Document Title: **Volvo standard tightening torques**	Function Group: **030**	Information Type: **Service Information**	Date: **4/6/2026**
Profile: **L110G Volvo**			

Volvo standard tightening torques

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G 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 ≈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	180	244	254	345

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

Document Title: **Engine, software specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **4/6/2026**
Profile: **L110G Volvo**			

Engine, software specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G 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: **4/6/2026**
Profile: **L110G Volvo**			

Valve mechanism, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G 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: **4/6/2026**
Profile: **L110G Volvo**			

Flywheel, tightening torques

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G 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°

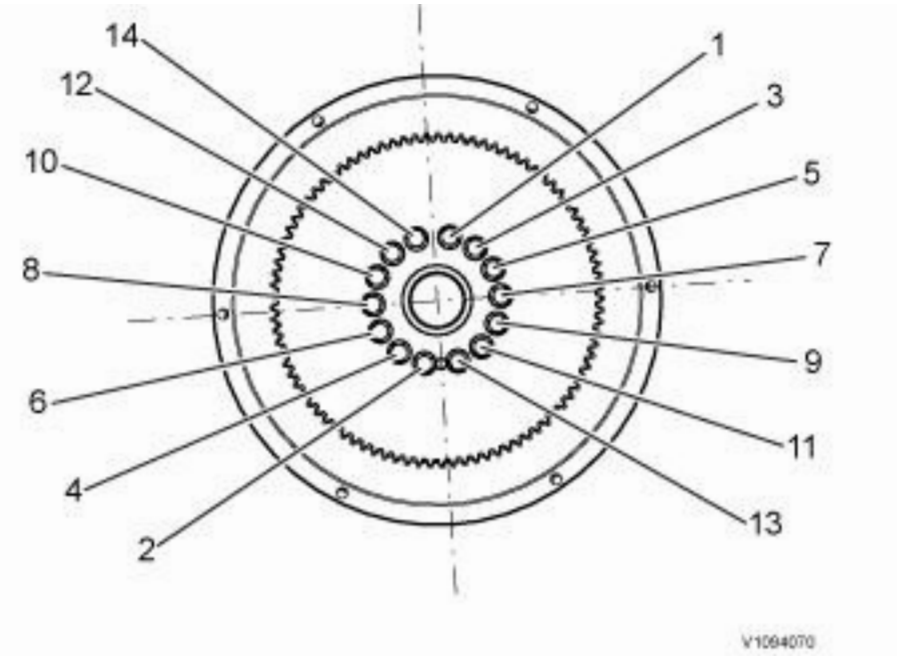


Figure 1

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

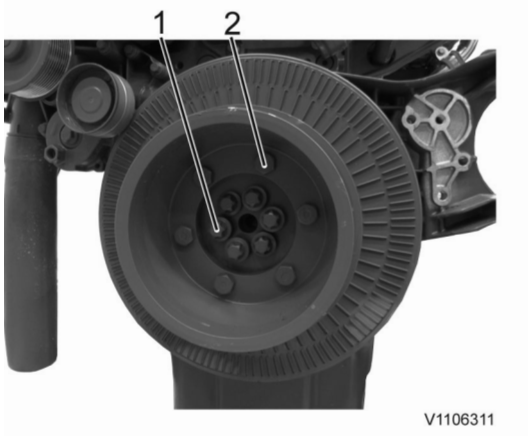


Figure 2

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)

Belt tensioner

Tightening torque	45±4.5 Nm (33±3.3 lbf ft)

VOLVO

Service Information

Document Title: **Oil sump, tightening torque**	Function Group: **030**	Information Type: **Service Information**	Date: **4/6/2026**
Profile: **L110G Volvo**			

Oil sump, tightening torque

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

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

Figure 1

Document Title: **Lubrication system, tightening torques**	Function Group: **030**	Information Type: **Service Information**	Date: **4/6/2026**
Profile: **L110G Volvo**			

Lubrication system, tightening torques

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

Part	Comment	Torque
Oil cooler on oil cooler housing	Tighten screws in order	22 Nm (16 lbf ft)

