

THE UNIMOG CONCEPT

The exceptional cross-country ability of the UNIMOG can best be described by the following distinctive features:

[Portal axles](#) provide high ground clearance to tackle the most difficult terrain.

A highly flexible [suspension](#) with coil springs and torque tubes allows impressive axle articulation and ensures driver comfort both on- and off-the-road.

The Unimog is fitted with low-pressure single tyres that provide maximum traction in all situations.

The backbone of the Unimog consists of a flexible [ladder-frame](#) with tubular cross-members.

Large angles of [approach](#) and departure characterize the cross-country aptitude of the Unimog.

A small [turning circle](#) accords the Unimog a high degree of manoeuvrability.

[Four-wheel drive](#) and 100% differential-locks can be engaged and disengaged whilst on the move.

Self-cleaning disc brakes are now fitted as standard to provide maximum safety.

An advanced [transmission](#) system allows selection of the correct working speed for all applications.

Front and rear [PTOs](#) are available to drive a wide range of implements such as winches, pumps and generators.

[Powerful hydraulics](#) allow a number of implements to be controlled independently of one another.

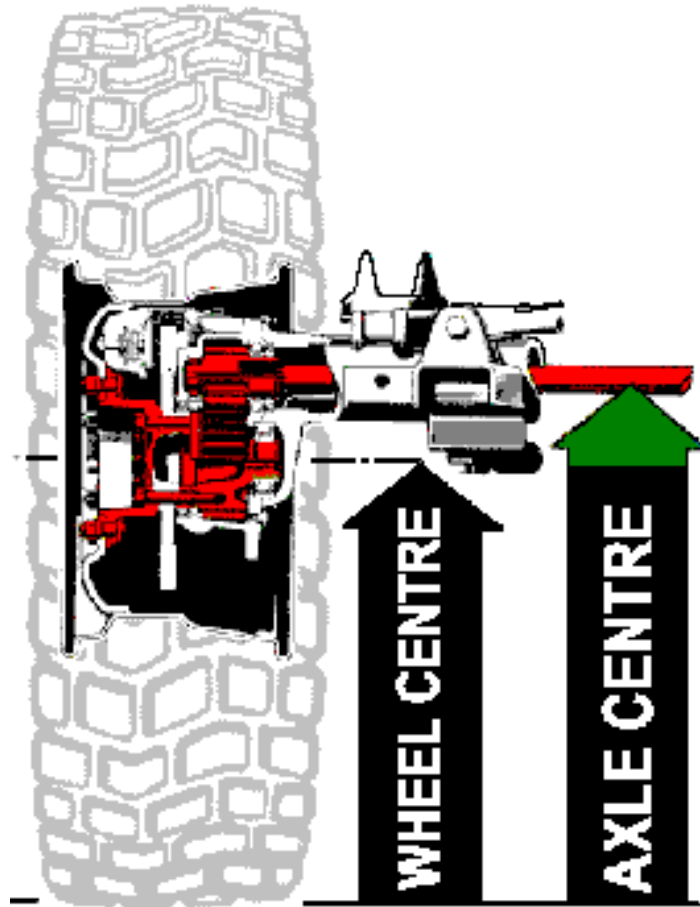
[Three-point mounting](#) of major assemblies and bodies allows torsional flexing of the chassis without restricting off-road ability.

[Creature comforts](#) are provided by a spacious cab fitted with an efficient heating and ventilation system with air-conditioning as an option.

A [7-seater crew-cab](#) is also available for the HD-series.



