



Volvo Construction Equipment

L60Gz, L90Gz

Volvo Wheel Loaders 12.3-15.1 t 156-174 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.



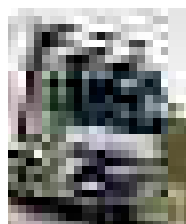
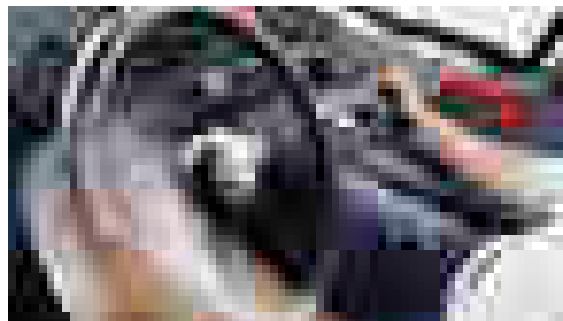
You learn a lot in 180 years.

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.

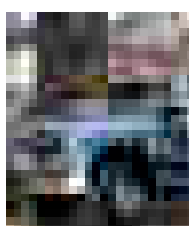
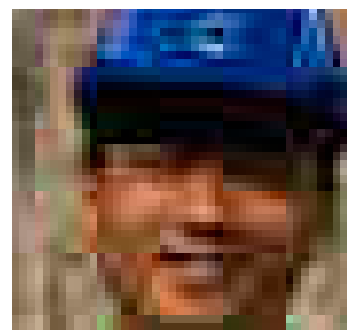
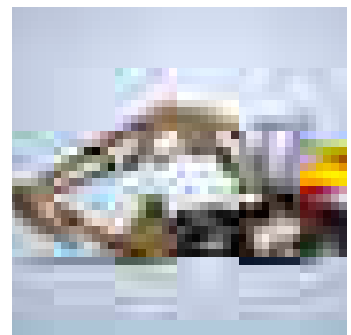
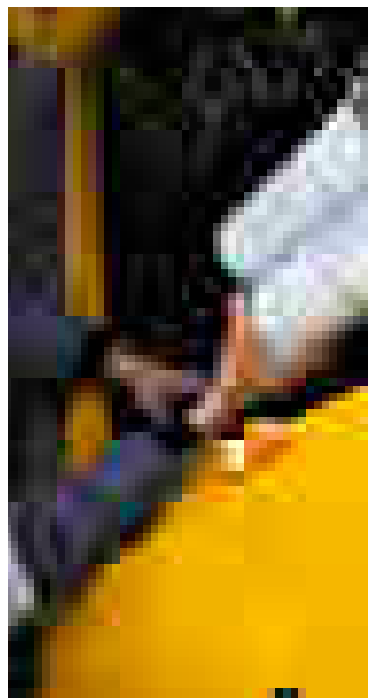
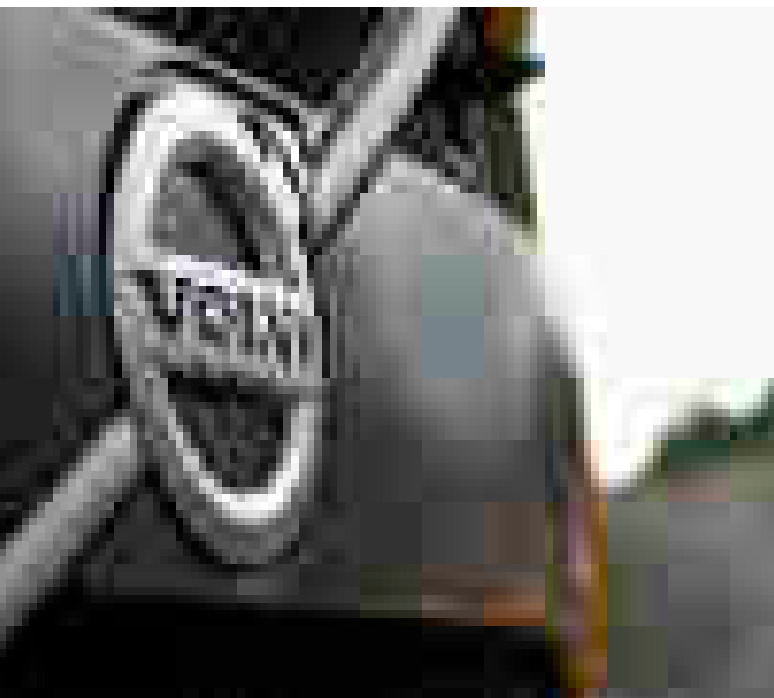
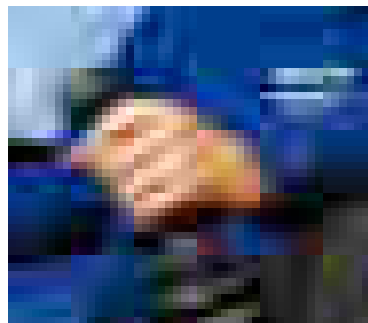
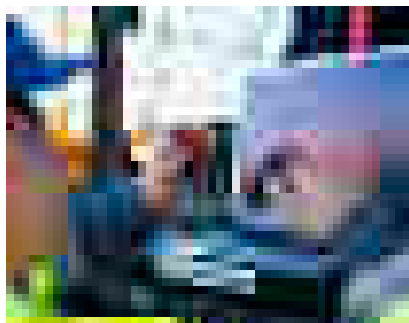
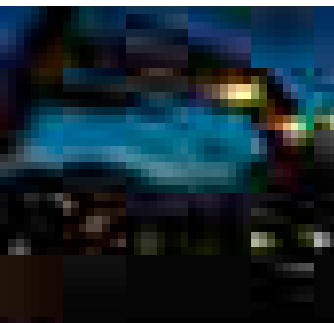
We have a passion for performance.



