

V O L V O



Volvo Wheel Loaders 24.1-33.1 t 304-380 hp

# L180H

Volvo Construction Equipment

# Volvo L150H, L180H, L220H in detail

## Engine

V-ACT Stage V 13 liter, 6-cylinder straight turbocharged diesel engine with 4 valves per cylinder, overhead camshaft and electronically controlled unit injectors. The engine has wet replaceable cylinder liners and replaceable valve guides and valve seats. The throttle applications is transmitted electrically from the throttle pedal or the optional hand throttle .

**Air Cleaning:** 3 stages.

**Cooling system:** Hydrostatic, electronically controlled fan and intercooler of the air-to-air type.

## L150H

Engine	Volvo	D13J
Max. power at	r/min	1 300
ECE R120 net	kW	224
	hp	304
ISO 9249, SAE J1349 net	kW	223
	hp	303
Max. torque at	r/min	1 000
SAE J1995 gross	Nm	1 960
ISO 9249, SAE J1349 net	Nm	1 957
Economic working range	r/min	800 - 1 600
Displacement	l	12.8

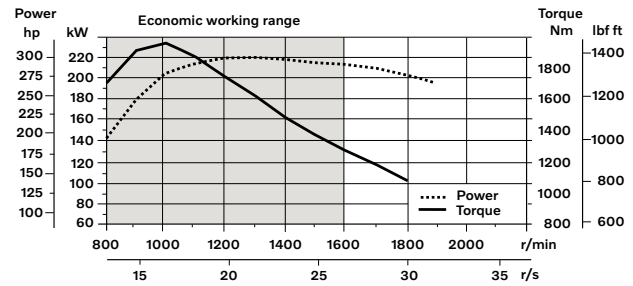
## L180H

Engine	Volvo	D13J
Max. power at	r/min	1 300 - 1 400
ECE R120 net	kW	251
	hp	341
ISO 9249, SAE J1349 net	kW	250
	hp	340
Max. torque at	r/min	1 000
SAE J1995 gross	Nm	2 030
ISO 9249, SAE J1349 net	Nm	2 024
Economic working range	r/min	800 - 1 600
Displacement	l	12.8

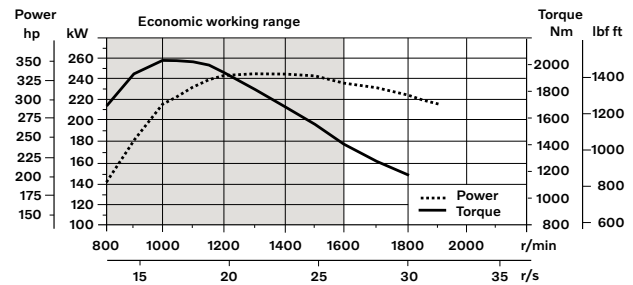
## L220H

Engine	Volvo	D13J
Max. power at	r/min	1 300 - 1 400
ECE R120 net	kW	280
	hp	380
ISO 9249, SAE J1349 net	kW	279
	hp	379
Max. torque at	r/min	1 100
SAE J1995 gross	Nm	2 231
ISO 9249, SAE J1349 net	Nm	2 220
Economic working range	r/min	800 - 1 600
Displacement	l	12.8

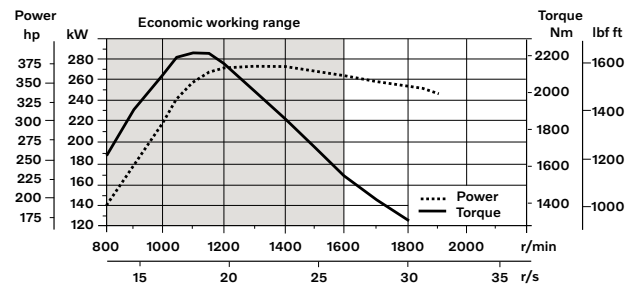
## L150H



## L180H



## L220H



Drivetrain				
<b>Torque converter:</b> Single-stage.				
<b>Transmission:</b> Volvo countershaft transmission with single lever control. Fast and smooth shifting of gears with Pulse Width Modulation (PWM) valve. Torque converter with lockup.				
<b>Transmission:</b> Volvo Automatic Power Shift (APS) with fully automatic shifting 1-4 and mode selector with 4 different gear shifting programs, including AUTO. Also equipped with Rimpull control to avoid wheel spin and optimize bucket filling.				
<b>Axles:</b> Volvo fully floating drive shafts with planetary hub reductions and nodular iron axle housing. Fixed front axle and oscillating rear axle. 100% differential lock on the front axle. Optional: Limslip rear.				
	L150H	L180H	L220H	
Transmission	Volvo HTL 223	HTL 223	HTL 310	
Torque multiplication, stall ratio	2.09:1	2.09:1	2.02:1	
Maximum speed, forward/reverse				
1st gear	km/h	6.1	6.1	6.7 / 6.6
2nd gear	km/h	12.6	12.6	11.6 / 11.4
3rd gear	km/h	23.5	23.5	21.7 / 21.4
4th gear	km/h	38	38	36.5 / 36.1
Measured with tires		26.5 R25 L3	26.5 R25 L3	29.5 R25 L4
Front axle/rear axle		Volvo/AWB 40B/40C	Volvo/AWB 40B/40B	Volvo/AWB 50/41
Rear axle oscillation	± °	15	15	15
Ground clearance	mm	610	610	600
at oscillation	°	15	15	15

