

**V O L V O**



Volvo Wheel Loaders 19-21.6 t / 45,635-47,620 lb 272 hp

# **L120H**

Volvo Construction Equipment

# L120H

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



# Made to move

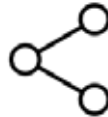
The second generation of Volvo L120H Wheel Loader is as versatile, fuel efficient and reliable as its forerunner but it comes with a batch of improvements that increase availability. A new Volvo engine and power strategy, plus a host of maintenance-friendly features trigger benefits for the operators, 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



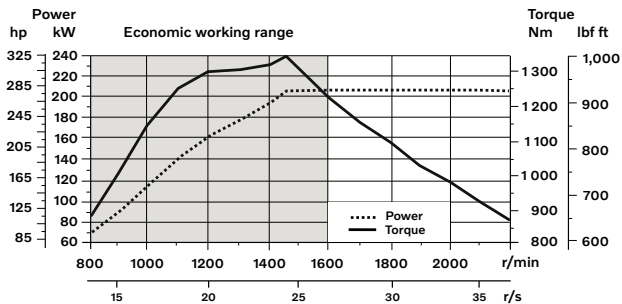
- Electric fuel priming pump
- Lockout-tagout (LOTO) on service switch
- Electrically-operated engine hood with large opening
- Slidable cooler installation
- Drain/fill connector for hydraulic oil
- Brake wear indicators

# Volvo L120H in detail

## Engine

8 liter, 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)	1,900 (25)
ISO 14396 gross	kW (hp)	205 (272)
ISO 9249, SAE J1349 net	kW (hp)	205 (272)
Max. torque at	r/min (r/s)	1,450 (225)
ISO 14396 gross	Nm (ft lbf)	1 345 (981)
ISO 9249, SAE J1349 net	Nm (ft lbf)	1,345 (981)
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)	7.2 (4.3)
2nd gear	km/h (mi/h)	13.6 (8.4)
3rd gear	km/h (mi/h)	28.1 (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)	460 (18.1)

## 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:** Fully sealed, wet multi-disc brake built into the transmission. Applied by spring force and disengaged by external hydraulic pressure. The parking brake is activated and deactivated through a switch in the dashboard.  
**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

**Instrumentation:** All important information is centrally located in the operator's field of vision. Display for Contrinsic monitoring system.  
**Heater and defroster:** Heater coil with filtered fresh air and fan with auto and manual (11 speed) setting. Defroster vents for all window areas.  
**Operator's seat:** 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.  
**Standard:** The cab is tested and approved according to ROPS (ISO 3471, SAE J1040), FOPS (ISO 3449). The cab meets with requirements according to 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 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 (5.9)
Piston rod diameter	mm (in)	80 (3.1)
Stroke	mm (in)	676 (26.6)
Tilt cylinder		1
Cylinder bore	mm (in)	210 (8.3)
Piston rod diameter	mm (in)	110 (4.3)
Stroke	mm (in)	412 (16.2)

## 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)	29.0 ± 0.5 (290 ± 5)
---	-----------	----------------------

Flow	l/min (gal/min)	128 (33.8)
------	-----------------	------------

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)	31.0 ± 0.5 (310 ± 5)
---	-----------	----------------------

Flow	l/min (gal/min)	128 (33.8)
------	-----------------	------------

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 (8.7)
------	-----------------	----------

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)
--------------------------------	-----------	----------------

<b>Cycle times</b>		
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 (3.1)
Rod diameter	mm (in)	50 (2)
Stroke	mm (in)	486 (19.1)
Working pressure	MPa (bar)	26.5 (265)
Maximum flow	l/min (gal/min)	128 (31.7)
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 (71.3)
-----------	---------	------------

DEF/AdBlue® tank	l (gal)	31 (8.2)
------------------	---------	----------

Engine coolant	l (gal)	38 (11.4)
----------------	---------	-----------

Hydraulic oil tank	l (gal)	140 (35.1)
--------------------	---------	------------

