



Volvo XC70
(2015-2016)



Wiring Diagrams and Electric Model Year 2016



WIRING DIAGRAM 2016

Structure week 15W17 TP 39393031 - VOLVO S80 (07-), V70, XC70 (08-) -

Table of Contents

Explanations & Abbreviations

How to use the wiring diagrams 1:2.....	8
How to use the wiring diagrams 2:2.....	9

Electrical distribution

Overview without Start/Stop function.....	10
Overview with Start/Stop function.....	11
Overview, Distribution box in engine compartment.....	12
Overview, Distribution box in engine compartment.....	13
Overview, Distribution box in passenger compartment.....	14
Overview, Distribution box in luggage compartment.....	15

Fuses

Distribution box, engine compartment F1 - F2.....	16
Distribution box, engine compartment F3 - F7.....	17
Distribution box, engine compartment F8 - F21.....	18
Distribution box, engine compartment F22 - F31.....	19
Distribution box, engine compartment F32 - F37.....	20
Distribution box, engine compartment F38 - F38.....	21
Distribution box, engine compartment F39 - F39.....	22
Distribution box, engine compartment F40 - F44.....	23
Central Electronic Module (CEM) F1 - F3.....	24
Central Electronic Module (CEM) F4 - F14.....	25
Central Electronic Module (CEM) F15 - F24.....	26
Distribution box, passenger compartment F1 - F17.....	27
Distribution box, passenger compartment F18 - F30.....	28
Distribution box, cold zone, engine compartment F1 - F10.....	29
Distribution box, cold zone, engine compartment F11 - MF2.....	30
Distribution box, luggage compartment FA1 - FA12.....	31
Battery PF1 - -.....	32

Relays

Relays in the engine compartment.....	33
Relays in the engine compartment.....	34
Relays in passenger and luggage compartment.....	35

Ground connections

Overview.....	36
31/2-31/6.....	37
31/7.....	38
31/10.....	39
31/15.....	40
31/47-31/48.....	41
31/65-31/83.....	42
31/84-31/89.....	43
31/93-31/131.....	44
31/XX4-31/XX14.....	45
31/TRM-31/AL.....	46

Control modules

Overview locations.....	47
Overview designations.....	48
Central Electronic Module (CEM), 1:3.....	49
Central Electronic Module (CEM), 2:3.....	50
Central Electronic Module (CEM), 3:3.....	51
Data communication, high speed CAN, 1:2, EXC 4-CYL.....	52
Data communication, high speed CAN, 2:2, EXC 4-CYL.....	53
Data communication, high speed CAN, 1:2, 4-CYL 2.0L.....	54
Data communication, high speed CAN, 2:2, 4-CYL 2.0L.....	55
Data communication, intermediate speed CAN, LHD.....	56
Data communication, intermediate speed CAN, RHD.....	57
Data communication MOST.....	58
Data communication LIN, 1:3.....	59
Data communication LIN, 2:3.....	60
Data communication LIN, 3:3.....	61
Steering Wheel Module (SWM).....	62

Group 26 Cooling system

Cooling fan, 4-CYL D.....	63
Cooling fan, 4-CYL P.....	64
Cooling fan, 5-CYL D.....	65
Cooling fan, 5-CYL P.....	66

Group 27 Engine controls

Cruise control, 4-CYL D.....	67
Cruise control, 4-CYL P.....	68
Cruise control, 5-CYL D.....	69
Cruise control, 5-CYL P.....	70
Start-/Stop function, 4-CYL D.....	71
Start-/Stop function, 4-CYL P.....	72
Start-/Stop function, 5-CYL D.....	73
Start-/Stop function, 5-CYL P.....	74

Group 28 Ignition and control system

Engine management system, 1:3, 4-CYL D.....	75
Engine management system, 2:3, 4-CYL D.....	76
Engine management system, 3:3, 4-CYL D.....	77
Engine management system, 1:3, 4-CYL P.....	78
Engine management system, 2:3, 4-CYL P.....	79
Engine management system, 3:3, 4-CYL P.....	80
Engine management system, 1:3, 5-CYL D.....	81
Engine management system, 2:3, 5-CYL D.....	82
Engine management system, 3:3, 5-CYL D.....	83
Engine management system, 1:2, 5-CYL P.....	84
Engine management system, 2:2, 5-CYL P.....	85
Emission control, 4-CYL P.....	86
Emission control, 5-CYL P.....	87

