

VOLVO BM

TERRAIN CHASSIS 860 TC



VOLVO BM 860 TC solves your off-road haulage problems

The Volvo BM 860 TC off-road machine is unmatched for mounting heavy equipment and for haulage work over rough terrain. Simple, rugged design and construction with outstanding ability to negotiate difficult terrain make the 860 TC ideal for carrying efficient equipment combinations and for new contract procedures.

Top quality and high-precision production are features of all components incorporated into the 860 TC. Heavy payloads and impressive lugging power ensure high economic yield.

Power-packed superb stamina

Designed to stand up to on-the-job abuse, the power train in the 860 TC incorporates time-tested VOLVO produced components — manufactured to close tolerances and well adapted to that purpose.

Power-shift gearbox and torque converter with lock-up clutch

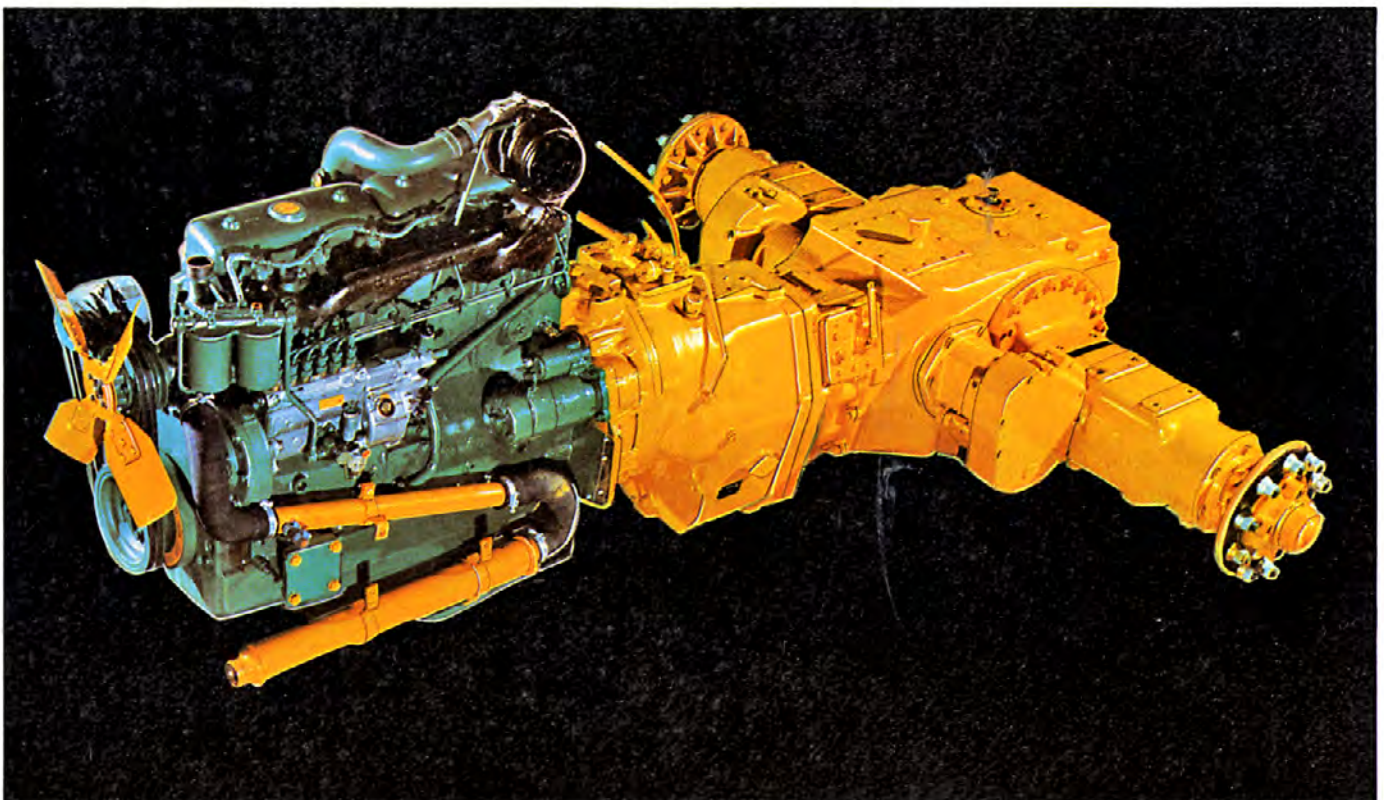
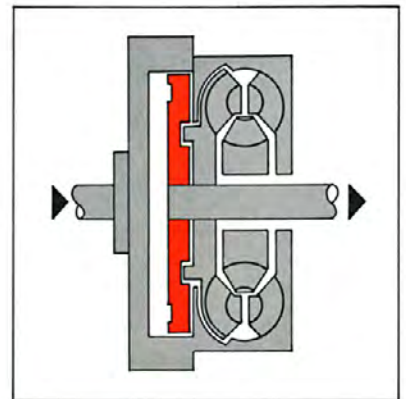
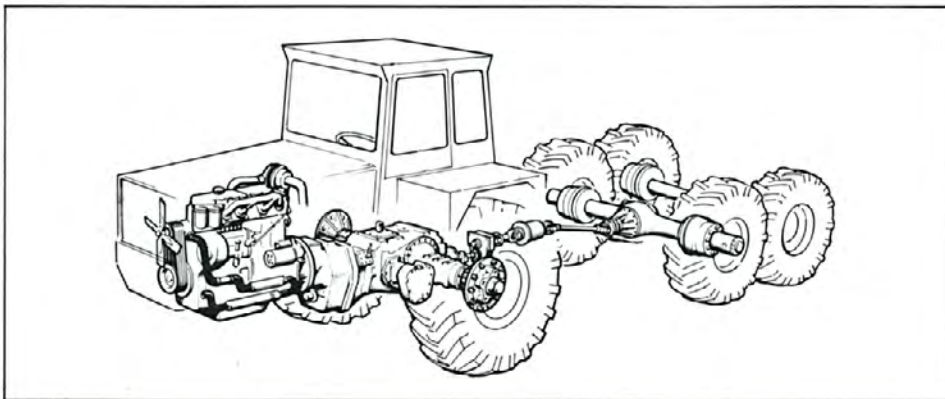
The power-shift gearbox makes it easy for the driver to change gear throughout the entire speed range — up and down, forward and reverse. The torque converter provides optimal torque continuously, and operates smoothly over difficult terrain conditions.

