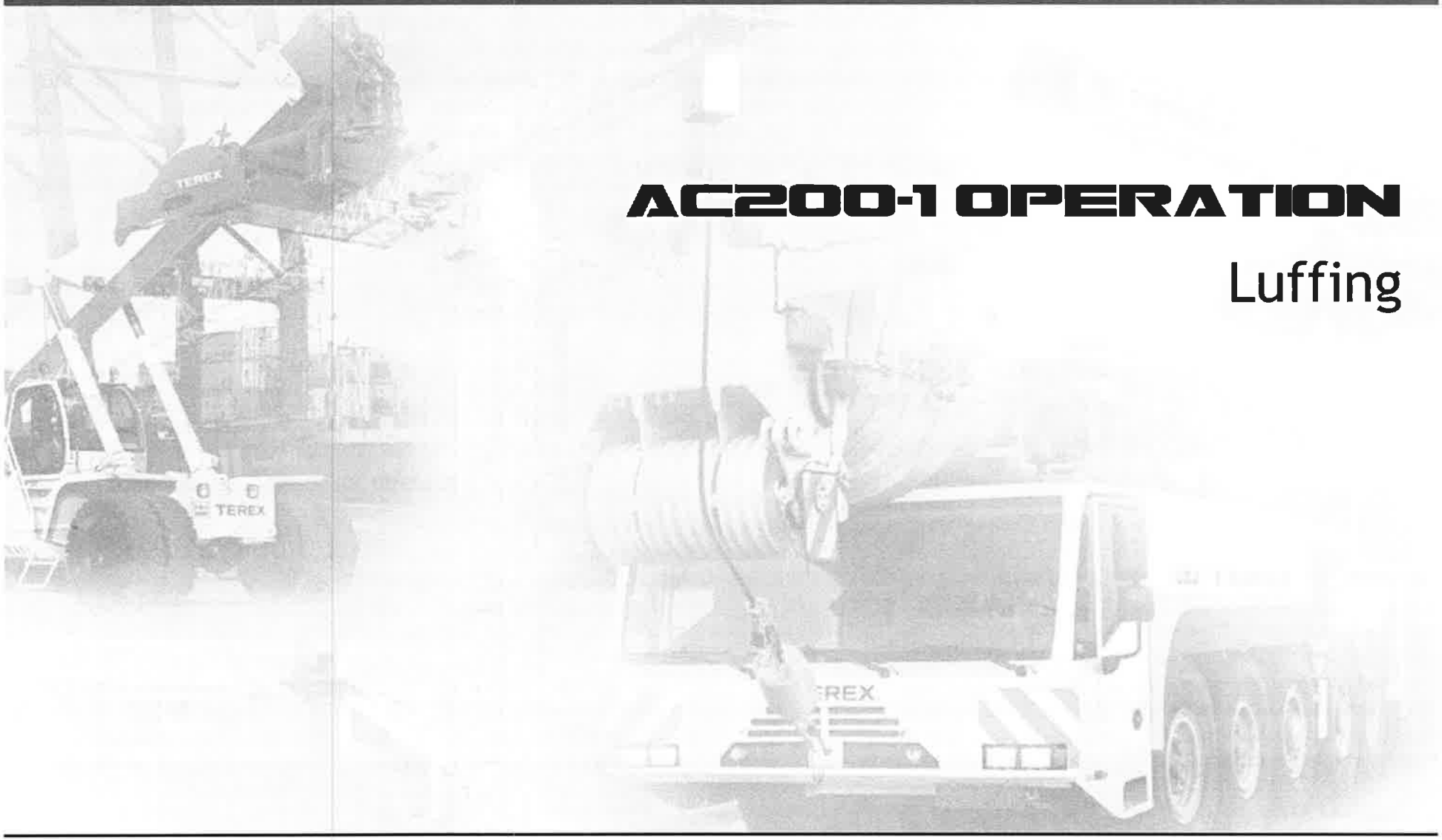
TEREX®

GLOBAL CRANE TRAINING



AC200-1 OPERATION

Luffing

Luffing Content

Luffing

Luffing Operation

The main boom is luffed (raised and lowered) by extending and retracting the luffing cylinder.

