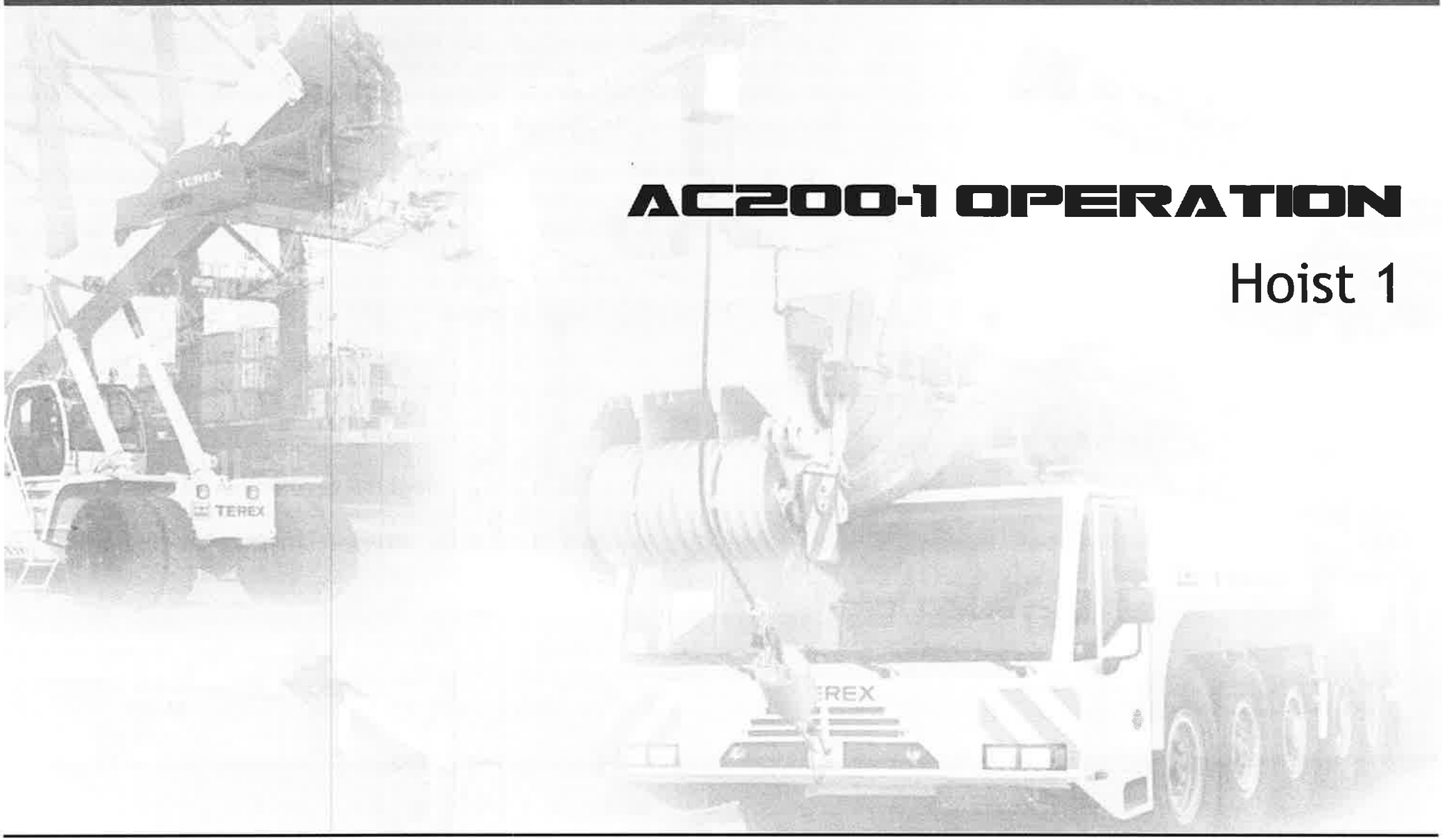
TEREX®

GLOBAL CRANE TRAINING



AC200-1 OPERATION

Hoist 1

Hoist 1 Content

"Hoist 1" Hook Operation

Raising and Lowering the Load with Hoist 1

Depending on the crane equipment, different modes can be selected.

Mode 1:	SLH = slewing gear		SRH = luffing gear	
	SLV = tele		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 = tele		SRV = hoist 1	H1
Mode 4:	SLH = luffing gear		SRH = slewing gear	
	SLV = tele		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 = tele	
	SLV = luffing gear		SRV = hoist 1	H1

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

*To prevent the unintended activation of crane movements, both control levers are fitted with an additional button (**36/32**) (**dead** man's switch).*

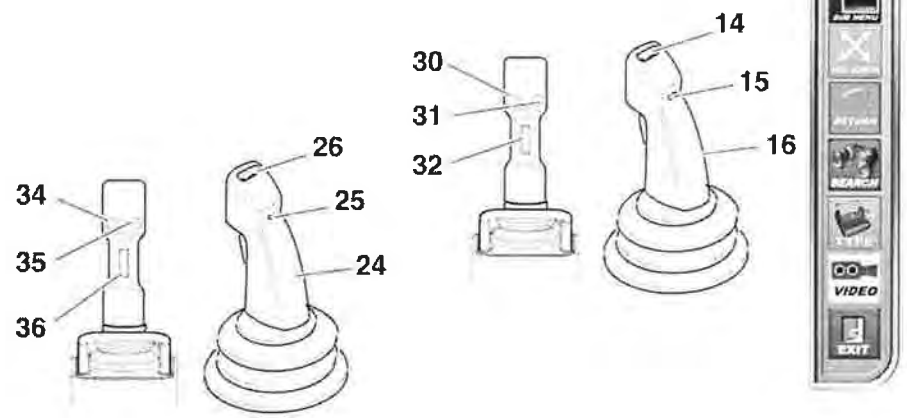
A crane movement can only be carried out when one of the buttons is pressed.

