

# **VOLVO BM**

## **LOADER 641**



# VOLVO BM 641

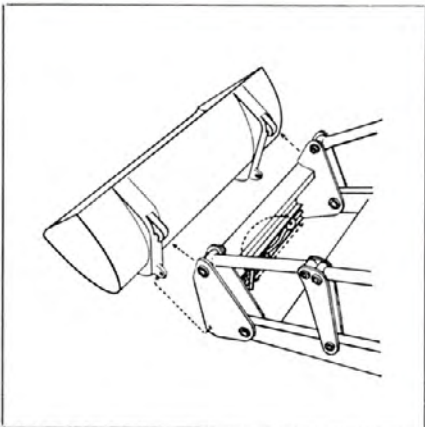
The 641 is a 4-wheel drive, handy all-round loader featuring torque converter and Power-Shift gearbox. The loader has very fine performance characteristics as a result of a new 80-hp engine and rugged design throughout with axles, side arms and hydraulic cylinders of ample dimensions.

The driver's cab is spacious and easy to enter. Low noise level owing to careful insulation and effective cab suspension.

Hydrostatic steering for reliable and easy handling.

Its excellent off-road performance and versatility make the VOLVO BM 641 an efficient and economical loader for the most varied tasks.





**all-round...**



Characteristic features of the VOLVO BM loaders are their nimbleness, the snap-on coupling and the design of the side arms which provides both long outreach and high lift. These properties have enabled the development of a range of attachments which is unique for loaders.

The 641 can utilize the entire range of attachments—approx. 70 different units—and in combination with its excellent off-road performance this

makes it a truly all-round loader which effectively handles the most diversified jobs.

Attachment changes in less than a minute are made possible by the snap-on coupling of the attachment bracket—an exclusive design feature which enables the VOLVO BM loader to satisfy such a wide range of requirements. The fast attachment changes also mean that the loader can easily shift from one task to

another—important for full utilization. The 641 can also be fitted with a hydraulic snap-on coupling controlled from the driver's seat.

The 641 operates with ease on loose and slippery ground. It features 4-wheel drive and large wheels providing a large contact area and low specific ground pressure. The loader also incorporates a rugged differential lock.



# outreach ...

The VOLVO BM 641 has a robust loader unit of special design which combines long outreach with high lift. The linkage system ensures parallel side-arm action and good bucket angles. The open design with no obscuring hydraulic cylinder provides excellent visibility for perfect control of the attachment in all positions.

## Lift

Maximum lift under attachment pivot is all of 151.6 in (3.85 m) and under tipped bucket (45°) 116.1 in (2.95 m)—excellent values which enable the 641 to load onto high haulage vehicles rapidly and easily and to reach high up in service work on building sites.

## Outreach

Its long outreach enables the 641 to fill its bucket without the front tyres having to run into the material being loaded. This eliminates unnecessary wheel-spin and tyre wear.

The driver can concentrate fully on the positioning of the load, since the outreach will generally eliminate the risk of running into the vehicle being loaded. The long outreach also makes it possible to load into wide lorries from one side.





The driver's cab on the 641 is a carefully designed, safe and comfortable work station. It has been approved according to international standards. Wide foot steps and a door which is held in position by a gas-spring make it easy to climb in and out the cab.



**comfort...**



#### **Low noise level**

The extreme airtightness, careful insulation and rubber suspension of the cab ensure a low noise level. A contributing factor is also the uncommonly vibrationless running of the new engine.

#### **Heating and ventilation**

The heater has a high capacity and is installed beneath the driver's seat—a

position which provides for a very uniform and effective radiation of the hot air. There are two fan speeds. Opening side and rear windows and a safety hatch in the roof enable individual adjustment of the ventilation.

