Volvo has developed and manufactured wheel loaders for half a century. The latest experiences and leading technology have been used in designing the L90E. It is the true all-round machine, giving you countless possibilities to expand your application range. With the Volvo engine and Automatic Power Shift (APS) gearshifting system, you get optimal performance and low fuel consumption in all types of applications. The Torque Parallel linkage, hydraulic attachment bracket and wide range of Volvo genuine attachments further increase the machine’s versatility.

**Gets more done**
You’ll find the L90E a pleasure to operate. In this respect, competing loaders simply can’t compete. It’s powerful, agile and easy to maneuver. Sitting comfortably in an ergonomically designed seat, you have total control over the machine. Engine and hydraulics respond immediately to your commands. Visibility is panoramic and the air in the cab is always fresh. Both operator and machine get more done with a lot less haste.

**A great deal for your investment**
Proven reliability, excellent financing, extremely low fuel consumption and a high trade-in value provide the cornerstones of a safe investment. Add to that outstanding handling and productivity, a market-leading operator environment to protect the person in the machine, quick and simple daily maintenance and modest service requirements.

And what do you get? The most cost efficient loader in its class, delivering unparalleled profitability — both now and in years to come.

With the L90E, everybody is a winner. Quite simply, a great deal for your money.

---

**Specifications L90E**

<table>
<thead>
<tr>
<th>Engine:</th>
<th>Volvo D6D LA E2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max power at 32,0 r/s (1900 r/m)</td>
<td>322 kW (166 hp)</td>
</tr>
<tr>
<td>SAE J1995 gross</td>
<td>ISO 9249, 122 kW (166 hp)</td>
</tr>
<tr>
<td>SAE J1349 net</td>
<td>121 kW (165 hp)</td>
</tr>
<tr>
<td>Breakout force:</td>
<td>115,6 kN</td>
</tr>
<tr>
<td>Static tipping load</td>
<td></td>
</tr>
<tr>
<td>at full turn:</td>
<td>9760 kg*</td>
</tr>
<tr>
<td>Buckets:</td>
<td>2,3 – 7,0 m³</td>
</tr>
<tr>
<td>Log grapple:</td>
<td>1,3 – 2,4 m²</td>
</tr>
<tr>
<td>Operating weight:</td>
<td>15,0 – 17,0 t</td>
</tr>
<tr>
<td>Tires:</td>
<td>20,5 R25</td>
</tr>
<tr>
<td></td>
<td>650/65 R25</td>
</tr>
</tbody>
</table>

* Bucket: 2,5 m³ straight edge with teeth. Tires: 20,5 R25 L2. Standard boom.
Volvo engine delivers rapid response for faster work cycles

L90E is equipped with Volvo’s 6-liter engine, correctly matched to the Volvo transmission, axles and hydraulic system for unbeatable productivity and economy. The electronically controlled engine transmits high torque at low engine speeds for faster work cycles and fuel efficient operation.

Responds to your commands

The Volvo fully automatic countershaft transmission provides smooth and effective gear shifting. All the operator has to do is select forward or reverse and APS automatically selects the right gear according to both engine rpm and ground speed. Volvo’s in-house engineered axles and drivetrain are well matched and designed for top dependability. And Volvo’s oil circulation cooled wet disc brakes provide smooth, effective braking — and, of course, a long service life.

Torque Parallel linkage — a breakthrough in the industry

The reliable TP linkage, Volvo’s patented lift-arm system, delivers high and even breakout torque throughout the entire lifting range. The system is exceedingly user-friendly. The operator can easily handle heavy materials and maintain full control in all positions. In addition, TP linkage provides excellent parallel movement, making it possible for the L90E to perform well in applications where other manufacturers need two different machine types.

Hydraulics that make sense

The Volvo L90E features an intelligent load sensing system for both the main and steering hydraulics. Two variable piston pumps provide the exact flow and pressure required at any given moment, distributing power when and where it’s needed. In addition to rapid response, this system facilitates smoother operation, lower fuel consumption, and precise control, even at low rpm.

Load more tons per hour with the Volvo L90E. Its powerful engine and the Automatic Power Shift (APS) gear shifting system provide immediate response even in the toughest conditions. And Volvo axles are designed to ensure that the rimpull is there when needed. Torque Parallel linkage (TP linkage), load sensing hydraulics, smooth steering and stable operation help make the L90E a precision performer.

