

Document Title: Volvo standard tightening torques	Function Group: 030	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

Volvo standard tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H 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	387
3/4	270	365	384	521
7/8	350	474	500	674
1	440	594	624	844
1 1/8	540	730	768	1044
1 1/4	650	880	924	1254
1 3/8	770	1044	1094	1474
1 1/2	900	1224	1284	1744
1 3/4	1040	1414	1484	2014
2	1200	1634	1724	2324
2 1/4	1400	1894	2004	2724
2 3/4	1600	2164	2284	3114
3	1800	2444	2584	3504
3 1/2	2000	2724	2894	3904
4	2200	2994	3124	4204
4 1/2	2400	3264	3374	4514
5	2600	3534	3634	4844
5 1/2	2800	3804	3904	5194
6	3000	4074	4184	5564
6 1/2	3200	4344	4474	5954
7	3400	4614	4774	6364
7 1/2	3600	4884	5084	6794
8	3800	5154	5404	7244
8 1/2	4000	5424	5734	7714
9	4200	5694	6074	8204
9 1/2	4400	5964	6424	8714
10	4600	6234	6784	9244
10 1/2	4800	6504	7154	9794
11	5000	6774	7534	10364
11 1/2	5200	7044	7924	10954
12	5400	7314	8324	11564
12 1/2	5600	7584	8734	12194
13	5800	7854	9154	12844
13 1/2	6000	8124	9584	13514
14	6200	8394	10024	14204
14 1/2	6400	8664	10474	14914
15	6600	8934	10934	15644
15 1/2	6800	9204	11404	16394
16	7000	9474	11884	17164
16 1/2	7200	9744	12374	17954
17	7400	10014	12874	18764
17 1/2	7600	10284	13384	19594
18	7800	10554	13904	20444
18 1/2	8000	10824	14434	21314
19	8200	11094	14974	22204
19 1/2	8400	11364	15524	23114
20	8600	11634	16084	24044
20 1/2	8800	11904	16654	25004
21	9000	12174	17234	25994
21 1/2	9200	12444	17824	27004
22	9400	12714	18424	28034
22 1/2	9600	12984	19034	29094
23	9800	13254	19654	30174
23 1/2	10000	13524	20284	31274
24	10200	13794	20924	32394
24 1/2	10400	14064	21574	33534
25	10600	14334	22234	34694
25 1/2	10800	14604	22904	35874
26	11000	14874	23584	37074
26 1/2	11200	15144	24274	38294
27	11400	15414	24974	39534
27 1/2	11600	15684	25684	40794
28	11800	15954	26404	42074
28 1/2	12000	16224	27134	43374
29	12200	16494	27874	44694
29 1/2	12400	16764	28624	46034
30	12600	17034	29384	47394
30 1/2	12800	17304	30154	48774
31	13000	17574	30934	50174
31 1/2	13200	17844	31724	51594
32	13400	18114	32524	53034
32 1/2	13600	18384	33334	54494
33	13800	18654	34154	55974
33 1/2	14000	18924	34984	57474
34	14200	19194	35824	58994
34 1/2	14400	19464	36674	60534
35	14600	19734	37534	62094
35 1/2	14800	20004	38404	63674
36	15000	20274	39284	65274
36 1/2	15200	20544	40174	66894
37	15400	20814	41074	68534
37 1/2	15600	21084	41984	70194
38	15800	21354	42904	71874
38 1/2	16000	21624	43834	73574
39	16200	21894	44774	75294
39 1/2	16400	22164	45724	77034
40	16600	22434	46684	78794
40 1/2	16800	22704	47654	80574
41	17000	22974	48634	82374
41 1/2	17200	23244	49624	84194
42	17400	23514	50624	86034
42 1/2	17600	23784	51634	87894
43	17800	24054	52654	89774
43 1/2	18000	24324	53684	91674
44	18200	24594	54724	93594
44 1/2	18400	24864	55774	95534
45	18600	25134	56834	97494
45 1/2	18800	25404	57904	99474
46	19000	25674	58984	101474
46 1/2	19200	25944	60074	103494
47	19400	26214	61174	105534
47 1/2	19600	26484	62284	107594
48	19800	26754	63404	109674
48 1/2	20000	27024	64534	111774
49	20200	27294	65674	113894
49 1/2	20400	27564	66824	116034
50	20600	27834	67984	118194
50 1/2	20800	28104	69154	120374
51	21000	28374	70334	122574
51 1/2	21200	28644	71524	124794
52	21400	28914	72724	127034
52 1/2	21600	29184	73934	129294
53	21800	29454	75154	131574
53 1/2	22000	29724	76384	133874
54	22200	29994	77624	136194
54 1/2	22400	30264	78874	138534
55	22600	30534	80134	140894
55 1/2	22800	30804	81404	143274
56	23000	31074	82684	145674
56 1/2	23200	31344	83974	148094
57	23400	31614	85274	150534
57 1/2	23600	31884	86584	152994
58	23800	32154	87904	155474
58 1/2	24000	32424	89234	157974
59	24200	32694	90574	160494
59 1/2	24400	32964	91924	163034
60	24600	33234	93284	165594
60 1/2	24800	33504	94654	168174
61	25000	33774	96034	170774
61 1/2	25200	34044	97424	173394
62	25400	34314	98824	176034
62 1/2	25600	34584	100234	178694
63	25800	34854	101654	181374
63 1/2	26000	35124	103084	184074
64	26200	35394	104524	186794
64 1/2	26400	35664	105974	189534
65	26600	35934	107434	192294
65 1/2	26800	36204	108904	195074
66	27000	36474	110384	197874
66 1/2	27200	36744	111874	200694
67	27400	37014	113374	203534
67 1/2	27600	37284	114884	206394
68	27800	37554	116404	209274
68 1/2	28000	37824	117934	212174
69	28200	38094	119474	215094
69 1/2	28400	38364	121024	218034
70	28600	38634	122584	220994
70 1/2	28800	38904	124154	223974
71	29000	39174	125734	226974
71 1/2	29200	39444	127324	230004
72	29400	39714	128924	233054
72 1/2	29600	39984	130534	236124
73	29800	40254	132154	239214
73 1/2	30000	40524	133784	242324
74	30200	40794	135424	245454
74 1/2	30400	41064	137074	248604
75	30600	41334	138734	251774
75 1/2	30800	41604	140404	254964
76	31000	41874	142084	258174
76 1/2	31200	42144	143774	261404
77	31400	42414	145474	264654
77 1/2	31600	42684	147184	267924
78	31800	42954	148904	271214
78 1/2	32000	43224	150634	274524
79	32200	43494	152374	277854
79 1/2	32400	43764	154124	281204
80	32600	44034	155884	284574
80 1/2	32800	44304	157654	288064
81	33000	44574	159434	291574
81 1/2	33200	44844	161224	295104
82	33400	45114	163024	298654
82 1/2	33600	45384	164834	302224
83	33800	45654	166654	305814
83 1/2	34000	45924	168484	309424
84	34200	46194	170324	313054
84 1/2	34400	46464	172174	316704
85	34600	46734	174034	320374
85 1/2	34800	47004	175904	324064
86	35000	47274	177784	327774
86 1/2	35200	47544	179674	331504
87	35400	47814	181574	335254
87 1/2	35600	48084	183484	339024
88	35800	48354	185404	342814
88 1/2	36000	48624	187334	346624
89	36200	48894	189274	350454
89 1/2	36400	49164	191224	354304
90	36600	49434	193184	358174
90 1/2	36800	49704	195154	362064
91	37000	49974	197134	365974
91 1/2	37200	50244	199124	370004
92	37400	50514	201124	374054
92 1/2	37600	50784	203134	378124
93	37800	51054	205154	382214
93 1/2	38000	5132		

