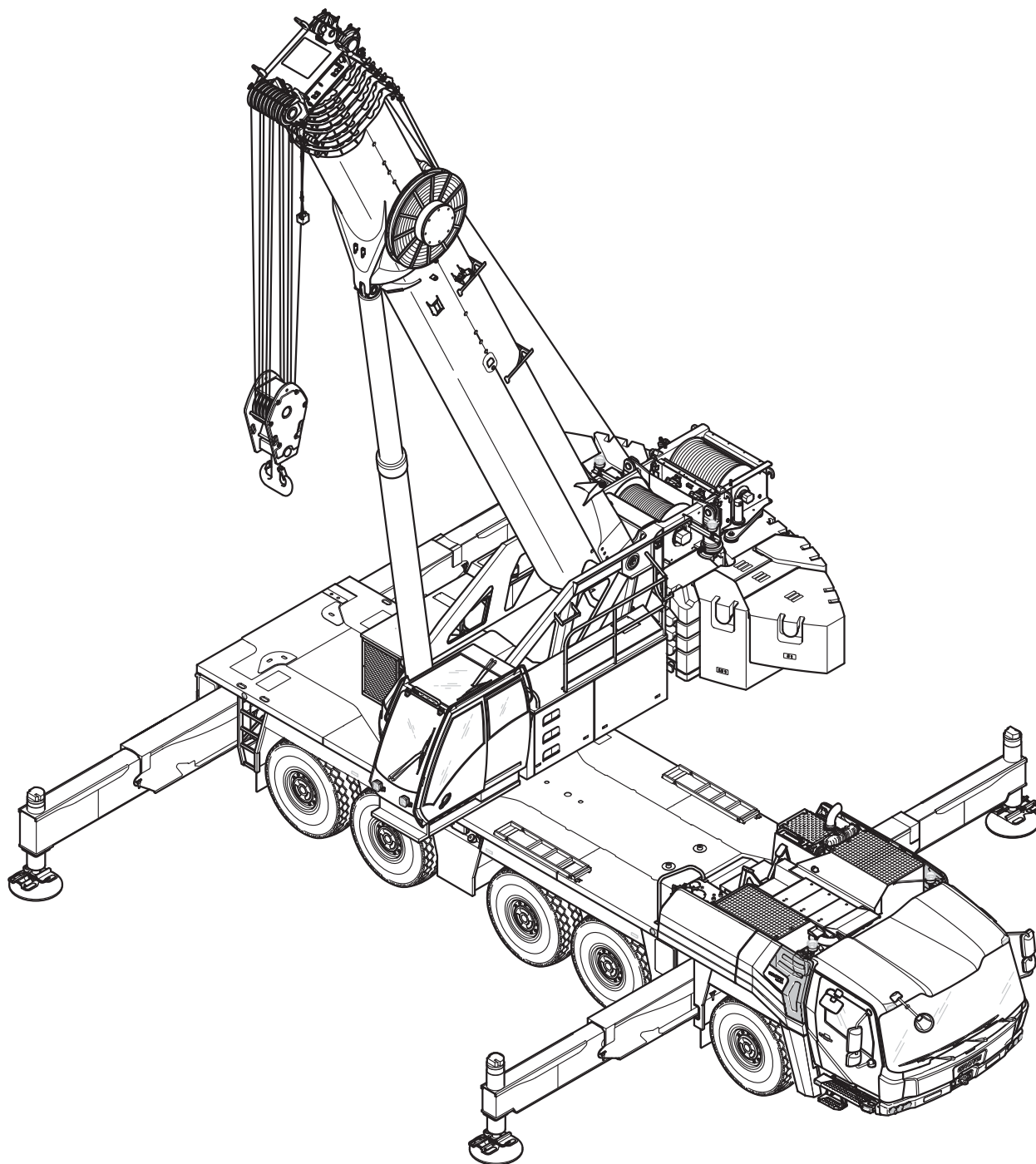


# Lattice extension operating manual



3 302 450 en  
22/02/2016

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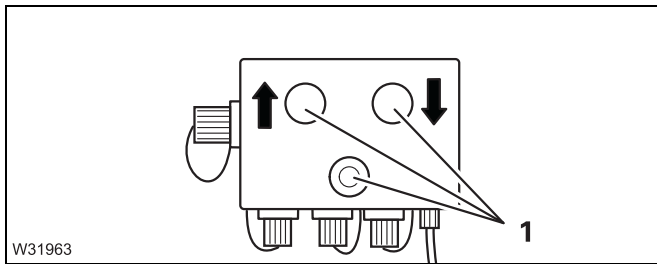
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## 2 Basic safety instructions

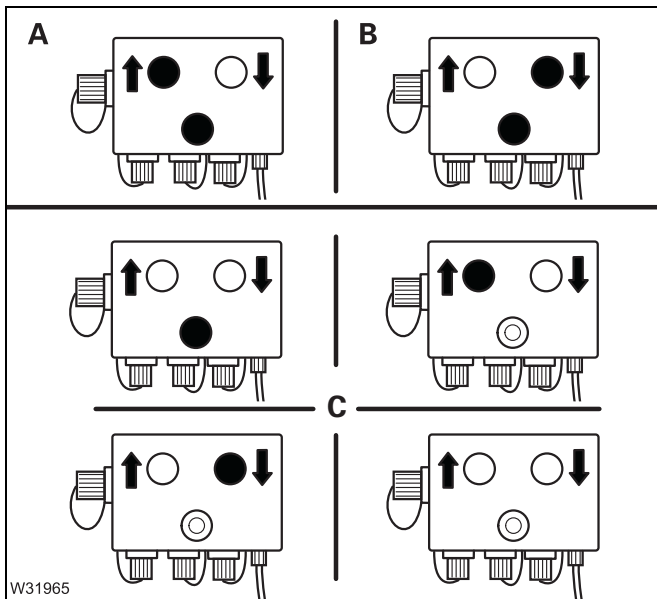
2.1	Other applicable documents .....	2 - 1
2.2	Safety instructions for working with a lattice extension .....	2 - 2

### 3.1.4 Section 2 control unit



#### Operating elements

- 1 Function buttons



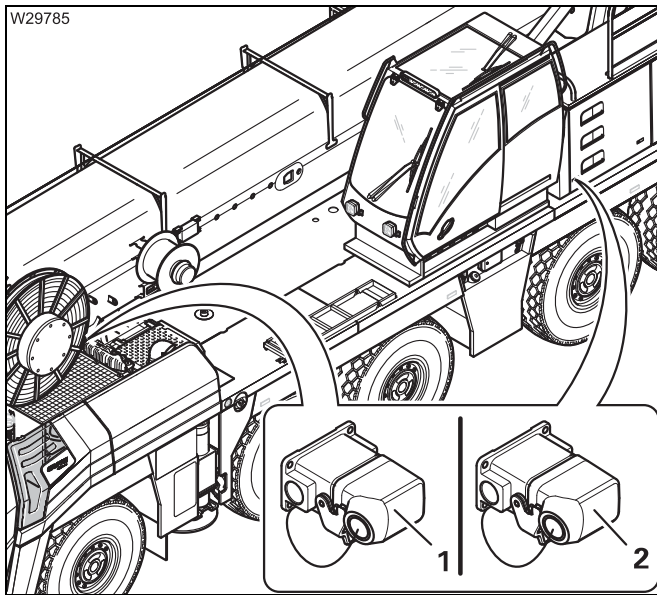
#### Button combinations

There are two button combinations; buttons that are engaged are shown in black:

- A Raise swing-away lattice
- B Lower swing-away lattice

- **Function on**  
Press the required button combination.
- **(C) - Function off**  
Release one or both the buttons.

### 3.3.1 Connecting hand-held control



#### With the hand-held control

Derricking the swing-away lattice is enabled at the sockets (1) and (2).

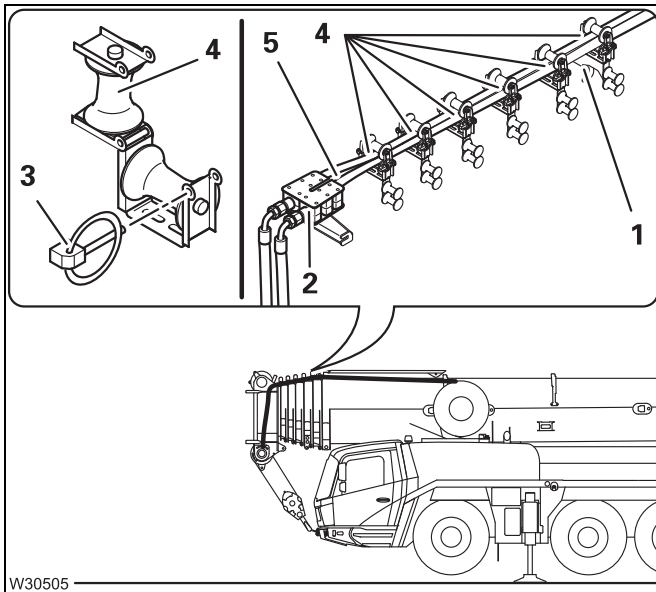
Connection to the socket (2) is not suitable for rigging since you cannot see the folded swing-away lattice from this point.

This socket (2) is intended for emergency operation.

- Connect the hand-held control to the socket (1).

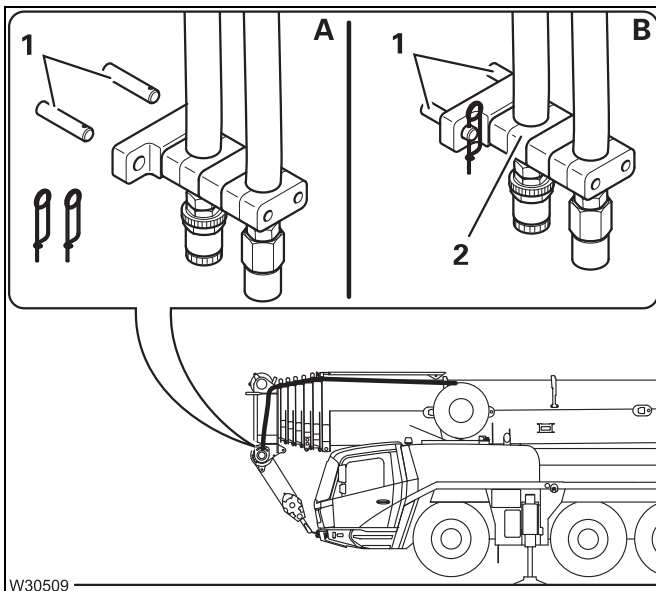
#### Connecting the hand-held control

➡ *Operating manual GMK5250L.*



### Attaching the hoses

- Loosen the hinged pins (3) and fold up the guide rollers (4).
- Remove the hoses from the clamp (1) and fasten them to the clamp (2).
- Fold down the guide rollers (4) and secure them with the linchpins (3).

