

Document Title: <b>Description</b>	Function Group: <b>000</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Description

Volvo BM L70C is a four-wheel drive loader with articulated steering.

The engine is a 6-cylinder, turbocharged diesel engine type TD61GD or TD63KDE (low-emission engine).

The transmission is hydro-mechanical, where all gears are in constant mesh. The type designation is HT90.

Between engine and transmission there is a single stage hydraulic torque converter.

Front and rear axles have fully floating drive shafts with planetary gears in the wheel hubs.

The service brakes of the machine are disc brakes running in oil and integrated with the respective planetary gear hubs.

The drum brake type parking brake is fitted on the front axle.

The machine is provided with two load-sensing variable hydraulic pumps connected in parallel which, via a central valve, supply steering, brakes, servo and working hydraulics with oil.

For further description of function and components, see the respective manual section.



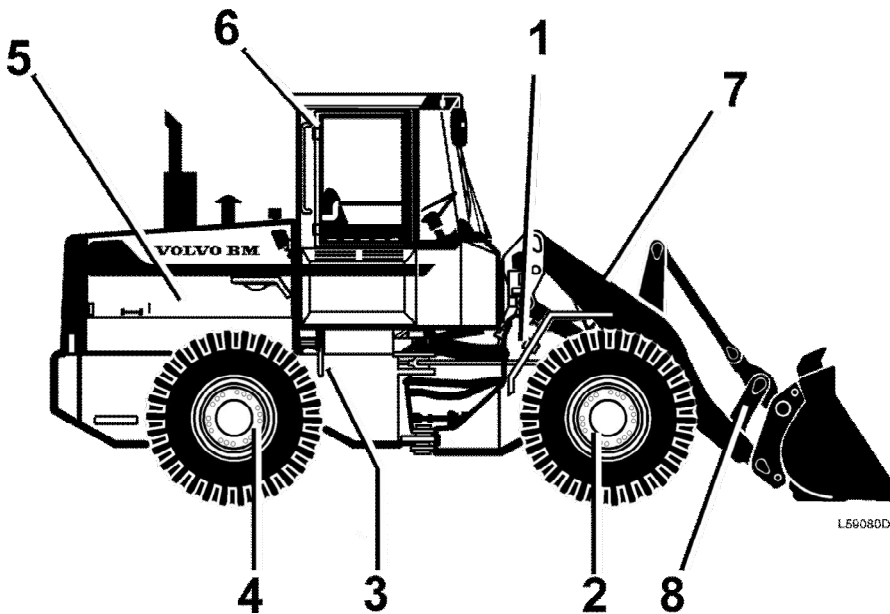
**Figure 1**

Loder L70C

Document Title: <b>Product Identification Plates</b>	Function Group: <b>000</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Product Identification Plates

From the picture and the text below it can be seen which product identification plates should be found on the machine. When ordering spare parts and when making enquires per telephone or correspondence, the model designation and Product Identification Number, (PIN) should be stated. When applicable the data on the additional plate, "INCL. PARTS." should be stated.



**Figure 1**  
Product Identification Plates

1	Product plate with Product Identification Number, PIN for the complete machine shows model designation, engine manufacturer and serial number. The plate is fitted on the left side of the front frame. Model designation and serial number are also visibly stamped on the right side of the front frame.
2	The front drive axle product and serial numbers are positioned on the axle housing.
3	The transmission product and serial numbers are positioned on the front part of the transmission.
4	The rear drive axle product and serial numbers are positioned on the axle housing.
5	The engine type designation, part and serial numbers are stamped on the right side of the cylinder block near the upper edge.
6	The cab type, type approval and serial number are positioned by the right roof member inside the cab.
7	The lifting frame product and serial numbers are positioned on the outside of the left lifting arm.
8	The attachment bracket* type and serial numbers are positioned on the right side.
*Optional equipment	

Document Title: <b>Boom Suspension System</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## **Boom Suspension System**

Pressure-reducing valve R1, closing pressure	12 MPa (120 bar) (1740 psi)
Pressure-reducing valve R2, closing pressure	12 MPa (120 bar)
Safety valve TB opening pressure	21 MPa (210 bar) (3046 psi)
Accumulator, precharging pressure	2 MPa (20 bar) (290 psi)

Document Title: <b>Brakes</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Brakes

### Hydraulic pump (in common with other hydraulics)

Type	Dual circuit all-hydraulic wet disc brake
Brake lining area per wheel	636 cm <sup>2</sup> (98.6 in <sup>2</sup> )
Brake disc, min. thickness	7.2 mm (0.283 in)
Brake disc, thickness new disc	9.5 mm (0.374 in)
Accumulator capacity, three at	0.5 litre (30.5 in <sup>3</sup> )
Precharging pressure, new accumulators	5.0 MPa (50 bar) (725 psi)
Precharging pressure min.	3.5 MPa (35 bar) (508 psi)
Pressure-reducing valve (at starting)	16.5 ± 1.0 MPa (165 ± 10 bar) (2393 ± 145 psi)
Brake pressure, max	15.0 ± 0.5 MPa (150 ± 5.0 bar) (2176 ± 73 psi)
Unloading pressure (electrical)	13.7 ± 0.3 MPa (137 ± 3.0 bar) (1987 ± 44 psi)
Cut-in pressure	12.0 ± 0.3 MPa (120 ± 3.0 bar) (1740 ± 44 psi)
Low-pressure indication	9.0 ± 0.5 MPa (90 ± 5.0 bar) (1305 ± 73 psi)
Brake pressure, front and rear circuits	8.0 ± 0.6 MPa (80 ± 6.0 bar) (1160 ± 87 psi)

