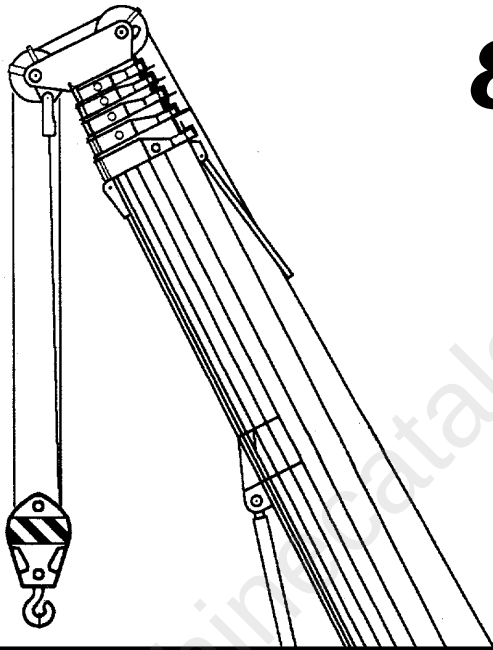
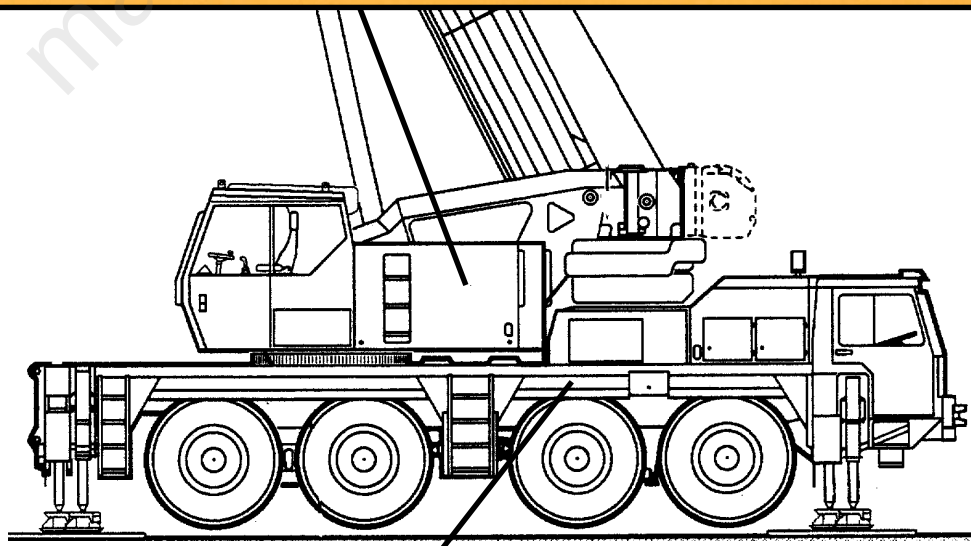


Service Manual LTM 1080/1

899640408



Superstructure (OW)



Carrier (UW)



SERVICE MANUAL

LTM 1080/1

Superstructure (OW)

Table of contents

Manual

Ident. No. 899640408

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Manual holder

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OW-01 General (see UW-01)

OW-02 Outline of components

OW-03 Technical description

OW-04 Slewing rim

OW-05 Drive assembly

OW-06 Cooling system (not installed)

OW-07 Slewing gear/slew. pass-through

OW-08 Hoist gear

OW-09 Luffing gear/ballasting

OW-10 Crane hydraulics

OW-11 Crane electrics/Liccon/LSB

OW-12 Compressed air syst. (s. UW-09)

OW-13 Telescopic boom electrics

OW-14 Telescopic boom/Telematik

OW-15 Centralized lubricating system

OW-16 Liccon test system

OW-17 Heating (not dealt with)

OW-18 Air condition (not dealt with)

OW-19 Accessories (not dealt with)