Product: L110H Volvo Wheel Loaders Service Manual

Full Download: <https://www.arepairmanual.com/downloads/l110h-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 5717 pages at:

<https://www.arepairmanual.com/downloads/l110h-volvo-wheel-loaders-service-manual/>

Document Title: Conversion tables	Function Group: 030	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

Conversion tables

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H 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 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

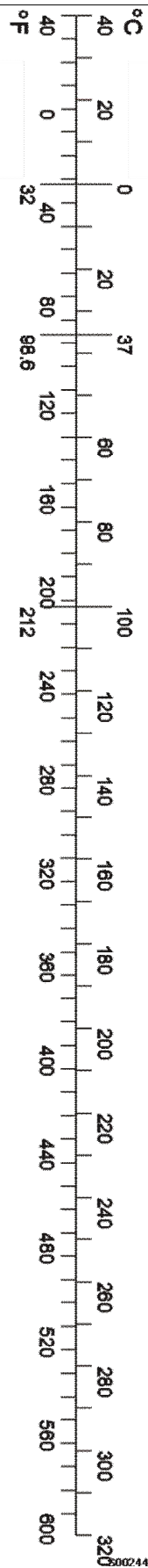
Unit explanations

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: Torque wrench extension	Function Group: 030	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

Torque wrench extension

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			

When an extension is used together with a torque wrench (e.g.88830381 Wrench), the torque applied to the screw increases since the lever arm is extended.

The following formula is used to calculate the correct torque wrench settings:

$$M1 = M2 \times (L1/L2)$$

M1 is the torque to be set on the torque wrench.

L1 is the normal length of the torque wrench.

M2 is the tightening torque according to specification.

L2 is the total length of the torque wrench and extension.

NOTE!

The extension and the torque wrench must be in a straight line for the calculation to be correct.

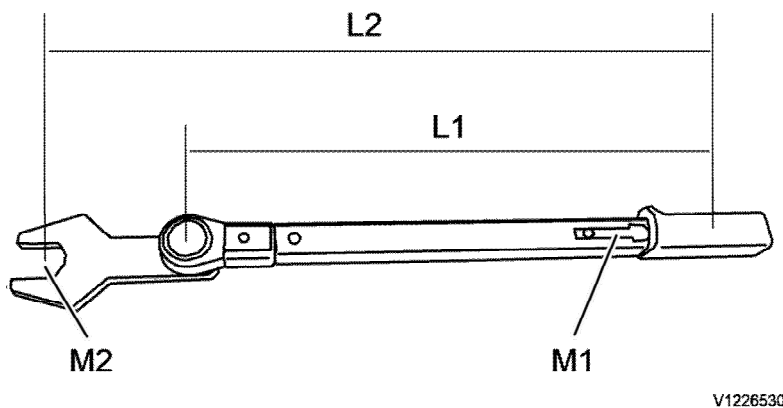


Figure 1

Calculation example

M1 is the torque to be set on the torque wrench.

M2 is the tightening torque according to specification, e.g. 100 Nm.

L1 is the measured length of the torque wrench, e.g. 45 cm.

L2 is the measured length of the extension and the torque wrench, e.g. 60 cm.

L1 = 45 cm

L2 = 60 cm

M2 = 100 Nm

$$M1 = 100 \text{ Nm} \times (45 \text{ cm}/60 \text{ cm}) = 75 \text{ Nm}$$

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. 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-2049	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E-2049

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Valid for option/configuration			
Model	Option no.	Option	Configuration
L110H Volvo	53224080	Engine	D8M US Tier 4 final
L110H Volvo	53224081	Engine	D8M EU Stage V
L110H Volvo	53224085	Engine	D8L Stage IIIA
L110H Volvo	55010155	Engine	D8L Stage IIIA
L110H Volvo	55010156	Engine	D8M EU Stage V

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo	Arvika	12301	12500
L110H Volvo	Arvika	16001	20000
L110H Volvo	Arvika	20001	28000
L110H Volvo	Pederneiras	75001	99999
L110H Volvo	Shippensburg	633301	640000