Group 32 Alternator and voltage regulator

Power supply, Start/Stop, 4-CYL.....	88
Power supply, Start/Stop, 5-CYL.....	89
Power supply, W/O Start/Stop, 5-CYL.....	90

Table of Contents

Group 33 Starting system

Starting system, Start/Stop, 1:2, 4-CYL P	91
Starting system, Start/Stop, 2:2, 4-CYL P	92
Starting system, Start/Stop, 1:2, 4-CYL D.....	93
Starting system, Start/Stop, 2:2, 4-CYL D.....	94
Starting system, Start/Stop, 1:2, 5-CYL P.....	95
Starting system, Start/Stop, 2:2, 5-CYL P.....	96
Starting system, Start/Stop, 1:2, 5-CYL D.....	97
Starting system, Start/Stop, 2:2, 5-CYL D.....	98
Starting system, W/O Start/Stop, 5-CYL P.....	99

Group 35 Lighting

High and low beam - Halogen.....	100
High and low beam - Dual Xenon.....	101
Beam length adjustment, manual.....	102
Running/Parking light, Tail lights, V70, XC70.....	103
Running/Parking light, Tail lights, S80.....	104
Fog lights, V70, XC70.....	105
Fog lights, S80.....	106
Brake lights, V70, XC70.....	107
Brake lights, S80.....	108
Reversing lights, V70, XC70.....	109
Reversing lights, S80.....	110
Follow-me-home lighting, LHD.....	111
Follow-me-home lighting, RHD.....	112
Interior lighting, 1:2, LHD.....	113
Interior lighting, 2:2, LHD.....	114
Interior lighting, 1:2, RHD.....	115
Interior lighting, 2:2, RHD.....	116
Active headlight.....	117
Lighting in door sill trims, Accessories.....	118
Auxiliary lights.....	119
Lighting mug holder and floor, Accessories.....	120

Group 36 Additional electrical equipment

Rain sensor.....	121
Direction indicator and hazard warning flashers, LHD V70, XC70.....	122
Direction indicator and hazard warning flashers, LHD S80.....	123
Direction indicator and hazard warning flashers, RHD V70, XC70.....	124
Direction indicator and hazard warning flashers, RHD S80.....	125
Wiper/washer windshield.....	126
High pressure headlight washer.....	127
Wiper/Washer rear window, V70, XC70.....	128
Keyless vehicle, 1:2.....	129
Keyless vehicle, 2:2.....	130
Horn.....	131
Anti-theft alarm.....	132
Parking assistance.....	133
Collision warning with power brake booster.....	134
Tire Pressure Monitoring System (TPMS).....	135
Alcohol lock.....	136

Group 37 Wiring and fuses

Diagnostics system.....	137
Outlet 12V.....	138
Outlet 12V, S80.....	139
Cable harness towbar/tow hitch 4-pin, V70, XC70.....	140
Cable harness towbar/tow hitch 4-pin, S80.....	141
Cable harness towbar/tow hitch 7-pin, V70, XC70.....	142
Cable harness towbar/tow hitch 7-pin, S80.....	143
Cable harness towbar/tow hitch 13-pin, V70, XC70.....	144
Cable harness towbar/tow hitch 13-pin, S80.....	145

Group 38 Instruments

Seat belt reminder.....	146
Driver information system.....	147

Group 39 Other

TV receiver/TV control module.....	148
Cellular phone, 1:2.....	149
Cellular phone, 2:2.....	150
Audio, 1:2.....	151
Audio, 2:2.....	152
Audio High/Premium, 1:3, IAM.....	153
Audio High/Premium, 2:3, IAM.....	154
Audio High/Premium, 3:3, IAM.....	155
Audio High/Premium, 1:3, IHU.....	156
Audio High/Premium, 2:3, IHU.....	157
Audio High/Premium, 3:3, IHU.....	158
DAB Radio.....	159
Bluetooth Handsfree.....	160
Multimedia monitor with DVD, Dual Screen, Accessories, V70, XC70.....	161
Satellite radio.....	162
Parking camera.....	163
Parking camera, Wide angle, Front.....	164
Navigation system & Traffic information, portable.....	165
Vehicle Information and Communication System, VICS, JP.....	166
Sensus Connected Touch.....	167

