

Document Title: <b>Volvo standard tightening torques</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Volvo standard tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110F 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	388
3/4	270	365	384	520
7/8	340	460	484	655
1	410	550	584	795
1 1/8	500	670	704	950
1 1/4	590	795	834	1120
1 3/8	680	920	964	1305
1 1/2	770	1045	1094	1485
1 5/8	860	1165	1214	1665
1 3/4	950	1285	1334	1845
1 7/8	1040	1405	1454	2025
2	1130	1525	1574	2205
2 1/8	1220	1645	1694	2385
2 1/4	1310	1765	1814	2565
2 3/8	1400	1885	1934	2745
2 1/2	1490	2005	2054	2925
2 5/8	1580	2125	2174	3105
2 3/4	1670	2245	2294	3285
2 7/8	1760	2365	2414	3465
3	1850	2485	2534	3645
3 1/8	1940	2605	2654	3825
3 1/4	2030	2725	2774	4005
3 3/8	2120	2845	2894	4185
3 1/2	2210	2965	3014	4365
3 5/8	2300	3085	3134	4545
3 3/4	2390	3205	3254	4725
3 7/8	2480	3325	3374	4905
4	2570	3445	3494	5085
4 1/8	2660	3565	3614	5265
4 1/4	2750	3685	3734	5445
4 3/8	2840	3805	3854	5625
4 1/2	2930	3925	3974	5805
4 5/8	3020	4045	4094	5985
4 3/4	3110	4165	4214	6165
4 7/8	3200	4285	4334	6345
5	3290	4405	4454	6525
5 1/8	3380	4525	4574	6705
5 1/4	3470	4645	4694	6885
5 3/8	3560	4765	4814	7065
5 1/2	3650	4885	4934	7245
5 5/8	3740	5005	5054	7425
5 3/4	3830	5125	5174	7605
5 7/8	3920	5245	5294	7785
6	4010	5365	5414	7965
6 1/8	4100	5485	5534	8145
6 1/4	4190	5605	5654	8325
6 3/8	4280	5725	5774	8505
6 1/2	4370	5845	5894	8685
6 5/8	4460	5965	6014	8865
6 3/4	4550	6085	6134	9045
6 7/8	4640	6205	6254	9225
7	4730	6325	6374	9405
7 1/8	4820	6445	6494	9585
7 1/4	4910	6565	6614	9765
7 3/8	5000	6685	6734	9945
7 1/2	5090	6805	6854	10125
7 5/8	5180	6925	6974	10305
7 3/4	5270	7045	7094	10485
7 7/8	5360	7165	7214	10665
8	5450	7285	7334	10845
8 1/8	5540	7405	7454	11025
8 1/4	5630	7525	7574	11205
8 3/8	5720	7645	7694	11385
8 1/2	5810	7765	7814	11565
8 5/8	5900	7885	7934	11745
8 3/4	5990	8005	8054	11925
8 7/8	6080	8125	8174	12105
9	6170	8245	8294	12285
9 1/8	6260	8365	8414	12465
9 1/4	6350	8485	8534	12645
9 3/8	6440	8605	8654	12825
9 1/2	6530	8725	8774	13005
9 5/8	6620	8845	8894	13185
9 3/4	6710	8965	9014	13365
9 7/8	6800	9085	9134	13545
10	6890	9205	9254	13725
10 1/8	6980	9325	9374	13905
10 1/4	7070	9445	9494	14085
10 3/8	7160	9565	9614	14265
10 1/2	7250	9685	9734	14445
10 5/8	7340	9805	9854	14625
10 3/4	7430	9925	9974	14805
10 7/8	7520	10045	10094	14985
11	7610	10165	10214	15165
11 1/8	7700	10285	10334	15345
11 1/4	7790	10405	10454	15525
11 3/8	7880	10525	10574	15705
11 1/2	7970	10645	10694	15885
11 5/8	8060	10765	10814	16065
11 3/4	8150	10885	10934	16245
11 7/8	8240	11005	11054	16425
12	8330	11125	11174	16605
12 1/8	8420	11245	11294	16785
12 1/4	8510	11365	11414	16965
12 3/8	8600	11485	11534	17145
12 1/2	8690	11605	11654	17325
12 5/8	8780	11725	11774	17505
12 3/4	8870	11845	11894	17685
12 7/8	8960	11965	12014	17865
13	9050	12085	12134	18045
13 1/8	9140	12205	12254	18225