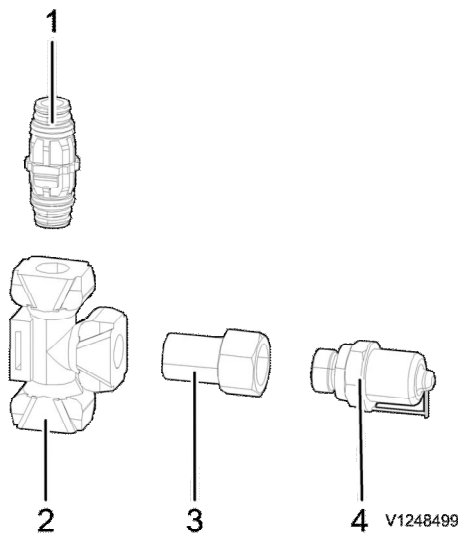


Figure 1

1. 991080
2. 991980
3. 991079
4. 15018967

Document Title: E 1708, Checking point	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E 1708, Checking point

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			

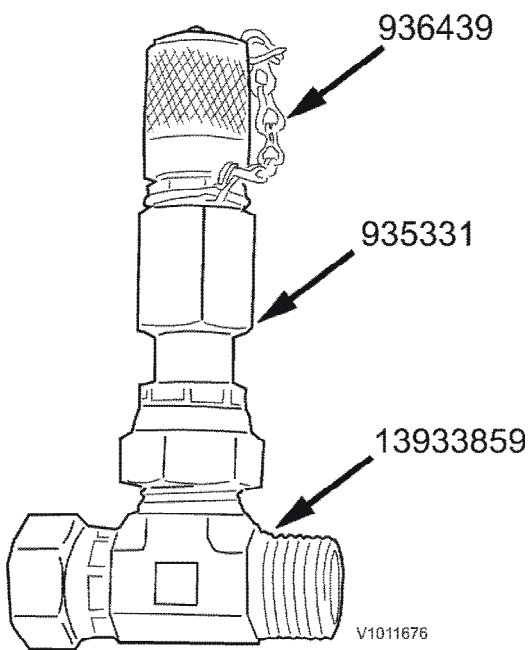


Figure 1

Document Title: E1711	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E1711

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			

E1711

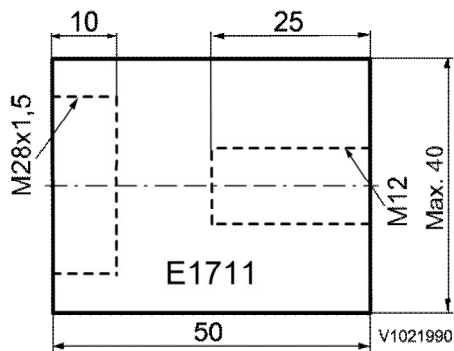


Figure 1
E1711

Document Title: E-2005	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E-2005

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			

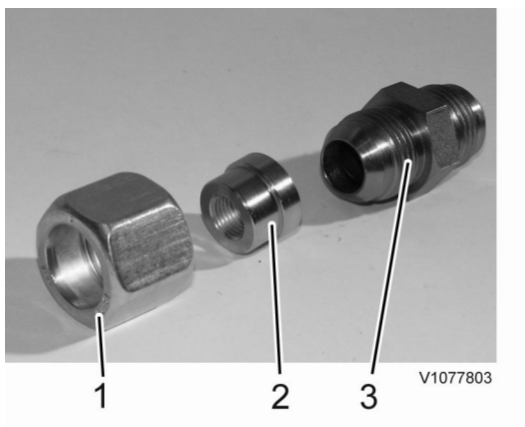


Figure 1

E-tool 2005

1. Coupling nut 931206
2. Test nipple 11054368 Thread R1/4"
3. Nipple 929315

Document Title: E-2010	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E-2010

