

**Attachment 3**

**New and old hook arrangements for the *Caribbean Fantasy* lifeboats.**

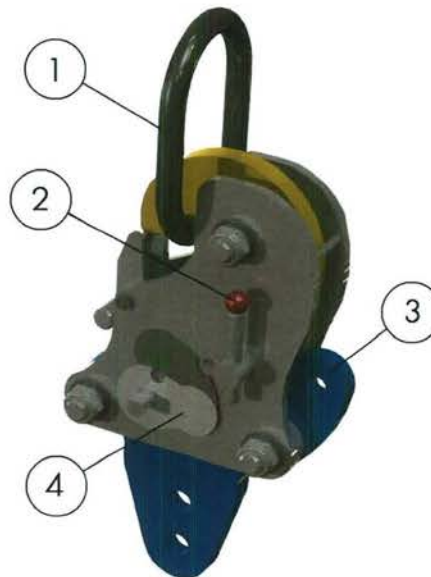
***Caribbean Fantasy* Fire of August 17, 2016**

**Survival Factors Factual Report**

Follow these steps:

1. Visually check that the master links are seated properly in both forward and aft hooks (see Figure1).
2.
3. Visually check that maintenance devices are NOT attached to the forward and aft hooks (see Figure1).
4. Indicators are in reset position

Page from U-Hook Operations and Maintenance Manual. These hooks were installed on lifeboats no. 1, no. 2 and no. 3 at the time of the accident.



Note the use of a recovery pin. The previous hook arrangement in each of the three lifeboats did not use a "pin" at the hooks at each end of the lifeboats.

- 1 Master link is seated properly
- 2
- 3 No maintenance devices attached
- 4 Indicators are in reset position (hook closed or secured, locked)

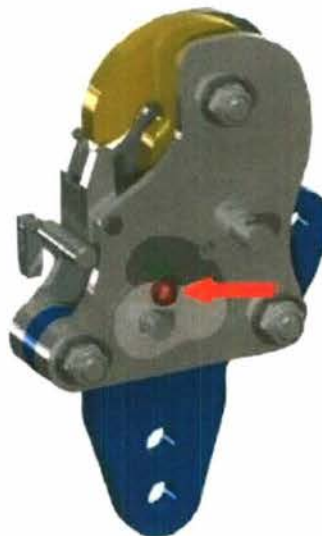
**Figure 1- Launching/No Launching Visual Check**

3. With the release handle fully open rotate the secondary arm by recovery pin and ensure forward and aft hooks are rotated into reset position. This hook has a secondary safety which does not allow the operator to close the release lever until both hooks are manually secured and in safe position.
4. The coxswain will then direct the crewperson standing by the release control unit to rotate the release handle to the closed position (see Figure 19).





**Figure 19 - Rotate Release Handle closed**

5. [REDACTED] (see Figure 20). Report 'FORWARD HOOK LOCKED' and AFT HOOK LOCKED'.
6. Check hook rotated to reset position



**Figure 20 - Hook Locked with [REDACTED]**

Page from U-Hook Operations and Maintenance Manual. These hooks were installed on lifeboats no. 1, no. 2 and no. 3 at the time of the accident.

 <b>GRIMALDI GROUP</b>	 <b>STUDIO ENGINEERING S.r.l.</b>
<b>M/V VICTORY</b>	<b>TRAINING MANUAL</b>

2) SGANCIO ED AMMAINO (Fig.6.10 6.11 6.12)

a) Rimuovere le rizze sullo scafo dell'imbarcazione (3) ed i ganci di sicurezza dei bracci (2) tirando l'apposita maniglia (1). Assicurarsi che i bracci e l'imbarcazione siano privi di impedimenti che possono ostacolare la manovra

b) Aprire il freno del verricello tirando il cavo di comando ammaino dall'imbarcazione. (ammaino per gravità) (4) Durante la fuoriuscita dei bracci il peso sul verricello aumenta fino a quando l'imbarcazione è completamente fuoribordo. Non è necessario frenare per evitare e che lo scafo vada ad urtare contro la murata della nave durante l'ammaino.

**SOLO PER LE IMBARCAZIONI DI SALVATGGIO**

Chiudere il freno quando l'imbarcazione si trova sul punto d'imbarco, l'imbarcazione è sostenuta dai cavi di sospensita. Agganciare e mettere in tensione i paranchi di accosto. Imbarcare i passeggeri.

c) Mantenere teso il cavo di comando ammaino fino a quando l'imbarcazione è in acqua. Se il cavo viene rilasciato il freno si chiude e l'operazione di ammaino si interrompe. Non toccare la leva (A) di sgancio finché la barca è in acqua

d) Continuare ad ammainare anche quando l'imbarcazione galleggia in modo da creare un sufficiente lasco che faciliti le operazioni di sgancio.

e) Togliere il perno rosso (B) di sicurezza della leva di sgancio (A), portare verso l'alto l'impugnatura (A) e muovere la leva di sgancio verso poppa fino all'apertura dei ganci. (Fig. 6-6A)

**NOTA**

La leva di sgancio ha un dispositivo automatico © di sicurezza che si sposta in posizione OFF quando l'imbarcazione è in acqua. L'indicatore entra allora nella zona rossa.

