

Document Title: Volvo standard tightening torques	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Volvo standard tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

The tightening torques in the following tables apply to bolts and nuts with tensile strength. The tables should be used as a general instruction for tightening bolts and nuts without specified values. The charts contains values for course thread bolts and nuts.

Torque values should be increased with $\approx 10\%$, for flange bolts.

All standard torques for bolts are without surface treatment.

The standard torque for bolts lubricated with oil should be reduced with 20% of the given value.

Standard tightening torque charts

Bolt size Metric Coarse Threads	Tensile strength 8.8		Tensile strength 10.9	
	(Nm)	(lbf ft)	(Nm)	(lbf ft)
M5	6	4	8	6
M6	10	7	14	11
M8	25	18	35	26
M10	50	37	70	52
M12	87	64	122	90
M14	139	103	195	144
M16	213	157	299	220
M18	293	216	413	305
M20	416	307	585	432
M24	719	530	1010	745
M27	1060	782	1490	1100
M30	1140	840	2025	1493
M36	2500	1844	3600	2653

Bolt size Inch SAE Coarse Threads	Tensile strength 5		Tensile strength 8	
	(lbf ft)	(Nm)	(lbf ft)	(Nm)
1/4	10	13,6	14	19
5/16	21	28,5	29	39,3
3/8	37	50,2	52	70
7/16	59	80	84	114
1/2	90	122	128	174
9/16	130	176	184	250
5/8	200	271	284	390
3/4	270	365	384	520
7/8	350	474	500	670
1	430	581	616	830
1 1/8	520	704	744	1010
1 1/4	610	827	872	1170
1 3/8	700	950	1000	1340
1 1/2	790	1073	1128	1510
1 3/4	880	1196	1256	1680
2	970	1319	1384	1850
2 1/4	1060	1442	1512	2020
2 3/4	1150	1565	1640	2190
3	1240	1688	1768	2360
3 1/2	1330	1811	1896	2530
4	1420	1934	2024	2700
4 1/2	1510	2057	2152	2870
5	1600	2180	2280	3040
5 1/2	1690	2303	2408	3210
6	1780	2426	2536	3380
6 1/2	1870	2549	2664	3550
7	1960	2672	2792	3720
7 1/2	2050	2795	2920	3890
8	2140	2918	3048	4060
8 1/2	2230	3041	3176	4230
9	2320	3164	3304	4400
9 1/2	2410	3287	3432	4570
10	2500	3410	3560	4740
10 1/2	2590	3533	3688	4910
11	2680	3656	3816	5080
11 1/2	2770	3779	3944	5250
12	2860	3902	4072	5420
12 1/2	2950	4025	4200	5590
13	3040	4148	4328	5760
13 1/2	3130	4271	4456	5930
14	3220	4394	4584	6100
14 1/2	3310	4517	4712	6270
15	3400	4640	4840	6440
15 1/2	3490	4763	4968	6610
16	3580	4886	5096	6780
16 1/2	3670	5009	5224	6950
17	3760	5132	5352	7120
17 1/2	3850	5255	5480	7290
18	3940	5378	5608	7460
18 1/2	4030	5501	5736	7630
19	4120	5624	5864	7800
19 1/2	4210	5747	5992	7970
20	4300	5870	6120	8140
20 1/2	4390	5993	6248	8310
21	4480	6116	6376	8480
21 1/2	4570	6239	6504	8650
22	4660	6362	6632	8820
22 1/2	4750	6485	6760	8990
23	4840	6608	6888	9160
23 1/2	4930	6731	7016	9330
24	5020	6854	7144	9500
24 1/2	5110	6977	7272	9670
25	5200	7100	7400	9840
25 1/2	5290	7223	7528	10010
26	5380	7346	7656	10180
26 1/2	5470	7469	7784	10350
27	5560	7592	7912	10520
27 1/2	5650	7715	8040	10690
28	5740	7838	8168	10860
28 1/2	5830	7961	8296	11030
29	5920	8084	8424	11200
29 1/2	6010	8207	8552	11370
30	6100	8330	8680	11540
30 1/2	6190	8453	8808	11710
31	6280	8576	8936	11880
31 1/2	6370	8699	9064	12050
32	6460	8822	9192	12220
32 1/2	6550	8945	9320	12390
33	6640	9068	9448	12560
33 1/2	6730	9191	9576	12730
34	6820	9314	9704	12900
34 1/2	6910	9437	9832	13070
35	7000	9560	9960	13240
35 1/2	7090	9683	10088	13410
36	7180	9806	10216	13580
36 1/2	7270	9929	10344	13750
37	7360	10052	10472	13920
37 1/2	7450	10175	10600	14090
38	7540	10298	10728	14260
38 1/2	7630	10421	10856	14430
