

VOLVO BM 3500

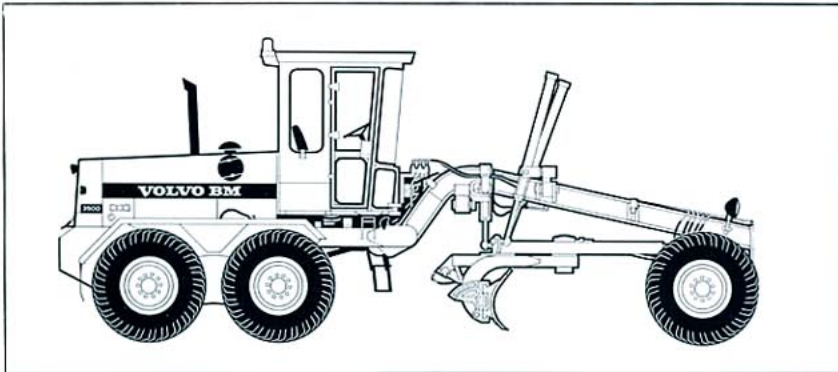


The Volvo BM 3500 — an advanced and efficient road-builder

Volvo BM have been designing and building motor graders for many years. They have been operating on building and road construction projects all over the world, under widely varying conditions. It is the wealth of knowledge and know-how gained from this vast experience that is embodied in the advanced features of the Volvo BM 3500.

Full hydraulic operation of every working function gives the driver precise, effective control. Articulated bogie steering provides excellent manoeuvrability for working in restricted areas. Add to this the fantastic comfort and safety of the well appointed cab and you can see that the Volvo BM 3500 is no ordinary motor grader.

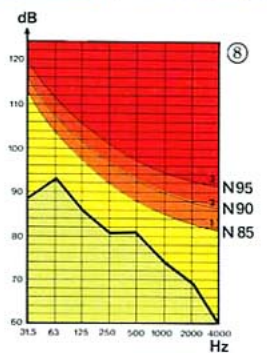
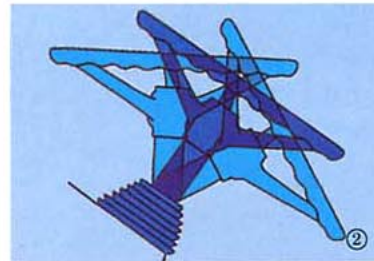
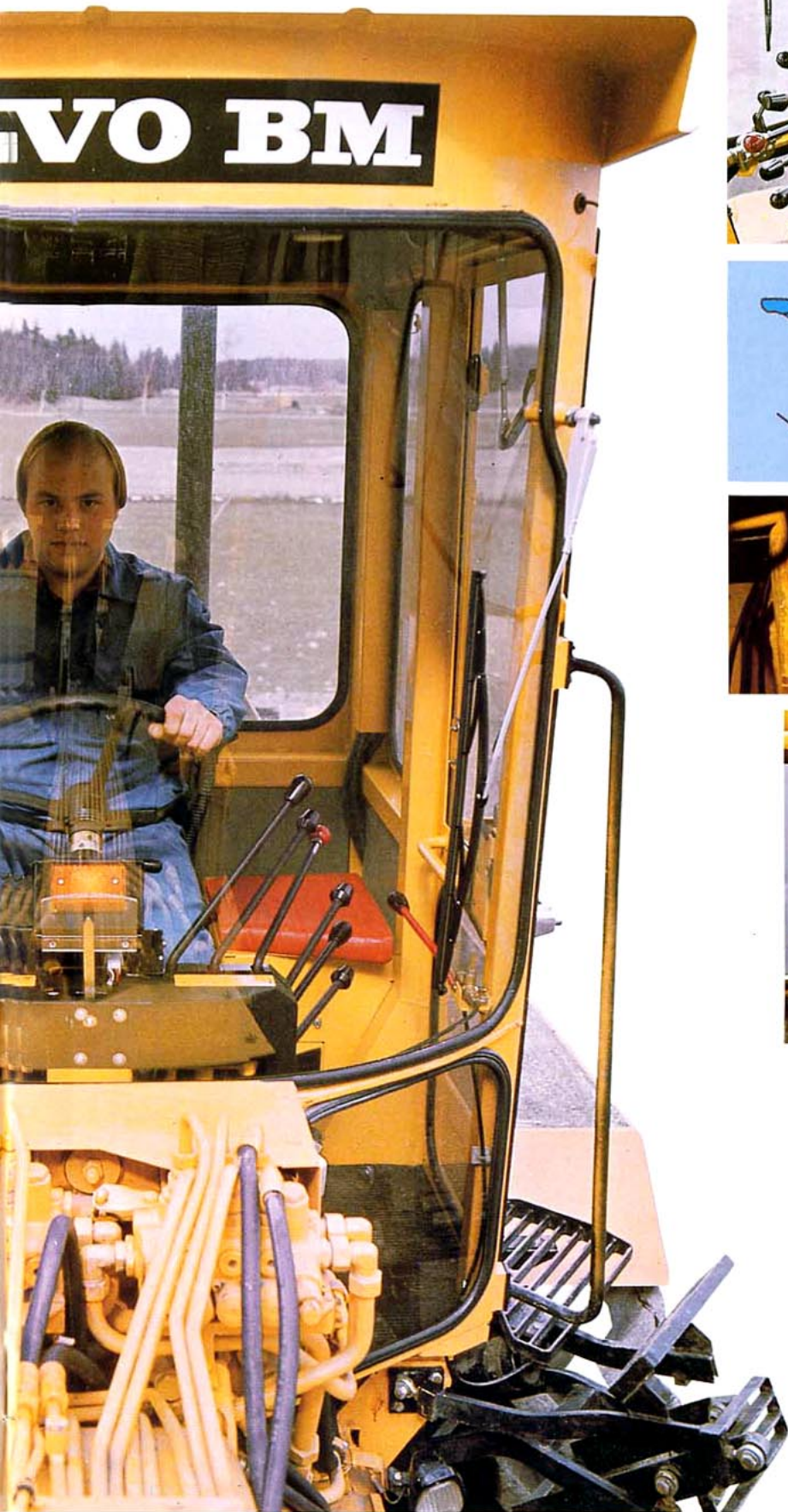
Try it out for yourself. The Volvo BM 3500 is a genuine Swedish product displaying all the quality that this implies.

