



Volvo Construction Equipment

# L120Gz

Volvo Wheel Loaders 17.9-18.8 t 245 hp



# A passion for performance

At Volvo Construction Equipment, we're not just coming along for the ride. Developing products and services that raise productivity – we are confident we can lower costs and increase profits for industry experts. Part of the Volvo Group, we are passionate about innovative solutions to help you work smarter – not harder.

## Helping you to do more.

Doing more with less is a trademark of Volvo Construction Equipment. High productivity has long been married to low energy consumption, ease of use and durability. When it comes to lowering life-cycle costs, Volvo is in a class of its own.

## Designed to fit your needs.

There is a lot riding on creating solutions that are suited to the particular needs of different industry applications. Innovation often involves high technology – but it doesn't always have to. Some of our best ideas have been simple, based on a clear and deep understanding of our customers' working lives.



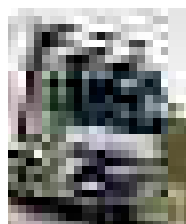
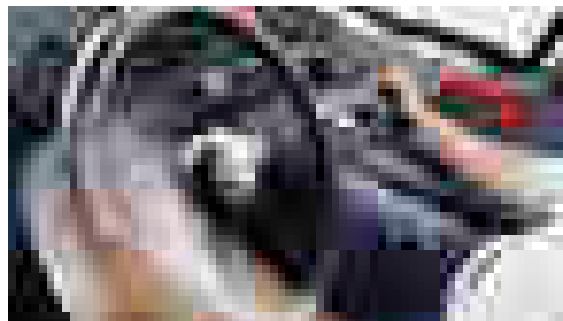
## You learn a lot in 180 years.

Over the years, Volvo has advanced solutions that have revolutionized the use of construction equipment. No other name speaks Safety louder than Volvo. Protecting operators, those around them and minimizing our environmental impact are traditional values that continue to shape our product design philosophy.

## We're on your side.

We back the Volvo brand with the best people. Volvo is truly a global enterprise, one that is on standby to support customers quickly and efficiently – wherever they are.

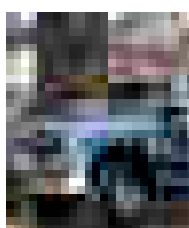
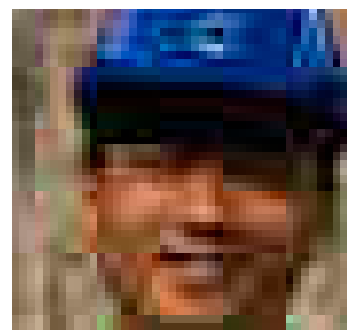
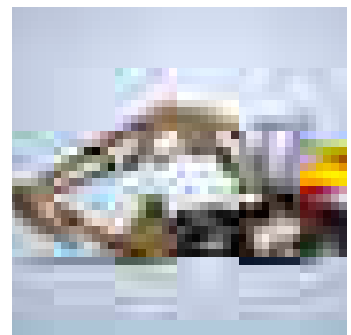
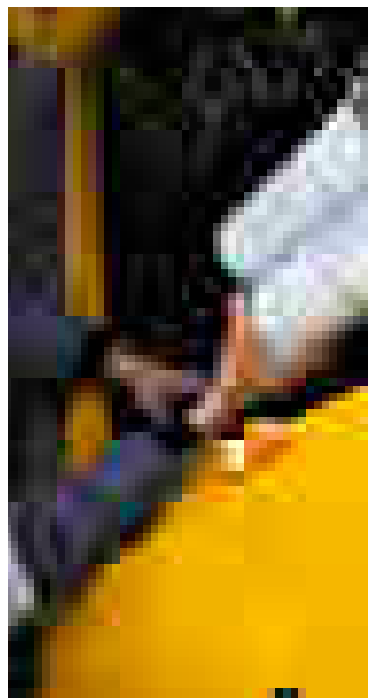
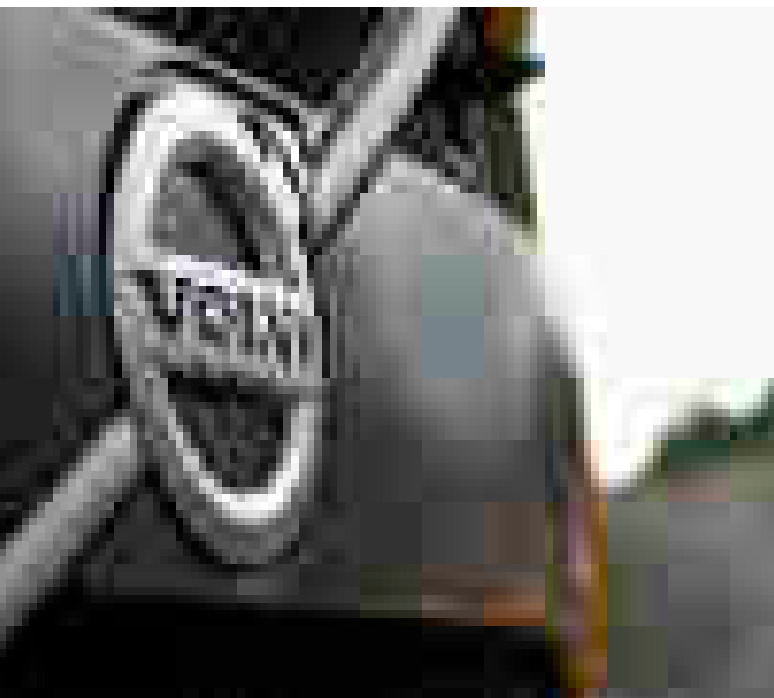
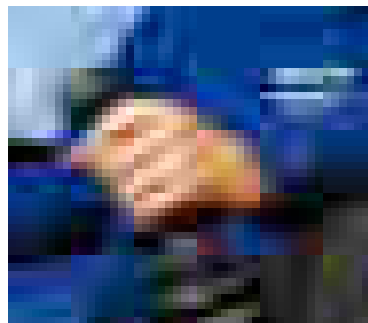
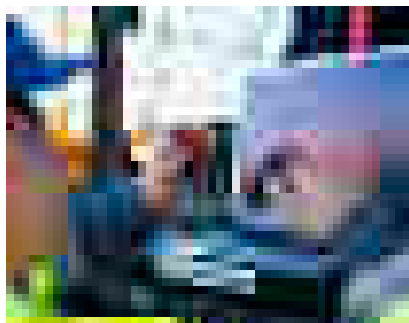
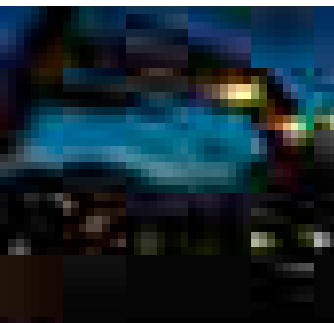
## We have a passion for performance.



