

Document Title: Volvo standard tightening torques	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

Volvo standard tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G 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
3/4	200	271	284	390
1 1/8	300	408	428	588
1 1/4	400	544	576	784
1 3/8	500	680	720	980
1 1/2	600	816	864	1176
1 5/8	700	952	1008	1372
1 3/4	800	1088	1152	1568
2	1000	1424	1500	2016
2 1/4	1500	2136	2250	3024
2 3/4	2000	2848	3000	4032
3	2500	3560	3750	5040
3 1/2	3000	4272	4500	6048
4	3500	4984	5250	7056
4 1/2	4000	5696	6000	8064
5	4500	6408	6750	9072
5 1/2	5000	7120	7500	10080
6	5500	7832	8250	11088
6 1/2	6000	8544	9000	12096
7	6500	9256	9750	13104
7 1/2	7000	9968	10500	14112
8	7500	10680	11250	15120
8 1/2	8000	11392	12000	16128
9	8500	12104	12750	17136
9 1/2	9000	12816	13500	18144
10	9500	13528	14250	19152
10 1/2	10000	14240	15000	20160
11	10500	14952	15750	21168
11 1/2	11000	15664	16500	22176
12	11500	16376	17250	23184
12 1/2	12000	17088	18000	24192
13	12500	17800	18750	25200
13 1/2	13000	18512	19500	26208
14	13500	19224	20250	27216
14 1/2	14000	19936	21000	28224
15	14500	20648	21750	29232
15 1/2	15000	21360	22500	30240
16	15500	22072	23250	31248
16 1/2	16000	22784	24000	32256
17	16500	23496	24750	33264
17 1/2	17000	24208	25500	34272
18	17500	24920	26250	35280
18 1/2	18000	25632	27000	36288
19	18500	26344	27750	37296
19 1/2	19000	27056	28500	38304
20	19500	27768	29250	39312
20 1/2	20000	28480	30000	40320
21	20500	29192	30750	41328
21 1/2	21000	29904	31500	42336
22	21500	30616	32250	43344
22 1/2	22000	31328	33000	44352
23	22500	32040	33750	45360
23 1/2	23000	32752	34500	46368
24	23500	33464	35250	47376
24 1/2	24000	34176	36000	48384
25	24500	34888	36750	49392
25 1/2	25000	35600	37500	50400
26	25500	36312	38250	51408
26 1/2	26000	37024	39000	52416
27	26500	37736	39750	53424
27 1/2	27000	38448	40500	54432
28	27500	39160	41250	55440
28 1/2	28000	39872	42000	56448
29	28500	40584	42750	57456
29 1/2	29000	41296	43500	58464
30	29500	42008	44250	59472
30 1/2	30000	42720	45000	60480
31	30500	43432	45750	61488
31 1/2	31000	44144	46500	62496
32	31500	44856	47250	63504
32 1/2	32000	45568	48000	64512
33	32500	46280	48750	65520
33 1/2	33000	46992	49500	66528
34	33500	47704	50250	67536
34 1/2	34000	48416	51000	68544
35	34500	49128	51750	69552
35 1/2	35000	49840	52500	70560
36	35500	50552	53250	71568
36 1/2	36000	51264	54000	72576
37	36500	51976	54750	73584
37 1/2	37000	52688	55500	74592
38	37500	53400	56250	75600
38 1/2	38000	54112	57000	76608
39	38500	54824	57750	77616
39 1/2	39000	55536	58500	78624
40	39500	56248	59250	79632
40 1/2	40000	56960	60000	80640
41	40500	57672	60750	81648
41 1/2	41000	58384	61500	82656
42	41500	59096	62250	83664
42 1/2	42000	59808	63000	84672
43	42500	60520	63750	85680
43 1/2	43000	61232	64500	86688
44	43500	61944	65250	87696
44 1/2	44000	62656	66000	88704
45	44500	63368	66750	89712
45 1/2	45000	64080	67500	90720
46	45500	64792	68250	91728
46 1/2	46000	65504	69000	92736
47	46500	66216	69750	93744
47 1/2	47000	66928	70500	94752
48	47500	67640	71250	95760
48 1/2	48000	68352	72000	96768
49	48500	69064	72750	97776
49 1/2	49000	69776	73500	98784
50	49500	70488	74250	99792
50 1/2	50000	71200	75000	100800
51	50500	71912	75750	101808
51 1/2	51000	72624	76500	102816
52	51500	73336	77250	103824
52 1/2	52000	74048	78000	104832
53	52500	74760	78750	105840
53 1/2	53000	75472	79500	106848
54	53500	76184	80250	107856
54 1/2	54000	76896	81000	108864
55	54500	77608	81750	109872
55 1/2	55000	78320	82500	110880
56	55500	79032	83250	111888
56 1/2	56000	79744	84000	112896
57	56500	80456	84750	113904
57 1/2	57000	81168	85500	114912
58	57500	81880	86250	115920
58 1/2	58000	82592	87000	116928
59	58500	83304	87750	117936
59 1/2	59000	84016	88500	118944
60	59500	84728	89250	119952
60 1/2	60000	85440	90000	120960
61	60500	86152	90750	121968
61 1/2	61000	86864	91500	122976
62	61500	87576	92250	123984
62 1/2	62000	88288	93000	124992
63	62500	89000	93750	125999
63 1/2	63000	89712	94500	127008
64	63500	90424	95250	128016
64 1/2	64000	91136	96000	129024
65	64500	91848	96750	130032
65 1/2	65000	92560	97500	131040
66	65500	93272	98250	132048
66 1/2	66000	93984	99000	133056
67	66500	94696	99750	134064
67 1/2	67000	95408	100500	135072
68	67500	96120	101250	136080
68 1/2	68000	96832	102000	137088
69	68500	97544	102750	138096
69 1/2	69000	98256	103500	139104
70	69500	98968	104250	140112
70 1/2	70000	99680	105000	141120
71	70500	100392	105750	142128
71 1/2	71000	101104	106500	143136
72	71500	101816	107250	144144
72 1/2	72000	102528	108000	145152
73	72500	103240	108750	146160
73 1/2	73000	103952	109500	147168
74	73500	104664	110250	148176
74 1/2	74000	105376	111000	149184
75	74500	106088	111750	150192
75 1/2	75000	106800	112500	151200
76	75500	107512	113250	152208
76 1/2	76000	108224	114000	153216
77	76500	108936	114750	154224
77 1/2	77000	109648	115500	155232
78	77500	110360	116250	156240
78 1/2	78000	111072	117000	157248
79	78500	111784	117750	158256
79 1/2	79000	112496	118500	159264
80	79500	113208	119250	160272
80 1/2	80000	113920	120000	161280
81	80500	114632	120750	162288
81 1/2	81000	115344	121500	163296
82	81500	116056	122250	164304
82 1/2	82000	116768	123000	165312
83	82500	117480	123750	166320
83 1/2	83000	118192	124500	167328
84	83500	118904	125250	168336
84 1/2	84000	119616	126000	169344
85	84500	120328	126750	170352
85 1/2	85000	121040	127500	171360
86	85500	121752	128250	172368
86 1/2	86000	122464	129000	173376
87	86500	123176	129750	174384
87 1/2	87000	123888	130500	175392
88	87500	124600	131250	176400
88 1/2	88000	125312	132000	177408
89	88500	126024	132750	178416
89 1/2	89000	126736	133500	179424
90	89500	127448	134250	180432
90 1/2	90000	128160	135000	181440
91	90500	128872	135750	182448
91 1/2	91000	129584	136500	183456
92	91500	130296	137250	184464
92 1/2	92000	131008	138000	185472
93	92500	131720	138750	186480
93 1/2	93000	13		