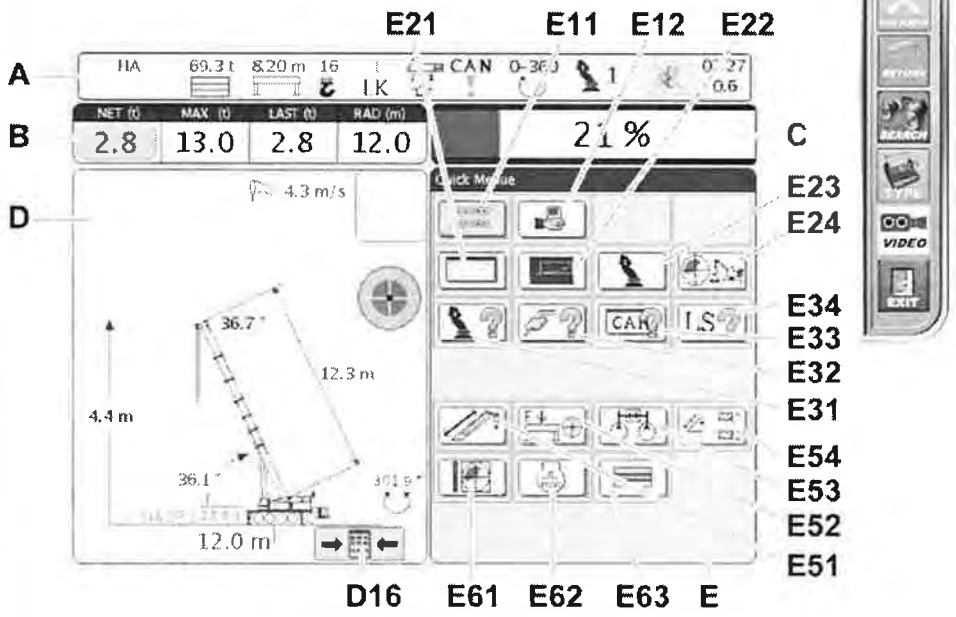
On devices with dolly preparation, the ball tap terminating the luffing cylinder during road driving must be open (see section in the carrier operating instructions).

Proceed as follows to luff the main boom:

1. Stabilize crane according to planned working position (mbe, cwt etc.) (for specifications, see load capacity chart).
2. With the engine running, select the desired hydraulic supply for the luffing gear using buttons “E53” and “E54” on the quick menu.

With the ”E53” status shown, both hydraulic pumps are connected. Telescoping, luffing, HW1 and, if available, HW2 movements (“E54” button) are performed by means of the hydraulic oil of the connected gear oil pumps.

3. If necessary, use the “E23” button to change the control lever function.

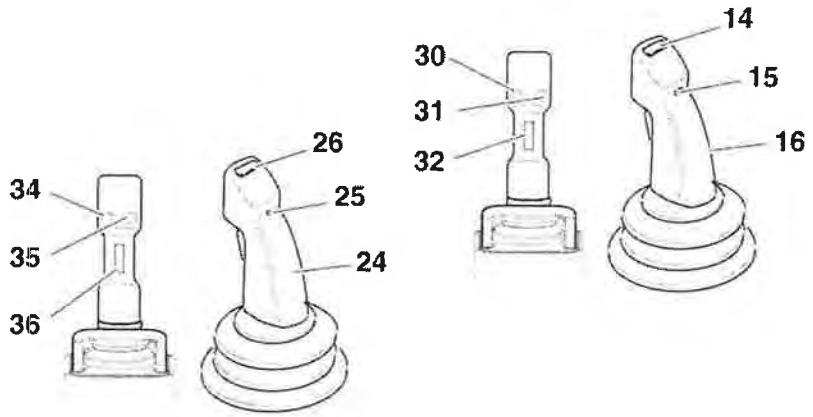


4. Start luffing movement by pressing one of the buttons (36/32) "Dead man's switch system" and carefully moving the appropriate control lever (24/16).
Dead man's switch system

To prevent unintentional activation of crane movements, both control levers (24/16) are equipped with an extra button (dead man's switch). Button (36) on control lever (24) and button (32) on control lever (16).
The crane movement can only be carried out as long as one of these buttons is pressed.
Activating (pressing and releasing) of a dead man's switch as well as activating a limit switch override on the control panel is only permitted when the control lever is positioned in "neutral" and/or after the initiated crane movement has been completed.

