

V O L V O



Volvo Wheel Loaders 11.0-17.3 t 167-186 hp

**L90H**

Volvo Construction Equipment

# L90H

Leave the heavy-duty work for the L90H, designed to do more, be more comfortable and help you increase your productivity.



# Designed to do more

Hard work has never felt so easy. H-Series wheel loaders are built with an industry-leading, strong frame, which, combined with the ideally-matched genuine Volvo drivetrain, achieves long-lasting performance. And with the help of a range of smart apps you can boost the efficiency of your operation from the comfort of the cab.



## Loaded with versatility

- Torque Parallel linkage
- Volvo attachment bracket
- Range of purpose-built attachments
- Rehandling bucket
- 3rd and 4th hydraulic functions



## Keep it moving

- Quick hydraulic oil fill thanks to new mounted nipple
- Improved cooling capacity
- Strong frame and central hinge
- Optional delayed engine shutdown
- Optional external axle cooling



## Safety as standard

- Anti-slip steps and strategically placed handrails
- Orange seatbelt
- Redesigned side mirrors
- Rear-view camera



## Strong and stable

- Optimized loading unit weight, heavy-duty counterweight for greater stability
- Standard electro-servo controls
- Bucket leveling function
- Increased lifting height by 72mm



## Increased productivity

- Optional lock-up converter
- Rimpull control
- Smart Control
- Smooth Control
- Eco pedal



## Greater access

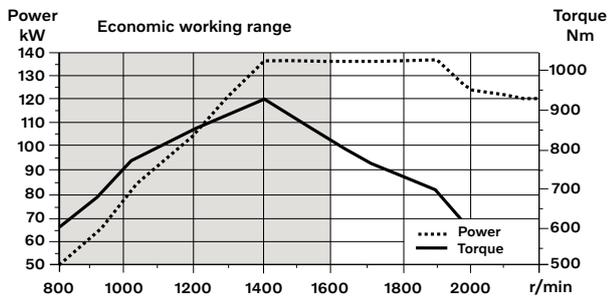
- Cooler installation slides out for easier cleaning
- Repositioned fill spouts for transmission and engine oil
- Ground-level access to service points
- Electronically-operated engine hood

# Volvo L90H in detail

## Engine

6-cylinder, 6 liters inline turbocharged diesel engine with an advanced fuel injection system with the common rail. Fuel is distributed under high pressure from a high-pressure accumulator, the rail. One belt driven high pressure pump deliver the fuel to the rail and then further on via high-pressure pipes to the electronically operated fuel injectors. Engine meets Stage V emission legislation.

Engine	Volvo	D6J
Max. power at	r/min	1 400 - 1 900
ISO 14396 gross	kW	137
	hp	186
ISO 9249, SAE J1349 net	kW	137
	hp	186
Max. torque at	r/min	1 400
ISO 14396 gross	Nm	934
ISO 9249, SAE J1349 net	Nm	934
Economic working range	r/min	800 - 1 600
Displacement	l	5.7



## Electrical 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, etc.

Batteries	V	2 x 12
Battery capacity	Ah	2 x 110
Cold cranking capacity, approx	A	680
Alternator rating	W/A	3 135/80
Starter motor output	kW	55

## Brake system

**Service brake:** Volvo dual-circuit system with outboard mounted, hydraulically operated, fully sealed and circulating oil cooled wet disc brakes. Four operator selectable transmission disengagement settings while braking.

**Parking brake:** Dry disc brake mounted on the transmission output shaft. Applied by spring force, electro-hydraulically released with a switch on the instrument panel.

**Secondary brake:** Dual brake circuits with rechargeable accumulators.

**Standard:** The brake system complies with the requirements of ISO 3450, 71/320/EEC

Number of brake discs per wheel		1
Accumulators	l	2 x 0.5+1 x 1.0
Accumulators for parking brake	l	1 x 1.0

## Lift Arm System

Torque parallel linkage (TP-linkage) with high breakout torque and parallel lift-arm action.

