

Kockum 540



This durable, reliable dump truck loads 10 tonnes more than its tare

What makes one dump truck different from another?

At first sight, the differences may not seem too great. Nevertheless, some features are especially important. The ones that can be decisive for the profitability of the vehicle. Two of these features are tare weight and operational reliability.

These characteristics were given top priority when we designed the Kockum 540 – a durable haulage vehicle with high load capacity and superior availability.

Compare the tare weight

The Kockum 540 weighs only 25.8 tonnes, which gives it the lowest tare weight of all the vehicles in the 40 short-ton class. Tare weight is decisive for the operating costs of a dump truck. Primarily because the truck is driven empty for half of its service life. Reducing the tare weight therefore means lower costs in connection with tyre wear and fuel consumption. This is one of the reasons why the K540 offers such impressive economic benefits.

Calculate the load factor

A simple way to evaluate the load efficiency of a truck is to calculate the load factor. How heavy a load can the vehicle haul per tonne of tare weight? The Kockum 540 weighs 25.8 tonnes and has a maximum permissible load capacity of 36.3 tonnes (40 short tons). The load factor is thus $36.3/25.8$, or 1.41. In other words, the K540 can haul 1.41 tonnes for every tonne of tare weight.

A dump truck with the same load capacity and a tare weight of 32.5 tonnes has a load factor of 1.12. This means that the K540 has a load factor that is 0.29 greater, which gives it a load efficiency that is 26% higher.

Have a good look at durability and availability

The Kockum 540 has superior load efficiency. It's also built for tough, reliable operation. This has been proven by two years of punishing tests under severe conditions. The K540 has a heavy-duty power train built of carefully selected components. The completely new design of the frame and the dump body reduces stress to a low level. The twin brake system includes a hydraulic retarder. All vital parts are easily accessible for service, and the driver has an efficient, wellplanned working environment. These are just a few of the features that make the Kockum 540 one of the most competitive dump trucks on the market. A dump truck that gives you high availability and excellent operating economy.



weight!

The Kockum 540 has low tare weight for high load efficiency. The frame and dump body are based on a completely new design. The cab has been designed for safety and has proven its excellent availability.

The Kockum 540 represents a new approach to dump truck design in many respects. It opens up a new perspective on efficiency and haulage economy.



Light and easy to manoeuvre. Safe, efficient driver environment.

The Kockum 540 is a successful combination of very low tare weight and high load capacity. The high load factor of 1.41 enables the truck to haul 1.41 tonnes of material for every tonne of tare weight. The low tare weight of the K540 results primarily from the new design of the rock body, which has been thoroughly tested under tough working conditions. We've used a computer to identify all static and dynamic stresses and load points. We modified and re-tested the truck repeatedly before we arrived at an extremely clean design that meets demands for both low tare weight and high strength.

Simple, straightforward frame design

The frame is an extremely light structure that includes all-welded box-sections of selected high-strength steel. The design is simple and straightforward, with no superfluous joints. All mountings have been rationalized in order to reduce weight and simplify design. Loads are dis-

tributed evenly over the entire frame, so that there are no direct concentrations of stress. The simplified design also allows for automatic welding, which ensures welds of high, uniform quality.

New rock body is standard

The rock body is fitted, as standard equipment. It features Kockum Landsverk's new light-weight design, which is based on the use of extremely high-grade plate for a simpler, lighter structure. The bottom and side plates meet maximum demands for wearability (HB>360) and strength (110 kp/mm²). This enables us to build a body with longitudinal reinforcements without using conventional transverse ribs. Concentrations of stress are eliminated, so that there is no risk of cracks. The geometry of the body has also been carefully analysed. The result is a compact but roomy unit with low loading height.





Exemplary working environment

The driver has excellent visibility from his seat in the cab, with an exceptionally good view of the road directly in front of the vehicle. The perfect positioning of the cab is dramatically demonstrated during operation in a confined space. The cab is light and airy, with large glass panes that are tinted to reduce glare. The narrow window-posts minimize blind spots in the driver's field of vision. Large rear-view mirrors give a good view of what's happening behind the vehicle. The wind-screen is made of laminated safety glass.



