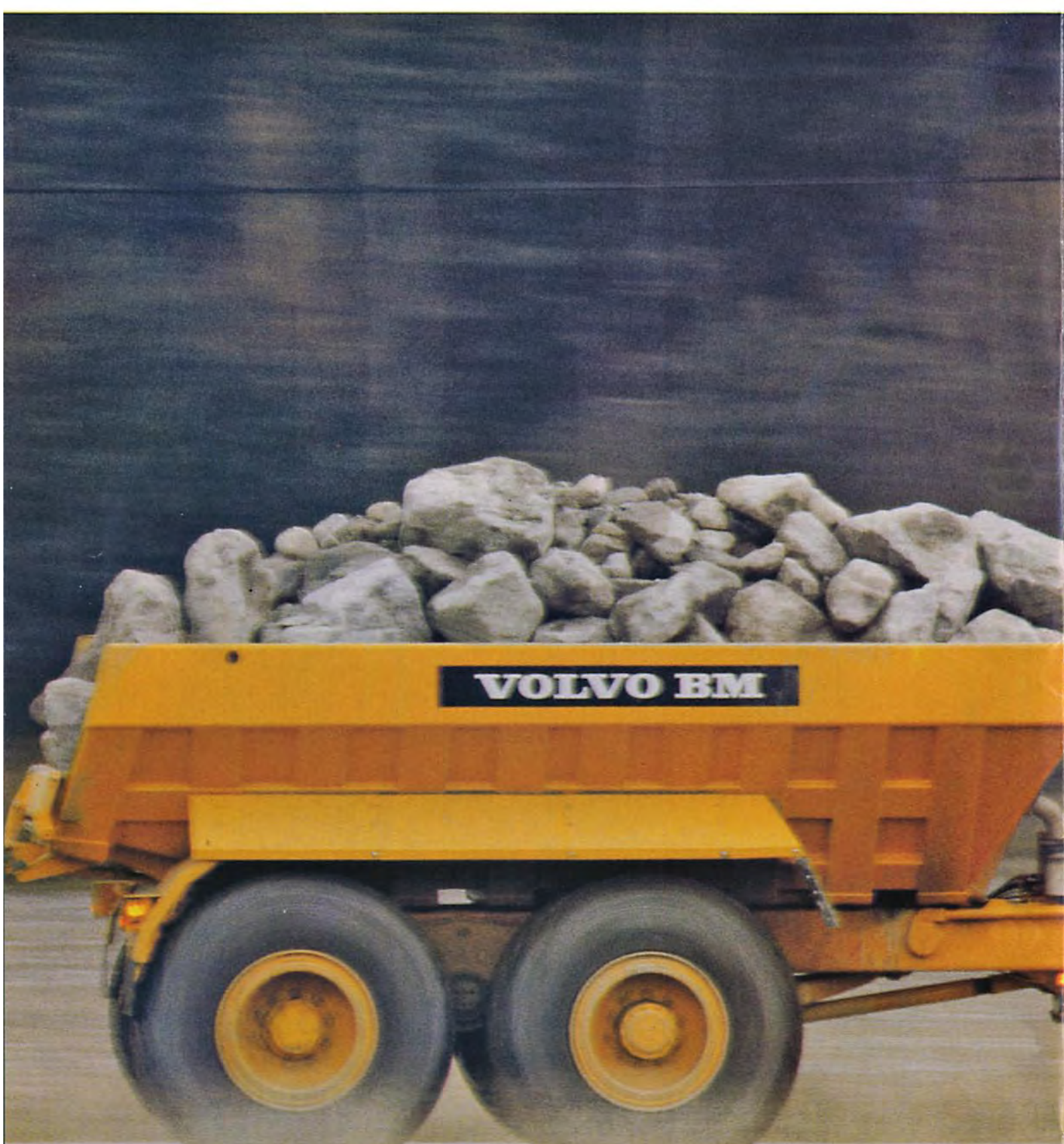


# **VOLVO BM**

## **5350**







**VOLVO BM**

*The Volvo BM 5350 – on and off the road  
– for rapid transports of large volumes*

*The 5350 dumptruck is designed to operate at high average speeds, and is a fast and very agile machine on load and dump cycle applications. This enables large volumes of material to be moved in a short space of time. Designed and developed from the ground up for profitable bulk haulage under widely varying conditions, the 5350's excellence stems from a combination of characteristics, developed and refined through Volvo BM's many years' experience with on-road and off-road vehicles.*





### Off-road mobility

6 large wheels. Constant 4-wheel drive. Transverse and longitudinal differentials with locks ("Cross-Country Drive") plus Volvo BM's terrain bogie. Automatic gearbox.