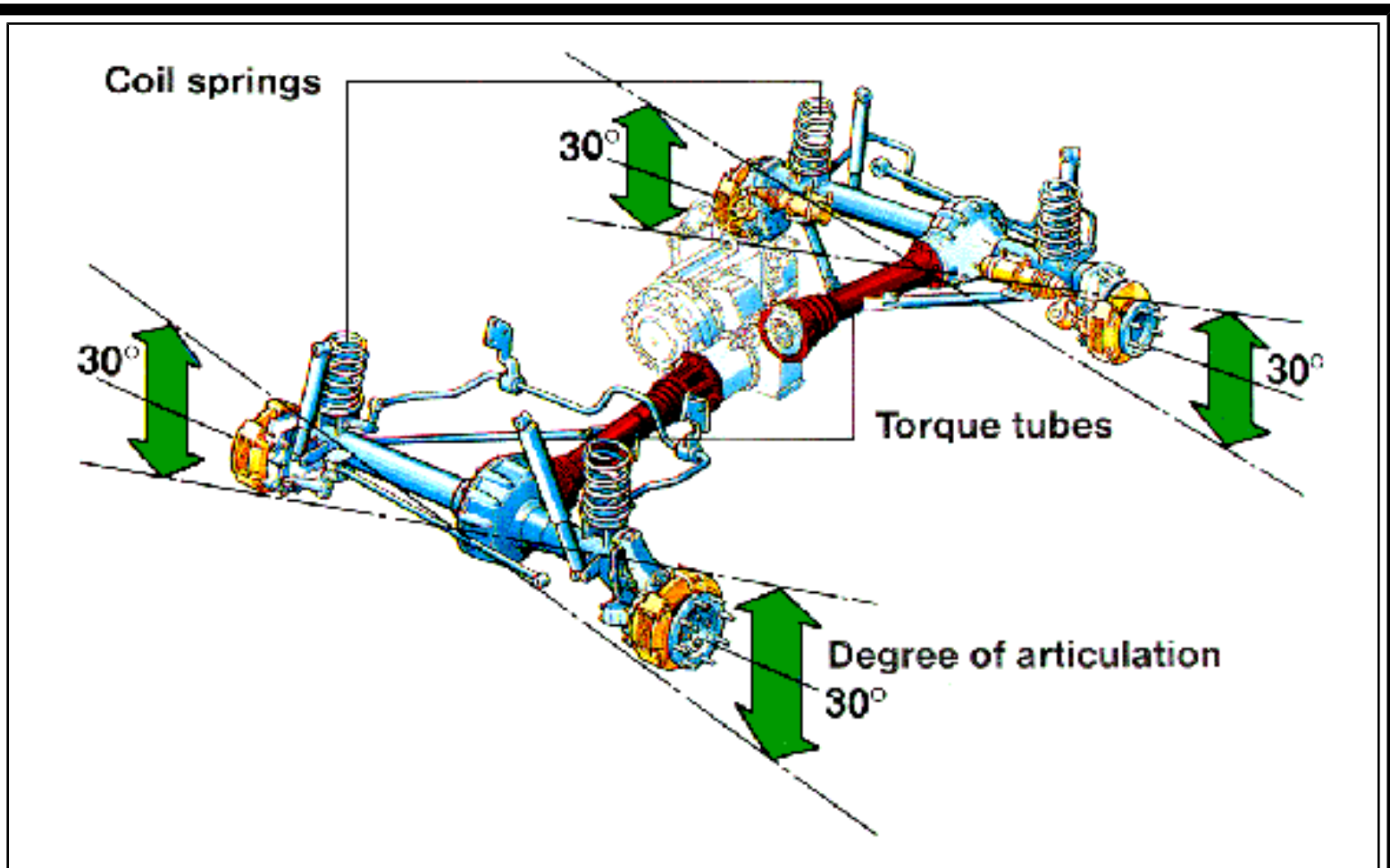
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Up hill and down dale, with the portal axles.

With the portal design of the axles, the axle tube and the differential are both above the centre axis of the wheel. The result is an extremely high ground clearance yet a low centre of gravity. Obstacles up to half a metre high can be overcome by the Unimog without difficulty. In addition, the drive-train components are subjected to less strain because the full driving torque is reached only at the wheel itself, not before. Both axles are of identical design and strength.

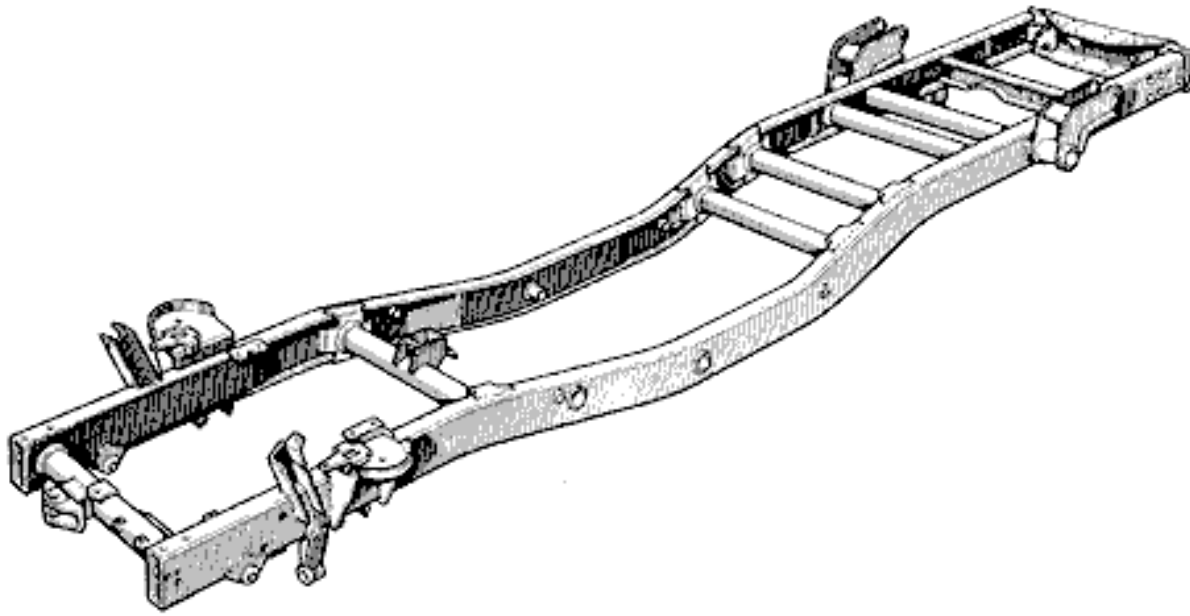
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Suspension, with coil springs and torque tubes.

