



LIEBHERR



**AUK
Truck-
mounted
crane**

80 TS



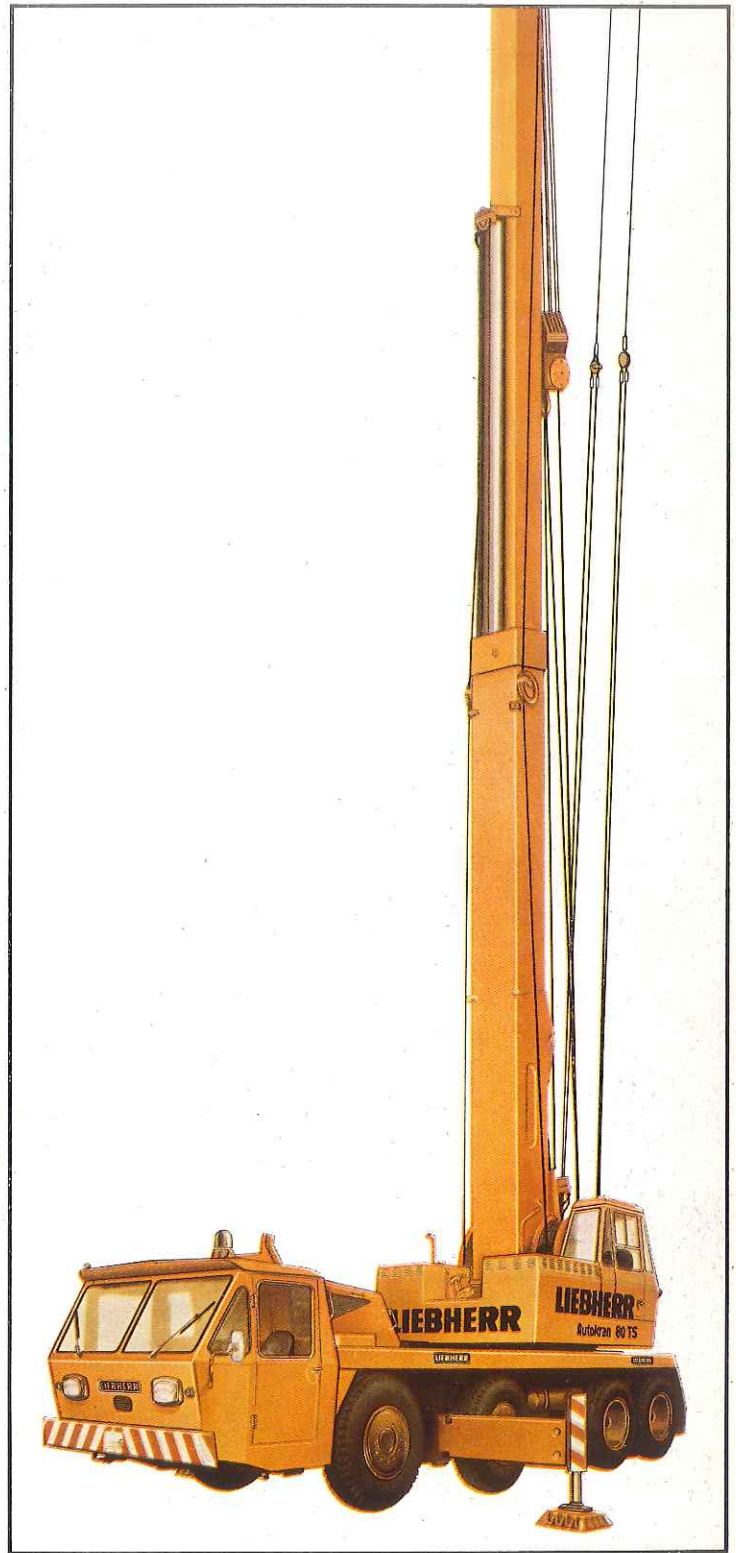
