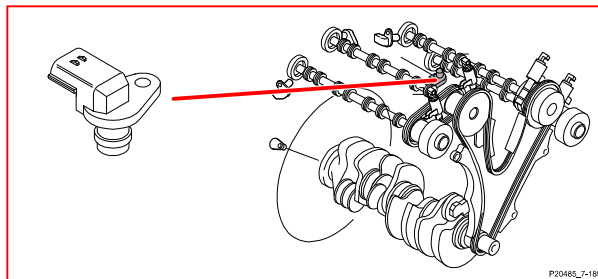
P20485_7-188

7/103 Rear heated oxygen sensor, bank A, 8-cyl.



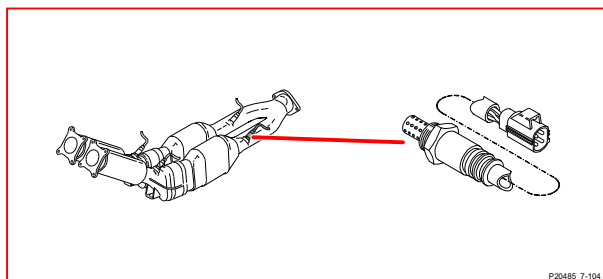
P20485_7-103

7/189 Exhaust camshaft position sensor, bank B, 8-cyl.



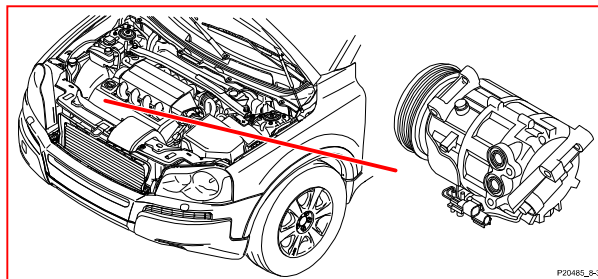
P20485_7-189

7/104 Rear heated oxygen sensor, bank B, 8-cyl.



P20485_7-104

8/3 Electromagnetic clutch, climate control system, 8-cyl.

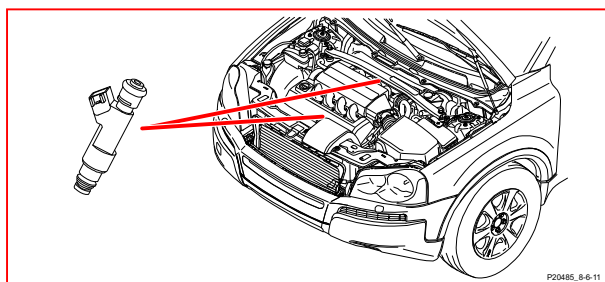


P20485_8-3

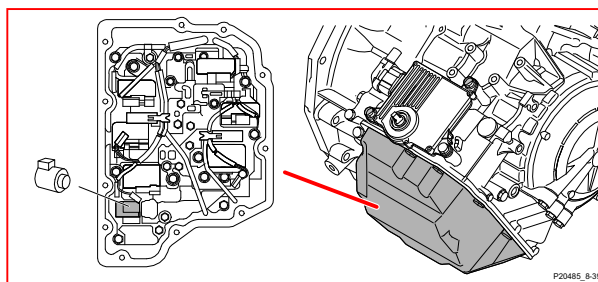
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8/6 - 8/107

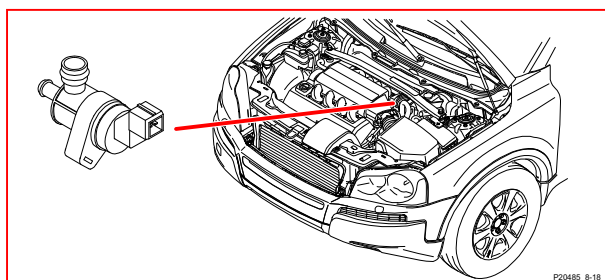
8/6-11 Injectors, 8-cyl.