### Fast

Powerful engine with good acceleration. Unique suspension system allows high average speeds. Top speed 48 km/h (30 mph).

### Agile

Hydromechanical articulated steering and small turning radius.

### Economical

Hydraulic functions only take power when necessary - giving efficient utilization of engine output. The Volvo turboengine

with efficient combustion and low fuel consumption, is also easy to service.

### Flexible

System body for various materials and jobs. Always a full load, even with lighter materials.

### Working environment

Very roomy cab with low noise level. Pleasant, functional interior. Comfortable driving position and good heating and ventilation.

Study the 5350 more closely. It has an array of interesting and important design features that add up to a highly efficient machine for off-highway haulage.





*The right characteristics  
in every situation give  
high total capacity*

*The 5350 gets you into the loading position quickly, without needing a lot of room, regardless of the angle and condition of the ground. Articulated steering and 4-wheel drive provide the necessary manoeuvrability.*



*High average speeds. You can drive relatively fast over rough terrain, thanks to the unique suspension system. On good surfaces, such as construction roads, the vehicle does 48 km/h (30 mph). The automatic gearbox makes optimum use of the engine output. When you go from an easy to a difficult surface, you don't have to think about the 4-wheel drive. The 5350 has constant 4-wheel drive thanks to its unique differential system (Cross-Country Drive).*

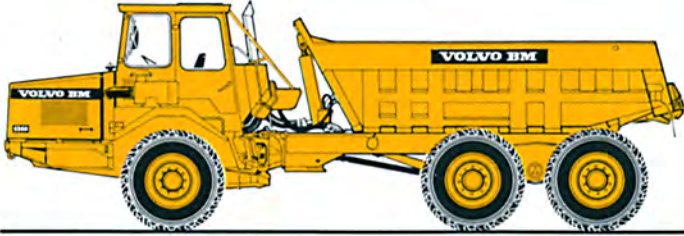
*Tipping time is 12 seconds, and it is easy to dump the load on the right spot, since the 5350 is so easy to manoeuvre. You can also back right out onto the edge of the tip.*



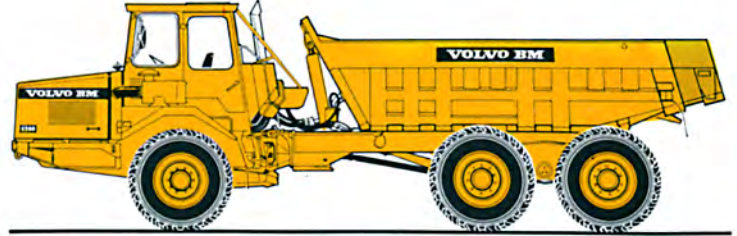


# Flexible – the right equipment for different jobs

The system body on the 5350 offers load volumes from 12.5 to 16 m<sup>3</sup> (16.4 to 21.0 yd<sup>3</sup>), heaped. The system is based on the ability to raise and extend the basic body. In addition, there is a special high strength wear plate, intended for rock and other heavily abrasive materials. The option of being able to choose the right body for different jobs permits maximum utilisation of machine capacity.



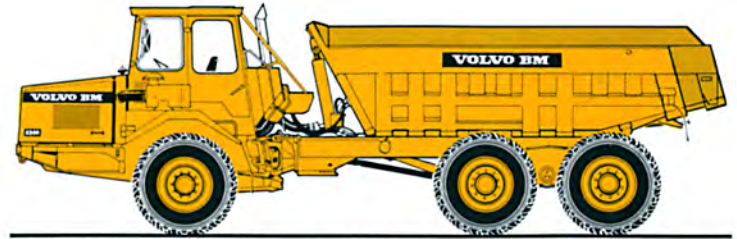
**Basic body** of rugged construction. Abrasion-resistant, quenched and tempered steel plate of very great strength. Prepared for exhaust gas heating. Symmetrical body shape, length and height designed for efficient loading.



