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VOLVO XC90

## **WIRING DIAGRAM 2011**

TP 39179202

## 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 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**

Fuse in cargo compartment auxiliary fuse box.

#### Changes introduced up to and including January 2009

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.

#### Ordering:

Electronic Wiring Diagrams (EWD) can be ordered from the Technical Information Shop (TIS) at

www.volvocarstechinfo.ford.com

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Direction indicator and hazard warning flashers		Parking camera & AEM	
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# **Explanations Abbreviations**

Groups		Other	
Group 23	- Fuel system	ABL	- Active Dual Years headlights
Group 26	= Fuel system	ACC	<ul><li>Active Dual Xenon headlights</li><li>Accessories</li></ul>
Group 27	<ul><li>= Cooling system</li><li>= Engine controls</li></ul>		= Accessories = Silver plated
•		Ag	•
Group 32	= Alternator and voltage regulator	Au AUDIO	= Gold plated
Group 33	= Starting system		= Audio system
Group 35	= Lighting	AUTO	= Automatic transmission
Group 36	= Additional electrical equipment	BLIS	= Blind spot information system
Group 37	= Wiring and fuses	CEM	= Central Electronic Module
Group 38	= Instruments	DIESEL	= D5244 T4/T5/T6/T7
Group 39	= Other	DRL	= Daytime Running Lights
Group 43	= Transmission	DSTC	= Dynamic Stability Traction Control
Group 59	= Brake system	Du-X	= Dual Xenon
Group 64	= Steering	ECC	= Electronic climate control system
Group 76	= Shock absorbers	ECPS	= Electronic power steering
Group 83	= Doors and openings	EXC	= Exclusive
Group 84	= Exterior decorative elements, etc.	EXT. D	= Extended electrical distribution
Group 85	= Interior equipment	HISPEED	= High speed data bus
Group 87	= Climate control system	LH	= Left-hand side
Group 88	= Internal equipment	LHD	= Left-hand drive
		LOSPEED	•
Ignition sw	ritch symbols	MAN	= Manual transmission
X	= Accessories (audio position)	MCC	= Manual Climate Control
S	= Powered upon insertion of key	PCL	= Power Child Lock
15	= Contact remains connected during	PETROL	= Gasoline
	start	REM	= Rear Electronic Module
15l	= Contact is broken while starting	RH	= Right-hand side
30	= Constant power from the battery	RHD	= Right-hand drive
50	= Start	RTI	= Road Traffic Information
		SRS	= Airbag
Countries/	Markets	Т	= Turbocharged engine
Α	= Austria	W/O	= Without
AUS	= Australia	5CYL	= 5-cylinder engine
В	= Belgium	6CYL	= 6-cylinder engine
CDN	= Canada	8CYL	= 8-cylinder engine
CH	= Switzerland		
D	= Germany	Colors	
DK	= Denmark	BL	= Blue
E	= Spain	BN	= Brown
EU/OS	= Markets outside USA and Canada	GN	= Green
FIN	= Finland	GR	= Gray
GB	= Great Britain	NL	= Natural
ISR	= Israel	LBL	= Light Blue
J	= Japan	LGN	= Light Green
KOR	= Korea	OR	= Orange
N	= Norway	P	= Pink
N NL	= Netherlands	R	= Red
S	= Sweden	SB	= Black
USA	= United States of America	VO	= Violet
		W	= White
WEU	= Western Europe	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.

The systems are shown in non-active status. i.e. with "key removed" and when the doors, hatches and hood are closed.

### 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".

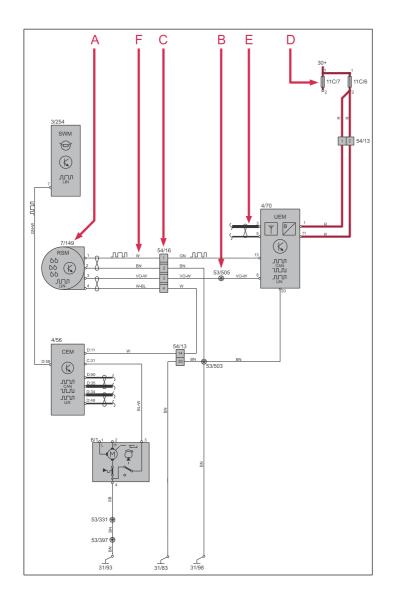
### F. Abbreviations

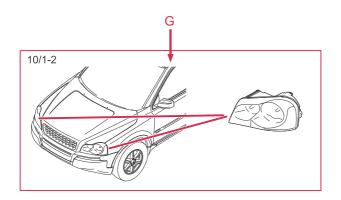
A number of different abbreviations are used in the manual. These are explained in the section "Abbreviations".