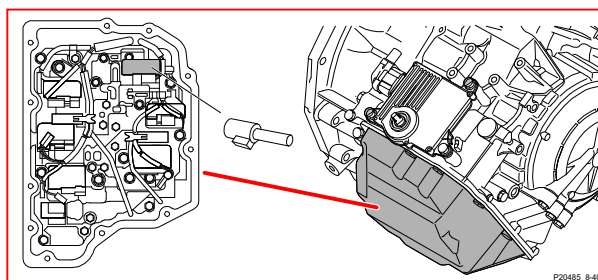
8/39 Shift solenoid 2 TF-80SC AWD



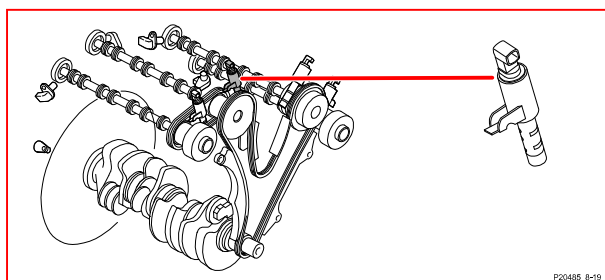
8/18 EVAP valve, 8-cyl.



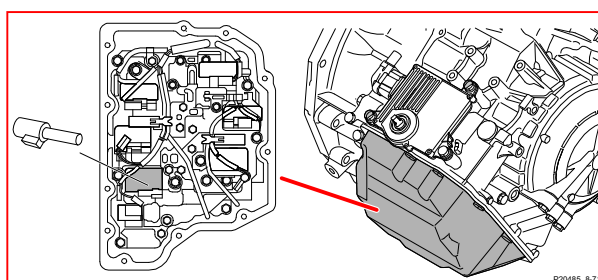
8/40 Lock-up solenoid TF-80SC AWD



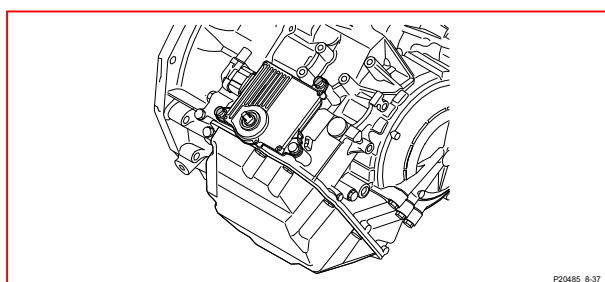
8/19 Solenoid, variable valve timing intake, bank A, 8-cyl.



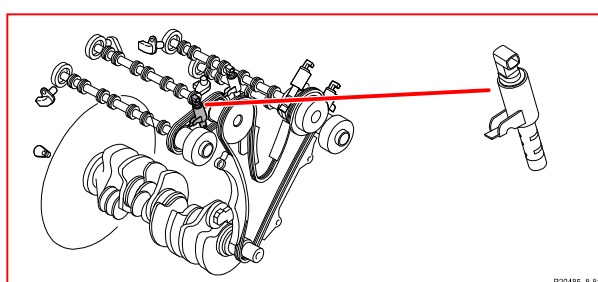
8/71 Throttle solenoid TF-80SC AWD



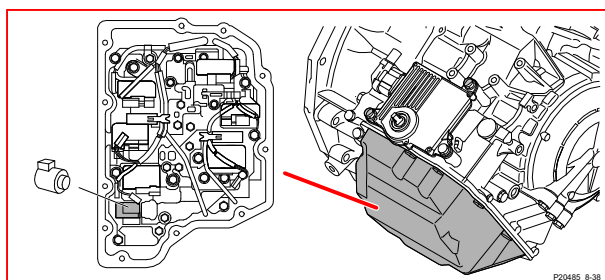
8/37 Automatic transmission TF-80SC AWD



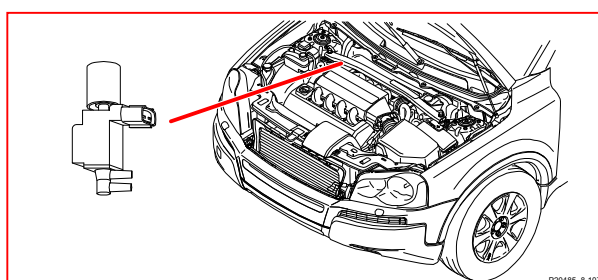
8/81 Solenoid, variable valve timing outlet, bank A, 8-cyl.