These springs, unusual on a commercial vehicle, enable all four wheels to maintain constant contact with the ground in rough terrain. They also ensure high ride comfort during on-road operation.

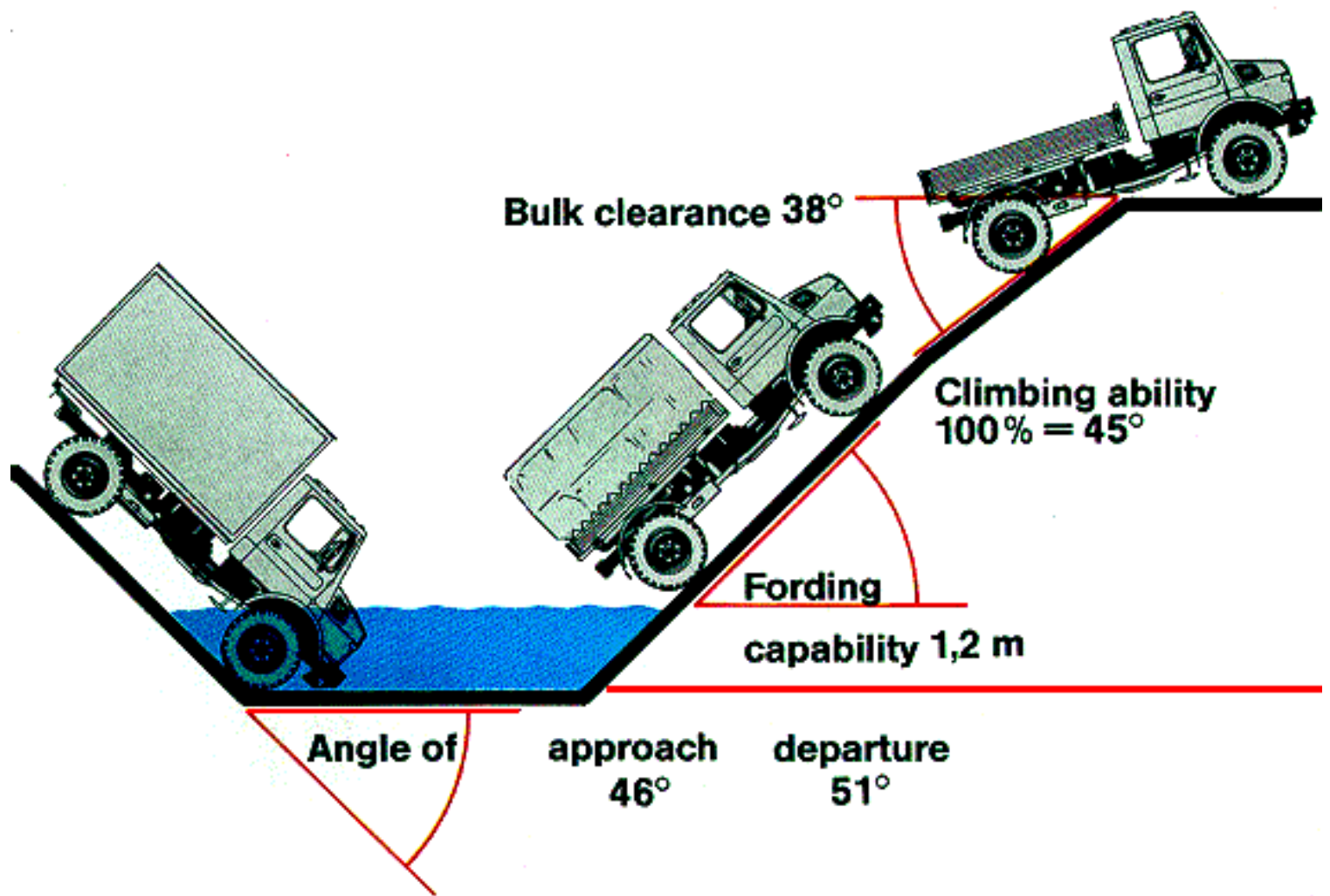
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Where above average off road performance is required, the Unimog leads.

The flexible ladder type frame consists of two U section side members with welded-in tubular cross-members. This provides sufficient stiffness on the road as well as excellent torsional flexibility during off- road operation.