### G. Component location

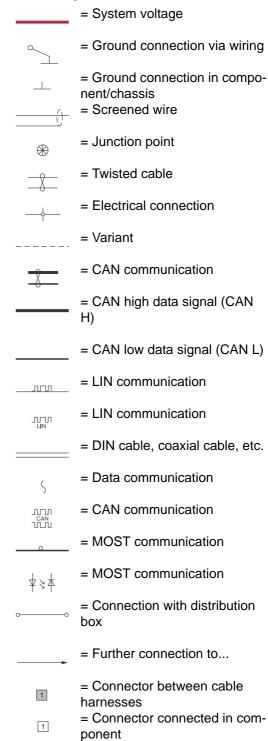
There is a section at the end of the manual in which the appearance and location of components is described in numerical order.

### How to use the wiring diagrams 2:2

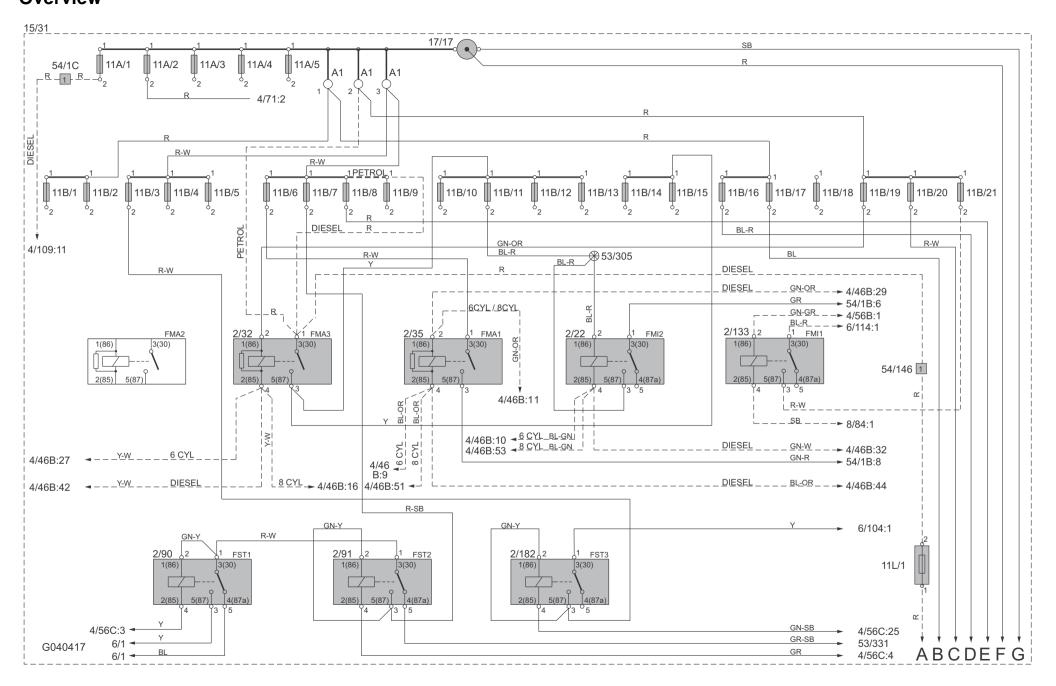




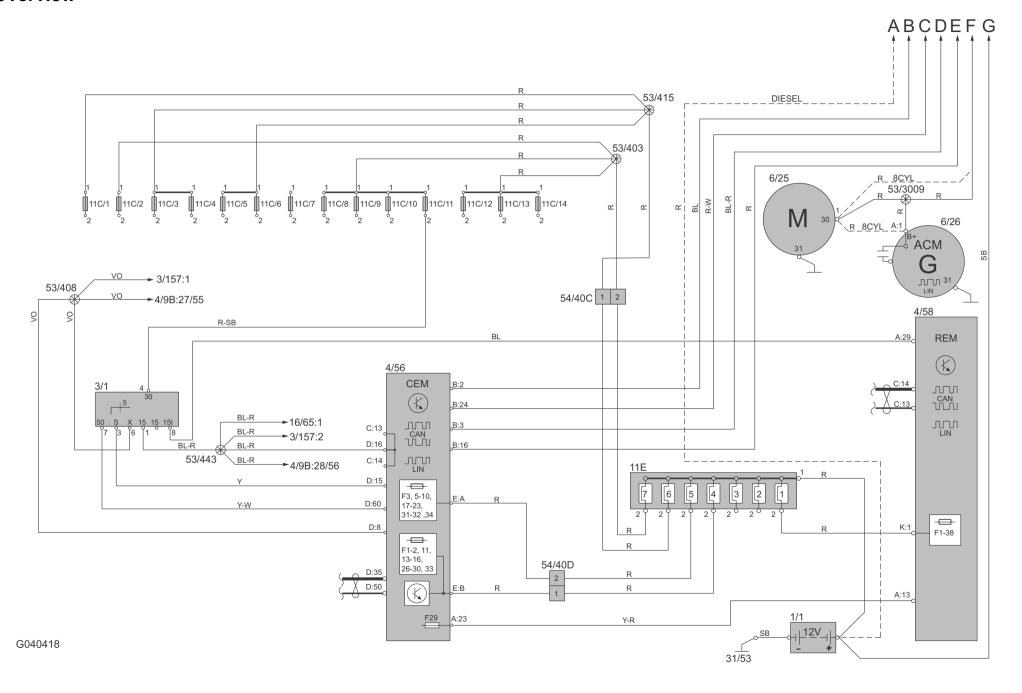
### List of symbols



## Electrical distribution 1:2 Overview

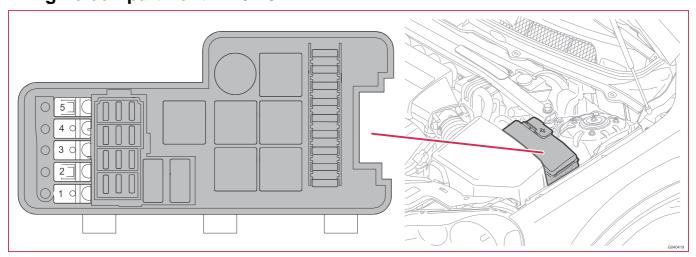


