

VOLVO BM
616 B / 646



The Volvo BM 646 at work on a sugar plantation in Colombia.



The excavator-loader that does the tough jobs

The Volvo BM 616 B and 646 are the only excavator-loaders built around a loader chassis. This results in exceptionally powerful and sturdy machines that can handle much tougher jobs than most conventional machines. But the 616 B and 646 are also highly versatile. Power-shift transmissions with converter, lateral angulation of the backhoe unit and snap-on attachment couplings make them highly versatile excavator-loaders capable of handling the most diverse jobs—true 'allrounders' among excavator-loaders.





Volvo BM 616B/646, the allround excavators

Volvo BM excavator-loaders are highly productive in widely diverse fields. They are just as effective on building sites and municipal utility jobs as when digging ditches and laying cables.

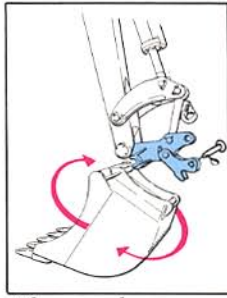
The versatility of these machines is partly explained by the wide range of attachments available and the quick method of coupling them. Changes from one attachment to another can be made in little more than a minute.



A rugged backhoe unit with lateral angulation

The backhoe unit is designed to cope with punishing work all the year round. One factor which makes the machine tougher and more tenacious than the rest is that it is built on a time-tested Allrounder loader chassis—a chassis unique to Volvo. The high-capacity hydraulic system ensures quick responses and hefty breakout, lifting and slewing forces. The backhoe unit is designed to cope with the tough Scandinavian ground conditions. With an outreach of 5,9 metres and its excellent geometry, which includes a bucket angle of 180°, it has plenty of capacity for even the biggest jobs. One feature you will find extremely useful is lateral angulation. This enables you to work close up to walls and around obstacles without moving the machine.





