

HENRIKSEN HOOKS

**HOOKS**  
HENRIKSEN HOOKS

# HHH 2,5

ON-LOAD RELEASE HITCH HOOK



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Rev.: -1

M000762

**HENRIKSEN**

REDUCING OPERATIONAL RISK

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## HHH 2,5

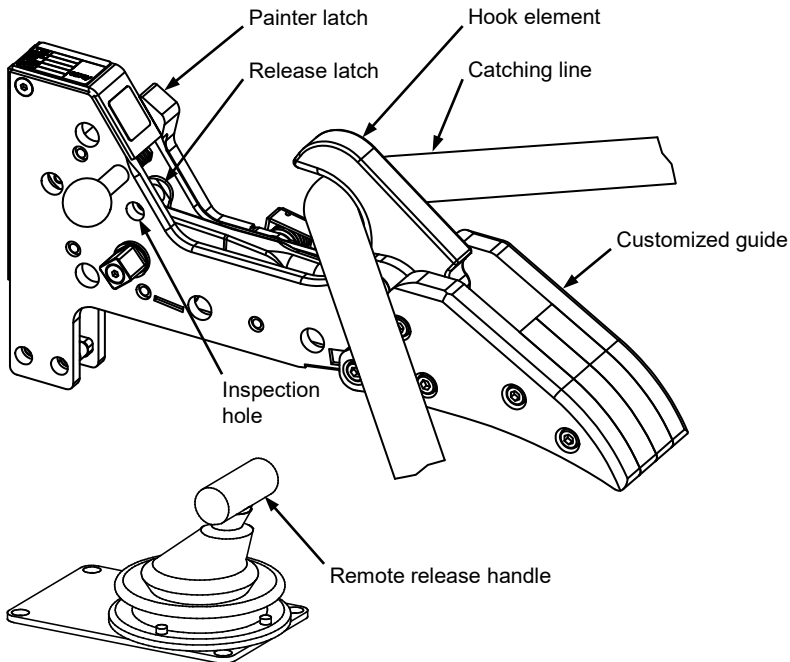
### GENERAL

- Read this user manual carefully before you use the hook and save it for future reference.
- Operational scenarios with corresponding risk evaluations must be well known for the operators.
- It is important that the hook is inspected and maintained periodically to ensure a safe and well-functioning equipment.
- Monthly controls by the operators are limited to visual check and practical operations.
- All necessary service and maintenance shall be carried out by authorized service personal annually and by 5-years controls. On-line annual inspection course for Henriksen hooks is available on the internet, please check our website for more information.
- Contact the manufacturer in case of any visible damage and/or if malfunction occurs.
- Any unauthorized repair, service and/or parts used in the hook will violate the warranty.

## HHH 2,5

### LAUNCH – USED AS HITCH HOOK

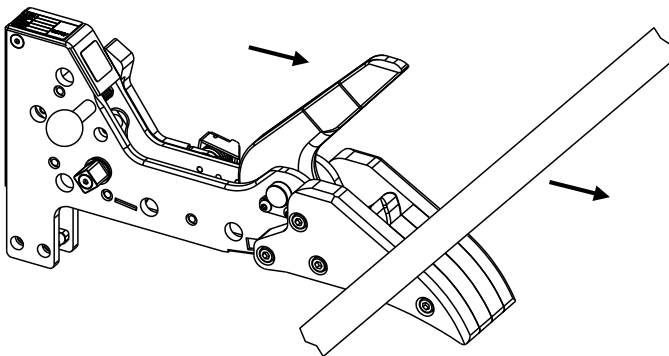
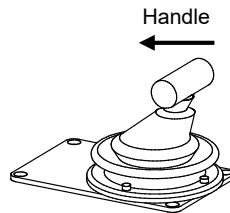
- 1** Check the following before launch:
- the boat is in the correct position
  - the hook is not damaged
  - the hook element is in closed position
  - the remote release handle is in closed position
  - the release latch is in the correct position, you can clearly see the latch in the inspection hole, refer to the illustration
  - the painter latch is in inactive position.
  - the catching line is properly placed and under tension.
  - the hook is free of any impurities or ice



## HHH 2,5

### LAUNCH – USED AS HITCH HOOK

- 2** Pull the remote release handle - refer to the illustration - to open the hook and release the catching line.



