



GLOBAL CRANE TRAINING

AC200-1 OPERATION

Head Roller



Head Roller Content



Content	Pg.	Content	Pg.
General information	3		
Folding from the operating position to the transport position	10		
Separate transport	11		

Head Roller (Optional)

General

The head sheave (101) is for raising loads with single strand reeving. If the crane is equipped with a second hoist, the hook block can remain reeved on the main boom head.

The head sheave (101) consists of a basic body (101a) and the hinged rocker arm (101b).

The head sheave can be folded to the side of the main boom for transportation (if the permitted axle loads allow for it).

Figure shows the head sheave in the operating position (with rocker arm (101b) folded down).

Main boom operation with the head sheave fitted in the transport position results in the crane having a reduced load capacity.

The optional “runner” (see section 41) can also be folded to the side of the main boom head in the transport position at the same point.

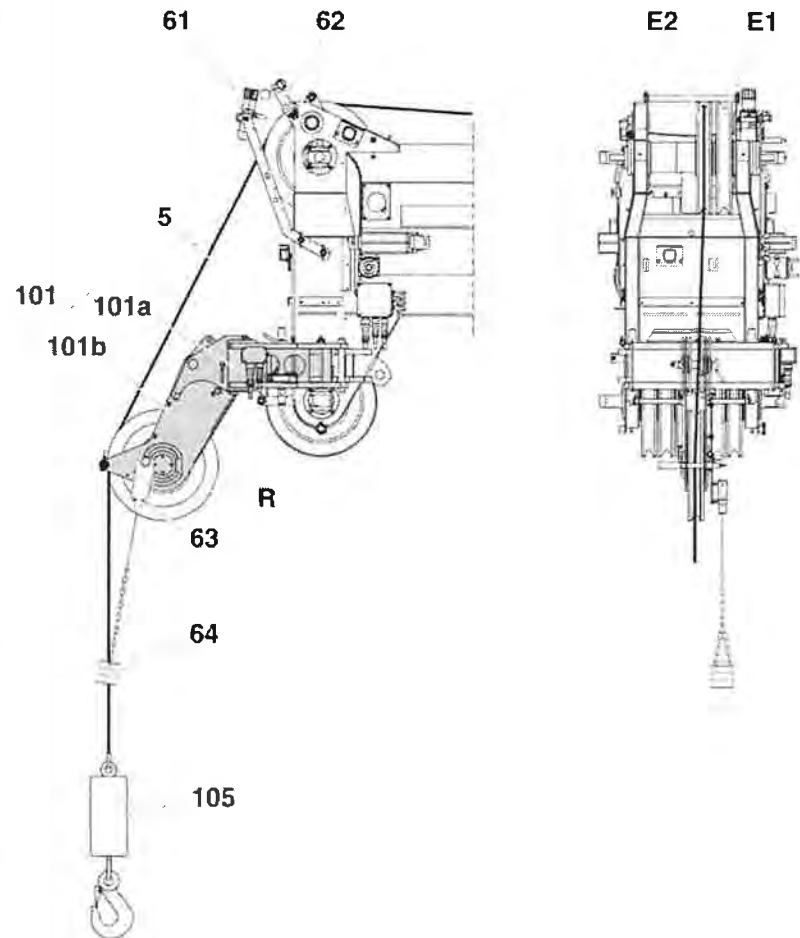
However, only the runner or the head sheave can be folded to the left of the main boom head at the same time.

Important Notes

The head roller is marked with the factory number of the crane. It can only be fitted onto a crane with this construction number.

Exceptions are only permitted if this is clearly indicated in the crane documents (e.g. the crane passport).

Only trained and instructed personnel may fit and remove the head sheave!



When fitting and removing the head sheave there is a risk of crushing between the main boom head and head sheave. "Assembling and dismantling crane components" into consideration as well as the procedure described in the following.

It is prohibited to walk on the boom!

Supplied folding / sliding ladder (72):

Risk of falling!

In order to carry out all assembly work with as little risk as possible, a ladder is supplied with the machine.

If the supplied ladder is not used, the assembly work must be carried out using other suitable aids (ladders, hoist platforms, scaffolding, auxiliary crane).

It is not permitted to climb or walk on the main boom.

The supplied folding / sliding ladder (72) can be fastened to the main boom extension for transportation, for example.

