VOLVO WHEEL LOADERS

L60F, L70F, L90F





GET THE JOB DONE. GET A VOLVO

"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-rounders 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, guick 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.

Specifications
Engine:
Max power at
SAE J1995 gross:
ISO 9249, SAE J1349 net:
Breakout force:
Static tipping load at full turn:
Buckets:
Log grapples:
Operating weight:

L60F
Volvo D6E LCE3
28.3 r/s (1700 rpm)
115 kW (154 hp)
114 kW (153 hp)
82.9 kN* (18,637lbf)
7380 kg* (16,270 lb)
1.7-5.0 m ³ (2.2-6.5 yd ³)
0.7-1.3 m ² (7.5-14.0 ft ²)
11.0-13.3 t
(24,250-29,320 lb)
17.5 R25, 20.5 R25 /
600/65 R25

L70F Volvo D6E LBE3 28.3 r/s (1700 rpm) 126 kW (169 hp) 125 kW (168 hp) 95.4 kN** (21,447 lbf) 8420 kg** (18,563 lb) 2.0-6.4 m³ (2.6-8.4 yd³) 2.3-7.0 m³ (3.0-9.2 yd³) 12.7-15.0 t (28,000-33,070 lb) 20.5 R25

L90F Volvo D6E LAE3 28.3 r/s (1700 rpm) 129 kW (173 hp) 128 kW (172 hp) 118.5 kN*** (26,640 lbf) 9568 kg*** (21,094 lb) 0.9-1.5 m² (9.7-16.1 ft²) 1.3-2.4 m² (14.0-25.8 ft²) 15.0-17.0 t (33,070-37,480 lb) 20.5 R25 600/65 R25



Tires:

^{*} 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



"F" FOR FLEXIBILITY

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.

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.

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.



















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.

Ildeal 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.

















POWER YOUR CREATIVITY

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 of 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, electronicallycontrolled 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.

The right power, regardless of engine rpm

Volvo's wheel loaders feature an intelligent load-sensing hydraulic system, providing exact distribution of power when and where it's needed, regardless of engine rpm. The system makes the wheel loader easy to operate, saves fuel, and assists the operator in controlling both machine and load.



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









PROTECT YOUR PRODUCTIVITY

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.



Care Cab - 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 visibility all-around the machine increases safety on the work site

Easy-to-clean interior

Several storage compartments

Laminated front windshield protects the operator

Practical sliding window

Well-placed handrails improve safety

Powerful halogen work lights front and rear give good visibility of the whole operating area









REAL-TIME INTELLIGENCE SUPPORTS MORE UPTIME

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

Computerized electrical and monitoring system. Reliable and operator-friendly. Coordination of operating data from engine and machine computer for optimal performance and safety.

Display information in three categories – continuous operating data, warning texts, and error messages.

Available in 24 languages, monitors fuel consumption, cycle times, and service intervals.

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 quickcouplings tightly grouped for fast and easy checks.









DON'T DISTURB YOUR ENVIRONMENT, PROTECT IT.

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 equirements 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



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

USE IT INTELLIGENTLY

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



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

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

BUILT TO RUN. SUPPORTED FOR LIFE.

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.







JOB SATISFACTION COMES STANDARD. HERE ARE YOUR OPTIONS.



















Selection of Volvo equipment

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.

VOLVO L60F, L70F, L90F IN DETAIL







Engine

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.

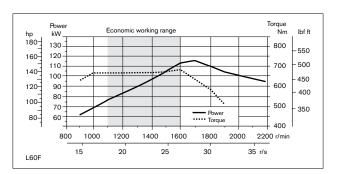
L60F

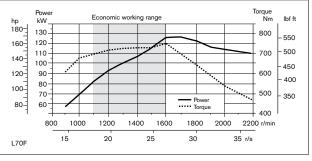
D6E LCE3
28.3 r/s (1700 rpm)
115 kW (154 hp)
114 kW (153 hp)
26.7 r/s (1600 rpm)
680 Nm (500 lbf ft)
648 Nm (480 lbf ft)
1100-1600 rpm
5.7 (348 in³)

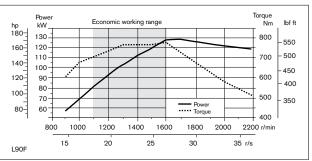
L70F

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 (348 in³)
ISO 9249, SAE J1349 net Max torque at SAE J1995 gross ISO 9249, SAE J1349 net Economic working range	125 kW (168 r 26.7 r/s (1600 rp 750 Nm (550 lbf 717 Nm (530 lbf 1100-1600 r _l

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 (348 in³)











Drivetrain

Torque 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 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

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

L70F

L70F	
Transmission	Volvo HTE 120
Torque multiplication	2.67:1
Maximum speed, forward/reverse	
1st gear	7.4 km/h (4.6 mph)
2nd gear	14.4 km/h (8.9 mph)
3rd gear	27.6 km/h (17.1 mph)
4th gear (limited by ECU)*	44.5 km/h (27.7 mph)
Measured with tires	20.5 R25 L2
Front axle/rear axle	Volvo AWB 25/20
Rear axle oscillation	±13°
Ground clearance at 12° osc.	470 mm (18.5 in)

L90F

200.	
Transmission	Volvo HTE 125
Torque multiplication	2,65
Maximum speed, forward/reverse	
1st gear	6.7 km/h (4.2 mph)
2nd gear	13.0 km/h (8.1 mph)
3rd gear	25.1 km/h (15.6 mph)
4th (limited by ECU)*	46.2 km/h (28.7 mph)
Measured with tires	20.5 R25 L2
Front axle/rear axle	Volvo AWB25/AWB20
Rear axle oscillation	±13°
Ground clearance at 13° osc.	470 mm (18.5 in)

^{*} local restrictions may apply

Electrical system

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

L60F, L70F, L90F

Voltage	24 V
Batteries	2x12 V
Battery capacity	2x110 Ah
Cold cranking capacity, approx	690 A
Reserve capacity	206 min
Alternator rating	2280 W/80 A
Starter motor output	5.5 kW (7.4 hp)

