

# **EFFER JIBs**

Operator's Manual GB

This operator's manual is an Original Instruction valid for JIBs mounted on EFFER cranes with Progress 3.0 from serial number(s):

VG0007890

2023-03



Help us to improve this manual. Please send your comments and suggestions to **[documentation@hiab.com](mailto:documentation@hiab.com)**

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# 1. Introduction

## 1.1. This Operator's Manual is intended for operators of cranes with a JIB

### This manual describes

- operation
- maintenance and faults

This manual is a supplement to the Operator's Manual for your type of crane.



### **DANGER**

If you have not studied the complete Operator's Manual for your crane and for your JIB carefully, it could lead to fatal accidents or serious damage.

### **Therefore you should:**

- Study the entire Operator's Manual carefully.
- Operate the crane only after you have done so.

Follow the directions for use, operation and maintenance of the crane exactly.



### **NOTE**

The manufacturer reserves the right to change specifications, equipment, operating instructions and maintenance instructions without prior notice.

## 1.2. The JIB

The JIB is an additional, folding, lifting device that extends the crane boom. Use the JIB so as to be able to reach further.



### NOTE

- Load diagram signs for the JIB are placed on the base.
- See the Technical Data for the precise technical information concerning the JIB on your crane.

## Crane configurations where EFFER JIBs can be fitted:

JIB	Crane configuration (Progress)	JIB	Crane configuration (Progress)
<b>A (JIB030A)</b>	175.2 3S/4S + JIB 2S/3S	<b>9C (JIB140C)</b>	955 8S + JIB 4S/6S
	175.2 C3S/C4S + JIB 2S/3S		1000 9S + JIB 6S
<b>9H (JIB H)</b>	215 3S + JIB 3S		1405 9S + JIB 6S
	215 4S + JIB 3S/4S	<b>D (JIB260D)</b>	955 6S + JIB 4S/6S HD*
	215 5S + JIB 2S		955 7S + JIB 6S HD*
	215 C4S + JIB 4S		1000 8S + JIB 6S
<b>9K (JIB088K)</b>	265 3S/C3S/5S + JIB 2S/3S		1000 9S + JIB 6S HD*
	265 4S/C4S + JIB 2S/3S/4S		1405 6S + JIB 6S
	315 4S/C4S + JIB 3S/4S L*		1405 7S/8S + JIB 6S HD*
	315 5S/6S + JIB 3S/4S		1855 9S + JIB 6S
	395 4S/5S/6S + JIB 3S/4S		1855 L8S + JIB 6S
	395 C4/C5/C6 + JIB 3S/4S		2055 9S + JIB 6S
	685 8S + JIB 4S		<b>9VL XL (JIB280VL)</b>
<b>9B (JIB100B)</b>	315 4S/C4S + JIB 3S/4S HD*	1855 L8S/L9S + JIB XL6S	
	395 4S/C4S + JIB 4S HD*	2055 8S/9S + JIB XL6S	
	525 5S + JIB 3S/4S/6S	2255 8S + JIB XL6S	
	525 6S + JIB 3S/4S/6S HD*	2255 8S + KJ 2S + JIB XL6S	
<b>9C (JIB140C)</b>	685 4S/5S + JIB 4S	<b>E (JIB400E)</b>	1855 6S/8S + JIB 4S/6S HD*
	685 6S + JIB 4S/6S HD*		2055 6S/8S + JIB 4S/6S HD*
	955 7S + JIB 6S	<b>9L (JIB360L)</b>	2255 8S + JIB L6S HD*
*HD*: Heavy duty *L*: Light			



### NOTE

The table shows the available configurations as standard, further special configurations are possible on specific request.

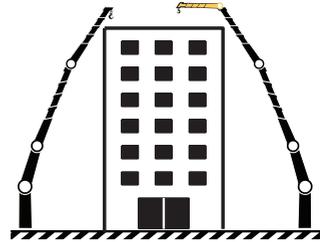


### DANGER

It is strictly forbidden to use the JIB/2nd JIB upside down (e.g. work under bridges with a personal basket).

### 1.3. The 2nd JIB

The 2nd JIB is an additional, folding, lifting device that extends the JIB boom. Use the 2nd JIB so as to be able to reach further.



#### NOTE

- Load diagram signs for the 2nd JIB are placed on the base.
- See the Technical Data for the precise technical information concerning the 2nd JIB on your crane.

#### Crane configurations where EFFER 2nd JIBs can be fitted:

2nd JIB	JIB	Crane configuration (Progress)
A (JIB030A)	D (JIB260D)	1405 8S + JIB 6S HD* + 2nd JIB 2S
	E (JIB400E)	1855 8S + JIB 6S HD* + 2nd JIB 3S
		2055 8S + JIB 6S HD* + 2nd JIB 3S
	9L (JIB360L)	2255 8S + JIB L6S HD* + 2nd JIB 3S
	9VL XL (JIB280VL)	2255 8S + JIB XL6S + 2nd JIB 3S
*HD*: Heavy duty *L*: Light		



#### NOTE

The table shows the available configurations as standard, further special configurations are possible on specific request.



#### DANGER

It is strictly forbidden to use the JIB/2nd JIB upside down (e.g. work under bridges with a personal basket).

## 1.4. The Machinery Directive 2006/42/EC

- The Declaration of Conformity, delivered with the equipment contains (1):
- Business name and full address where the interchangeable equipment is manufactured (2):  
Factory addresses:  
Hiab Cranes S.L.U. Pol. Ind. Malpica, calle E, 86 50016 Zaragoza, Spain  
Cargotec Poland Sp. z o. o. Ul. Metalowa 2, 73-102 Stargard, Poland  
Hiab Italia S.r.l. Via IV Novembre 12, 40061 Minerbio (BO), Italy
- Description and identification of the equipment (3):  
Mark  
Type: see chapter Identification of the interchangeable equipment.  
Serial number  
Manufact. year  
Declaration of which provisions the equipment fulfils.
- Name and address of the person authorised to compile the technical file (4):  
Name  
Address
- Identity and signature of the person who drawn up the declaration (5):  
Name  
Position  
Date and Signature

Declaration of conformity with the Machinery Directive 2006/42/EC

We .....  
.....

hereby declares that the interchangeable equipment:

Mark: .....  
Type: .....  
Serial number: .....  
Manufact. year: .....

• complies with the provisions of the machinery directive 2006/42/EC;  
• also complies with the provisions of the directive on electromagnetic compatibility 2014/30/EU as amended;  
• complies with the harmonised standard EN 12999-2:2020.  
Technical file in accordance with Directive 2006/42/EC, Annex VII A is compiled by:

Name: .....  
Address .....

This declaration is drawn up by:

Name: .....  
Position: .....

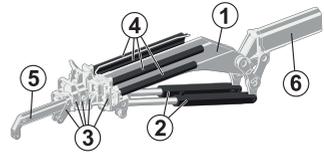


## 2. Structure and parts of the JIB

### 2.1. JIB Components

The JIB consists of the following components:

- (1) JIB boom
- (2) JIB cylinder
- (3) JIB extension
- (4) JIB extension cylinder
- (5) JIB manual extension [option]
- (6) JIB support / JIB long support [option]



### 3. Safety precautions and warnings

#### 3.1. Safety precautions and warnings



#### DANGER

If you have not studied the complete Operator's Manual for your crane and for your JIB carefully, it could lead to fatal accidents or serious damage.



#### DANGER

When using the JIB, always connect the JIB to the Progress control system. Without this connection, the JIB features are not activated.

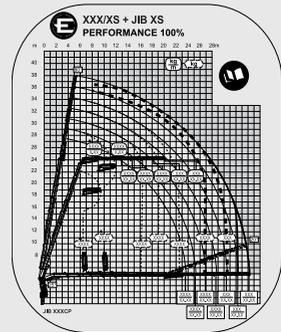


#### DANGER

##### JIB load diagram

Load diagram signs on the base show the maximum lifting capacity, if the crane can lift the 100% of the performance.

**Never exceed the JIB's maximum permitted load!**



#### NOTE

The lifting capacity indicated in the standard crane and crane + JIB load chart does not include the weight of the hose reel, winch, grapple, exchange solenoid valves, manual extensions and any other accessories fitted on the boom system.



#### DANGER

Always check that the JIB is firmly attached before use.



## **WARNING**

The operation of a crane with JIB is different from the operation of a crane without it. For example, there is a big difference when you need to put the crane in and out of transport position.

To prevent damage to the JIB: study this instruction carefully before operating the crane with the JIB.

## 4. Hydraulic connections

### 4.1. Hydraulic couplings [option]

Hydraulic couplings allow a faster connection and disconnection of each hydraulic line.

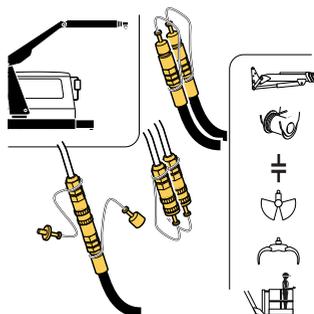


#### WARNING

- Switch off the control system and the PTO before connecting or disconnecting the connectors.
- Always remove/attach first the electrical connection before the hydraulic connection.
- Keep the electrical and hydraulic protection caps and bypass in good conditions and store them in a safe place.