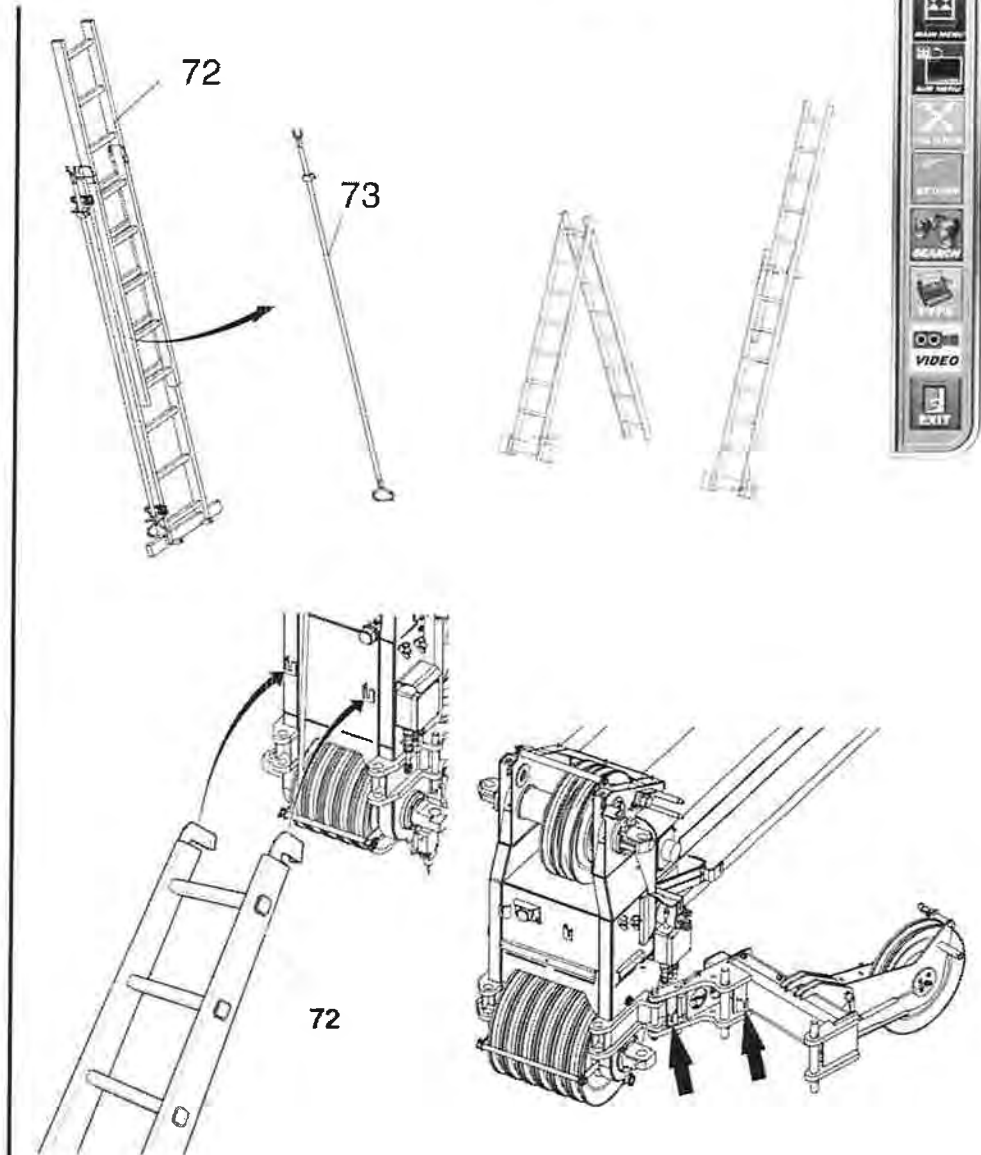
There are brackets on the folding / sliding ladder (72) for fastening the actuating rod (73). This actuating rod (73) can be used as an aid when fitting the hoist rope.

There are metal plates on the main boom for attaching the ladders (72) safely during the corresponding working procedures.

There are also metal plates on the head sheave for hanging up the ladders (72). However, these can only be used if the head sheave is pinned firmly in the transport position or when the head sheave is not to be folded over in the load raising position.

Risk of falling!

The ladders' (72) attachment facilities on the head sheave may only be used if the head sheave is pinned firmly in the transport position or when the head sheave is not to be folded over in the load raising position.



Risk of unchecked head sheave movement!

Generally, the main boom must be aligned horizontally during fitting or folding the head sheave. Any exceptions to this rule are clearly listed.

Folding from the Transport Position to the Operating Position

When folding the head sheave there is a risk of crushing between the main boom head and head sheave. Proceed with appropriate caution!

