

Document Title: <b>Volvo standard tightening torques</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## Volvo standard tightening torques

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

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

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

All standard torques for bolts are without surface treatment.

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

### Standard tightening torque charts

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

Bolt size Inch SAE Coarse Threads	Tensile strength 5		Tensile strength 8	
	(lbf ft)	(Nm)	(lbf ft)	(Nm)
1/4	10	13,6	14	19
5/16	21	28,5	29	39,3
3/8	37	50,2	52	70
7/16	59	80	84	114
1/2	90	122	128	174
9/16	130	176	184	250
5/8	200	271	284	388
3/4	270	365	384	520
7/8	340	460	484	655
1	410	550	584	795
1 1/8	490	660	704	945
1 1/4	570	770	824	1105
1 3/8	650	880	954	1295
1 1/2	730	990	1084	1475
1 5/8	810	1100	1214	1675
1 3/4	890	1210	1344	1885
1 7/8	970	1320	1474	2095
2	1050	1430	1604	2305
2 1/8	1130	1540	1734	2515
2 1/4	1210	1650	1864	2725
2 3/8	1290	1760	1994	2935
2 1/2	1370	1870	2124	3145
2 5/8	1450	1980	2254	3355
2 3/4	1530	2090	2384	3565
2 7/8	1610	2200	2514	3775
3	1690	2310	2644	3985
3 1/8	1770	2420	2774	4195
3 1/4	1850	2530	2904	4405
3 3/8	1930	2640	3034	4615
3 1/2	2010	2750	3164	4825
3 5/8	2090	2860	3294	5035
3 3/4	2170	2970	3424	5245
3 7/8	2250	3080	3554	5455
4	2330	3190	3684	5665
4 1/8	2410	3300	3814	5875
4 1/4	2490	3410	3944	6085
4 3/8	2570	3520	4074	6295
4 1/2	2650	3630	4204	6505
4 5/8	2730	3740	4334	6715
4 3/4	2810	3850	4464	6925
4 7/8	2890	3960	4594	7135
5	2970	4070	4724	7345
5 1/8	3050	4180	4854	7555
5 1/4	3130	4290	4984	7765
5 3/8	3210	4400	5114	7975
5 1/2	3290	4510	5244	8185
5 5/8	3370	4620	5374	8395
5 3/4	3450	4730	5504	8605
5 7/8	3530	4840	5634	8815
6	3610	4950	5764	9025
6 1/8	3690	5060	5894	9235
6 1/4	3770	5170	6024	9445
6 3/8	3850	5280	6154	9655
6 1/2	3930	5390	6284	9865
6 5/8	4010	5500	6414	10075
6 3/4	4090	5610	6544	10285
6 7/8	4170	5720	6674	10495
7	4250	5830	6804	10705
7 1/8	4330	5940	6934	10915
7 1/4	4410	6050	7064	11125
7 3/8	4490	6160	7194	11335
7 1/2	4570	6270	7324	11545
7 5/8	4650	6380	7454	11755
7 3/4	4730	6490	7584	11965
7 7/8	4810	6600	7714	12175
8	4890	6710	7844	12385
8 1/8	4970	6820	7974	12595
8 1/4	5050	6930	8104	12805
8 3/8	5130	7040	8234	13015
8 1/2	5210	7150	8364	13225
8 5/8	5290	7260	8494	13435
8 3/4	5370	7370	8624	13645
8 7/8	5450	7480	8754	13855
9	5530	7590	8884	14065
9 1/8	5610	7700	9014	14275
9 1/4	5690	7810	9144	14485
9 3/8	5770	7920	9274	14695
9 1/2	5850	8030	9404	14905
9 5/8	5930	8140	9534	15115
9 3/4	6010	8250	9664	15325
9 7/8	6090	8360	9794	15535
10	6170	8470	9924	15745
10 1/8	6250	8580	10054	15955
10 1/4	6330	8690	10184	16165
10 3/8	6410	8800	10314	16375
10 1/2	6490	8910	10444	16585
10 5/8	6570	9020	10574	16795
10 3/4	6650	9130	10704	17005
10 7/8	6730	9240	10834	17215
11	6810	9350	10964	17425
11 1/8	6890	9460	11094	17635
11 1/4	6970	9570	11224	17845
11 3/8	7050	9680	11354	18055
11 1/2	7130	9790	11484	18265
11 5/8	7210	9900	11614	18475
11 3/4	7290	10010	11744	18685
11 7/8	7370	10120	11874	18895
12	7450	10230	12004	19105
