

**V O L V O**



Volvo Wheel Loaders 18-20.7 t / 39,680-45,635 lb 256 hp

**L110H**

Volvo Construction Equipment

# L110H

With high breakout force, ultimate parallel movement and easy bucket filling, this medium sized 20-tonne (44,800 lb) wheel loader is ready to tackle a range of applications.



# Made to move

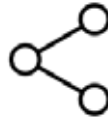
The second generation of Volvo L110H Wheel Loader is as versatile, fuel efficient and reliable as its forerunner but it comes with a batch of improvements that increase availability. A new Volvo engine and power strategy, plus a host of maintenance-friendly features trigger benefits for the operators, service technicians and machine owners.

## Fuel efficiency



- Second generation OptiShift with lockup
- Reverse By Braking
- Rimpull control
- Eco pedal
- Dry P-brake

## Loaded for versatility



- Unique Torque Parallel linkage
- Range of matched Volvo Attachments
- Custom built attachments
- Tailored application packages

## Operator comfort



- Removed main switch, ignition key activates and powers the machine
- Choice of single or multi levers
- Choice of three hydraulic response modes
- Auto bucket leveling function
- Comfort Drive Control (option)
- Premium seat (option)

## Load Assist, powered by Volvo Co-Pilot



- On-Board Weighing
- Operator Coaching
- Tire Pressure Monitoring System (option)
- Collision Mitigation System integrated into the Volvo Co-Pilot display

## Uptime



- Auto engine regeneration while working
- 1,000 hr engine service interval
- Removed main switch = no risk of flat battery because left on
- Delayed engine shutdown reduces wear
- Lifetime Frame and Structure warranty

## Serviceability



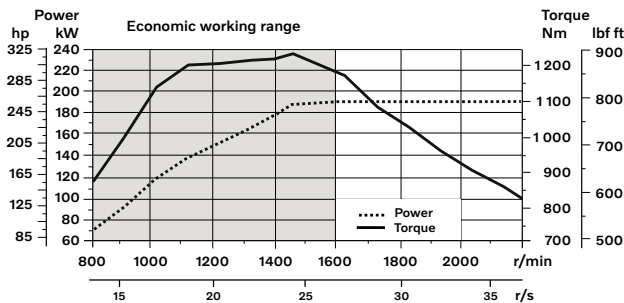
- Electric fuel priming pump
- Lockout-tagout (LOTO) on service switch
- Electrically-operated engine hood with large opening
- Slidable cooler installation
- Drain/fill connector for hydraulic oil
- Brake wear indicators

# Volvo L110H in detail

## Engine

8 litre, 6-cylinder in-line turbocharged diesel engine with an advanced common rail fuel injection system. Fuel is distributed under high pressure from a high-pressure accumulator. One camshaft-driven high pressure pump delivers the fuel to the rail and then to the electronically operated fuel injectors via high pressure pipes. The engine meets all emission requirements and comply with Tier 4 final / EU StageV emission legislation by the help of the exhaust after treatment system (EATS) which contains the diesel oxy-catalyst (DOC) and diesel particulate filter (DPF) for regeneration, urea injector, mixing chamber, SCR and slipcat for reduction of NOx. The reduction of NOx is assisted by the use of cooled exhaust gas recirculation (EGR) as well.

Engine	Volvo	D8M
Max. power at	r/min (r/s)	1 800 (30)
ISO 14396 gross	kW (hp)	191 (256)
ISO 9249, SAE J1349 net	kW (hp)	191 (256)
Max. torque at	r/min (r/s)	1,450 (242)
ISO 9249, SAE J1349 net	Nm (ft lbf)	1,246 (922)
Economic working range	r/min (r/s)	850 - 2,100 (14.2 - 35)
Displacement	l (in <sup>3</sup> )	7.8 (473)



## Drivetrain

**Torque converter:** Single-stage.  
**Transmission:** Volvo countershaft transmission with single lever control. Fast and smooth shifting of gears with Pulse Width Modulation (PWM) valve.  
**Transmission:** 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. OptiShift transmission is also available as an option (HTL 206E).  
**Axles:** Volvo fully floating axle shafts with planetary hub reductions and cast steel axle housing. Fixed front axle and oscillating rear axle. 100% differential lock on the front axle. Optional: Limslip rear.