Volvo Trucks



Renault Trucks



Mack Trucks



UD Trucks



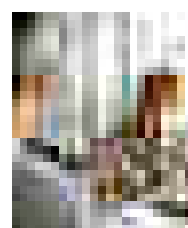
Volvo Buses



Volvo Construction  
Equipment



Volvo Penta



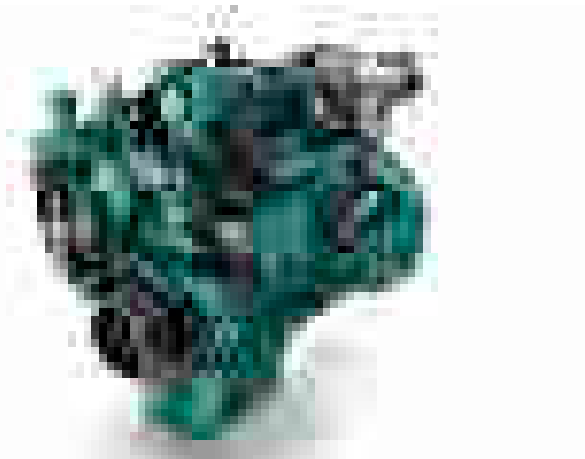
Volvo Financial Services

# Loaded with productivity.

Volvo Construction Equipment began designing wheel loaders in 1954 and since then machine owners and operators have got to know the legendary reputation of these productive, fuel efficient machines. The new L120Gz provides the power, strength and reliability you need to maximize your productivity and profitability.

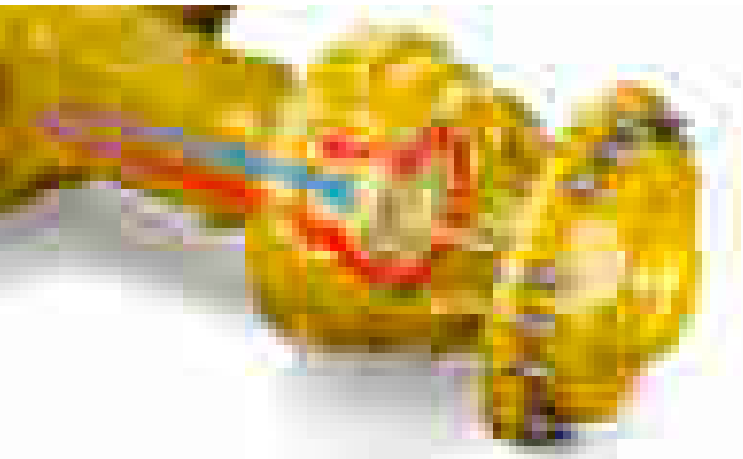
## Volvo engine

Featuring advanced technology and built on decades of experience, the powerful Volvo engine delivers high torque at low rpm for superior performance and low fuel consumption.



## Fully Automatic Power Shift

Fully Automatic Power Shift ensures optimal operation by adjusting machine gears – from first to fourth – in line with parameters including engine and travel speed. This delivers smooth gear changes, fast cycle times and low fuel consumption.



## Axles

Oil-cooled, wet disc brakes on both the front and rear axle deliver superior braking performance for smooth, safe control and long service life. For outstanding traction in slippery conditions, the front axle is equipped with 100% differential locks. Axle oil circulation allows the oil to flow and cool inside the axle – protecting components and increasing brake service life.



## Eco pedal

Volvo's unique eco pedal applies mechanical push-back force when the accelerator is used excessively and engine rpm is about to exceed the economic operating range. This encourages the operator to ease off the throttle, reducing fuel consumption.



#### **Powertrain**

The ideally-matched, all-Volvo powertrain has been built to work together in perfect harmony. The Volvo design has been comprehensively tested to deliver optimized performance, high productivity, low fuel consumption and superior reliability.



#### **Lifting arm system**

The Volvo designed Z-bar linkage provides high breakout force for strong, powerful digging and complete bucket fill even in the hardest materials. The durable system and quick hydraulic speeds deliver fast cycle times and high productivity.

# Move more with Volvo.

The new L120Gz features proven, advanced technology. With load-sensing hydraulics and a powerful, durable Z-bar linkage, these machines will increase your productivity – even in the most demanding conditions. Load more and get the job done with Volvo.

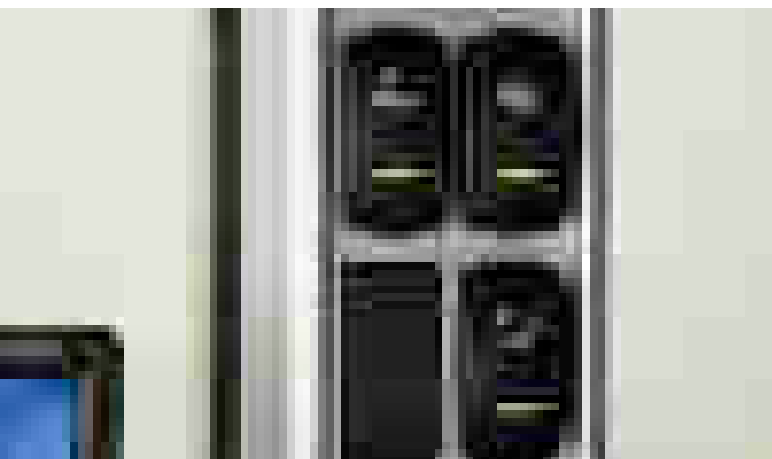
## Hydraulic controls

For ease of operation and increased comfort during long work shifts, the operator can precisely control the bucket and lifting unit via the hydraulic lever controls.



