

VOLVO BM 4500



High production with good economy – that's the new Volvo BM 4500

High capacity and reliability on the toughest jobs are outstanding features of the new Volvo BM 4500, making it a dependable link in an efficient production chain. Volvo BM loaders have been designed and developed as a result of stringent laboratory tests and long practical experience. Advanced technical engineering and operational reliability, combined with excellent economy, enable the new 4500 to live up to all expectations of what a Volvo BM loader should be – an efficient, profitable machine. The 4500 weighs 14 tons and has an engine developing 137 kW (186 h.p.) SAE gross. Buckets with capacities ranging from 2.4 to 8 m³ (3.1 to 10.5 yd³) are available. But power and bucket size is not all that determines capacity. The 4500 is a very well balanced loader. Its engine, transmission, and working hydraulics, are designed to operate in complete harmony. From his comfortable cab, the operator can utilise the Volvo BM 4500's resources to the full, so achieving very high productivity in relation to the machine's size. This has been proved in practical tests. The new 4500 is therefore a very sound investment – built to satisfy the highest demands, on economy and productivity.





VOLVO BM

4600

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Equipped for hard work. Easy to operate and care for.

Loading haulage vehicles; feeding, crushing and sorting plants; loading and hauling over long distances; dozing and grading – these are natural tasks for the Volvo BM 4500 – because of its speed, reliability and stability. The 4500 has high capacity, but it also has good overall economy. Low operating costs and low maintenance requirements see to that. It is also well equipped and versatile, making it a pleasure to operate.

Volvo BM's ROPS tested safety cab.

Tinted window glass.

Powerful and efficient loader unit.

Well-designed buckets for maximum capacity in different materials.

Wide range of attachments.

Very good bucket angles.

Hydraulic attachment bracket (extra).

Heavy-duty axles with large wheels.