Volvo Trucks



Renault Trucks



Mack Trucks



UD Trucks



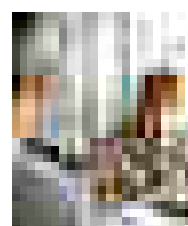
Volvo Buses



Volvo Construction
Equipment



Volvo Penta



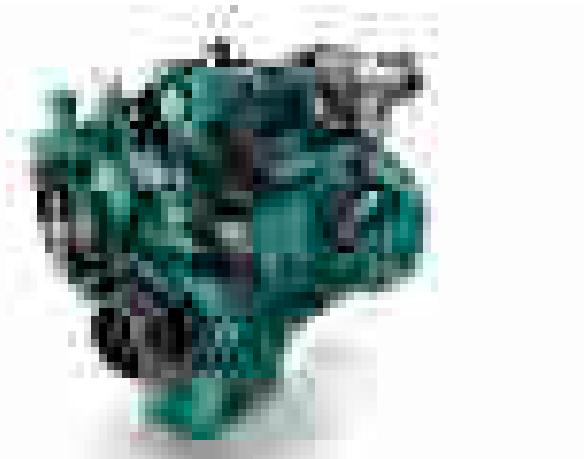
Volvo Financial Services

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 L60Gz and L90Gz provide 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 L60Gz and L90Gz feature 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.

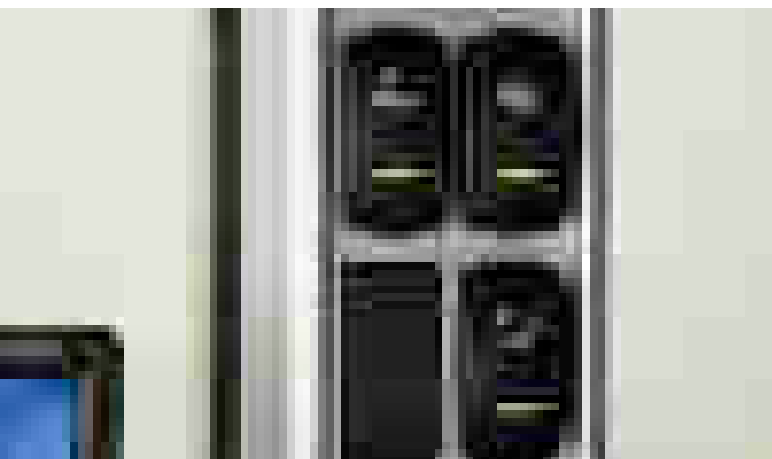
Hydraulic controls

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.