Transmission	Volvo	HTE 206F
Torque multiplication, stall ratio		2.47:1
<b>Maximum speed, forward/reverse</b>		
1st gear	km/h (mi/h)	7.3 (4.3)
2nd gear	km/h (mi/h)	13.7 (8.4)
3rd gear	km/h (mi/h)	28.4 (17.4)
4th gear	km/h (mi/h)	40 (24.9)
Note: 4th gear limited by ECU		
Measured with tires		750/65R25
Front axle/rear axle		AWB 31/AWB 30
Rear axle oscillation	± °	13
Ground clearance at oscillation	mm (in)	430 (181)

## Electrical system

**Central warning system:** Contrinsic 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.

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	2 x 170
Cold cranking capacity, approx	A	1,000
Alternator rating	W/A	3,479/130
Starter motor output	kW	5.5

## Brake system

**Service brake:** 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 declutch of the transmission when braking by selecting the setting in the contronics.  
**Parking brake:** Dry disc brake. Applied by spring force, electro-hydraulic release with a switch on the instrument panel.  
**Secondary brake:** Dual brake circuits with rechargeable accumulators. One circuit or the parking brake fulfills all safety requirements.  
**Standard:** The brake system complies with the requirements of ISO 3450.

Number of brake discs per wheel		1
Accumulators	l (gal)	3 x 1.0 (3 x 0.26)
Accumulators for parking brake	l (gal)	1 x 1.0 (1 x 0.26)

## Cab

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 CO<sub>2</sub>-eq.

Emergency exit: Use emergency hammer to break window

Ventilation	m <sup>3</sup> /min (yd <sup>3</sup> /min)	9 (118)
Heating capacity	kW	16
Air conditioning (optional)	kW	7.5

## Lift Arm System

Torque Parallel linkage (TP-linkage) with high breakout torque and parallel movement throughout the entire lifting range.

Lift cylinders		2
Cylinder bore	mm (in)	150 (59)
Piston rod diameter	mm (in)	80 (31)
Stroke	mm (in)	676 (266)
Tilt cylinder		1
Cylinder bore	mm (in)	210 (83)
Piston rod diameter	mm (in)	110 (43)
Stroke	mm (in)	412 (162)

## Hydraulic system

**System supply:** Two load-sensing axial piston pumps with variable displacement. The steering system always has priority.  
**Valves:** Double-acting 2-spool valve. The main valve is controlled by a 2-spool pilot valve.  
**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.

Working pressure maximum, pump 1 for working hydraulic system	MPa (bar)	27.0 ± 0.5 (270 ± 5)
---	-----------	----------------------

Flow	l/min (gal/min)	128 (338)
at	MPa (bar)	10 (100)
engine speed	r/min (r/s)	1,900 (317)

Working pressure maximum, pump 2 for steering-, brake-, pilot- and working hydraulic system	MPa (bar)	29.0 ± 0.5 (290 ± 5)
---	-----------	----------------------

Flow	l/min (gal/min)	128 (338)
at	MPa (bar)	10 (100)
engine speed	r/min (r/s)	1,900 (317)

Working pressure maximum, pump 3 for brake- and cooling fan system	MPa (bar)	21.0 ± 0.5 (210 ± 5)
--	-----------	----------------------

Flow	l/min (gal/min)	33 (87)
at	MPa (bar)	10 (100)
engine speed	r/min (r/s)	1,900 (317)

Pilot system, working pressure	MPa (bar)	3.5 ± 0.5 (35)
--------------------------------	-----------	----------------

### Cycle times

Lift	s	5.4
Tilt	s	2.1
Lower, empty	s	2.5
Total cycle time	s	10

Raise and tilt cycle times with load according to ISO 14397

## 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.

Steering cylinders		2
Cylinder bore	mm (in)	75 (31)
Rod diameter	mm (in)	50 (2)
Stroke	mm (in)	486 (191)
Working pressure	MPa (bar)	26.5 (265)
Maximum flow	l/min (gal/min)	128 (317)
Maximum articulation	± °	40

## Service Refill

**Service accessibility:** Electrically openable engine hood with large opening angle giving excellent access to the engine compartment. 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.