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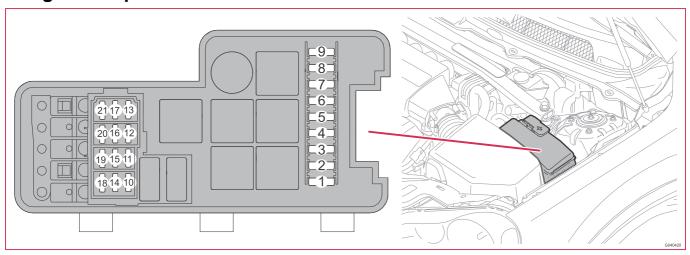
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# Fuses Engine compartment 11A/1-5



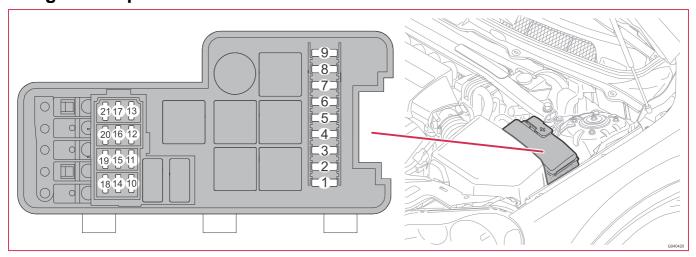
No.	Fuse fun	ction	via	Α
1	4/109 20/22-26	Glow plug control unit (GCU) Glow plug	- 4/109	60
2	6/29	Cooling fan motor, Diesel	4/71	60
3	-		-	-
4	-		-	-
5	-		-	-

