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L45H, L50H

Volvo Wheel Loaders 8.6-9.9 t / 19,114-21,958 lb 98-117 hp



Volvo L45H, L50H in detail

Engine

Volvo Tier 4f compliant, 4 liter, 4-cylinder in-line turbocharged diese engine; featuring common rail fuel injection system and externally cooled exhaust gas recirculation (EGR). Exhaust aftertreatment system includes a diesel oxidation catalyst (DOC), a diesel particulate filter (DPF) and a selective catalytic reduction (SCR).

Cooling pack includes side by side arranged radiators for engine coolant, hydraulic oil and charge air cooler.

		L45H	L50H
Engine	Volvo	D4J	D4J
Max power at	r/min (r/s)	1800 - 2200 (30 - 36.7)	1800 - 2200 (30 - 36.7)
SAE J1995 gross	kW (hp)	75 (100)	87 (117)
SAE J1349, ISO 9249 net	kW (hp)	73 (97.9)	85 (114)
Max. torque at	r/min (r/s)	1 450 (24.2)	1 450 (24.2)
SAE J1995 gross	Nm (ft lbf)	425 (314)	475 (350)
SAE J1349, ISO 9249 net	Nm (ft lbf)	416 (307)	466 (344)
Economic working range	r/min (r/s)	1 200 - 1 800 (20 - 30)	1 200 - 1 800 (20 - 30)
Displacement	l (in³)	4 (244)	4 (244)

Drivetrain

Hydrostatic transmission allows for speed range change without any tractive power interuption.

Maximum tractive power is available in all speed ranges, regardless of the

Automatic power regulation prevents engine stalling in case of additional power demand from the working hydraulics or the auxiliaries, and protects from overheating in case of overload. Fully floating axle shafts with self-lubricated oscillating rear axle.

Fixed front axle and oscillating rear axle, both self-lubricated. 100% differential lock on both axles.

For 40/50 km/h (24.8/31 mi/h)* speed version only: The drive modes selector enable to select the best possible driveline setting for every applications and operator preference. *max vehicle speed market dependent

		L45H	L50H
Travel speed, forward/reverse			
20 km/h (12.4 mi/h)-speed vers	sion		
1st gear	km/h	0 - 6	0 - 6
	(mi/h)	(0 - 3.7)	(0 - 3.7)
2nd gear	km/h	0 - 20	0 - 20
	(mi/h)	(0 - 12.4)	(0 - 12.4)
30 km/h (19 mi/h)-speed version	on		
1st gear	km/h	0 - 6	0 - 6
	(mi/h)	(0 - 3.7)	(0 - 3.7)
2nd gear	km/h	0 - 30	0 - 30
	(mi/h)	(0 - 19)	(0 - 19)
50 km/h (31 mi/h)*-speed vers	ion		
1st gear	km/h	0 - 6	0 - 6
	(mi/h)	(0 - 3.7)	(0 - 3.7)
2nd gear	km/h	0 - 19	0 - 19
	(mi/h)	(0 - 11.8)	(0 - 11.8)
3rd gear	km/h	0 - 50*	0 - 50*
	(mi/h)	(0 - 31)*	(0 - 31)*

^{*}max vehicle speed market dependent

Hydraulic system

Closed center load sensing hydraulic system with pilot operated control

System supply:

A variable displacement piston pump provides flow to the working hydraulic and steering system. The steering function has always priority. A gear pump provides flow to the braking system and the cooling fan.

Double-acting 3-spools main control valve (4-spools valve as option). The lift function has four positions: lift, hold (neutral), lower and float

An optional automatic boom kick-out can be switched on and off and is adjustable to any position between maximum reach and full lifting height. The tilt function has three positions: rollback, hold (neutral) and dump. The standard bucket positioner system allows to easily adjust the tilt angle to a predefined position.

Standard third function for sweepers, snow blowers, hi tip buckets, optional 4th function for attachments with additional functions

Full-flow filtration through 10 micron (absolute) filter cartridge in a combined suction-return-filter.

