

Volvo Xc90 2009 Wiring Diagram

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VOLVO XC90

WIRING DIAGRAM 2009



TP 39131202

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 install 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 VIDA.
- Certain components of the aforementioned systems must be grounded while working. Read the appropriate sections in VIDA.
- Install no accessories in the areas between the A and B-posts, the B and C-posts, and the C and D-posts.

Test terminal

Data link connector in the passenger compartment.

Changes implemented up to and including May 2008.

Any changes made to the vehicles 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 39131202**

Replaces previous publication 39131201 of Electronic Wiring Diagram Electronic Wiring Diagram (EWD) which can be ordered from Technical Information Shop (TIS)

at www.volvocarstechinfo.ford.com/vss

We reserve 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	= Alternator 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 control system
Group 88	= Internal equipment

Ignition switch symbols

X	= Accessories (audio position)
S	= Powered upon insertion of key
15	= Contact remains connected during start
15l	= 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

ABL	= Active Bi-Xenon® Light
ACC	= Accessories
Ag	= Silver plated
Au	= Gold plated
AUDIO	= Audio system
AUTO	= Automatic transmission
Bi-X	= Bi-Xenon®
BLIS	= Blind spot information system
CEM	= Central Electronic Module
DIESEL	= D5244 T4/T5/T6/T7
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
MCC	= Manual Climate Control
PCL	= Power Child Lock
PETROL	= Gasoline
REM	= Rear Electronic Module
RH	= Right-hand side
RHD	= Right-hand drive
RTI	= Road Traffic Information
SRS	= Airbag
T	= Turbocharged engine
W/O	= Without
5CYL	= 5-cylinder engine
6CYL	= 6-cylinder engine
8CYL	= 8-cylinder engine

Colors

BL	= Blue
BN	= Brown
GN	= Green
GR	= Gray
NL	= Natural
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.

Together, this constitutes a component designation, e.g. 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	Branching point
54	Connector

B. Branching points

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

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

The location of the branching 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 not shown in their entirety on the respective wiring diagram. Complete information on Data communication can be found in the section entitled "Control modules".

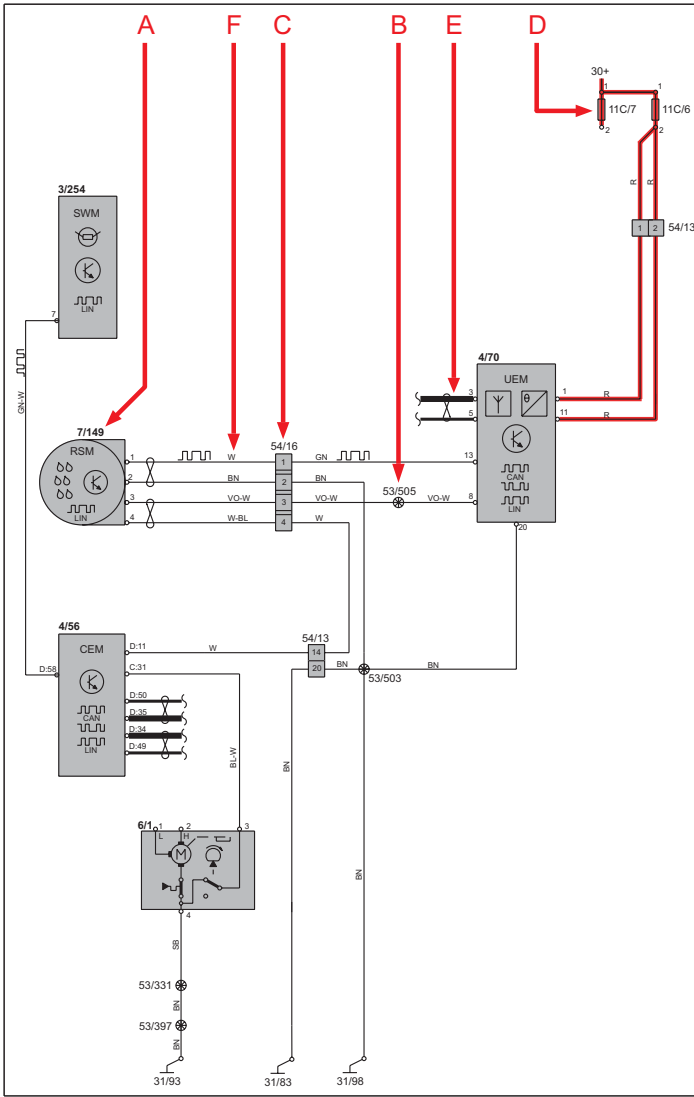
F. Abbreviations

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




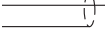


















G. Component location

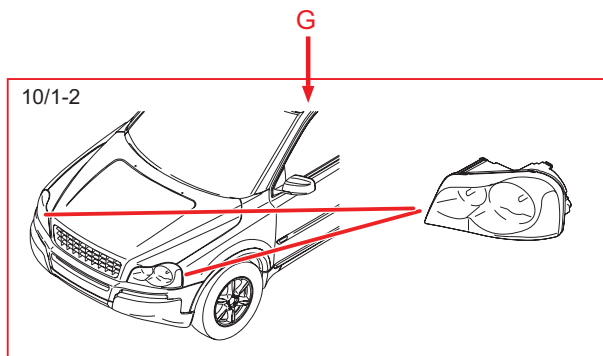
There is a section at the end of the manual in which the appearance and location of components is described in numerical order.