13 1/4	9230	12325	12374	18405
13 3/8	9320	12445	12494	18585
13 1/2	9410	12565	12614	18765
13 5/8	9500	12685	12734	18945
13 3/4	9590	12805	12854	19125
13 7/8	9680	12925	12974	19305
14	9770	13045	13094	19485
14 1/8	9860	13165	13214	19665
14 1/4	9950	13285	13334	19845
14 3/8	10040	13405	13454	20025
14 1/2	10130	13525	13574	20205
14 5/8	10220	13645	13694	20385
14 3/4	10310	13765	13814	20565
14 7/8	10400	13885	13934	20745
15	10490	14005	14054	20925
15 1/8	10580	14125	14174	21105
15 1/4	10670	14245	14294	21285
15 3/8	10760	14365	14414	21465
15 1/2	10850	14485	14534	21645
15 5/8	10940	14605	14654	21825
15 3/4	11030	14725	14774	22005
15 7/8	11120	14845	14894	22185
16	11210	14965	15014	22365
16 1/8	11300	15085	15134	22545
16 1/4	11390	15205	15254	22725
16 3/8	11480	15325	15374	22905
16 1/2	11570	15445	15494	23085
16 5/8	11660	15565	15614	23265
16 3/4	11750	15685	15734	23445
16 7/8	11840	15805	15854	23625
17	11930	15925	15974	23805
17 1/8	12020	16045	16094	23985
17 1/4	12110	16165	16214	24165
17 3/8	12200	16285	16334	24345
17 1/2	12290	16405	16454	24525
17 5/8	12380	16525	16574	24705
17 3/4	12470	16645	16694	24885
17 7/8	12560	16765	16814	25065
18	12650	16885	16934	25245
18 1/8	12740	17005	17054	25425
18 1/4	12830	17125	17174	25605
18 3/8	12920	17245	17294	25785
18 1/2	13010	17365	17414	25965
18 5/8	13100	17485	17534	26145
18 3/4	13190	17605	17654	26325
18 7/8	13280	17725	17774	26505
19	13370	17845	17894	26685
19 1/8	13460	17965	18014	26865
19 1/4	13550	18085	18134	27045
19 3/8	13640	18205	18254	27225
19 1/2	13730	18325	18374	27405
19 5/8	13820	18445	18494	27585
19 3/4	13910	18565	18614	27765
19 7/8	14000	18685	18734	27945
20	14090	18805	18854	28125
20 1/8	14180	18925	18974	28305
20 1/4	14270	19045	19094	28485
20 3/8	14360	19165	19214	28665
20 1/2	14450	19285	19334	28845
20 5/8	14540	19405	19454	29025
20 3/4	14630	19525	19574	29205
20 7/8	14720	19645	19694	29385
21	14810	19765	19814	29565
21 1/8	14900	19885	19934	29745
21 1/4	14990	20005	20054	29925
21 3/8	15080	20125	20174	30105
21 1/2	15170	20245	20294	30285
21 5/8	15260	20365	20414	30465
21 3/4	15350	20485	20534	30645
21 7/8	15440	20605	20654	30825
22	15530	20725	20774	31005
22 1/8	15620	20845	20894	31185
22 1/4	15710	20965	21014	31365
22 3/8	15800	21085	21134	31545
22 1/2	15890	21205	21254	31725
22 5/8	15980	21325	21374	31905
22 3/4	16070	21445	21494	32085
22 7/8	16160	21565	21614	32265
23	16250	21685	21734	32445
23 1/8	16340	21805	21854	32625
23 1/4	16430	21925	21974	32805
23 3/8	16520	22045	22094	32985
23 1/2	16610	22165	22214	33165
23 5/8	16700	22285	22334	33345
23 3/4	16790	22405	22454	33525
23 7/8	16880	22525	22574	33705
24	16970	22645	22694	33885
24 1/8	17060	22765	22814	34065
24 1/4	17150	22885	22934	34245
24 3/8	17240	23005	23054	34425
24 1/2	17330	23125	23174	34605
24 5/8	17420	23245	23294	34785
24 3/4	17510	23365	23414	34965
24 7/8	17600	23485	23534	35145
25	17690	23605		