Thermostatically controlled oil flow to oil cooler (fast warm-up, optimized

		L45H	L50H
Main Flow	l/min	132	158
	(gal/min)	(34.8)	(41.7)
Working pressure max	bar	260	260
	(psi)	(3,771)	(3,771)
at engine speed	r/min	2 200	2 200
Flow auxiliary hydraulics	l/min	120	125
	(gal/min)	(31.7)	(33.0)
Working pressure max	bar	200	200
	(psi)	(2,900)	(2,900)
at engine speed	r/min	2 200	2 200
High flow	l/min	125	143
	(gal/min)	(33.0)	(37.8)
Working pressure max	bar	200	200
	(psi)	(2,900)	(2,900)
at engine speed	r/min	2 200	2 200

Linkage			
Double acting cylinder for all functions			
		L45H	L50H
Linkage system		Torque parallel (TP)	Torque parallel (TP)
Lift cylinders		2	2
Tilt cylinders		1	1
Lift time (loaded)	s	4.8	4.7
Lowering time (empty)	s	3.2	3.9
Dump time	s	1.5	1.2

Steering System

Load sensing hydrostatic articulated steering with double acting cylinders. System supply: The steering system has priority feed from the loadnsing axial piston pump with variable displacement.

Steering cylinders: Two double-acting cylinders. Elastical end-stops.

		L45H	L50H
Steering cylinders		2	2
Working pressure	MPa (psi)	17.5 (2,538)	17.5 (2,538)
Maximum flow	l/min (gal/ min)	70 (18.5)	70 (18.5)
Max articulation	±°	40	40

Brake system

Brake system 20 & 30 km/h (12.4 & 19 mi/h) speed version:

The brake system complies with ISO 3450 requirements. Single circuit service brake featuring hydraulically operated wet disk brakes on rear axle.

An Inching-brake pedal provides hydrostatic wearless braking in the first stage for precise approach; if applied further the service brakes takes over for final braking and machine immobilization.

Parking brake: Mechanically operated dry disc brake located on the input

shaft of the front axle

Brake system 40/50 km/h (24.8/31 mi/h)*:

The brake system complies with ISO 3450 requirements. Dual circuit service brake featuring hydraulically operated wet disk brakes on front and rear axle.

An electronically Inching-brake pedal provides hydrostatic wearless braking in the first stage for precise approach; if applied further the service brakes takes over for final braking and machine immobilization. Parking brake: Mechanically operated dry disc brake located on the input shaft of the front axle.

* max vehicle market dependent

Electrical system

Contronic electrical system with central warning light and buzzer, providing clear and easy to read information to the operator

LCD display with main and sub information field, adjustable to various

Display information in three categories:

- Information on continous operating data,
- Check requests (based on vehicle and error messages)
- Warning (with alarm texts).

Additional audible warning by a buzzer. Indicator and activation lights for various control and monitoring functions. Gauges for Diesel Exhaust Fluid level, fuel tank level, speedometer, engine speed, coolant temperature, transmission/hydraulic oil temperature. A keypad allows easy navigation on the central instrument display. Direct access buttons for Engine, Transmission, Hydraulics, Axles & Brakes, Electrical system, Vehicle information, Vehicle messages, Service, Settings and Cycle information.

		L45H	L50H
Voltage	V	24	24
Batteries	V	2x12	2x12
Battery capacity	Ah	2x100	2x100
Cold cranking capacity, approx	Α	830	830
Alternator rating	W/A	3 080 / 110	3 080 / 110
Starter motor output	kW	5.5	5.5

Cab

The cab is tested and approved according to ROPS (ISO 3471, SAE J1040) and FOPS (ISO 3449).

The cab is compliant with ISO 6055 requirements regarding Operator overhead protection - Industrial trucks and SAE J386 regarding Operator Restraint

The operator's seat features an adjustable suspension and a retractable seatbelt. Fresh air is filtered through two large elements prior entering, ensuring extremely clean air distribution in the cab.

11 air flow settings or an automatic mode provides efficient ventilation. Air vents are available to all windows enabling fast de-misting and defrosting. The contronic monitoring system provides all important information in a central position and all machine controls are located in the operator's field of vision.

Sound Level

		L45H	L50H
Sound pressure level in cab ac	cording to ISO	6396	
L_{pA}	dB	70	70
L _{pA} (as option)	dB	68	68

External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC

-VVA	42	102	.02
Service Refill			
		L45H	L50H
Fuel tank	l (gal)	160 (42.3)	160 (42.3)
DEE/AdBlue® tank	l (aal)	20 (5.3)	20 (5.3)

dВ

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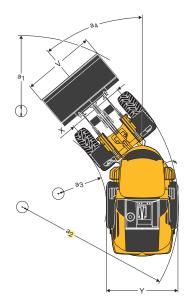
102

