

Volvo Wheel Loaders 35.0-40.0 t/77,162-88,185 lb 330 hp

# L200H HIGH LIFT

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# A proven concept since 1974



- Lift arm system enabling log stacks up to 6.9 meters (22'8")
- Faster travel on rough terrain
- Ability to operate on unpaved ground
- Minimize risk of damaging paved surfaces
- Log pusher (Option): up to 30% higher stack

## Lift up to 27% more



- Up to 11.2 tonne (24,692 lb) lifting capacity
- Range of Volvo grapples Up to 13% larger (4.3m² / 46.3ft²)
- Stronger rotator unit with integrated dampening system
- Wide, low-profile tires

# Reaching new heights



### Superb fuel efficiency

- Optimized gear ratio for fast acceleration and smooth operation
- OptiShift Reverse By Braking, Lock-up transmission
- Eco pedal



#### Load Assist NEW!

- On-Board Weighing
- Tire Pressure Monitoring System
- Operator Coaching
- Integrated rearview camera and optional radar detect system



### The operator's choice

- Customizable joystick via smartphone/ Bluetooth
- Front-view camera (Option)
- Collision Mitigation System (Option)
- Adjustable premium seat with 3-points seatbelt (Option)
- Comfort Drive Control: lever-steering (Option)
- Operator Training Program



### Keep moving

- 4,000hr axle oil change intervals
- 1,000hr engine service intervals
- Reversible hydraulically-driven cooling fan
- Automatic lubrication system
- ActiveCare Direct
- Genuine Volvo Parts, Maintenance and repair agreements



## Straightforward servicing

- Quick oil drain/fill connectors for hydraulics, transmission, engine and front axle
- Easier to inspect and clean the engine compartment thanks to additional handrails on both sides, electronically-operated engine hood and easy-to-remove/reposition covers
- Tilting cab
- Brake wear indicators located on the wheels
- Replaceable breather filters

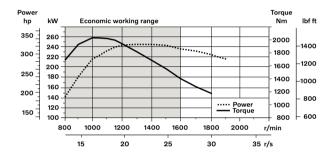
## L200H High Lift in detail

#### Engine

V-ACT Stage IV/Tier 4F, 13 liter, 6-cylinder straight turbocharged diesel engine with 4 valves per cylinder, overhead camshaft and electronically controlled unit injectors. The engine has wet replaceable cylinder liners and replaceable valve guides and valve seats. The throttle applications is transmitted electrically from the throttle pedal or the optional hand throttle. Air cleaning: Two-stage: Pre stage filter - primary filter.

Cooling system: Hydrostatic, electronically controlled fan and intercooler

Engine	Volvo	D13J
Max. power at	r/min (r/s)	1,300 - 1,400 (21.7 - 23.3)
ECE R120 net	kW (hp)	251 (337)
ISO 9249, SAE J1349 net	kW (hp)	250 (335)
Max. torque at	r/min (r/s)	1,000 (167)
ECE R120 net	Nm (ft lbf)	2,071 (1,527)
ISO 9249, SAE J1349 net	Nm (ft lbf)	2,065 (1,523)
Economic working range	r/min (r/s)	800 - 1,600 (13.3 - 26.7)
Displacement	l (in³)	128 (781)



#### Brake system

Service brake: Volvo dual-circuit system with nitrogen-charged accumulators. Outboard-mounted fully hydraulic operated, fully sealed oil circulation-cooled wet disc brakes. The operator can select automatic disengagement of the transmission when braking, using Contronic. **Parking brake:** Fully sealed, wet multi-disc brake built into the transmission. Applied by spring force, electro-hydraulic release with a switch on the instrument panel.

Secondary brake: Dual brake circuits with rechargeable accumulators. One circuit or the parking brake fulfills all safety requirements.