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	3x0.5 (3x0.13 US gal)
Accumulators for parking brake	1x0.5 (1x0.13 US gal)

L70F

Number of brake discs per wheel front/rear	1/1
Annualistana	2x0.5 l, 1x1.0 l
Accumulators	(2x0.13, 1x0.26 US gal)
Accumulators for parking brake	1x1.0 (3x0.26 US gal)

Number of brake discs per wheel front/rear	1/1
Accommodates	2x0,5 1x1,0
Accumulators	(2x0.13, 1x0.26 US gal)
Accumulators for parking brake	1x1,0 (3x0.26 US gal)

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 accordi	ng 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 emergenc	y 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 68 dB (A)
External sound level according	g 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)

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)







Hydraulic system

System supply: Two load-sensing axial piston pumps with variable displacement. The steering function always has priority. Valves: Double-acting 2-spool valve. The main valve is controlled by a 2-spool pilot valve. Lift function: The valve has four positions; raise, hold, lower, and float position. 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: 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.

L60F

L001	
Working pressure, maximum	26.0 MPa (3,770 psi)
Flow	145 l/min (38 US gpm)
at	10 MPa (1,450 psi)
engine speed	32 r/s (1900 rpm)
Pilot system, working pressure	3.0 MPa (435 psi)
Cycle times	
Raise*	4.5 s
Tilt*	2.3 s
Lower, empty	2.9 s
Total cycle time	9.7 s

L70F

Working pressure, maximum	26.0 MPa (3,770 psi)
Flow	154 l/min (41 US gpm)
at	10 MPa (1,450 psi)
engine speed	32 r/s (1900 rpm)
Pilot system, working pressure	3.0 MPa (435 psi)
Cycle times	
Raise*	5.3 s
Tilt*	1.3 s
Lower, empty	2.7 s
Total cycle time	9.3 s

L90F

Working pressure, maximum	26.0 MPa (3,770 psi)
Flow	162 l/min (43 US gpm)
at	10 MPa (1,450 psi)
engine speed	32 r/s (1900 rpm)
Pilot system, working pressure	3.0 MPa (435 psi)
Cycle times	
Raise*	5.4 s
Tilt*	2.1 s
Lower, empty	2.5 s
Total cycle time	10.0 s

 $^{^{\}star}$ with load as per ISO 14397 and SAE J818

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.

L60F

Steering cylinders	2
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

Steering cylinders	2
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°

Steering cylinders	2
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°

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 (59.2 US gal)
Engine coolant	30 ∣ (7.9 US gal)
Hydraulic oil tank	90 I (23.8 US gal)
Transmission oil	20 (5.3 US gal)
Engine oil	20 (5.3 US gal)
Axle oil front/rear	24/24 (6.3/6.3 US gal)

L70F refill capacities

Fuel tank	224 (59.2 US gal)
Engine coolant	30 I (7.9 US gal)
Hydraulic oil tank	90 I (23.8 US gal)
Transmission oil	20 (5.3 US gal)
Engine oil	20 (5.3 US gal)
Axle oil front/rear	35/27 (9.3/7.1 US gal)

L90F refill capacities

Fuel tank	224 (59.2 US gal)
Engine coolant	30 I (7.9 US gal)
Hydraulic oil tank	90 I (23.8 US gal)
Transmission oil	20 (5.3 US gal)
Engine oil	20 (5.3 US gal)
Axle oil front/rear	35/27 (9.3/7.1 US gal)





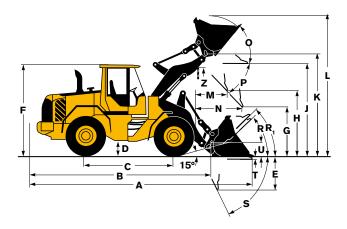
SPECIFICATIONS

Tires: 20.5 R25 L2

	Standa	rd boom		Long boom		
	L60F	L70F	L90F	L60F**	L70F	L90F
В	5990 mm 19'8"	6050 mm 19'10"	6120 mm 20'1"	6500 mm 21'4"	6530 mm 21'5 "	6550 mm 21'6"
С	3000 mm 9'10"	3000 mm 9'10"	3000 mm 9'10"	-	-	-
D	460 mm 1'6"	460 mm 1'6"	460 mm 1'6"	-	-	-
F	3220 mm 10'7 "	3280 mm 10'9"	3280 mm 10'9"	-	-	-
G	2130 mm 7'0"	2130 mm 7'0"	2130 mm 7'0"	-	-	-
J	3580 mm 11'9"	3580 mm 11'9"	3650 mm 12'0 "	4100 mm 13'5 "	4050 mm 13'3 "	4080 mm 13'5"
K	3870 mm 12'8"	3870 mm 12'8"	3960 mm 13'0 "	4390 mm 14'5 "	4340 mm 14'3 "	4390 mm 14'5"
0	56°	56°	57°	57°	52°	57°
P _{max}	45 °	46°	44°	44 °	45 °	-
R	42 °	42°	44 °	43°	44 °	47°
R ₁ *	47°	48°	49°	50°	52°	53°
S	79°	68°	67°	-	72°	65°
Т	93 mm 0'3.7"	110 mm 0'4.3"	110 mm 0'4.4"	130 mm 0'5.1"	118 mm 0'4.6"	116 mm 0'4.6"
U	450 mm 1'6"	450 mm 1'6 "	490 mm 1'7 "	590 mm 1'11"	560 mm 1'10"	590 mm 1'11"
X	1900 mm 6'3"	1930 mm 6'3"	1960 mm 6'5"	-	-	-
Υ	2440 mm 8'0"	2470 mm 8'1"	2490 mm 8'2"	-	-	
Z	3210 mm 10'6"	3200 mm 10'6"	3300 mm 10'10"	3600 mm 11'10"	3500 mm 11'6"	3660 mm 12'0"
a_2	5340 mm 17'6"	5350 mm 17'7 "	5370 mm 17'7"	-	-	-
a ₃	2900 mm 9'6"	2890 mm 9'6"	2880 mm 9'5"	-	-	-
a_4	±40 °	±40°	±40°	-	-	-

 $^{^{\}star}$ Carry position SAE $\,^{\star\prime})$ 20.5 R25 tires provide 50 mm (2") higher clearance over 17.5 R25 tires, which are not allowed on the long boom configuration.