12 1/8	7530	10340	12134	19315
12 1/4	7610	10450	12264	19525
12 3/8	7690	10560	12394	19735
12 1/2	7770	10670	12524	19945
12 5/8	7850	10780	12654	20155
12 3/4	7930	10890	12784	20365
12 7/8	8010	11000	12914	20575
13	8090	11110	13044	20785
13 1/8	8170	11220	13174	20995
13 1/4	8250	11330	13304	21205
13 3/8	8330	11440	13434	21415
13 1/2	8410	11550	13564	21625
13 5/8	8490	11660	13694	21835
13 3/4	8570	11770	13824	22045
13 7/8	8650	11880	13954	22255
14	8730	11990	14084	22465
14 1/8	8810	12100	14214	22675
14 1/4	8890	12210	14344	22885
14 3/8	8970	12320	14474	23095
14 1/2	9050	12430	14604	23305
14 5/8	9130	12540	14734	23515
14 3/4	9210	12650	14864	23725
14 7/8	9290	12760	14994	23935
15	9370	12870	15124	24145
15 1/8	9450	12980	15254	24355
15 1/4	9530	13090	15384	24565
15 3/8	9610	13200	15514	24775
15 1/2	9690	13310	15644	24985
15 5/8	9770	13420	15774	25195
15 3/4	9850	13530	15904	25405
15 7/8	9930	13640	16034	25615
16	10010	13750	16164	25825
16 1/8	10090	13860	16294	26035
16 1/4	10170	13970	16424	26245
16 3/8	10250	14080	16554	26455
16 1/2	10330	14190	16684	26665
16 5/8	10410	14300	16814	26875
16 3/4	10490	14410	16944	27085
16 7/8	10570	14520	17074	27295
17	10650	14630	17204	27505
17 1/8	10730	14740	17334	27715
17 1/4	10810	14850	17464	27925
17 3/8	10890	14960	17594	28135
17 1/2	10970	15070	17724	28345
17 5/8	11050	15180	17854	28555
17 3/4	11130	15290	17984	28765
17 7/8	11210	15400	18114	28975
18	11290	15510	18244	29185
18 1/8	11370	15620	18374	29395
18 1/4	11450	15730	18504	29605
18 3/8	11530	15840	18634	29815
18 1/2	11610	15950	18764	30025
18 5/8	11690	16060	18894	30235
18 3/4	11770	16170	19024	30445
18 7/8	11850	16280	19154	30655
19	11930	16390	19284	30865
19 1/8	12010	16500	19414	31075
19 1/4	12090	16610	19544	31285
19 3/8	12170	16720	19674	31495
19 1/2	12250	16830	19804	31705
19 5/8	12330	16940	19934	31915
19 3/4	12410	17050	20064	32125
19 7/8	12490	17160	20194	32335
20	12570	17270	20324	32545
20 1/8	12650	17380	20454	32755
20 1/4	12730	17490	20584	32965
20 3/8	12810	17600	20714	33175
20 1/2	12890	17710	20844	33385
20 5/8	12970	17820	20974	33595
20 3/4	13050	17930	21104	33805
20 7/8	13130	18040	21234	34015
21	13210	18150	21364	34225
21 1/8	13290	18260	21494	34435
21 1/4	13370	18370	21624	34645
21 3/8	13450	18480	21754	34855
21 1/2	13530	18590	21884	35065
21 5/8	13610	18700	22014	35275
21 3/4	13690	18810	22144	35485
21 7/8	13770	18920	22274	35695
22	13850	19030	22404	35905
22 1/8	13930	19140	22534	36115
22 1/4	14010	19250	22664	36325
22 3/8	14090	19360	22794	36535
22 1/2	14170	19470	22924	36745
22 5/8	14250	19580	23054	36955
22 3/4	14330	19690	23184	37165
22 7/8	14410	19800	23314	37375
23	14490	19910	23444	37585
23 1/8	14570	20020	23574	37795
23 1/4	14650	20130	23704	38005
23 3/8	14730	20240	23834	38215
23 1/2	14810	20350	23964	38425
23 5/8	14890	20460	24094	38635
23 3/4	14970	20570	24224	38845
23 7/8	15050	20680	24354	39055
24	15130	20790	24484	39265
24 1/8	15210	20900	24614	39475
24 1/4	15290	21010	24744	39685
24 3/8	15370	21120	24874	39895
24 1/2	15450	21230	25004	40105
24 5/8	15530	21340	25134	40315
24 3/4	15610	21450	25264	40525
24 7/8	15690	21560	25394	40735
25	15770	21670	255	