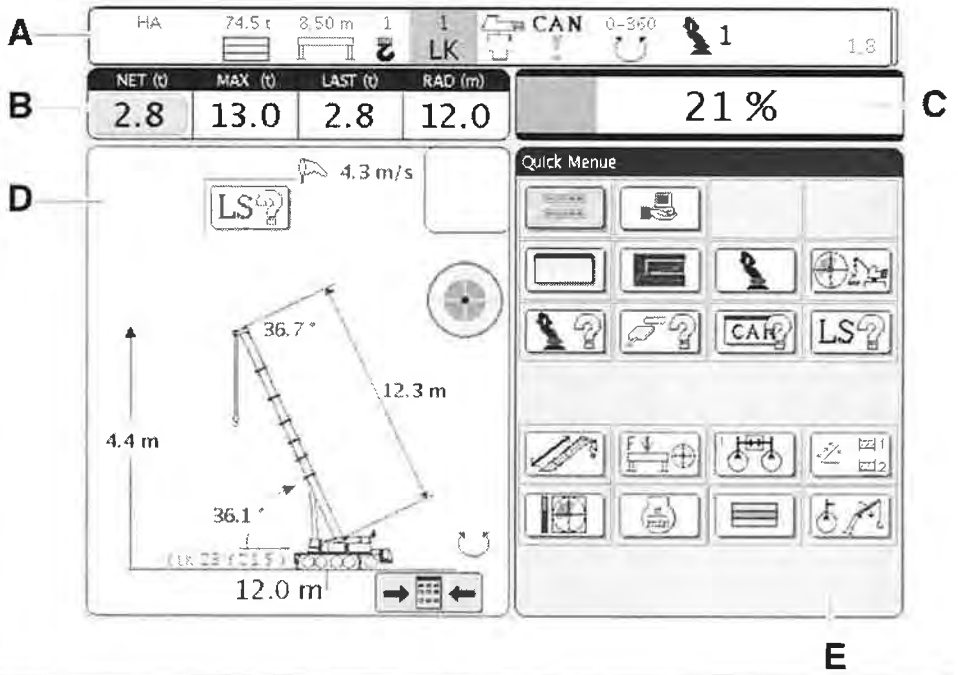
In order to avoid unplanned movements, take each selection of pilot control assignment into consideration.

Risk of accidents!

- The movement "raise load" is automatically shut down when:
* LLD has shut down. Lifting capacity of 100% is reached (bar display **C**)
* the hook block has tripped the hoist limit switch.

Lowering load is possible.





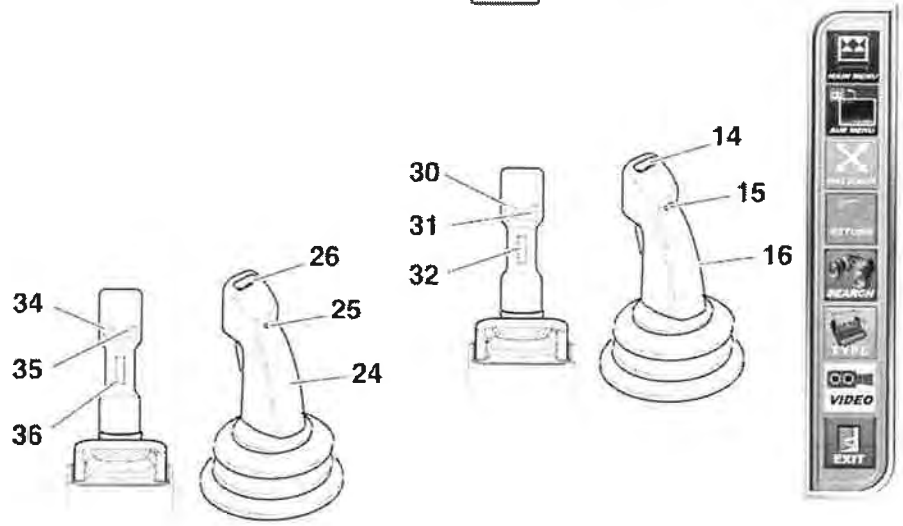
– The movement "lower load" is automatically shut down, when the lower limit switch for hoist 1 has tripped.
Raising of the load is possible.
– When actuating control lever (**24/16), feel the cone of the** hoist rotation indicator (**25/15).**
As soon as the hoist rotates, you will feel a definite vibration there.

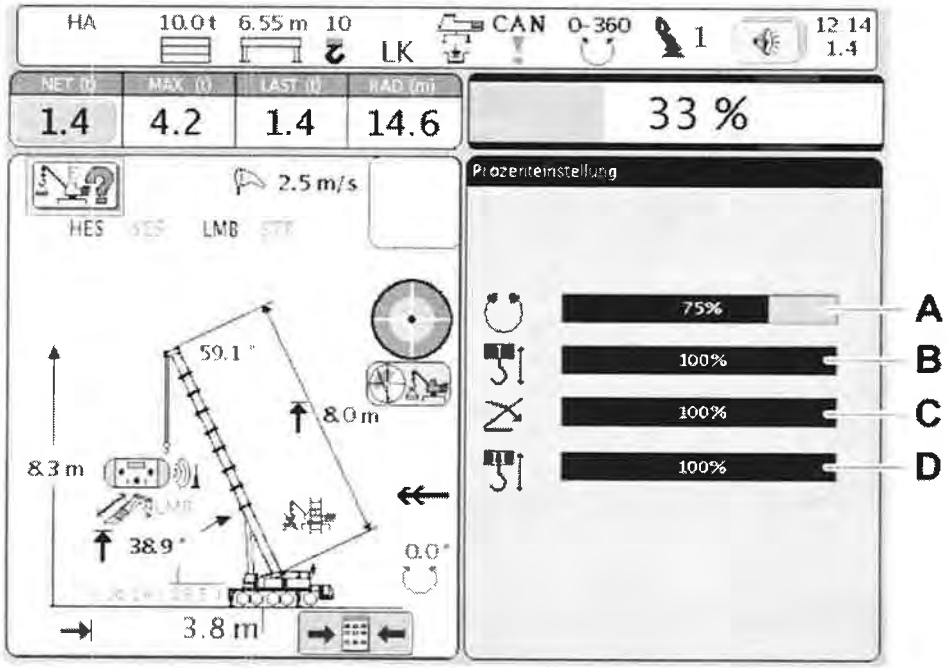
Raising the Load in High Range

The high range for hoist 1 is switched on by pressing button (**30)** and lever (**24/16) simultaneously.**
High-speed mode may only be used for up to a maximum of 30% of the corresponding load capacity.
High speed may not be used for one rope crane operation with main boom extension.