Group 43 Transmission

Automatic transmission, AWF21.....	168
Automatic transmission, AWF22.....	169
Manual Transmission, M66.....	170
Differential Electronic System (DEM).....	171

Group 55 Parking brake

Electric parking brake.....	172
-----------------------------	-----

Group 59 Brake system

Brake control system.....	173
---------------------------	-----

Group 64 Steering

Power steering, EHPAS.....	174
Power steering, EPAS.....	175

Group 76 Shock absorbers

Four-C.....	176
-------------	-----

Group 83 Doors and openings

Central locking front doors, LHD.....	177
Central locking front doors, RHD.....	178
Central locking rear doors.....	179
Central locking tailgate, V70, XC70.....	180
Central locking tailgate, S80.....	181
Central locking fuel filler flap.....	182
Signal receiver central locking.....	183
Power windows front doors, LHD.....	184
Power windows front doors, RHD.....	185
Power windows rear doors.....	186
Power sunroof.....	187

Table of Contents

Group 84 Exterior decorative elements, etc.

Power door mirrors, LHD.....	188
Power door mirrors, RHD.....	189
Heated door mirrors, LHD.....	190
Heated door mirrors, RHD.....	191
Blind spot information system, LHD.....	192
Blind spot information system, RHD.....	193
Heated windscreen.....	194
Heated rear window.....	195

Group 85 Interior equipment

Power driver's seat with memory function, LHD.....	196
Power driver's seat with memory function, RHD.....	197
Power passenger seat, LHD.....	198
Power passenger seat, RHD.....	199
Heated steering wheel.....	200
Heated front seats with fans.....	201
Heated front seats without fans.....	202
Heated rear seat.....	203
Lumbar support driver, LHD.....	204
Lumbar support driver, RHD.....	205
Lumbar support passenger, LHD.....	206
Lumbar support passenger, RHD.....	207

Group 87 Climate control system

Climate control system, 1:2, 4-CYL.....	208
Climate control system, 2:2, 4-CYL.....	209
Climate control system, 1:2, 5-CYL P.....	210
Climate control system, 2:2, 5-CYL P.....	211
Climate control system, 1:2, 5-CYL D.....	212
Climate control system, 2:2, 5-CYL D.....	213
Climate control system PTC-elements.....	214
Parking heater, auxiliary heater.....	215
Parking heater, remote start.....	216

Group 88 Internal equipment

Supplemental restraint system, 1:2.....	217
Supplemental restraint system, 2:2.....	218
Power folding headrest.....	219
Remote control garage opening.....	220
Rear-view mirror with automatic dimming.....	221

Connectors..... 222

Branching points..... 270

Cable harness routing in vehicle

Rear door harness, left, V70, XC70.....	291
Rear door harness, left, S80.....	291
Rear door harness, right, V70, XC70.....	292
Rear door harness, right, S80.....	292
Driver door harness, LHD.....	293
Driver door harness, RHD.....	293
Passenger door harness, LHD.....	294
Passenger door harness, RHD.....	294
Dual battery harness.....	295
Alternator and generator harness, 4-CYL.....	295
Alternator and generator harness, 5-CYL & STOSTA.....	296
Alternator and generator harness, 5-CYL & W/O STOSTA.....	296
Centre console harness.....	297
Tunnel harness.....	297
Front bumper harness.....	298
Rear bumper harness, V70, XC70.....	298
Rear bumper harness, S80.....	299
Rear bumper adapter harness, V70, XC70.....	299
Rear bumper adapter harness, S80.....	300
Boot lid/tailgate harness, V70, XC70.....	300
Boot lid/tailgate harness, S80.....	301
Heated windscreen adapter harness.....	301
WEM harness.....	302
Rear right axle harness, 2WD.....	302
Rear right axle harness, 4WD.....	303
Rear right axle harness, 5-CYL D.....	303
Left rear axle harness.....	304
Left rear axle harness.....	304
Left rear axle harness, 5-CYL D.....	305
Electrical power steering harness, LHD.....	305
Electrical power steering harness, RHD.....	306
Crankshaft sensor harness, 4-CYL D.....	306
Crankshaft sensor harness, 4-CYL P.....	307
Crankshaft sensor harness, 5-CYL D.....	307
Glow plug adapter harness, 4-CYL D.....	308
AWD harness, 4WD.....	308
Forward looking radar adapter harness.....	309
Heated washer nozzle harness.....	309
Floor harness, V70, XC70 & LHD.....	310
Floor harness, V70, XC70 & RHD.....	311
Floor harness, S80 & LHD.....	312
Floor harness, S80 & RHD.....	313
Dashboard harness, LHD.....	314
Dashboard harness, RHD.....	315
Engine harness, 4-CYL 2.0D.....	316
Engine harness, 4-CYL 2.0P.....	317
Engine harness, 5-CYL P.....	318
Engine harness, 5-CYL D.....	319
Roof harness, LHD.....	320
Roof harness, RHD.....	321
Engine compartment harness, LHD.....	322
Engine compartment harness, RHD.....	323
Infotainment harness, V70, XC70.....	324
Infotainment harness, S80.....	325
Four-C harness, V70, XC70.....	326
Four-C harness, S80.....	327