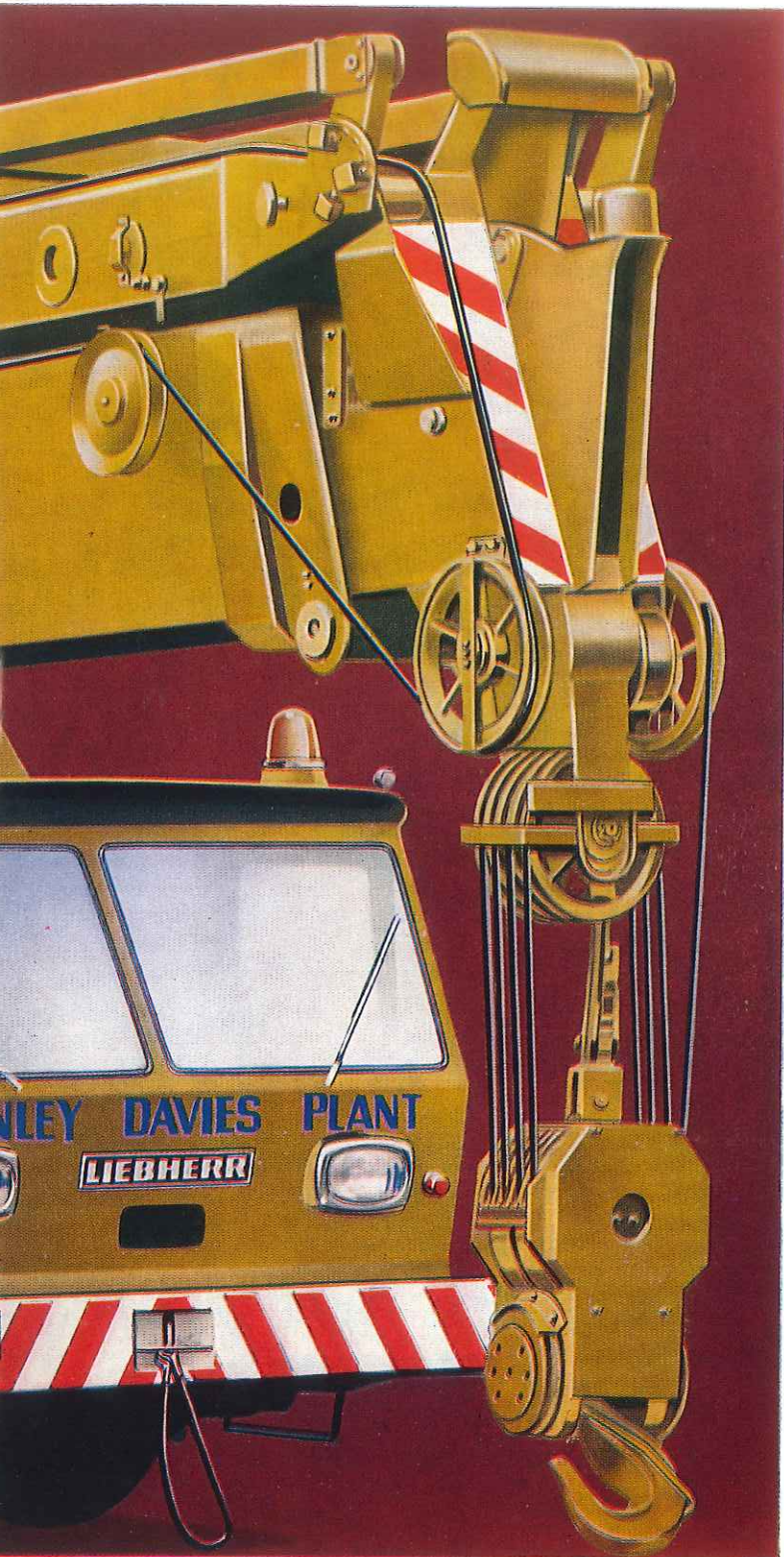
Hydraulic Truck-mounted Tower Slewing Crane