#### **Excellent driver comfort**

The cab is carefully appointed and very spacious. The driving position is restful with correctly positioned controls and instruments and hydrostatic

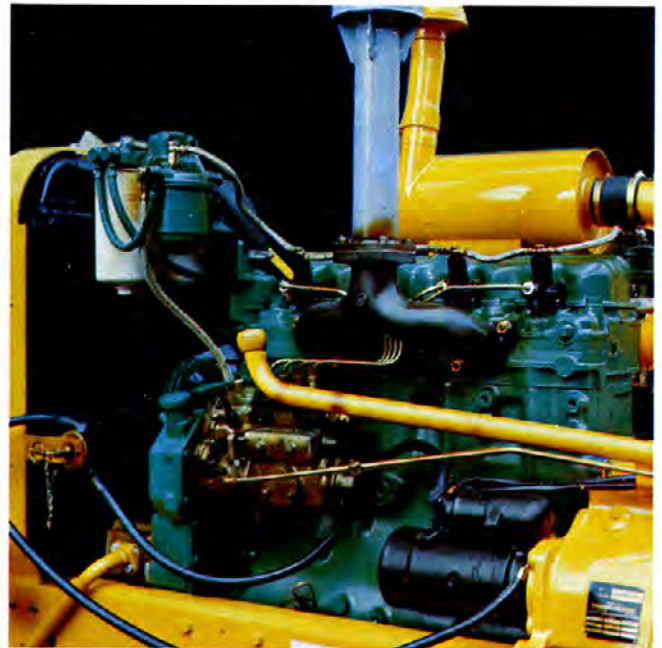
steering for exact, finger-tip control. Large glazed areas provide excellent all-round visibility and full control of the attachment in all positions.

#### **Driver's seat**

The seat is covered with nylon pile which breathes. It is adjustable vertically and for leg-room. The firmness of its suspension and the back-rest rake are also adjustable to provide the best individual seating position.

# engine...

The 641 is powered by a completely new 4-cylinder, direct-injection VOLVO BM diesel engine developing 80 hp SAE at 2 300 rev/min. The engine has a displacement of 256.3 in<sup>3</sup> (4.2 litres) and a maximum torque of 198.2 lbf ft (27.4 kgf m) at 1 300 rev/min. Wet replaceable cylinder liners, aluminium alloy pistons and a crankshaft carried in five case-hardened bearings provide a high degree of wear resistance. The exceptionally vibrationless running of the engine is due to a special balancing mechanism. The injection pump is fitted with an automatic cold starting device. The air filter is composed of a dry filter and a centrifugal separator with a high filtering effect. An alternator guarantees battery charging even at low engine speeds.



## Specifications VOLVO BM 641

### Engine

VOLVO BM 4-cylinder, 4-stroke diesel engine with direct injection, type	D 42
Hp rating at 2 300 rev/min	80 hp SAE
Max. torque at 1 300 rev/min	198 lbf ft (27.4 kgf m)
Displacement	256.3 in <sup>3</sup> (4.2 litres)
Bore	4.155 in (105.57 mm)
Stroke	4.33 in (120 mm)
Compression ratio	17.5:1
Air cleaner	Centrifugal separator with dry filter element, pressure drop indicator

### Electrics

Voltage	24 V
Alternator	700 W
Starter	4 hp
Transistorized charging relay	
Safety start device	

### Torque converter

Single-stage, single-phase with 3.3:1 stall ratio

### Transmission

Full Power-Shift in two ranges with four forward and four reverse speeds

### Speeds

Forward and reverse in miles/h (km/h)	
I 0—4.8 (0—7.7)	III 0—11.8 (0—19.0)
II 0—7.5 (0—12.0)	IV 0—18.6 (0—30.0)
Differential lock	

### Tyres

Standard: front	16.9—30/14
rear	12.4—24/12

### Steering

Full power steering, type	Orbitrol
Turning radius	18 ft 5 in (5.6 m)

### Brakes

Hydraulic disc brakes, fully enclosed  
Parking brake

### Hydraulics

Hydraulic pump, type	Hemworthy
Capacity	32 Imp.gal/min (145 l/min)
Working pressure (low pressure system)	1422 lbf/in <sup>2</sup> (100 kgf/cm <sup>2</sup> )
Oil tank capacity	19.8 Imp.gal (90 l)
Lifting cylinders, bore X stroke	3.94 X 35.32 in (100 X 897 mm)
Tipping cylinders, bore X stroke	4.33 X 13.27 in (110 X 337 mm)

### Operating data\*

Max. lifting height under tipped bucket	9 ft 6 in (2.90 m)
Outreach at a height of 6 ft 6 in (2 metres)	4 ft 7 in (1.40 m)
Bucket capacities	1 1/4—4 yd <sup>3</sup> (0.95—3.0 m <sup>3</sup> )

\* The capacity figure is based on rear tyres without calcium chloride solution.