Lift cylinders		2
Cylinder bore	mm	120
Piston rod diameter	mm	70
Stroke	mm	744
Tilt cylinder		1
Cylinder bore	mm	180
Piston rod diameter	mm	90
Stroke	mm	430

## Steering System

**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	80
Rod diameter	mm	50
Stroke	mm	345
Working pressure	MPa	21
Maximum flow	l/min	60
Maximum articulation	± °	40

## 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 11 manual speed settings. 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), FOPS (ISO 3449). The cab meets with requirements according to ISO 6055 (Operator overhead protection - Industrial trucks) and SAE J386 (Operator Restraint System).

**Emergency exit:** Use emergency hammer to break window

Ventilation	m <sup>3</sup> /min	9
Heating capacity	kW	16
Air conditioning (optional)	kW	75

## 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	105

## Service Refill

**Service accessibility:** Large, electrically operated easy-to-open hood covering whole engine compartment. Fluid filters and component breather air filters are located from ground level access and promote long service intervals. Machine contronics have possibility to monitor, log and analyze data to facilitate troubleshooting. A quick-fit adapter on the hydraulic tank provides faster hydraulic oil fill.

Fuel tank	l	222
DEF/AdBlue® tank	l	20
Engine coolant	l	30
Hydraulic oil tank	l	90
Transmission oil (non lock-up)	l	21
Transmission oil (lock-up)	l	22
Engine oil	l	20
Axle oil front	l	35
Axle oil rear	l	27

## Hydraulic system

Closed center load sensing hydraulic system with non pressurised hydraulic tank and pilot operated control valves.

**System supply:** Variable displacement axial piston pump supply the hydraulic system.

**Valves:** The central valve distributes pressure and flow out to the cooling fan, steering, brake, pilot and hydraulic system. Steering system gets priority over others.

**Lift function:** The valve has four positions; raise, hold, lower and float position. Automatic boom kickout position can be set to any position between maximum reach and full lifting height.

**Tilt function:** The valve has three functions; rollback, hold and dump. Automatic tilt out/tilt in 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 2 for steering-, brake-, pilot- and working hydraulic system	MPa	31
Flow at engine speed	l/min	171
	MPa	10
	r/min	1900
Working pressure maximum, pump 3 for brake- and cooling fan system	MPa	21
Flow at engine speed	l/min	33
	MPa	10
	r/min	1900
Pilot system, working pressure	MPa	3.5
Cycle times		
Lift	s	5.7
Tilt	s	2.3
Lower, empty	s	4
Total cycle time	s	12

## 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) gear shifting system with fully automatic shifting 1-4 and mode selector with 4 different gear shifting programs, including AUTO mode. Also equipped with Rimpull control to avoid wheel spin and optimize bucket filling.

**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.

Transmission	Volvo:	HTE 125C Non Lock-up / HTE 125 Lock-up
Torque multiplication, stall ratio		2.5:1 Non Lock-up / 2.59:1 Lock-up
<b>Maximum speed</b>		
1st gear	km/h	Converter 6.5 / Lock-up 6.5
2nd gear	km/h	Converter 14 / Lock-up 14
3rd gear	km/h	Converter 26 / Lock-up 27
4th gear	km/h	Converter 46 / Lock-up 50
4th gear: Shown in speedometer and limited by ECU		
Measured with tires		20.5R25
Front axle/rear axle		AWB 25/AWB 20
Rear axle oscillation	± °	13
Ground clearance at oscillation	mm	470
	°	13



