

Volvo Wheel Loaders 50.0-56.3 t/110,231-124,120 lb 532 hp

# L350H

Volvo Construction Equipment

# L350H



# Better, faster, stronger



#### **Built for demanding jobs**

- Reinforced upper center hinge bearing
- Updated frames to accommodate new Volvo transmission and axles
- Lifetime warranty on the front and rear frames, articulation joint and loader arm assembly
- Heavy-duty axles with fully floating shafts planetary hub reduction
- Proven Z-bar lifting arm with double sealing on each of the pins
- Range of Volvo Attachments



### Faster and more fuel efficient

- Up to 10% more productive with new lift/tilt cylinders and increased hydraulic working pressure
- Up to 15% greater fuel efficiency thanks to 3rd generation OptiShift
- Increased tractive force up to 22%, depending on machine gear and engaged speed
- Optimized gear shifting ratio
- Rimpull control
- Compatible with HVO alternative fuel



#### Operator in focus

- Remote-controlled door opening
- Choice of seats available with a 3-point seatbelt
- Secondary steering system
- · Comfort Drive Control lever steering
- Choice of three hydraulic modes
- Bucket leveling function
- Electrically adjusted heated rearview mirrors (Option)
- Rearview camera, radar detect system (Option)



#### **Load Assist**

Suite of apps accessed from the 10" Volvo Co-Pilot display

- On-Board Weighing
- Operator Coaching
- Tire Pressure Monitoring System



#### More uptime

- 1,000-hour engine service intervals
- 4,000-hour (or 18 months) axle oil change intervals, made possible by the external axle oil cooler with filtration
- Engine side hood panels, easily accessed cooling package
- · Breather filters
- Maintenance-free rear axle trunnion bearings
- Automatic lubrication system (Option)



# Volvo Services: boost your profits

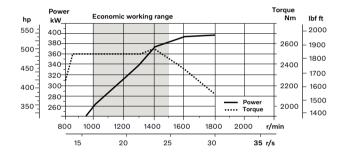
- ActiveCare Direct
- Operator Training Program
- Volvo Site Simulation
- Maintenance and Repair agreements
- Genuine Volvo Parts

### Volvo L350H in detail

#### Engine

V-ACT, 16 liter, 6-cylinder straight VGT (Variable Geometry 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. Cooled EGR (Exhaust Gas Recirculation) and exhaust after treatment with EATS-Muffler (Exhaust After Treatment System) including DOC (Diesel Oxidation Catalyst), DPF (Diesel Particulate Filter) and SCR (Selective Catalytic Reduction) with an electronically controlled UDS (Urea Dosing System). Stage IV/T4f after treatment system features passive DPF regeneration with an AHI (After treatment Hydro carbon Injection) device.

Engine	Volvo	D16J
Max. power at	r/min (r/s)	1,700 -1,800 (30)
ECE R120 net	kW (hp)	397 (532)
ISO 9249, SAE J1349 net	kW (hp)	395 (530)
Max. torque at	r/min (r/s)	1,400 (233)
ECE R120 net	Nm (ft lbf)	2,250 (1,881)
ISO 9249, SAE J1349 net	Nm (ft lbf)	2,547 (1,879)
Economic working range	r/min (r/s)	1,000 - 1,500 (16.7 - 25)
Displacement	l (in³)	161 (982)



#### Electrical System

#### Central warning system:

Contronic electrical system with central warning light and buzzer for following functions: - Serious engine malfunction - Low steering system pressure - Overspeed warning engine - Interruption in communication (computer error)

Central warning light and buzzer with 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 crankcase pressure - Low transmission oil pressure - High transmission oil temperature - Low brake pressure - Engaged parking brake - Brake charging failure - 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	А	1,000
Alternator rating	W/A	2,280/80
Starter motor output	kW	7

#### Drivetrain

Torque converter: 3-element ,1-stage, 2-phase torque converter with Lock-Up function, and free-wheel stator.

Up function, and free-wheel stator.

Transmission: Planetary Power Shift transmission with full modulated electronically controlled shifting of 4 gears forward and reverse. 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: Fully floating axle shafts with double planetary-type heavy duty hub reductions. Fixed front axle and oscillating rear axle.

Optional: Limited-slip differentials in front and rear axle.