Roomy, well-planned cab

The cab is roomy and has been planned on the basis of a detailed analysis of the driver's various tasks. The ergonomically designed seat is fitted with arm-rests and can be adjusted for the driver's height and weight. And of course it's suspended hydraulically. The backrest can also be adjusted. A safety belt is standard equipment. Another vital safety feature is the soft, shock-absorbent material that covers the walls of the cab as well as all edges and protrusions.

Controls and instruments are positioned for maximum convenience and efficiency, with the most important ones directly in front of the driver. Less frequently used instruments are positioned in the ceiling of the cab, which can be fitted with a radio. All instruments are clearly marked with easily understood ISO symbols.



Professional road "feel" superior traction

The Kockum 540 gives the driver true professional road "feel". It's easy to drive, and it's quick and reliable on difficult surfaces or steep slopes. It's also fast – 65 km/h on a level road.

Engine output is high in relation to total weight. A full 322 kW (438 HP) is utilized very efficiently by an Allison CLBT 5961 powershift gearbox and a torque converter with lock-up.

The double brake system is fitted with a hydraulic retarder and dual-circuit disc brakes for safety and high performance.

The steering system is servo-assisted and incorporates mechanical return. This design contributes to the excellent road "feel" as well as to improved safety.



The Kockum 540: service and te

Payload

Payload	40 tons (36.300 kg)	
Payload volume, struck (SAE)	17,2 m ³	
Payload volume, heaped 2:1 (SAE)	23,5 m ³	

Weight distribution

	kg	lbs
<i>Empty</i>		
Front axle	13.400	29.550
Rear axle	12.400	27.350
Total	25.800	56.900

Loaded

Front axle	20.200	44.500
Rear axle	41.900	92.400
Total	62.100	136.900

Engine

Scania DSI 14, 8 cyl., 4-stroke, direct injection, turbo-charged diesel with charge-air cooling.

Max. output 322 kW (438 hp) SAE at 2,100 rpm.

Max. torque 1695 Nm (173 kpm) SAE at 1,200 rpm.

Bore	127 mm
Stroke	140 mm
Displacement	14.2 dm ³ (litre)
Compression ratio	15.5:1

Volumes dm³ (litre)

Engine, lubricating system	25
Engine, cooling system	130
Gear box	80
Hydraulic system	250
Rear axle	90
Fuel tank	600

Optional engines

1. Cummins KT 1150C 450, 6 cyl., 4-stroke, direkt injection, turbo-charged diesel.
Max. output 335 kW (456 hp) SAE at 2,100 rpm.
2. Detroit Diesel 12V71TT, 12 cyl., 2-stroke, direct injection, turbo-charged diesel.
Max. output 335 kW (456 hp) SAE at 2,100 rpm.

Converter - Gear Box

Allison CLBT 5961 · Powershift gear box · Converter with lock-up · Retarder

Torque conversion max. 2,56

Ratios	1 4,00	4 1,35
	2 2,68	5 1,00
	3 2,01	6 0,67
	Reverse	5,12

Rear axle

Axle housing of cast steel · Fully floating drive shafts · Final reduction in differential and wheel hubs (planetary gears).

Ratio Overall 15,73:1

Front axle

Heavy-duty, all-welded axle with axle bed of box design · Carried in suspension system of pneumatic oil type.

Suspension

Front and rear suspension system of pneumatic oil type.

The Kockum 540 is designed for easy service.

The K540 is designed from the stand-point of total economy. Ease of service is a vital factor. Fast, simple maintenance increases the vehicle's availability.



The K540 has therefore been designed with reference to both daily maintenance and the inevitable replacement of parts. We've simplified and standardized as much as possible to make the K540 easy to service. It satisfies the demands of drivers and mechanics as well as owners. Service engineers were called upon when the prototype was being tested at various work sites, in order to obtain outside evaluations of the K540 in terms of ease of service.