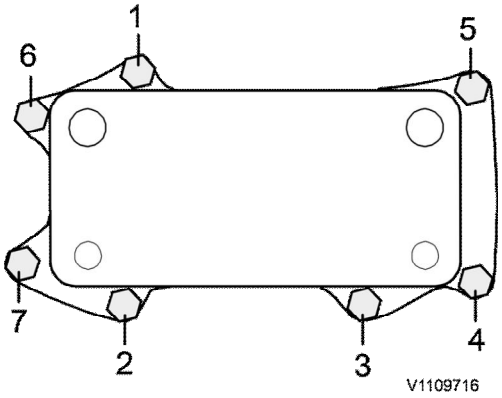


Figure 1
Oil cooler

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: **4/6/2026**
Profile: **L110G Volvo**			

Exhaust aftertreatment system, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

Spark plug, electrode gap	1.0 +0.05/-0,05 mm (0.039 +0.002/-0.002 in)

	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: **4/6/2026**
Profile: **L110G Volvo**			

Conversion tables

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

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 mm							

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 $mile^2$ = 259 ha = 2.59 km^2							

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 cm^3 = 231 in^3 = 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/cm^2 = 735.56 Dry (mmHg) = 0.96784 atm						

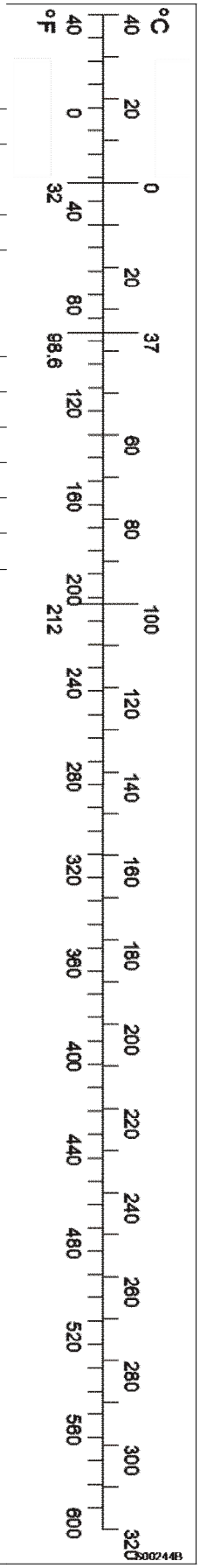
Unit explanations

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 ($Pa = N/m^2$)				
kPa	x4.0	$=in.H_2O$	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				
ºC =(ºF-32)/1.8			ºF =(ºC x1.8) +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: **4/6/2026**
Profile: **L110G Volvo**			

Fuel system, specifications

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Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G 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 system, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **4/6/2026**
Profile: **L110G Volvo**			

Lubrication system, specifications

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Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