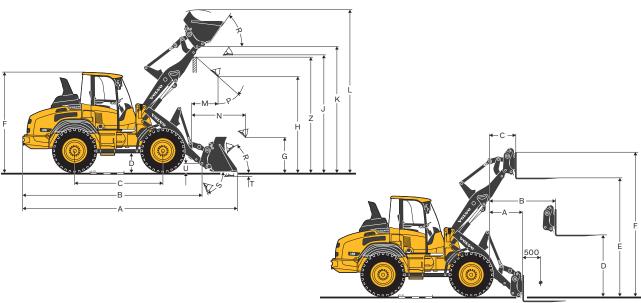
Engine oil I (gal) 14 (3.7) 14 (3.7) Engine coolant I (gal) 20 (5.3) 20 (5.3) 95 (25.1) Hydraulic tank I (gal) 95 (25.1) Front axle oil 20/30 km/h I (gal) 17.5 (4.6) 17.5 (4.6) speed version Rear axle oil 20/30 km/h I (gal) 17.5 (4.6) 17.5 (4.6) speed version Front axle oil 40/50 km/h I (gal) 17.0 (4.5) 17.0 (4.5) speed version Rear axle oil 40/50 km/h* I (gal) 18.3 (4.8) 18.3 (4.8) speed version Transmission oil 40/50 km/h I (gal) 2.7 (0.71) 2.7 (0.71) (24.8/31 mi/h)* speed version

*max vehicle speed market dependent

Specifications L45H

			attachme	nkage, TPV nt bracket i-25 tires				
В	mm	in	5 320	209.4				
C	mm	in	2 650	104.3				
D	mm	in	395	15.5				
F	mm	in	2 950	116.1				
G	mm	in	1000	39.4				
J	mm	in	3 430	135				
K	mm	in	3 685	145				
0		0	55					
Р		0	4	1 5				
R		0	4	15				
S		0	75					
U	mm	in	255	10				
Χ	mm	in	1750	68.9				
Υ	mm	in	2 150	84.6				
Z	mm	in	3 445	135.6				
a	mm	in	4 745	186.8				
a ₃	mm	in	2 555	100.6				
а.		0	Δ	-0				





Nith Loading Fork				chment cket	TPV Attachment bracket Long Boom		
Center of gravity 500 mm / 19.7 in				T			
A	mm	in	785	30.9	1 135	44.7	
В	mm	in	1 475	58	1 745	68.7	
С	mm	in	650	25.6	825	32.5	
D	mm	in	1 705	67.1	1 705	67.1	
E	mm	in	3 490	137.4	3 695	145.5	
F	mm	in	4 225	166.3	4 430	174.4	
Tipping load full turn (ISO 14397)	kg	lb	4 420	9,744	3 920	8,642	
Working load acc. to EN 474-3, 60/80 %	kg	lb	2 650 / 3 530	5,842 / 7,782	2 350 / 3 130	5,180 / 6,900	
Working load 80%, transport position, 40 deg. and full turn	kg	lb	4 000	8,818	-	-	

				GE	NERAL	PURPO	SE	L	IGHT M	ATERIA	L	4-i	n-1	High	n-Tip	LONG	воом
TPV	TP-Linkage, attachment brac 15.5-25 tires	cket			No. of the Parks												
Cap	acity heaped	m³	yd ³	1.4	1.8	1.5	2.0	1.8	2.4	2.0	2.6	1.2	1.6	2	2.6	-	-
Mat	erial density	kg/ m³	lb/yd³	1800	3,034	1700	2,865	1400	2,360	1 200	2,022	1900	3,202	1 000	1,685	-300	-505
	ic tipping load. ight (ISO 14397)	kg	lb	5 940	13,095	5 860	12,919	5 710	12,588	5 600	12,345	5 580	12,301	4 880	10,758	-	-
	ic tipping load. curn 40° (ISO 97)	kg	lb	5 250	11,574	5 190	11,442	5 050	11,133	4 960	10,935	4 940	10,890	4 320	9,524	-640	-1,410
	raulic lifting acity. max.	kN	lbf	70	15,736	69.4	15,601	67.5	15,174	66	14,837	66.5	14,950	57.5	12,927	-	-
Brea	akout force	kN	lbf	71	15,961	69.4	15,601	61.6	13,848	55.8	12,544	76.7	17,242	-	-	-	-
Α	Total length	mm	in	6 370	250.8	6 385	251.3	6 505	256.1	6 615	260.4	6 295	247.8	6 955	273.8	-	-
L	Lift height. max.	mm	in	4 740	186.6	4 790	188.5	4 810	189.3	4 940	194.5	4 815	189.5	5 695	224.2	200	8
V	Bucket width	mm	in	2 250	88.6	2 250	88.6	2 250	88.6	2 250	88.6	2 250	88.6	2 250	88.6	-	-
a ₁	Clearance circle	mm	in	10 310	405.9	10 320	406.3	10 390	409	10 460	411.8	10 305	405.7	10 675	420.2	-	-
Т	Digging depth	mm	in	85	3.3	85	3.3	85	3.3	85	3.3	120	4.7	95	3.7	-	-
Н	Dump height. 45°	mm	in	2 800	110.2	2 780	109.4	2 690	105.9	2 610	102.7	2 790	109.8	4 230	166.5	200	8
М	Reach at max. height	mm	in	940	37	960	37.8	1 040	40.9	1 115	43.9	830	32.6	1500	59	170	7
N	Reach. max.	mm	in	1 770	69.6	1 785	70.2	1860	73.2	1 935	76.1	1650	64.9	2 685	105.7	270	10.6
Ope	rating weight	kg	lb	8 770	19,334	8 790	19,378	8 800	19,400	8 830	19,466	8 990	19,819	9 230	20,348	-	-