Product: L330D Volvo Wheel Loaders Service Manual

Full Download: <https://www.arepairmanual.com/downloads/l330d-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 408 pages at:

<https://www.arepairmanual.com/downloads/l330d-volvo-wheel-loaders-service-manual/>

Document Title: <b>Operation numbers for additional work</b>	Function Group: <b>070</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>Wheel Loaders (WLO)</b>			

## 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

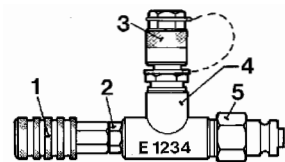
Document Title: <b>E 1234 Nipple</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## E 1234 Nipple

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

Drawing dimensions indicated in mm, unless otherwise indicated (1 mm = 0.04 in).



**Figure 1**

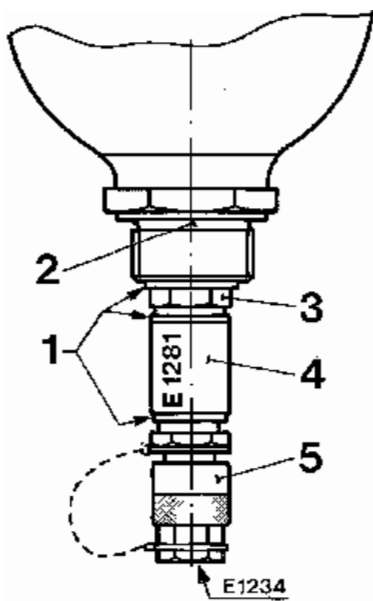
1. 999 3522-3 (Tema no. 150)
2. Pipe bushing R 1/4" - R 1/8"
3. Measuring nipple, part no. 930032-8
4. T-pipe, R 1/4"
5. Nipple 999 3758

Document Title: <b>E 1281 Nipple</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## E 1281 Nipple

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			



**Figure 1**

1. Seal washer
2. Accumulator with threads, M16 x 1.5, internal
3. Nipple, part no. 957030-0
4. Sleeve, R 1/4"
5. Measuring nipple, part no. 930032-8

Document Title: <b>E 1693 Press tool</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