•		
Transmission	Volvo	HTL 500
Torque multiplication, stall ratio		2.45
Maximum speed, forward/reverse		
1st gear	km/h (mi/h)	6.9 (4.29)
2nd gear	km/h (mi/h)	12.2 (7.58)
3rd gear	km/h (mi/h)	21.9 (13.6)
4th gear	km/h (mi/h)	37.7 (23.4)
Measured with tires		35/65 R33 L4
Front axle/rear axle		Volvo AHW 91/AHW 91
Rear axle oscillation	±°	12
Ground clearance	mm (in)	550 (217)
at oscillation	0	12

#### Steering System

Steering system: Load-sensing hydrostatic articulated steering with an accumulator system and a non-pressurized tank.

System supply: The steering system has priority feed from a load-sensing axial piston pump with variable displacement.

CDC: Speed dependent electro-hydraulic power steering system with closed center hydrostatic back-up and end-stroke damping

Steering cylinders		2
Cylinder bore	mm (in)	110 (433)
Rod diameter	mm (in)	70 (276)
Stroke	mm (in)	595 (234)
Working pressure	MPa (bar)	27 (270)
Maximum flow	l/min (gal/min)	370 (977)
Maximum articulation	<u>+</u> °	37

#### Service Refill

**Service accessibility:** Large, easy-to-open service doors with gas struts. Swing-out radiator grill. Fluid filters and component breather 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.

l (gal)	540 (143)
l (gal)	53 (14)
l (gal)	73 (193)
l (gal)	365 (964)
l (gal)	134 (354)
l (gal)	55 (145)
l (gal)	140 (37)
l (gal)	146 (386)
	I (gal)

#### Hydraulic system

**System supply:** Two load-sensing axial piston pumps with variable displacement. The steering function always has priority from one of the pumps.

Valves: Double-acting 2-spool valve. The main valve is controlled by an electric pilot.

Lift function: The valve has three positions; raise, hold and lower. Inductive/magnetic automatic boom kickout can be switched on and off and is adjustable to any position between maximum reach and full liftning height. Tillt function: The valve has three functions; rollback, hold, and dump. Inductive/magnetic automatic bucket positioner can be switched on and off. Cylinders: Doubleacting cylinders for all functions.

Filter: Full-flow filtration through 10 micron (absolute) filter cartridge. Hydraulic oil cooler: Air cooled oil cooler mounted on radiator.

Trydradic on cooler. All cooled on	cooler mounted	on radiator.
Working pressure maximum, pump 1 for working hydraulic system	MPa (bar)	27 (270)
Flow	I/min (gal/min)	343 (906)
at	MPa (bar)	10 (100)
engine speed	r/min (r/s)	1,800 (30)
Working pressure maximum, pump 2 for steering-, brake-, pilot- and working hydraulic system	MPa (bar)	29 (290)
Flow	l/min (gal/min)	400 (106)
at	MPa (bar)	10 (100)
engine speed	r/min (r/s)	1,800 (30)
Working pressure maximum, pump 3 for brake- and cooling fan system	MPa (bar)	26 (260)
Flow	l/min (gal/min)	84 (222)
at	MPa (bar)	10 (100)
engine speed	r/min (r/s)	1,800 (30)
Cycle times		
Lift	s	71
Tilt	s	19
Lower, empty	s	43
Total cycle time	s	133

#### Raise and tilt cycle times with load according to ISO 14397 and SAE J818

#### Lift Arm System

Z-bar linkage system with high breakout forces. The lift arms are single plate construction with a high-strength steel cast cross tube. The single bell crank and bucket link are nodular iron castings.

Lift cylinders		2
Cylinder bore	mm (in)	190 (748)
Piston rod diameter	mm (in)	110 (433)
Stroke	mm (in)	1,264 (498)
Tilt cylinder		1
Cylinder bore	mm (in)	250 (984)
Piston rod diameter	mm (in)	120 (472)
Stroke	mm (in)	728 (287)

#### Brake system

Service brake: Service brakes are dual circuit all-hydraulic multidisc brakes with nitrogen-charged accumulators and automatic slack adjusters. Outboard-mounted oil-cooled, wet disc brakes at each wheel. Transmission disengagement during braking can be preselected in Contronic.

Parking brake: 3 calliper (dry) spring applied, electro hydraulically released via a swich on dash board. Applies automatically when the key is turned off.

via a swich on dash board. Applies automatically when the key is turned off. **Secondary brake**: Dual circuit axle-by-axle system. Actuated by service brake pedal. Low pressure alarm. Dead engine braking capability provided by three nitrogen charged accumulators.