#### To connect the hydraulic couplings you must:

1. Switch off the control system.
2. Disengage the PTO.
3. Connect the respective hydraulic couplings taking care with the corresponding identification.



#### NOTE

To prevent damage, do not change the hydraulic couplings position.

4. Reconnect the PTO and switch on the system, if needed.
5. Do a functional test of all movements of the accessories to verify that there are no mistakes in the connections.

#### To disconnect the hydraulic couplings you must:

1. Switch off the control system.
2. Disengage the PTO.
3. Disconnect the hydraulic couplings, and protect them with protective caps.
4. Reconnect the PTO and switch on the system, if needed.
5. Operate the crane to verify that all functions work correctly.

## 4.2. Multi-connection hydraulic quick couplings (quickfaster) [option]

Hydraulic quick couplings allow the connection of several hydraulic lines at the same time.

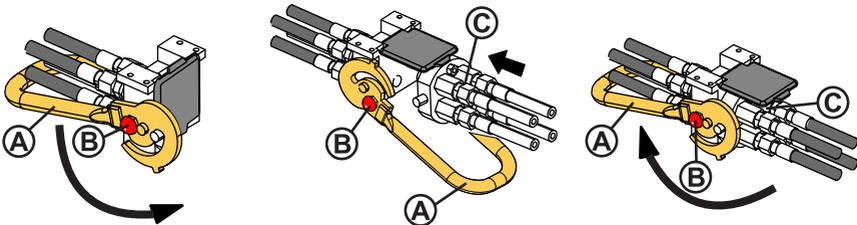


### WARNING

- Switch off the control system and the PTO before connecting or disconnecting the connectors.
- Always remove/attach first the electrical connection before the hydraulic connection.
- Keep the electrical and hydraulic protection caps and bypass in good conditions and store them in a safe place.

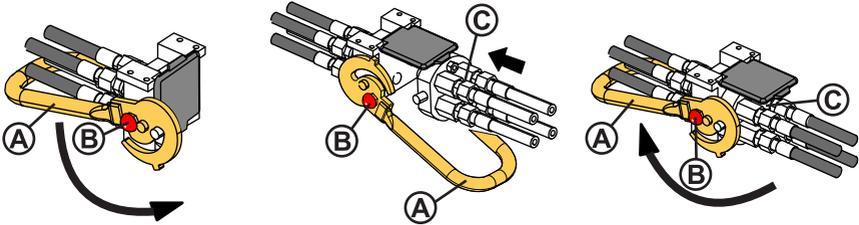
### To connect the hydraulic couplings you must:

1. Switch off the control system.
2. Disengage the PTO.
3. Push the red button (B) to release the lever (A).
4. Turn the lever (A) and connect the hydraulic coupling (C).
5. Turn the lever (A) to its initial position. Make sure that the red button (B) locks the connection correctly.
6. Reconnect the PTO and switch on the system, if needed.
7. Operate the crane.



**To disconnect the hydraulic couplings you must:**

1. Switch off the control system.
2. Disengage the PTO.
3. Push the red button **(B)** to release the lever **(A)**.
4. Turn the lever **(A)** and disconnect the hydraulic coupling **(C)**.
5. Turn the lever **(A)** to its initial position. Make sure that the red button **(B)** locks the connection correctly.
6. Reconnect the PTO and switch on the system, if needed.
7. Operate the crane.



## 5. Electrical connections [option]

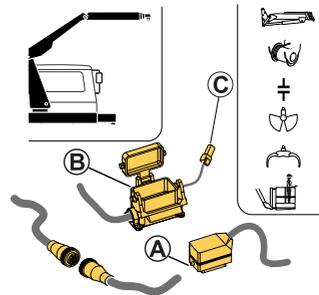


### WARNING

- Switch off the control system and the PTO before connecting or disconnecting the connectors.
- Always remove/attach first the electrical connection before the hydraulic connection.
- Keep the electrical and hydraulic protection caps and bypass in good conditions and store them in a safe place.

#### To connect the accessory electrically you must obey the following procedures:

- With the JIB, lifting platform and hoist on the JIB, connect the plug **(A)** mounted on the JIB to the box **(B)** mounted at the end of the crane hydraulic extensions.
- With the rotator and the grab, connect the connector **(A)** directly to the box **(B)**.
- With the hoist on the crane, plug the hoist connector into the pin **(C)**.



#### To disconnect the accessory electrically you must:

- Disconnect electrical connector plug **(A)** of the accessory from the socket **(B)** on the crane.
- With a hoist (with pulley on the crane), disconnect the connector and connect the electrical bypass on the cable **(C)** located on the crane.
- Insert the protection cap in the accessory electrical plug.

## 6. JIB operation

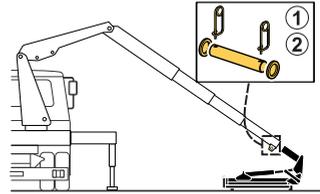
### 6.1. Fitting the JIB (without hoist)



#### WARNING

Take care, when fitting and dismantling the JIB that your fingers do not get trapped.

1. Dismantle the hook from the crane.
2. Pull out the shafts (1) and locking pins (2).
3. Position the crane boom immediately above the JIB.
4. Push in the stop button and switch off the operating system with the ON/OFF button.
5. Disengage the PTO.
6. Connect the JIB to the hydraulic system. (Refer to the content: hydraulic connections).



#### WARNING

Clean the quick connect coupling on the hydraulic system and on the JIB. Dirt will cause serious damage to the hydraulic system.

7. Connect the JIB to the control safety system. (Refer to the content: electrical connections).



#### DANGER

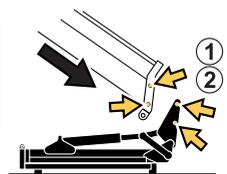
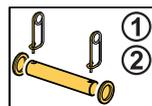
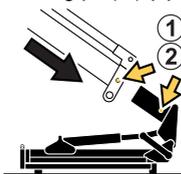
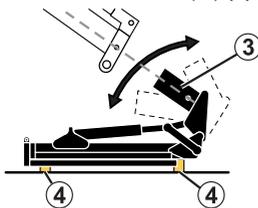
When using the JIB, always connect the JIB to the control safety system.

Never use the JIB without connecting it to the control safety system.

8. Fit the JIB

#### JIB with internal fitting

- a. Engage the PTO.
- b. Operate the JIB support (3) to be aligned with the crane boom extensions.
- c. Extend the crane boom extensions, fit the JIB support into the last extension and center the holes to be able to fit the shaft(-s) and locking pin(-s).
- d. Place the shaft(-s) (1) and locking pin(-s) (2).



**DANGER**

Check that the JIB is firmly attached!

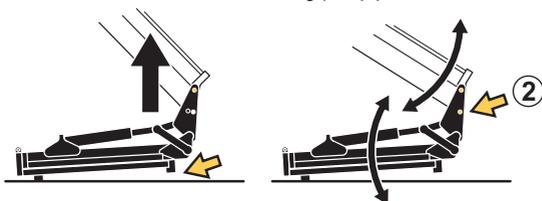
Check that the locking pin and the securing plate are firmly attached.

**JIB with external fitting**

- a. Engage the PTO
- b. Operate the JIB support to be aligned with the crane boom extensions.
- c. Extend the crane boom extensions and match the upper side of the jib attachment with welded rounded elements on top of the last extension.
- d. Align the extension upper hole with the JIB attachment upper hole, using both crane and jib movements.
- e. Place the upper shaft and locking pin (1).



- f. Slightly raise the whole jib with crane boom.
- g. Open the jib until the tip touches the ground if needed.
- h. Align the extension lower hole with the jib attachment lower hole using the opening or the closing JIB movements.
- i. Place the lower shaft and locking pin (2).

**DANGER**

Never stand in front of the boom system when fitting the jib.

**WARNING**

Always move the crane slowly and smoothly when fitting the jib.

Do not force the jib attachment parts with excessive pushing force.

9. Dismantle the JIB supports (4), if needed.

**CAUTION**

Make sure that the crane and the JIB stay within the width of the truck.

10. Make sure before operating the crane and the JIB that the JIB extensions are not mechanically locked.
11. Fit the hook to the JIB.



**NOTE**

Always use the applicable hook for the JIB.

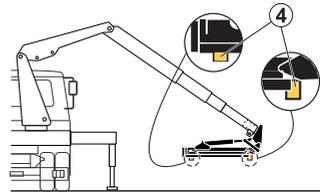
## 6.2. Dismantling the JIB (without hoist)



**WARNING**

Take care, when fitting and dismantling the JIB that your fingers do not get trapped. Dismantle the JIB carefully. Rough and careless handling can damage the JIB.