**Extended body** – 500 mm (20 in) extension facilitates tipping in shafts and pockets in mines.



**Raised body** – 275 mm (11 in) higher than the standard body. Suitable for hauling light materials. Should be combined with overhung and underhung tailboard.



**Extended and raised body** – suitable for light materials, for example, crushed materials of low density.

## Sprung bogie lift



The sprung bogie lift is available as optional equipment and is an essential factor for boosting capacity. The bogie lift is used when driving empty on the return run. It permits a smaller turning radius, lower fuel consumption and reduced tyre wear. In addition, the bogie lift contributes to greater driver comfort, due to its springing and shock-absorbing action.

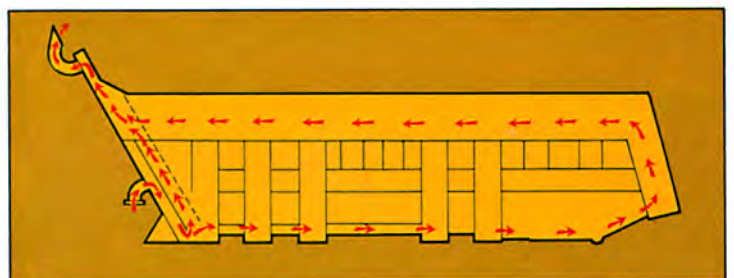


## Tailboards

The 5350 can be equipped with tailboards as optional equipment. The underhung tailboard opens automatically during tipping. When the entire opening on the dumper body is required to be closed, an upper tailboard is available. These tailboards cannot be combined with body extension.

## Prepared for exhaust gas heating

All bodies are prepared with ducts for exhaust gas heating as standard. The connection equipment is extra.

















## Comfortable, safe, working environment

The 5350 is designed for high speeds. The driver's station has been designed for comfort, even when driving fast over a poor surface. The cab is very spacious, with low noise level and has all controls and instruments arranged for safe and effortless driving.

- ① Interacting elements for springing and damping are: tyres, rubber springs, shock absorbers, cab suspension and the springing/damping action of the seat.
- ② The climate control system with high-pressure capacity has air intakes with large paper filters to provide dust free air.
- ③ The cab is very spacious, with good visibility through the tinted windows, and there is room for extra seats for passengers.
- ④ Automatic gear-changing. The gear selector for choosing the speed range is conveniently located and easy to operate.
- ⑤ Stable, skid-proof boarding steps. The lower part is automatically folded up during driving.
- ⑥ Large doors and handles facilitate safe entry and exit of the cab.