Fuel tank	l (gal)	270 (713)
DEF/AdBlue® tank	l (gal)	31 (66)
Engine coolant	l (gal)	38 (114)
Hydraulic oil tank	l (gal)	140 (351)
Transmission oil	l (gal)	38 (10)
Engine oil	l (gal)	30 (58)
Axle oil front	l (gal)	36 (95)
Axle oil rear	l (gal)	41 (108)

## Sound Level

Sound pressure level in cab according to ISO 6396		
L <sub>pA</sub>	dB	68
External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC		
L <sub>WA</sub>	dB	106

# Specifications

## DIMENSIONS

Tires 23.5 R25 L3			L110H			
			Standard boom		Long boom	
B	mm	ft in	6,550	21'6"	7,080	23'3"
C	mm	ft in	3,200	10'6"	3,200	10'6"
D	mm	ft in	440	1'5"	430	1'5"
F	mm	ft in	3,380	11'1"	3,380	11'1"
G	mm	ft in	2,131	7'0"	2,133	7'0"
J	mm	ft in	3,710	12'2"	4,220	13'10"
K	mm	ft in	4,030	13'3"	4,550	14'11"
O	°		55		74	
P <sub>max</sub>	°		50		47	
R	°		41		41	
R <sub>1</sub> *	°		43		47	
S	°		66		43	
T	mm	ft in	95	0'4"	106	0'4"
U	mm	ft in	430	1'5"	560	1'10"
X	mm	ft in	2,070	6'9"	2,070	6'9"
Y	mm	ft in	2,670	8'9"	2,670	8'9"
Z	mm	ft in	3,340	10'11"	3,330	10'11"
a <sub>2</sub>	mm	ft in	5,730	18'10"	5,730	18'10"
a <sub>3</sub>	mm	ft in	3,060	10'0"	3,060	10'0"
a <sub>4</sub>		±°	40		40	
With 3.0 m <sup>3</sup> STE H T bucket						

\* Carry position SAE

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

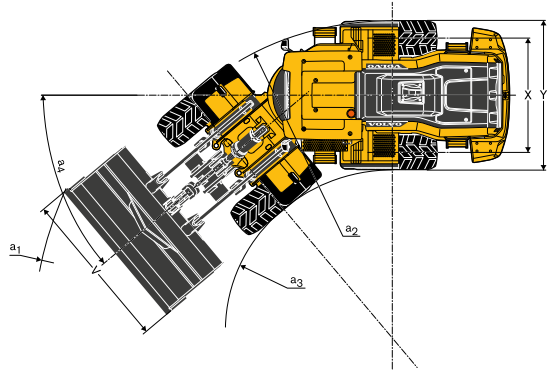
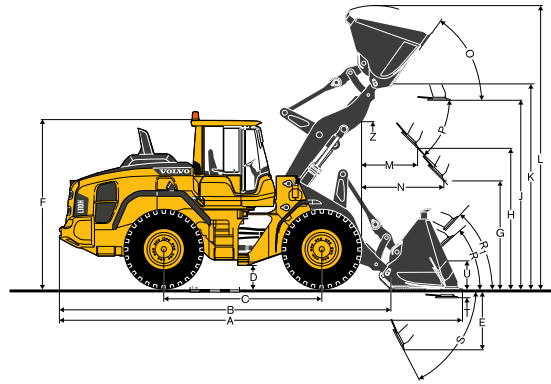
L110H Log Loader

Grapple: WLA80832

Operating weight

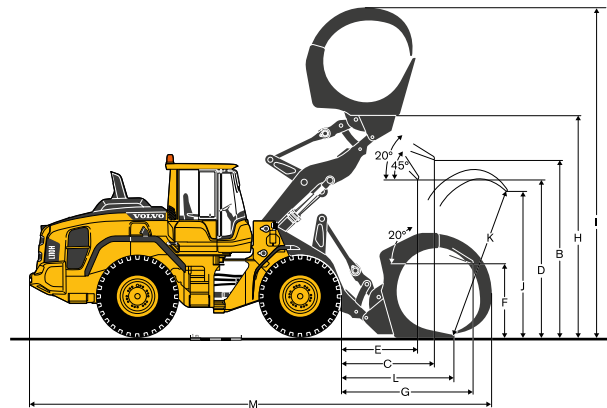
(incl. logging cw 685 kg / 1,510 lb): 20,070 kg / 44,240 lb