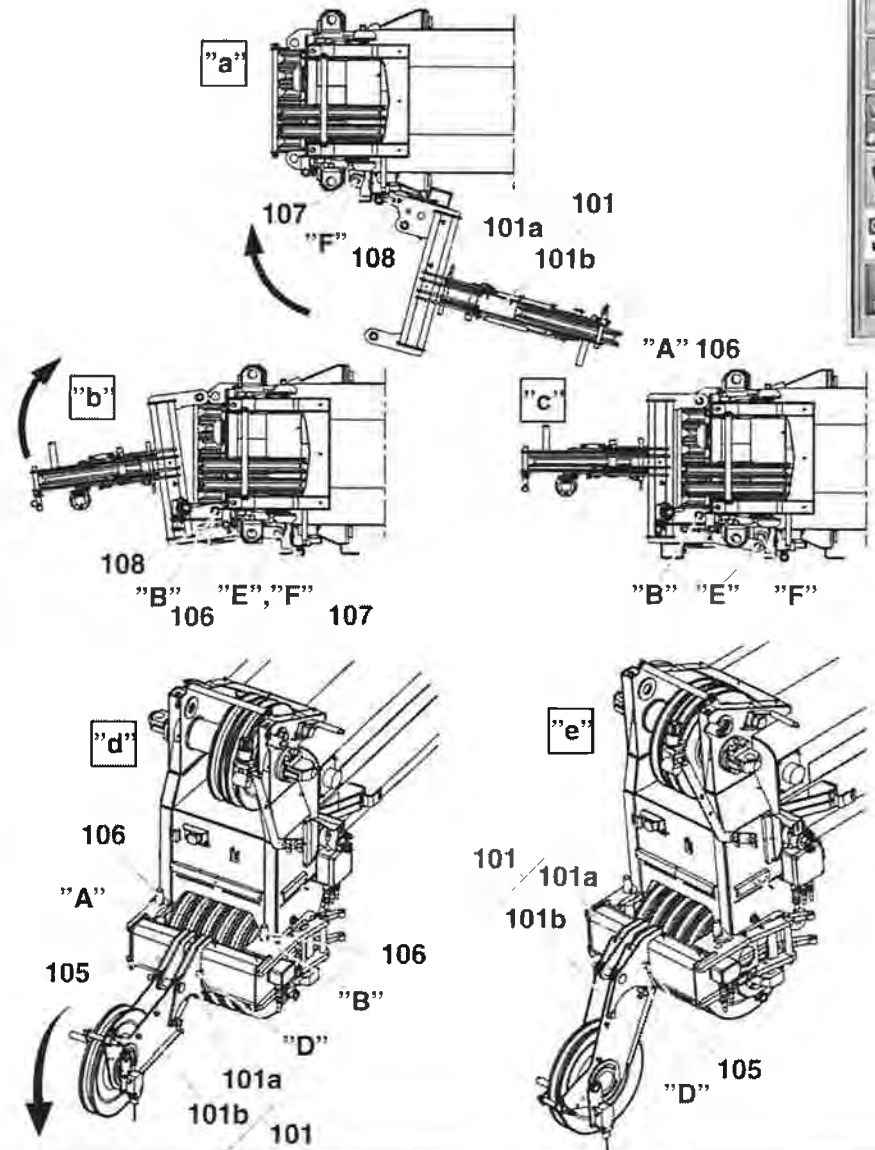
Risk of falling!

During the folding procedure, the head sheave is only held in place by pin (107) in point "F" on the left-hand side of the head.

Pin (107) may not be removed during the folding procedure.

No one may be in the area at risk of objects falling!

1. Remove pins (106) (2x) from their pinning positions in the head sheave (101).
2. Loosen pin (108, "a") and insert in the "resting position" on the head sheave ("b"); secure against falling out.
3. Fold the head sheave (101) forwards, over the fitted pin (107) (point F), until pin (106) can be inserted at point (B) ("b").
4. Insert pin (106) in point (B) and secure against falling out.
5. Remove pin (107) from point (F).
6. Continue to fold head sheave (101) over the fitted pin (106) (point B), until the holes of the mounting shackles of the head sheave are flush with the corresponding holes of the retainer welded to the main boom head in point (A).
7. Insert pin (107) in point (E) in the resting position and secure against falling out.
8. Insert pin (106) in point (A) and secure against falling out ("c").



9. Raise the hinged rocker arm (101b) slightly to relieve pin (105) of load and to remove pin (105) from position (D) ("d")

Risk of crushing!

There is a risk of crushing between the rocker arm and the frame of the head sheave as soon as the rocker arm moves or is moved.