## Simple service

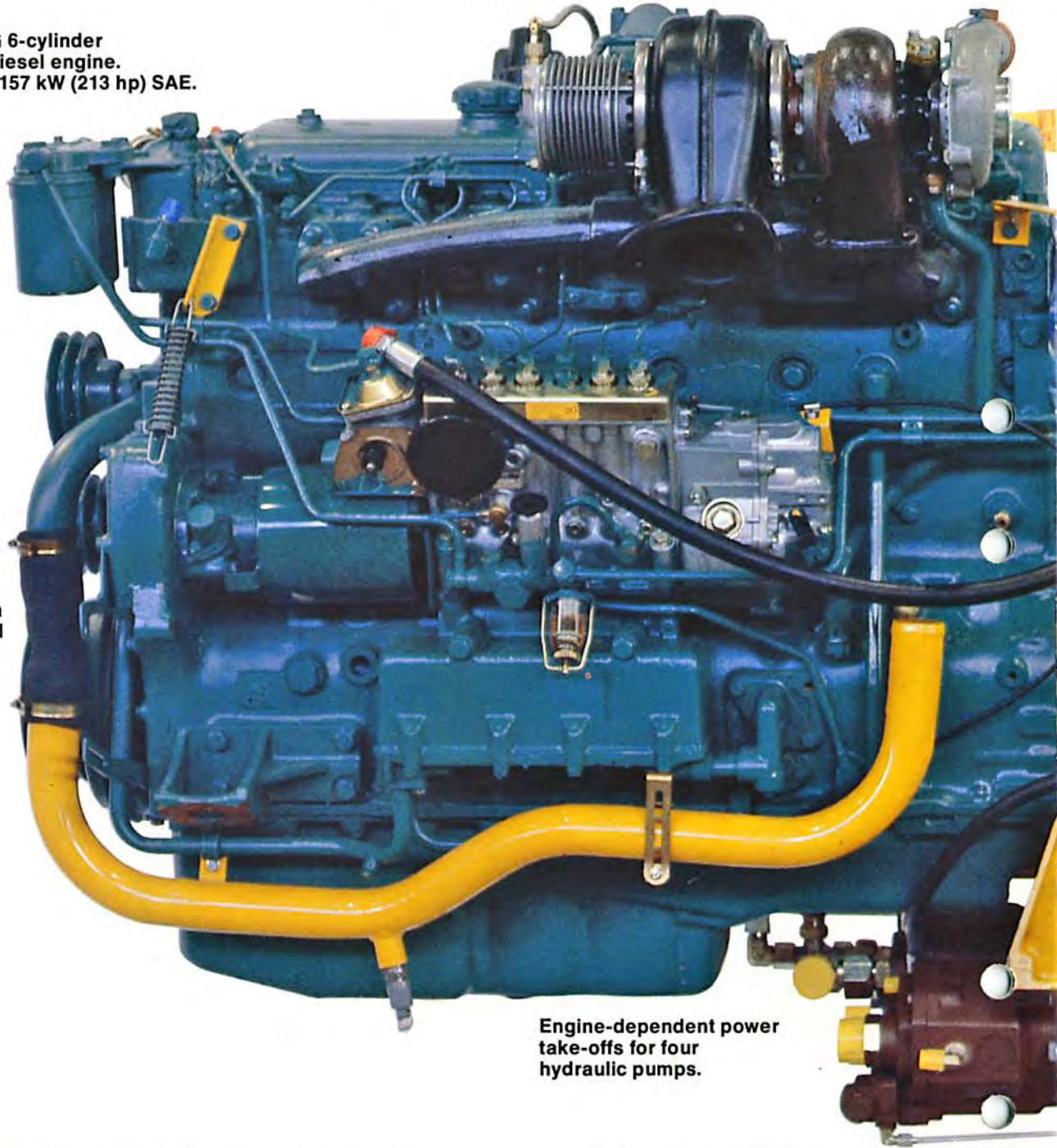
Like other Volvo BM products, the 5350 is designed for simple and easy daily, weekly and periodic servicing. Daily lubrication is effected through only eight easily accessible lube points. The engine bonnet and the underbody plate can be opened, leaving the engine space easily accessible. Simplicity of servicing ensures a longer life for the machine. It all adds up to greater overall economy and a happier, more productive machine operator





**Turbocharger  
with exhaust gas  
pressure regulator.**

**TD 70 G 6-cylinder  
Volvo diesel engine.  
Output 157 kW (213 hp) SAE.**

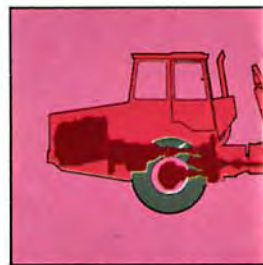


**Direct-driven  
water-cooled  
compressor.**

**Engine-dependent power  
take-offs for four  
hydraulic pumps.**



*The fan is driven by a thermostatically controlled hydraulic motor. This continuously regulates the fan speed, drawing power only when needed.*



#### ***Cross Country Drive***

*There is constant 4-wheel drive throughout the speed range. The longitudinal and transverse differential system allows the drive axles and the individual wheels to turn at varying speeds. This eliminates snatching and reduces wear and tear on tyres and on the road. All differentials can be locked.*

