

VOLVO COMPACT WHEEL LOADERS

L40B, L45B



VOLVO

BUILT TO WORK.

Meet your most valuable performer: the Volvo L40B and L45B. Built to work all day, every day, each offers ideal size and a wide range of attachments for unmatched versatility. Loaded with power, yet efficient to operate, you're going to enjoy a new standard of productivity and profitability.

Take control of your productivity

For optimum traction in difficult terrain, the Volvo Model L40B and L45B feature 100% operator selectable differential locks in the front and rear axles - helping all wheels turn with the same speed. The servo-controlled hydraulic control valve features a proven, double-acting design for smooth control of all movements. Independent hydraulic pumps with load-sensing control improve precision hydraulic control while extending the life of components and reducing fuel consumption. For effortless handling, the ergonomic joystick controls multiple functions: lift, lower, float, dig and dump, forward, neutral, reverse and differential locks.

Giving you a needed lift

Experience the performance of Volvo's TP Linkage system for high breakout force, superior parallel fork loading action and safe visibility throughout the entire lift range. Loading operations are quick and efficient with optimum lifting height and fast cycle times. The counterweight is beveled on the lower side for ease of operation on extremely steep slopes or rough terrain.

Productivity starts with efficiency

The low-emission Volvo engine is not only high on power and output, it's low on fuel consumption for economical operation that increases profitability. A fuel filter and water separator protects the fuel-injection system. For maximum power and speed, enjoy automatic drive facility from a hydrostatic transmission that features an axial piston drive motor. The system's high pressure allows maximum speed - without the need to shift and regardless of traction. Advantages include less wear and optimum performance in all drive modes.

Loaded with versatility

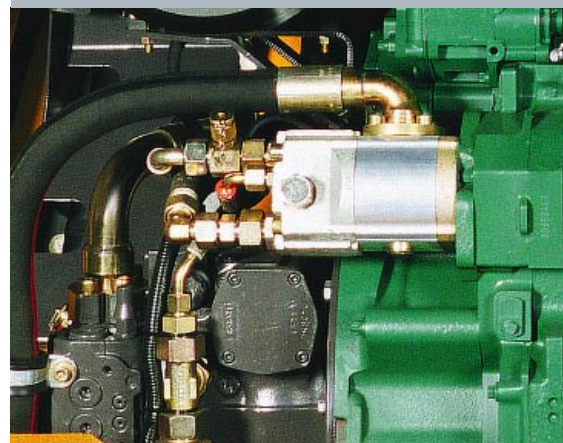
With a wide range of available Volvo attachments and a choice of two attachment carriers, the Volvo L40B and L45B deliver the versatility of an entire fleet of machines. Built of the finest quality and perfectly matched for your machine, genuine Volvo attachments help you take on any job. The quick-attach makes attachment hook-up quick and easy, right from the operator's seat. Standard hydraulic couplings on the carriers allow use of numerous hydraulic tools and attachments for even more productivity.



- Wide range of accessories available.



- Operator selectable differential locks provide optimal traction.



- Separate hydraulic pumps provide fast cycle times.



- Superb ground clearance, drive torque and traction.
- Patented Volvo loader linkage.



TOUGH WHERE IT COUNTS.

You make money working, not down for repair. That's why the L40B and L45B are built strong and sturdy from the ground up - to match high Volvo standards. When it's time for service, Volvo makes it fast and easy to get you back out there. We give you maximum uptime so you get maximum profits.

Volvo keeps you protected

Demand Volvo quality for the toughest of jobs. The L40B and L45B feature superior frame stability from a durable center articulating/oscillating joint. Navigate over difficult, uneven terrain with confidence, comfort and ease - with smooth steering, excellent power distribution and high ground contact. Special tires do not influence the steering angle or oscillation angle. For high-quality performance and long life, the oscillating joint features large, sealed hinge bushings and surface-hardened pins. A special shock absorber stabilizes oscillating movements for greater operator comfort. For maximum protection from damage, expensive downtime and repair, hydraulic hoses and electrical cables are routed through the central articulating/oscillating joint to the main control valve. The standard water separator prevents damage in injection pumps and injection nozzles for long life.

Your access to greater uptime

Easy access makes service quick and simple. All important service points, such as the radiator, battery and all filters, are grouped within easy reach and fully protected under the lockable engine hood. Perform quick service checks with an engine oil dipstick and a hydraulic oil sight gauge. Standard, easy-access test ports on all hydraulic components make maintenance fast and easy.