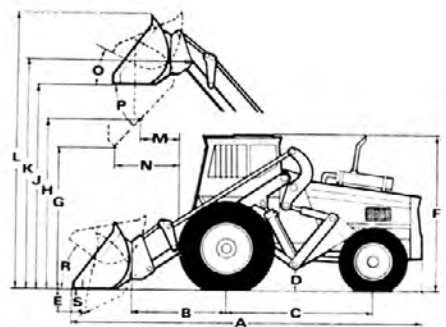
### General data

Total weight with bucket	17,000 lb (7,700 kg)
Wheel base	7 ft 8 in (2.35 m)
Track, front	5 ft 9 in (1.76 m)
rear	5 ft 8 in (1.74 m)
Ground clearance	1 ft 2 in (0.35 m)
Fuel tank capacity	24 Imp.gal (110 litres)

### Standard equipment

Safety cab, spring-cushioned seat, heater with fresh air intake, windscreen wipers, rearview mirror in cab, twin headlights front and twin working lights rear, parking lights, tail and brake lights, direction indicators, position lights, flashing warning lights, horn, sun visor, engine hour recorder, fuel gauge, alternator, parking brake indicator light, differential lock, steering brake, snap-on attachment bracket with mechanical locking, pipe set for 3rd hydraulic function, dry air filter with pressure drop indicator, neutral start ignition switch.

### Dimensions



A 18' 1 3/4" (5550 mm)	K 12' 7 1/2" (3850 mm)
B 4' 9" (1450 mm)	L 15' 5 1/2" (4700 mm)
C 7' 8 1/2" (2350 mm)	M 2' 6" (750 mm)
D 1' 1 3/4" (350 mm)	N 4' 7" (1400 mm)
E 2' 5" (710 mm)	O 41"
F 8' 7 3/4" (2640 mm)	P 45"
G 6' 6 3/4" (2000 mm)	R 42"
H 9' 6" (2900 mm)	S 42"
J 11' 9 3/4" (3600 mm)	

### Optionals

Socket for trailer, snap-on attachment bracket with hydraulic locking, rotating flashing beacon, front working light, industrial towing hook, air-compressor for trailer brake system, outlet for trailer brake, tyre pump, spark arrester, safety belt, flotation tyres, heavy duty tyres, belly guards.

Specifications and design are subject to alteration without prior notice.



# VOLVO BM 641

**effective, 4-wheel drive all-round loader**

- Versatile owing to the snap-on coupling on the attachment bracket which enables attachment changes in a minute. Wide range of attachments—approx. 70 different units.
- Comfortable, safe driver's cab with a low noise level. Excellent visibility, heating and ventilation. Very comfortable seat.
- Carefully designed loader unit combining long outreach with high lift. Parallel side-arm action and good bucket angles.
- Large wheels give a low ground pressure—an advantage on ground with poor bearing capacity. Small angle of climb over obstacles. Rugged differential lock as standard. Unbeatable on difficult ground.
- Torque converter and Power-Shift gearbox—easy, fast gear shifts without use of a clutch pedal.
- Automatic increase in torque as resistance increases.
- 80-hp 4-cyl. VOLVO BM diesel engine. A balancing mechanism ensures virtually vibrationless running.
- 4-wheel drive keeps the loader on the move over loose and slippery ground. Planetary gears in the wheel hubs.

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## **VOLVO BM**

VOLVO BM AB ESKILSTUNA SWEDEN