The 860 TC can also be used to advantage over smooth terrain as well as on roads where the torque converter is not used. To utilize engine power to the maximum and increase acceleration, the torque converter has been designed with a lock up clutch which provides direct drive from engine to gearbox. The lock up clutch actuates the second gear and is engaged automatically at optimum torque. If desired the lock-up function can be disengaged entirely by means of a switch on the instrument panel.

Sophisticated turbocharged engine incorporates benefits of long-term experience

The Volvo TD 50 B diesel which boasts many sophisticated design features is manufactured in long runs for trucks, forestry machines and other types of construction equipment which impose strin-

gent requirements. Its 5.1 litre displacement enables this turbocharged Volvo diesel to deliver more power than conventional, naturally-aspirated engines of the same type. Moreover, fuel consumption is low and exhaust gases are cleaner. The turbocharger consists of an exhaust-driven compressor which provides the engine with an ample supply of air to ensure complete combustion of all fuel. Turbocharging imposes exacting requirements for tightness, cooling and resistance to deformation. As a result, this engine is provided with two cylinder heads, steel gaskets, an unusually sturdy engine block, a 7-bearing crankshaft and camshafts with large bearing seats, not to mention the highly efficient cooling system. To simplify service and ensure reliable operation, fuel, oil and air are cleaned in paper filters in which large filtering areas provide virtually 100 % cleaning under all operating conditions.



Tractive power

The engine unit and load unit on the 860 TC are joined through a rugged towing cylinder. The driving axles are independent of each other and the large wheels can follow terrain irregularities whilst maintaining full ground contact. In slippery underwheel conditions, mobility is assured by having both driving axles equipped with differential locks (air-operated and controlled by foot switches).

Rugged frame

Since the load unit can rotate around the towing cylinder on the engine unit, the frame is not exposed to torsional stresses. As a result, the unusually rugged frame features high torsional strength, thus permitting heavy complicated equipment to be carried. The 860 TC is also available with an extra long chassis.