### Parking brake

Type	Mechanically operated drum brake on front axle
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### Steering system

Type	Hydrostatic
Steering arc	± 40°
Number of steering wheel turns, total	3.5 revolutions

Document Title: <b>Capacities</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Capacities

### NOTE!

The given capacity applies when changing unless otherwise stated.

	litres	US gal
Engine incl. filter	16	4.2
Cooling system (total)	40	10.6
Fuel tank (total)	190	50.2
Transmission incl. torque converter	17	4.5
Front axle incl. hub reduction (total)	24	6.3
Rear axle, incl. hub reduction (total)	24	6.3
Hydraulic system (total)	104	27.5
Hydraulic oil tank	65	17.2

Document Title: <b>Electrical system</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Electrical system

System voltage	24 V

### Battery

Number of	Two, connected in series
Battery disconnect switch	Connected to negative pole
Voltage	12 V
Battery capacity	105 Ah

### Battery electrolyte density

Fully charged battery	1.275 - 1,285
Battery should be recharged at	1.250

### Alternator with regulator

Type	Alternating current
Output (rated output)	1680 W
Voltage, at +20 °C	28.5 ± 0,15 V
Current, max.	60 A
Resistance across rotor windings	13.5 Ω
Resistance in stator windings	0.12 Ω

### Starter motor

Type	KB 24 V 5.4kW
Output	5.4 kW (7.3 hp)

### Bulbs

	Watt	Socket
Travel lights, asymmetrical	75/70	P 43t - 38 (H4)
Parking lights, front	4	BA 9s
Parking lights, rear	10	BA 15s
Tail lights	10	BA 15 s
Stop lights	21	BA 15 s
Direction indicators, rear	21	BA 15 s
Direction indicators, side	21	BA 15 s
Side lights	5	SV 8.5
Instrument lighting	2	BA 9 s
Control lamp panel	20 x 1.2	W 2 x 4.6 d

Cab light	10	SV 15 s
Working lights, front halogen	70	PK 22 s (H3)
Working lights, rear halogen	70	PK 22 s (H3)
The switches guide light	1,2	W 1.2 x 4.6 d
Speedometer	2	BA 9 s

### Fuses

Current rating	20 A	2 st
	15 A	5 pcs
	10 A	11 pcs
	5 A	26 pcs

Document Title: <b>Engine</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Engine

Unless otherwise stated the following data apply to both the standard engine and the low-emission version of the engine on L70B and L70C.

### General

#### Designation

basic version	TD61GD
low-emission version	TD63KDE

#### Flywheel output at 36.6 r/s (2200 rpm)

basic version	87 kW (118 hp) SAE J 1349 Net
87 kW (118 hp) DIN 70020 Net	
93 kW (126 hp) SAE J 1349 Brutto	

#### Flywheel output at 35.0 r/s (210 rpm)

L70B	L70C	
low-emission version	87 kW (118 hp) SAE J 1349 Net	90 kW (122hp) SAE J 1349 Net
87 kW (118 hp) DIN 70020 Net	90 kW (122 hp) DIN 70020 Net	
93 kW (126 hp) SAE J 1349 Gross	96 kW (130 hp) SAE J 1349 Gross	

#### Torque at 20 r/s (1200 rpm)

basic version	495 Nm (365 lb ft) SAE J 1349 Net
495 Nm (365 lb ft) (365 lb ft) DIN 70020 Net	
500 Nm (369 lb ft) (369 lb ft) SAE J 1349 Gross	

#### Torque at 18.33 r/s (1100 rpm)

low-emission version	610 Nm (450 lb ft) (450 lb ft) SAE J 1349 Net
615 Nm (454 lb ft) SAE J 1349 Gross	
93 kW (126 hp) SAE J 1349 Gross	

Number of cylinders	6
Cylinder bore	98.43 mm (3.875 in)
Stroke	120 mm (4.724 in)
Cylinder capacity	5.48 litre (334 in <sup>3</sup> )
Compression ratio	
basic version	16.0:1
low-emission version	18.3:1
Order of injection	1-5-3-6-2-4

Idling speed, low	115 ± 0.5 r/s (690 ± 30 rpm) (794 ± 35 Hz)
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Idling speed, high	39.0 ± 1,0 r/s (224 ± 60 rpm) (2693 ± 69 Hz)
Stall speed, basic version only 3rd gear	35.0 ± 1.7 r/s (2130 ± 100 rpm) (2451 ± 115 Hz)
Stall speed, low-emission version only 3rd gear	35.6 ± 1.6 r/s (2135 ± 95 rpm) (2457 ± 109 Hz)

### Valve system

Valve arrangement	Overhead valves
Valve clearance, warm and cold engine	
inlet valves	0.40 mm (0.016 in)
exhaust valves	0.55 mm (0.022 in)