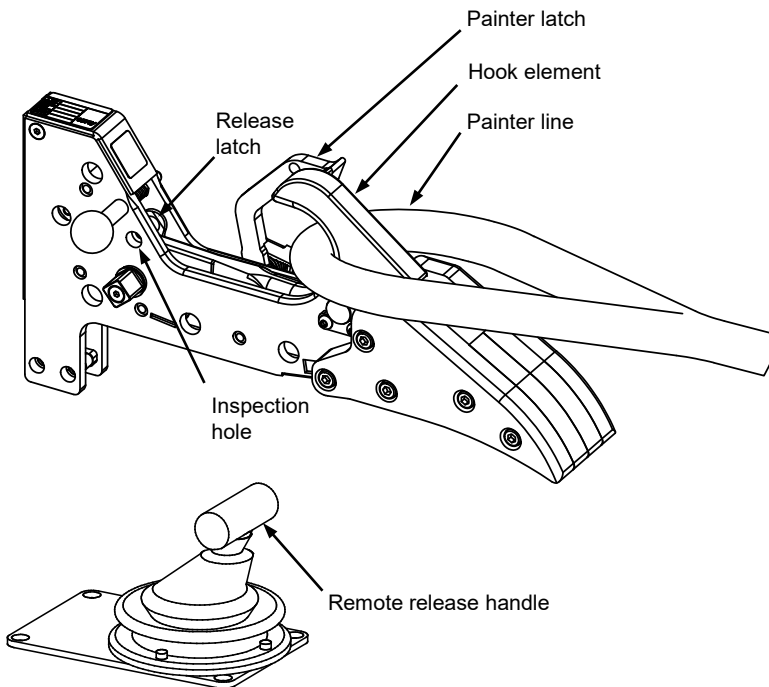
- 3** The hook element remains in open position after releasing the catching line.

Close the hook manually to reset the hook.

## HHH 2,5

### LAUNCH – USED AS PAINTER HOOK

- 1** Check the following before launch:
- the hook is not damaged
  - the hook element is in closed position
  - the remote release handle is in closed position
  - the painter latch is in the activated position
  - the release latch is in the correct position, you can clearly see the latch in the inspection hole, refer to the illustration
  - the painter line (rope or steel link) is properly placed
  - the hook is free of any impurities or ice

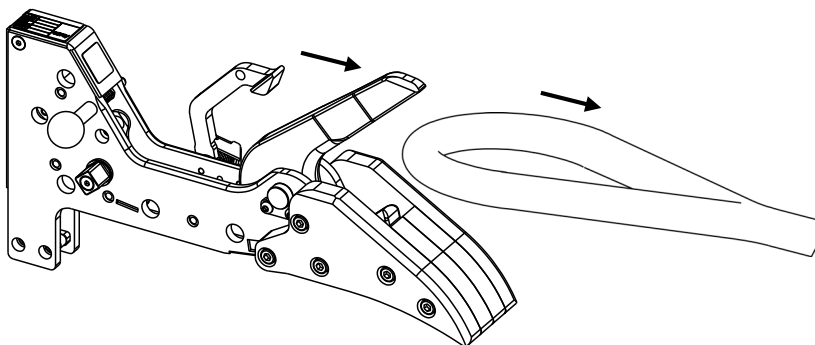
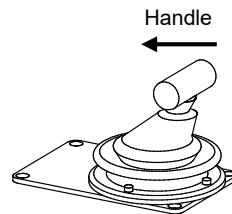


## HHH 2,5

### LAUNCH – USED AS PAINTER HOOK

- 2 Continue the launch process.
- 3 Release the painter line when the boat and the crew is ready.

Pull the painter remote release handle – refer to the illustration – to open the hook and release the painter line.



#### **WARNING:**

Do not open the hook before the lifting hook has released the lifting ring!

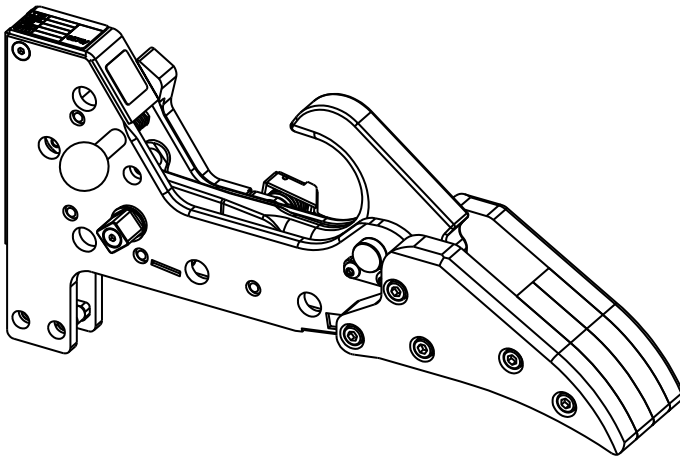
- 4 The hook element remains in open position after releasing the painter line.

Set the painter latch to inactive position.  
Close the hook manually to reset the hook.