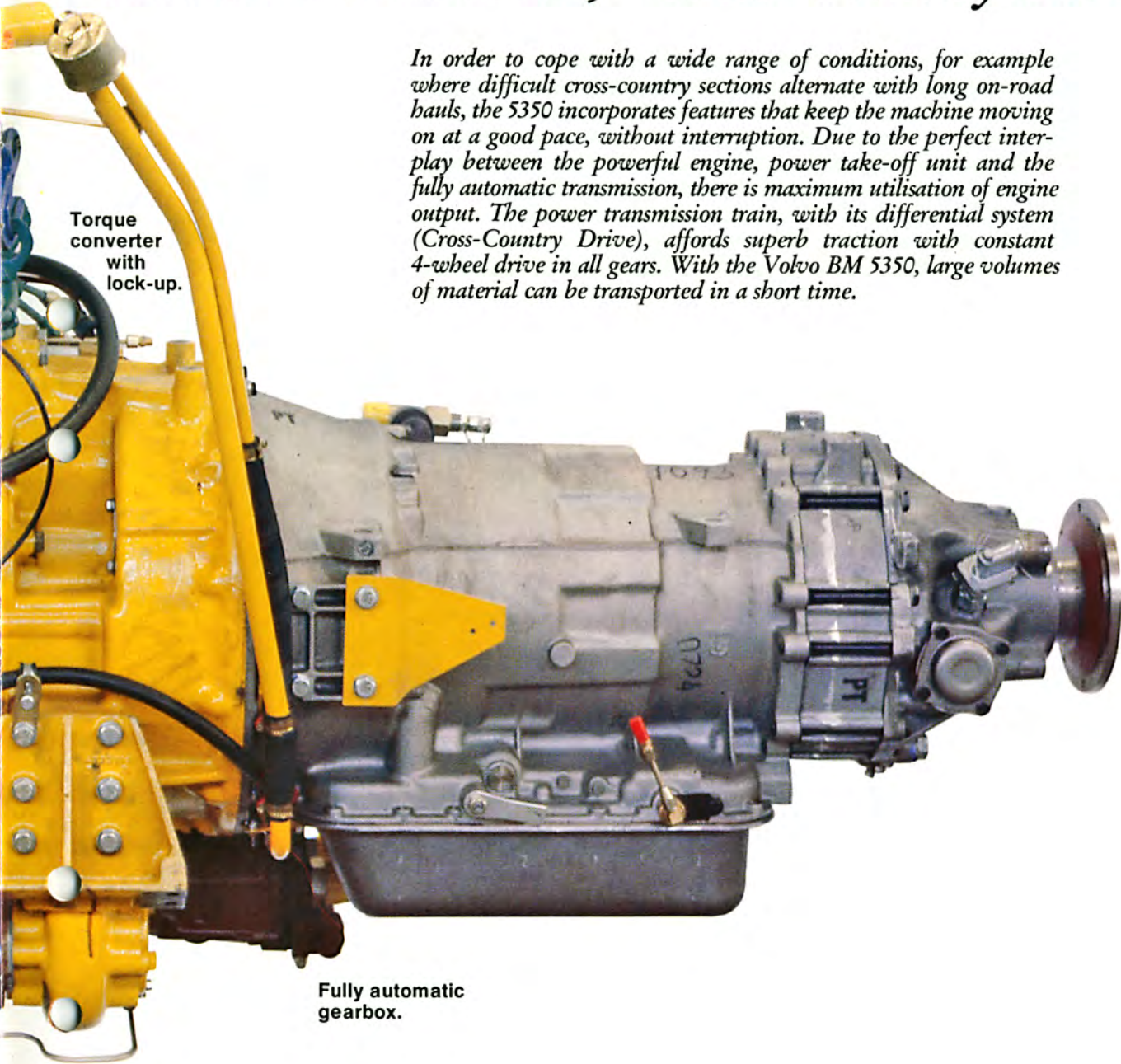


*Its fully automatic gearbox gives the 5350 lively manoeuvrability and makes it easy to drive. Just preselect the speed range according to prevailing conditions – and the gearbox does the rest.*



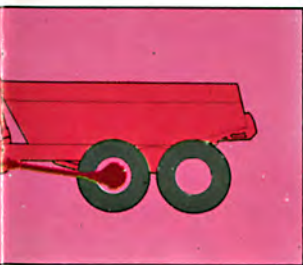
# Powerful, economical turboengine. Fully automatic gearbox. Constant 4-wheel drive, "Cross-Country Drive".