**E 1693 Press tool**

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

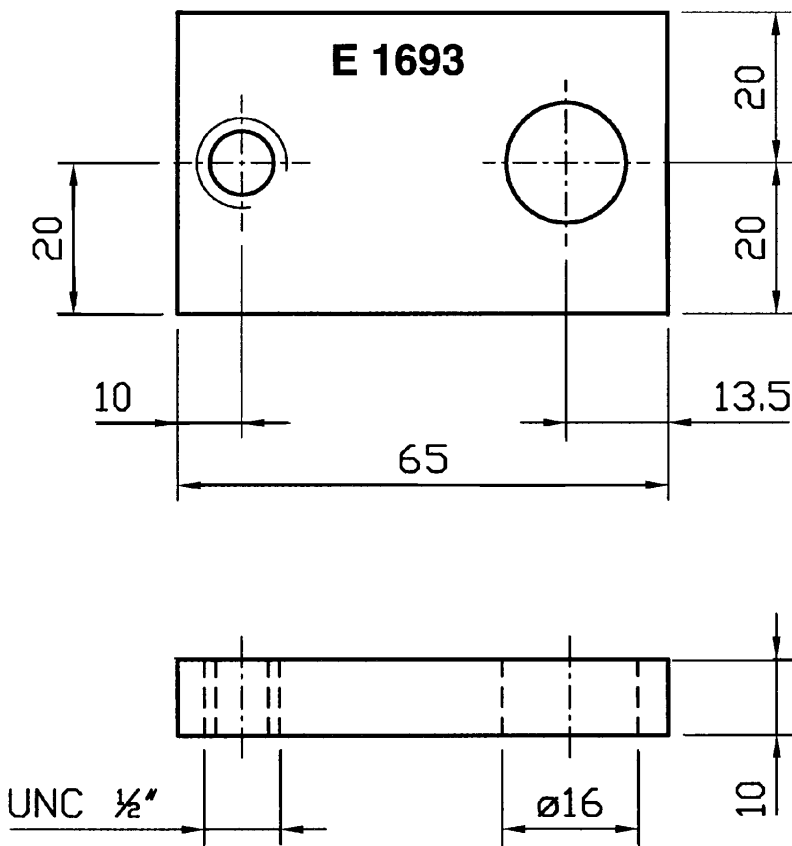


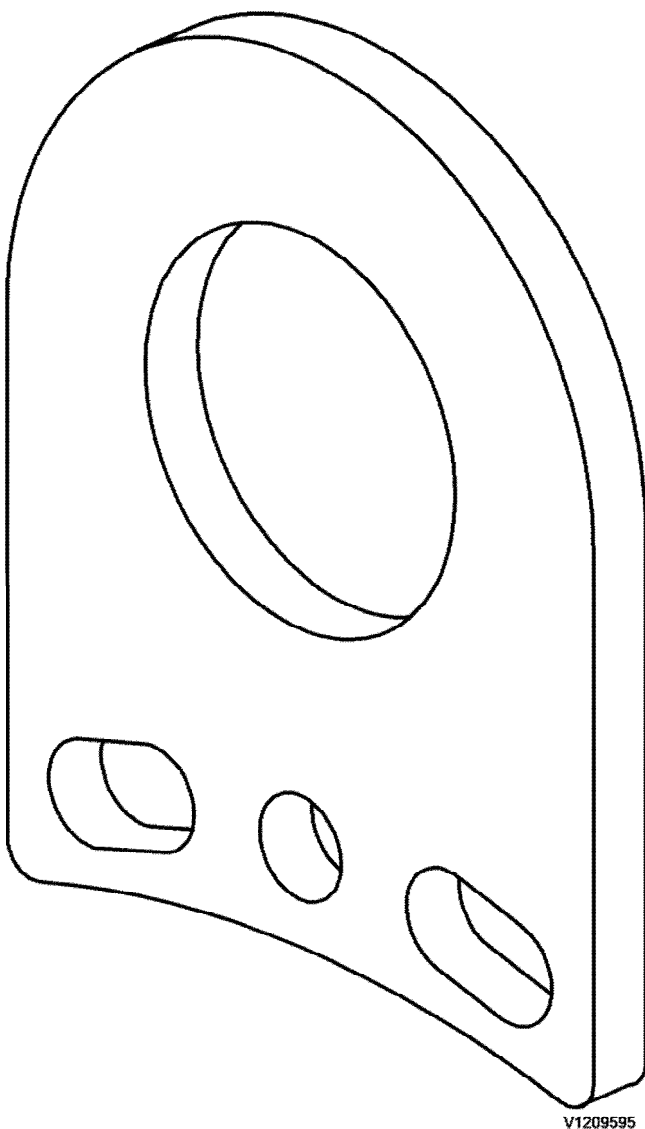
Figure 1

Document Title: <b>88830225 Lifting tool user instructions</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## 88830225 Lifting tool user instructions

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			



**Figure 1**  
88830225 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: BM Lindahl AB

Address: Ålmedal 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**



**Figure 3**

Usage

The lifting tool covered by this document are only intended for lifting Volvo Articulated Hauler hubs.

The lifting tool must always be fastened with three nuts.

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.

### Technical data

Type designation: lifting tool

Maximum load: 750 kg (1650 lb)

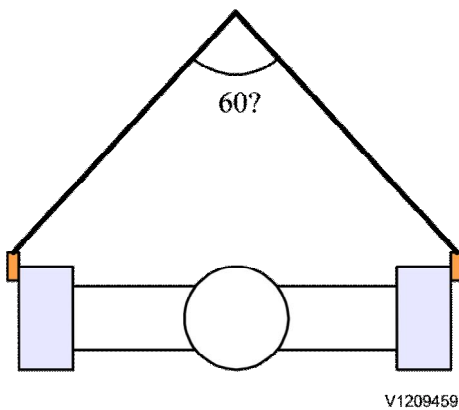
Mass: 3 kg (6.61 lb)

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.



**Figure 4**

Max lift angle

Maximum lift angles must not exceed 60° when lifting axles.

#### Handling

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

#### 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.

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

Shackles should be used to connect the lifting tools.

Lifting sling and straps should be marked with lifting capacity.

All tools used for the lift must have sufficient lifting capacity.

#### Maintenance

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

Check that areas around openings are intact and do not have indications of 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 nuts are intact and do not have indications of breakage or deformation.
- Check that the nuts are properly tightened.

Document Title: <b>Infrared Thermometer</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>Wheel Loaders (WLO)</b>			

## Infrared Thermometer

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### Gun Style Infrared Thermometer Laser Sight Model: SIG1

#### 9998519 Infrared thermometer (user instruction in FGI 080) Application

This tool can be used to measure fast and easy temperature differences. For instance in case of troubleshooting it is sometimes necessary to measure temperature differences on two equal parts with the same surface.



Never point the device towards the eyes permanent eye damage may occur. Use extreme caution when using the laser. Keep out of the reach of children. Be careful around mirror surfaces since mirrors can reflect the laser. Looking into the reflected laser is just as damaging as looking directly at the laser.

#### General information

1. Field of view: The SIG1 takes it's measurement from a circle of a size determined by a simple ratio of 10:1. The diameter of this circle is 1/10 the distance between the target and the tip of the SIG1. For example, if you're standing 20 feet (610 cm) from your target, the size of the circle you're taking the average temperature of will be 2 feet (61 cm) wide.
2. If you want to get the temperature of something small, such as a pipe, you must get close enough for the pipe to take up the whole viewing area circle. Otherwise the pipe and the background temperatures will be averaged into the reading.
3. You need to be aware that if the target surface is reflective enough, it may reflect infrared from other objects. For example, if you take a reading of a shiny metal surface, the infrared energy of your face may reflect enough energy off the surface to affect the reading. For this reason, it's a good idea to put non-reflective tape or paint on reflective surfaces when taking infrared temperature readings.

#### NOTE!

The measured temperature will be lower than actual.

#### Operation

1. Point the laser towards the target to be measured.
2. Pull trigger to light the target with the laser and measure its surface temperature.
3. As long as the trigger is held down, the SIG1 will constantly update the measurement and the blue backlight will illuminate the display.
4. When the trigger is pulled the red laser dot will shine about 1/4" above the centre of the circular area being measured by the thermometer.
5. Once the trigger is released, the last measurement will be shown and held until the trigger is pressed again or until the SIG1 turns off.