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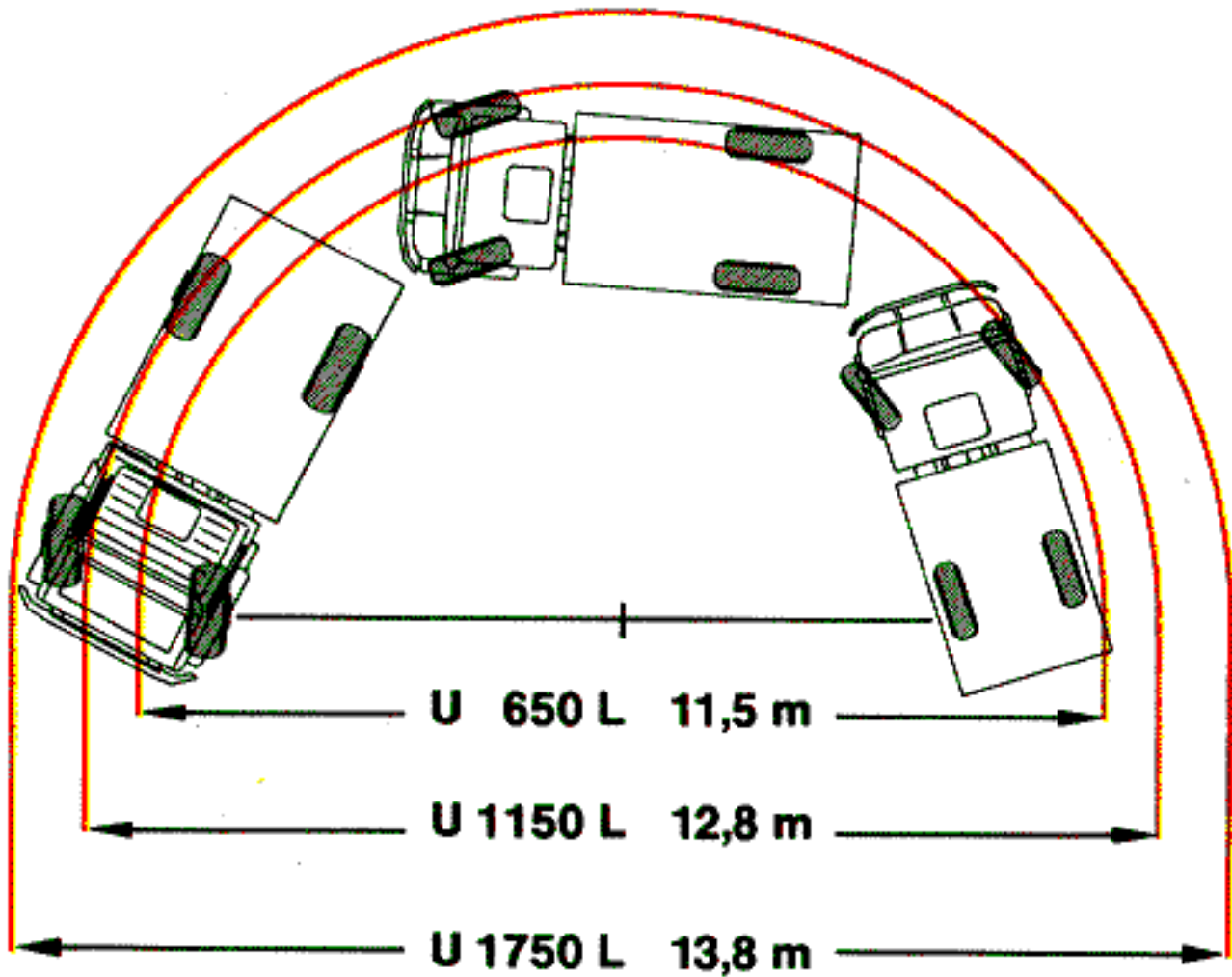


Large angles of approach and departure.

Short frame overhangs, portal axles and large tyres stop the Unimog from touching the ground on steep slopes.

Climbing ability up to 100 percent. Steep banks, hills and obstacles are no problem for the Unimog. It's impressive climbing ability - even when fully laden - is due to the high torque of the engine, the optimum gear ratios and the excellent traction ensured by four-wheel drive and differential locks in both axles.

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Extreme manoeuvrability.

A short wheelbase, a favourable track width and a good steering lock result in a turning circle which is small for a vehicle of this type. The Unimog's ease of handling is further enhanced by power steering.