## HHH 2,5

### RECOVERY – USED AS HITCH HOOK

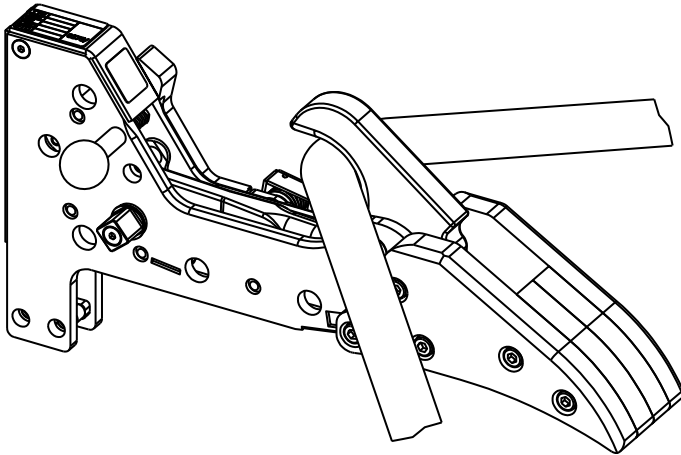
- 1 Check the following before recovery:
  - the hook is not damaged
  - the hook element is in closed position
  - the release latch is in the correct position
  - the painter latch is in inactive position
  - the remote release handle is in closed position
  - the hook is free of any impurities or ice



## HHH 2,5

### RECOVERY – USED AS HITCH HOOK

- 2 When the boat is in correct position – on a ramp or similar – attach the catching line properly into the hooks jaw.



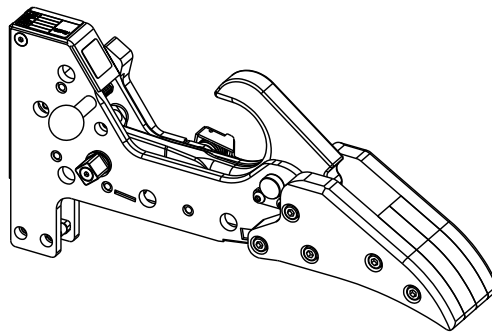
- 3 Keep the catching line under tension.



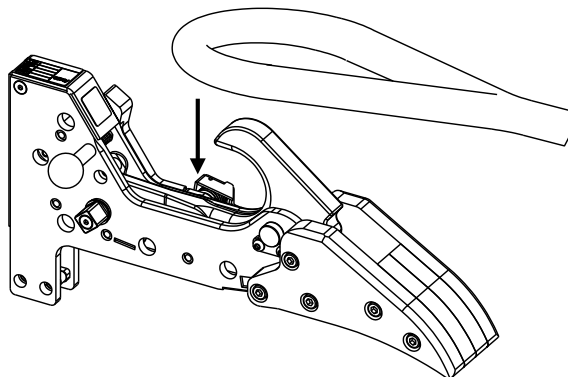
## HHH 2,5

### RECOVERY – USED AS PAINTER HOOK

- 1 Check the following before recovery:
  - the hook is not damaged
  - the hook element is in closed position
  - the release latch is in the correct position
  - the painter latch is in inactive position
  - the remote release handle is in closed position
  - the hook is free of any impurities or ice



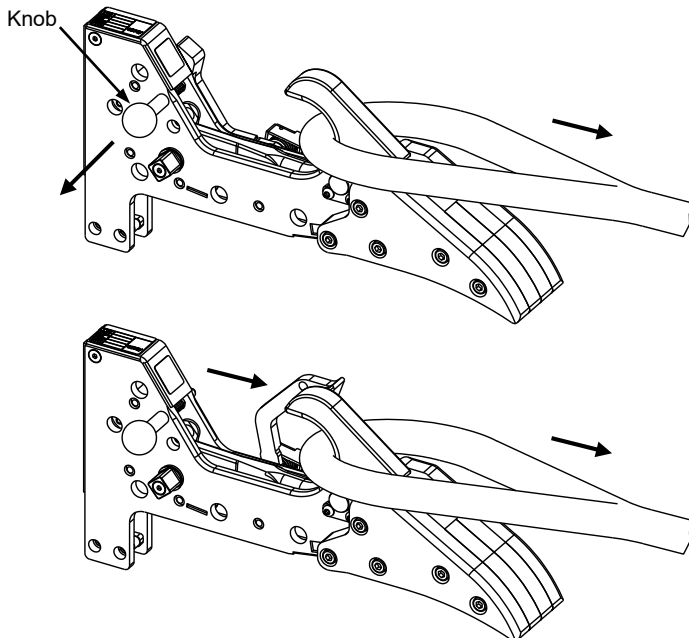
- 2 Place the painter line into the proper position of the hooks jaw.



## HHH 2,5

### RECOVERY – USED AS PAINTER HOOK

- 3** Pull the knob to activate the painter latch to secure the painter line.



#### CAUTION:

The painter latch is moderately spring-loaded. Keep the painter line tensioned during rest of the recovery operation.