The crane is mounted on a 8-wheel front-wheel steering chassis built by LIEBHERR. With the crane lowered down for transportation, the 230 hp water-cooled diesel engine is powerful enough to drive the crane at a maximum of 55 km/hr.

Two or three of the four axles are driven. The single wheels of the two front axles are individually sprung and steerable. The two front axles are coupled together by compensating rods. The rear axles are jointed cross-shaft types suspended in bogies. Twin wheels are fitted at the rear.

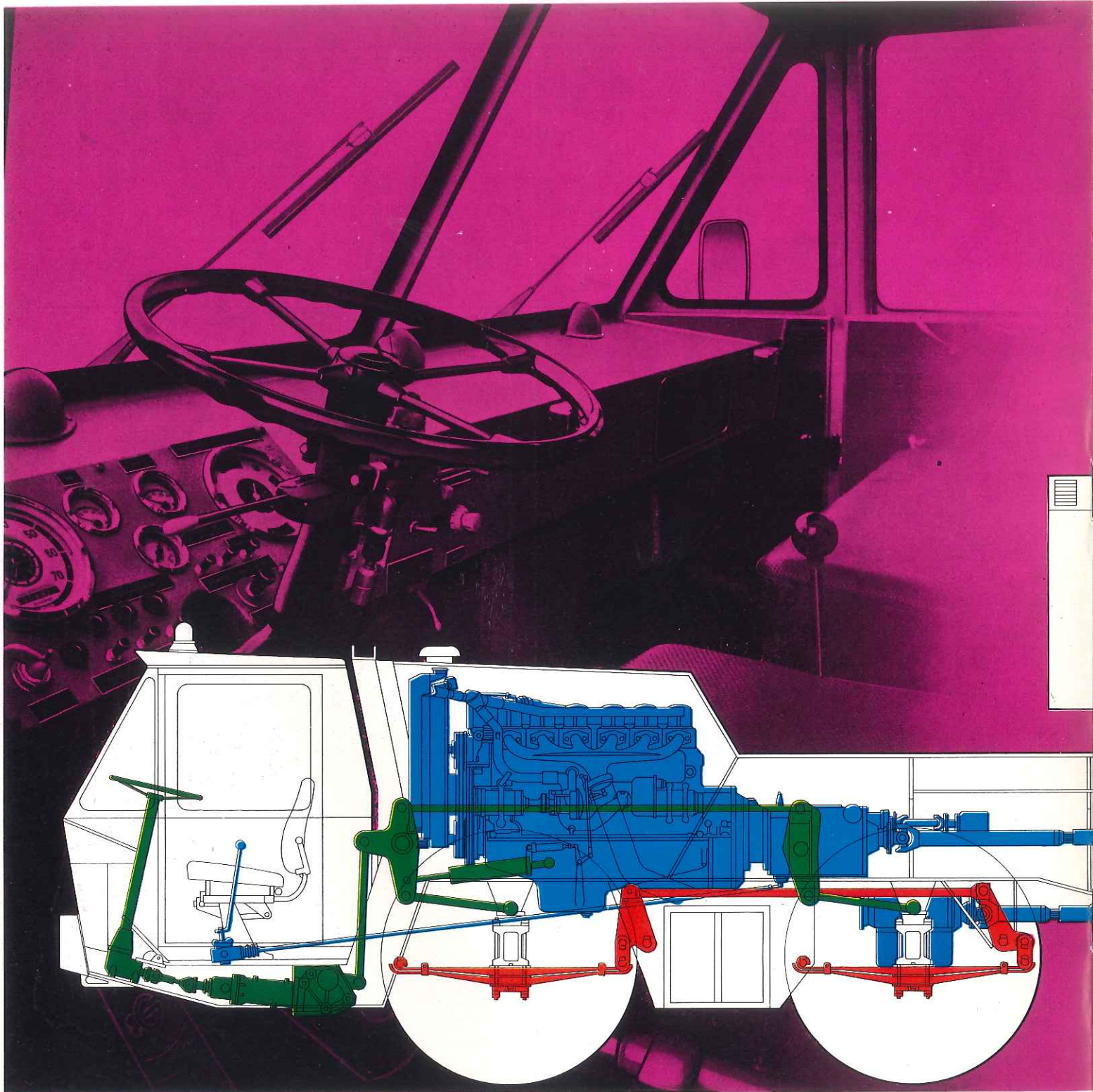
The mechanical steering linkage has

hydraulic power assist; this means that little driver effort is required to steer the vehicle. The main pump of the steering assist system is driven directly by the diesel engine. Additionally, a standby pump is provided in the system; a change-over valve will automatically bring this into action should the main pump break down or the diesel engine stop. Power is transmitted from the engine via a disc-type clutch and six-speed transmission to the road wheels. A pneumatic-hydraulic booster unit actuates the disc clutch. The six speeds are selected in the conventional manner with the help of a floor-mounted



