

BM-VOLVO

LOADER LM 1640

HEAVY-DUTY 4-YD³ WHEELED LOADER WITH SUPERIOR DRIVER COMFORT





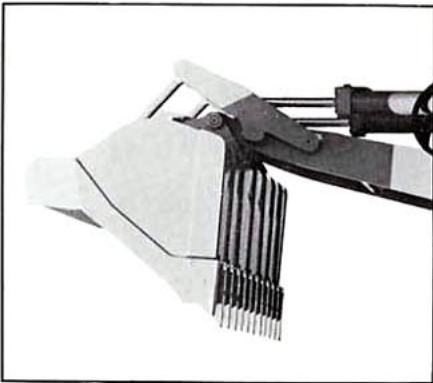
Large capacity—55° bucket crowd angle in top position permits maximum heap in the 4-yd³ (3-m³) bucket with no spill. Height from ground to bucket pivot is all of 13 ft (4 m).



The LM 1640 has the capacity for high volume loading, for excavating and earthmoving. Engine rating—215 hp—is high relative to the 16.5-ton weight of the machine, a ratio which makes the loader fast and efficient. Driver comfort and safety are of a high order. Articulated steering makes operations smooth and easy. The safety cab has exceptionally low noise-level and is extremely spacious and comfortable. Large windows ensure excellent all-round visibility. The BM-VOLVO LM 1640 is built to stand up to tough operating conditions with a minimum of service.



LM 1640



Boom assembly— bucket angles

The Boom assembly is of very rugged design with wide mounting, resulting in low torsional stresses and a favourable distribution of forces. These properties have been obtained by means of centrally positioned rams and a balanced linkage geometry. Bucket angles are excellent—max. dumping angle is a full 90° and the crowd angle in bottom position is 72°.



Outreach—lift

The driver can deposit the load exactly where he wants it. Maximum height of bucket pivot is 13 ft (4 m), giving a dump clearance in dumping of nearly 10 ft (3 m). Outreach in front of the tyres at a height of 6 ft 6 in (2 m) is 5 ft 7 in (1.71 m). The reaction of the hydraulic systems is rapid and engine speed can be kept up even during braking since the separate working brake disengages the gearbox.

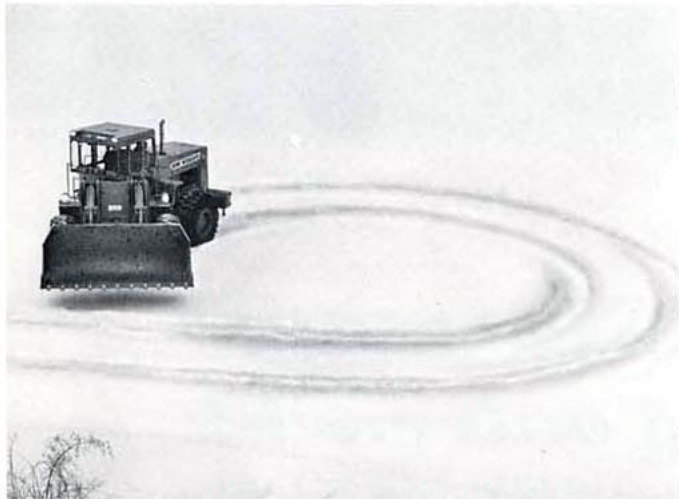
Transmission

The LM 1640 has a Power-Shift gearbox with one planetary gear for each speed range. The gear shift engages smoothly throughout its speed range even at full engine speed on turns. The 4-wheel drive can be disengaged for high speed travelling. The good stability of the loader makes it safe and easy to drive.

stable boom assembly!
high lift - long outreach!
effective transmission!



LM 1640



The articulated steering offers the advantage that the long wheel base can be combined with a tight turning radius of only 20 ft 7 in (6.3 m). The articulation point is located midway between the axles and the rear wheels will always follow the front wheel tracks exactly. The driver thus knows that the cab-engine section will always follow the front section and can therefore devote all his attention to the front section.



The oscillating rear axle has a total movement of 34°. One wheel can be raised or lowered 26 3/4 in (680 mm) with ground contact still maintained on all four wheels.

16.5-ton 4 yd³ bucket



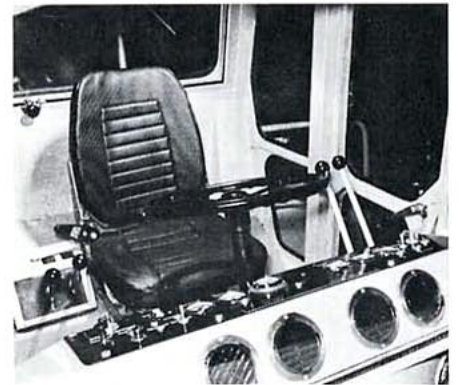
The LM1640 with its long, 11 ft 4 in (3.47 m) wheel base, accurate weight distribution and wide track is capable of smooth and stable operation even on rough ground. This reduces the risk of unnecessary bucket spill. When loading, for instance from a gravel bank, for haulage to a crusher, the LM1640 can maintain a high average transport speed with a high capacity as a result. Engagement of the 4-wheel drive guarantees its ability to negotiate very difficult ground, and even where irregularities are large all wheels will maintain contact with the ground due to the wide oscillation of the rear axle. Under very slippery conditions the loader can be "jack-knifed" forward by means of the articulated steering.