Product: L120G Volvo Wheel Loaders Service Manual

Full Download: <https://www.arepairmanual.com/downloads/l120g-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 2541 pages at:

<https://www.arepairmanual.com/downloads/l120g-volvo-wheel-loaders-service-manual/>

Document Title: Engine, software specifications	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

Engine, software specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

Engine protection

Function	Action	Limit/cause
High coolant temperature	Yellow lamp on Red lamp on Both lamps off [T1] ⓘ Engine shut down	104°C (219°F) 107°C (225°F) 100°C (212°F) 116°C (241°F)
High inlet manifold air pressure	Red lamp on Red lamp off	0.35 MPa (51 PSI) 0.25 MPa (36 PSI)
High inlet manifold air temperature	Yellow lamp on Red lamp on	120°C (240°F) 140°C (284°F)
High oil temperature	Yellow lamp on Red lamp on Both lamps off [T2] ⓘ	125°C (257°F) 128°C (262°F) 123°C (253°F)
Low oil pressure	Red lamp and forced idle Engine shut down	0.5– 2 MPa (73–290 PSI)[T3] ⓘ
Low coolant level	Yellow lamp	[T4] ⓘ
High temperature of cooled EGR exhausts after the EGR cooler	Yellow lamp on Red lamp on Derate	200°C (392°F) 240°C (464°F) [T5] ⓘ
High E-ECU temperature	Red lamp on and derate	95°C (203°F)
High soot load	Yellow lamp Buzzer	100%
	Yellow lamp Buzzer Start derate	130%
	Red lamp Buzzer continuous Max derate [T6] ⓘ	140%
	Red lamp Buzzer continuous Max derate [T7] ⓘ	170%
	Red lamp Buzzer continuous Max derate [T8] ⓘ	200%
Air pump failure	Red lamp Derate [T9] ⓘ	Air pump failure

[T1] If the temperature has triggered yellow or red lamp, the temperature has to decrease to specified value for turning the lamps off.

[T2] If the temperature has triggered yellow or red lamp, the temperature has to decrease to specified value for turning the lamps off.

[T3] The red lamp is lit and force idle is performed when the oil pressure is lower than the specified value for 80% of the time during a 4 sec period. When vehicle speed is ~0km/h the engine will be forced shut off.

[T4] Yellow lamp is lit when the coolant level in the expansion tank has been below low level for 90% of the time during a 15 sec period.

[T5] If the temperature exceeds specified value for yellow lamp for more than 20% within a 30 sec period, the derate starts. At specified value for red lamp the derate will be 100%.

[T6] Stand still regeneration required

[T7] Service regeneration required

[T8] DPF replacement required

[T9] Startup delay 30 seconds.

Document Title: Valve mechanism, specifications	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

Valve mechanism, specifications

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

Valve mechanism	
Valve arrangement	Top valves
Inlet valves, angle-tightening	To zero clearance, then 75° ±10° counter-clockwise
Exhaust valves, angle-tightening	To zero clearance, then 105° ±10° counter-clockwise

Tightening torques	
Lock nut, valves	20 ±2 Nm (14.8 ±1.5 lbf ft)
Valve cover	8.5 Nm (6.3 lbf ft)

Document Title: Flywheel, tightening torques	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

Flywheel, tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

NOTE!

Always use new bolts!

Flywheel

Tighten the bolts in the order shown in the following figure. All bolts are tightened in two steps:

Step 1	30 Nm (22 lbf ft)
Step 2, angle-tightening	60°
Step 3, angle-tightening	60°

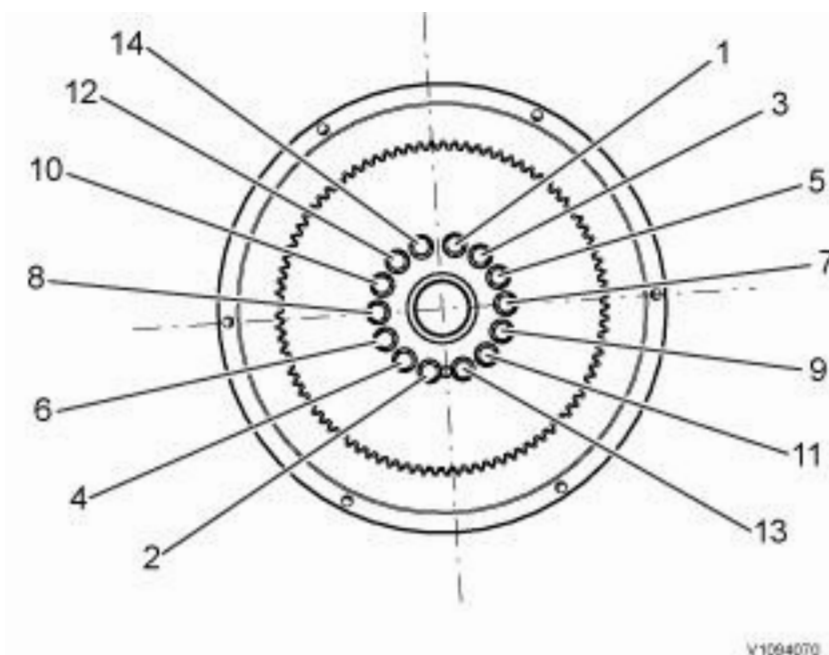


Figure 1

Vibration damper

Tighten the bolts in the order shown in the following figure. All bolts are tightened in two steps:

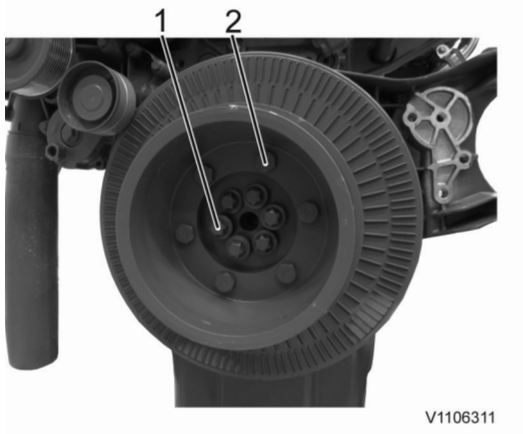


Figure 2

1. M12x80 bolt
2. M12x35 bolt

M12x80 bolt	
Step 1	30±3 Nm (22±2.2 lbf ft)
Step 2	60°
Step 3	60°

M12x35 bolt	110 ±11 Nm (81 ±8 lbf ft)
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Belt tensioner

Tightening torque	45±4.5 Nm (33±3.3 lbf ft)
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Document Title: Oil sump, tightening torque	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
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Oil sump, tightening torque