39	7720	10544	10984	14600
39 1/2	7810	10667	11112	14770
40	7900	10790	11240	14940
40 1/2	7990	10913	11368	15110
41	8080	11036	11496	15280
41 1/2	8170	11159	11624	15450
42	8260	11282	11752	15620
42 1/2	8350	11405	11880	15790
43	8440	11528	12008	15960
43 1/2	8530	11651	12136	16130
44	8620	11774	12264	16300
44 1/2	8710	11897	12392	16470
45	8800	12020	12520	16640
45 1/2	8890	12143	12648	16810
46	8980	12266	12776	16980
46 1/2	9070	12389	12904	17150
47	9160	12512	13032	17320
47 1/2	9250	12635	13160	17490
48	9340	12758	13288	17660
48 1/2	9430	12881	13416	17830
49	9520	13004	13544	18000
49 1/2	9610	13127	13672	18170
50	9700	13250	13800	18340
50 1/2	9790	13373	13928	18510
51	9880	13496	14056	18680
51 1/2	9970	13619	14184	18850
52	10060	13742	14312	19020
52 1/2	10150	13865	14440	19190
53	10240	13988	14568	19360
53 1/2	10330	14111	14696	19530
54	10420	14234	14824	19700
54 1/2	10510	14357	14952	19870
55	10600	14480	15080	20040
55 1/2	10690	14603	15208	20210
56	10780	14726	15336	20380
56 1/2	10870	14849	15464	20550
57	10960	14972	15592	20720
57 1/2	11050	15095	15720	20890
58	11140	15218	15848	21060
58 1/2	11230	15341	15976	21230
59	11320	15464	16104	21400
59 1/2	11410	15587	16232	21570
60	11500	15710	16360	21740
60 1/2	11590	15833	16488	21910
61	11680	15956	16616	22080
61 1/2	11770	16079	16744	22250
62	11860	16202	16872	22420
62 1/2	11950	16325	17000	22590
63	12040	16448	17128	22760
63 1/2	12130	16571	17256	22930
64	12220	16694	17384	23100
64 1/2	12310	16817	17512	23270
65	12400	16940	17640	23440
65 1/2	12490	17063	17768	23610
66	12580	17186	17896	23780
66 1/2	12670	17309	18024	23950
67	12760	17432	18152	24120
67 1/2	12850	17555	18280	24290
68	12940	17678	18408	24460
68 1/2	13030	17801	18536	24630
69	13120	17924	18664	24800
69 1/2	13210	18047	18792	24970
70	13300	18170	18920	25140
70 1/2	13390	18293	19048	25310
71	13480	18416	19176	25480
71 1/2	13570	18539	19304	25650
72	13660	18662	19432	25820
72 1/2	13750	18785	19560	25990
73	13840	18908	19688	26160
73 1/2	13930	19031	19816	26330
74	14020	19154	19944	26500
74 1/2	14110	19277	20072	26670
75	14200	19400	20200	26840
75 1/2	14290	19523	20328	27010
76	14380	19646	20456	27180
76 1/2	14470	19769	20584	27350
77	14560	19892	20712	27520
77 1/2	14650	20015	20840	27690
78	14740	20138	20968	27860
78 1/2	14830	20261	21096	28030
79	14920	20384	21224	28200
79 1/2	15010	20507	21352	28370
80	15100	20630	21480	28540
80 1/2	15190	20753	21608	28710
81	15280	20876	21736	28880
81 1/2	15370	20999	21864	29050
82	15460	21122	21992	29220
82 1/2	15550	21245	22120	29390
83	15640	21368	22248	29560
83 1/2	15730	21491	22376	29730
84	15820	21614	22504	29900
84 1/2	15910	21737	22632	30070
85	16000	21860	22760	30240
85 1/2	16090	21983	22888	30410
86	16180	22106	23016	30580
86 1/2	16270	22229	23144	30750
87	16360	22352	23272	30920
87 1/2	16450	22475	23400	31090
88	16540	22598	23528	31260
88 1/2	16630	22721	23656	31430
89	16720	22844	23784	31600
89 1/2	16810	22967	23912	31770
90	16900	23090	24040	31940
90 1/2	16990	23213	24168	32110
91	17080	23336	24296	32280
91 1/2	17170	23459	24424	32450
92	17260	23582	24552	32620
92 1/2	17350	23705	24680	32790
93	17440	23828	24808	32960
93 1/2	17530	23951	24936	33130
94	17620	24074	25064	33300
94 1/2	17710	24197	25192	33470
95	17800	24320	25320	33640
95 1/2	17890	24443	25448	33810
96	17980	24566	25576	33980
96 1/2	18070	24689	25704	34150
97	181			