Engine

• Volvo D6D, a turbocharged, air-to-air intercooled low emission engine with electronically controlled fuel injection delivers high torque even at low rpm.
• The electronically controlled hydrostatic fan is only activated when necessary, thus saving fuel.

Transmission

• With Volvo’s 3rd generation of APS, the operator can select between four different operating modes, including the new AUTO function, which adaptively chooses the most convenient shifting program for the job at hand, equally weighing the operator’s driving habits together with the operating cycle.
• The 3rd generation APS now has fully automatic shifting 1-4, meaning all the operator has to do is choose forward or reverse.

Axles/Brakes

• The Volvo axles are fully integrated with the drivetrain, delivering superior rimpull.
• Oil circulation cooled wet disc brakes ensure effective braking and a long service life.
• An electronic brake test in Contronic gives you instant access to the status of the brakes.
• A brake wear indicator on each wheel allows you to easily check the brake pad wear.

Steering

• Load-sensing steering only uses power when it’s needed, thereby saving fuel.
• E-series loaders feature an accumulator system, providing stable, smooth steering and greater safety.

Frame

• Rugged frame design for secure mounting of components increases the service life of the machine.
• Volvo’s frame joint bearing design is a well-proven concept that’s easy to maintain and renowned for its long service life.
TP linkage
- Unique patented lift-arm system, which provides two solutions in one: excellent breakout torque and parallel action throughout the entire lifting range.

Load-sensing hydraulics
- The load-sensing hydraulic system ensures that hydraulic oil is pumped around the system only when and where it's needed. This means greater efficiency and lower fuel consumption.

Pilot-operated hydraulics allow precise control of the attachments, making life easier and safer for the operator.
A clean and comfortable workplace
The right cab climate does wonders for efficiency, keeping operators sharp during long shifts. In fact, all incoming air is filtered in two stages, making this one of the cleanest cabs on the market. Even the recirculated air is filtered. Furthermore, Volvo’s state-of-the-art air-conditioning* provides a pleasant temperature year-round, regardless of outdoor conditions. So even after a long work shift, the air in the cab is still fresh and the operator’s mind is still clear.

Comfort and productivity go hand-in-hand
There is a range of comfortable seats, all of them with multiple adjustment functions for optimal individual comfort. All instruments are visible at a glance, and all important information is right in front of the operator. The forward, reverse and kick-down functions are situated both on the lever on the left-hand side of the steering wheel and on the hydraulic console to the right. And thanks to Comfort Drive Control (CDC)*, you can steer, change directions and kickdown to first gear with easy-to-use controls integrated into the left-hand armrest — an excellent way to combat fatigue and static muscle strain. Furthermore, to avoid monotonous arm movements, you can shift at any time from lever steering to using the steering wheel.

Contronic keeps an eye on everything
Contronic, the highly reliable control and monitoring system from Volvo, continuously monitors the machine’s operation and performance. The system is an electronic network made up of three computers. Operating at three levels, the system keeps an eye on the machine’s various functions in real-time. If a potential problem should occur, the system generates an immediate warning, making the operator aware of the condition. All operating data is saved and can be used to analyze how the machine performs and also to trace its history since the latest service. The machine’s functions can be updated for optimal adaptation to new and changing operating conditions via the Contronic service display tool. With VCADS Pro, it’s also possible to check and adjust the machine’s functions and performance characteristics.

Low noise levels
Thanks to its ingenious rubber mounting system and heavy-duty insulation, the Care Cab is one of quietest cabs on the market. By reducing tiresome earfuls and annoying vibrations, the operator will stay sharp throughout the shift. In short, it’s a great place to work.

Volvo Care Cab with the Contronic monitoring system reinforces Volvo’s reputation as a leader in operator environments and cab comfort. We never forget the operator inside the machine. A comfortable, operator-friendly and safe environment makes the workday easier and more productive.
A winner for years to come
Your Volvo L90E has to be a winner — both in day-to-day and long-term operations, always operating economically with maximum consideration of the environment. The machinery has to be trusted in all aspects. It must deliver the anticipations of productivity and economy. High quality and easy maintenance are imperative for keeping up the work process. The high performance low emission engine is both good for your business and for the environment.

