

## VOLVO COMPACT WHEEL LOADER

# L40B



- **Gross Power:**  
SAE J1995 71/97 kW/hp  
**Net Power:**  
SAE J1349 63/86 kW/hp
- **Operating Weight:**  
7.8 - 8.0 t  
17,196 - 17,637 lb
- **Bucket Capacities:**  
1.2 - 2.0 m<sup>3</sup>  
1.6 - 2.6 yd<sup>3</sup>
- **High-performance, low environmental impact diesel engine:** quiet, low emissions, economical fuel consumption.
- **Hydrostatic drive with significant advantages:**
  - Easy to operate due to automatic drive facility.
  - Maintains high drawbar pull even when working hydraulics are engaged.
  - Advantageous hydrostatic brakes, wear-free and safe.
- **Strong TP-loader linkage, perfect for loading fork applications:** high breakout and lift forces combine with optimum parallel lift of the attachment.
- **Operator-selected 100% differential lock** on both axles to give optimum traction.
- **Standard hydraulic quick change attachment bracket:** Various tried-and-tested attachments for a wide range of applications.
- **Cab designed for comfort:**
  - Electronic Service and Information System (ESIS).
  - Multi-function lever.

# VOLVO



## ENGINE

**Engine:** Deutz 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

Engine .....	BF4M 1013E	
Gross power @ .....	2,100 r/min	<b>35 r/s</b>
SAE J1995 .....	71 kW	<b>97 hp</b>
SAE J1995 .....	97 hp	<b>97 hp</b>
Net power @ .....	2,100 r/min	<b>35 r/s</b>
SAE J1349 - DIN ISO 1585.....	63 kW	<b>86 hp</b>
SAE J1349 - DIN ISO 1585.....	86 hp	<b>86 hp</b>
Max. torque @ .....	1,400 r/min	<b>23 r/s</b>
SAE J1349 netto.....	380 Nm	<b>280 lbf ft</b>
DIN ISO 1585.....	380 Nm	<b>280 lbf ft</b>
Cubic capacity .....	4.76 l	<b>290 in<sup>3</sup></b>
Bore.....	108 mm	<b>4.25 in</b>
Stroke.....	130 mm	<b>5.1 in</b>



## ELECTRICAL SYSTEM

Rated voltage .....	24 V	
Battery voltage.....	2 x 12 V	
Battery capacity.....	2 x 74 Ah	
Alternator rating.....	1,540/55 W/A	
Starter motor output.....	4.0 kW	<b>5.4 hp</b>



## 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 working hydraulics at constant engine rpm. Multi-function lever for change of direction, differential lock and use of the servo-control.

**Axles:** all-wheel drive by two rigid planetary axles.

**Differential locks:** hydraulically actuated 100% differential locks in both axles.

**Frame:** solid front and rear frame, robot-welded. Articulating-oscillating joint for optimum maneuverability and traction.

Oscillation at wheel, max. ....	310 mm	<b>1'0" in</b>
Track .....	1,760 mm	<b>5'9" ft in</b>
Angle of oscillation.....	±10°	
Tires: Size.....	15.5-25	
Rim .....	12 x 25	

	Standard	Optional High Speed
1st range forward/reverse.....	0-6 km/h <b>0-4 mph</b>	0-6 km/h <b>0-4 mph</b>
2nd range forward/reverse .....	0-20 km/h <b>0-12.5 mph</b>	0-13 km/h <b>0-8 mph</b>
3rd range forward/reverse .....		0-35 km/h <b>0-22 mph</b>



## SERVICE FILL CAPACITIES

Engine .....	14.0 l	<b>3.7 US gal</b>
Fuel tank.....	130.0 l	<b>34.3 US gal</b>
Front axle, total.....	7.9 l	<b>2.1 US gal</b>
Rear axle, incl. drop-box.....	9.9 l	<b>2.6 US gal</b>
Hydraulic tank, incl. hydrostatic system	120.0 l	<b>31.7 US gal</b>



## BRAKING SYSTEM

**Service brake:** reliable, dual braking system, disc brake hydraulically actuated via pump accumulator, acting on 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 plus additional pedal, both acting on the oil-immersed multi-disk brake on the rear axle.

**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.

Single lever control for

1. Lifting function
2. Tilting function

Additional lever for

1. Hydraulic attachment bracket  
Unlock, neutral, lock (unlock via solenoid for safety)
2. 3<sup>rd</sup> function hydraulics.

