



Volvo V70
(2011-2012)



Wiring Diagrams and Electric Model Year 2012



VOLVO V70 (08-), XC70 (08-) & S80 (07-)

WIRING DIAGRAM 2012



TP 39213202

Table of Contents 1:3

Vehicles with SRS (Airbag)/SIPS bag/	
IC (Inflatable curtain)	2
Explanations	6
How to use the wiring diagrams 1:2.....	7
 Electrical distribution	
Overview without Start/stop function	9
Overview with Start/stop function	10
Overview, Distribution box in engine compartment	11
Overview, Distribution box in passenger compartment.....	12
Overview, Distribution box in cargo compartment	13
 Fuses	
Distribution box in engine compartment F1-F7	14
Distribution box in engine compartment F8-F21.....	15
Distribution box in engine compartment F22-F31.....	16
Distribution box in engine compartment F32-F37.....	17
Distribution box in engine compartment F38	18
Distribution box in engine compartment F38-F39.....	19
Distribution box in engine compartment F39-F44.....	20
Central electronic module (CEM) F1-F3	21
Central electronic module (CEM) F4-F19	22
Central electronic module (CEM) F20-F24	23
Passenger compartment.....	24
Distribution box in passenger compartment F1 - F17... ..	25
Distribution box in passenger compartment F18 - F22	26
Distribution box in passenger compartment	
F25 - F30	27
Distribution box in cargo compartment FA1-FA11.....	28
Distribution box in engine compartment, cold zone.....	29
Battery PF1-PF2.....	30
 Relays	
Relays in the engine compartment	31
Relays in passenger compartment	32
Relays in cargo compartment.....	33
Central Electronic Module (CEM)	34
 Ground connections	
Overview.....	35
31/1 - 31/6	36
31/7 - 31/10	37
31/15 - 31/47	38
31/48 - 31/68	39
31/83 - 31/88	40
31/89 - 31/107	41
31/117 - 31/TRM.....	42
31/INFOT - 31/AL	43

Control modules

Overview locations.....	44
Overview designations.....	45
Central Electronic Module (CEM) 1:3	46
Data communication high speed CAN	49
Data communication high speed CAN, 4-Cyl.....	50
Data communication intermediate speed CAN, LHD ..	51
Data communication intermediate speed CAN, RHD ..	52
Data communication, LIN 1:2.....	53
Data communication MOST	55
Steering Wheel Module (SWM)	56

Group 26 Cooling system

Cooling fan 4-Cyl. Turbo	57
Cooling fan, 5-Cyl. Turbo & 6-Cyl.	58
Cooling fan, 4-Cyl. Diesel	59
Cooling fan, 5-Cyl. Diesel	60

Group 27 Engine controls

Cruise control 4-Cyl. Turbo	61
Cruise control 4-Cyl. Diesel	62
Cruise control 5-Cyl. & 6-Cyl.	63
Cruise control 5-Cyl. Diesel	64
Start/Stop function 4-Cyl. 1.6l Turbo.....	65
Start/Stop function 4-Cyl. 1.6l Diesel DV6C	66
Start-/Stop function 5-Cyl. 1.6l Diesel VED5.....	67

Group 28 Ignition and control system

Engine management system B4164T 1:2.....	68
Engine management system B4204T6, T7 1:2.....	70
Engine management system B5254T10 1:2	72
Engine management system D4162T 1:3.....	74
Engine management system D5244T11, T15, T17 & D5204T3 1:3	77
Engine management system B6324S4 1:2.....	80
Engine management system B6324S5 1:2.....	82
Engine management system B6304T4 1:2.....	84
Emission control, 4-Cyl. 1.6l & 2.0l	86
Emission control 5-Cyl. Turbo.....	87
Emission control 6-Cyl.	88

Group 32 Alternator and voltage regulator

Power supply 4-Cyl. Turbo.....	89
Power supply 4-Cyl. with start/stop.....	90
Power supply 5-Cyl. & 6-Cyl.	91

Table of Contents 2:3

Group 33 Starting system

Starting system 4-Cyl. Turbo	92
Starting system 5- & 6-Cyl.....	93
Starting system 4-Cyl. Diesel.....	94
Starting system 5-Cyl. Diesel.....	95