Operating load: 6,500 kg / 14,330 lb



## Dimensions

Dimensions			L110H	
			Tires: 750/65 R25	
A	m <sup>2</sup>	ft <sup>2</sup>	2.4	25.8
B	mm	ft in	3,480	11'5"
C	mm	ft in	1,850	6'1"
D	mm	ft in	2,860	9'5"
E	mm	ft in	1,460	4'9"
F	mm	ft in	1,530	5'0"
G	mm	ft in	2,720	8'11"
H	mm	ft in	4,600	15'1"
I	mm	ft in	6,630	21'9"
J	mm	ft in	2,790	9'2"
K	mm	ft in	2,990	9'10"
L	mm	ft in	2,050	6'9"
M	mm	ft in	8,830	29'0"



**L110H**

		REHANDLING*				GENERAL PURPOSE								ROCK**		LIGHT MATERIAL				LONG BOOM***		
Tires 23.5R25 XHA2 L3																						
		3.5 m <sup>3</sup> / 4.6 yd <sup>3</sup> STE P BOE		3.5 m <sup>3</sup> / 4.6 yd <sup>3</sup> STE H BOE		3.0 m <sup>3</sup> / 3.9 yd <sup>3</sup> STE P T		3.0 m <sup>3</sup> / 3.9 yd <sup>3</sup> STE H T		3.4 m <sup>3</sup> / 4.4 yd <sup>3</sup> STE P BOE		3.4 m <sup>3</sup> / 4.4 yd <sup>3</sup> STE H BOE		2.7 m <sup>3</sup> / 3.5 yd <sup>3</sup> SPN P T SEG		5.5 m <sup>3</sup> / 7.2 yd <sup>3</sup> LM H		9.5 m <sup>3</sup> / 12.4 yd <sup>3</sup> LM H		3.0 m <sup>3</sup> / 3.9 yd <sup>3</sup> STE H T		
Volume, heaped ISO/SAE	m <sup>3</sup> yd <sup>3</sup>	3.5	4.6	3.5	4.6	3.0	3.9	3.0	3.9	3.4	4.4	3.4	4.4	2.7	3.5	5.5	7.2	9.5	12.4	3.0	3.9	
Volume at 110% fill factor	m <sup>3</sup> yd <sup>3</sup>	3.9	5.1	3.9	5.1	3.3	4.3	3.3	4.3	3.7	4.8	3.7	4.8	3.0	3.9	6.1	8.0	10.5	13.7	3.3	4.3	
Static tipping load, straight	kg lb	14,790 32,610	14,100 31,090	13,860 30,560	13,150 29,000	12,500 27,560	12,340 27,210	11,670 25,730	12,080 26,640	11,470 25,290	12,260 27,030	10,640 23,460	10,700 23,590	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150
at 35° turn	kg lb	13,150 29,000	12,500 27,560	12,340 27,210	11,670 25,730	12,080 26,640	11,470 25,290	12,260 27,030	10,640 23,460	10,700 23,590	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150	-520 -1,150
at full turn	kg lb	12,660 27,920	12,030 26,530	11,890 26,220	11,240 24,780	11,630 25,640	11,040 24,340	11,800 26,020	10,220 22,540	10,270 22,650	-530 -1,170	-530 -1,170	-530 -1,170	-530 -1,170	-530 -1,170	-530 -1,170	-530 -1,170	-530 -1,170	-530 -1,170	-530 -1,170	-530 -1,170	-530 -1,170
Breakout force	kN lbf	173.1 38,920	160.0 35,970	179.7 40,400	165.5 37,210	171.5 38,560	158.5 35,640	153.0 34,400	123.1 27,680	107.3 24,130	+3 +680	+3 +680	+3 +680	+3 +680	+3 +680	+3 +680	+3 +680	+3 +680	+3 +680	+3 +680	+3 +680	+3 +680
A	mm ft in	8,040 26'5"	8,150 26'9"	8,110 26'7"	8,220 27'0"	8,060 26'5"	8,160 26'9"	8,390 27'6"	8,580 28'2"	8,880 29'2"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"
E	mm ft in	1,220 4'0"	1,320 4'4"	1,280 4'2"	1,380 4'6"	1,230 4'0"	1,330 4'4"	1,520 5'0"	1,700 5'7"	1,960 6'5"	-310 -3'0"	-310 -3'0"	-310 -3'0"	-310 -3'0"	-310 -3'0"	-310 -3'0"	-310 -3'0"	-310 -3'0"	-310 -3'0"	-310 -3'0"	-310 -3'0"	-310 -3'0"
H	mm ft in	2,820 9'3"	2,750 9'0"	2,780 9'1"	2,710 8'11"	2,810 9'3"	2,740 9'0"	2,600 8'6"	2,420 7'11"	2,210 7'3"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"	+510 +1'8"
L	mm ft in	5,580 18'4"	5,650 18'6"	5,430 17'10"	5,490 18'0"	5,500 18'1"	5,570 18'3"	5,540 18'2"	5,840 19'2"	6,010 19'9"	+520 +1'8"	+520 +1'8"	+520 +1'8"	+520 +1'8"	+520 +1'8"	+520 +1'8"	+520 +1'8"	+520 +1'8"	+520 +1'8"	+520 +1'8"	+520 +1'8"	+520 +1'8"
M	mm ft in	1,170 3'10"	1,250 4'1"	1,220 4'0"	1,300 4'3"	1,180 3'10"	1,260 4'2"	1,400 4'7"	1,520 5'0"	1,730 5'8"	-40 -1'0"	-40 -1'0"	-40 -1'0"	-40 -1'0"	-40 -1'0"	-40 -1'0"	-40 -1'0"	-40 -1'0"	-40 -1'0"	-40 -1'0"	-40 -1'0"	-40 -1'0"
N	mm ft in	1,720 5'8"	1,760 5'9"	1,740 5'9"	1,780 5'10"	1,720 5'8"	1,760 5'9"	1,810 5'11"	1,800 5'11"	1,810 5'11"	+440 +1'5"	+440 +1'5"	+440 +1'5"	+440 +1'5"	+440 +1'5"	+440 +1'5"	+440 +1'5"	+440 +1'5"	+440 +1'5"	+440 +1'5"	+440 +1'5"	+440 +1'5"
V	mm ft in	3,000 9'10"	3,000 9'10"	2,880 9'5"	2,880 9'5"	2,880 9'5"	2,880 9'5"	2,880 9'5"	3,000 9'10"	3,400 11'2"	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
a <sub>1</sub> clearance circle	mm ft in	12,930 42'5"	12,980 42'7"	12,860 42'2"	12,910 42'4"	12,830 42'1"	12,880 42'3"	13,040 42'9"	13,260 43'6"	13,810 45'4"	+480 +1'7"	+480 +1'7"	+480 +1'7"	+480 +1'7"	+480 +1'7"	+480 +1'7"	+480 +1'7"	+480 +1'7"	+480 +1'7"	+480 +1'7"	+480 +1'7"	+480 +1'7"
Operating weight	kg lb	19,360 38,920	19,580 35,970	18,520 40,400	18,750 37,210	18,580 38,560	18,800 35,640	19,710 34,400	19,260 27,680	19,480 24,130	+250 +680	+250 +680	+250 +680	+250 +680	+250 +680	+250 +680	+250 +680	+250 +680	+250 +680	+250 +680	+250 +680	+250 +680