1. Mount the JIB supports (4).
2. Retract the JIB extensions and lock them mechanically, if needed.
3. Extend the 2nd boom cylinder totally.
4. Extend the crane extension at least 800 mm for standard JIB support.
5. Lower the JIB very carefully onto a leveled surface.

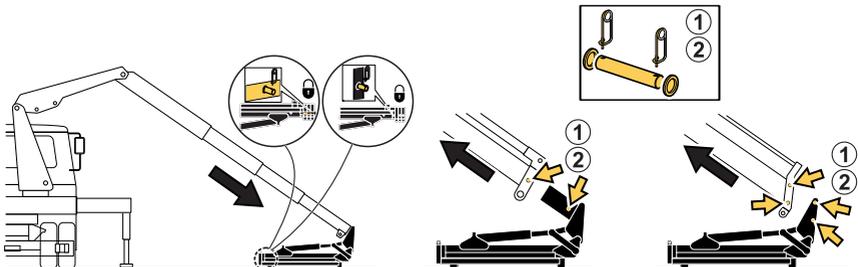


Check that the tip of the crane and the JIB are not damaged in this operation.

6. Use the JIB cylinder function to align the JIB support and the crane extensions.
7. Remove the JIB

**JIB with internal fitting**

- a. Pull out the shafts (1) and locking pins (2). The JIB is now free from the crane.
- b. Carefully retract the crane extension away from the JIB.



- c. Disengage the PTO.

**JIB with external fitting**

- a. Slightly raise the whole jib.
- b. Open the jib until the tip touches the ground.
- c. Free the lower shaft with small and smooth opening or closing JIB movements.
- d. Pull out the lower shaft and locking lower pin.

- e. Put the JIB on the ground with the crane boom system.
- f. Free the upper shaft with small and smooth crane and JIB movements.
- g. Pull out the lower shaft and locking upper pin.
- h. Disengage the PTO.

**DANGER**

Never stand in front of the boom system when dismantling the jib.

**WARNING**

Always move the crane slowly and smoothly when dismantling the jib.

Do not force the jib attachment parts with excessive pushing force.

8. Disconnect the JIB from the hydraulic system. (Refer to the content: hydraulic connections).
9. Disconnect the cable contact. (Refer to the content: electrical connections).

**CAUTION**

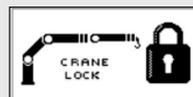
Do not forget to protect them with the plastic caps supplied.

10. Place the shafts (1) and locking pins (2).

## 6.3. Operate the crane with JIB (without hoist) out of transport position

**WARNING**

- A crane with interchangeable equipment and/or optional crane components can differ from the operations described in this section. For this reason, study the operating instructions for any interchangeable equipment and/or optional crane components carefully.
- Always make sure that the stabiliser extensions and legs are in working position and securely locked before operating the boom system out of the parking position. Otherwise, the message 'CRANE LOCK' will appear on the controller display.
- We recommend that you do these operations slowly or use the option for reduced speed.





### DANGER

- With remote-controlled cranes, stay in a safe area while the boom system is moving.
- If the crane is equipped with a high seat with the controller, operate the boom system out of transport position from the ground.



### WARNING

Always operate a crane with a JIB very carefully. The space for moving the boom system and the JIB is limited. Make sure that there is enough space available.

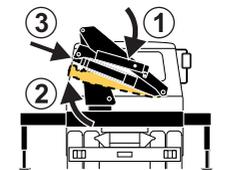
Careless or rough crane movements can seriously damage the crane and the JIB.



### NOTE

Always refer to your specific crane operator's manual for more information about this operation.

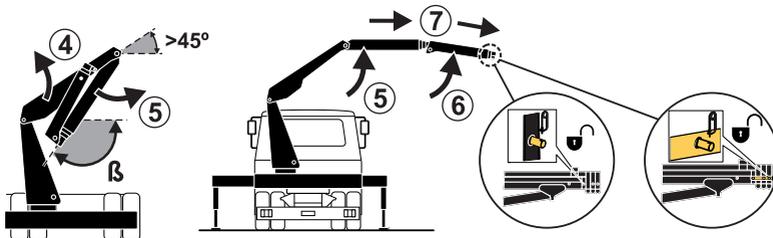
1. Operate the JIB against the 2nd boom (1).
2. Operate the 2nd boom against the 1st boom (2) to raise it from its rest position on the column.
3. Retract the crane extensions (3).



### CAUTION

Do these operations slowly to prevent damage to the crane and JIB.

4. Raise the 1st boom (4) of about 45° or until the boom deployment assistance by Progress ( $\beta < 135^\circ$ ) allows you to operate the 2nd boom.
5. Raise the 2nd boom (5) until you have enough space to safely open the JIB.



**CAUTION**

Unlock the JIB extensions. If you extend the JIB extensions when they are locked, you will lead to structural damage of the crane and JIB.

6. Slew the crane to the working position.
7. If needed, extend the crane and JIB extensions (6).

## 6.4. Working with the JIB

### 6.4.1. Operation with the 5th and 6th functions

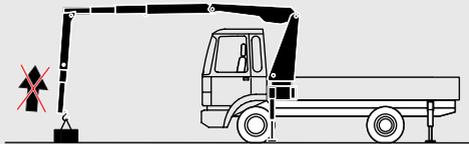
The JIB is operated with the 5th and 6th functions of the controller or from the main control valve (only for emergency operations).

**WARNING**

Do not push the JIB tip against the ground.  
You will damage it.

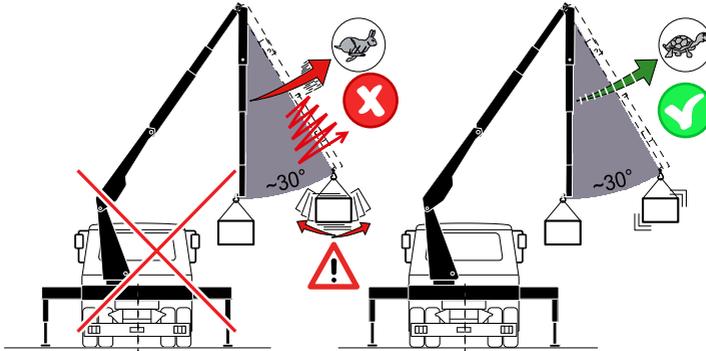
**CAUTION**

When the JIB is below the horizontal position, do not retract the extensions of the JIB to lift the load.



### Crane speed

- With the boom system fully extended: work at low crane speed.
- Raise the JIB very slowly and gradually for the first 30° to avoid uncontrolled oscillations.



### DANGER

- There is a risk of damaging the hook, crane or load.
- There is a risk of causing the fall of the load.

### 6.4.2. How to achieve sufficient reach

1. First extend the crane extensions completely.
2. Then extend the JIB as far as needed.



### WARNING

In high boom positions, retract the JIB extensions before retracting crane extensions. Otherwise, unexpected side movements of the boom system can occur, causing dangerous movements of the load.



### CAUTION

The extensions might not retract in sequence.

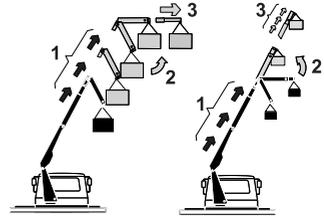
### 6.4.3. How to get the maximum performance with the JIB

These pictures show the right procedure to operate the loads to get the maximum performance.

To get this maximum performance you must disengage the HSS feature.

In order to lift maximum loads in certain cases, you must apply a special hook or mechanically lock the JIB extensions.

Sometimes to lift the maximum loads, you must apply a special hook or a locking device of the extensions. A mark (\*, ■, ●, ▲) in the load diagram next to the capacity value indicates where this is necessary.



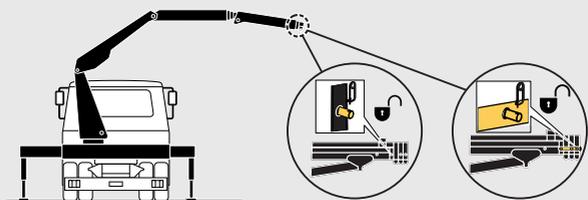
*	Lifting by fixed hook.
■	With a special hook.
■	Maximum load of cranes / JIB limited by maximum hook coupling and/or connection capacity.
●	Maximum load that can be lifted by mechanically locked extensions.
▲	2nd boom and/or JIB not more than -30° below the horizontal. (For 2nd boom/JIB angles greater than -30°, boom extensions must be mechanically locked).

### 6.4.4. Locking the JIB extensions



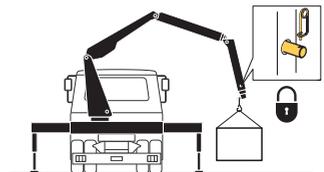
**CAUTION**

Do not extend/retract the JIB extensions if they are locked by the special pin. It can seriously damage the crane and the JIB.



#### For special liftings

To lift heavy loads below the horizontal line, it may be necessary to lock the JIB extensions by a special pin (see the load diagram and the technical data for further information).



### For transport position

For further information, refer to the content: driving on the road with the crane.