Minimum oil pressure, recommendation

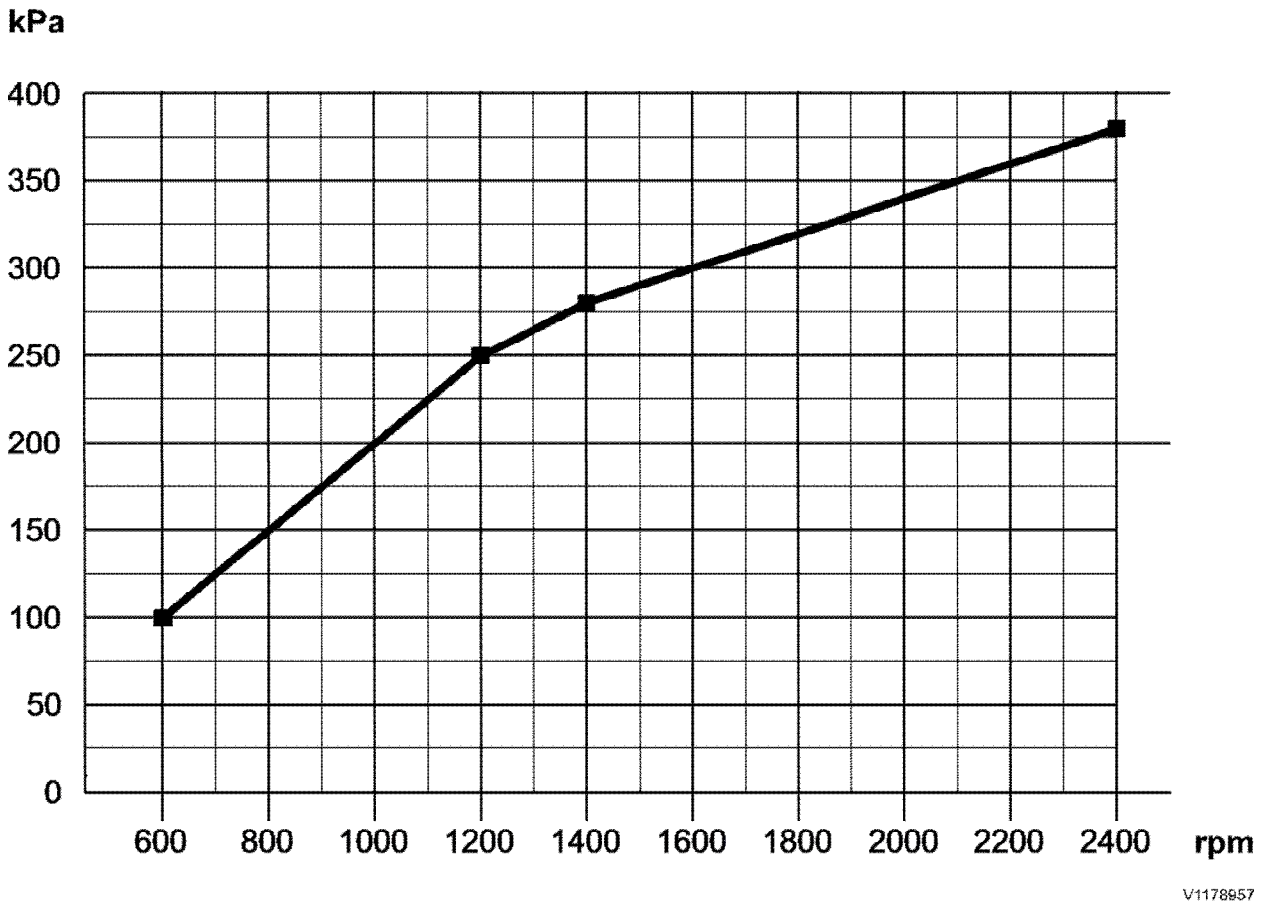

Figure 1
Minimum oil pressure, guide

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: **4/6/2026**
Profile: **L110G Volvo**			

Engine, tightening torques

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G 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 Vibration damper: step 2, angle-tightening Vibration damper: step 3, angle-tightening	30 ±3 Nm (22 ±2.2 lbf ft) 60° 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: **4/6/2026**
Profile: **L110G Volvo**			

Engine, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G 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)	1990–2090 rpm
HTE206B (22590)	1960–2070 rpm
HTE206 (22576)	2000–2100 rpm
L120G (2)	
HTL206 (22577)	2020–2110 rpm
HTE206B (22590)	2000–2100 rpm
HTE206 (22576)	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: **4/6/2026**
Profile: **Wheel Loaders (WLO)**			

Operation numbers for additional work

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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. Hhen 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:	Function Group:	Information Type:	Date:
E 1708, Checking point	**080**	**Service Information**	**4/6/2026**
Profile: **L110G Volvo**			

E 1708, Checking point

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Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