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

Number of brake discs per wheel		1
Accumulators	l (gal)	2 x 1.0 + 1 x 0.5 (2 x 0.26 + 1 x 0.13)

#### Electrical System

#### Central warning system:

Contronic electrical system with central warning light and buzzer for following functions: - Serious engine fault - Low steering system pressure -Over speed warning engine - Interruption in communication (computer fault) Central warning light and buzzer with the gear engaged for the following functions. - Low engine oil pressure - High engine oil temperature - High charge air temperature - Low coolant level - High coolant temperature - High crank case pressure - Low transmission oil pressure - High transmission oil temperature - Low brake pressure - Engaged parking brake - Fault on brake charging - Low hydraulic oil level - High hydraulic oil temperature - Overspeeding in engaged gear - High brake cooling oil temperature front and rear axles.

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	2 x 170
Cold cranking capacity, approx	А	1,000
Alternator rating	W/A	2 280/80
Starter motor output	kW	7

#### 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. Torque converter with lockup.

Transmission: Volvo Automatic Power Shift (APS) with fully automatic

shifting 1-4 and mode selector with 4 different gear shifting programs, including AUTO. Also equipped with Rimpull control to avoid wheel spin. Axles: Volvo fully floating axle shafts with planetary hub reductions and nodular iron axle housing. Fixed front axle and oscillating rear axle. 100% differential lock on the front axle.

Transmission	Volvo	HTL 223
Torque multiplication, stall ratio		2.09:1
1st gear	km/h (mi/h)	6 (3.73)
2nd gear	km/h (mi/h)	13 (8.08)
3rd gear	km/h (mi/h)	24 (14.9)
4th gear	km/h (mi/h)	38 (23.6)
Note: 4th gear limited by ECU		
Front axle/rear axle		AWB 40B
Rear axle oscillation	±°	13
Ground clearance	mm (in)	540 (213)
at oscillation	0	13

#### Cab

Instrumentation: All important information is centrally located in the operator's field of vision. Display for Contronic 3.0 monitoring system. **Heater and defroster:** Heater coil with filtered fresh air and fan with auto and 11 speeds. Defroster vents for all window areas.

Operator's seat: Operator's seat with adjustable suspension and retractable

seatbelt. The seat is mounted on a bracket on the rear cab wall. The forces from the retractable seatbelt are absorbed by the seat rails.

Standard: 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").

Ventilation	m³/min (yd³/min)	9 (118)
Heating capacity	kW	16
Air conditioning (optional)	kW	75

#### Steering System

Steering system: Load-sensing, hydrostatic articulated steering.

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

Steering cylinders: Two double-acting cylinders.

Steering cylinders		2
Cylinder bore	mm (in)	100 (394)
Rod diameter	mm (in)	60 (236)
Stroke	mm (in)	525 (207)
Working pressure	MPa (bar)	21 (210)
Maximum flow	l/min (gal/min)	252 (666)
Maximum articulation	±°	37

#### Service Refill

Service accessibility: Large, easy-to-open hood covering whole engine department, electrically operated. Fluid filters and component breather air filters promote long service intervals. A quick-fit adapter on the hydraulic tank provides faster hydraulic oil fill. Possibility to monitor, log and analyze data to facilitate troubleshooting.

Fuel tank	l (gal)	366 (967)
DEF/AdBlue® tank	l (gal)	31 (82)
Engine coolant	l (gal)	55 (145)
Hydraulic oil tank	l (gal)	156 (412)
Transmission oil	l (gal)	48 (127)
Engine oil	l (gal)	50 (132)
Axle oil front	l (gal)	46 (122)
Axle oil rear	l (gal)	55 (145)

#### Lift Arm System

The Volvo high-lift arm system is a rugged and stable in-house design, with optimized visibility throughout the work cycle. The new lift arm design gives increased lift height and the possibility to rotate the grapple 360 degrees fully open at top position. The lift height is up to 19'7" under closed grapple. The lift arm system also integrates windshield protection.

Lift cylinders		2
Cylinder bore	mm (in)	140 (551)
Piston rod diameter	mm (in)	110 (433)
Stroke	mm (in)	2,242 (883)
Tilt cylinder		2
Cylinder bore	mm (in)	140 (551)
Piston rod diameter	mm (in)	70 (276)
Stroke	mm (in)	691 (272)

#### Hydraulic system

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

Valves: Two main valves. Main valve 1: 2 spool control valve for lift- and tilt function. Main valve 2: 4 spool control valve for grapple, grapple tilt, rotator and log pusher (extra equipment).