Electrical system				
Central warning system: Contronic electrical system with central warning light and buzzer for following functions: - Serious engine fault - Low steering system pressure - Over speed warning engine - Interruption in communication (computer fault) Central warning light and buzzer with the gear engaged for the following functions. - Low engine oil pressure - High engine oil temperature - High charge air temperature - Low coolant level - High coolant temperature - High crank case pressure - Low transmission oil pressure - High transmission oil temperature - Low brake pressure - Engaged parking brake - Fault on brake charging - Low hydraulic oil level - High hydraulic oil temperature - Overspeeding in engaged gear - High brake cooling oil temperature front and rear axles.				
	L150H	L180H	L220H	
Voltage	V	24	24	24
Batteries	V	2 x 12	2 x 12	2 x 12
Battery capacity	Ah	2 x 170	2 x 170	2 x 170
Cold cranking capacity, approx	A	1 000	1 000	1 000
Alternator rating	W/A	2 280/80	2 280/80	2 280/80
Starter motor output	kW	7	7	7

Brake system				
<b>Service brake:</b> Volvo dual-circuit system with nitrogen charged accumulators. Outboard mounted hydraulically operated, fully sealed oil circulation-cooled wet disc brakes. The operator can select automatic disengagement of the transmission when braking using Contronic.				
<b>Parking brake:</b> Dry disc brake. Applied by spring force, electro-hydraulic release with a switch on the instrument panel.				
<b>Secondary brake:</b> Dual brake circuits with rechargeable accumulators. One circuit or the parking brake fulfills all safety requirements.				
<b>Standard:</b> The brake system complies with the requirements of ISO 3450.				
	L150H	L180H	L220H	
Number of brake discs per wheel front/rear		1/1	1/1	2/1
Accumulators		2 x 1.0 + 3 x 0.5	2 x 1.0 + 1 x 0.5	2 x 1.0 + 1 x 0.5
Cab				
<b>Instrumentation:</b> All important information is centrally located in the operator's field of vision. Display for Contronic monitoring system.				
<b>Heater and defroster:</b> Heater coil with filtered fresh air and fan with auto and 11 speeds. Defroster vents for all window areas.				
<b>Operator's seat:</b> Operator's seat with adjustable suspension and retractable seatbelt. The seat is mounted on a bracket on the rear cab wall and floor. The forces from the retractable seatbelt are absorbed by the seat rails.				
<b>Standard:</b> The cab is tested and approved according to ROPS (ISO 3471), FOPS (ISO 3449). The cab meets with requirements according to ISO 6055 (Operator overhead protection - Industrial trucks) and SAE J386 ("Operator Restraint System"). Refrigerant of the type R134a is used when this machine is equipped with air conditioning. Contains fluorinated greenhouse gas R134a, Global Warming Potential 1.430 t CO2-eq				
	L150H	L180H	L220H	
Emergency exit: Use emergency hammer to break window				
Ventilation	m <sup>3</sup> /min	9	9	9
Heating capacity	kW	16	16	16
Air conditioning (optional)	kW	7.5	7.5	7.5
Lift Arm System				
Torque Parallel linkage (TP-linkage) with high breakout torque and parallel action throughout the entire lifting range.				
	L150H	L180H	L220H	
Lift cylinders		2	2	2
Cylinder bore	mm	160	180	190
Piston rod diameter	mm	90	90	90
Stroke	mm	784	788	768
Tilt cylinder		1	1	1
Cylinder bore	mm	220	240	250
Piston rod diameter	mm	110	120	120
Stroke	mm	452	480	455

# Volvo L150H, L180H, L220H in detail

## Hydraulic system

**System supply:** Two load-sensing axial piston pumps with variable displacement. The steering function always has priority.  
**Valves:** Double-acting 2-spool valve. The main valve is electro operated.  
**Lift function:** The valve has four positions; raise, hold, lower and floating position. Inductive/magnetic automatic boom kickout can be switched on and off and is adjustable to any position between maximum reach and full lifting height.  
**Tilt function:** The valve has three functions including rollback, hold and dump. Inductive/magnetic automatic tilt can be adjusted to the desired bucket angle.  
**Cylinders:** Double-acting cylinders for all functions.  
**Filter:** Full flow filtration through 10 micron (absolute) filter cartridge.

