

V O L V O



Volvo Wheel Loaders 31.2-33.1 t 375 hp

# L220

Volvo Construction Equipment

# L220

**Powerful and efficient, the L220 boosts productivity in rehandling, quarrying and material handling. Smart technology and durability you can count on.**



## **Fast cycle times**

- Second generation load sensing hydraulics
- Automatic traction control
- Bucket leveling function
- Entirely Volvo powertrain
- Reduced steps between gears for faster acceleration and smooth operation.
- Volvo Torque Parallel Linkage
- Volvo Attachment



## **Efficient and profitable operations**

- Powerful and efficient engine
- Second generation OptiShift
- Reverse By Braking
- Smart control with reduced fuel consumption
- Attachment optimization
- External dry P-Brake, which eliminates drag losses
- Auto bucket fill
- Compatible with HVO

# Powerful, efficient and high-performance loading

From rehandling and quarrying to bulk material handling, the Volvo L220 Wheel Loader is designed to deliver unmatched efficiency and power. Featuring faster cycle times, an unrivalled operator environment, and Volvo quality, durability and safety you can depend on, this is a machine which delivers maximum uptime and performance in the toughest of conditions. What's more, a host of Volvo solutions including Load Assist, On-Board Weighing and Load Ticket further help optimize every load, ensuring maximum efficiency and profitability in your operations.

## The operator's choice



- Interactive, integrated Volvo Co-Pilot display
- Dynamic instrument cluster
- Comfort Drive Control (CDC)
- Customizable operator settings

## A new level in cab comfort



- Most comfortable and quietest cab on the market
- Enhanced storage options
- New armrest, new cupholder and USB chargers
- Extensive range of seats - including premium seats with heating and cooling functionality..

## Durable by design



- A durability leader in its class
- Outstanding uptime
- Volvo-renowned quality runs throughout every component
- Strong frame structure and robust axles, ideally matched to the Volvo powertrain
- Self-cleaning hydraulically driven cooling fan
- Outboard mounted brakes
- Front and rear axles are cooled by the oil circulation.

## Industry leading serviceability



- Cab can be tilted to either a 30° or 70° angle
- Electronically operated engine hood
- Captive oil filters, captive fuel filters with electric pump, optional fast fuel fill
- Optional fast fuel fill
- Service light under the grille
- Brake wear indicators

## Ultimate performance across a range of segments



- Rehandling
- Block handling
- Log loading
- Slag handling
- Quarry / Aggregate
- Waste & Recycling
- And more...

## Safety inside and out



- Excellent in-cab visibility and field of vision
- High definition rear view camera integrated in the Volvo Co-Pilot display
- Volvo Smart View with 360°
- Collision Mitigation System
- Battery disconnect/service switch with lockout/tagout
- Radar detect system
- Orange handrails
- Remote door opening
- Enhanced LED lighting packages
- New service platform

## Loaders and beyond



- Load Assist with On Board Weighing
- Load Ticket
- Connected Map with Performance Indicator
- Operator Coaching
- CareTrack telematics system



## Fast cycle times

Achieve fast cycle times with second generation load sensing hydraulics.

The second generation load sensing hydraulics are designed to enhance the responsiveness of the hydraulic system and improve the lifting and lowering speed of the boom.

Boost productivity further with the bucket leveling function which automatically returns the bucket to level from both dump and curl positions, enhancing operator performance.

## Fuel efficiency, lower emissions

Do more with less fuel, thanks to the industry-renowned fuel efficiency of Volvo Wheel Loaders.

Contributing to the fuel-efficient performance is Smart Control, powerful engine, second generation OptiShift, attachment optimization and external dry P-Brake, which eliminates drag losses.

What's more, the renewable synthetic diesel fuel, HVO (Hydro-treated Vegetable Oils), has been approved for use in Volvo Construction Equipment diesel engines with the potential to reduce CO<sub>2</sub> emissions by up to 90%.



## Intuitive operator interface

Operators can stay in-the-know and focused on the task at hand thanks to all essential in-cab information conveniently displayed on just two screens.

The interactive, integrated Volvo Co-Pilot display offers easy control over essential functions such as media, camera settings, climate control and machine status.

This is combined with the dynamic instrument cluster, positioned in front of the steering wheel, which provides essential vehicle data at a glance.