Group 35 Lighting

High and low beam	96
High and low beam (Dual Xenon).....	97
Beam length adjustment, manual	98
Running/Parking light, Tail lights V70	99
Running/Parking light, Tail lights S80.....	100
Running/Parking light, Tail lights (Dual Xenon) V70..	101
Running/Parking light, Tail lights (Dual Xenon) S80..	102
Fog lights V70.....	103
Fog lights S80.....	104
Brake lights V70.....	105
Brake lights S80.....	106
Reversing lights V70.....	107
Reversing lights S80.....	108
Follow-me-home lighting LHD	109
Follow-me-home lighting RHD.....	110
Interior lighting, LHD 1:2	111
Interior lighting, RHD 1:2	113
Active headlight	115
Lighting in door sill trims	116
Auxiliary lights.....	117
Lighting mug holder and floor	118

Group 36 Additional electrical equipment

Rain sensor.....	119
Direction indicator and hazard warning flashers	
LHD V70	120
Direction indicator and hazard warning flashers	
LHD S80	121
Direction indicator and hazard warning flashers	
RHD V70.....	122
Direction indicator and hazard warning flashers	
RHD S80.....	123
Wiper/washer windshield	124
High pressure headlight washer	125
Wiper/Washer rear window.....	126
Keyless vehicle 1:2	127
Horn	129
Anti-theft alarm	130
Parking assistance.....	131
Collision warning with power brake booster	132
Tire pressure monitoring system (TPMS).....	133
Alcohol lock.....	134

Group 37 Wiring and fuses

Diagnostics system	135
Outlet 12 V	136
Cable harness towbar/tow hitch 4-pin V70	137
Cable harness towbar/tow hitch 4-pin S80	138
Cable harness towbar/tow hitch 7-pin V70	139
Cable harness towbar/tow hitch 7-pin S80	140
Cable harness towbar/tow hitch 13-pin V70	141
Cable harness towbar/tow hitch 13-pin S80	142
Accessory USB unit (AUU)	143

Group 38 Instruments

Seat belt reminder	144
Driver information module.....	145
Analog clock	146

Group 39 Other

Cellular phone 1:2	147
Audio 1:2.....	149
Audio Premium 1:3	151
DAB Radio	154
Telephone system Bluetooth	155
Bluetooth Handsfree	156
Rear seat entertainment	157
Satellite radio	158
Parking camera.....	159
Navigation system, portable.....	160
TV	161

Group 43 Transmission

Transmission M66 & MMT 6	162
Automatic transmission, TF-80SC AWD	163
Automatic transmission MPS6	164
Automatic transmission AWF21.....	165
Differential Electronic Module (DEM).....	166

Group 55 Parking brake

Electric parking brake	167
------------------------------	-----

Group 59 Brake system

Brake control system & DSTC	168
-----------------------------------	-----

Group 64 Steering

Speed dependent power steering	169
--------------------------------------	-----

Table of Contents 3:3

Group 76 Shock absorbers

Four-C 170

Group 83 Doors and openings

Central locking front doors LHD 171
Central locking front doors RHD 172
Central locking rear doors 173
Central locking trunk lid/tailgate V70 174
Central locking trunk lid/tailgate S80 175
Central locking fuel filler flap 176
Signal receiver central locking 177
Power windows front doors LHD 178
Power windows front doors RHD 179
Power windows rear doors 180
Power sunroof 181

Group 84 Exterior decorative elements, etc.

Power door mirrors LHD 182
Power door mirrors RHD 183
Heated door mirrors LHD 184
Heated door mirrors RHD 185
Blind spot information system LHD 186
Blind spot information system RHD 187
Heated rear window 188

Group 85 Interior equipment

Power driver's seat with memory function, LHD 189
Power driver's seat with memory function, RHD 190
Power passenger seat, LHD 191
Power passenger seat, RHD 192
Heated front seats with fans 193
Heated front seats without fans 194
Heated rear seat 195
Massage seats 196