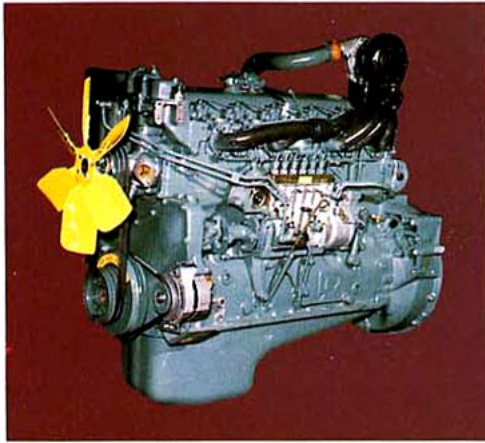


Carefully designed in every detail

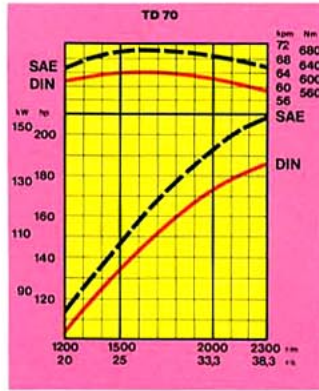
- ① Well-grouped controls with double command for the blade's lifting function.
- ② Steering wheel adjustable for different driving positions.
- ③ Cab mounted on rubber pads for minimum noise and vibration.
- ④ Operator's station permits operation from a standing or sitting position.
- ⑤ Well-appointed instrument panel with clear dials and symbols.
- ⑥ Effective heating and ventilation. Separate defroster for front window and upper door windows.
- ⑦ Pneumatically operated steps for safe and convenient boarding and alighting (extra).
- ⑧ Noise level well below N80 curve.



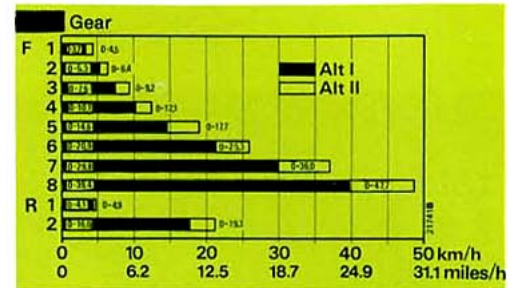




The tried and tested Volvo TD70 direct-injection turbo-diesel has a low fuel consumption.



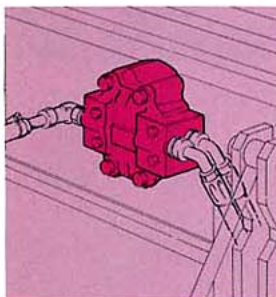
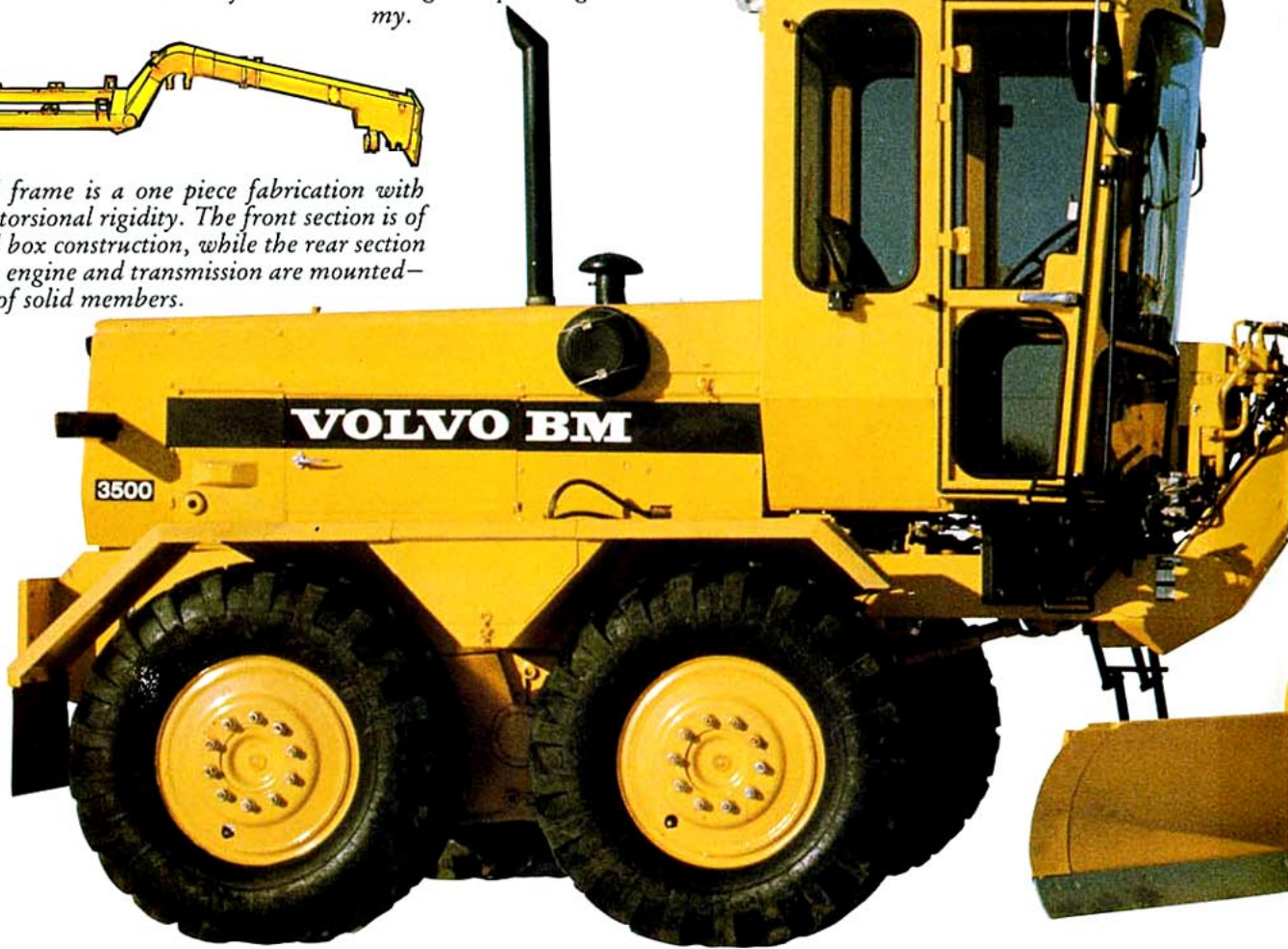
High horsepower/weight ratio and low fuel consumption provide high productivity and good operating economy.