\* Measured with additional rehandling counterweight | \*\* With MICHELIN 23,5R25 XMINE D2 Pro L5 Tire | \*\*\* Compared to GP 3.0 m<sup>3</sup> / 3.9 yd<sup>3</sup> STE H T bucket

**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/m<sup>3</sup> (2,700 lb/yd<sup>3</sup>). Result: The 3.4 m<sup>3</sup> (4.5 yd<sup>3</sup>) bucket carries 3.6 m<sup>3</sup> (4.7 yd<sup>3</sup>). For optimum stability always consult the bucket selection chart.

Material	Bucket fill, %	Material density	ISO/SAE bucket volume		Actual volume			
			t/m <sup>3</sup>	lb/yd <sup>3</sup>	m <sup>3</sup>	yd <sup>3</sup>	m <sup>3</sup>	yd <sup>3</sup>
Earth/Clay	~ 110		1.8	3,030	3.0	3.9	3.3	4.3
			1.6	2,700	3.4	4.5	3.7	4.8
Sand/Gravel	~ 105		1.8	3,030	3.0	3.9	3.2	4.2
			1.6	2,700	3.4	4.5	3.6	4.7
Aggregate	~ 100		1.8	3,030	3.5	4.6	3.5	4.6
			1.6	2,700	3.5	4.6	3.5	4.6
Rock	≤100		1.7	2,866	2.7	3.5	2.7	3.5