Risk of accidents!
Activating one of these dead man's switches when the control lever has been moved as far as possible from neutral position causes abrupt activation or, when the lever is released, abrupt termination of the corresponding movement.
Keep in mind the control lever function selected in step 3.

Risk of accidents!
To prevent the load or hook block from swinging out and creating a crushing / impact hazard when a movement is switched off, it is critical to ensure that the speed and acceleration of all crane movements are carefully set and modulated.
Control levers (24/16) must not be switched immediately from one luffing direction to the opposite luffing direction, but must be first allowed to rest in neutral position. Do not switch to the opposite direction until the main boom has come to a halt.



When released, the control lever automatically returns to neutral position. The crane movement which has been started is stopped.

If the hook is fully raised, and if the hoist limit switch has triggered, the main boom can no longer be lowered. First the hoist (the hook) must be lowered.

The drive of the luffing gear has 2 speed ranges:

Level 1: normal operation

Level 2: high speed

Buttons (34/30) are used to select speed levels.

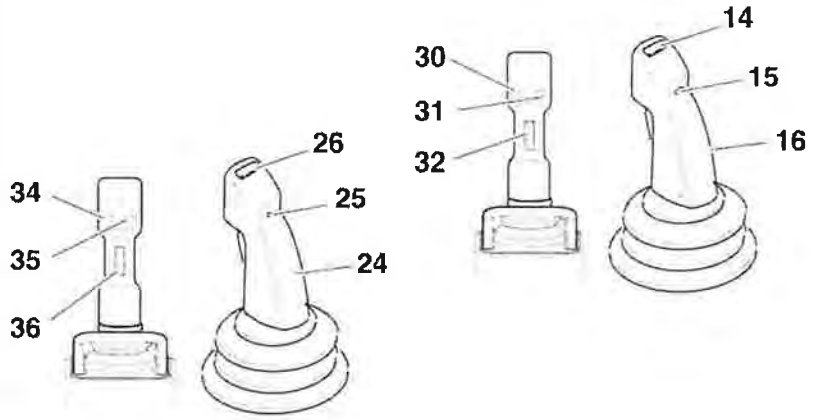
In addition, it is possible to fine-tune the speed of crane movement “Luffing gear down”.

If a prohibited overload condition has occurred, the load−moment−reducing movement ”raise main boom” is also shut down by the load limit device.

Lifting loads using luffing gear

Risk of accidents!

Lifting loads using the luffing gear is prohibited in all cases.



Preparing luffing gear for operation

On devices with dolly preparation, the ball tap terminating the luffing cylinder during road driving must be open.

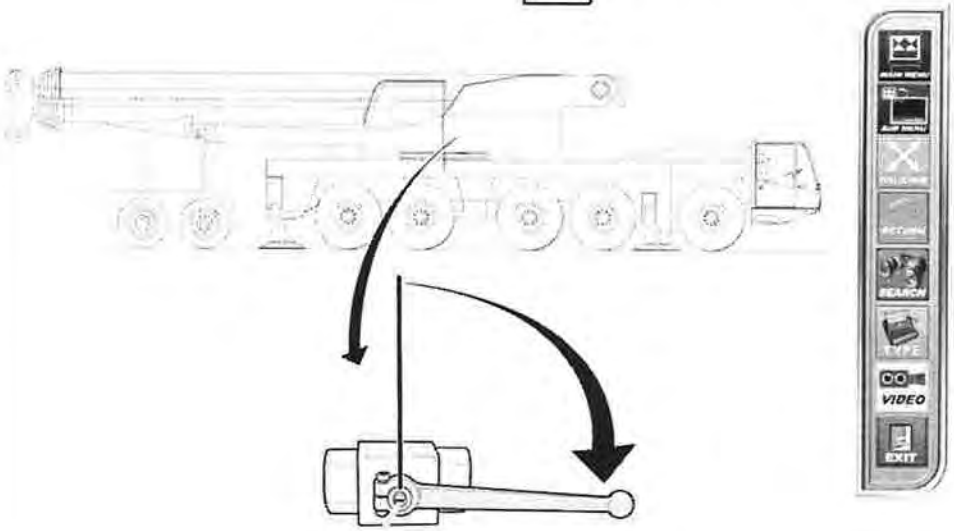
Selecting hydraulic supply for luffing gear

You can select the hydraulic supply for individual movements depending on which movements are to be performed simultaneously. There are four operating modes that can be used.