With 8 forward gears and a torque converter lock up, the 3500 has a very wide range of speeds and tractive powers.



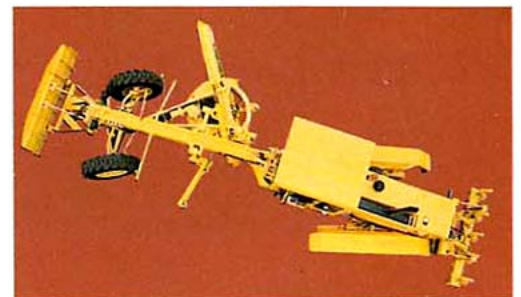
The rugged frame is a one piece fabrication with exceptional torsional rigidity. The front section is of a reinforced box construction, while the rear section—where the engine and transmission are mounted—is made up of solid members.



A dual circuit hydraulic system is operated by a powerful twin pump. The two circuits can be inter-connected for even higher speed when required.

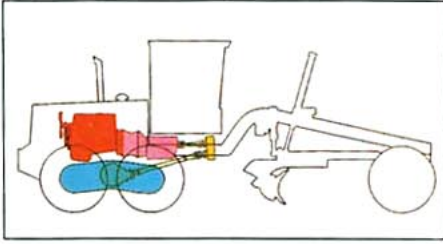


The steerable bogie is mounted on a sturdy ball bearing race with a diameter of 75 cm. The stresses from the blade are therefore distributed over a large bearing surface, resulting in low wear and reduced maintenance costs.



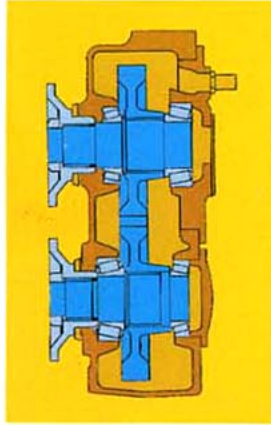
Articulated bogie steering and adjustable attachment arms for the lifting cylinders provide extremely good reach to both sides (3.05–10 ft).

Powerful and manoeuvrable

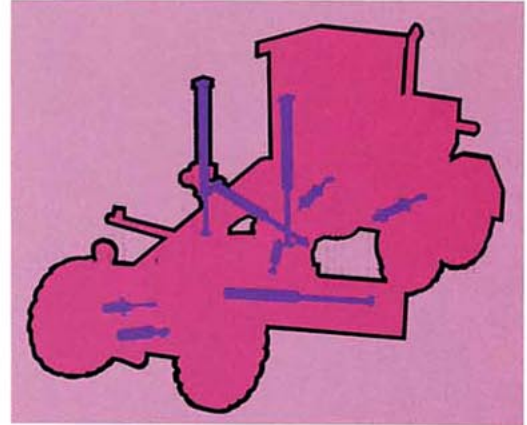


Power is transmitted from the engine via a torque converter and gearbox to the dropbox and from there out to the gear-driven bogie.