***long wheel base!
tight turning radius!
great mobility!***



First-rate all-round visibility and clearly arranged instrumentation.

Comfortable, adjustable seat with all controls near at hand.



Large and convenient access steps.

Brakes—ground clearance

The brakes on all four wheels are air-operated and are actuated via two separate circuits. The LM 1640 has two brake pedals. The right-hand pedal produces normal braking (running brake) while the left-hand pedal also disengages the gear-box during braking (working brake). The driver can run up to the dumping point and stop the loader while maintaining the high engine speed required for fast hydraulic operations.

Ground clearance is generous—15 3/4 in (400 mm) under the centre pivot—which contributes to the high mobility of the loader. It also reduces the risk of damage to the machine.

Comfortable cab

The design of the LM 1640 is highly safety-oriented. The cab is crash-proof and has large glazed areas for maximum visibility. Convenient access steps on both sides and wide doors. The cab is spacious and snug which, along with its carefully planned layout, ensures true job satisfaction. The noise level is kept at a comfortably low level since the cab is mounted on the frame on rubber blocks and is very carefully insulated. The instruments are clearly arranged to enable fast and accurate checks.

Powerful engine

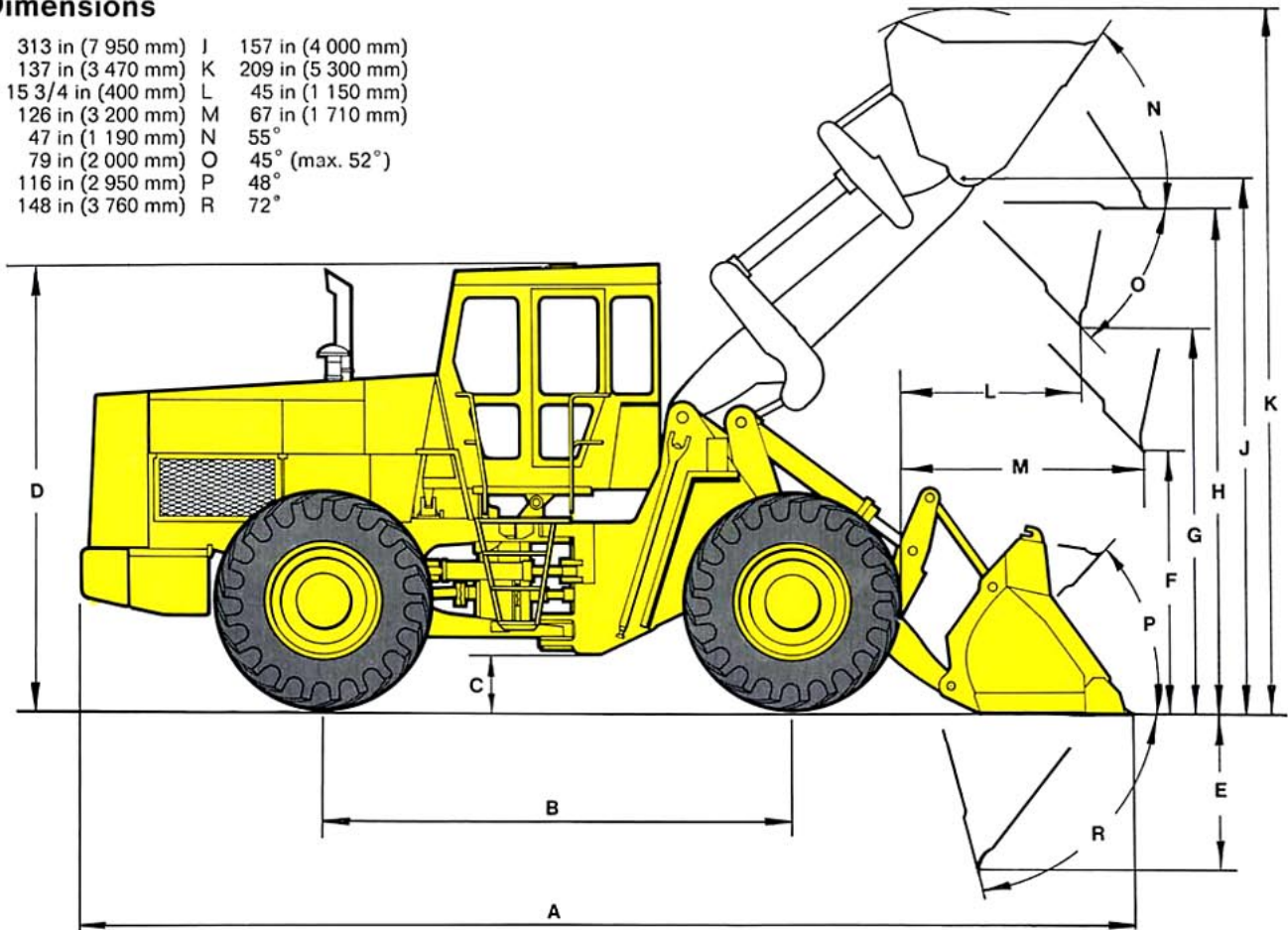
The LM 1640 is powered by a 6-cylinder diesel engine developing 215 hp SAE. The engine is of solid design and provides high torque over a wide speed range. Max. torque is 580 lbf ft (80 kgf m) SAE. The output is high relative to the weight of the loader but in perfect balance with the rugged construction of the transmission, frame and axles. The engine is easily accessible for inspection entirely from the ground through large inspection doors.