		L150H	L180H	L220H
Working pressure maximum, pump 1 for working hydraulic system	MPa	29	29	29
Flow at engine speed	l/min	180	217	252
	MPa	10	10	10
Working pressure maximum, pump 2 for steering-, brake-, pilot- and working hydraulic system	MPa	31	31	31
Flow at engine speed	l/min	202	202	202
	MPa	10	10	10
Working pressure maximum, pump 3 for brake- and cooling fan system	MPa	25	25	25
Flow at engine speed	l/min	83	83	83
	MPa	10	10	10
Pilot system, working pressure	MPa	3.5	3.5	3.5
Cycle times				
Lift	s	5.9	6.4	6.8
Tilt	s	2	1.8	1.6
Lower, empty	s	3.7	3.3	3.2
Total cycle time	s	11.6	11.5	11.6

## Steering System

**Steering system:** Load-sensing hydrostatic articulated steering.  
**System supply:** The steering system has priority feed from a load-sensing axial piston pump with variable displacement.  
**Steering cylinders:** Two double-acting cylinders.

		L150H	L180H	L220H
Steering cylinders		2	2	2
Cylinder bore	mm	100	100	100
Rod diameter	mm	60	60	60
Stroke	mm	390	525	525
Working pressure	MPa	21	21	21
Maximum flow	l/min	202	202	202
Maximum articulation	± °	37	37	37

## Service Refill

**Service accessibility:** Large, easy-to-open hood covering whole engine department, electrically operated. Fluid filters and component breather air filters promote long service intervals. A quick-fit adapter on the hydraulic tank provides faster hydraulic oil fill. Possibility to monitor, log and analyze data to facilitate troubleshooting.

		L150H	L180H	L220H
Fuel tank	l	366	366	366
DEF/AdBlue® tank	l	31	31	31
Engine coolant	l	55	55	55
Hydraulic oil tank	l	156	156	226
Transmission oil	l	48	48	48
Engine oil	l	50	50	50
Axle oil front	l	46	46	77
Axle oil rear	l	55	55	71

## Sound Level

		L150H	L180H	L220H
Sound pressure level in cab according to ISO 6396				
L <sub>pA</sub>	dB	69	70	70
External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC				
L <sub>WA</sub>	dB	108	108	109

# Specifications

Tires L150H, L180H: 26.5 R25 L3. Tires L220H: 29.5 R25 L3  
Tire deflection: standard

		Standard boom			Long boom		
		L150H	L180H	L220H	L150H	L180H	L220H
B	mm	7 070	7 190	7 480	7 570	7 620	7 800
C	mm	3 550	3 550	3 700	3 550	3 550	3 700
D	mm	480	480	530	470	490	530
F	mm	3 580	3 580	3 730	3 570	3 590	3 730
G	mm	2 134	2 134	2 135	2 157	2 133	2 133
J	mm	3 920	4 060	4 230	4 490	4 560	4 600
K	mm	4 340	4 470	4 660	4 900	4 970	5 020
O	°	58	57	56	59	55	56
P <sub>max</sub>	°	50	49	48	49	49	48
R	°	45	45	43	48	48	44
R <sub>1</sub> *	°	48	48	47	53	53	49
S	°	66	71	65	61	63	63
T	mm	93	131	119	149	207	121
U	mm	520	570	600	640	660	680
X	mm	2 280	2 280	2 400	2 280	2 280	2 400
Y	mm	2 960	2 960	3 150	2 960	2 960	3 150
Z	mm	3 510	3 810	4 050	3 960	4 180	4 380
a <sub>2</sub>	mm	6 790	6 790	7 100	6 790	6 790	7 100
a <sub>3</sub>	mm	3 820	3 820	3 960	3 820	3 820	3 960
a <sub>4</sub>	±°	37	37	37	37	37	37

\* Carry position SAE

**Bucket:** L150H: 4.0 m<sup>3</sup> GP STE PT SEG

L180H: 4.6 m<sup>3</sup> GP STE PT SEG

L220H: 5.2 m<sup>3</sup> GP STE PT SEG

**L150H** Sales code: WLA80713

Operating weight (incl. logging cw 1 140 kg): 25 660 kg  
Operating load: 7 700 kg