8/38 Shift solenoid 1 TF-80SC AWD



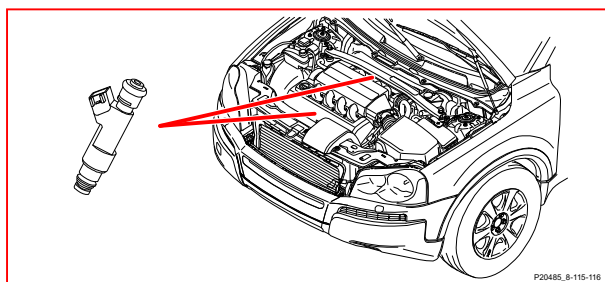
8/107 Valve, variable intake, 8-cyl.



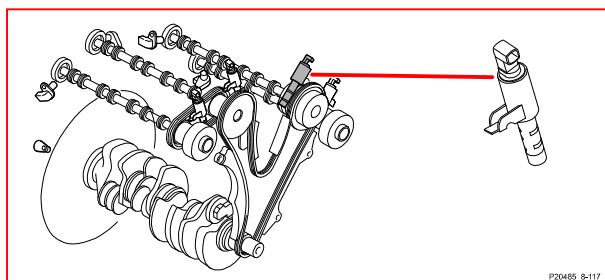
Component illustrations

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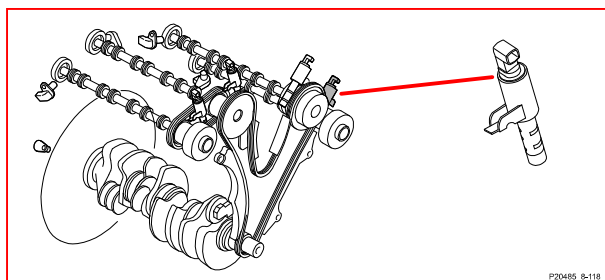
8/115-116 Injectors, 8-cyl.



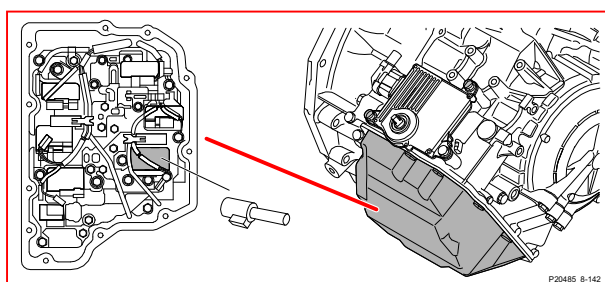
8/117 Solenoid, variable valve timing intake, bank B, 8-cyl.



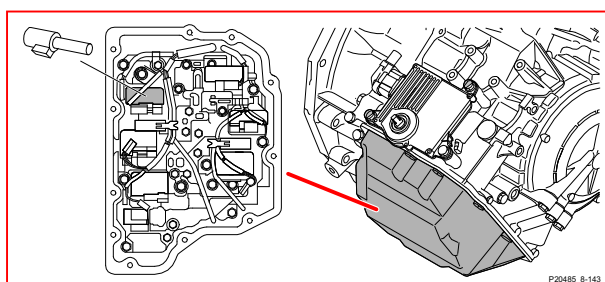
8/118 Solenoid, variable valve timing outlet, bank B, 8-cyl.



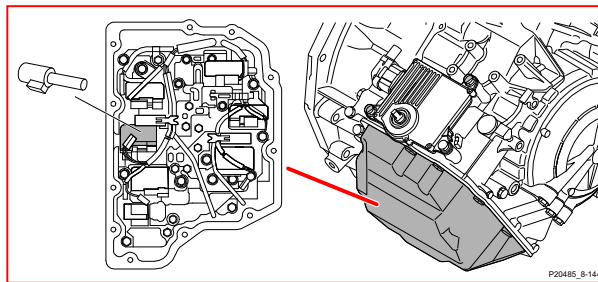
8/142 Linear pressure solenoid SLB1 TF-80SC AWD



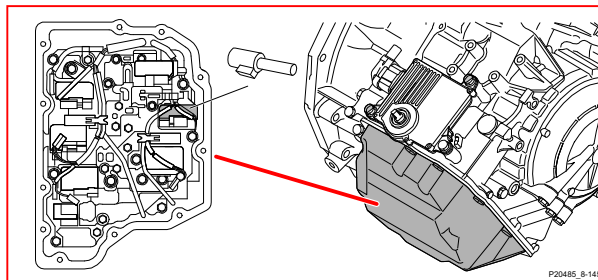
8/143 Linear pressure solenoid SLC1 TF-80SC AWD