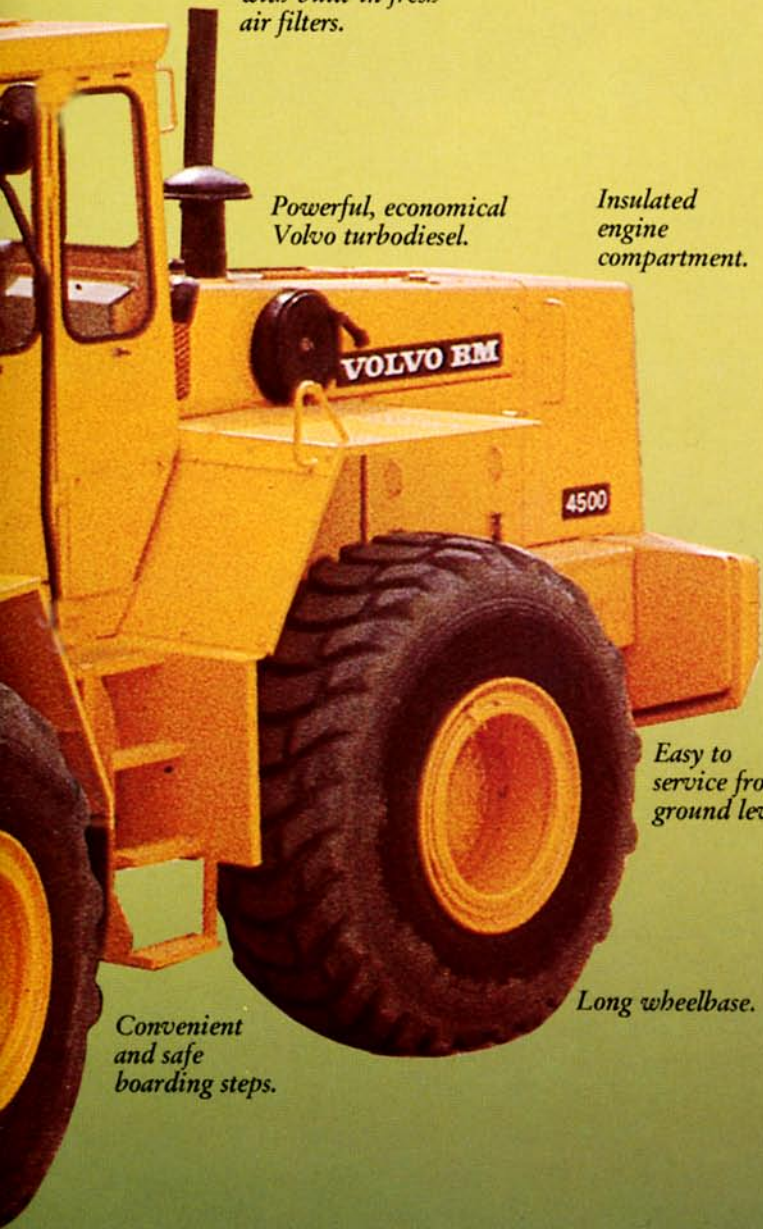


The 4500 offers high capacity, even over long-haul cycles. Its long wheelbase and good weight distribution maintains stability at high average speeds.

Effective heating and ventilation system with built-in fresh air filters.

Powerful, economical Volvo turbodiesel.

Insulated engine compartment.



Easy to service from ground level.

Convenient and safe boarding steps.

Long wheelbase.

Simple servicing leaves more time for productive work

The Volvo BM 4500 is designed throughout for easy servicing. This leaves more time for productive work, resulting in greater economy for the owner and greater job satisfaction for the driver.



The engine's large air filter is easy to inspect and change.



Easy access for checking and topping up the transmission oil level.



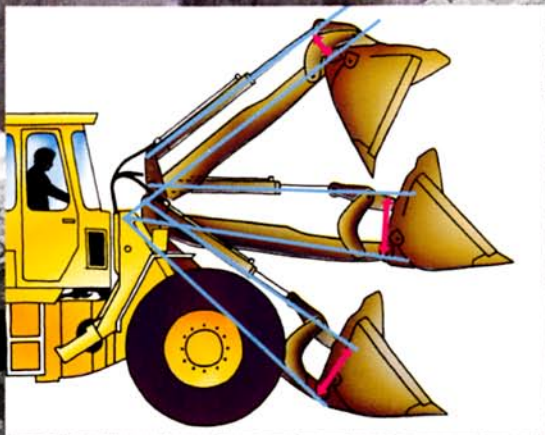
Well protected batteries - easy to inspect.



All lube points have easy access from ground level.



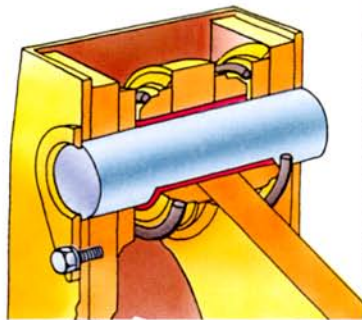
The well-insulated engine compartment has large doors giving good access to engine and radiator.



Volvo BM's new side-arm system is designed to give excellent breakout forces throughout the full range of side-arm movement. This, combined with good bucket angles, is the result of an ingeniously designed linkage system, giving good leverage geometry on tilt-controlling movements.



The mechanical stop for the backward tilt, combined with an accelerated bucket movement, makes sure that the bucket is completely filled, with the heap well back. The dumping angle, together with a mechanical knock-out, permits even "sticky" material to be easily discharged from the bucket.



Large, well-sealed bearing surfaces give the side-arm system long life and sound operating economy. The forces exerted by the hydraulic cylinders are in line with the side-arm system, so eliminating torsional and flexural stresses.



The tilt linkage system has spherical link bearings at all heavily loaded points. The bearings are well sealed to keep grease in and dirt out.

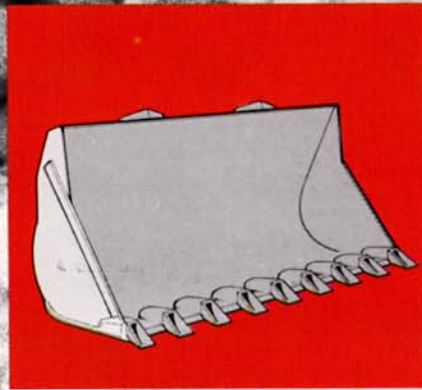


Fully automatic bucket operation is standard. This makes the work easier and improves capacity. The positions at the top and bottom of the lifting movement and the tilt function are adjustable.

Volvo BM's new loader unit features capacity and reliability

Many years of development work combined with long experience in the field have given Volvo BM's engineers a wealth of knowledge. Systematic computations have been used to achieve optimum capacity and function in varying situations. The result is a highly reliable and efficient loader unit that makes the 4500 a harmonious, well-co-ordinated working unit.