## Durable by design

A durability leader in its class, Volvo Wheel Loaders deliver outstanding uptime.

Volvo-renowned quality runs throughout every component, including a strong frame structure and robust axles, ideally matched to the Volvo powertrain.

The hydraulically driven cooling fan regulates component temperature and can be automatically reversed to permit self-cleaning of the cooling units.

For long service life, the brakes are outboard mounted and the front and rear axles are cooled by the oil circulation.

## Safety first

Excellent in-cab visibility and field of vision is complemented by a host of safety-enhancing features including high definition rear view camera integrated in the Volvo Co-Pilot display, Collision Mitigation System and radar detect system that provides visual and audible alerts when encountering unseen objects.

Orange handrails and steps improve visibility for operators and maintenance staff, while automatic door opening allows the door to be opened with the key or button.

## Ultimate performance across a range of applications

Get ready to achieve maximum results across a wide range of applications in the Volvo L220 thanks to a range of options and attachments which equip the machine to take on the unique challenges and requirements of your segment.

A comprehensive range of attachments designed to work in perfect harmony provide the ideal match of machine and attachment to succeed across applications including rehandling, log loading, slag handling, block handling and more.



# Volvo L220 in detail

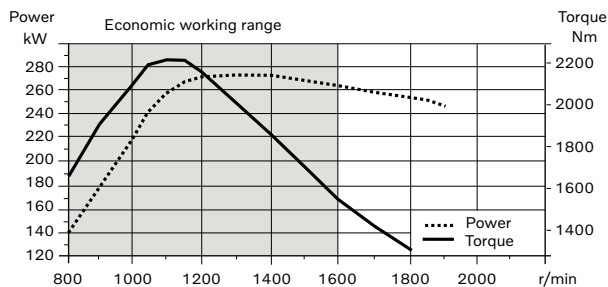
## Engine

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 application is transmitted electrically either from the throttle pedal or the optional hand throttle.

**Air cleaning:** 2 stages.

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

Engine	Volvo	D13J
Max. power at	r/min	1 300 - 1 400
ECE R120 net	kW	280
	hp	381
ISO 9249, SAE J1349 net	kW	279
	hp	379
Max. torque at	r/min	1 100
ECE R120 net	Nm	2 276
ISO 9249, SAE J1349 net	Nm	2 265
Economic working range	r/min	800 - 1 600
Displacement	l	12.8



## Drivetrain

**Torque converter:** Single-stage torque converter with lockup.

**Transmission:** The electronically controlled Volvo countershaft transmission features the Full Automatic Power Shift (FAPS) function, which offers fully automatic shifting in all four forward gears and from the second to the fourth gear in reverse. It is complemented by a mode selector with four gear-shifting programs. The Rimpull Control function helps prevent wheel spin and optimizes bucket filling. The single lever control and the Pulse Width Modulation (PWM) valves ensure effortless, fast, and smooth shifting, providing higher precision and reliability.

**Axles:** Volvo's fully floating drive shafts with planetary hub reductions and cast iron axle housing. The axles are now equipped with the innovative Automatic Traction Control (ATC) system, which enhances traction capability significantly. This system automatically engages a 100% differential lock, providing superior grip and stability. The ATC is standard on the front axle, ensuring optimal performance in challenging conditions, and is available as an optional feature for the rear axle, offering additional flexibility and control.

Transmission	Volvo	HTL 310
Torque multiplication, stall ratio		2.02:1
<b>Maximum speed, forward/reverse</b>		
1st gear	km/h	6.7 / 6.6
2nd gear	km/h	11.6 / 11.4
3rd gear	km/h	21.7 / 21.4
4th gear	km/h	36.5 / 36.1
Measured with tires		29.5 R25 L4
Front axle/rear axle	Volvo/AWB	50/41
Rear axle oscillation	± °	15
Ground clearance	mm	600
at oscillation	°	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.

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	2 280 / 80
Starter motor output	kW	7

## 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 disengagement of the transmission when braking using Contronic.

**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 front/rear	2/1
Accumulators	l 2 x 1.0 + 1 x 0.5

## Cab

**Instrumentation:** All important information is centrally located in the operator's field of vision. Display for Contronic monitoring system.

**Heater and defroster:** Heater coil with filtered fresh air and fan with auto and manual settings (11 speeds). Defroster vents for all window areas.