Transmission oil	l (gal)	37 (10)
------------------	---------	---------

Engine oil	l (gal)	30 (7.9)
------------	---------	----------

Axle oil front	l (gal)	36 (9.5)
----------------	---------	----------

Axle oil rear	l (gal)	41 (10.8)
---------------	---------	-----------

## 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			L120H			
			Standard boom		Long boom	
B	mm	ft in	6,660	21'10"	7,140	23'5"
C	mm	ft in	3,200	10'6"	3,200	10'6"
D	mm	ft in	430	1'5"	430	1'5"
F	mm	ft in	3,380	11'1"	3,380	11'1"
G	mm	ft in	2,132	6'12"	2,132	6'12"
J	mm	ft in	3,770	12'4"	4,280	14'1"
K	mm	ft in	4,100	13'5"	4,610	15'1"
O	°		54		54	
P <sub>max</sub>	°		50		50	
R	°		42		43	
R <sub>1</sub> *	°		45		48	
S	°		68		64	
T	mm	ft in	108	0'4"	157	0'6"
U	mm	ft in	450	1'6"	580	1'11"
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	3,330	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 3.4 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.

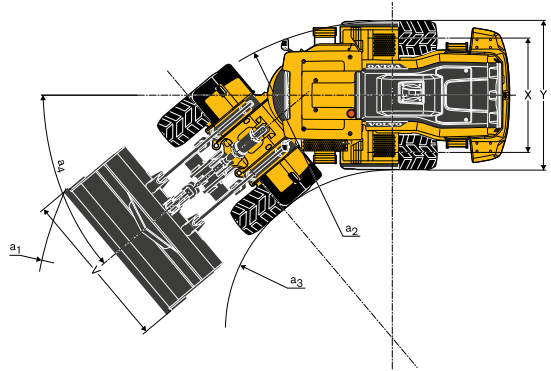
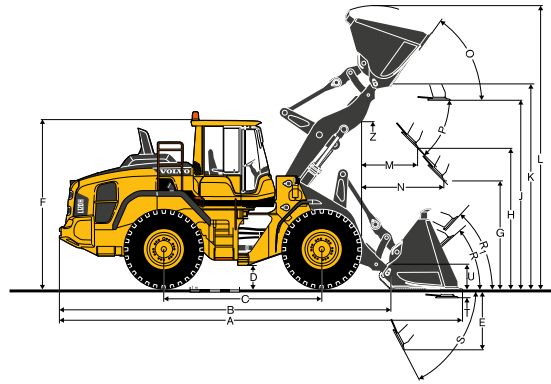
L120H Log Loader

Grapple: WLA80832

Operating weight

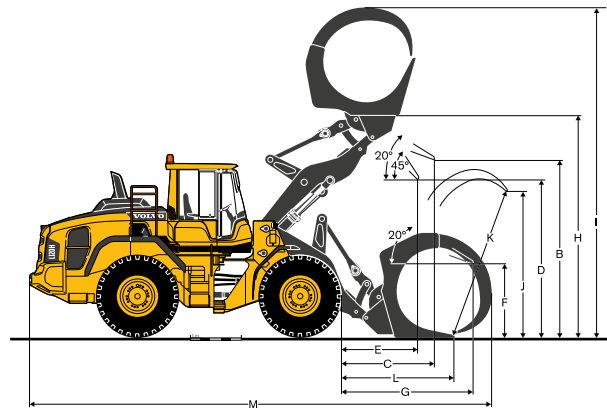
(incl. logging cw 685 kg / 1,510 lb): 20,840 kg / 45,940 lb

Operating load: 7,050 kg / 15,540 lb



## Dimensions

			L120H	
			Tires: 750/65 R25	
A	m <sup>2</sup>	ft <sup>2</sup>	2.4	25.8
B	mm	ft in	3,550	11'8"
C	mm	ft in	1,890	6'2"
D	mm	ft in	2,920	9'7"
E	mm	ft in	1,500	4'11"
F	mm	ft in	1,530	5'0"
G	mm	ft in	2,790	9'2"
H	mm	ft in	4,660	15'3"
I	mm	ft in	6,690	21'11"
J	mm	ft in	2,790	9'2"
K	mm	ft in	2,990	9'10"
L	mm	ft in	2,150	7'1"
M	mm	ft in	8,930	29'4"