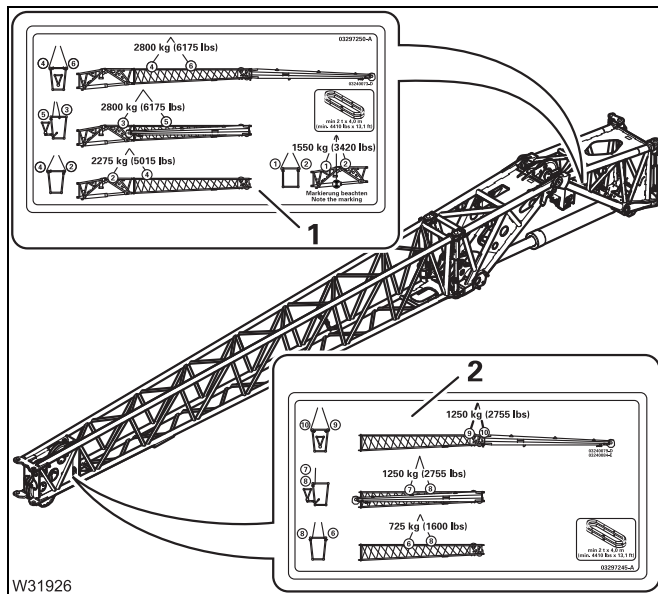


### Fastening the connections

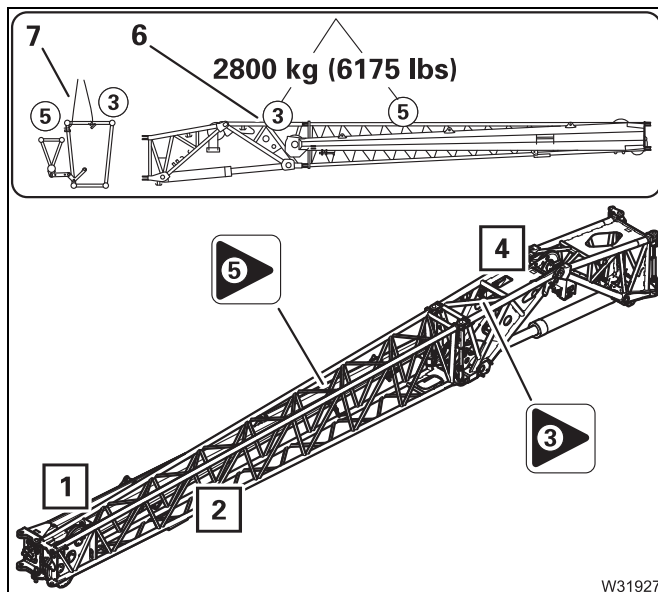
- (A) – Remove the retaining pins from the securing bolts (1).
- (B) – Place the connection plate (2) on the bolts (1).
- Insert the retaining pins into the bolts (1).



## Section combination



For section combinations, the slinging points and the information on weight and required lifting gear are specified on the stickers (1) and (2).



### Example

For the section combination, section 1 is folded onto section 2, and section 2 is mounted in front of section 4.

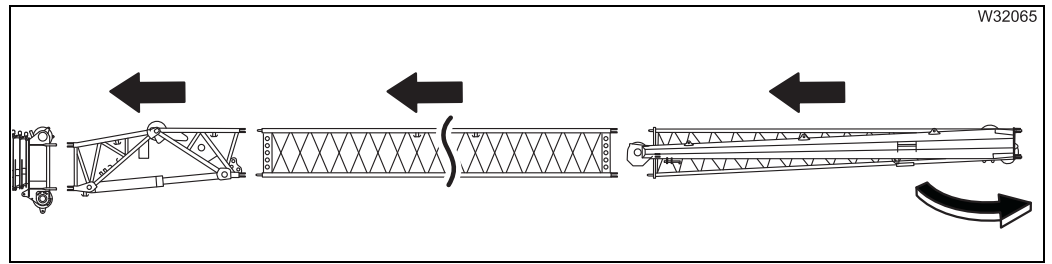
The sticker (6) shows:

- The weight
- The slinging points ③ and ⑤
- The manner in which the lifting gear must be attached to the slinging point (7).

Slinging points 3 and 5 on the swing-away lattice are labelled with stickers having the corresponding numerals.

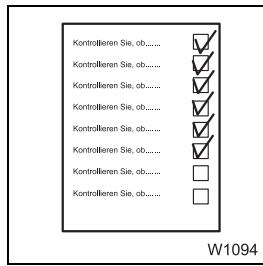
5.3.2

**CHECKLIST: Installing the swing-away lattice – into the working position**



This checklist is not equivalent to the complete operating instructions. There are accompanying operating instructions which are indicated by cross-references.

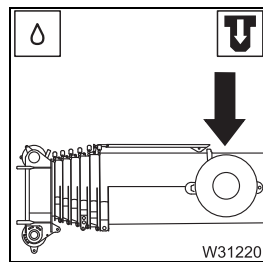
**Observe the warnings and safety instructions specified there!**



W1094

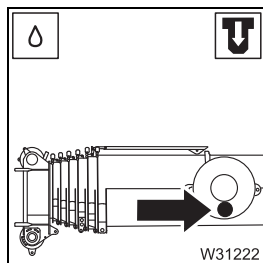
**1. Prerequisite**

- The truck crane is on outriggers and the superstructure is turned to the side or to the rear; **!!!** ➔ *Operating manual GMK5250L*.
- The appropriate counterweight for the crane operation must be rigged; **!!!** ➔ *Operating manual GMK5250L*.
- The main boom must be completely retracted and lowered into the horizontal position; **!!!** ➔ *Operating manual GMK5250L*.
- An auxiliary crane must be available.



W31220

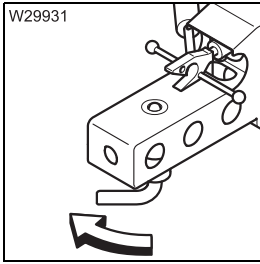
**2. Mount the hose drum; **!!!** ➔ p. 4 - 3.**



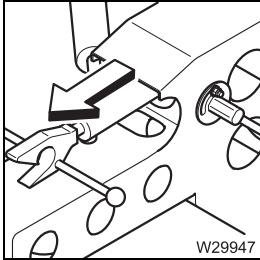
W31222

**3. Check that the locking device has been released; **!!!** ➔ p. 4 - 5.**

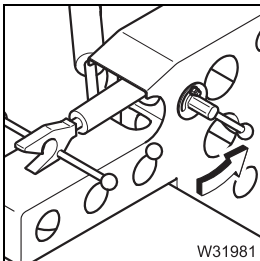




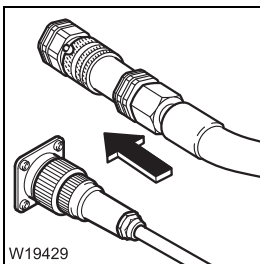
9. Unlock the driver at the *front* connection; ■■■▶ p. 5 - 79.



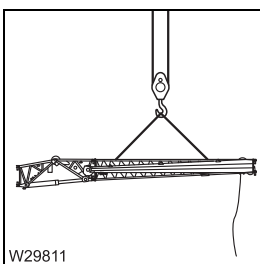
10. Fully extend the swivel ram; ■■■▶ p. 5 - 77.



11. Bring the swivel ram into the *locked* position; ■■■▶ p. 5 - 80.

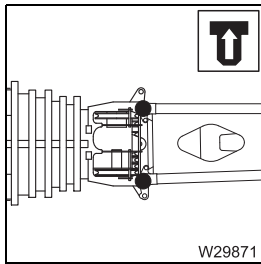


12. Establish the hydraulic/electrical connections on the main boom:  
– Hydraulic connection; ■■■▶ p. 5 - 105,  
– Electrical connection; ■■■▶ p. 5 - 108.

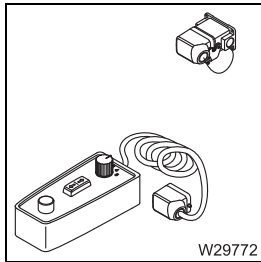


13. Sling lifting gear to the swing-away lattice and attach guide ropes:  
– ■■■▶ *Identification*, p. 5 - 3,  
– ■■■▶ *Transport dimensions and weights*, p. 5 - 6,  
– ■■■▶ *Slinging points*, p. 5 - 4.

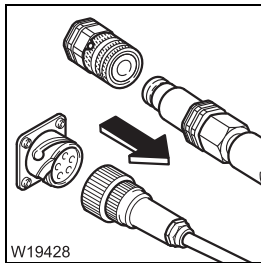




- Separate the connections on the right and left of the main boom head;  
    ▣▣▣▣ p. 5 - 88.



- Remove the *lattice extension* hand-held control, ▣▣▣▣ p. 3 - 4.

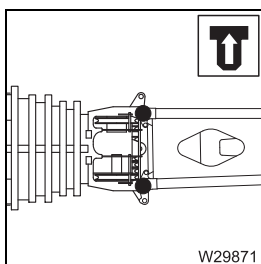
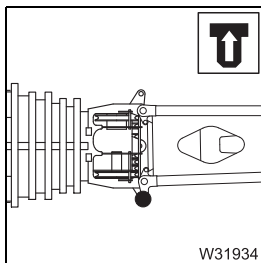


**11. Disconnect the hydraulic and electrical connections to the main boom:**

- Hydraulic connection; ▣▣▣▣ p. 5 - 105,
- Electrical connection; ▣▣▣▣ p. 5 - 108.

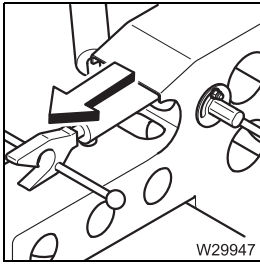
**12. If mechanical locking is in use**

- Disconnecting the slewing connection; ▣▣▣▣ p. 5 - 87.

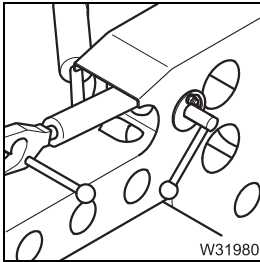


- Separate the connections on the right and left of the main boom head;  
    ▣▣▣▣ p. 5 - 91.

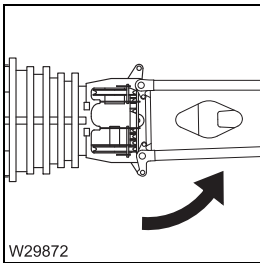




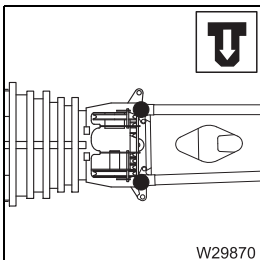
19. Extend the swivel ram; ■■■▶ p. 5 - 77.



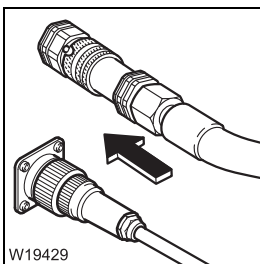
20. Unlock the swivel ram; ■■■▶ p. 5 - 80.  
Hold section 2 with a guide rope when doing this.



21. Using the guide rope, swing section 2 in front of the main boom head;  
■■■▶ p. 5 - 103.

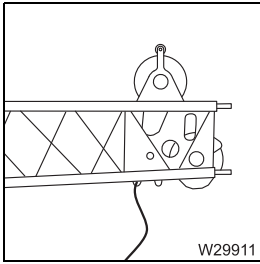


22. Establishing and securing the connections at the right and left of the main boom head:  
– With hydraulic locking pins; ■■■▶ p. 5 - 88,  
– With mechanical locking pins; ■■■▶ p. 5 - 91.