### Air cleaner

Type	Air cleaning in 3 stage:
	Cyclone cleaner - primary filter - secondary filter

### Lubrication system

Oil pressure, warm engine	300-500 kPa (3-5 bar) (44 - 73 psi)
min., warm engine, low idling	50 kPa (0.5 bar) (7.3 psi)
Overflow valve	
opening pressure	100 - 140 kPa (15 - 20 psi)
Relief valve blue	
opening pressure	470 kPa (68 psi)
Oil cooling valve red	
opening pressure	240 kPa (35 psi)

### Fuel system

INJECTION PUMP	
basic version	
Type	In-line pump
Designation	MW
Injection timing	16 ± 0.5° B.T.D.C. (Incl. engine no. – 92878)
18 ± 0.5° B.T.D.C. (w.e.fr. engine no. 92879–)	
Lift above the basic circle	3.0 - 3.1 mm (0.118 - 0.122 in)
low-emission version	
Type	In-line pump
Designation	MW
Injection timing	12 ± 0.5° B.T.D.C.
Lift above the basic circle	3.0 - 3.1 mm (0.118 - 0.122 in)

### INJECTORS

basic version	
Type	Multi-hole nozzle (5 holes)
Designation	KBELK 98 P 101 DILLA 143 P4280
opening pressure	24.0 MPa (240 bar) (3481 psi)
new spring	24.5 MPa (245 bar) (3553 psi)

low-emission version	
Type	Multi-hole nozzle (6 holes)
Designation	KBELK 98 P 101 DILLA 143 P4280
opening pressure	24.0 MPa (240 bar) (3481 psi)
new spring	24.5 MPa (245 bar) (3553 psi)

### FEED PUMP

basic version	
Type	Piston pump
Designation	FP
Feed pressure	100 - 150 kPa (1.0 - 1.6 bar) (15 - 22 psi)
low-emission version	
Type	Piston pump
Designation	FP
Feed pressure	100 - 150 kPa (1.0 - 1.5 bar) (15 - 22 psi)

### Cold-starting device

basic version	
Preheating element	in inlet manifold [1]
low-emission version	
Preheating element	in inlet manifold

### Turbocharger

Designation	T300
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### Intercooler (only low-emission version)

Type	Type Water cooled with separate water pump
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### Cooling system

Type	Closed system
Radiator cap valve opens at	50 kPa (0.5 bar) (7.3 psi)

### THERMOSTAT

Type	Piston-type thermostat
Antal	1
Begins to open at	82 °C (180 °F)
Fully open at	92 °C (198 °F)

[1]Optional equipment

Document Title: <b>Hydraulic system</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Hydraulic system

Type	Servo-controlled type "closed centre"

### Hydraulic pump

L70B	L70C	
Type	Type Nine-cylinder axial piston pump, variable displacement	
Working pressure (low idling)	26.0 ± 0.35 MPa (260 ± 3.5 bar) (3771 ± 51 psi)	
Stand-by pressure (low idling)	2.8 ± 0.4 MPa (28 ± 4.0 bar) (3916 ± 116 psi)	2.8 ± 0.4 MPa (28 ± 4.0 bar) (3916 ± 116 psi)

### Control valve

L70B	L70C	
Shock valve, tilting piston end	30 ± 0.8 MPa (300 ± 8 bar) (4351 ± 116 psi)	30 ± 0.8 MPa (300 ± 8 bar) (4351 ± 116 psi)
Shock valve, tilting piston rod end	27 ± 0.8 MPa ( 275 ± 8 bar) (3916 ± 116 psi)	27 ± 0.8 MPa ( 275 ± 8 bar) (3916 ± 116 psi)
Shock valve, lifting function	40 ± 1.0 MPa (400 ± 10 bar) (5802 ± 145 psi)	40 ± 1.0 MPa (400 ± 10 bar) (5802 ± 145 psi)
Shock valve, 3rd function	21 ± 1.0 MPa (210 ± 10 bar) (3046 ± 145 psi)	21 ± 1.0 MPa (210 ± 10 bar) (3046 ± 145 psi)
Max. pressure 4th function	21 ± 1.0 MPa ( 210 ± 10 bar) (3046 ± 145 psi)	16.5 ± 1.0 MPa (165 ± 10 bar) (2393 ± 145 psi)
Maximum pressure 4th function together		21 ± 1.0 (210 ± 10 bar) (3046 ± 145 psi)
Servo pressure	3 ± 0.8 MPa (30 ± 8 bar) (435 ± 116 psi)	
Back-up valve, return pressure	0.4 - 0.6 MPa (4 - 6 bar) (58 ± 87 psi)	0.4 - 0.6 MPa (4 - 6 bar) (58 ± 87 psi)

### Lifting cylinder

Type	Double-acting
Inside diameter	100 mm (3.937 in)
Piston rod diameter	2.756 in)
stroke	734 mm (28.898 in)

### Tilting cylinder

Type	Double-acting
Inside diameter	150 mm (5.906 in)
Piston rod diameter	80 mm (3.150 in)

stroke

440 mm 17.323 in)

Document Title: <b>Power transmission</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Power transmission

### Transmission

Type	Hydro-mechanical
Make	Volvo
Designation	HT90
Product number, 4-speed	30872
Number of gears	4 forward, 3 rearward
Produktnummer, 8-växlad	30873
Number of gears	8 forward, 6 rearward
Gear-shifting system	Electro-hydraulic

