

HENRIKSEN HOOKS

HOOKS
HENRIKSEN HOOKS

HMKTWV

REMOTE RELEASE OFF-LOAD HOOKS

TWIN SYSTEM



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Rev.: --

M000306

HENRIKSEN

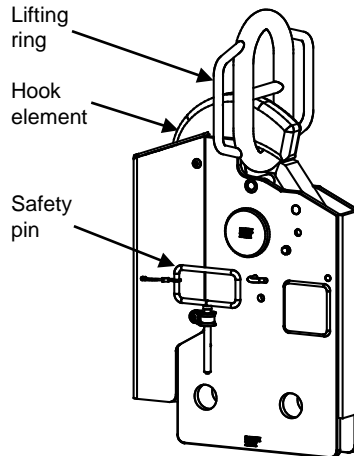
REDUCING OPERATIONAL RISK

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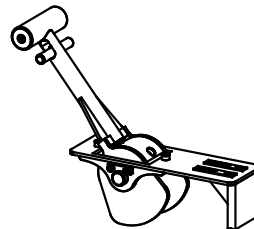
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LAUNCH

- 1** Check the following on both hooks:
 - the hook element is in closed position
 - the lifting ring is properly placed
 - the safety pin is **not** inserted into the hook
 - the hook is free of any impurities or ice



- 2** Check that the remote handle is in closed position, refer to the illustration.



- 3** Start the lowering process with a continuous motion.

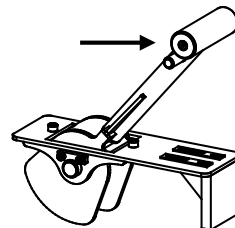
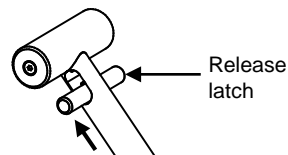
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LAUNCH

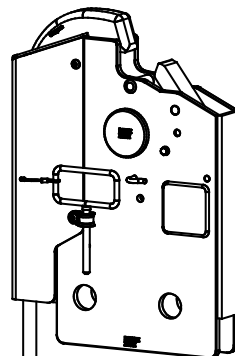
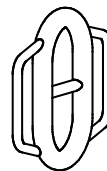
- 4** When the boat is close to the water surface pull the release lever and set the remote handle to open position to activate the hooks.

NOTE:

Set the remote handle to closed position and cancel the activated state of the hooks if necessary.



- 5** When the boat is waterborne and **both** hooks are off-loaded, the hooks will open automatically **at the same time** and release the lifting rings.

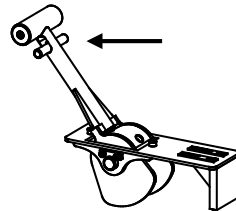


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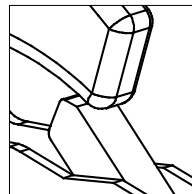
RESET

- 1** Set the remote handle to the closed position.

The hook elements move to closed position on both hooks.



- 2** Visually check that the hook elements are closed and synchronized: the position of the tip of the hook element and the tip of the latch compared to each other are the same on both hooks, refer to the illustration.

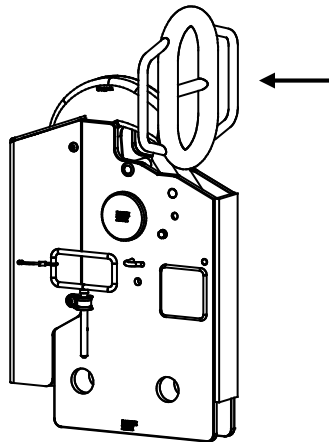


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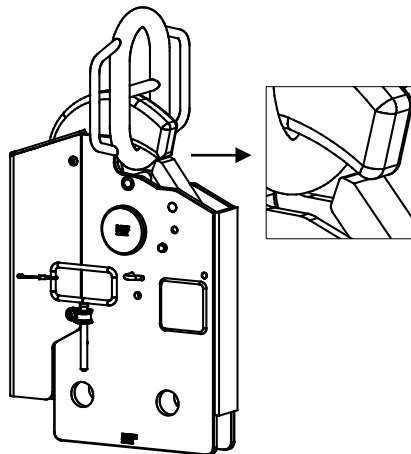
RECOVERY

1 Make sure that the hooks are reset.

2 Place the lifting ring properly into the jaw of the forward hook and make sure that the latch is completely locked, refer to the illustration.