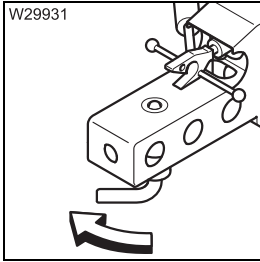


23. Establish the hydraulic/electrical connections on the main boom:  
– Hydraulic connection; ■■■▶ p. 5 - 105,  
– Electrical connection; ■■■▶ p. 5 - 108.

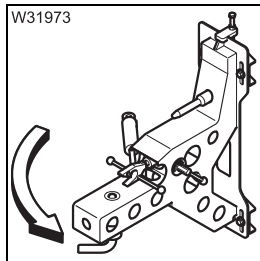




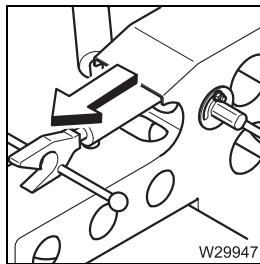
**10.** Fasten the guide ropes to section 2.



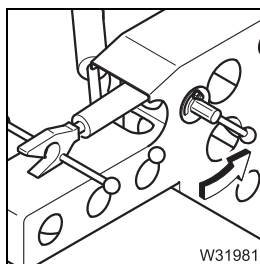
**11.** Unlock the *front* connection;  p. 5 - 79.



**12.** Check that the extension cylinder is fully extended;  p. 5 - 75.

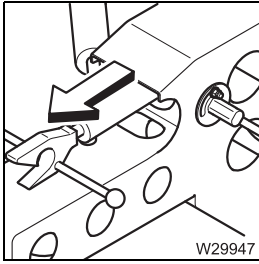


**13.** Fully extend the swivel ram;  p. 5 - 77.

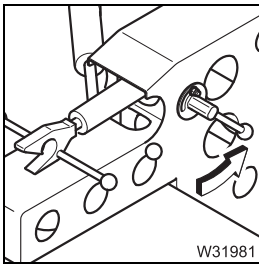


**14.** Lock the swivel ram;  p. 5 - 80.

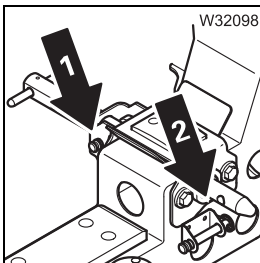




19. Fully extend the swivel ram; ■■■▶ p. 5 - 77.

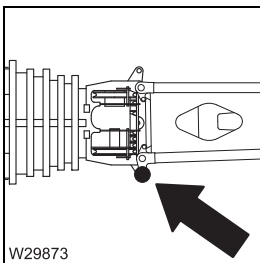


20. Lock the swivel ram; ■■■▶ p. 5 - 80.



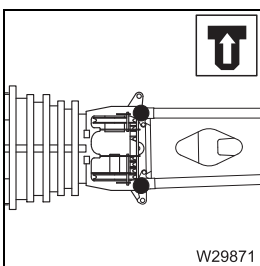
21. Checks at the *rear* connection.

- The connection is secured in the *rear* position by the pin (1); ■■■▶ p. 5 - 82.
- The pin (2) must be secured in the holder; ■■■▶ p. 5 - 83.



22. Check that the slewing connection is established and secured:

- With hydraulic locking pins; ■■■▶ p. 5 - 84,
- With mechanical locking pins; ■■■▶ p. 5 - 87.



23. Separating the connections on the right and left of the main boom head:

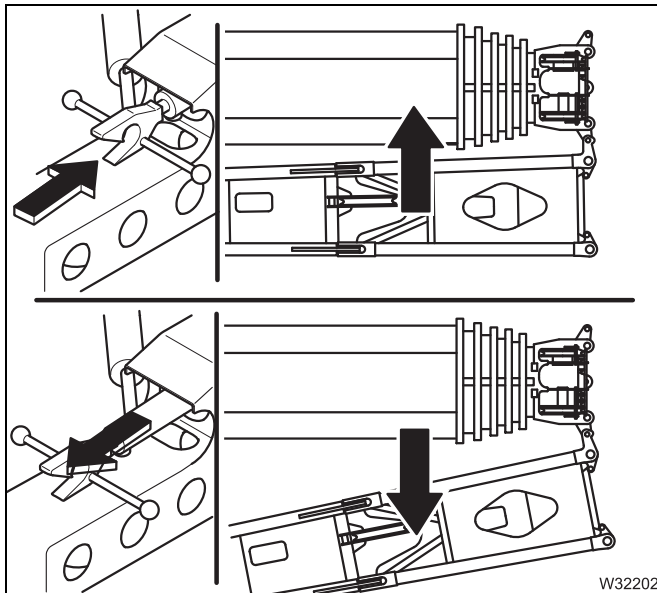
- With hydraulic locking pins; ■■■▶ p. 5 - 88,
- With mechanical locking pins; ■■■▶ p. 5 - 91.



### 5.4.4

## Extending/retracting the swivel ram

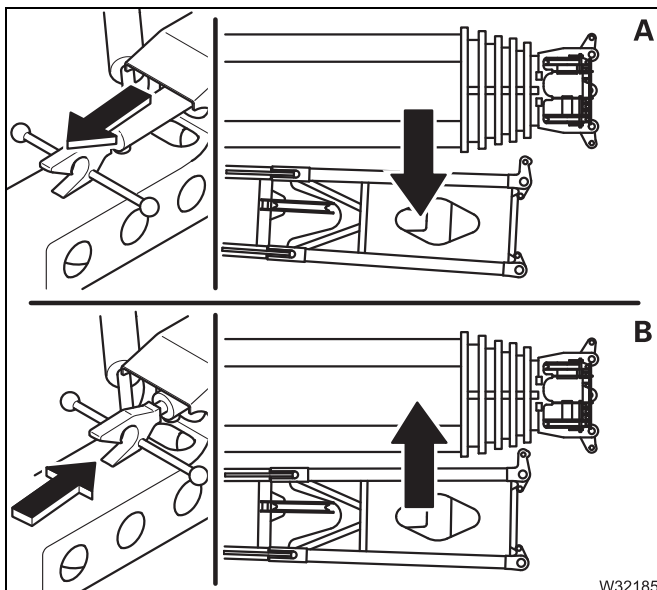
The swivel ram can slew the swing-away lattice.



### When rigging

Retracting the swivel ram pulls the swing-away lattice onto the console on the main boom.

Extending the swivel ram pushes the swing-away lattice away from the console on the main boom.



### When working with the main boom

The swing-away lattice is slewed automatically; see p. 5 - 132.

(A) – The swing-away lattice is swung outwards before telescoping out so that the telescopic sections can move past the swing-away lattice.

(B) – The swing-away lattice is swung onto the main boom and into the transport position after telescoping in.



### Risk of damage to connecting points!

Ensure that all necessary connections have been established and separated as specified in the checklist before moving the swivel ram. This prevents the connecting points from being damaged or torn off.



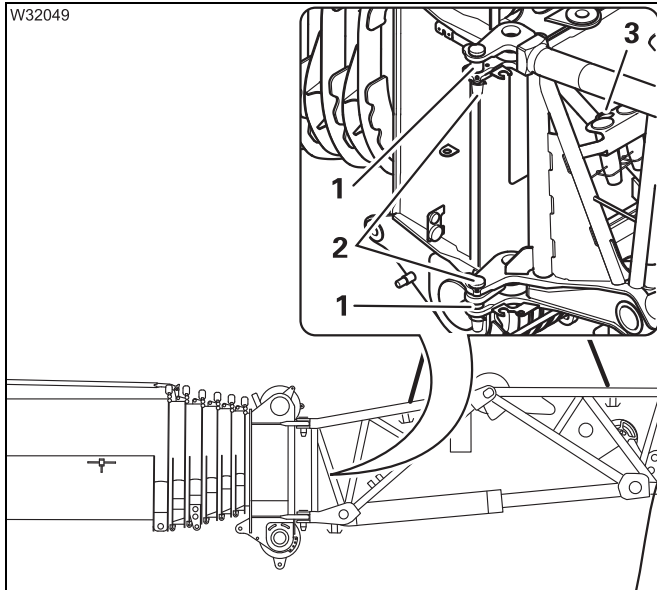
## 5.4.11

### Establishing/separating the slewing connection – mechanical locking



#### **Risk of accidents if used improperly!**

Attach slings to the swing-away lattice only at the designated slinging points. Use only sling gear and joining elements of sufficient load bearing capacity.



#### **Connecting**

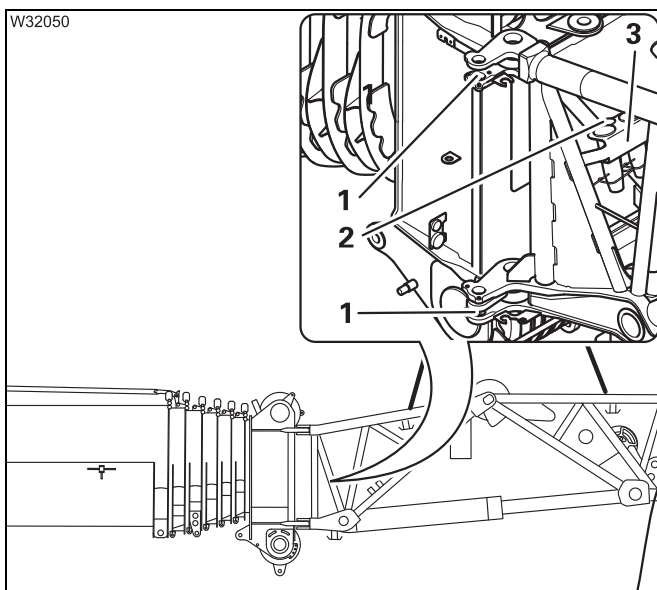
A guide rope must be attached.

- Sling the swing-away lattice on an auxiliary crane if necessary.
- Align the connecting points (1).
- Remove the pins (2) from the clamps (3) and insert them into the connecting points (1).
- Secure the pins.
- Disconnect the guide rope and the lifting gear.



#### **There is a risk of accidents due to the swing-away lattice falling.**

Ensure that the swing-away lattice is slung on an auxiliary crane or attached to the main boom before separating the slewing connection. This prevents the swing-away lattice from falling down and injuring or killing you or other persons.

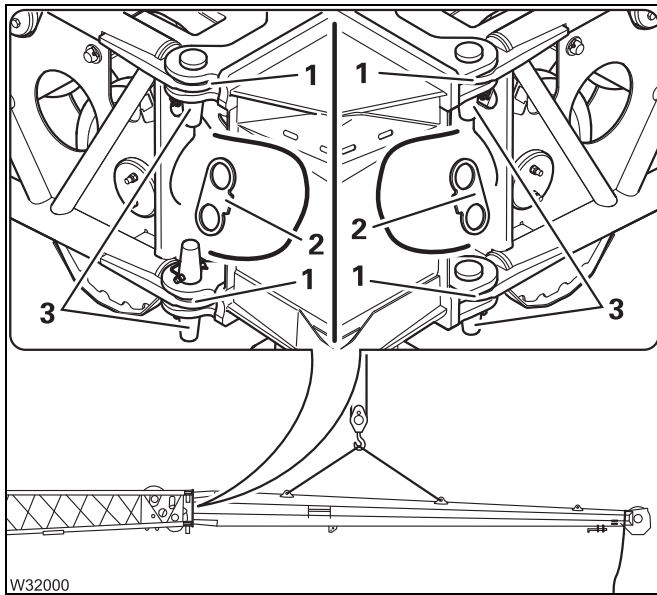


#### **Separating**

A guide rope must be attached.