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

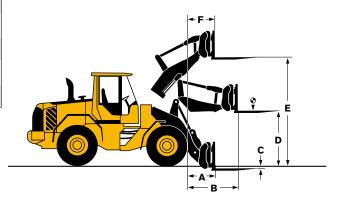


Tires: 20.5 R25 L2

	L60F	L70F	L90F
А	800 mm	830 mm	960 mm
	2'7"	2'9 "	3'2"
В	1560 mm	1600 mm	1700 mm
	5'1"	5'3 "	5'7"
С	-40 mm	-46 mm	-8 mm
	- 0'1.6"	- 0'1.8"	- 0'0.3"
D	1830 mm	1850 mm	1790 mm
	6'0"	6'1"	5'10"
E	3710 mm	3730 mm	3770 mm
	12'2"	12'3 "	12'4"
F	690 mm	760 mm	740 mm
	2'3"	2'6"	2'5"
Operating load* at load rated distance	4350 kg 9,590 lb 600 mm 2'0"	4900 kg 10,800 lb 600 mm 2'0"	5700 kg 12,570 lb 600 mm 2'0"
Operating weight	11 450 kg	12 950 kg	14 500 kg
	25,240 lb	28,550 lb	31,970 lb

Fork tine sales code L60F and L70F (R/L): WLA80042/80043 Fork tine sales code L90F (R/L): WLA80344/80345

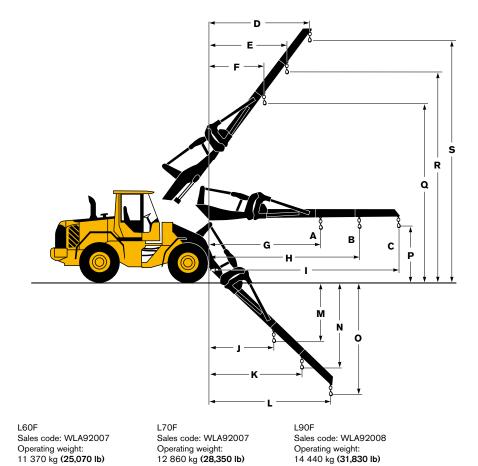
Length: 1200 mm (3'11")
Fork frame order no.: 80041
* acc. std EN 474-3, firm and level ground



Tires: 20.5 R25 L2

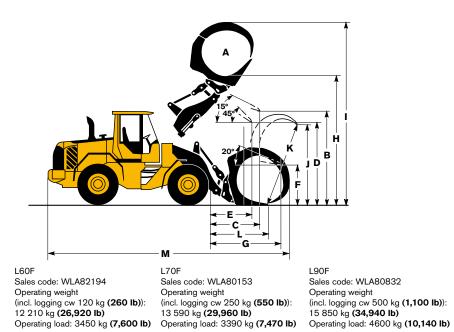
	L60F	L70F	L90F
A*	1800 kg	2150 kg	2760 kg
	3,970 lb	4,740 lb	6,080 lb
B*	1400 kg	1710 kg	2130 kg
	3,090 lb	3,770 lb	4,700 lb
C+	1150 kg	1400 kg	1740 kg
	2,540 lb	3,090 lb	3,840 lb
D	2580 mm	2720 mm	2640 mm
	8'6"	8'11"	8'8"
E	1990 mm	2110 mm	2040 mm
	6'6''	6'11"	6'8"
F	1450 mm	1550 mm	1440 mm
	4'9"	5'1"	4'9"
G	3270 mm	3320 mm	3280 mm
	10'9"	10'11"	10'9"
Н	4300 mm	4360 mm	4410 mm
	14'1"	14'4"	14'6 "
I	5440 mm	5490 mm	5550 mm
	17'10"	18'0"	18'3 "
J	910 mm	1270 mm	1370 mm
	3'0"	4'2"	4'6 "
К	1240 mm	1750 mm	1920 mm
	4'1"	5'9"	6'4"
L	1590 mm	2270 mm	2470 mm
	5'3"	7'5"	8'1"
М	2250 mm	2180 mm	2040 mm
	7'5"	7'2"	6'8"
N	3230 mm	3100 mm	3030 mm
	10'7"	10'2"	9'11"
0	4310 mm	4110 mm	4020 mm
	14'2"	13'5"	13'2"
Р	1520 mm	1520 mm	1530 mm
	5'0"	5'0''	5'0"
α	5300 mm	5290 mm	5330 mm
	17'5"	17'4"	17'6"
R	6180 mm	6170 mm	6290 mm
	20'3"	20'3"	20'8"
S	7150 mm	7120 mm	7250 mm
	23'5"	23'4"	23'9"

^{*} Carry position SAE



Tires: 20.5 R25 L2

	L60F	L70F	L90F
А	1,3 m ²	1,5 m ²	2,4 m ²
	14.0 ft²	16.1 ft²	25.8 ft ²
В	3420 mm	3380 mm	3420 mm
	11'3"	11'1"	11'3"
С	1480 mm	1600 mm	1830 mm
	4'10"	5'3"	6'0"
D	2940 mm	2870 mm	2790 mm
	9'8"	9'5"	9'2"
E	1170 mm	1270 mm	1440 mm
	3'10"	4'2"	4'9"
F	1540 mm	1500 mm	1440 mm
	5'1"	4'11"	4'9"
G	2350 mm	2440 mm	2770 mm
	7'9"	8'0"	9'1"
Н	4340 mm	4380 mm	4540 mm
	14'3"	14'4"	14'11"
1	5890 mm	6030 mm	6580 mm
	19'4"	19'9"	21'7 "
J	2000 mm	2140 mm	2790 mm
	6'7"	7'0"	9'2"
К	2080 mm	2370 mm	2990 mm
	6'10"	7'9"	9'10"
L	1700 mm	1800 mm	2160 mm
	5'7"	5'11"	7'1"
М	7830 mm	7960 mm	8420 mm
	25'8"	26'1"	27'8"