3 Place the second lifting ring properly into the jaw of the aft hook and make sure that the latch is completely locked, refer to the illustration.



4 The hooks are ready to recover the boat.

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MANUAL OVERRIDE

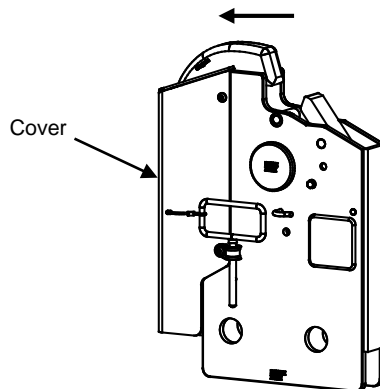
The hooks can be operated manually in case of damage of the push/pull cable system (when the twin control system is not operative).

The launch and the reset processes are different in these cases, however the recovery process is the same as in the normal operation mode.

GENERAL PREPARATION BEFORE MANUAL OVERRIDE

Disconnect the cable from both hooks as described below.

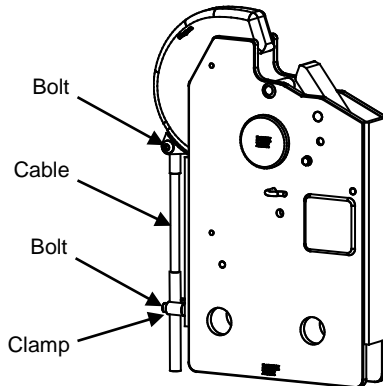
- 1 Open the hook and remove the cover.



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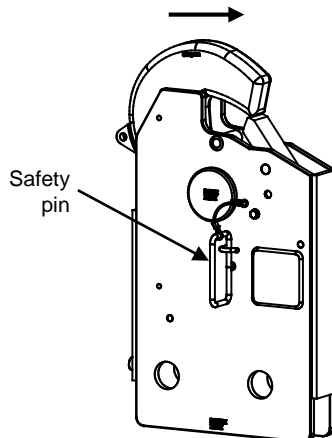
GENERAL PREPARATION BEFORE MANUAL OVERRIDE

- 2** Remove the bolts and the clamp and disconnect the cable.



- 3** Close the hook element and hold it in this position.

- 4** Insert the safety pin and release the hook element.

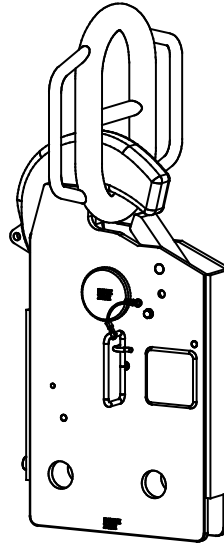


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LAUNCH

- 1** Check the following on both hooks:
 - the push/pull cable is disconnected
 - the hook element is in closed position
 - the safety pin is properly placed
 - the lifting ring is properly placed
 - the hook is free of any impurities or ice

- 2** Start the lowering process with a continuous motion.

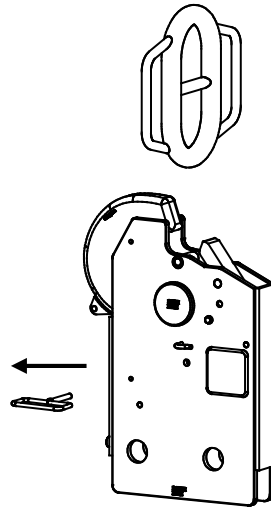


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LAUNCH

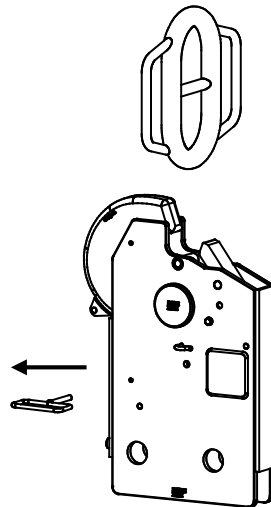
3 When the boat is waterborne and **both** hooks are off-loaded open the aft hook first:

- twist the safety pin clockwise and pull it out, and the hook will open immediately and release the aft lifting ring.