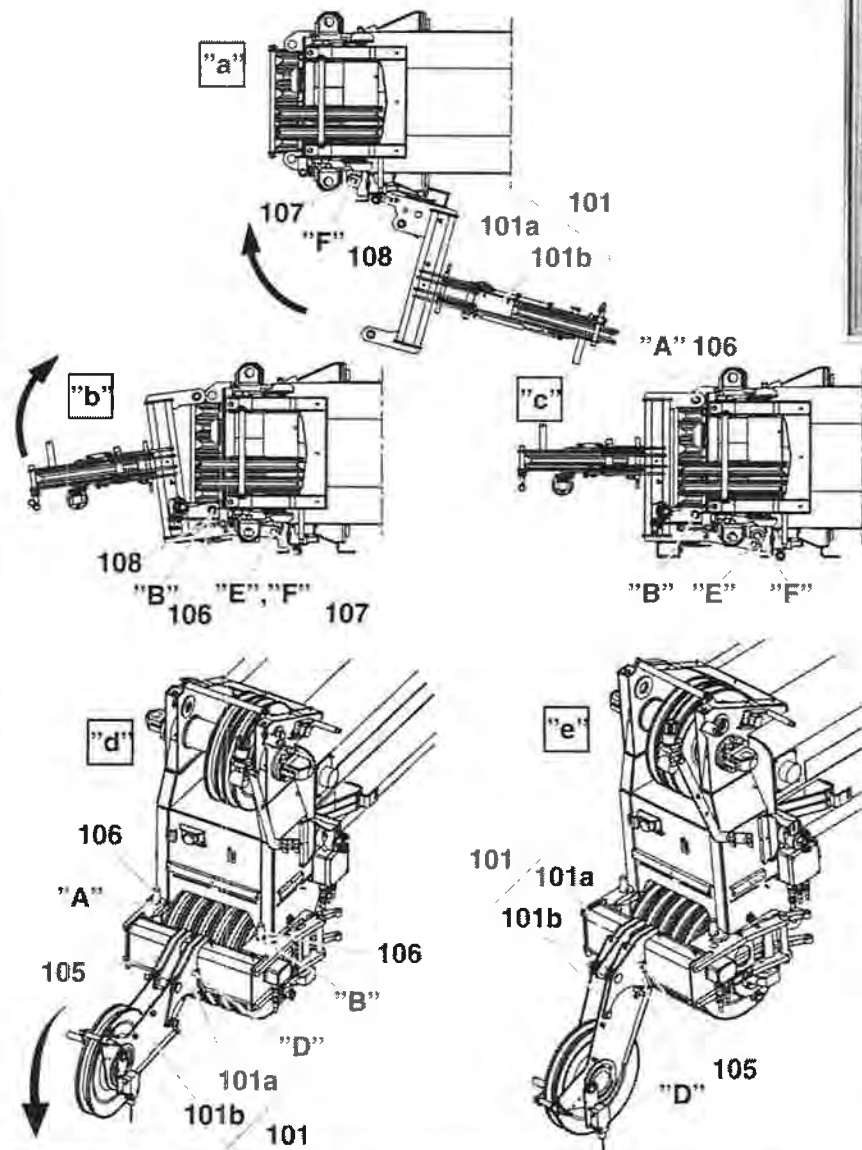
Proceed with appropriate caution!

10. Fold the rocker arm (101b) down, until the corresponding rocker arm (101b) hole is flush with the hole in the frame (101a) of the head sheave.

Then insert pin (105) in position (D) and secure ("e").

Risk of accidents!

Operation with the head sheave may not be carried out under any circumstances in the raised position (transport position)!



11. Feed the hoist rope from the hoist drum to the intake sheaves on the main boom head.

Observe for this the detailed specifications contained in "Reevings" in the sub point "Reeving the hoist rope in and out".

12. Feed the hoist rope over the intake sheave (E2) on the main boom head to the head sheave's sheave (R) and pin on suitable hook suspension gear (105).

Risk of accidents!

The head sheave is only permitted to be operated with single strand lines!

The rope may not be fed via intake sheave (E1) as this would make the deviation angle of the hoist rope too large.

Risk of damage to the rope!

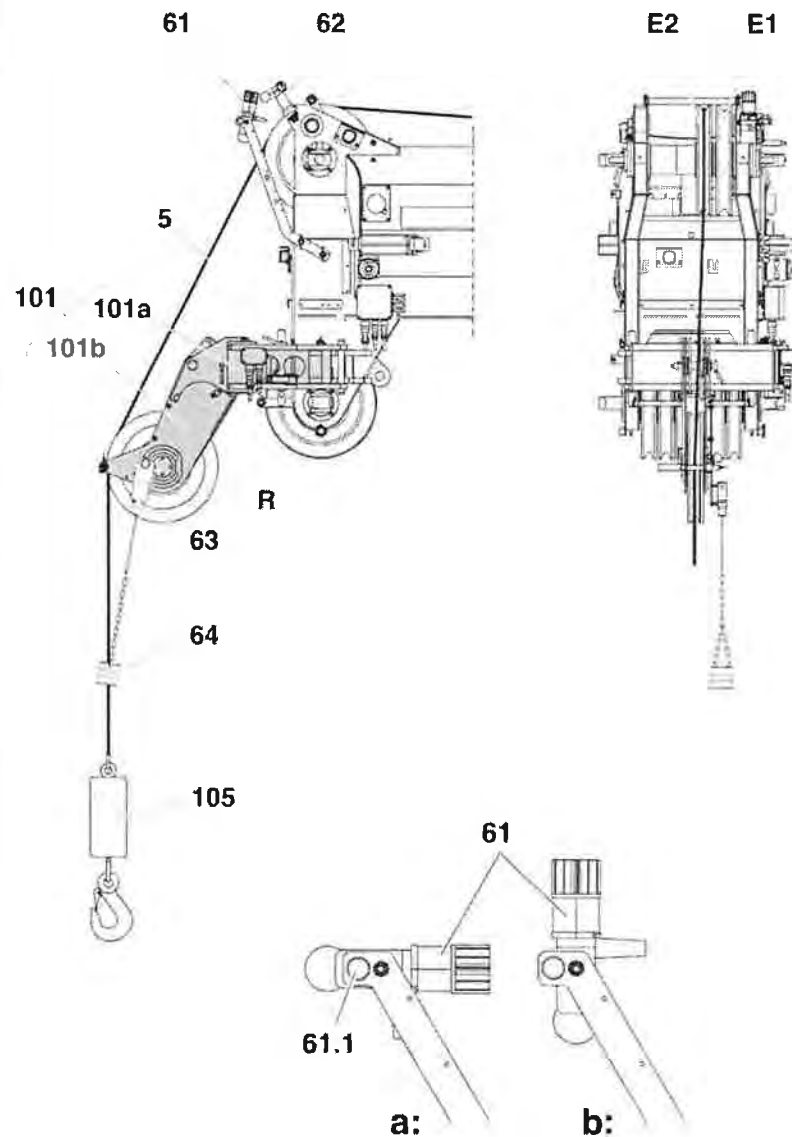
During reeving, there is a risk that all involved sheaves become wrapped and wound up. Proceed with appropriate caution!