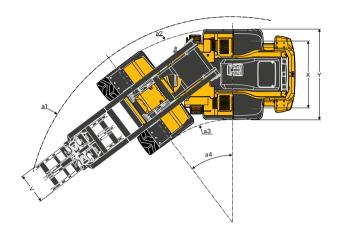
Filter: Full flow filtration through 10 micron (absolute) filter cartridge.

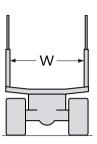
Working pressure maximum, pump 1	MPa (bar)	20 (200)
Working pressure maximum, pump 2	MPa (bar)	28 (280)
Pilot system	MPa (bar)	3.2 - 4.0 (32 - 40)
Lower, empty (top to bottom)	S	6

#### Sound Level

Sound level in cab according to ISO 6	396/SAE J2105	
L <sub>pA</sub>	dB	70
External sound level according to ISO	O 6395/SAE J2104	
L <sub>WA</sub>	dB	108

# **Specifications**



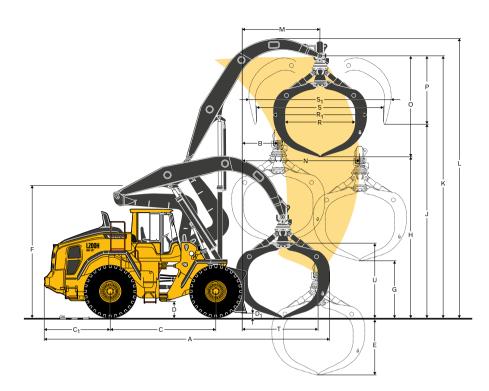


Tires: 875/65 R29*				
Rotating grapple, 360°, 4.3 m² (46.3 ft²), 54578540				
В	mm	ft in	1,210	3'12"
С	mm	ft in	3,550	11'8"
C <sub>1</sub>	mm	ft in	2,230	7'4"
D Ground clearance	mm	ft in	540	1'9"
D <sub>1</sub> Ground clearance with log pusher	mm	ft in	250	0'10"
F Min machine height with grapple tilted forward	mm	ft in	4,790	15'9"
К	mm	ft in	9,070	29'9"
L	mm	ft in	9,630	31'7"
M	mm	ft in	2,610	8'7"
N	mm	ft in	3,970	13'0"
Т	mm	ft in	2,540	8'4"
U	mm	ft in	2,500	8'2"
X	mm	ft in	2,400	7'10"
Υ	mm	ft in	3,260	10'8"
a <sub>1</sub>	mm	ft in	7,390	24'3"
a <sub>2</sub>	mm	ft in	6,980	22'11"
a <sub>3</sub>	mm	ft in	3,680	12'1"
a <sub>4</sub>	0	0	± 37	± 37
Log pusher length**	mm	ft in	200	0'8"

<sup>\*</sup> The 775/65 R29 tires affect the dimensions B, E, M, N, T by +70 mm (+0 $^{\circ}3^{\circ}$ ) and heights G, H, J, K, L by -70 mm (-0 $^{\circ}3^{\circ}$ ).

Note: When unloading a vehicle, the log grapple's width (R) should be the same or less compared to the distance between the "stakes" (W) on the vehicle.

<sup>\*\*</sup> The log pusher affects the length A by +200 mm (+0'8") and the lengths B, M, N by -200 mm (-0'8").