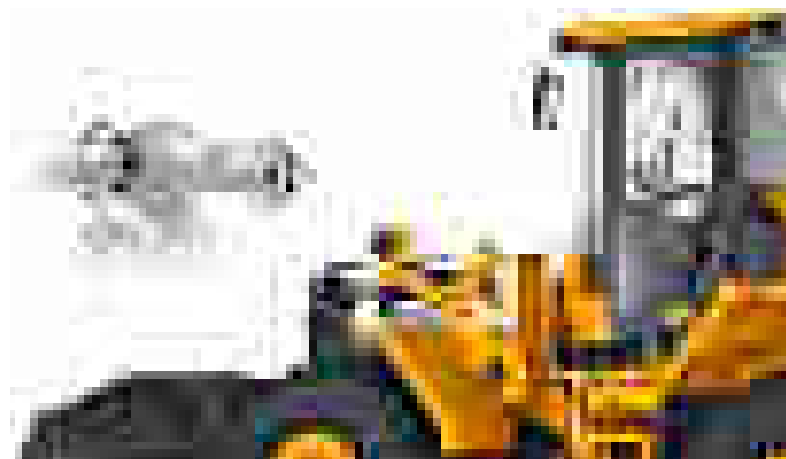
## Load-sensing hydraulics

Volvo's load-sensing hydraulics and steering system supply power to the hydraulic functions only when needed, lowering fuel consumption. The powerful systems provide fast response for shorter cycle times while delivering smooth operation through superior control of the load, attachment and steering.



## Bucket positioning

The automatic bucket leveler and boom kick-out functions quickly and accurately stop the bucket and linkage in adjustable, pre-selected positions. When activated, this easy-to-use feature increases productivity and shortens cycle times.



## Double-sealing pins

The bucket pins are double sealed to keep grease inside the bearing and dirt out. This ensures long pin and bearing life.

# The perfect match.

Exceptional design and superior durability are at the center of Volvo attachments. The robust buckets are engineered to perform in perfect harmony with Volvo wheel loaders, in the specific environments and applications machine owners operate in. Whatever material you need to load, Volvo has the right bucket for the job.

## Bucket type

The general purpose, standard-duty bucket can be used for a variety of jobs while the heavy-duty version provides ultimate durability and wear resistance for unmatched life span and value for money. The re-handling bucket is optimized for handling, stockpiling and loading

processed material including aggregate and sand. The spade nose rock bucket has high penetration capabilities and is ideally suited for loading shot rock. The light material bucket is a high capacity bucket for low density materials.



## Volvo bucket design

No manufacturer is better at designing buckets for Volvo machines than Volvo. The purpose-built buckets have been developed as an integrated part of the wheel loader for which they're intended – with properties perfectly matched to machine parameters including lifting arm geometry and breakout, rim pull and lifting force.

## Durable protection

For superior performance and life span, Volvo buckets are constructed from high quality materials including wear-resistant steel in the most exposed areas. To support its durable, high-performance buckets, Volvo offers a selection of cost-effective, replaceable wear parts. With a range including bolt-on edge, teeth, adapters and segments, customers can tailor their wear protection to meet specific job demands.





#### **Volvo buckets**

Volvo buckets and Volvo wheel loaders are perfectly matched to work together as one solid, reliable unit – delivering maximum productivity and long life. The entire range of high quality, durable buckets is designed for optimized performance.



#### **Volvo cab**

The spacious ROPS/FOPS cab includes a tiltable steering wheel, vibration damping and ergonomically placed controls. With a comfortable seat, ample storage space and a powerful climate control system fitted as standard, the operator will experience a productive work shift.

# Comfort delivers productivity.

Comfort matters – especially in the cab where it has a direct impact on sustained productivity. That's why the industry-leading Volvo cab has been designed with the operator in focus. Step inside this spacious, comfortable environment and experience a space optimized for long, productive work shifts. Capitalize on comfort and increase your productivity with Volvo.

## Visibility

All-around visibility from large expanses of glass and slim cab pillars helps to create a safe, productive and comfortable operating environment.



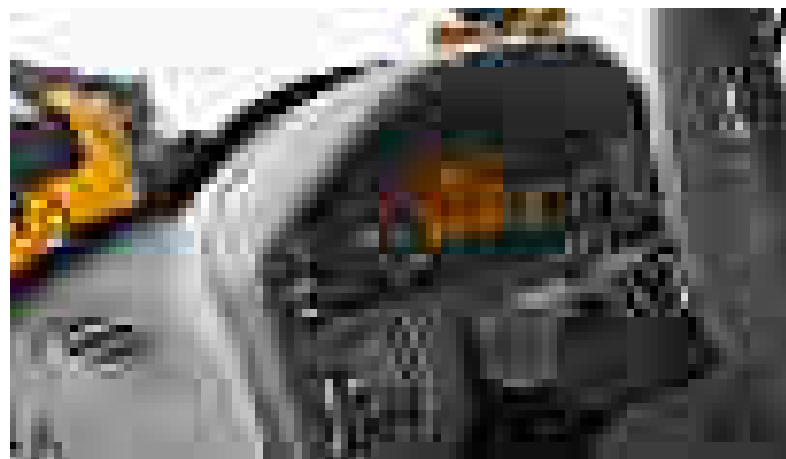
## Cab air filter

The cab air intake is located high on the machine, where air is cleanest. The easy-to-replace pre-filter effectively separates coarser dust and particles before the air passes through the main filter and finally enters the cab. Volvo's industry-leading design allows 90% of the cab air to be recirculated through the main filter for continuous dust removal.



## Easy access

Safely and easily access the cab via a three-point access ladder with anti-slip steps. Ideally positioned, sturdy handrails and a wide door frame with a 95° opening angle further increase operator safety and comfort.