4 Open the forward hook:

- twist the safety pin clockwise and pull it out, and the hook will open immediately and release the forward lifting ring.



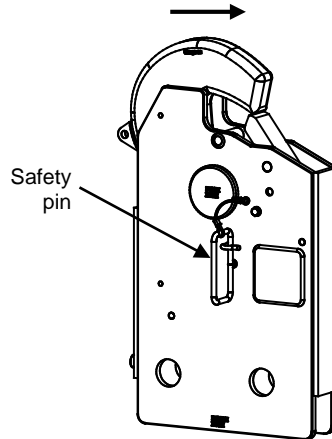
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RESET

- 1** Set the hook element manually to closed position on the first hook and hold it in this position.

Insert the safety pin into the hook.

Make sure that the safety pin is properly placed, refer to the illustration.



- 2** Release the hook element.

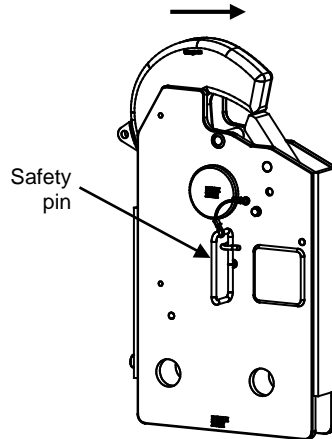
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RESET

- 3** Set the hook element manually to closed position on the second hook and hold it in this position.

Insert the safety pin into the hook.

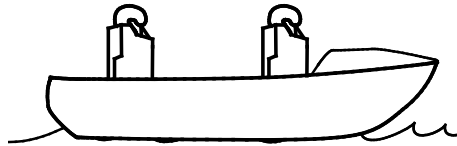
Make sure that the safety pin is properly placed, refer to the illustration.



- 4** Release the hook element.

GENERAL CONSIDERATIONS

- 1** We recommend that the hooks are mounted facing in the same direction.



- 2** Consider the ergonomical details before mounting the components of the twin system. It shall be easy to install, remove, and safe to operate and inspect the hooks and the remote unit.
- 3** We recommend to place the remote unit in the middle between the hooks to ensure almost the same cable length for the push/pull cables.
- 4** Use an installation path for the cables that prevents tripping hazard, and protect the cables against wear and tear.
- 5** Make sure that the minimum bending radius of the push/pull cables will be more than 200 mm / 8 inch after the cable are installed.
- 6** Consider prevention against icing on the hooks.

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RECOMMENDED BOLTS AND LOCKNUTS

Hook type	Bolts and locknuts dimensions (minimum A4 70 quality) *	Max. torque (Nm)
HMKTWV 3,5	M24	70
HMKTWV 5	M30	70
HMKTWV 8	M30	70

* The bolt should be unthreaded in the lifting cross-section.
Bolts can be ordered from Henriksen, the length is specified by the boat builder.

RECOMMENDED LIFTING RINGS

We strongly recommend to use standard Henriksen Lifting Rings, because the ring dimensions are designed to **geometrically fit** together with the Henriksen Hooks.

CABLE OVERVIEW

Hook type	Cable type
HMKTWV 3,5	HH090019 CABLE 6433
HMKTWV 5	HH090019 CABLE 6433
HMKTWV 8	HH090019 CABLE 6433



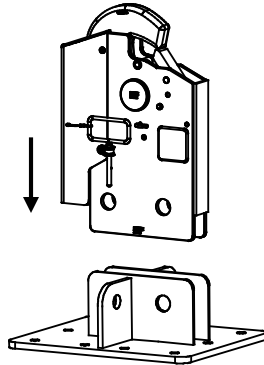
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HOOKS ON THE MOUNTING PLATES

- 1 Place the hook between the plates of the lifting arrangement of the boat.