- Sling the swing-away lattice on an auxiliary crane if necessary.
- Remove the pins (2) from the connecting points (1) and insert them into the clamps (3).
- Secure the pins.

## Section 1 - section 2

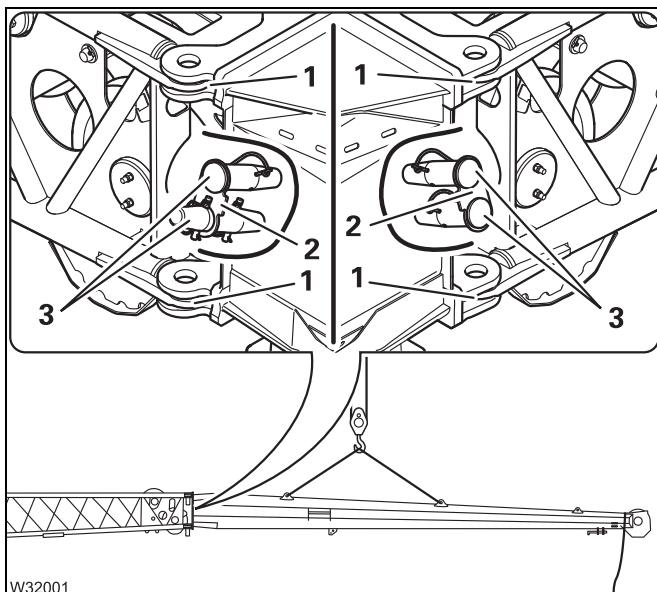


### Connecting

- Attach section 1 to an auxiliary crane.
- Align the connecting points (1).
- Remove the pins (3) from the clamps (2) and insert them into the connecting points (1).
- Secure the pins.



Set the lattice extension down on the ground to relieve the load on the pins. Use the control unit in section 2 for this.



### Separating

A guide rope must be attached.

- Attach section 1 to an auxiliary crane.
- Remove the pins (3) from the connecting points (1) and insert them into the clamps (2).
- Secure the pins.
- Lift section 1 off from section 2.



Once you have lifted sections 1 and 2 together you can then separate section 1 from section 2 on the ground. To do this you must first disconnect the electrical connections between the sections.

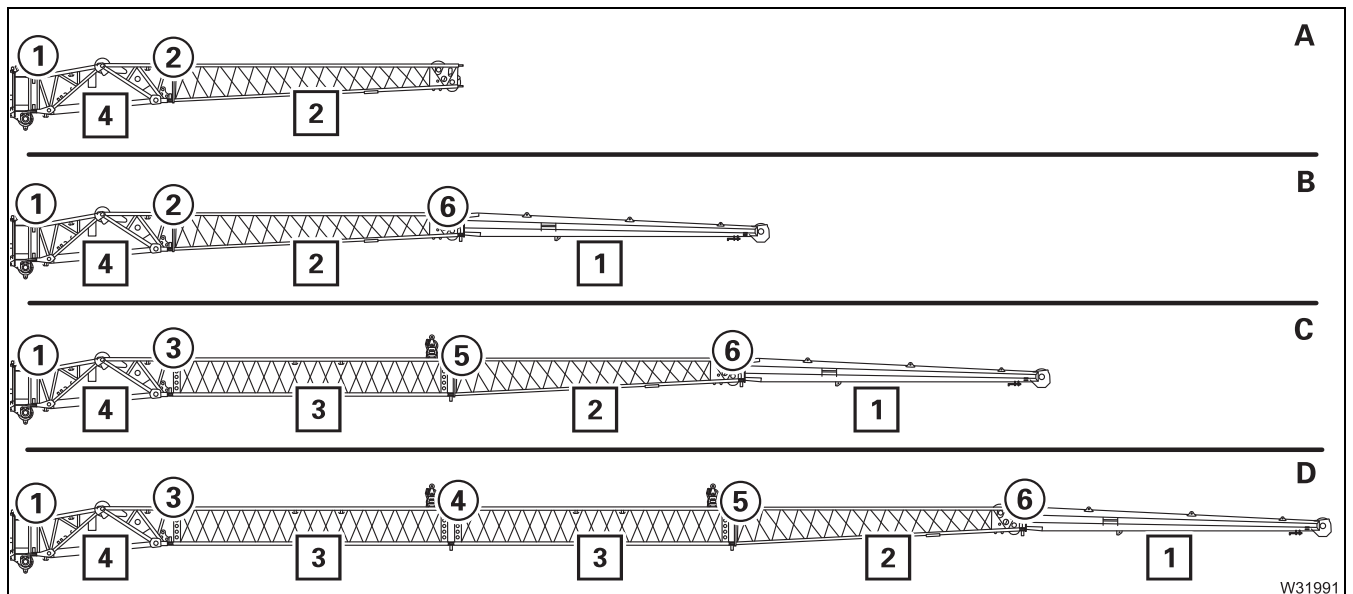


#### **Risk of accidents due to falling sections!**

Before you separate section 1 from section 2 on the ground you must first support the individual sections so that they cannot fall over. In this way you avoid that the sections fall to the ground after they have been separated, and injure you or other people.

**5.4.21**

**Establishing/disconnecting electrical connections to the swing-away lattice**



**Risk of crushing due to movement of swing-away lattice**

Always lock the swing-away lattice or secure it with the guide ropes to prevent it from swinging before you start establishing or disconnecting electrical connections.

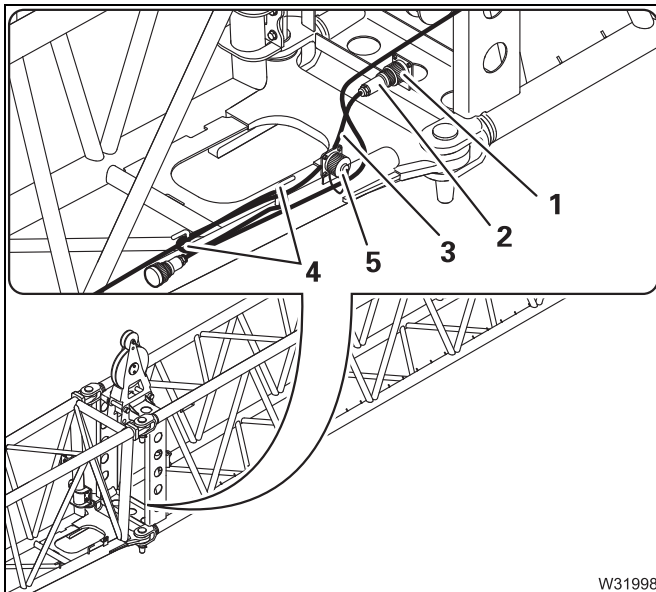
This prevents the swing-away lattice from swinging and crushing you.

Depending on the swing-away lattice **A - D** being used, you must establish/separate different electrical connections ① to ⑥ for sections ① to ④.

①	Section 4 - Main boom	▣▣▣▣ p. 5 - 108
②	Section 2 - section 4	▣▣▣▣ p. 5 - 114
③	Section 3 - section 4	▣▣▣▣ p. 5 - 112
④	Section 3 - section 3	▣▣▣▣ p. 5 - 114
⑤	Section 2 - section 3	▣▣▣▣ p. 5 - 116
⑥	Section 1 - section 2	▣▣▣▣ p. 5 - 118

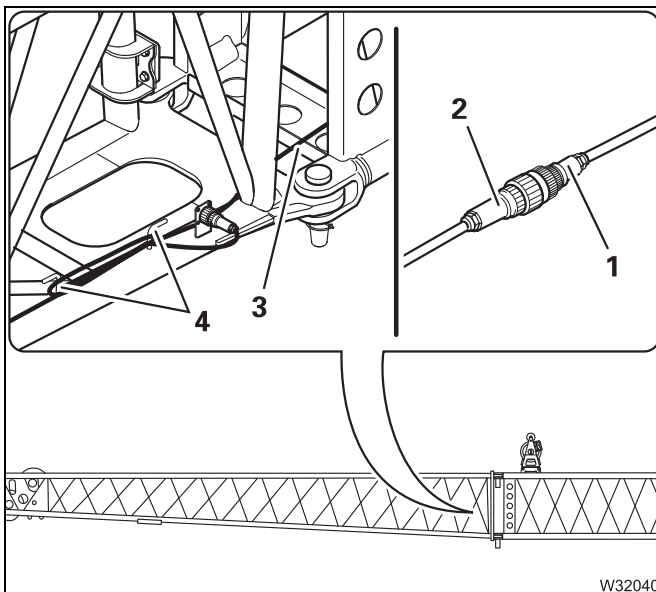


**Section 2 -  
section 3**



**Making the electrical connections**

- Unwind the cable (3) from the holder (4).
- Remove the plug (2) from the dummy socket (5) and plug it into the socket (1).
- Lay the cable (3) so that it will not be damaged during crane operation.





**Making the connections for the camera**

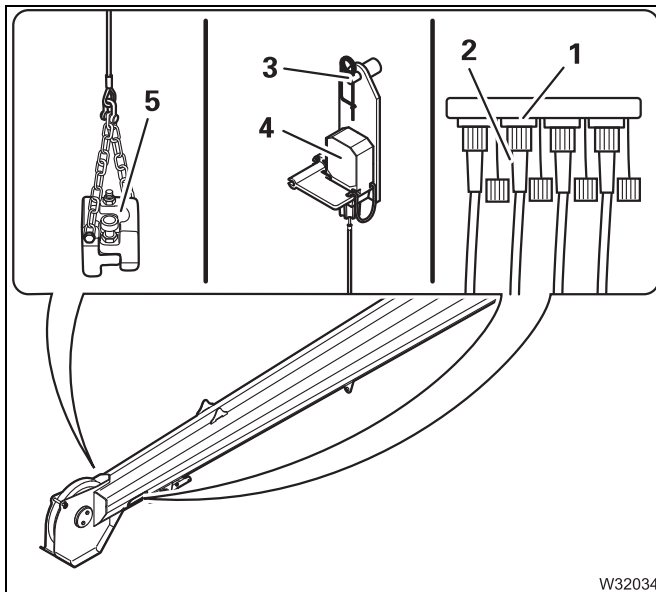
- Unwind the cable (3) from the holder (4).
- Insert the plug (2) into the socket (1).
- Lay the cable (3) so that it will not be damaged during crane operation.