## Fuses Engine compartment 11B/1-11



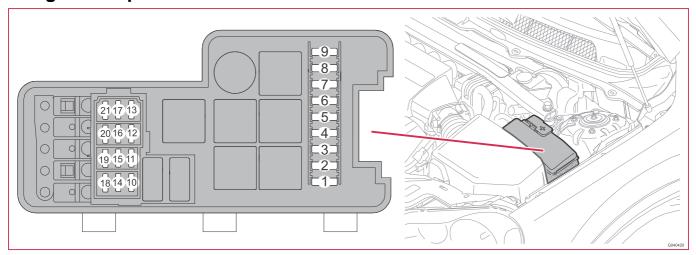
No.	Fuse fu	nction	via	Α
1	4/16	Brake Control Module (BCM)	-	30
2	4/16	Brake Control Module (BCM)	-	30
3	6/104	High pressure headlight washer motor	2/182	35
4	6/35 6/73 9/30	Fuel pump, auxiliary heater Coolant pump, auxiliary heater Auxiliary heater	4/7 4/7 4/7	25
5	54/8	Connector, cable harness, auxiliary lights, 30-feed	-	20
6	6/25	Starter motor	2/35	35
7	2/90 2/91 6/1	Relay, windshield wiper, low/high speed Relay, intermittent wiping Windshield wiper motor	2/91 - 2/90, 2/91	25
8	4/83 6/33	Fuel pump control module Fuel pump	4/56 4/56	15
9	4/28	Transmission Control Module (TCM), TF-80SC/TF-80SC AWD	-	15
10	4/46 20/3-8 20/14 20/46-53	Engine Control Module (ECM), Diesel Spark plug and ignition coil, not 8-Cyl. Condenser, ignition coils, 8-Cyl. Spark plug with ignition coil, 8-Cyl.	- - - -	20
11	6/44 7/51 8/3	Cooling fan, electrics box, engine compartment Accelerator pedal sensor Electromagnetic clutch, climate control system	- - 2/22	10
		continues		

## Fuses Engine compartment 11B/12-14



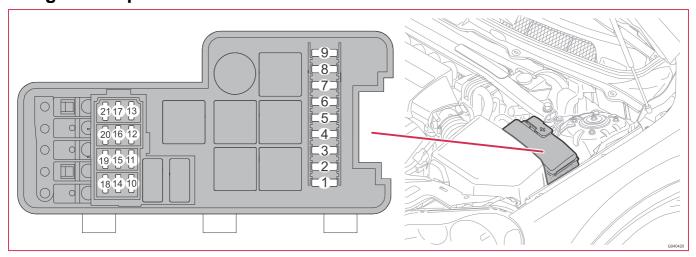
No.	Fuse f	unction	via	Α
12	7/17	Mass air flow sensor (MAF), Diesel	-	5
	4/46	Engine Control Module (ECM), Gasoline not 8-Cyl.	-	15
	7/17	Mass air flow sensor (MAF), Gasoline not 8-Cyl.	-	
	8/6-11	Injection valves, Gasoline not 8-Cyl.	-	
	8/146-			
	8/153	Injection valves, 8-Cyl.	-	
13	4/46	Engine Control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

## Fuses Engine compartment 11B/15



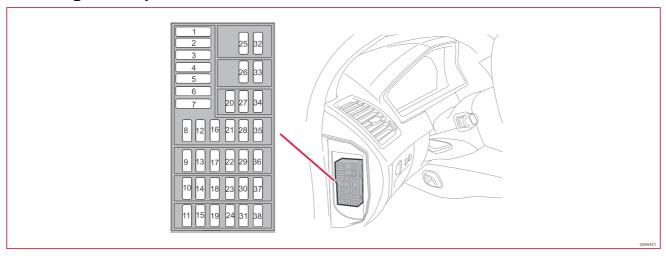
No.	Fuse f	unction	via	Α
15	6/67	Pump, fuel leakage control		10
	8/18	EVAP valve	-	
	8/19	Solenoid, variable valve timing, intake	-	
	8/28	Turbo control valve	-	
	8/81	Solenoid, variable valve timing, exhaust	-	
	9/32	PTC resistor, crankcase ventilation	-	
	8/125	Variable valve lifter, front plane, 6-Cyl.	-	15
	8/126	Variable valve lifter, rear plane, 6-Cyl.	-	
	4/46	Engine Control Module (ECM), 8-Cyl.	-	j
	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	Variable intake valve, 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)	-	1
	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	<u>.</u>	•

## Fuses Engine compartment 11B/16-21



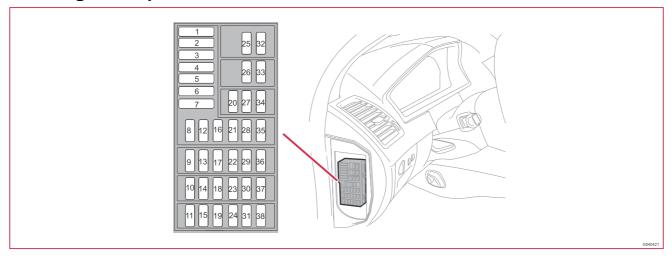
No.	Fuse f	unction	via	Α
16	10/1 10/70	Left front lamp housing, daytime running lights Left-hand low beam	4/56 4/56	20
17	10/2 10/66	Right front lamp housing, daytime running lights Right-hand low beam	4/56 4/56	20
19	2/32 4/46	Main relay, engine management system Engine Control Module (ECM)		5
20	10/11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