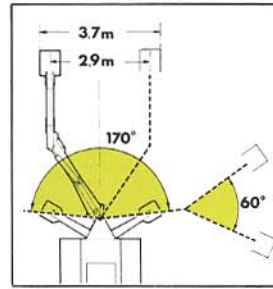
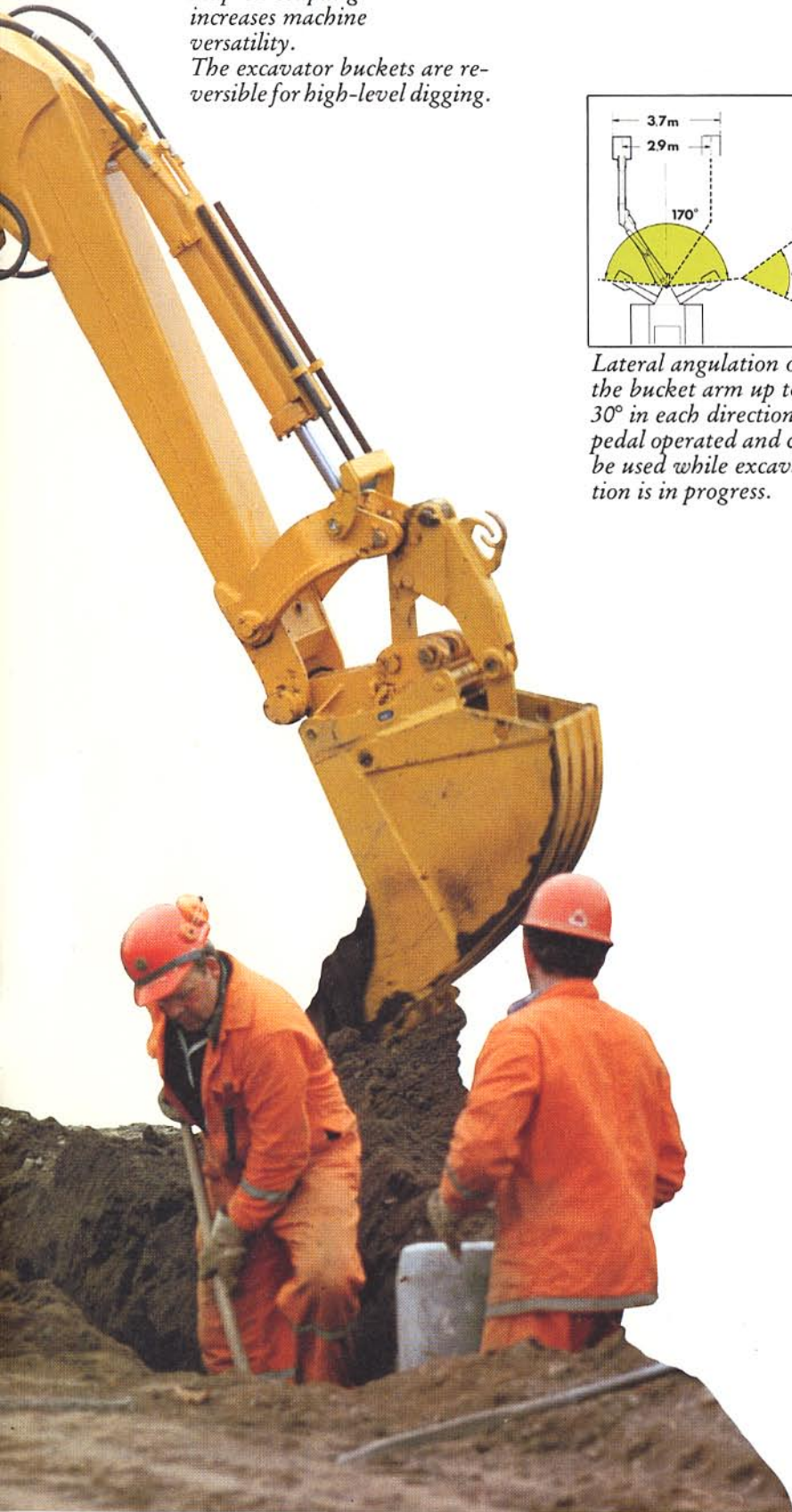
The attachment bracket with snap-on coupling increases machine versatility. The excavator buckets are reversible for high-level digging.



The 616 B/646 can easily cope with large boulders.



Generous outreach and lifting height together with a favourable carrying angle makes loading easy.



Lateral angulation of the bucket arm up to 30° in each direction is pedal operated and can be used while excavation is in progress.



The large slewing force in the bucket arm comes in handy when backfilling trenches.



The bucket can easily be reversed for high-level excavation.



With lateral angulation of the bucket arm you can dig along-side walls and around rocks and pipes—extremely useful when exposing cable and pipe systems in roadwork.

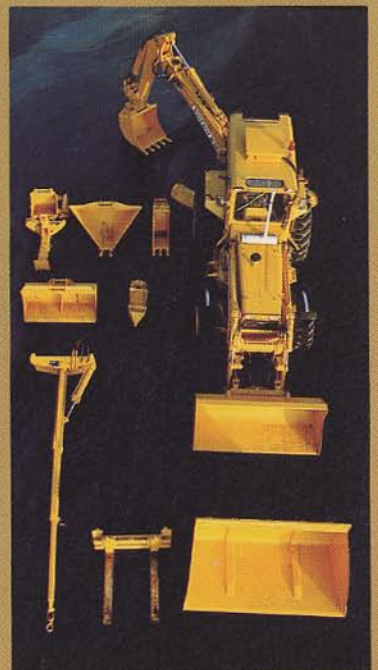


With the four-wheel drive and pole-raising unit, you have a powerful and stable power line erection machine.