*In order to cope with a wide range of conditions, for example where difficult cross-country sections alternate with long on-road hauls, the 5350 incorporates features that keep the machine moving on at a good pace, without interruption. Due to the perfect interplay between the powerful engine, power take-off unit and the fully automatic transmission, there is maximum utilisation of engine output. The power transmission train, with its differential system (Cross-Country Drive), affords superb traction with constant 4-wheel drive in all gears. With the Volvo BM 5350, large volumes of material can be transported in a short time.*

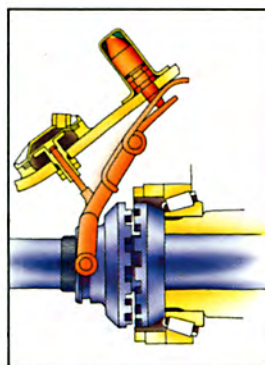


**Torque converter with lock-up.**

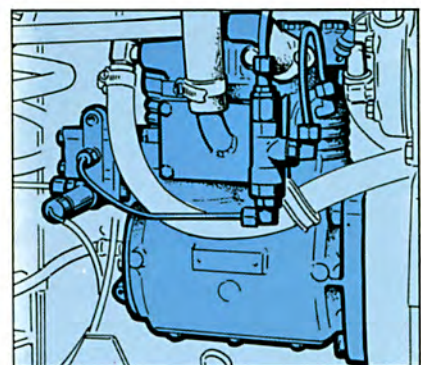
**Fully automatic gearbox.**



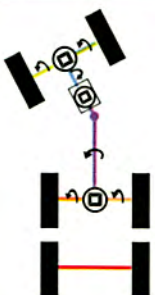
*The drop-box has a built-in differential with a lock-up function. Power take-off from the drop-box also drives the safety steering pump. This guarantees full steering capacity as soon as the machine is rolling.*



*Both drive axes have pneumatically operated differential locks with 100 % lock-up.*



*The compressor is water-cooled and is reliably driven from a power take-off at the front of the engine. The pneumatic system is divided into four circuits through a safety valve so that braking is guaranteed even if one or more of the circuits should develop a fault or fail.*





Vibration-damping engine mountings.

Advanced technology and high quality materials give the frame high strength-to-weight ratio.

Fully floating axles with very robust casings and hub reduction.