Product: L90F Volvo Wheel Loaders Service Manual

Full Download: <https://www.arepairmanual.com/downloads/l90f-volvo-wheel-loaders-service-manual/>

3/4	320	434	451	612
7/8	515	700	728	988
1	775	1052	1091	1480
1 1/8	953	1290	1545	2100
1 1/4	1344	1823	2180	2960
1 3/8	1600	2170	2650	3600
1 1/2	2000	2714	3200	4340

Sample manual. Download All 2074 pages at:

<https://www.arepairmanual.com/downloads/l90f-volvo-wheel-loaders-service-manual/>

Document Title: Lubrication specifications	Function Group: system, 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Lubrication system, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Lubrication system	
Oil pressure maximum warm engine, high idling speed	450–500 kPa (4.5–5 bar) (65–72 psi)
Min. oil pressure, hot engine, low idling speed	60 kPa (0.6 bar) (8.7 psi)

Document Title: Fuel system, tightening torques	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Fuel system, tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

NOTICE

Regarding bolted joints which are not listed here, see "Volvo standard tightening torques"

Fuel rail, attaching bolts	30 Nm (22 lbf ft)
Electrical cables, attaching bolts	1.4 ±0.1 Nm (1.03 lbf ft)
Fuel delivery line (between fuel rail and injector)	25 Nm (18.4 lbf ft)
Injector, yoke	
Step 1:	5 Nm (3.7 lbf ft)
Step 2:	120° ±5 °
Fuel control valve (FCV)	30 Nm (22 lbf ft)
Return line to control valve	39 Nm (28.8 lbf ft)
Fuel feed filter, attaching bolts	30 Nm (22 lbf ft)
Feed line to control valve (from fuel filter)	49 Nm (39.1 lbf ft)
Feed pipe (on control valve)	34 Nm (25.1 lbf ft)
High-pressure pump, attaching bolts	
Step 1:	10 Nm (7.4 lbf ft)
Step 2:	50 Nm (36.9 lbf ft)
Safety valve (PRV), fuel rail	100 Nm (73.8 lbf ft)
High-pressure sensor, fuel rail	70 Nm (51.6 lbf ft)

Document Title: Thermostat, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Thermostat, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Cooling system	
Thermostat starts to open at	83 °C (181.4 °F)
Thermostat fully open at	95 °C (203 °F)