## Passenger compartment 11C/1-4



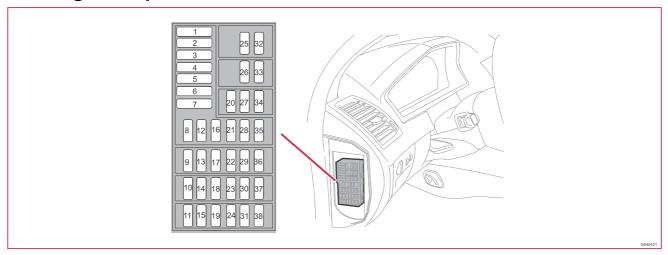
No.	Fuse f	unction	via	Α
1	6/28	Motor, passenger compartment fan	4/31	30
2	16/105	Audio module (AUD)	-	30
3	4/52 6/16 6/17 6/18 6/19	Power Seat Module (PSM) Driver seat motor, backrest angle Driver seat motor, up/down front edge Driver seat motor, up/down rear edge Driver seat motor, forward/backward	- 4/52 4/52 4/52 4/52	25
4	6/20 6/64 6/65 6/66	Passenger seat motor, forward/backward Passenger seat motor, backrest angle Passenger seat motor, up/down front edge Passenger seat motor, up/down rear edge	3/27 3/27 3/27 3/27	25
		continues	,	•

## Passenger compartment 11C/5-7



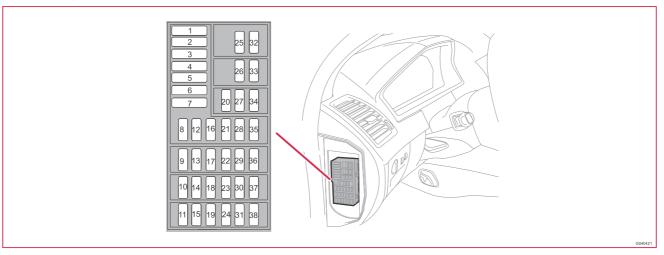
No.	Fuse for	unction	via	Α	
5	3/74	Left-hand front door lock unit	3/126	25	
	3/126	Driver/Passenger Door Module (DDM)/(PDM)	-		
	6/58	Motor, front left power window	3/126		
	6/62	Power door mirror, left	3/126		
	9/33	Left heated exterior rearview mirror	3/126		
	10/148	Left exterior rearview mirror lighting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

## Passenger compartment 11C/8-10



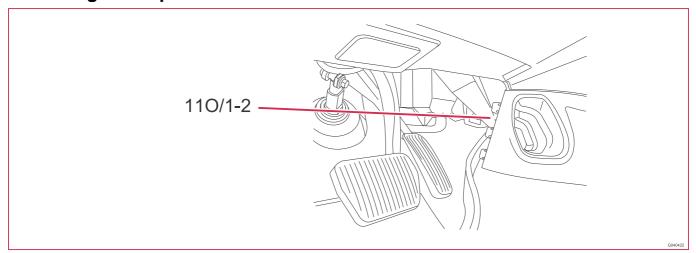
No.	Fuse fu	unction	via	Α
8	16/1	Integrated Audio Module (IAM)	-	15
	16/109	DVD player/control module	-	
9	4/124	Accessory USB unit (AUU)	-	10
	16/46	Multimedia display	-	
	16/108	Multimedia Module (MMM)	-	
	16/109	DVD player/control module	-	
	16/145	Remote Digital Audio Receiver (RDAR)	-	
	54/112	Connector, 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		

## Passenger compartment 11C/11-14



No.	Fuse function		via	Α
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	
	110/1	Fuses in spare fuse holder, passenger compartment	-	
	110/2	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	Left-hand vanity mirror lighting	4/70	
	10/115	Right-hand vanity mirror lighting	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
	16/147	Bluetooth Phone Module (BPM)		

Full download. Full download. Full download. Passenger compartment 110/1-2



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

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