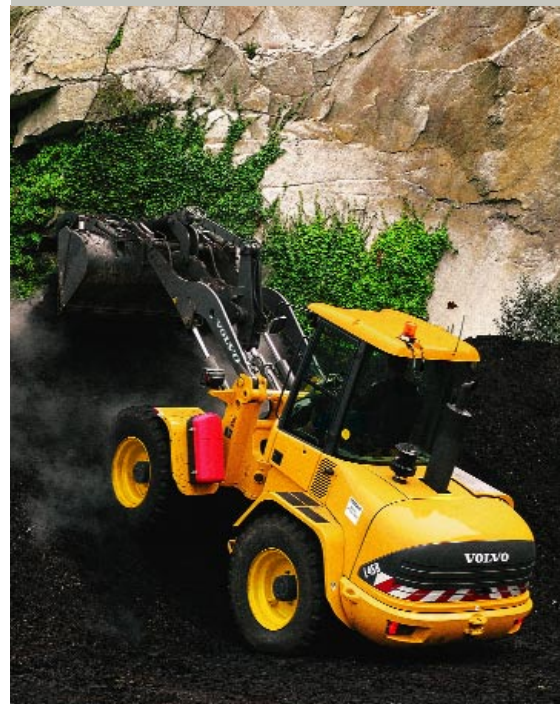
There's excellent side engine access to the double filter element located in the hydraulic tank. The air filter is not only easy to access and maintain, there's also an indicator light in the cab.

More quality. Built in

Look to the Volvo L40B and L45B for a compact wheel loader that stands up to today's jobsite conditions. The rugged, high-strength steel frame design offers secure mounting of components for durability and performance. Each machine is assembled using the latest, high-quality components - designed and built together from the ground up to guarantee the highest quality and reliability. From fabrication to finished product, every Volvo L40B and L45B must meet Volvo's demanding standards.



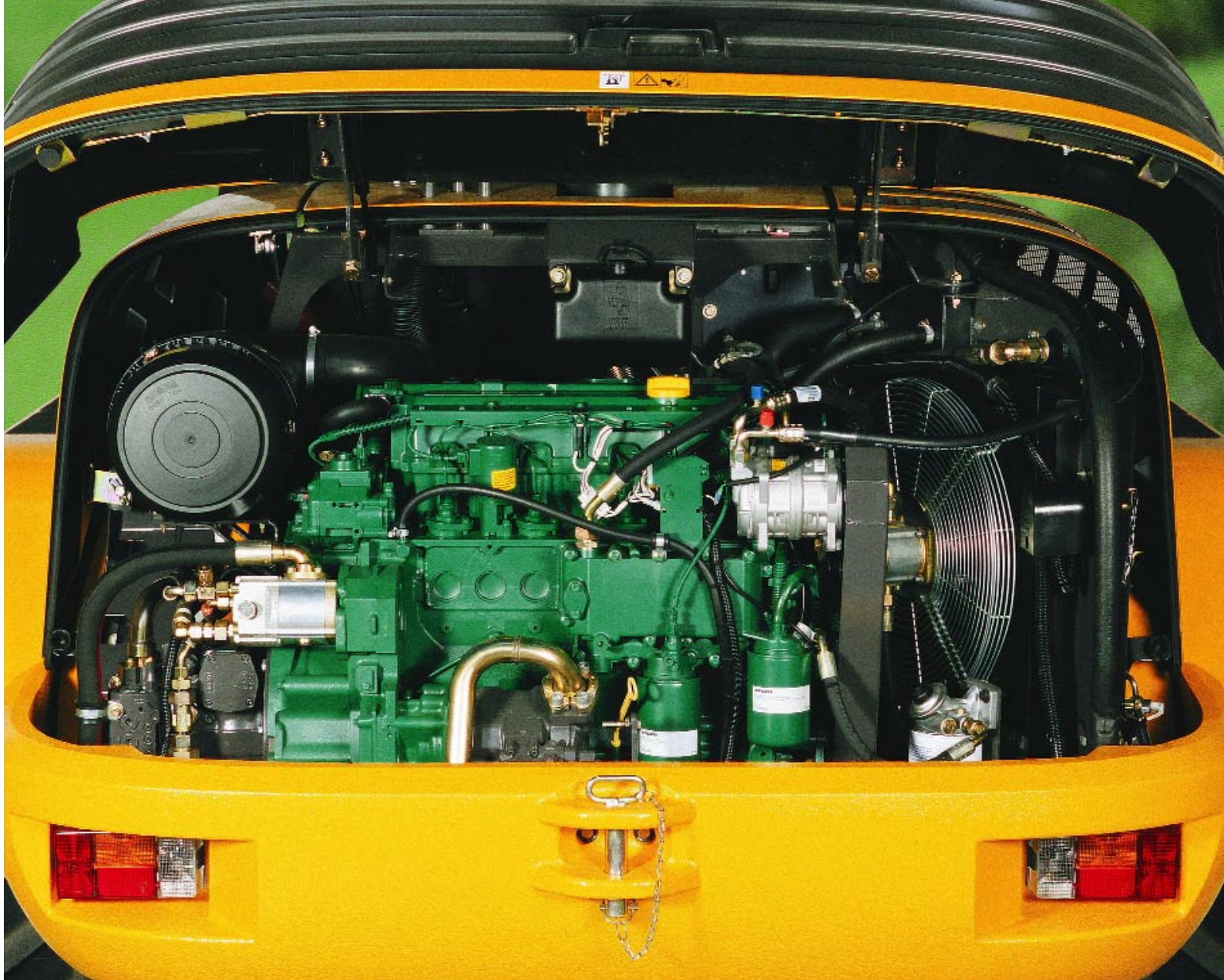
- Articulated frame for work in tight areas.