Document Title: Engine, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Engine, specifications

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo	Arvika	25001	49999

General

Number of cylinders	6
Cylinder bore	98 mm (3.86 in)
Stroke	126 mm (4.96 in)
Displacement	5.70 litres (1.51 US gal)
Injection order	1-5-3-6-2-4
Low idle	700 ±50 rpm
High idle (run out speed)	
L60F	2370 ±25 rpm
L70F	2360 ±25 rpm
L90F	2360 ±25 rpm
Weight, engine	600 kg (1323 lbs)

Stall speed torque converter⁽¹⁾

L60F ⁽²⁾	
HTE110C (22717)	2090–2200 rpm
HTE110 (22560)	2090–2200 rpm
L70F ⁽²⁾	
HTE120C (22719)	2080–2200 rpm
HTE120B (22701)	2080–2200 rpm
HTE120 (22561)	2080–2200 rpm
L90F ⁽²⁾	
HTE125 (22562)	2030–2170 rpm

(1) Shall be performed on gear 2, APS-mode service (manual), and without using the hydraulics.

(2) The transmission part number can be found in the machine card in PROSIS.

Document Title: Valve mechanism, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Valve system specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Valve mechanism	
Valve arrangement	Top valves with IEGR-rocker arm
Inlet valves	To zero clearance, then 75° counter-clockwise
Exhaust valves	To zero clearance, then 120° counter-clockwise

IEGR-unit	
Adjusting screw	To zero clearance, then 144° counter-clockwise

Document Title: Engine, capacities	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Engine, capacities

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

NOTICE

Stated capacity applies when changing, unless otherwise stated.

Engine	
Engine oil, total	21 litres (5.6 US gal)
Engine oil when changing, incl. filter	20 litres (5.3 US gal)

Document Title: Fuel system, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Fuel system, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Injectors	
Type	Multi-hole nozzle (6 holes)
Opening pressure	Variable, controlled through mapping
Order of injection	1-5-3-6-2-4

High-pressure fuel pumps	
Quantity	2
Output pump pressure, low idle	55 ±5 MPa (550 ±50 bar) (7977 ± 725 psi)

Fuel rail, pressure [1]	
Start (starter motor)	31.5 ±3 MPa (315 ±30 bar)
Low idle	41.7 ±3 MPa (417 ±30 bar)
High idle	77.3 ±3 MPa (773 ±30 bar)
Stall speed	102.2 ±3 MPa (1022 ±30 bar)
Pressure relief valve (PRV) open, low idle	70 ±5 MPa (700 ±50 bar)

Fuel control valve's (FCV) output pressure[2]	
Start (starter motor)	0.06 ±0.02 MPa (0.6 ±0.2 bar)
Low idle	0.08 ±0.02 MPa (0.8 ±0.2 bar)
High idle	0.10 ±0.02 MPa (1.0 ±0.2 bar)
Stall speed	0.13 ±0.02 MPa (1.3 ±0.2 bar)
Without control (open circuit FCV), low idle	0.45 ±0.02 MPa (4.5 ±0.2 bar)

[1]Values are a measured average value and shall be used as a guideline value when checking, e.g., the fuel control valve (FCV)

[2]Values are a measured average value and shall be used as a guideline value when checking, e.g., the fuel control valve (FCV)

Document Title: Fuel tank, volume	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Fuel tank, volume

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Fuel tank	
Capacity, total	224 l (59.2 US gal)
Volume, usable	219 l (57.9 US gal)

Document Title: Fuel feed pump, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Fuel feed pump, specifications

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
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Fuel feed pump	
Type	Rotor pump
Feed pressure	450–600 kPa (4,5–6,0 bar) (65.3–87.0 psi)