Group 87 Climate control system

Climate control system PTC-elements 197
Climate control system, 4-Cyl. Turbo 1:2 198
Climate control system 4-Cyl. Diesel 1:2 200
Climate control system 5- & 6-Cyl. 1:2 202
Parking heater, auxiliary heater 204
Parking heater, remote start 205
Refrigeration box rear seat 206

Group 88 Internal equipment

Rear-view mirror with automatic dimming 207
Supplemental restraint system 1:2 208
Power folding headrest 210
Remote control garage opening 211

Group 89 Body other

Radiator masking blind 212

Connectors..... 213

Branching points 248

Cable harness routing in vehicle

Harness engine 4-Cyl. Turbo 266
Engine harness, 5-Cyl 266
Engine harness, 6-Cyl 267
Harness engine, 6-Cyl. Turbo 267
Harness engine, 2.0l Diesel 268
Harness engine, 2.4l Diesel 268
Engine compartment harness LHD 269
Engine compartment harness RHD 270
Harness dashboard, LHD 271
Harness Dashboard, RHD 272
Harness Floor, LHD S80 273
Harness Floor, RHD S80 274
Harness Floor, LHD V70 275
Harness Floor, RHD V70 276
Harness infotainment, LHD S80 277
Harness infotainment, RHD S80 278
Harness infotainment, LHD V70 279
Harness infotainment, RHD V70 280
Roof harness, S80 281
Roof harness, V70 281
Center console harness 282
Tunnel harness 282
Harness front door, left 283
Harness front door, right 283
Harness rear door, left 284
Harness rear door, right 284
Trunk lid/tailgate harness, S80 285
Trunk lid/tailgate harness, V70 285
Harnesses rear axle 286
Executive harnesses 287