## Contronics

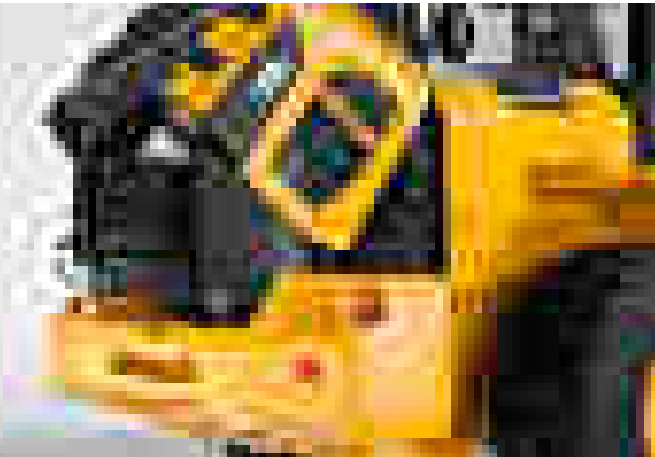
The Volvo Contronics system continuously monitors and records machine operation and performance in real-time. Contronics facilitates ease of operation by providing the operator with all the necessary information and diagnostics for optimal performance. Information including fuel levels and warning messages is relayed via the display in the cab.

# Uptime goes up with Volvo.

At Volvo we know that service and maintenance checks need to be quick and easy to perform in order to achieve maximum machine uptime. With excellent access to the engine compartment and ground level filters you'll benefit from time saving features that allow you to get the most out of every day.

## Radiator cleaning

Easily access and clean the radiator from ground level. The cooling fan's optional reversible functionality – which blows air in the opposite direction – allows for self-cleaning of the cooling units.



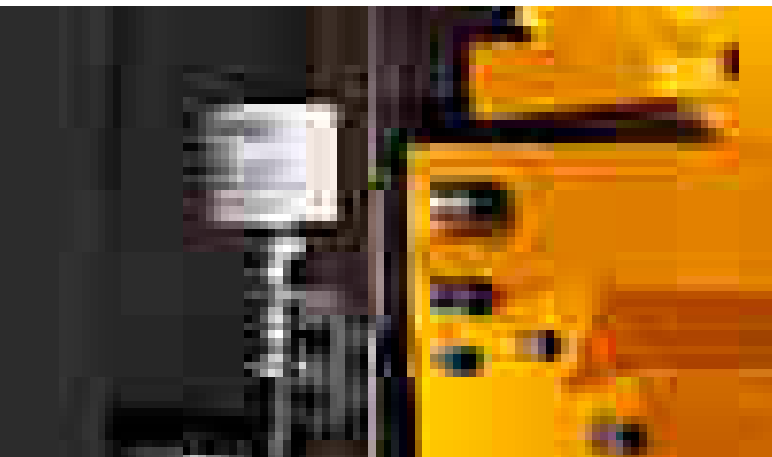
## Maintenance-free rear axle cradles

The rear axle is supported on maintenance-free cradles and includes lubricated-for-life bearings and bushings – reducing overall service cost and increasing machine uptime. The Volvo design minimizes force on the axle ensuring long component life.



## Breather filter

The transmission, hydraulic tank, front and rear axle and fuel tank are ventilated by a replaceable breather filter. This reduces the risk of contamination and increases service life.



## Brake wear indicator

The unique Volvo brake wear indicator enables brake pad wear to be monitored quickly and easily. The system increases safety and reduces the risk of machine damage.





#### **Service access**

Excellent access to the engine compartment provides safe and easy maintenance access. This allows regular checks to be done faster, increasing machine uptime.

# Exceed your expectations.

## Fully Automatic Power Shift

Fully Automatic Power Shift ensures optimal operation by adjusting the machine gears – from first to fourth – in line with parameters including engine and travel speed.



## Lifting arm system

The Volvo designed Z-bar linkage provides high breakout force for strong, powerful digging and complete bucket fill even in the hardest materials.

## Load-sensing hydraulics

Volvo's load-sensing hydraulics supply power to the hydraulic functions only when needed, lowering fuel consumption and delivering fast response for quick cycle times.

## Volvo bucket design

The properties of Volvo buckets are perfectly matched to machine parameters including lifting arm geometry and breakout, rim pull and lifting force.

## Contronics

The Volvo Contronics system facilitates ease of operation by providing the operator with all the necessary information and diagnostics via the display for optimal performance.



## Volvo buckets

Volvo buckets and Volvo wheel loaders are perfectly matched to work together as one solid, reliable unit – delivering maximum productivity and long life.



#### **Volvo cab**

Volvo's industry-leading ROPS/FOPS cab features all-around visibility, ergonomically placed controls, a powerful climate control system and ample storage space.

#### **CareTrack\***

CareTrack is the state-of-the-art Volvo telematics system that provides access to a wide range of machine monitoring information designed to save machine owners time and money.



#### **Service access**

Excellent access to the engine compartment provides safe and easy maintenance access, increasing machine uptime.

#### **Maintenance-free rear axle cradles**

The rear axle is supported on maintenance-free cradles and includes lubricated-for-life bearings and bushings – reducing overall service cost and increasing machine uptime.



#### **Powertrain**

The ideally-matched, all-Volvo powertrain has been built to work together in perfect harmony. The powerful engine delivers the ultimate combination of high performance and low fuel consumption.

#### **Eco pedal**

Volvo's unique eco pedal reduces fuel consumption by applying mechanical push-back force when the accelerator is used excessively and engine rpm is about to exceed the economic operating range.

\*Not available in all markets.

# Adding value to your business.

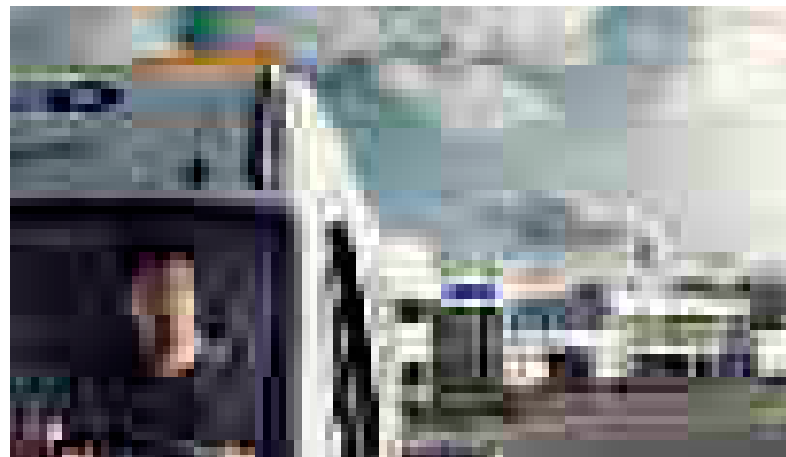
Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to the positive return of your investment.