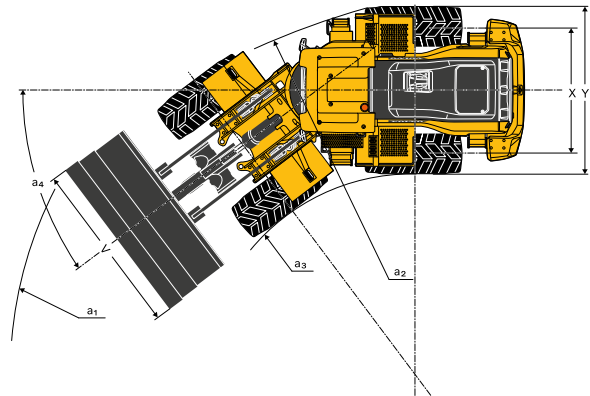
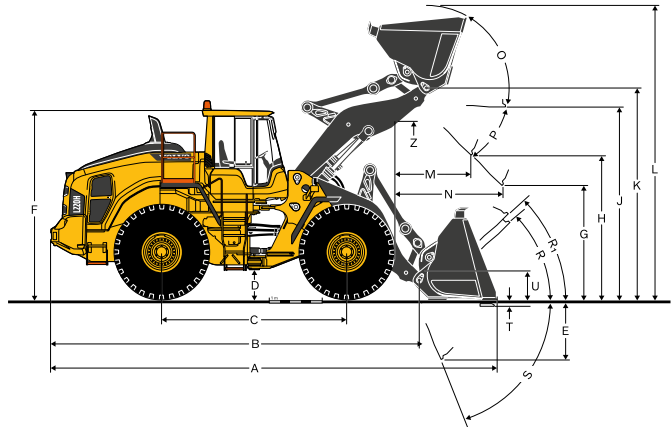
**L180H** Sales code: WLA80027

Operating weight (incl. logging cw 1 140 kg): 28 470 kg  
Operating load: 8 710 kg

**L220H** Sales code: WLA80852

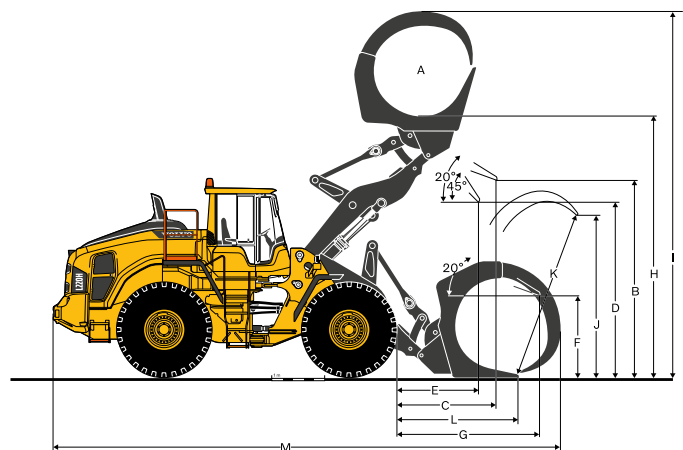
Operating weight (incl. logging cw 870 kg): 32 810 kg  
Operating load: 10 080 kg

Where applicable, specifications and dimensions are according to ISO 7131, SAE J732, ISO 7546, SAE J742, ISO 14397, SAE J818.













Tires L150H, L180H: 775/65 R29 L3 | Tires L220H: 875/65 R29 L4

		L150H	L180H	L220H
A	m <sup>2</sup>	3.1	3.5	4
B	mm	3 660	3 870	3 920
C	mm	2 110	2 150	2 270
D	mm	2 960	3 150	3 160
E	mm	1 650	1 720	1 780
F	mm	1 630	1 700	1 640
G	mm	2 930	3 040	3 230
H	mm	4 990	5 170	5 350
I	mm	7 270	7 610	7 730
J	mm	3 080	3 370	3 620
K	mm	3 340	3 710	3 940
L	mm	2 290	2 410	2 630
M	mm	9 680	9 980	10 380