## 5.4.24 Installing / removing the lifting limit switch


### Installation

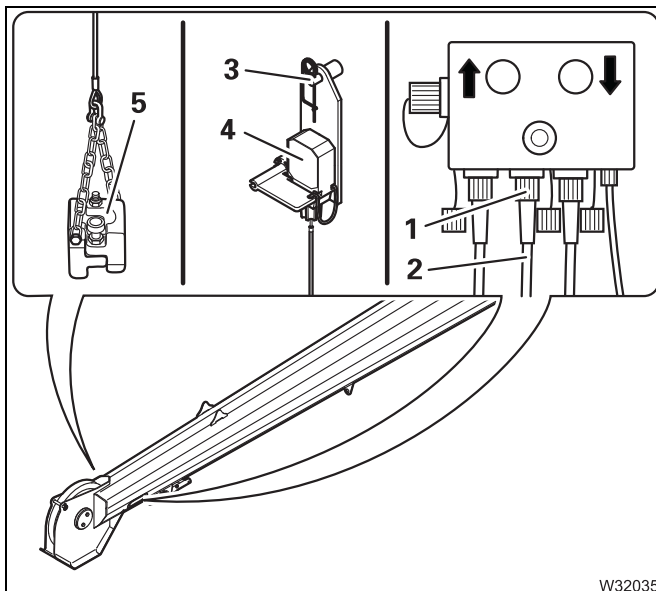
If only a single lifting limit switch is available you must use the lifting limit switch belonging to the main boom;  *Operating manual GMK5250L.*

If several lifting limit switches are available, all those lifting limit switches on the main boom from which no lifting limit switch weight is suspended must be jumpered;  *Operating manual GMK5250L.*




#### On section 1

- Plug the lifting limit switch (4) onto the holder (3).
- Secure the lifting limit switch.
- Secure the cable so that it does not sag during crane operation and thus might be damaged.
- Insert the plug (2) into the socket (1).
- Install the lifting limit switch weight (5) and lay it around the hoist rope;  *Operating manual GMK 5250L.*



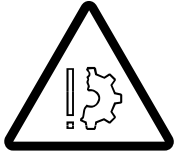
#### On section 2

- Plug the lifting limit switch (4) onto the holder (3).
- Secure the lifting limit switch.
- Secure the cable so that it does not sag during crane operation and thus might be damaged.
- Insert the plug (2) into the socket (1).
- Install the lifting limit switch weight (5) and lay it around the hoist rope;  *Operating manual GMK 5250L.*

### 5.4.29

## Set the swing-away lattice down on the *rear* connection

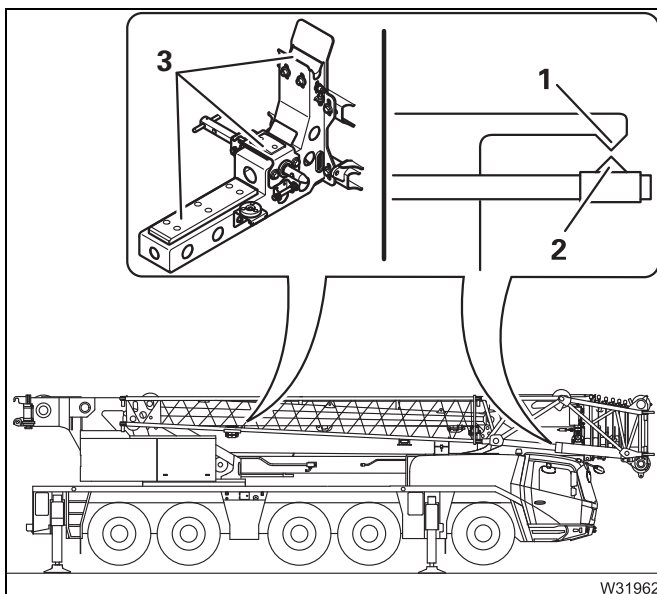
When you unrig the swing-away lattice 2.0 + 19.3 m or install it in the transport position then you must set it down on the console at the *rear* connection.



### Risk of damage to the swing-away lattice and add-on parts!

Ensure that all necessary connections have been established and separated as specified in the checklist before lowering the swing-away lattice. Do not lower the swing-away lattice below the position shown by the markings.

This prevents damage to the connecting points or add-on parts.



- Lower the swing-away lattice until the markings (1) and (2) line up.

The swing-away lattice is lowered onto the supports (3) at the *rear* connection.

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### 5.6.3

### Maintenance plan M 3

**M 3**

**Maintenance work on the LATTICE EXTENSION:  
every three months/after 250 oper. hrs.**

**Swing-away lattice**

- Check the sheaves

▣▣▣▣▶ p. 5 - 146

### 5.6.4

### Maintenance plan M 12

**M 12**

**Maintenance work on the LATTICE EXTENSION:  
every 12 months/after 1,000 oper. hrs.**

**Swing-away lattice**

- Lubricate joints

▣▣▣▣▶ p. 5 - 151

### 5.6.5

### Description of maintenance work

**Pin**

Grease <sup>1)</sup>	Designation to DIN 51502	Specification Classification	GROVE section no. <sup>1)</sup>
Grease	KP - L2K	DIN 51825	00554201

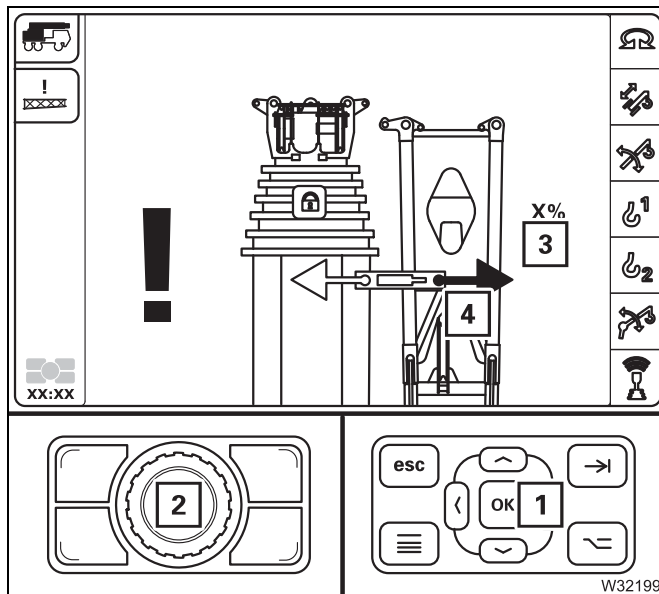
<sup>1)</sup> ▣▣▣▣▶ *Maintenance Manual*

**Prerequisite**

- The truck crane must be secured against unauthorised use; ▣▣▣▣▶ *Maintenance Manual*

**or**

- The swing-away lattice is removed; ▣▣▣▣▶ p. 5 - 33.

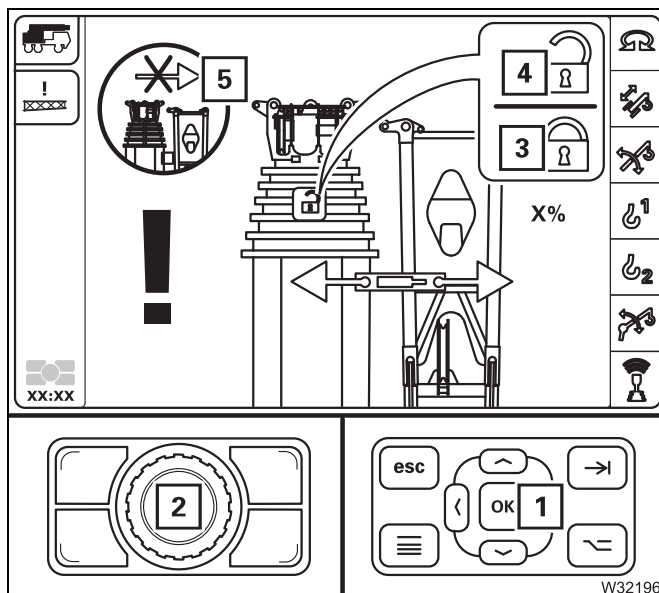


### Extend swivel ram

- Select the symbol (4).
- Press the button (1) or (2) – the swivel ram extends.
- Hold the button pressed until the display (3) shows 100%.

The swivel ram is extended and the swing-away lattice is swung out for telescoping.

- Externally inspect the truck crane to see if the telescoping sections can move freely.



### Releasing telescoping

- Select the symbol (3).
- Press button (1) or (2) sufficiently often until the symbol (4) is displayed.

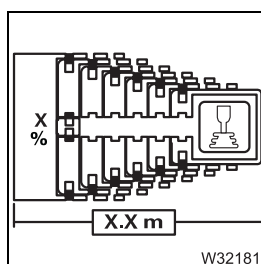
Telescoping is now released and will be performed when you move the control lever. Automatic swinging is disabled – warning message (5).

Telescoping is released until the telescoping mechanism or the ignition is switched off.

The symbol (5) *Automatic swinging disabled* is also shown as a warning message in the main menu.

### Retracting

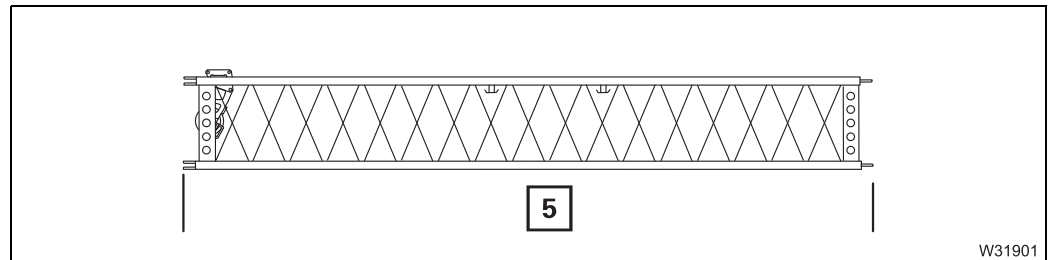
If the automatic swinging malfunction occurred while telescoping the main boom out, then first check that the swing-away lattice is swung out before telescoping in. If necessary, use emergency operation to swing the swing-away lattice outwards before telescoping in.



- Telescope the main boom in completely and lock the main boom. Lock the telescoping cylinder in telescopic section VI.

## 6.2.4

### Transport dimensions and weights

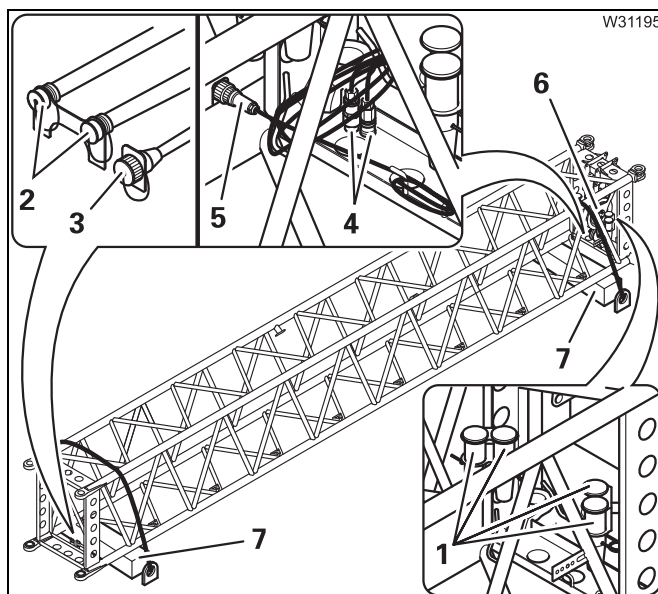


Section	Length x width x height in m	Weight in kg
5	8.20 x 0.90 x 1.20	715

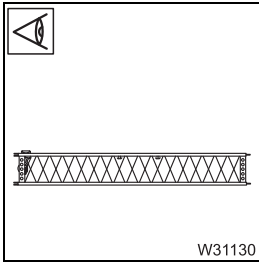
## 6.2.5

### Transport condition

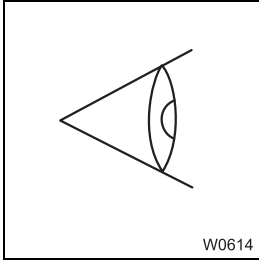
#### Section 5



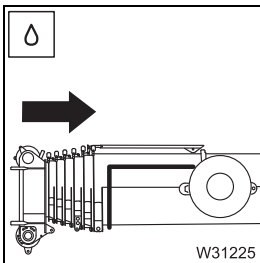
- Check that the heavy lattice load extension is secure for transport or secure it now, if necessary.
  - All pins (1) must be secured in the clamps.
  - All hoses (2) and electrical cables (3) must be closed with caps.
  - The plug (5) has been inserted in the dummy socket.
  - The hoses (4) must be wound on to the holder.
  - The deflection sheave (6) must be folded in and secured.
  - The section 5 must be secured to a suitable support (7).