## Complete Solutions

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life cycle of

your machine? By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.



## Genuine Volvo Parts

Our attention to detail is what makes us stand out. This proven concept acts as a solid investment in your machine's future. Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, can you be sure that your machine retains the renowned Volvo quality.



## Service Network

In order to respond to your needs faster, a Volvo expert is on their way to your job site from one of our Volvo facilities. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.





#### Customer Support Agreements

The range of Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services. Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Customer Support Agreement you are in control of your service costs.

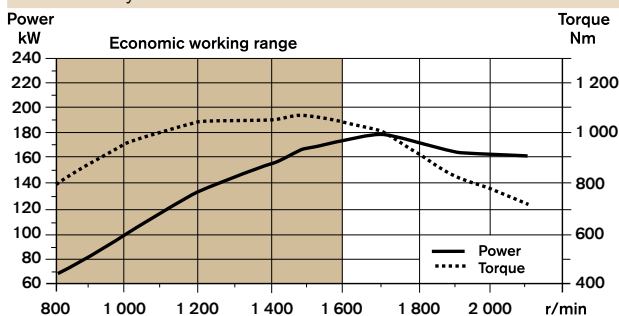
# Volvo L120Gz in detail.

## Engine

Volvo's V-ACT Tier 3 /Stage IIIA-approved, 7 liter, 6-cylinder straight turbocharged diesel engine with Common Rail fuel injection system and switchable internal Exhaust Gas Recirculation (I-EGR). The engine has wet replaceable cylinder liners and replaceable valve guides and valve seats. The throttle application is transmitted electrically from the throttle pedal or the optional hand throttle.

**Air cleaning:** Three-stage Cyclone/oil bath precleaner - primary filter - secondary filter.

**Cooling system:** Air-to-air intercooler and hydrostatic, electronically controlled fan



Engine		D7E LAE3
Max power at	r/s (r/min)	28.3 (1 700 )
SAE J1995 gross	kW / hp	180 / 245
ISO 9249, SAE J1349 net	kW / hp	179 / 243
Max torque at	r/s (r/min)	25.0 (1 500 )
SAE J1995 gross	Nm	1 065
ISO 9249, SAE J1349	Nm	1 065
Economic working range	r/s (r/min)	13.3-26.6 (800-1 600)
Displacement	l	7.1

## Electrical system

Contronic electrical system with central warning light and buzzer for following functions:

- Serious engine fault
- Low steering system pressure
- Interruption in communication (computer fault) Central warning light and buzzer with the gear engaged for the following functions:

Low engine oil pressure, High charge air temperature, Low coolant level, High coolant temperature, 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 140
Cold cranking capacity, approx.	A	890
Alternator rating	W/A	2 280/80
Starter motor output	kW	5.5

## Brake system

**Service brake:** Volvo dual-circuit system with nitrogen charged accumulators. Outboard mounted hydraulically operated, fully sealed oil circulation cooled wet disc brakes. The operator can select automatic declutch of the transmission when braking through Contronics.

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

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

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

Number of brake discs per wheel front/rear	1/1
Accumulators	3 x 1

\*two for severe brake; one for parking brake

## Drivetrain

**Torque converter:** Single-stage

Transmission: Volvo countershaft transmission with single lever control. Fast and smooth shifting of gears with Pulse Width Modulation (PWM) valve.

**Transmission:** Volvo Automatic Power Shift (APS) gear shifting system with fully automatic shifting 1-4 and mode selector with 4 different gear shifting programs, including AUTO mode.

**Axles:** Volvo fully floating axle shafts with planetary hub reductions and cast steel axle housing. Fixed front axle and oscillating rear axle. 100% differential lock on the front axle.

Transmission		Volvo	HTE205B
	1st gear	km/h	7.2
Maximum speed,	2nd gear	km/h	13.5
forward/reverse	3rd gear	km/h	27.3
	4th gear*	km/h	40
Measured with tires		23.5R25	
Front axle/rear axle		AWB 31/AWB 30	
Rear axle oscillation ±		° ± 13	
Ground clearance at 13° osc.		mm	428

\* limited by parameter

## Cab

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

**Heater and defroster:** Heater coil with filtered fresh air and fan with auto and 11 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 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, FOPS (ISO 3449). The cab meets with requirements according to ISO 6055 (Operator overhead protection - Industrial trucks) and SAE J386 ("Operator Restraint System").

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

Sound level in cab according to ISO 6396/SAE J2105	dB(A)	74
External sound level according to ISO 6395/SAE J2104	dB(A)	108
Ventilation	m³/min	9
Heating capacity	kW	16
Air conditioning (optional)	kW	4.8

## Hydraulic system

**System supply:** One load-sensing axial piston pump with variable displacement. The steering function always has priority. Valves: Double-acting 2-spool valve. The main valve is controlled by a 2-spool pilot valve.

**Lift function:** The valve has three positions; raise, hold and lower position. Inductive/magnetic automatic boom kickout can be switched on and off and is adjustable to any position between maximum reach and full lifting height.

**Tilt function:** The valve has three functions; rollback, hold and dump. Inductive/magnetic automatic tilt can be adjusted to the desired bucket angle.

**Cylinders:** Double-acting cylinders for all functions.

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

Working pressure maximum, pump 1 for working hydraulic system	MPa	29
Flow	l/min	128
at	MPa	10
engine speed	r/s (r/min)	32 (1 900)
Working pressure maximum, pump 2 for steering-, brake-, pilot- and working hydraulic system	MPa	31
Flow	l/min	128
at	MPa	10
engine speed	r/s (r/min)	32 (1 900)
Working pressure maximum, pump 3 for brake- and cooling fan system	MPa	21
Flow	l/min	32
at	MPa	10
engine speed	r/s (r/min)	32 (1 900)
Pilot system, working pressure	MPa	3.5
Cycle times		
Lift	s	5.2
Tilt	s	1.5
Lower, empty	s	3.8
Total cycle time	s	10.5

## Lift arm system

Z-bar linkage with high breakout force for strong, powerful digging		
Lift cylinders		2
Cylinder bore	mm	150
Piston rod diameter	mm	80
Stroke	mm	676
Tilt cylinder		1
Cylinder bore	mm	160
Piston rod diameter	mm	100
Stroke	mm	545

## Steering system

**Steering system:** Load-sensing, hydrostatic articulated steering, **System supply:** The steering system has priority feed from a load-sensing axial piston pump with variable displacement, **Steering cylinders:** Two double-acting cylinders.