VOLVO’S COMMITMENT TO NATURE AND MANKIND

Quality, safety, and care for the environment are Volvo’s core values. Indeed, we see our commitment as an integral part of our operation. Few machines have to work in tougher conditions. The ultimate goal is maximized productivity and efficiency for the lowest cost per hour, with minimized environmental impact. For instance, plants and manufacturing processes are certified in accordance with ISO 14001. This is but one example of our tangible commitments and high quality standards. And that’s why Volvo customers get one of the most environmentally considerate and dependable wheel loaders on the market.

More than 95% recyclable
The L90E is almost completely recyclable. We see it as a natural step in our commitment. Components such as the engine, transmission and hydraulics are re-engineered and re-used in our Parts Exchange program. The equipment has to be as trustworthy, service-friendly, productive and as cost-effective as possible. Choose this wheel loader for maximum productivity and minimal impact on operator, machinery and environment. Feel free to feel secure in a Volvo L90E.

Comfortable and quiet operator’s environment
The operator inside deserves a comfortable, reliable and safe machine to work with. A good environment helps to spare operator, equipment and nature for years to come. The Volvo L90E is a super competitive wheel loader that puts the operator right in the middle, literally speaking. Tedious vibrations and noise have been heavily reduced. If the operator feels comfortable and secure, it’s easier to stay attentive.

Quality
• The air is vented from all major components with easy to replace breather filters, used to prevent dirty air from entering the transmission, axles, fuel tank, and hydraulic tank.
• All electrical wires are routed through sturdy conduits, protected from water, dust, and abrasion with rubberized connectors and terminal caps.
• The L90E is designed from the beginning for easy service and maintenance. Easy access to all components lays the foundation for shorter service and maintenance time and longer life.

Safety
• A dual-circuit service brake system that fulfills all requirements according to ISO 3450, electronic brake test in Contronic and easy to check brake wear indicators are all ways to ensure safe and effective braking.
• Volvo Care Cab is tested and approved according to ROPS ISO 3471 and FOPS ISO 3449 standards.
• Optimized panoramic visibility gives effective control over the entire work area.
• The L90E has steps and platforms that are equipped with anti-slip surfaces and well positioned hand rails.

Environment
• The low rpm, high performance D6D engine meets all current emission requirements according to stage 2 legislation in Europe and the US.
• The L90E is manufactured in environmentally certified factories according to ISO 14001.
• The L90E is more than 95% recyclable according to material weight.
• Low external and internal sound levels.
### Engine
6 liter, 6-cylinder straight turbocharged diesel engine with electronically controlled unit pumps and conventional injectors. The engine has dry 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. Cooling system: Air-to-air intercooler and hydrostatic, electronically controlled fan.

- **Max power at** 320 r/s (1900 r/min)
- **SAE J1995 gross** 122 kW (166 hp)
- **ISO 9249, SAE J1349** 121 kW (165 hp)
- **Max torque at** 23.3 r/s (1400 r/min)
- **SAE J1995 gross** 739 Nm
- **ISO 9249, SAE J1349** 732 Nm
- **Economic working range** 1100–1600 r/min
- **Displacement** 5.7 l

### Drivetrain
- **Transmission converter:** single-stage.
- **Transmission:** Volvo countershaft transmission with single lever control. Fast and smooth shifting of gears between forward and reverse with Pulse Width Modulation (PWM) valve.
- **Gearshifting system:** Volvo Automatic Power Shift (APS) with fully automatic shifting 1-4 and mode selector with 4 different gearshifting programs, including AUTO. Axles: Volvo fully floating axle shafts with planetary hub reductions and cast steel axle housings. Fixed front axle and oscillating rear axle. 100% differential lock on the front axle.

### 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 disengagement of the transmission when braking using Contronic. Parking brake: Fully sealed, wet multi-disc brake built into the transmission. Applied by spring force and electro-hydraulically released with a switch on the instrument panel. Secondary brake: Dual brake circuits with rechargeable accumulators. Either one circuit or the parking brake fulfills all safety requirements. Standard: The brake system complies with the requirements of ISO 3450.