gear lever.
 A transfer box is also provided in the transmission train; this gives the vehicles a minimum speed of 0.95 km/hr.
 A secondary drive unit is provided so that the crane can be driven and steering from the crane operator's cab on the slewing platform. The minimum speed of the unit can be set to meet any working requirements.
 The driven axles are differential types with planetary gearing built into the wheel hubs.
 The vehicle is provided with three braking systems — road brakes, hand-brake and an electrical permanent brake. The road

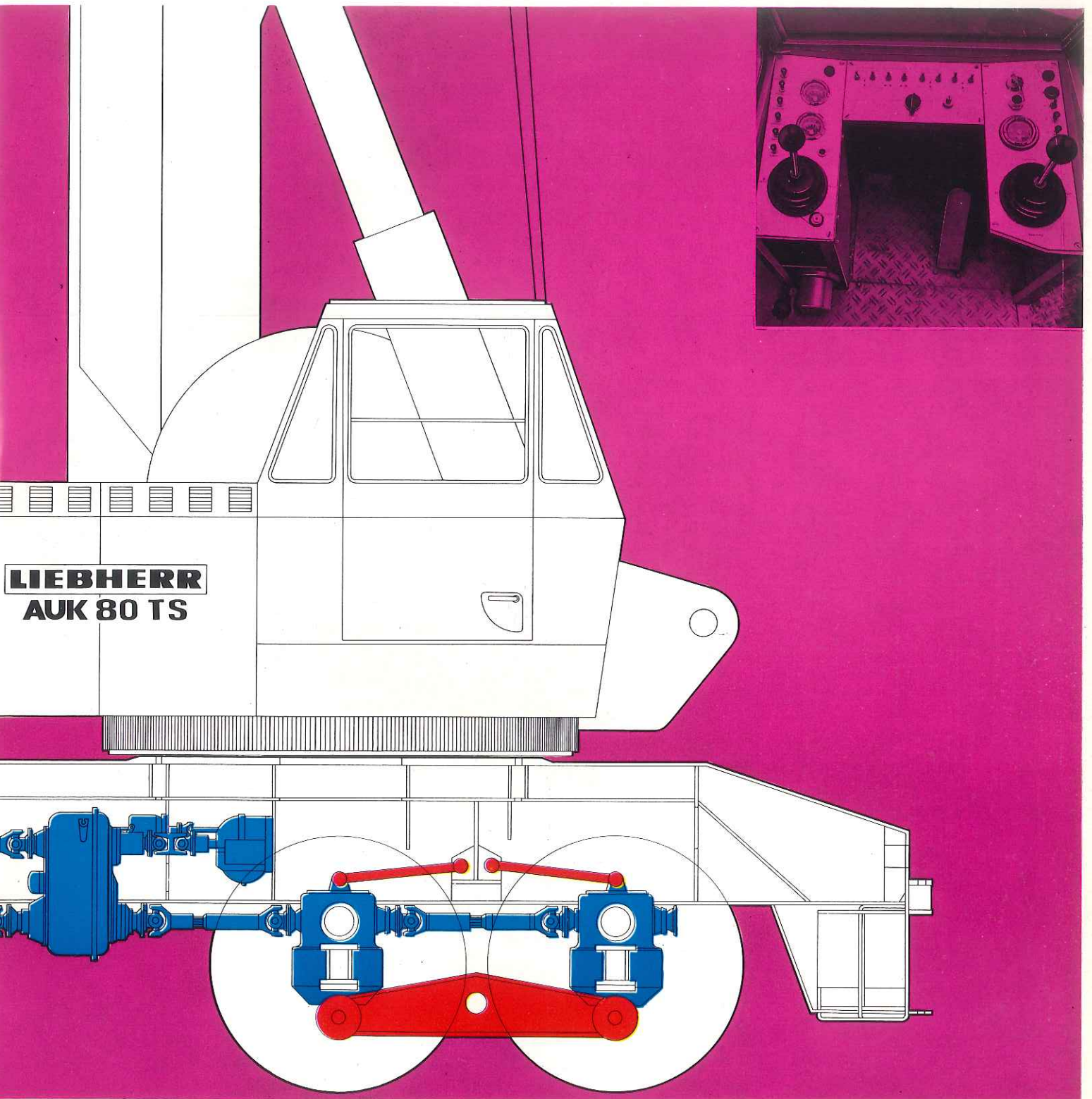
brakes comprise two separate and independent braking systems.
 The vehicle frame is an all-welded construction of best quality structural steel. Four hydraulically actuated support jacks provide the crane with a firm and solid footing whilst it is working. Using electric pushbuttons, the support jacks can be moved horizontally and vertically from the operator's cab on the slewing platform.
 The heatable driver's cab of the unit is mounted on rubberblock suspensions; it will comfortably carry four people. It is designed to provide the driver with unobstructed allround vision. The driver's