2) RELEASE AND LAUNCHING (Fig. 6.10 6.11.6.12)

a) *Pull the handgrip (1) for release safety hook (2) on the davits and hull shell gripe slip links (3). Ensuring that they do not impede the launching of the boat*

b) *Operator opens the winch dedman brake by pulling the control wire in the boat (4) (gravity launch). During the swinging out, the load on the winch increases until the davits are in the full outboard position. Unnecessary braking should be avoided to prevent the boat from swinging and hitting the ship side.*

**ONLY FOR THE LIFEBOATS**

*Close the brake when the boat is in the embarkament position, held in by the tracing pendants. Hook bowsing blocks into their respective eye-plates on the davit tracks and boat suspension links. Tension the bowsing ropes and meke fast.*

c) *Lower away to the water by maintaining the pull on the control wire. If the control wire is released the brake will drop closed and the lowering operation will be stopped. Do not touch the lever (A) until the boat is in the water.*

d) *Do not apply the brake immediately the boat is waterborn but let the winch run on so as to give enough slack to facilitate unhooking of the lower blocks*

e) *[Redacted] (A) pull release handle upwards (A) and push rapidaly aft,) until hooks are released.*

**NOTE**

*Release lever has an automatic device © moving in OFF position when the boat is in the water. The indicator move then in the red zone.*

- f) Quando l'imbarcazione galleggia rilasciare i pattini agendo nel modo seguente (Fig. 6-6B)
- estrarre le spine di fermo (A) del sistema di sgancio (lato destro e sinistro dell'imbarcazione);
  - ruotare le maniglie (B) in senso antiorario
- g) Avviare il motore
- h) Rilasciare la cima di ormeggio
- i) Il Timoniere dirige per allontanarsi dalla nave.

### 3 RECUPERO E RIAGGANCIAMENTO IN POSIZIONE DI ENTROBORDO DELLE BARCHE DI SALVATAGGIO E SOCCORSO (Figg. 6.7 6.10)


- a) Accertarsi che i ganci siano nella giusta posizione di bloccaggio (1)
- b) Bloccare i ganci spingendo la leva (A) di sgancio verso prora fino al suo blocco. (2)
- c) Reinscrivere la coppiglia di sicurezza (B) (3)
- d) Agganciare i cavi e sollevare l'imbarcazione fuori dell'acqua. (4) Prima di sollevare la barca controllare che il dispositivo automatico di sicurezza © sia su ON (verde). L'operazione di sollevamento avviene mediante il verricello elettrico manovrato da un operatore sul ponte 7. posto in posizione idonea per controllare otticamente la manovra di sollevamento. Controllare che le funi siano tese e ben avvolte sul tamburo. (4) Durante il sollevamento controllare che il dispositivo idrostatico di sicurezza si reinneschi. L'indicatore si porta automaticamente nella zona verde quando l'imbarcazione è fuori dall'acqua. (5)

- f) When the boat is waterborn, release the skates by the handle as follow (Fig. 6-6B)

- Pull out the two securing pins (A) on both side of the boat;
- Turn the handles counter (B) clockwise

- g) Start the engine
- h) Release the painter by turning the release lever
- i) Helmsman steers the boat away from the ship

### 3 HOISTING AND RECOVERING THE BOAT INBOARD (Figg. 6.7 6.10)

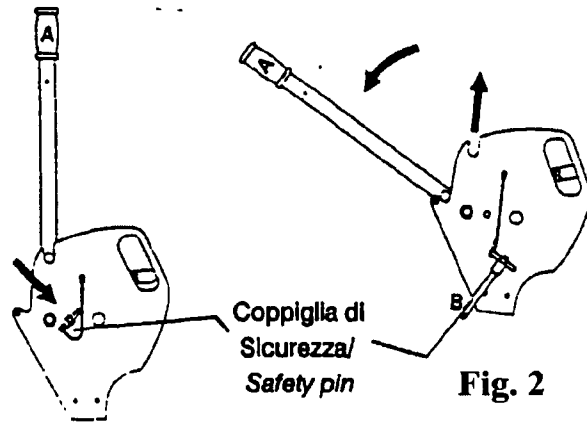
- a) Check hooks have returned to lock position for locking (1)
- b) Lock hooks by pushing release handle (A) forward until locked. (2)
- c) 
- d) Hook boat in and lift the boat from the water. (4) Before lifting the boat check that the safety automatic device © is on ON (Green) The operator on deck 7 can then proceed with the hoisting by operating the push button box, which is positioned by the ship side to give to the operator full visual contact during the hoisting. Attention: the lines must be taut and close to one another on the drum. (4) When lifting, ensure hydrostatic safety device re-engages. Indicator will move automatically to green position when lifeboat clear water. (5)

Page from Caribbean Fantasy SOLAS Training Manual. Information for hooks previously installed on LB no. 1 and no. 2.