Equipment

STANDARD EQUIPMENT	L45H	L50F
Engine		
Dry-type air filter	•	•
Three stage air cleaner, pre-cleaner, primary and secondary filter Preparation for pre-cleaner	•	•
Preheating of induction air	•	•
Side by side (single layer) cooling pack	•	•
Coolant level monitoring	•	•
Filtration screens on air inlets	•	•
Fuel pre-filter with water trap	•	•
Crank case breather oil trap	•	•
Exhaust after-treatment system Exhaust heat ventilation	•	•
Drivetrain		-
Hydrostatic drive 20 km/h (16.6 mph)	•	•
Inching-brake pedal (hydrostatic wearless braking ahead of service		•
brake application)	•	•
Wet disc service brakes, hydraulically operated Dry disc parking brake		
Operator-selected 100% differential locks in both axles	•	•
Electrical system		
24 V electrical system (2 X 12V maintenance free batteries)	•	•
Batteries covered by lockable engine hood	•	•
Electronic battery cut-off switch	•	•
Alternator 110 A / 3 080 W Electric horn	•	•
Care Track GSM		
Hydraulic system		
Load-Sensing Hydraulics	•	•
Flow sharing main control valve, three-spool system	•	•
Variable displacement axial piston pump for working hydraulic and		•
steering Goar pump for brake system and cooling for		
Gear pump for brake system and cooling fan 3rd hydraulic circuit		
Bucket positioner	•	•
Indicator glass for hydraulic oil level	•	•
Thermostatically controlled oil flow to oil cooler (fast warm-up,	•	
optimized cooling)		
Lights Main head lights (halogen) upper/dipped/asymmetrical	•	•
Working lights, halogen (2 front/2 rear)	•	•
Parking lights	•	•
Rear lights	•	•
Brake lights	•	•
Direction indicators	•	•
Hazard warning lights	•	•
Reversing lights	•	•
Cab lighting Service	_	
Standard tool kit	•	•
Drain valves for engine oil, hydraulic oil and coolant	•	•
Hydraulic pressure test ports with quick-connects	•	•
Instrumentation & controls		
24 Volt accessories socket	•	•
Hazard warning switch	•	•
Safety start Electronic Information System	•	•
Contronic display with keypad	•	•
Monitoring of fuel level, fuel consumption, Diesel Exhaust Fluid		
level, temperatures and pressures (engine, ambient, transmission, hydraulics, brakes and steering)	٠	•
LED-illuminated symbols are available for direction indicators, transportation & work lights, rotating beacon*, parking brake, engine oil pressure, battery charging, differential lock, boom suspension system*, DEF warning, regeneration and high exhaust temperature. *optional	•	•
Cab, Exterior		
	•	•
ROPS/FOPS-cab	-	•
ROPS/FOPS-cab Cab cushionning	•	
ROPS/FOPS-cab Cab cushionning Single key kit door/start	•	•
ROPS/FOPS-cab Cab cushionning Single key kit door / start Lockable door	_	•
ROPS/FOPS-cab Cab cushionning Single key kit door/start	•	
ROPS/FOPS-cab Cab cushionning Single key kit door / start Lockable door Door stops	•	•
ROPS/FOPS-cab Cab cushionning Single key kit door / start Lockable door Door stops All-round tinted safety glass Sliding window RHS Two-stage air inlet filtration with large easy to replace elements	•	•
ROPS/FOPS-cab Cab cushionning Single key kit door / start Lockable door Door stops All-round tinted safety glass Sliding window RHS	•	•

