“Get the job done” has defined Volvo ever since inventing and refining the wheel loader concept more than half a century ago. The F-series’ quiet, fast, and safe all-rounder set a whole new standard when it comes to operating joy. A lot of that is due to the new quiet, environment-friendly engine, smooth shifting Automatic Power Shift (APS) transmission, and roomier comfort cab with optimized visibility.

**Versatile high-performers**

It is easier to do a good job in a Volvo. The new Care Cab is the safest, most comfortable, and cleanest operator’s station we’ve built. From here, the operator has precision-control of the attachments with the TP-Linkage and load-sensing hydraulics. The in-house manufactured engine, transmission, and steering always give instant response. Volvo L60F, L70F, and L90F have a built-in smoothness that gives faster work cycles and makes operating with different attachments a whole new experience.

**Reliable and totally economical**

When you buy a Volvo, you get a highly reliable and productive wheel loader. Volvo’s wheel loaders are also characterized by low fuel consumption, quick and easy maintenance, and high resale value. All in all, this gives world class total economy. You have a reliable partner in our global dealer and service network. We are ready to assist you with knowledge, genuine spare parts, and well-trained service personnel.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>L60F</th>
<th>L70F</th>
<th>L90F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine:</td>
<td>Volvo D6E LCE3</td>
<td>Volvo D6E LBE3</td>
<td>Volvo D6E LAE3</td>
</tr>
<tr>
<td>Max power at 28.3 r/s (1700 rpm)</td>
<td>115 kW (154 hp)</td>
<td>126 kW (169 hp)</td>
<td>129 kW (173 hp)</td>
</tr>
<tr>
<td>SAE J1995 gross:</td>
<td>114 kW (153 hp)</td>
<td>125 kW (168 hp)</td>
<td>128 kW (172 hp)</td>
</tr>
<tr>
<td>ISO 9249, SAE J1349 net:</td>
<td>114 kW (153 hp)</td>
<td>125 kW (168 hp)</td>
<td>128 kW (172 hp)</td>
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<tr>
<td>Breakout force:</td>
<td>82.9 kN (18,637 lbf)</td>
<td>95.4 kN (21,447 lbf)</td>
<td>118.5 kN (26,640 lbf)</td>
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<tr>
<td>Static tipping load at full turn:</td>
<td>7380 kg* (16,270 lb)</td>
<td>8420 kg** (18,563 lb)</td>
<td>9568 kg*** (21,094 lb)</td>
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<tr>
<td>Buckets:</td>
<td>1.7–5.0 m³ (2.2–6.5 yd³)</td>
<td>2.0–6.4 m³ (2.6–8.4 yd³)</td>
<td>2.3–7.0 m³ (3.0–9.2 yd³)</td>
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<tr>
<td>Log grapples:</td>
<td>0.7–1.3 m² (7.5–14.0 ft²)</td>
<td>0.9–1.5 m² (9.7–16.1 ft²)</td>
<td>1.3–2.4 m² (14.0–25.8 ft²)</td>
</tr>
<tr>
<td>Operating weight:</td>
<td>11.0–13.3 t</td>
<td>12.7–15.0 t</td>
<td>15.0–17.0 t</td>
</tr>
<tr>
<td>Tires:</td>
<td>(24,250-29,320 lb)</td>
<td>(28,000-33,070 lb)</td>
<td>(33,070-37,480 lb)</td>
</tr>
</tbody>
</table>

* Bucket: 2.1 m³ (2.8 yd³) (pin-on) with bolt-on edges. Tires: Tire:20.5 R25 L2, Std. boom
** Bucket: 2.3 m³ (3.0 yd³) (pin-on) with bolt-on edges. Tires: Tire:20.5 R25 L2, Std. boom
*** Bucket: 2.5 m³ (3.3 yd³) (pin-on) with bolt-on edges. Tires: Tire:20.5 R25 L2, Std. boom
Many have tried to copy Volvo’s successful all-rounder concept. Nobody has been able to do it. Usability is based on fast and easily operated wheel loaders. Add the TP-Linkage’s high breakout torque and parallel movement throughout the entire lifting range, the smart hydraulic attachment bracket, and the market’s widest range of genuine attachments, and you get a machine for all applications.

**Highly maneuverable L60F**

Even though Volvo L60F has grown, it is still highly maneuverable and easy to operate in tight quarters. The all-round L60F has the power needed to handle various and fast-changing applications on construction sites, in industries, for municipalities, in gravel pits, and agriculture.

**Powerful L90F**

The powerful Volvo L90F is the wheel loader for gravel pits, harbors, goods terminals, industries, and logging yards. Volvo’s TP-Linkage, attachment bracket, and genuine Volvo attachments make the flexible L90F even more of an all-rounder. So flexible that one machine is enough, where others need two.

**All-rounder L70F**

New and bigger, the Volvo L70F is built for tough construction work, moving earth and loading gravel. Excellent maneuverability makes this all-rounder perfect for different jobs in industries, recycling terminals, and saw mills.
ATTACH A NEW BUSINESS IDEA

You don’t have to buy a new machine every time you want to do new business. With genuine Volvo attachments and a hydraulic attachment bracket you can change business just like that on the move. The Volvo’s value as an all-rounder grows with the number of different applications it can handle. And the number of genuine attachments – attachments that do your wheel loader full justice – increases steadily.

Ideal partners for every job
All genuine Volvo attachments are of the same high quality as the rest of the machine. Every attachment is designed as an integrated part of the wheel loader. Their functions and properties are precisely matched to parameters such as link arm geometry and breakout, rim-pull, and lifting force. In short, they are made for each other and ideal partners for every job.

The right attachments for your work site
Volvo’s complete attachment range makes it possible to tailor the wheel loader exactly for the applications and conditions on your work site. Genuine Volvo attachments offer buckets for all types of jobs and materials, log grapples, material handling arms, and a long line of different fork attachments. The perfect connection between bracket and attachment is a guarantee for high safety on your work site.
Volvo’s in-house manufactured drivetrain, hydraulics, and TP-Linkage are tailored to work together in perfect harmony. The power comes from the latest generation of quiet, environmentally-friendly engines. Volvo’s load-sensing hydraulic system contributes to the low fuel consumption by always delivering the right power to the right function, without unnecessary pumping of the oil.

**Quiet low-emission engine meets new legislation**
The new, environment-friendly engine delivers high torque near idle rpm which gives the Volvo excellent rimpull, low fuel consumption, and minimal emissions. The external sound level meets the requirements according to new EU legislation. Lower sound level in the cab also contributes to higher operator comfort and performance.

**Automatic Power Shift (APS) always selects the right gear**
Volvo Automatic Power Shift is the starting point for fast and efficient work cycles. The system is dependent on machine speed and engine rpm. All the operator has to do is select forward or reverse. APS adapts to the operator’s operating style and saves fuel by always selecting the right gear.

**In-house developed axles**
Volvo’s axles are an integrated part of the drivetrain – an effective power pack, dimensioned to provide top reliability.

**Smooth and effective braking**
Volvo L60F, L70F, and L90F are equipped with Volvo’s wet, circulation-cooled disc brakes. They have long operating life and give smooth and effective braking action.