Hoist speeds

The hoist is electrically pre–controlled. The hoist speed depends on the speed of the hydraulic pump and the position of control lever.
The speed of the crane movement „Hoist 1" can also be precision controlled. The movements that are carried out via the **X–axle** (horizontal movement of pilot control lever) of the individual pilot control lever can be regulated via the corresponding self return rocker switch (**26/14) (button actuated to the right – fast; button** actuated to the left – slow). The movements that are carried out via the **Y–axle (vertical movement of the pilot control lever) of the**
individual pilot control lever can be regulated via the corresponding self return rocker switch (**26/14) and by pressing** the keys (**35/31; on the front side of the pilot control lever in the** direction of travel, always left) at the same time.
As long as the speed is being regulated via button (**26/14), the** corresponding percentage is shown in the display of the load limit device (**B,).**





Camera Surveillance of the Hoist (Optional)

A camera is fitted to the hoist in order to monitor the reeling behavior of the hoist rope from display (27) in the crane operator's cab. It is in a protective case.

The entire unit must be slid up and clamped in place for operation.

When the crane is in the transportation state the entire unit must be slid down and clamped in place.

The display (27) is on the top of the instrument panel in the superstructure cab.

The following settings can be made on display (27):

Key Meaning

27.1 LED: display readiness for operation

27.2 Manual switchover camera 1 / camera 2

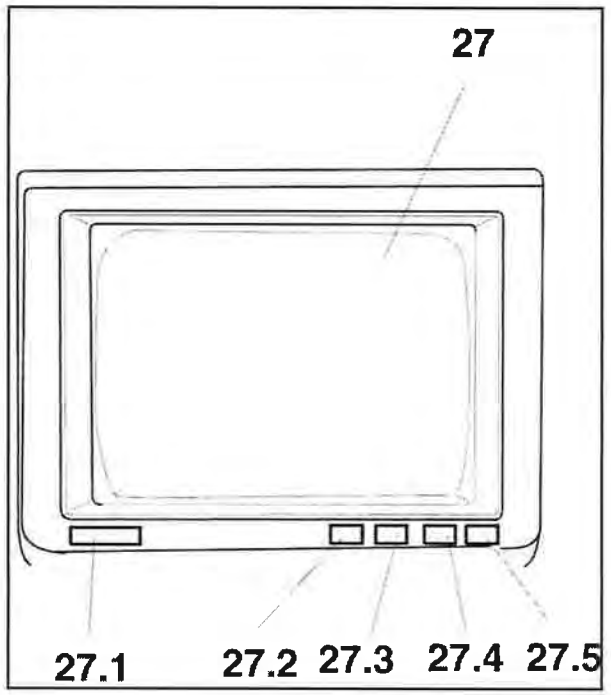
27.3 Switchover brightness between 2 levels of brightness

27.4 Switchover camera or AV input for the screen

27.5 On / Off switch

Changing the setting Color (contrast) and brightness is only possible for hoist 1. The selected setting remains for hoist 2 (optional).

When the display is switched on hoist 1 is automatically shown as soon as the ignition is activated. As soon as the control lever for hoist 2 is activated, hoist 2 (optional) is displayed instead of hoist 1.



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GLOBAL CRANE TRAINING

AC200-1 OPERATION

Hoist 2

Hoist 2 Content

Hoist 2 (Optional)

You can use the second hoist when working with the main boom extension and when utilizing an auxiliary head sheave and/or a runner.

Information on Transport and Attachment Points

Attachment Points

In transport configuration, the actual hoist 2 (**1a) is mounted** together with the assembly aid (**1b)** the transport condition.

The connecting bolts must be fitted and secured against falling out.

Use the attachment points (A) as shown in figure.

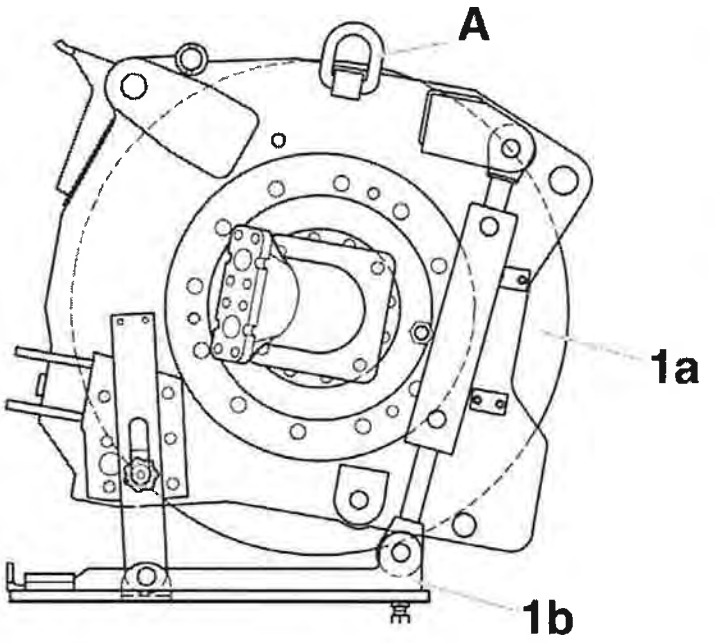
Risk of accidents!

The parts must not swing out or dangle at an angle when they are raised. If necessary, lifting chains fitted with shortening claws must be used.

The securing equipment must be supplied by the customer.

Transport Dimensions / Weights

	Transport dimensions			Approx. weight
	Length mm (in)	Width mm (in)	Height mm (in)	kg (lbs)
Hoist 2 with mounting device	1730 mm (68.1 in)	795 mm (31.3 in)	710 mm (28.0 in)	1800 kg (3968 lbs)
Additional top roller	953 mm (37.5 in)	61 mm (2.4 in)	242 mm (9.5 in)	15 kg (33.1 lbs)



Fitting and Removing Hoist 2

Equipment may only be fitted and removed by trained and qualified personnel!