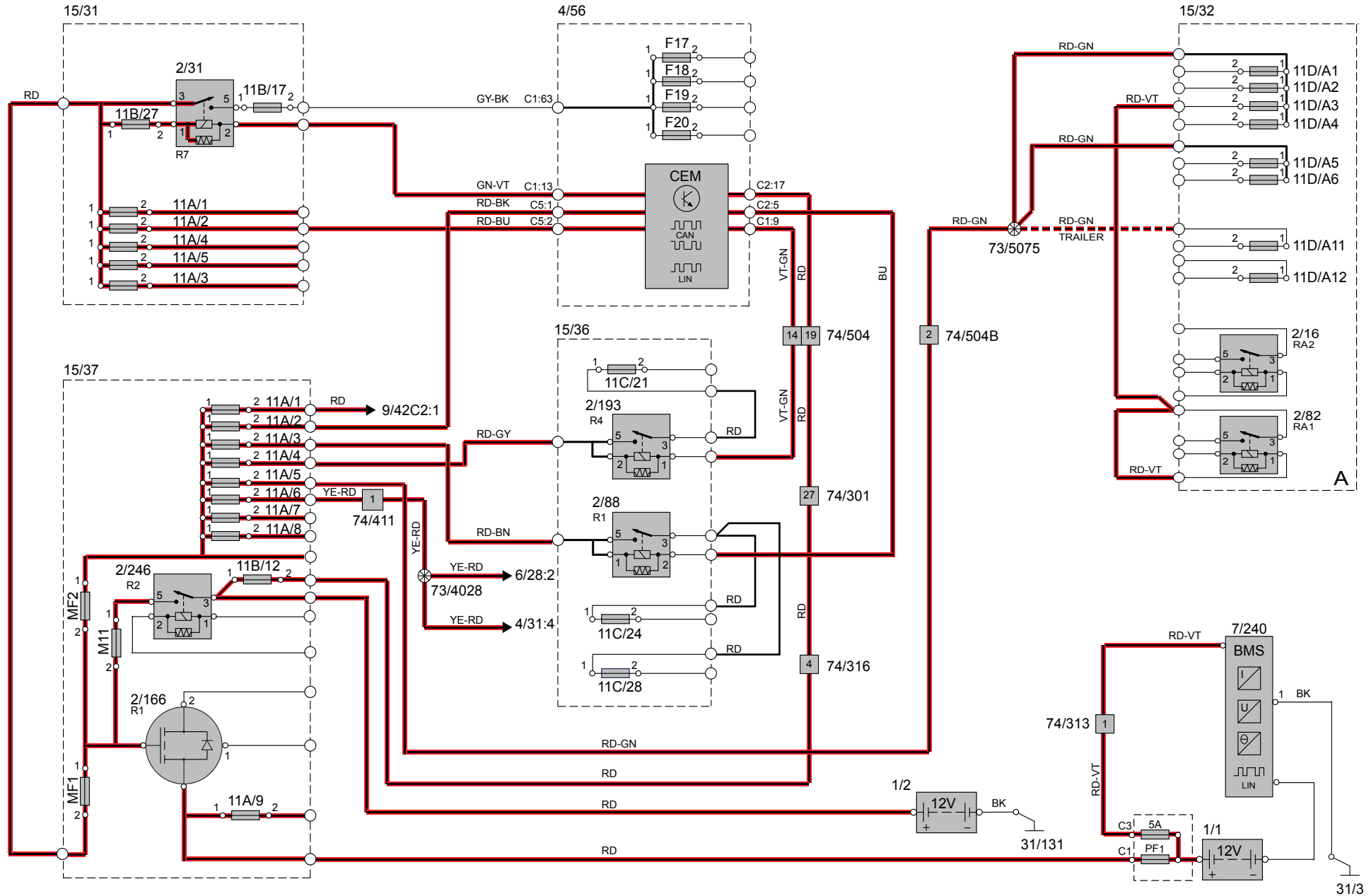
Component Illustrations..... 328

Index..... 398

List of Components..... 401

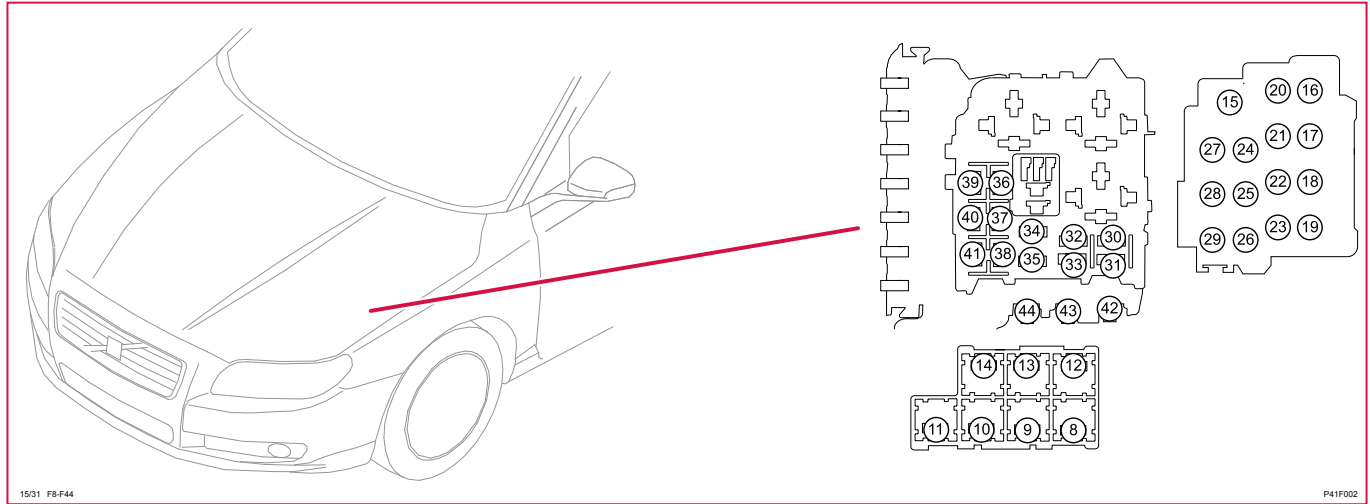
Electrical distribution

Overview with Start/Stop function



Fuses

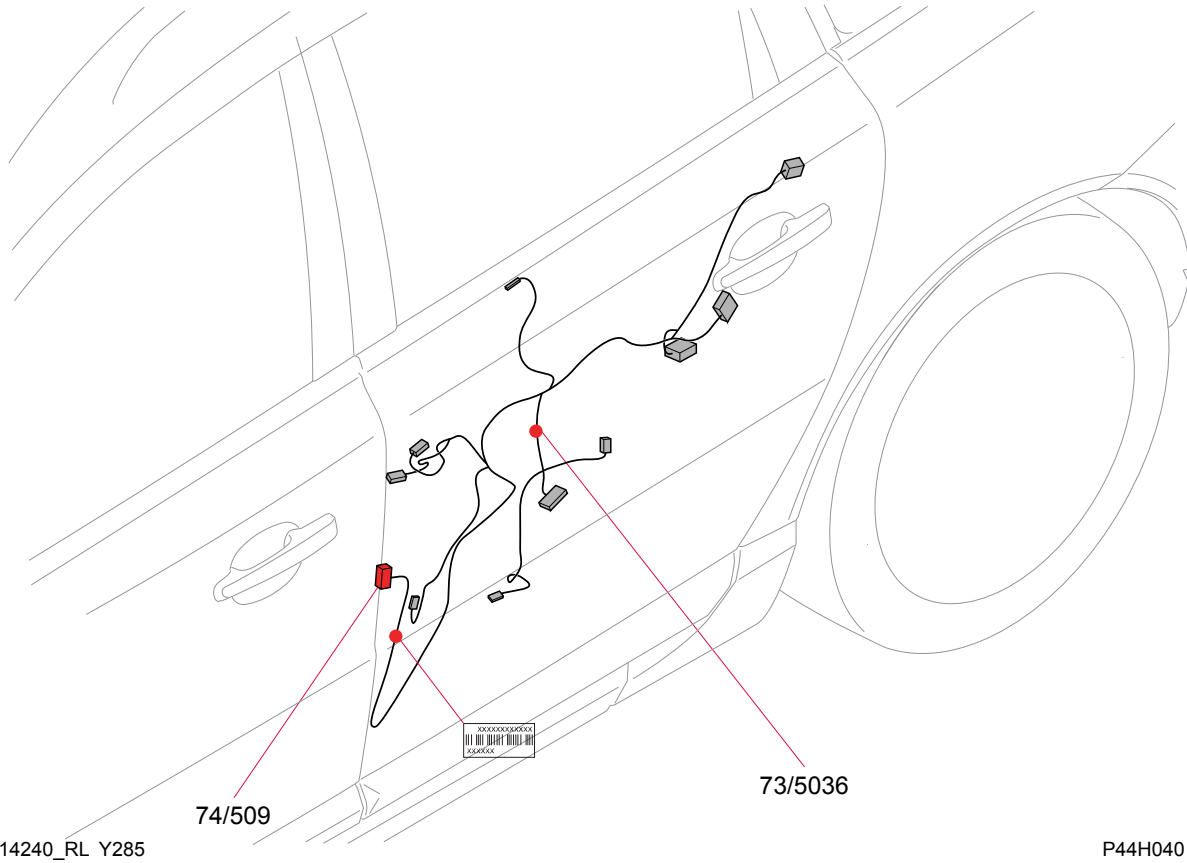
Distribution box, engine compartment F8 - F21



15/31 Distribution box, engine compartment

No.	No.	Fuse function	via	A
F8	11B/8	9/7 Electrically heated windshield, W/O STOSTA	2/81B	40
F9	11B/9	6/1 Wiper Motor Module (WMM)	-	30
F10	11B/10	4/7 Combustion Preheater Module (CPM), HEAT 4/106 Control module, remote parking heater start, HEAT	-	25