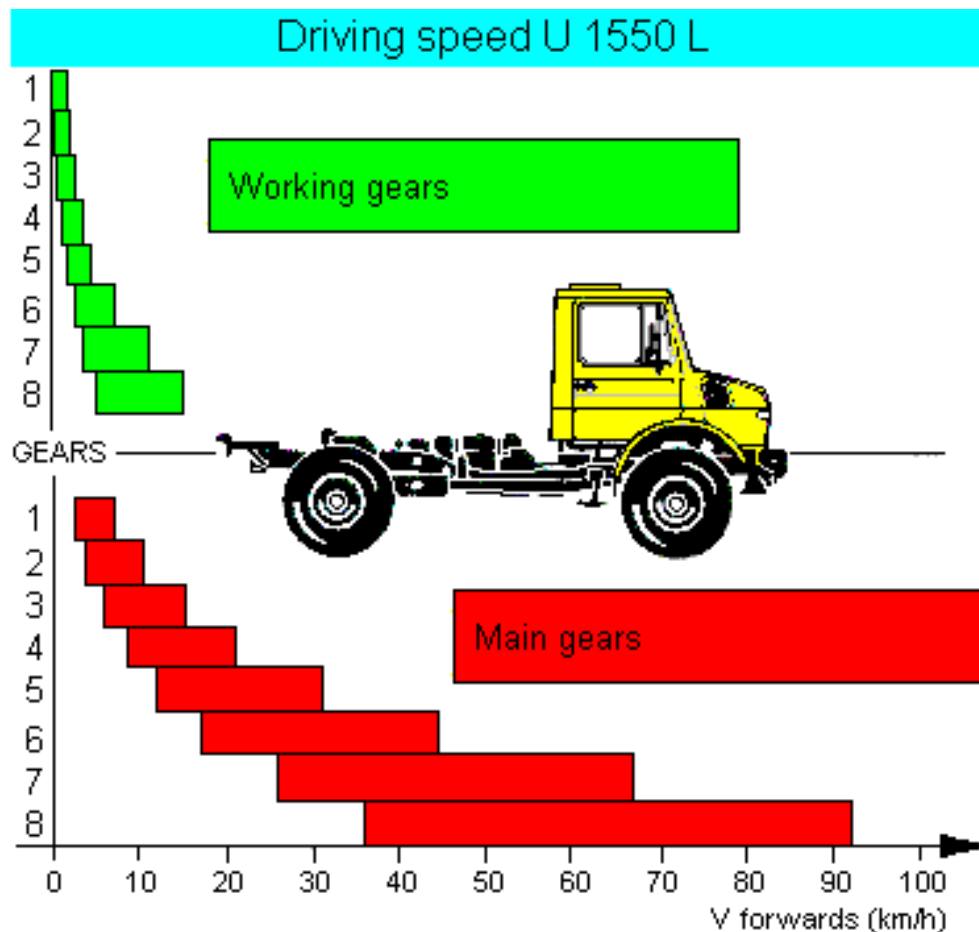
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Surefootedness off the road.

The Unimog can get through even the most difficult situations with full transferral of power to all four wheels and 100% locking differentials in both axles.

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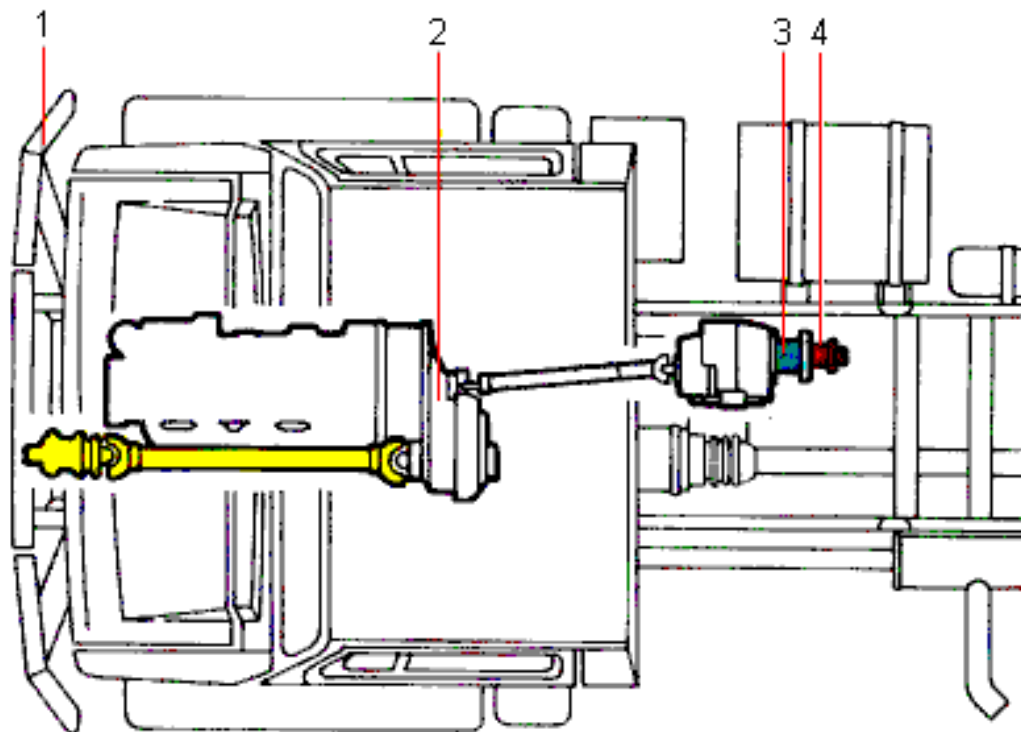


The right speed for any application.