Document Title: <b>Alternative fuels</b>	Function Group: <b>160</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## Alternative fuels

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

**This statement is only valid for Volvo branded engines.**

Hydro-treated vegetable oil (HVO) and fatty acid methyl ester (FAME) biodiesel are both made from renewable raw materials such as vegetable oils and animal fats, but they are chemically processed in different ways.

### Hydro-treated vegetable oil (HVO)

HVO is created using a chemical process called hydro-treating. Hydro-treating creates an oxygen-free hydrocarbon product that is very similar to distillate diesel fuel and is well suited for use in diesel engines. HVO fuels complying with the CEN diesel fuel standard EN 590:2013 or with the European Fuel Quality Directive 98/70/EC are approved for use in all Volvo Construction Equipment diesel engines with no changes to maintenance intervals. Paraffinic diesel fuels complying with the CEN standard EN 15940 may be used in all machines operating outside the European Union and for EU-certified engines up to the emission level Stage IV. These fuels may also be used for the EU-certified D11, D13 and D16 engines meeting the emission level Stage V.

### Biodiesel

Biodiesel is a product made from renewable resources such as vegetable oils or animal fat. Biodiesel that has been chemically processed into fatty acid methyl ester (FAME) can be blended with distillate diesel fuel and used in some diesel engines. Unblended biodiesel is referred to as B100 because it is 100% biodiesel.

Rapeseed methyl ester (RME) is the most common type of FAME used in Europe. Soy methyl ester (SME) and sunflower oil methyl ester (SOME) are the most common types of FAME used in the US.

Although use of FAME biodiesel is now a legal requirement in some markets, it is not as suitable for use in diesel engines as conventional diesel fuel or HVO (hydro-treated vegetable oil).

### Biodiesel fuel requirements

The FAME biodiesel blends specified in the table below are approved for use if:

- The biodiesel is pre-blended by the fuel supplier
- The biodiesel used in the blend conforms to EN14214 or ASTM D6751
- The distillate fuel used in the blend meets fuel sulphur requirements
- The distillate fuel used in the blend conforms to EN590 or ASTM D975
- B1-B5 biodiesel blends conform to EN590 or ASTM D975
- B6-B7 biodiesel blends conform to EN590 or ASTM D7467
- B8-B20 biodiesel blends conform to EN16709(B20) or ASTM D7467

Engine emission designation	Engine size	Acceptable blend
EU Stage II / US Tier 2 * EU Stage IIIA / US Tier 3 * EU Stage IIIB / US Tier 4 interim EU Stage IV / US Tier 4 final EU Stage V	Below D4 / 4 litres	Up to B7
EU Stage II / US Tier 2 * EU Stage IIIA / US Tier 3 * EU Stage IIIB / US Tier 4 interim EU Stage IV / US Tier 4 final	D4–D8	Up to B7
EU Stage II / US Tier 2 *	D9–D16	Up to B20

EU Stage IIIA / US Tier 3 *		
US Tier 4 final, special North America arrangement **		
EU Stage IIIB / US Tier 4 interim EU Stage IV / US Tier 4 final	D11–D16	Up to B10
EU Stage IIIB / US Tier 4 interim, equipped with High Sulphur Fuel Conversion Kit (only available in unregulated markets) EU Stage IV / US Tier 4 final, equipped with High Sulphur Fuel Conversion Kit (only available in unregulated markets)	D4–D16	Up to B20
EU Stage V	D4–D16	Up to B7
* As Tier 2 and Tier 3 emissions regulations ended in 2005 and 2010 respectively, engines produced since then typically <b>meet Stage II / Stage IIIA regulations</b> , allowing their sale in less regulated markets.		
** With additional restrictions and special operating conditions, equipment used in North America may operate on B20 diesel.		

#### NOTE!

Failures directly caused by the use of poor quality biofuel, or any other fuel not conforming to standards, are not factory defects and the manufacturer's warranty does not apply.

#### Maintenance interval requirements

Additional service actions and shorter maintenance intervals are mandatory when using biodiesel blends above B10.

<b>Every 10 hours</b>
<ul style="list-style-type: none"> <li><input type="radio"/> Check the engine oil and change if it rises above the maximum fill level</li> <li><input type="radio"/> Inspect the fuel system components and replace as necessary</li> </ul>
<b>Half of original interval</b>
<ul style="list-style-type: none"> <li><input type="radio"/> Change the engine oil and filter</li> <li><input type="radio"/> Replace the fuel filter(s)</li> </ul>
<b>Every year, regardless of operating hours</b>
<ul style="list-style-type: none"> <li><input type="radio"/> Change the engine oil and filter</li> <li><input type="radio"/> Clean the fuel tank</li> </ul>

#### Effects of biodiesel on engine oil

Using biodiesel can lead to increased oil dilution. Use engine oil analysis tools frequently to check for fuel dilution and monitor engine oil condition. Check the engine oil level daily. Always change the engine oil if the oil level rises above the maximum fill level.