You can select the operating mode by pressing “E53” until you find the mode you want. On “E53” and “E54” you can see the movements and the pumps that have been assigned to them. In the upper left−hand corner of the “E53” button, you can see the number of the current operating mode.

Operating modes 2 and 4 are best used for delicate, simultaneous movement of the luffing gear and hoist.

Operating mode 3 can only be selected if hoist 2 is among the assigned control lever functions.



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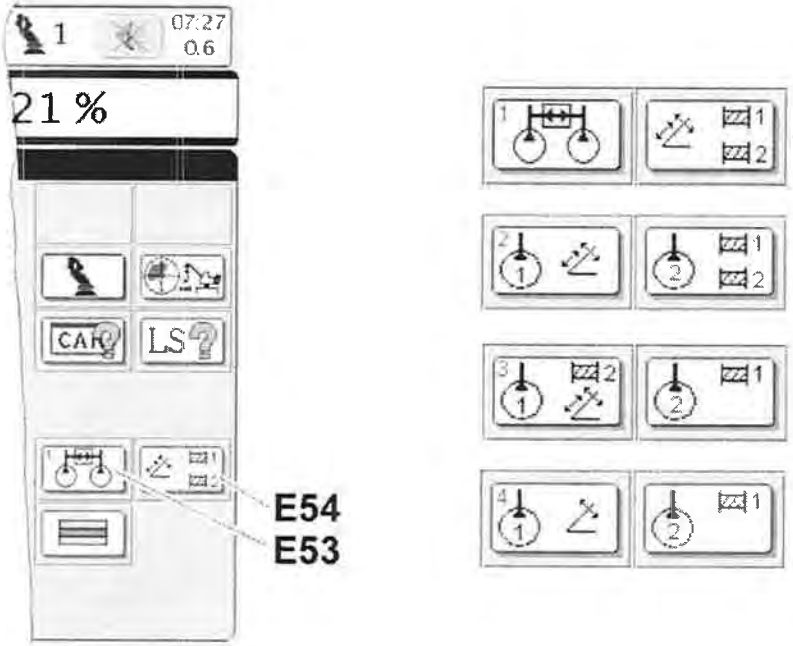