**Operator's seat:** Operator's seat with adjustable air 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.

**Standards:** 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	9
Heating capacity	kW	16
Air conditioning (optional)	kW	7.5

## Sound Level

Sound pressure level in cab according to ISO 6396		
L <sub>pA</sub>	dB	70
External sound level according to ISO 6395		
L <sub>WA</sub>	dB	109

## 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.

Working pressure maximum, pump 1 for working hydraulic system	MPa	29
Flow	l/min	252
at	MPa	10
engine speed	r/min	1 900
Working pressure maximum, pump 2 for steering-, brake-, pilot- and working hydraulic system	MPa	31
Flow	l/min	202
at	MPa	10
engine speed	r/min	1 900
Working pressure maximum, pump 3 for brake- and cooling fan system	MPa	25
Flow	l/min	83
at	MPa	10
engine speed	r/min	1 900
Pilot system, working pressure	MPa	3.5
<b>Cycle times</b>		
Lift	s	6.8
Tilt	s	1.6
Lower, empty	s	3.2
Total cycle time	s	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.

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

## Service Refill

**Service accessibility:** Large, easy-to-open hood covering whole engine compartment, 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.

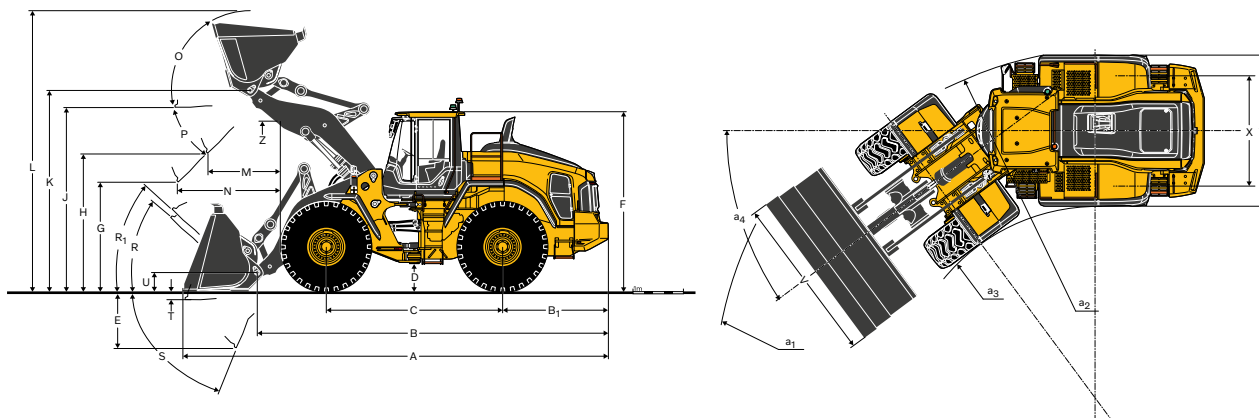
Fuel tank	l	366
DEF/AdBlue® tank	l	31
Engine coolant	l	55
Hydraulic oil tank	l	226
Transmission oil	l	48
Engine oil	l	50
Axle oil front	l	77
Axle oil rear	l	71

## Lift Arm System

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

Lift cylinders		2
Cylinder bore	mm	190
Piston rod diameter	mm	90
Stroke	mm	768
Tilt cylinder		1
Cylinder bore	mm	250
Piston rod diameter	mm	120
Stroke	mm	455

# Specifications



## DIMENSIONS

Tires: 29.5 R25 L3 Tire deflection: standard

	Unit	L220K	
		Standard boom	Long boom
B Overall length w/o bucket / attachm. bracket	mm	7 490	7 810
B <sub>1</sub> Rear overhang	mm	2 240	2 240
C Wheel base	mm	3 700	3 700
D Ground clearance	mm	520	510
F Height to top of ROPS	mm	3 710	3 710
G Specific height for reach (N)	mm	2 132	2 133
J Lift height under level bucket	mm	4 230	4 590
K Height to hinge pin	mm	4 640	5 010
O Rollback angle, max., fully raised	°	56	56
P <sub>max</sub> Dump angle, max., fully raised	°	48	48
R Rollback angle, max., at ground level	°	43	44
R <sub>1</sub> * Rollback angle at SAE carry position	°	47	49
S Digging angle, max.	°	65	63
T Digging depth	mm	125	131
U Hinge pin height at carrying position	mm	590	670
X Track width	mm	2 400	2 400
Y Machine width over tire	mm	3 150	3 150
Z Max. load-over height	mm	4 040	4 370
a <sub>2</sub> Turning radius outer circle	mm	7 100	7 100
a <sub>3</sub> Turning radius inner circle	mm	3 960	3 960
a <sub>4</sub> Max. articulation	±°	37	37