# Specifications

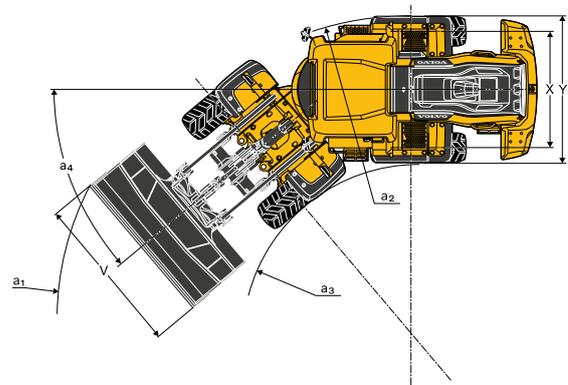
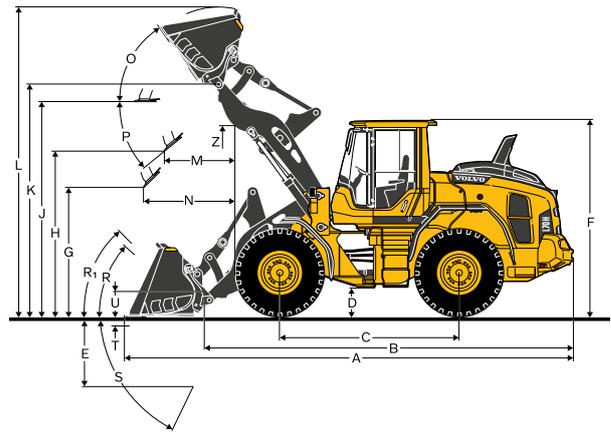
## Tires 20.5 R25 L3

		L90H	
		Standard boom	Long boom
B	mm	6 170	6 600
C	mm	3 050	3 050
D	mm	450	440
F	mm	3 280	3 280
G	mm	2 132	2 132
J	mm	3 730	4 140
K	mm	4 040	4 460
O	°	57	58
P <sub>max</sub>	°	45	44
R	°	44	47
R <sub>1</sub> *	°	49	53
S	°	67	65
T	mm	112	123
U	mm	480	570
X	mm	1 960	1 960
Y	mm	2 490	2 490
Z	mm	3 460	3 910
a <sub>2</sub>	mm	5 430	5 430
a <sub>3</sub>	mm	2 940	2 940
a <sub>4</sub>	±°	40	40

\* Carry position SAE

\*\*Calculated with additional protective guarding

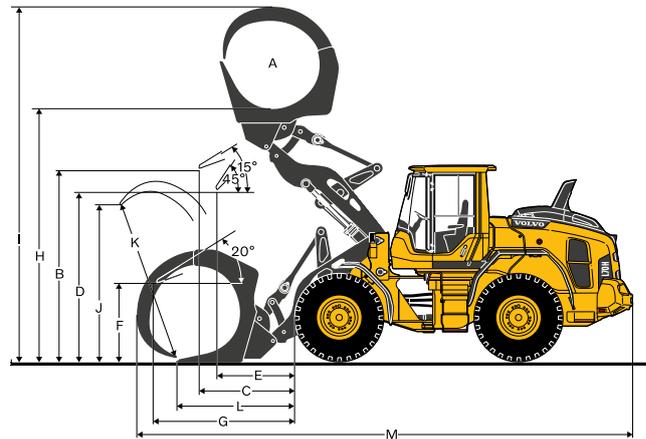
Where applicable, specifications and dimensions are according to ISO 7131, SAE J732, ISO 7546, SAE J742, ISO 14397, SAE J818



## Tires: 20.5R25 L3

		L90H
SAE-Load	kg	4 600
Operating weight without load*	kg	16 645
Grapple sales code		80 832
A	m <sup>2</sup>	2.4
B	mm	3 487
C	mm	1 703
D	mm	2 865
E	mm	1 319
F	mm	1 441
G	mm	2 740
H	mm	4 613
I	mm	6 664
J	mm	2 786
K	mm	2 990
L	mm	2 131
M	mm	8 469