seat is adjustable and mounted on non-vibrating springs. The vehicle is designed to comply with German Highway Authority requirements. A liberally-dimensioned ball-bearing type slewing ring is located between the vehicle chassis and the crane structure. The slewing platform is an all-weld construction of best-quality structural steel. The crane is hydraulically driven; a 95 hp diesel engine drives a total of three hydraulic pumps. The hoist and slewing gear units are driven by hydraulic motors via totally-enclosed worm-gear trains. The hoist



units are additionally provided with spring-actuated brakes. Pressure relief valves are installed in each hydraulic circuit; additionally, the hydraulic cylinders used for luffing and telescoping the jib are provided with safety non-return valves to maintain the jib in position should a hose or pipe break or fracture. The all-welded box-type telescopic jib is made of best-quality heat-treated structural steel. The top of the tower is designed to take the roller bearing of the rope block on one side while the other side is equipped to fit the pivot end of a luffing jib. This means that the crane can



beused for dual purposes, namely as a tower slewing crane or as a luffing jib crane. The crane operator's cabin is laid out so that the operator has a clear view in both working directions. The controls are also duplicated for working on both sides.

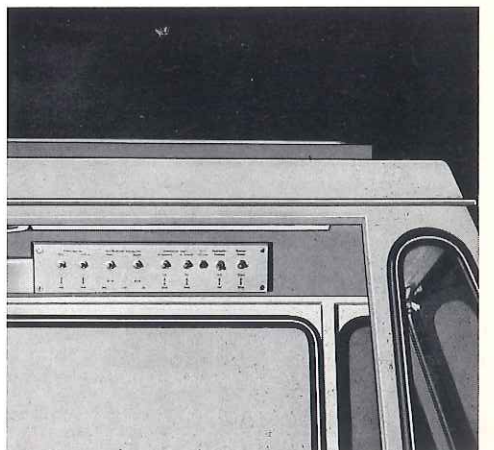
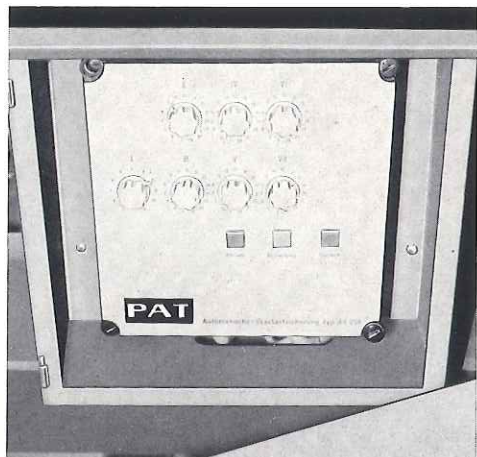
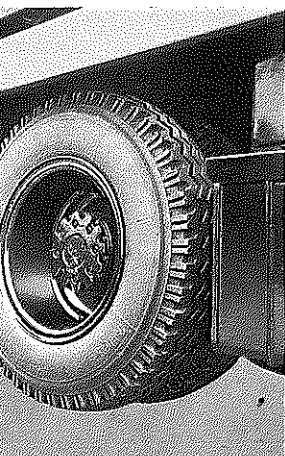
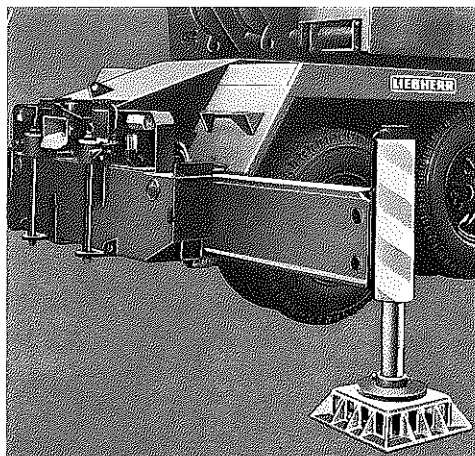