How to use the wiring diagrams 2:2

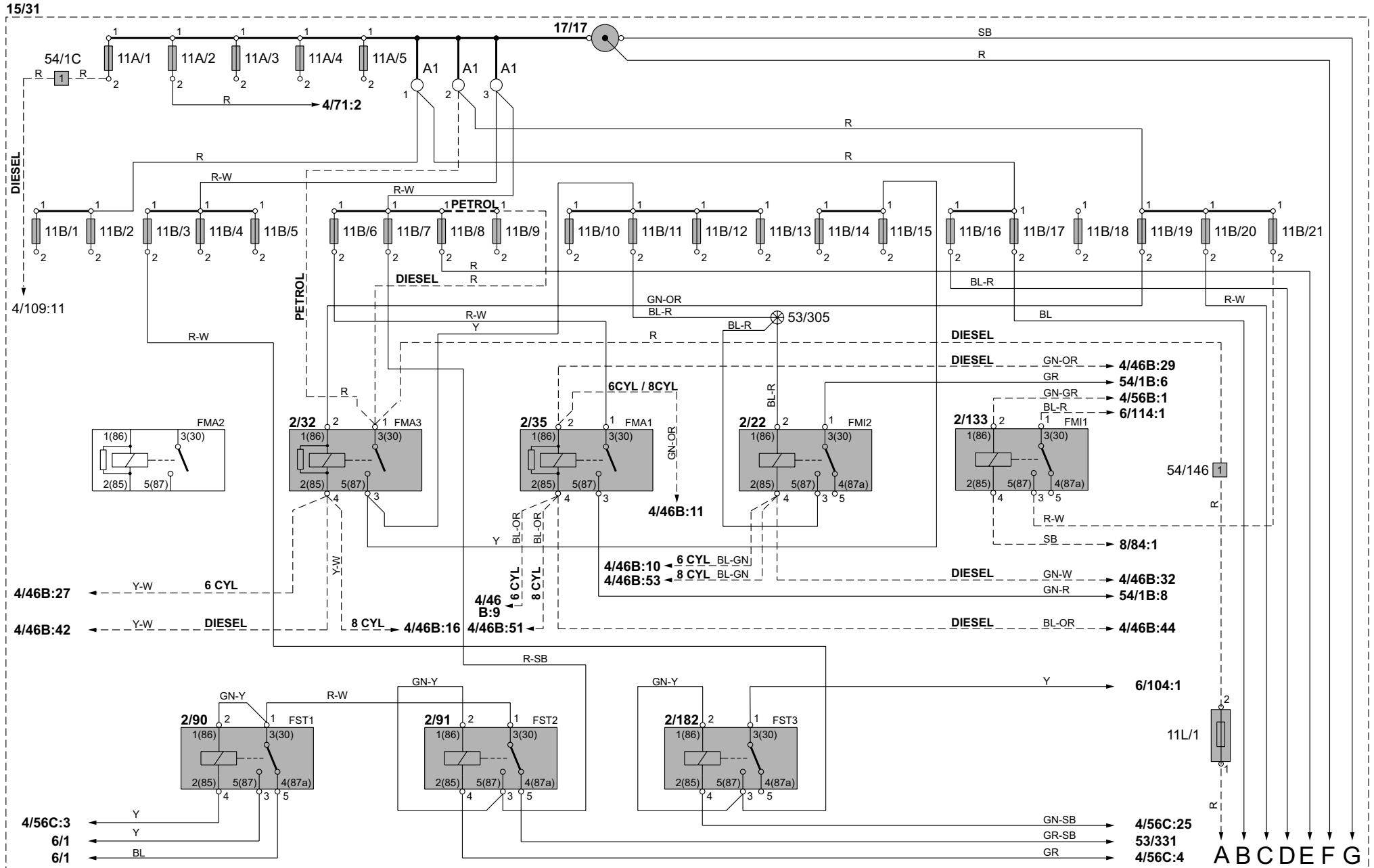


List of symbols

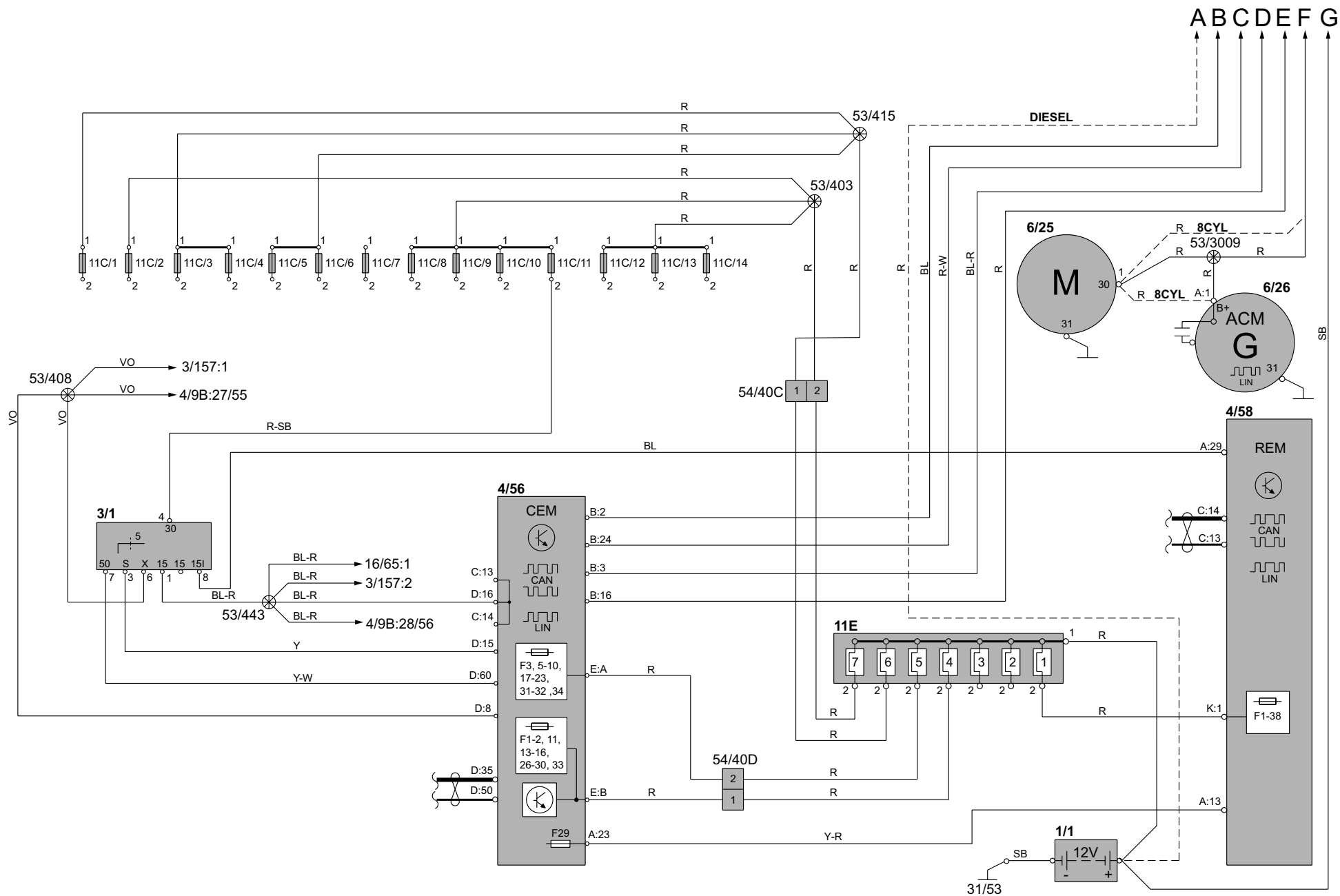
-  = System voltage
-  = Ground connection via wiring
-  = Ground connection in component/chassis
-  = Screened wire
-  = Junction point
-  = Twisted cable
-  = Electrical connection
-  = Variant
-  = CAN communication
-  = CAN high data signal (CAN H)
-  = CAN low data signal (CAN L)
-  = LIN communication
-  = 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 distribution 1:2 Overview