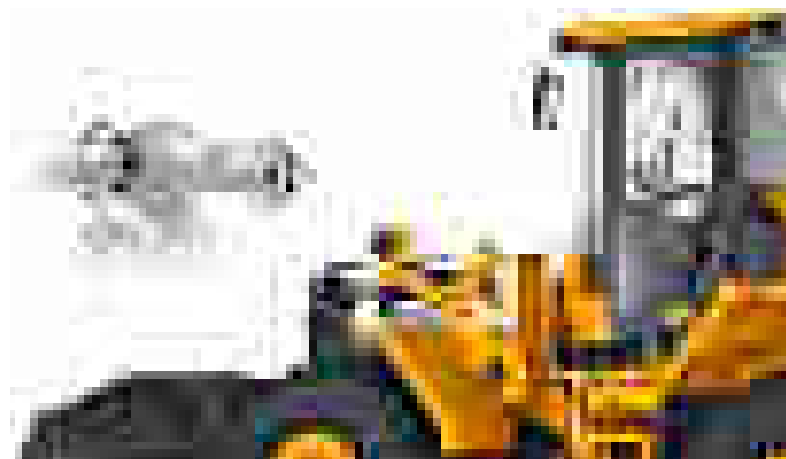
Load-sensing hydraulics

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.

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.



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 heavy-duty rock bucket is optimized for loading shot rock. The light material bucket is a high capacity bucket, ideal for low density materials.



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.

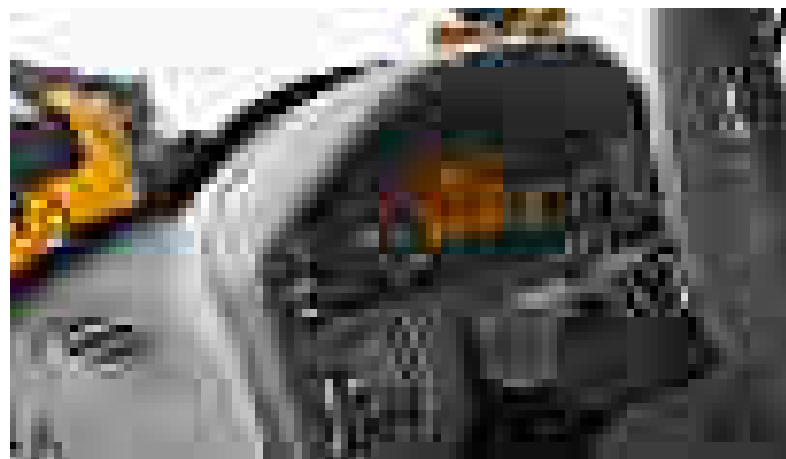


Easy access

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.

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.



Contronics

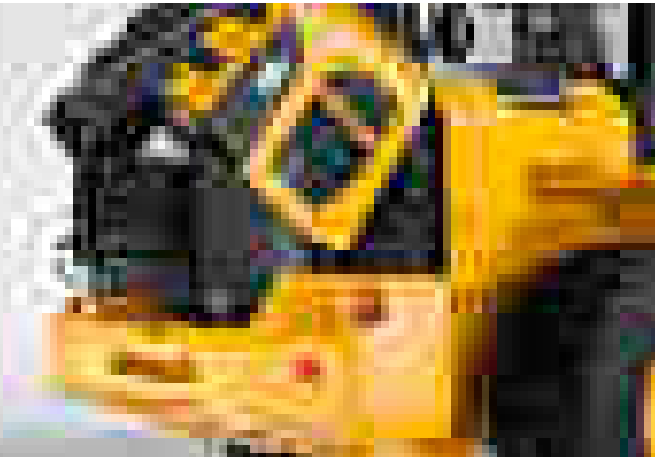
The Volvo Contronics system continuously monitors and records machine operation and performance in real-time. Contronics facilitates ease of operation by providing the operator with all the necessary information and diagnostics for optimal performance. Information including fuel levels and warning messages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



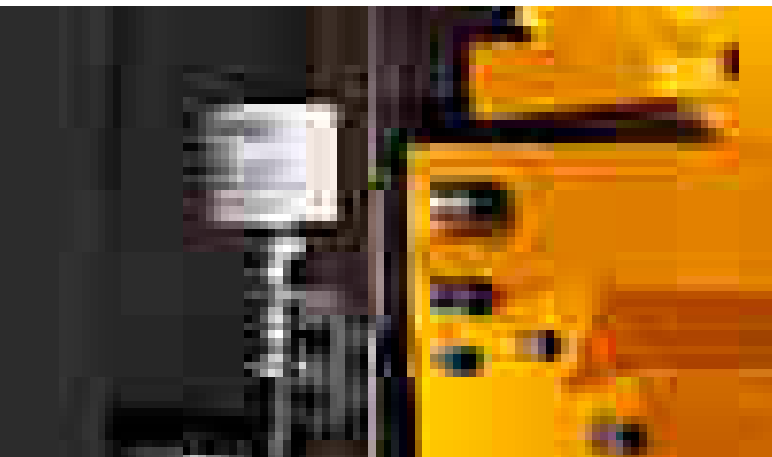
Maintenance-free rear axle cradles

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.

