STILL WAGNER

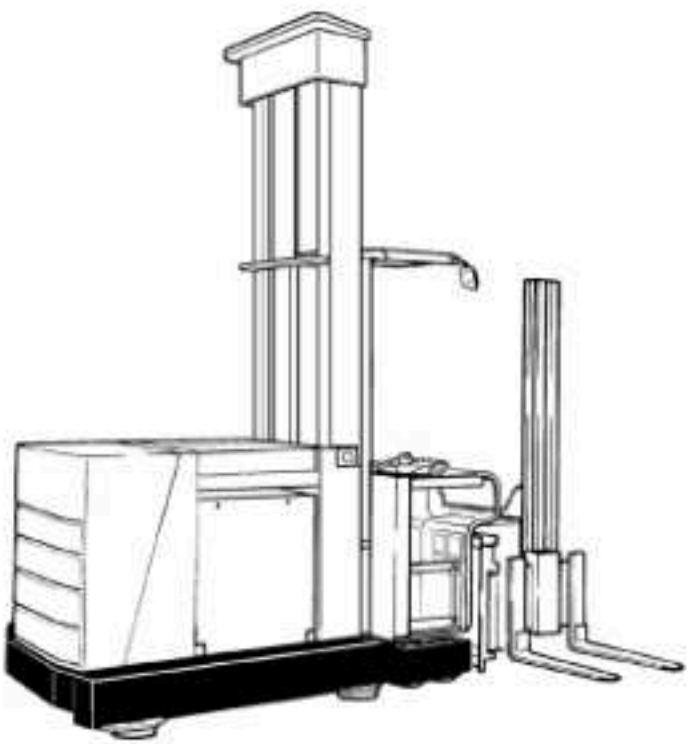
Workshop Manual MX10/13-N

This workshop manual is for use with vehicle types

MX10 and MX13 with shunt technology.

The "N" has been added to the type name (see below) in order to differentiate this manual from the manual for series technology.

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Key words

Remark: "A5 ff" means that the key word is dealt with on page A5 **and** the following pages.

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Key words

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LR80

Continued:
Steering angle limitation



Detent control

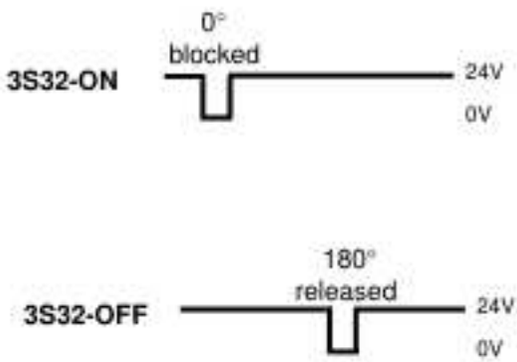
The detent (1) of the steering angle limitation system is controlled by the steering lock signal from the LR80. The motor that drives the detent always turns in the same direction and is controlled by relay 3K30. The in and out movement of the detent is controlled by an eccentric cam. The limit switches 3S32-ON and 3S32-OFF in the motor indicate the position of the eccentric cam and switch the motor off in the relevant position (relay 3K30 drops out). The motor is switched off without follow-up by applying 0V to the positive motor connection.

The steering angle limitation unit has 5 switches for control and monitoring:

3S32 on: Switches the motor off at 0° position, detent blocked
3S32 off: Switches the motor off at 180° position, detent released
3S33: Detent released monitor
3S34: Detent blocked monitor
3S35: Monitor for aisle travel steering angle within ±3°

If the steering lock signal changes to 0V, the detent released, i.e. the motor is driven by relay 3K30 until switch **3S32 off** (180°) changes to "0V" for approx. 100 ms.

If the steering lock signal is applied (24V), the detent is blocked, i.e. the motor is driven by relay 3K30 until switch **3S32 on** (0°) changes to "0V" for approx. 100 ms.



Remark: In old circuit diagrams, 3S32 (ON/OFF) is drawn as a change-over switch, but it is actually 2 break contacts!
The break contacts **3S32-On** and **3S32-Off** are inside the motor unit and cannot be accessed.

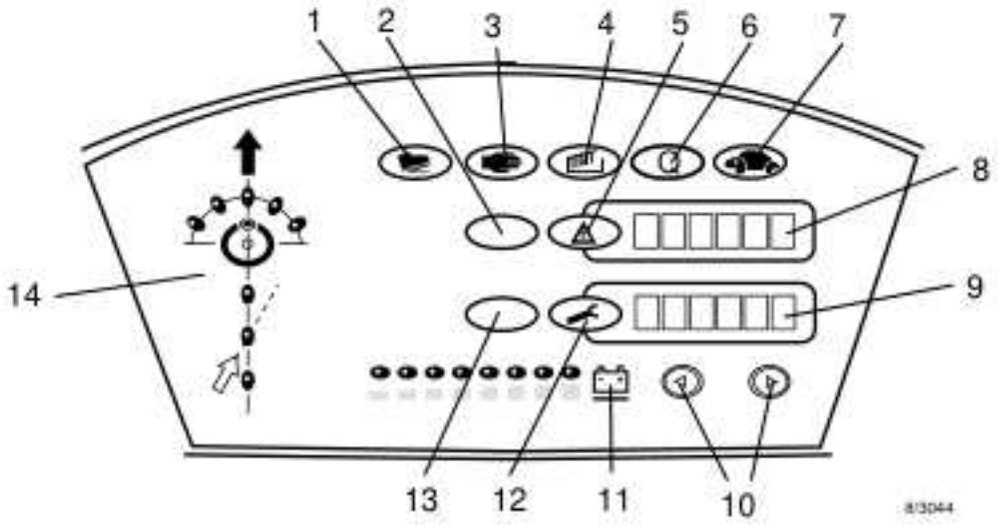
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Continued:
Operating console A29

Operating console display

General
The purpose of the display board is to show the operating statuses of the vehicle. Information from different sources is evaluated and displayed in the form of status displays, maintenance instructions and service information.



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(1) Red display for deadman's switch (FPS)
(2) PSA active
(3) Red display for 2-handed operation (PLC)
(4) Red display for barrier switch (cab)
(5) Test and error LED for inductive automatic steering (LR 80 central processing unit)
(6) Red display for acknowledgement (PLC)
(7) Yellow display for creep speed (FPS)
(8) LR80 display
(9) 7 segment display for operating hours and error messages (FPS)
(10) Operating keys
(11) Battery status display (FPS)
(12) Red display for maintenance and troubleshooting
(13) PSA fault
(14) Wheel position display (setpoint), automatic steering or manual steering, detection display for inductive automatic steering

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Hydraulic motor

Technical data

Model		G-P 116-14 / 7.9
Motor type		4-pin series-wound motor
Voltage	(V)	48
Current	(A)	213
Revolutions	(rpm)	2800
Output	(KW)	9.0
Operating mode		S2-60
Protection class		IP 20 KLE 00
Insulation class		B / F
Motor fuse	(A)	200
Current consumption when lifting with a load	(A) max.	220

Carbon brushes:

Id. no. W8 405 417

Length when new: 38mm
Replace when residual length is: 19mm

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