The finely graduated gearbox of the Unimog permits speeds from a walking pace all the way up to over 100 km / h. In models U 1250 L to U 2150 L the main gearbox has 8 gears. With the addition of the working gears, 16 fully-synchromesh gears become available, both forward and reverse. The double-H gate makes shifting precise and easy. A shift gate display tells the driver which gear is engaged, making operation even more convenient.

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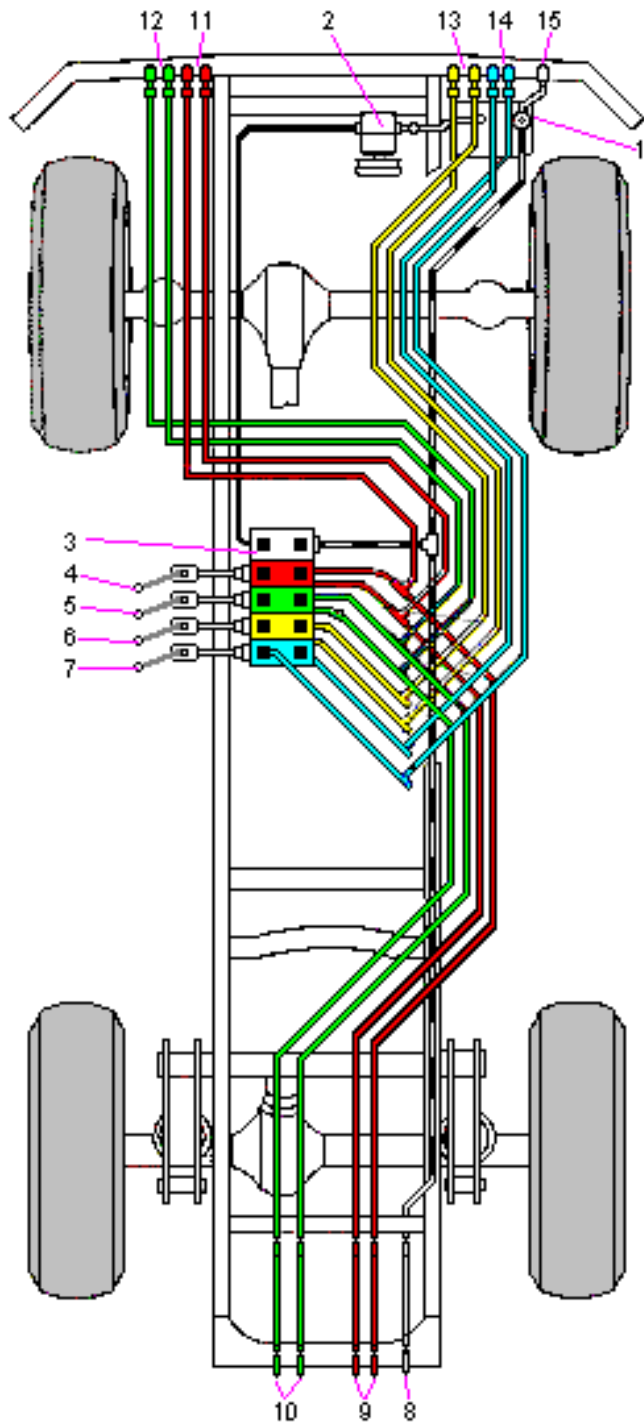
1. Front PTO shaft
2. Special transmission PTO
3. Fast PTO for hydraulic pumps
4. Very fast PTO for fire fighting pumps & generators



PTOs can use full engine power to drive implements.

The transmission PTO is a cost-effective feature, since the gearbox clutch and the PTO shaft clutch are identical. Possible uses include the powering of winches, compressors and generators. An additional, fast running PTO is also available for instance for driving the hydraulic pump of a loading crane, or for fire fighting pumps or generators.