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Valid for serial numbers			
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Oil sump	30±3 Nm (22±2 lbf ft)
<p>NOTE! 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>	

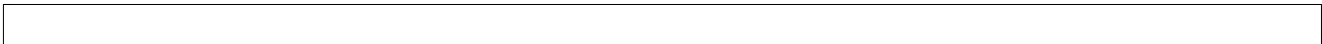


Figure 1

Document Title: Lubrication system, tightening torques	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

Lubrication system, tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
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Part	Comment	Torque
Oil cooler on oil cooler housing	Tighten screws in order	22 Nm (16 lbf ft)

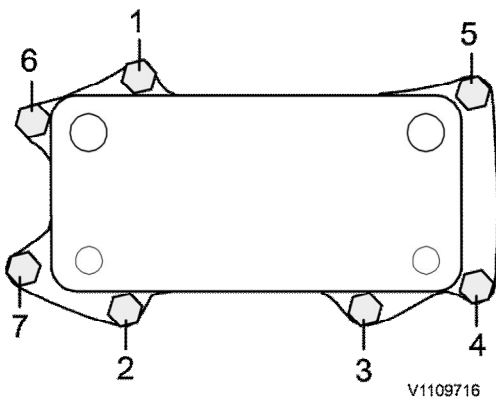


Figure 1
Oil cooler

Part	Comment	Torque
Oil cooler housing on crankcase	Step 1: Tighten screws M8x80–10.9 (3 pieces)	30 Nm (22 lbf ft)
	Step 2: Tighten screws M8x50–10.9 (5 pieces)	30 Nm (22 lbf ft)
Engine oil pressure sensor, SE2203		30 ±5 Nm (22.13 ±3.6 lbf ft)

Document Title: Exhaust aftertreatment system, specifications	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
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Exhaust aftertreatment system, specifications

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Model	Production site	Serial number start	Serial number stop
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Spark plug, electrode gap	1.0 +0.05/-0,05 mm (0.039 +0.002/-0.002 in)
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	Warm engine Low idle	Warm engine Burner running Low idle	Warm engine Regeneration running Low idle	Warm engine Regeneration running High idle
Burner temperature	50–120 °C (122–248 °F)	600–900 °C (1112–1652 °F)	600–900 °C (1112–1652 °F)	600–950 °C (1112–1742 °F)
Temperature before DOC	50–120 °C (122–248 °F)	280–380 °C (536–716 °F)	310–400 °C (590–752 °F)	310–400 °C (590–752 °F)
Temperature after DOC	50–120 °C (122–248 °F)	260–380 °C (500–716 °F)	360–650 °C (680–1202 °F)	360–650 °C (680–1202 °F)
Pressure after MV1 (AHI)	20–30 kPa (2.9–4.3 psi)	20–30 kPa (2.9–4.3 psi)	100–350 kPa (14.50 – 50.76 psi)	100–350 kPa (14.50– 50.76 psi)
Pressure after MV2 (Burner)	-	150 ± 20 kPa (21.76 ± 2.18 psi)	150 ± 15 kPa (21.76 ± 2.18 psi)	150 ± 15 kPa (21.76 ± 2.18 psi)
Shut off valve duty cycle	0 %	100 %	100 %	100 %
MV1 duty cycle	0 %	0 %	0–20 %	0–40 %
MV2 duty cycle	0 %	45–65 %	40–65 %	50–65 %
Spark plug duty cycle	0	1	1	1
Glow plug duty cycle	0 %	40–55 % (when the glow plug is active)	40–55 % (when the glow plug is active)	40–55 % (when the glow plug is active)
Air pump mass flow	3–5.4 kg/h	18–20.4 kg/h	13.2–20.4 kg/h	18–20.4 kg/h
Air pump motor speed	800–1400 rpm	2000–5600 rpm	2000–6000 rpm	2000–6300 rpm
Air pump mass flow during Tech Tool operation 25410–3	Approx. 19–22 kg/h	-	-	-
Air pump pressure during Tech Tool operation 25410–3	At least 12–40 kPa (1.74–5.8 psi), (relative pressure)	-	-	-
Air pump motor maximum speed during Tech Tool operation 25410–3	Max 6600 rpm	-	-	-

Document Title: Conversion tables	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

Conversion tables

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

Unit	cm	m	km	in	ft	yd	mile
cm	1	0.01	0.00001	0.3937	0.03281	0.01094	0.000006
m	100	1	0.001	39.37	3.2808	1.0936	0.00062
km	100000	1000	1	39370.7	3280.8	1093.6	0.62137
in	2.54	0.0254	0.000025	1	0.08333	0.02777	0.000015
ft	30.48	0.3048	0.000304	12	1	0.3333	0.000189
yd	91.44	0.9144	0.000914	36	3	1	0.000568
mile	160930	1609.3	1.6093	63360	5280	1760	1

1 mm = 0.1 cm - 1 mm = 0.001 m

Area

Unit	cm ²	m ²	km ²	a	ft ²	yd ²	in ²
cm ²	1	0.0001	-	0.000001	0.001076	0.000012	0.155000
m ²	10000	1	0.000001	0.01	10.764	1.1958	1550.000
km ²	-	1000000	1	10000	1076400	1195800	-
a	0.01	100	0.0001	1	1076.4	119.58	-
ft ²	-	0.092903	-	0.000929	1	0.1111	144.000
yd ²	-	0.83613	-	0.008361	9	1	1296.00
in ²	6.4516	0.000645	-	-	0.006943	0.000771	1

1 ha = 100 a - 1 mile² = 259 ha = 2.59 km²

Volume

Unit	cm ³ = cc	m ³	l	in ³	ft ³	yd ³
cm ³ = ml	1	0.000001	0.001	0.061024	0.000035	0.000001
m ³	1000000	1	1000	61024	35.315	1.30796
dm ³ (l)	1000	0.001	1	61.024	0.035315	0.001308
in ³	16.387	0.000016	0.01638	1	0.000578	0.000021
ft ³	28316.8	0.028317	28.317	1728	1	0.03704
yd ³	764529.8	0.76453	764.53	46656	27	1

1 gal (US) = 3785.41 cm³ = 231 in³ = 0.83267 gal (UK)

Weight

Unit	g	kg	t	oz	lb
g	1	0.001	0.000001	0.03527	0.0022
kg	1000	1	0.001	35.273	2.20459
t	1000000	1000	1	35273	2204.59
oz	28.3495	0.02835	0.000028	1	0.0625
lb	453.592	0.45359	0.000454	16	1

1 ton (metric) = 1.1023 ton (US) = 0.9842 ton (UK)