- Non-stop operation.



- Volvo durability.
- Easy service access to the engine compartment.



- Volvo quality and sturdiness.

GET COMFORTABLE WITH VOLVO SAFETY.

For an operator, your cab is your office. In the Volvo L40B and L45B, you've got the best seat on the jobsite. You're surrounded in comfort: with plenty of room and everything right where you want it. You can also relax, knowing you've got Volvo safety. Now that's the smart way to work.

Safe operation - for everyone

A safe jobsite starts with the operator. The L40B and L45B provide excellent visibility around the entire machine. Cab windows are large, offering a very large glazed surface area on all four sides. Excellent visibility improves safety for the operator, nearby objects and those working in the vicinity of the machine. The boom design with TP Linkage system and a quickcoupler provide improved visibility down to the attachment for a reduced risk of damage. The central electrical board, components, relays and fuses are located in a protected, safe location that's easy to check and access. The wiring harness is fixed to the chassis, housed in a protected, flexible conduit. This protects wiring against wear caused by vibrations, dust and heat. That means safer electronics, improved reliability and higher residual value.

Work in comfort

The Volvo comfort cab offers the finest work environment. The operator station has plenty of comfortable features including one of the most spacious cabs in its category. Operators of all heights and sizes will feel at ease for fatigue-free operation and greater productivity. Enjoy efficient climate control with comfortable heating, demisting and defrosting. Air-conditioning and the high-capacity, three-phase heating fan allow year-round productivity. Seven well-placed adjustable fresh air blowers keep you comfortable with fresh, filtered outside air. There's plenty of floor space and storage space. A large, lockable storage compartment offers a safe location for personal items such as a cell phone or other valuables.

You're safe with Volvo

Entering and exiting the cab is quick, safe and easy from both sides of the machine. You always have three points of contact, climbing the large anti-slip steps and gripping the wide, ergonomic handrails. All cabs are ROPS/FOPS certified for optimum safety against falling objects or in case of accidental roll-over. Quiet cab sound proofing meets cab sound regulations for a comfortable environment and fatigue-free operation. To protect against vandalism, all critical components, such as oil fills, batteries and maintenance points, are located under the lockable engine hood.



- ROPS/TOPS certified cab for safe operation.



- Ergonomic control for multiple functions.



- Optional protection package.



- Easy-view instrument panel.
- Spacious cab offers comfort and visibility.



SPECIFICATIONS

Engine

Volvo in-line 4-cylinder, 4 stroke, direct injection diesel engine with turbocharging, water cooled.