### 6.4.5. Operating conditions JIB

The JIB operating angle position varies depending on version:



#### WARNING

Do not slew the crane until the load is completely free of the ground.



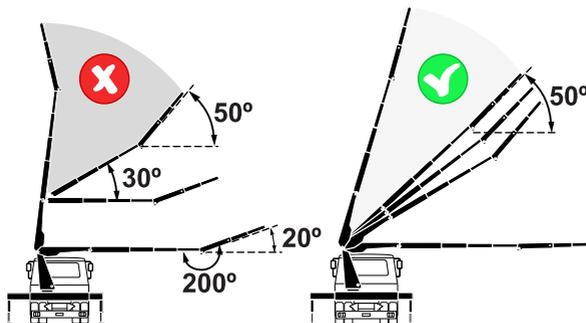
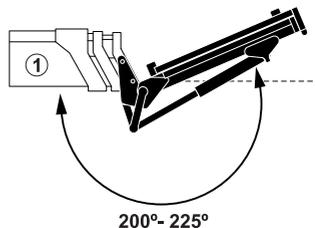
#### DANGER

Never exceed the JIB's maximum permitted load.

- **Maximum working angle for the JIB is higher than 180° (1)**

Operating JIB angles over 180° are permitted only when the JIB boom is under 50° from the horizontal.

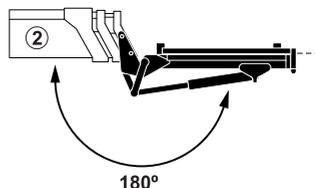
If the JIB boom is over 50° from the horizontal, the maximum angle position of the JIB is the alignment with the 2nd boom and crane extensions.



- **Maximum working angle for the 2nd JIB is 180° (2)**

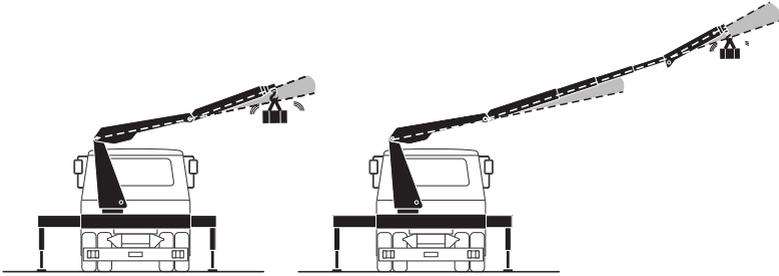
When the 2nd boom is in vertical positions, the speed could be reduced to ensure a higher sensitivity and safety.

Slewing speed may be decreased with great outreaches and/or loads.



### 6.4.6. MAX boom elevation (tipping)

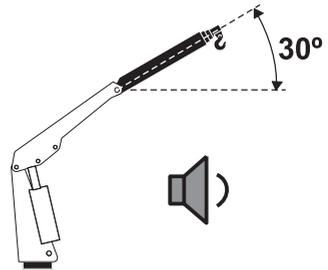
This feature allows the 2nd boom and the JIB to reach a greater alignment in relation to the previous boom or extension.



• **2nd boom tipping check**

The 2nd boom can tip in relation to the 1st boom. When the 2nd boom goes beyond a 30° angle, the system emits a single sound. The movements blocked by the load limiter vary according to the 2nd boom angle.

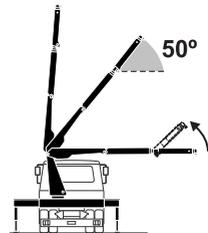
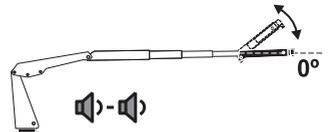
If the 1st boom is moved to the max verticality position when the 2nd boom is in tipping position, the system blocks the lifting movement when the 2nd boom reaches a verticality of approximately 80° (max verticality).



• **JIB tipping check**

The JIB can tip in relation to the 2nd boom. When the JIB goes beyond the alignment with the 2nd boom, the system emits a double sound, both raising and lowering the JIB.

When the JIB is in tipping position, if the crane booms are in the max. verticality position, the system blocks the lifting movements when the JIB reaches a 50° verticality (Max. verticality allowed under the JIB position). The displays show the crane movements blocked.



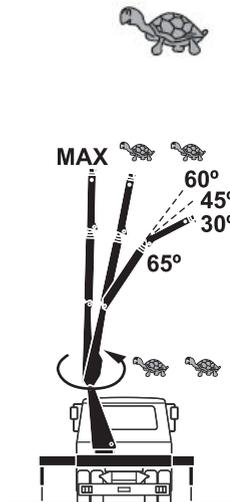
**NOTE**

The configuration with the basic crane in completely vertical position is possible only if the JIB is not in tipping position.

### 6.4.7. MAX speed limitation (automatic slow-down)

This feature is managed by Progress and keeps the operation safe and efficient in one or more of the following conditions.

- **Safe operation with the crane in vertical position (2nd boom over 50° till the max verticality) when:**
  - working with the crane boom system in vertical position to prevent sudden movements that could damage the load and the crane.
  - operating a quick lowering movement starting from the vertical boom system position (the load could hit the boom and the descent could become not easy to control, compromising the load stability).
  - operating quick slewing movements with the boom extensions fully extended in vertical positions.
  - extending quickly the boom extensions.
  - having lateral deflection on the boom system over 70° more than 3°.



#### NOTE

The lateral deflection sensor (if installed) blocks the crane movements causing side swaying on the last boom extension, and the warning message 'B4 010' appears on the controller display. To solve it, operate the crane to the transport position and level the vehicle completely. If the error does not disappear, go to an authorised service workshop.

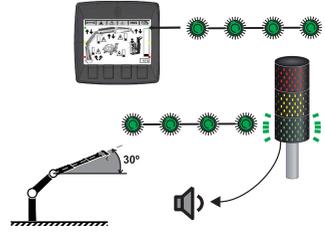


#### NOTE

When working in vertical position, the load swinging can generate a not-real overload detection. In these cases, push the reset button to continue with crane operations.

- **When heavy loads are applied to the crane** to avoid over-pressures.
- **With flow sharing** to allow simultaneous crane movements.
- **When there is a need to limit the maximum crane hook speed** to prevent damage to the crane or the load.

- **When working with the “MAX boom elevation”** to avoid overturning the vehicle. The 2nd boom can go against the 1st boom, when the 2nd boom goes over a 30° angle, you will have different warnings on the crane.



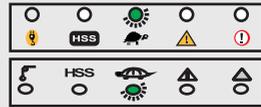
**WARNING**

When the conditions that activate the automatic slow-down are no longer detected, the crane speed automatically increases.



**NOTE**

When the maximum speed is reduced by Progress for safety reasons (despite any activated feature), the green light blinks.



**6.5. Operate the crane with JIB (without hoist) into transport position**



**WARNING**

A crane with interchangeable equipment and/or optional crane components can differ from the operations described in this section. For this reason, study the operating instructions for any interchangeable equipment and/or optional crane components carefully.



**DANGER**

- With remote controlled cranes, stay in a safety area while the boom system is moving.
- We recommend that you do these operations slowly or use the option for reduced speed.





### WARNING

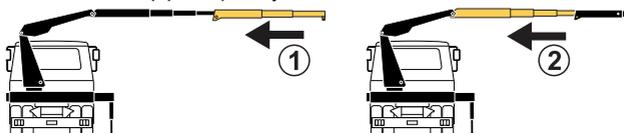
Always operate a crane with a JIB very carefully. The space for moving the boom system and the JIB is limited. Make sure that there is enough space. Careless or rough crane movements can seriously damage the crane and the JIB.



### NOTE

Always refer to your specific crane operator's manual for more information about this operation.

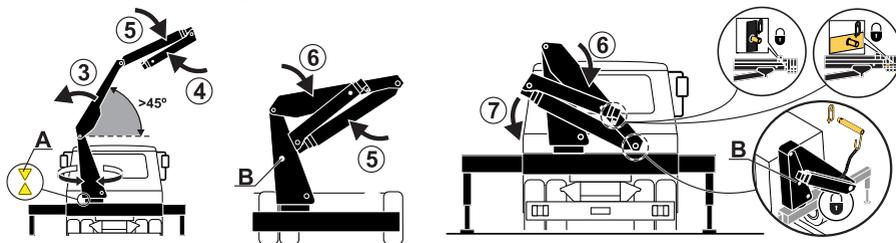
1. Retract the JIB extensions (1) completely.
2. Retract the crane extensions (2) completely.



### CAUTION

The extensions might not retract in sequence.

3. Raise the 1st boom (3) of about 60° or until the boom deployment assistance by Progress allows you to operate the 2nd boom.
4. Slew the crane to the transport position. Check that the yellow arrows signs (A) on the column and on the base are aligned.
5. Operate the JIB towards the 2nd boom (4) completely.
6. Operate the 2nd boom against the 1st boom (5) completely.



### CAUTION

Be very careful not to cause damage to the slewing motors.