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.

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

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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.



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.

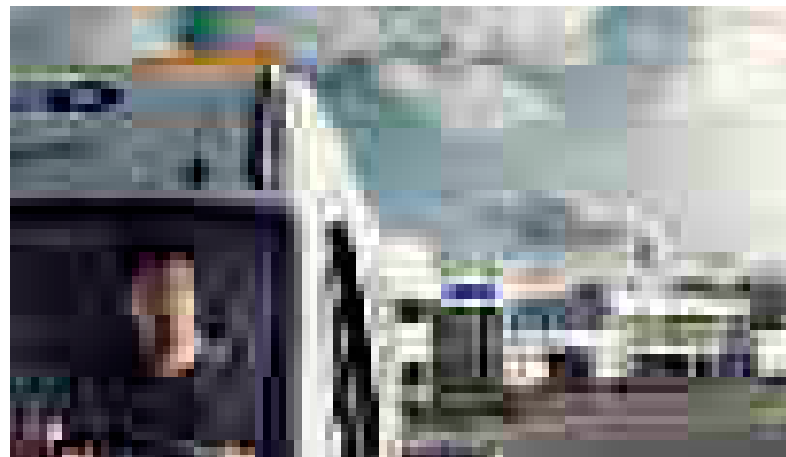
Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to the positive return of your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

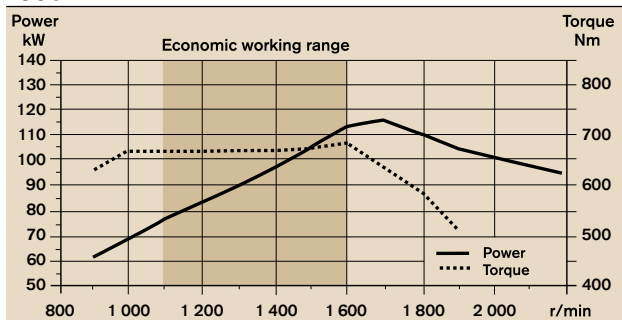
The range of Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services. Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Customer Support Agreement you are in control of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

Volvo L60Gz, L90Gz in detail.

Engine

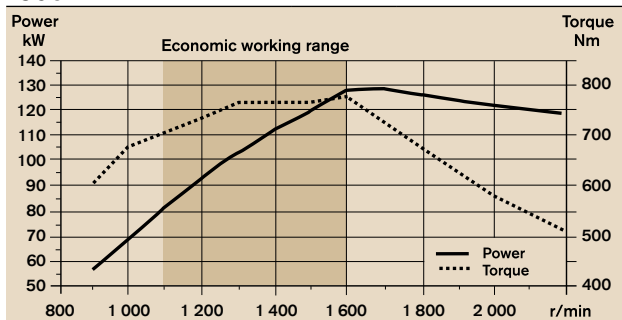
Volvo's V-ACT Tier 3 / Stage IIIA-approved, 6 liter, 6-cylinder straight turbocharged diesel engine with Common Rail fuel injection system and switchable internal Exhaust Gas Recirculation (I-EGR). The engine has wet replaceable cylinder liners and replaceable valve guides and valve seats. The throttle application is transmitted electrically from the throttle pedal or the optional hand throttle. Air cleaning: Three-stage Cyclone/oil bath pre-cleaner - primary filter - secondary filter. Cooling system: Air-to-air intercooler and hydrostatic, electronically controlled fan

L60Gz



Engine	D6E LCE3	
Max power at	r/s (r/min)	28.3 (1 700)
SAE J1995 gross	kW / hp	115 / 156
ISO 9249, SAE J1349 net	kW / hp	114 / 155
Max torque at	r/s (r/min)	26.7 (1 600)
SAE J1995 gross	Nm	680
ISO 9249, SAE J1349	Nm	648
Economic working range	r/s (r/min)	18.3-26.7 (1 100-1 600)
Displacement	l	5.7