Air cleaning: 1. Pre cleaner with ejector / 2. Paper filter with indicator in cab / 3. Safety filter.

| | L40B | L45B |
|------------------------------|----------------------|----------------------|
| Engine | D5DCAE2 | D5DCBE2 |
| Gross power @ | 35 r/s (2100 r/min) | 35 r/s (2100 r/min) |
| SAE J1995 | 97 hp (71 kW) | 102 hp (75 kW) |
| Net power @ | 2100 r/min | 2100 r/min |
| SAE J1349 - DIN ISO 1585 | 94 hp (69 kW) | 99 hp (73 kW) |
| Max. torque @ | 1400 r/min | 1400 r/min |
| SAE J1349 net - DIN ISO 1585 | 277 lbf (375 Nm) | 332 lbf (450 Nm) |
| Cubic capacity | 1.26 US gal (4.76 l) | 1.26 US gal (4.76 l) |
| Bore | 4.25" (108 mm) | 4.25" (108 mm) |
| Stroke | 5.12" (130 mm) | 5.12" (130 mm) |

Electrical system

| | L40B | L45B |
|----------------------|-------------|-------------|
| Rated voltage | 24 V | 24 V |
| Battery voltage | 2 x 12 V | 2 x 12 V |
| Battery capacity | 2 x 74 Ah | 2 x 74 Ah |
| Alternator rating | 1540/55 W/A | 1540/55 W/A |
| Starter motor output | 4,0 kW | 4,0 kW |

Drivetrain

Transmission: hydrostatic transmission, full power shift under load, both when changing direction (forward and reverse) and between ranges. Maximum drawbar force can be achieved in all ranges.

Inch/brake pedal for variable machine speed control and power transfer to bucket hydraulics at constant engine rpm.

Multi-function lever for change of direction, differential lock and use of the servo-control.

| | L40B | L45B |
|----------------------------|-----------------|-----------------|
| Oscillation at wheel, max. | 12.2" (310 mm) | 12.2" (310 mm) |
| Track | 69.3" (1760 mm) | 69.3" (1760 mm) |
| Angle of oscillation | ±10° | ±10° |
| Tires: Size | 15.5-25 | 15.5-25 |
| Rim | 12 x 25 | 12 x 25 |

Differential locks: hydraulically actuated 100% differential locks in both axles. Frame: solid front and rear frame, robot-welded. Articulating/oscillating joint for optimum manoeuvrability and traction.

Speed, max. Standard

| | L40B | L45B |
|---------------------------|--------------------|--------------------|
| 1st range forward/reverse | 3.7 mph (6 km/h) | 3.7 mph (6 km/h) |
| 2nd range forward/reverse | 12.4 mph (20 km/h) | 12.4 mph (20 km/h) |

Speed, max. High Speed

| | L40B | L45B |
|---------------------------|--------------------|--------------------|
| 1st range forward/reverse | 3.7 mph (6 km/h) | 3.7 mph (6 km/h) |
| 2nd range forward/reverse | 8.1 mph (13 km/h) | 21.7 mph (35 km/h) |
| 3rd range forward/reverse | 21.7 mph (35 km/h) | 21.7 mph (35 km/h) |

Service fill capacities

| | L40B | L45B |
|---------------------------|-----------------------|-----------------------|
| Engine | 3.7 US gal (14.0 l) | 3.7 US gal (14.0 l) |
| Fuel tank | 34.3 US gal (130.0 l) | 34.3 US gal (130.0 l) |
| Front axle, total | 2 US gal (7.9 l) | 2 US gal (7.9 l) |
| Rear axle, incl. drop-box | 2.6 US gal (9.9 l) | 2.6 US gal (9.9 l) |
| Hydraulic tank, incl. | | |
| hydraulic system | 31.7 US gal (120.0 l) | 31.7 US gal (120.0 l) |

Braking system

Service brake: reliable, dual braking system, disc brake hydraulically actuated via pump accumulator, acting upon all four wheels.

1. Wear-free, hydrostatic inching brake.
 2. Central disc brake, actuated via "inch/brake pedal." First stage of pedal application actuates the inching facility, the last third of pedal application applies the central disc brake.
 3. High speed version: Inch/brake pedal and additional pedal both acting on the oil immersed multi-disk brake.
- Parking brake: central disc brake, acting upon all four wheels.

Hydraulic system

Load-sensing hydraulic system with self-controlling power distribution. Thermostatically controlled oil circuit with integrated cooling system. Hydraulic control valve: Servo-controlled, double acting control valve three spool system, with primary and secondary pressure valves.