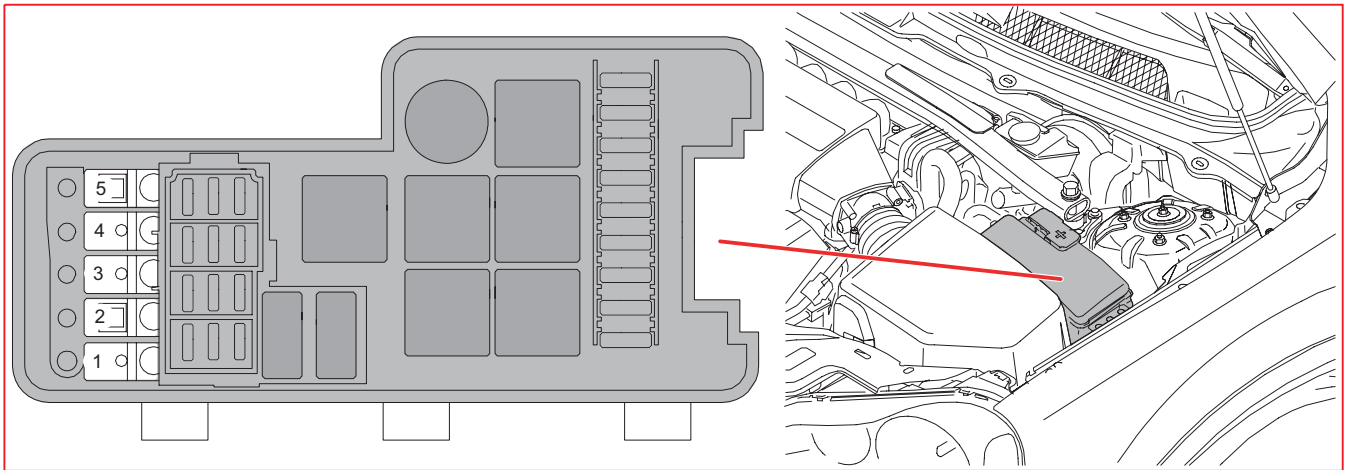


Electrical distribution 2:2 Overview



Fuses

Engine compartment 11A/1-5

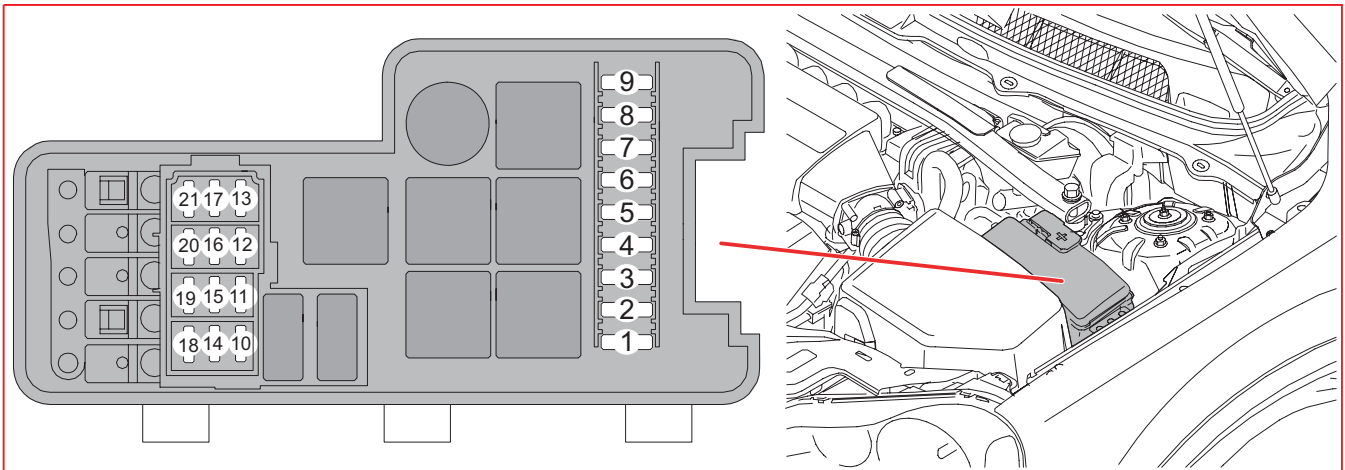


11A Fuses in the engine compartment

No.	Fuse function	via	A
1	4/109 Glow plug control unit (GCU) 20/22-26 Glow plug	- 4/109	60
2	6/29 Cooling fan motor, Diesel	4/71	60
3	-	-	-
4	-	-	-
5	-	-	-

Fuses

Engine compartment 11B/1-11

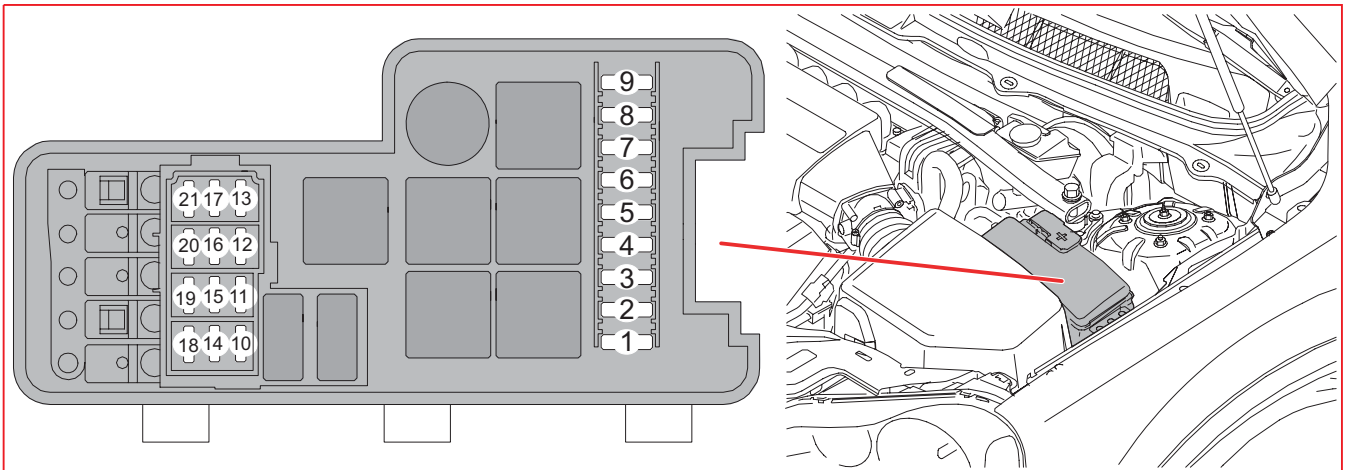


11B Fuses in the engine compartment

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 motor	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, auxiliary 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	2/91 - 2/90, 2/91	25
8	4/83 Control module fuel pump 6/33 Fuel pump	4/56 4/56	15
9	4/28 Transmission Control Module (TCM), TF-80SC/TF-80SC AWD	-	15
10	4/46 Engine Control Module (ECM), Diesel 20/3-8 Spark plug and ignition coil, not 8-Cyl. 20/14 Condenser, ignition coils, 8-Cyl. 20/46-53 Spark plug with ignition coil, 8-Cyl.	- - - -	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
continues			