# Volvo L180H Specifications

## L180H

Tires 26.5 R25 L3		REHANDLING				GENERAL PURPOSE			ROCK***	LIGHT MATERIAL	LONG BOOM*
											
		4.8 m³ STE P BOE	5.2 m³ STE P BOE	5.5 m³ STE P BOE	5.8 m³ STE P BOE	4.4 m³ STE P T SEG	4.6 m³ STE P T SEG	4.8 m³ STE P T SEG	4.2 m³ SPN P T SEG	7.8 m³ LM P	4.6 m³ STE P T SEG
Volume, heaped ISO/SAE	m³	4.8	5.2	5.5	5.8	4.4	4.6	4.8	4.2	7.8	4.6
Volume at 110% fill factor	m³	5.3	5.7	6.1	6.4	4.8	5.1	5.3	4.6	8.6	5.1
Static tipping load, straight	kg	23 670	23 520	23 350	23 210	21 540	21 560	21 360	22 250	20 430	-3 820
at 35° turn	kg	21 010	20 860	20 700	20 570	19 140	19 150	18 960	19 750	18 070	-3 480
at full turn	kg	20 710	20 560	20 390	20 260	18 860	18 880	18 690	19 470	17 800	-3 450
Breakout force	kN	224.9	224.2	216.2	210.0	235.9	236.0	226.4	212.6	173.5	+3.9
A	mm	8 890	8 890	8 960	9 010	9 000	9 000	9 070	9 140	9 360	+470
E	mm	1 430	1 430	1 490	1 540	1 530	1 530	1 590	1 650	1 860	+20
H**)	mm	3 060	3 050	3 010	2 970	2 990	2 990	2 940	2 910	2 690	+500
L	mm	6 010	6 010	6 040	6 110	6 130	6 170	6 180	6 320	6 300	+500
M**)	mm	1 330	1 330	1 370	1 410	1 420	1 420	1 460	1 520	1 610	+20
N**)	mm	1 960	1 960	1 990	2 000	2 020	2 020	2 040	2 080	2 050	+410
V	mm	3 200	3 400	3 400	3 400	3 200	3 200	3 200	3 230	3 400	0
a <sub>1</sub> clearance circle	mm	14 800	14 990	15 010	15 040	14 850	14 850	14 880	14 960	15 220	+350
Operating weight	kg	28 070	28 190	28 290	28 360	27 020	27 060	27 120	28 440	27 470	+270






\*) Measured with 4.6 m³ GP STE P T SEG bucket Note: This only applies to genuine Volvo attachments.

\*\*) Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge measured at 45° dump angle. (Spade nose buckets at 42°.)

\*\*\*) Measured with 26.5 R25 L5 tires

### Bucket Selection Chart

The chosen bucket is determined by the density of the material and the expected bucket fill factor. The actual bucket volume is often larger than the rated capacity, due to the features of the TP linkage, including an open bucket design, good rollback angles in all positions and good bucket filling performance. The example represents a standard boom configuration. Example: Sand and gravel. Fill factor ~ 105%. Density 1.6 t/m³. Result: The 4.6 m³ bucket carries 4.8 m³. For optimum stability always consult the bucket selection chart.

Material	Bucket fill, %		Material density, t/m³	ISO/SAE bucket volume, m³	Actual volume, m³
Earth/Clay	~ 110		~ 1.7	4.4	~ 4.8
			~ 1.6	4.6	~ 5.1
			~ 1.5	4.8	~ 5.3
Sand/Gravel	~ 105		~ 1.7	4.4	~ 4.6
			~ 1.6	4.6	~ 4.8
			~ 1.5	4.8	~ 5.1
Aggregate	~ 100		~ 1.8	5.2	~ 5.2
			~ 1.7	5.5	~ 5.5
			~ 1.6	5.8	~ 5.8
Rock	≤100		~ 1.7	4.3	~ 4.3

The size of rock buckets is optimized for optimal penetration and filling capability rather than the density of the material.

Type of boom	Type of bucket	ISO/SAE Bucket volume	L180H Material density: (t/m³)							
			0,8	1,0	1,2	1,4	1,6	1,8	2,0	
Standard boom	Rehandling*	5,2 m³							5,5	5,2
		5,5 m³					5,8		5,5	
		5,8 m³			6,1		5,8			
	General purpose	4,4 m³							4,8	4,4
4,6 m³							5,1		4,6	
4,8 m³						5,3		4,8		
Rock	4,2 m³							4,2	4,0	
Light material	7,8 m³	7,8								
Long boom	Rehandling*	4,8 m³						5,0	4,8	
		5,2 m³			5,5		5,2			
	General purpose	4,4 m³				4,8			4,4	
		4,2 m³							4,2	4,0
Light material	7,8 m³	7,8								

How to read bucket fill factor

\* Including counterweight

### Supplemental Operating Data

Tires 26.5 R25 L3		Standard boom			Long boom		
		26.5 R25 L4	26.5 R25 L5	775/65 R29 L3	26.5 R25 L4	26.5 R25 L5	775/65 R29 L3
Width over tires	mm	+5	+30	+130	+5	+30	+130
Ground clearance	mm	+18	+40	+10	+18	+40	+10
Tipping load, full turn	kg	+280	+770	+600	+250	+760	+530
Operating weight	kg	+400	+1 050	+920	+400	+1 050	+1 120