Steering cylinders		2
Cylinder bore	mm	75
Rod diameter	mm	50
Stroke	mm	486
Working pressure	MPa	26
Maximum flow	l/min	74.5
Maximum articulation	± °	38

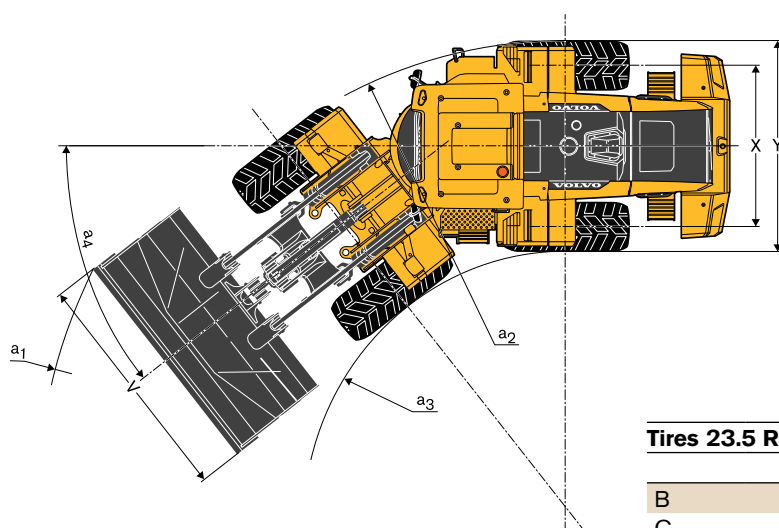
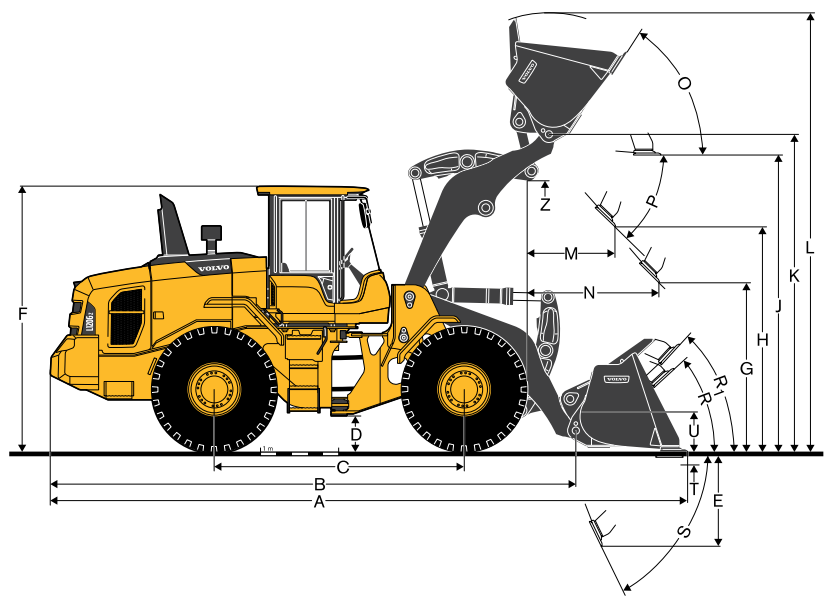
## Service

**Service accessibility:** Large, easy-to-open hood covering whole engine department. Fluid filters and component breather air filters promote long service intervals. Possibility to monitor, log and analyze data to facilitate troubleshooting.

## Refill capacity

Fuel Tank	l	269
Engine coolant	l	37.8
Hydraulic oil tank (Hydraulic oil volume in tank)	l	130
Transmission oil	l	41
Engine oil	l	24
Axle oil front	l	36
Axle oil rear	l	41

# Specifications.















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

Tires 23.5 R25 L3			
		Standard boom	Long boom
B	mm	6 747	7 191
C	mm	3 200	3 200
D	mm	428	428
F	mm	3 368	3 368
G	mm	2 134	2 134
J	mm	3 766	4 240
K	mm	4 031	4 502
O	°	58	57.5
Pmax	°	48.5	48.5
R	°	44.4	45.1
R <sub>1</sub> *	°	50.8	52.3
S	°	64	63
T	mm	102	102
U	mm	468	599
X	mm	2 064	2 064
Y	mm	2 685	2 685
Z	mm	3 616	4 004
a <sub>2</sub>	mm	5 964	5 964
a <sub>3</sub>	mm	3 270	3 270
a <sub>4</sub>	±°	38	38

\* Carry position SAE

## L120Gz

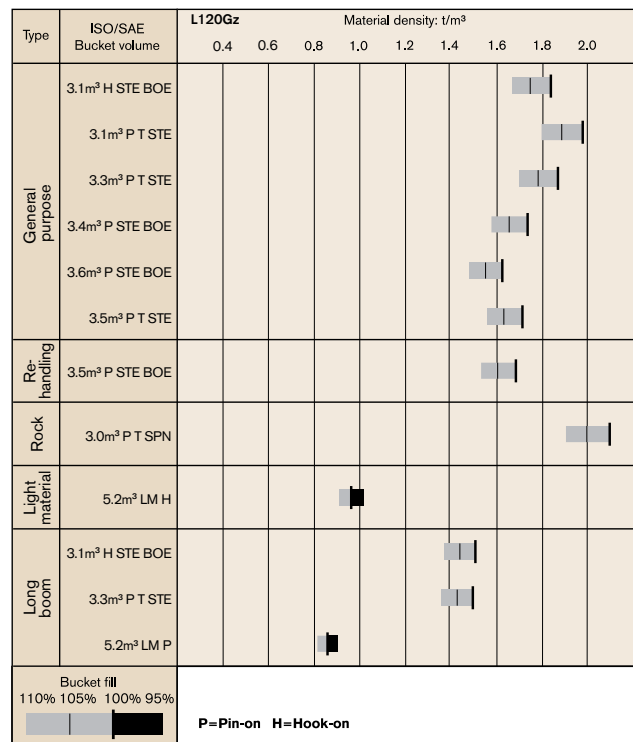
Tires 23.5R25 VJT L3	General Purpose						Rehandling	Rock	LM	Long boom GP		Long boom LM
												