				Round shaped											Heart shaped					
Tires: 875/65 R2	9							0												
Order no.			5501	55019257   55019260   55019263   55019272   55019148   55019230   55019243   54578540							5501	9237								
Clamping						Ch	ain							Ar	ms				Arr	ns
Grapple area	m²	ft²	3.4	36.6	3.7	39.8	4	43.1	4.3	46.3	3.4	36.6	3.7	39.8	4	43.1	4.3	46.3	3.7	39.8
A	mm	ft in	9,620	31'7"	9,680	31'9"	9,740	31'11"	9,770	32'1"	9,620	31'7"	9,680	31'9"	9,740	31'11"	9,770	32'1"	9,680	31'9"
E	mm	ft in	1,560	5'1"	1,680	5'6"	1,800	5'11"	1,920	6'4"	1,560	5'1"	1,680	5'6"	1,800	5'11"	1,920	6'4"	1,860	6'1"
G	mm	ft in	2,250	7'5"	2,130	6'12"	2,010	6'7"	1,890	6'2"	2,250	7'5"	2,130	6'12"	2,010	6'7"	1,890	6'2"	1,950	6'5"
Н	mm	ft in	5,980	19'7"	5,860	19'3"	5,740	18'10"	5,620	18'5"	5,980	19'7"	5,860	19'3"	5,740	18'10"	5,620	18'5"	5,680	18'8"
J	mm	ft in	6,890	22'7"	6,830	22'5"	6,770	22'3"	6,710	22'0"	6,890	22'7"	6,830	22'5"	6,770	22'3"	6,710	22'0"	6,740	22'1"
0	mm	ft in	3,090	10'2"	3,210	10'6"	3,330	10'11"	3,450	11'4"	3,090	10'2"	3,210	10'6"	3,330	10'11"	3,450	11'4"	3,390	11'1"
Р	mm	ft in	2,180	7'2"	2,240	7'4"	2,300	7'7"	2,360	7'9"	2,180	7'2"	2,240	7'4"	2,300	7'7"	2,360	7'9"	2,330	7'8"
R	mm	ft in	2,400	7'10"	2,400	7'10"	2,400	7'10"	2,400	7'10"	2,400	7'10"	2,400	7'10"	2,400	7'10"	2,400	7'10"	2,400	7'10"
R <sub>1</sub>	mm	ft in	3,070	10'1"	3,130	10'3"	3,190	10'6"	3,220	10'7"	3,070	10'1"	3,130	10'3"	3,190	10'6"	3,220	10'7"	3,130	10'3"
S	mm	ft in	3,730	12'3"	3,950	12'12"	4,160	13'8"	4,370	14'4"	3,730	12'3"	3,950	12'12"	4,160	13'8"	4,370	14'4"	4,210	13'10"
S <sub>1</sub>	mm	ft in	4,300	14'1"	4,500	14'9"	4,700	15'5"	4,900	16'1"	4,300	14'1"	4,500	14'9"	4,700	15'5"	4,900	16'1"	4,410	14'6"
V	mm	ft in	1,100	3'7"	1,100	3'7"	1,100	3'7"	1,100	3'7"	1,100	3'7"	1,100	3'7"	1,100	3'7"	1,100	3'7"	900	2'11"
Grapple weight	kg	lb	2,520	5,560	2,580	5,690	2,650	5,840	2,750	6,060	2,870	6,330	2,950	6,500	3,060	6,750	3,140	6,920	2,880	6,350
Max working load*	kg	lb	11,150	24,580	11,090	24,450	11,030	24,320	10,920	24,070	10,800	23,810	10,730	23,660	10,620	23,410	10,540	23,240	10,790	23,790
Operating weight**	kg	lb	36,300	80,030	36,360	80,160	36,420	80,290	36,520	80,510	36,650	80,800	36,720	80,950	36,830	81,200	36,910	81,370	36,650	80,800
Timber			1	х	)	<	×	(	)	<	>		)	<	)	<	1	x		
Shortwood (pulpwoo	od)																		х	
Unloading against w	all																		×	
Tire availability				775 8	§ 875			87	75			775 8	& 875			87	75		775 8	875

\* Fully articulated, with tire deflection, boom retracted by ~750 mm (2'6") with 875 tires and by ~850 mm (2'9") with 775 tires.

\*\* Including liquid in rear tires.

Note: Log pusher increases operating weight by 970 kg (2,140 lb). Radiator grille guard (WL86023) increases operating weight by 130 kg (290 lb) and increases the working load by 100 kg (220 lb). Fire suppression system increases operating weight by 85 kg (190 lb).