**L120H**

		REHANDLING*				GENERAL PURPOSE								ROCK**		LIGHT MATERIAL				LONG BOOM***		
Tires 23.5R25 XHA2 L3																						
		3.8 m <sup>3</sup> / 5.0 yd <sup>3</sup> STE P BOE		3.8 m <sup>3</sup> / 5.0 yd <sup>3</sup> STE H BOE		3.4 m <sup>3</sup> / 4.4 yd <sup>3</sup> STE P T		3.4 m <sup>3</sup> / 4.4 yd <sup>3</sup> STE H T		3.6 m <sup>3</sup> / 4.7 yd <sup>3</sup> STE P BOE		3.6 m <sup>3</sup> / 4.7 yd <sup>3</sup> STE H BOE		3.0 m <sup>3</sup> / 3.9 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		3.4 m <sup>3</sup> / 4.4 yd <sup>3</sup> STE H T		
Volume, heaped ISO/SAE	m <sup>3</sup> yd <sup>3</sup>	3.8	5.0	3.8	5.0	3.4	4.4	3.4	4.4	3.6	4.7	3.6	4.7	3.0	3.9	5.5	7.2	9.5	12.4	3.4	4.4	
Volume at 110% fill factor	m <sup>3</sup> yd <sup>3</sup>	4.2	5.5	4.2	5.5	3.7	4.8	3.7	4.8	4.0	5.2	4.0	5.2	3.3	4.3	6.1	8.0	10.5	13.7	3.7	4.8	
Static tipping load, straight	kg lb	15,640 34,490	14,780 32,590	14,590 32,170	13,910 30,670	14,540 32,060	13,870 30,580	14,900 32,850	13,050 28,780	13,160 29,020	-2,580 -5,690	-2,350 -5,190										
at 35° turn	kg lb	13,860 30,560	13,060 28,800	12,940 28,530	12,310 27,140	12,900 28,440	12,270 27,060	13,220 29,150	11,490 25,340	11,560 25,490	-2,350 -5,190											
at full turn	kg lb	13,330 29,390	12,550 27,670	12,460 27,470	11,840 26,110	12,410 27,360	11,800 26,020	12,720 28,050	11,030 24,320	11,090 24,450	-2,290 -5,050											
Breakout force	kN lbf	163.7 36,810	151.9 34,150	173.7 39,050	160.3 36,040	168.8 37,950	156.1 35,100	150.5 33,840	121.6 27,340	106.1 23,860	+5 +1,130											
A	mm ft in	8,210 26'11"	8,310 27'3"	8,240 27'0"	8,350 27'5"	8,160 26'9"	8,270 27'2"	8,470 27'9"	8,690 28'6"	8,980 29'6"	+500 +1'8"											
E	mm ft in	1,300 4'3"	1,400 4'7"	1,330 4'4"	1,430 4'8"	1,260 4'2"	1,360 4'6"	1,520 5'0"	1,730 5'8"	2,000 6'7"	+20 +0'1"											
H	mm ft in	2,840 9'4"	2,700 8'10"	2,820 9'3"	2,750 9'0"	2,870 9'5"	2,800 9'2"	2,690 8'10"	2,470 8'1"	2,270 7'5"	+510 +1'8"											
L	mm ft in	5,710 18'9"	5,770 18'11"	5,520 18'1"	5,590 18'4"	5,570 18'3"	5,640 18'6"	5,690 18'8"	5,900 19'4"	6,070 19'11"	+510 +1'8"											
M	mm ft in	1,250 4'1"	1,230 4'0"	1,270 4'2"	1,350 4'5"	1,220 4'0"	1,300 4'3"	1,450 4'9"	1,560 5'1"	1,760 5'9"	-30 -1'1"											
N	mm ft in	1,820 6'0"	1,710 5'7"	1,830 6'0"	1,870 6'2"	1,810 5'11"	1,850 6'1"	1,930 6'4"	1,890 6'2"	1,910 6'3"	+450 +1'6"											
V	mm ft in	3,000 9'10"	3,000 9'10"	3,000 9'10"	3,000 9'10"	3,000 9'10"	3,000 9'10"	2,880 9'5"	3,000 9'10"	3,400 11'2"	0 0											
a <sub>1</sub> clearance circle	mm ft in	13,040 42'9"	13,090 42'11"	13,060 42'10"	13,110 43'0"	13,010 42'8"	13,060 42'10"	13,100 43'0"	13,330 43'9"	13,880 45'6"	+480 +1'7"											
Operating weight	kg lb	20,210 44,555	20,510 45,217	19,390 42,748	19,610 43,232	19,410 42,792	19,630 43,277	20,390 44,952	20,030 44,159	20,250 44,644	+280 +1,130											