1. Lifting function / 2. Tilting function / 3. Additional function for hydraulic QC. Unlock, neutral, lock. Preparation for operating hydraulic attachments with this function is available as an option.
- Hydraulic oil filter: Combined suction and return-filtration cartridge with a 10 µm filter. The filter can be replaced without emptying the hydraulic oil tank. Hydraulic pump: axial piston pump.

Hydraulic pump:

| | L40B | L45B |
|-----------------------|---------------------------|---------------------------|
| Flow | 28 US gal/min (106 l/min) | 28 US gal/min (106 l/min) |
| @ engine rpm | 2100 r/min (35 r/s) | 2100 r/min (35 r/s) |
| Relief valve pressure | 3336 psi (23 MPa) | 3616 psi (25 MPa) |

Steering

Load-sensing hydrostatic steering. Central articulating/oscillating joint with damping effect. Steering pump: gear-type pump controlled by priority valve. Steering cylinder: 2 double-acting steering cylinders.

Steering:

| | L40B | L45B |
|-----------------------|------|------|
| Angle of articulation | ±40° | ±40° |

Steering pump:

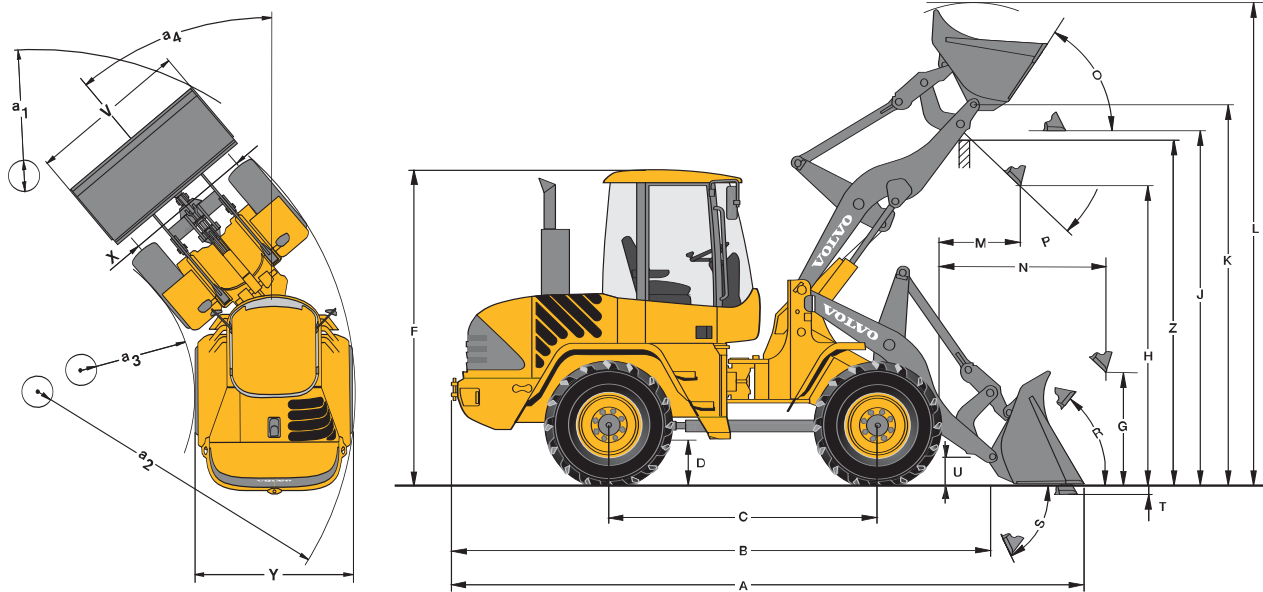
| | L40B | L45B |
|-----------------------|------------------------------|------------------------------|
| Flow | 11.5 US gal/min (43.5 l/min) | 11.5 US gal/min (43.5 l/min) |
| Engine rpm | 2100 r/min (35 r/s) | 2100 r/min (35 r/s) |
| Relief valve pressure | 2466 psi (17 MPa) | 2466 psi (17 MPa) |





Linkage

Linkage system: TP / Lift cylinders: 2 / Tilt cylinders: 1.


| | L40B | L45B |
|-----------------------|-------|-------|
| Lift time (loaded) | 6,0 s | 6,0 s |
| Lowering time (empty) | 5,0 s | 5,0 s |
| Dump time | 1,5 s | 1,5 s |
| Crowd time | 1,8 s | 1,8 s |