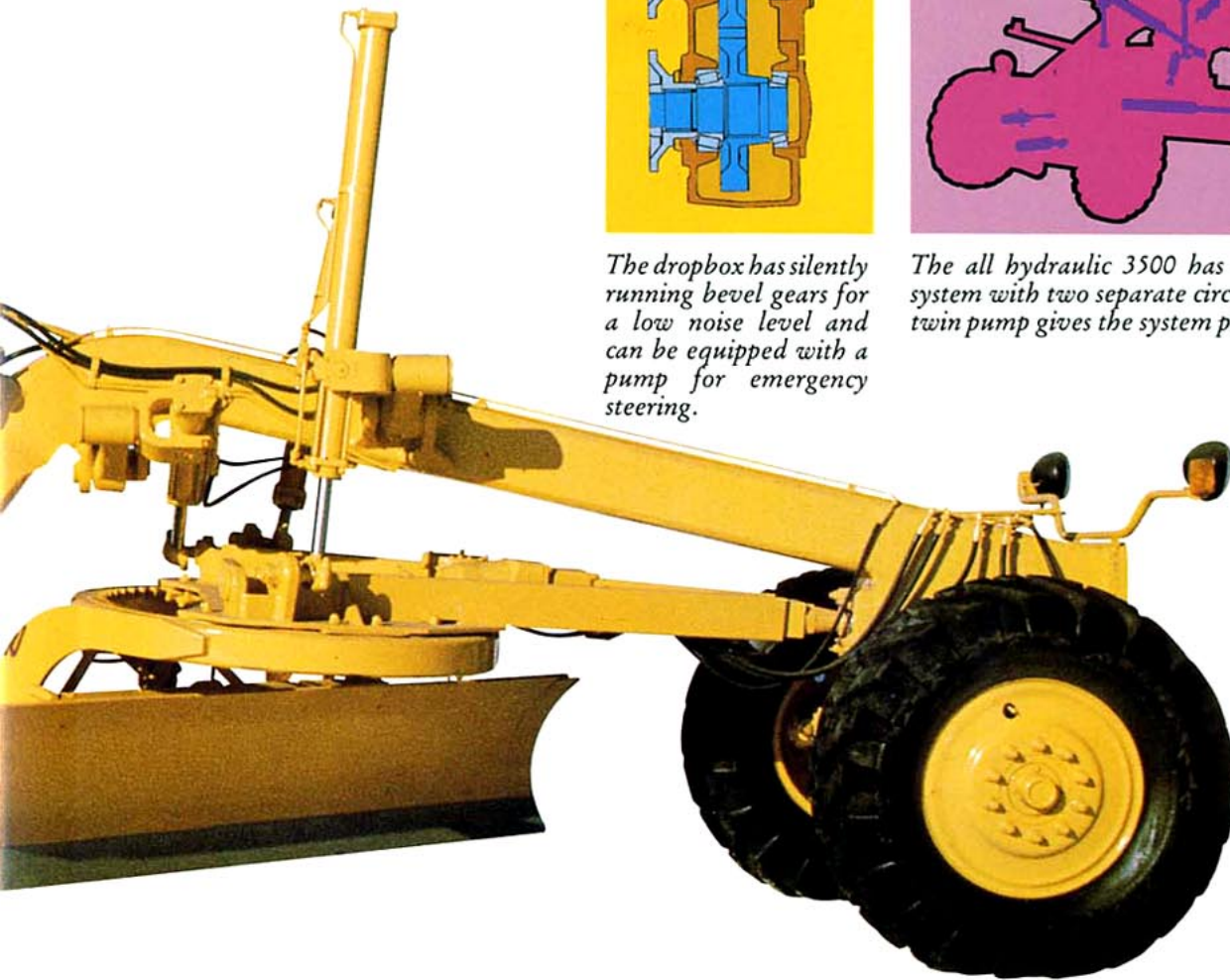
Due to its advanced design, the Volvo BM 3500 is efficient in all situations. It is nimble in tight spaces and has all the power and weight needed for the heavy jobs. High quality in every detail ensures low maintenance costs.



The dropbox has silently running bevel gears for a low noise level and can be equipped with a pump for emergency steering.



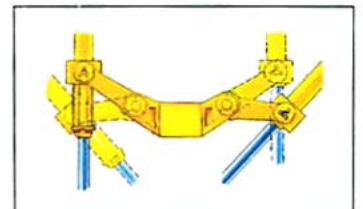
The all hydraulic 3500 has a high-capacity system with two separate circuits. A powerful twin pump gives the system plenty of muscle.