Fast daily maintenance

Cooling water, lubricating and hydraulic oil, air filter and battery can all be checked quickly from the convenient service platform, which is also fitted with a safety-rail. The windscreen washer and the cab ventilation filter can be checked through a panel in the front of the vehicle.

Easily accessible engine

The engine and the gear box are easily accessible, thanks to the large side panels and bonnet. Comprehensive standardization of parts reduces the number of maintenance tools to a minimum.

Simple maintenance of suspension

The four hydro-pneumatic suspension units are identical. The simple design includes removable tube ends. There are no welded joints whatsoever.

Oil-pressure dismantling

The vital bearings that demand a little more maintenance are designed for fast, easy dismantling. This applies to hydro-pneumatic suspension units, tipping and steering cylinders, frame connections and linkages.

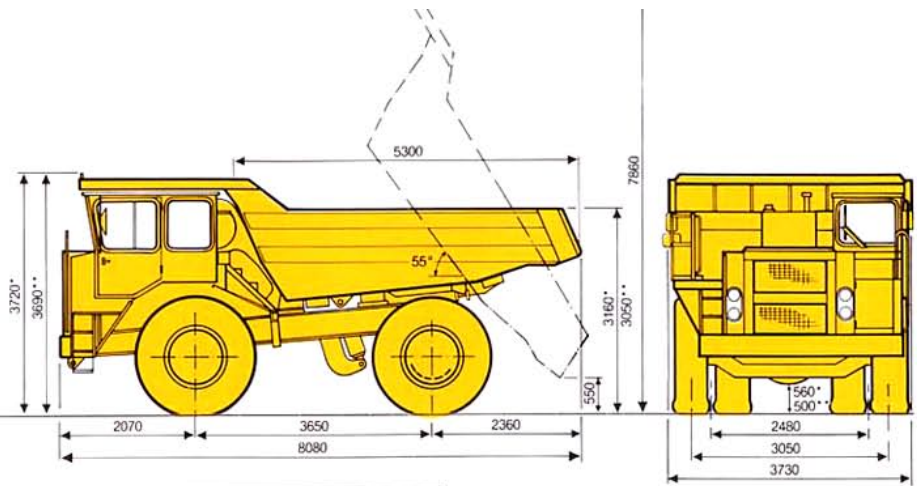
Compact electrical system

The electrical system is based on printed circuit boards, all of which are installed at an easily accessible control point. This means fewer contacts, simplified troubleshooting and greater reliability.

chnical data.

Dimensions in mm

* Empty
** Loaded



Wheels

Rims 13.00 - 33
Tyres 18.00 - 33/32 PR

Brakes

Service brakes 1

Hydrodynamic brake (retarder) incorporated in gear box.

Service brakes 2

Dual-circuit compressed air actuated drum brakes.

Parking brake

Spring action on front and rear wheel brakes.

Steering

Hydraulic power steering with mechanical return system.

Pump, gear type, direct-driven from the engine.

Steering wheel turns lock to lock 3.5

Hoist

Pump, gear type, direct-driven from the gear box via an automatic hydraulically controlled power take-off.

One 3-stage telescopic cylinder, 2 stages double-acting.

Dumping angle 55°

Dumping time 12 seconds

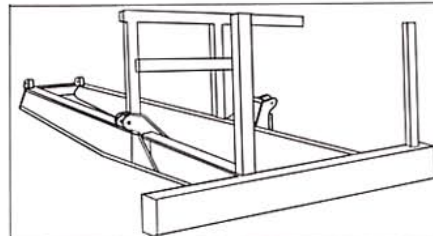
Electrical system

Voltage 24 V

Batteries 2 pcs 12 V, total 200 Ah

Alternator 35 A

Starter 5,5 kW (7,5 hp)



Frame

All-welded box sections with cross members

Lights

Headlights with full and dipped beam · Curve and fog lights · Parking light · Direction indicators · Brake lights · Tail lights · Reversing lights · Hazard flashers · Cab light · Instrument lights.