We recommend to use two outside mounting plates if possible.

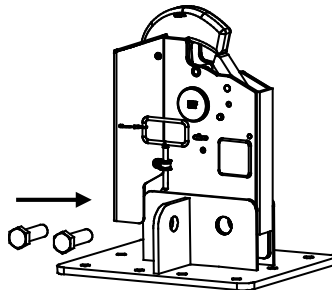
Check that the hook is placed in the correct position.



- 2 Insert the mounting bolts through the holes on the lifting arrangement and the hook.

WARNING:

Use only recommended bolts, see the table on the previous page.

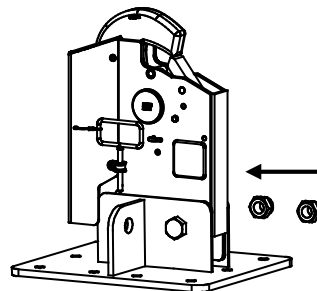


- 3 Mount the locknuts.

WARNING:

Use only recommended locknuts and torques, see the table on the previous page.

Always use new locknuts.

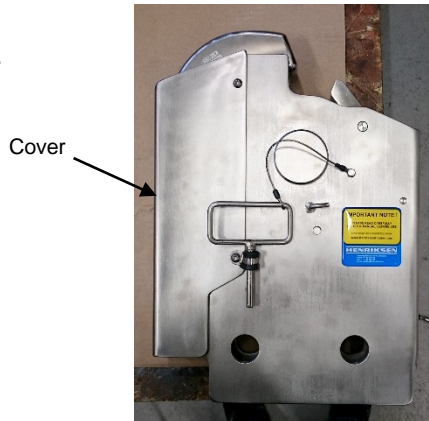


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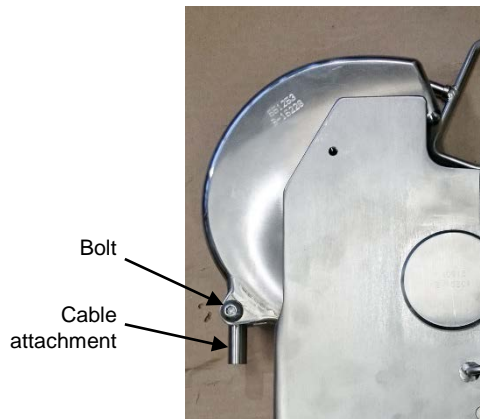
REMOTE CABLES ON THE HOOKS

Mount the cable on both hooks as described below.

- 1** Make sure that the hook is open and remove the cover.



- 2** Remove the bolt and the cable attachment from the hook element.



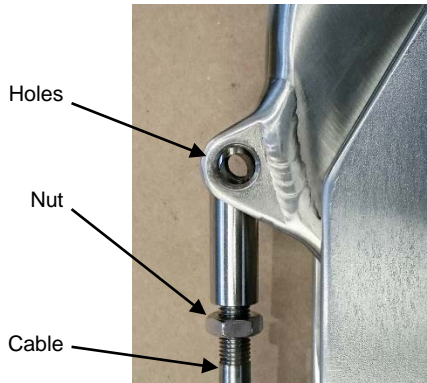
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REMOTE CABLES ON THE HOOKS

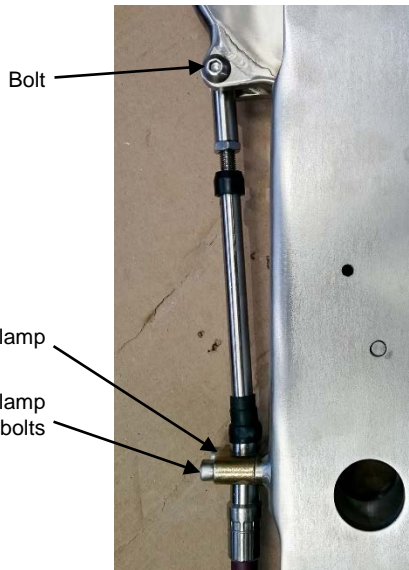
3 Make sure that the nut is on the cable and attach the cable attachment.