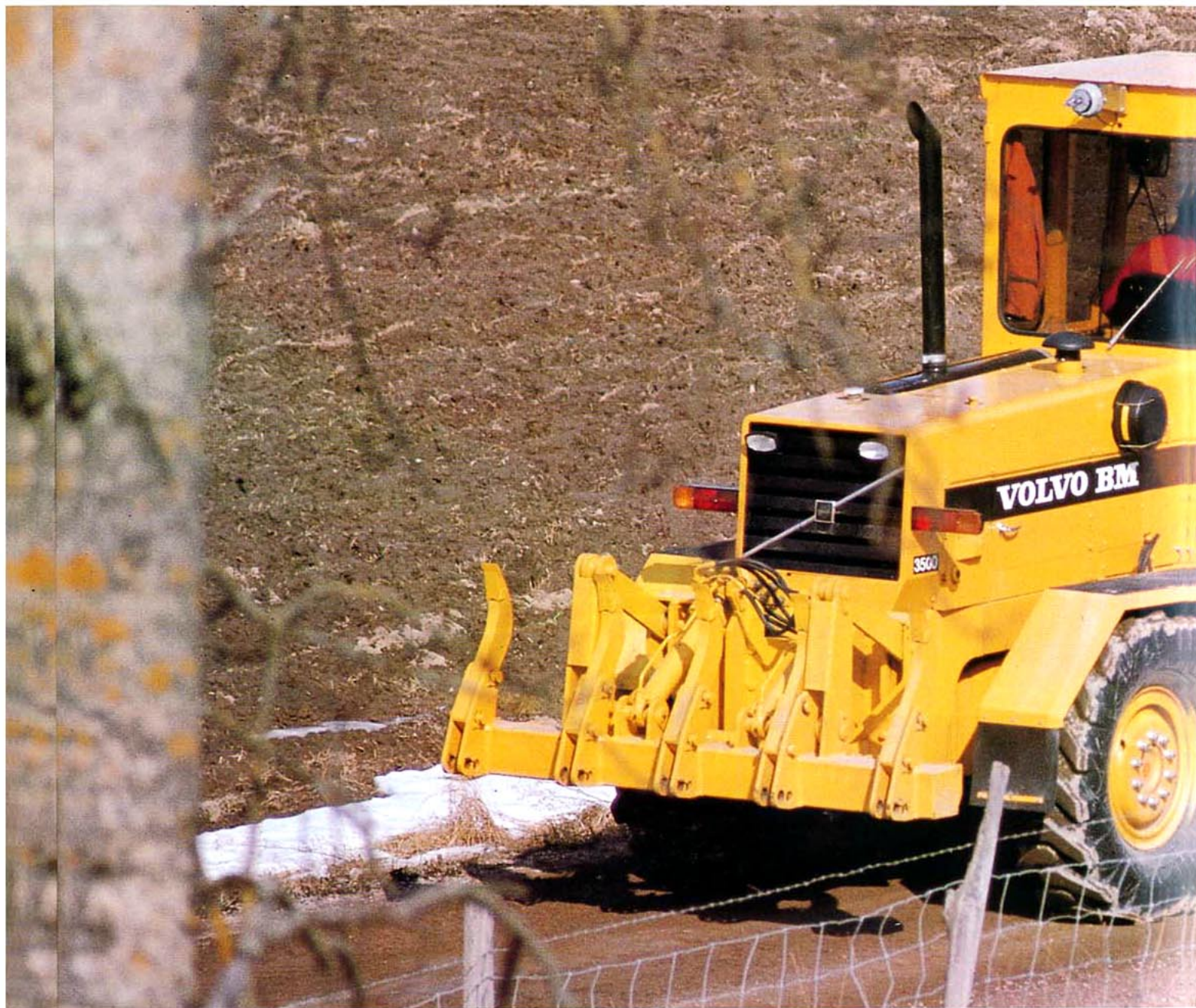
The front wheels can lean up to 18° either side of vertical in order to counteract lateral drift when the blade is working under a heavy load.



Hydraulically driven worm and gear provide full 360° circle rotation. This enables the 3500 to work even while backing.



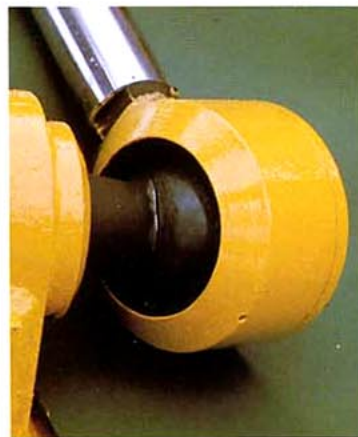
The blade attachment arms have quick and easy manual adjustment. The advantages are a compact stable construction and arms which do not obstruct visibility.



The blade has a safety clutch to prevent damage to the machine. If the blade encounters a firmly bedded stone or similar obstruction, it is automatically disengaged; the blade can then be reset directly from the cab.



The ball sockets on the blade's lifting cylinders are sealed to reduce wear and maintenance costs. These ball sockets are easy to replace when they become worn or damaged.



The ball gudgeons on the circle are also easily replaced. This guarantees minimum play in the joints and consistent precision operation of the machine.

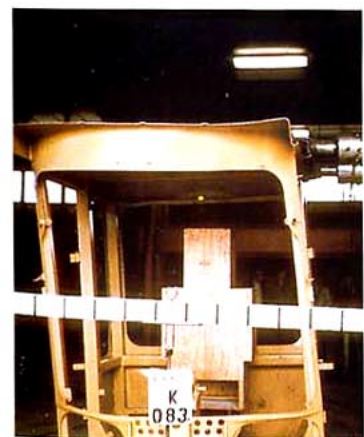


The rear side of the grader blade is reinforced by a welded box construction and heavy-duty sections.

The guides and their bearings on all motor graders are subjected to a great deal of wear and tear. For this reason, those on the 3500 have been designed for easy replacement if play becomes excessive.



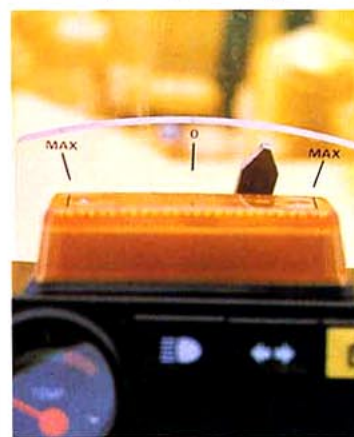
The Volvo BM 3500 is highly efficient in most fields of application. It has the power, the weight and the manoeuvrability.



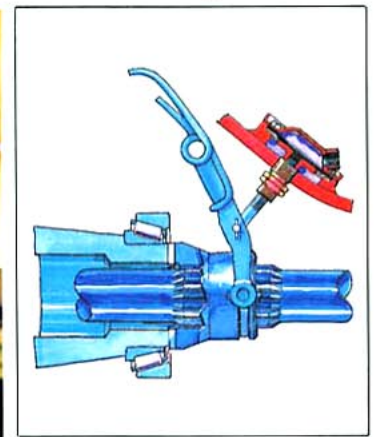
The safety cab is approved by the American ROPS test. This involves a fixed cab being subjected to lateral and vertical pressures with forces calculated in relation to the machine's weight. The operator of a 3500 can feel safe and well-protected in this cab.