## **Equipment**

#### STANDARD EQUIPMENT

#### **Engine**

Exhaust after-treatment system

Two stage air cleaner, pre-cleaner, primary and secondary filter

Indicator for coolant level

Preheating of induction air

Fuel pre-filter with water trap

Fuel filter

Crankcase breather oil trap

Reversible cooling fan

Exterior radiator air intake protection

#### Drivetrain

Automatic Power Shift

Fully automatic gearshifting, 1-4

PWM-controlled gearshifting

Forward and reverse switch by hydraulic lever console

Rimpull control

Indicator glass for transmission oil level

Differentials: Front, 100% hydraulic diff lock. Rear, conventional.

OptiShift

Lock-up first gear

#### **Electrical System**

24 V, pre-wired for optional accessories

Alternator 24V/80A/2280W

Battery disconnect switch

Fuel gauge

Hour meter

Electric horn

Instrument cluster:

Fuel level

Diesel Exhaust Fluid/AdBlue level

Transmission temperature

Coolant temperature

Instrument lighting

#### Lighting:

Twin halogen front headlights with high and low beams

Parking lights

Double brake and tail lights

Turn signals with flashing hazard light function

Halogen work lights (2 front and 2 rear)

#### STANDARD EQUIPMENT

#### Contronic monitoring system

Monitoring and logging of machine data

Contronic display

Fuel consumption

Diesel Exhaust Fluid/AdBlue consumption

Ambient temperature

Clock

Test function for warning and indicator lights

Brake test

Test function, sound level at max fan speed

Warning and indicator lights:

Battery charging

Parking brake

Warning and display message: Regeneration

Engine coolant temperature

Charge-air temperature

Engine oil temperature

Engine oil pressure

Transmission oil temperature

Transmission oil pressure

Hydraulic oil temperature

Brake pressure

Parking brake applied

Brake charging

Overspeed at direction change

Axle oil temperature

Steering pressure

Crankcase pressure

Attachment lock open

Safety Belt Warning

#### Level warnings:

Fuel level

Diesel Exhaust Fluid/AdBlue level

Engine oil level

Engine coolant level

Transmission oil level

Hydraulic oil level

Washer fluid level

Engine torque reduction in case of malfunction indication:

High engine coolant temperature

High engine oil temperature

Low engine oil pressure

High crankcase pressure

High charge-air temperature

Engine shutdown to idle in case of malfunction indication:

High transmission oil temperature

Slip in transmission clutches Keypad, background lit

Start interlock when gear is engaged

#### STANDARD EQUIPMENT

#### Hydraulic system

Main valve, double acting 2-spool with hydraulic pilots

Variable displacement axial piston pumps (3) for:

- 1 Working hydraulics, Pilot hydraulics and Brake system
- 2 Working hydraulics, Pilot hydraulics, Steering and Brake system
- 3 Cooling fan and Brake system

Electro-hydraulic servo controls

Electronic hydraulic lever lock

Automatic boom kick-out

Automatic bucket positioner

Double-acting hydraulic cylinders

Indicator glass for hydraulic oil level

Hydraulic oil cooler

Boom suspension system

#### Brake system

Dual brake circuits

Dual brake pedals

Secondary brake system

Parking brake, electro-hydraulic

Brake wear indicators

Oil cooler and filter front & rear axle

#### 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 rear-view mirrors

Dual exterior rear-view mirrors

Sliding window, right side

Tinted windshield glass

Retractable seatbelt (SAE J386)