**Standard:** The brake system complies with the requirements of ISO 3450:1996.

Number of brake discs per wheel front/re	10/10	
Accumulators	l (gal)	9 x 1.0 (9 x 0.26)
Accumulators for parking brake	l (gal)	1 x 1.0 (1 x 0.26)

#### Cab

**Instrumentation:** All important information is centrally located in the operator's field of vision. Display for Contronic monitoring system. Heater and defroster: Heater coil with filtered fresh air, fan with auto function and 11 manually selectable steps, defroster vents for all window areas.

Operator's seat: Operator's seat with adjustable suspension and retractable seatbelt. The seat is mounted on a bracket on the rear wall and floor. The forces from the retractable seatbelt are absorbed by the seat rails

Standard: The cab is tested and approved according to ROPS (ISO 3471, SAE J1040), FOPS (ISO 3449). The cab meets with requirements according to ISO 6055 ("Operator overhead protection - Industrial trucks") and 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  $\rm CO_2$ -eq

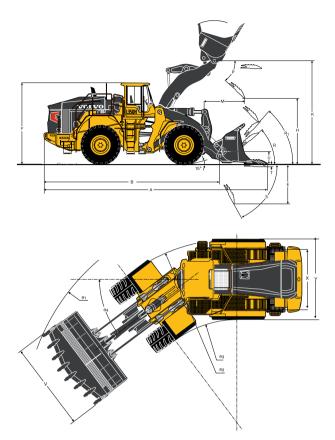
Emergency exit: Use emergency hammer to break window

Ventilation	m³/min (yd³/min)	9 (118)
Heating capacity	kW	16
Air conditioning	kW	8

#### Sound Level

Sound level in cab according to ISO	6396/SAE J2105 at fan sp	eed pos 3
$L_pA$	dB	72
External sound level according to IS	O 6395/SAE J2104	
L <sub>WA</sub>	dB	111

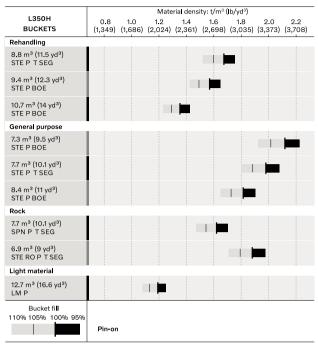
# **Specifications**



		Standard boom		rd boom	Long boom	
В	mm	ft in	9,130	30'0"	9,560	31' 4"
C	mm	ft in	4,300	14' 1"	4,300	14' 1"
)	mm	ft in	550	1' 10"	550	1' 10"
=	mm	ft in	4,180	13' 9"	4,180	13' 9"
1	mm	ft in	4,000	13' 1"	4,000	13' 1"
2	mm	ft in	3,460	11' 4"	3,460	11' 4"
3	mm	ft in	2,135	7' 0"	2,134	7' 0"
	mm	ft in	4,920	16' 2"	5,390	17' 8"
(	mm	ft in	5,340	17' 6"	5,810	19' 1"
)	o		6	60	5	8
) max	o	,	4	-6	4	5
2	c		4	4	4	5
R <sub>1</sub> *	c	•	4	8	5	0
5	c		6	66	7.	2
	mm	ft in	130	0' 5"	130	0' 5"
J	mm	ft in	620	2'0"	750	2' 6"
(	mm	ft in	3,200	10' 6"	3,200	10' 6"
(	mm	ft in	4,100	13' 5"	4,100	13' 5"
2	mm	ft in	4,470	14' 8"	4,890	16' 1"
12	mm	ft in	8,480	27' 10"	8,480	27' 10'
13	mm	ft in	4,380	14' 4"	4,380	14' 4"
14	±	•	3	37	3	7

<sup>\*</sup>Carry position SAE

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



How to read bucket fill factor

#### **Bucket Selection Chart**

The volume handled varies with the bucket fill and is often greater than indicated by the bucket's ISO/SAE volume. The table shows optimum bucket choice with regard to the material density.

Material	Bucket fill, %	Material density		
iviateriai	Bucket IIII, 76	t/m³	lb/yd³	
Earth	110-115	1.4-1.6	2,360 - 2,697	
Clay	110-120	1.4-1.6	2,360 - 2,697	
Sand	100-110	1.6-1.9	2,360 - 2,697	
Gravel	100-110	1.7-1.9	2,697 - 3,203	
Rock	75-100	1.5-1.9	2,528 - 3,203	

The size of rock buckets is optimized for optimal penetration and filling capability rather than the density of the material.