\* Carry position SAE

Bucket: WLA87132 5.2 m<sup>3</sup> GP STE P BOE

Grapples:

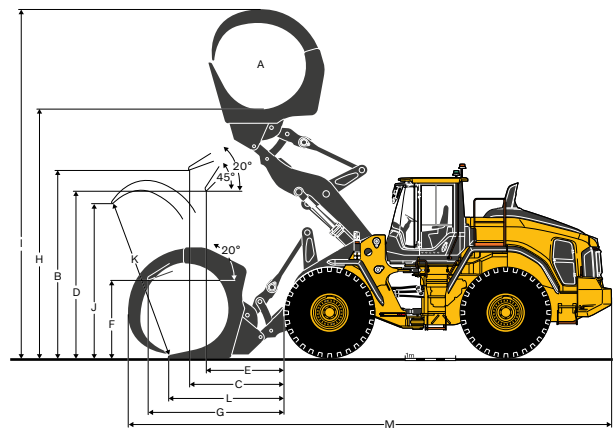
Sales code: WLA80852

Operating weight (incl. logging cw 870 kg): 33 800 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.














# **DIMENSIONS**

**Tires: 875/65 R29 L4**

	Unit	L220K
A Grapple Area	m <sup>2</sup>	4.0
B Dumping clearance at max. HPH, dump 20°	mm	3 900
C Dumping reach at max. HPH, dump 20°	mm	2 270
D Dumping clearance at max. HPH, dump 45°	mm	3 140
E Dumping reach at max. HPH, dump 45°	mm	1 780
F Dumping clearance at parallel lifting arm pos.	mm	1 620
G Dumping reach at parallel lifting arm pos.	mm	3 230
H Max. dumping clearance	mm	5 330
I Overall operating height	mm	7 700
J Height upper clamp at K	mm	3 620
K Max. opening width	mm	3 940
L Reach at ground position	mm	2 650
M Overall machine length	mm	10 410

# Specifications

## L220K

Tires 29.5 R25 L3		REHANDLING <sup>(1)</sup>				GENERAL PURPOSE			ROCK <sup>(2)</sup>	LIGHT MATERIAL	LONG BOOM
											-
		WLA86759	WLA86760	WLA86761	WLA86758	WLA87132	WLA87135	WLA87137	WLA87526	WLA93450	-
		5.6 m <sup>3</sup> STE P BOE	5.9 m <sup>3</sup> STE P BOE	6.3 m <sup>3</sup> STE P BOE	6.3 m <sup>3</sup> STE H BOE	5.2 m <sup>3</sup> STE P BOE	5.6 m <sup>3</sup> STE P T SEG	6.0 m <sup>3</sup> STE P T SEG	5.0 m <sup>3</sup> SPN P T SEG	8.2 m <sup>3</sup> LM P BOE	-
Volume, heaped ISO/SAE	m <sup>3</sup>	5.6	5.9	6.3	6.3	5.2	5.6	6.0	5.0	8.2	-
Volume at 110% fill factor	m <sup>3</sup>	6.2	6.5	6.9	6.9	5.7	6.2	6.6	5.5	9.0	-
Static tipping load, straight	kg	25 150	24 990	24 810	23 950	23 770	23 410	23 540	24 370	22 740	-2 830
at 35° turn	kg	22 340	22 190	22 020	21 210	21 150	20 790	20 900	21 660	20 160	-2 600
at full turn	kg	22 020	21 870	21 700	20 900	20 850	20 500	20 600	21 360	19 860	-2 580
Breakout force	kN	229	223	215	205	241	233	236	194	191	+3.3
A Overall length	mm	9 270	9 320	9 390	9 480	9 180	9 480	9 450	9 740	9 590	+310
E Digging depth, max dump (S)	mm	1 470	1 510	1 570	1 650	1 400	1 650	1 630	1 860	1 750	-20
H <sup>(3)</sup> Dump clearance	mm	3 160	3 130	3 080	3 080	3 220	3 020	3 040	2 870	2 910	+360
L Overall operating height	mm	6 360	6 410	6 470	6 520	6 370	6 440	6 590	6 350	6 450	+360
M <sup>(3)</sup> Dump reach	mm	1 400	1 430	1 480	1 610	1 340	1 540	1 520	1 730	1 610	-30
N <sup>(3)</sup> Reach at 45° discharge, pos. G	mm	2 100	2 120	2 150	2 190	2 070	2 180	2 170	2 300	2 180	+270
V Bucket width	mm	3 400	3 400	3 400	3 400	3 400	3 400	3 400	3 430	3 700	0
a <sub>1</sub> Outer clearance circle (diameter)	mm	15 810	15 830	15 870	15 920	15 760	15 920	15 910	16 120	16 250	+260
Operating weight without load	kg	32 480	32 580	32 690	33 100	31 550	31 810	31 920	33 850	32 120	+380