safety cab!
generous ground clearance!
215 hp engine!

Dimensions

A	313 in (7 950 mm)	J	157 in (4 000 mm)
B	137 in (3 470 mm)	K	209 in (5 300 mm)
C	15 3/4 in (400 mm)	L	45 in (1 150 mm)
D	126 in (3 200 mm)	M	67 in (1 710 mm)
E	47 in (1 190 mm)	N	55°
F	79 in (2 000 mm)	O	45° (max. 52°)
G	116 in (2 950 mm)	P	48°
H	148 in (3 760 mm)	R	72°



Specification, BM-VOLVO LM 1640

General data

Total weight with bucket	36,380 lb (16 500 kg)
Wheel base	11 ft 4 in (3.47 m)
Track	7 ft 7 in (2.31 m)
Turning radius	20 ft 7 in (6.3 m)
Tyres	23.5—25/16

Steering

Articulated steering with hydraulic steering unit and 2 steering cylinders	
Steering angle	37.7°

Engine

6-cylinder diesel engine, type D11 R41	
Rating at 2 200 rev/min, SAE/DIN	215/202 hp
Max. torque at 1 200 rev/min, SAE/DIN	580/570 lbf ft (80/79 kgf m)

Transmission

Torque converter and hydraulically operated planetary gearbox

Speed ranges

I forward and reverse	0—3.7 miles/h (0—6 km/h)
II forward and reverse	0—7.5 miles/h (0—12 km/h)
III forward and reverse	0—16.2 miles/h (0—26 km/h)
IV forward and reverse	0—26.1 miles/h (0—42 km/h)

Loading unit

Tipping load, SAE	23,800 lb (10 800 kg)
Payload, SAE (50 % of tipping load)	11,900 lb (5 400 kg)
Bucket capacity, standard	4 yd ³ (3 m ³)
Outreach at 6 ft 7 in (2 m) height	5 ft 7 in (1.71 m)
Dump clearance	9 ft 7 in (2.95 m)

Hydraulic system

Pump capacity	79 Imp.gal/min (360 l/min)
Working pressure	1,990 lb/in ² (140 kgf/cm ²)

Brakes

Foot brake: air-operated, twin-circuit system acting on all wheels
Hand brake: mechanical, acting on the gearbox output shaft

Standard equipment

Impact-tested safety cab
Rubber mat in cab
Rearview mirrors in cab
Hour recorder
Air-operated windshield wipers front and rear
Blinkers
Working lights, front
Working lights, rear
Head-lamps

Tail lamps combined with brake lamps and blinkers
Cab lighting
Cigarette lighter
Ashtray
Horn
Heater
Gravel bucket
Tool kit
3rd hydraulic function excg. pipes and lever

Optional

Engine preheater
Flashing beacon
Various types of attachments
Safety belt
Trailer
Extra cab heater

Specification and design are subject to change without prior notice.



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Stable boom assembly!

Rugged design with wide mounting. Balanced linkage geometry ensures a favourable distribution of forces and excellent bucket angles.

High lift—long outreach!

Clearance below bucket pivot is all of 13 ft (4 m) and outreach in front of the tyres at a height of 6 ft 7 in (2 m) is a good 5 ft 6 in (1.7 m).

Long wheel base!

Ensures safe and stable operation both on the job and in travelling, resulting in a high transport speed with a minimum of spill.

Articulated steering!

Gives a tight turning radius and easy control. Rear wheels always track.

Very good manoeuvrability!

4-wheel drive, wide-range oscillating rear axle and gener-

ous ground clearance provide for excellent off-road performance. By means of the articulated steering, the loader can be "jack-knifed" forward on very difficult ground.

Safety cab!

Crash-proof, comfortable and spacious with very good visibility. The cab is rubber-suspended which, in combination with its careful insulation, ensures a very low noise level.

Generous ground clearance!

Contributes to the excellent manoeuvrability and reduces the risk of damage to the loader.

Powerful engine!

6-cylinder diesel engine of rugged design delivering 215 hp SAE. High output relative to the weight of the loader.

Simple servicing!

Easily accessible for daily inspection and service.



BOLINDER-MUNKTELL

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Eskilstuna, Sweden