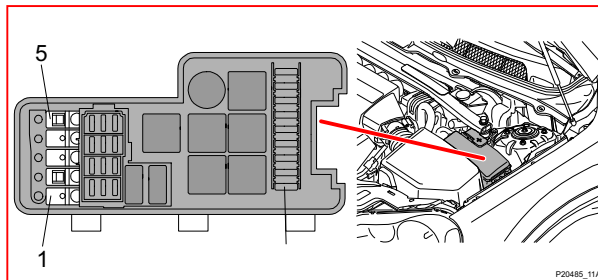
8/144 Linear pressure solenoid SLC2 TF-80SC AWD



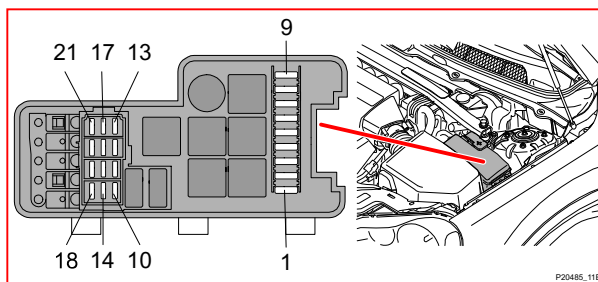
8/145 Linear pressure solenoid SLC3 TF-80SC AWD



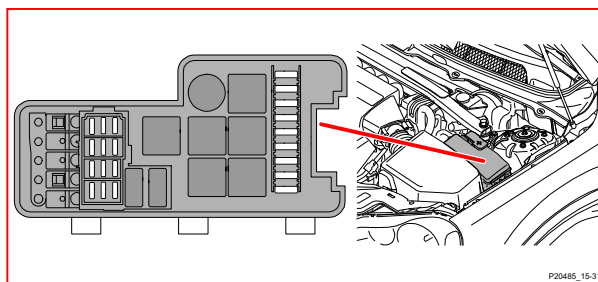
11A Main fuses in fuse box engine compartment XC90



11B Fuses in engine compartment fuse box XC90



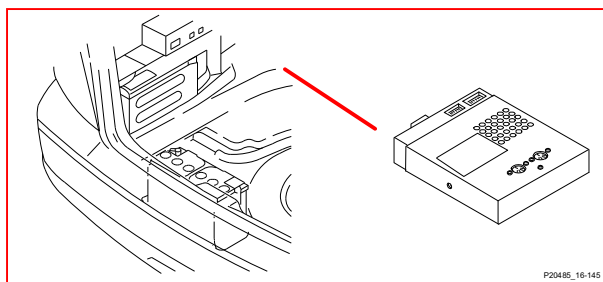
15/31 Engine compartment electrical distribution box XC90



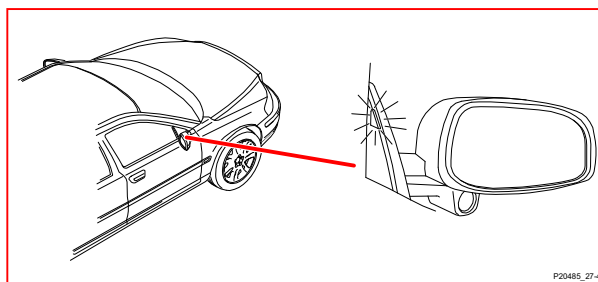
Component illustrations

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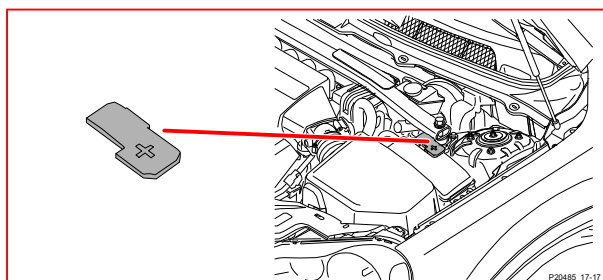
16/145 Satellite radio receiver