Document Title: Lighting, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Lighting, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Bulbs	Watt	Socket
Headlights, low beams	70	PX 26D (H7)
Headlights, high beams	70	PK 22S (H3)
Parking light, front	4	BA 9s
Parking light, rear	10	BA 15s
Tail lights	10	BA 15s
Brake lights	21	BA 15s
Direction indicators, rear	21	BA 15s
Direction indicators, side	21	BA 15s
Running lights	—	—
Cab light	10	BA 15s
Switches with guide lights	1.2	W 2x 4.6 d
Work lights, front halogen	70	PK 22 s (H3)
Working lights, rear halogen	70	PK 22 s (H3)

Document Title: Thermostat, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Thermostat, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Cooling system	
Thermostat starts to open at	83 °C (181.4 °F)
Thermostat fully open at	95 °C (203 °F)

Document Title: Cooling system, volume	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Cooling system, capacity

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
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Coolant, when changing, incl. filter	30 l (7.9 US gal)
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Document Title: Temperature limits for cooling fan speed, specifications.	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
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Temperature limits for cooling fan speed, specifications.

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Valid for serial numbers			
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Signals from the different sensors vary linearly between 0.0 and 1.0 depending on the temperature. The cooling fan signal with the highest value controls the requested cooling fan speed. If the engine speed is below 800 rpm, the value for the charge air will be 0 = 45 °C (113 °F)

System	Temperature interval
Coolant flowing out of the radiator	70–80 °C (158–176 °F)
Hydraulic system when the thermostat has opened, see Thermostat specifications	70–95 °C (158–203 °F)
Axles front and rear when the engine thermostat has opened, see Thermostat specifications	90–133 °C (194–271.4 °F)
Transmission	90–105 °C (194–221 °F)
Engine	85–95 °C (185–203 °F)
Charge air when induction air temperature is 25 °C (77 °F) or lower	45–60 °C (113–140 °F)
Charge air when induction air temperature is above 25 °C (77 °F)	Induction air temperature = T T+20 °C to T+35 °C (T+68 °F to T+95 °F)

Document Title: Cooling fan rpm, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
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Cooling fan rpm, specifications

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Valid for serial numbers			
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The VCADS Pro parameter GDR is used for setting the maximum cooling fan speed by selecting sound reduction level (A, B or C), depending on the requirements for cooling of engine, charge air, timing gears and hydraulic oil.

Cooling fan	
Basic speed	400 rpm
Speed at pressure test	1700 rpm

GDR	Max. fan speed at high idling	Description
A	1200 rpm	Low sound level
B	1400 rpm	Standard cooling
C	1800 rpm	Maximal cooling

Document Title: Engine, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
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Engine, tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
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NOTICE

Regarding bolted joints which are not listed here, see "Volvo standard tightening torques"

Engine mounting	
Engine member – Frame	160 Nm (118 lbf ft) +60°
Flywheel housing – Hydraulic transmission	60 Nm (44 lbf ft)
Front engine mount, rubber pads – engine member	85 Nm (63 lbf ft)
Front engine mount, rubber pads – engine mount	85 Nm (63 lbf ft)
Front engine mount, rubber pads – engine block	275 Nm (202 lbf ft)
Engine	
Valve cover	13 Nm (9.6 lbf ft)
IEGR-unit	30 Nm (22 lbf ft)
Lock nut, valve adjusting screw	20 ±2 Nm (14.8 ±1.5 lbf ft)
Lock nut, adjusting screw on IEGR-unit	20 Nm (14.8 lbf ft)
Belt pulley: step 1	40 Nm (33 lbf ft)
Belt pulley: step 2, angle tightening	60°
Belt pulley: step 3, angle tightening	60°
Vibration damper	70 Nm (52 lbf ft)
Connector ED, centre bolt	3.5 ±0.5 Nm (2.6 ±0.4 lbf ft)
Speed (rpm) sensor crankshaft, holder	9 Nm (6.6 lbf ft)

Document Title: Turbocharger, tightening torques	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
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Turbocharger, tightening torques