### TORQUE CONVERTER

Type	Single stage
Designation	XT 379A
Torque multiplication, when stalling	2.85:1

### Oil pressure, at high idling speed

Main pressure	1.30 - 1.46 MPa (13.0 - 14.6 bar) (189 - 212 psi)
Clutch pressure, gear 1-4, F-R	1.30 - 1.47 MPa (13.0 - 14.7 bar) (189 - 213 psi)
Lubricating oil pressure	0.25 - 0.30 MPa (2.5 - 3.0 bar) (36 - 44 psi)
Torque converter pressure, out, max.	0.79 MPa (8.0 bar) (115 psi)

### Drive axles

Type	Fully floating drive shafts with hub reductions of the planetary gear type
Make	Volvo
Designation	
Front axle	AWB15 (Prod nr 23848)
Rear axle	AWB15 (Prod nr 23849)
front axle with differential lock (dog clutch)	AWB15 (Prod nr 23850)
front axle with limited slip differential	AWB15 (Prod nr 23867)
rear axle with limited slip differential	AWB 15 (Prod nr 23865)
Gear ratio, total	20.75:1
Differential lock (dog clutch) operation	Front axle Electro-hydraulic

### Speed range

Däck 17.5R25	Gear position	1H	2H	3H	4H	1L	2L	3L	4L
	km/h	6	12	24	41	1.7	3.3	6.5	12.1
Mph	3.7	7.5	14.9	25.5	1.0	2.0	4.0	7.5	
Tyres 20.5R25	Gear position	1H	2H	3H	4H	1L	2L	3L	4L
	km/h	7	14	26	45	1.9	3.8	7.3	13.7
Mph	4.3	8.7	19.1	27.3	1.2	2.4	4.5	8.5	

Document Title: <b>Servo system</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Servo system

Type	"Closed centre"
Load-lowering equipment	
Accumulator 0.5 litre in servo circuit	precharging pressure 1.4 MPa (14 bar) (203 psi)

Document Title: <b>Steering system</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Steering system

Type	Hydrostatic
Steering arc	± 40°
Number of steering wheel turns, total	3.5 revolutions

### Hydraulic pump (in common with other hydraulics)

Type	Type Nine-cylinder axial piston pump, variable displacement
Steering pressure	21.0 ± 0.5 MPa (210 ± 5 bar) (3771 ± 51 psi)
Hålltryck	2.8 ± 0.4 MPa (28 ± 4 bar) (406 ± 58 psi)

### Steering valve (ORBITROL)

Type	Closed centre"
Designation	OSPL 500 LS

### Shock valves

Number of valves	2 pcs
Shock valve, opening pressure	28 ± 0.5 MPa (280 ± 5 bar) (4061 ± 73 psi)

### Steering cylinder

Type	Double-acting
Inside diameter	63 mm (2.48 in)
Piston rod diameter	40 mm(1.57 in)
Stroke	370 mm (14.57 in)

Document Title: <b>Tightening torques</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Tightening torques

**Important! For bolted joints which are not listed here, See VOLVO BM standard tightening torques**



Nuts and bolts should be cleaned and oiled.

### Engine

<b>TD61/TD63</b>	<b>Nm</b>	<b>kpm</b>	<b>lbf ft</b>
Flywheel housing - torque converter housing	57 ± 6	5.7 ± 0.6	42 ± 4.4
Cylinder block - bracket	85 ± 8	8.5 ± 0.8	63 ± 5.9
Bracket - tapered rubber damper	220 ± 20	22.0 ± 2.0	162 ± 14.8
Rear frame - rubber damper	48 ± 5	4.8 ± 0.5	35 ± 3.7
<b>Valves</b>			
Bearing bracket, rocker arm shaft	65 (50 alum)	6.5 5.0 (alum)	48 (alum)
Inspection covers, valve tappets	24	2.4	18
Valve covers	24	2.4	18
<b>INJECTORS</b>			
Nut for retaining yoke	50	5.0	37
Delivery pipe nuts	15-25	1.5-2.5	11 - 18
<b>INJECTION PUMP</b>			
Clamping bolt in pump coupling			
Pump coupling - drive flange			

Document Title: <b>VOLVO BM standard tightening torques</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## VOLVO BM standard tightening torques

The tightening torques in the following tables apply to bolts with a tensile strength as shown below. The tables are to be considered as a general instruction for the tightening torque of nuts and bolts when no other torque is stated.

### NOTE!

For flanged bolts type U6FS the values should be increased by 10 %.

Nut and bolts should be cleaned and lubricated with oil.