Product: L110F Volvo Wheel Loaders Service Manual

Full Download: <https://www.arepairmanual.com/downloads/l110f-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 2494 pages at:

<https://www.arepairmanual.com/downloads/l110f-volvo-wheel-loaders-service-manual/>

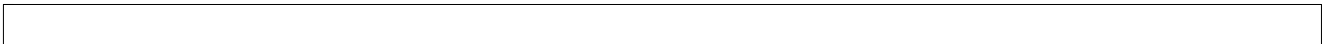
Document Title: <b>Oil sump, tightening torque</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

### Oil sump, tightening torque

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110F Volvo			

Oil sump	<b>30±3 Nm (22±2 lbf ft)</b>
<p><b>NOTE!</b> Apply sealing compound in an even bead, thickness approx. 3.5 mm, to the sealing surface on the oil sump.</p> <p>See example in figure.</p>	



**Figure 1**

Document Title: <b>Lubrication specifications</b>	Function Group: <b>system, 030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Lubrication system, specifications

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L110F Volvo			

<b>Lubrication system</b>	
Oil pressure maximum warm engine, high idling speed	400-500 kPa (4-5 bar) (58-72 psi)
Oil pressure minimum warm engine, low idling speed	60 kPa (0.6 bar) (8.7 psi)

Document Title: <b>Fuel system, tightening torques</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Fuel system, tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110F 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: <b>Thermostat, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Thermostat, specifications

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L110F Volvo			

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

Document Title: <b>Engine, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Engine, specifications

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110F Volvo			

### General

Number of cylinders	6
Cylinder bore	108 mm (4.25 in)
Stroke	130 mm (5.12 in)
Displacement	7.15 litres (1.89 US gal)
Injection order	1-5-3-6-2-4
Low idle	780 ±50 rpm
High idle (run out speed)	2250 ±35 rpm
Weight, engine	685 kg (1510 lbs)

### Stall speed torque converter<sup>(1)</sup>

<b>L110F</b> <sup>(2)</sup>	
HTE205 (22724)	2020–2110 rpm
HTE204 (22563)	2020–2110 rpm
<b>L120F</b> <sup>(2)</sup>	
HTE205 (22724)	2070–2130 rpm
HTE205 (22564)	2070–2130 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: <b>Speed sensor, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Speed sensor, specifications

Showing Selected Profile

<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L110F Volvo			

<b>Speed sensor</b>	
Crankshaft, clearance sensor — flywheel	0.6 ±0.1 mm (0.024 ±0.004 in)

Document Title: <b>Valve mechanism, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Valve system specifications

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L110F Volvo			

<b>Valve mechanism</b>	
Valve arrangement	Top valves with IEGR-rocker arm
Inlet valves	To zero clearance, then 90° counter-clockwise
Exhaust valves	To zero clearance, then 150° counter-clockwise

<b>IEGR-unit</b>	
Adjusting screw	To zero clearance, then 144° counter-clockwise

Document Title: <b>Engine, capacities</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Engine, capacities

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
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<b>Engine</b>	
Engine oil incl. filter, total	22 l (5.8 US gal)
Change volume	21 litres (5.55 US gal)

Document Title: <b>Fuel system, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Fuel system, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110F 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: <b>Fuel tank, volume</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Fuel tank, volume

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L110F Volvo			

<b>Fuel tank</b>	
Capacity, total	275 l (72.6 US gal)
Volume, usable	269 l (71.1 US gal)

Document Title: <b>Fuel feed pump, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Fuel feed pump, specifications

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
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<b>Fuel feed pump</b>	
Type	Rotor pump
Feed pressure	500–700 kPa (5.0–7.0 bar) (72.5–101.5 psi) at 780–max. rpm

Document Title: <b>Thermostat, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Thermostat, specifications

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L110F Volvo			

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

Document Title: <b>Cooling system, volume</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Cooling system, volume

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L110F Volvo			

Cooling system	
Coolant, total	40 l (10.6 US gal)
Coolant, when changing	38 l (10.0 US gal)

Document Title: <b>Reversible cooling fan, tightening torques</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Reversible cooling fan, tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110F Volvo			

### Tightening torque for directional valve

Directional valve for fan	
Nut for PWM2601	4–8 N m (2.95–5.9 lbf ft)
Nut for PWM2602	4–8 N m (2.95–5.9 lbf ft)

Document Title: <b>Temperature limits for cooling fan speed, specifications.</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Temperature limits for cooling fan speed, specifications.