**Fuel-efficient Volvo V-ACT D6E engines**
Turbocharged low-emission, high-performance engine with air-to-air intercooler
Electronic engine control with overspeed protection for optimal performance in all operating situations
Hydrostatically-driven, electronically-controlled cooling fan works only when needed, which saves fuel

**Smooth shifting electric-hydraulic HTE transmission**
Fuel-saving APS selects the right gear for the job, current operating conditions
Smooth shifts and high comfort with Pulse Width Modulation (PWM) gear selector valve
Four gears forward, four reverse
The transmission features automatic downshifting to 1st gear when needed

**Axles**
100% lockable differential lock on the front axle for best traction in difficult conditions
Lubricated-for-life rear axle bearings promote higher uptime and longer service life

**Wet disc brakes for greater safety**
All-hydraulic dual circuit system for greater safety
Contronic performs electronic brake test
Simple checking of brake pads with brake wear indicator on all wheels
YOU ARE LOOKING AT THE HEIGHT OF PRECISION

Precision-control, optimized visibility of the attachment throughout the entire lifting range, and fingertip operation of the load-sensing hydraulics give the operator complete control of the most demanding tasks. This means higher safety and faster work cycles in all types of jobs.

Complete control all the way
Volvo’s patented lift-arm system TP-Linkage combines high breakout torque and excellent parallel movement throughout the entire lifting range. That’s exactly what an all-rounder needs. The system is operator-friendly and gives the operator good control of heavy loads all the way up when loading.

Easy precision steering
The precision steering is easily operated and exact even at low engine rpm. The hydrostatic, load-sensing steering system only works when you turn the steering wheel, which means fuel savings.

Smooth and comfortable ride
The long wheel base enables Volvo’s wheel loaders to ride smoothly and comfortably on rough ground. The Boom Suspension System (BSS) increases productivity by up to 20 percent, and is available as an option.

Load-sensing steering
Saves fuel by only using power when you steer
Provides increased comfort and operating safety

TP-Linkage combines power and precision
Volvo’s patented lift-arm system
Combines the best of parallel and Z-bar linkages

Load-sensing hydraulic system
Saves fuel by no unnecessary pumping of hydraulic oil
Fingertip operation and control of the attachment
3rd* and 4th* hydraulic function enables use of advanced attachments

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

* Optional equipment
The new generation’s Volvo Care Cab is quieter, cleaner, and roomier. Visibility has been improved and the cab is safer, both inside and outside. Comfort has been improved with Automatic Heat Control and better vibration damping. The result is the best Care Cab we’ve ever built. Simply put – the industry’s most effective workplace.

**Volvo protects against dust**

The right cab climate helps the operator stay sharp right to the end of the shift. Volvo Care Cab has a unique filter system which gives one of the market’s cleanest cab environments. All cab air is filtered through double filters. On very dusty work sites, the operator can choose endless variable recirculation of up to 90 percent temperature-controlled air, and to only let in 10 percent outdoor air.

**Care Cab spares backs and shoulders**

Volvo Care Cab is an ergonomically-designed workplace. All instruments are easy to read and all important information is grouped in front of the operator. Several seats and adjustment features make it easy to find a comfortable operating position. The forward-reverse function is available both in the lever to the left of the steering wheel and in the hydraulic console for the right hand. With lever steering* (Comfort Drive Control, or CDC) the operator can handle steering, shifting forward-reverse, and kick-down with controls in the left armrest to avoid static muscle loads.

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*Optional equipment*
Just like the operator, the turbo diesel engine also needs to breathe clean, cooled air, even in the toughest conditions. Volvo’s care for the operator and machine means that most problems that can be caused by particles are filtered away. Contronic real-time intelligence will find and delete the rest. The Contronic system works in three ways. It warns the operator in time, troubleshoots and stores operating data for the service technician, and helps the machine owner to adapt the wheel loader to new operating conditions.

Contronic handles checking
Service-friendliness is important to your productivity. The more you are going to use the wheel loader, the more important it is to be able to perform daily service fast and easy. That’s why all filters and service points are easily accessed on a Volvo, and all hatches are large and easy to open. Volvo Contronic handles some of the daily checks by fast and easy electronic level checks of oils and fluids. Contronic is an integrated network that continuously monitors the wheel loader’s operation and performance in real-time. The system works at three levels.

Level 1: The system keeps an eye on the machine’s functions in real-time. If something abnormal should occur, Contronic automatically generates a warning and brings the situation to the operator’s attention. A service technician can log in to the system and troubleshoot the problem directly on-site.

Level 2: All operating data is stored in Contronic. Data can be used to analyze how the machine is operated and to see what has happened since the last service. The information is presented in MATRIS analysis program, giving valuable information for troubleshooting and service actions.

Level 3: The wheel loader’s functions and performance can be updated and adapted to changing operating conditions with VCADS Pro analysis and programming tool.

Contronic electronic monitoring system

The system has built-in safety functions that automatically restrict engine torque and power in case of major malfunction to protect engine and transmission and to minimize risk of subsequent damage.

Maintenance and availability
Electronic monitoring of fluid levels simplifies and reduces time for daily inspections also gives increased operating safety. Long lubrication intervals mean more time for productive work. Contronic generates signals for abnormalities and shows diagnosis for actions. Well-designed steps, platforms as well as well-placed handles, for safe and comfortable service. Breather filters give component protection for transmission, axles, fuel tank, and hydraulic oil tank. Volvo’s oil-bath pre-cleaner*, in combination with the standard air filter, gives significantly higher effectiveness in dusty and dirty operating conditions. Easily accessed hatches and service points facilitate service. Pressure check connections and quick-couplings tightly grouped for fast and easy checks.

* Optional equipment
Volvo L60F, L70F, and L90F are a different breed of environmentalists. The on-board power drives them on to new and more tasks. Emissions are low and the wheel loaders are almost completely recyclable. They are part of a natural cycle, and important parts return to operation as factory remanufactured exchange components.

**So fuel-efficient that it runs on exhausts**
With the new generation of turbocharged diesel engines, Volvo has taken another major step in reducing emissions, without impact on engine performance. Volvo Advanced Combustion Technology, V-ACT, makes it possible, with advanced fuel injection and electronic engine control, meaning that every drop of fuel is used. A smart system for internal recirculation of exhausts, I-EGR, reduces the NOx-value by reducing peak combustion temperatures.

**More than 95 percent recyclable**
Volvo’s core values are quality, safety, and environmental care. Today, our wheel loaders are almost completely recyclable. Components such as engine, transmission, and hydraulics are overhauled and re-used in our exchange system.