L60F

				GENERAL	PURPOSE			GRADING	LIGHT M	ATERIAL	
Tires 20.5 R25 L2											LONG BOOM**
		Bolt-on edges	Teeth	Bolt-on edges	Bolt-on edges	Bolt-on edges	Bolt-on edges		Bolt-on edges	Bolt-on edges	
Volume, heaped ISO/SAE	m³ yd³	1.9 2.5	1.8 2.4	2.1 2.7	2.1 2.7	2.3 3.0	2.3 3.0	1.6 2.1	3.1 4.1	5.0 6.5	-
Volume at 110% fill factor	m³ yd³	2.1 2.7	2.0 2.6	2.3 3.0	2.3 3.0	2.5 3.3	2.5 3.3	1.8 2.3	3.4 4.5	5.5 7.2	-
Static tipping load, straight	kg	8120	8270	8520	8030	8440	7930	7290	7740	7720	-1700
	Ib	17,910	18,240	18,780	17,700	18,600	17,480	16,080	17.070	17,020	-3,750
at 35° turn	kg	7260	7410	7640	7170	7560	7076	6540	6900	6850	-1570
	Ib	16,010	16,330	16,840	15,810	16,670	15,600	14,410	15,220	15,110	-3,460
at full turn	kg	7010	7150	7380	6920	7300	6820	6310	6660	6600	-1530
	Ib	15,450	15,770	16,270	15,250	16,100	15,050	13,920	14,670	14,540	-3,370
Breakout force	kN	80,1	84,2	82,9	76,1	78,9	72,8	62,4	61,7	53,9	+9,0
	lbf	18,020	18,930	18,640	17,110	17,750	16,360	14,020	13,870	12,090	+2,020
A	mm	7310	7420	7270	7370	7340	7440	7540	7650	7880	+520
	ft in	24'0 "	24'4 "	23'10 "	24'2 "	24'1"	24'5 "	24'9"	25'1"	25'10 "	+1'9 "
E	mm	1130	1260	1100	1190	1160	1250	1330	1470	1690	+40
	ft in	3'9"	4'1"	3'7"	3'11"	3'10"	4'1 "	4'4"	4'10 "	5'7 "	+0'2"
H*)	mm	2810	2740	2830	2770	2790	2730	2580	2590	2440	+530
	ft in	9'3 "	9'0"	9'3 "	9'1"	9'2"	8'11"	8'5"	8'6"	8'0''	+1'9 "
L	mm	5120	5120	5120	5180	5200	5250	4540	5290	5490	+520
	ft in	16'9 "	16'9 "	16'10"	17'0 "	17'1 "	17'3 "	14'11"	17'4 "	18'0 "	+1'9 "
M*)	mm	1040	1160	1010	1090	1050	1140	1100	1320	1500	-7,0
	ft in	3'5"	3'10"	3'4"	3'7 "	3'5"	3'9 "	3'7 "	4'4"	4'11"	-0'1"
N*)	mm	1590	1660	1580	1610	1590	1630	1510	1630	1680	+440
	ft in	5'3 "	5'5"	5'2"	5'3 "	5'3 "	5'4 "	4'11"	5'4"	5'6"	+1'5 "
٧	mm in	2500 98 "	2500 98 "	2500 98 "	2500 98 "	2500 98 "	2500 98 "	2500 98 "	2550 100 "	2650 104 "	-
a, clearance circle	mm ft in	11 590 38'0 "	11 660 38'3 "	11 590 38'0"	11 630 38'2"	11 620 38'1"	11 660 38'3 "	11 920 39'1"	11 830 38'10"	12 060 39'7 "	-
Operating weight	kg	11 800	11 740	11 600	11 840	11 640	11 890	11 630	11 940	12 220	+160
	Ib	26,020	25,890	25,580	26,110	25,670	26,210	25,650	26,320	26,950	+350

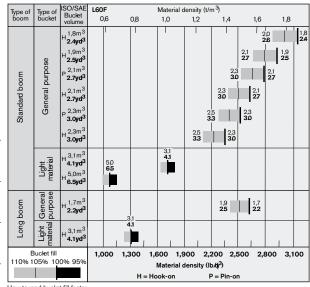
^{*)} Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge Measured at 45° dump angle. **) 17.5 R25 tires not allowed.

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 1,9 m³ (2.5 yd³) bucket carries 2,0 m³ (2.6 yd³). For optimal stability always consult the bucket selection chart.

Material	Bucket fill, %		Material density, ucket fill, % t/m³ lb		ISO/SAE bucket volume, m³ yd³		Actual volume, m ³ yd ³	
Earth/Clay	~ 110		~ 1.55	~ 2,610	1.9	2.5	~ 2.1	~ 2.8
Eartin/Clay	~ 110		~ 1.40	~ 2,360	2.1	2.8	~ 2.3	~ 3.0
			~ 1.30	~ 2,190	2.3	3.0	~ 2.5	~ 3.3
Sand/Gravel	~ 105		~ 1.65	~ 2,780	1.9	2.5	~ 2.0	~ 2.6
Saliu/Glavei	~ 105		~ 1.50	~ 2,530	2.1	2.8	~ 2.2	~ 2.9
			~ 1.35	~ 2,280	2.3	3.0	~ 2.1	~ 2.8
Aggragata	~ 100		~ 1.75	~ 2,950	1.9	2.5	~ 1.9	~ 2.5
Aggregate	~ 100	\vee	~ 1.55	~ 2,610	2.1	2.8	~ 2.1	~ 2.8
			~ 1.55	~ 2,610	2.3	3.0	~ 2.3	~ 3.0
Rock	≤100	\bigcirc	~ 1.70	~ 2,870	1.6	2.1	~ 1.6	~ 2.1