**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		
Flow .....	106 l/min	<b>28 US gpm</b>
@ engine rpm.....	2,100 r/min	<b>35 r/s</b>
Relief valve pressure .....	21 MPa	<b>3,045 psi</b>



## 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		
Angle of articulation .....	±40°	
Steering pump		
Flow .....	43.5 l/min	<b>11.5 US gpm</b>
@ engine rpm .....	2,100 r/min	<b>35 r/s</b>
Relief valve pressure.....	17 MPa	<b>2,465 psi</b>



## LINKAGE

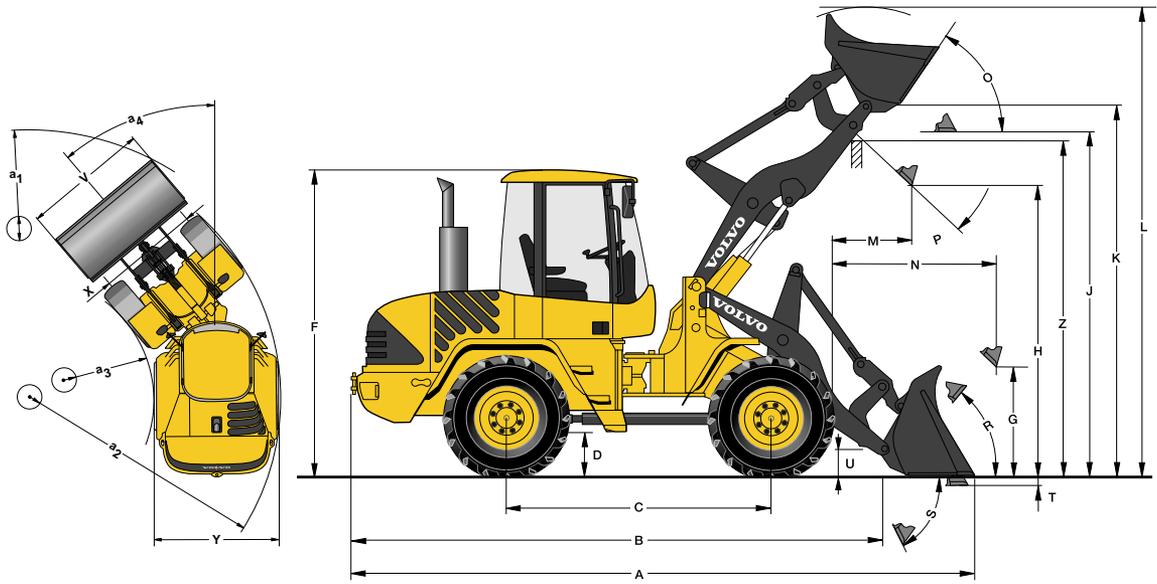
<b>Lifting frame:</b>	<b>TP</b>
Lift cylinders.....	2
Tilt cylinder.....	1

Lift time (loaded) .....	6.0 s
Lowering time (empty).....	5.0 s
Dump time .....	1.5 s
Crowd time.....	1.8 s

## DIMENSIONS • TP LINKAGE

L40B with TP Linkage,  
Volvo quick attachment  
bracket & 15.5-25 tires

B	4,865 mm	16' 0"
C	2,400 mm	7' 10"
D	415 mm	1' 4"
F	2,930 mm	9' 7"
G	1,020 mm	3' 4"
J	3,300 mm	10' 10"
K	3,555 mm	11' 8"
O	57 °	
P	45 °	
R	50 °	
S	68 °	
U	255 mm	10"
X	1,760 mm	5' 9"
Y	2,160 mm	7' 1"
Z	3,310 mm	10' 9"
a <sub>2</sub>	4,440 mm	14' 7"
a <sub>3</sub>	2,220 mm	7' 3"
a <sub>4</sub>	±40 °	