Easy to manoeuvre — powerful steering

Hydraulic steering provides 45° articulation on each side and a tight turning radius — only 7.5 m (25 ft). This ensures easy manoeuvrability in tight areas. The two steering cylinders provide steering power which, in loose underwheel conditions, facilitates greatly when the machine is negotiating rough terrain.

The 860 TC in the illustrations is provided with extra protection for the rear window and frame joint as well as 20.5×25 tyres.





Engineered to meet stringent requirements

Six large wheels, free to move independently, and load capacity which is in a class apart makes the 860 TC ideal as an off-road haulage vehicle. A combination of the 4-wheel drive, articulated steering and sophisticated bogie design, are features which give the VOLVO BM TC ample stamina to operate over terrain where conventional vehicles dare not tread.

Agile bogie and frame joint

The bogie and frame joint are major 860 TC design features. The rugged frame joint is positioned for high ground clearance. Moreover, it permits wide-angle steering which augments manoeuvrability.

The bogie is designed so that each wheel is free to move independently thus enabling the load unit to "float" smoothly as the chassis moves over rough terrain. The load resting on the bogie provides weight distribution which contributes favourably to the greater lugging power and hill-climbing capability of the 860 TC.

Three brake systems

Three independent brake systems provide maximum safety

Power brakes

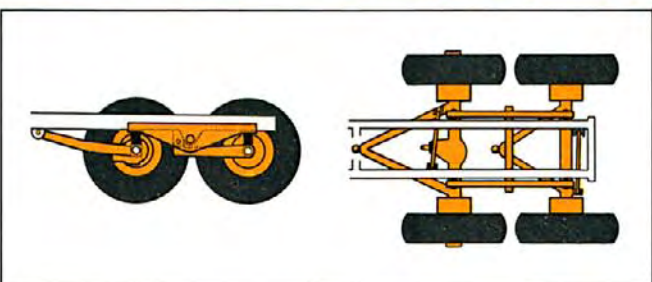
On all wheels operated by compressed air — total friction area 6485 cms² (1000 in²).

Parking brakes

which operate on front axle and the driving bogie axle.

Exhaust brake

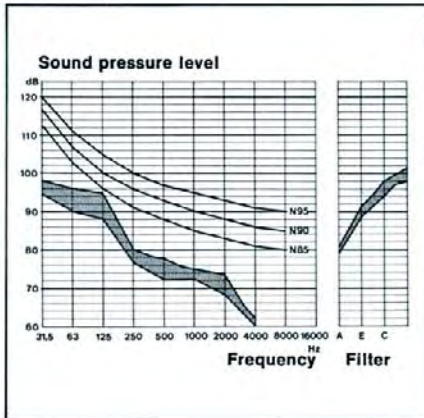
Which boosts the braking effort.



The 860 TC has excellent hill-climbing capabilities owing to its powerful engine, torque converter, 4-wheel drive and good weight distribution. At a total weight of 30 tons, the 860 TC can climb slopes of up to 30° at a coefficient of friction of 0.6 or higher.



Comfortable and easy to drive



Spacious and convenient

The 860 TC is both easy and convenient to drive. The spacious cab is effectively insulated. The noise level inside the cab is well beneath the N 85 curve. The heating and ventilation equipment circulates fresh air, and the fan speeds can be varied to obtain the desired cab temperature.

Safe, easy control

Powered controls are provided throughout — steering, gearshifting, braking, engaging/disengaging the 4-wheel drive and differential.

Single, easy-to-operate lever control transmission

Toggle switches for high/low gear ranges and for engaging/disengaging the 4-wheel drive are mounted in the single gearshift lever, thus ensuring gentle, efficient gear-shifting.

Correct, convenient driving position

Fore-and-aft seat position and backrest angle are adjustable. A ride-level indicator tells when the adjustable seat springs are set correctly for the driver's weight.



Easy to service

The simple design and construction of the VOLVO BM 860 TC facilitates daily servicing and overhauls. Trouble has been taken to locate lubrication and test points where they will be readily accessible. The engine hood and underside guards are easy to open and provide plenty of space for inspection and servicing.



Uninterrupted research, precise measurement and long-term testing precede the arrival of each new VOLVO BM product on the market. Safety, top quality and economy are thus built into the entire production line from the outset.

VOLVO BM

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