	3.1 m³ STE H BOE	3.1 m³ STE P T	3.3 m³ STE P T	3.4 m³ STE P BOE	3.6 m³ STE P BOE	3.5 m³ STE P T	3.5 m³ STE P BOE	3.0 m³ SPN P T	5.2 m³ LM P BOE	3.1 m³ STE H BOE	3.3 m³ STE P T	5.2 m³ LM P
Volume, heaped ISO/SAE	m³ 3.1	3.1	3.3	3.4	3.6	3.5	3.5	3	5.2	3.1	3.3	5.2
Volume at 110% fill factor	m³ 3.4	3.4	3.6	3.7	4	3.9	3.9	3.3	5.7	3.4	3.6	5.7
Static tipping load, straight	kg 13 260	14 240	14 030	13 750	13 670	13 950	13 750	14 600	12 290	10 980	11 570	11 000
at 35° turn	kg 11 760	12 660	12 460	12 190	12 110	12 390	12 190	12 980	10 830	9 670	10 210	9 670
at full turn	kg 11 500	12 390	12 190	11 930	11 840	12 120	11 920	12 700	10 570	9 450	9 980	9 430
Breakout force	kN 177.1	213.6	204.3	192.5	187.6	198.4	192.5	180.7	139.8	169.3	195.1	151.5
A	mm 8 300	8 300	8 330	8 180	8 210	8 380	8 170	8 450	8 700	8 740	8 780	8 920
E	mm 1 350	1 350	1 390	1 240	1 270	1 430	1 240	1 480	1 700	1 350	1 390	1 500
H	mm 2 820	2 810	2 800	2 900	2 870	2 760	2 900	2 740	2 540	3 280	3 270	3 160
L	mm 5 460	5 530	5 590	5 590	5 640	5 640	5 660	5 530	5 980	5 930	6 050	6 320
M	mm 1 280	1 270	1 340	1 210	1 230	1 350	1 210	1 410	1 540	1 260	1 330	1 390
N	mm 1 840	1 830	1 900	1 820	1 830	1 880	1 820	1 930	1 920	2 250	2 310	2 320
V	mm 3 000	3 000	3 000	3 000	3 000	3 000	3 000	3 000	3 200	3 000	3 000	3 200
a <sub>1</sub> clearance circle	mm 13 330	13 330	13 360	13 280	13 290	13 380	13 280	13 430	13 700	13 660	13 690	13 930
Operating weight	kg 18 120	17 890	18 010	18 140	18 190	18 050	18 160	18 830	18 680	18 390	18 280	18 630

### 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, t/m³
Earth	110 - 115	1.4 - 1.6
Clay	110 - 120	1.4 - 1.6
Sand	100 - 110	1.6 - 1.9
Gravel	100 - 110	1.6 - 1.9
Rock	75 - 100	1.6 - 1.9

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



How to read bucket fill factor

### Supplemental Operating Data

		Standard boom	Long boom	Standard boom
Tires 23.5R25 VJT L3		23.5R25 L5	23.5R25 L3	750/65 R25
Width over tires	mm	30	±0	200
Ground clearance	mm	50	±0	10
Tipping load, full turn	kg	508	-2 172	683
Operating weight	kg	670	±0	640

# Equipment.

## STANDARD EQUIPMENT

### Service and maintenance

Engine oil remote drain and fill  
Lubrication manifolds, ground accessible  
Pressure test ports: transmission and hydraulic, quick connects  
Service platforms with anti-slip surfaces  
CareTrack, GSM  
Toolbox, lockable

### Engine

Three 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  
Crank case breather oil trap  
Exhaust heat insulation

### Electrical system

24 V, pre-wired for optional accessories  
Alternator 24V/ 80A  
Battery disconnect switch with removable key  
Battery box, steel  
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  
Halogen work lights (2 front and 2 rear)

### Contronic monitoring system

Monitoring and logging of machine data  
Contronic display  
Fuel consumption  
Ambient temperature  
Clock  
Test function for warning and indicator lights  
Brake test

### Warning and indicator lights:

Battery charging  
Parking brake  
Warning and display message:  
Engine coolant temperature  
Charge air 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

### Level warnings:

Fuel level  
Engine coolant level  
Transmission oil level  
Hydraulic oil level

### Engine torque reduction in case of malfunction indication:

High engine coolant temperature  
Low engine oil pressure  
High charge air temperature

### Engine shutdown to idle in case of malfunction indication:

High transmission oil temperature  
Slip in transmission clutches

Key pad, background lit  
Start interlock when gear is engaged

### Drivetrain

Automatic Power Shift  
Fully automatic gear shifting, 1-4  
PWM-controlled gear shifting  
Forward and reverse switch by hydraulic lever console  
Indicator glass for transmission oil level  
Differentials: Front, 100% hydraulic diff lock. Rear, conventional

### Tires

23.5-25  
Brake system  
Dual brake circuits  
Single brake pedal  
Secondary brake system  
Parking brake, electrical-hydraulic  
Brake wear indicators  
Wet disc brakes on all four wheels

### Cab

ROPS (ISO 3471), FOPS (ISO 3449)  
Single key kit door/start  
Acoustic inner lining  
Ashtray  
Cigarette lighter, 24 V power outlet  
Lockable door  
Cab heating with fresh air inlet and defroster  
Air conditioner  
Fresh air inlet with two filters  
Manual heat control  
Floor mat  
Single interior lights  
Single interior rearview mirrors  
Dual exterior rearview mirrors  
Sliding window, right side  
Tinted safety glass  
Retractable seatbelt (SAE J386)  
Adjustable steering wheel  
Storage compartment  
Document pocket  
Sun visor  
Beverage holder  
Windshield washer front and rear  
Windshield wipers front and rear  
Interval function for front  
Foot step, left side (toolbox lockable included)