#### Effects of biodiesel on fuel systems

Biodiesel dissolves and loosens some fuel system deposits. During the initial conversion to biodiesel, loosened deposits will travel to the fuel filters and require more frequent fuel filter replacements. Start with new fuel filters when using biodiesel for the first time.

Biodiesel is aggressive to some materials used in fuel system components. Inspect seals, hoses, rubber and plastic components every 10 hours. Repair or replace any components that are damaged, softened or leaking. Clean biodiesel from painted surfaces immediately to prevent paint damage.

Biodiesel is more sensitive to bacteria and water contamination than distillate diesel fuel.

- Use as much fuel as possible before refilling the fuel tank in order to prevent bacteria growth if a machine is in regular use, e.g. regularly uses up a tank of fuel within a week. In climates where condensation is a risk, or when the machine is working for short durations, keep the fuel tank full.
- Do not use biodiesel in machines with low utilization or operating time.
- Do not store machines for more than 4 weeks without flushing biodiesel out of the fuel system by operating the machine through at least one full tank of distillate diesel fuel.
- Always follow the manufacturer's storage recommendations and "best-before" dates for each delivery of biodiesel.

**Effects of biodiesel on exhaust aftertreatment systems**

Biodiesel leaves higher levels of ash in diesel particulate filters and may require more frequent diesel particulate filter (DPF) regeneration and cleaning. Biodiesel can cause deviations in temperatures and functionality of the DPF burner and may cause fault codes or errors.

Biodiesel exhaust gas is aggressive to some materials used in selective catalytic reduction systems (SCR) and may require more frequent cleaning, repairing or replacing of SCR parts.

**Effects of biodiesel on cold weather operation**

Biodiesel has a high viscosity at temperatures below 0 °C (32 °F) and may cause problems starting the engine. Use a fuel heater or park machines in a heated building if possible.

**Effects of biodiesel on engine performance**

Biodiesel B100 has about 8% lower energy density compared to regular diesel fuel. Blends equal or lower than B20 have a small impact on engine performance.

**Effects of biodiesel on emissions compliance**

Engines are certified to comply with U.S. EPA, California and EU emissions standards based upon the use of test fuels with specifications established by these regulatory agencies. Alternative fuels, including biodiesel, that are not substantially similar to the required test fuels may adversely affect engine emissions compliance. As a result, Volvo does not warrant that the engine will conform to applicable Federal or California and EU emissions limits when operated on, or having previously being operated on, biodiesel or other alternative fuels that are not substantially similar to specified test fuels used for certification, nor if biodiesel / regular diesel is used in blends that exceed the recommendations.

However, the use of biodiesel up to a maximum of 20% (B20) in and of itself, will not affect the manufacturer's mechanical warranty as to engine or emissions system, provided the bio fuel used in the blend conforms to the applicable standards and the additional steps outlined herein are followed.

Document Title: <b>Working on the electrical system of the machine</b>	Function Group: <b>170</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## Working on the electrical system of the machine

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

- Only use test instruments with a light-emitting diode, never a test light with a light bulb, for example, during trouble-shooting of the electrical system!  
**The high firing voltage of the bulb can destroy expensive electronic components.**
- When installing a two-way radio, mobile phone, etc., installation must be performed according to manufacturer's instructions in order to eliminate interference with electronic systems and components intended for the function of the machine.

Document Title: <b>Cleanliness in hydraulic systems</b>	Function Group: <b>170</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## Cleanliness in hydraulic systems

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

Observe the greatest possible cleanliness when dismantling the hydraulic system. Wipe all pipe and hose connections and remove flaking paint, etc., before disconnecting. Plug all pipes, hoses, cylinders, etc., immediately after dismantling. Never fit a hydraulic hose that has not been plugged without cleaning it first.

### Repairing hydraulic system

The following points must be observed when changing the pump or after other work has been carried out that may mean air has entered the system.

1. Start the engine and allow it to run at **low idle** for approx. 10 minutes without activating any hydraulic functions.
2. Activate all hydraulic functions a few times with the engine running at **low idle speed**.  
(Attention missing)
3. Run each hydraulic function a few times to overflow (hydraulic cylinder to end position) at high engine speed, approx. 20–25 r/s (1200–1500 rpm) (780–975 Hz).

Document Title: <b>Electric welding</b>	Function Group: <b>170</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## Electric welding

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

For electric welding on the machine or on attachments on machine:

- ground connection turned off with battery disconnect switch.
- fuse FH4 must be removed, located next to the battery disconnect switch.
- connectors for all control units (ECUs) must be unplugged.

**NOTE!**

Ground the welding unit as close as possible to the welding point.

Document Title: <b>Charging batteries</b>	Function Group: <b>170</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## Charging of batteries

Showing Selected Profile

<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L330D Volvo			

### Explosion hazard

When a battery is being charged, an explosive mixture of oxygen and hydrogen is formed. A short circuit, open flame or spark near the battery can cause a powerful explosion. Always turn off the charging current before disconnecting the charging clamps. Ventilate well, especially if the battery is charged in a confined space.