# Equipment

STANDARD EQUIPMENT			
	L150H	L180H	L220H
<b>Engine</b>			
Exhaust after-treatment system	•	•	•
Two stage air cleaner, pre-cleaner, primary and secondary filter	•	•	•
Preheating of induction air	•	•	•
Fuel pre-filter with water trap	•	•	•
Fuel filter	•	•	•
Crankcase breather oil trap	•	•	•
Exterior radiator air intake protection	•	•	•
<b>Drivetrain</b>			
Automatic Power Shift	•	•	•
Fully automatic gearshifting, 1-4	•	•	•
PWM-controlled gearshifting	•	•	•
Forward and reverse switch by hydraulic lever console	•	•	•
Rimpull control	•	•	•
Indicator glass for transmission oil level	•	•	•
Differentials: Front, 100% hydraulic diff lock. Rear, conventional.	•	•	•
Optishift with Lock-up, RBB	•	•	•
Lock-up first gear	•	•	•
<b>Electrical system</b>			
24 V, pre-wired for optional accessories	•	•	•
Alternator 24V/80A/2280W	•	•	•
Battery disconnect switch	•	•	•
Fuel gauge	•	•	•
Hour meter	•	•	•
Electric horn	•	•	•
Instrument cluster:			
Fuel level			
Diesel Exhaust Fluid/AdBlue level	•	•	•
Transmission temperature			
Coolant temperature			
Instrument lighting			
Lighting:			
Twin halogen front headlights with high and low beams			
Parking lights	•	•	•
Double brake and tail lights			
Turn signals with flashing hazard light function			
Halogen work lights (2 front and 2 rear)			

STANDARD EQUIPMENT			
	L150H	L180H	L220H
<b>Contronic monitoring system</b>			
Monitoring and logging of machine data	•	•	•
Contronic display	•	•	•
Fuel consumption	•	•	•
Diesel Exhaust Fluid/AdBlue consumption	•	•	•
Ambient temperature	•	•	•
Clock	•	•	•
Test function for warning and indicator lights	•	•	•
Brake test	•	•	•
Test function, sound level at max fan speed	•	•	•
Warning and indicator lights:			
Battery charging	•	•	•
Parking brake			
Warning and display message:			
Regeneration			
Engine coolant temperature			
Charge-air temperature			
Engine oil temperature			
Engine oil pressure			
Transmission oil temperature			
Transmission oil pressure			
Hydraulic oil temperature	•	•	•
Brake pressure			
Parking brake applied			
Brake charging			
Overspeed at direction change			
Axle oil temperature			
Steering pressure			
Crankcase pressure			
Attachment lock open			
Safety Belt Warning			
Level warnings:			
Fuel level			
Diesel Exhaust Fluid/AdBlue level			
Engine oil level	•	•	•
Engine coolant level			
Transmission oil level			
Hydraulic oil level			
Washer fluid level			
Engine torque reduction in case of malfunction indication:			
High engine coolant temperature	•	•	•
High engine oil temperature			
Low engine oil pressure			
High crankcase pressure			
High charge-air temperature			
Engine shutdown to idle in case of malfunction indication:			
High transmission oil temperature	•	•	•
Slip in transmission clutches			
Keypad, background lit	•	•	•
Start interlock when gear is engaged	•	•	•

# Equipment

STANDARD EQUIPMENT			
	L150H	L180H	L220H
<b>Hydraulic system</b>			
Main valve, double acting 2-spool with hydraulic pilots	•	•	•
Variable displacement axial piston pumps (3) for:			
1 Working hydraulics, Pilot hydraulics and Brake system	•	•	•
2 Working hydraulics, Pilot hydraulics, Steering and Brake system			
3 Cooling fan and Brake system			
Electro-hydraulic servo controls	•	•	•
Electronic hydraulic lever lock	•	•	•
Automatic boom kick-out	•	•	•
Automatic bucket positioner	•	•	•
Double-acting hydraulic cylinders	•	•	•
Indicator glass for hydraulic oil level	•	•	•
Hydraulic oil cooler	•	•	•
<b>Brake system</b>			
Dual brake circuits	•	•	•
Dual brake pedals	•	•	•
Secondary brake system	•	•	•
Parking brake, electro-hydraulic	•	•	•
Brake wear indicators	•	•	•
<b>Cab</b>			
ROPS (ISO 3471), FOPS (ISO 3449)	•	•	•
Single key kit door/start	•	•	•
Acoustic inner lining	•	•	•
Cigarette lighter, 24 V power outlet	•	•	•
Lockable door	•	•	•
Cab heating with fresh air inlet and defroster	•	•	•
Fresh air inlet with two filters	•	•	•
Automatic heat control	•	•	•
Floor mat	•	•	•
Dual interior lights	•	•	•
Interior rear-view mirrors	•	•	•
Dual exterior rear-view mirrors	•	•	•
Sliding window, right side	•	•	•
Tinted windshield glass	•	•	•
Retractable seatbelt (SAE J386)	•	•	•
Adjustable steering wheel	•	•	•
Storage compartment	•	•	•
Document pocket	•	•	•
Sun visor	•	•	•
Beverage holder	•	•	•
Windshield washer front and rear	•	•	•
Windshield wipers front and rear	•	•	•
Interval function for front and rear wipers	•	•	•