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	Material density: t/m <sup>3</sup> (lb/yd <sup>3</sup> )									
			0.8 (1,349)	1.0 (1,686)	1.2 (2,024)	1.4 (2,361)	1.6 (2,698)	1.8 (3,035)	2.0 (3,373)			
Standard boom	Rehandling	P 3.5 m <sup>3</sup> (4.6 yd <sup>3</sup> )						3.7 (4.8)	3.5 (4.6)			
		H 3.5 m <sup>3</sup> (4.6 yd <sup>3</sup> )						3.7 (4.8)	3.5 (4.6)			
	General purpose	P 3.0 m <sup>3</sup> (3.9 yd <sup>3</sup> )							3.3 (4.3)	3.0 (3.9)		
		H 3.0 m <sup>3</sup> (3.9 yd <sup>3</sup> )							3.3 (4.3)	3.0 (3.9)		
	Rock	P 3.4 m <sup>3</sup> (4.5 yd <sup>3</sup> )							3.7 (4.8)	3.4 (4.5)		
		H 3.4 m <sup>3</sup> (4.5 yd <sup>3</sup> )							3.7 (4.8)	3.4 (4.5)		
Long boom	Rehandling	P 2.7 m <sup>3</sup> (3.5 yd <sup>3</sup> )								2.7 (3.5)	2.6 (3.3)	
		H 2.7 m <sup>3</sup> (3.5 yd <sup>3</sup> )								2.7 (3.5)	2.6 (3.3)	
	Light material	H 5.5 m <sup>3</sup> (7.2 yd <sup>3</sup> )	10.0 (13.0)					5.8 (7.6)	5.5 (7.2)			
		H 9.5 m <sup>3</sup> (12.4 yd <sup>3</sup> )		9.5 (12.4)								

How to read bucket fill factor

**Supplemental Operating Data**

Tires 23.5 R25 L3	Standard boom				Long boom			
	23.5 R25 L5		750/65 R25		750/65 R25		750/65 R25	
Width over tires	mm	in	+30	+1.2	+200	+7.9	+200	+7.9
Ground clearance	mm	in	+50	+2	0	0	0	0
Tipping load, full turn	kg	lb	+490	+1,078	+430	+946	+310	+682
Operating weight	kg	lb	+670	+1,474	+640	+1,408	+640	+1,408



# Equipment

## STANDARD EQUIPMENT

### Engine

Exhaust after-treatment system  
 Three stage air cleaner, pre-cleaner, primary and secondary filter  
 Indicator for coolant level  
 Preheating of induction air  
 Fuel pre-filter with water trap  
 Fuel filter  
 Electric fuel prime pump  
 Crankcase breather oil trap  
 Exterior radiator air intake protection

### Drivetrain

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.

### Electrical system

24 V, pre-wired for optional accessories  
 Alternator 24 V / 130 A / 3,479 W  
 Battery disconnect (service) 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)

Delayed Engine Shutdown

Co-Pilot available

Rearview camera in Co-Pilot

Operator Coaching Start

## STANDARD EQUIPMENT

### Contronic monitoring system

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

### Hydraulic system

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

Secondary steering with automatic test function

Quick hydraulic oil fill

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



---

**STANDARD EQUIPMENT**

---

**Brake system**

Dual brake circuits  
Dual brake pedals  
Secondary brake system  
Parking brake, electro-hydraulic  
Brake wear indicators

**Cab**

ROPS (ISO 3471), FOPS (ISO 3449)  
Harness Anchor Points  
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  
Anchorage for Operator's manual  
Automatic Climate Control, ACC  
Operator's seat, Comfort ISRI, 2pt seat belt

**Service and maintenance**

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

**External equipment**

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

# Equipment

## OPTIONAL EQUIPMENT

### Engine

Air pre-cleaner, cyclone type  
 Air pre-cleaner, oil-bath type  
 Air pre-cleaner, turbo type II  
 Air pre-cleaner, turbo type III  
 Engine auto shutdown  
 Engine delayed shutdown  
 Engine block heater  
 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

### Wheels and tires

23.5 R25  
 750/65 R25

### Drivetrain

Oil cooler and filter front & rear axle  
 OptiShift transmission with Lock-up RBB  
 Diff lock front 100%, Limited Slip rear  
 Agri power-shift / lock-up 1-4  
 Speed limiter  
 Stainless steel, brake lines