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			

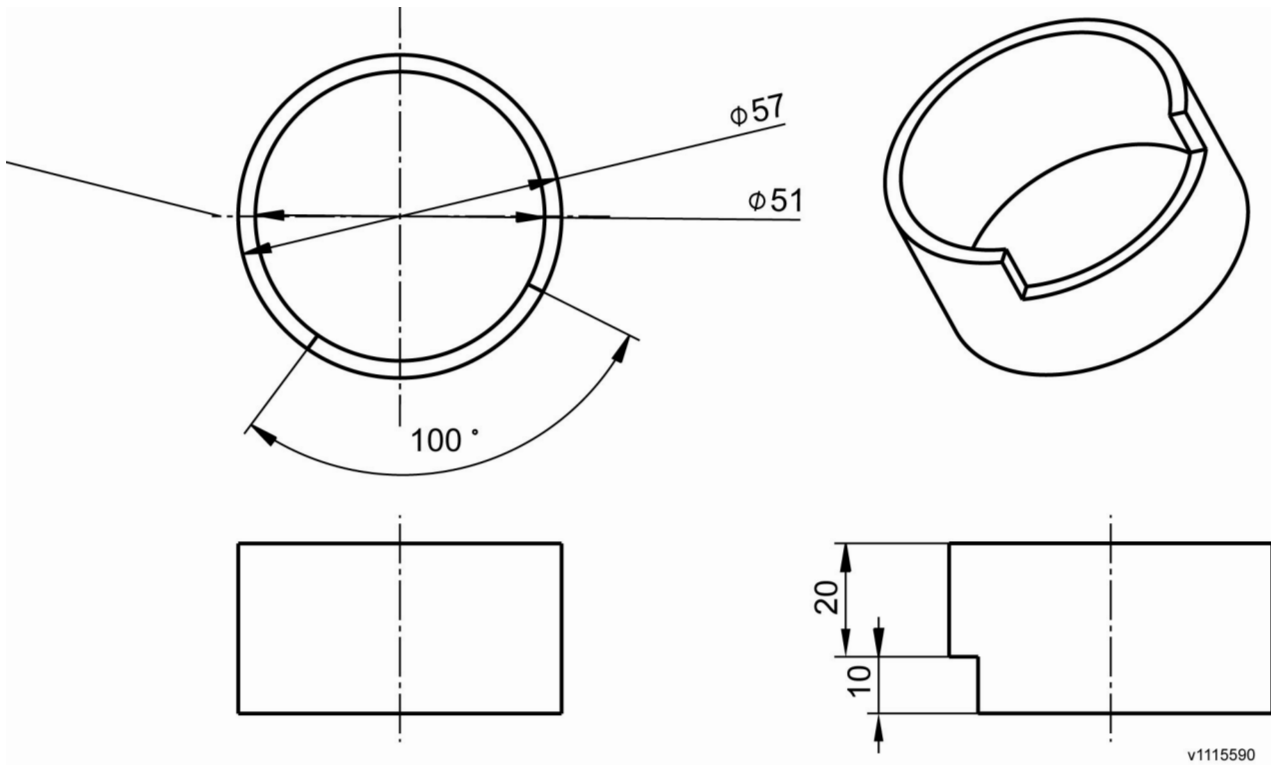


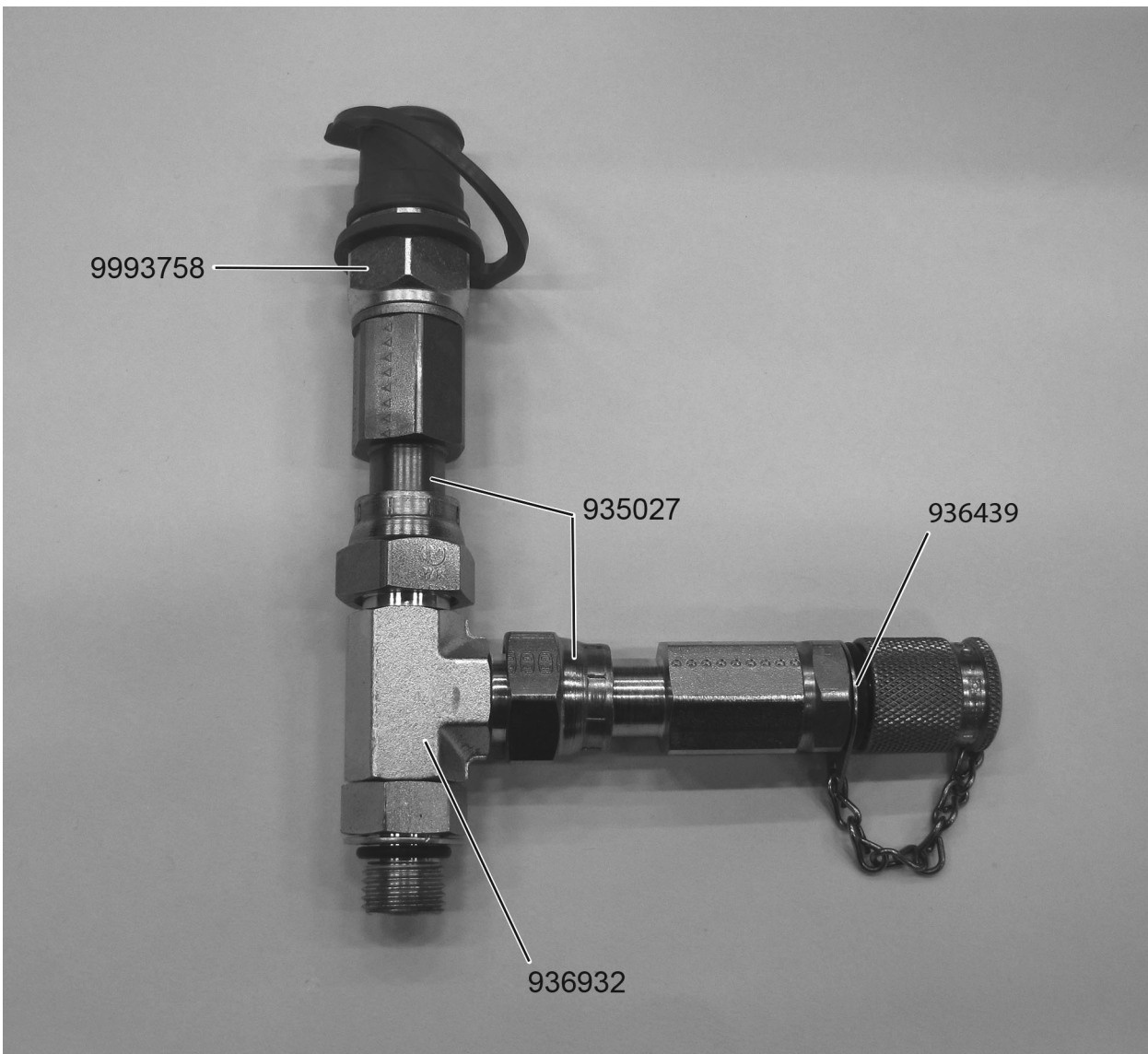
Figure 1

Document Title: E-2014	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E-2014