LTM 1080/1 - Superstructure

Outline

OW-02

Outline of components

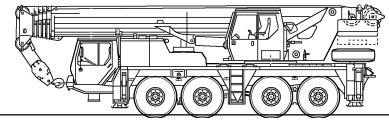
Item	Designation	Function	see chapt.
1	Roller slewing rim	Linking device between carrier and superstructure	OW-04
2	Slewing gear	Drive, slewing superstructure (360°)	OW-07
3	Slewing feedthrough	Line connections (air/hydr./electr.) to carrier	OW-07
4	Hoist gear	Drive - Hoist winch	OW-08
5	Ballasting	Mounting - counterweight slabs	OW-09
6	Centralized lubricating system	Automatic greasing system	OW-15
7	El./hydr. valve unit	Control, luffing / telescope + counterweight	OW-10
8	Telescoping ram	Telescoping of boom sections	OW-14
9	Telescopic boom	Autom. telescoping system	OW-14
10	Luffing ram	Luffing telescopic boom	OW-09
11	Liccon - console (monitor)	Operating and display unit	OW-11
12	Liccon - central unit	Crane control + safe load indicator	OW-11

LTM 1080/1 - Superstructure Outline

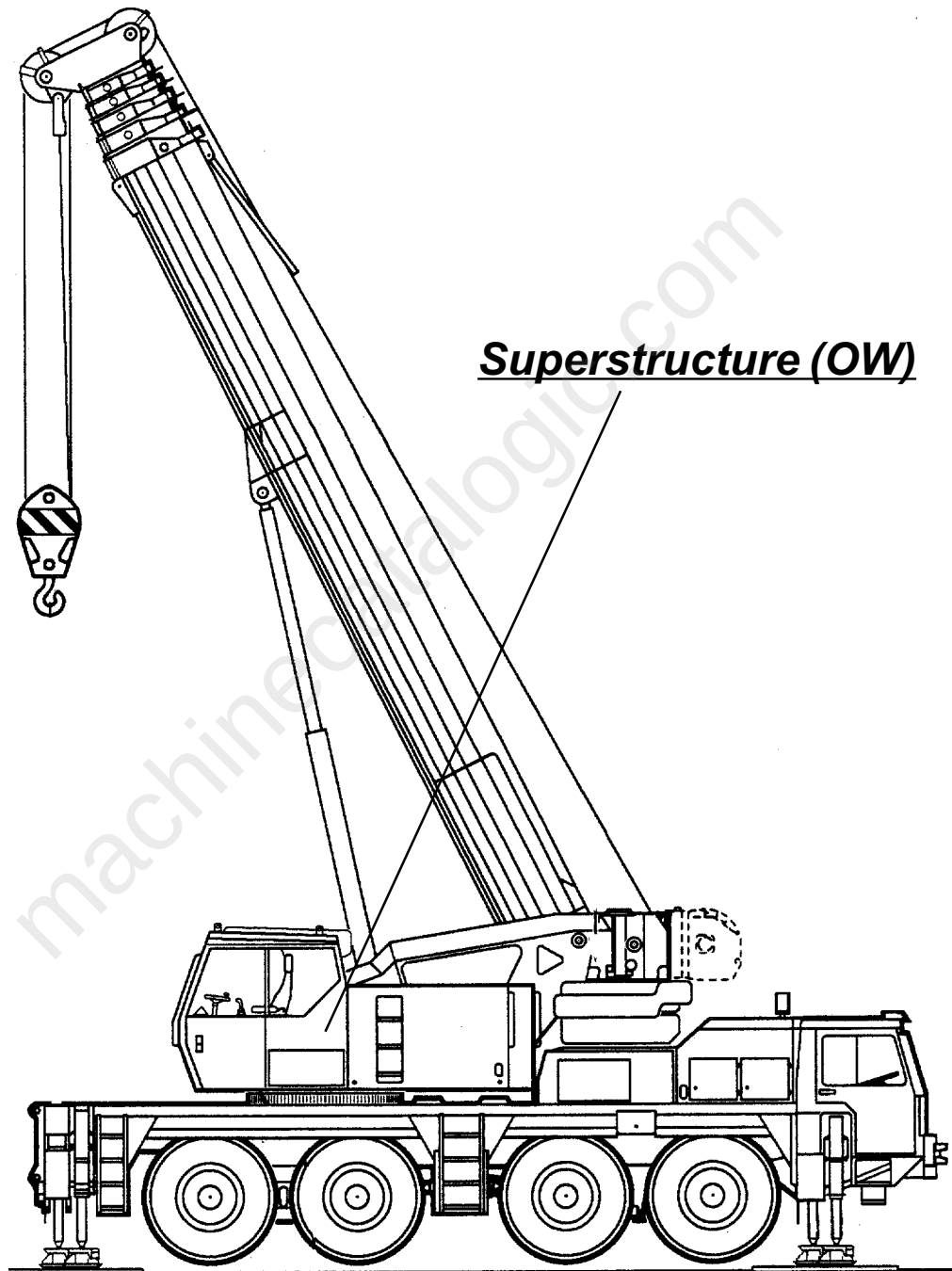
OW-02

Chapter-outline for components on superstructure

Chapter	Components	Ident. no.
OW-04	<u>Slewing rim</u> Roller slewing rim (ROD 173 DA 001)	9141 897 08 9907 074 01
OW-05	<u>Driving unit</u> • Double pump, LPVD 100-10EL/DAL 2240 (Hw/Tw/Ww) • gear pump, A1-23-L5-K07-NN (Dw)	9140 440 08 9883 159 23 5121 336 08
OW-06	<u>Cooling system / Ventilator drive</u> see chapter UW-05	-
OW-07	<u>Slewing gear / -feedthrough</u> • Hydraulic motor (LMB FMF 032) • Gear (ZHP 3.19 KS-EX)	9277 118 23 5000 628 08
OW-08	<u>Hoist gear I</u> • Fixed displacement motor (A2F M 80/61W) • Compact rope winch (KSW 325)	5102 328 08 9277 080 01
OW-09	<u>Luffing gear / ballasting</u> • Luffing ram (4042) • ballasting ram (4177)	5123 724 08 5123 810 08
OW-10	<u>Crane hydraulic system</u> • Crane hydraulic system, circuit diagram • Control block, pilot control • Control block (RC 002449), LS-Hw/Tw/Ww • Control block (C 60 806/4), Ww-lowering brake • Control block (NG12 RC 004237), slewing gear • Control block (RC 004236), ballasting	9829 302 08 5114 934 08 5113 014 08 5114 869 08 5113 077 08 5113 078 08
OW-11	<u>Crane electrics - Liccon / LSB bus</u> • circuit diagram superstructure	9829 453 08
OW-12	<u>Compressed air system - superstructure (see chapter UW-09)</u> • circuit diagram	9829 069 08
OW-13	<u>Telescopic boom-electrics (see chapter OW-11)</u> • circuit diagram	9829 453 08
OW-14	<u>Telescopic boom / "Telematik" (48m)</u> • Telescoping mechanics, complete • Telescoping ram (818961)	9144 904 08 5123 725 08