\* Calculated with additional protective guarding



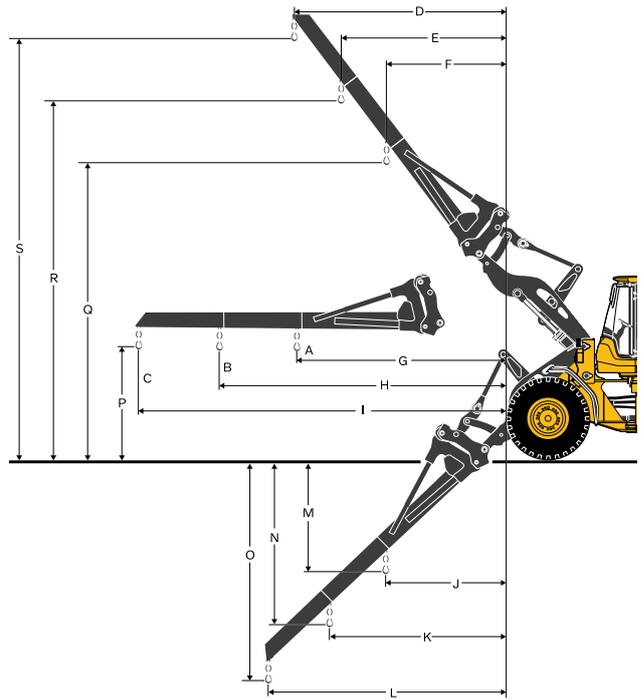
**Tires: 20.5R25 L3**

		<b>L90H</b>
Material handling arm sales code		92 008
A*	kg	2 760
B*	kg	2 130
C*	kg	1 740
Static tipping load, straight	kg	4 289
35deg. Turn	kg	3 834
at full turn	kg	3 700
D	mm	2 486
E	mm	1 894
F	mm	1 301
G	mm	3 253
H	mm	4 387
I	mm	5 520
J	mm	1 339
K	mm	1 889
L	mm	2 439
M	mm	2 051
N	mm	3 043
O	mm	4 034
P	mm	1 520
Q	mm	5 403
R	mm	6 370
S	mm	7 336
Operating weight without load	kg	14 833

\* Op. load at full turn + tipping position

Tipping loads calculated for max. arm length

\*\*Calculated with additional protective guarding

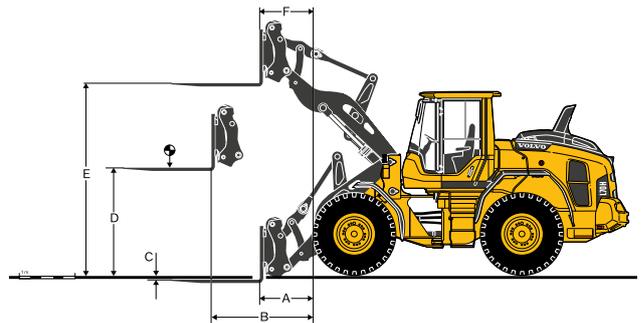


**Tires: 20.5R25 L3**

		<b>L90H</b>
Fork frame sales code		83770
Fork tines sales code (R/L)		80106/80107
Static tipping load, straight	kg	8 904
35deg. Turn	kg	7 947
at full turn	kg	7 664
at load center distance*	mm	600
A	mm	932
B	mm	1 679
C	mm	-4
D	mm	1 800
E	mm	3 841
F	mm	641
Operating weight without load	kg	14 928