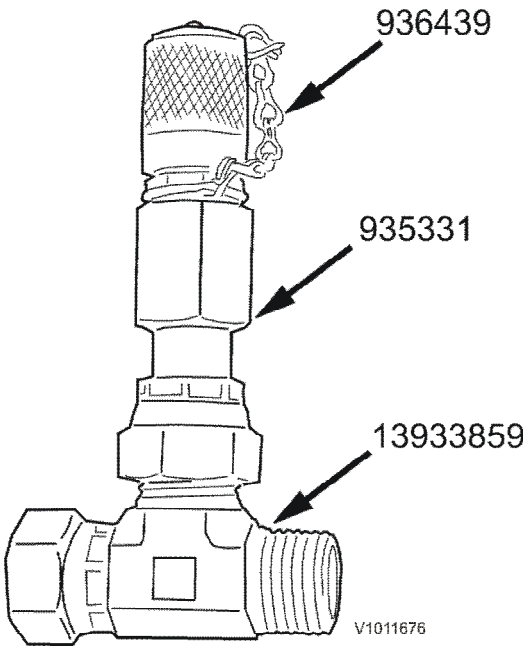

Figure 1

Document Title: **E1711**	Function Group: **080**	Information Type: **Service Information**	Date: **4/6/2026**
Profile: **L110G Volvo**			

E1711

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

E1711

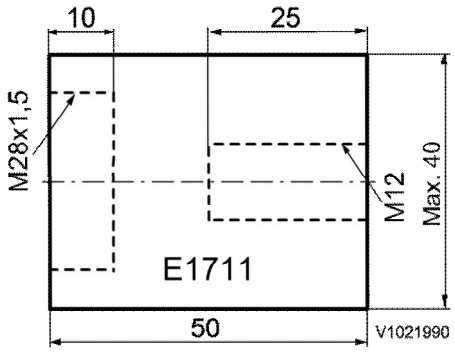

Figure 1
E1711

Document Title:	Function Group:	Information Type:	Date:
E-2000	**080**	**Service Information**	**4/6/2026**
Profile: **L110G Volvo**			