### Corrosive sulphuric acid

The battery electrolyte contains corrosive sulphuric acid. Electrolyte spilled on bare skin must be removed immediately. Wash with soap and plenty of water. If electrolyte gets into your eyes or any other sensitive body part, rinse immediately with plenty of water and seek immediate medical attention.

Document Title: <b>Arrival Inspection, according to Inspection Programme</b>	Function Group: <b>171</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>Wheel Loaders (WLO)</b>			

## **Arrival Inspection, according to Inspection Programme**

**Op nbr 171-001**

**Total procedure time (hr): 1.75**

1. This Inspection Programme can be found as a PDF file in the document library in PROSIS.

Document Title: <b>Delivery Inspection, according to Inspection Programme</b>	Function Group: <b>171</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>Wheel Loaders (WLO)</b>			

## **Delivery Inspection, according to Inspection Programme**

**Op nbr 171-002**

**Total procedure time (hr): 2.50**

1. This Inspection Programme can be found as a PDF file in the document library in PROSIS.

Document Title: <b>Delivery Instructions, according to Inspection Programme</b>	Function Group: <b>171</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>Wheel Loaders (WLO)</b>			

## **Delivery Instructions, according to Inspection Programme**

**Op nbr 171-004**

1. This Inspection Programme can be found as a PDF file in the document library in PROSIS.

Document Title: <b>Maintenance of Stored Machines, according to Inspection Programme</b>	Function Group: <b>171</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>Wheel Loaders (WLO)</b>			

## **Maintenance of Stored Machines, according to Inspection Programme**

**Op nbr 171-003**

**Total procedure time (hr): 1.50**

1. This Inspection Programme can be found as a PDF file in the document library in PROSIS.

Document Title: <b>Transporting a wheel loader on another vehicle</b>	Function Group: <b>171</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## Transporting a wheel loader on another vehicle

Showing Selected Profile

<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L330D Volvo			

If the wheel loader is transported on another vehicle or by rail, it is important to cover the exhaust pipe outlet with a cap or other suitable protection. This applies especially when the exhaust pipe outlet faces the direction of travel. This prevents damage to the turbocharger bearing, which may be damaged if the turbo rotates without any lubrication.

Document Title: <b>Service specifications</b>	brake,	Function Group: <b>173</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>				

## Wheel brake, specification

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Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
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Service brakes	
Type	Dual circuit fully hydraulic disc brake
Brake discs, quantity per wheel	6 pcs.
Brake disc, thickness new	7.7 mm (0.30 in)/disc
Brake disc, minimum thickness	6.2 mm (0.24 in)/disc
Basic setting wear indicator's pin, protrusion	9.1 mm (0.36 in)
Accumulators	3 pcs.
Accumulator volume, 2 pcs.	4.0 l (1.057 US gal)
Accumulator volume, 1 pc.	1.0 l (0.264 US gal)
Precharge pressure, new accumulator (4.0 litres)	4.0 MPa (40 bar) (580 psi)
Precharge pressure, new accumulator (1.0 litre)	5.0 MPa (50 bar) (725 psi)
Min. allowed precharge pressure in accumulator	2.5 MPa (25 bar) (363 psi)
Foot brake pedal angle (adjustable)	std. 45°
Clearance between brake pedal and piston	0.4 ±0.2 mm (0.016 ±0.008 in)
Brake pressure, max., adjusted on central block	16.0–17.5 MPa (160–175 bar) (2320–2538 psi)
Brake pressure in circuit	5.9–7.1 MPa (59–71 bar) (856–1030 psi)
Unloading (cut-out) pressure (electrical)	15.0 ±0.3 MPa (140 ±3 bar) (2175 ±44 psi)
Engagement pressure	12.5 ±0.3 MPa (125 ±3 bar) (1813 ±44 psi)

Document Title: <b>Parking brake, manually releasing</b>	Function Group: <b>176</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## Parking brake, manually releasing

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

If the parking brake cannot be released with the switch for parking brake, it can be released manually as follows:

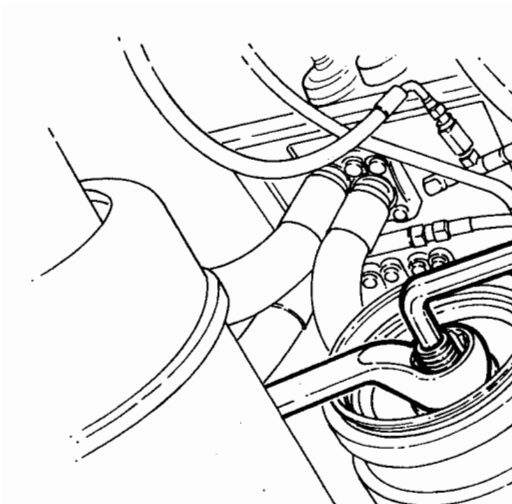


### WARNING

**Block the wheels before taking any measures as there is a risk that the machine will start moving.**

#### Releasing

- Remove the rubber cap on the parking brake's upper part.
- Loosen the stop nut and screw out the Allen head bolt until the brake releases.