13. Fit the hazard light (61) and the anemometer (62) rotor to the main boom head.

The hazard light (61) must be in the swinging position ("b") during crane operation.

The locking pin (61.1;) may not be locked in place.

Figure ("a") shows the locking pin (61.1) locked in place for the transport condition.



14. Fit the hoist limit switch (63) with attached shift weight (64) to the head sheave and secure against falling out.

If a second hoist limit switch is not used and the hoist limit switch from the main boom head is used: connect the bridging plug ("B2") on the right-hand side of the main boom head to the usual connection for the hoist limit switch (HR).

The bridging plug "B2" is marked with the letter "W".

Risk of malfunctions!

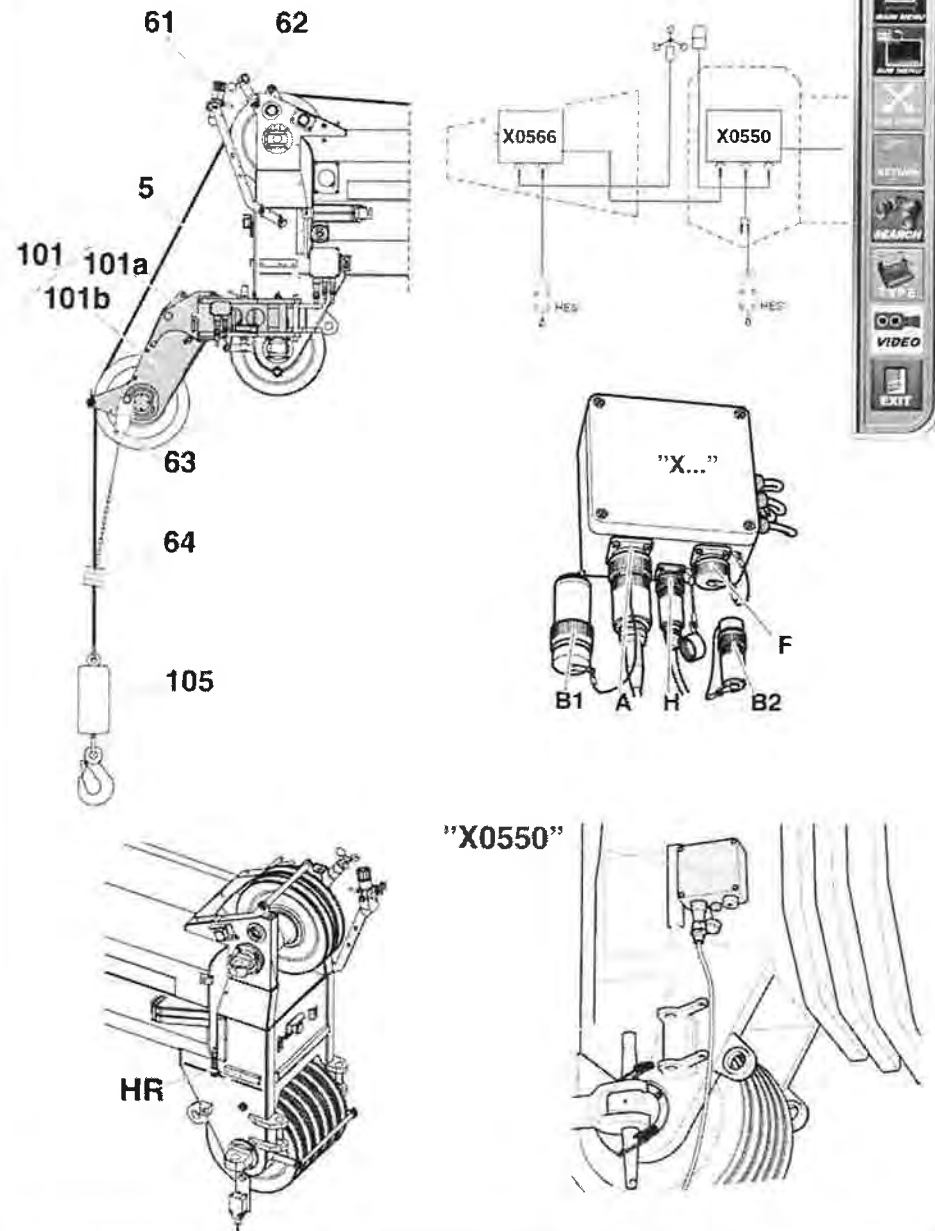
The bridging plug (B2) supplied with the crane must be used.