SPECIFICATIONS - L40B

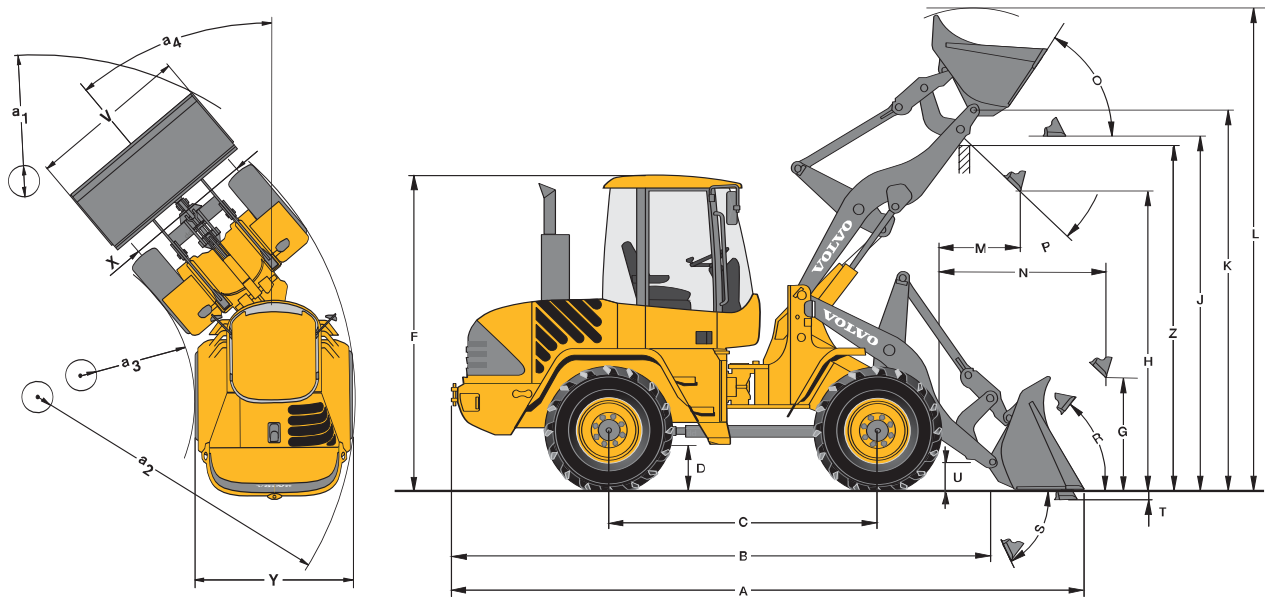






| Data according to bucket type | | Gen. Purpose | | Light material | |
|--|---|---|---|---|---|
| | |  |  |  |  |
| L40B with TP Linkage and 15.5-25 tires | | | | | |
| Capacity heaped | yd ³ (m ³) | 1.6 1.2 | 1.8 1.4 | 2.1 1.6 | |
| Material density | lb/yd ³ (kg/m ³) | 3203 1900 | 2697 1600 | 2360 1400 | |
| Static tipping load, straight (ISO / DIS) | lb (kg) | 11574 5250 | 11464 5200 | 11354 5150 | |
| Static tipping load, full turn 40° (ISO / DIS) | lb (kg) | 10252 4650 | 10141 4600 | 10031 4550 | |
| Hydraulic lifting capacity, max. | lbf (kN) | 14725 65,5 | 14500 64,5 | 14275 63,5 | |
| Breakout force | lbf (kN) | 13713 61 | 12589 56 | 11578 51,5 | |
| A Total length | ft/ins (mm) | 19'2" 5850 | 19'5" 5930 | 19'8" 6000 | |
| L Lift height, max. | ft/ins (mm) | 14'10" 4520 | 15'1" 4610 | 15'4" 4680 | |
| V Bucket width | ft/ins (mm) | 7'5" 2250 | 7'5" 2250 | 7'5" 2250 | |
| a ₁ Clearance circle | ft/ins (mm) | 31'4" 9550 | 31'6" 9590 | 31'7" 9630 | |
| T Digging depth | ft/ins (mm) | 0'6" 160 | 0'6" 160 | 0'6" 160 | |
| H Dump height 45° | ft/ins (mm) | 9' 2740 | 8'8" 2680 | 8'7" 2620 | |
| M Reach at max. height | ft/ins (mm) | 2'9" 845 | 2'11" 890 | 3'1" 940 | |
| N Reach, max. | ft/ins (mm) | 5'3" 1605 | 6'5" 1650 | 5'7" 1700 | |
| Operating weight | lb (kg) | 17417 7900 | 17483 7930 | 17461 7920 | |