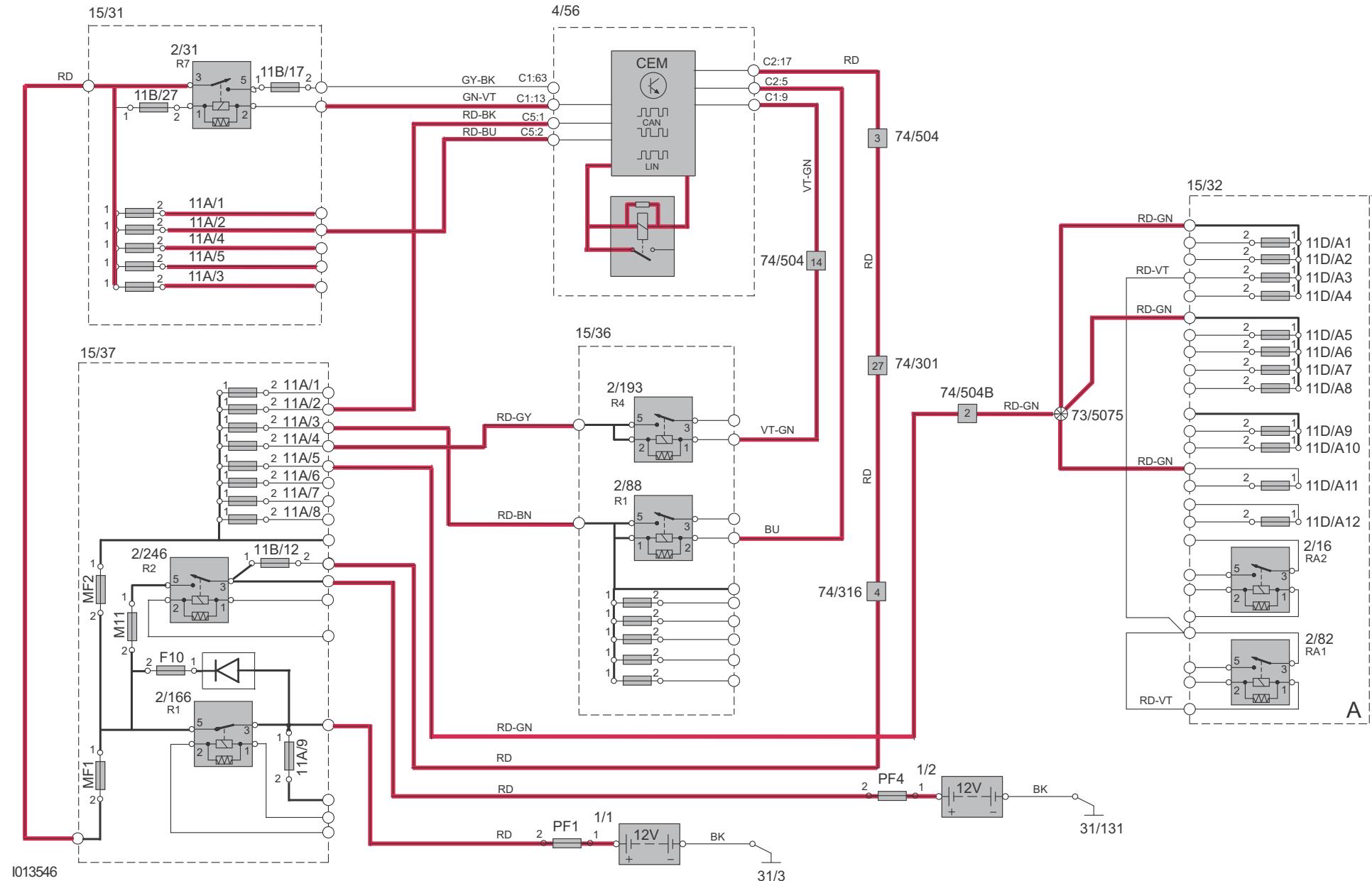
Component illustrations 288

Index 1:2 349

List of components 1:7 351

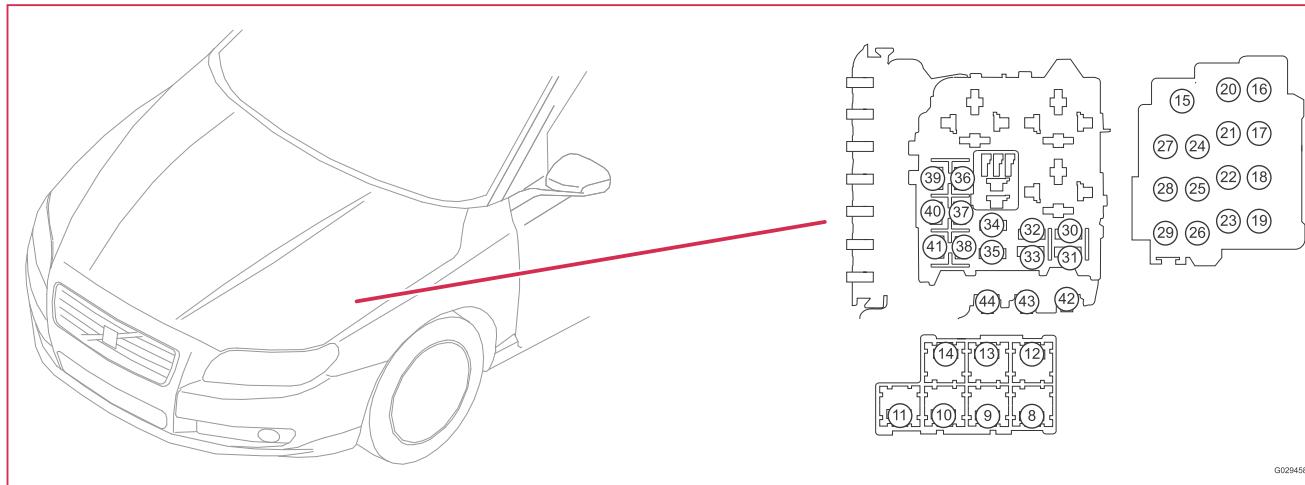
Electrical distribution

Overview with Start/stop function



Fuses

Distribution box in engine compartment F8-F21



G029458

15/31 Distribution box in engine compartment

No.	No.	Fuse function	via	A
F8	11B/8	2/182 Relay, headlight washer motor 6/104 Washer motor headlights	- 2/182	20
F9	11B/9	6/1 Wiper Motor Module (WMM)	-	30
F10	11B/10	4/7 Combustion Preheater Module (CPM) 4/106 Control module, remote parking heater start	- -	25
F11	11B/11	4/31 Passenger compartment fan control module 6/28 Motor, passenger compartment fan	- -	40
F13	11B/13	4/16 Brake Control Module (BCM), pump	-	40