<sup>(1)</sup> Measured with additional counterweight.

<sup>(2)</sup> Measured with 29.5 R25 L5 tires.

<sup>(3)</sup> Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge measured at 45° dump angle.

Note: This only applies to genuine Volvo attachments.

### 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>. Result: The 5.2 m<sup>3</sup> bucket carries 5.5 m<sup>3</sup>. For optimum stability always consult the bucket selection chart.

Material	Bucket fill, %		Material density, t/m <sup>3</sup>	ISO/SAE bucket volume, m <sup>3</sup>	Actual volume, m <sup>3</sup>
Earth/Clay	~ 110		~ 1.6 ~ 1.5 ~ 1.4	4.9 5.2 5.4	~ 5.4 ~ 5.7 ~ 5.9
Sand/Gravel	~ 105		~ 1.7 ~ 1.6 ~ 1.5	4.9 5.2 5.4	~ 5.1 ~ 5.5 ~ 5.7
Aggregate	~ 100		~ 1.8 ~ 1.7 ~ 1.6	5.6 5.9 6.3	~ 5.6 ~ 5.9 ~ 6.3
Rock	≤100		~ 1.7	4.5	~ 4.5

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> )							
			0,8	1,0	1,2	1,4	1,6	1,8	2,0	
Standard boom	Rehandling*	5,6 m <sup>3</sup>						5,9	5,6	
		5,9 m <sup>3</sup>						6,2	5,9	
		6,3 m <sup>3</sup>					6,6	6,3		
	General purpose	4,9 m <sup>3</sup>						5,4	4,9	
		5,2 m <sup>3</sup>					5,7	5,2		
		5,6 m <sup>3</sup>				6,2	5,6			
	Rock	4,5 m <sup>3</sup>							4,5	4,3
		5,0 m <sup>3</sup>						5,0	5,3	
	Light material	8,2 m <sup>3</sup>	8,2							
Long boom	Rehandling*	5,6 m <sup>3</sup>						5,9	5,6	
		5,9 m <sup>3</sup>					6,2	5,9		
	General purpose	4,9 m <sup>3</sup>					5,4	4,9		
	Rock	4,5 m <sup>3</sup>						4,5	4,3	
	Light material	8,2 m <sup>3</sup>	8,2							

Bucket fill  
110% 105% 100% 95%

Pin-on

How to read bucket fill factor

\* Including counterweight

### SUPPLEMENTAL OPERATING DATA

Tires 29.5 R25 L3	Unit	Standard boom			Long boom		
		29.5 R25 L4	29.5 R25 L5	875/65 R29 L4	29.5 R25 L4	29.5 R25 L5	875/65 R29 L4
Width over tires	mm	+20	+60	+120	+20	+60	+120
Ground clearance	mm	+30	+50	-10	+30	+50	-10
Tipping load, full turn	kg	+500	+1 290	+560	+460	+1 190	+510
Operating weight	kg	+710	+1 780	+1 010	+720	+1 790	+1 020

# Equipment

## STANDARD EQUIPMENT

### Engine

- Exhaust after-treatment system
- Two stage air cleaner, primary and secondary filter
- 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
- Smart control
- Indicator glass for transmission oil level
- Differentials: Front, 100% diff lock with Automatic Traction Control. Rear, conventional.
- Optishift with Lock-up, RBB
- Lock-up first gear