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

Supplemental Operating Data

Supplemental Operating Data										
T: 00 5 DOT 10		Standar	Standard boom							
Tires 20.5 R25 L2		17.5 R25 L2	600/65 R25	600/65 R25						
Width over tires	mm	-130	+60	+60						
	in	-5"	+2"	+2 "						
Ground clearance	mm	-60	-20	-20						
	in	-2 "	-1"	-1"						
Tipping load, full turn	kg	-310	+130	+110						
	lb	- 680	+290	+240						
Operating weight	kg	-560	+240	+240						
	Ib	-1 230	+ 530	+530						

L70F

		GENERAL PURPOSE							LIGHT M	IATERIAL	AL	
Tires 20.5 R25 L2											LONG BOOM	
		Bolt-on edges	Teeth	Bolt-on edges	Bolt-on edges	Bolt-on edges	Bolt-on edges		Bolt-on edges	Bolt-on edges		
Volume, heaped ISO/SAE	m³ yd³	2.1 2.7	2.0 2.6	2.3 3.0	2.3 3.0	2.4 3.1	2.4 3.1	2.2 2.9	3.4 4.4	6.4 8.4	-	
Volume at 110% fill factor	m³ yd³	2.3 3.0	2.2 2.9	2.5 3.3	2.5 3.3	2.6 3.5	2.6 3.5	2.4 3.2	3.7 4.9	7.0 9.2	-	
Static tipping load, straight	kg	9250	9420	9770	9180	9730	9150	7510	8780	8350	-1770	
	Ib	20,410	20,780	21,530	20,240	21,450	20,160	16,560	19,370	18,410	-3,900	
at 35° turn	kg	8250	8410	8730	8170	8690	8140	6650	7800	7330	-1620	
	Ib	18,180	18,540	19,240	18,020	19,160	17,950	14,650	17,190	16,170	-3,570	
at full turn	kg	7950	8110	8420	7870	8380	7840	6390	7500	7030	-1580	
	Ib	17,520	17,880	18,570	17,360	18,490	17,290	14,090	16,550	15,510	-3,480	
Breakout force	kN	90.3	94.7	95.4	86.7	93.5	85.1	62.8	71.8	53.9	-2.0	
	lbf	20,310	21,280	21,450	19,490	21,030	19,130	14,120	16,150	12,130	-450	
А	mm	7450	7570	7390	7510	7420	7530	7920	7750	8300	+470	
	ft in	24'5 "	24'10"	24'3 "	24'8"	24'4 "	24'9 "	26'0"	25'5 "	27'3 "	+1'7 "	
E	mm	1180	1300	1130	1240	1150	1260	1680	1470	1970	+30	
	ft in	3'11"	4'3"	3'8"	4'1"	3'9 "	4'2"	5'6"	4'10 "	6'6"	+0'1"	
H*)	mm	2750	2680	2790	2710	2770	2700	2350	2520	2150	+490	
	ft in	9'0 "	8'10"	9'2"	8'11"	9'1"	8'10"	7'9 "	8'3 "	7'1"	+1'7 "	
L	mm	5220	5220	5220	5280	5250	5310	4710	5450	5780	+470	
	ft in	17'1 "	17'1"	17'1 "	17'4 "	17'3 "	17'5 "	15'6 "	17'10 "	19'0"	+1'7 "	
M*)	mm	1140	1250	1090	1180	1110	1200	1350	1350	1730	-20	
	ft in	3'9 "	4'1"	3'7 "	3'10 "	3'8"	3'11"	4'5 "	4'5 "	5'8"	-0'1"	
N*)	mm	1650	1720	1620	1660	1630	1670	1570	1680	1730	+400	
	ft in	5'5 "	5'8"	5'4 "	5'6"	5'4"	5'6 "	5'2"	5'6"	5'8"	+1'4 "	
V	mm in	2550 100 "	2550 100 "	2550 100 "	2550 100 "	2550 100 "	2550 100 "	2650 104 "	2650 104 "	2750 108 "	-	
a ₁ clearance circle	mm ft in	11 690 38'4"	11 760 38'7 "	11 670 38'3 "	11 720 38'5 "	11 680 38'4"	11 730 38'6 "	12 320 40'5 "	11 980 39'4"	12 410 40'9"	-	
Operating weight	kg	13 370	13 300	13 160	13 410	13 180	13 430	13 670	13 620	14 160	+250	
	Ib	29,490	29,330	29,020	29,580	29,070	29,620	30,140	30,030	31,230	+550	

^{*)} Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge. Measured at 45° dump angle.

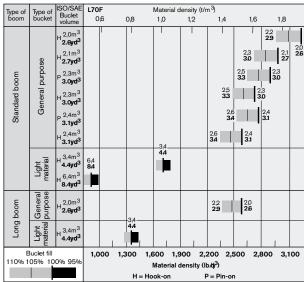
Note: This only applies to genuine Volvo attachments.