4 Apply Loctite 243 on the clamp bolts and attach the cable to the hook with the clamp and the clamp bolts. Tighten the bolts.

5 Push the cable completely in and adjust the position of the cable attachment to align the holes.



6 Attach the cable attachment with the cable to the hook element with the bolt.



7 Make sure that the hook element hits the back plate of the hook in open position. Adjust the position of the cable attachment if necessary.

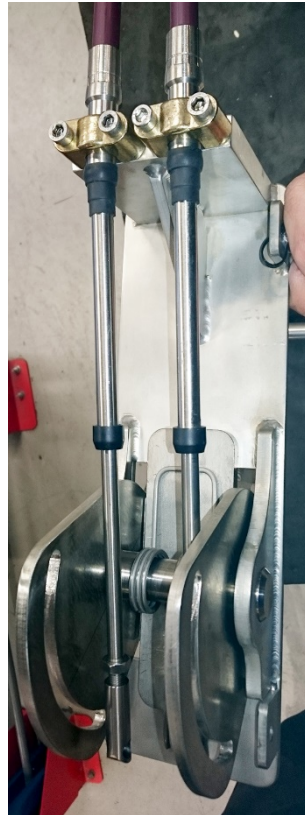
8 Lock the cable attachment on the cable with the nut.

9 Apply Loctite 243 on the bolt connecting the cable attachment and the hook element and tighten it.

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REMOTE CABLE ON THE REMOTE UNIT

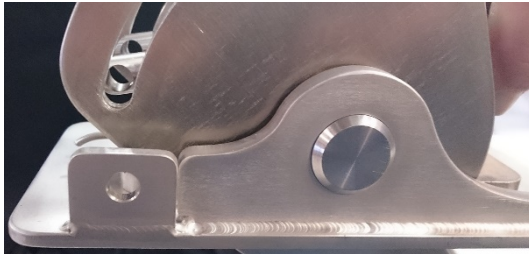
- 1** Make sure that both cables are connected to the hooks and the hooks are in open position.
- 2** Make sure that the nuts are on the cables and attach the cable attachments.
- 3** Apply Loctite 243 on the clamp bolts and attach the cables to the remote unit with the clamps and the clamp bolts. Tighten the bolts.
- 4** Make sure that the remote handle is in open position.



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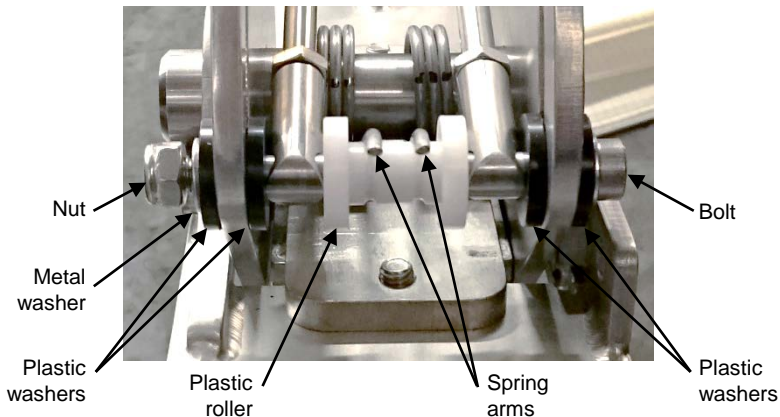
REMOTE CABLE ON THE REMOTE UNIT

- 5 Adjust the positions of the cable attachments to align the holes, refer to the illustration.



- 6 Insert the bolt with the washers and the plastic roller through the handle plates and the cable attachments, and attach the nut, refer to the illustration.

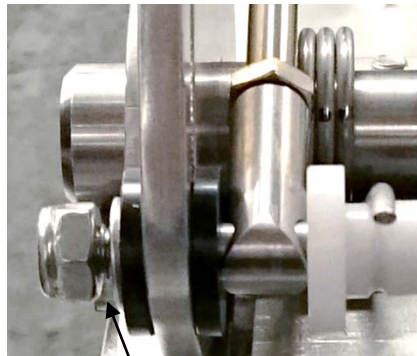
Note the position of the spring arms and the head of the bolt.