\* Firm and level ground

\*\*Calculated with additional protective guarding



# Specifications

L90H\*

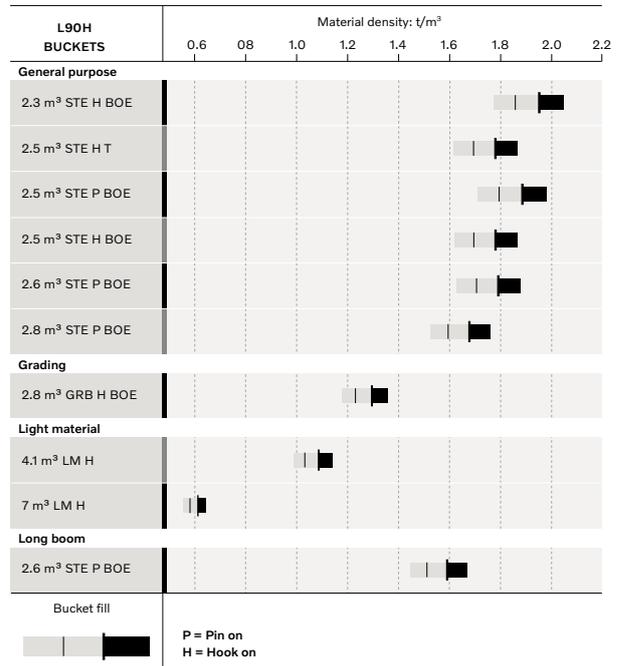
BR 20,5R25 VJT L3	GENERAL PURPOSE						GRADING	LIGHT MATERIAL		LONG BOOM	
	2.3 m³ STE H BOE	2.5 m³ STE H T	2.5 m³ STE P BOE	2.5 m³ STE H BOE	2.6 m³ STE P BOE	2.8 m³ STE P BOE	2.8 m³ GRB H BOE	4.1 m³ LM H	7 m³ LM H	2.6 m³ STE P BOE	
Volume, heaped ISO/SAE	m³	2.3	2.5	2.5	2.5	2.6	2.8	2.8	4.1	7.0	2.6
Volume at 110% fill factor	m³	2.5	2.8	2.8	2.8	2.9	3.1	3.1	4.5	7.7	2.9
Static tipping load, straight	kg	11 410	11 330	11 940	11 320	11 820	11 910	9 260	10 820	10 530	-1 800
at 35° turn	kg	10 120	10 030	10 620	10 030	10 500	10 580	8 190	9 550	9 250	-1 650
at full turn	kg	9 730	9 650	10 220	9 650	10 110	10 190	7 870	9 180	8 870	-1 600
Breakout force	kN	134.9	129.9	141.3	127.1	133.8	135.5	92.2	100.7	87.0	+1.7
A	mm	7 600	7 850	7 550	7 690	7 630	7 610	8 170	8 050	8 350	+410
E	mm	1 200	1 410	1 150	1 280	1 220	1 200	1 760	1 600	1 860	-10
H	mm	2 890	2 730	2 920	2 830	2 870	2 880	2 400	2 610	2 410	+430
L	mm	5 450	5 510	5 440	5 530	5 520	5 500	4 900	5 630	5 840	+420
M	mm	1 010	1 170	960	1 070	1 020	1 000	1 210	1 350	1 560	-50
N	mm	1 670	1 720	1 650	1 700	1 670	1 660	1 520	1 710	1 710	+360
V	mm	2 650	2 650	2 650	2 500	2 500	2 750	2 880	2 750	3 000	0
a <sub>1</sub> clearance circle	mm	12 140	12 290	12 130	12 060	12 040	12 250	12 980	12 500	12 920	+340
Operating weight	kg	15 560	15 630	15 380	15 600	15 390	15 360	15 700	15 850	16 280	+290

\*Calculated with additional protective guarding.

## 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 1.65 t/m³. Result: The 1.9 m³ bucket carries 2.0 m³. For optimal 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	~ 1.55	2.1	2.3
		~ 1.45	2.3	2.5
		~ 1.4	2.4	2.6
Sand/Gravel	~ 105	~ 1.6	2.1	2.2
		~ 1.5	2.3	2.4
		~ 1.45	2.4	2.5
Aggregate	~ 100	~ 1.8	2.1	2.1
		~ 1.7	2.3	2.3
		~ 1.6	2.4	2.4
Rock	≤100	~ 1.7	1.6	1.6



How to read bucket fill factor

## Supplemental Operating Data

Tires 20.5 R25 L3	Standard boom		Long boom	
	20.5 R25 L2	650/65 R25 L3	650/65 R25 L3	
Width over tires	mm	+4	+164	+164
Ground clearance	mm	-8	-4	+12
Tipping load, full turn	kg	-70	+315	+287
Operating weight	kg	-111	+545	+543

Calculated with 2.6 m³ STE P BOE, additional protective guarding

# Equipment

## STANDARD EQUIPMENT

### Engine

Exhaust after-treatment system  
 3-stage air cleaner, pre-cleaner, primary and secondary filter  
 Indicator glass for coolant level  
 Preheating of induction air  
 Fuel pre-filter with water trap  
 Fuel filter  
 Crank case breather oil trap  
 Exhaust heat ventilation

### Tires

20.5R25

### Drivetrain

Automatic Power Shift  
 Fully automatic gear shifting, 1-4  
 PWM-controlled gear shifting  
 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 80A/3135W  
 Battery disconnect switch  
 Maintenance-free batteries  
 Battery box, steel  
 Fuel gauge  
 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