**Volvo cares about the environment**
- Engine D6E meets all governing emission requirements according to step IIIA in Europe and Tier 3 in the USA
- Volvo’s wheel loaders are manufactured in environmentally certified plants according to ISO 14001
- Load-sensing hydraulic and steering systems contribute to lower fuel consumption
- More than 95 percent recyclable by weight
- Low sound levels, inside and outside

**Volvo means quality**
- Replaceable breather filters shut out dirty air from transmission, axles, fuel tank, and hydraulic tank
- High-quality components that can handle tough conditions and environments
- Volvo’s frame joint with ingenious bearing design, renowned for its long service life
- All electric cabling is well protected from water, dirt, and wear in solidly fastened, heavy-duty conduits with rubberized connectors and terminal caps
- Electrical components, including the fuse box, are well protected inside the cab

**Volvo means safety**
- Dual circuit service brake system meets all requirements for safe and effective brake function according to ISO 3450
- Electronic brake test in Contronic
- Simple checking with wear indicators increases safety
- Automatic parking brake when engine stops means that a parked machine is always braked
- Volvo Care Cab is tested and approved according to ROPS ISO 3471 and FOPS ISO 3449
- Excellent all-round visibility gives effective control of the work site
- Sloping engine hood gives better visibility to the rear
- New design of steps and platforms, with anti-slip protection and well-placed handrails
- Warning decals give clear information in the form of symbols and illustrations
MORE THAN 50 YEARS OF EXPERIENCE BUILT IN

Load-sensing hydraulic system
- Saves fuel by no unnecessary pumping of hydraulic oil
- Pilot-operated fingertip control of the attachment
- 3rd* and 4th* hydraulic functions enable use of advanced attachments

Load-sensing steering
- Saves fuel by only using power when you steer
- Gives increased comfort and operating safety

TP-Linkage combines power and precision
- Volvo’s patented lift-arm system
- Combines the best of parallel and Z-bar linkages

Two machines in one
- TP-Linkage, attachment bracket, and a complete range of attachments means that one Volvo is enough, where others need several machines
- With the hydraulic attachment bracket you can change business on the move
- Tailor the wheel loader exactly for the application

Contronic increases reliability
- Network monitors operation and performance in real-time
- The Contronic system warns the operator in time, making it easier for the service technician to troubleshoot and helps the machine owner to adapt the wheel loader to the application
- Fast and easy electronic level checks of oils and fluids
- Display shows continuous operating data, warning texts, and error messages
- Monitors fuel consumption, cycle times, and service intervals
- Available in 24 languages

Easy maintenance means higher availability
- Easily accessed hatches and service points
- Tightly grouped pressure check connections and quick-couplings
- Long lubrication intervals give more time for productive work
- Well-designed steps, handrails, and handles for safe service

Lubricated-for-life rear axle bearings
- Promote higher uptime and longer service life
Care Cab is a more effective workplace
• Comfortable cab climate with the market’s best filter system
• Adjustable steering wheel, seat, armrest, and lever carrier
• Viscous damping of cab mounting eliminates vibrations
• Improved all-round visibility increases safety
• Laminated front windshield protects the operator
• Practical sliding window
• Halogen work lights front and rear give good visibility

Fuel-efficient, low-emissions, high-performance engines
• Turbocharged Volvo V-ACT D6E engines
• Volvo’s Tier 3/Stage IIIA-approved
• Engine control with overspeed protection for optimal performance in all operating conditions
• Hydrostatically-driven, electronically-controlled cooling fan works only when needed, which saves fuel

Smooth shifting Volvo Automatic Power Shift (APS)
• Fuel-saving APS selects the right gear for the job, current operating conditions, and the operator’s operating style
• Smooth shifts and high comfort with PWM gear selector valve
• Four gears forward, four reverse
• Automatic downshifting to 1st gear when needed

In-house manufactured transmission and axles
• Volvo’s in-house manufactured drivetrain, hydraulics, and TP-Linkage are tailored to work together in perfect harmony
• 100 percent lockable differential lock on the front axle for best traction in difficult conditions.

Smooth and effective braking
• Circulation-cooled wet disc brakes with long service life
• All-hydraulic dual circuit system increases safety
• Contronic performs electronic brake test
• Simple checking of brake pads with brake wear indicator on all wheels

Volvo Frames
• High-quality steel provides stress resistance and operational stability
• Low vibrations and incredibly quiet sound levels
• Well-organized articulation joint provides visual appeal and reliability
• Upper and lower joints are designed to resist large forces

*Optional equipment
When you invest in a Volvo wheel loader, you get a construction machine of the very highest quality. But of course, even the best machines need service and maintenance to be as productive tomorrow as they are today. Customer Support will help you to keep an eye on your owning and operating costs.

We care about your operation – anywhere, anytime
Volvo Construction Equipment and Volvo Wheel Loaders center around a professional Customer Support organization, providing parts supply, aftersales services and training. All this gives customer benefits through controlled owning and operating costs. When you invest in a Volvo wheel loader, the availability of good service and access to genuine Volvo parts are just as important as the price. After all, it is the total cost during the machine’s entire life that’s interesting. With all the products and resources we have at our disposal, we can offer you the best support. Anywhere, anytime.

Four levels of support, one level of care
The best way to get the most out of your Volvo wheel loader is to invest in a Volvo Customer Support Agreement. There are four levels of agreements designed to give you total peace of mind; white, blue, silver, and – of course – gold, which includes all service, maintenance, and repairs during the whole contract period at a fixed price. From this completely flexible starting point, we can create an agreement uniquely tailored to the needs of your business and the age of your loaders.

Genuine Volvo parts leave nothing to chance
Each genuine Volvo part is developed to and manufactured together with all other machine components. It’s a complete system where each part works in perfect harmony with other parts. Only by using genuine parts can you be sure that your machine retains the qualities and features we gave it from the beginning.
Boom Suspension System
(BSS)
The Boom Suspension System absorbs shocks, eliminates rocking and bouncing, and smoothes out rough roads. BSS contributes to higher productivity, less spill, and better operator comfort.

Long boom
A long boom gives the extra dump height and reach necessary for loading high trucks or feeders. The additional reach also gives added protection when loading the bucket by keeping the machine further away from the material.

Comfort Drive Control (CDC)
Lever steering CDC enables the operator to handle steering, shifting forward-reverse, and kick-down with controls in the left armrest. At any time, the operator can change between steering with steering wheel and CDC to avoid static muscle loads.

Automatic Lubrication System
Our factory-installed 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.

Single lever
An optional pilot-control.

3rd and 4th hydraulic function
Enable use of advanced attachments, e.g., V-plough and log grapple with heel kick-out.

CareTrack telematics system
Remote monitoring of the machine’s position, utilization, and performance. Forwarding of error codes, alarms, and service reminders. Position on map plus Geo & Time-fence functions.

Fenders
Front and rear fenders – to protect the machine in extreme environments.

Guards protect both operator and machine
Waste handling is tough work. Special pre-cleaners, air intake protection, and multiple guards, such as windshield, belly, hinge, and hose guards, keep both operator and wheel loader well protected from dust and debris.

Selection of Volvo equipment

JOB SATISFACTION COMES STANDARD. HERE ARE YOUR OPTIONS.
**VOLVO L60F, L70F, L90F 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 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; cyclone precleaner - primary filter - secondary filter.