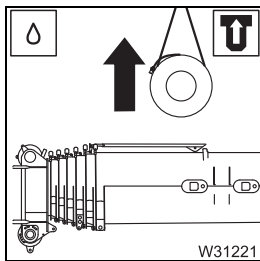
16. Secure section 5 for transport; p. 6 - 5.



17. Secure the swing-away lattice for transport; p. 5 - 12.



18. If necessary, move the hoses into the position for working with the main boom; p. 4 - 6.



19. If necessary, remove the hose drum; p. 4 - 3.

### 6.4.8

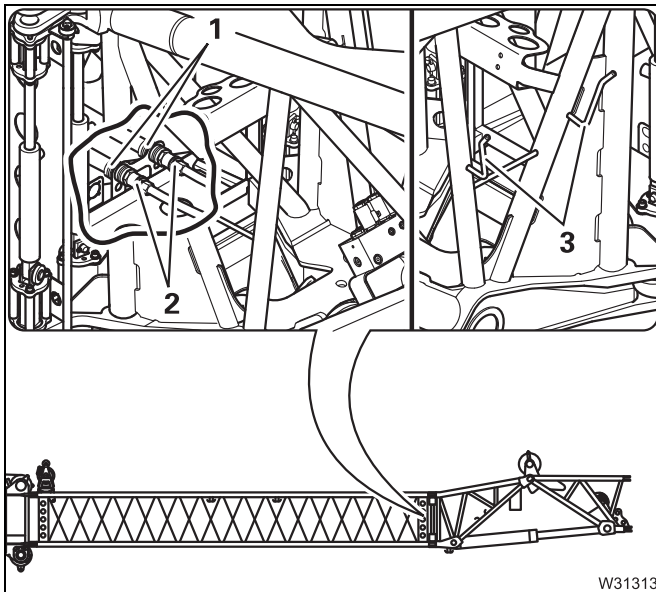
## Connecting/disconnecting the hydraulic connections – section 4/section 5



### Crushing hazard for hands and arms during hydraulic locking!

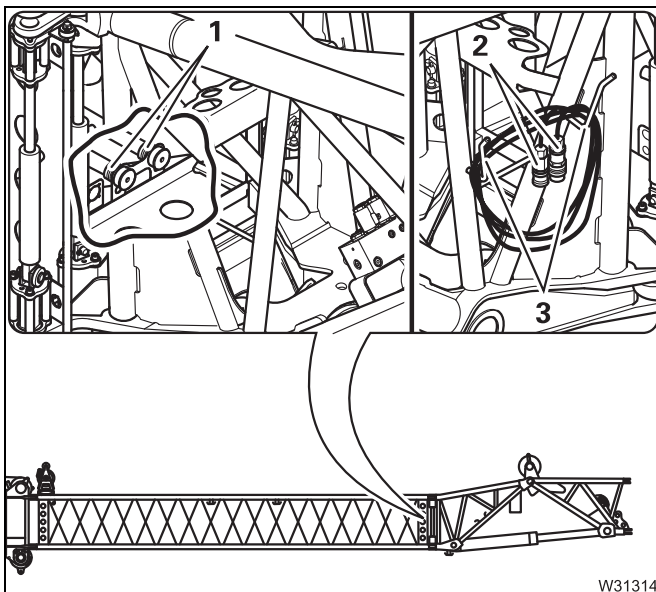
Whilst section 4 is unlocked it can swing. Therefore, do not reach between section 5 and section 4. This will prevent your arms or hands from being crushed.

Lay the hoses in such a way that they will not be damaged during crane operation.



### Making

- Take the hoses (2) from the holder (3).
- Connect the hoses to the connections (1) (match the markings).



### Breaking

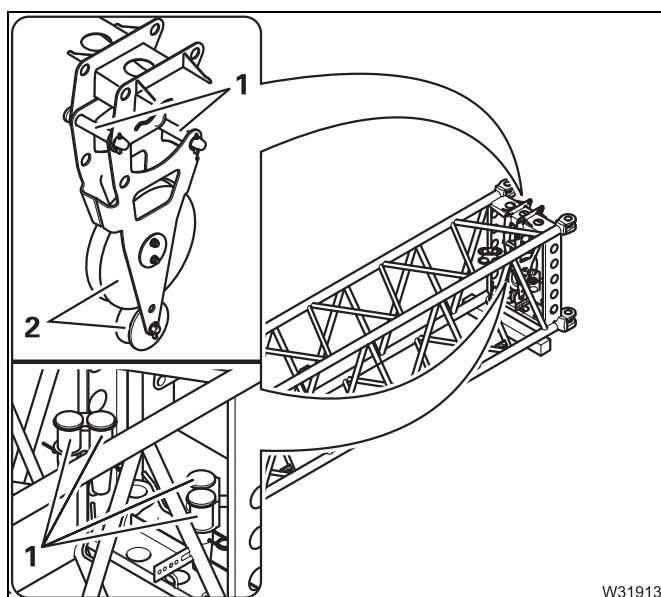
- Remove the hoses (2) from the connections (1).
- Close the hoses and the connections (1) with the caps.
- Wind the hoses on to the holder (3) on section 4.

### 6.6.3

### Description of maintenance work

Grease <sup>1)</sup>	Designation according to DIN 51502	Specification classification	GROVE section no. <sup>1)</sup>
Grease	KP - L2K	DIN 51825	00554201

<sup>1)</sup>  *Maintenance Manual*



#### Lubricating the pins

- Grease the pins (1).

#### Check the sheaves

- Check the deflection sheave (2) for damage, wear, freedom of movement and heavy soiling.
- Have damaged, worn, stiff or extremely soiled sheaves replaced by **Manitowoc Crane Care** or an authorised GROVE dealer or your repair crew.

## 7.2

## Checklists for rigging work

### 7.2.1

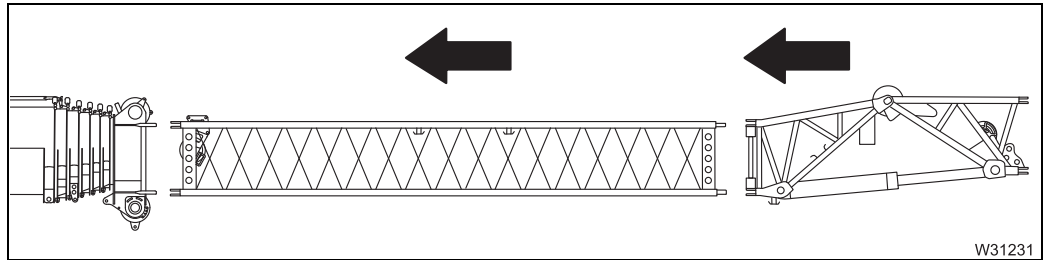
### Overview

The following table shows which checklist is applicable for any required rigging work.

	<b>Required rigging work</b>	<b>Checklist</b>
<b>ISS 4.1 m</b>	– Installing the ISS	<i>CHECKLIST: Installing the ISS 4.1 m, p. 7 - 8</i>
	– Removing the ISS	<i>CHECKLIST: Removing the ISS 4.1 m, p. 7 - 13</i>
<b>ISS 12.1 m</b>	– Installing the ISS	<i>CHECKLIST: Installing the ISS 12.1 m, p. 7 - 17</i>
	– Removing the ISS	<i>CHECKLIST: Removing the ISS 12.1 m, p. 7 - 23</i>

## 7.2.4

### CHECKLIST: Installing the ISS 12.1 m

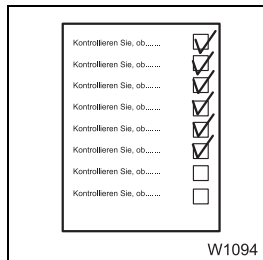


W31231



This checklist is not a complete operating manual. There are accompanying operating instructions which are indicated by cross-references.

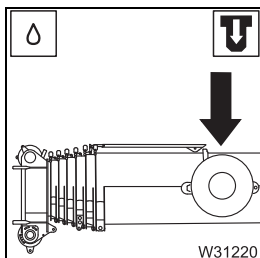
**Observe the warnings and safety instructions there.**



W1094

#### 1. Prerequisite

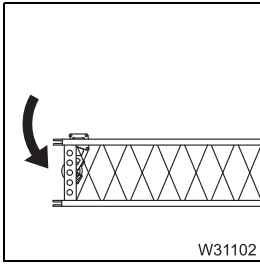
- The truck crane must be supported on its outriggers; *Operating manual GMK5250L*.
- The appropriate counterweight for the crane operation must be rigged; *Operating manual GMK5250L*.
- The main boom must be completely retracted and lowered into the horizontal position; *Operating manual GMK5250L*.
- An auxiliary crane must be available.



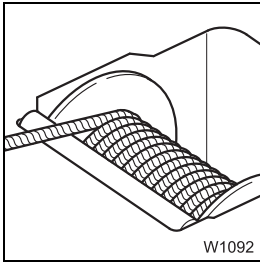
W31220

#### 2. If necessary, mount the hose reel; p. 4 - 3.

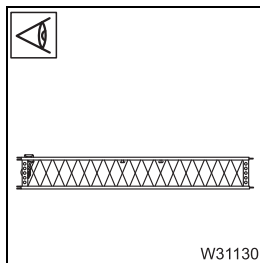




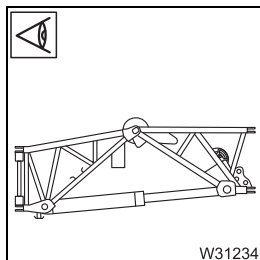
18. Fold in the deflection sheave on section 5; and secure it; p. 7 - 47.



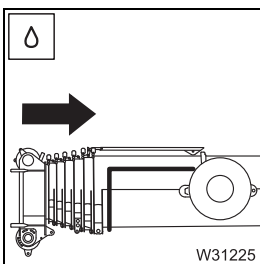
19. Reeve the hoist rope on to the main boom head, or reel it on to the drum; *Operating manual GMK5250L*.



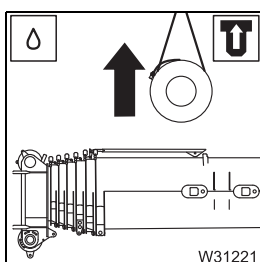
20. Secure section 5 for transport; p. 7 - 5.