Pressure

Unit	kp/cm ²	bar	Pa=N/m ²	kPa	lbf/in ²	lbf/ft ²
kp/cm ²	1	0.98067	98066.5	98.0665	14.2233	2048.16
bar	1.01972	1	100000	100	14.5037	2088.6
Pa=N/m ²	0.00001	0.001	1	0.001	0.00015	0.02086
kPa	0.01020	0.01	1000	1	0.14504	20.886
lbf/in ²	0.07032	0.0689	6894.76	6.89476	1	144
lbf/ft ²	0.00047	0.00047	47.88028	0.04788	0.00694	1

kg/cm² = 735.56 Dry (mmHg) = 0.96784 atm

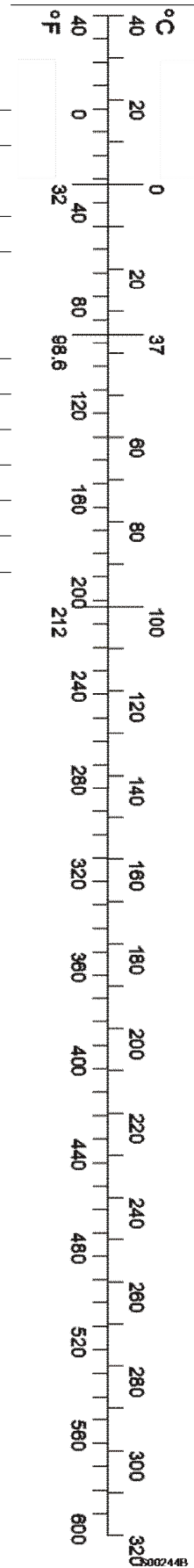
Unit explanations

Unit	abbreviation
Newton meter	Nm
Kilopoundmeter	kpm
Kilopascal	kPa
Megapascal	MPa
Kilowatt	kW
kilojoule	kJ
British thermal unit	Btu
Calorie	cal

Approx. conversion

SI unit	Conversion factor	Non SI	Conversion factor	SI
Torque				
Nm	x10.2	=kg/cm	x0.8664	=lb in
Nm	x0.74	=lbf-ft	x1.36	=Nm
Nm	x0.102	=kg/m	x7.22	=lbft
Pressure (Pa = N/m²)				
kPa	x4.0	=in.H ₂ O	x0.249	=kPa
kPa	x0.30	=in.Hg	x3.38	=kPa
kPa	x0.145	=psi	x6.89	=kPa
bar	x14.5	=psi	x0.069	=bar
kp/cm ²	x14.22	=psi	x0.070	=kp/cm ²
N/mm ²	x145.04	=psi	x0.069	=bar
MPa	x145	=psi	x0.00689	=MPa
Power (W = J/s)				
kW	x1.36	=hp(cv)	x0.736	=kW

kW	x1.34	= bhp	x0.746	= kW
kW	x0.948	= Btu/s	x1.055	= kW
W	x0.74	= ft-lb/s	x1.36	= W
Energy (J = Nm)				
kJ	x0.948	= Btu	x1.055	= kJ
J	x0.239	= calorie	x4.19	= J
Speed and acceleration				
m/s ²	x3.28	= ft/s ²	x0.305	= m/s ²
m/s	x3.28	= ft/s	x0.305	= m/s
km/h	x0.62	= mph	x1.61	= km/h
Horsepower/torque				
Bhp x5252 rpm = TQ (lb-ft)			TQ x rpm 5252 = bhp	
Temperature				
$^{\circ}\text{C} = (^{\circ}\text{F} - 32) / 1.8$			$^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$	
Flow factor				
l/min (dm ³ /min)	x0.264	= US gal/min	x3.785	= liter/min



Document Title: Fuel system, specifications	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

Fuel system, specifications

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

Fuel feed pump	
Type	Gear pump
Safety valve	1.5 MPa (217.6 psi)
Opening pressure	0.975 MPa (141.4 psi)
Fully opened	1.45 MPa (210.3 psi)
Feed pressure at:	
600 rpm	min. 0.56–0.64 MPa (81.2–92.8 psi)
1200 rpm	min. 0.56–0.65 MPa (81.2–94.3 psi)

Fuel Control Valve (FCV) — Overflow valve	
Opening pressure	0.46 MPa (66.7 psi)

Fuel rail	
Injection pressure at injectors	between 30–195 MPa (4351–28282 psi)
Maximum pressure	195 MPa (28282 psi)
Over-pressure (PRV opening pressure 1)	240–280 MPa (34809–40611 psi)
Injector fuel return flow, idling speed	0–115 ml/min (3.89 US oz./min)

Pressure Release Valve (PRV)	
Opening pressure	240–280 MPa (34809–40611 psi)
Pressure when open	90–110 MPa (13053–15954 psi)
Life time limits:	50 openings 300 minutes in PRV open mode accumulated Lifetime limits are not monitored by main software, no error messages when limits are exceeded. PRV openings are logged in the EMS error memory

Document Title: Lubrication specifications	Function Group: system, 030	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

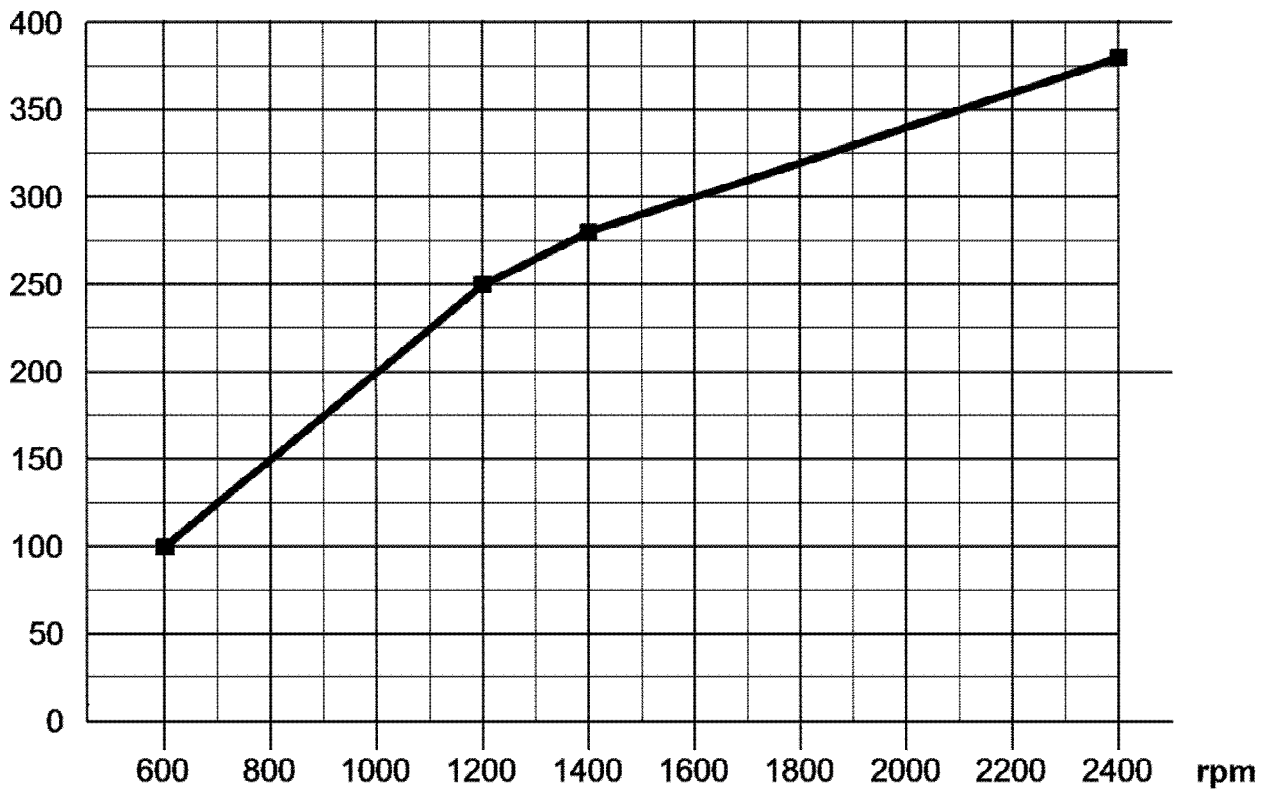
Lubrication system, specifications

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

Minimum oil pressure, recommendation

kPa



V1178857

Figure 1

Minimum oil pressure, guide

NOTE!