E-2000

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

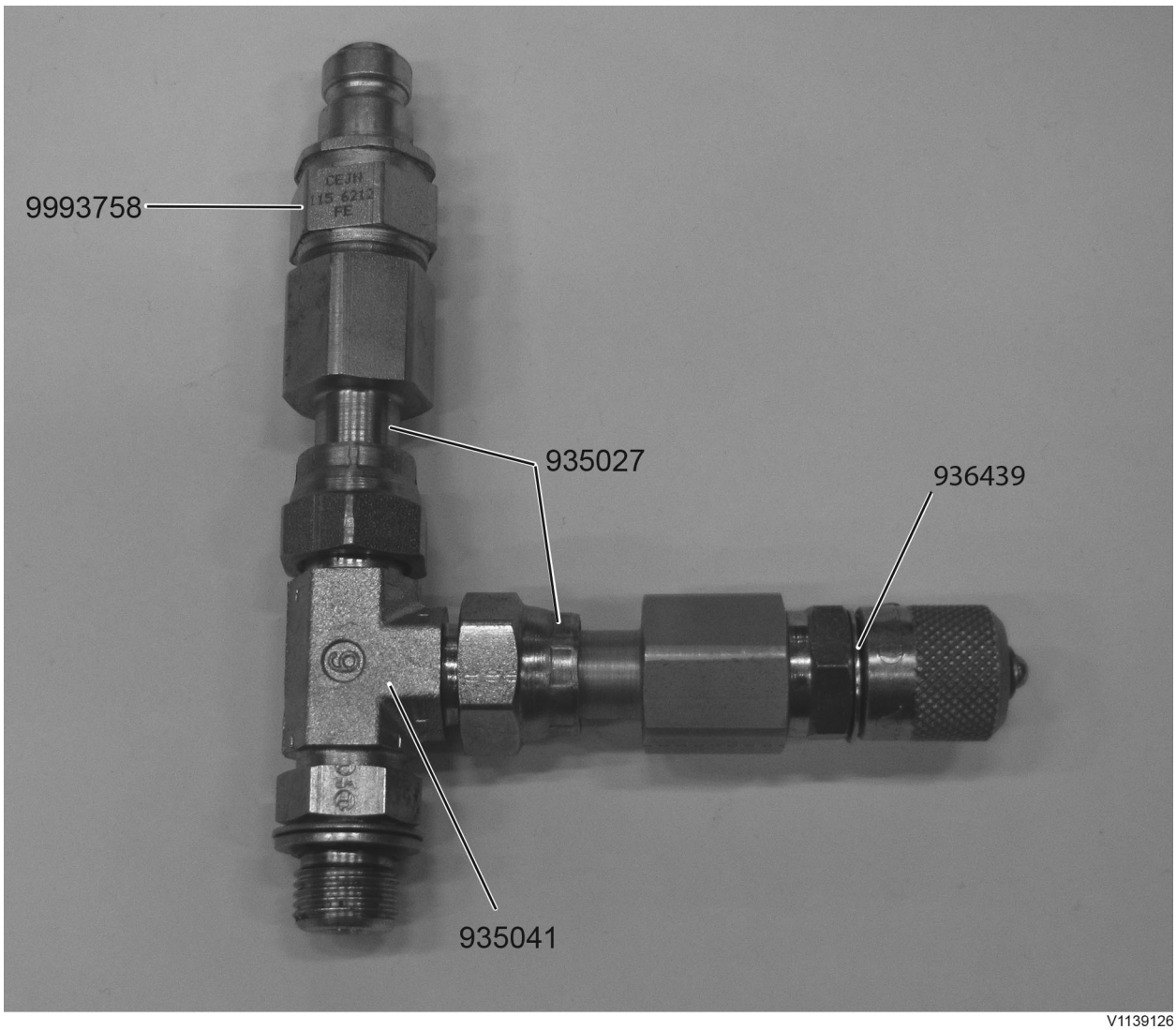

Figure 1

Document Title: **E-2001**	Function Group: **080**	Information Type: **Service Information**	Date: **4/6/2026**
Profile: **L110G Volvo**			