21. Secure section 4 for transport; p. 7 - 5.



22. If necessary, move the hoses into the position for working with the main boom; p. 4 - 6.



23. If necessary, remove the hose reel; p. 4 - 3.

### 7.3.5

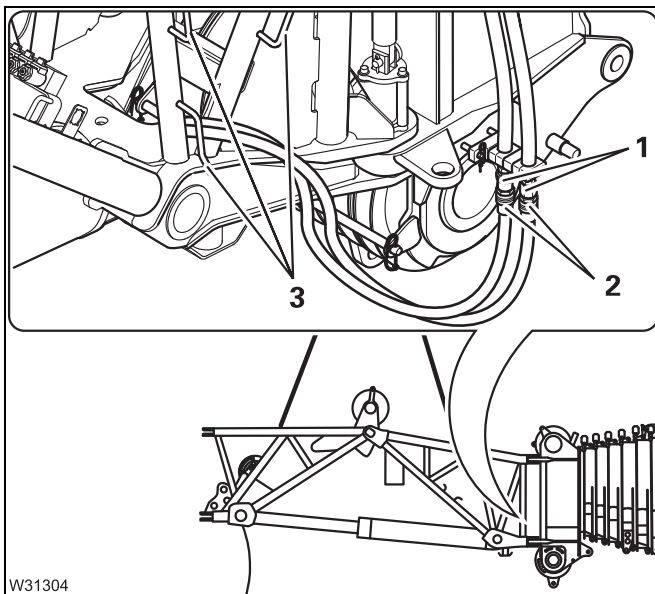
## Making/breaking the hydraulic connections – section 4 / main boom



### Crush hazard for hands and arms during hydraulic locking

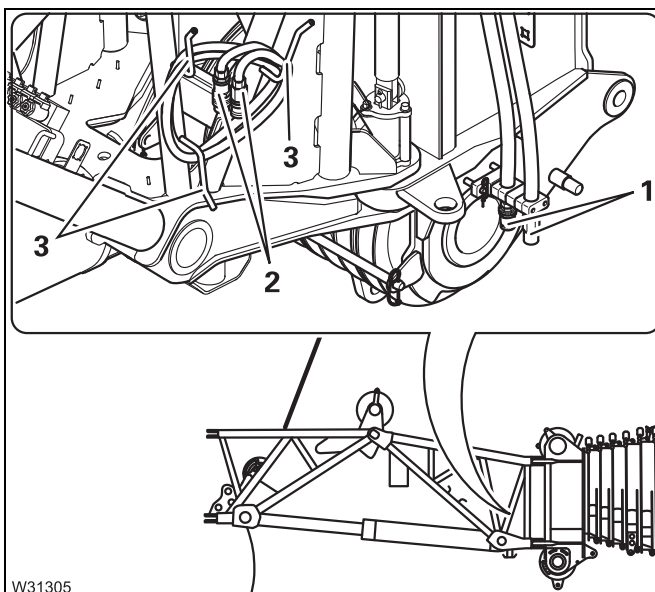
Whilst section 4 is unlocked it can swing. Therefore do not reach between the main boom and section 4. In this way you avoid the risk that your hands and arms may be trapped and crushed.

Lay the hoses in such a way that they will not be damaged during crane operation.



### Connecting

- Take the hoses (2) from the holder (3).
- Connect the hoses to the connections (1) (match the markings).



### Breaking

- Remove the hoses (2) from the connections (1).
- Close the hoses and the connections (1) with the caps.
- Wind the hoses (2) on to the holder (3).

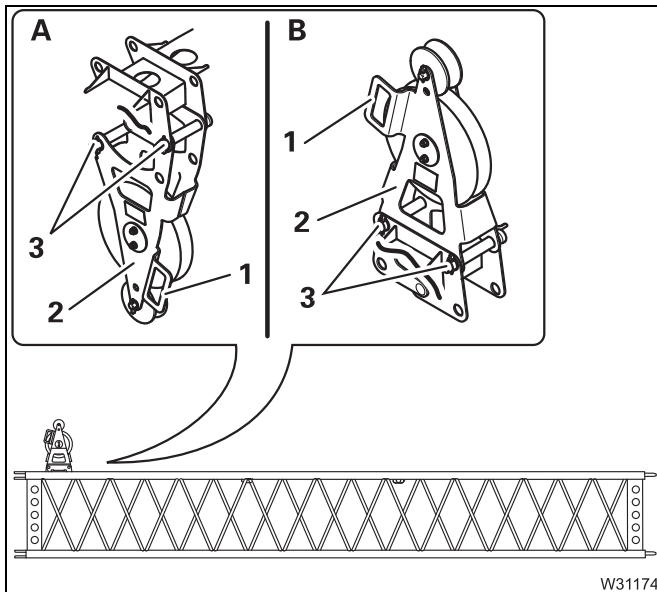
### 7.3.13

## Folding out / folding in the deflection sheave on section 5



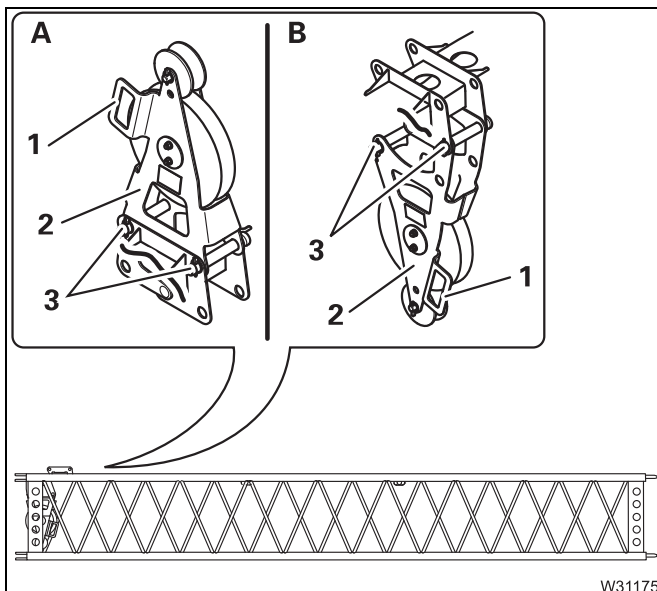
### Crush hazard

Always hold the deflection sheave by the handle when pulling out the pin. Your fingers might be crushed if you hold the sheave by the side plate.



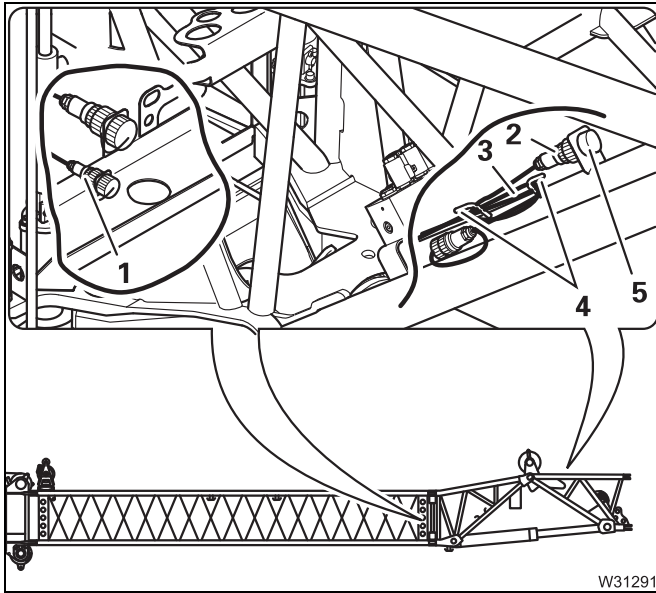
### Folding out

- (A) – Hold the deflection sheave (2) by the handle (1) and pull out the pins (3).
- (B) – Fold the deflection sheave (2) upwards until it is aligned with the connecting points.
- Insert the pins (3) into the connecting points.
- Secure the pins.



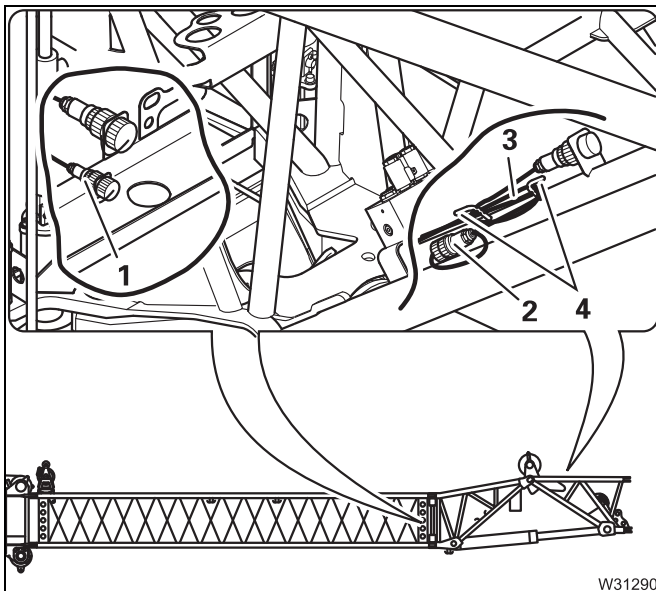
### Folding in

- (A) – Hold the deflection sheave (2) by the handle (1) and pull out the pins (3).
- Fold the deflection sheave (2) downwards until it is aligned with the connecting points.
- Insert the pins (3) into the connecting points.
- Secure the pins.



### Breaking the electrical connections

- Remove the plug (2) from the socket (1) and plug it into the dummy socket (5).
- Wind the cable (3) on to the holder (4).
- Cover the socket (1) with the cap.



### Breaking the connections for the camera

- Remove the plug (2) from the socket (1).
- Wind the cable (3) on to the holder (4).
- Cover the plug and socket (1) with caps.

## 7.6

## Maintenance



If the heavy load lattice extension has been in storage for an extended period of time, perform maintenance work on it no later than when it is next used.