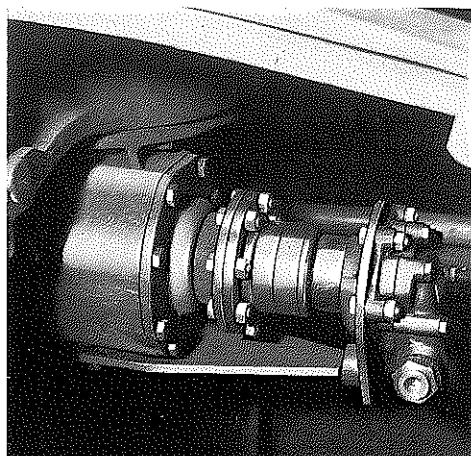
Photo (right): Automatic cutout controls of the electronic overload safety device.
 Photo (extreme right): Controls in the operator's cab for the hydraulic support jack system.



ated rear axles



Hydraulic support jacks
(horizontal and vertical movement)



Standby pump for the servo steering unit

SPECIFICATIONS

Mercedes Benz
OM 355
Diesel
Water
230 hp
81 kg/metre
11.5 litres
24 volt

Mercedes Benz
OM 352
Water
Diesel
95 hp
30 kg/metre
5.67 litre
24 volt

Truck

Tyres: front

single, 14.00—24
(Michelin G 24 Métalic)
twin, 12.00—24
(Michelin F 24, Métalic)

rear

Track: front
(tyre centre line)
rear
(centre line outer tyres)

2,070 mm

Wheelbase

2,120 mm
1,960 mm between two front wheels
2,675 mm between rear front and
front rear wheels

Gearchange
Transmission

1,320 mm between two rear wheels
floor-mounted lever
ZF AK 6—80 (6-speed change gear)
bottom ratio 6.1; top ratio 0.72

Transfer box

ZF VG 500
highway ratio 1.00;
cross-country ratio 2.47

Clutch

Fichtel & Sachs single-disc dry
clutch

Speeds

pneumatic-hydraulic operation
top speed 55 km/hr
bottom speed (cross-country)
0.95 km/hr
or 16 metres/min.