E-2001

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

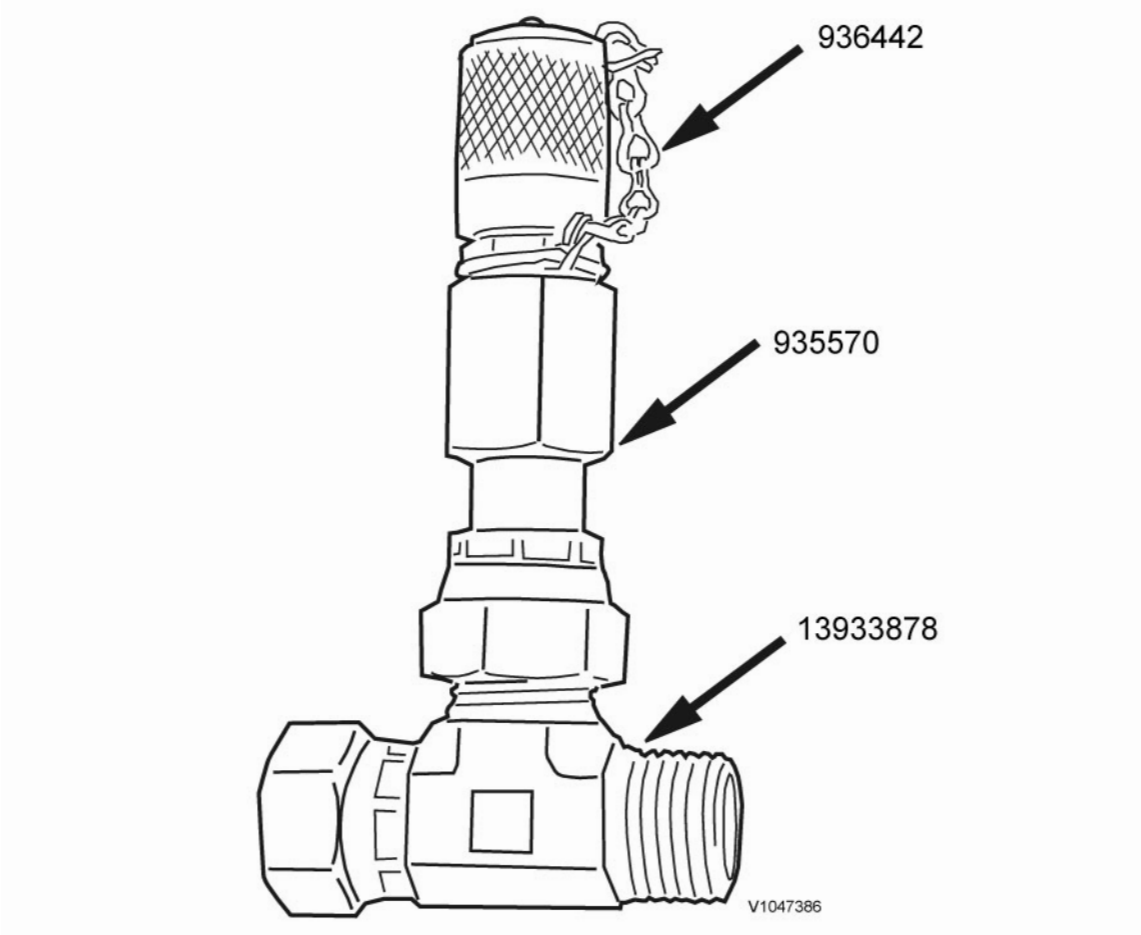

Figure 1

Document Title: **E-2010**	Function Group: **080**	Information Type: **Service Information**	Date: **4/6/2026**
Profile: **L110G Volvo**			

E-2010

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

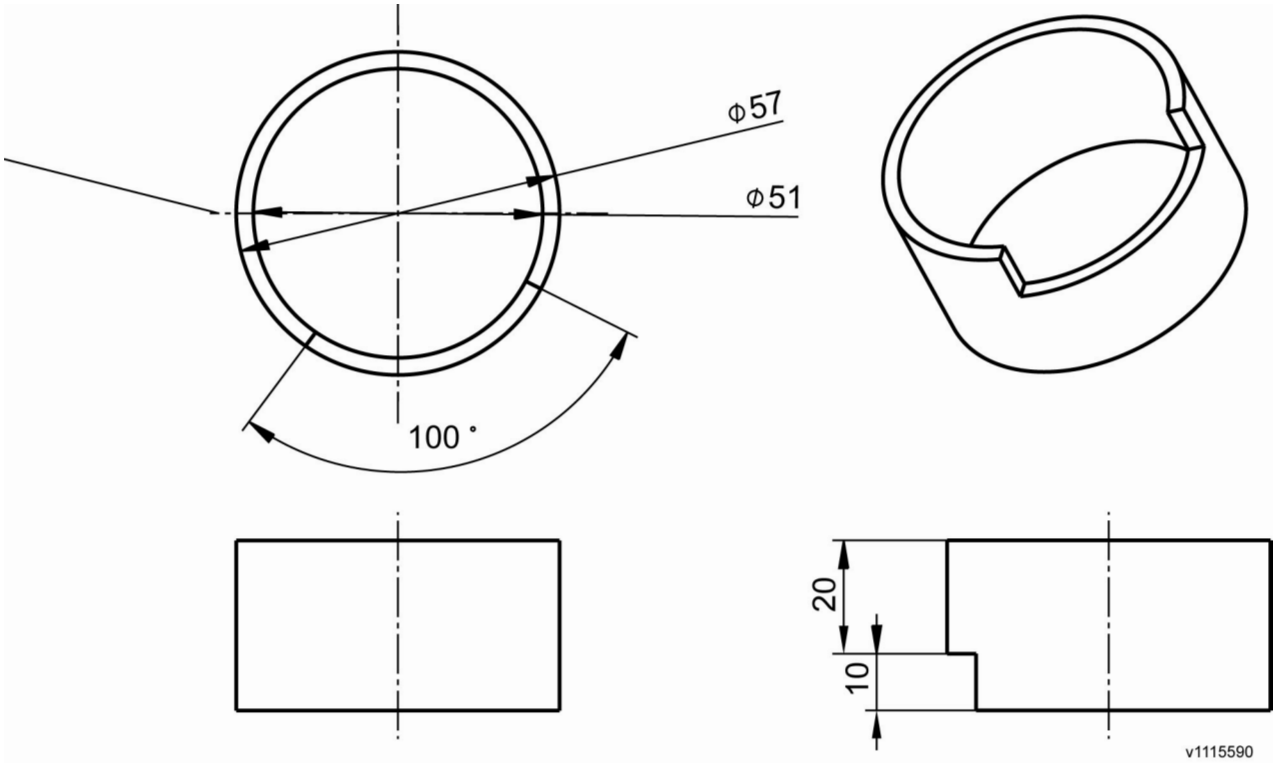

Figure 1

Document Title: **E-2015**	Function Group: **080**	Information Type: **Service Information**	Date: **4/6/2026**
Profile: **L110G Volvo**			