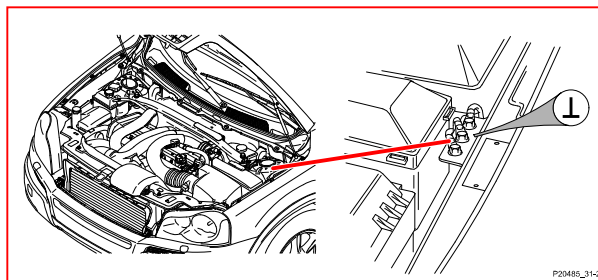
27/4 Right-hand Camera Module (RCM)



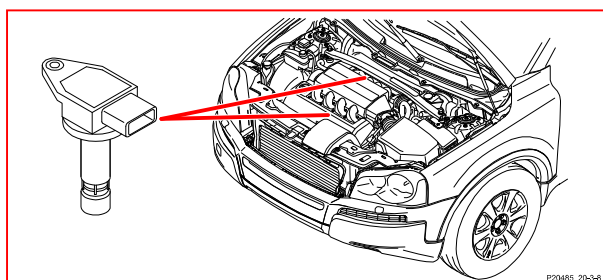
17/17 Auxiliary start connection XC90



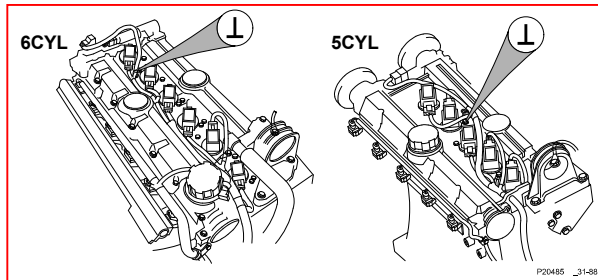
31/2 Ground connection, left MacPherson strut tower



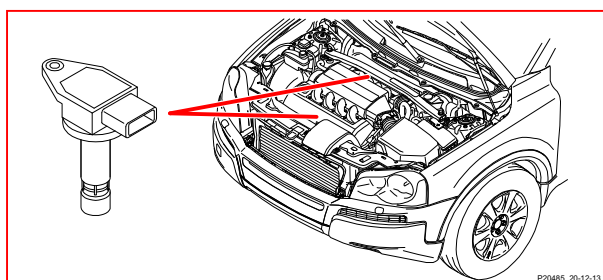
20/3-8 Spark plug with ignition coil, 8-cyl.



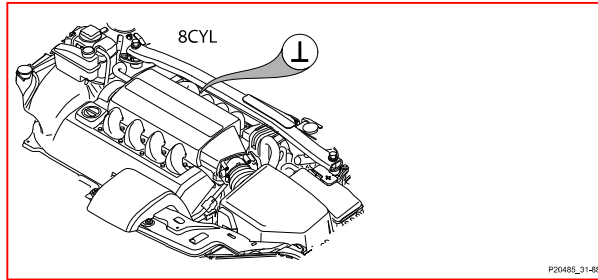
31/88 Ground connection, Engine ignition coil group 1



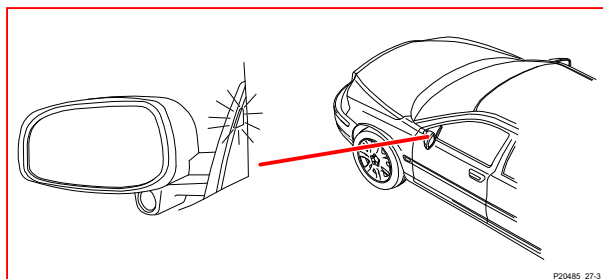
20/12-13 Spark plug with ignition coil, 8-cyl.



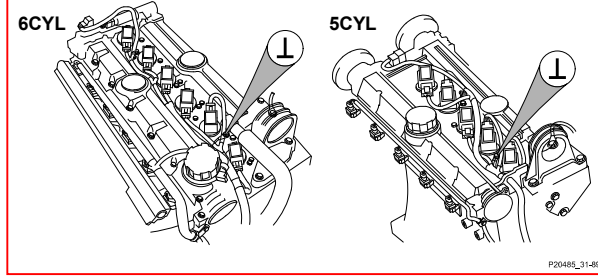
31/88 Ground connection, engine ignition coils, 8-cyl.