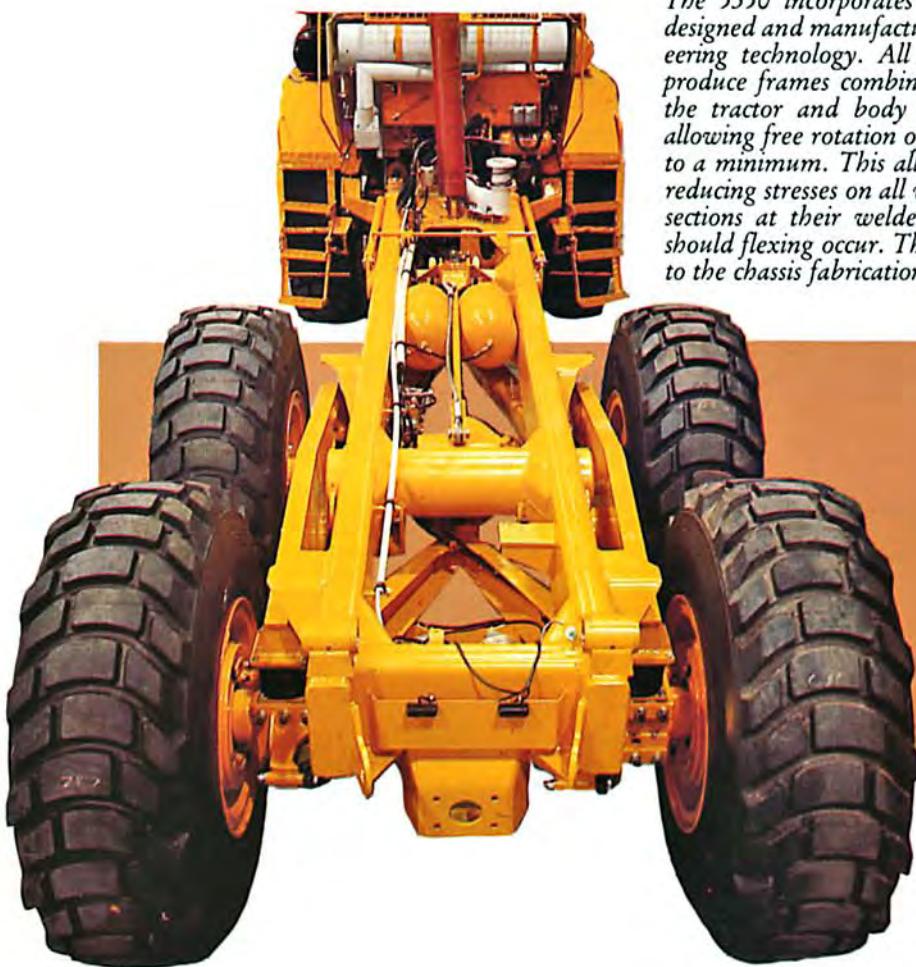
### Strong frame construction

The 5350 incorporates two main chassis frames which have been designed and manufactured using the latest and most advanced engineering technology. All parts are welded with extreme precision to produce frames combining great strength with low weight. Because the tractor and body frames are joined by a cylindrical bearing allowing free rotation of the two halves, torsional stresses are reduced to a minimum. This allows both frames to be made extremely rigid, reducing stresses on all welds. Cross members, brackets, etc. have soft sections at their welded joints to reduce the possibility of fracture should flexing occur. This method of manufacture adds extra strength to the chassis fabrication.



### Exclusive bogie

Volvo BM's terrain bogie has independent axle suspension. Each pair of wheels has great freedom of movement whilst retaining full ground contact. This ensures a smooth, flowing ride over uneven terrain. Rear axle lift on sprung bogie is available as extra equipment.