Body

All-welded construction with two external horizontal stiffeners along the entire length of the body · Exhaust-heated.

Material

High tensile heat-treated steel

Yield strength 110 kp/mm²

Hardness 360 Brinell

Bottom 20 mm

Sides and front 10 mm

Weight 6.300 kg

Cab

All-steel cab · Heat and sound insulated · Heater and defroster equipment · Adjustable driver's seat

Standard equipment

Instruments

Hour counter · Air pressure gauge · Oil pressure gauge, engine · Coolant temperature gauge · Oil temperature gauge, gear box · Oil pressure gauge, gear box · Speedometer · Revolution counter

Control lamps

Parking brake · Full beam · Direction indicators · Battery charging · Oil pressure, engine · Dump body · Lock-up · Safety belt

Miscellaneous

Wind screen wipers · Wind screen washers · Horn · External rear-view mirrors · Rock ejectors on rear wheels · Electrical engine heater · Safety belt

Optional equipment

Body with rubber bottom · Body rubber lining · Increased body height · Self-opening tail gate · Tachograph · Spare wheel · Emergency steering · Air conditioning · Additional cab heater · Silencer · Electrical heater for the gear box

Operating data

Operating speed Max. 65 km/h

Minimum turning radius 8.000 mm

Minimum swept radius

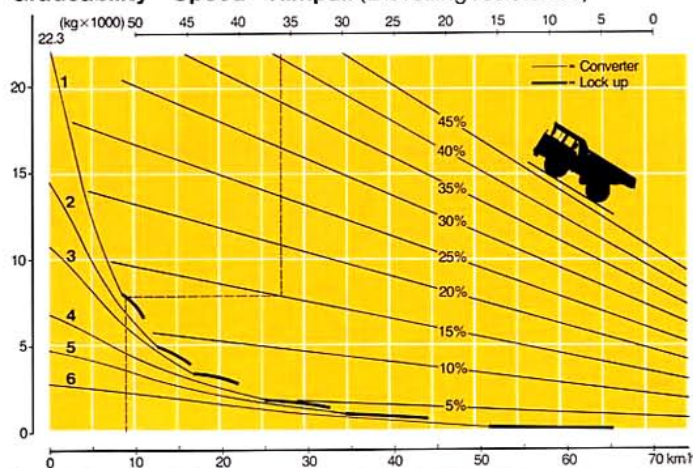
..... 9.000 mm left turn

Minimum swept radius

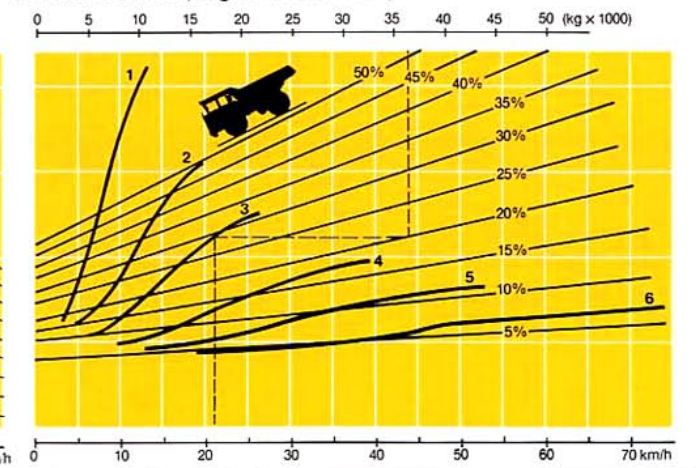
..... 9.200 mm right turn

Dimensions and weights to tolerances of ± 3%.
Specifications subject to change without notice.

Gradeability - Speed - Rimpull (2% rolling resistance)



Retarder chart (engine friction incl.)



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Under our policy of continual product improvement, we reserve the right to change specifications and design without notice. The illustrations do not necessarily show the standard version of the machine.

Ref.No. 21 1 669 1634
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