7. Lower the 1st boom completely (6) to the parking support of the base.



### CAUTION

Do these operations slowly not to cause damage to the parking support.

8. Lightly operate the 2nd boom (7) against the parking support (B) of the column until it has contact with the support.



**CAUTION**

Take care not to cause damage to the 2nd boom and the support during these operations.

Do not apply too much force on the parking support.

9. Insert the safety pin that locks the 1st boom (if installed).
10. Lock the JIB extensions.
11. Fold the hook.

## 6.6. Overload protection (Load limiter device)

### 6.6.1. Crane overload protection

Progress not only prevents overloading of the crane stopping specific crane movements when the maximum operating performance is reached, but it also controls the speed of the crane/hook tip. This way, if more movements are carried out at the same time, the crane tip/hook speed does not exceed the safety values that would cause control problems during operation (MAX SPEED LIMITATION feature).

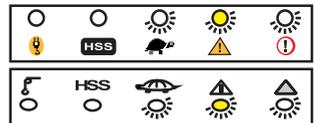
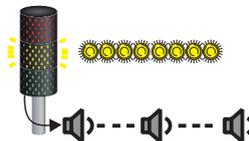


**NOTE**

For more information about the visual warning on the User interface with LEDs, refer to the content: "[Indicator LEDs on the User Interface](#)".

Thus, this is what can happen while you operate the crane:

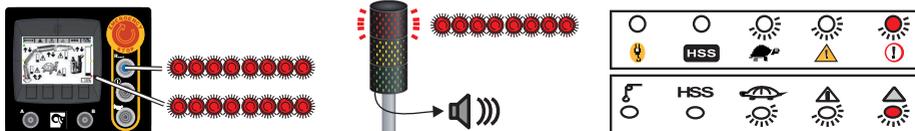
- **The crane automatically slows down some movements even if no load is on the hook.**  
This occurs automatically when:
  - a. The crane reaches special configurations, for example when it approaches the crane boom max verticality or when the cylinder is reaching its end of stroke.
  - b. You activate several simultaneous movements with the controller. As the available oil is proportionally distributed in the valve so that all movements receive enough oil (refer to the FLOW SHARING feature), the speed of the first active movements is reduced.
- **A movement in one direction is blocked** when the crane reaches the max allowed geometric configuration.



• **Slewing movements stopped.**

When operating the crane, Progress stops the slewing movements if the crane is about to go into an area where the vehicle stability is low.

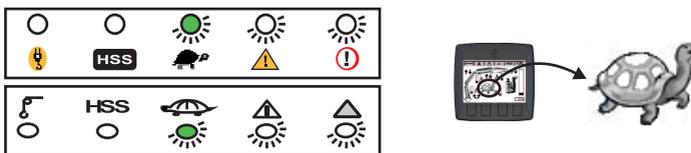
Retract the boom extensions to be able to continue with the slewing operation.



• **Crane with load on the hook.**

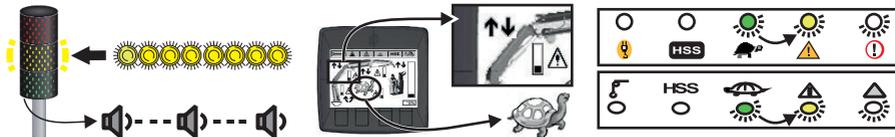
When the pressure inside a boom moving cylinder (1st boom, 2nd boom, JIB) approaches 70% of the max pressure allowed (max pressure = max crane performance), the slow-down begins.

- The green LED turns on and the turtle icon is shown.



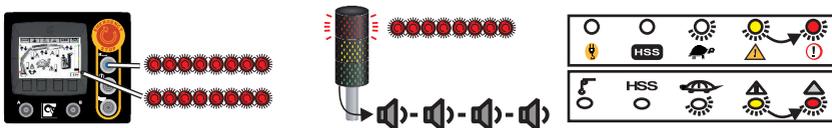
When you operate the crane and reach the 90% of the max performance:

- The yellow lamp on the column lights is flashing.
- A slowly intermittent sound is activated on the horn.
- The yellow LED goes on.



• **When 100% of the maximum permitted pressure is reached, the system stops all functions that increase the pressure.**

- On the column lamp, the red light is flashing.
- A quick intermittent sound is activated from the horn.
- On the display panel, the red light is flashing.
- On the User Interface, the red light of the reset LED is flashing.
- The yellow LED on the controller turns off and the red LED is flashing.



### Unblocking crane movements in overload situations

If the maximum lifting capacity is reached, the system stops all crane movements that could worsen the stability. You can see on the display panel and on the controller which movements are not allowed (100% overload) and which are still permitted to correct the overload situation.

Display	SCANRECO	SCANRECO HD



#### NOTE

If you are in an overload situation where no movement is allowed, follow the procedure: “Section 6.6.3: Release the overload protection (page 34)”.

## 6.6.2. JIB overload protection

Progress prevents the crane but also the JIB from being overloaded.

The overload situations for the JIB are the same as for the crane, but it has its own indicators in the user interface.

### LEDs on the user interface

	LEDs flashing slowly	LEDs flashing fast	LEDs steady	
JIB (1)	90% of max. performance	100% of max. performance	Overloaded	

### Symbols on the display

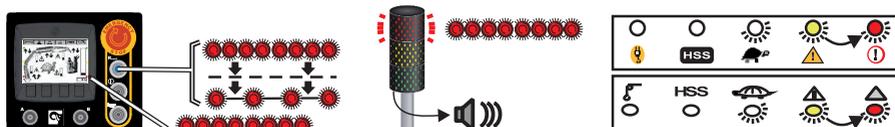
<b>WARNING OR ERROR ALERT (2)</b>	
Indicates that the pressure in the lifting cylinder is 90% or more of the permissible one.	
<b>WORKING PRESSURE BAR (3)</b>	
Indicates the percentage (%) of pressure inside the cylinder of each single movement.	

### 6.6.3. Release the overload protection

If all functions have been blocked due to an overload situation, it is possible to temporarily release it and operate an appropriate crane function to correct the overload situation.

**Proceed as follows:**

1. Push the RESET button on the controller. The LED on the RESET button turns off, the LED on the controller becomes yellow, and the overload release is active in 10-second intervals.
2. Operate the crane using smooth and gentle movements to get the crane out of a locked position. During this time, you can operate only one function at a time and never the boom extension out.



3. After a 10-second interval, the red lamp and the RESET button LED blink for 30 seconds (the waiting time).



#### NOTE

When operating the boom system/JIB over 70°, the waiting time is reduced to five seconds.

After this time, it is possible to operate another movement following the same procedure.



#### NOTE

The procedure described above can be repeated up to five times. After that, only the operation to retract the boom extensions is available.



#### WARNING

Only use the overload release to get the crane out of a locked position. Never use the overload release to overload the crane deliberately!



#### NOTE

In case of a crane breakdown, the use of the overload release will be part of the investigation. If the use of overload release is too excessive, it might affect the warranty.

## 6.7. Manual extensions in JIB



#### NOTE

Manual extensions in JIB are available for non-CE markets.

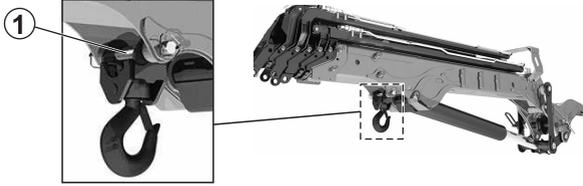
Refer to the section “manual extensions” on your crane operator’s manual for further information.

## 6.8. Special hook position

In some JIB models, there is a special hook position where you can place the hook to handle heavy loads.

### Hook on the fixed JIB boom attachment [option]

Place the applicable hook on the JIB boom attachment (1).



### WARNING

The loads you can lift with the fixed hook change depend on the crane extension you have extended. Refer to the load diagram placed on the JIB.

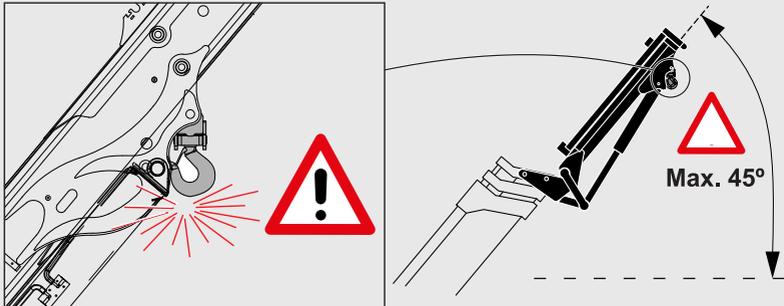
EFFER MODEL + JIB XL6S	
Crane extension position for Maximum working load (Pmax FIX)	
Crane extension	*Pmax FIX Maximum working load
8th extension	--- kg
7th extension	--- kg
6th extension	--- kg
5th extension	--- kg

\*Load which can be lifted by FIX HOOK



### DANGER

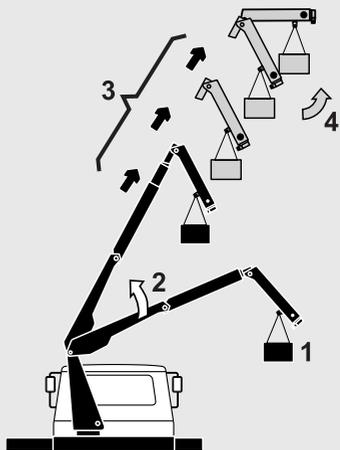
- With the load applied to the fixed hook, the maximum angle for the JIB boom is 45° with the horizontal.
- There is a risk of damaging the hook, crane or load if you exceed the maximum angle.
- There is a risk of breaking the hook and cause the fall of the load.