### 7.6.1

### Maintenance plan W

**W**

#### Maintenance work on the HEAVY LOAD LATTICE EXTENSION: weekly

##### Heavy load lattice extension

- Greasing the piston rod of the derricking cylinder ▣▣▣▣▶ p. 7 - 69
- **If hydraulic locking is in use:** Grease the piston rod of the locking cylinder ▣▣▣▣▶ p. 7 - 69

### 7.6.2

### Maintenance plan M 1

**M1**

#### Maintenance work on the HEAVY LOAD LATTICE EXTENSION: monthly/after approx. 100 oper. hrs.

##### Heavy load lattice extension

- Lubricating the pins ▣▣▣▣▶ p. 7 - 68

### 7.6.3

### Maintenance plan M 3

**M3**

#### Maintenance work on the HEAVY LOAD LATTICE EXTENSION: every three months/after 250 oper. hrs.

##### Heavy load lattice extension

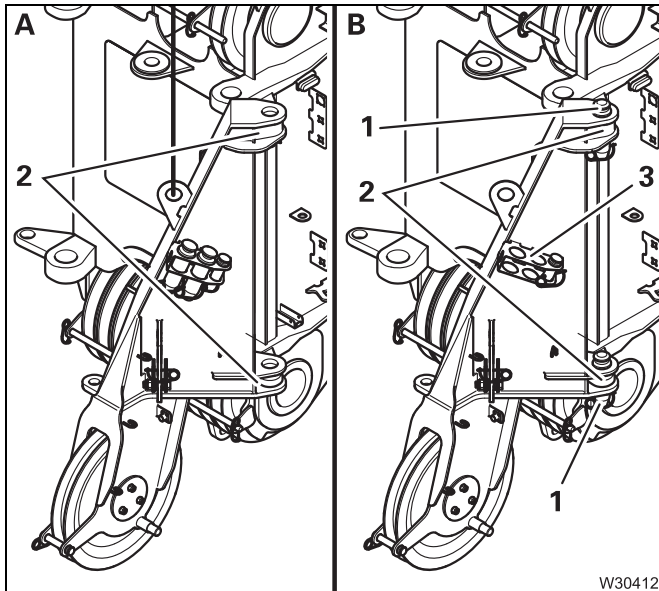
- Check the sheaves ▣▣▣▣▶ p. 7 - 69

## 8.2

## Rigging work

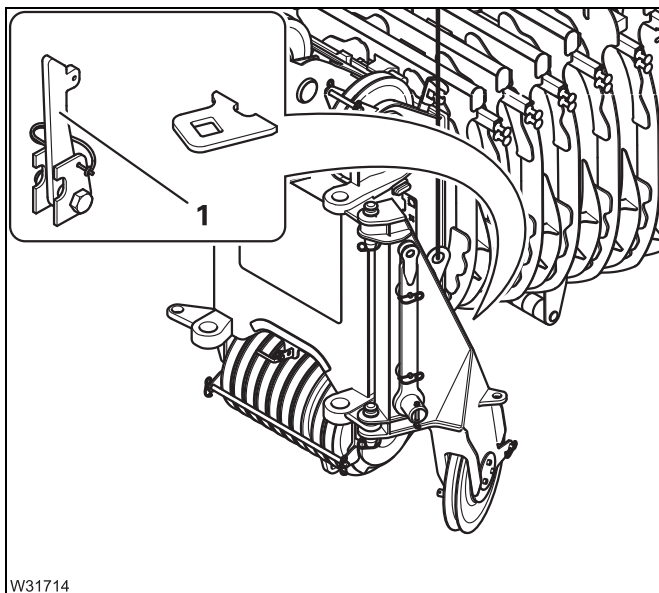
### 8.2.1

### Moving the auxiliary single-sheave boom top into the working position



#### After transport on a separate vehicle

- (A) – Attach the auxiliary single-sheave boom top to an auxiliary crane.
- Align the connection points (2).
- (B) – Take the pins (1) out of the holder (3) and insert them into the connecting points (2).
- Secure the pins (1).
- Remove the lifting gear.



#### After transport on the main boom

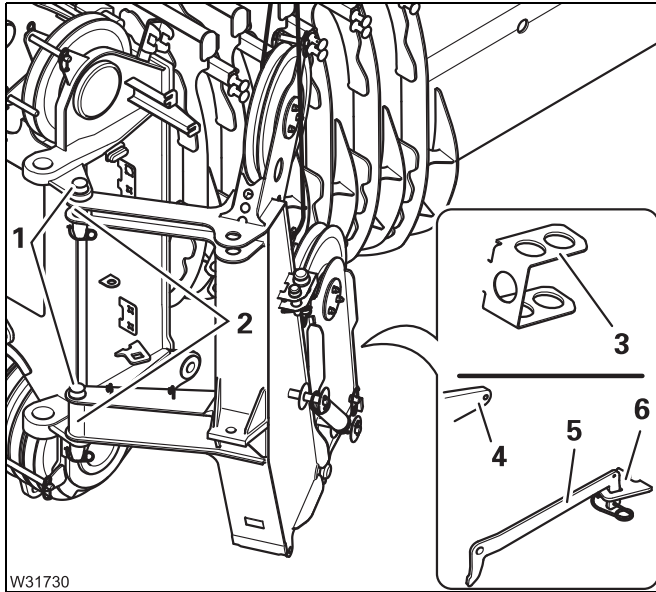
- Fold the lever (1) upwards.
- Secure the lever.





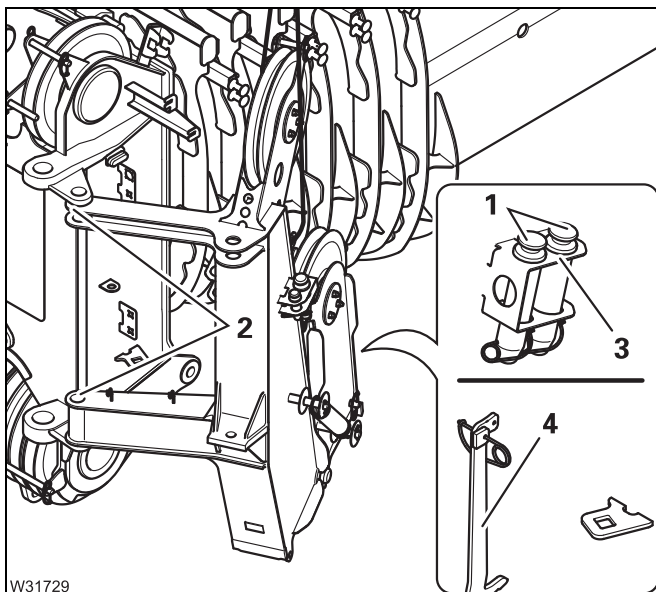
## 9.2.3

### Installing/removing a folded up auxiliary single-sheave boom top



#### Installing

- Sling the auxiliary single-sheave boom top to an auxiliary crane; ▣▶ p. 9 - 1.
- Align the connection points (2).
- Remove the pins (1) from the clamps (3) and plug them into the connecting points (2).
- Remove the lever (5) from the clamp (4).
- Fold the lever (5) so that it engages in the holder (6).
- Secure the lever (5).



#### Removing

- Sling the auxiliary single-sheave boom top to an auxiliary crane; ▣▶ p. 9 - 1.
- Remove the pins (1) from the connecting points (2) and plug them into the clamps (3).
- Fold the lever (4) upwards.
- Secure the lever (4).
- Lift the auxiliary single-sheave boom top from the main boom.

# 10

## Turning loads over

Turning loads over is permitted only using

- Auxiliary single-sheave boom top,
- Heavy load lattice extension (SLS, ISS).
- Swing-away lattice/boom extension up to a maximum length of 21.3 m.



### **Risk of accidents due to incorrect procedure**


Before turning loads, observe all the prerequisites specified in this section and proceed exactly as described. This way, you avoid accidents due to overload.

### **Prerequisites**

- The main hoist rope must be reeved on the main boom.
- The auxiliary hoist rope must be reeved on the lattice extension.
- The main hoist rope must be reeved with at least the same number of falls as the auxiliary hoist rope.

**Swing-away lattice 2 + 19.3 m** All axle loads specified apply to a reeved 3-sheave hook block, weight 950 kg.

Counter-weight in t	Telescopic section telescope status I-II-III-IV-V-VI in %	Main boom angle in °	Lattice extension inclination in °	Super-structure position <sup>1)</sup>	Maximum axle load <sup>2)</sup> in t	
					front	rear
7.0	0-0-0-0-0-0	20 - 25	5 - 20	front	20.0	11.5
	0-0-0-0-0-0	80	5 - 50	rear	10.0	18.5
16.5	0-0-0-0-0-0	25 - 30	5 - 20	front	12.0	19.5
	0-0-0-0-0-0	80	5 - 50	rear	13.5	19.0
21.0	50-0-0-0-0-0	20 - 40	5 - 20	front	20.0	19.0
	0-0-0-0-0-0	75 - 80	5 - 50	rear	15.0	21.0
26.0	50-50-0-0-0-0	20 - 35	5 - 20	front	25.0	16.5
	0-0-0-0-0-0	70 - 80	5 - 50	rear	17.0	22.5
30.5	50-50-0-0-0-0	20	5 - 20	front	23.0	16.5
	0-0-0-0-0-0	80	5 - 50	rear	18.5	20.5
35.5	50-50-50-0-0-0	20 - 40	5	front	26.5	21.0
	0-0-0-0-0-0	75 - 80	5 - 50	rear	20.0	22.0
40.0	50-50-50-0-0-0	20 - 40	5	front	24.5	23.5
	0-0-0-0-0-0	80	5 - 50	rear	22.0	21.5
45.5	50-50-50-0-0-0	15 - 20	5	front	23.5	22.0
	0-0-0-0-0-0	60 - 80	5 - 50	rear	24.0	26.5
50.0	50-50-50-50-0-0	20	5	front	25.0	21.5
	0-0-0-0-0-0	70 - 80	5 - 50	rear	23.5	27.0
70.0	not permitted			front	--	--
	0-0-0-0-0-0	65 - 70	5 - 50	rear	27.0	61.7
80.0	not permitted			front	--	--
	not permitted			rear	--	--

1), 2)  Notes on the tables, p. 11 - 3



## 11.3.4 Heavy load lattice extension 4.1 m/12.1 m

**Heavy load lattice extension 4.1 m** All axle loads specified apply to a reeved 3-sheave hook block, weight 950 kg.

Counterweight in t	Telescopic section telescope status I-II-III-IV-V-VI in %	Main boom angle in °	Lattice extension inclination in °	Super-structure position <sup>1)</sup>	Maximum Axle Load <sup>2)</sup> in t	
					front	rear
0.0	0-0-0-0-0-0	30 - 40	5 - 20	front	14.0	13.0
	0-0-0-0-0-0	75	5 - 50	rear	7.0	16.5
7.0	0-0-0-0-0-0	20- 30	5 - 20	front	12.5	16.0
	0-0-0-0-0-0	75	5 - 50	rear	9.5	17.5
16.5	50-0-0-0-0-0	20- 35	5 - 20	front	17.5	17.0
	0-0-0-0-0-0	75	5 - 50	rear	12.5	18.5
21.0	50-0-0-0-0-0	20 - 30	5 - 20	front	15.5	19.0
	0-0-0-0-0-0	75	5 - 50	rear	14.5	18.5
26.0	50-50-0-0-0-0	20 - 35	5 - 20	front	20.0	19.0
	0-0-0-0-0-0	75	5 - 50	rear	16.0	19.0
30.5	50-50-0-0-0-0	20	5 - 20	front	20.5	17.5
	0-0-0-0-0-0	75	5 - 50	rear	17.5	17.5
35.5	50-50-50-0-0-0	20 - 30	5 - 20	front	21.0	21.0
	0-0-0-0-0-0	75	5 - 50	rear	17.5	20.0
40.0	50-50-50-0-0-0	25	5 - 20	front	18.5	22.5
	0-0-0-0-0-0	75	5 - 50	rear	21.0	20.5
45.5	50-50-50-50-0-0	20	5 - 20	front	21.0	22.5
	0-0-0-0-0-0	75	5 - 50	rear	23.0	21.0
50.0	50-50-50-50-50-0	20	5 - 20	front	21.5	23.5
	0-0-0-0-0-0	70	5 - 50	rear	23.0	22.5
70.0	0-0-0-0-0-0	50 - 60	5 - 50	rear	27.5	28.0
80.0	Not permissible					

1), 2) ■■■► Notes on the tables, p. 11 - 3

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