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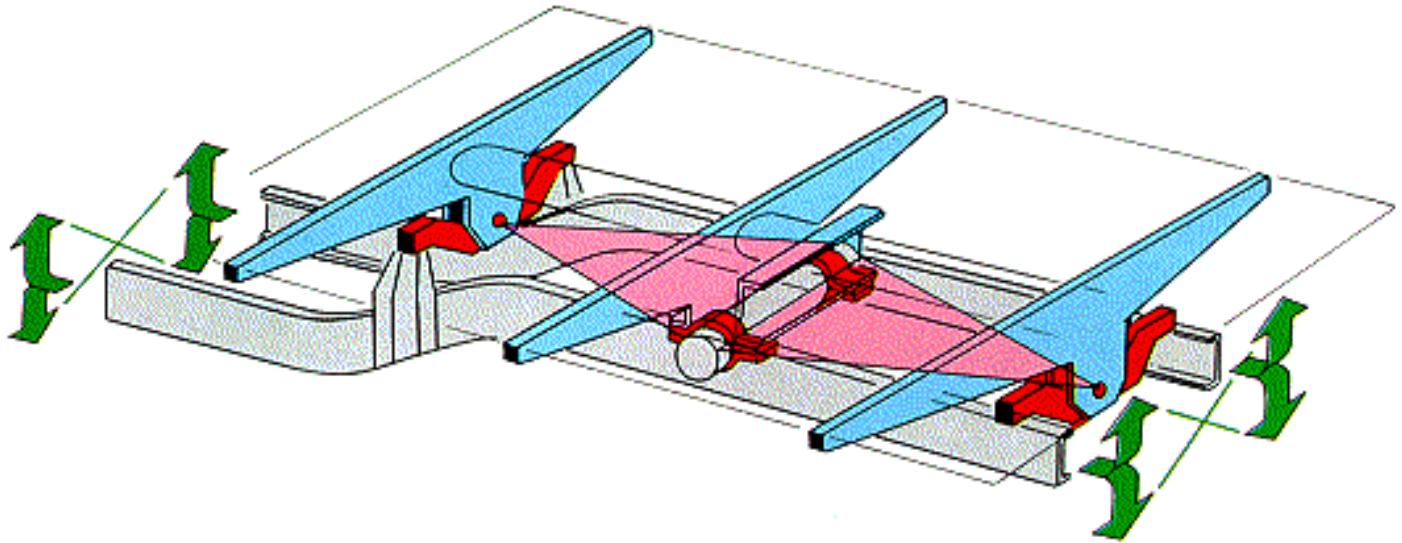
Integrated hydraulic system ex-factory with up to 4 control valves

- 1. Oil reservoir
- 2. Hydraulic pump
- 3. Input plate
- 4-7. Hydr. controls 1-4
- 8. Separate return line, rear
- 9-10 Hydr. connections, rear
- 11-14 Hydr. connections, front
- 15. Separate return line, front

Powerful hydraulics for versatility of operation.

Mercedes-Benz supplies an efficient hydraulic system ex-factory. Pump capacities range from 40 to 55 litres / minute at an operating pressure of 180 - 200 bar. Up to 4 double-acting control valves permit a total of 8 hydraulic connections at the front and 4 at the rear, each with a separate return line. This makes it convenient to use different implements simultaneously, such as a winch as well as hydraulic tools etc.

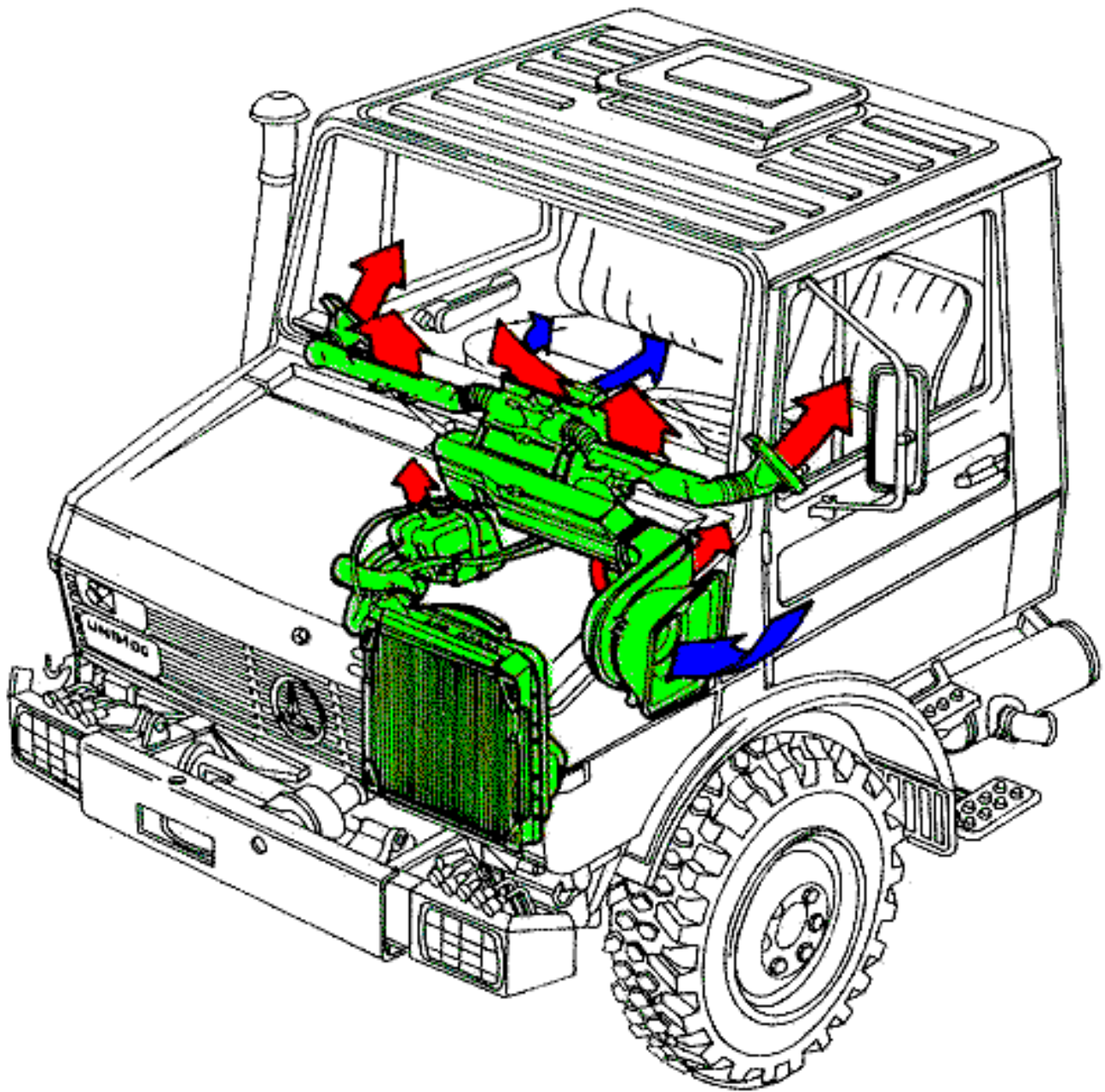
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Torsion-free 3-point mounting for major components and bodies.