OW-15	<u>Centralized lubricating system</u> • Lubricating pump with integrated control (S-EP4)	7743 568 08



Outline of components / assemblies



1.6 Luffing mechanism

1 differential cylinder with servo brake-valve.

Angle of adjustment	:	- 2,2° - 83°
Luffing time	:	approx. 48 sec.

1.7 Slewing mechanism

Axial-piston constant motor, planetary gear, spring-loaded multi-disc brake as static brake controlled electro-hydraulically. The LIEBHERR slewing mechanism is driven through a „controlled open oil circuit“. Slewing speed infinitely variable from 0 - 2 min⁻¹.

1.8 Telescopic boom

The telescopic boom is a novel buckling resistant and anti-torsion design made of high tensile fine grained steel and consists of the pivot section and 5 telescope sections. The new oviform boom cross-section provides maximum stability. All telescopes are extended/retracted by means of a double-acting hydraulic ram. The new rapid cycle telescoping system TELEMATIK permits automatic or manual setting of the various boom lengths. The telescoping procedure is controlled by the LICCON system and displayed on the monitor by telescoping images. All boom sections can also be telescoped under partial load. The rope pulleys at the boom head are made of abrasionproof polyamide. The standard equipment comprises 5 rope pulleys for a max. lifting capacity of 53 t.

Boom length	:	10,8 m - 48 m
Telescoping time from 10,8 m - 48 m	:	approx. 280 sec.

1.9 Superstructure cabin

Galvanized and powder-coated sheet steel construction, space-saving sliding door, heat and sound insulated internal panelling, all-round safety glazing, tinted windscreens (excepting roof window), roof window with bullet-proof glass with large parallel windscreen wiper with wash device, frontscreen can be opened, with large windscreen wiper and wash device, roller blind at roof and front window. Operator's seat with multiple adjustment device, headsupport and lumbar support, individually adjustable operator control panels made fast together with the elbow-rests on the bucket-seat, i. e. inclining the bucket-seat the position of the panels is constant to the bucket-seat, modern instrument-panel with integrated LICCON-monitor, engine-independent heating (Thermo 90 S) with insulated duct, defroster/aeration device, stow-away boxes, radiopreparation, working floodlight 70 W. Driving of the crane and control of the outriggers from superstructure cabin (electronic inclinometer in LICCON system), electrical control of steering by a tracer. The crane cabin can be inclined by 20°.