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			



V1138633

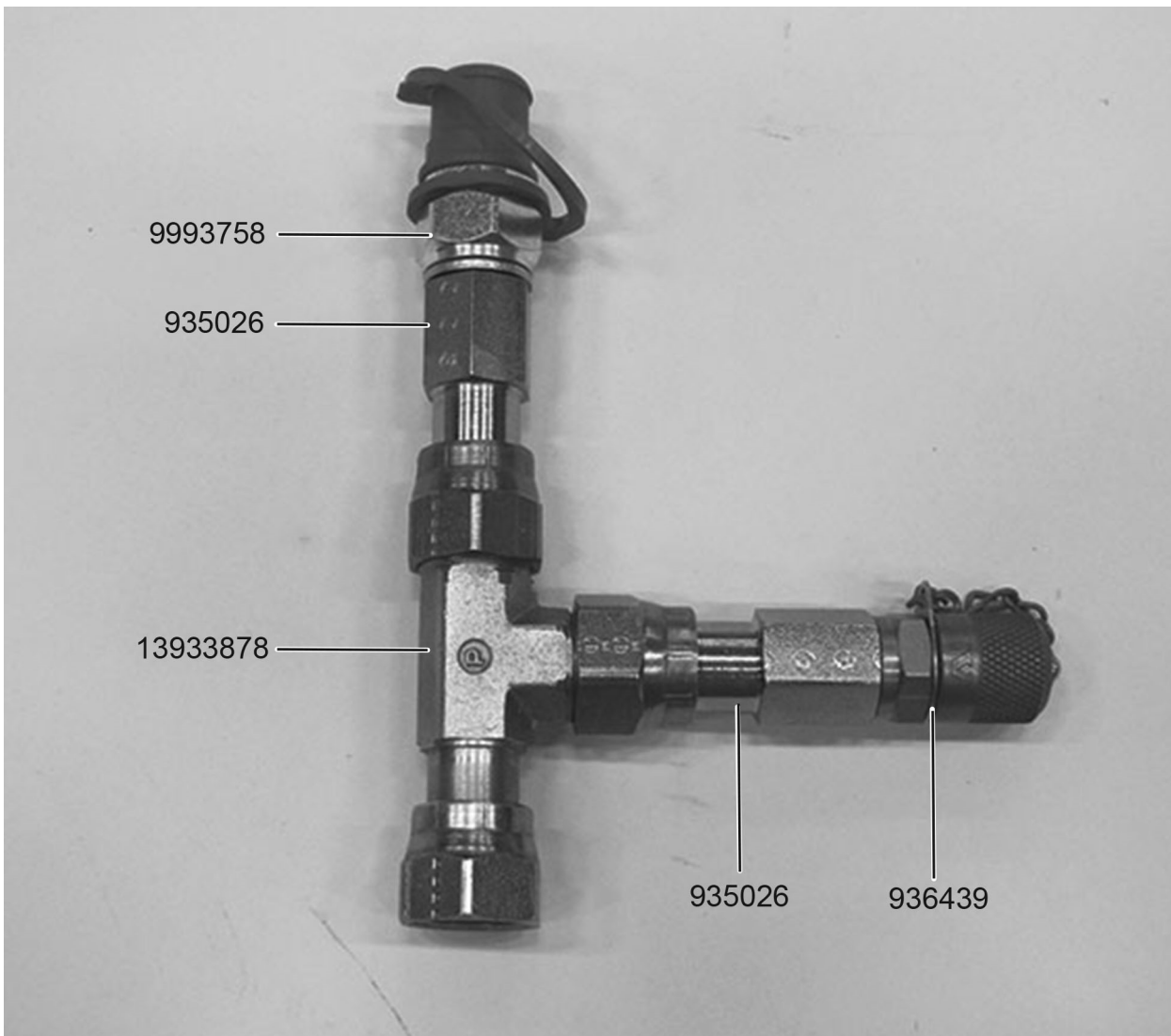
Figure 1

Document Title: E-2015	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E-2015

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			



V1138746

Figure 1

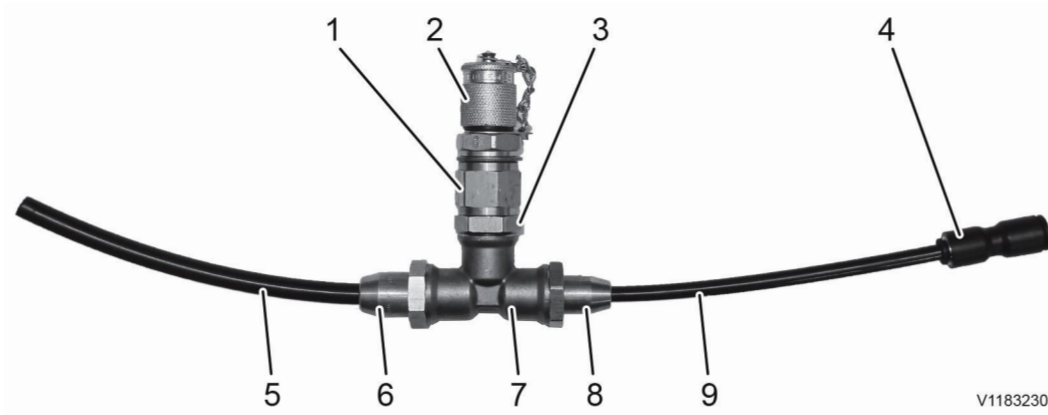
Document Title: E-2016	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E-2016

Showing Selected Profile

Valid for option/configuration			
Model	Option no.	Option	Configuration
L110H Volvo	53224080	Engine	D8M US Tier 4 final
L110H Volvo	53224081	Engine	D8M EU Stage V
L110H Volvo	53224085	Engine	D8L Stage IIIA
L110H Volvo	55010155	Engine	D8L Stage IIIA
L110H Volvo	55010156	Engine	D8M EU Stage V

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo	Arvika	12301	12500
L110H Volvo	Arvika	16001	20000
L110H Volvo	Arvika	20001	28000
L110H Volvo	Pederneiras	75001	99999
L110H Volvo	Shippensburg	633301	640000



V1183230

Figure 1

1. 88830130 Nipple
2. 15018967 Testing nipple
3. 11196161 Nipple
4. 17413665 Connector Ø 6/8 mm
5. 980832 Tube Ø 8 mm
6. 977789 Fitting Ø 8 mm
7. 15023142 T-coupling
8. 979282 Fitting Ø 6 mm
9. 980831 Tube Ø 6mm

Document Title: E-2019	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E-2019