Supplemental Operating Data												
	Width	over tires		und		ating	Static tipping load, full turn					
			clearance		weight		Standard boom		Long boom			
	mm	in	mm	in	kg	lb	kg	lb	kg	lb		
35/65 R33 Michelin XMine D2** L5	+20	+0.8	-20	-0.8	-220	-485	-220	-485	-200	-440		
35/65 R33 Bridgestone VSDL IDU** L5	-20	-0.8	-10	-0.4	-240	-530	-220	-485	-200	-440		
35/65 R33 Bridgestone VSNT** L4	0	0	-20	-0.8	-800	-1,765	-520	-1,145	-470	-1,035		
36/65 R33 Michelin XTXI *** I 4	0	0	-40	-1.6	-1.350	-2.975	-880	-1.940	-790	-1.740		

# **Specifications**

L350H																	
Standard boom					Rehandling <sup>1</sup>							General purpose <sup>2</sup>					
Tires 875/65 R33 RL5K L5 Pin-on buckets			8.8 m³ (11.5 yd³)		9.4 m³ (12.3		10.7 m³ (14 yd³)		72 3 (0 5 43)		7.7 m³ (10.1 yd³)		8.4 m³ (11 yd³				
				BOE		E P BOE		BOE		BOE		T SEG	1	BOE			
Volu	ume heaped ISO/SAE	m³	yd <sup>3</sup>	8.8	11.5	9.4	12.3	10.7	14.0	7.3	9.5	7.7	10.1	8.4	11.0		
Volu	ume at 110% fill factor	m³	yd <sup>3</sup>	9.7	12.7	10.3	13.5	11.8	15.4	8.0	10.5	8.5	11.1	9.2	12.1		
Sta	tic tipping load, straight machine	kg	lb	43,120	95,060	42,810	94,380	42,180	92,990	39,640	87,390	38,970	85,910	39,090	86,180		
Sta	tic tipping load at 35°. Turn	kg	lb	38,280	84,390	37,990	83,750	37,370	82,390	35,350	77,930	34,690	76,480	34,820	76,760		
Sta	tic tipping load at full turn	kg	lb	37,720	83,160	37,440	82,540	36,830	81,200	34,860	76,850	34,200	75,400	34,340	75,710		
Bre	akout force	kN	lbf	404	90,913	390	87,653	363	81,628	464	104,289	448	100,782	429	96,511		
Α	Overall length	mm	ft in	11,100	36' 5"	11,180	36' 8"	11,330	37' 2"	10,840	35' 7"	11,270	37' 0"	10,980	36' 0"		
Ε	Digging depth, max dump (S)	mm	ft in	1,710	5' 7"	1,770	5' 10"	1,910	6'3"	1,470	4' 10"	1,840	6' 0"	1,590	5'3"		
H <sup>4</sup>	Dump clearance	mm	ft in	3,690	12' 1"	3,640	11' 11"	3,530	11' 7"	3,880	12' 9"	3,590	11' 9"	3,780	12' 5"		
L	Overall operating height	mm	ft in	7,300	23' 11"	7,380	24' 3"	7,540	24' 9"	7,120	23' 4"	7,180	23' 7"	7,290	23' 11"		
M <sup>4</sup>	Dump reach	mm	ft in	1,830	6' 0"	1,880	6' 2"	1,980	6' 6"	1,650	5' 5"	1,930	6' 4"	1,750	5' 9"		
N <sup>4</sup>	Reach at 45° discharge, Pos. G	mm	ft in	2,700	8' 10"	2,740	9'0"	2,810	9'3"	2,580	8' 6"	2,770	9' 1"	2,650	8'8"		
٧	Bucket width	mm	ft in	3,970	13' 0"	3,970	13' 0"	3,970	13' 0"	3,970	13' 0"	3,970	13' 0"	3,970	13' 0"		
a <sub>1</sub>	Outer clearance circle (diameter)	mm	ft in	18,350	60' 2"	18,390	60' 4"	18,480	60'8"	18,210	59' 9"	18,450	60'6"	18,290	60'0"		
Оре	erating weight without load	kg	lb	53,220	117,330	53,370	117,660	53,690	118,370	51,060	112,570	51,500	113,540	51,350	113,210		

<sup>1</sup> Calculated with 875/65 R33 Bridgestone VSNT\*\* L4 tires and Rehandling counterweight.

Note: This only applies to genuine Volvo attachments. Measured at 45° dump angle. (Spade nose buckets at 42°.)