If the engine is operated continuously in the critical range, engine damage is expected in the long run.

Oil consumption

Lubricating oil, approx. maximum consumption	0.75 % of fuel consumption
--	----------------------------

Document Title: Engine, tighten torques	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

Engine, tightening torques

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

NOTICE

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

Engine mounts	
Flywheel housing – hydraulic transmission	92 Nm (67.8 lbf ft)
Front engine mount, rubber pads – frame	150 Nm (110.6 lbf ft)
Front engine mount, rubber pads – engine mount	92 Nm (67.8 lbf ft)
Front engine mount, engine member – engine block	230 Nm (169.6 lbf ft)
Engine	
Vibration damper: step 1	30 ±3 Nm (22 ±2.2 lbf ft)
Vibration damper: step 2, angle-tightening	60°
Vibration damper: step 3, angle-tightening	60°
Belt pulley	110 ±11 Nm (81 ±8 lbf ft)
Connector ED, centre bolt	3.5 ±0.5 Nm (2.6 ±0.4 lbf ft)

Document Title: Engine, specifications	Function Group: 030	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

Engine, specifications

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

General

Number of cylinders	6
Cylinder bore	110 mm (4.33 in)
Stroke	136 mm (5.35 in)
Displacement	7.75 litres (2.05 US gal)
Injection order	1-5-3-6-2-4
Low idle	800 rpm
High idle (run out speed)	2275 rpm
Weight, engine	750 kg (1655 lbs)

Stall speed torque converter⁽¹⁾

L110G ⁽²⁾ HTL206 (22577) HTE206B (22590) HTE206 (22576)	1990–2090 rpm 1960–2070 rpm 2000–2100 rpm
L120G ⁽²⁾ HTL206 (22577) HTE206B (22590) HTE206 (22576)	2020–2110 rpm 2000–2100 rpm 2000–2090 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: Operation numbers for additional work	Function Group: 070	Information Type: Service Information	Date: 4/8/2026
Profile: Wheel Loaders (WLO)			

Operation numbers for additional work

Showing Selected Profile

These operations can be used to identify work that is not included in the time guide or described in the methods in the Service Manual. When these operations are used, a description of the work that has been performed must be provided.

Other work related to engine

Op. no. 070-210

This operation can be used when work has been done related to the engine and function group 2 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

Other work related to electrical system

Op. no. 070-310

This operation can be used when work has been done related to the electrical system and function group 3 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

Other work related to transmission, gearbox, travel motor, swing motor

Op. no. 070-410

This operation can be used when work has been done related to the transmission, gearbox, travel motor or swing motor and function group 4 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

Other work related to drive axle

Op. no. 070-470

This operation can be used when work has been done related to the drive axle and function group 46 when no applicable method description was available. When this operation is used, additional information is required:

- Description of required work that have been done

Other work related to brake system

Op. no. 070-510

This operation can be used when work has been done related to the brake system and function group 5 when no applicable

method description was available. When this operation is used, additional information is required:

- Description of work that has been done

Other work related to steering system

Op. no. 070-610

This operation can be used when work has been done related to the steering system and function group 6 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

Other work related to frame link, axle suspension

Op. no. 070-710

This operation can be used when work has been done related to the frame link, axle suspension and other parts related to function group 7 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

Other work related to cab, air conditioning

Op. no. 070-810

This operation can be used when work has been done related to the cab, air conditioning and other parts related to function group 8 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

Other work related to hydraulic system

Op. no. 070-910

This operation can be used when work has been done related to the hydraulic system and other parts related to function group 9 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

Document Title: E 1708, Checking point	Function Group: 080	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

E 1708, Checking point

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

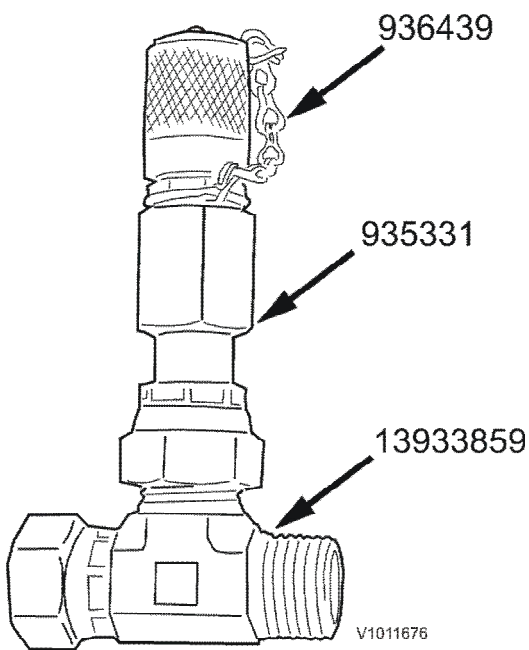


Figure 1

Document Title: E1711	Function Group: 080	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