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

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### L60F

**Engine:** D6E LCE3

- **Max power at**: 28.3 r/s (1700 rpm)
- **SAE J1995 gross**: 115 kW (154 hp)
- **ISO 9249, SAE J1349 net**: 114 kW (153 hp)
- **Max torque at**: 26.7 r/s (1600 rpm)
- **SAE J1995 gross**: 680 Nm (500 lbf ft)
- **ISO 9249, SAE J1349 net**: 648 Nm (480 lbf ft)
- **Economic working range**: 1100-1600 rpm
- **Displacement**: 5.7 l (348 in³)

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### L70F

**Engine:** D6E LBE3

- **Max power at**: 28.3 r/s (1700 rpm)
- **SAE J1995 gross**: 126 kW (169 hp)
- **ISO 9249, SAE J1349 net**: 125 kW (168 hp)
- **Max torque at**: 26.7 r/s (1600 rpm)
- **SAE J1995 gross**: 750 Nm (550 lbf ft)
- **ISO 9249, SAE J1349 net**: 717 Nm (530 lbf ft)
- **Economic working range**: 1100-1600 rpm
- **Displacement**: 5.7 l (348 in³)

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### L90F

**Engine:** Volvo D6E LAE3

- **Max power at**: 28.3 r/s (1700 rpm)
- **SAE J1995 gross**: 129 kW (173 hp)
- **ISO 9249, SAE J1349 net**: 128 kW (172 hp)
- **Max torque at**: 26.7 r/s (1600 rpm)
- **SAE J1995 gross**: 770 Nm (570 lbf ft)
- **ISO 9249, SAE J1349 net**: 736 Nm (540 lbf ft)
- **Economic working range**: 1100-1600 rpm
- **Displacement**: 5.7 l (348 in³)
**Drivetrain**

**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 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.

**L60F**

<table>
<thead>
<tr>
<th>Transmission</th>
<th>Volvo HTE 110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque multiplication</td>
<td>2.85:1</td>
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<tr>
<td>Maximum speed, forward/reverse</td>
<td></td>
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<tr>
<td>1st gear</td>
<td>7.3 km/h (4.5 mph)</td>
</tr>
<tr>
<td>2nd gear</td>
<td>14.2 km/h (8.8 mph)</td>
</tr>
<tr>
<td>3rd gear</td>
<td>27.1 km/h (16.8 mph)</td>
</tr>
<tr>
<td>4th gear (limited by ECU)*</td>
<td>43.1 km/h (26.8 mph)</td>
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<tr>
<td>Measured with tires</td>
<td>20.5 R25 L2</td>
</tr>
<tr>
<td>Front axle/rear axle</td>
<td>Volvo AWB 15/15</td>
</tr>
<tr>
<td>Rear axle oscillation</td>
<td>±13°</td>
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<tr>
<td>Ground clearance at 13° osc.</td>
<td>470 mm (18.5 in)</td>
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**L70F**

<table>
<thead>
<tr>
<th>Transmission</th>
<th>Volvo HTE 120</th>
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<tbody>
<tr>
<td>Torque multiplication</td>
<td>2.67:1</td>
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<td>Maximum speed, forward/reverse</td>
<td></td>
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<tr>
<td>1st gear</td>
<td>7.4 km/h (4.6 mph)</td>
</tr>
<tr>
<td>2nd gear</td>
<td>14.4 km/h (8.9 mph)</td>
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<tr>
<td>3rd gear</td>
<td>27.6 km/h (17.1 mph)</td>
</tr>
<tr>
<td>4th gear (limited by ECU)*</td>
<td>44.5 km/h (27.7 mph)</td>
</tr>
<tr>
<td>Measured with tires</td>
<td>20.5 R25 L2</td>
</tr>
<tr>
<td>Front axle/rear axle</td>
<td>Volvo AWB 25/20</td>
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<tr>
<td>Rear axle oscillation</td>
<td>±13°</td>
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<tr>
<td>Ground clearance at 12° osc.</td>
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**L90F**

<table>
<thead>
<tr>
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<th>Volvo HTE 125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque multiplication</td>
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<tr>
<td>Maximum speed, forward/reverse</td>
<td></td>
</tr>
<tr>
<td>1st gear</td>
<td>6.7 km/h (4.2 mph)</td>
</tr>
<tr>
<td>2nd gear</td>
<td>13.0 km/h (8.1 mph)</td>
</tr>
<tr>
<td>3rd gear</td>
<td>25.1 km/h (15.6 mph)</td>
</tr>
<tr>
<td>4th (limited by ECU)*</td>
<td>462 km/h (28.7 mph)</td>
</tr>
<tr>
<td>Measured with tires</td>
<td>20.5 R25 L2</td>
</tr>
<tr>
<td>Front axle/rear axle</td>
<td>Volvo AWB25/ABW20</td>
</tr>
<tr>
<td>Rear axle oscillation</td>
<td>±13°</td>
</tr>
<tr>
<td>Ground clearance at 13° osc.</td>
<td>470 mm (18.5 in)</td>
</tr>
</tbody>
</table>

* local restrictions may apply

**Electrical system**

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

**L60F, L70F, L90F**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>24 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batteries</td>
<td>2×12 V</td>
</tr>
<tr>
<td>Battery capacity</td>
<td>2×110 Ah</td>
</tr>
<tr>
<td>Cold cranking capacity, approx</td>
<td>690 A</td>
</tr>
<tr>
<td>Reserve capacity</td>
<td>206 min</td>
</tr>
<tr>
<td>Alternator rating</td>
<td>2280 W/80 A</td>
</tr>
<tr>
<td>Starter motor output</td>
<td>5.5 kW (7.4 hp)</td>
</tr>
</tbody>
</table>

**Brake system**

**Service brake**: Volvo dual-circuit system with nitrogen charged accumulators. Outboard mounted hydraulically operated oil circulation-cooled wet disc brakes. The operator can select automatic disengagement of the transmission when braking using Contronic. **Parking brake**: Dry disc brake mounted on the transmission output shaft. Applied by spring force and electrohydraulically 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.

**L60F**

| Number of brake discs per wheel front/rear | 1/1 |
| Accumulators | 3×0.5 l (3×0.13 US gal) |
| Accumulators for parking brake | 1×0.5 l (1×0.13 US gal) |

**L70F**

| Number of brake discs per wheel front/rear | 1/1 |
| Accumulators | 2×0.5 l, 1×1.0 l |
| (2×0.13, 1×0.26 US gal) |
| Accumulators for parking brake | 1×1.0 l (3×0.26 US gal) |

**L90F**

| Number of brake discs per wheel front/rear | 1/1 |
| Accumulators | 2×0.5 l, 1×1.0 l |
| (2×0.13, 1×0.26 US gal) |
| Accumulators for parking brake | 1×1.0 l (3×0.26 US gal) |

* local restrictions may apply
Volvo L60F, L70F, L90F in detail

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, SAE J1040), FOPS (ISO 3449). The cab meets with requirements according to ISO 6055 (Operator overhead protection - Industrial trucks) and SAE J386 (“Operator Restraint System”).