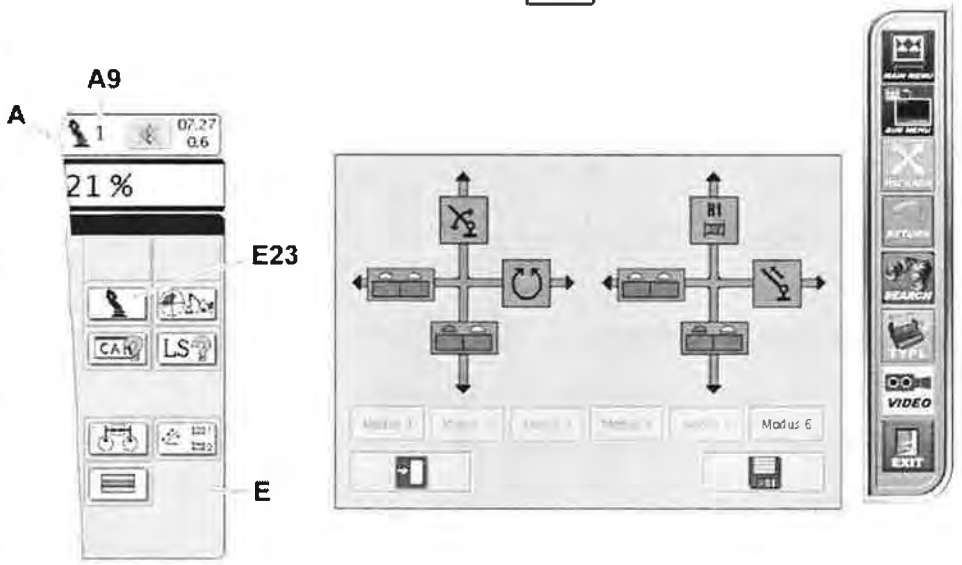
Assigning control lever functions

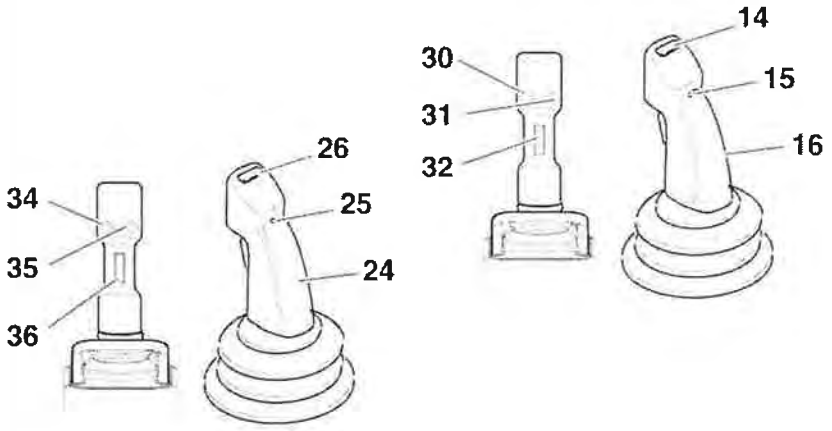
Depending on the crane equipment, different modes (IC−1) can be selected. After the “E23” button has been selected, an image will appear in area “E” of the crane operation mask to show the current control lever function. By selecting a new mode (e.g. mode 4), you can display the corresponding control lever function. The newly selected mode becomes active after you select the ”Save” symbol (disk) to quit the display. The current control lever function is shown at position “A9” in field “A”.

Mode 1:	SLH = slewing gear		SRH = luffing gear	
	SLV = telescoping		SRV = hoist 1	H1
Mode 2:	SLH = slewing gear		SRH = luffing gear	
	SLV = hoist 2	H2	SRV = hoist 1	H1
Mode 3:	SLH = slewing gear		SRH = hoist 2	H2
	SLV = telescoping		SRV = hoist 1	H1
Mode 4:	SLH = luffing gear		SRH = slewing gear	
	SLV = telescoping		SRV = hoist 1	H1
Mode 5:	SLH = luffing gear		SRH = slewing gear	
	SLV = hoist 2	H2	SRV = hoist 1	H1
Mode 6:	SLH = slewing gear		SRH = telescoping	
	SLV = luffing gear		SRV = hoist 1	H1

☞ *(S = control lever, R = right (16), L = left (24), H = horizontal, V = vertical)*

Keep in mind the selected pilot control assignment in order to avoid inadvertent movements. Risk of accidents!





Luffing speeds

Luffing up main boom in high speed mode

To switch the luffing gear to high-speed mode, activate button (30) and control lever (24/16) at the same time.

High-speed mode may only be used for up to a maximum of 30% of the corresponding load capacity.

Switching to high-speed mode is not permitted in the following cases:

– – with suspended loads

– with attached main boom extension

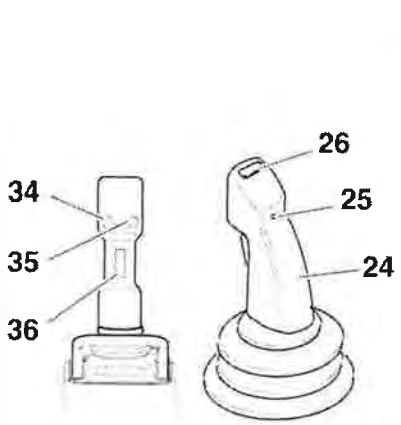
– to lift or lower a boom, which has been either fully or partially extended, out of a flat position.