- Good bucket angles
- Large breakout force throughout the side-arm movement
- Well-sealed bearings with large bearing surfaces
- Symmetrically acting forces
- Fully automatic bucket operation
- Two-lever, servo-assisted working hydraulics



The servo-assisted working hydraulics allow fingertip control of the two operating levers. The tilt function can be switched from high to low speed - handy for precision work. The machine is also prepared for a third hydraulic function.

Volvo BM has always offered a wide range of attachments. Having the appropriate attachment for each type of handling job boosts productivity and profitability. The Volvo BM 4500, as you would expect, has also been provided with a wide range of attachments. Quality attachments, each designed for its own task.

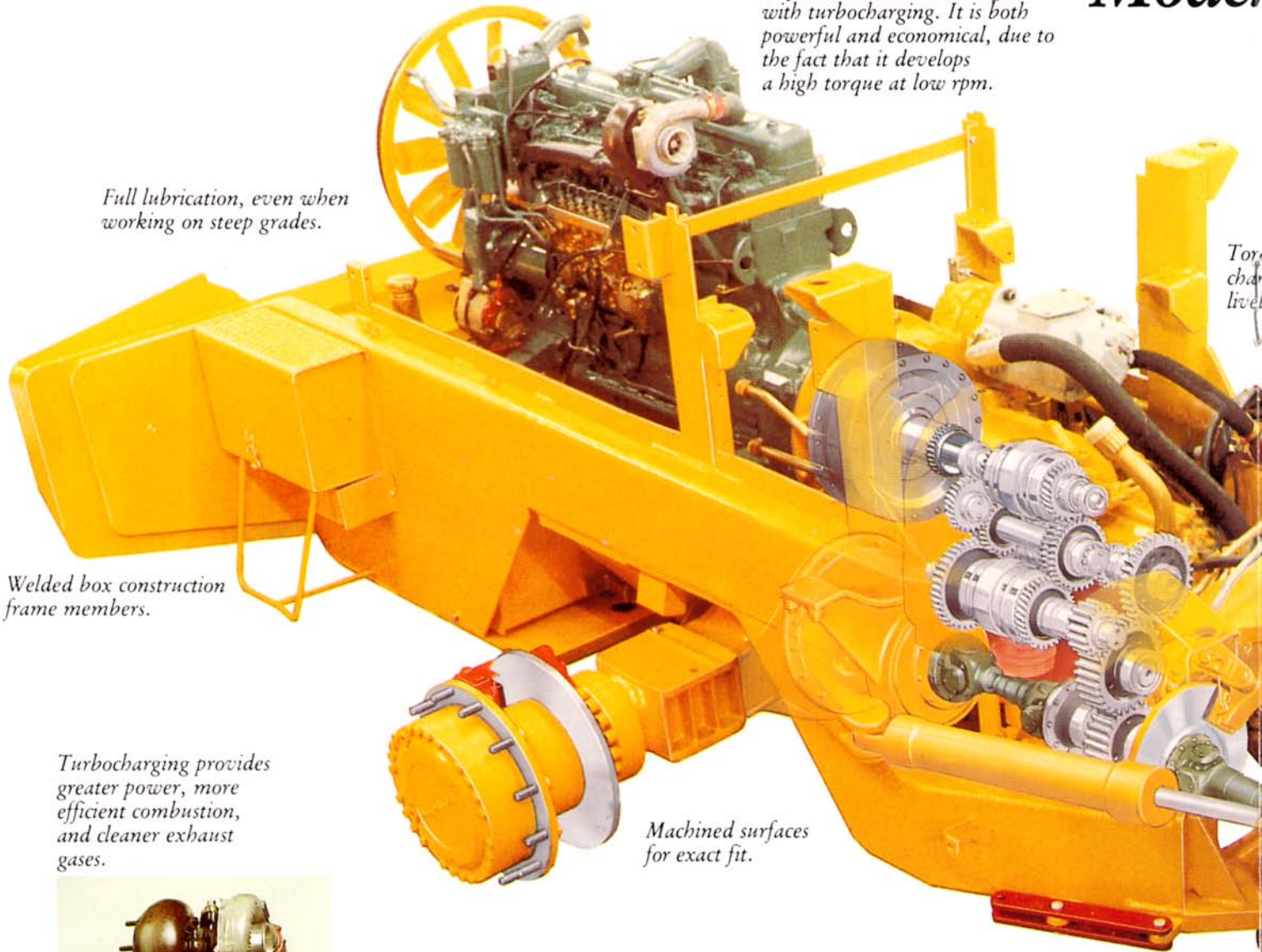
In order to prove their high quality and design reliability, components are thoroughly checked on test rigs. Components are put through simulated movements at loads far exceeding those to which they are normally subjected. The test results must be up to par before they go onto production lines for machine assembly.