1.10 Safety devices

LIEBHERR LICCON overload safety indicator consisting of: the electronic basic module with power pack and the microprocessor central unit, the monitor with operator's control board, pressure transducer and inclination angle sensor and length sensor. Setting of configuration data by convenient interactive functions. The operating configuration display shows among others the load charts of the crane. Graphic symbols in the operating display give admissible load, gross load, net load, working radii, boom length and jib height. System errors and application errors are shown on the monitor by error no. Hoist limit switch, safety valves against pipe and hose ruptures; drum limit switch at 3 rest layers.

1.11 TEST SYSTEM for maintenance purpose

The TEST SYSTEM is a module of the LICCON system. It enables the service personnel to locate malfunctions direct on the display screen and thus expedites the fault finding process. The display is available in German language.

1.12 Counterweight

8,5 tons counterweight. Hydraulic ballasting device controlled from superstructure cabin. The crane can travel on roads with this counterweight, permissible total weight 48 tons (without double lattice-type swing-away jib). (Additional counterweight as per item 5.1)

1.13 Central greasing

Automatic greasing of slewing ring, telescopic boom bearing, bearings of luffing cylinder and winches.

2 WORKING EQUIPMENT

2.1 Lattice-type swing-away jibs

mounted to the boom at 0°, 20° and 40°,
incl. extension of LICCON overload safety indicator

2.1.1 Single-lattice-type swing-away jib

Made of high tensile fine grained steel.
Length 10,5 m, to be rigidly mounted. The lattice-type swing-away jib is mounted to the boom head by means of a hydraulic erection device.

2.1.2 Double-lattice-type swing-away jib

Made of high tensile fine grained steel.
Length 10,5 m - 19 m, to be rigidly mounted. The lattice-type swing-away jib is mounted to the boom head by means of a hydraulic erection device.

2.1.3 Special lattice-type swing-away jib

Made of high tensile fine grained steel.
Length 2,6 m, to be rigidly mounted to the telescopic boom at 7°. For transport it can be folded to the telescopic boom.

2.2 Second hoist mechanism

Axial piston constant motor, special grooved LIEBHERR hoist drum with incorporated planetary gear and spring-loaded multi-disc brake. The hoist mechanism is driven through a „controlled open oil circuit“. Non-twisting hoist rope.

Rope diameter	:	17 mm
Rope length	:	approx. 210 m
Single line pull	:	57 kN
Max. line speed (outer layer)	:	approx. 130 m/min.

2.3 Hookblocks and hook

2.3.1 Hookblock 80 t - 7 sheaves, 450 kg, twin-hook

2.3.2 Hookblock 58 t - 5 sheaves, 410 kg, twin-hook

2.3.3 Hookblock 38 t - 3 sheaves, 470 kg, single hook

2.3.4 Hookblock 16 t - 1 sheave, 325 kg, single hook

2.3.5 Crane hook 5,7 t, 110 kg, single hook

3 ADDITIONAL EQUIPMENT - SUPERSTRUCTURE

3.1 Additional counterweight 7,5 t

For a total counterweight of 16 t, resulting in increased lifting capacities and axle loadings of 14,6 t. In case of on-road travelling, the max. permissible axle loadings of 12 t each are exceeded so that the additional counterweight has to be transported separately.

3.2 Working area limitation with LICCON system

Electronic LICCON working area limitation system to unburden the crane operator by limiting automatically the following working areas:

- the pulley head height limitation
- the radius limitaiton
- the slewing angle limitaiton
- the edge limitation

Each limitation function can be activated individually but also in conjunction with others.

3.3 Radio - superstructure cabin

Full Version Available

Liebherr LTM 1080/1 All Terrain Crane Service Manual

Liebherr LTM 1080/1 all terrain crane service manual with hydraulic circuit diagrams, component outlines and repair procedures. Instant PDF download.

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