**WARNING**

Lifting a load attached to the fixed hook to the maximum height, requires the appropriate sequence of the movements:

1. Lift the load with the JIB boom points down and with an appropriate angle to avoid hitting the load against the crane.
2. Raise the 1st boom of the crane to the maximum high position.
3. Extend the crane extensions until you reach the desired height.
4. Raise the JIB boom to the horizontal position.



## 7. JIB operation (with hoist)

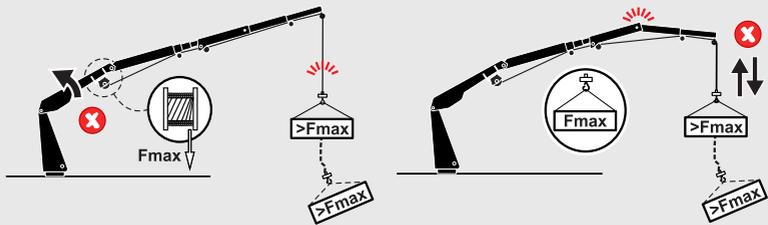
If a hoist is mounted on the crane, the rope is guided by intermediate pulleys mounted on the extensions and on the JIB, they could be different depending on the crane configuration.



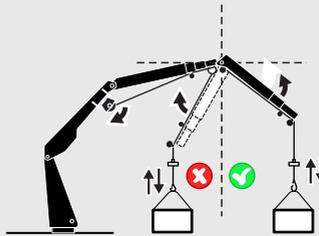
### DANGER

These situations are supervised by safety devices:

- Do not use the crane and/or JIB to lift greater loads than the permitted by the hoist.
- Do not use the hoist to lift greater loads than the permitted by the crane and/or JIB.

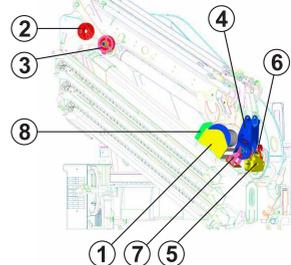


- You must not lift loads with the hoist with the wrong side of the boom system.



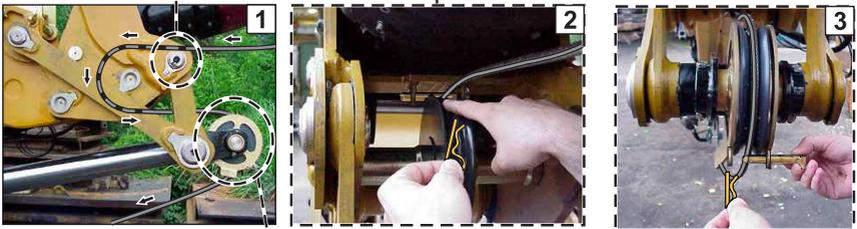
### 7.1. Hoist components fitted on the crane and JIB

- (1) Hoist
- (2) 1st pulley on the JIB attachment
- (3) 2nd pulley on the JIB cylinder attachment
- (4) JIB top-roller (pulley on the tip of the JIB)
- (5) Counterweight
- (6) Hook
- (7) Extensions locking support
- (8) JIB support

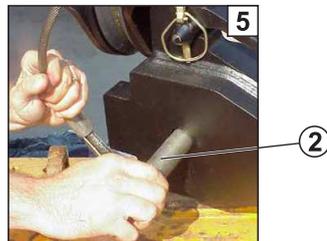


## 7.2. Fitting the JIB (with hoist)

1. Fit the JIB according to: Fitting the JIB (without hoist).
2. Make sure that the electrical connections between the JIB and hoist are properly connected. Refer to the content: electrical connections in the hoist operator's manual.
3. Operate the crane and the JIB carefully in order to have access to the intermediate pulleys and top-roller.
4. Remove the rope from the applicable support where it is attached.
5. Unroll the rope from the hoist (6-8 m approx.). Keep the end part well stretched.
6. Guide the rope through the pulleys on the JIB **[1]**:
  - a. Unlock and disassemble the pins on the 1st pulley of the JIB attachment **[2]**.
  - b. Pass the rope through the pulley. Reinstall and lock the pins.
  - c. Unlock and disassemble the pin on the 2nd pulley of the JIB cylinder attachment **[3]**.
  - d. Pass the rope through the pulley. Reinstall and lock the pin.



7. Guide the rope through the top-roller on the JIB:
  - a. Unlock and disassemble the pin **(1)** on the top-roller of the JIB **[4]**.
  - b. Pass the rope through the top-roller. Reinstall and lock the pin **(1)**.
  - c. Unlock and disassemble the pin **(2)** on the counterweight **[5]**.
  - d. Insert the rope in the counterweight. Reinstall and lock the pin **(2)**.



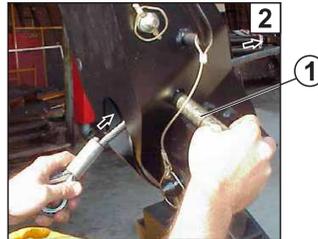
## 7.3. Dismantling the JIB (with hoist)



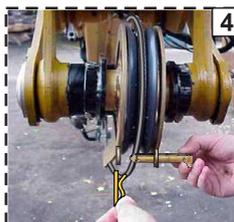
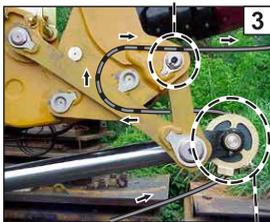
### WARNING

Take care, when fitting and dismantling the JIB that your fingers do not get trapped. Dismantle the JIB carefully. Rough and careless handling can damage the JIB.

1. Operate the crane and the JIB carefully in order to have access to the intermediate pulleys and top-roller.
2. Disconnect the electrical connections between the JIB and hoist. Refer to the content: electrical connections in the hoist operator's manual.
3. Remove the rope from the top-roller on the JIB:
  - a. Unlock and disassemble the pin (2) on the counterweight [1].
  - b. Remove the rope from the counterweight. Reinstall and lock the pin (2).
  - c. Unlock and disassemble the pin (1) on the top-roller of the JIB [2].
  - d. Remove the rope from the top-roller. Reinstall and lock the pin (1).



4. Remove the rope from the pulleys on the JIB [3]:
  - a. Unlock and disassemble the pins on the 2nd pulley of the JIB cylinder attachment [4].
  - b. Remove the rope from the pulley. Reinstall and lock the pin.
  - c. Unlock and disassemble the pins on the 1st pulley of the JIB attachment [5].
  - d. Remove the rope from the pulley. Reinstall and lock the pins.



5. Roll up the rope carefully.



### WARNING

To obtain a correct rolling up, the rope has to be guided. A wrong rolling up can result in damage on rope or unexpected movements.

6. Attach the rope to the applicable support.
7. Dismantle the JIB according to: Dismantling the JIB (without hoist).

## 7.4. Operate the crane with JIB (with hoist) out of transport position



### DANGER

Before moving the boom system, unroll the rope far enough to release the crane from the transport position.



### NOTE

Keep the rope loose:

- Move the selector to the hoist mode on your controller.
- Use the controller to roll/unroll the rope while you are operating the crane into transport position.

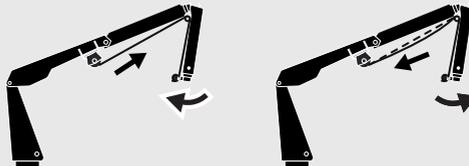
1. Follow the procedure: Operate the crane with JIB (without hoist) out of transport position.



### CAUTION

Pay careful attention to the rope tension when folding and unfolding the boom system/JIB:

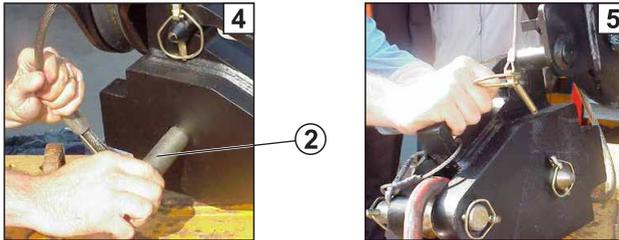
- When folding the boom system/JIB, be careful not to give an excessive tension to the rope, carefully unroll the hoist rope, if needed.
- When unfolding the boom system/JIB, be careful not to keep too loose the rope, carefully roll the hoist rope, if needed.