### Electrical system

- 24V, pre-wired for optional accessories
- Alternator 24V/130A/3479W
- Battery disconnect (service) switch
- Electric horn
- 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)
- Dual LED reversing strobe lights

## STANDARD EQUIPMENT

### Dynamic Instrument Cluster

- 8-inch dynamic instrument cluster display
- Fuel consumption
- Diesel Exhaust Fluid/AdBlue consumption
- Ambient temperature
- Clock

- 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

- Climate control temperature and fan speed

- Speed indicator

- Engine revolutions per minute indicator

- 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

- Start interlock when gear is engaged

### Integrated Volvo Co-Pilot

- 12.8-inch High Definition vertical Co-Pilot display
- Machine integration
  - Machine information
  - Machine settings
  - Service information
  - Service mode
- Smart View with rear view camera
- Climate controls
- Radio and media (with Bluetooth and USB connection)
- Load Assist portfolio
  - Operator Coaching Start
  - Toolbox applications
- Remote support
  - Help center (digital operator's manual)



STANDARD EQUIPMENT
<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
Secondary steering with automatic test function
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)
Harness Anchor Points
Single key kit door/start
Acoustic inner lining
Cigarette lighter, 24V power outlet
Lockable door
Cab heating with fresh air inlet and defroster
Fresh air inlet with two filters
Automatic heat control
Floor mat
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
<b>Service and Maintenance</b>
Engine oil remote drain and fill
Volvo High Performance oil filters with 1,000 hours service interval
Transmission oil remote drain and fill
Quick-fit transmission oil change
Lubrication manifolds, ground accessible
Pressure check connections: transmission and hydraulic, quick-connects
Quick-fit hydraulic oil fill
Service platform on the front frame
Tool box, lockable
<b>External equipment</b>
Orange hand rails
Fenders, front and rear
Reflecting stickers (decals), machine contour and cab
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 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

### Drivetrain

Automatic Traction Control 100% diff lock, front & rear  
 Speed limiter  
 Wheel/axle seal guards

### Electrical system

Anti-theft device  
 Emergency stop  
 Locking device, Tag out Lock out  
 License plate holder, lighting  
 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  
 Seatbelt indicator, external  
 Shortened headlight support brackets  
 Side marker lamps  
 Site services enabled  
 Warning beacon LED  
 Warning beacon LED automatic  
 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  
 Headlights, assymetric Left, LED  
 Headlights, assymetric Right, LED  
 Working lights, attachments, LED  
 Electrical distribution unit 24 volt  
 Parking brake alarm, audible for air susp seats  
 Jump start connector, ISO-Type  
 Max Boom height  
 Can Bus Interface

## OPTIONAL EQUIPMENT

### Integrated Volvo Co-Pilot

Tire pressure monitoring system  
 Handsfree telephone  
 Smart View  
 Smart View with 360°  
 Smart View with radar detect system  
 Forward camera  
 Dual forward cameras  
 Collision Mitigation System  
 Load Assist portfolio  
 Load Assist OBW  
 Load Assist Task Modes  
 Operator Coaching Advanced  
 Site Operations  
 Connected Map  
 Load Ticket  
 File Upload  
 Performance indicators  
 Task Manager  
 Media player

### Hydraulic System

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

### Brake system

Oil cooler and filter front & rear axle

OPTIONAL EQUIPMENT
<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, 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, 2pt 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
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 240V
Cab, Hot applications. Roof, steel
Fire extinguisher cab
Outside steel protection cab
Rear view mirrors long arm, cab
Reinforced windshield, flat
<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
Option for machines without dinitrol

OPTIONAL EQUIPMENT
<b>Wheel/Tires</b>
29.5 R25
875/65 R29
<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
<b>Other equipment</b>
CE-marking
Comfort Drive Control (CDC)
Counterweight, logging
Counterweight, signal painted, chevrons
Sound decal, EU
Sound decal, USA
Noise reduction kit, exterior
Block Handler package
Log Loader package
Rehandler package
Scrap Handler package
Slag Handler package
Waste Handler package
<b>Attachments</b>
Buckets:
Rock straight or spade nose
General purpose
Rehandling
Side dump
Light material
High tip
Refuse
Wear parts:
Bolt-on and weld-on bucket teeth
Segments
Cutting edge in three sections, bolt-on
Fork equipment
Material handling arm
Log grapples
Log pusher

Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

**V O L V O**