L90Gz



Engine	D6E LAE3	
Max power at	r/s (r/min)	28.3 (1 700)
SAE J1995 gross	kW / hp	129 / 175
ISO 9249, SAE J1349 net	kW / hp	128 / 174
Max torque at	r/s (r/min)	26.7 (1 600)
SAE J1995 gross	Nm	770
ISO 9249, SAE J1349 net	Nm	736
Economic working range	r/s (r/min)	18.3-26.7 (1 100-1 600)
Displacement	l	5.7

Electrical system

L60Gz, L90Gz

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	2 x 120
Cold cranking capacity, approx	A	690
Alternator rating	W/A	2 280/80
Starter motor output	kW	5.5

Brake system

L60Gz: Service brake: Volvo dual-circuit system with nitrogen charged accumulators. Outboard mounted hydraulically operated, 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.

L90Gz: Service brake: Volvo dual-circuit system with nitrogen charged accumulators. Outboard mounted hydraulically operated, 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.

L60Gz, L90Gz

Number of brake discs per wheel front	1
Accumulators	l 2 x 0.5 + 1

Drivetrain

L60Gz: Contronics 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

L90Gz: Contronics 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

L60Gz

Transmission	Volvo	HTE 110B
1st gear	km/h	7.3
Maximum speed, forward/reverse	2nd gear	14.2
	3rd gear	27.1
	4th gear*	44
Measured with tires	20.5R25	
Front axle/rear axle	AWB 15/AWB 15	
Rear axle oscillation ±	°	± 13
Ground clearance at 13° osc.	mm	455

L90Gz

Transmission	Volvo	HTE 125
1st gear	km/h	6.9
Maximum speed, forward/reverse	2nd gear	13.3
	3rd gear	25.7
	4th gear*	44
Measured with tires	20.5R25	
Front axle/rear axle	AWB 25/AWB 20	
Rear axle oscillation ±	°	± 13
Ground clearance at 13° osc.	mm	455

* limited by parameter

Cab

Instrumentation: All important information is centrally located in the operator's field of vision. Display for Contronics 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).

L60Gz

Emergency exit: Use emergency hammer to break window

Sound level in cab according to ISO 6396/SAE J2105	dB(A)	74
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External sound level according to ISO 6395/SAE J2104	dB(A)	107
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Ventilation	m ³ /min	9
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Heating capacity	kW	14
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Air conditioning (optional)	kW	4.8
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L90Gz

Emergency exit: Use emergency hammer to break window

Sound level in cab according to ISO 6396/SAE J2105	dB(A)	74
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External sound level according to ISO 6395/SAE J2104	dB(A)	108
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Ventilation	m ³ /min	9
-------------	---------------------	---

Heating capacity	kW	14
------------------	----	----

Air conditioning (optional)	kW	4.8
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Lift arm system

Z-bar linkage with high breakout force for strong, powerful digging

L60Gz

Lift cylinders		2
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Cylinder bore	mm	110
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Piston rod diameter	mm	70
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Stroke	mm	680
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Tilt cylinder		1
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Cylinder bore	mm	130
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Piston rod diameter	mm	90
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Stroke	mm	462
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L90Gz

Lift cylinders		2
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Cylinder bore	mm	120
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Piston rod diameter	mm	70
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Stroke	mm	733
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Tilt cylinder		1
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Cylinder bore	mm	140
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Piston rod diameter	mm	90
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Stroke	mm	504
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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.

		L60Gz	L90Gz
Working pressure maximum, pump 2 for steering-, brake-, pilot- and working hydraulic system	MPa	27	31
Flow	l/min	153	171
at	MPa	10	10
engine speed	r/s (r/min)	32 (1 900)	32 (1 900)
Working pressure maximum, pump 3 for brake and cooling fan system	MPa	21	21
Flow	l/min	32	32
at	MPa	10	10
engine speed	r/s (r/min)	32 (1 900)	32 (1 900)
Pilot system, working pressure	MPa	3.5	3.5
Cycle times			
Lift	s	4.2	5.4
Tilt	s	2.9	3.1
Lower, empty	s	1.2	1.3
Total cycle time	s	8.3	9.8

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.