Fuses

Engine compartment 11B/12-14

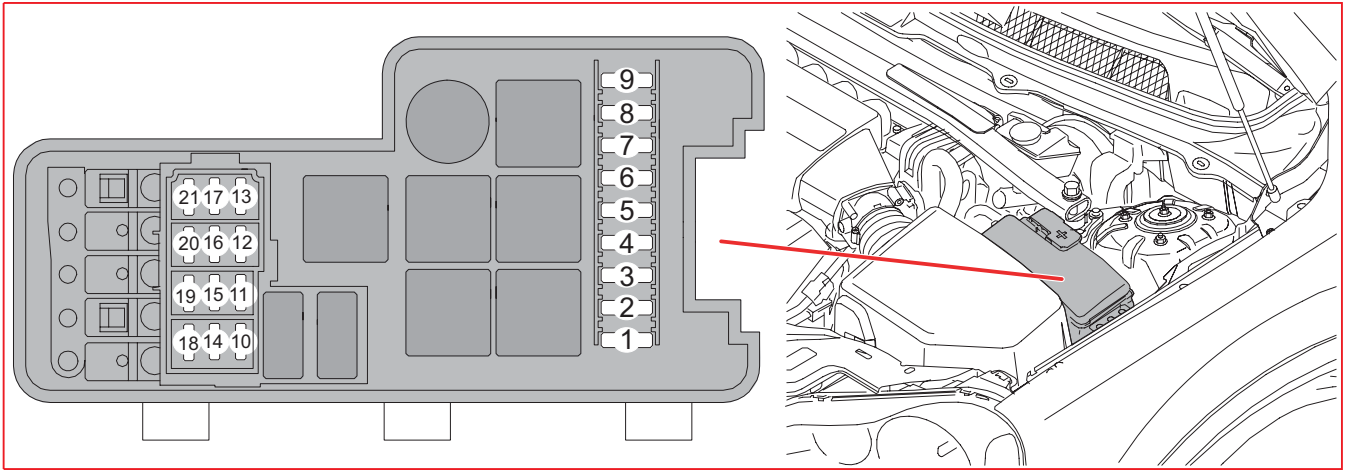


11B Fuses in the engine compartment

No.	Fuse function	via	A
12	7/17 Mass air flow sensor (MAF), Diesel	-	5
	4/46 Engine Control Module (ECM), Gasoline not 8-Cyl.	-	15
	7/17 Mass air flow sensor (MAF), Gasoline not 8-Cyl.	-	
	8/6-11 Injection valves, Gasoline not 8-Cyl.	-	
	8/146-8/153 Injection valves, 8-Cyl.	-	
13	4/46 Engine Control Module (ECM), 8-Cyl.	-	10
	6/120 Throttle body motor, 8-Cyl.	4/46	
	4/46 Engine Control Module (ECM), Diesel	-	15
	6/118 Swirl throttle control motor, Diesel	4/46	
	6/120 Throttle body motor, Diesel	4/46	
	6/139 Upper actuating motor, intake manifold	-	
	6/140 Lower actuating motor, intake manifold	-	
8/98 Fuel pressure control valve, Diesel	4/46		
8/111 Fuel flow control valve	4/46		
14	7/15 Heated oxygen sensor, Diesel	-	10
	7/15 Heated oxygen sensor	-	20
	7/82 Heated oxygen sensor, diagnosis 1	-	
	7/103 Heated oxygen sensor 3	-	
	7/15 Front heated oxygen sensor, bank 2, 8-Cyl.	-	20
	7/82 Front heated oxygen sensor, bank 1, 8-Cyl.	-	
	7/103 Rear heated oxygen sensor, bank 2, 8-Cyl.	-	
7/104 Rear heated oxygen sensor, bank 1, 8-Cyl.	-		
continues			

