

**SB 55/99-100****Operate the Hydraulic Anchor Part Brake**

2018-11-28

Rev. B

**1 Scope and Target Group****⚠ WARNING**

- ✓ Always refer to the user manual for additional information and safety warnings.
- ✓ Only perform this task if you are qualified to carry out the steps described below.
- ✓ Always make sure that the tasks described in this bulletin are intended for the equipment you are working on.
- ✓ If you are unsure about the workflow, steps or qualification, contact your TTS aftersales service contact.

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## 1.1 Operate the Hydraulic Anchor Part Brake

## 1.2 Operation Introduction

This chapter describes the devices necessary to control the anchor part.

## 1.3 Safety Information

### 1.3.1 Safety Warnings

**⚠ WARNING**

Do not leave winches or windlasses running unattended.

**⚠ WARNING**

When operating a winch or windlass, ensure that the person in charge of instructions is in sight.

**⚠ WARNING**

Do not stand on the machinery itself.

**⚠ WARNING**

Do not operate various pieces of equipment at the same time. This could lead to malfunction of the deck equipment or personal injury.

### 1.3.2 Safety Caution

**⚠ CAUTION**

Do not operate the anchor winch in continuous operation for long periods. Overstress may damage the anchor winch.

### 1.3.3 Operator Qualification

**The operator working on / with the system must:**

- Be able to perform assigned work activities and to detect and avoid possible dangers on his/her own based on his/her professional training, know-how and experience as well as knowledge of the applicable standards and regulations
- Be authorized and instructed explicitly by the customer to work on / with the system
- Be instructed about difficulties, hazards and other special rules of conduct
- Be constantly informed about all changes made to the system and experience gained
- Immediately report any defects, damages, accidents, malfunctions or other irregularities detected
- Perform his/her work reliably
- Not be under the influence of e.g. drugs, alcohol or medication
- Meet the stipulations regarding age and occupation applying in the respective country.

### 1.3.4 Personal Protective Equipment

The following personal protective equipment is required to operate the deck equipment:

- Safety helmet
- Safety goggles
- Safety shoes
- Overalls with long sleeves
- Heavy protective safety gloves
- Ear plugs
- Further equipment specified by the shipyard.

### 1.4 Pre-Condition of the Operation

- Read and understand all safety information.
- Grease all sliding bearings before performing any operation.
- Clean the open gear of the anchor part and apply recommended grease before performing any operation.
- All clutches are disengaged.
- Chain wheel band brake is closed.
- Chain stopper is closed.
- The master switches at the control column are in “ZERO” position.
- The emergency stop button is released.
- Main switch on the switch cabinet is on.
- Adjust the chain wheel band brake by turning the hand wheel, so that the arrow is in line with the groove of brake spindle. (see below notice)



< Figure 1 : Arrow and groove on the chain wheel band brake, here not in line >

## 1.5 Operation of the Anchor Part

### 1.5.1 Lower the Anchor

1. Make sure that you know all safety and operation instruction before you operate the anchor part.
2. Make sure the pre-condition of the operation.
3. Turn the mode switch on the control column to “ON”. The button turns green.
4. Remove the lashing device from the chain stopper.
5. Engage the anchor claw clutch. The anchor mode lamp on the control column flashes green.

**NOTICE**

The green light on the control column flashes green because the anchor is within 5 meters of home/hawse position.

**NOTICE**

Use the creep speed buttons for approaching shift position of anchor claw clutch.

**NOTICE**

After engage of the anchor claw clutch, **make sure** that the gap in the lowering direction between the claws is removed by moving the winch, before anchor brake releasing.

6. Open the chain stopper.
7. If necessary, heave the anchor slightly to unload the chain stopper.
8. Release the chain wheel brake by pushing the brake release button.
9. Lower the anchor to the water surface by using the master switch in the LOWER direction.
10. Release the brake release button to close the chain wheel brake.
11. Disengage the anchor claw clutch from the main shaft.

**CAUTION**

When you drop the anchor chain by using chain wheel band brake, do not let the speed grow too high. The anchor part will be damaged.

12. Open the chain wheel band brake by pushing the brake release button on the related control column.

**NOTICE**

If you release the brake release button, chain wheel band brake is closed immediately.

13. After required length of chain has been paid out, stop the chain by releasing the brake release button on the related control column.
14. Close the chain stopper.

**NOTICE**

When you close the chain stopper, open the chain wheel band brake slightly to put the chain link on the chain stopper properly.

15. Secure the chain stopper bar.

16. Release the brake release button to close the chain wheel band brake.

**NOTICE**

After brake is closed it can happen that the groove in brake spindle is above the arrow on the plate. This is normal and it sets itself within short time. Do not try to readjust it by turning the handwheel in open brake direction.

**NOTICE**

When you finish operation, the main supply switch of the HPU is still on.

For customer use only

### 1.5.2 Heave the Anchor

**⚠ CAUTION**

Do not use the anchor part to pull ships. Anchor part is not designed to pull the ship to the anchor. Misuse can cause damages to the gear or the hydraulic/electric motor. Observe the max. forces to be applied by the chain to the chain wheel:

- 45% of the minimum breaking load for the chain provided for the anchor part.
- 80% of the minimum breaking load for the chain provided for the chain stopper
- In case the ship has no chain stopper, the anchor part is able to take 80% maximum breaking load.
- In case the ship has the chain stopper from other manufacturer, advise crew to observe whole manual of the chain stopper.

1. Make sure that you know all safety and operation instruction before you operate the anchor part.
2. Make sure the pre-condition of the operation.
3. Turn the mode switch on the control column to “ON”.
4. Push the “Take over” button at the related control column. The button turns green.
5. Engage the anchor claw clutch. The anchor mode lamp at the related control column turns green.

**NOTICE**

The green light on the control column turns green because the anchor is outside 5 meters of home/hawse position.

**NOTICE**

Use the creep speed buttons for approaching shift position of clutch.

**NOTICE**

After engage of the anchor claw clutch, **make sure** that the gap in the heaving direction between the claws is removed by moving the winch, before anchor brake releasing.

6. Open the chain stopper.
7. Push brake release button to open the chain wheel band brake.
8. Heave the anchor by using the master switch in the HEAVE direction.

**NOTICE**

Speed is automatically reduced to first step when the anchor is within 5 meters of the home/hawse position.

9. Close the chain stopper.
10. Release the brake release button to close the chain wheel band brake.
11. Secure the chain stopper bar.
12. Attach lashing device to the chain link to safety the anchor.
13. Disengage the anchor claw clutch.