### Electrical system
- **Central warning system:** Central warning light for the following functions, (buzzer with gear engaged): Engine oil pressure, charge-air temperature, fuel temperature, transmission oil pressure, brake pressure, parking brake applied, hydraulic oil level, steering pressure, low coolant level, coolant temperature, transmission oil temperature, hydraulic oil temperature, overspeeding in engaged gear, brake charging, axle oil temperature.
- **Voltage** 24 V
- **Battery** 2x12 V
- **Battery capacity** 2 x 110 Ah
- **Cold cranking capacity, approx.** 690 A
- **Reserve capacity, approx.** 206 min
- **Alternator rating** 1540 W/55 A
- **Starter motor output** 5.4 kW (7.3 hp)

### Number of brake discs per wheel
- **Front/rear** 1/1

### Accumulators
- **Front/rear** 2 x 0.5 l
- **Accumulators for parking brake** 1 x 1.0 l

### Engine
**Engine Type:**
- **Volvo D6D LA E2**

### Transmission
- **Volvo HTE 202**

### Torque Multiplication
- **2.45:1**

### Maximum Speed
- **Forward/Reverse**
  - 1st: 6.8 km/h
  - 2nd: 12.7 km/h
  - 3rd: 25.6 km/h
  - 4th: 37.1 km/h

### Measured with Tires
- **20.5 R25 L2**

### Front Axle/Rear Axle
- **Volvo/AWB 25/20**

### Rear Axle Oscillation
- ±13°

### Ground Clearance
- **470 mm**
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.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder bore</td>
<td>80 mm</td>
</tr>
<tr>
<td>Piston rod diameter</td>
<td>50 mm</td>
</tr>
<tr>
<td>Stroke</td>
<td>345 mm</td>
</tr>
<tr>
<td>Maximum flow</td>
<td>200 l/min</td>
</tr>
<tr>
<td>Maximum articulation</td>
<td>±40°</td>
</tr>
</tbody>
</table>

Cab
Instrumentation: All important information is centrally located in the operator's field of view on the Contronic monitoring system's display unit. Heater and defroster: Heater coil with filtered fresh air and fan with four speeds. Defroster vents for all window areas. Operator seat: Ergonomic seat with adjustable suspension and retractable seatbelt. The seat is mounted on a bracket, which is mounted on the rear cab wall. The forces from the retractable seat belt are absorbed by the seat rail. Standard: The cab structure is tested and approved according to ROPS (ISO 3471) and FOPS (ISO 3449). The cab meets all requirements according to ISO 6055 (Operator Overhead Protection - Industrial Trucks) and SAE J386 (Operator Restraint System).

Emergency exits 1
Sound level in cab according to ISO 6396 LpA 70 dB (A)
External sound level according to ISO 6395 (Directive 2000/14/EC) LwA 105 dB (A)
Ventilation 9 m³/min
Heating capacity 11 kW
Air conditioning (optional) 8 kW

Hydraulic system
System supply: One load-sensing axial piston pump with variable displacement. The steering system 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 four positions including lift, hold, lower and float. Inductive/magnetic automatic boom kick-out 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 including 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 20 micron (absolute) filter cartridge.

Lift arm system
Torque Parallel linkage (TP linkage) with high breakout torque and parallel action throughout the entire lifting range.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lift cylinders</td>
<td>2</td>
</tr>
<tr>
<td>Cylinder bore</td>
<td>120 mm</td>
</tr>
<tr>
<td>Piston rod diameter</td>
<td>70 mm</td>
</tr>
<tr>
<td>Stroke</td>
<td>733 mm</td>
</tr>
<tr>
<td>Tilt cylinder</td>
<td>1</td>
</tr>
<tr>
<td>Cylinder bore</td>
<td>180 mm</td>
</tr>
<tr>
<td>Piston rod diameter</td>
<td>90 mm</td>
</tr>
<tr>
<td>Stroke</td>
<td>430 mm</td>
</tr>
</tbody>
</table>

Service
Service accessibility: Large, easy-to-open service doors with gas struts. Swing-out radiator grille and cooling fan. Possibility to log and analyze data to facilitate troubleshooting.