		L60Gz	L90Gz
Steering cylinders		2	2
Cylinder bore	mm	70	80
Rod diameter	mm	45	50
Stroke	mm	386	345
Working pressure	MPa	21	21
Maximum flow	l/min	43	55
Maximum articulation	± °	40	40

Service

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

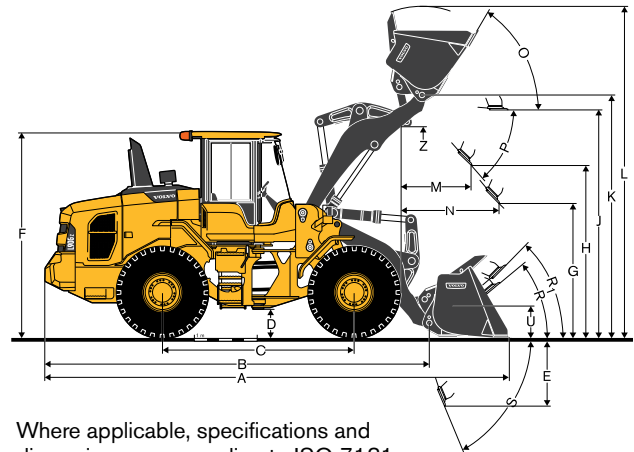
Refill capacity		L60Gz	L90Gz
Fuel Tank	l	219	219
Engine coolant	l	35	33
Hydraulic oil tank	l	90	90
Transmission oil	l	21	21
Engine oil	l	19	19
Axle oil front	l	25	35
Axle oil rear	l	25	27

Specifications.

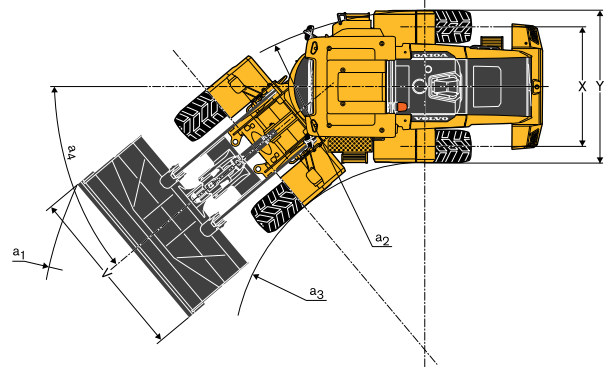
Tires 20.5R25 VJT L3

		L60Gz	L90Gz
		Standard boom	
B	mm	6 220	6 118
C	mm	3 000	3 050
D	mm	455	455
F	mm	3 279	3 279
G	mm	2 134	2 134
J	mm	3 518	3 599
K	mm	3 766	3 860
O	°	57.6	60
P _{max}	°	48.5	48.5
R	°	39.6	38.2
R [*]	°	45.2	42.7
S	°	69.7	67.7
T	mm	94	84
U	mm	446	414
X	mm	1 904	1 904
Y	mm	2 424	2 424
Z	mm	3 257	3 357
a ₂	mm	5 402	5 402
a ₃	mm	2 978	2 978
a ₄	±°	40	40

* Carry position SAE



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



BUCKET SELECTION GUIDE










Type	ISO/SAE Bucket volume	Material density: t/m ³								
		0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0
General purpose	1.8m ³ H STE BOE									
	1.9m ³ H STE BOE									
	2.2m ³ P STE BOE									
	2.1m ³ P T STE									
	2.1m ³ H STE BOE									
	2.0m ³ H T STE									
	2.4m ³ P STE BOE									
	2.3m ³ P T STE									
Light material	3.5m ³ H LM									
Bucket fill 110% 105% 100% 95%										
		P=Pin-on H=Hook-on								

How to read bucket fill factor










Type	ISO/SAE Bucket volume	Material density: t/m ³								
		0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0
General purpose	2.4m ³ P T STE									
	2.5m ³ H T STE									
	2.6m ³ H STE BOE									
	2.6m ³ P T STE									
	2.7m ³ P STE BOE									
	2.8m ³ H STE BOE									
	2.8m ³ P T STE									
	2.9m ³ P STE BOE									
Light material	4.5m ³ H LM									
Bucket fill 110% 105% 100% 95%										
		P=Pin-on H=Hook-on								