\* Measured with additional rehandling counterweight | \*\* With MICHELIN 23,5R25 XMINE D2 Pro L5 Tire | \*\*\* Compared to GP 3.4 m<sup>3</sup> / 4.4 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	3.3	4.3	3.6	4.7
			1.6	2,700	3.6	4.7	3.9	5.1
Sand/Gravel	~ 105		1.8	3,030	3.3	4.3	3.5	4.6
			1.6	2,700	3.6	4.7	3.8	5.0
Aggregate	~ 100		1.8	3,030	3.8	5.0	3.8	5.0
			1.6	2,700				
Rock	≤100		1.7	2,866	3.0	3.9	3.0	3.9

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 3.8 m <sup>3</sup> (5.0 yd <sup>3</sup> )					4.0 (5.2)	3.8 (5.0)	
		H 3.8 m <sup>3</sup> (5.0 yd <sup>3</sup> )					4.0 (5.2)	3.8 (5.0)	
	General purpose	P 3.3 m <sup>3</sup> (4.3 yd <sup>3</sup> )						3.6 (4.7)	3.3 (4.3)
		H 3.3 m <sup>3</sup> (4.3 yd <sup>3</sup> )						3.6 (4.7)	3.3 (4.3)
	Rock	P 3.6 m <sup>3</sup> (4.7 yd <sup>3</sup> )					4.0 (5.2)	3.6 (4.7)	
		H 3.6 m <sup>3</sup> (4.7 yd <sup>3</sup> )					4.0 (5.2)	3.6 (4.7)	2.8 (3.7)
Long boom	Rehandling	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)					
	General purpose	P 3.8 m <sup>3</sup> (5.0 yd <sup>3</sup> )					4.0 (5.2)	3.8 (5.0)	
		P 3.3 m <sup>3</sup> (4.3 yd <sup>3</sup> )						3.6 (4.7)	3.3 (4.3)
Rock	P 3.6 m <sup>3</sup> (4.7 yd <sup>3</sup> )					4.0 (5.2)	3.6 (4.7)		
	P 3.0 m <sup>3</sup> (3.9 yd <sup>3</sup> )						3.1 (4.1)	3.0 (3.9)	
Light material	H 5.5 m <sup>3</sup> (7.2 yd <sup>3</sup> )	5.8 (7.6)	5.5 (7.2)						

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	+450	+990	+380	+836	+330	+726
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  
 Delayed Engine Shutdown  
 Fuel fill strainer  
 Reversible cooling fan

### 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.  
 OptiShift transmission with Lock-up RBB

### 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)

### Co-Pilot available

Rearview camera in Co-Pilot  
 Rear view camera, monitor  
 Operator Coaching Start  
 Locking device, Tag out Lock out  
 Load Assist  
 Max Boom height  
 OnBoard Weighing  
 Operator Coaching Advanced

## 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

---

**STANDARD EQUIPMENT**

---

**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

Boom suspension system

**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

---

**STANDARD EQUIPMENT**

---

**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 block heater  
 Fuel heater  
 Hand throttle control  
 Max. fan speed, hot climate  
 Radiator, corrosion-protected  
 Reversible cooling fan and axle oil cooler

### Wheels and tires

23.5 R25  
 750/65 R25

### Drivetrain

Oil cooler and filter front & rear axle  
 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  
 Working lights, attachments, LED  
 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  
 License plate holder, lighting  
 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  
 Radar detect system  
 Collision Mitigation System  
 Forward camera  
 Dual forward cameras  
 Parking brake alarm, audible for air susp seats  
 Jump start connector, ISO-Type  
 Can Bus Interface  
 OnBoard Weighing Task Mode  
 Tire pressure monitoring system  
 Connected Map

### Hydraulic 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  
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  
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**