## OPERATING DATA • TP LINKAGE

Data according to bucket type L40B with TP Linkage, Volvo quick attachment bracket (hook on) and 15.5-25 tires Data for other bucket types and sizes on request.		General Purpose				Light Material		4-in-1	High-Tip
		 Hook on	 Pin on	 Hook on	 Pin on	 Hook on	 Hook on	 Hook on	 Hook on
Capacity heaped	m <sup>3</sup>	1.2	1.2	1.4	1.4	1.6	2.0	1.1	2.0
	yd <sup>3</sup>	1.6	1.6	1.8	1.8	2.1	2.6	1.4	2.6
Material density	kg/m <sup>3</sup>	1,900	1 900	1,600	1 600	1,400	1,100	1,900	900
	lb/yd <sup>3</sup>	3,202	3,202	2,696	2,696	2,359	1,854	3,202	1,517
Static tipping load, straight (ISO / DIS)	kg	5,250	5 450	5,200	5 400	5,150	5,000	4,950	4,200
	lb	11,574	12,015	11,464	11,905	11,354	11,023	10,913	9,259
Static tipping load, full turn 40° (ISO / DIS)	kg	4,650	4 800	4,600	4 750	4,550	4,400	4,350	3,700
	lb	10,251	10,582	10,141	10,472	10,031	9,700	9,590	8,157
Hydraulic lifting capacity, max.	kN	59.0	63.0	58.0	62.0	57.5	55.3	55.5	50.0
	lbf	13,264	14,163	13,039	13,938	12,927	12,432	12,477	11,353
Breakout force	kN	56.0	63.0	51.4	57.0	47.6	40.0	55.1	-
	lbf	12,589	14,163	11,555	12,814	10,701	8,992	12,387	-
A Total length	mm	5,820	5 730	5,895	5 760	5,970	6,160	5,830	6,495
	ft in	19'1"	18'10"	19'4"	18'11"	19'7"	20'3"	19'2"	21'4"
L Lift height, max.	mm	4,520	4 460	4,610	4 550	4,680	4,810	4,540	5,580
	ft in	14'10"	14'8"	15'1"	14'11"	15'4"	15'9"	14'11"	18'4"
V Bucket width	mm	2,250	2 250	2,250	2 250	2,250	2,250	2,250	2,250
	ft in	7'5"	7'5"	7'5"	7'5"	7'5"	7'5"	7'5"	7'5"
a <sub>1</sub> Clearance circle	mm	9,550	9 500	9,590	9 550	9,630	9,750	9,550	9,990
	ft in	31'4"	31'2"	31'6"	31'4"	31'7"	31'12"	31'4"	32'9"
T Digging depth	mm	160	165	160	165	160	155	155	170
	ft in	0'6"	0'6"	0'6"	0'6"	0'6"	0'6"	0'6"	0'7"
H Dump height	mm	2,740	2 800	2,680	2 745	2,620	2,490	2,690	4,110
	ft in	9'0"	9'2"	8'10"	9'0"	8'7"	8'2"	8'10"	13'6"
M Reach at max. height	mm	845	780	890	825	940	1,060	805	1,420
	ft in	2'9"	2'7"	2'11"	2'8"	3'1"	3'6"	2'8"	4'8"
N Reach, max.	mm	1,605	1 540	1,650	1 585	1,700	1,820	1,565	2,700
	ft in	5'3"	5'1"	5'5"	5'2"	5'7"	5'12"	5'2"	8'10"
Operating weight	kg	7,900	7 800	7,930	7 830	7,920	7,960	8,080	8,390
	lb	17,416	17,196	17,482	17,262	17,460	17,549	17,813	18,497

Data with hook on loading fork Center of gravity 500 mm 20"		L40B - Possible machine variations		
		Linkage/attach. bracket	Standard	Hi-speed vers.
Tipping load, full turn (ISO / DIS)	kg lb	3,750 8,270		
Payload according to EN 474-3, 60/80%	kg lb	2,250/3,000 4,960/6,610		
Payload 80%, transport position, 40° full turn	kg lb	3,700 8,160		
		TP / Hook on	●	●
		TP / Pin on	●	●

## 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)  
Parking lights  
Rear lights  
Brake lights  
Direction indicators  
Hazard warning lights  
Reversing lights  
Cab lighting

### Instrumentation & controls:

Multi-function lever  
12 Volt power socket  
Horn  
Audible reverse alarm  
Hazard warning switch  
Safety start

### Electronic Service and Information-System (ESIS):

*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  
Boom arm suspension system (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  
Hydraulic return filter  
*Touch pad with symbols and integrated LEDs for:*  
Parking lights  
Working lights (front/rear)  
Windshield wiper (rear)  
Rotating beacon (option)  
Boom arm suspension system on/off (option)  
Locking and activation of Volvo attachment bracket disconnect  
Activation of multi-function lever for directional change  
*Digital LED display activated by dual function keys for:*  
Entry and retrieval of operating and service information  
Anti-theft function control

### Drivetrain

Hydrostatic drive  
Operator-selected 100%

differential locks  
Tires 15.5-25

### Hydraulic System

Load-Sensing Hydraulics  
Axial piston pump  
Control valve three-spool system  
3rd hydraulic circuit including 2 quick couplings

### Service and Maintenance

Tool kit  
Wheel nut wrench

### 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 rear view 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

Rubber floor mat

### Working Equipment

Automatic bucket leveller with on/off switch  
Hydraulic quick-change attachment bracket

### Carriage Body

Fenders (front/rear)  
Mudflaps, (front)  
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 insulation:  
86/622/EEC II, amendment  
95/27/EC

## OPTIONAL EQUIPMENT

### Engine

Pre-heater

### Hydraulics

Optional 3rd hydraulics can be incorporated into joystick lever  
4th hydraulic circuit

### Cab

Hand throttle  
Hand control inch valve  
Air conditioner  
Radio  
Interior mirror

### Working Equipment

Boom arm suspension system

### Environment

Initial filling of biodegradable hydraulic oil  
Low-noise kit

### Canopy version

ROPS FOPS Canopy  
Vandal protection kit  
Weatherproof seat

Additional drainage mat

### Safety

Anti-theft system  
Protective guards for:  
Main headlights,  
Working lights, Rear lights  
Rotating beacon  
Visual reverse alarm

## ATTACHMENTS

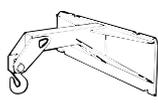
A small selection of the most popular attachments. Other buckets and attachments available on request.



Loading Fork



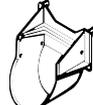
4-in-1 Bucket



Hook and Tackle



Sweeper



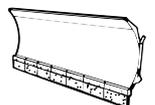
Tree Transplanting Bucket



Side-Tip Bucket



Hay/Manure Fork



Snow Plow

*Under our policy of continuous product 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

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