**Figure 1**

Manual release of parking brake

1. Allen head key

#### Restoring parking brake

See Section 5 in *Parking brake, adjusting*.

Document Title: <b>Propeller shafts, removing</b>	Function Group: <b>176</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## Propeller shafts, removing

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

- Place the machine in the service position.
- Block all wheels so that the machine cannot move, raise the front or rear wheels from the ground to take the strain off the propeller shafts and remove them.

### **NOTICE**

**The parking brake does not work in this position.**

Document Title: <b>Towing</b>	Function Group: <b>176</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

## Towing/recovering

Showing Selected Profile

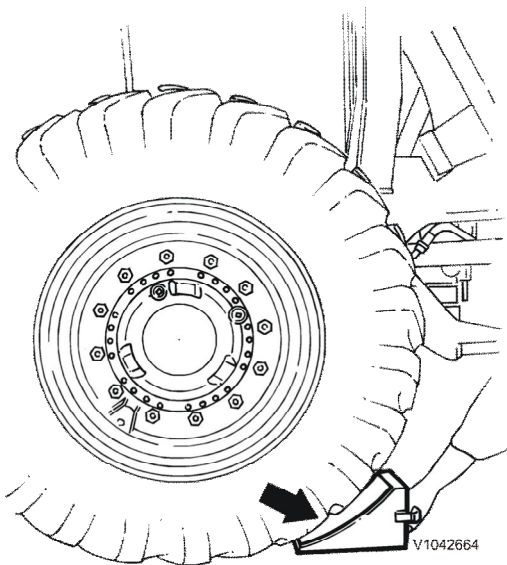
Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

### Actions for towing/recovering

If possible, the engine shall be started when towing/recovering, to ensure satisfactory function of brakes and steering. When towing, the gear selector shall be in neutral position. The engine cannot be started by towing the vehicle.

### **! WARNING**

The parking brake must be applied and the wheels blocked before making preparations to tow or recover the machine to prevent it from moving. Great care must be observed when towing to avoid personal or even fatal injury.



**Figure 1**

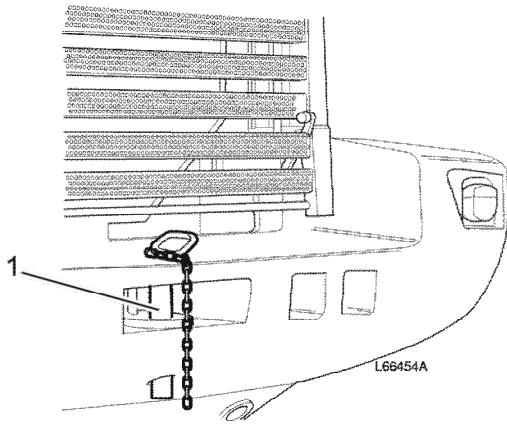
Blocking of wheels

### Recovering

### **! WARNING**

If it's not possible to start the engine, braking and steering functions will be limited. In this situation, towing should only be performed in emergencies, over the shortest possible distance and by trained personnel (see towing). If possible, transport the machine on a trailer.

Use a tow bar to tow the machine to a suitable location or passable road. The tow bar shall be connected to the tow device.



**Figure 2**

1. Towing device

**NOTICE**

The lifting eyes must not be used for towing.

Document Title: <b>Safety concerns everybody!</b>	Function Group: <b>191</b>	Information Type: <b>Service Information</b>	Date: <b>4/14/2026</b>
Profile: <b>L330D Volvo</b>			

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## Safety concerns everybody!

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L330D Volvo			

Always follow the instructions in the machine's operator's manual which supplements this Service Manual.

The Operator's Manual **must always** be kept in the manual storage box for easy reference.

Volvo designs and manufactures machines with a high level of safety as well as effectiveness. All this work may be wasted if anyone who is about to perform service on any of our machines does not read the safety instructions, or does not follow them, e.g., does not replace guards, climbs on slippery machine parts instead of using a ladder, grabs a hold of hoses instead of handles or uses the wrong tools for the job.

In order to maintain safe and efficient function, always use genuine Volvo spare parts intended and adapted for the machine. If other spare parts than genuine Volvo are used then Volvo Construction Equipment cannot be held responsible for machine damage, and warranty claims will be denied.

Machines seldom cause accidents, instead people often do.

A safety-conscious person and a well-maintained machine make for a safe, effective and profitable combination.

**Those who do not follow the safety instructions and observe the warnings in this manual must make sure that their work method is safe. Otherwise, there is a great risk of accidents, perhaps even accidents that result in fatalities.**



### WARNING SYMBOL

This symbol is shown at various points throughout the manual. The appearance of it means "Warning, stay alert! Your safety may be involved!"

**Get to know the capacity and limits of your machine!**