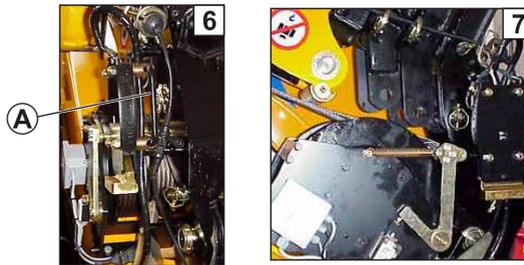
2. Unfasten the hook from the fixing chain on the counterweight **[1]**.
3. Unlock and disassemble the pin **(1)** on the top-roller.
4. Unlock and disassemble the pin **(3)** to remove the rope from the top-roller **[2]**.
5. Rotate the swivelling hook attachment part. Guide the rope through the top-roller **[3]**.
6. Reinstall and lock the pins **(1)** and **(3)** on the top-roller.



7. Unlock and disassemble the pin (2) on the counterweight [4].
8. Attach the rope to the counterweight. Reinstall and lock the pin (2).
9. Unfasten the counterweight from the top-roller [5]. Reinstall and lock the pin.



10. Rotate the counterweight carefully by 90° with the help of the appropriate handle.
11. Unfasten the electrical end of stroke device [6] from the applicable handle (A) on the top-roller [7].
12. Close the applicable handle to retract the rope from the hoist end stroke device.



## 7.5. Operate the crane with JIB (with hoist) into transport position



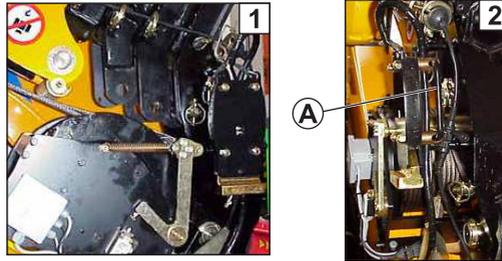
### NOTE

Keep the rope loose:

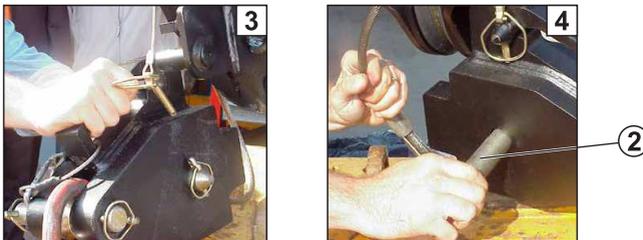
- Move the selector to the hoist mode on your controller.
- Use the controller to roll/unroll the rope while you are operating the crane into transport position.

1. Operate the crane to reach the boom system and JIB horizontal position.
2. Retract the JIB and crane extensions completely.

3. Open the applicable handle to extend the rope from the hoist end of stroke device.
4. Move the electrical end of stroke device to the top-roller [1] and fasten it [2] to the applicable handle (A).



5. Operate the crane carefully until the counterweight is laying on the ground. Rotate it by 90° with the help of the appropriate handle.
6. Move the top-roller next to the counterweight. Put the top-roller vertically and keep the JIB in a sloped position.
7. Attach the counterweight in the applicable top-roller pin [3] and lock it with the cotter-pin. Thus, the counterweight is fastened to the top-roller.
8. Unlock and disassemble the pin (2) on the counterweight [4].
9. Remove the rope from the counterweight. Reinstall and lock the pin (2).



10. Rotate the swivelling hook attachment part, after unlocking and disassembling the pin (1) and (3) on the top-roller [5] and [6].
11. Put the rope inside of the top-roller [6] and lock it, reinstalling and locking the pin (3).
12. Reinstall and lock the pin (1).



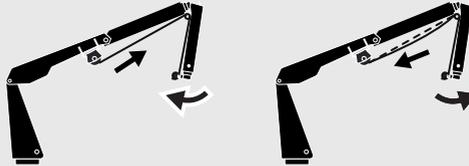
13. Fasten the hook to the counterweight with the fixing chain [7].
14. Follow the procedure: Operate the crane with JIB (without hoist) into transport position.



**CAUTION**

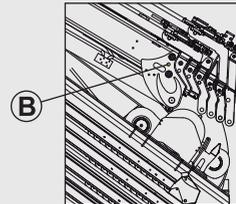
Pay careful attention to the rope tension when folding and unfolding the boom system/JIB:

- When folding the boom system/JIB, be careful not to give an excessive tension to the rope, carefully unroll the hoist rope, if needed.
- When unfolding the boom system/JIB, be careful not to keep too loose the rope, carefully roll the hoist rope, if needed.



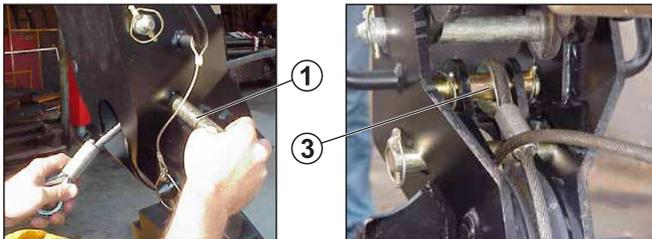
**CAUTION**

Do not remove the top-roller mounted on the JIB when operating the crane into transport position. During this operation without the top-roller mounted on the crane, insert a pin in the hole (B) to lock the JIB extensions.



**7.6. Lifting loads without dismantling the hoist**

1. Connect the hook with its spacer to the swiveling lugs inside the top-roller.
2. Disassemble the pins (1) and (3) on the top-roller.



**NOTE**

- Lifting loads with a hook without dismantling the top-roller is permitted. Take in consideration that the lifting loads could differ from the load diagram due to the weight and position of the top-roller.
- Make sure that the rope keeps in its position and straight enough during the operations.

## 8. 2nd JIB operation

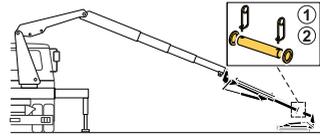
### 8.1. Fitting the 2nd JIB



#### WARNING

Take care, when fitting and dismantling the 2nd JIB that your fingers do not get trapped.

1. Dismantle the hook from the crane.
2. Pull out the shafts (1) and locking pins (2).
3. Position the JIB immediately above the 2nd JIB.
4. Push in the stop button and switch off the operating system with the ON/OFF button.
5. Disengage the PTO.
6. Connect the 2nd JIB to the hydraulic system. (Refer to the content: hydraulic connections).



#### WARNING

Clean the quick connect coupling on the hydraulic system and on the 2nd JIB. Dirt will cause serious damage to the hydraulic system.

7. Connect the 2nd JIB to the control safety system. (Refer to the content: electrical connections).

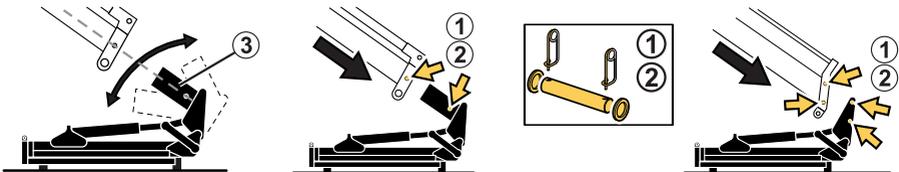


#### DANGER

When using the 2nd JIB, always connect the 2nd JIB to the control safety system.

Never use the 2nd JIB without connecting it to the control safety system.

8. Fit the 2nd JIB
  - a. Engage the PTO.
  - b. Operate the 2nd JIB support (3) to be aligned with the JIB extensions.
  - c. Extend the JIB extensions, fit the 2nd JIB support into the last extension and center the holes to be able to fit the shaft(-s) and locking pin(-s).
  - d. Place the shaft(-s) (1) and locking pin(-s) (2).



**DANGER**

Check that the 2nd JIB is firmly attached!

Check that the locking pin and the securing plate are firmly attached.

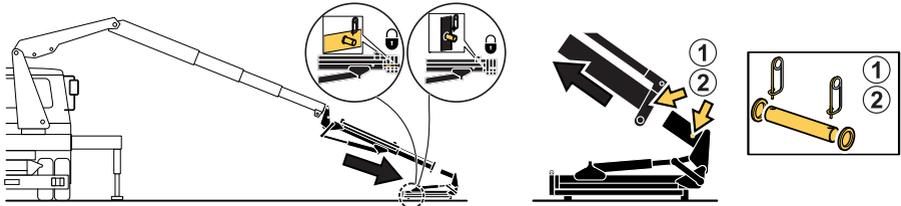
9. Make sure before operating the crane, JIB and 2nd JIB that the JIB and 2nd JIB extensions are not mechanically locked.

## 8.2. Dismantling the 2nd JIB

**WARNING**

Take care, when fitting and dismantling the 2nd JIB that your fingers do not get trapped. Dismantle the 2nd JIB carefully. Rough and careless handling can damage the 2nd JIB.