### Hydraulic system

Main valve, double acting 2-spool with hydraulic pilots  
Variable displacement axial piston pumps (3) for:  
Working hydraulics,  
Working hydraulics, pilot hydraulics, steering system, brakes  
Cooling fan, brakes  
Hydraulic control levers  
Mechanical level lock  
Boom kick-out, automatic  
Bucket positioner with position indicator, automatic  
Double acting hydraulic cylinders  
Indicator glass for hydraulic oil level  
Hydraulic oil cooler

### External equipment

Basic fenders, front and rear  
Viscous cab mounts  
Rubber engine and transmission mounts  
Frame, joint lock  
Vandalism lock prepared for:  
Batteries  
Engine compartment  
Lifting eyes  
Tie down eyes  
Tow hitch

## OPTIONAL EQUIPMENT

### Service and maintenance

Auto Lubrication System  
Tool kit  
Wheel nut wrench kit

### Engine

Air pre-cleaner, cyclone type  
Air pre-cleaner, oil-bath type  
Water Separator  
Fuel filter extra  
Engine auto shutdown  
Engine block heater, 230V / 550W  
Fuel heater  
Fuel fill strainer  
Max. fan speed, hot climate  
Reversible cooling fan  
High Altitude kit

## OPTIONAL EQUIPMENT

### Electrical

Headlights, assym. left  
Rear view camera incl. Monitor, colour  
Reverse alarm  
Warning beacon, rotating  
Working lights front, extra 2 halogen lamps

### Cab

Operator's seat, Volvo air susp, heavy-duty, high back, heat, headrest  
Operator's seat, Volvo air susp, heavy-duty, high back, headrest  
Operator's seat, Volvo air susp, heavy-duty, high back, heat, headrest, parking brake alarm  
Operator's seat, ISRI, high back  
Radio installation kit without radio  
Radio with MP3  
Rear view mirrors, std  
Rear view mirrors, heated  
Rear view mirrors, long arm right  
Rear view mirrors, el. heated, long arm right  
Rear view mirrors, engine hood  
Universal door/ignition key USA  
Universal door/ignition key, std  
Steering wheel knob  
Foot step, right side

### Steering system

Secondary steering

### Brake system

Parking brake alarm, audible, for air susp. seats

### Hydraulic system

Hydraulic 2 functions  
Hydraulic 2 functions, Arctic (Servo system Std/OptiShift, Arctic)  
Hydraulic 3 functions (only for std boom)  
Arctic kit for 3rd function (only for std boom)  
Option without attachment lock (only diff.lock), std  
Option without attachment lock (only diff.lock), std, arctic  
Separate attachment locking, Std boom  
Arctic kit, attachment locking (only for std boom)  
Separate attachment locking, Long boom  
Brackets for 3rd function and attachment lock  
O-ring for normal climate  
O-ring for cold climate  
Mineral hydraulic fluid, std  
Mineral oil for cold climate  
Hydraulic fluid, for hot climate

### Protective equipment

Anti-theft device  
Footsteps, right-hand side  
Cover plates rear frame  
Guards for front head lights  
Guards for tail lights

### Other equipment

CareTrack, GSM (Global)  
3-year subscription CareTrack, GSM (Global)  
CareTrack, GSM/Satellite  
3-year subscription, CareTrack, GSM/Satellite (Global)  
Long Boom  
PIN PLATE for non-Russia  
PIN PLATE for Russia  
Plastic rear fender

### Tires and Rims

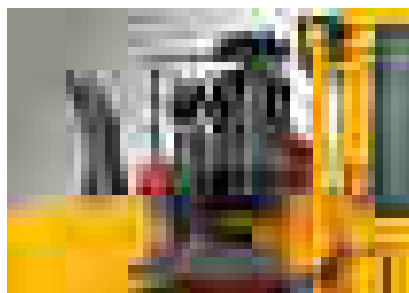
Rims 25-19.5/2.5 3 piece wood (Rims for 23.5R25)  
Rims for Bias tire(for 23.5-25)  
Rims for Radial tire 25-19.5/2.5(for 23.5R25 )  
20.5-25

### Attachments

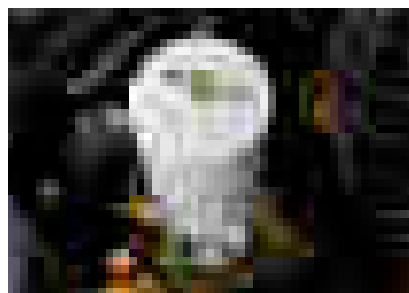
Buckets:  
General purpose(Straight)  
Rock Straight (or spade nose)  
Rehandling  
Light material  
Wear parts:  
Bolt-on edge  
Bolt-on or weld-on bucket teeth  
Segments  
Fork equipment  
Attachment Bracket VAB L weld

## Selection of Volvo optional equipment

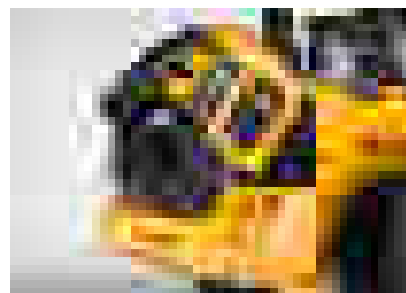
### Oil bath pre-cleaner



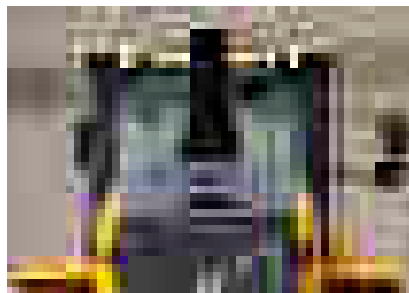
### Fuel filter extra



### Reversible fan



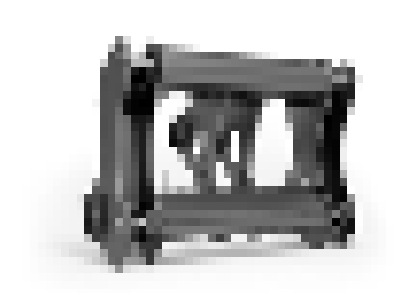
### Rear view camera



### Long boom



### Attachment bracket



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 Construction Equipment**

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