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			

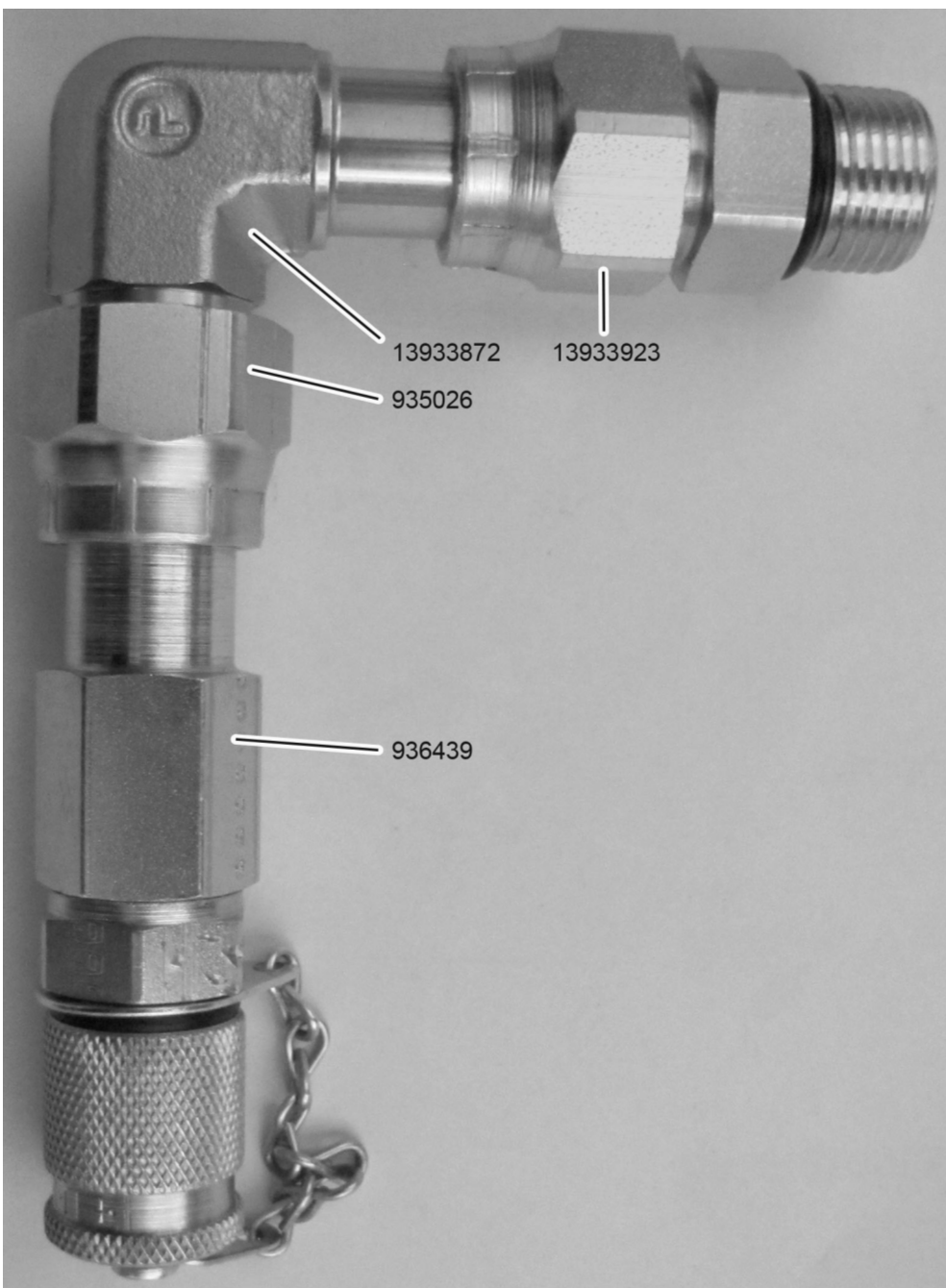


Figure 1

Document Title: E-2036	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E-2036

Showing Selected Profile

Valid for option/configuration			
Model	Option no.	Option	Configuration
L110H Volvo	53224080	Engine	D8M US Tier 4 final
L110H Volvo	53224081	Engine	D8M EU Stage V
L110H Volvo	55010156	Engine	D8M EU Stage V

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo	Arvika	12301	12500
L110H Volvo	Arvika	16001	20000
L110H Volvo	Shippensburg	633301	640000

Socket

Dimensions on the drawing are given in mm.

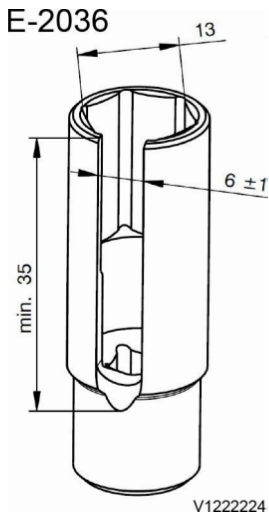


Figure 1

E-2036

Socket, 13 mm

Document Title: E-2030	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

E-2030

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			

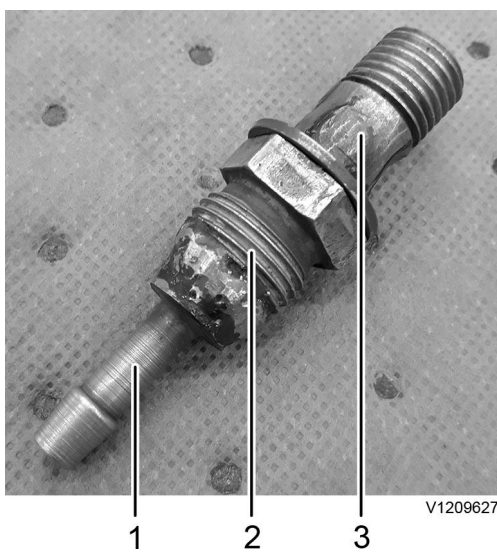


Figure 1

1. Hose nipple, diameter of approx. 8 mm
2. 21023622
3. Holes welded shut

Document Title: 9993807 Lifting tool user instructions	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

9993807 Lifting tool user instructions

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			

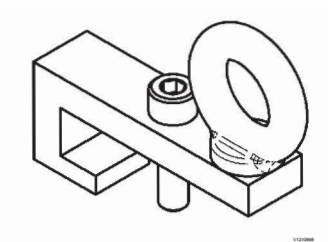


Figure 1

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

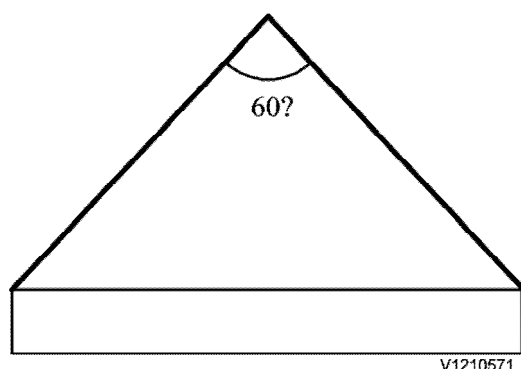
The lifting tools may only be used for the intended purpose. All other use is forbidden.