### TENSILE STRENGTH 8.8

#### Metric coarse and fine threads

Thread	N m	kgf. m	lb. ft
M6	10±2	1.0±0.2	7.4±1.5
M8	24±5	2.4±0.5	18±3.5
M10	48±10	4.8±1.0	35±7.4
M12	85±18	8.5±1.8	63±13.0
M14	140±25	14.0±2.5	103±18.0
M16	220±45	22.0±4.5	160±33.0
M20	430±85	43.0±8.5	320±63.0
M24	740±150	74.0±15.0	550±110.0

### TENSILE STRENGTH 10.9

#### Metric coarse and fine threads

Thread	N m	kgf. m	lb. ft
M6	12±2	1.2±0.2	9±1.5
M8	30±5	3.0±0.5	22±1.5
M10	60±10	6.0±1.0	44±7.5
M12	105±20	10.5±2.0	78±14.5
M14	175±30	17.5±3.0	130±22
M16	275±45	27.5±4.5	204±33
M20	540±90	54.0±9.0	400±66
M24	805±160	80.5±16.0	594±118

### UNC threads

Thread	N m	kgf. m	lb. ft
1/4"	9±2	0.9±0.2	6.6±1.5
5/16"	18±4	1.8±0.4	13±3.0
3/8"	33±8	3.3±0.8	24±5.9
7/16"	54±14	5.4±1.4	40±10
1/2"	80±20	8.0±2.0	59±15

9/16"	120±30	12.0±3.0	89±22
5/8"	170±40	17.0±4.0	130±30
3/4"	300±40	30.0±4.0	220±52
7/8"	485±115	48.5±11.5	360±85
1"	725±175	72.5±17.5	530±130

Document Title: <b>Weights (approx)</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

### Weights (approx)

	<b>kg</b>	<b>lb</b>
Engine	630	1389
Radiator	50	110
Transmission HT90	450	992
Front axel	540	1191
Rear axle	535	1180
Steering cylinder	20	44
Front frame	910	2007
Rear frame	900	1985
Counterweight	650	1433
Underbody plate	60	132
Lifting frame, incl. links and pins	1200	2646
Attachment bracket	225	496
Lifting cylinder	75	165
Tilting cylinder	100	221
Cab	580	1280
Hydraulic oil pump	47	104
Control valve	35	77
Central valve	19	42
Fuel tank	14	21
Hydraulic oil tank	42	93

Document Title: <b>Time Guide</b>	Function Group: <b>070</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

## Time Guide

Regarding: L70C

### 16 Lubricants, fuels and other liquids

Op.no.	Time (h)	Operation
16234	1,75	Hydraulic oil tank, changing oil and filter excl. cleaning tank
16236	2,5	Hydraulic oil tank, changing oil and filter incl. cleaning tank
16238	1,5	Transmission, changing oil and filter and cleaning suction strainer
16259	2	Axles, changing oil

### 17 General

17101	0,5	Arrival inspection, according to programme
17102	1,5	Delivery inspection, according to programme
17202	3	Warranty inspection 100 hours, according to service programme
17204	7	Warranty inspection 1000 hours, according to service programme
17307	1,5	Maintenance service, every 250 hours
17310	3	Maintenance service, every 500 hours
17312	5	Maintenance service, every 1000 hours
17314	8	Maintenance service, every 2000 hours

### 21 Engine, general

21002	1,5	Compression test, engine at operating temperature
21070	6,5	Engine, removing
21071	40	Engine removed, general overhaul
21072	6,5	Engine, fitting
21102	6	Cylinder head, replacing gasket
21168	3	Cylinder heads all removed, decarbonizing and grinding in valves
21171	0,75	Cylinder head removed, pressure testing each
21211	0,5	Cylinder, cylinder heads removed, measuring wear in all cylinders
21310	10	Cylinder liner and piston, replacing one
21318	18	Cylinder liners and pistons, replacing all
21412	1	Valves, adjusting

21436	0,5	Valve covers all, fitting new gasket
21502	5	Timing gear cover, fitting new gasket in machine
21530	7	Timing gear, replacing in machine
21532	8	Timing gear case, fitting new gasket in machine
21614	2,5	Crankshaft, replacing front oil seal

## 22 Lubrication and oil system

22106	0,25	Oil pressure relief valve, replacing
22306	1	Oil cooler, replacing

## 23 Fuel system, general

23301	0,5	Fuel system, bleeding
23314	0,5	Fuel filters all, replacing
23315	0,25	Fuel filter extra, replacing
23410	3	Fuel tank, replacing
23601	0,5	Idling speed, checking and adjusting
23602	0,5	Stall speed, checking
23630	1,25	Injection timing, checking and adjusting
23644	1,5	Injection timing, checking
23673	3	Injection pump, replacing incl setting injection timing
23702	1,5	Injectors, replacing all
23707	0,25	Overflow valve, replacing
23716	1	Injectors, replacing copper sleeve in machine
23718	0,5	Delivery pipe, replacing one
23720	0,25	Pressure equalizer, replacing
23780	2	Injectors removed, reconditioning all

## 25 Inlet and exhaust systems

25102	1	Induction manifold, replacing gasket
25104	1,5	Exhaust manifold, replacing gasket
25220	1	Silencer, replacing
25221	0,5	Exhaust pipe, flexible tube, replacing
25571	1	Turbo charger, replacing
25573	2	Turbo charger removed, reconditioning
25602	0,5	Air cleaner, checking prssure drop indicator
25606	0,75	Pre-heating coil, replacing

## 26 Cooling system

26104	1	Coolant, changing
26108	2,5	Radiator, replacing
26112	1	Radiator hose upper, replacing
26114	1	Radiator hoses lower, replacing
26116	2	Radiator hoses all, replacing