Fuses

Engine compartment 11B/15

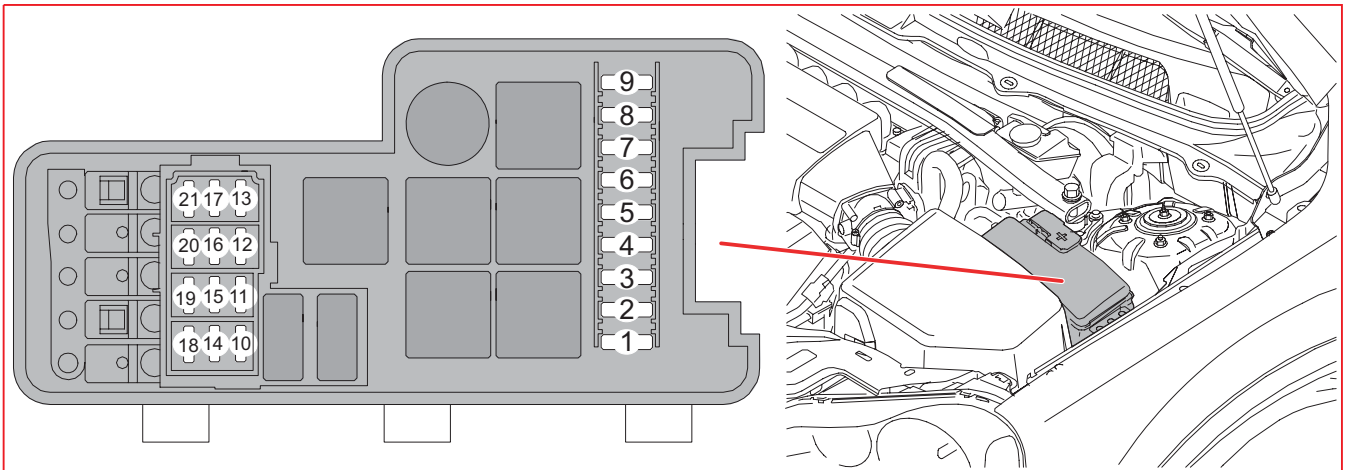


11B Fuses in the engine compartment

No.	Fuse function	via	A
15	6/67 Pump, fuel leakage control	-	10
	8/18 EVAP valve	-	
	8/19 Solenoid, variable valve timing, intake	-	
	8/28 Turbocharger control valve	-	
	8/81 Solenoid, variable valve timing outlet	-	
	9/32 PTC resistor, crankcase ventilation	-	
8/125	Variable valve lifter, front plane, 6-Cyl.	-	15
	8/126 Variable valve lifter, rear plane, 6-Cyl.	-	
4/46	Engine Control Module (ECM), 8-Cyl.	-	
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.	-	
8/18	EVAP valve, 8-Cyl.	-	
8/19	Solenoid, variable valve timing, intake, bank 2, 8-Cyl.	-	
8/81	Solenoid, variable valve timing, exhaust, bank 2, 8-Cyl.	-	
8/107	Valve, variable intake, 8-Cyl.	-	
8/117	Solenoid, variable valve timing, intake, bank 1, 8-Cyl.	-	
8/118	Solenoid, variable valve timing, exhaust, bank 1, 8-Cyl.	-	
4/109	Glow plug control unit (GCU)	-	
6/143	Turbo control motor, Diesel	-	
8/64	Solenoid valve, engine pad, Diesel	-	
8/113	Bypass valve, EGR cooling, Diesel	-	
8/120	EGR valve, Diesel	-	
continues			

Fuses

Engine compartment 11B/16-21

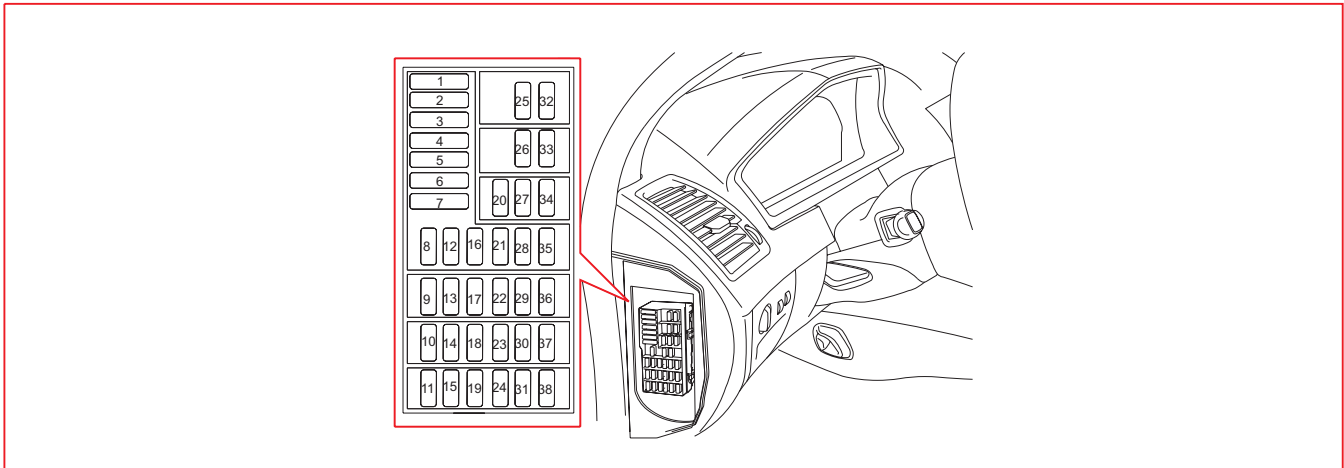


11B Fuses in the engine compartment

No.	Fuse function	via	A
16	10/1 Left front lamp housing, daytime running lights	4/56	20
	10/70 Low beam, left	4/56	
17	10/2 Right front lamp housing, daytime running lights	4/56	20
	10/66 Low beam, right	4/56	
19	2/32 Main relay, engine management system	-	5
	4/46 Engine Control Module (ECM)	-	
20	10/11 Running/parking light, front left	4/56	15
	10/12 Running/parking light, front right	4/56	
	10/71 Side running light, front left	4/56	
	10/73 Side running light, front right	4/56	
21	6/114 Vacuum pump	2/133	20