27/3 Left-hand Camera Module (LCM)



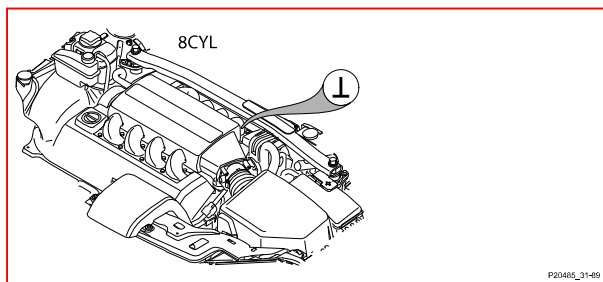
31/89 Ground connection, Engine ignition coil group 2



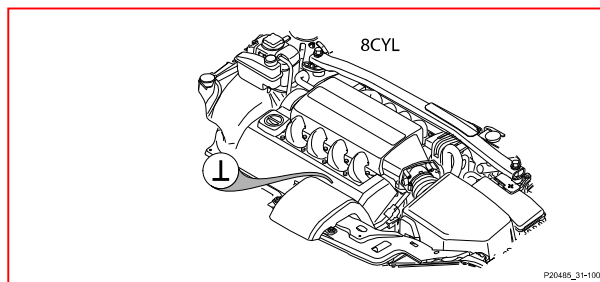
Component illustrations

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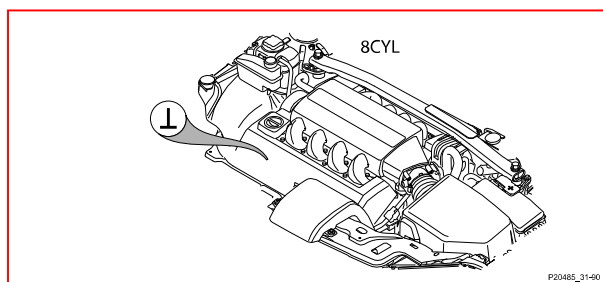
31/89 Ground connection, engine ignition coils, 8-cyl.



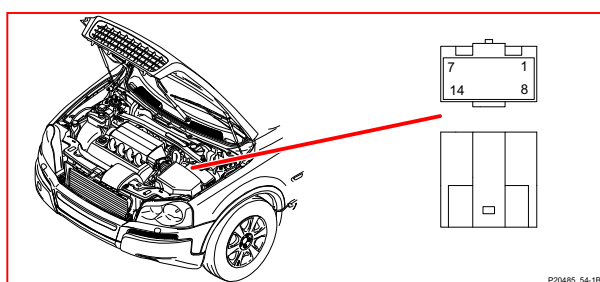
31/100 Ground connection, engine ignition coils, 8-cyl.



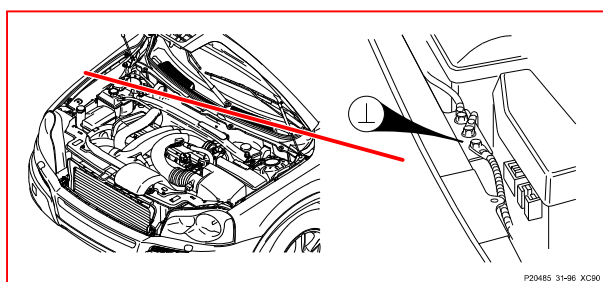
31/90 Ground connection, engine ignition coils, 8-cyl.