A central warning lamp in front of the operator monitors all vital functions. The lamp lights in the event of high engine temperature, low motor oil pressure, high transmission temperature, low transmission oil pressure, low brake pressure and low coolant level.



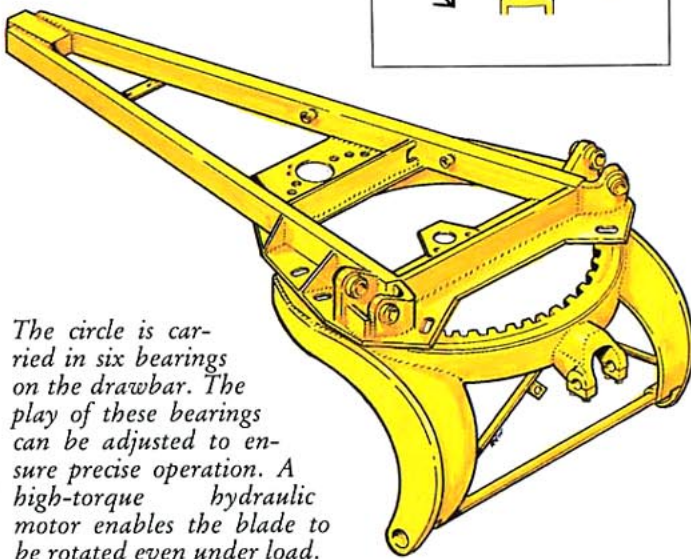
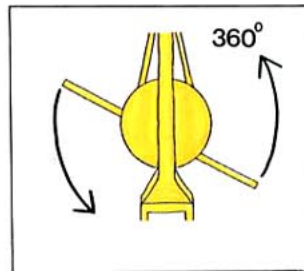
A bogie steering position indicator to assist the operator in precision work can be fitted as an extra.



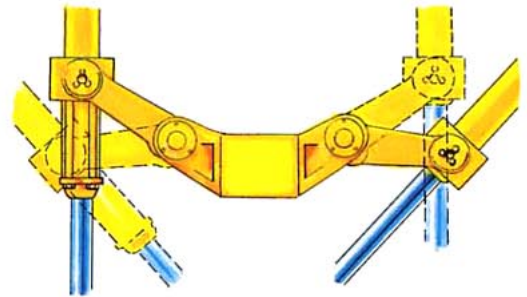
The differential lock is pneumatically operated and provides 100% lock-up between the drive wheels. This ensures positive traction on slippery surfaces and when high grading resistance is encountered.

Designed for high capacity

The drawbar and circle on the 3500 are of heavy-duty construction for high precision and reliability on roadwork. The drawbar is made of solid steel with a replaceable drawball. The circle is a welded box-section fabrication with a one-piece gear rim.

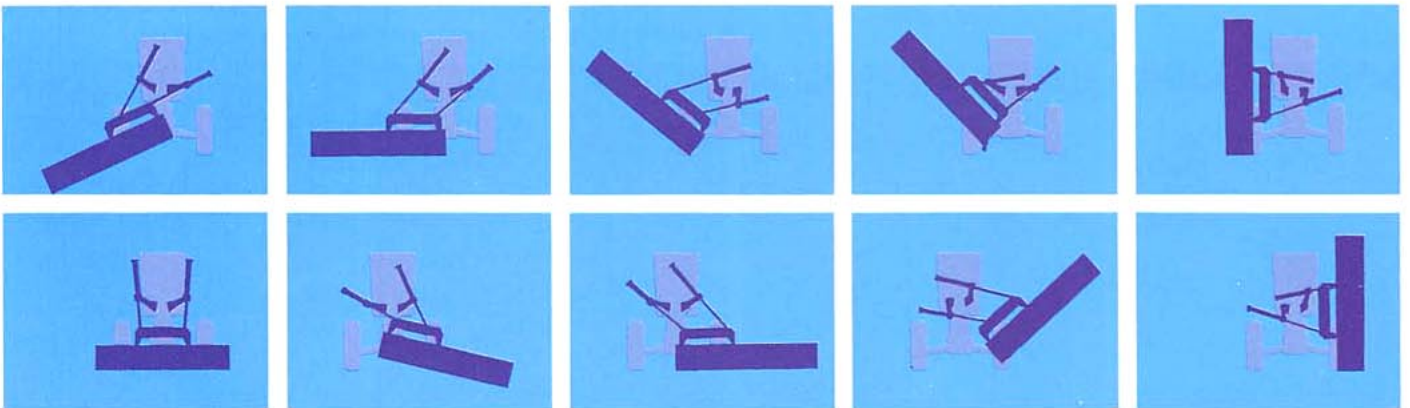


The circle is carried in six bearings on the drawbar. The play of these bearings can be adjusted to ensure precise operation. A high-torque hydraulic motor enables the blade to be rotated even under load.



Large working range

Individual adjustment of the cylinders provides the high grader blade with a wide range of movement in both directions.

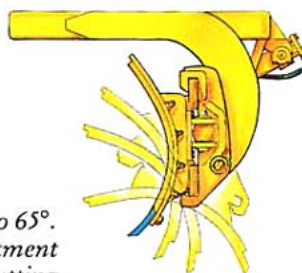


Wide range of adjustment

The circle and grader blade can be adjusted for all conceivable requirements from ordinary grading to the cutting of wide and steep slopes.