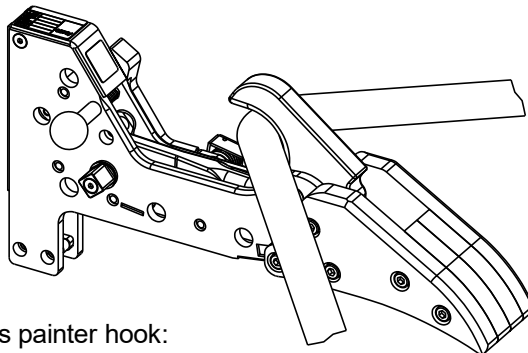
**NOTE:** See the “SAFE USE” chapter at the end of the manual for the recommended lifting operations.

## HHH 2,5

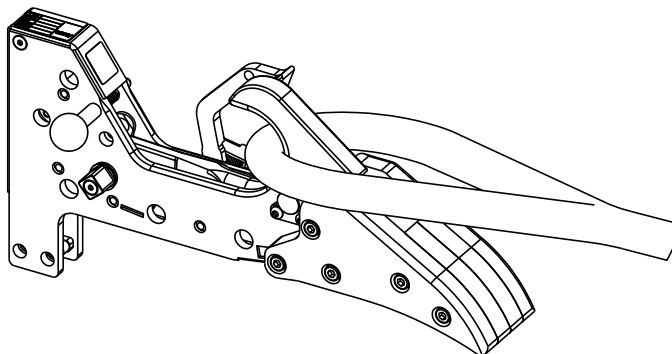
### LAUNCH

- 1 Check the following before launch:
  - the boat is in the correct position
  - the hook element is in locked position
  - the release latch is in the correct position, refer to the illustration
  - the catching line / painter line is properly placed
  - the hook is free of any impurities or ice
  - a 17 mm wrench is available

Used as hitch hook:



Used as painter hook:



## HHH 2,5

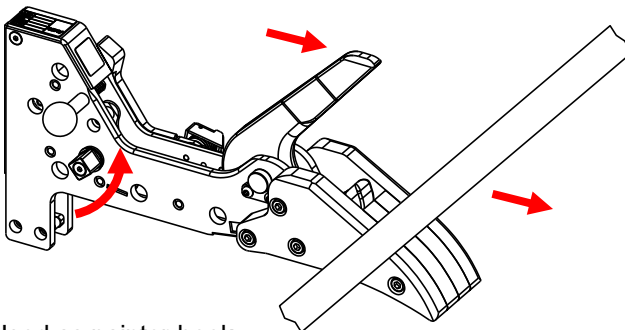
### LAUNCH – USED AS HITCH HOOK

- 2** Turn the release lever counter-clockwise with a 17 mm wrench to open the hook and to release the catching line / painter line.

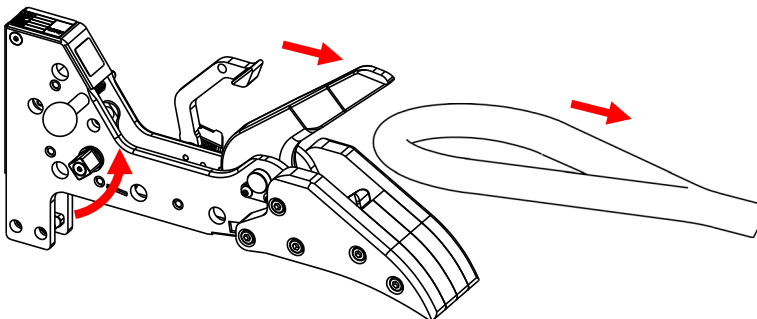
**WARNING:** This operation will override the remote release handle and any IHS system!

**WARNING:** The operator must have safe position during the manual override operation!

Used as hitch hook:



Used as painter hook:



MANUAL  
OVERRIDE

## HHH 2,5

### GENERAL CONSIDERATIONS

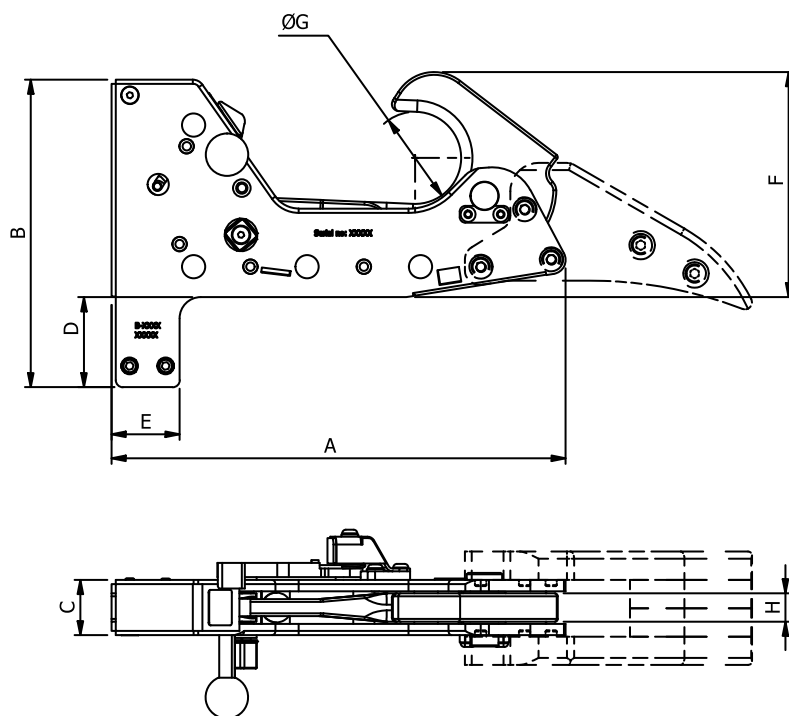
- 1** Mount the hook on an area that is strong enough to withstand the forces the hook is exposed to.
- 2** Use two outside mounting plates and to apply shims to reduce the gap between the hook and the mounting plates.
- 3** Make sure that the mounting arrangement doesn't cause a blockage of the proper operation of the release mechanism.
- 4** We recommend to use proper sized catching line: max.  $\varnothing 65$  mm.
- 5** Consider the vertical angle of the hook used as hitch hook and/or the operational angle of the painter line when the hook used as painter hook before mounting the hook on the boat.  
  
Make sure that the operation angle of the line is within the operational angle of the hook:
  - Vertical: from  $0^\circ$  up to  $45^\circ$
  - Horizontal: the direction of the load should be aligned to the axis of the boat.
- 6** Make sure that the hook operator can get access to the hook easily and can connect the painter line safely during recovery.
- 7** Consider the ergonomical details before mounting the remote unit with the push / pull cable. It shall be easy to install, remove, adjust and safe to operate the remote unit.
- 8** Make sure that the minimum bending radius of the remote cable will be more than 150 mm / 6 inch after the cable is installed (cables with other bending radius are available).
- 9** Use an installation path for the remote cable that prevents tripping hazard.



## HHH 2,5

### DIMENSIONS (mm)

Hook type	HHH 2,5
WLL	2 500 kg



A	B	C	D	E	F	ØG	H
320	217	39	63,5	48	159	Ø65	20



## HHH 2,5

### RECOMMENDED BOLTS

Hook type	Bolts* and locknuts	Max. torque (Nm)
HHH 2,5	M16 A4-70	50

\* The length is specified by the boat builder.  
The bolt should be unthreaded in the loaded cross-section.

**WARNING:**

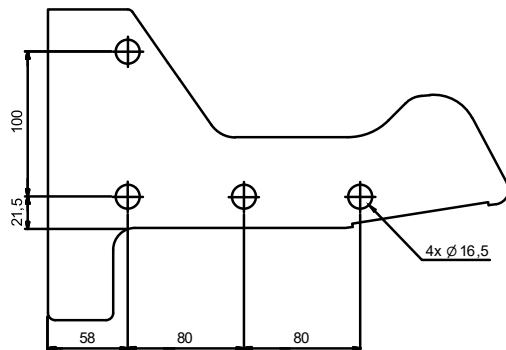
Use only recommended bolts, locknuts and torques.  
Always use new locknuts.

Use correct type of M6 / Ø6 (1/4") countersunk screw (depending on the board material) to fasten the remote unit.

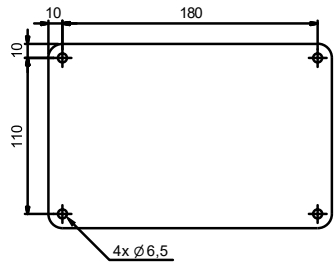
### MOUNTING HOLES

(Dimensions in mm)

#### HHH 2,5



#### REMOTE HANDLE



## HHH 2,5

### REMOTE HANDLE WITH CABLE

- 1 Make sure that the nut is installed on this end of the cable.



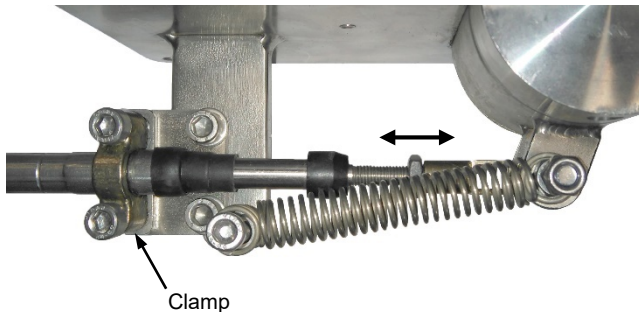
- 2 Attach the cable attachment to the cable, refer to the illustration.