Powerful front loader with generous outreach and lifting height

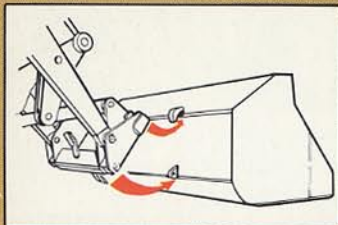
Reverse the driver's seat and you have an effective front loader with single-lever operation. Penetration and bucket fill are quite out of the ordinary. This is partly due to the efficient power-shift transmission with a converter that automatically pours on extra power when resistance is met.

A wide range of oscillation on the front axle reduces bucket spillage to a minimum, a great asset when operating on uneven ground. Another asset on difficult terrain is four-wheel drive on the 646. A tight turning circle adds agility to a machine that is highly manoeuvrable in confined spaces.



Choose the right attachments from Volvo BM's attachment catalogue.

Both the backhoe unit and loader unit have a snap-on attachment bracket enabling most attachments to be changed in little over a minute. Volvo BM has the biggest range of attachments on the market—you have a choice of some 80 specialist units when you buy a 616 B or 646. You then have a highly versatile excavator-loader that will complete most jobs with speed and efficiency.





Safe and comfortable cab

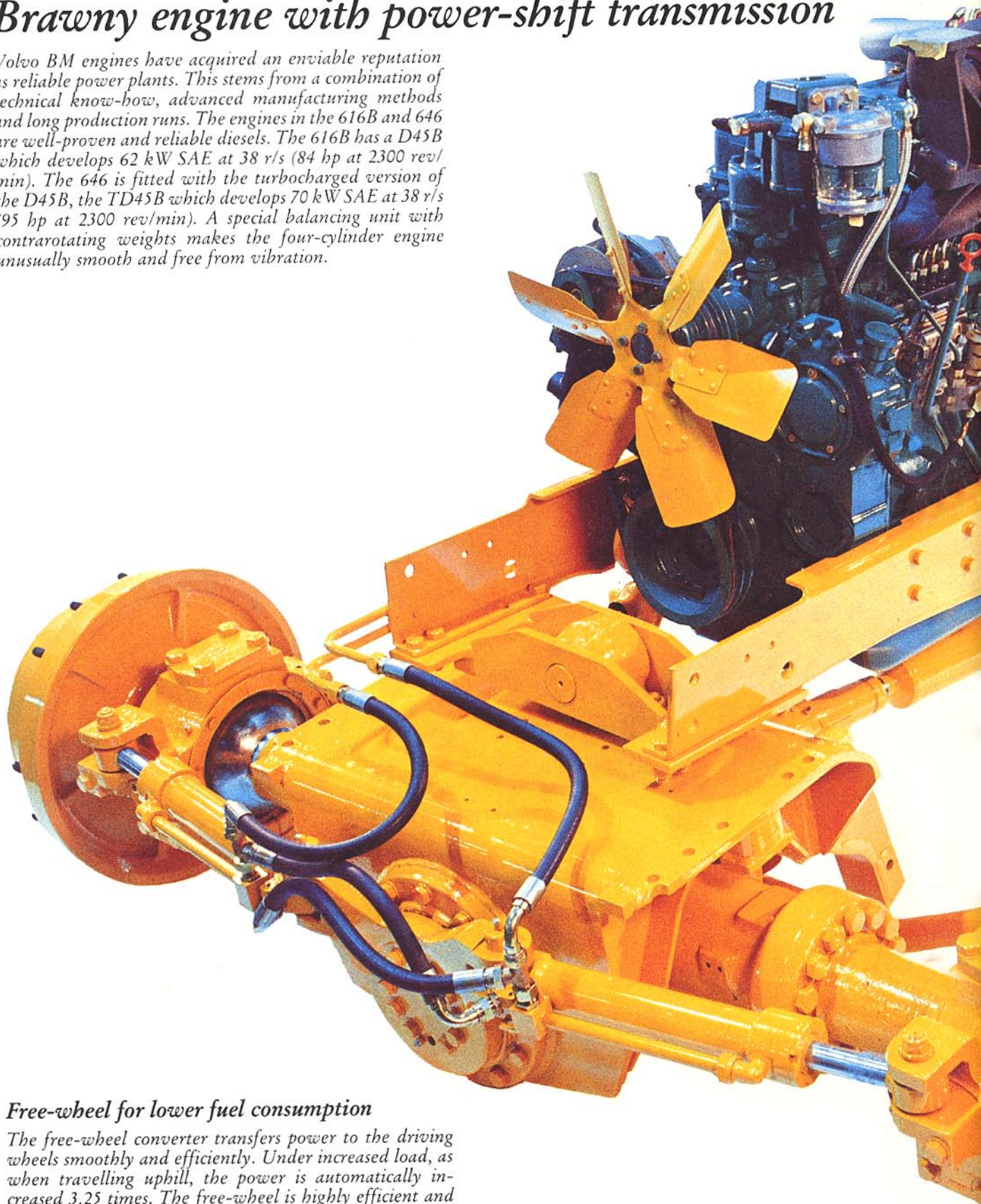
The cab has everything you could wish for in a modern workstation. It is comfortable, spacious, quiet and complies with current safety standards; these include impact resistance, controls and instruments positioned so that you can work safely and accurately with light, precise movements, and a central warning lamp right in front of you that tells of any vital function failure during excavating.