| L40B with TP Linkage, quick attachment bracket (hook on) and 15.5-25 tires | |
|--|------------------|
| B | 16'1" (4900 mm) |
| C | 7'10" (2400 mm) |
| D | 1'4" (415 mm) |
| F | 9'7" (2930 mm) |
| G | 3'4" (1020 mm) |
| J | 10'10" (3300 mm) |
| K | 11'8" (3555 mm) |
| O | 57° |
| P | 45° |
| R | 50° |
| S | 68° |
| U | 0'10" (255 mm) |
| X | 5'9" (1760 mm) |
| Y | 7'1" (2160 mm) |
| Z | 10'10" (3310 mm) |
| a ₂ | 14'7" (4440 mm) |
| a ₃ | 7'3" (2220 mm) |
| a ₄ | ±40° |


| Data with loading fork | |  |
|--|---------|---|
| Center of gravity 1'8" (500 mm) | | |
| Tipping load, full turn (ISO / DIS) | lb (kg) | 8267 3750 |
| Payload according to EN 474-3, 60/80% | lb (kg) | 4960/6614 2250/3000 |
| Payload 80%, transport position, 40° full turn | lb (kg) | 8157 3700 |

SPECIFICATIONS - L45B



| Data according to bucket type | | Gen. Purpose | | Light material | |
|--|---|---|---|---|---|
| | |  |  |  |  |
| L45B with TP Linkage and 15.5-25 tires | | | | | |
| Capacity heaped | yd ³ (m ³) | 1.8 1.4 | 2.1 1.6 | 2.6 2 | |
| Material density | lb/yd ³ (kg/m ³) | 3034 1800 | 2697 1600 | 2023 1200 | |
| Static tipping load, straight (ISO / DIS) | lb (kg) | 13007 5900 | 12787 5800 | 12456 5650 | |
| Static tipping load, full turn 40° (ISO / DIS) | lb (kg) | 11574 5250 | 11354 5150 | 11023 5000 | |
| Hydraulic lifting capacity, max. | lbf (kN) | 16321 72,6 | 16006 71,2 | 15624 69,5 | |
| Breakout force | lbf (kN) | 13938 62 | 12882 57,3 | 10813 48,1 | |
| A Total length | ft/ins (mm) | 19'11" 6060 | 20'1" 6130 | 20'5" 6320 | |
| L Lift height, max. | ft/ins (mm) | 15'5" 4700 | 15'8" 4770 | 16'1" 4900 | |
| V Bucket width | ft/ins (mm) | 7'5" 2250 | 7'5" 2250 | 7'5" 2250 | |
| a ₁ Clearance circle | ft/ins (mm) | 2'10" 9770 | 32'3" 9820 | 32'7" 9940 | |
| T Digging depth | ft/ins (mm) | 0'8" 200 | 0'8" 200 | 0'8" 190 | |
| H Dump height 45° | ft/ins (mm) | 9'1" 2780 | 8'11" 2720 | 8'6" 2580 | |
| M Reach at max. height | ft/ins (mm) | 2'11" 895 | 3'1" 935 | 3'6" 1060 | |
| N Reach, max. | ft/ins (mm) | 5'7" 1710 | 5'9" 1750 | 6'2" 1875 | |
| Operating weight | lb (kg) | 18519 8400 | 18629 8450 | 18585 8430 | |

| L45B with TP Linkage, quick attachment bracket (hook on) and 15.5-25 tires | |
|--|------------------|
| B | 16'6" (5030 mm) |
| C | 8' (2450 mm) |
| D | 1'4" (410 mm) |
| F | 9'7" (2930 mm) |
| G | 3'2" (970 mm) |
| J | 11'2" (3395 mm) |
| K | 12' (3650 mm) |
| O | 57° |
| P | 45° |
| R | 50° |
| S | 68° |
| U | 0'10" (255 mm) |
| X | 5'9" (1760 mm) |
| Y | 7'1" (2160 mm) |
| Z | 12'2" (3400 mm) |
| a ₂ | 14'10" (4520 mm) |
| a ₃ | 7'5" (2270 mm) |
| a ₄ | ±40° |

| Data with loading fork | |  |
|--|---------|---|
| Center of gravity 1'8" (500 mm) | | |
| Tipping load, full turn (ISO / DIS) | lb (kg) | 9645 4375 |
| Payload according to EN 474-3, 60/80% | lb (kg) | 5787/7716 2625/3500 |
| Payload 80%, transport position, 40° full turn | lb (kg) | 8818 4000 |