Fuses

Passenger compartment 11C/1-4

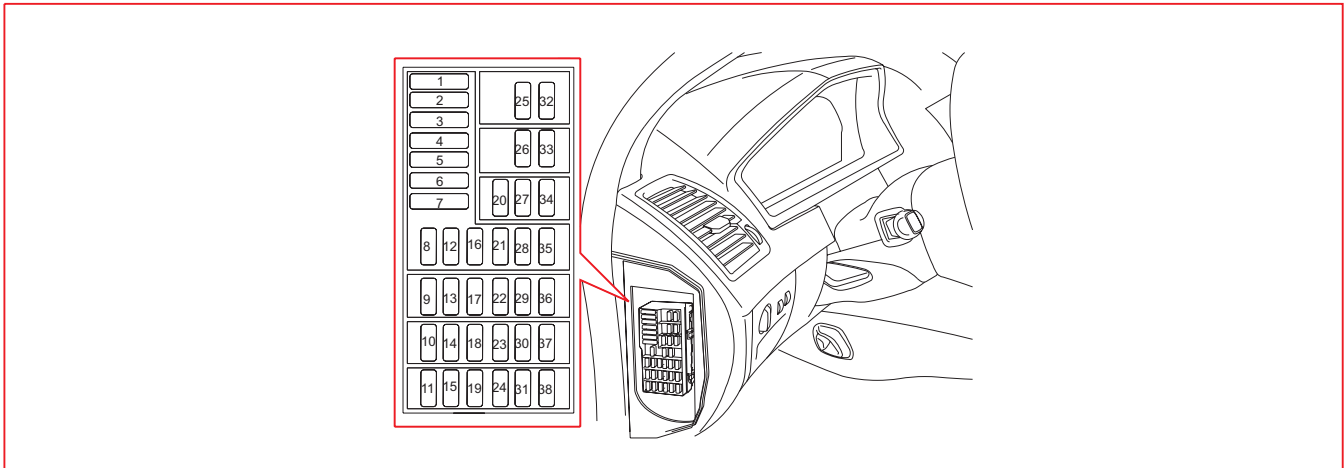


11C Fuses in the passenger compartment

No.	Fuse function	via	A
1	6/28 Motor, passenger compartment fan	4/31	30
2	16/105 Audio Module (AUD)	-	30
3	4/52 Power Seat Module (PSM)	-	25
	6/16 Motor driver's seat, backrest angle	4/52	
	6/17 Motor driver's seat, up/down front edge	4/52	
	6/18 Motor driver's seat, up/down rear edge	4/52	
	6/19 Motor driver's seat, fore/aft	4/52	
4	6/20 Motor passenger seat, fore/aft	3/27	25
	6/64 Motor passenger seat, backrest angle	3/27	
	6/65 Motor passenger seat, up/down front edge	3/27	
	6/66 Motor passenger seat, up/down rear edge	3/27	
continues			

Fuses

Passenger compartment 11C/5-7

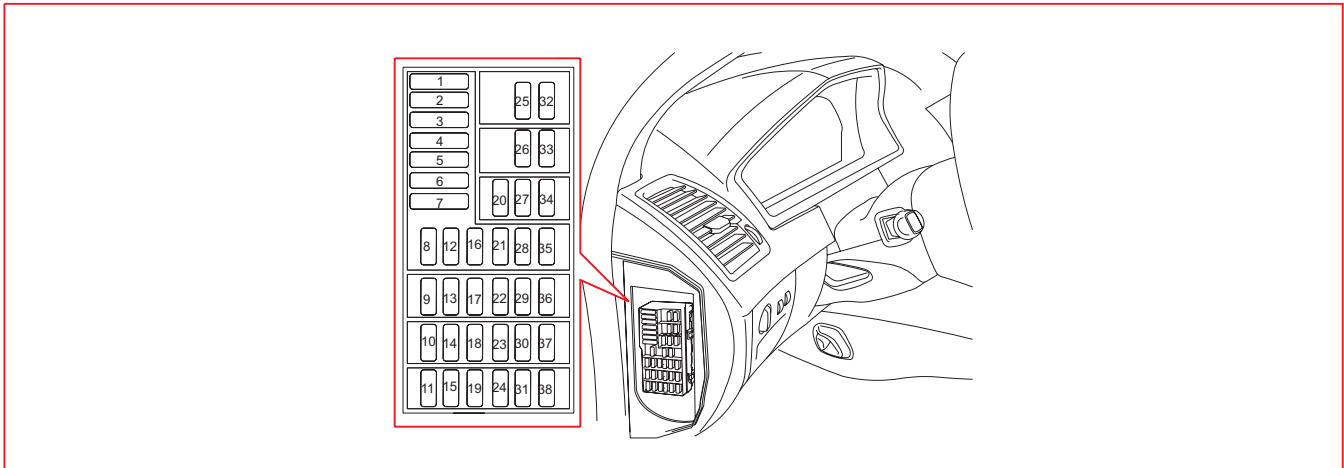


11C Fuses in the passenger compartment

No.	Fuse function	via	A	
5	3/74	Left-hand front door lock unit	3/126	25
	3/126	Driver/Passenger Door Module (DDM)/(PDM)	-	
	6/58	Motor, front left power window	3/126	
	6/62	Left power exterior rearview mirror	3/126	
	9/33	Left heated exterior rearview mirror	3/126	
	10/148	Left exterior rearview mirror lighting	3/126	
6	3/75	Right-hand front door lock unit	3/127	25
	3/127	Passenger/Driver Door Module (PDM)/(DDM)	-	
	6/60	Motor, front right power window	3/127	
	6/63	Right power exterior rearview mirror	3/127	
	9/34	Right heated exterior rearview mirror	3/127	
10/149	Right exterior rearview mirror lighting	3/127		
7	-	-	-	-
continues				