How to read bucket fill factor

L60Gz

Tires 20.5R25 VJT L3		GENERAL PURPOSE								LM
										
		1.8 m³ STE H T	1.9 m³ STE H BOE	2.2 m³ STE P BOE	2.1 m³ STE P T	2.1 m³ STE H BOE	2.0 m³ STE H T	2.4 m³ STE P BOE	2.3 m³ STE P T	3.5 m³ LM H
Volume, heaped ISO/SAE	m³	1.8	1.9	2.2	2.1	2.1	2.0	2.4	2.3	3.5
Volume at 110% fill factor	m³	2.0	2.1	2.4	2.3	2.3	2.2	2.6	2.5	3.9
Static tipping load, straight	kg	8 610	8 490	8 900	9 070	8 440	8 560	8 850	9 020	8 030
at 35° turn	kg	7 700	7 580	7 950	8 110	7 530	7 650	7 910	8 070	7 120
at full turn	kg	7 430	7 320	7 680	7 830	7 270	7 380	7 630	7 790	6 850
Breakout force	kN	103.4	98.3	112.9	119.7	94.0	98.6	108.9	115.2	81.8
A	mm	7 690	7 520	7 410	7 460	7 620	7 770	7 450	7 500	7 840
E	mm	1 310	1 160	1 040	1 080	1 230	1 360	1 070	1 120	1 420
H	mm	2 590	2 700	2 760	2 720	2 620	2 520	2 730	2 700	2 470
L	mm	4 940	4 940	5 040	5 040	5 010	5 010	5 090	5 090	5 380
M	mm	1 370	1 280	1 120	1 150	1 280	1 380	1 150	1 180	1 400
N	mm	1 740	1 710	1 590	1 590	1 660	1 700	1 600	1 610	1 680
V	mm	2 500	2 500	2 500	2 500	2 500	2 500	2 500	2 500	2 750
a, clearance circle	mm	11 770	11 690	11 620	11 640	11 720	11 790	11 640	11 660	12 050
Operating weight	kg	12 360	12 390	12 380	12 320	12 420	12 380	12 400	12 340	12 840

L90Gz

Tires 20.5R25 VJT L3		GENERAL PURPOSE								LM
										
		2.4 m³ STE P T	2.5 m³ STE H T	2.6 m³ STE H BOE	2.6 m³ STE P T	2.7 m³ STE P BOE	2.8 m³ STE H BOE	2.8 m³ STE P T	2.9 m³ STE P BOE	4.5 m³ LM H
Volume, heaped ISO/SAE	m³	2.4	2.5	2.6	2.6	2.7	2.8	2.8	2.9	4.5
Volume at 110% fill factor	m³	2.6	2.8	2.9	2.9	3.0	3.1	3.1	3.2	5.0
Static tipping load, straight	kg	12 140	11 430	11 150	11 990	11 730	11 080	11 880	11 620	10 800
at 35° turn	kg	10 780	10 120	9 850	10 630	10 390	9 790	10 530	10 290	9 500
at full turn	kg	10 380	9 740	9 470	10 230	9 990	9 410	10 130	9 890	9 120
Breakout force	kN	168.7	141.4	134.1	159.3	150.1	129.6	152.7	144.3	117.6
A	mm	7 680	7 870	7 730	7 750	7 580	7 780	7 810	7 630	7 960
E	mm	1 270	1 430	1 300	1 330	1 170	1 350	1 380	1 220	1 500
H	mm	2 720	2 590	2 680	2 670	2 780	2 650	2 630	2 750	2 530
L	mm	5 220	5 230	5 230	5 290	5 290	5 280	5 340	5 340	5 670
M	mm	1 270	1 390	1 290	1 320	1 190	1 330	1 360	1 230	1 410
N	mm	1 720	1 760	1 720	1 740	1 680	1 730	1 750	1 700	1 740
V	mm	2 750	2 750	2 750	2 750	2 750	2 750	2 750	2 750	3 000
a, clearance circle	mm	12 040	12 130	12 060	12 080	11 990	12 080	12 110	12 020	12 390
Operating weight	kg	14 500	14 690	14 810	14 580	14 690	14 860	14 620	14 730	15 150

Bucket Selection Chart - L60Gz, L90Gz

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.

Supplemental Operating Data - L60Gz, L90Gz

Tires 20.5R25 VJT L3	Standard boom	
	650/65 R25	
Width over tires	mm	200
Ground clearance	mm	-20
Tipping load, full turn	kg	436
Operating weight	kg	600

Equipment.