E1711

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

E1711

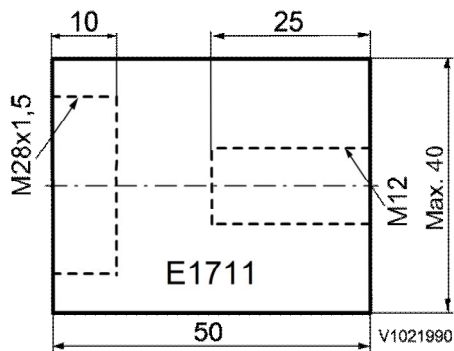


Figure 1

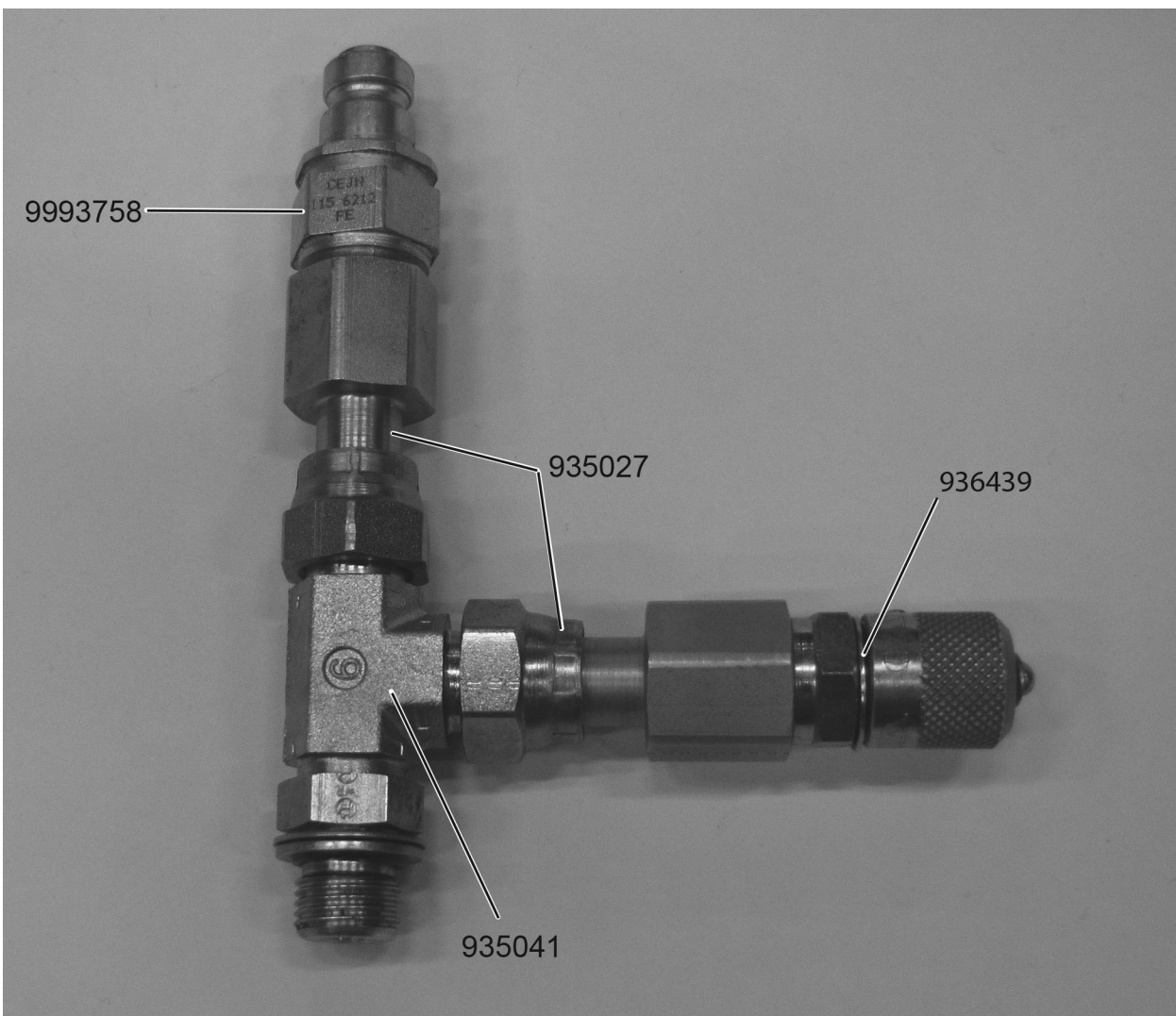
E1711

Document Title: E-2000	Function Group: 080	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

E-2000

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			



V1139126

Figure 1

Document Title: E-2001	Function Group: 080	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

E-2001

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

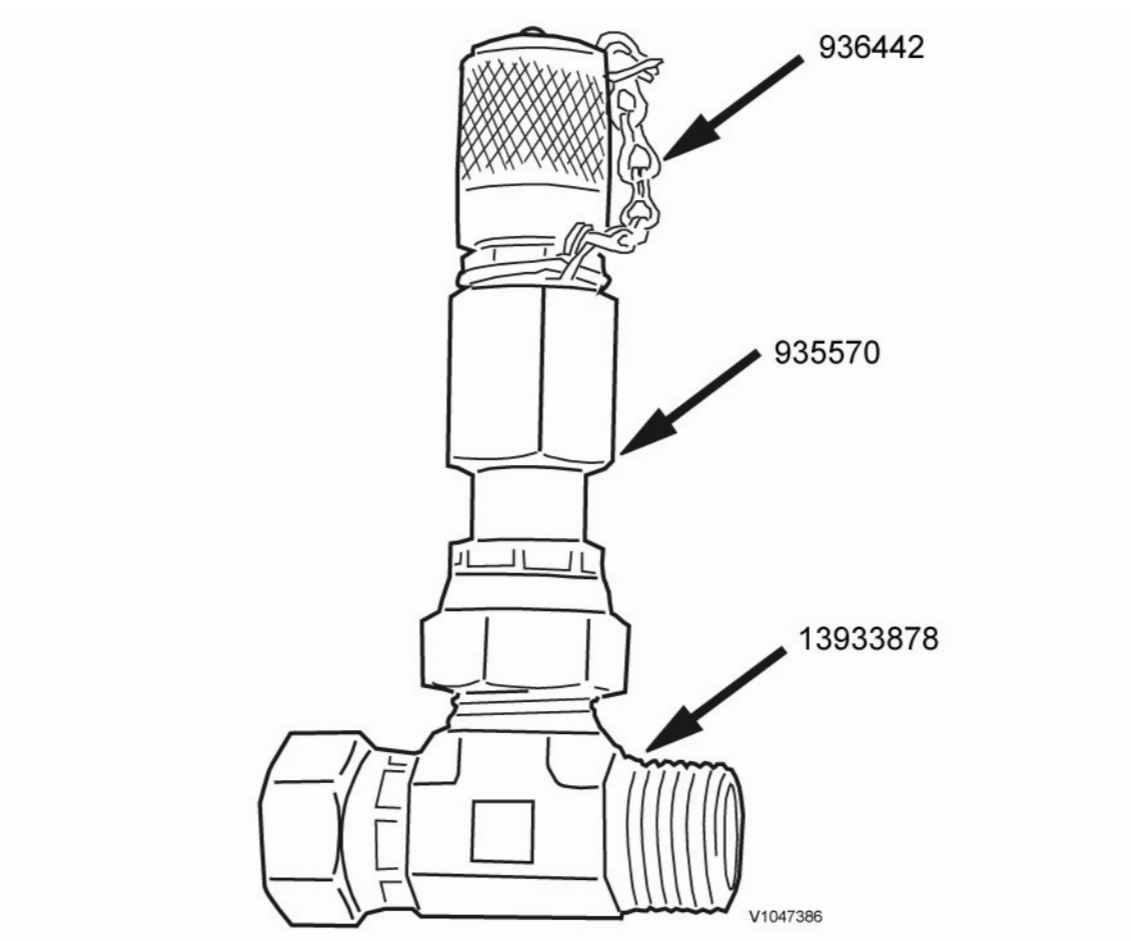


Figure 1

Document Title: E-2010	Function Group: 080	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