STANDARD EQUIPMENT		
JIMPAND EGGII MENI	L45H	L50H
Cab, Interior		
Acoustic inner lining	•	•
Floor mat	•	•
Adjustable steering column	•	•
Left and right armrests	•	•
4-way adjustable operator's seat	•	•
Retractable seat belt		
Sunvisor	•	•
Interior rear view mirror		
Air conditioner	•	•
Automatic heat control		
Several air vents on the front and rear of the cab, allowing excellent		
climate control, demisting and defrosting	•	•
Interior light	•	•
Coat hook	•	•
Cup holder	•	•
Storage box in the cab	•	•
24 V power outlet		•
Emergency hammer	•	•
		•
Seat mec/susp		
Working Equipment	•	•
Automatic bucket postioner		
Hydraulic quick-change attachment bracket	•	•
External equipment		
Fenders (front/rear)	•	•
Lockable engine hood	•	•
Lockable fuel-tank cap	•	•
Lockable Diesel Exhaust Fluid filler cap	•	•
Vertical exhaust	•	•
Frame, joint lock	•	•
Towing device	•	•
Lifting eyes and Tie-down points	•	•
Official approval		
Machine conforming to European directive 2006/42/EC	•	•
Electromagnetic compatibility (EMC) conforming to European		
Electromagnetic compatibility (EMC) conforming to European directive 2014/30/EC	•	•
Noise emissions in the environment conforming to directive		
2000/14/EC	•	•
Tipping land and an dead apply and a 100 14207 1		
Tipping load and payload conforming to ISO 14397-1	•	•
ROPS conforming to ISO 3471	•	•
ROPS conforming to ISO 3471	-	-
	-	-
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449	-	-
ROPS conforming to ISO 3471	•	•
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT	-	-
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine	•	•
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle	•	•
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater	•	•
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle	L45H	L50H
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ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown	L45H	L50H
POPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type	L45H	L50H
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient	L45H	L50H
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan	L45H	L50H
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V	L45H	L50H
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain	L45H	L50H
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching	L45H	L50H
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version	L45H	L50H
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ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h* (XXX) Electric	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h * (XXX) Electric Rotating beacon foldable	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h* (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h* (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h* (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h* (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible Reverse alarm audible & switchable	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h* (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible	L45H	
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ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h * (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible Reverse alarm audible & switchable Reverse alarm audio visual switchable	L45H	L50H
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h* (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible & switchable Reverse alarm audio visual switchable Rear view camera incl monitor (color)	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h/* (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible Reverse alarm audible & switchable Reverse alarm audio visual switchable Rear view camera incl monitor (color) LED Working lights on cab, 2 front / 2 rear LED Working lights on cab, 4 front / 4 rear	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h/12 mi/h version 30 km/h/19 mi/h version 40/50 km/h * (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible Reverse alarm audible & switchable Reverse alarm audio visual switchable	L45H	
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ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h / (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible & switchable Reverse alarm audible & switchable Reverse alarm audio visual switchable Rear view camera ind monitor (color) LED Working lights on cab, 2 front / 2 rear LED Working lights on cab, 4 front / 4 rear Additional LED Working lights, 2 front / 1 rear Elevated headlights 350 mm / 13.8 in Road light equipm. width 2.5 m / 8.2 ft	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h/12 mi/h version 30 km/h/19 mi/h version 40/50 km/h/* (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible & switchable Reverse alarm audible & switchable Reverse alarm audio visual switchable Reverse alarm audio monitor (color) LED Working lights on cab, 2 front / 2 rear LED Working lights on cab, 4 front / 4 rear Additional LED Working lights, 2 front / 1 rear Elevated headlights 350 mm / 13.8 in Road light equipm. width 2.5 m / 8.2 ft Power outlet 12 V	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h / 12 mi/h version 30 km/h / 19 mi/h version 40/50 km/h * (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible Reverse alarm audible & switchable Reverse alarm audio visual switchable Reverse alarm audio visual switchable Reverse alarm audio visual switchable Reverse alarm inding lights on cab, 2 front / 2 rear LED Working lights on cab, 4 front / 4 rear Additional LED Working lights, 2 front / 1 rear Elevated headlights 350 mm / 13.8 in Road light equipm. width 2.5 m / 8.2 ft Power outlet 12 V Anti theft device	L45H	
ROPS conforming to ISO 3471 FOPS conforming to ISO 3449 OPTIONAL EQUIPMENT Engine Handthrottle Fuel preheater Automatic engine shutdown Turbo II Prefilter Air pre-cleaner, oil-bath type Fan speed, high ambient Reversible cooling fan Engine Block heater, 120 V Drivetrain Hand-inching 20 km/h/12 mi/h version 30 km/h/19 mi/h version 40/50 km/h/* (XXX) Electric Rotating beacon foldable Preparation for magnetic rotating beacon Magnetic rotating beacon Reverse alarm audible & switchable Reverse alarm audible & switchable Reverse alarm audio visual switchable Reverse alarm audio monitor (color) LED Working lights on cab, 2 front / 2 rear LED Working lights on cab, 4 front / 4 rear Additional LED Working lights, 2 front / 1 rear Elevated headlights 350 mm / 13.8 in Road light equipm. width 2.5 m / 8.2 ft Power outlet 12 V	L45H	