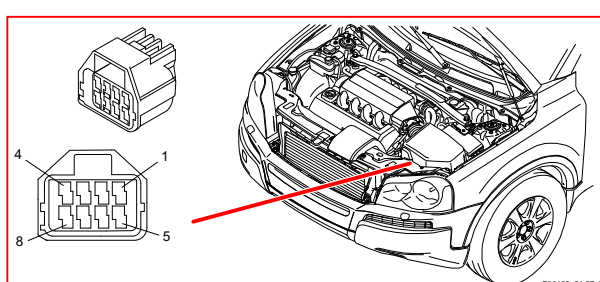
54/1B Connector



31/96 Ground connection, right MacPherson strut tower



54/57.1 Connector



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7/11	Ambient temperature sensor, XC90	7/93	Occupant Weight Sensor (OWS)
7/12	Solar sensor, twilight sensor and alarm indicator, XC90	7/100	Inclination Sensor Module (ISM)
7/15	Heated oxygen sensor, XC90	7/103	Heated oxygen sensor 3, XC90
7/15	Front heated oxygen sensor, bank A, 8-cyl.	7/103	Rear heated oxygen sensor, bank A, 8-cyl.
7/16	Coolant temperature sensor, XC90	7/104	Rear heated oxygen sensor, bank B, 8-cyl.
7/16	Coolant temperature sensor, 8-cyl.	7/105	Ambient temperature sensor, engine control module, XC90
7/17	Mass airflow sensor (MAF), XC90	7/123	Clutch pedal sensor, XC90
7/17	Mass air flow sensor (MAF), 8-cyl.	7/124	Brake pedal sensor, XC90
7/23	Rear knock sensor, XC90	7/129	Brake pressure sensor 2, XC90
7/23	Knock sensor, bank B, 8-cyl.	7/139	Brake pressure sensor 1, XC90
7/24	Front knock sensor, XC90	7/149	Rain Sensor Module (RSM)
7/24	Knock sensor, bank A, 8-cyl.	7/156	Fuel pressure and temperature sensor, XC90
7/25	Impulse sensor, XC90	7/159	Air Quality Sensor (AQS)
7/25	Impulse sensor, Diesel, XC90	7/162	Pressure sensor, fuel lines, XC90
7/25	Impulse sensor, 8-cyl.	7/164	Body Sensor Cluster (BSC), XC90
7/31	Front left ABS sensor, XC90	7/165	Intake manifold pressure and temperature sensor, XC90
7/32	Front right ABS sensor, XC90	7/172	Camshaft position sensor, intake side, XC90
7/35	Oil level sensor, XC90	7/172	Intake camshaft position sensor, bank A, 8-cyl.
7/41	Evaporator temperature sensor, XC90	7/173	Camshaft position sensor, exhaust side, XC90
7/51	Accelerator pedal sensor, XC90	7/173	Camshaft position sensor, exhaust side, Diesel, XC90
7/56	Rear left ABS sensor, XC90	7/173	Exhaust camshaft position sensor, bank A, 8-cyl.
7/57	Rear right ABS sensor, XC90	7/188	Intake camshaft position sensor, bank B, 8-cyl.
7/61	Input rpm sensor, 4T65AWD	7/189	Exhaust camshaft position sensor, bank B, 8-cyl.
7/61	Input speed sensor, TF-80SC AWD		
7/62	Output rpm sensor, 4T65AWD		
7/62	Output speed sensor, TF-80SC AWD		
7/73	Coolant level sensor, XC90		

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8/3	Electromagnetic clutch, climate control system, XC90	8/107	Valve, variable intake, 8-cyl.
8/3	Electromagnetic clutch, climate control system, 8-cyl.	8/111	High pressure solenoid valve, Diesel, XC90
8/6-10	Injectors, Diesel, XC90	8/115-116	Injectors, 8-cyl.
8/6-11	Injectors, XC90	8/117	Solenoid, variable valve timing intake, bank B, 8-cyl.
8/6-11	Injectors, 8-cyl.	8/118	Solenoid, variable valve timing outlet, bank B, 8-cyl.
8/17	EGR valve, Diesel, XC90	8/142	Linear pressure solenoid SLB1 TF-80SC AWD
8/18	EVAP valve, XC90	8/143	Linear pressure solenoid SLC1 TF-80SC AWD
8/18	EVAP valve, 8-cyl.	8/144	Linear pressure solenoid SLC2 TF-80SC AWD
8/19	Variable valve timing solenoid, intake, XC90	8/145	Linear pressure solenoid SLC3 TF-80SC AWD
8/19	Solenoid, variable valve timing intake, bank A, 8-cyl.		
8/28	Turbo control valve, XC90		
8/36	Shift lock solenoid, XC90	9/12	Seat Heater Module (SHM), left-hand
8/37	Automatic transmission, 4T65AWD	9/13	Seat Heater Module (SHM), right-hand
8/37	Automatic transmission TF-80SC AWD	9/30	Auxiliary heater, XC90
8/38	Shift solenoid 1, 4T65AWD	9/32	PTC resistor, air preheating, XC90
8/38	Shift solenoid 1 TF-80SC AWD		
8/39	Shift solenoid 2, 4T65AWD	10/1	Front left lamp housing, XC90
8/39	Shift solenoid 2 TF-80SC AWD	10/2	Front right lamp housing, XC90
8/40	Lock-up solenoid, 4T65AWD	10/3	License plate lighting, XC90
8/40	Lock-up solenoid TF-80SC AWD	10/11	Front left Position/parking lights, XC90
8/41	Pressure solenoid, 4T65AWD	10/12	Front right Position/parking lights, XC90
8/46	DSTC activation unit, XC90	10/17	Rear right lamp housing, XC90
8/64	Solenoid valve, engine pad, Diesel XC90	10/18	Rear left lamp housing, XC90
8/71	Throttle solenoid TF-80SC AWD	10/65	Front right auxiliary light, XC90
8/78	Oil pressure sensor, 4T65AWD	10/69	Front left auxiliary light, XC90
8/81	Variable valve timing solenoid, outlet, XC90	10/71	Side running light, front left, XC90
8/81	Variable valve timing solenoid, outlet, bank A, 8-cyl.	10/73	Side running light, front right, XC90
8/82	Variable turbo geometry solenoid, Diesel XC90		
8/84	Vacuum pump switch, XC90	11A	Main fuses in fuse box engine compartment XC90
8/85	Thermal switch and fuel filter heating, XC90	11B	Fuses in engine compartment fuse box XC90
		11C	Fuses in passenger compartment fuse box
		11E	Main fuses at battery