F14	11B/14	4/16 Brake Control Module (BCM), valves	-	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) F18-F19 Fuses in the Central Electronic Module (CEM)	-	20
F18	11B/18	4/16 Brake Control Module (BCM)	-	5
F19	11B/19	4/99 Speed dependent power steering control module	-	5
F20	11B/20	4/28 Transmission Control Module (TCM) 4/28B Transmission Control Module (TCM) MPS6 4/46 Engine Control Module (ECM) 4/9 Supplemental restraint system module (SRS)	- - - -	10
F21	11B/21	9/43 Heated windshield washer nozzle, left 9/44 Heated windshield washer nozzle, right	- -	10

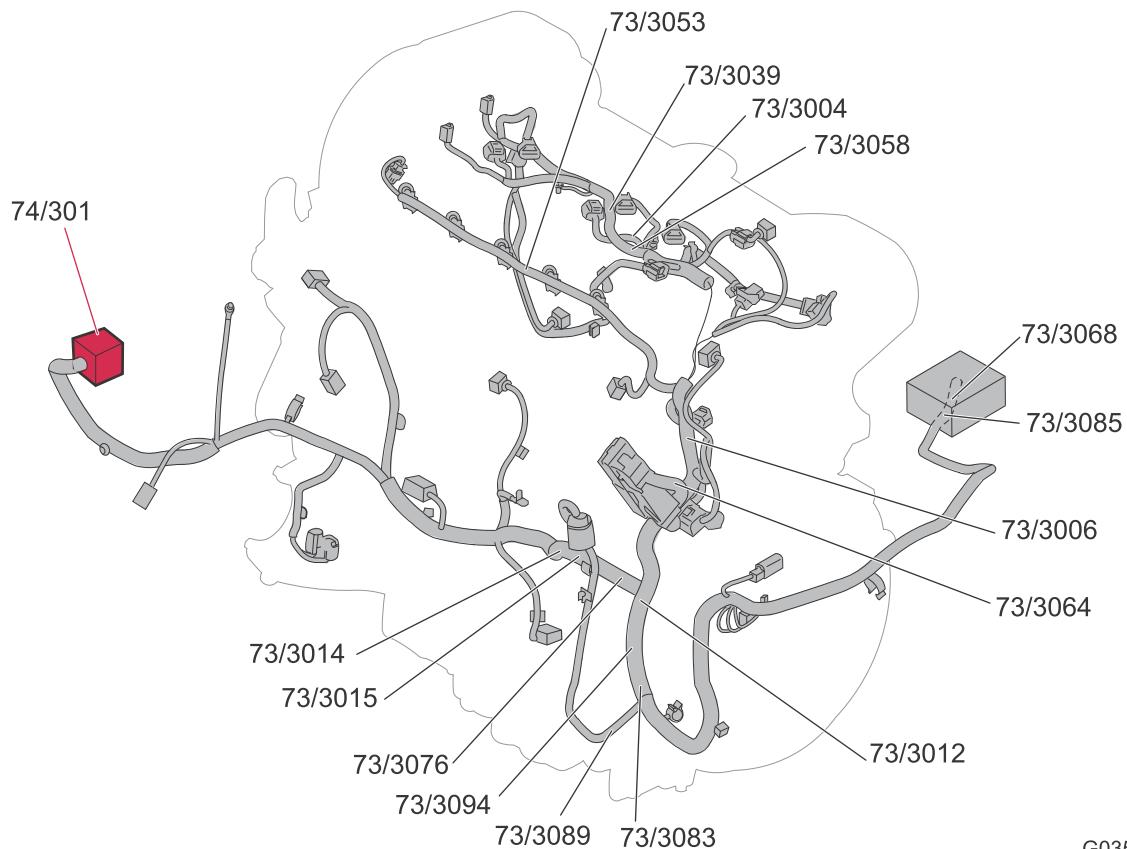
continues

Cable harness routing in vehicle Harness engine 4-Cyl. Turbo



I05127

Cable harness routing in vehicle Engine harness, 5-Cyl.



G035645