STANDARD EQUIPMENT

	L60Gz	L90Gz
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)	•	•
Contronics monitoring system		
Monitoring and logging of machine data	•	•
Contronics 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	•	•
Steering pressure	•	•
Attachment lock open	•	•
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		
17.5-25	•	•
20.5R25	•	•

	L60Gz	L90Gz
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 (2) for:		
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

	L60Gz	L90Gz
Service and maintenance		
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	•	•
Electrical		
Headlights, assym. left	•	•
Rear view camera incl. Monitor, colour	•	•
Reverse alarm	•	•
Warning beacon, rotating	•	•
Working lights front, extra 2 halogen lamps	•	•

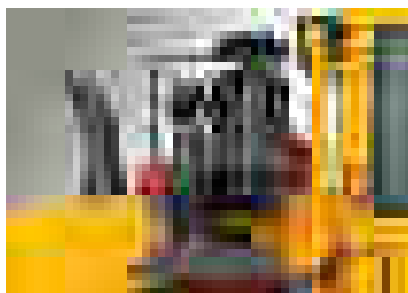
OPTIONAL EQUIPMENT

	L60Gz	L90Gz
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, el.adjusted and heated	•	•
Rear view mirrors, long arm right	•	•
Rear view mirrors, el.adjusted and 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	•	•

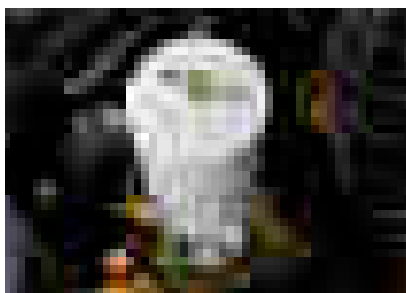
	L60Gz	L90Gz
Protective equipment		
Anti-theft device	•	•
Footsteps, right-hand side	•	•
Cover plates rear frame	•	•
Guards for front head lights	•	•
Guards for tail lights	•	•
Other equipment		
CareTrack, GSM (Global)	•	•
3-year subscription CareTrack, GSM (Global)	•	•
CareTrack, GSM/Satellite	•	•
3-year subscription, CareTrack, GSM/Satellite (Global)	•	•
PIN PLATE for non-Russia	•	•
PIN PLATE for Russia	•	•
Plastic rear fender	•	•
Tires and Rims		
17.5-25	•	•
20.5-25	•	•
20.5R25	•	•
Rims 25-14.00/1.5 for 17.5-25	•	•
Rims 25-17.00/2.0 WP for 20.5R25	•	•
Rims 25-17.00/2.0 for 20.5-25	•	•
Rims 25-17.00/2.0 for 20.5R25	•	•
Attachments		
Buckets:		
General purpose (Straight)	•	•
Rock spade nose	•	•
Light material	•	•
Wear parts:		
Bolt-on edge	•	•
Bolt-on or weld-on bucket teeth	•	•
Segments	•	•
Fork equipment	•	•
Attachment Bracket	•	•

Selection of Volvo optional equipment

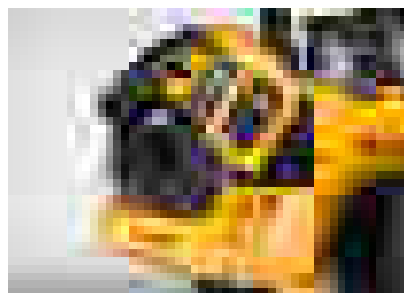
Oil bath pre-cleaner



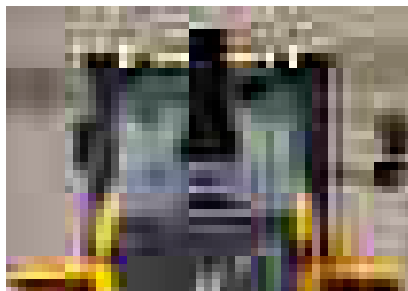
Fuel filter extra



Reversible fan



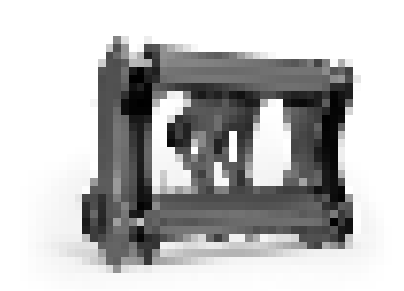
Rear view camera



Auto engine shutdown



Attachment bracket



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Volvo Construction Equipment

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