1. Retract the 2nd JIB extensions and lock them mechanically, if needed.
2. Extend the 2nd boom cylinder totally.
3. Extend the JIB extension at least 800 mm for standard 2nd JIB support.
4. Lower the 2nd JIB very carefully onto a leveled surface.  
Check that the tip of the JIB and the 2nd JIB are not damaged in this operation.
5. Use the 2nd JIB cylinder function to align the 2nd JIB support and the JIB extensions.
6. Pull out the shafts **(1)** and locking pins **(2)**. The 2nd JIB is now free from the JIB.
7. Carefully retract the JIB extension away from the 2nd JIB.



8. Disengage the PTO.
9. Disconnect the 2nd JIB from the hydraulic system.(Refer to the content: hydraulic connections).
10. Disconnect the cable contact. (Refer to the content: electrical connections).

**CAUTION**

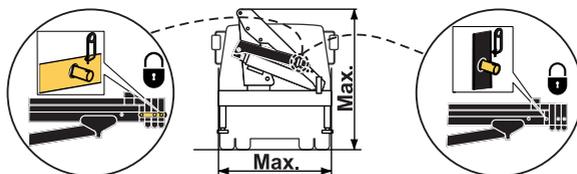
Do not forget to protect them with the plastic caps supplied.

11. Place the shafts **(1)** and locking pins **(2)**.

## 9. Driving on the road with the JIB/2nd JIB

### JIB

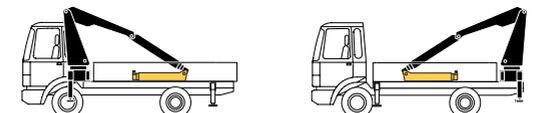
After use, always put the crane and JIB into the transport position. Retract the JIB extensions completely and lock them with the transport pin. It could be different from the picture depending on the crane and JIB configuration.



### CAUTION

Make sure that the crane and JIB folded do not exceed the permitted dimensions.

When you have to park the boom on the load bed, secure the boom and the lifting accessories to prevent any unintentional movement of the crane and the lifting accessories. This possible transport position must be approved by the crane installer.



### JIB and hoist

Before driving on roads, make sure that the end of the hoist rope is carefully fastened to the applicable support, and slightly taut.

The rope, top roller, intermediate pulleys and pins must be positioned and carefully fastened to avoid creating a hazard. The possibility of keeping these parts connected to the crane while driving depends on the crane configuration and the maximum overall dimensions allowed by current regulations. It is the operator's responsibility to ensure compliance with these regulations and make sure that the driving configuration is correct and safe.

### 2nd JIB

While driving on the road the 2nd JIB must be disassembled for transport.



### NOTE

- For further instructions, refer to the vehicle's manual(s).
- Make sure that you always obey local traffic rules when driving with a crane.

## 10. Maintenance

### 10.1. Maintenance and service

Follow the instructions in this manual and the Operator's Manual for your crane.

### 10.2. General greasing of the cranes

Incorrect or insufficient lubrication of a crane is the number one cause of premature failure.

Lubricate all parts in the crane marked with the symbol 



#### WARNING

Before and after a long stop of the crane, lubrication is necessary (especially after a winter shutdown).



#### WARNING

Follow the lubrication schedule exactly. If you do not do so, you can cause serious damage to the crane, interchangeable equipment and/or optional crane component, if mounted.

Procedure:

1. Shut down the crane.
2. Make sure that all the lubrication points are clean before lubricating. Dirt can damage the parts.
3. Lubricate all points in each section.
4. Operate the crane through the full cycle for each section. Moving the lubricated parts is very important to get the full and correct lubrication of all moving components.
5. Shut down the crane and repeat the lubrication.
6. Lubrication is finished when the grease spills out from the ends. Clean the excess grease.



#### WARNING

Personnel must not try to work on a moving/activated crane as there is a risk of serious injury or death.

You will need different tools based on the area to lubricate: a pressure grease pump , an oiler , a brush .



#### CAUTION

When you use pressure grease pumps, open the plastic safety guard of the nipple and close it at the end.

## Greases

- Use molybdenum-disulfide grease (for bronze-made components).
- Use lithium-based grease AGIP MUEP2 or equivalent, for the booms, JIB, and stabiliser extensions.



### CAUTION

Do not mix greases with different characteristics. If you change from one kind to another, fully remove the old grease by applying a large quantity of the new one.

### Recommended greases:

Use Nilex 2 (Nils) or grease type NILS ATOMIC RH for cranes equipped with centralised or automatic greasing system.

### Alternative:

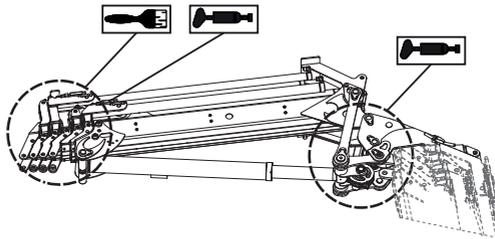
FUCHS LUBRITECK: STABYL AX 2, AGIP: ROCOL SAPPHIRE AQUA 2, AGIP: AC 2.

### Lubricating oil:

For oil lubrication, use class SAE 30 (maximum ambient temperature 20 °C) and class SAE 90 (for ambient temperatures higher than 20 °C).

## 10.3. Lubrication schedule

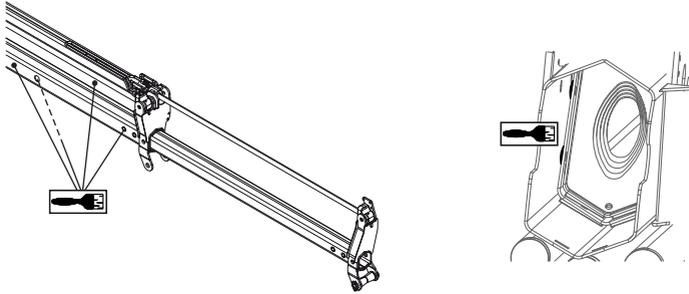
1. Extend the extensions totally.
2. Lubricate all marked points.



## 10.4. Lubrication of the boom system

### Extensions

Clean the surfaces and remove with a spatula all abrasive material (dirt, sand, shavings), and where possible, the old grease.



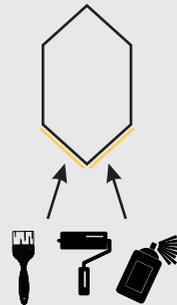
- Grease externally the extensions in the low part (less in the upper and side parts).
- Grease internally the extensions in the upper part (less in the lower and side parts).
- In order to internally grease, use the side holes in the extensions (if fitted) and the back closing plate slots.
- Grease the sliding block area (if fitted) with the extensions retracted and also through two specific greasing points.



**NOTE**

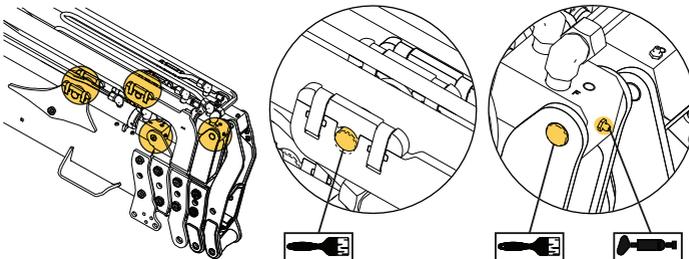
To prevent or correct malfunctions or the “stick-slip” of the boom extensions operation, we recommend lubricating the lower part of the extensions.

If you have any doubt, please contact your Effer representative.



**Extension cylinders support**

Grease the extension cylinders support to prevent corrosion and wear.

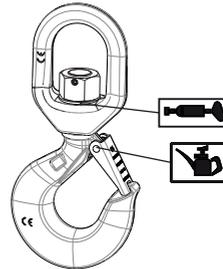


- Grease all points where the extension cylinders touch the supports.
- Grease the supports and locking pins located on the rod of the extension cylinder.

## 10.5. Lubrication of the hooks

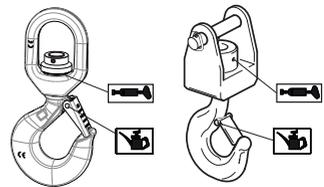
### Hooks with plane bearing

1. Lubricate with oil the spring of the latch.
2. If the hook cannot rotate easily without load, grease the plane bearing surfaces.  
Use a heavy duty penetrating spray grease, type "ZEP 2000" or equivalent quality.



### Hooks with swivel

1. Lubricate with oil the spring of the latch.
2. If the hooks cannot rotate easily with load, grease the swivel bearing.  
Use a bearing grease, type "Texaco Multifak EP 2" or equivalent quality.



## 10.6. Faults

If faults occur with the JIB, contact an authorised service workshop.



### NOTE

- When you use the JIB, connect the JIB connector to the Progress control system.
- After you remove the JIB: put the plug in the Progress connection for the JIB and crane.



### WARNING

Never try to repair the JIB yourself!

## 11. Technical Data

### Documentation

The Technical Data for the JIB shall be printed out when installed on the crane.

**The Operator's manuals for the crane and the JIB should be stored together with Technical Data for both.**