F11	11B/11	4/31 Fan control module, passenger compartment, W/O STOSTA 6/28 Motor, passenger compartment fan, W/O STOSTA	-	40
F12	11B/12	2/81B Relay, heated windshield, driver side, [15/46], W/O STOSTA 9/7 Electrically heated windshield, W/O STOSTA	2/81A 2/81A	40
F13	11B/13	4/16 Brake Control Module (BCM)	-	40
F14	11B/14	4/16 Brake Control Module (BCM)	-	20
F15	11B/15	6/104 High pressure headlight washer motor	2/182	20
F16	11B/16	10/1 Lamp housing, front left 10/2 Lamp housing, front right	- -	10
F17	11B/17	4/56 Central Electronic Module (CEM) F17-F20 Fuses, [4/56]	- -	20
F18	11B/18	4/16 Brake Control Module (BCM)	-	5
F19	11B/19	4/99 Power steering control module 6/163 Power Steering Control Module (PSCM), EPAS 6/164 Power Steering Control Module (PSCM), EHPAS	- - -	5
F20	11B/20	4/9 Supplemental restraint system module (SRS) 4/28 Transmission Control Module (TCM), AUTO 4/46 Engine Control Module (ECM)	- - -	10
F21	11B/21	9/43 Heated windshield washer nozzle, left, HEATNOZZ 9/44 Heated windshield washer nozzle, right, HEATNOZZ	- -	10
Continues				

Cable harness routing in vehicle Rear door harness, left, V70, XC70



Cable harness routing in vehicle Rear door harness, left, S80