E-2010

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

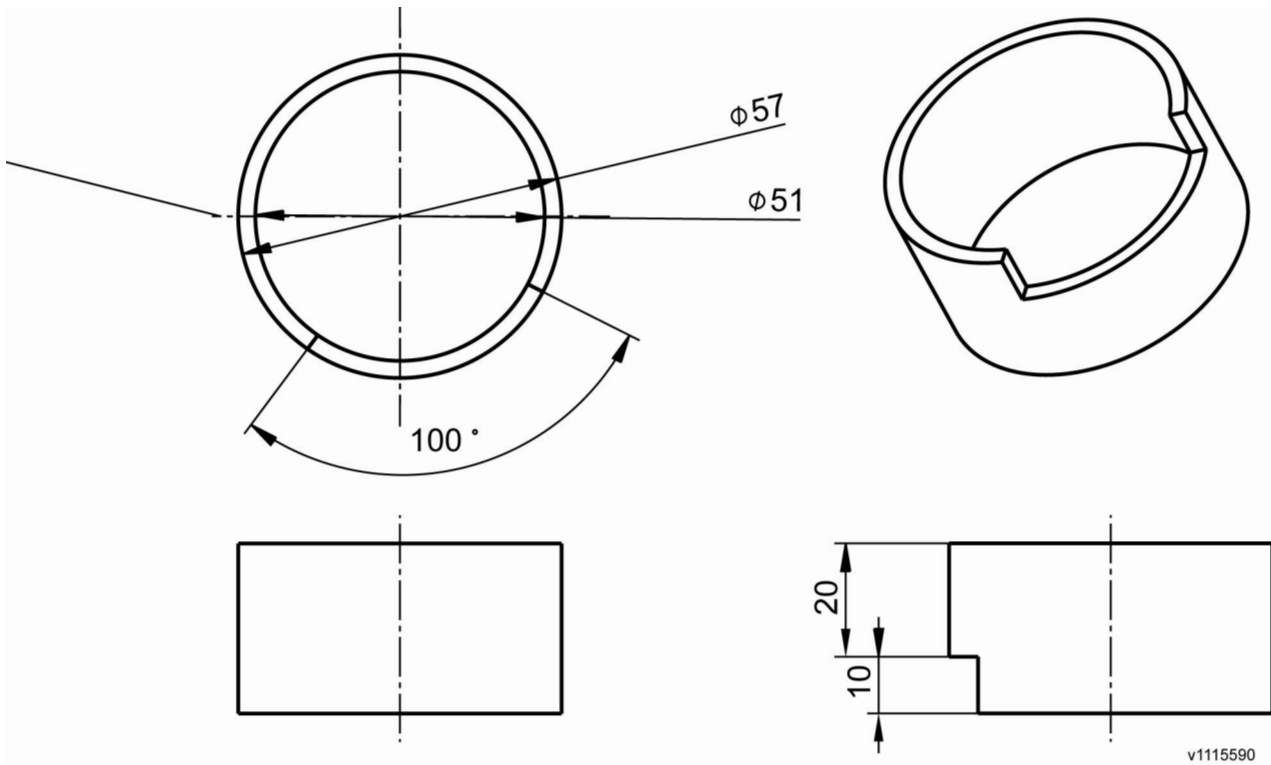


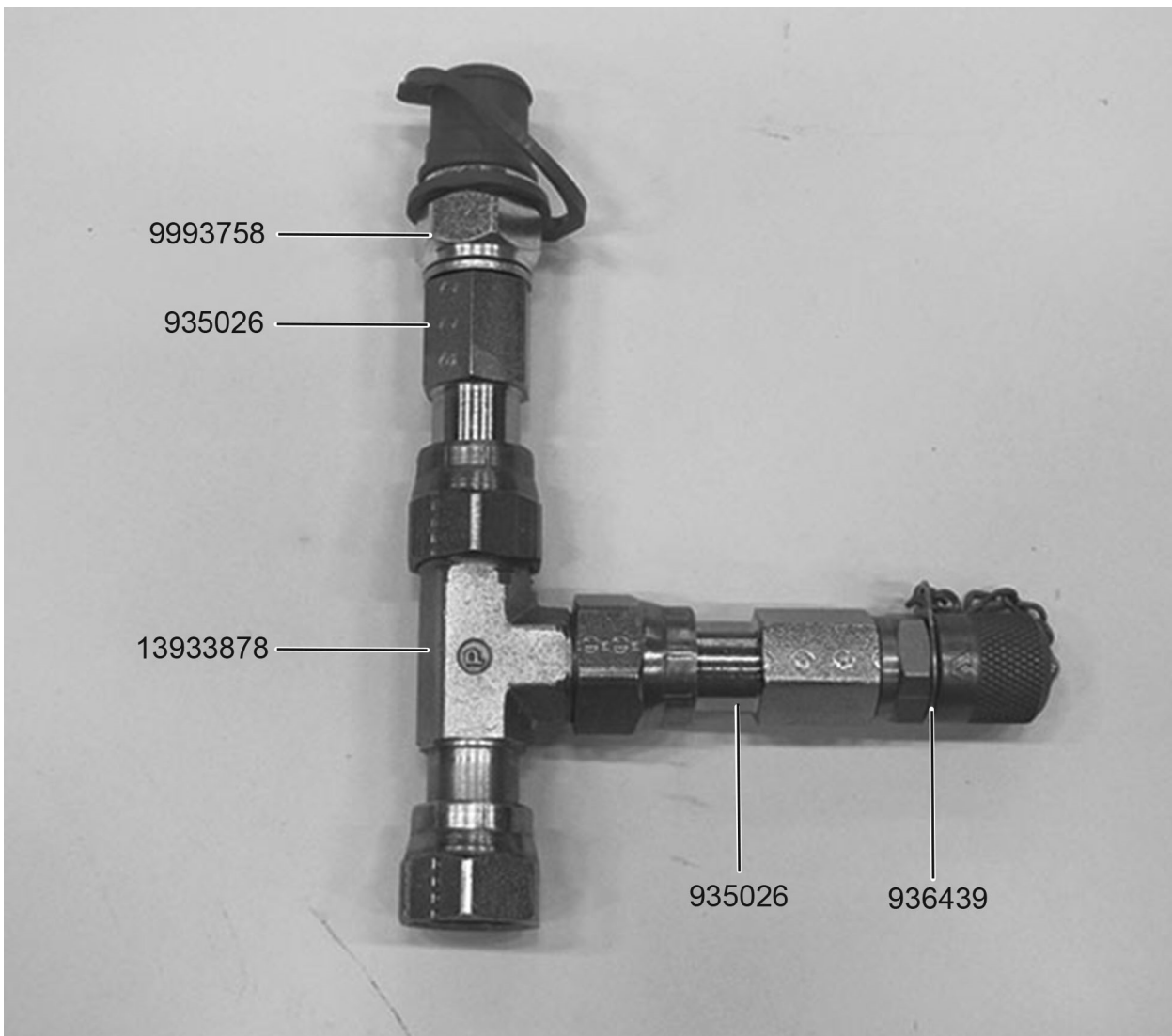
Figure 1

Document Title: E-2015	Function Group: 080	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

E-2015

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			



V1138746

Figure 1

Document Title: E-2031	Function Group: 080	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

E-2031

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

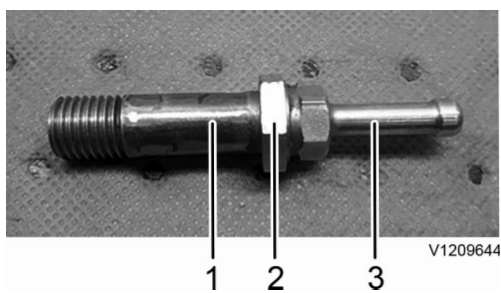


Figure 1

1. Holes welded shut
2. 21713266
3. Hose nipple, diameter of approx. 8 mm

Document Title: 9993807 Lifting tool user instructions	Function Group: 080	Information Type: Service Information	Date: 4/8/2026
Profile: L120G Volvo			

9993807 Lifting tool user instructions

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L120G Volvo			

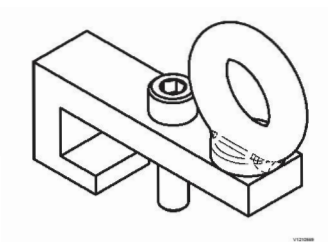


Figure 1

9993807 Lifting tool

Instructions

This instruction is a guide on how to use and maintain the lifting tool correctly. The instructions must be studied carefully by the personnel concerned before the lifting tool can be put into use.