Fuses

Passenger compartment 11C/8-10

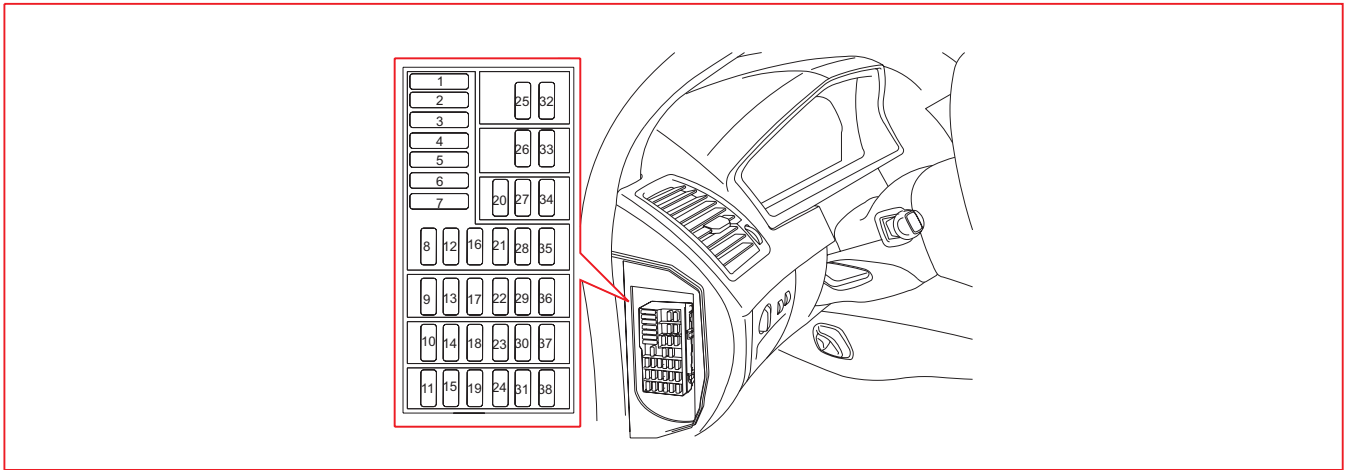


11C Fuses in the passenger compartment

No.	Fuse function	via	A
8	16/1 Integrated Audio Module (IAM)	-	15
	16/109 DVD player/control module	-	
9	4/124 Accessory USB unit (AUU)	-	10
	16/46 Multimedia display	-	
	16/108 Multimedia Module (MMM)	-	
	16/109 DVD player/control module	-	
	16/139 Global Positioning System Module (GPS)	-	
	16/145 Remote Digital Audio Receiver (RDAR)	-	
	54/112 Connector, cable harness, infotainment, 30-feed	-	
10	3/111 Light Switch Module (LSM)	-	5
	3/254 Steering Wheel Module (SWM)	-	
	4/68 Steering Wheel Angle Sensor Module (SAS)	3/254	
	17/13 Data link connector	-	
continues			

Fuses

Passenger compartment 11C/11-14

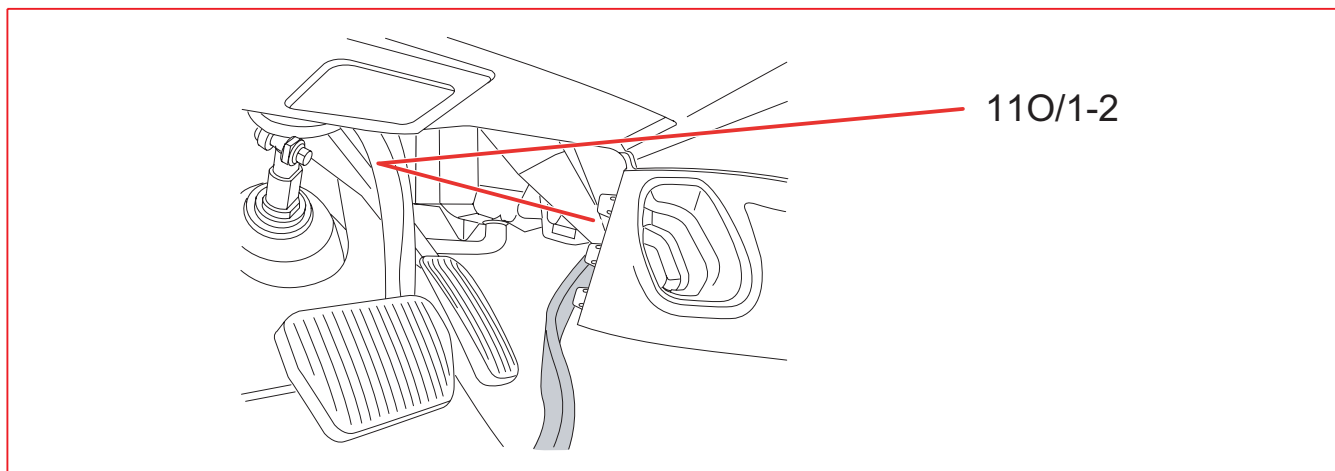


11C Fuses in the passenger compartment

No.	Fuse function	via	A	
11	3/157	Switch, passenger side airbag	3/1	7.5
	4/9	Supplemental Restraint System module (SRS)	3/1	
	4/28	Transmission Control Module (TCM)	3/1, 4/56	
	4/46	Engine Control Module (ECM)	3/1, 4/56	
	4/56	Central Electronic Module (CEM)	3/1	
	4/58	Rear Electronic Module (REM)	3/1	
	11O/1	Fuses in spare fuse holder, passenger compartment	-	
	11O/2	Fuses in spare fuse holder, passenger compartment	3/1	
	16/65	Antenna ring/ignition switch illumination	3/1	
12	3/117	Switch unit, ceiling light	4/70	10
	4/33	Sun Roof Module (SRM)	4/70	
	4/70	Upper Electronic Module (UEM)	-	
	4/76	Remote control unit for garage door opener	4/70	
	7/149	Rain Sensor Module (RSM)	4/70	
	10/114	Vanity mirror lighting, left	4/70	
	10/115	Vanity mirror lighting, right	4/70	
	10/150	Rear reading light	4/70	
10/172	Reading light, third row of seats	4/70		
13	4/70	Upper Electronic Module (UEM)	-	15
	6/15	Sunroof motor	4/33	
14	16/60	Phone Module (PHM)	-	5

Fuses

Passenger compartment 110/1-2



110/1-2 Fuses in spare fuse holder, passenger compartment

No.	Fuse function	via	A
1	Alcohol lock Alcohol lock	- 2/241	5
2	Alcohol lock	-	5