## OPTIONAL EQUIPMENT

### Electrical system

Anti-theft device  
 Halogen Economy package  
 Halogen Feature package  
 Halogen Power package  
 Headlights, assymetric left, halogen  
 Working lights, attachments, halogen  
 LED Economy package  
 LED Feature package  
 LED Power package  
 LED Intense package  
 Alarm kit, anti-theft function in WECU  
 Battery disconnect switch, additional in cab  
 Emergency stop  
 Locking device, Tag out Lock out  
 License plate holder, lighting  
 Rear view camera, monitor  
 Rear view mirrors, el.adjusted and heated  
 Rear view mirrors, long arm right  
 Rear view mirrors, el.adjusted and heated, long arm right  
 Reduced function working lights, reverse gear activated  
 Reverse alarm, audible  
 Reverse alarm, white noise  
 Dual LED reversing strobe lights  
 Seatbelt indicator, external  
 Shortened headlight support brackets  
 Side marker lamps  
 Warning beacon LED  
 Warning beacon LED automatic  
 Electrical distribution unit 24 volt  
 Load Assist  
 Radar detect system  
 Collision Mitigation System  
 Forward camera  
 Dual forward cameras  
 Parking brake alarm, audible for air susp seats  
 Jump start connector, ISO-Type  
 Max Boom height  
 Can Bus Interface  
 OnBoard Weighing  
 OnBoard Weighing Task Mode  
 Tire pressure monitoring system  
 Connected Map  
 Operator Coaching Advanced

### Hydraulic system

Boom suspension system  
 Separate attachment locking  
 Arctic kit, attachment locking hoses  
 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  
 Hydraulic constant flow control with detent for 3rd function  
 Single lever control, hydraulics 2 functions  
 Single lever control, hydraulics 3 functions  
 Single lever control, hydraulics 4 functions

---

**OPTIONAL EQUIPMENT**

---

**Cab**

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, Mechanical ISRI, 2pt seat belt
Operator's seat, Volvo Air Suspension, Heavy Duty, 2pt seat belt
Operator's seat, Volvo Air Suspension, 2pt seat belt
Operator's seat, Volvo Air Suspension, 3pt seat belt
Operator's seat, Comfort ISRI, 3pt seat belt
Operator's seat, Premium ISRI, 2pt seat belt
Operator's seat, Premium ISRI, 3pt 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 mirrors
Cab heater power outlet 240 V
Cab, Hot applications. Roof, steel
Fire extinguisher cab
Outside steel protection cab
Rear view mirrors long arm, cab
Reinforced windshield, flat

**Service and maintenance**

Automatic lubrication system
Automatic lubrication system for long boom
Grease nipple guards
Oil sampling valve
Refill pump for grease to lube system
Tool kit
Wheel nut wrench kit
CareTrack, GSM, GSM/Satellite
Telematics, Subscription

---

**OPTIONAL EQUIPMENT**

---

**Protective equipment**

Belly guard front
Belly guard rear
Cover plate, heavy-duty, front frame
Cover plate, rear frame
Cover plate, front/rear axle
Cab roof, heavy-duty
Guards for front headlights
Guards for radiator grill
Guards for tail lights
Windows, side and rear guards
Windshield guard
Wheel/axle seal guards
Corrosion protection, painting of machine
Corrosion protection, painting of attachment bracket
Bucket Teeth protection

**External equipment**

Cab ladder, rubber-suspended
Deleted front mudguards & wideners rear
Handles on counterweight
Fire suppression system
Mudguards, full cover, rear for 80-series tires
Mudguards, full cover, rear for 65-series tires
Long boom
Tow hitch

**Other equipment**

CE-marking
Comfort Drive Control (CDC)
Counterweight, logging
Counterweight, signal painted, chevrons
Sound decal, EU
Sound decal, USA
Reflecting stickers (decals), machine contour
Reflecting stickers (stripes), machine contour Cab
Option for machines without dinitrol
Noise reduction kit, exterior
Sign, slow moving vehicle
Sign, 50 km/h
Agriculture package
Log Loader package
Rehandling package
Scrap Handler package
Waste Handler package

**Attachments**

Buckets:
Rock straight or spade nose
General purpose
Rehandling
Light material
High tip
Grading
Wear parts:
Bolt-on and weld-on bucket teeth
Segments
Cutting edge in three sections, bolt-on
Fork equipment
Material handling arm
Log grapples
Snow plows
Spreading bucket
Sweepers

**V O L V O**