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.

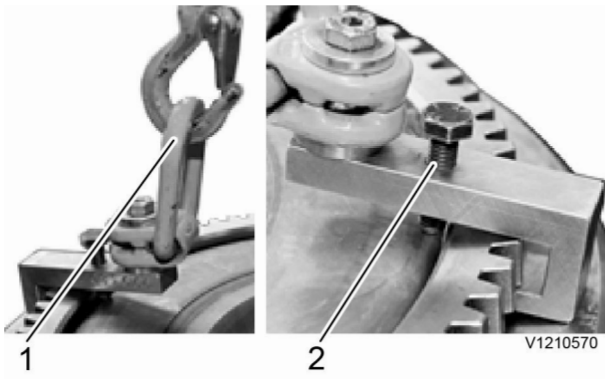


Figure 4

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.

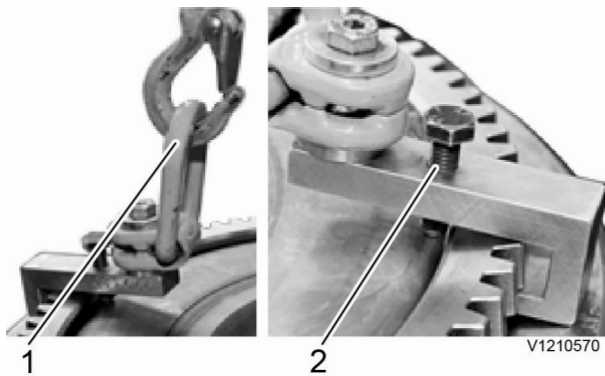


Figure 5

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

A defective lifting tool must be replaced.

Workplace

Protective shoes must be used.

The workplace should be kept free from equipment that can cause slipping or tripping risks.

The lifting tool is intended to be used in a workshop environment, outdoor usage is forbidden.

Continuous supervision

The lifting tool must be subjected to continuous supervision before use.

- Check for cracks.
- Check if the lifting tool is bent or deformed.
- Check that threaded screws and bolts are intact and do not have indications of breakage or deformation.

Document Title: 11668007 Lifting tool user instructions	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

11668007 Lifting tool user instructions

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			



V1210648

Figure 1
11668007 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.

Manufacturer

Company: BM Lindahl AB

Address: Älmedal 6

Postal address: 364 33 Åseda, 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.

Intended usage

11668007 Lifting tool consists of stand, lifting jack, extensions and locking pins.

Intended users are appointed and trained personnel, the lifting tool is not intended to be used by unauthorized or underage personnel.

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

The lifting tool is only intended for lifting Volvo Wheel Loaders and Volvo Articulated Haulers. Maximum load: 15 000 kg (33 070 lb).

Technical data

Type designation: lifting tool

Maximum load: 15 000 kg (33 070 lb), with two 11668007 lifting tools: 30 000 kg (66 140 lbs)

Mass: 78 kg (172 lb)

Test factor for static testing: For lifting tools and manually operated machines: 1.5. For other machines: 1.25

Height: 500–800 mm (19.7–31.5 in), with extensions: 600–900 mm (23.6–35.4 in)

Safety information

Limits of use

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

For Volvo Wheel Loaders, the lifting tool is only intended to lift the rear axle.



V1071600

Always secured loads with safety pins. To stay under raised load without locking pins, is associated with life danger.



V1071600

To prevent breakage and sliding, the lifting tool must always be used with a vertical load.

To prevent oblique loads, always use two 11668007 lifting tools.

Handling

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

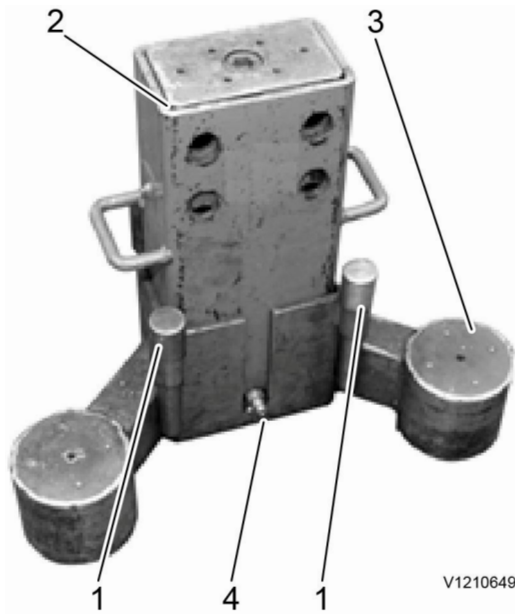


Figure 2

Pre use check

1. **Safety pins**
Make sure that safety pins are supplied along with the lifting tool.
Check that the safety pins are intact and do not have indications of breakage or deformation.
2. **Inner and outer lifting beam**
Check that the beam with pin holes is intact and do not have indications of breakage or deformation.
3. **Support legs**
The lifting tool has three support legs.
Check that the stand is intact and does not have indications of breakage or deformation.
4. **Connection nipple**
Connection nipple for pneumatic pump.

Pneumatic pump

Check that pneumatic pump with hose kit and couplings does not have indications of breakage or deformation. Always replace defective units.

Intended user

The lifting device is intended to be use 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.



V1071600

Make sure that there are no people in the vicinity who may be at risk when operating this lifting tool.

Lifting



V1071600

Never stay under raised load with the safety pins disconnected.