- 3 Change the position of the cable attachment and the nut on the cable end to adjust the operational range of the remote handle.

Make sure that cable is minimum 5 mm deep inside the cable attachment.

Lock the cable attachment with the nut after the adjustment is completed.

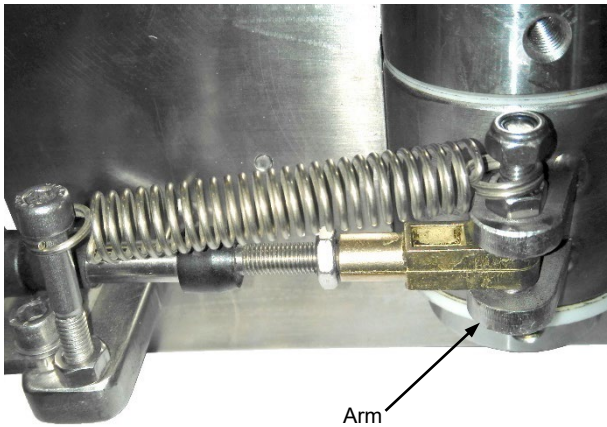




## HHH 2,5

### REMOTE HANDLE WITH CABLE

- 4 Install the cable attachment with the cable on the arm of the remote unit, refer to the illustration.





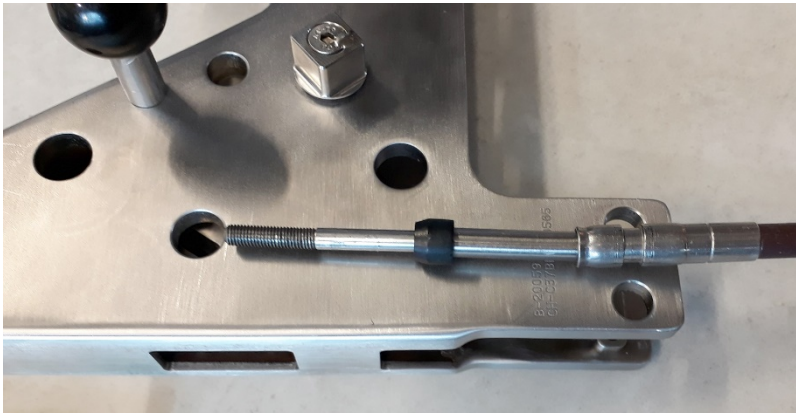
## HHH 2,5

### HOOK WITH CABLE

- 1 Remove the bolts and the cable clamp from the hook.



- 2 Make sure that there is no nut on the cable.

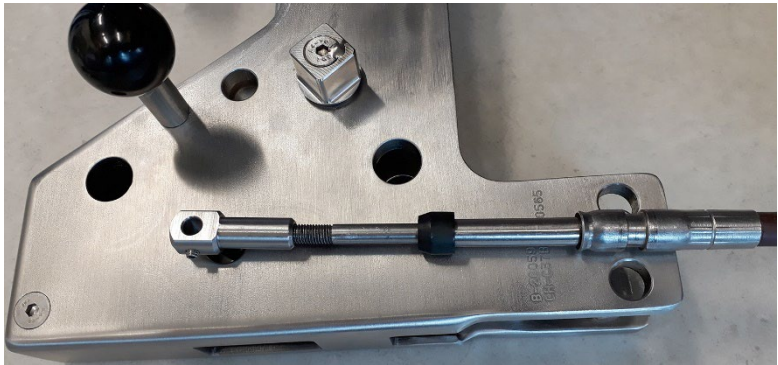




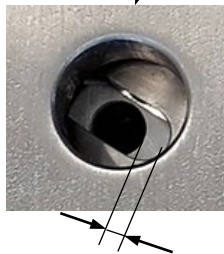
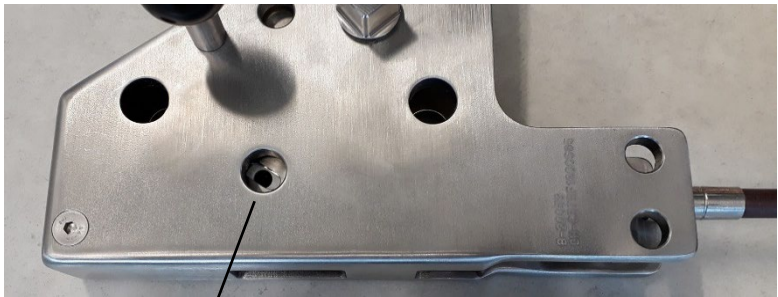
## HHH 2,5

### HOOK WITH CABLE

**3** Connect the cable attachment to the cable.



**4** Place the cable attachment into the groove of the release arm.



Make sure that there is a gap between the hole and the end of the groove, refer to the illustration.