STANDARD EQUIPMENT

Engine

Diesel engine, direct fuel injection
Extra fuel filter
Cold start aid
Dry-type air filter

Electrical System

Alternator 55 A

Lighting

Main head lights (halogen)
full/dipped/asymmetrical
Working lights (2 front/2 rear right)
Parking lights
Rear lights
Brake lights
Direction indicators
Hazard warning lights
Reversing lights
Cab lighting

Instrumentation & controls

Multi-function lever (joystick)
24 Volt accessories socket
Horn
Hazard warning switch
Safety start

Electronic Information System

Analog LED-information for:
Fuel level
Engine temperature
Drive system oil temperature
LED-illuminated symbols (color-coded) for:
Direction (forward/reverse)
Indicators (left/right)
Pre-heater
Main beam
Differential locks
Ride control (BSS) (option)
Loading fork operation (option)

LED-illuminated symbols (red) with acoustic signal for:

Parking brake
Air filter restriction
Drive system oil temperature
Engine temperature
Engine oil pressure
Battery charging
Return filter
Touch pad with symbols and integrated LEDs for:
Parking lights
Working lights (front/rear)
Windshield wiper (rear)
Rotating beacon (option)
Ride control (BSS) on/off (option)
Locking and activation of quick attach
Activation of multi-function lever for directional change
Digital LED display activated by dual function keys for:
Entry and retrieval of operating information
Anti-theft function control

Drivetrain

Hydrostatic drive
Operator-selected 100% differential locks
Tyres 15.5-25

Hydraulic System

Load-Sensing Hydraulics
Axial piston pump
Control valve three-spool system
3rd hydraulic circuit

Cab, Exterior

ROPS/FOPS-cab with flexible mountings
Walk-through cab
Lockable doors
All-round tinted safety glass
Windshield wiper (front/rear)

Windshield washer (front/rear)
Sliding window in the left door
Door stops
External rearview mirrors (right/left)

Cab, Interior

4-way adjustable operator's seat
Adjustable steering column
Seat belt
Sun visor
Heater with air-filter and defroster (front/rear)
Cab ventilation
Preparation for an optional air-conditioner
Storage box in the cab

Working Equipment

Automatic bucket level indicator
Hydraulic quick-attach

Carriage Body

Fenders and mudguards, (front/rear)
Lockable engine hood
Lockable fuel-tank cap
Vertical exhaust
Towing device
Lifting eyes

International Standards for Machines and Production

Quality: DIN/ISO 9001
Safety: CE - Criteron
Machine guide-lines 98/37/EC
ROPS ISO 3471
FOPS ISO 3449
Operating weight ISO 7131
Tipping load / Payload: ISO / DIS 14397-1
EMV (Electromagnetic Compatibility) 89/336/EEC plus supplement
Environment: DIN/ISO 14001
Sound regulation: 2000/14/EC

OPTIONAL EQUIPMENT

Engine Equipment

Pre-heater
Precleaner air filter (Turbo II)
Oilbath air filter
Exhaust particle filter

Hydraulics

Hydraulic couplings for
4th hydraulic circuit

Cab

Handthrottle
Hand control inch valve
Air-conditioner
Radio
Air suspension operator's seat

Working Equipment

Boom arm suspension system

Environment

Biodegradable hydraulic oil
Low-noise kit

Safety

Anti-theft system
Protective guards for:
Main head lights
Working lights
Rear lights
Rotating beacon
Full waste guarding



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



All products are not available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

VOLVO

Construction Equipment

Volvo Construction Equipment North America, Inc.

One Volvo Drive, Asheville, NC 28803-3447

www.volvoce.com

Ref. No. 22 1 000 9881
Printed in USA 10/05 – 5,0
Volvo, Asheville

English
GMC