E-2015

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

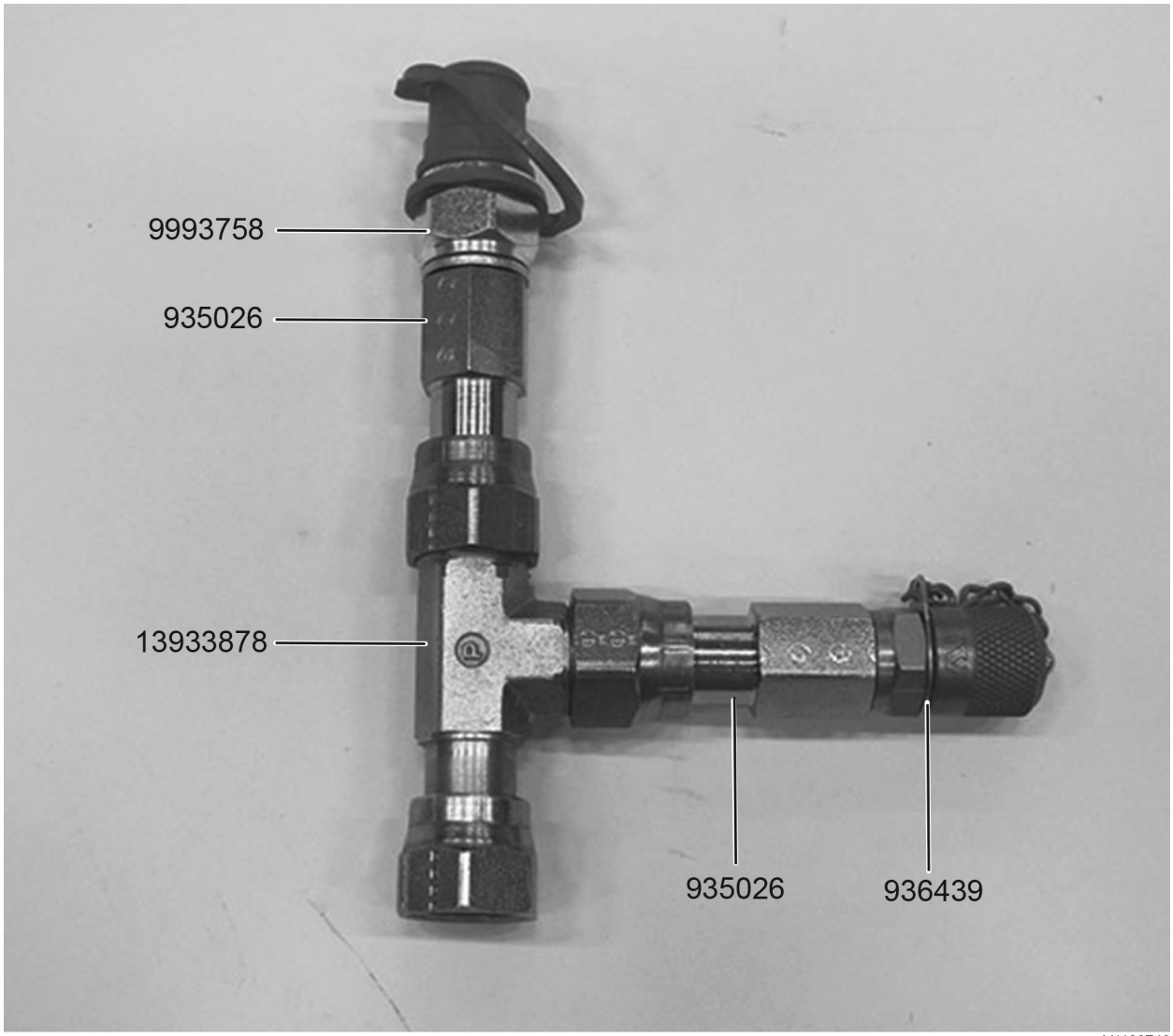

Figure 1

Document Title: **E-2031**	Function Group: **080**	Information Type: **Service Information**	Date: **4/6/2026**
Profile: **L110G Volvo**			

E-2031

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

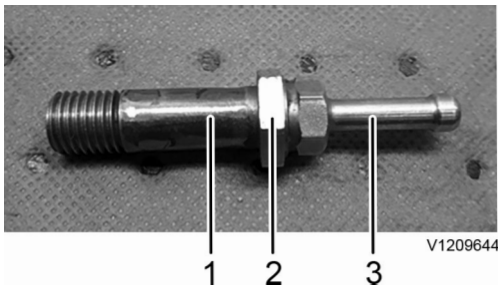

Figure 1

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: **4/6/2026**
Profile: **L110G Volvo**			

9993807 Lifting tool user instructions

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
L110G Volvo			