Refill capacities
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel tank</td>
<td>205 l</td>
</tr>
<tr>
<td>Engine coolant</td>
<td>36 l</td>
</tr>
<tr>
<td>Hydraulic oil tank</td>
<td>115 l</td>
</tr>
<tr>
<td>Transmission oil</td>
<td>40 l</td>
</tr>
<tr>
<td>Engine oil</td>
<td>20 l</td>
</tr>
<tr>
<td>Axles front/rear</td>
<td>30/25 l</td>
</tr>
</tbody>
</table>

Working pressure, maximum 260 MPa
Flow 175 l/min at 10 MPa and engine speed 32 r/s (1900 r/min)
Pilot system
Working pressure 3,5 MPa
Cycle times
Lift* 5,4 s
Tilt* 2,1 s
Lower, empty 2,5 s
Total cycle time 10,0 s
* with load as per ISO 14397 and SAE J818
Tires: 20.5 R25 L2

<table>
<thead>
<tr>
<th></th>
<th>Standard boom</th>
<th>Long boom</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>6020 mm</td>
<td>6450 mm</td>
</tr>
<tr>
<td>C</td>
<td>3000 mm</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>400 mm</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>3260 mm</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>2130 mm</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>3650 mm</td>
<td>4080 mm</td>
</tr>
<tr>
<td>K</td>
<td>3960 mm</td>
<td>4380 mm</td>
</tr>
<tr>
<td>O</td>
<td>56 °</td>
<td>57 °</td>
</tr>
<tr>
<td>P&lt;sup&gt;*&lt;/sup&gt;</td>
<td>45 °</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>43 °</td>
<td>46 °</td>
</tr>
<tr>
<td>R&lt;sup&gt;+&lt;/sup&gt;</td>
<td>47 °</td>
<td>52 °</td>
</tr>
<tr>
<td>S</td>
<td>67 °</td>
<td>66 °</td>
</tr>
<tr>
<td>T</td>
<td>112 mm</td>
<td>117 mm</td>
</tr>
<tr>
<td>U</td>
<td>430 mm</td>
<td>520 mm</td>
</tr>
<tr>
<td>X</td>
<td>1950 mm</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>2490 mm</td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td>3260 mm</td>
<td>3620 mm</td>
</tr>
<tr>
<td>a&lt;sub&gt;2&lt;/sub&gt;</td>
<td>5370 mm</td>
<td></td>
</tr>
<tr>
<td>a&lt;sub&gt;3&lt;/sub&gt;</td>
<td>2880 mm</td>
<td></td>
</tr>
<tr>
<td>a&lt;sub&gt;4&lt;/sub&gt;</td>
<td>±40 °</td>
<td></td>
</tr>
</tbody>
</table>

* Carry position SAE

Tires: 650/65 R25

**Operating weight (incl. logging cw 680 kg): 16 740 kg**

**Operating load: 4600 kg**

**Supplemental Operating Data**

<table>
<thead>
<tr>
<th>Tires 20.5 R25 L2</th>
<th>Standard boom</th>
<th>Long boom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width over tires  mm</td>
<td>+200</td>
<td>+200</td>
</tr>
<tr>
<td>Ground clearance  mm</td>
<td>+10</td>
<td>0</td>
</tr>
<tr>
<td>Tipping load, full turn kg</td>
<td>+320</td>
<td>+360</td>
</tr>
<tr>
<td>Operating weight kg</td>
<td>+550</td>
<td>+690</td>
</tr>
</tbody>
</table>

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

The chosen bucket is determined by the density of the material and the expected bucket fill factor. The actual bucket volume is often larger than the rated capacity, due to the features of the TP linkage, including an open bucket design, good rollback angles in all positions and good bucket filling performance. The example represents a standard boom configuration. Example: Sand and gravel. Fill factor ~ 105%. Density 1.65 t/m³. Result: The 2.7 m³ bucket carries 2.8 m³. For optimal stability always consult the bucket selection chart.

#### Material Bucket fill, %

<table>
<thead>
<tr>
<th>Material</th>
<th>Bucket fill, %</th>
<th>Material density, t/m³</th>
<th>ISO/SAE bucket volume, m³</th>
<th>Actual volume, m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth/Clay</td>
<td>~ 110</td>
<td>- 1.80</td>
<td>2.5</td>
<td>- 2.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1.70</td>
<td>2.6</td>
<td>- 2.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1.65</td>
<td>2.7</td>
<td>- 3.0</td>
</tr>
<tr>
<td>Sand/Gravel</td>
<td>~ 105</td>
<td>- 1.80</td>
<td>2.5</td>
<td>- 2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1.70</td>
<td>2.6</td>
<td>- 2.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1.65</td>
<td>2.7</td>
<td>- 2.8</td>
</tr>
<tr>
<td>Aggregate</td>
<td>~ 100</td>
<td>- 1.80</td>
<td>2.5</td>
<td>- 2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1.70</td>
<td>2.6</td>
<td>- 2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1.65</td>
<td>2.7</td>
<td>- 2.7</td>
</tr>
<tr>
<td>Rock</td>
<td>≤ 100</td>
<td>- 1.80</td>
<td>2.2</td>
<td>- 2.2</td>
</tr>
</tbody>
</table>