Axles: front

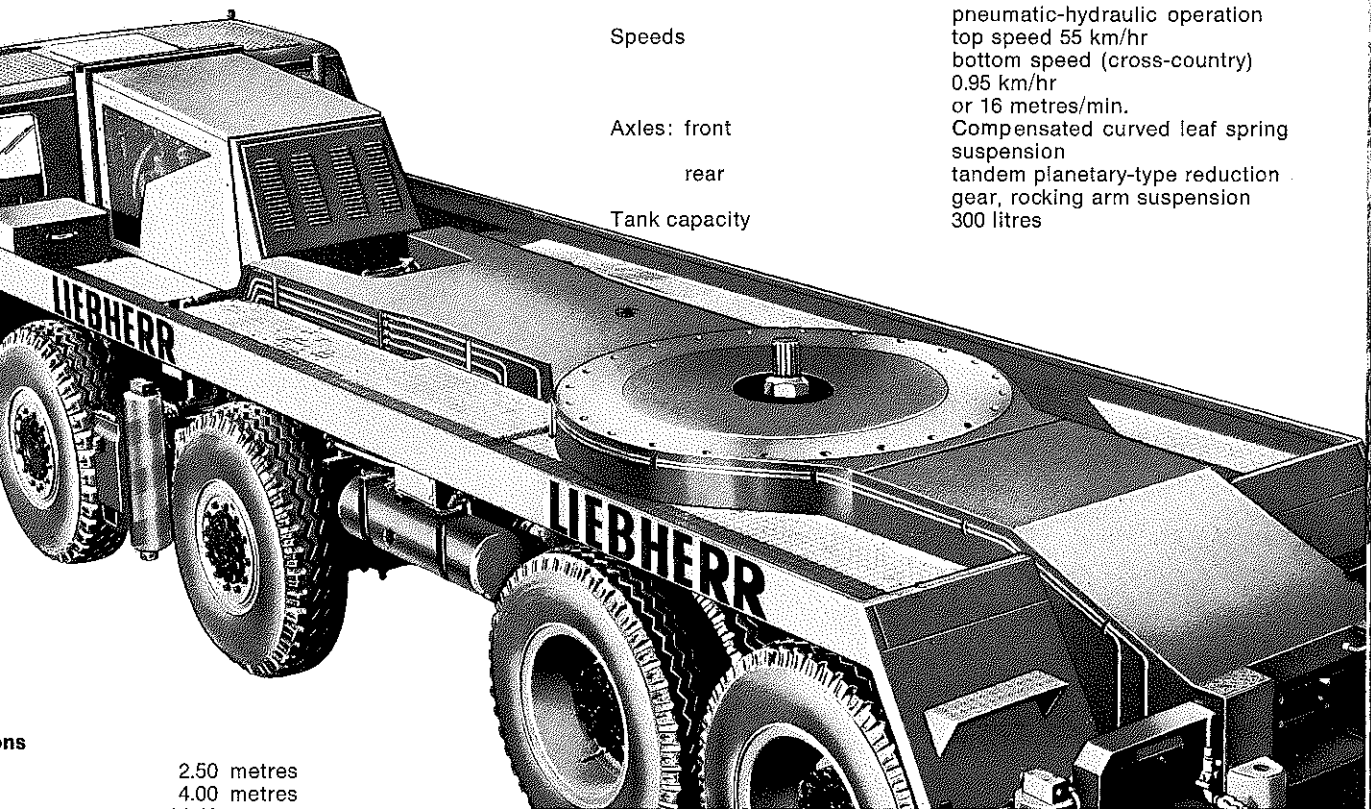
Compensated curved leaf spring
suspension

rear

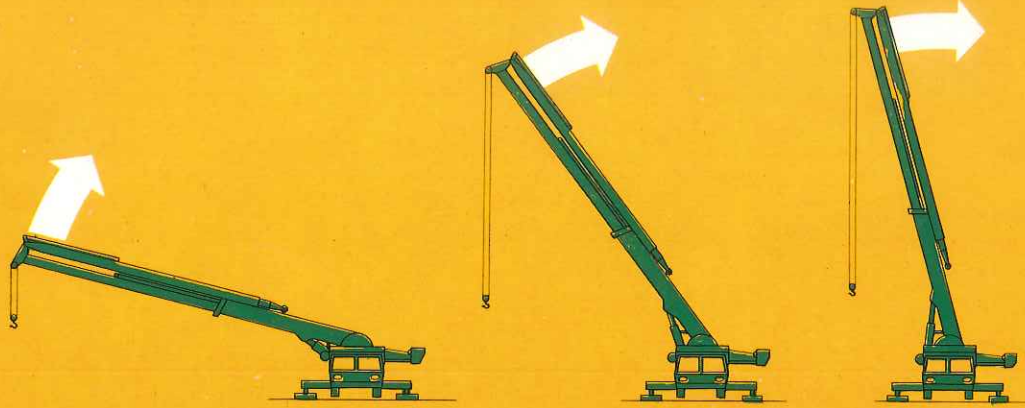
tandem planetary-type reduction
gear, rocking arm suspension