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 $\sim 105\%$. 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	Bucket	fill, %	Materi densit t/m ³		buc	/SAE ket volume, yd ³	Actua m ³	il volume, yd³
Earth/Clay	~ 110		~ 1.55	~ 2,610	2.1	2.8	~ 2.3	~ 3.0
Ear III/ Clay	~ 110	7	~ 1.45	~ 2,440	2.3	3.0	~ 2.5	~ 3.3
			~ 1.40	~ 2,360	2.4	3.1	~ 2.6	~ 3.4
Sand/Gravel	~ 105	1	~ 1.60	~ 2,700	2.1	2.8	~ 2.2	~ 2.9
Sanu/Graver	~ 103		~ 1.50	~ 2,530	2.3	3.0	~ 2.4	~ 3.1
			~ 1.45	~ 2,440	2.4	3.1	~ 2.5	~ 3.3
Aggregate	~ 100		~ 1.80	~ 3,030	2.1	2.8	~ 2.1	~ 2.8
Aggregate	~ 100	\vee	~ 1.70	~ 2,870	2.3	3.0	~ 2.3	~ 3.0
			~ 1.60	~ 2,700	2.4	3.1	~ 2.4	~ 3.1
Rock	≤100		~ 1.70	~ 2,870	1.6	2.1	~ 1.6	~ 2.1

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



How to read bucket fill factor

Supplemental Operating Data

Time - 00 F D0F 10		Standard boom	Long boom
Tires 20.5 R25 L2		600/65 R25	600/65 R25
Width over tires	mm	+60	+60
	in	+2"	+2"
Ground clearance	mm	-20	-20
	in	- 1"	- 1"
Tipping load, full turn	kg	+150	+130
	Ib	+330	+290
Operating weight	kg	+240	+240
	Ib	+530	+530

L90F

				GEN	ERAL PURP	OSE			LIGHT N	IATERIAL	
Tires 20.5 R25 L2											LONG BOOM
		Bolt-on edges	Teeth	Bolt-on edges	Bolt-on edges	Bolt-on edges	Bolt-on edges	Bolt-on edges	Bolt-on edges	Bolt-on edges	
Volume, heaped ISO/SAE	m³ yd³	2.3 3.0	2.5 3.3	2.5 3.3	2.5 3.3	2.6 3.4	2.7 3.5	2.7 3.5	4.1 5.4	7.0 9.2	-
Volume at 110% fill factor	m³ yd³	2.5 3.3	2.8 3.6	2.8 3.6	2.8 3.6	2.9 3.7	3.0 3.9	3.0 3.9	4.5 5.9	7.7 10.1	-
Static tipping load, straight	kg Ib	10 700 23,600	10 740 23,690	11 210 24,720	10 520 23,190	10 550 23,260	10 430 23,000	11 180 24,650	10 130 22,340	9840 21,690	-1650 -3,640
at 35° turn	kg	9470	9500	9 940	9300	9320	9200	9910	8920	8610	-1500
	Ib	20,870	20,950	21,920	20,500	20,550	20,290	21,860	19,670	18,980	-3,310
at full turn	kg	9100	9140	9570	8940	8960	8840	9540	8560	8240	-1460
	Ib	20,070	20,150	21,100	19,710	19,750	19,490	21,040	18,880	18,180	-3,220
Breakout force	kN lbf	113.1 25,420	112.4 25,260	118.5 26,650	108.5 24,400	106.5 23,940	104.5 23,500	113.7 25,560		73.0 16,400	+2.0 +450
A	mm	7550	7810	7510	7610	7640	7670	7560	8000	8300	+410
	ft in	24'9 "	25'8"	24'7 "	25'0"	25'1 "	25'2"	24'10 "	26'3 "	27'3 "	+1'4 "
E	mm	1200	1430	1160	1250	1280	1300	1200	1600	1860	-6.0
	ft in	3'11"	4'8"	3'9"	4'1"	4'2"	4'3"	3'11"	5'3 "	6'1"	-0'0"
H*)	mm	2820	2650	2850	2780	2750	2740	2820	2530	2320	+420
	ft in	9'3 "	8'8"	9'4"	9'1"	9'0 "	9'0"	9'3 "	8'4"	7'7 "	+1'5"
L	mm	5380	5460	5370	5430	5460	5490	5430	5560	5760	+420
	ft in	17'8 "	17'11"	17'7 "	17'10"	17'11"	18'0 "	17'10"	18'3"	18'11"	+1'5 "
M*)	mm	1130	1310	1090	1170	1180	1210	1130	1470	1670	-50
	ft in	3'8"	4'4"	3'7 "	3'10"	3'10"	3'11"	3'8"	4'10"	5'6"	-0'2"
N*)	mm	1700	1770	1680	1720	1720	1730	1690	1740	1730	+360
	ft in	5'7 "	5'10"	5'6"	5'8"	5'8"	5'8"	5'7"	5'8"	5'8"	+1'2 "
V	mm in	2650 104 "	2750 108 "	2750 108 "	2750 108 "	3000 118 "	-				
a, clearance circle	mm ft in	11 860 38'11"	12 000 39'4"	11 840 38'10"	11 890 39'0 "	11 900 39'1"	12 010 39'5"	11 950 39'3 "	12 200 40'0"	12 600 41'4 "	-
Operating weight	kg	15 170	15 170	14 980	15 220	15 250	15 340	14 970	15 460	15 890	+250
	Ib	33,450	33,450	33,040	33,550	33,630	33,830	33,010	34,090	35,040	+550

 $^{^{\}circ}$) Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge. Measured at 45° dump angle.

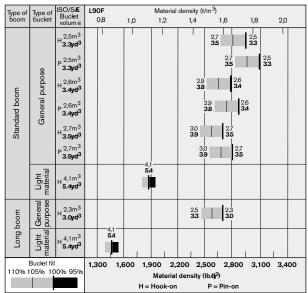
Note: This only applies to genuine Volvo attachments.

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 (3.5 yd³) bucket carries 2.8 m³ (3.7 yd³). For optimal stability always consult the bucket selection chart.