The instructions must always be available to the personnel maintaining and using the lifting tool daily.

It is also important to:

- Keep the instructions and other applicable documents during the entire lifetime of the lifting tool.
- Pass the instructions to other owners or users of the lifting tool.
- Update the instructions with additions or changes made by the manufacturer.

Pay careful attention to information about warnings mentioned in the instructions and found on the warning signs on the lifting tools. If this information is not observed, severe personal injuries and equipment damage can arise.

Responsibility

The instructions describe the authorized method to use the lifting tool.

The lifting tool may only be used by personnel with adequate technical training or corresponding professional experience and in consultation with the manufacturer.

If the instructions have not been followed, the manufacturer is not responsible for personal injuries or damage to equipment.

Marking

Do not remove or make machine labels or other labels unreadable.

The lifting tool is marked with a CE mark, which means that it is designed, manufactured and described in accordance with EC Machinery Directive 2006/42/EC.

Warning decals and CE mark on lifting tool must be clearly visible. If a part provided with warning decals or CE mark is changed, a new warning decal and CE mark must be mounted in the same place. Defective decals and CE marks must be replaced immediately.



V1141218

Figure 2

CE-marking

Manufacturer

Company: Volvo Construction Equipment AB

Address: CE-46840, RLA 0301

Postal address: 631 85 Eskilstuna, Sweden

Rebuilding

If the lifting tool is rebuilt or supplemented with other parts without permission by the manufacturer, the CE marking does not include this part. If such rebuilding or added parts changes the function of the lifting tool, the CE marking in its entirety is no longer valid. After rebuilding, it is important that the instructions are supplemented with the necessary illustrations, photos and texts.

NOTE!

If not explicitly stated otherwise, always assume this instruction reference the use of two 9993807 Lifting tools.

Intended usage

The lifting toll specified in this document is only intended for lifting torque converters with a maximum weight of 100 kg. Intended users are appointed and trained personnel, the lifting gear is not intended to be used by unauthorised or underage personnel.

To fulfil the requirements for intended use, the user must follow all instructions and maintenance directions written by the manufacturer.

Technical data

Type designation: lifting tool for torque converter

Maximum load, lifting tool x 2: 100 kg (220 lb)

Mass, lifting tool x 2 with shackles and chain slings: 5 kg (11 lb)

Test factor for static testing (for lifting tools): 1.5

Safety information

Limits of use

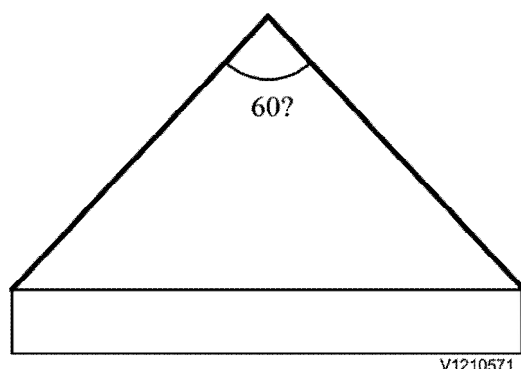
The lifting tools may only be used for the intended purpose. All other use is forbidden.

Lifting hooks must be equipped with a self-locking hook.

Shackles should be used for connecting the tools.

Lifting sling and straps should be marked with lifting capacity.

All accessories for the lift must have sufficient lifting capacity.



V1210571

Figure 3

Max lift-angle

Maximum lift angles must not exceed 60°.

Handling

To meet the requirements for intended use, the user must observe all user and maintenance instructions prescribed by the manufacturer.

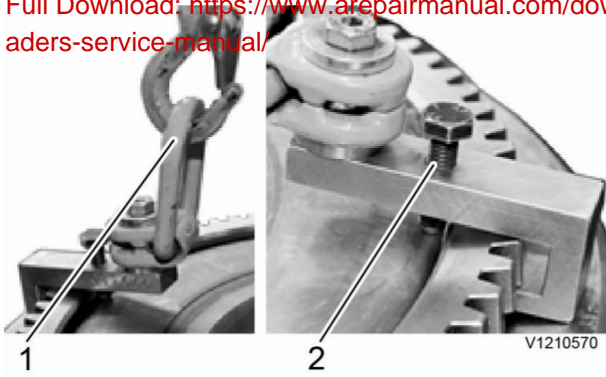


Figure 4

1. **Lifting equipment**
 Use lifting sling with sufficient lifting capacity, 100 kg (220 lb).
 Always use lifting hooks equipped with a self-locking hook.
 Use shackles with sufficient lifting capacity, 100 kg (220 lb).
2. **Bolts**
 Position the lifting tool under gear ring and tighten the bolts.
 Tighten until the lifting tool is unable to move independently of the gear ring.

Intended user

The lifting device is intended to be used by trained personnel, it is not intended to be used by unauthorized or underage personnel.

Conditions and preparatory measures

Lifting tool with damaged parts must not be used.
 Before lifting, check that the lifting tool does not have indications of cracks or deformations.

Maintenance

Maintenance must be performed by person with appropriate technical training or equivalent professional experience and in consultation with the manufacturer.

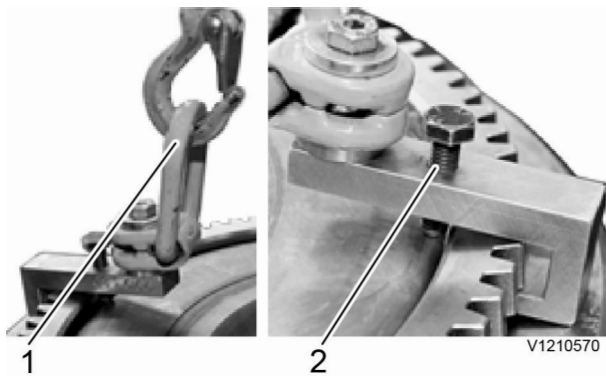


Figure 5

Detail/interval	Control/oversight
1 Shackles. Annual check.	Check that shackles does no have visible defects, cracks or deformations.
2 9993807 Lifting tool. Annual check.	Check that the lifting tool with threads and bolt does no have visible defects, cracks or deformations.

General

Sample manual. Download All 2541 pages at:
 A defective lifting tool must be replaced.
<https://www.aresairmanual.com/downloads/l120g-volvo-wheel-loaders-service-manual/>