Adjustable steering wheel

Storage compartment

Document pocket

Sun visor

Beverage holder

Windshield washer front and rear

Windshield wipers front and rear

Interval function for front and rear wipers

#### STANDARD EQUIPMENT

#### Service and maintenance

Automatic lubrication system

Engine oil remote drain and fill

Transmission oil remote drain and fill

Lubrication manifolds, ground accessible

Pressure check connections: transmission and hydraulic, quick-connects

Quick-fit hydraulic oil fill

Tool box, lockable

#### External equipment

Orange hand rails

Fenders, front and rear

Viscous cab mounts

Rubber engine and transmission mounts

Frame, joint lock

Vandalism lock prepared for

Engine compartment

Radiator grille Lifting eyes

Tie-down eyes

Fabricated counterweight

Counterweight, pre-drilled for optional guards

#### Other equipment

Counterweight, logging

## **Equipment**

**OPTIONAL EQUIPMENT** 

Engine

Air pre-cleaner, cyclone type

Air pre-cleaner, oil-bath type

Air pre-cleaner, turbo type

Engine auto shutdown

Engine delayed shutdown

Engine block heater

Fuel fill strainer

Fuel heater

Hand throttle control

Max. fan speed, hot climate

Radiator, corrosion-protected

Reversible cooling fan and axle oil cooler

Wheels and tires

775/65 R29

875/65 R29

Drivetrain

Speed limiter

Electrical System

Anti-theft device

Emergency stop

Locking device, Tag out Lock out

Headlights, assym. left

License plate holder, lighting

Rear vision system, colour LCD monitor in the cab

Reduced function working lights, reverse gear activated

Reverse alarm, audible

Reverse alarm, audible, multi-frequency

Reverse warning light, strobe lighting

Side marker lamps

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 work lights, attachments, 6 LED lamps

LED light packages

Working lights halogen, attachments

Working lights on cab halogen, front and rear

Working lights on cab halogen, rear

Electrical distribution unit 24 volt

Radar detect system

Jump start connector, NATO-Type

**OPTIONAL EQUIPMENT** 

Hydraulic system

Hydraulic fluid, biodegradable, Volvo

Hydraulic fluid, fire-resistant

Hydraulic fluid, for hot climate

Brake system

Stainless steel, brake lines

Cah

Anchorage for Operator's manual

Automatic Climate Control, ACC

ACC control panel, with Fahrenheit scale

Asbestos dust protection filter

Ashtrav

Cab air pre-cleaner, cyclone type

Carbon filter

Cover plate, under cab

Lunch box holder

Volvo Armrest, operator's seat, left

Operator's seat, Volvo air susp, heavy-duty, high back, heated

Operator's seat, (air seat std) 2-point seat belt

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

Operator's seat, Premium Comfort ISRI

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

Radio installation kit incl. 12 volt outlet, left side

Radio installation kit incl. 12 volt outlet, right side

Radio (with AUX, Bluetooth and USB connection)

DAB Radio

Subwoofer

Steering wheel knob

Sun blinds, rear windows

Sun blinds, side windows

Timer cab heating

Window, sliding, door

Universal door/ignition key

Remote door opener

Forward view mirror

Cab heater power outlet 240V

Delayed Engine Shutdown

Service and maintenance

Oil sampling valve

Refill pump for grease to lube system

Tool kit

Wheel nut wrench kit

Quick engine oil change

Cleaner kit, with air blow gun

ROX, rapid oil exchange pump

CareTrack, GSM, GSM/Satellite

Telematics, Subscription

#### OPTIONAL EQUIPMENT

#### Protective equipment

Belly guard rear

Belly guard rear, oil pan

Center hinge and rear frame guard

Cover plate, rear frame

Cab roof, heavy-duty

Guards for front headlights

Guards for radiator grill

Guards for tail lights

Windows, side and rear guards

#### External equipment

Cab ladder, rubber-suspended

Fire suppression system

Handles on counterweight

Counterweight, signal painted, chevrons

Mudguards, full cover wideners and prot. Included

Tow hitch

#### Other equipment

CE-marking

Comfort Drive Control (CDC)

Secondary steering with automatic test function

Sound decal, EU

Sound decal, USA

Reflecting stickers (decals), machine contour

Reflecting stickers (stripes), machine contour Cab

Option for machines without dinitrol

Noise reduction kit, exterior

Sign, slow moving vehicle

Sign, 50 km/h (31 mph)

#### Attachments

Log grapples

## V O L V O