OPTIONAL EQUIPMENT		
OF HOUSE EGON MENT	L45H	L50H
Hydraulics		
Hyd oil mineral VG46 HV	•	•
Hyd oil mineral VG32 HV	•	•
Hyd oil mineral VG68 HV	•	•
Boom suspension system	•	•
Boom kickout	•	•
Safety valve for lift cylinder	•	•
Combination Boom suspension system with safety valves for		
boom cylinder	•	•
Tilt control	•	•
Tilt speed limiter mechanical	•	•
Safety valve for tilt cylind.	•	•
4th function	•	•
Hydr. Couplings	•	•
High flow L45H: 125 I/min (33.0 gal/min)	•	_
High flow L50H: 143 I/min (37.8 gal/min)	_	•
Auxiliary hydraulic's return line (via filter)	•	•
Cab		
Door all glass	•	•
Door with sliding window	•	•
Foldable right hand window	•	•
Split door (Door with foldable window)	•	•
Heated rearview mirrors	•	•
Seat fab air/susp heat	•	•
Seat belt 3"	•	•
Seat belt warning	•	•
Comfort drive control (CDC)	•	•
Radio preparation 12 V	•	•
Radio	•	•
Joystick control including F/R/N, up/down-shift, differential lock and 3rd hydraulic function	•	•
Multilever control, including F/R/N, up/down-shift, differential lock, horn and 3rd hydraulic function	•	•
Multilever control, including F/R/N, up/down-shift, differential lock, horn, 3rd & 4th hydraulic function	•	•
Timer cab heating (Pause heating)	•	•
Auxiliary cab & engine heater	•	•

	L45H	L50H
Service	•	
Wheel chock	•	•
Tool Kit	•	•
Central Lub unit (Volvo)	•	•
Wheel/Tires		
500/70R24	•	•
540/65R24	•	_
15.5R25	•	•
17.5R25	•	•
3-piece rim	•	•
550/65R25	•	•
600/55-26.5	•	•
Protective equipment		
Front Mudflaps	•	•
Extended mudflaps	•	•
Mudguard extension 75 mm / 2.95 in	•	•
Belly guards, front/rear	•	•
Rear lights protection	•	•
Headlights protection	•	•
Working lights guards, front/rear	•	•
Windshield guard, rear	•	•
Windshield guard, front	•	•
Engine hood protection	•	•
Other		
Long boom	•	•
Preparation for licence plate	•	•
Side marking reflectors	•	•
SMV warning triangle	•	•
Trailer socket	•	•
Multiline license plate retainer	•	•
Colour Level 1 (yellow parts)	•	•
Colour Level 1+2	•	•
Other attachments		
Log grapples	•	•
Forks	•	•
Material handling arm	•	•
General Purpose bucket	•	•
High-Tip bucket	•	•
Light material bucket	•	•
Clamp bucket	•	•

SELECTION OF VOLVO OPTIONAL EQUIPMENT

Boom Suspension System



Comfort Drive Control



Reversible cooling fan



3rd and 4th hydraulic function



Auxiliary cab and engine heater



Central lubrication system



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.