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Valid for serial numbers			
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Stud bolt	40 ±4 Nm (30 ±3 lbf ft)
Nut	10 ±1 Nm (7.4 ±0.7 lbf ft)
Oil pressure pipe, attaching bolts	39 Nm (29 lbf ft)
Return pipe, attaching bolts	20 Nm (15 lbf ft)

Document Title: Battery, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
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Battery, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Battery	
Total	2 batteries connected in series
Voltage	12 V
Battery capacity	110 Ah

Charge level	Voltage
Fully charged battery	12.78 V
Charge within 24 hours at	12.54 V
Minimum charge to store machine for 30 days	12.64 V

Document Title: Battery, weight	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
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Battery, weight

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
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Battery	
Weight, incl. electrolyte	21.5 kg (47.4 lb)

Document Title: Electrical specifications	Function Group: system, 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Electrical system, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Electrical system	
System voltage	24 V

Document Title: Preheating, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Preheating, specifications

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Preheating coil	
Output	4 kW

Document Title: Alternator 80 A, specification	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Alternator 80 A, specification

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Alternator, 80 amp with regulator	
Type	Alternating current
Output (rated output)	2280 W
Voltage, at +20 °C (68 °F)	28.3 ± 0.3 V
Current, maximum	80 A
Resistance across rotor winding	8.0 ± 0.4 Ω
Resistance in stator winding	0.1 Ω

Document Title: Starter specifications	Function Group: motor, 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Starter motor, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Starter motor	
Output	5.5 kW

Document Title: Front and rear axles, tightening torque	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

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Front axle, tightening torque

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

NOTE!

For bolted joints not indicated here, see Volvo standard tightening torques.

Tightening torques are indicated in **Nm and (lbf ft)**.

	AWB15 (L60F)	AWB25 (L70F, L90F)
Cover hub reduction	310 ±20 (288 ±14)	310 ±20 (288 ±14)
Shift fork	19 ±11 (14 ±8.1)	-
Shaft for shift fork	27 ±3 (19.9 ±2.2)	-
Crown wheel	132.5 ±12.5 (97.7 ±9.2)	205 ±15 (151 ±11)
Pinion nut	500 ±20 (369 ±14)	1300 ±100 (959 ±74)
Hub retainer	310 ±20 (288 ±14)	310 ±20 (288 ±14)
Rolling resistance of new bearings:	Noted value at bearing contact (take-up) plus 24 ±3 Nm (18 ±2 lbf ft)	Noted value at bearing contact (take-up) plus 24 ±3 Nm (18 ±2 lbf ft)
Rolling resistance, run-in bearings	Noted value at bearing contact (take-up) plus 6 ±1 Nm (4 ±1 lbf ft)	Noted value at bearing contact (take-up) plus 6 ±1 Nm (4 ±1 lbf ft)
Hub nut	2250 ±250 (1660 ±184)	3000 ±500 (2212 ±369)
Hub cover	45 ±5 (33 ±3.5)	45 ±5 (33 ±3.5)
Differential lock switch	-	27 ±3 (20 ±2)
Differential lock: Stop bolt	30 ±3 (22 ±2.2)	-
Cover	27 ±3 (20 ±2.2)	-
Impeller	12 ±2 (8.9 ±1.4)	12 ±2 (8.9 ±1.4)
Lock nut for adjusting brake clearance	67.5 ±17.5 (49.8 ±12.9)	90 ±10 (66 ±7)
Temperature sensor	-	40 ±10 (29.5 ±7)
Drain plugs and filler plugs	80 ±10 (59 ±7)	-
Plug for suction line, external cooling	-	80 ±10 (59 ±7)
Plugs for external cooling	-	50 ±10 (37 ±7)
Plugs for brake connection and diff. lock connection	-	25 ±5 (18 ±3.5)
Brake wear indicator: Nipple	45 ±5 (33 ±3.5)	45 ±5 (33 ±3.5)
Cover	25 ±5 (18 ±3.5)	25 ±5 (18 ±3.5)
Bleeder nipple	30 ±5 (22 ±3.5)	30 ±5 (22 ±3.5)