Modern

Quiet, low-speed fan.

The Volvo TD 70 H is a modern 6-cylinder construction engine with turbocharging. It is both powerful and economical, due to the fact that it develops a high torque at low rpm.

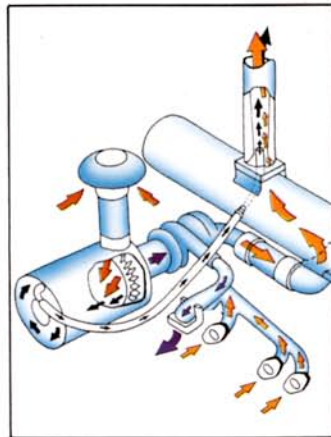
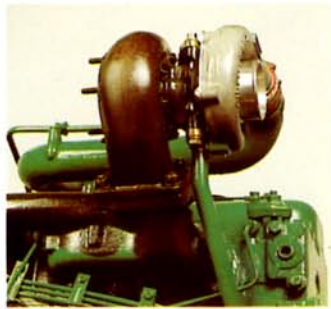
Full lubrication, even when working on steep grades.



Welded box construction frame members.

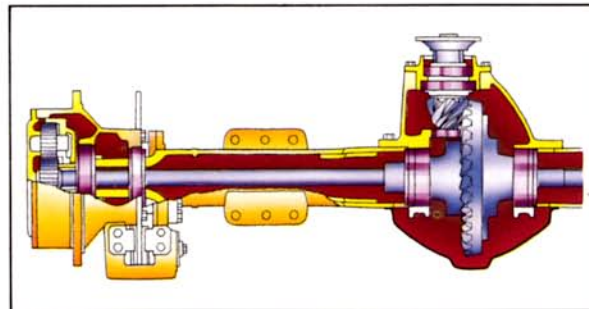
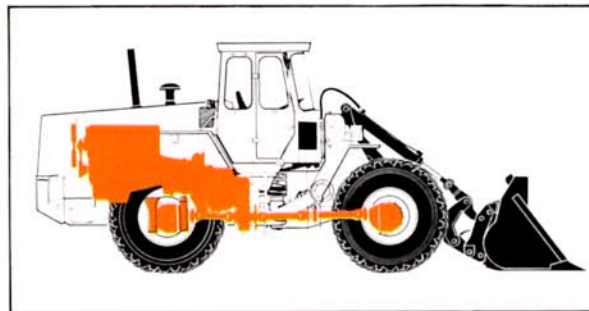
Turbocharging provides greater power, more efficient combustion, and cleaner exhaust gases.

Machined surfaces for exact fit.

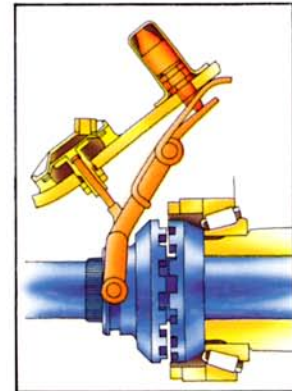


Effective air cleaning:

1. Cyclone filter with ejector discharge (80 % cleaning)
2. Main filter
3. Catch-all filter



The power pack is positioned to give good weight distribution and to provide a low centre of gravity. Add to this its long wheel base between fully floating drive axles and you can see why the 4500 is inherently stable.



The differential lock, operated by compressed air, gives 100 % lock-up.

Articulation j made to withstand heavy stresses.



The axle mounting precision-machined. Six bolts on each side secure the axle to the frame.

Advanced technology and high standard components

The Volvo BM HT 120 hydraulic transmission – full power shift gearbox with smooth, precise gear-changing.

Hydraulic converter with “rigid” characteristic gives smooth acceleration.

Precision engineering and quality are the hallmarks of the 4500's construction. The life of a loader is highly dependent upon its welds, bearings, and frame members being able to withstand high, continuous stresses. Axles, engine, and transmission, are of Volvo's and Volvo BM's own manufacture. Component standardisation permits longer production runs, reduced spare parts stocking, and greater servicing expertise. The end result is an economical and reliable machine with in-built quality in each and every part.