L60F
Emergency exits | Use emergency hammer to break window
Sound level in cab according to ISO 6396 | LpA 68 dB (A)
External sound level according to ISO 6395 | LwA 104 dB (A)
Ventilation | 9 m³/min (318 ft³/min)
Heating capacity | 11 kW (37,530 Btu/h)
Air-conditioning (optional) | 8 kW (27,300 Btu/h)

L70F
Emergency exits | Use emergency hammer to break window
Sound level in cab according to ISO 6396 | LpA 68 dB (A)
External sound level according to ISO 6395 | LwA 105 dB (A)
Ventilation | 9 m³/min (318 ft³/min)
Heating capacity | 11 kW (37,530 Btu/h)
Air-conditioning (optional) | 8 kW (27,300 Btu/h)

L90F
Emergency exits | Use emergency hammer to break window
Sound level in cab according to ISO 6396 | LpA 70 dB (A)
External sound level according to ISO 6395 | LwA 105 dB (A)
Ventilation | 9 m³/min (318 ft³/min)
Heating capacity | 11 kW (37,530 Btu/h)
Air-conditioning (optional) | 8 kW (27,300 Btu/h)

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

L60F
Lift cylinders | 2
Cylinder bore | 110 mm (4.3 in)
Piston rod diameter | 70 mm (2.8 in)
Stroke | 665 mm (26.2 in)
Tilt cylinder | 1
Cylinder bore | 150 mm (5.9 in)
Piston rod diameter | 80 mm (3.2 in)
Stroke | 444 mm (17.5 in)

L70F
Lift cylinders | 2
Cylinder bore | 110 mm (4.3 in)
Piston rod diameter | 70 mm (2.8 in)
Stroke | 756 mm (29.8 in)
Tilt cylinder | 1
Cylinder bore | 160 mm (6.3 in)
Piston rod diameter | 90 mm (3.5 in)
Stroke | 432 mm (17.0 in)

L90F
Lift cylinders | 2
Cylinder bore | 120 mm (4.7 in)
Piston rod diameter | 70 mm (2.8 in)
Stroke | 733 mm (28.8 in)
Tilt cylinder | 1
Cylinder bore | 180 mm (7.1 in)
Piston rod diameter | 90 mm (3.5 in)
Stroke | 430 mm (16.9 in)
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.

### L60F
- **Cylinder bore**: 70 mm (2.76 in)
- **Rod diameter**: 45 mm (1.77 in)
- **Stroke**: 386 mm (15.2 in)
- **Working pressure**: 21 MPa (3,046 psi)
- **Maximum flow**: 145 l/min (38.30 US gpm)
- **Maximum articulation**: ±40°

### L70F
- **Cylinder bore**: 70 mm (2.76 in)
- **Rod diameter**: 45 mm (1.77 in)
- **Stroke**: 386 mm (15.2 in)
- **Working pressure**: 21 MPa (3,046 psi)
- **Maximum flow**: 154 l/min (40.68 US gpm)
- **Maximum articulation**: ±40°

### L90F
- **Cylinder bore**: 80 mm (3.15 in)
- **Rod diameter**: 50 mm (1.99 in)
- **Stroke**: 345 mm (13.6 in)
- **Working pressure**: 21 MPa (3,046 psi)
- **Maximum flow**: 162 l/min (42.80 US gpm)
- **Maximum articulation**: ±40°

* with load as per ISO 14397 and SAE J818
VOLVO L60F, L70F, L90F IN DETAIL

Service
Service accessibility: Large, easy-to-open service doors with gas struts. Swing-out radiator grill. Reversible fan is standard. Fluid filters and component breather filters promote long service intervals. Possibility to log and analyze data to facilitate troubleshooting.

L60F refill capacities
- Fuel tank: 224 l (59.2 US gal)
- Engine coolant: 30 l (7.9 US gal)
- Hydraulic oil tank: 90 l (23.8 US gal)
- Transmission oil: 20 l (5.3 US gal)
- Engine oil: 20 l (5.3 US gal)
- Axle oil front/rear: 24/24 l (6.3/6.3 US gal)

L70F refill capacities
- Fuel tank: 224 l (59.2 US gal)
- Engine coolant: 30 l (7.9 US gal)
- Hydraulic oil tank: 90 l (23.8 US gal)
- Transmission oil: 20 l (5.3 US gal)
- Engine oil: 20 l (5.3 US gal)
- Axle oil front/rear: 35/27 l (9.3/7.1 US gal)

L90F refill capacities
- Fuel tank: 224 l (59.2 US gal)
- Engine coolant: 30 l (7.9 US gal)
- Hydraulic oil tank: 90 l (23.8 US gal)
- Transmission oil: 20 l (5.3 US gal)
- Engine oil: 20 l (5.3 US gal)
- Axle oil front/rear: 35/27 l (9.3/7.1 US gal)
SPECIFICATIONS

Tires: 20.5 R25 L2

<table>
<thead>
<tr>
<th>Standard boom</th>
<th>Long boom</th>
</tr>
</thead>
<tbody>
<tr>
<td>L60F</td>
<td>L70F</td>
</tr>
<tr>
<td>B</td>
<td>5990 mm</td>
</tr>
<tr>
<td>C</td>
<td>3000 mm</td>
</tr>
<tr>
<td>D</td>
<td>460 mm</td>
</tr>
<tr>
<td>F</td>
<td>3200 mm</td>
</tr>
<tr>
<td>J</td>
<td>3580 mm</td>
</tr>
<tr>
<td>K</td>
<td>3870 mm</td>
</tr>
<tr>
<td>L</td>
<td>3870 mm</td>
</tr>
<tr>
<td>M</td>
<td>56 °</td>
</tr>
<tr>
<td>N</td>
<td>42 °</td>
</tr>
<tr>
<td>O</td>
<td>47 °</td>
</tr>
<tr>
<td>P</td>
<td>79 °</td>
</tr>
<tr>
<td>Q</td>
<td>193 mm</td>
</tr>
<tr>
<td>R</td>
<td>1900 mm</td>
</tr>
<tr>
<td>S</td>
<td>2440 mm</td>
</tr>
<tr>
<td>T</td>
<td>3210 mm</td>
</tr>
<tr>
<td>U</td>
<td>5340 mm</td>
</tr>
<tr>
<td>V</td>
<td>2900 mm</td>
</tr>
<tr>
<td>W</td>
<td>96 °</td>
</tr>
</tbody>
</table>

* Carry position SAE **) 17.5 R25 tires not allowed.