The cab, the engine, the gearbox and the platform or body support assembly are located at three points. This ensures unimpeded torsional flexing of the Unimog's frame even when it is fitted with special bodies and equipment, so off-road capability is not restricted. The resultant low mechanical stressing enhances the service life even of the lightweight box bodies used today

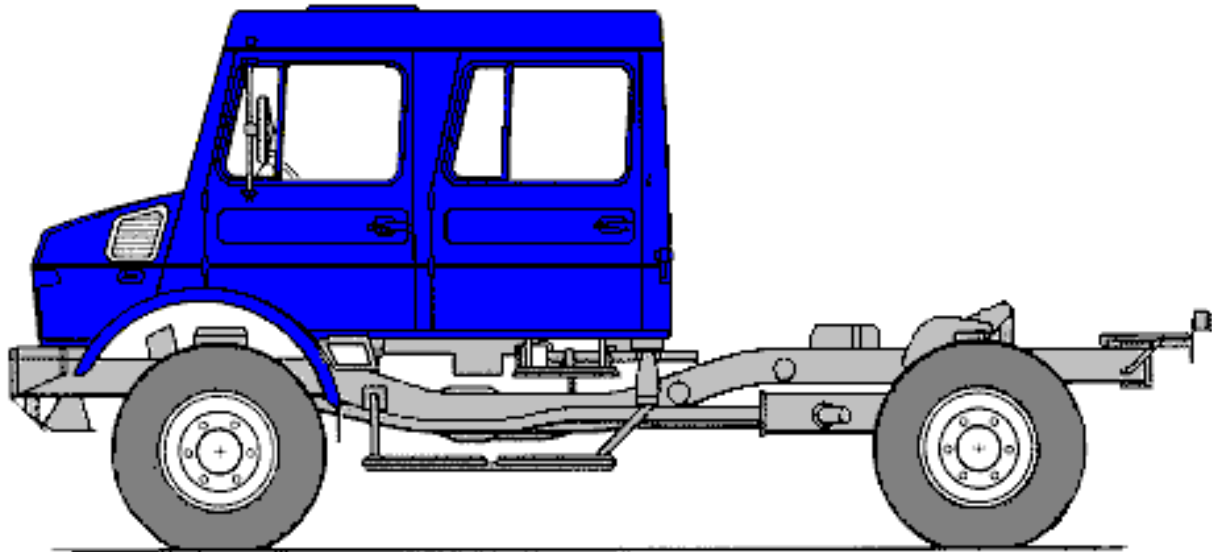
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The heating, ventilation and demisting system ensures a pleasant working climate.

In combination with the large roof hatch, the Unimog has a high air throughput and thus a more pleasant working climate all year round. This means good visibility at low exterior temperatures and high air humidity, for instance. The switches are located in convenient positions on the dashboard, and the high efficiency of the heating and ventilation system is ensured even at low driving speeds (air conditioning optionally available). The heating is via the coolant circuit. The interior is lined in noise absorbing material - this not only helps make the cab quieter, it also helps prevent engine heat from coming through the cab floor.

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Cab versions.

In the standard version, every Unimog is supplied as a two-seater. In the heavy duty series (U 1250 L upwards), a bench seat offers two more passengers a comfortable place to sit. For these more powerful models a crew cab for up to 7 persons is also available. All three cabs can be raised for maintenance work.

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