26202	2	Coolant pump, replacing
26271	1,5	Coolant pump removed, reconditioning
26298	0,75	Thermostat, replacing
26322	1	Fan belt and/or alternator-, compressor belt, replacing all belts

### 27 Engine control

27322	0,5	Stop cable control, replacing
27323	0,5	Electrical engine shut down, check and adjusting

### 31 Battery and mounting parts

31102	1	Batteries, replacing
31103	0,5	Main switch, replacing
31106	0,5	Earth lead to battery, replacing
31108	1	Starter motor lead to battery, replacing

### 32 Alternator and charge regulator

32102	1	Alternator, replacing incl function check (no measuring instrument)
32125	0,5	Alternator, replacing carbon brush kit in machine
32205	0,5	Charging regulator, replacing

### 33 Starting system, general

33118	0,75	Starter motor, replacing
33401	0,5	Starter lock, replacing

### 35 Lighting

35224	0,5	Head lamp assy, replacing one incl adjusting
35316	0,5	Rear lamp, replacing one
35318	0,25	Rear lamp, replacing glass or bulb
35656	0,5	Work lighting, replacing one head lamp assy
35657	0,5	Work lighting, replacing one insert

### 36 Other electrical equipment, general

36102	0,5	Flasher unit, replacing relay
36110	0,75	Flasher switch, replacing
36117	0,5	Flasher lamp, replacing glass or bulb
36202	0,25	Horn, replacing
36203	0,5	Reverse alarm, replacing
36216	0,75	Horn switch, replacing
36301	0,5	Windscreen wiper rear, replacing motor
36302	0,75	Windscreen wiper front, replacing motor
36303	0,75	Windscreen wiper, replacing switch

36304	0,25	Windscreen flusher pump, replacing
36404	0,25	Switch, replacing
36408	0,25	Brake light switch, replacing
36720	0,5	ECU, replacing
36721	0,5	CU 8, replacing

### 38 Instruments, sender units, warning systems

38603	0,5	Transmission oil pressure sensor, replacing
38604	0,5	Transmission temperature sensor, replacing
38605	0,5	Transmission, revolution sensor, replacing
38606	0,5	Engine temperature sensor, replacing
38607	0,5	Engine oil pressure sensor, replacing
38611	0,75	Fuel level sender, replacing
38704	0,5	Transmission temperature gauge, replacing
38705	0,5	Information display, replacing
38706	0,5	Engine temperature gauge, replacing
38711	0,5	Fuel level gauge, replacing
38720	0,5	Tachometer, replacing

### 42 Transmission, general

42102	0,75	Hydraulic transmission, check oil pressure
42106	2	Oil cooler, replacing
42147	0,75	Gear selector, replacing
42148	1	Gear selector valve, replacing one solenoid
42152	1	Seal for front output shaft, replacing
42154	1	Seal for rear output shaft, replacing
42170	6	Transmission, removing
42171	40	Transmission removed, reconditioning
42172	8	Transmission, fitting

### 45 Propeller shaft incl. bearings and mounting

45102	1,5	Support or intermediate bearing, replacing
45104	1	Propeller shaft, rear, replacing
45107	1	Propeller shaft, in frame joint, replacing
45113	1	Propeller shaft, removed reconditioning

### 46 Drive axles, general

461	Null	Front axle
46101	3,5	Axle, replacing
46103	0,5	Axle, fitting
46105	1,5	Drive shaft, replacing one side

46113	15	Centre gear, axle removed, reconditioning
46114	1,75	Pinion front, fitting new gasket
46140	1	Hub retainer, replacing
46141	4,5	Hub retainer removed, reconditioning
46142	3,5	Hub retainer, reconditioning one side
46143	2,5	Hub, replacing seal
46152	0,25	Differential lock front, repacking excl adjusting
46153	0,75	Differential lock, adjusting engagement
463	Null	Rear axle
46301	5	Axle, replacing
46305	1,5	Drive shaft, replacing one side
46313	15	Centre gear, axle removed, reconditioning
46314	1,5	Pinion rear, fitting new gasket
46340	1	Hub retainer, replacing
46341	4,5	Hub retainer removed, reconditioning
46343	2,5	Hub, replacing seal

#### 51 Wheel brake, all

516	Null	Front axle
51601	0,5	Brake linings, checking wear
51604	3	Brake discs, replacing on both sides
51650	1,5	Brake piston, replacing seals
517	Null	Rear axle
51701	0,5	Brake linings, checking wear
51704	3	Brake disc, replacing both sides
51750	1,5	Brake piston, replacing seals

#### 52 Hydraulic brake system

52001	0,5	Brake system, checking function, hydraulic
52002	0,5	Brake system, checking function, retardation
52004	0,5	Brake system, adjusting unloading pressure
52005	0,5	Brake system, check and adjusting pressure in circuit
52037	1	Brake system, bleeding
52508	1,75	Foot brake valve, replacing
52509	1,25	Foot brake valve removed, reconditioning

#### 55 Parking brake incl.control system

55002	0,5	Parking brake, adjusting
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#### 64 Steering