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

Tires: 20.5 R25 L2

<table>
<thead>
<tr>
<th>L60F</th>
<th>L70F</th>
<th>L90F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>800 mm</td>
<td>830 mm</td>
</tr>
<tr>
<td>B</td>
<td>1560 mm</td>
<td>1500 mm</td>
</tr>
<tr>
<td>C</td>
<td>-40 mm</td>
<td>-46 mm</td>
</tr>
<tr>
<td>D</td>
<td>1830 mm</td>
<td>1850 mm</td>
</tr>
<tr>
<td>E</td>
<td>3710 mm</td>
<td>3730 mm</td>
</tr>
<tr>
<td>F</td>
<td>690 mm</td>
<td>760 mm</td>
</tr>
<tr>
<td>Operating load* at load rated distance</td>
<td>4350 kg</td>
<td>9590 lb</td>
</tr>
<tr>
<td>Operating weight</td>
<td>11450 kg</td>
<td>25240 lb</td>
</tr>
</tbody>
</table>

Fork tine sales code L60F and L70F (R/L): WLA80042/80043
Fork tine sales code L90F (R/L): WLA80344/80345
Length: 1200 mm (3’11")
Fork frame order no.: 80041
* acc. std EN 474-3, firm and level ground
Tires: 20.5 R25 L2

<table>
<thead>
<tr>
<th></th>
<th>L60F</th>
<th>L70F</th>
<th>L90F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A'</td>
<td>1800 kg</td>
<td>2150 kg</td>
<td>2760 kg</td>
</tr>
<tr>
<td>B'</td>
<td>3970 lb</td>
<td>4740 lb</td>
<td>6080 lb</td>
</tr>
<tr>
<td>C'</td>
<td>3090 kg</td>
<td>3770 kg</td>
<td>4700 kg</td>
</tr>
<tr>
<td>D'</td>
<td>1400 kg</td>
<td>1400 kg</td>
<td>1740 kg</td>
</tr>
<tr>
<td>E'</td>
<td>2540 lb</td>
<td>3090 lb</td>
<td>3840 lb</td>
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<tr>
<td>F'</td>
<td>2880 mm</td>
<td>2720 mm</td>
<td>2640 mm</td>
</tr>
<tr>
<td>G'</td>
<td>1990 mm</td>
<td>2110 mm</td>
<td>2040 mm</td>
</tr>
<tr>
<td>H'</td>
<td>66°</td>
<td>61°</td>
<td>68°</td>
</tr>
<tr>
<td>I'</td>
<td>1450 mm</td>
<td>1500 mm</td>
<td>1440 mm</td>
</tr>
<tr>
<td>J'</td>
<td>3270 mm</td>
<td>3200 mm</td>
<td>3280 mm</td>
</tr>
<tr>
<td>K'</td>
<td>4300 mm</td>
<td>4360 mm</td>
<td>4410 mm</td>
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<td>L'</td>
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<td>2470 mm</td>
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<td>M'</td>
<td>2250 mm</td>
<td>2180 mm</td>
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<tr>
<td>N'</td>
<td>3220 mm</td>
<td>3100 mm</td>
<td>3080 mm</td>
</tr>
<tr>
<td>O'</td>
<td>4310 mm</td>
<td>4110 mm</td>
<td>4200 mm</td>
</tr>
<tr>
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<td>1520 mm</td>
<td>1500 mm</td>
<td>1530 mm</td>
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<tr>
<td>Q'</td>
<td>5300 mm</td>
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<td>5330 mm</td>
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<tr>
<td>R'</td>
<td>6180 mm</td>
<td>6170 mm</td>
<td>6290 mm</td>
</tr>
<tr>
<td>S'</td>
<td>7150 mm</td>
<td>7120 mm</td>
<td>7250 mm</td>
</tr>
</tbody>
</table>

*Tires: 20.5 R25 L2

- L60F: Sales code: WLA82194
  - Operating weight: 11 370 kg (25,070 lb)
  - Operating load: 3450 kg (7,600 lb)

- L70F: Sales code: WLA80153
  - Operating weight: 12 860 kg (28,350 lb)
  - Operating load: 3390 kg (7,470 lb)

- L90F: Sales code: WLA80832
  - Operating weight: 14 440 kg (31,830 lb)
  - Operating load: 4600 kg (10,140 lb)
### General Purpose

<table>
<thead>
<tr>
<th>Material</th>
<th>Bucket fill %</th>
<th>Material density, lb/ft³</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>~1.55 to 2.610</td>
<td>~1.9 to 2.5</td>
<td>~2.1 to 2.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.40 to 2.360</td>
<td>~2.1 to 2.8</td>
<td>~2.3 to 3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.30 to 2.190</td>
<td>~2.3 to 3.0</td>
<td>~2.5 to 3.3</td>
</tr>
<tr>
<td>Sand/Gravel</td>
<td>~105</td>
<td>~1.65 to 2.780</td>
<td>~1.9 to 2.5</td>
<td>~2.0 to 2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.50 to 2.530</td>
<td>~2.1 to 2.8</td>
<td>~2.2 to 2.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.35 to 2.280</td>
<td>~2.3 to 3.0</td>
<td>~2.1 to 2.8</td>
</tr>
<tr>
<td>Aggregate</td>
<td>~100</td>
<td>~1.75 to 2.950</td>
<td>~1.9 to 2.5</td>
<td>~1.9 to 2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.65 to 2.610</td>
<td>~2.1 to 2.8</td>
<td>~2.1 to 2.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.55 to 2.610</td>
<td>~2.3 to 3.0</td>
<td>~2.3 to 3.0</td>
</tr>
<tr>
<td>Rock</td>
<td>≤100</td>
<td>~1.70 to 2.870</td>
<td>~1.8 to 2.1</td>
<td>~1.6 to 2.1</td>
</tr>
</tbody>
</table>

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

### 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></td>
<td>17.5 R25 L2</td>
<td>600/65 R25</td>
</tr>
<tr>
<td>Width over tires</td>
<td>mm</td>
<td>~130</td>
</tr>
<tr>
<td></td>
<td>in</td>
<td>~5&quot;</td>
</tr>
<tr>
<td>Ground clearance</td>
<td>in</td>
<td>~60</td>
</tr>
<tr>
<td>Tipping load, full turn</td>
<td>kg</td>
<td>~210</td>
</tr>
<tr>
<td></td>
<td>lb</td>
<td>~680</td>
</tr>
<tr>
<td>Operating weight</td>
<td>kg</td>
<td>~560</td>
</tr>
<tr>
<td></td>
<td>lb</td>
<td>~1,230</td>
</tr>
</tbody>
</table>
### 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 1.60 t/m³ (2,700 lb/yd³). Result: The 2.1 m³ (2.8 yd³) bucket carries 2.2 m³ (2.9 yd³). For optimal stability always consult the bucket selection chart.

#### Material

<table>
<thead>
<tr>
<th>Material</th>
<th>Bucket fill, %</th>
<th>Material density, lb/yd³</th>
<th>ISO/SAE bucket volume, m³</th>
<th>Actual volume, yd³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth/Clay</td>
<td>~110</td>
<td>~1.55 – 2.610</td>
<td>~2.1 – 2.8</td>
<td>~2.3 – 3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.45 – 2.440</td>
<td>~2.3 – 3.0</td>
<td>~2.5 – 3.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.40 – 2.360</td>
<td>~2.4 – 3.1</td>
<td>~2.6 – 3.4</td>
</tr>
<tr>
<td>Sand/Gravel</td>
<td>~105</td>
<td>~1.60 – 2.700</td>
<td>~2.1 – 2.8</td>
<td>~2.2 – 2.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.50 – 2.530</td>
<td>~2.3 – 3.0</td>
<td>~2.4 – 3.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.45 – 2.440</td>
<td>~2.4 – 3.1</td>
<td>~2.5 – 3.3</td>
</tr>
<tr>
<td>Aggregate</td>
<td>~100</td>
<td>~1.80 – 3.030</td>
<td>~2.1 – 2.8</td>
<td>~2.1 – 2.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.70 – 2.870</td>
<td>~2.3 – 3.0</td>
<td>~2.3 – 3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~1.60 – 2.700</td>
<td>~2.4 – 3.1</td>
<td>~2.4 – 3.1</td>
</tr>
<tr>
<td>Rock</td>
<td>≤100</td>
<td>~1.70 – 2.870</td>
<td>~1.6 – 2.1</td>
<td>~1.6 – 2.1</td>
</tr>
</tbody>
</table>

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

---

**补丁建议**

1. **Fitness**
   - The selected bucket for the TP Linkage 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 1.60 t/m³ (2,700 lb/yd³). Result: The 2.1 m³ (2.8 yd³) bucket carries 2.2 m³ (2.9 yd³). For optimal stability always consult the bucket selection chart.