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

**Engine**
- Three stage air cleaner with ejector and inner filters
- Indicator glass for coolant level
- Preheating of induction air
- Muffler, spark arresting
- Fuel filter extra large with water trap
- Oil trap

**Electrical system**
- 24 V, pre-wired for optional accessories
- Alternator, 24 V/55 A
- Battery disconnect switch
- Fuel gauge
- Temperature gauge, transmission oil
- Temperature gauge, engine coolant
- Hour meter
- Electric horn
- Instrument panel with symbols
- Lighting:
  - Two 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)
- Instrument lighting

**Conronic monitoring system**
- ECU with log and analysis system
- Conronic display
- Fuel consumption
- Ambient temperature
- Engine ‘Shutdown to idle’ in case of malfunction indication:
  - High engine coolant temperature
  - Low engine oil pressure
  - High transmission oil temperature
- Start interlock when gear is engaged
- Brake test
- Warning function for engine oil pressure
- Warning and indicator lights:
  - Battery charging
  - Oil pressure engine

**OPTIONAL EQUIPMENT**

(Standard on certain markets)

**Service and maintenance**
- Tool kit, lockable
- Tool kit
- Wheel nut wrench kit
- Automatic lubricator, system
- Automatic lubrication system, stainless steel
- Automatic lubrication system incl. long boom
- Automatic lubrication system for attachment bracket, cast
- Automatic lubrication system, stainless steel
- Automatic lubrication system incl. long boom
- Automatic lubrication system
- Wheel nut wrench kit
- Tool box, lockable

**Air conditioning**
- Fan air intake protection
- Reversible cooling fan

**Engine equipment**
- Engine block heater 290 V
- Engine auto shutdown
- Air pre-cleaner, oil-bath type
- Air pre-cleaner, oil-bath type
- Air pre-cleaner, turbo type
- Air pre-cleaner, Sy-Klone type
- Hand throttle control
- Fuel filter restrainer
- Coolant filter
- Exhaust heat insulation
- Radiator, hyd. cooler and fuel cooler, corrosion-protected
- Fan air intake protection
- Reversible cooling fan

**Electrical system**
- Alternator, 80 A with air filter
- Work light, attachments
- Work lights front, extra
- Work lights rear, extra
- Work lights front, on cab, dual
- Work lights front, high intensity
- License plate holder, lighting
- Asymmetrical lights for left-hand traffic
- Back-up alarm
- Back-up lights, automatic
- Rotating beacon, collapsible
- Battery disconnect switch, additional in cab
- Side running lights
- Anti-theft device

**Cab**
- Installation kit for radio, 11 A, 12 V, left/right in cab
- Radio with tape recorder
- Radio with CD-player
- Sun blinds, front and rear windows
- Sun blinds, side windows
- Sliding window, right
- Sliding window, door
- Retractable lap-type belt, longer and wider than standard
- Air conditioning
  - Oil pressure, transmission
  - Brake pressure
  - Parking brake
  - Hydraulic oil level
  - Primary steering
  - Secondary steering
  - High beams
  - Turn signals
  - Work lights
  - Rotating beacon
  - Preheating coil
  - Differential lock
  - Coolant temperature
  - Transmission oil temperature
  - Low fuel level
  - Brake system pressure
  - Level warnings:
    - Coolant level
    - Hydraulic oil level
    - Washer fluid level

**Drivetrain**
- Automatic Power Shift with operator-controlled disengagement function for transmission cut-out when braking and mode selector with AUTO function
- Transmission modulated with single lever control
- Forward and reverse switch by lever console
- Differential lock: 100% hydraulic diff lock
- Rear: conventional

**Brake system**
- Wet oil circulation-cooled disc brakes on all four wheels
- Dual brake circuits
- Dual service brake pedals
- Secondary brake system
- Parking brake, el-hydraulic
- Brake wear indicator

**Cab**
- Cab
- Single key kit door/start
- Cab
- Brake wear indicator
- Parking brake, el-hydraulic
- Dual brake circuits
- Rear: conventional
- Transmission modulated with single lever control
- Differential lock: 100% hydraulic diff lock
- Rear: conventional