Good blade angles

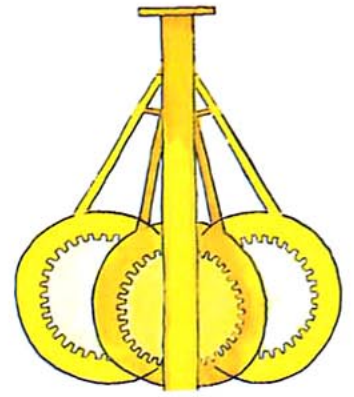
The blade's cutting angle can be varied by up to 65°. This comes in handy when you want fine-adjustment of the cutting depth or want to find the best cutting angle.



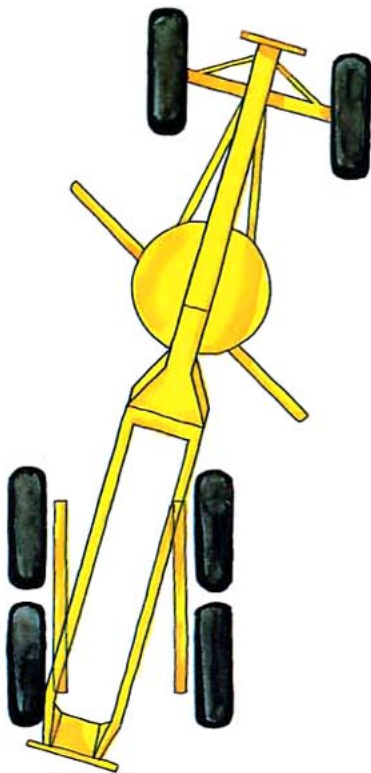


Effective reach

Reach is a full 3.05 metres (10 feet), making the 3500 an extremely effective motor grader. Where other motor graders have to make several passes, the 3500 needs only one.

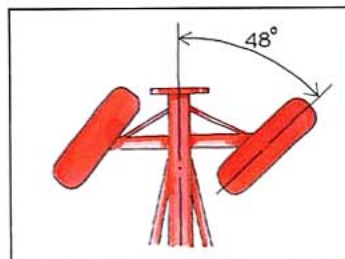


The circle can be regulated with precision through a wide range by means of a well-designed and powerful hydraulic system.

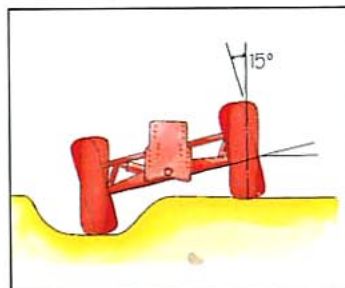


Articulated bogie steering boosts capacity

'Crabbing' enables the operator to skirt windrows, increasing the machine's capacity. Bogie steering also improves the machine's balance.



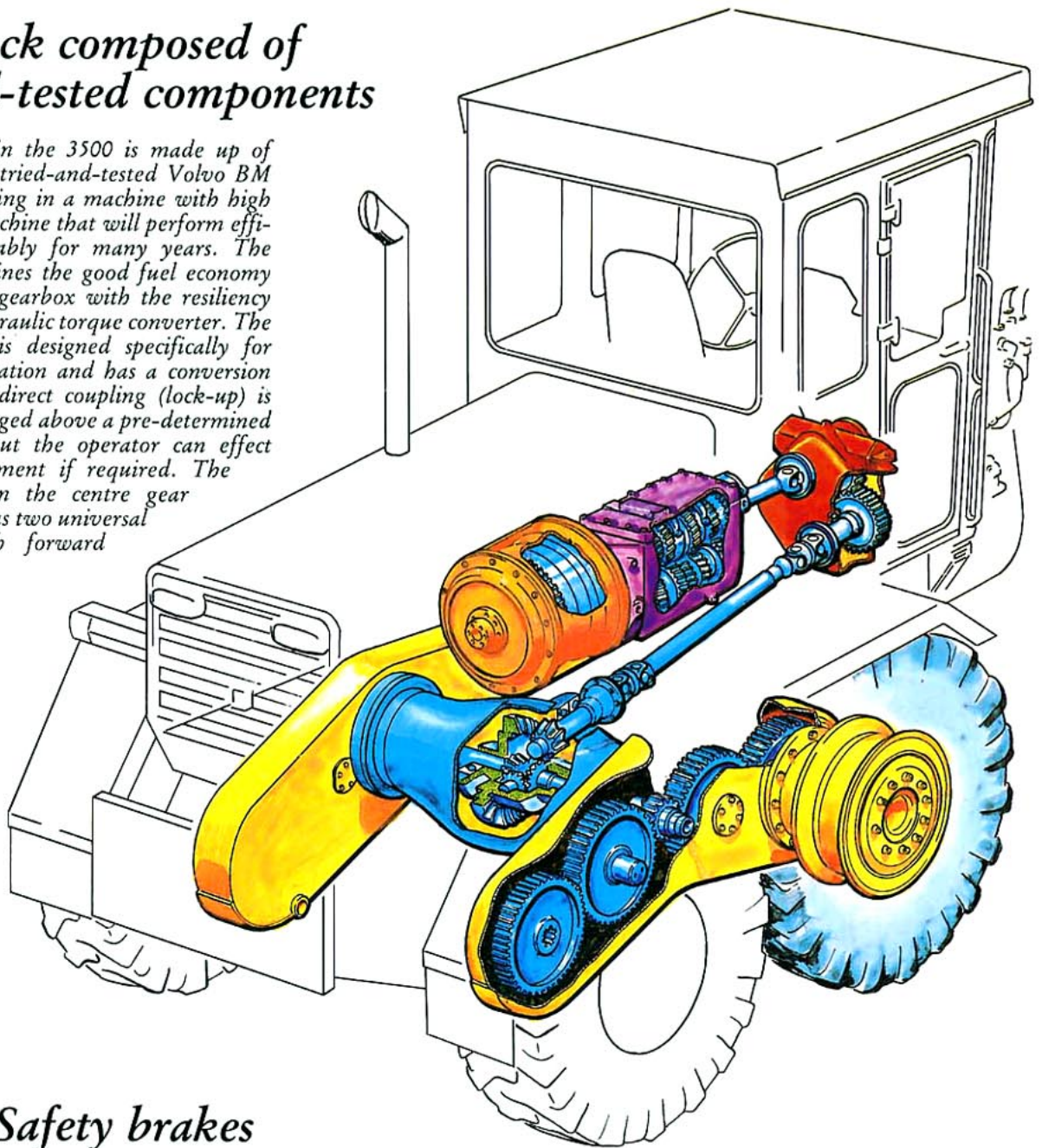
A turning radius of only 7.5 metres (25 feet) gives the 3500 the manoeuvrability of a much smaller motor grader. This small turning radius ensures efficient working even on narrow and winding roads. Sharp bends can be taken with a full blade load while steering the machine with the bogie alone.