2. **Material**
   - The table above provides a selection of materials and their corresponding bucket fills, material densities, and ISO/SAE bucket volumes. The actual volume varies, which is critical for optimal performance.

3. **Bucket Design**
   - The bucket design is optimized for different types of material, such as Earth/Clay, Sand/Gravel, and Aggregate. Each type has specific fill factors that are important for performance and stability.

---

**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</td>
<td>mm</td>
<td>+60</td>
</tr>
<tr>
<td>Ground clearance</td>
<td>mm</td>
<td>–20</td>
</tr>
<tr>
<td>Tipping load, full turn</td>
<td>kg</td>
<td>+150</td>
</tr>
<tr>
<td>Operating weight</td>
<td>kg</td>
<td>+240</td>
</tr>
<tr>
<td></td>
<td>lb</td>
<td>+530</td>
</tr>
</tbody>
</table>
Fig. 1: Bucket Selection Chart

### General Purpose

<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>
<th>L90F</th>
<th>Material density, lb/yd³</th>
<th>ISO/SAE bucket volume, yd³</th>
<th>Actual volume, yd³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth/Clay</td>
<td>~110</td>
<td>~1.80 - 3.030</td>
<td>2.5 - 3.3</td>
<td>~2.9 - 3.6</td>
<td>~2.7 - 3.5</td>
<td>~2.8 - 3.5</td>
<td>~2.8 - 3.6</td>
<td>~2.7 - 3.5</td>
</tr>
<tr>
<td>Sand/Gravel</td>
<td>~105</td>
<td>~1.80 - 3.030</td>
<td>2.5 - 3.3</td>
<td>~2.9 - 3.8</td>
<td>~2.6 - 3.4</td>
<td>~2.7 - 3.5</td>
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<td>Aggregate</td>
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<td>~1.80 - 3.030</td>
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<td>~2.1 - 2.7</td>
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The size of rock buckets is optimized for optimal penetration and filling capability rather than the density of the material.

### Supplemental Operating Data

<table>
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<tr>
<th>Tires 20.5 R25 L2</th>
<th>Standard boom Long boom</th>
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<td>Tipping load, full turn</td>
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<td>Operating weight</td>
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How to read bucket fill factor

1. Measured at the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge.
2. Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge.
3. Note: This only applies to genuine Volvo attachments.

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 (2,780 lb/yd³). Result: The 2.7 m³ (2.5 yd³) bucket carries 2.8 m³ (3.7 yd³). For optimal stability always consult the bucket selection chart.
<table>
<thead>
<tr>
<th>Service and maintenance</th>
<th>L60F</th>
<th>L70F</th>
<th>L90F</th>
<th>L60F</th>
<th>L70F</th>
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<tr>
<td>Sliding window, right side</td>
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<tr>
<td>Sliding glass, door</td>
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<tr>
<td>Cab heating with fresh air inlet and defroster</td>
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<tr>
<td>Fresh air inlet with two filters</td>
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<td>Automatic heat control</td>
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<td>Floor mat</td>
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<tr>
<td>Dual interior lights</td>
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<td>Dual interior rearview mirrors</td>
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<tr>
<td>Dual exterior rearview mirrors</td>
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<tr>
<td>Sliding window, right side</td>
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<tr>
<td>Sliding glass, door</td>
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</tbody>
</table>

**STANDARD EQUIPMENT**
### Hydraulic system
- Main valve, double acting 2-spool with hydraulic pilots: L60F, L70F, L90F
- Variable displacement axial piston pumps (2) for:
  - Working hydraulics, pilot hydraulics, steering system, brakes, Cooling fan, brakes
- Hydraulic control levers
- Electric level lock
- Boom kick-out, automatic, adjustable
- Bucket positioner with position indicator, automatic, adjustable
- Double acting hydraulic cylinders
- Indicator glass for hydraulic oil level
- Hydraulic oil cooler
- Attachment bracket, cast, visibility-optimized
- Separate attachment locking, standard boom

### External equipment
- Basic fenders with wideners: L60F, L70F, L90F
- Viscous cab mounts
- Rubber engine and transmission mounts
- Easy-to-open side panels
- Frame, joint lock
- Vandalism lock prepared for:
  - Batteries
  - Engine compartment
  - Radiator grille
- Lifting eyes
- Tie down eyes
- Tow hitch
- Working hydraulics, pilot hydraulics, steering system, brakes, Cooling fan, brakes

### Protective equipment
- Cover plates, rear frame: L60F, L70F, L90F
- Decals, USA: L60F, L70F, L90F

### Other equipment
- Working lights, attachments: L60F, L70F, L90F

### OPTIONAL EQUIPMENT

#### Service and maintenance
- Automatic lubrication system: L60F, L70F, L90F
- Automatic lubrication system for long boom: L60F, L70F, L90F
- Automatic lubrication system, stainless steel: L60F, L70F, L90F
- Automatic lubrication system for attachment bracket, cast: L60F, L70F, L90F
- Automatic lubrication system, stainless steel for attachment bracket, cast: L60F, L70F, L90F
- Oil sampling valve: L60F, L70F, L90F
- Refill pump for automatic lubrication system: L60F, L70F, L90F
- Toolbox, lockable: L60F, L70F, L90F
- Tool kit: L60F, L70F, L90F
- Wheel nut wrench kit: L60F, L70F, L90F

#### Engine
- Air pre-cleaner, Sy-Klone type, one-stage: L60F, L70F, L90F
- Air pre-cleaner, Sy-Klone type, two-stage: L60F, L70F, L90F
- Air pre-cleaner, oil-bath type: L60F, L70F, L90F
- Air pre-cleaner, turbo type, one-stage: L60F, L70F, L90F
- Engine auto shut down: L60F, L70F, L90F
- Engine block heater, 120 V: L60F, L70F, L90F
- ESW, Disabled engine protection: L60F, L70F, L90F
- ESW, Increased engine protection: L60F, L70F, L90F
- Exhaust heat insulation: L60F, L70F, L90F
- Fan air intake protection, extra close-meshed: L60F, L70F, L90F
- Fuel heater: L60F, L70F, L90F
- Hand throttle control: L60F, L70F, L90F
- Max. fan speed, hot climate: L60F, L70F, L90F
- Radiator, hyd. oil cooler, corrosion-protected: L60F, L70F, L90F