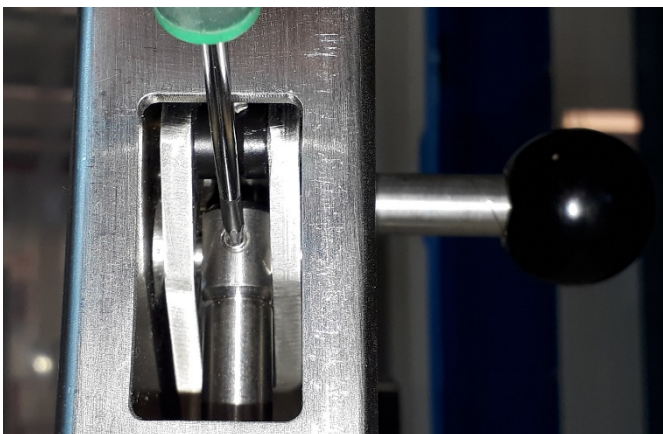
## HHH 2,5

### HOOK WITH CABLE

- 5** Insert the pin through the release arm and the cable attachment.



- 6** Lock the pin with the set screw in the cable attachment. Apply Loctite 243 or equivalent on the set screw before tightening.



## HHH 2,5

### HOOK WITH CABLE

- 7** Place the cable clamp onto the cable.
- 8** Place the cable into the cable clamp base in the hook.
- 9** Apply Loctite 243 or equivalent on the bolts and insert them into the cable clamp.
- 10** Tighten the bolts.



## HHH 2,5

### FUNCTIONAL TEST

Do a functional test of the following after mounting the hook and the remote unit on the boat:

- The hook element can open fully.
- The painter latch can move to the activated position.
- The painter line shall be inserted simply and safely.
- The remote cable moves freely.
- The remote handle shall have a free movement (min. 10° angle) before you can feel the resistance point caused by the release mechanism in the hook.
- The hook can open immediately when you pull the remote handle (apply a small force on the hook element during the test).
- The remote handle goes back fully to the closed position after you release it.

Do a functional test of the following when the boat is waterborne:

#### Used as hitch hook:

- It is safe and easy to attach the catching line during the intended operation.

#### Used as painter hook:

- The operation angle of the painter line is within the operational angle of the painter hook.
- It is safe to connect the painter line.
- It is safe to release the boat at operational speed (under load).

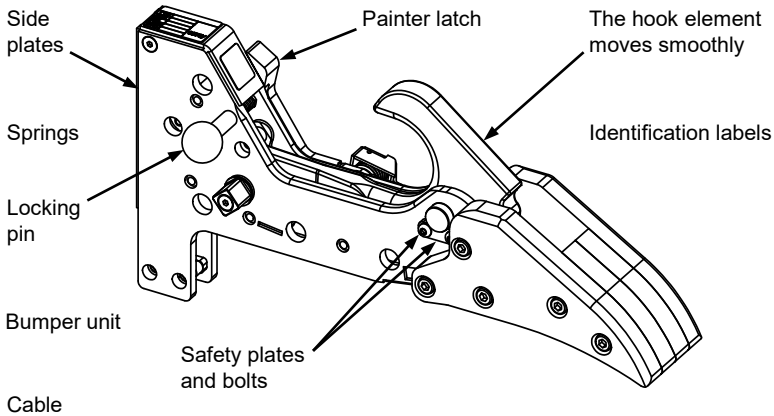
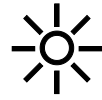
Increased attention is recommended during the initial tests on the sea.

We recommend to prevent the hook against any ice to build up.



## HHH 2,5

- 1 For safety reasons carry out the control in good lighting conditions.
- 2 Remove all impurities (salt, grease, dust, etc.) with fresh water. Remove ice if necessary.
- 3 Check that the following parts are free from deformations and defects:



MONTHLY CONTROL

Contact the manufacturer in case of any deviation!

## HHH 2,5

- 4** Check the following:
- The hook element can open fully.
  - The painter latch can be activated and moves into closed position.
  - The catching or painter line shall be inserted simply and safely.
  - The remote cable moves freely.
  - The remote handle shall have a free movement (min. 10° angle) before you can feel the resistance point caused by the release mechanism in the hook.
  - The hook under load opens immediately when you pull the remote handle.
  - The remote handle goes back fully to the closed position after you release it.

We recommend to prevent the hook against any ice to build up.

**5 DO NOT PAINT ANY PART OF THE HOOK!**



Contact the manufacturer in case of any deviation!



## HHH 2,5

### SAFE LAUNCH – USED AS HITCH HOOK

- 1** The operators make sure that the boat is in the correct position and ready to be launched.
- 2** The crew of the boat stands back and takes a safe stand-by position.
- 3** The hook operator opens the hook and the hook releases the catching line.
- 4** The coxswain maneuvers the boat away from the vessel.