1. **Steering linkage lock**
Lock steering linkage with steering linkage lock.
If an articulated hauler is being lifted, place body support.
Connect stops.
2. **Assemble**
Place the lifting jack into the stand.
Make sure the nipple fits in the groove.
3. **Place the lifting tool**

Place the lifting tool under wheel axle lifting point.

If needed, connect extensions.

Connect pneumatic pump to the respective nipple on the lifting tools.

To ensure a parallel lift, lower the lifting tools to their lower end point.

Start the pneumatic pump (pumps) and lift to the desired level.

4. **Safety pins**

Connect all safety pins. Make sure that all safety pins are fully inserted.

Lower until the load rests on the safety pins.



Figure 3

Lowering

1. **Steering linkage lock**

Remove steering linkage lock.

Remove stops.

2. **Remove safety pins**

Lift the load with the lifting tools to release the safety pins.

Remove all safety pins and place the safety pins at their designed holders on the lifting tools.

3. **Lower the load**

Lower the load.

Lower the lifting tools to their lower end point.

Make sure that the lifting tools are lowered parallel to avoid uneven weight distribution.

4. **Remove pump and lifting tool**

Disconnect the pneumatic pump (pumps) from the nipples on the lifting tools.

Remove the lifting tool and place it at the designated location.

Maintenance

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

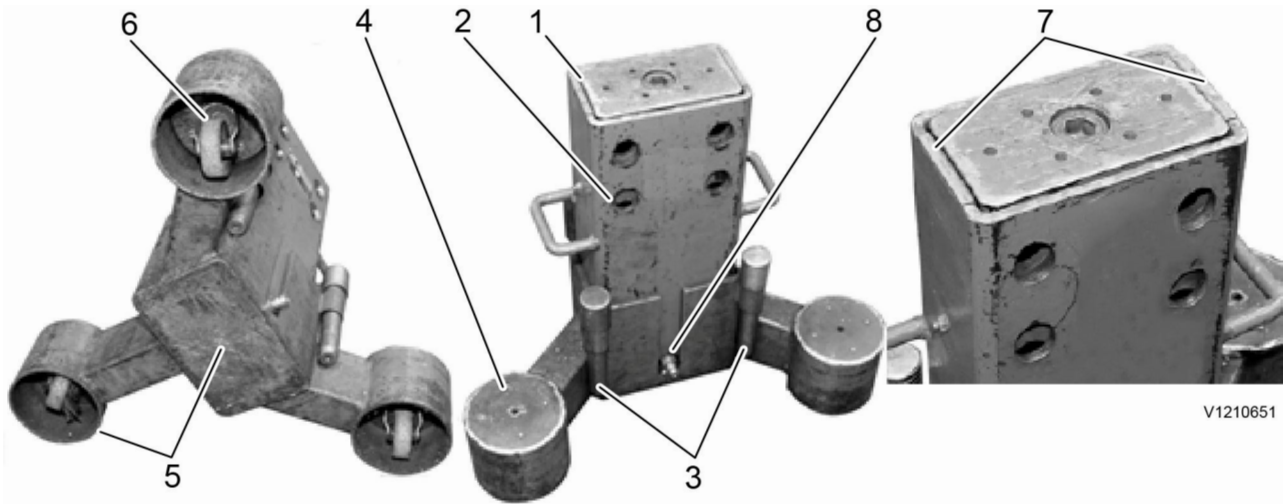


Figure 4

Detail/interval	Control/oversight
1. Inner and outer beam Before use.	Check that beams are intact and does not have indications of breakage or deformation.
2. Pin holes, inner and outer beam Before use.	Check that all holes in beams are intact and does not have indications of breakage or deformation.
3. Pins Before use.	Check that all pins are intact and does not have indications of breakage or deformation. Before lifting, make sure that no pins are missing.
4. Support legs Before use.	Check that the support legs are intact and does not have indications of breakage or deformation.
5. Supporting surfaces Monthly check.	Check that all supporting areas are intact and does not have indications of breakage or deformation.
6. Castor As needed.	Replaced as needed.
7. Friction plate Annual check or as needed.	Lift the inner beam to its upper end point. Grease the friction plates and lower the beam to its lower end point to disperse the grease.
8. Quick coupling Before use.	Check that the quick coupling is clean. Clean dirty quick coupling with cloth. Protect quick coupling with plastic cover.

General

A defective lifting tool must be replaced.

Workplace

Protective shoes must be used.

The workplace should be kept free from equipment that can cause slipping or tripping risks.

The lifting tool is intended to be used in a workshop environment, outdoor usage is forbidden.

The lifting tool is intended to be used on a level and stable surface.

Leaked or spilled hydraulic oil should be taken care of immediately with an absorbent to prevent slipping. The supplier/ manufacturers product sheet regarding safe handling of hydraulic oil must be followed.

Continuous supervision

The lifting tool must be subjected to continuous supervision before use.

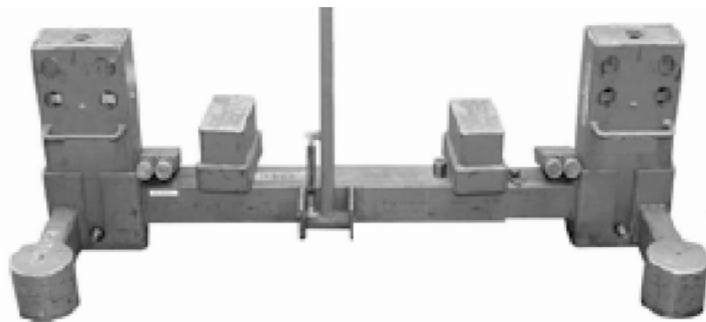
- Check for cracks.
- Check if the lifting tool is bent or deformed.
- Make sure that quick couplings are clean.

Document Title: 11668008 Lifting tool user instructions	Function Group: 080	Information Type: Service Information	Date: 4/6/2026
Profile: L110H Volvo			

11668008 Lifting tool user instructions

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L110H Volvo			



V1210596

Figure 1

11668008 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 <https://www.arepairmanual.com/downloads/l110h-volvo-wheel-loaders-service-manual/>