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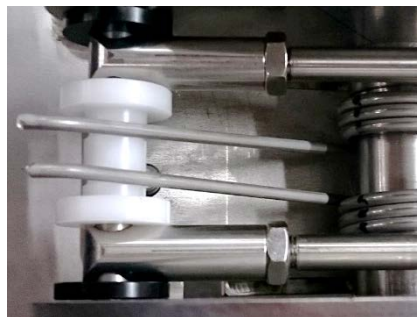
REMOTE CABLE ON THE REMOTE UNIT

- 5** Tighten the nut gently and make sure to have a 0,05 – 0,1 mm wide gap between the nut and the metal washer.



Gap: 0,05 – 0,1 mm

- 6** Lock the cable attachments on the cables with the nuts.



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FINAL STEPS

- 1 Make sure that the dust covers are properly placed on both cables on both ends.

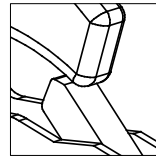


- 2 Apply Loctite 243 on the bolts and mount the covers back onto the hooks.

FUNCTIONAL TEST

Do a functional test of the following after mounting the hooks, the cables and the remote unit on the boat:

- When both hooks are unloaded, they will open immediately at the same time when you activate/open them.
- Load or simulate the load only on the aft hook and check that the activated hooks will not open until the load is removed.
- Load or simulate the load only the on forward hook and check that the activated hooks will not open until the load is removed.
- The hook elements can open freely.
- The rings can be inserted simply and safely.
- The installation path for the cables does not cause tripping hazard and the cables are protected against wear and tear.
- The safety pins are easy to insert into the hooks.
- Check visually that the hook elements are synchronized: the position of the tip of the hook element and the tip of the latch compared to each other are the same on both hooks in closed position, refer to the illustration.

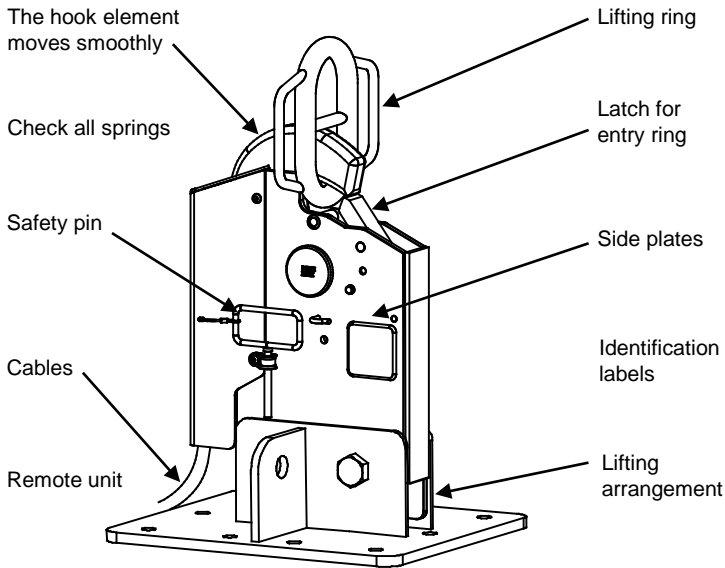
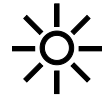


We recommend to prevent the hooks and the remote unit against any ice to build up.



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- 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:

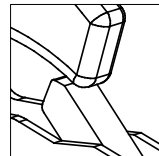


MONTHLY CONTROL

Contact the manufacturer in case of any deviation!

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- 4** Do a functional test of the following:
- When both hooks are unloaded, they will open immediately at the same time when you activate/open them.
 - Load or simulate the load only on the aft hook and check that the activated hooks will not open until the load is removed.
 - Load or simulate the load only the on forward hook and check that the activated hooks will not open until the load is removed.
 - The hook elements can open freely.
 - The rings can be inserted simply and safely.
 - The installation path for the cables does not cause tripping hazard and the cables are protected against wear and tear.
 - The safety pins are easy to insert into the hooks.
 - Check visually that the hook elements are synchronized: the position of the tip of the hook element and the tip of the latch compared to each other are the same on both hooks in closed position, refer to the illustration.