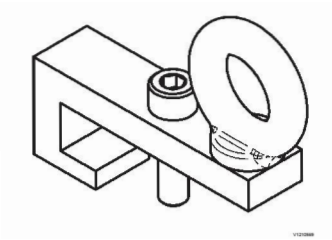

Figure 1
9993807 Lifting tool

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.

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.

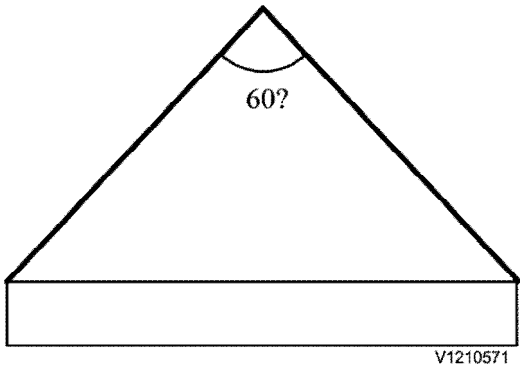

Figure 3
Max lift-angle
Maximum lift angles must not exceed 60°.

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

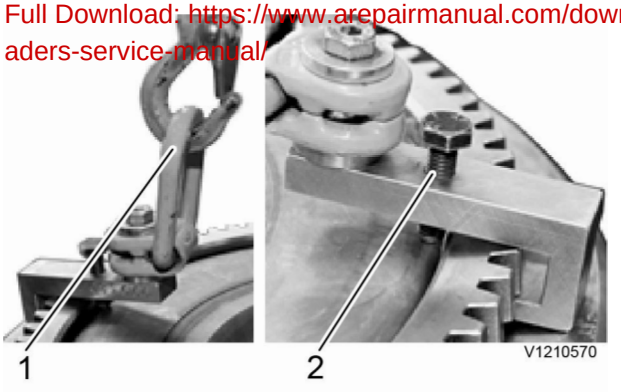

Figure 4

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.

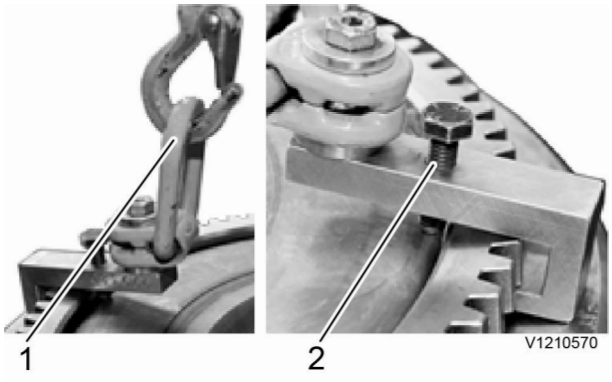

Figure 5

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

A defective lifting tool must be replaced.