STANDARD EQUIPMENT			
	L150H	L180H	L220H
<b>Service and maintenance</b>			
Engine oil remote drain and fill	•	•	•
Transmission oil remote drain and fill	•	•	•
Lubrication manifolds, ground accessible	•	•	•
Pressure check connections: transmission and hydraulic, quick-connects	•	•	•
Quick-fit hydraulic oil fill	•	•	•
Tool box, lockable	•	•	•
<b>External equipment</b>			
Orange hand rails	•	•	•
Fenders, front and rear	•	•	•
Viscous cab mounts	•	•	•
Rubber engine and transmission mounts	•	•	•
Frame, joint lock	•	•	•
Vandalism lock prepared for			
Engine compartment	•	•	•
Radiator grille			
Lifting eyes	•	•	•
Tie-down eyes	•	•	•
Fabricated counterweight	•	•	•
Counterweight, pre-drilled for optional guards	•	•	•



**OPTIONAL EQUIPMENT**

	L150H	L180H	L220H
<b>Engine</b>			
Air pre-cleaner, cyclone type	•	•	•
Air pre-cleaner, oil-bath type	•	•	•
Air pre-cleaner, turbo type	•	•	•
Engine auto shutdown	•	•	•
Engine delayed shutdown	•	•	•
Engine block heater 230V/110V	•	•	•
Fuel fill strainer	•	•	•
Fuel heater	•	•	•
Hand throttle control	•	•	•
Max. fan speed, hot climate	•	•	•
Radiator, corrosion-protected	•	•	•
Reversible cooling fan	•	•	•
Reversible cooling fan and axle oil cooler	•	•	•
<b>Tires</b>			
26.5 R25	•	•	–
775/65 R29	•	•	–
29.5 R25	–	–	•
875/65 R29	–	–	•
<b>Drivetrain</b>			
Diff lock front 100%, Limited Slip rear	•	•	•
Speed limiter	•	•	•
Wheel/axle seal guards	•	•	•
<b>Electrical system</b>			
Anti-theft device	•	•	•
Emergency stop	•	•	•
Locking device, Tag out Lock out	•	•	•
Headlights, assym. left	•	•	•
License plate holder, lighting	•	•	•
Rear vision system, colour LCD monitor in the cab	•	•	•
Rear view mirrors, Long arm	•	•	•
Rear view mirrors, adjustable, el.heated, Long arm	•	•	•
Reduced function working lights, reverse gear activated	•	•	•
Reverse alarm, audible	•	•	•
Reverse alarm, white noise	•	•	•
Reverse warning light, strobe lighting	•	•	•
Seatbelt indicator, external	•	•	•
Shortened headlight support brackets	•	•	•
Side marker lamps	•	•	–
Warning beacon LED	•	•	•
Warning beacon LED automatic	•	•	•
LED Head Light	•	•	•
LED tail light	•	•	•
LED working lights, attachments	•	•	•
LED working lights on cab, front and rear	•	•	•
LED working lights on cab, front, 2 alt. 4 LED lamps	•	•	•
LED working lights on cab, rear, 2 alt. 4 LED lamps	•	•	•
LED working lights, rear in grille, 2 LED lamps	•	•	•
LED working lights, front above head lamps, 2 LED lamps	•	•	•
LED work lights, side on cab, 4 LED lamps	•	•	•
LED light packages	•	•	•
Working lights halogen, attachments	•	•	•
Working lights on cab halogen, front and rear	•	•	•
Working lights on cab halogen, rear	•	•	•
Electrical distribution unit 24 volt	•	•	•
Alternator 120 amp, heavy-duty	•	•	•
Radar detect system	•	•	•
Forward camera, colour	•	•	•
Parking brake alarm, audible for air susp seats	•	•	•
Jump start connector, NATO-Type	•	•	•
Max Boom height	•	•	•
Can Bus Interface	•	•	•
Delayed Engine Shutdown	•	•	•
Co Pilot available	•	•	•
Rearview camera in Co pilot	•	•	•
OnBoard Weighing	•	•	•
Tire pressure monitoring	•	•	•
MAP	•	•	•