The hoist 2 (**1) can be assembled with the help of an** auxiliary crane, or mounting aid (**1b) in combination with** counterweight (**2) as support.**

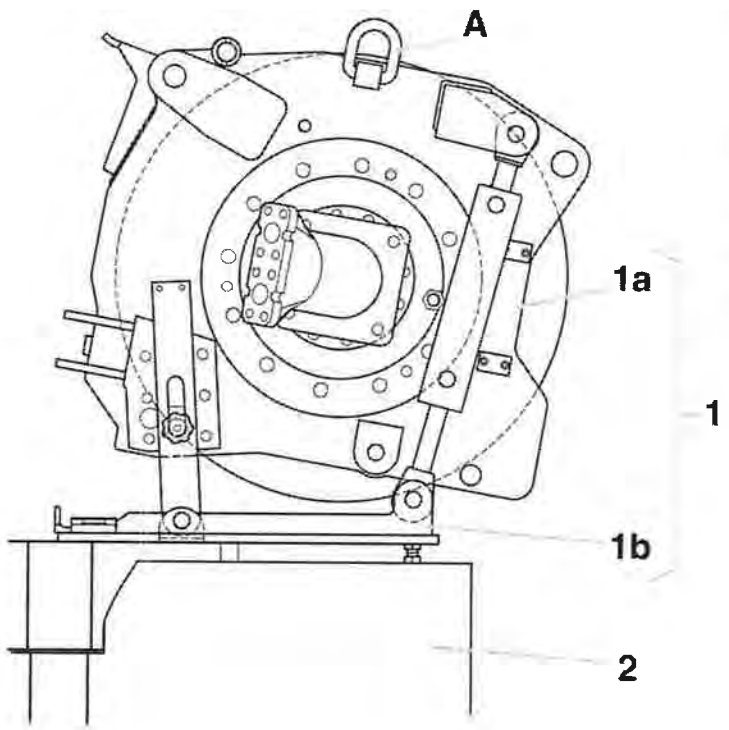
In transport configuration, the actual hoist 2 (**1a) is mounted** together with the assembly aid (**1b). shows the** transport conditions.

Risk of tipping!

Hoist 2 needs to be secured against falling when transported separately.

A risk of crushing exists during attachment of hoist 2 between the hoist housing and the superstructure frame and the counterweight that has been set down.

The outrigger span needs to be selected in accordance with subsequent crane operation.



Fitting and Removing Hoist 2with the Auxiliary Crane

Fitting

1. Stabilize the crane and make it level.
2. Hitch the entirety of hoist 2 to the slinging points (**A) provided** on the auxiliary crane and raise slightly.

Persons must not stand or walk beneath suspended loads or in areas where loads/equipment could fall.

The auxiliary crane must be able to hold the load until the bolting at all locking points has been completed.

3. Separate the hoist 2 (**1a) from the mounting aid (1b):** to do this, loosen bolts (**3) and (4), push the connecting rod (5) up and lock.**

The rod of the hydraulic cylinder (**8) can not be locked with** the pins (**3) at point (B) until after connection with the** superstructure hydraulic system.

4. Hoist 2 using the upper securing forks, place Hoist 2 on the guide rail on the superstructure frame and push towards the superstructure. Fasten hoist 2 using the 4 biconical pins (**7)** into points (**F) and (G), and secure (4xeach).**

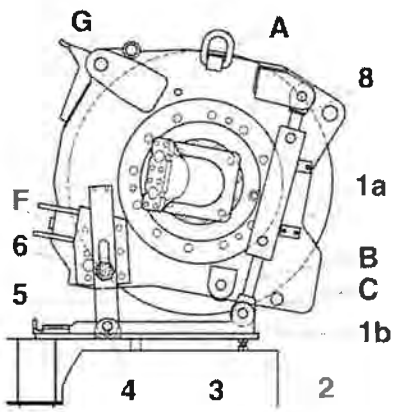
Risk of crushing!

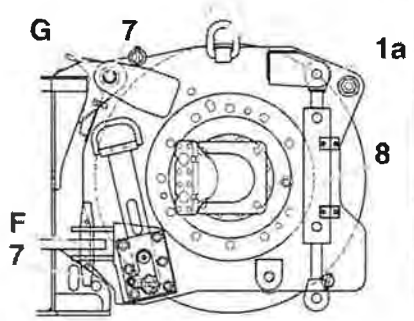
Risk of crushing exists between hoist 2 and the respective fastening points on the superstructure frame.

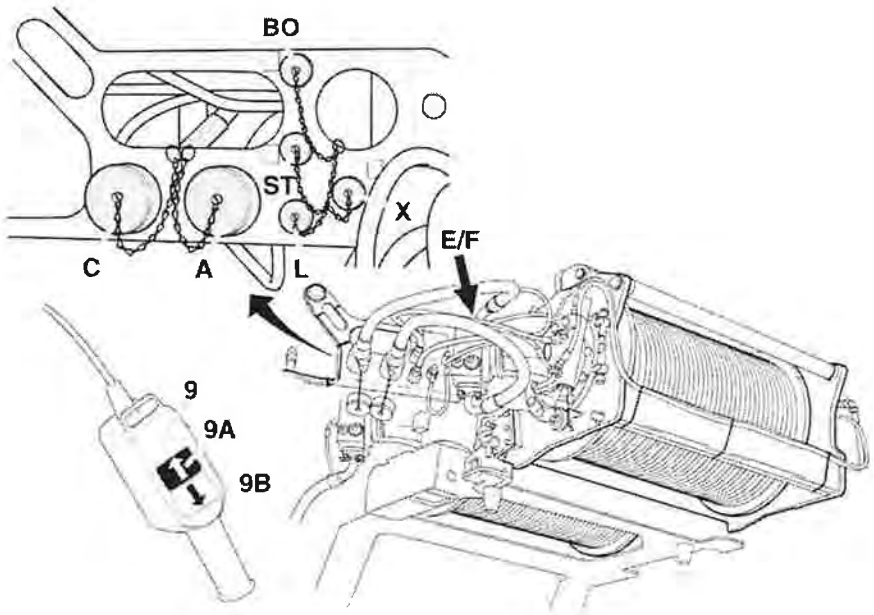
5. Release the auxiliary crane.
6. Connect up the hydraulics connections (**C, A, L, ST, BO, X)** and electrics connections (**E) between hoist** and superstructure frame.

The hydraulic lines and connections are equipped with signs which indicate which belongs where.

All hydraulic couplings are fitted with protective caps which must be removed before fitting.