64121	1,5	Adjustable steering column, replacing
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64515	0,5	Steering system, checking and adjusting standby pressure
64528	0,5	Steering system, checking and adjusting working pressure
64560	2	Steering cylinder, repacking in machine
64577	1,5	Steering cylinder removed, reconditioning incl replacing bearings
64581	1,75	Steering valve removed, reconditioning
64582	2	Steering valve, replacing
64793	1	Auxiliary steering, replacing hydraulic pump

#### **74 Frame joint, general**

74105	0,5	Frame joint, checking clearance
74136	12	Frame joint, replacing bearings

#### **75 Axle suspension, general**

75501	1	Axle suspension, measuring axial and radial clearanse
75502	1	Axle suspension, adjusting axial clearance

#### **77 Wheel, Tyre, Hub, Crawler/Track**

77101	0,5	Wheel, removing and fitting
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#### **81 Cab, general**

81815	1	Cab suspension, rubber element replacing
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#### **83 Doors and Covers**

83104	1,75	Door, replacing
83106	0,5	Door lock, replacing
83114	0,5	Door, replacing sealing strip

#### **84 Outside trim parts, Glass, Sealing, Mouldings**

84302	6	Windscreen, replacing
84312	1	Rear window, replacing
84313	1	Side windov, replacing
84348	1	Door window, replacing

#### **87 Air Conditioning unit**

87304	1	Radiator, replacing
87306	1	Fan motor, replacing
87308	0,75	Heat control valve, replacing
87309	0,75	Heat control, replacing
87402	1	Refrigerant, draining
87403	1	Cooling unit, performance test

87405	1,75	Refrigerant, filling excl vacuum pumping
87406	4	Compressor, replacing incl draining and filling
87407	1	V-belt, replacing
87410	3,5	Condenser, replacing incl draining and filling
87411	3	Receiver, replacing incl draining and filling
87412	4	Evaporator, replacing incl draining and filling
87413	3,5	Expansion valve, replacing incl draining and filling
87414	1	Thermostat, replacing
87415	1	Compressor, replacing shaft seal (compressor removed)
87416	1	Compressor, replacing magnetic clutch (compressor removed)
87417	1,75	Compressor, replacing magnetic clutch in machine
87419	0,5	Compressor, replacing valve plate (compressor removed)

### 91 Working hydraulic and servo system

91105	3	Hydraulic tank, replacing inlet hose for pump
91111	1	Oil cooler, replacing
91138	5	Hydraulic oil tank, replacing
91209	1	Shock valve, tilt function, checking and adjusting
91211	1	Shock valve lift function, adjusting
91230	2	Central valve, replacing
91261	2	Control valve, repacking slide in machine
91303	0,25	Oil pump, checking and adjusting standby pressure
91304	0,5	Oil pump, checking and adjusting working pressure
91310	3	Oil pump, replacing
91311	3	Oil pump removed, reconditioning
91454	0,5	Servo valve, adjusting control
91455	0,5	Servo pressure, checking and adjusting
91458	3	Servo valve, replacing
91463	0,5	Servo pressure, checking by spool valve in control valve
91601	0,5	Boom suspension system, checking function
91602	0,75	Accumulator, check and adjusting
91604	1,5	Boom suspension system, checking closing pressure
91605	1	Boom suspension system, checking opening pressure

**94 Unit for load handling**

94502	1	Lift frame, replacing bearing in lower bucket- or implement attachment
94503	0,5	Implement attachment, measuring clearance of lower bearing
94504	2	Lift cylinder, replacing
94505	3	Lift cylinder, repacking in machine
94506	2	Lift cylinder removed, repacking
94507	0,75	Tilt cylinder removed, replacing bearings "E-F"
94508	2	Tilt cylinder, replacing
94509	2	Tilt cylinder, repacking in machine
94510	1,5	Tilt cylinder removed, repacking
94511	1	Implemental attachment, replacing hydraulic cylinder
94512	1	Lift cylinder removed, replacing bearings "C-P"
94516	4	Lift frame, replacing bearing in upper mounting "O"
94545	1	Implemental attachment/bucket attachment, replacing bushes "A"
94554	0,75	Implement attachment, replacing
94556	1	Implement attachment, repacking removed hydraulic cylinder
94562	1	T-link upper, replacing "HIJ"
94563	0,75	T-link upper removed, replacing bearings "HIJ"
94564	1,5	T-link, lower, replacing "IB"
94565	1	T-link lower removed, replacing bearing "IB"
94566	1	Tilt link, replacing "GH"
94567	0,75	Tilt link removed, replacing bearings "GH"
94568	3	Tilt arm, replacing bearing "GDF"
94569	2	Tilt arm, replacing "GDF"
94570	0,75	Tilt arm removed, replacing bearing "GDF"

Document Title: <b>E-tool</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/18/2026</b>
Profile:			

### E-tool

#### Drawings of tool (E-tool ) which can be made in your own workshop

The measurements on the drawings are given in mm, unless otherwise stated (1 mm = 0.0397 in)