L350H									
Standard boom		Ro		Light material <sup>3</sup>					
Tires 875/65 R33 RL5K L5 Pin-on buckets									
			6.9 m³ (9 yd³)	STE P T SEG	7.7 m <sup>3</sup> (10.1 yd <sup>3</sup>	3) SPN PT SEG	12.7 m³ (16.6 yd³) LM P		
Volume heaped ISO/SAE m³ yd³			6.9	9.0	7.7	10.1	12.7	16.6	
Volume at 110% fill factor	m³	yd <sup>3</sup>	7.6	9.9	8.5	11.1	14.0	18.3	
Static tipping load, straight machine kg lb		39,210	86,440	37,840	83,420	37,500	82,670		
Static tipping load at 35°. Turn kg lb		34,930	77,010	33,580	74,030	33,290	73,390		
Static tipping load at full turn	kg	lb	34,440	75,930	33,100	72,970	32,820	72,360	
Breakout force	kN	lbf	465	104,424	353	79,403	388	87,113	
A Overall length	mm	ft in	11,200	36' 9"	11,740	38' 6"	11,170	36' 8"	
E Digging depth, max dump (S)	mm	ft in	1,790	5' 10"	2,260	7' 5"	1,780	5' 10"	
H <sup>4</sup> Dump clearance	mm	ft in	3,630	11' 11"	3,270	10' 9"	3,630	11' 11"	
L Overall operating height	mm	ft in	7,310	24' 0"	7,410	24' 4"	7,670	25' 2"	
M <sup>4</sup> Dump reach	mm	ft in	1,880	6' 2"	2,280	7' 6"	1,890	6' 2"	
N <sup>4</sup> Reach at 45° discharge, Pos. G	mm	ft in	2,740	9'0"	3,010	9' 11"	2,700	8' 10"	
V Bucket width	mm	ft in	3,970	13' 0"	4,110	13' 6"	4,500	14' 9"	
a <sub>1</sub> Outer clearance circle (diameter)	mm	ft in	18,400	60' 4"	18,830	61' 9"	18,860	61' 11"	
Operating weight without load	kg	lb	51,420	113,360	52,190	115,060	51,420	113,360	

 $<sup>^1</sup>$  Calculated with 875/65 R33 Bridgestone VSNT\*\* L4 tires and Rehandling counterweight.

Note: This only applies to genuine Volvo attachments. Measured at 45° dump angle. (Spade nose buckets at 42°.)

<sup>&</sup>lt;sup>2</sup> Calculated with 875/65 R33 Goodyear RL-5K\*\*\* L5 tires.

<sup>&</sup>lt;sup>3</sup> Calculated with 875/65 R33 Bridgestone VSNT\*\* L4 tires.

 $<sup>^{\</sup>mathbf{4}}$  Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge.

 $<sup>^2</sup>$  Calculated with 875/65 R33 Goodyear RL-5K\*\*\* L5 tires.

 $<sup>^{\</sup>rm 3}$  Calculated with 875/65 R33 Bridgestone VSNT\*\* L4 tires.

<sup>&</sup>lt;sup>4</sup> Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge.