### Contronic monitoring system

Contronic display  
 Fuel consumption  
 Diesel Exhaust Fluid/AdBlue consumption  
 Ambient temperature  
 Clock  
 Test function for warning and indicator lights  
 Brake test  
 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  
 Crank case pressure  
 Attachment lock open  
 Level warnings:  
 Fuel level  
 Diesel Exhaust Fluid/AdBlue 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 crank case pressure  
 High charge air temperature  
 Engine shutdown to idle in case of malfunction indication:  
 High transmission oil temperature  
 Slip in transmission clutches  
 Key pad, background lit  
 Start interlock when gear is engaged

### Hydraulic system

Main valve, double acting 2-spool with hydraulic pilots  
 Variable displacement axial piston pumps (2) for:  
 Working hydraulics, pilot hydraulics, steering system, brakes  
 Cooling fan, brakes  
 Hydraulic control levers  
 Mechanical hydraulic lever lock  
 Automatic boom kick-out  
 Automatic bucket positioner  
 Double acting hydraulic cylinders  
 Indicator glass for hydraulic oil level  
 Hydraulic oil cooler

### Brake system

Dual brake circuits  
 Dual brake pedals  
 Secondary brake system  
 Parking brake, electrical-hydraulic  
 Brake wear indicators  
 Outboard mounted circulating oil cooled wet disc brakes on all four wheels

# Equipment

## STANDARD EQUIPMENT

### Cab

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 rearview mirrors
Dual exterior rearview mirrors
Sliding window, right side
Tinted safety 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
Foot step, left side (toolbox lockable included)

### Service and maintenance

Engine oil remote drain and fill
Transmission oil remote drain and fill
Sliding hydraulic oil cooler and AC-condenser
Lubrication manifolds, ground accessible
Pressure test ports: transmission and hydraulic, quick connects
Service platforms with anti-slip surfaces
Quick-fit hydraulic oil fill
CareTrack
Telematics, 6 -year subscription
Toolbox, lockable

### External equipment

Basic fenders, front and rear
Viscous cab mounts
Rubber engine and transmission mounts
Engine hood, electronically openable
Frame, joint lock
Vandalism lock for engine compartment
Lifting eyes
Tie down eyes
Tow hitch
Counterweight, pre-drilled for optional guards

## OPTIONAL EQUIPMENT

### Engine

Air pre-cleaner, cyclone type
Air pre-cleaner, oil-bath type
Air pre-cleaner, turbo type
Engine auto shut down
Engine block heater, 120V / 230V
Fuel heater
Fuel fill strainer
Hand throttle control
Max. fan speed, hot climate
Reversible cooling fan

### Drivetrain

Lock-up torque converter
Rear axle with limited slip
Speed limiter, 20 km/h
Speed limiter, 30 km/h
Speed limiter, 40 km/h

## OPTIONAL EQUIPMENT

### Hydraulic system

Arctic kit: Attachment locking, pilot hoses and hydraulic oil
Attachment bracket, cast, visibility-optimized
Attachment bracket, side-tilting
Separate attachment locking, long boom
Separate attachment locking, standard boom
Single acting lifting function
Boom suspension system
Hydraulic fluid, biodegradable, Volvo
Hydraulic fluid, fire resistant
Hydraulic fluid, for hot climate
Detent for 3rd hydraulic function
Adjustable flow for 3rd hydraulic function
Hydraulic, 2 functions Electro-servo, std/long boom
Hydraulic, 3 functions Electro-servo, std/long boom
Hydraulic, 4 functions Electro-servo, std/long boom
Single lever control, 2 funct Electro-servo, std/long boom
Single lever control, 3 funct Electro-servo, std/long boom
Single lever control, 4 funct Electro-servo, std/long boom