Make sure in each case that the hydraulic connections have been joined correctly, i.e. that the couplings open properly.

Joining and releasing of hydraulic connections is always permitted only in depressurized condition, in other words, the superstructure engine must not be running

Connect the mobile control panel (**9) to the connection (F).**

7. Using the mobile control panel (**9), retract the** hydraulic cylinder (**8) via button (9B) until the rod can be** connected and secured with bolt (**3) in point (C).**

8. Place the mounting aid on the counterweight and secure.

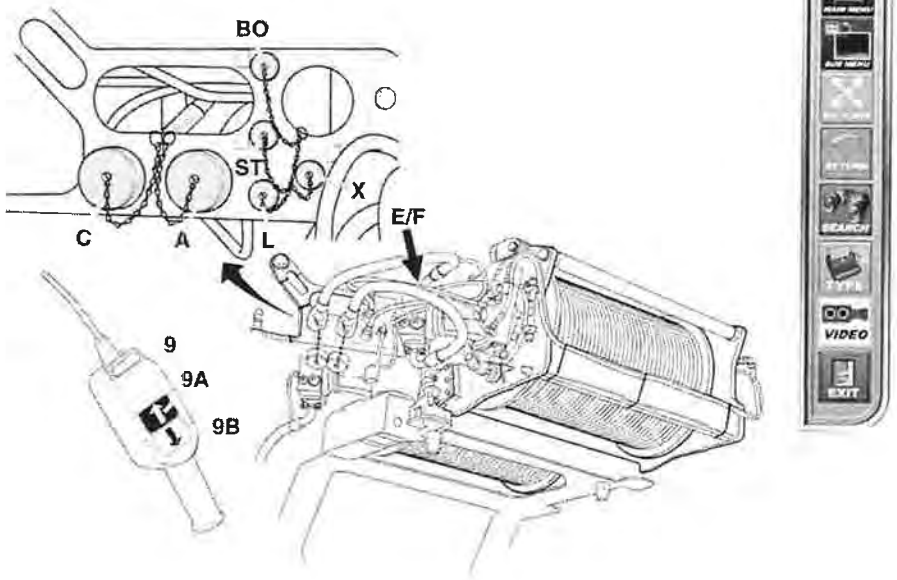
9. Pull up the counterweight (**2) using the counterweight** cylinder and bolt.

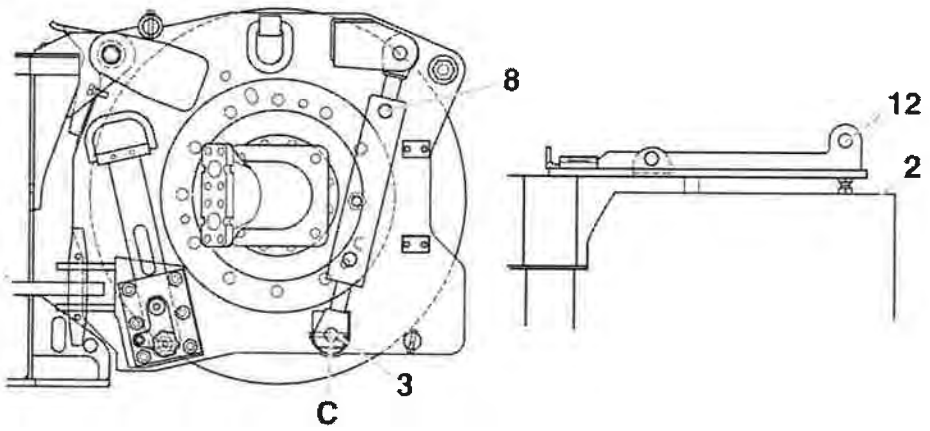
10. Reeve the hoist rope of hoist 2.

Removal

Proceed in reverse sequence when dismounting Hoist 2 with the aid of an auxiliary crane.

No persons may be in the area where there is a risk of falling items when loosening the biconical pins.





Fitting and Removing Hoist 2with Your Own Crane

Fitting

Assembling and dismantling hoist 2 with your own crane is carried out using mounting aid (**1b) and the 43.5 t** ***(96 kip) counterweight.***

A risk of crushing exists when fitting and removing hoist 2 between the individual elements and the superstructure frame and the crane chassis!

In particular, make sure that you allow sufficient safety clearance.

Persons must not stand or walk beneath suspended loads or in areas where loads/equipment could fall.

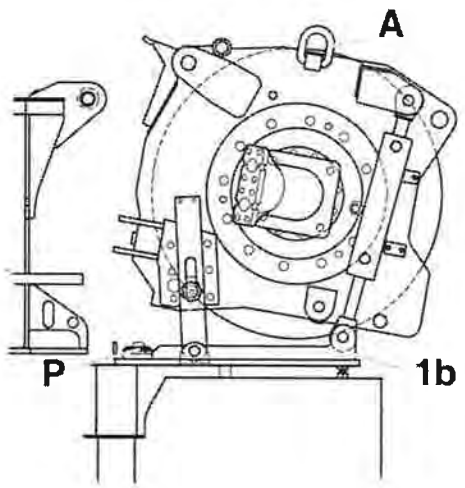
The auxiliary crane must be able to hold the load until the bolting at all locking points has been completed.