Front wheel lean and front axle oscillation both contribute to continuous good working even on deeply rutted surfaces – or when grading with one wheel in a ditch.

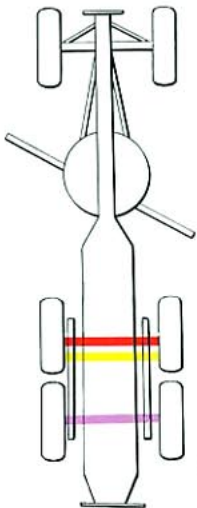
Power pack composed of tried-and-tested components

The transmission in the 3500 is made up of totally compatible tried-and-tested Volvo BM components, resulting in a machine with high productivity. A machine that will perform efficiently and profitably for many years. The transmission combines the good fuel economy of a synchronised gearbox with the resiliency and power of a hydraulic torque converter. The torque converter is designed specifically for motor grader operation and has a conversion ratio of 2.2:1. A direct coupling (lock-up) is automatically engaged above a pre-determined engine R.P.M., but the operator can effect manual disengagement if required. The prop-shaft between the centre gear and the dropbox has two universal joints for smooth forward drive.



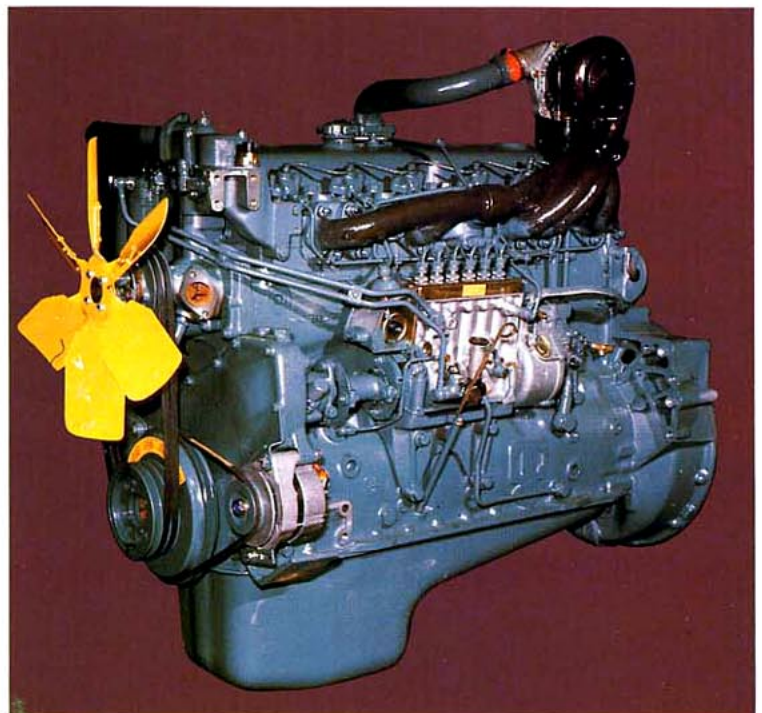
Safety brakes

The driving brakes are air-operated with two independent circuits for maximum safety. The parking brake is applied by spring action and released pneumatically. This means that the parking brake always works independently of the engine. Many different tyre sizes up to 20.5x25 inches can be used on the 3500, depending on the surface and the type of work.



Volvo turbodiesel

The engine is the well established TD70 with 154.5 kW SAE (185 hp DIN), currently powering numerous Volvo motor vehicles and boats all over the world. Its high output and constant torque at varying engine speeds give the 3500 plenty of power to cope with all situations. The electrical system has ample capacity with an alternator and a powerful starter motor for easy cold starts.







The Volvo BM 3500—a new Swedish motor grader with numerous advantages. It has a powerful turbocharged engine and an efficient transmission. Articulated bogie steering provides high manoeuvrability and efficiency at all times. These features, together with a comfortable ergonomically designed cab, enable the operator to work efficiently and tirelessly in a pleasant environment.

VOLVO BM

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