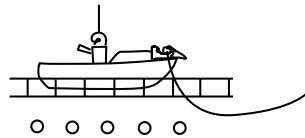
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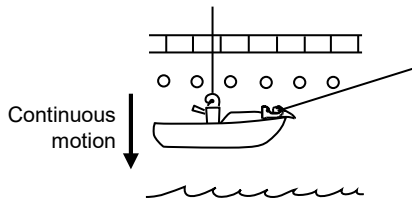
## HHH 2,5

### SAFE LAUNCH – USED AS PAINTER HOOK

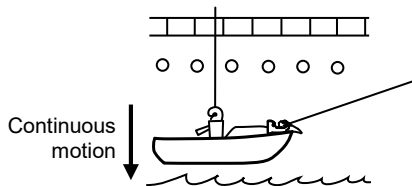
**1** The hook operator connects the lifting ring and the painter line before launch, and then gives a signal to the crane operator that the lowering process can start.



**2** The crane operator starts the lowering process with a continuous motion.



**3** The operators make sure that there are no obstacles under the boat and continue the launch process.



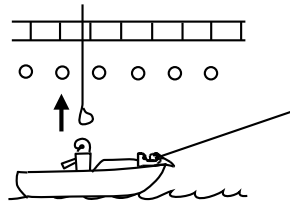
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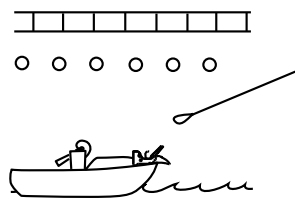
## HHH 2,5

### SAFE LAUNCH – USED AS PAINTER HOOK

**4** When the boat is waterborne and the lifting hook has released the lifting ring, the crane operator lifts the lifting line to avoid collision with the boat or the crew.



**5** The coxswain or the hook operator releases the painter line when the boat and the crew is ready.



**6** The coxswain maneuvers the boat ahead and away from the vessel.

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## HHH 2,5

### SAFE RECOVERY – USED AS HITCH HOOK

- 1** The operator on the mother vessel makes sure that the catching line is prepared, and gives a signal to the coxswain on the boat.
- 2** The operators both on the mother vessel and on the boat take a safe stand-by position away from the catching line and the hook.
- 3** The coxswain maneuvers the boat close to the catching line and the operator on the mother vessel places the line into the jaw of the hook.  
  
Repeat this operation if the connection failed.
- 4** The coxswain makes sure that the hook is properly holding the catching line.
- 5** The operators on the vessel can secure the boat with an additional line to reduce the load on the catching line.

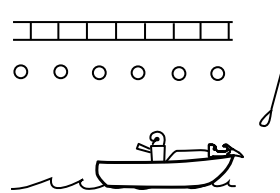
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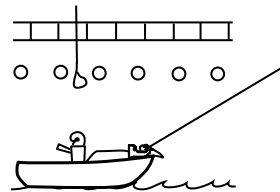
## HHH 2,5

### SAFE RECOVERY – USED AS PAINTER HOOK

- 1** The operators make sure that the lifting hook and the hitch hook are reset.
- 2** The coxswain maneuvers the boat close to the vessel to let the hook operator safely get the painter line.
- 3** The hook operator connects the painter line and secures it.

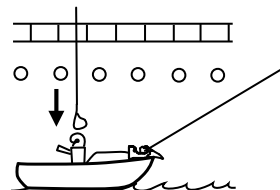


- 4** The coxswain reduces the speed of the boat and the painter line is tensioned. The coxswain then makes sure to keep the correct direction of the boat and tension in the painter line.



The boat shall then be in the correct position below the lifting rings.

- 5** The crane operator lowers the lifting line to let the hook operator safely get it.



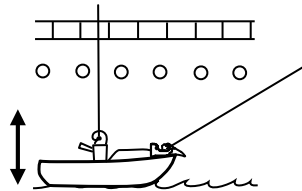
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### SAFE RECOVERY – USED AS PAINTER HOOK

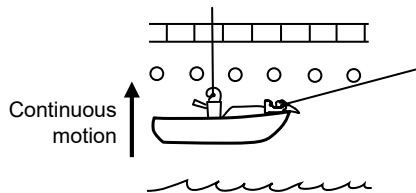
**6** The hook operator connects the lifting ring, and gives a signal to the crane operator.

The crane operator starts the automatic tensioning system (if available) to give tension in the wire.

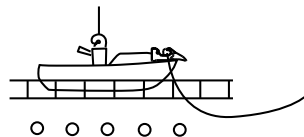


**7** The hook operator stands back and takes a safe stand-by position.

**8** The crane operator starts the lifting process with a smooth motion as the boat moves upwards on a wave.



**9** The crane operator completes the lifting process with a continuous motion and places the boat into the crib.



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