		Material density,	ISO/SAE bucket volume,	Actual volume,
Material	Bucket fill, %	t/m³ lb/yd³	m³ yd³	m³ yd³
Earth/Clay	~110	~ 1.80 ~ 3,030	2.5 3.3	~ 2.7 ~ 3.5
Eartii/Ciay	~110	7 ~ 1.70 ~ 2,870	2.6 3.4	~ 2.9 ~ 3.8
		~ 1.65 ~ 2,780	2.7 3.5	~ 3.0 ~ 3.9
Sand/Gravel	~ 105	~ 1.80 ~ 3,030	2.5 3.3	~ 2.6 ~ 3.4
Sand/ Graver	~ 105	~ 1.70 ~ 2,870	2.6 3.4	~ 2.7 ~ 3.5
		~ 1.65 ~ 2,780	2.7 3.5	~ 2.8 ~ 3.7
Aggragata	~ 100	~ 1.80 ~ 3,030	2.5 3.3	~ 2.5 ~ 3.3
Aggregate	~ 100	~ 1.70 ~ 2,870	2.6 3.4	~ 2.6 ~ 3.4
		~ 1.65 ~ 2,780	2.7 3.5	~ 2.7 ~ 3.5
Rock	≤100	~ 1.80 ~ 3,030	2.2 2.9	~ 2.2 ~ 2.9

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



How to read bucket fill factor

Supplemental Operating Data

Tires 20.5 R25 L2		Standard boom	Long boom
Tires 20.5 R25 L2		650/65 R25	650/65 R25
Width over tires	mm	+200	+200
	in	+8"	+8"
Ground clearance	mm	0	0
	in	0 "	0 "
Tipping load, full turn	kg	+400	+360
	Ib	+880	+790
Operating weight	kg	+600	+600
	Ib	+1,320	+1,320

STANDARD EQUIPMENT

Service and maintenance	L60F	L70F	L90F
Engine oil remote drain and fill	•	•	•
Transmission oil remote drain and fill	•	•	•
Lubrication manifolds, ground accessible	•	•	•
Pressure test ports: transmission and hydraulic, quick connects	•	•	•
Service platforms with anti-slip surfaces	•	•	•
Toolbox, lockable			•

Engine	L60F	L70F	L90F
Three stage air cleaner, pre-cleaner, primary and secondary filter	•	•	•
Indicator glass for coolant level	•	•	•
Preheating of induction air	•	•	•
Exhaust heat insulation	•	•	•
Fuel pre-filter with water trap	•	•	•
Fuel filter	•	•	•
Fuel fill strainer	•	•	•
Crank case breather oil trap	•	•	•
Muffler, spark-arresting	•	•	•
Reversible cooling fan	•	•	•

Electrical system	L60F	L70F	L90F
24 V, pre-wired for optional accessories	•	•	•
Alternator 24V/ 80A		•	•
Battery disconnect switch with removable key	•	•	•
Exchange battery		•	•
Battery boxes, steel	•	•	•
Fuel gauge		•	•
Hour meter	•	•	•
Electric horn		•	•
Instrument cluster: Fuel level Transmission temperature Coolant temperature Instrument lighting	•	•	•
Lighting: • Twin halogen front headlights with high and low beams • Parking lights • Double brake and tail lights • Turn signals with flashing hazard light function • Halogen work lights (2 front and 2 rear)	•	•	•

Contronic monitoring system	L60F	L70F	L90F
Monitoring and logging of machine data	•	•	•
Contronic display	•	•	•
Fuel consumption	•	•	•
Ambient temperature	•	•	•
Clock	•	•	•
Test function for warning and indicator lights	•	•	•
Brake test	•	•	•
Test function, sound level at max fan speed		•	
Warning and indicator lights: Battery charging Parking brake	•	•	•
Warning and display message: • Engine coolant temperature • Charge air temperature • Engine oil temperature • Engine oil pressure • Transmission oil temperature • Transmission oil temperature • Transmission oil pressure • Hydraulic oil temperature • Brake pressure • Parking brake applied • Brake charging • Overspeed at direction change • Axle oil temperature • Steering pressure • Crank case pressure • Attachment lock open	•	•	•
Level warnings: • Fuel level • Engine oil level • Engine coolant level • Transmission oil level • Hydraulic oil level • Washer fluid level	•	•	•

	L60F	L70F	L90F
Engine torque reduction in case of malfunction indication:	•	•	•
High engine coolant temperature			
High engine oil temperature			
Low engine oil pressure			
High crank case pressure			
High charge air temperature			
Engine shutdown to idle in case of malfunction indication:	•	•	•
High transmission oil temperature			
Slip in transmission clutches			
Key pad, background lit	•		•
Start interlock when gear is engaged	•	•	•

Drivetrain	L60F	L70F	L90F
Automatic Power Shift	•	•	•
Fully automatic gear shifting, 1-4	•	•	•
PWM-controlled gear shifting	•	•	•
Forward and reverse switch by hydraulic lever console	•	•	•
Indicator glass for transmission oil level	•	•	•
Differentials: Front, 100% hydraulic diff lock. Rear, conventional	•	•	•

Tires	L60F	L70F	L90F
17.5R25 (20.5R25 required with long boom)	•		
20.5R25		•	•

Brake system	L60F	L70F	L90F
Dual brake circuits	•		•
Dual brake pedals	•	•	•
Secondary brake system	•	•	•
Parking brake, electrical-hydraulic	•		•
Brake wear indicators	•	•	•
Outboard mounted oil circulation-cooled wet disc brakes on all four wheels	•	•	•

Cab	L60F	L70F	L90F
ROPS (ISO 3471), FOPS (ISO 3449)	•	•	•
Single key kit door/start	•	•	•
Acoustic inner lining	•	•	•
Ashtray	•	•	•
Cigarette lighter, 24 V power outlet	•	•	•
Lockable door	•	•	•
Cab heating with fresh air inlet and defroster	•		•
Fresh air inlet with two filters	•	•	•
Automatic heat control	•	•	•
Floor mat	•	•	•
Dual interior lights	•	•	•
Dual interior rearview mirrors	•	•	•
Dual exterior rearview mirrors	•	•	•
Sliding window, right side	•		•
Sliding glass, door	•	•	•
Tinted safety glass	•		•
Retractable seatbelt (SAE J386)	•	•	•
Adjustable steering wheel	•	•	•
Storage compartment	•	•	•
Document pocket	•	•	•
Sun visor	•	•	•
Beverage holder	•		•
Windshield washer front and rear	•	•	•
Windshield wipers front and rear	•	•	•
Interval function for front and rear wipers	•	•	•
Foot step, right side (toolbox lockable included)	•	•	
Foot steps, front frame	•	•	•