#### Electrical system
- Alternator, 80 A with air filter: L60F, L70F, L90F
- License plate holder, lighting: L60F, L70F, L90F
- Review camera color, LCD monitor: L60F, L70F, L90F
- Rearview mirrors, adjustable, el. heated: L60F, L70F, L90F
- Reverse alarm: L60F, L70F, L90F
- Reverse lights, automatic: L60F, L70F, L90F
- Reversing warning light, automatic: L60F, L70F, L90F
- Warning, collapsible, rotating beacon: L60F, L70F, L90F
- Warning beacon, flashing strobe light: L60F, L70F, L90F

#### Drivetrain
- Diff lock front 100%, limited slip rear: L60F, L70F, L90F
- Speed limiter, 20 km/h (12 mph): L60F, L70F, L90F
- Speed limiter, 30 km/h (19 mph): L60F, L70F, L90F
- Speed limiter, 40 km/h (25 mph): L60F, L70F, L90F
- Speed limiter, automatic: L60F, L70F, L90F

---

### FOOTNOTES
- *Note: Some equipment options may not be available on all models. Please contact the manufacturer for specific availability and compatibility.*
<table>
<thead>
<tr>
<th>Brake system</th>
<th>L60F</th>
<th>L70F</th>
<th>L90F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking brake alarm, audible</td>
<td>•</td>
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</tr>
<tr>
<td>Parking brake alarm, audible (connection to buzzer included)</td>
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<table>
<thead>
<tr>
<th>Hydraulic system</th>
<th>L60F</th>
<th>L70F</th>
<th>L90F</th>
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</thead>
<tbody>
<tr>
<td>Artic kit, pilot hoses, brake accumulators and hydraulic oil</td>
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<tr>
<td>Attachment bracket, side-lifting</td>
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</tr>
<tr>
<td>Boom suspension system with single acting lifting function</td>
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<tr>
<td>Attachment bracket, cast, visibility-optimized</td>
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</tr>
<tr>
<td>Separate attachment locking, standard boom</td>
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<tr>
<td>Separate attachment locking, long boom</td>
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</tr>
<tr>
<td>Adjustable flow for 3rd hydraulic function</td>
<td>•</td>
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<tr>
<td>Arctic kit, attachment locking hoses</td>
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<tr>
<td>Arctic kit, pilot hoses and brake accum, incl. hydr. oil</td>
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<tr>
<td>Detent for 3rd hydraulic function</td>
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<td>Hydraulic fluid, biodegradable, Agrol</td>
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<td>Hydraulic fluid, biodegradable, BP</td>
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<td>Hydraulic fluid, biodegradable, Panolin</td>
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<td>Hydraulic fluid, biodegradable, Volvo</td>
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<td>Hydraulic fluid, fire resistant</td>
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<tr>
<td>Hydraulic fluid, for hot climate</td>
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<tr>
<td>Hydraulic function, 3rd</td>
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<td>Hydraulic function, 3rd for long boom</td>
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<td>Hydraulic function, 3rd-4th</td>
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<td>Hydraulic function, 3rd-4th for long boom</td>
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<tr>
<td>Single acting lifting function</td>
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<tr>
<td>Single lever control</td>
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<tr>
<td>Single lever control for 3rd hydr. function</td>
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<tr>
<th>Tires and Rims</th>
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<tr>
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<td>• L3</td>
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<td>• L4</td>
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<table>
<thead>
<tr>
<th>Attachments</th>
<th>L60F</th>
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</thead>
<tbody>
<tr>
<td>Buckets:</td>
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<td>•</td>
</tr>
<tr>
<td>• Straight with teeth or bolt-on edges</td>
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<td>•</td>
</tr>
<tr>
<td>• Spade nose</td>
<td>•</td>
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<tr>
<td>• High tipping</td>
<td>•</td>
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<tr>
<td>• Light material</td>
<td>•</td>
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</tr>
<tr>
<td>• Grading</td>
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<tr>
<td>Wear parts:</td>
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</tr>
<tr>
<td>• Bolt-on edge</td>
<td>•</td>
<td>•</td>
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</tr>
<tr>
<td>• Bolt-on or weld-on bucket teeth</td>
<td>•</td>
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</tr>
<tr>
<td>• Segments</td>
<td>•</td>
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<tr>
<td>Log grapples</td>
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<tr>
<td>Fork equipment</td>
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<tr>
<td>Material handling arm</td>
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<tr>
<td>Snow blade</td>
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<tr>
<td>Boom</td>
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<tr>
<td>Sand spreading bucket</td>
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<tr>
<td>Bale clamp</td>
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<tr>
<td>Drum rotator</td>
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<thead>
<tr>
<th>External equipment</th>
<th>L60F</th>
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<tbody>
<tr>
<td>Cab ladder, rubber suspended</td>
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<tr>
<td>Fenders, full cover, rear for 80-series tires</td>
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</tr>
<tr>
<td>Mudflap kit for fenders, full cover for 80-series tires</td>
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</tr>
<tr>
<td>Fenders, basic, short, front/rear for 65-series tires</td>
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<tr>
<td>Fenders, full cover, front/rear for 65-series tires</td>
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<tr>
<td>Mudflap kit for fenders, full cover for 65-series tires</td>
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</tr>
<tr>
<td>Deleted front fenders and rear fender wideners</td>
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<tr>
<td>Long boom</td>
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<table>
<thead>
<tr>
<th>Protective equipment</th>
<th>L60F</th>
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<tbody>
<tr>
<td>Bellyguard front</td>
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<tr>
<td>Bellyguard rear</td>
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<tr>
<td>Guards for front head lights</td>
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<tr>
<td>Guards for radiator grill</td>
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<tr>
<td>Guards for tail lights</td>
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<tr>
<td>Guards for tail lights, heavy-duty</td>
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<tr>
<td>Guards for grease nipples</td>
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<tr>
<td>Anti-theft device</td>
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<tr>
<td>Cover plate, under cab</td>
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<tr>
<td>Wheel/axle seal guards</td>
<td>•</td>
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<tr>
<td>Windows, side and rear guards</td>
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</tr>
<tr>
<td>Windshield guard</td>
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<tr>
<td>Center hinge and rear frame guard</td>
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<tr>
<td>Corrosion protection, painting of machine</td>
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<tr>
<td>Boom cylinder hose and tube guards</td>
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<tr>
<td>Boom cylinder hose and tube guards for long boom</td>
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</table>

<table>
<thead>
<tr>
<th>Other equipment</th>
<th>L60F</th>
<th>L70F</th>
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<tbody>
<tr>
<td>Comfort Drive Control (CDC)</td>
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<tr>
<td>Counterweight, logging (only with approval)</td>
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<tr>
<td>Secondary steering with automatic test function</td>
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<tr>
<td>Decals English/Spanish</td>
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<tr>
<td>Noise reduction kit, EU excl. decal</td>
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<tr>
<td>Noise reduction kit, Blauer Engel incl. decal</td>
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<tr>
<td>Sign, slow moving vehicle</td>
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</tr>
</tbody>
</table>
Volvo Construction Equipment is different. The company’s products are designed, built and supported in a different way. That difference comes from our 175-year engineering heritage. A heritage of thinking first about the people who actually use the machines. About how to make them 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.