You must make sure that the shift weight is fitted over the hoist rope and is hanging freely.

Only then is it guaranteed to function properly.

Observe the details in section 17 "Reevings".

15. Connect the plug of the head sheave's cable harness to the junction box "X0550" on the main boom head (connection 'A').



16. If a second hoist limit switch is used:

To prevent risk to persons or damage to equipment, attach the shift weight or the hoist limit switch, which is fitted to the head of the main boom, in the transport position (left-hand side of the main boom head) and secure against falling out.

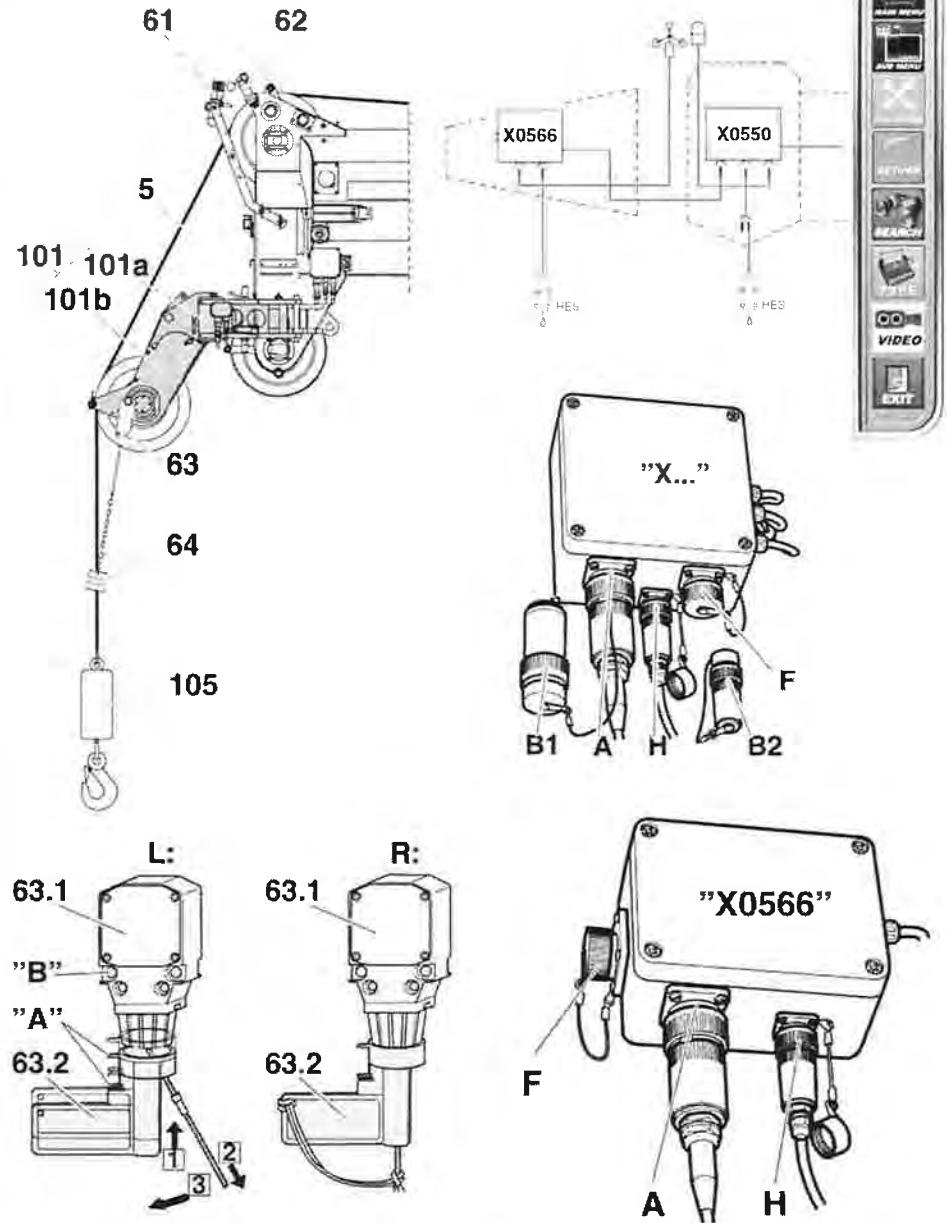
If a second hoist limit switch is fitted and the hoist limit switch shift weight of the hoist limit switch of the main boom head is fitted in the transport position (on the left-hand side of the main boom head), the switch must be locked mechanically in the open position (bridged). Figure (figure 'R') shows the hoist limit switch in the bridged state. In order to bridge the hoist limit switch, the restrainer (63.2) must first be fitted onto the actual hoist limit switch (63.1) 1. Then the jumper wire is pulled away to the side 2, then rotated in the longitudinal direction of the restrainer (63.2), 3 and finally relaxed. This procedure jams the restrainer (63.2) by the jumper wire's spring resistance.