Tank capacity

300 litres

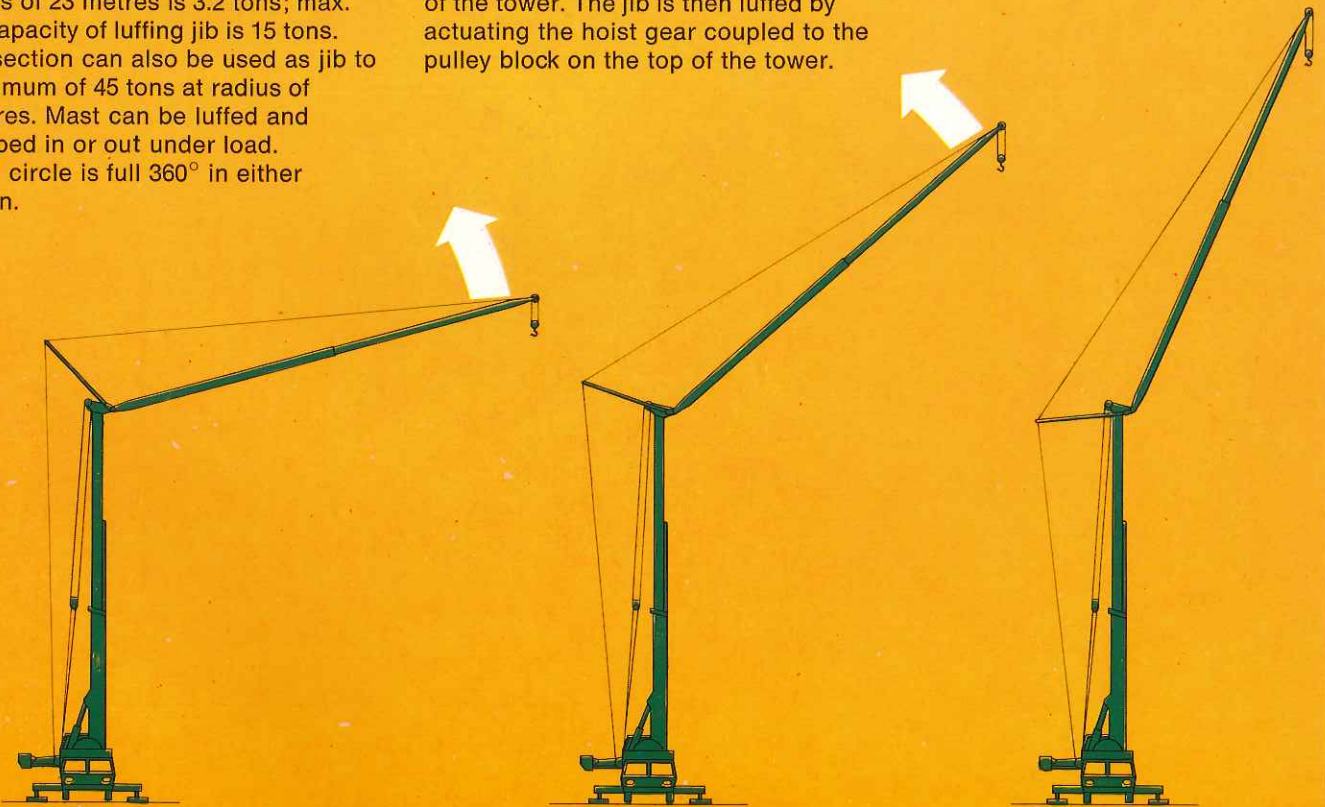


2.50 metres
4.00 metres



Crane equipment: Tower slewing crane equipment with 20 metre high tower and luffing jib extendable from 13.5 to 18 to 22.5 metres. Lifting capacity of luffing jib at radius of 23 metres is 3.2 tons; max. lifting capacity of luffing jib is 15 tons. Tower section can also be used as jib to lift maximum of 45 tons at radius of 4.5 metres. Mast can be luffed and telescoped in or out under load. Turning circle is full 360° in either direction.

The luffing jib is luffed up and down in that the luffing ties are passed over guide pulleys on the slewing platform and then coupled to the pulley block at the top of the tower. The jib is then luffed by actuating the hoist gear coupled to the pulley block on the top of the tower.



None of the crane parts needs dismantling before the crane is ready for road transportation. The unit can be erected in the shortest possible time

and is immediately ready to go to work. The counterweight is detachable so that the ballast can be installed at will on either side of the slewing platform. The ballast is changed as required depending on whether the crane is being used as a luffing jib crane or a slewing tower crane.





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