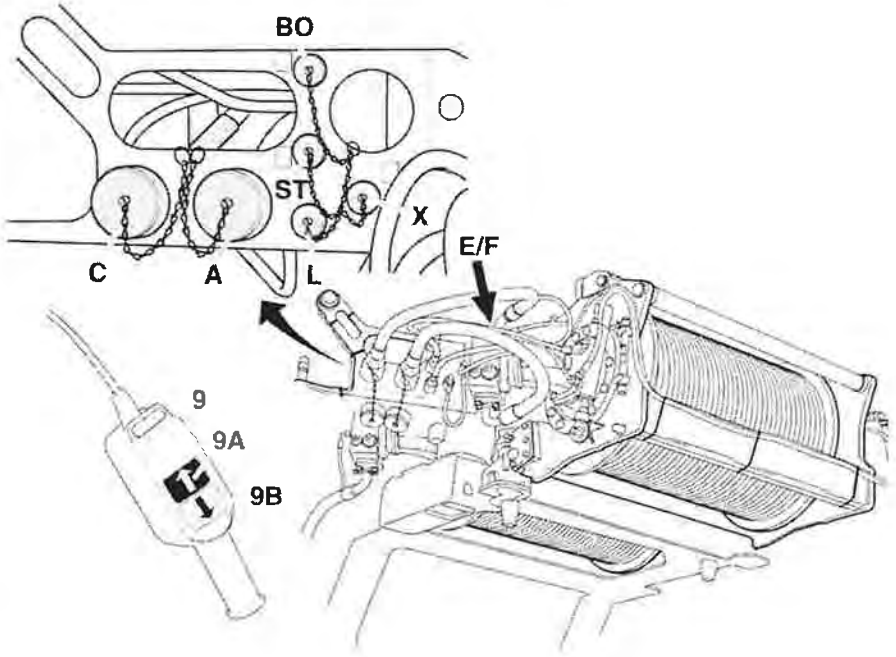
1. Stabilize the crane and make it level.
2. Adjust crane controls in accordance with the rigging situation.
3. Place minimum counterweight combination of 43.5 t *(96 kip)* on the counterweight support on the superstructure frame.
4. Attach hoist 2 with assembled mounting aid (**1b)** onto designated suspension points (**A), place on** counterweight stack and secure.

For positioning aid, the counterweight has cams, which catch in the corresponding grooves in the mounting aid.

According to design: secure mounting aid in point (**P).**

5. Release the auxiliary crane.
6. Rotate superstructure to the rear and pin (superstructure) to the undercarriage.
7. Connect up hydraulic connections (**C, A, L, ST, BO, X)** and electronic connections (**E) between hoist and** superstructure frame.





All hydraulic couplings are fitted with protective caps which must be removed before fitting.

Make sure in each case that the hydraulic connections have been joined correctly, i.e. that the couplings open properly. Joining and releasing of hydraulic connections is always permitted only in depressurized condition, in other words, the superstructure engine must not be running.

Connect the mobile control panel (**9) to the connection (F).**

8. On the mobile control panel (**9), extend the hydraulic cylinder (8) via button (9A).**

Hoist 2 performs a movement thereby by which the securing forks (**H) are guided along the guide rails of the** superstructure frame. Carry out the adjusting movement of the hydraulic cylinder (**8) until the biconical pins (7) can** be rigged in point (**G).**

9. Pin and secure hoist 2 with the biconical pins (**7) in point (G)** (2 x) .

10. Remove bolts (**4), push connecting rod (5) up, and** secure using bolts (**6).**

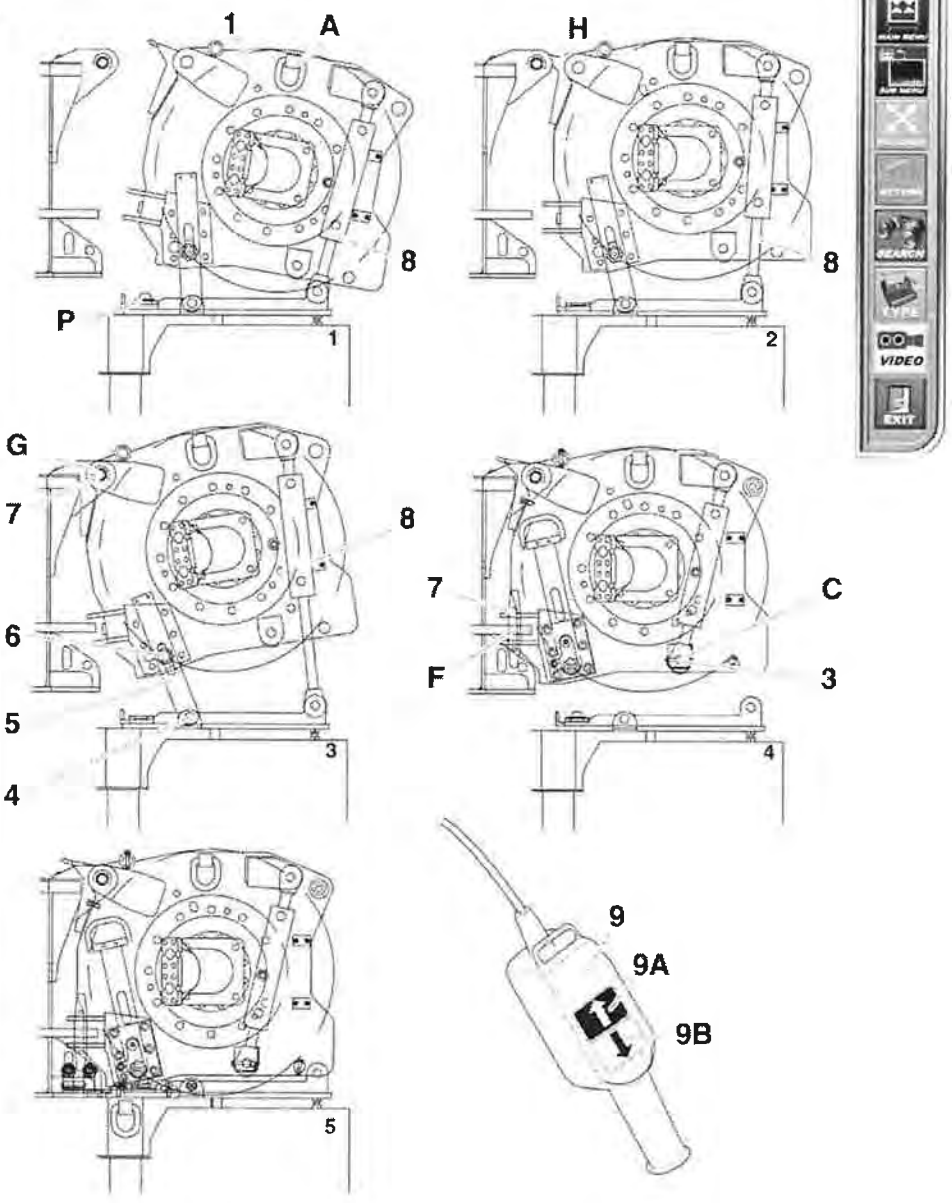
11. Using the mobile control panel (**9), run in the** hydraulic cylinder (**8) via button (9B) until the pins (7) can** be mounted in point (**F).**

12. Pin and secure hoist 2 with the biconical pins (**7) in point (F)** (2 x) .

13. Using the mobile control panel (**9) run in the** hydraulic cylinder (**8) via button (9B) until the eye of the** rod can be fastened with bolt (**3) in point (C) – secure bolts.**

14. Pull up the counter weight using the counterweight cylinder, and bolt.

15. Reeve the hoist rope of hoist 2.



Removal

Proceed in reverse sequence when dismounting hoist 2 .