L350H																
Standard boom					Rehandling <sup>1</sup>						General purpose <sup>2</sup>					
Tires 875/65 R33 RL5K L5 Pin-on buckets																
				(11.5 yd³) PBOE		12.3 yd³) PBOE	10.7 m <sup>3</sup> STE F		7.3 m <sup>3</sup> ( STE F	9.5 yd³) PBOE		10.1 yd <sup>3</sup> ) T SEG	8.4 m <sup>3</sup> STE F	(11 yd³) PBOE		
Volu	ume heaped ISO/SAE	m³	yd <sup>3</sup>	8.8	11.5	9.4	12.3	10.7	14.0	7.3	9.5	7.7	10.1	8.4	11.0	
Volu	ume at 110% fill factor	m <sup>3</sup>	yd <sup>3</sup>	9.7	12.7	10.3	13.5	11.8	15.4	8.0	10.5	8.5	11.1	9.2	12.1	
Sta	tic tipping load, straight machine	kg	lb	35,500	78,260	35,230	77,670	34,670	76,430	37,290	82,210	36,650	80,800	36,790	81,110	
Sta	tic tipping load at 35°. Turn	kg	lb	31,410	69,250	31,150	68,670	30,610	67,480	33,130	73,040	32,490	71,630	32,640	71,960	
Sta	tic tipping load at full turn	kg	lb	30,940	68,210	30,690	67,660	30,150	66,470	32,660	72,000	32,020	70,590	32,170	70,920	
Bre	akout force	kN	lbf	367	82,572	354	79,627	330	74,209	421	94,600	407	91,587	390	87,586	
Α	Overall length	mm	ft in	11,520	37' 10"	11,600	38'1"	11,750	38' 7"	11,250	36' 11"	11,680	38' 4"	11,400	37' 5"	
Ε	Digging depth, max dump (S)	mm	ft in	1,780	5' 10"	1,840	6' 0"	1,980	6' 6"	1,530	5'0"	1,910	6'3"	1,650	5' 5"	
Нз	Dump clearance	mm	ft in	4,160	13' 8"	4,110	13' 6"	4,000	13' 1"	4,350	14' 3"	4,060	13' 4"	4,250	13' 11"	
L	Overall operating height	mm	ft in	7,770	25' 6"	7,850	25' 9"	8,010	26' 3"	7,590	24' 11"	7,650	25' 1"	7,760	25' 6"	
Мз	Dump reach	mm	ft in	1,830	6' 0"	1,880	6' 2"	1,990	6' 6"	1,660	5' 5"	1,940	6' 4"	1,760	5' 9"	
Nз	Reach at 45° discharge, Pos. G	mm	ft in	3,060	10' 0"	3,090	10' 2"	3,160	10' 4"	2,930	9'7"	3,130	10' 3"	3,000	9'10"	
٧	Bucket width	mm	ft in	3,970	13' 0"	3,970	13' 0"	3,970	13' 0"	3,970	13' 0"	3,970	13' 0"	3,970	13' 0"	
a <sub>1</sub>	Outer clearance circle (diameter)	mm	ft in	18,690	61' 4"	18,740	61' 6"	18,830	61' 9"	18,550	60' 10"	18,790	61' 8"	18,630	61' 1"	
Оре	erating weight without load	kg	lb	52,430	115,590	52,580	115,920	52,900	116,620	52,690	116,160	53,130	117,130	52,980	116,800	

<sup>1</sup> Calculated with 875/65 R33 Bridgestone VSNT\*\* L4 tires and Long Boom counterweight.

Note: This only applies to genuine Volvo attachments. Measured at 45° dump angle. (Spade nose buckets at 42°.)

L350H									
Standard boom			Ro	Light material1					
Tires 875/65 R33 RL5K L5 Pin-on buckets					•				
			6.9 m <sup>3</sup> (9 yd <sup>3</sup> )	STE P T SEG	7.7 m <sup>3</sup> (10.1 yd	3) SPN PT SEG	12.7 m³ (16.6 yd³) LM P		
Volume heaped ISO/SAE m³ yd³			6.9	9.0	7.7	10.1	12.7	16.6	
Volume at 110% fill factor	m³	yd <sup>3</sup>	7.6	9.9	8.5	11.1	14.0	18.3	
Static tipping load, straight machine kg lb		36,870	81,280	35,580	78,440	35,290	77,800		
Static tipping load at 35°. Turn kg lb		32,710	72,110	31,450	69,340	31,200	68,780		
Static tipping load at full turn kg lb		lb	32,240	71,080	30,980	68,300	30,740	67,770	
Breakout force	kN	lbf	422	94,847	321	72,164	352	79,020	
A Overall length	mm	ft in	11,620	38'1"	12,150	39'10"	11,590	38' 0"	
E Digging depth, max dump (S)	mm	ft in	1,850	6' 1"	2,350	7' 9"	1,850	6' 1"	
H <sup>4</sup> Dump clearance	mm	ft in	4,100	13' 5"	3,750	12' 4"	4,120	13' 6"	
L Overall operating height	mm	ft in	7,780	25' 6"	7,880	25'10"	8,140	26' 8"	
M <sup>4</sup> Dump reach	mm	ft in	1,890	6' 2"	2,290	7' 6"	1,920	6' 4"	
N <sup>4</sup> Reach at 45° discharge, Pos. G	mm	ft in	3,100	10' 2"	3,380	11' 1"	3,050	10' 0"	
V Bucket width	mm	ft in	3,970	13' 0"	4,110	13' 6"	4,500	14' 9"	
a <sub>1</sub> Outer clearance circle (diameter)	mm	ft in	18,750	61' 6"	19,190	63'0"	19,200	63' 0"	
Operating weight without load	kg	lb	53,050	116,960	53,820	118,650	53,060	116,980	

<sup>1</sup> Calculated with 875/65 R33 Bridgestone VSNT\*\* L4 tires and Long Boom counterweight.

Note: This only applies to genuine Volvo attachments. Measured at 45° dump angle. (Spade nose buckets at 42°.)