### Brake system

Stainless steel, brake lines
Axle oil cooler
Parking brake alarm, audible

### Cab

ACC control panel, with Fahrenheit scale
Anchorage for Operator's manual
Asbestos dust protection filter
Automatic Climate Control, ACC
Automatic Climate Control, ACC, corrosion protection condenser
Cab air pre-cleaner, cyclone type
Carbon filter - cab
Remote door opener
Lunch box holder
Operator's seat, Volvo air-suspended, heavy-duty, high back, heated
Operator's seat, Volvo air-susp, 3-point seatbelt
Operator's seat, ISRI, heated, high back
Operator's seat, ISRI, low back
Operator's seat, Premium Comfort ISRI
Operator's seat, Premium Comfort ISRI 3-point seat belt
Armrest, operator's seat, ISRI, left only
Armrest, operator's seat, Volvo, left
Safety belt, 3" (75mm) width
Safety belt warning
Radio installation kit including 12 volt outlet, left-side
Radio installation kit including 12 volt outlet, right-side
Radio installation kit, 12V, for USA
Radio with AUX, Bluetooth and USB connection
DAB Radio
Subwoofer
Forward view mirror
Rear view mirrors, el.adjusted and heated
Rear view mirrors, long arm right
Rear view mirrors, el.adjusted and heated, long arm right
Steering wheel knob
Sun blinds, rear windows
Sun blinds, side windows
Timer cab heating
Universal door/ignition key
Window, sliding, door
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
Oil sampling valve
Refill pump for automatic lubrication system
Tool kit
Wheel nut wrench kit

---

**OPTIONAL EQUIPMENT**

---

**Electrical**

Battery disconnect switch, additional in cab  
Anti-theft device  
Headlights, assym. left  
Headlights, assym. right LED  
Headlights, assym. left LED  
Emergency stop  
License plate holder, lighting  
Reduced function working lights when reverse gear activated  
Side marker lamps  
Forward camera, colour  
Rear view camera including monitor, colour  
Rear view mirrors, long arm, right side  
Rearview mirrors, adjustable, el. heated  
Reverse alarm  
Reverse lights  
Reversing warning light  
Reverse warning light, strobe lightning  
Warning beacon (flasher), LED automatic  
Warning beacon (flasher), LED  
Seatbelt indicator, external  
Working lights, attachments, 1 LED  
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  
Co Pilot available  
Rearview camera in Co pilot  
Max Boom height  
Can Bus Interface  
Delayed Engine Shutdown

**Protective equipment**

Anti-theft device  
Bellyguard front  
Bellyguard rear  
Boom cylinder hose and tube guards  
Cab roof, heavy duty  
Center hinge and rear frame guard  
Corrosion protection, painting of machine  
Cover plate front frame, heavy-duty  
Cover plate, under cab  
Cover plates rear frame  
Guards for front headlights  
Grease nipple guards  
Guards for radiator grill  
Guards for tail lights, heavy-duty  
Wheel/axle seal guards  
Window guards, side and rear  
Windshield guard

---

**OPTIONAL EQUIPMENT**

---

**External equipment**

Deleted front mudguards  
Fire extinguisher  
Bracket for fire extinguisher  
Fire suppression system  
Mudguards, full cover, rear for 80-series tires  
Mudflap kit for mudguards, full cover for 80-series tires  
Mudguards, full cover, rear and front/rear for 65-series tires  
Mudflap kit for mudguards, full cover for 65-series tires  
Footsteps front frame  
Footsteps, right-hand side  
Flexible rear step  
Cab ladder, rubber suspended

**Other equipment**

CareTrack, GSM/Satellite  
CE-marking  
Comfort Drive Control (CDC)  
Comfort Drive Control (CDC) Electro-servo  
Secondary steering  
Counterweight, logging  
Counterweight, signal painted, chevrons  
Option for machines without dinitrol  
Noise reduction kit, EU excluding decal  
Sign, 50 km/h  
Sign, slow moving vehicle

**Tires and Rims**

20.5R25  
600/65R25  
650/65R25  
620/75R26 Agriculture application only  
750/65R26 Agriculture application only

**Attachments**

Buckets:  
Straight  
Spade nose  
High tipping  
Light material  
Grading  
Wear parts:  
Bolt-on edge  
Bolt-on or weld-on bucket teeth  
Segments  
Log grapples  
Fork equipment  
Material handling arm  
Snow blade  
Broom  
Sand spreading bucket  
Bale clamp  
Drum rotator

**V O L V O**