**OPTIONAL EQUIPMENT**

	L150H	L180H	L220H
<b>Hydraulic system</b>			
Boom suspension system	•	•	•
Separate attachment locking	•	•	•
Arctic kit, for 3rd function	•	•	•
Boom cylinder hose and tube guards	•	•	•
Hydraulic fluid, biodegradable, Volvo	•	•	•
Hydraulic fluid, fire-resistant	•	•	•
Hydraulic fluid, for hot climate	•	•	•
Hydraulic 3rd function	•	•	•
hydraulic 3rd-4th function	•	•	•
Single lever control, hydraulics 2 functions	•	•	•
Single lever control, hydraulics 3 functions	•	•	•
Single lever control, hydraulics 4 functions	•	•	•
<b>Brake system</b>			
Oil cooler and filter front & rear axle	•	•	•
Stainless steel, brake lines	•	•	–
<b>Cab</b>			
Anchorage for Operator's manual	•	•	•
Automatic Climate Control, ACC	•	•	•
ACC control panel, with Fahrenheit scale	•	•	•
Asbestos dust protection filter	•	•	•
Ashtray	•	•	•
Cab air pre-cleaner, cyclone type	•	•	•
Carbon filter	•	•	•
Cover plate, under cab	•	•	•
Lunch box holder	•	•	•
Volvo Armrest, operator's seat, left	•	•	•
Operator's seat, Volvo air susp, heavy-duty, high back, heated	•	•	•
Operator's seat, (air seat std) 2-point seat belt	•	•	•
Operator's seat, (air seat std) 3-point seat belt	•	•	•
Operator's seat, Premium Comfort ISRI	•	•	•
Operator's seat, Premium Comfort ISRI 3-point seat belt	•	•	•
Radio installation kit incl. 12 volt outlet, left side	•	•	•
Radio installation kit incl. 12 volt outlet, right side	•	•	•
Radio (with AUX, Bluetooth and USB connection)	•	•	•
DAB Radio	•	•	•
Subwoofer	•	•	•
Steering wheel knob	•	•	•
Sun blinds, rear windows	•	•	•
Sun blinds, side windows	•	•	•
Timer cab heating	•	•	•
Window, sliding, door	•	•	•
Universal door/ignition key	•	•	•
Remote door opener	•	•	•
Forward view mirror	•	•	•
Cab heater power outlet 240V	•	•	•
Cab, Hot applications. Roof, steel	•	•	•
Fire extinguisher cab	•	•	•
Outside steel protection cab	•	•	•
Rear view mirrors long arm, cab	•	•	•
Reinforced windshield, flat	•	•	•

# Equipment

## OPTIONAL EQUIPMENT

	L150H	L180H	L220H
<b>Service and maintenance</b>			
Automatic lubrication system	•	•	•
Automatic lubrication system for long boom	•	•	•
Grease nipple guards	•	•	•
Oil sampling valve	•	•	•
Quick engine oil change	•	•	•
Refill pump for grease to lube system	•	•	•
Tool kit	•	•	•
Wheel nut wrench kit	•	•	•
CareTrack, GSM, GSM/Satellite	•	•	•
Telematics, Subscription	•	•	•
Belly guard front	•	•	•
Belly guard rear	•	•	•
Cover plate, heavy-duty, front frame	•	•	•
Cover plate, rear frame	•	•	•
Cab roof, heavy-duty	•	•	•
Guards for front headlights	•	•	•
Guards for radiator grill	•	•	•
Guards for tail lights	•	•	•
Windows, side and rear guards	•	•	•
Windshield guard	•	•	•
Corrosion protection, painting of machine	•	•	•
Corrosion protection, painting of attachment bracket	•	•	–
Option for machines without dinitrol	•	•	•
Bucket Teeth protection	•	•	–
<b>External equipment</b>			
Cab ladder, rubber-suspended	•	•	•
Escape Ladder, left fender	•	•	•
Handles on counterweight	•	•	•
Deleted front mudguards	•	•	•
Fire suppression system	•	•	•
Mudguards, full cover, front and rear for 80-series tires	•	•	•
Mudguards, full cover, front and rear for 65-series tires	•	•	•
Long boom	•	•	•
Tow hitch	•	•	•

## OPTIONAL EQUIPMENT

	L150H	L180H	L220H
<b>Other equipment</b>			
CE-marking	•	•	•
Comfort Drive Control (CDC)	•	•	•
Counterweight, logging	•	•	•
Counterweight, signal painted, chevrons	•	•	•
Secondary steering with automatic test function	•	•	•
Sound decal, EU	•	•	•
Sound decal, USA	•	•	•
Reflecting stickers (decals), machine contour	•	•	•
Reflecting stickers (stripes), machine contour Cab	•	•	•
Noise reduction kit, exterior	•	•	•
Sign, 50 km/h	•	–	–
<b>Attachments</b>			
Buckets:	•	•	•
Rock straight or spade nose	•	•	•
General purpose	•	•	•
Re-handling	•	•	•
Side-dump	•	•	•
Light material	•	•	•
Wear parts:	•	•	•
Bolt-on and weld-on bucket teeth	•	•	•
Segments	•	•	•
Cutting edge in three sections, bolt-on	•	•	•
Fork equipment	•	•	•
Material handling arm	•	•	•
Log grapples	•	•	•

**V O L V O**