Risk of injury!

Wind the hoist rope onto the drum completely prior to dismantling the hoist and fasten the rope end to the frame of hoist 2.

No persons may be in the area where there is a risk of falling items when loosening the biconical pins.

Fitting and Removing the Additional Top Rollers

In order to stop the hoist ropes from rubbing against each other, they must be separated by additional top rollers.

The additional top rollers must be removed in order to maintain the vehicle height of 4.0 m *(13.1 ft) (transport state).*

Risk of ripping off!

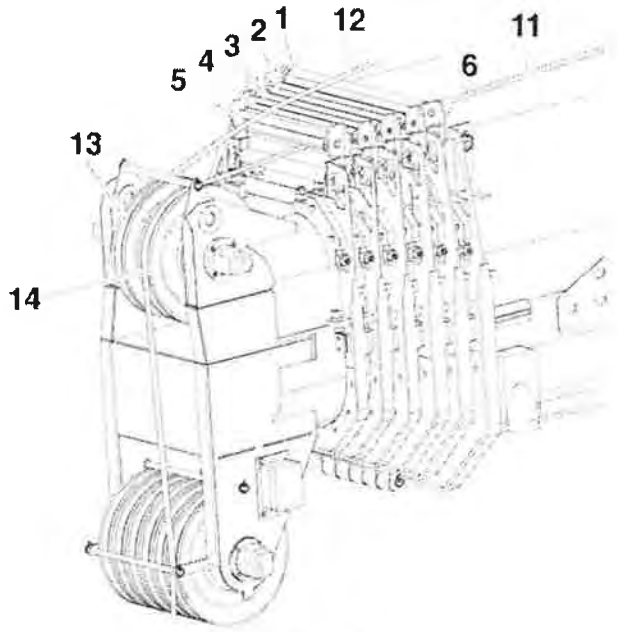
In order to carry out the work described in the following, you must use the supplied foldaway sliding ladder or another suitable step-up aid, e.g. hoist operating platform.

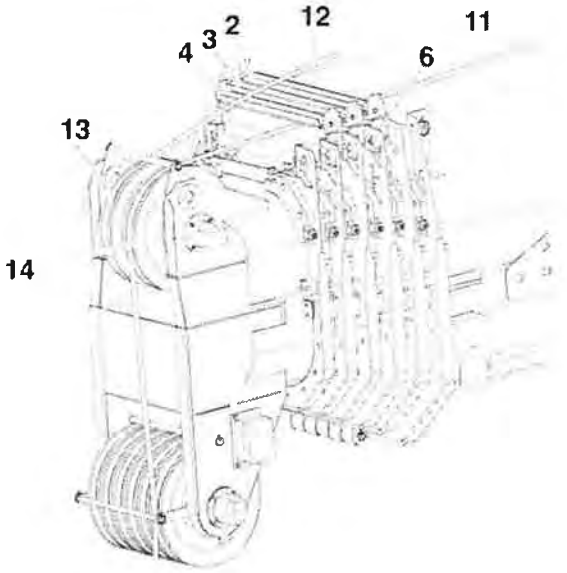
Depending on the design of the crane there are **5 additional top** rollers (**1 to 5;) or 3 additional top rollers (2 to 4;**) on the main boom.

*In order to have an advantageous run of the rope, we recommend that you only use **3 additional top rollers (2 to 4;) in the** crane with **5 additional top rollers.***

The additional top rollers must each be fastened using screw (**6**) (4 x each).

The additional top rollers are removed in the same way in the opposite sequence.





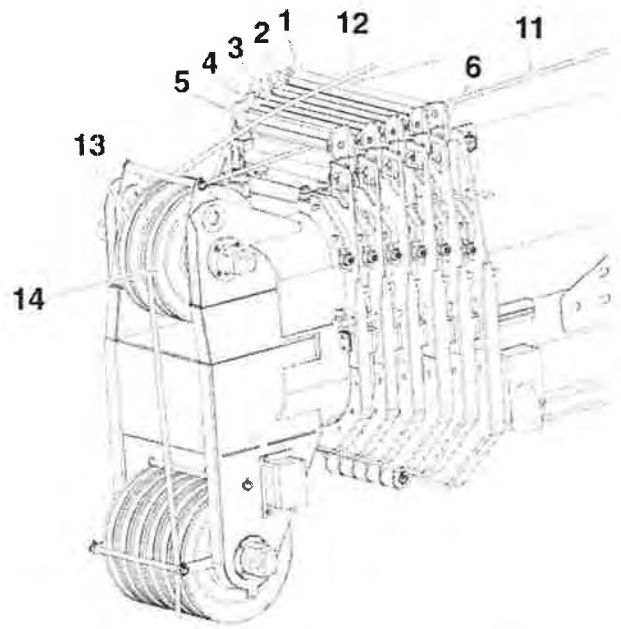
Rope Guide

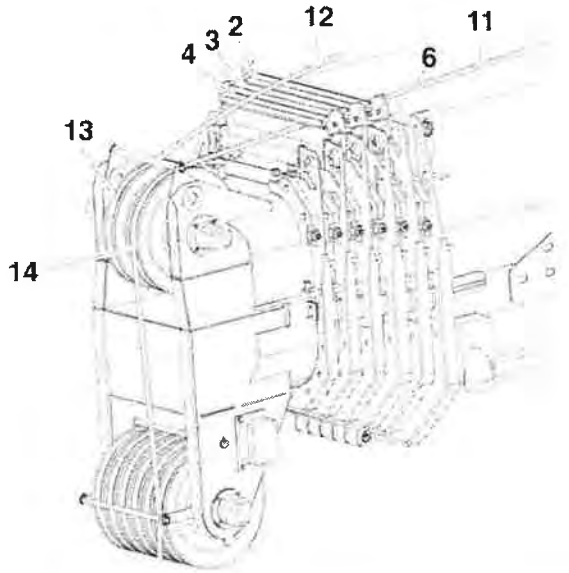
When reeving both hoists together, the hoist rope (**11) of hoist 1** is fed through the rope guides of the standard top roller or the additional top roller and laid on the main boom head over the sheave (**14).**

The hoist rope (**12) for hoist 2 is to be placed over the respective**

upper rope guide of the auxiliary carrying roller, and over the rope sheave (**13) on the main boom head (centre of the main boom** head).