The front frame's box sections eliminate uneven loads on the bearings.

Disc brakes all round. Dual brake circuits for maximum safety.

Volvo axles with hub reductions. Differential lock standard on the front axle.



Surfaces have polished surfaces.

axle

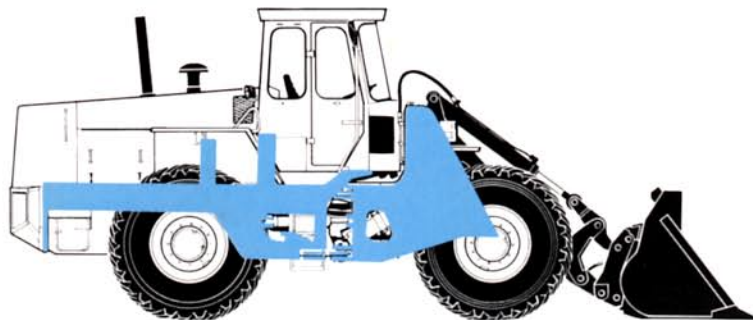




4500: reliability, durability and peace of mind



for owners



Frame members and lifting framework are also subjected to extensive rig testing. Precision engineering and high quality materials ensure long life. Each component is carefully designed and perfectly suited to its purpose.



The heavy duty articulation joint is designed with widely opposed bearing mounts to withstand heavy stresses.



Bearing mounts are machined in boring machines. This ensures the perfect fit and alignment necessary where powerful forces will be applied.

For a loader to have high reliability and good operating economy, thousands of parts must interact perfectly in a highly complex system. Reliability is something for which Volvo BM is renowned. This fact is substantiated time and time again by the way Volvo BM machines perform in the field worldwide.

The foundation of the machine's success is laid in Volvo BM's test laboratories and practical test areas.

Large components that will have to withstand high stresses are fatigue-tested in test rigs. The test programmes are designed to simulate the most extreme working conditions. Engines are run day and night under heavy overload to ensure that the mass-produced product meets the highest standards of reliability – with ample margin. The most advanced instruments trace both external and internal noise, so that technicians can analyse their findings, and make adjustments and improvements to give you the best product possible.

When prototypes and preliminary production runs have been approved, mass production is begun. Volvo BM has modern factories with highly advanced equipment and highly qualified personnel. This, together with a rigorous quality control system, ensures a final product that you can depend on.

The 4500 gives the operator a safe and comfortable

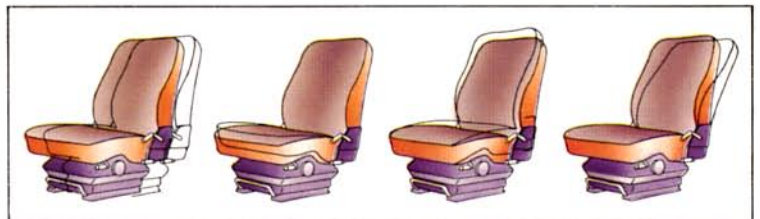


able working environment



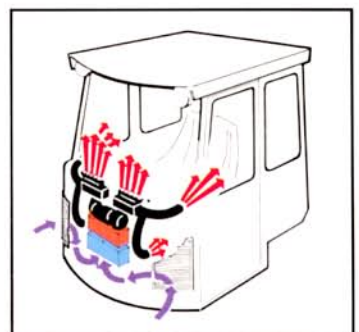
Volvo BM cabs provide a working environment to meet high demands.

- *ROPS-tested and approved*
- *Ergonomically located instruments and controls*
- *Safety rails, handles, and practical boarding steps*
- *Unhindered passage through either door*
- *Rear window and roof hatch can be used as exits*
- *Efficient sound-insulation*
- *Pleasant interior*



Upholstered, fabric covered operator's seat, individually adjustable for optimum driving comfort.

Heating and ventilation system with pre-filtered air to give pleasant working conditions, at any time of the year.



Electrohydraulic gear shifts with all functions on one lever. Easy gear-changing with short, positive movements.





VOLVO BM

VOLVO BM AB ESKILSTUNA

The manufacturers reserve the right to change specification or design without prior notice. Illustrations do not necessarily show the machine in its standard version.

Ref. No. 211 669 1451
ENGELSKA

Production group for basic printed matter Volvo BM
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