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15/31	Engine compartment electrical distribution box XC90	31/48	Ground connection, rear seat riser right side, XC90
16/1	Audio Module (AUM)	31/53	Ground connection, firewall, XC90
16/2	Amplifier, V70	31/66	Ground connection, front seat riser left side
16/5	Speaker, right rear door, V70	31/67	Ground connection, front seat riser right side
16/6	Speaker, left rear door, V70	31/70	Ground connection, left side member lower engine compartment, XC90
16/15	CD changer	31/72	Ground connection, cargo compartment
16/35	Siren Control Module (SCM)	31/73	Ground connection, rear seat riser right side, XC90
16/45	Road Traffic Information (RTI)	31/83	Ground connection, A-pillar left side, XC90
16/46	RTI display	31/84	Ground connection, A-pillar right side
16/46	Multimedia display, XC90	31/88	Ground connection, Engine ignition coil group 1
16/57	Speaker, left D-pillar, V70	31/88	Ground connection, engine ignition coils, 8-cyl.
16/58	Speaker, right D-pillar, V70	31/89	Ground connection, Engine ignition coil group 2
16/60	Phone Module (PHM), XC90	31/89	Ground connection, engine ignition coils, 8-cyl.
16/62	Hand unit, cellular telephone, XC90	31/90	Ground connection, engine ignition coils, 8-cyl.
16/79	Bass speaker, V70	31/93	Ground connection, left MacPherson strut tower, XC90
16/79	Subwoofer Module (SUB), XC90	31/94	Ground connection, right MacPherson strut tower, XC90
16/94	Infotainment Control Module (ICM), XC90	31/95	Ground connection, left MacPherson strut tower, XC90
16/105	Audio control module (AUD), XC90	31/96	Ground connection, right MacPherson strut tower
16/106	Control module, CD player (MP2), XC90	31/98	Ground connection, upper windshield member, XC90
16/107	Control module, MD player (MP1), XC90	31/100	Ground connection, engine ignition coils, 8-cyl.
16/108	Multimedia module (MMM), XC90	31/120	Ground connection, cargo compartment
16/110	Antenna control module (ATM), XC90	53/no.	Junction point
16/145	Satellite radio receiver	54/1B	Connector
16/149	MP3 player	54/57.1	Connector
17/13	Data link connector, XC90	16X/1	Connector, original car interface
17/17	Auxiliary start connection XC90	16X/45	Connector, original car interface
18/4	Contact reel, XC90	16X/57	Connector, original car interface, V70
20/3-8	Spark plug with ignition coil, XC90	16X/58	Connector, original car interface, V70
20/3-8	Spark plug with ignition coil, 8-cyl.	A1	Connecting rail to 15/31
20/12-13	Spark plug with ignition coil, 8-cyl.	C1-C6	Connecting rail to 15/31
20/14	Condenser, 8-cyl.		
20/22-26	Glow plug, XC90		
27/3	Left-hand Camera Module (LCM)		
27/4	Right-hand Camera Module (RCM)		
31/2	Ground connection, left MacPherson strut tower		
31/6	Ground connection, A-pillar left side, XC90		
31/10	Ground connection, A-pillar right side, XC90		

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