17. Connect the plug of the hazard light (61) to the connection "F" of the junction box "X0550" on the main boom head.

18. Connect the plug of the hoist limit switch (63) to the connection "H" and the plug of the anemometer (62) rotor to the connection "A" of the junction box "X0566" on the head sheave.

Risk of accidents!

If the rotor of the anemometer is not fitted or not connected, the wind speed is not displayed on the IC-1. A prohibited high wind speed might not be recognized.



Folding from the Operating Position to the Transport Position

If the head sheave is not required, it can be folded laterally backwards to the main boom head.

When folding the head sheave there is a risk of crushing between the main boom head and head sheave. Proceed with appropriate caution!

No one may be in the area at risk of falling equipment during the folding procedure!

The head sheave is folded from the operating position into the transport position as described in ('Folding from the transport position into the operating position'), just in the opposite sequence.

Hoist limit switches must be removed or hung in the corresponding transport position.

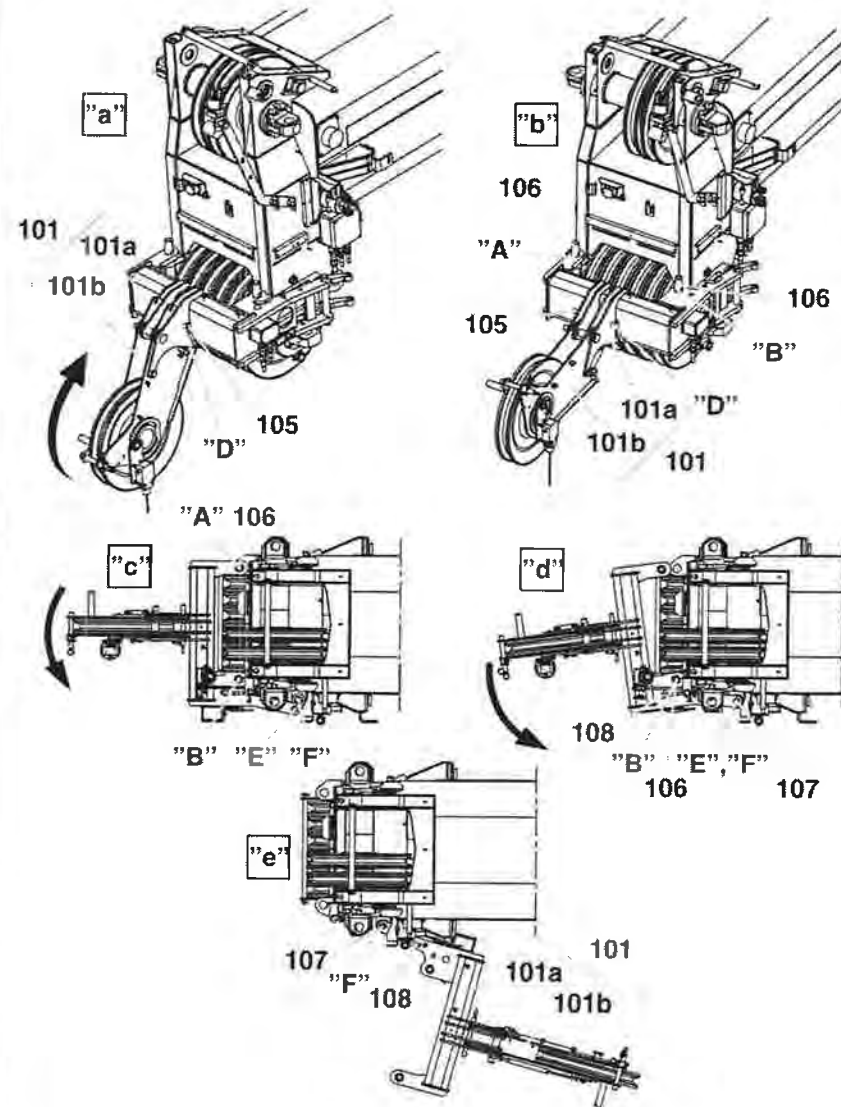
The hoist rope must be reeled in.