Volvo L45H Compact Wheel loader L45H Goodyear 17.5R25 TL 3A+ (width over tires 86") CL20192 12mph (20kph) travel speed CL34001 Reversible cooling fan CL33051 Cab, ROPS & FOPS CL40050 Cab door w sliding window CL46062 Sliding window RHS CL46054 Single lever control 3rd function w/o flow sharing, for bucket/fork use CL47050 Operator seat mechanical CL41050 Heat and A/C CL44051 Preparation for 12V accessories CL45052 Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007 Attachment Bracket VAB (cast) CL90052	Description	Article
12mph (20kph) travel speed CL34001 Reversible cooling fan CL33051 Cab, ROPS & FOPS CL40050 Cab door w sliding window CL46062 Sliding window RHS CL46054 Single lever control 3rd function w/o flow sharing, for bucket/fork use CL47050 Operator seat mechanical CL41050 Heat and A/C CL44051 Preparation for 12V accessories CL5052 Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Volvo L45H Compact Wheel loader	L45H
Reversible cooling fan CL33051 Cab, ROPS & FOPS CL40050 Cab door w sliding window CL46062 Sliding window RHS CL46054 Single lever control 3rd function w/o flow sharing, for bucket/fork use CL47050 Operator seat mechanical CL41050 Heat and A/C CL44051 Preparation for 12V accessories CL45052 Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Goodyear 17.5R25 TL 3A+ (width over tires 86")	CL20192
Cab, ROPS & FOPS CL40050 Cab door w sliding window CL46062 Sliding window RHS CL46054 Single lever control 3rd function w/o flow sharing, for bucket/fork use CL47050 Operator seat mechanical CL41050 Heat and A/C CL44051 Preparation for 12V accessories CL45052 Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	12mph (20kph) travel speed	CL34001
Cab door w sliding window CL46062 Sliding window RHS CL46054 Single lever control 3rd function w/o flow sharing, for bucket/fork use CL47050 Operator seat mechanical CL41050 Heat and A/C CL44051 Preparation for 12V accessories CL45052 Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design Protect.wax coating incl cyl. NMX90007	Reversible cooling fan	CL33051
Sliding window RHS CL46054 Single lever control 3rd function w/o flow sharing, for bucket/fork use CL47050 Operator seat mechanical CL41050 Heat and A/C CL44051 Preparation for 12V accessories CL45052 Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Titt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Cab, ROPS & FOPS	CL40050
Single lever control 3rd function w/o flow sharing, for bucket/fork use CL47050 Operator seat mechanical CL41050 Heat and A/C CL44051 Preparation for 12V accessories CL45052 Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Cab door w sliding window	CL46062
Operator seat mechanical Heat and A/C CL44051 Preparation for 12V accessories CL45052 Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Sliding window RHS	CL46054
Heat and A/C Preparation for 12V accessories CL45052 Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) Cl61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Single lever control 3rd function w/o flow sharing, for bucket/fork use	CL47050
Preparation for 12V accessories CL45052 Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) Cl61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Operator seat mechanical	CL41050
Back up alarm, audible CL51050 Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Heat and A/C	CL44051
Rear view camera CL52058 Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Preparation for 12V accessories	CL45052
Hydraulic oil ISO VG 46 CL60050 Tilt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Back up alarm, audible	CL51050
Tilt Cylinder (HD from L50H) CL61055 Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Rear view camera	CL52058
Volvo hydraulic quick couplings (2) for 3rd function CL62051 Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Hydraulic oil ISO VG 46	CL60050
Wheel chocks CL70051 Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Tilt Cylinder (HD from L50H)	CL61055
Manual US Version CL72067 Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Volvo hydraulic quick couplings (2) for 3rd function	CL62051
Frame Life Time WarrantyCertif CL80064 Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Wheel chocks	CL70051
Standard paint, Volvo design CL81051 Protect.wax coating incl cyl. NMX90007	Manual US Version	CL72067
Protect.wax coating incl cyl. NMX90007	Frame Life Time WarrantyCertif	CL80064
	Standard paint, Volvo design	CL81051
Attachment Bracket VAB (cast) CL90052	Protect.wax coating incl cyl.	NMX90007
	Attachment Bracket VAB (cast)	CL90052
88" MP 1.6 yd3 w/o teeth CL11390874	88" MP 1.6 yd3 w/o teeth	CL11390874
88" BOCE 3 piece CL11391017	88" BOCE 3 piece	CL11391017



Volvo Construction Equipment North America Warranty – Disclaimers – Limitations Limited Warranty for Governmental / Municipalities

Volvo Construction Equipment North America ("Volvo CE") hereby extends to its authorized dealers ("Dealer") and the Dealer's Governmental / Municipalities customers ("Customer", and both Dealer and Customer are referred to herein as a "Buyer"), who purchase a new Volvo construction equipment machine ("Machine") or new Volvo part ("Part", both of which are referred to herein as a "Product") from Volvo, the following limited warranty:

Subject to the exceptions and limitations set forth below, Volvo CE or Dealer will repair or replace any part of a new Machine or new Part which proves to be defective in material or workmanship during the following periods (the "Warranty Period"):