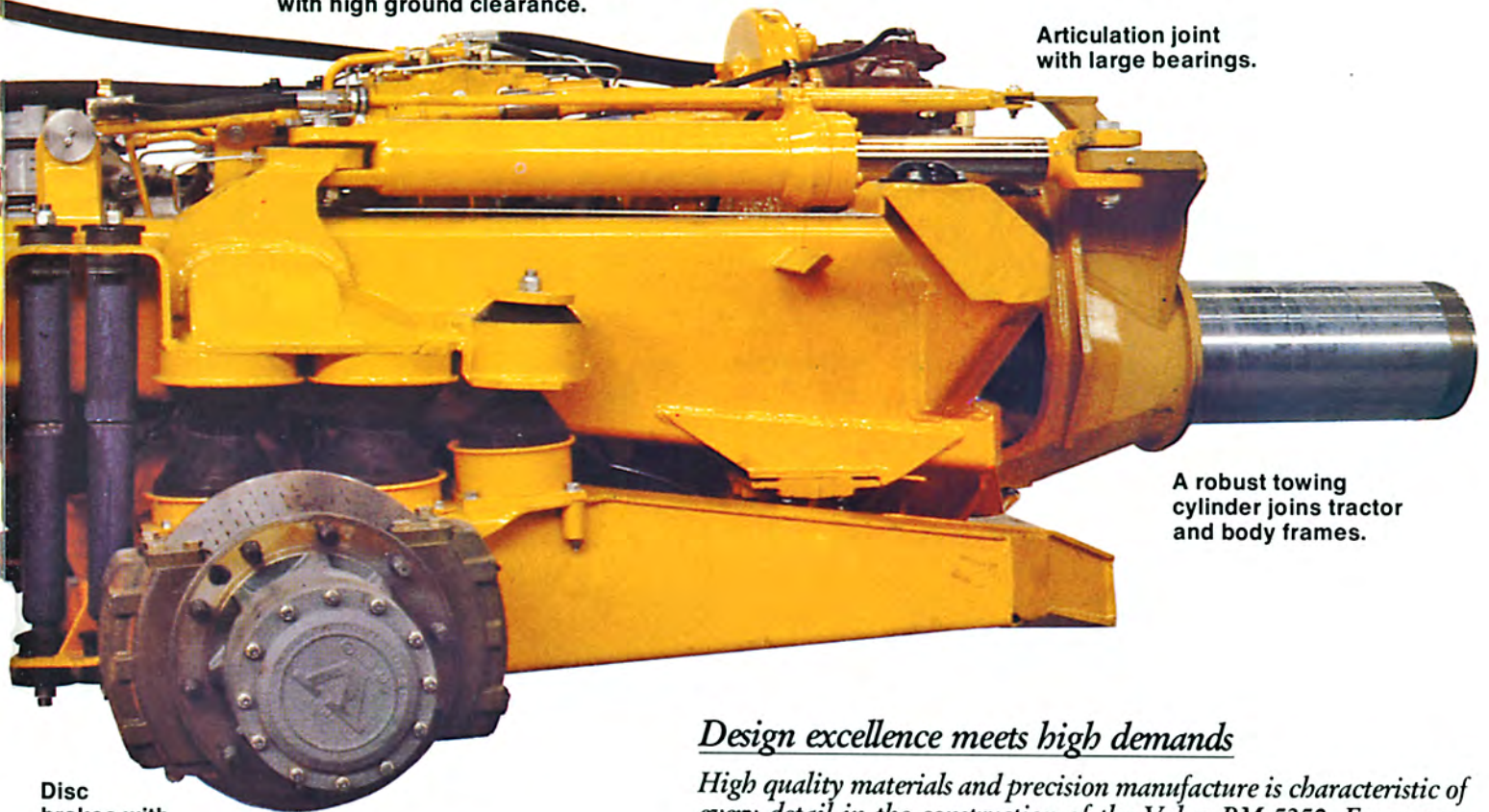




# Frame and axles designed for heavy loads. Unique suspension system.

Well-protected steering cylinders with high ground clearance.

Articulation joint with large bearings.



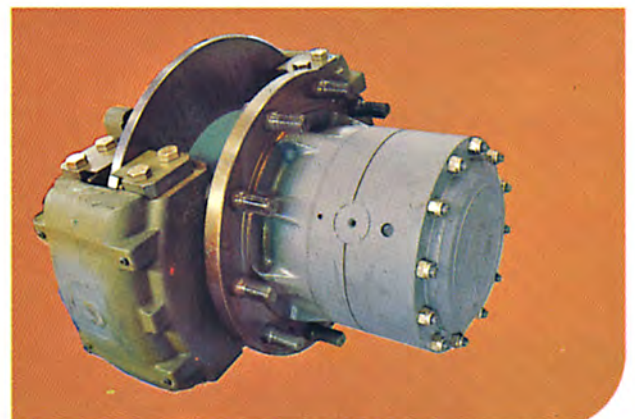
A robust towing cylinder joins tractor and body frames.

Disc brakes with double caliper assemblies.

Advanced suspension with shock absorption.

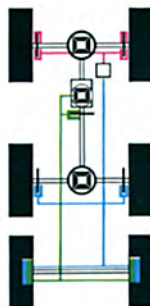
## Design excellence meets high demands

High quality materials and precision manufacture is characteristic of every detail in the construction of the Volvo BM 5350. Every new design feature has been thoroughly tested for reliable operation under widely varying operational conditions. These combined features offer you the benefits of high capacity, safety and economy.



## Well-balanced suspension

The Volvo BM 5350 has an advanced off-road suspension system. With the use of springs and shock absorbers, high speeds on relatively rough surfaces can be attained in complete safety.



## Brakes for heavy loads and high speeds

The brake system on the 5350 is split into two circuits for maximum safety and is compatible with the vehicle's high speed and power. The drive axles have disc brakes and the trailing axle has drum brakes. The parking brake acts on all six wheels. The brake system meets the full requirements for all trucks, even when the vehicle is fully laden.





- ① *Easy, positive steering.*
- ② *The engine's power take-offs drive three hydraulic pumps. There is a take-off for a fourth pump as well.*
- ③ *The fan motor is thermostatically-controlled and is driven by a pump that draws power only when needed.*
- ④ *Small turning radius – easy to manoeuvre.*

*Tipping time 12 s  
Tipping angle 70°*







## *Unique hydraulic system – only draws power when needed*

*The hydraulic system is one of the main reasons for the good operating economy of the 5350. It is load-sensing. Pressure and flow are automatically regulated to meet demands instantaneously. This means that the hydraulic system uses the minimum of power. The result is lower fuel consumption and more power for fast hauling.*

### *Power take-offs for direct drive*

*The 5350 has four axial piston pumps. Three are mounted on the engine's power take-off unit. The fourth, for safety steering, is mounted on the drop-box.*

*Pump I* always supplies the tipping function. When necessary, it also assists with steering.

*Pump II* is primarily responsible for supplying steering. The remaining flow goes to tipping.

*Pump III* drives the fan motor.

*Pump IV* is a safety pump that only works when the wheels are rotating. It guarantees steering capacity as soon as the machine is in motion.







*The Volvo BM 5350 is a very fast articulated dumptruck for high-capacity bulk haulage both on and off the road.*

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# **VOLVO BM**

**VOLVO BM AB ESKILSTUNA SWEDEN**

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

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