Risk of falling!

During the folding procedure, the head sheave is only held in place by pin (107) in point "F" on the left-hand side of the head.

Pin (107) may not be removed during the folding procedure.

No one may be in the area at risk of objects falling!





Separate Transport Attachment Points

Risk of accidents!

There are no attachment points welded to the head sheave. For this reason, it must be attached with a looping tackle.

The actual attachment procedure must be undertaken with the utmost care.

RISK OF ACCIDENTS!

When being raised, the head sheave may not swing out or hang crookedly. 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	Width	Height	
mm (in)	mm (in)	mm (in)	kg (lbs)
1170 mm (46.1 in)	880 mm (34.6 in)	810 mm (31.9 in)	155 kg (342 lbs)

Assembly and Removal of the Head Roller during Separate Transport

1. Move head roller against auxiliary crane.

When raising, the head sheave must be straight and must not swing.

The head roller is in transport position, i.e. the hinged rocker arm (101b) is connected in point (D) with pins (105), and secured with a forelock.

2. Bring the head roller (101) into assembly position using auxiliary crane on the main boom head. To do so, the relevant holes of the head sheave's mounting shackles must be flush with those on the corresponding mounting shackles on the main boom head on the right (points "A") and left (points "B").

Rig both points with pins (106), and secure these using forelocks.

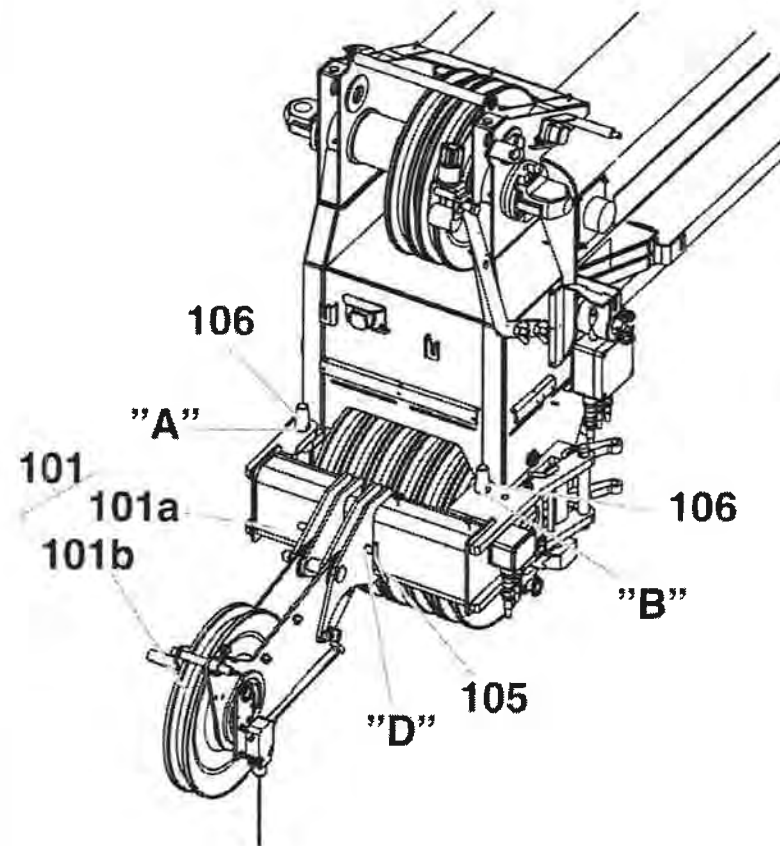
As long as the head sheave is being attached to the auxiliary crane or is not yet completely pinned, there must be no one in the area at risk of falling!

The head roller is now fastened on the main boom head.

No loads may be raised in this state!

3. In order to fit the head sheave in the operating position: Carry out steps "9." to "18."

4. In order to fit the head sheave in the transport position on the side of the main boom head.





Operation

1. Fit the head sheave in the operating position, fit the hoist limit switch with the accompanying shift weight, connect the head sheave electrically, reeve the hoist rope, pin the hook suspension gear in place and then fit the shift weight to the hoist rope.

This is described in detail in 'Folding from the transport to the operating position' .

2. The operating mode "HA" ("Main boom") must be selected on the LLD.

3. Set the reeving to "1".

Risk of accidents!

The head sheave is only permitted to be operated with single strand lines!

4. Select all other parameters in accordance with the actual crane configuration, which must correspond to the relevant load capacity table.

NOTES;