**Stainless steel brake lines**
- Parking brake alarm, audible
- Stainless steel brake lines

**Hydraulic system**
- Hydraulic system
  - Single lever control
  - Single lever control for 3rd hydraulic function
  - 3rd hydraulic function
  - 3rd hydraulic function for long boom
  - 3rd-4th hydraulic function
  - 3rd-4th hydraulic function for long boom
  - Detent for 3rd hydraulic function
  - Boom Suspension System (BSS)
  - Single acting lifting function
  - Biodegradable hydraulic fluid
  - Fire resistant hydraulic fluid
  - Hydraulic fluid for hot climate
  - Attachment bracket, cast
  - Attachment bracket, side-lifting adapter
  - Mounting kit for side-lifting adapter
  - Separate attachment locking, standard boom
  - Separate attachment locking, long boom
  - Arctic kit, attachment locking hoses
  - Arctic kit, pilot hoses and brake accum. incl. hydraulic oil

**Cigarette lighter**
- Lockable door
- Cab heating with filter, fresh air inlet and defroster
- Floor mat
- Interior light
- Two interior rear-view mirrors
- Two exterior rear-view mirrors
- Operable window right side
- Tinted safety glass
- Lap-type retractable seatbelt (SAE J388)
- Adjustable hydraulic lever console
- Ergonomically designed operator’s seat with adjustable suspension
- Storage compartment
- Sun visor
- Beverage holder
- Windshield wipers front and rear
- Windshield wipers front and rear
- Interval function for front and rear windshield wipers
- Service platforms with anti-slip surfaces on rear fenders
- Speedometer

**Hydraulic system**
- Main valve, 2-spool
- Pilot valve, 2-spool
- Variable displacement axial piston pumps (2) for:
  - steering system, pilot hydraulics, working hydraulics and brakes
  - fan motor
- Boom lowering system
- Boom kick-out, automatic, adjustable
- Bucket positioner, automatic with position indicator, adjustable hydraulic oil cooler

**External equipment**
- Noise and vibration dampening suspension of cab, engine and transmission
- Lifting eyes
- Tie-down eyes
- Easy-to-open side panels
- Mudguards (for 17.5 R25 and 20.5 R25 tires)
- Frame steering, joint lock
- Vandalism lock protected for batteries and engine compartment
- Tow hitch

**Other equipment**
- Comfort Drive Control, (CDC)
- Secondary steering
- Sign, slow moving vehicle
- Sign 50 km/h
- Noise reduction kit, EU
- Sound decal, EU
- CE-marking

**Tires**
- 17.5 R25, 20.5 R25, 600/65 R25

**Attachments**
- Bucket telescopic arm
- Bolt-on or weld-on bucket teeth
- Cutting edge in three sections, bolt-on, reversible
- Fork equipment
- Material handling arm
- Log grapples
- Snow blade
- Boom
- Sand spreading bucket
- Bale clamp
- Drum rotator
Boom Suspension System (BSS)*
BSS utilizes gas/oil accumulators connected to the lift cylinders to absorb shocks and smooth out rough roads for faster cycle times, less spillage and increased operator comfort.

Automatic Lubrication System*
Our factory fitted Automatic Lubrication System takes care of greasing while the machine is in operation. This means less downtime for scheduled maintenance and more time for productive work.

Comfort Drive Control (CDC)*
CDC significantly reduces repetitive and tiring steering wheel movements. The operator can shift and steer easily with the aid of controls integrated in the left armrest.

3rd and 4th hydraulic functions*
Volvo wheel loaders can be equipped with third and fourth hydraulic functions, which are operated with additional control levers. These functions are necessary when there’s a need to operate a third and fourth hydraulic function at the same time, such as when using a sweeper attachment or a timber grapple with hydraulic heel kick-out.

* Optional equipment

Genuine Volvo attachments
Genuine Volvo attachments and wear parts, including the new Volvo Tooth System, are designed as an integral part of the loader, making the L90E a swift and versatile machine in a wide range of applications.

Long boom*
A long boom gives the extra dump height and reach necessary for loading high trucks or feeders.

Long boom
Volvo Construction Equipment is different. It's designed, built and supported in a different way. That difference comes from an engineering heritage of over 170 years. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo. And we're proud of what makes Volvo different – More care. Built in.