Now the hoist limit switches must be fitted in accordance with the equipment used.





Hook Operation with Hoist 2

Pilot Control Assignment

Depending on the crane equipment, different control lever assignments can be selected.

*To prevent the unintended activation of crane movements, both control levers are fitted with an additional button (**36/32**) (**dead** man's switch).*

All crane movements can be performed if one of the keys is pressed.

Observe the selected pilot control assignment in order to avoid unintentional movements. Risk of accidents!

– The movement "raise load" is automatically shut down when:

∗ the load limit device has shut down. Lifting capacity of 100% is reached

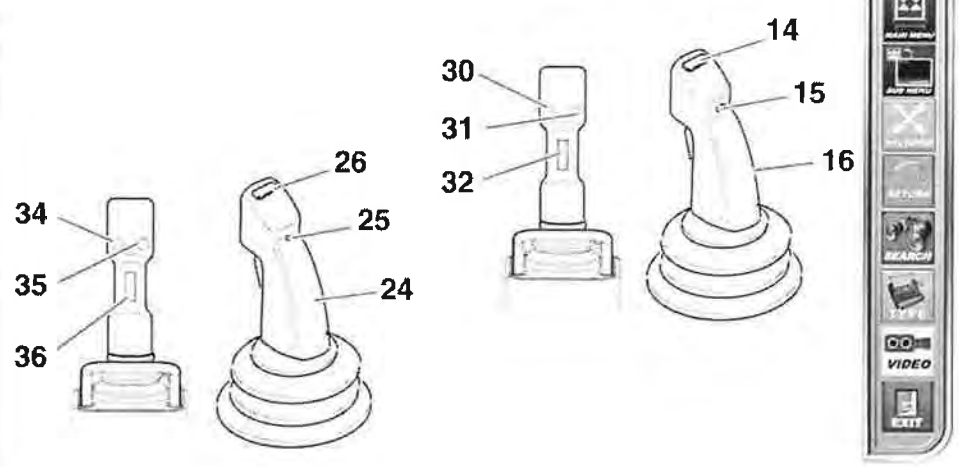
(bar display **C,)**

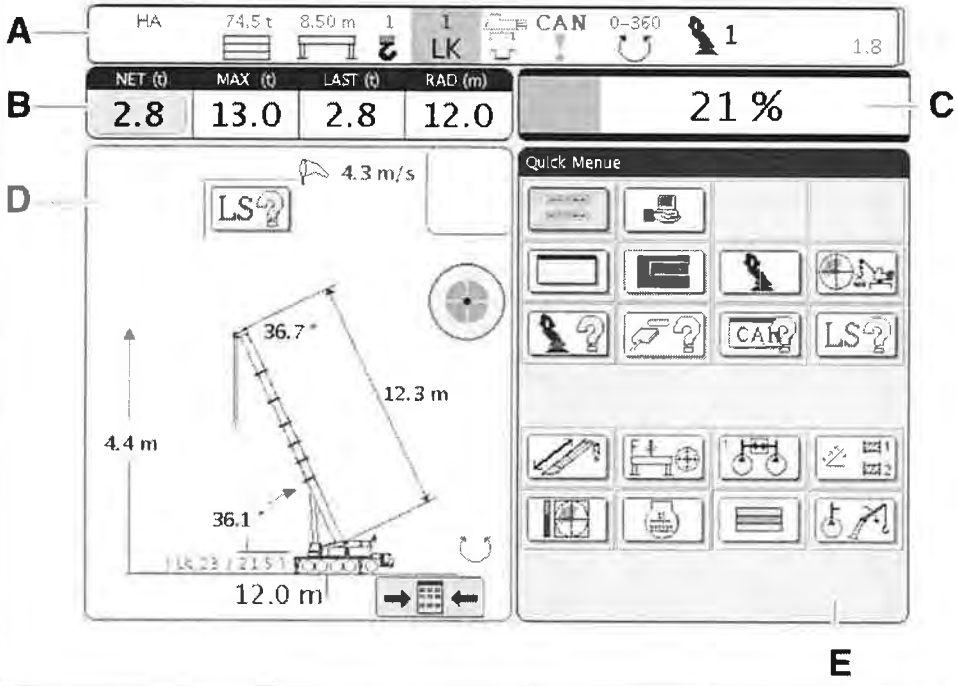
∗ the hook block in the hoist limit switch is activated.

Lowering load is possible.

The movement "Lower load" is automatically shut down if the lower limit switch for hoist 2 has been activated.

Raising of the load is possible.





- When activating control lever (**24/16), touch the cone of the** hoist rotation indicator (**25/15). As soon as the hoist rotates,** you will feel a definite vibration there.

Hoist Speeds

The hoist is pilot controlled electrically. The hoist speed is influenced by the engine speed, steering of the control lever as well as the number of movements carried out at the same time.

Fine tuning:

The speed of the crane movement "Hoist 2" can be additionally fine tuned. The movements that are carried out via the **X-axle** (horizontal movement of pilot control lever) of the individual pilot control lever can be regulated via the corresponding self return rocker switch (**26/14) (button actuated to the right - fast; button** actuated to the left - slow). The movements that are carried out via the **Y-axle (vertical movement of the pilot control lever) of the**

individual pilot control lever can be regulated via the corresponding self return rocker switch (**26/14) and** by pressing the keys (**35/31); on the front side of the pilot** control lever in the direction of travel, always left) at the same time.

As long as the speed is adjusted via key (**26/14), the** corresponding percentage appears in the display of the LLD (**D,**).

High range :

The high range for hoist 2 is switched on by pressing button (**30)** and lever (**24/16) simultaneously.**

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

High speed may not be used for one rope crane operation with main boom extension.