 $<sup>^2</sup>$  Calculated with 875/65 R33 Goodyear RL-5K\*\*\* L5 tires and Long Boom counterweight.

<sup>&</sup>lt;sup>3</sup> Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge.

 $<sup>^2</sup>$  Calculated with 875/65 R33 Goodyear RL-5K\*\*\* L5 tires and Long Boom counterweight.

 $<sup>^{\</sup>rm 3}$  Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge.

## **Equipment**

#### STANDARD EQUIPMENT

#### **Engine**

Three 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

Crankcase breather oil trap

#### Drivetrain

Automatic Power Shift (APS) with operator controlled transmission disengagement when braking and mode selector with AUTO mode

Fully automatic gear shifting, 1-4

Pulse Width Modulation (PWM) controlled gear shifting

Torque converter with Lock-Up

Automatic Lock-Up shifting, 2-4 (gear selector in 4), 2 (gear selector in 2) and 1 (gear selector in 1)

Forward and reverse switch by hydraulic lever console

Rimpull control

Axle oil cooler

Indicator glass for transmission oil level

#### Electrical System

24 V, pre-wired for optional accessories

Alternator 24V/80A

Battery disconnect switch with removable key

Fuel gauge

Hour meter

Electric horn

Instrument cluster:

Fuel 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
- Work lamp, front on cab, 2 Halogen lamps, std
- Work lamp, rear in grille, 4 Halogen lamps, std

#### STANDARD EQUIPMENT

#### Contronic monitoring system

Monitoring and logging of machine data

Contronic display

Fuel consumption

Ambient temperature

Clock

Brake test

Test function for warning and indicator lights

Warning and indicator lights:

Battery charging

Parking brake

Warning and display message:

- 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
- Parking brake NOT applied
- Brake charging
- Overspeed at direction change
- Axle oil temperature
- Steering pressure
- Crankcase pressure

#### Level warnings:

- Low fuel level
- Engine oil level
- Engine coolant level
- Transmission oil levelHydraulic oil level
- Washer fluid level

Engine torque reduction in case of malfunction indication:

- High engine coolant temperature
- High engine oil temperature
- Low engine oil pressure
- High crankcase pressureHigh charge-air temperature

Engine shutdown to idle in case of malfunction indication:

- High transmission oil temperature
- Slip in transmission clutches

Keypad, background lit

Start interlock when gear is engaged

#### STANDARD EQUIPMENT

#### Hydraulic system

Main valve, double-acting 2-spool with electric pilots

Variable displacement axial piston pumps (3) for:

Steering system, working hydraulics

Secondary steering with automatic test function

Working hydraulics, brakes

Cooling fan, brakes

Electric-hydraulic servo control

Electric level lock

Boom kick-out, automatic, adjustable from cab

Return-to-dig, automatic, adjustable from cab

Bucket positioner, automatic, adjustable from cab

Double-acting hydraulic cylinders with end-damping

Indicator glass for hydraulic oil level

Hydraulic oil cooler

#### Brake system

Wet oil circulation-cooled disc brakes on all four wheels

Dual brake circuits

Dual brake pedals

Secondary brake system

Parking brake, electric-hydraulic

Brake wear indicators

#### Cab

ROPS (ISO 3471), FOPS (ISO 3449)

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 climate control (ACC)

Floor mat

Interior light

Rear view mirror, interior

Dual exterior rear-view mirrors

Sliding window, right side

Tinted safety glass

Seat-mounted adjustable lever console, working hydraulics

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

Service platforms with slip protected surfaces on front and rear fenders

Comfort Drive Control (CDC)

Remote door opener

#### STANDARD EQUIPMENT

#### Service and maintenance

Engine oil remote drain and fill

Transmission oil remote drain and fill

Grouped lubrication points, ground accessible

Pressure check connections: transmission and hydraulic, quick-connect, grouped on console for easy access

Quick-fit hydraulic oil fill

Tool box, lockable

Wheel nut wrench kit

#### External equipment

Fenders, front with rubber extensions

Viscous cab mounts

Rubber engine and transmission mounts

Lifting eyes

Easy-to-open side panels with gas struts

Frame, joint lock

Vandalism lock prepared for:

- Batteries
- Engine compartment
- Radiator

Tie-down eyes

Recovery eyes

Tow hitch

## **Equipment**

#### **OPTIONAL EQUIPMENT**

#### Engine

Air pre-cleaner, oil-bath type

Air pre-cleaner, cyclone type

Cooling package: Radiator and charge air cooler, corrosion-protected

Engine block heater, 230 V

Engine block heater, 120V, USA

Engine auto shutdown

Volvo Engine Brake system - VEB

Hand throttle control

Fuel fill strainer

Fast fill fuel system

Fuel heater

Reversible cooling fan

Max. fan speed, hot climate

#### Drivetrain

Limited Slip, front and rear axle

Limited Slip, rear axle

Transmission oil heater

Speed limiter, 20 km/h (12.4 mph)

Speed limiter, 30 km/h (18.6 mph)

#### Electrical System

Travel lights:

Cab heater, power outlet 240V

Warning beacon LED

Warning beacon LED automatic

LED Economy package

LED Feature Package

LED Power Package

LED working lights, attachments

Halogen Economy package

Halogen Feature package

Halogen working lights, attachments

Warning beacon(flasher), LED

Reverse warning light, Strobe

Reverse alarm, audible, multi-frequency (white noise)

Reverse alarm, audible

Seatbelt indicator, external

Jump start connector, ISO type

Emergency stop

Electrical distribution unit 24 volt

Alternator 120 amp, heavy-duty

Anti-theft device

Max Boom height

Can Bus Interface

Delayed Engine Shutdown

Co Pilot available

Rearview camera in Co pilot

OnBoard Weighing

Tire Pressure Monitoring System

Connected Map

#### OPTIONAL EQUIPMENT

#### Hydraulic system

Boom suspension system with single-acting lift function

Arctic kit, pilot hoses, brake accumulators and hydraulic oil

Hydraulic 2 functions, Single lever control

Hydraulic 3 functions, Single lever control

3rd electro-hydraulic function

3rd electro-hydraulic function for long boom

Attachment bracket

Separate attachment locking

Biodegradable hydraulic fluid

Fire-resistant hydraulic fluid

Hot climate hydraulic fluid

Mineral oil for cold climate

#### Cab

Radio with Bluetooth/USB/AUX

DAR Radio

Radio installation kit incl. 11 A, 12 V outlet, left side

Radio installation kit incl. 11 A, 12 V outlet, right side

Rear-view camera incl. monitor, colour

Forward camera, colour

Rear-view mirrors, electrically adjustable and heated

Asbestos dust protection filter

Carbon filter

Automatic climate control panel, with Fahrenheit scale

Lunchbox holder

Universal key EU

Universal key US

Steering wheel knob

Sun blind, rear window

Sun blind, side windows

Timer cab heating

Window sliding, door

Operator's seat, Volvo air susp, heavy-duty, high back, heat, for CDC

Parking brake alarm, audible for air susp seats

Operator's seat, Premium Comfort

Operator's seat, Premium Comfort ISRI 3-point seat belt

Operator's seat, (air seat std) 3-point seat belt and CDC

Ashtray

Anchorage for Operator's manual

Forward view mirror

#### Service and maintenance

Tool kit

Automatic lubrication system

Automatic lubrication system for long boom

Refill pump for automatic lubrication system

Oil sampling valve

#### **OPTIONAL EQUIPMENT**

#### Protective equipment

Guards for front headlights

Tail light guards, heavy-duty

Guards for tail lights, heavy-duty

Guards for rear work lights

Radiator grille guard

Cab roof, heavy duty

Windows, side and rear guards

Windshield guard

Belly guard, front

Belly guard, rear

Fire extinguisher

Bracket for fire extinguisher

#### External equipment

Long boom

Fire suppression system

#### Other equipment

Counterweight, re-handling

Counterweight, signal painted, chevrons

Logger version

Block handler kit

Block handler kit, heavy-duty

CE-marking

Decals, USA

Sound decal, EU

Cleaner kit, with air blow gun (Tier4f)

Reflecting stickers (stripes), machine contour Cab

Option for machines without dinitrol

CareTrack

#### Tires and Rims

#### 35/65 R33 (875/65 R33):

- L4

- L5

Rims, 33-28.00/3,5:

- Five piece, heavy-duty

#### OPTIONAL EQUIPMENT

#### Attachments

Buckets (pin-on):

- Rock, straight edge
- Rock, spade nose
- Rock, side-dump, spade nose
- General purpose, straight edge
- Rehandling bucket, straight edge
- Light material, straight edge

Wear parts:

- Adapters for teeth, weld-on
- Teeth
- Segments, bolt-on
- Edge savers, bolt-on (reversible)

Block handling equipment (hook-on):

- Rock bucket, spade nose
- Stone fork
- Breaker tine
- Rake

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