Bushing for diff. lock	-	112.5 ±37.5 (83 ±27)
Breather valve, brakes	25 ±5 (18 ±3.5)	25 ±5 (18 ±3.5)
Brake adjusting bolt, nut	67.5 ±17.5 (49.8 ±12.9)	-
Front axle, attaching bolts	600 ±50 (440 ±35)	1100 ±100 (810 ±75)

Document Title: Front and rear axles, tightening torque	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

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Rear axle, tightening torque

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

NOTE!

For bolted joints not indicated here, see Volvo standard tightening torques.

Tightening torques are indicated in Nm and (lbf ft).

	AWB15 (L60F)	AWB20 (70F, L90F)
Casing halves	310 ±20 (288 ±14)	310 ±20 (288 ±14)
Shift fork	19 ±11 (14 ±8.1)	-
Crown wheel	132.5 ±12.5 (97.7 ±9.2)	132.5 ±12.5 (97.7 ±9.2)
Pinion nut	500 ±20 (369 ±14)	1300 ±100 (959 ±74)
Hub retainer	310 ±20 (288 ±14)	310 ±20 (288 ±14)
Rolling resistance of new bearings:	Noted value at bearing contact (take-up) plus 24 ±3 Nm (18 ±2 lbf ft)	Noted value at bearing contact (take-up) plus 24 ±3 Nm (18 ±2 lbf ft)
Rolling resistance, run-in bearings	Noted value at bearing contact (take-up) plus 6 ±1 Nm (4 ±1 lbf ft)	Noted value at bearing contact (take-up) plus 6 ±1 Nm (4 ±1 lbf ft)
Hub nuts	2250 ±250 (1660 ±184)	2250 ±250 (1660 ±184)
Hub cover	45 ±5 (33 ±3.5)	45 ±5 (33 ±3.5)
Differential lock: Stop bolt	30 ±3 (22 ±2.2)	-
Cover	27 ±3 (20 ±2.2)	-
Impeller	12 ±2 (8.9 ±1.4)	12 ±2 (8.9 ±1.4)
Lock nut for adjusting brake clearance	-	67.5 ±17.5 (49.8 ±12.9)
Temperature sensor	-	40 ±10 (29.5 ±7)
Drain plugs and filler plugs	80 ±10 (59 ±7)	-
Plug for suction line, external cooling	-	80 ±10 (59 ±7)
Plug for external cooling	-	50 ±10 (37 ±7)
Plug for brake	-	25 ±5 (18 ±3.5)
Brake wear indicator: Nipple	45 ±5 (33 ±3.5)	45 ±5 (33 ±3.5)
Cover	25 ±5 (18 ±3.5)	25 ±5 (18 ±3.5)
Bleeder nipple	30 ±5 (22 ±3.5)	30 ±5 (22 ±3.5)
Breather valve, brakes	25 ±5 (18 ±3.5)	25 ±5 (18 ±3.5)
Brake adjusting bolt, nut	67.5 ±17.5 (49.8 ±12.9)	-

Document Title: Front and rear axles, specifications	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Front and rear axles, specifications

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Oil, type	See Recommended lubricants, oils
Oil level: Max. min.	Lower edge of filler hole 5 mm (0.2 inch) below filler hole

Document Title: Front axle, volume	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Front axle, capacity

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Note. Given capacity applies when changing unless otherwise indicated.

Front axle	
Amount of oil, including hub reductions	35.0 dm ³ (litres) (7,7 US gal)

Document Title: Rear axle, volume	Function Group: 030	Information Type: Service Information	Date: 4/19/2026
Profile: L90F Volvo			

Rear axle, capacity

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L90F Volvo			

Note: Indicated replacement capacity where no other capacity is specified.

Rear axle	
Rear axle, including hub reduction	27.0 dm ³ (litres) (5.9 US gal)