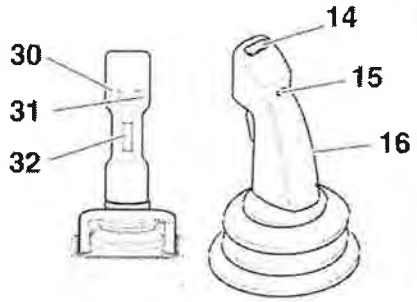
Fine-tuning downward luffing ("luffing gear down")

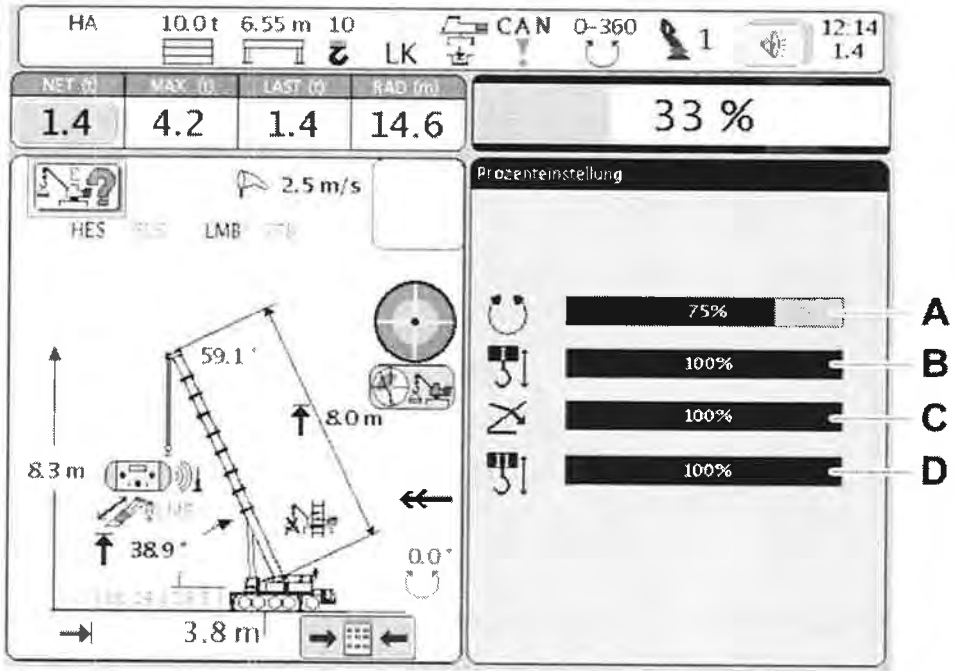
The luffing gear is electrically pre–controlled. The speed when lifting the main boom is determined by the rotation speed of the hydraulic pump and movement of the control lever.

The speed of the crane movement "Luffing gear down" can be additionally fine-tuned. Movements performed along the X–axis of the control lever (horizontal movement of control lever), can be adjusted using the corresponding rocker switch (26/14) (switch moved to right – fast; switch moved to left – slow). Movements performed along the Y–axis of the control lever (vertical movement of control lever), can be adjusted by activating the corresponding rocker switch (26/14) and pressing button (35/31); on front side of control lever, always on left side in relation to direction of travel) at the same time.

While the speed is being adjusted using the buttons, a corresponding percentage value will appear on the SLI display(C).







Overriding the load limit device

If the load has exceeded the limit, movements which increase the load moment are switched off by the load limit device. Lowering the load on the hook is the only movement still permitted (Unless the movement has also been switched off by the lowering limit switch.

Overriding shutdown of movement "Raise luffing gear"

To move a suspended load from the overload area into the permitted operating area, it is possible to raise the main boom.

Key-operated push button (116) is used to permit the "Raise luffing gear" movement. To do this, turn the key clockwise and hold in this position.

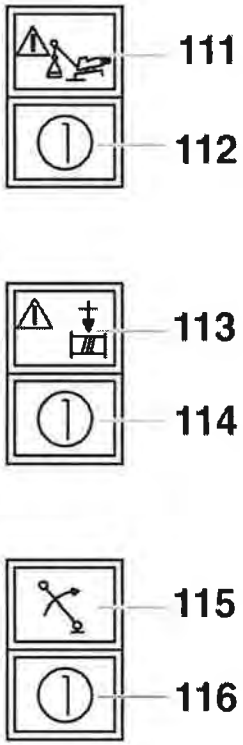
During override, the indicator light (115) is illuminated.

This movement is only permitted if it is clear that no dangerous situations can arise as a result.

If the load is still in contact with the ground and raising of the hoist has been shut down, the load is too heavy. In this case, activating the "Raise luffing gear" movement is not permitted!

Using the "Raise luffing gear" movement to lift the load is not permitted under any circumstances!

Using the key operated push button (116), it is possible to move the load out of the shutdown area without switching off the entire SLI (including all monitoring functions).



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