Volvo wheel loaders: 12 months/2500 hours, whichever first occurs Volvo articulated haulers: 12 months/2500 hours, whichever first occurs Volvo hydraulic excavators: 12 months/2500 hours, whichever first occurs Volvo motor graders: 12 months/2500 hours, whichever first occurs Volvo compactors: 12 months/1500 hours, whichever first occurs 24 months unlimited hours on DD90 and larger compactors

Volvo pavers: 12 months/1500 hours, whichever first occurs 24 months unlimited hours on 6000 / 7000 series pavers Volvo milling: 12 months/1500 hours, whichever first occurs

Volvo compact wheel loaders (up to 100 net hp.): 12 months/unlimited hours Volvo skid steer loaders: 12 months/unlimited hours; Lifetime arm for one-sided

Volvo compact hydraulic excavators (less than 11 metric tons): 12 months/unlimited hours

Volvo backhoe loaders: 12 months/unlimited hours

Volvo engines: 12 months/2500 hours, whichever first occurs Volvo parts: 6 months/1500 hours, whichever first occurs

Volvo remanufactured components: 12 months/2500 hours, whichever first occurs

Volvo Attachments: 12 months

The Warranty Period commences immediately following the delivery of said Product to the Buyer who first puts said Product into use. The foregoing limited warranty shall include the labor cost to accomplish the repair or replacement of the defective part provided that the repair or replacement was performed by a Dealer.

The foregoing warranty does not cover: (i) any Product found to have been damaged by abuse, accident, other casualty or a failure to maintain or use the warranted Product in accordance with the applicable manuals or instructions (Buyer is required to use only original equipment manufacturer filters during the Warranty Period); (ii) the labor costs to repair or replace defective Parts after the expiration of the Warranty Period of the Machine in which such Part is located; (iii) overtime labor premiums; (iv) costs and expenses associated with the transportation of Dealer's service personnel to and from the location of the warranted Product; (v) any parts, components, attachments or accessories for which Buyer receives a separate warranty by the manufacturer or producer thereof (in specified cases said warranty may be administered by Volvo CE); (vi) maintenance items or ground engaging parts that have achieved their normal service life.

DISCLAIMER OF IMPLIED WARRANTIES AND LIMITATION OF REMEDIES

THE FOREGOING WARRANTY TO BUYER IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

REMEDIES AVAILABLE TO BUYER ARE LIMITED TO MAKING A CLAIM UNDER THE FOREGOING WARRANTY AND ARE EXCLUSIVE AND EXPRESSLY LIMITED TO OBTAINING THE PARTS AND LABOR IN ACCORDANCE WITH THE TERMS OF SAID WARRANTY.

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Warranty – Disclaimers – Limitations

LIMITATIONS OF LIABILITY AND DAMAGES

Regardless of whether a claim against Volvo CE or Dealer is based on the foregoing warranty or is an action in contract, tort (negligence or strict liability) or otherwise, their respective liability for losses, dumages or expenses of any kind arising from the design, manufacture, repair or sale of the Products is Initiated, unless cotherwise prohibited by law, to an amount not exceeding the cost performing the obligations contained the through gurantary, and in or neutral high their respective or joint liability exceed the value of the Product or part theorif giving rise to such liability.

CONSEQUENTIAL AND SIMILAR DAMAGES NOT RECOVERABLE

Except for performing the obligations of the foregoing warranty in accordance with its terms. Volvo CE and Dealer shall have no liability for loss, damage, or expense, directly or indirectly, attributable to a loss of use of a broduct, loss or damage in property other than the Product, loss or damage in the Product or any part thereof or any other economic or commercial laws, including, without limitation, and advantages which by law may not be disclaimed). The parties intend that this prohibition against consequential and similar damages will survive and be effective even if the limitation of remedies in the foregoing sections is found to fail of its essential purpose under section 2-719 of the Uniform Commercial Code.

ALLOCATION OF RISK

The foregoing warranty disclaimers, limitations of liability and limitation of remedies are bugained allocations of risks among (i) the Contoner viola purchased the Product; (ii) the Dealer who sold the Product, and (iii) Volvo CE, which is a tailed party beneficiary of the courter of sale between the Oxtoner and the Dealer. The Buyer of the Product and (iii) Volvo CE, which is a tailed party beneficiary of the courter of sale between the Contoner and the Dealer. The Buyer of the Product and (iii) who CE, which is a tailed party beneficiary of the courter of sale