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Model	Production site	Serial number start	Serial number stop
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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 <a href="#">Thermostat specifications</a>	70–95 °C (158–203 °F)
Axles front and rear when the engine thermostat has opened, see <a href="#">Thermostat specifications</a>	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: <b>Cooling fan rpm, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Cooling fan rpm, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
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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	1500 rpm	Low sound level
B	1700 rpm	Standard cooling
C	1850 rpm	Maximal cooling

Document Title: <b>Engine, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## 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: <b>Speed sensor, tightening torque</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Speed sensor, tightening torque

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110F Volvo			

### **NOTICE**

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

Speed sensor	
Crankshaft sensor, holder	20 Nm (15 lbf ft)

Document Title: <b>Turbocharger, tightening torques</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Turbocharger, tightening torques

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Model	Production site	Serial number start	Serial number stop
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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: <b>Battery, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo, L110F Volvo</b>			

## Battery, specifications

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L110F Volvo			
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<b>Battery</b>	
Total	2 batteries connected in series
Voltage	12 V
Battery capacity	140 Ah

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

Document Title: <b>Battery, weight</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo, L110F Volvo</b>			

## Battery, weight

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L110F Volvo			
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<b>Battery</b>	
Weight, incl. electrolyte	40.3 kg (89 lb)

Document Title: <b>Electrical specifications</b>	Function Group: <b>system, 030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Electrical system, specifications

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
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<b>Electrical system</b>	
System voltage	24 V

Document Title: <b>Preheating, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Preheating, specifications

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<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
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<b>Preheating coil</b>	
Output	4 kW

Document Title: <b>Alternator 80 A, specification</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Alternator 80 A, specification

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Model	Production site	Serial number start	Serial number stop
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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: <b>Front and rear axles, tightening torque</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
Profile: <b>L110F Volvo</b>			

## Front and rear axles, tightening torque

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110F Volvo			

### NOTICE

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

Front axle AWB31		Rear axle AWB30
Front axle, front frame	1100 ± 100 Nm (811 ± 74 lbf ft)	-
Rear axle mounting, frame	-	500–550 Nm (370–405 lbf ft)
<b>Differential carrier assembly</b>		
Differential housing bolts	290–330 Nm (214–243 lbf ft)	
Crown wheel	150–180 Nm (110–132 lbf ft)	
Differential housing halves	120–150 Nm (89–110 lbf ft)	
Bearing caps	460–500 Nm (339–368 lbf ft)	
Diff. bearing adjusting nut	27–33 Nm (20–24 lbf ft)	
Striker plate bolt	25–29 Nm (18–21 lbf ft)	
Pinion nut	1200–1400 Nm ( 885–1032 lbf ft)	
Cover, differential carrier assembly	27–33 Nm (20–24 lbf ft)	
<b>Hub reduction</b>		
Attaching bolts	290–330 Nm (214–243 lbf ft)	
Hub nut	2500–3500 Nm (1844–2581 lbf ft)	
Rolling resistance of new bearings:	Noted value at bearing take-up plus 21–31 Nm (15–23 lbf ft)	
Rolling resistance, run-in bearings	Noted value at bearing take-up plus 5–8 Nm (4–6 lbf ft)	
Centre cover	40–50 Nm (30–36 lbf ft)	
<b>Differential lock</b>		
Stop bolt	27–33 Nm (20–24 lbf ft)	-
Cover	24–30 Nm (18–22 lbf ft)	-
Lock nut	24–30 Nm (18–22 lbf ft)	-

Document Title: <b>Front and rear axles, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
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## Front and rear axles, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
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Front axle AWB 31	
Oil, type	Transmission oil, (97303, STD 1273.03)
Grease; hub seal, pinion shaft seal	Heat-resistant grease
Grease, other	Universal grease (97718)
Tooth backlash, crown wheel – pinion shaft	0.35–0.46 mm (0.013–0.018 in)

Rear axle AWB 30	
Oil, type	Transmission oil, (97303, STD 1273.03)
Grease; hub seal, pinion shaft seal	Heat-resistant grease
Grease, other	Universal grease (97718)
Tooth backlash, crown wheel – pinion shaft	0.28–0.41 mm (0.011–0.016 in)

Document Title: <b>Front and rear axles, specifications</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/6/2026</b>
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## Front and rear axles, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
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Oil, type	See <a href="#">Recommended lubricants, oils</a>
Oil level: Max. min.	Lower edge of filler hole 5 mm (0.2 inch) below filler hole