Hydraulic system	L60F	L70F	L90F
Main valve, double acting 2-spool with hydraulic pilots	•	•	•
Variable displacement axial piston pumps (2) for: • Working hydraulics, pilot hydraulics, steering system, brakes • Cooling fan, brakes	•	•	•
Hydraulic control levers	•	•	•
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	L60F	L70F	L90F
Basic fenders with wideners	•	•	•
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	•	•	•

Protective equipment	L60F	L70F	L90F
Cover plates, rear frame	•	•	•

Other equipment	L60F	L70F	L90F
Decals, USA	•	•	•
CareTrack, Satellite	•	•	•

OPTIONAL EQUIPMENT

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

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

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

	L60F	L70F	L90F
Working lights, attachments	•	•	•
Working lights front, high intensity discharge (HID)	•	•	•
Working lights front, on cab, dual	•	•	•
Working lights rear, on cab, dual	•	•	•
Working lights front, extra	•	•	•

Cab	L60F	L70F	L90F
Automatic Climate Control, ACC	•	•	•
Automatic Climate Control, ACC, corr prot. condenser	•	•	•
Asbestos dust protection filter	•	•	•
Cab air pre-cleaner, Sy-Klone type	•	•	•
Carbon filter	•	•	•
Fan for AC condenser	•	•	•
Lunch box holder	•	•	•
Armrest, operator's seat, ISRI, left only	•	•	•
Armrest, operator's seat, KAB, left only	•	•	•
Operator's seat, KAB, air susp, heavy-duty, not for CDC	•	•	•
Operator's seat, KAB, air susp, heavy-duty, for CDC and "elservo"		•	•
Operator's seat, ISRI, air susp, heat, high back	•	•	•
Operator's seat, ISRI, heated, high back	•	•	•
Operator's seat, ISRI, low back	•	•	•
Radio installation kit incl. 11 amp 12 volt outlet, left-side	•	•	•
Radio installation kit incl. 11 amp 12 volt outlet, right-side	•	•	•
Radio installation kit, 20 amp, 12V	•	•	•
Radio with CD player	•	•	•
Seatbelt, 3", (width 75 mm / 3 in)	•	•	•
Steering wheel knob	•	•	•
Sun blinds, rear windows		•	•
Sun blinds, side windows		•	•
Timer cab heating	•	•	•

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

Brake system	L60F	L70F	L90F
Parking brake alarm, audible	•	•	•
Parking brake alarm, audible (connection to buzzer included)	•	•	•

Hydraulic system	L60F	L70F	L90F
Boom suspension system	•	•	•
Attachment bracket, cast, visibility-optimized			•
Separate attachment locking, standard boom			•
Separate attachment locking, long boom	•	•	•
Adjustable flow for 3rd hydraulic function	•	•	
Arctic kit, attachment locking hoses		•	•
Arctic kit, pilot hoses and brake accum. incl. hydr. oil	•	•	•
Detent for 3rd hydraulic function		•	•
Hydraulic fluid, biodegradable, Panolin	•	•	•
Hydraulic function, 3rd	•	•	•
Hydraulic function, 3rd for long boom	•	•	•
Hydraulic function, 3rd-4th	•	•	•
Hydraulic function, 3rd-4th for long boom	•	•	•
Single acting lifting function	•	•	•
Single lever control	•	•	•
Single lever control for 3rd hydr. function	•	•	•

External equipment	L60F	L70F	L90F
Cab ladder, rubber suspended	•	•	•
Fenders, full cover, rear for 80-series tires	•		•
Mudflap kit for fenders, full cover for 80-series tires	•		
Fenders, basic, short, front/rear for 65-series tires	•	•	•
Fenders, full cover, front/rear for 65-series tires	•	•	•
Mudflap kit for fenders, full cover for 65-series tires	•	•	•
Deleted front fenders and rear fender wideners	•	•	•
Long boom	•	•	•

Protective equipment	L60F	L70F	L90F
Bellyguard front	•	•	•
Bellyguard rear	•	•	•
Guards for front head lights	•	•	•
Guards for radiator grill	•	•	•
Guards for tail lights	•	•	•
Guards for tail lights, heavy-duty	•	•	•
Guards for grease nipples		•	•
Anti-theft device	•	•	•
Cover plate, under cab	•	•	•
Wheel/axle seal guards	•	•	•
Windows, side and rear guards	•	•	•
Windshield guard	•	•	•
Center hinge and rear frame guard	•	•	•
Corrosion protection, painting of machine	•	•	•
Boom cylinder hose and tube guards	•	•	•
Boom cylinder hose and tube guards for long boom	•	•	•

Other equipment	L60F	L70F	L90F
Comfort Drive Control (CDC)	•	•	•
Counterweight, logging	•	•	•
Secondary steering with automatic test function	•	•	•
Decals English/Spanish	•	•	•
Noise reduction kit, Blauer Engel incl. decal	•	•	•
Sign, slow moving vehicle	•	•	•

Tires and Rims	L60F	L70F	L90F
600/65R25	•		
600/65R25		•	
600/65R25, 650/65R25			•
•L2	•	•	•
•L3	•	•	•
• L4	•	•	•
• L5	•	•	•

Attachments	L60F	L70F	L90F
Buckets:	•	•	•
Straight with teeth or bolt-on edges			
Spade nose			
High tipping			
• Light material			
• Grading			
Wear parts:	•		•
Bolt-on edge			
Bolt-on or weld-on bucket teeth			
Segments			
Log grapples	•	•	•
Fork equipment	•	•	•
Material handling arm	•	•	•
Snow blade	•	•	•
Broom	•	•	•
Sand spreading bucket	•	•	•
Bale clamp	•	•	•
Drum rotator	•	•	•



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