The basic quality of Volvo BM machines is created on the drawing board. In production they are inspected and thoroughly tested at all stages of assembly and the final product is put through its paces in practical working conditions. All this is done to ensure that Volvo BM completely satisfies the high standards of quality and reliability demanded by today's building and construction industry.



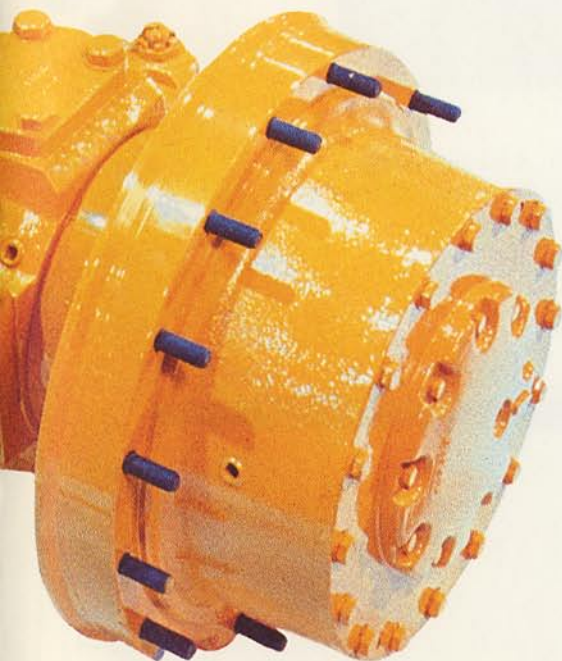
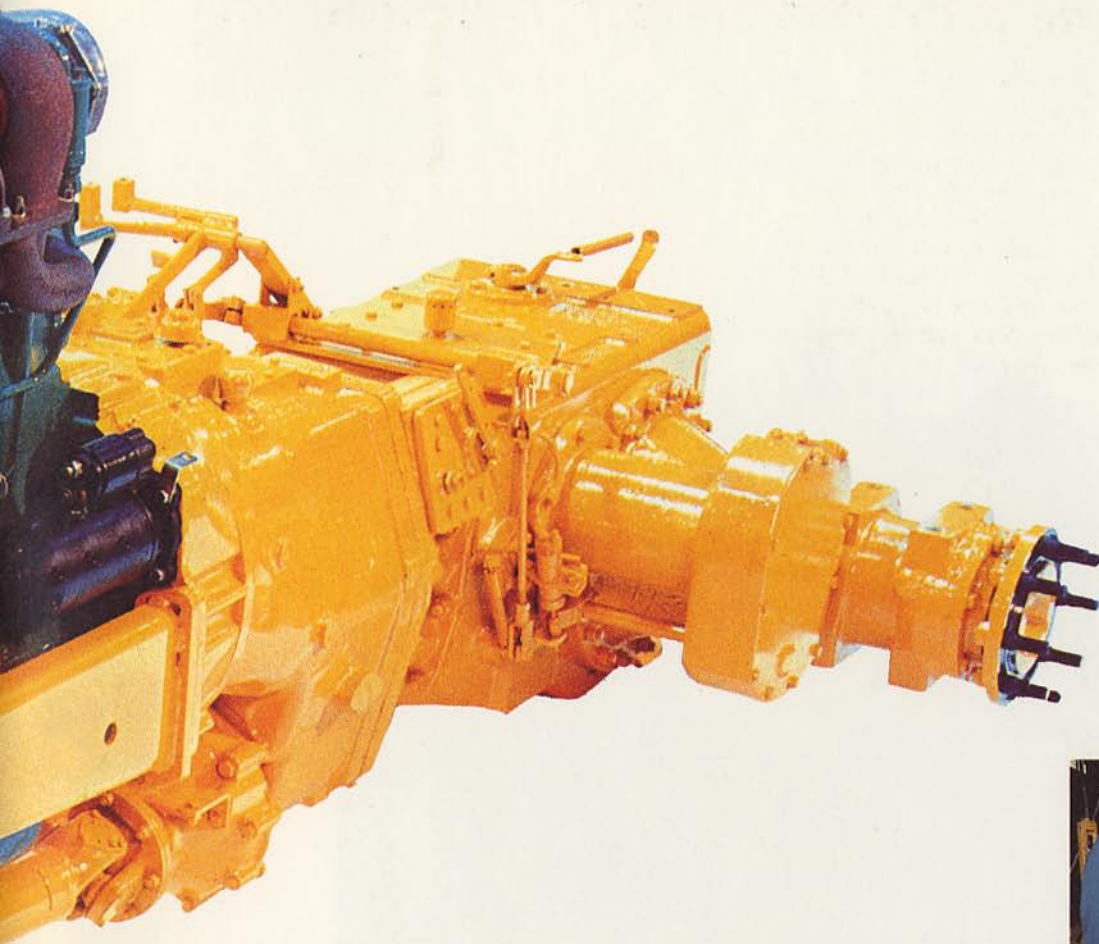
Brawny engine with power-shift transmission

Volvo BM engines have acquired an enviable reputation as reliable power plants. This stems from a combination of technical know-how, advanced manufacturing methods and long production runs. The engines in the 616B and 646 are well-proven and reliable diesels. The 616B has a D45B which develops 62 kW SAE at 38 r/s (84 hp at 2300 rev/min). The 646 is fitted with the turbocharged version of the D45B, the TD45B which develops 70 kW SAE at 38 r/s (95 hp at 2300 rev/min). A special balancing unit with contrarotating weights makes the four-cylinder engine unusually smooth and free from vibration.



Free-wheel for lower fuel consumption

The free-wheel converter transfers power to the driving wheels smoothly and efficiently. Under increased load, as when travelling uphill, the power is automatically increased 3.25 times. The free-wheel is highly efficient and minimises fuel consumption on the road when excavating. Power-shift and transmission enables you to change freely between ratios and into forward and reverse without using a clutch. Add servo-assisted steering and a short wheelbase and you get rapid cycle times with a resultant high level of productivity.



Meticulous testing and efficient assembly in modern factories

Major importance is attached to functional testing and quality control. Modern instruments and well-trained personnel can detect the smallest fault. Efficient assembly techniques are employed using up-to-the-minute equipment. All this ensures that Volvo BM quality and reliability are built into the final product.



The high-capacity Volvo BM 616 B and 646 excavator-loaders. A loader chassis, power-shift transmission and heavy-duty backhoe unit with hydraulic lateral angulation give them outstanding performance, even on the toughest jobs.

VOLVO BM
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