#### E 616 Trolley

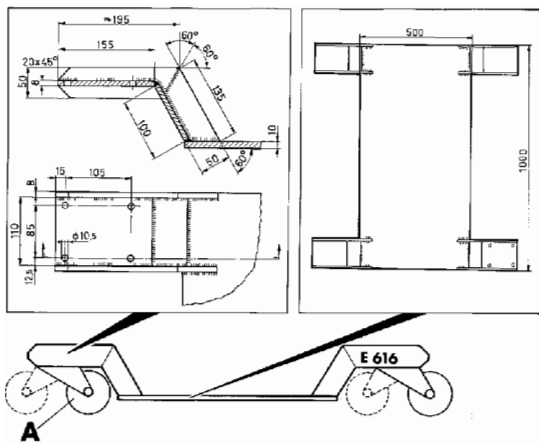


Figure 1

A. Castor, 4 pcs

#### E1351 Spanner

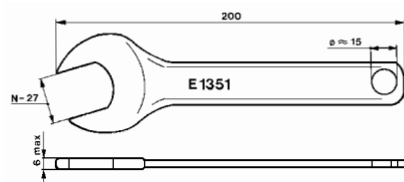
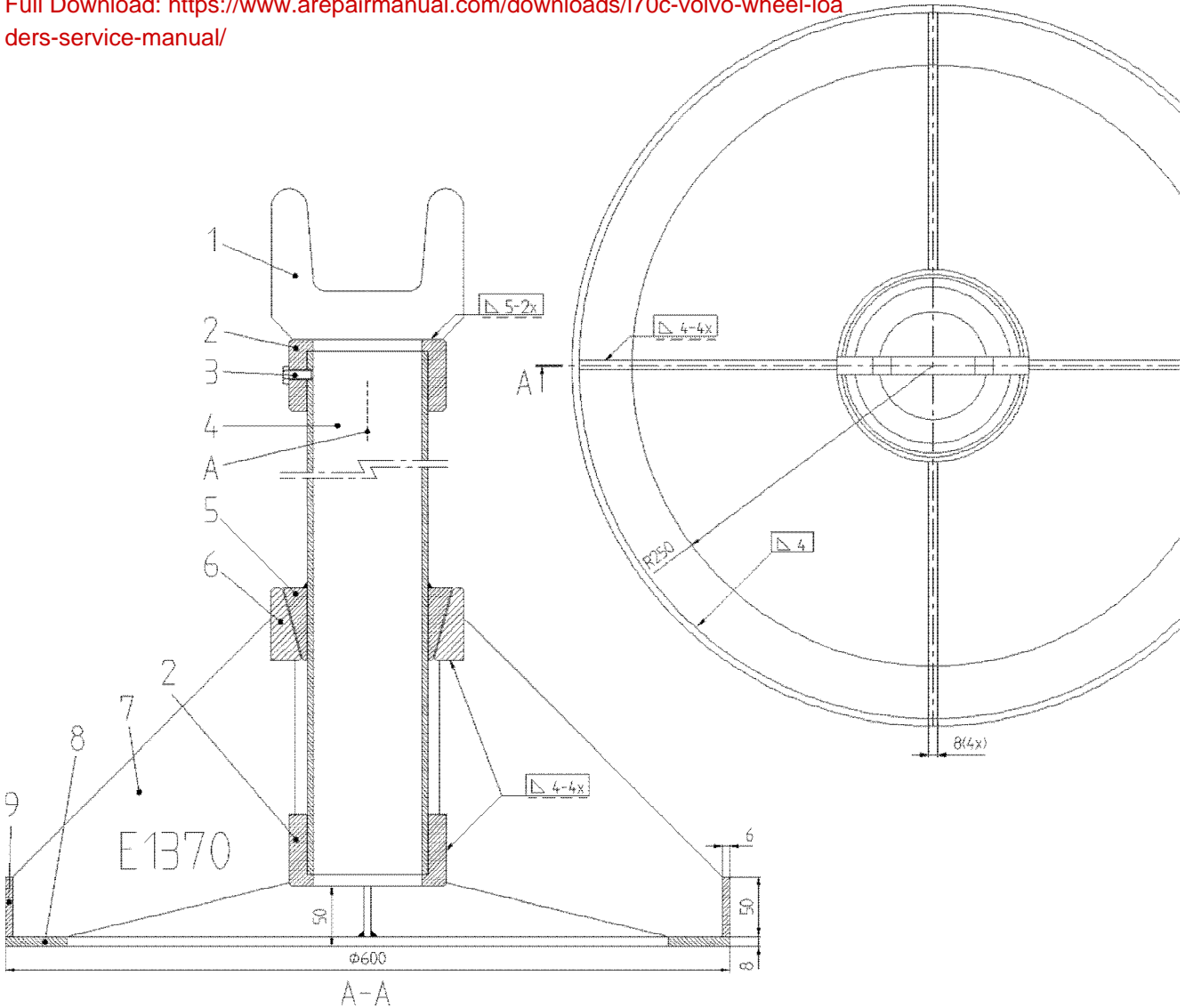


Figure 2

Blank standard open end spanner

#### E1370 Support



**Figure 3**

A	Is marked: Max. load 2.5 tonnes E1370 and the manufacturer's name.
1	13701 Material, plate SIS 2172
2	13702 Material, plate SIS 2172
3	Bolt M8x20
4	Pipe, DIN 2391 - Pcs 35 $\phi$ 100X5.0 L= 2250
5	13705 Material, SIS 2172
6	13706 Material, SIS 2172
7	13707 Material, SIS 2172
8	Material, SIS 2172
9	Material, SIS 2172 L=1866

**E 13701 Support**