We recommend to prevent the hooks and the twin control box against any ice to build up.

5 DO NOT PAINT ANY PART OF THE HOOKS!

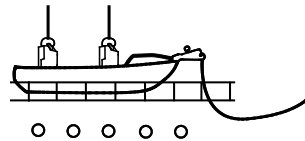


Contact the manufacturer in case of any deviation!

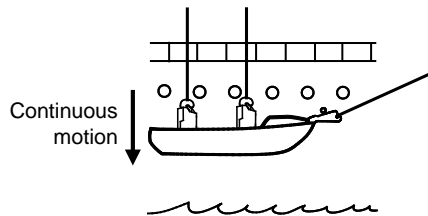
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SAFE LAUNCH

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

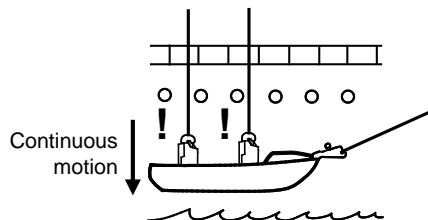


2 The crane operator starts the lowering process with a continuous motion.



3 The operators make sure that there are no obstacles under the boat.

The hook operator then activates the lifting hooks when the boat is close to the water surface.



NOTE:

In case of manual override follow the instructions as described in the “**Manual Override**” chapter.

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

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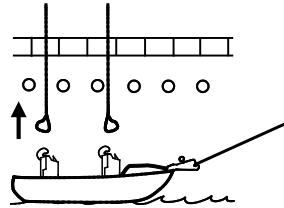
SAFE LAUNCH

- 5** When the boat gets waterborne and both lifting hooks are off-loaded, the hooks will open automatically and release the lifting rings.

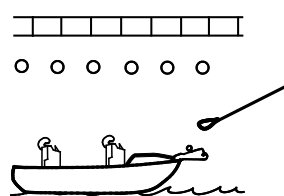
NOTE:

In case of manual override follow the instructions as described in the “**Manual Override**” chapter.

The crane operator lifts the lifting rings to avoid collision with the boat or the crew.



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



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

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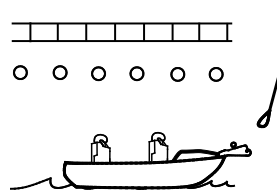
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SAFE RECOVERY

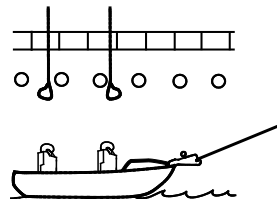
1 The hook operator makes sure that both the lifting hooks and the painter hook are reset.

2 The coxswain maneuvers the boat close to the vessel to let the hook operator safely get the painter line.

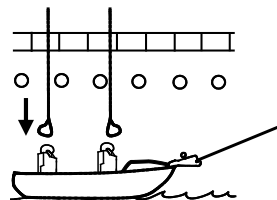


3 The hook operator connects the painter line.

4 The coxswain reduces the speed of the boat to get in the correct position below the lifting rings.



5 The crane operator lowers the lifting rings to let the hook operator safely get them.



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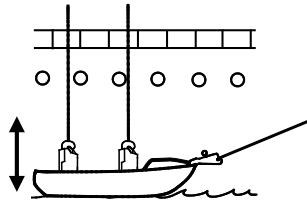


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SAFE RECOVERY

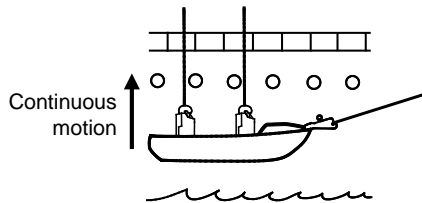
- 6** The hook operator connects the lifting rings first to the forward, then to the aft hook, and gives a signal to the crane operator.

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

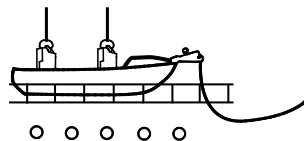


- 7** The hook operator stands back and takes a safe stand-by position.

- 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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