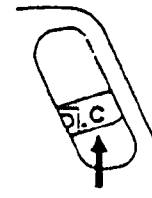
- e) Quando I bracci sono nella posizione di entro bordo, intervengono I finecorsa elettrici che bloccano la manovra togliendo tensione al motore elettrico. Per avere la certezza che la barca sia completamente nella posizione di entro bordo è consigliabile agire con la manovella sul verricello girando in direzione di innalzamento. (Fig. 6.9) Dopo l'uso rimettere la manovella a posto.
- f) Sistemare le rizze ed I ganci dei bracci (Fig. 6.10 6.11)

- e) When the jibs inboard the electrical end switches start working. Stop the supply to the engine and automatically stop the hoist. To be sure that the boat is completely inboard, it is advisable to turn the winch crank rotating it as it hoisting. (Fig. 6.9) Thereafter, store the crank in its place.
- f) Place the lashings.( Fig. 6.10 6.11)

Leva di sgancio/Release handle



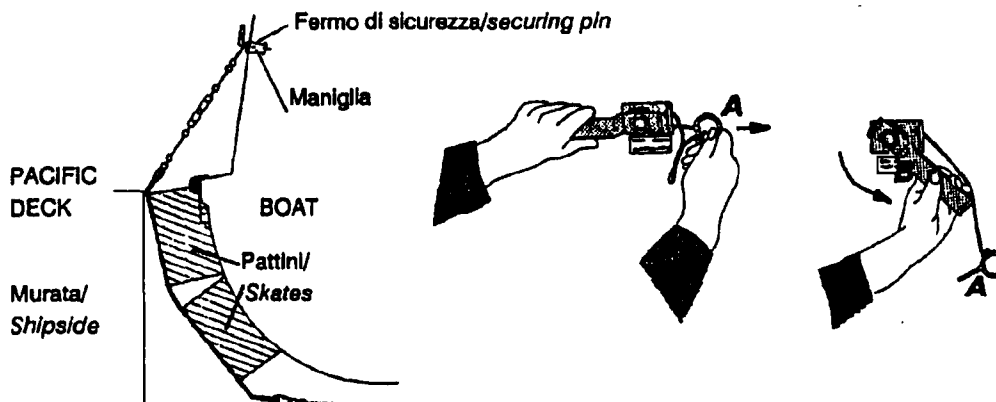
Zona rossa/red zone



**Fig. 2**

Disinnesto dei ganci / Normal release hooks

Page from Caribbean Fantasy SOLAS Training Manual. Information for hooks previously installed on LB no. 1 and no. 2.



**Fig. 6-6B Rilascio dei pattini / Skates release**

**4 RILASCIO DEI GANCI CON MANOVRE IN EMERGENZA (Fig. 6.8)**
**A) CON IMBARCAZIONE IN ACQUA (Fig.6.8)**

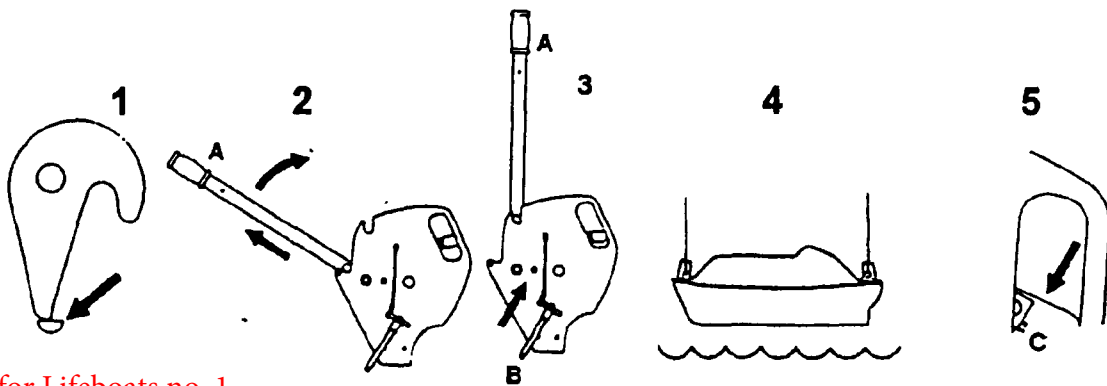
IMPIEGARE QUESTA PROCEDURA SOLO SE IL NORMALE SISTEMA DI SGANCIO NON FUNZIONA

- 1) Aprire i portelli dei due ganci, a prua e a poppa
- 2) Prendere le apposite chiavi per lo sgancio d'emergenza dalle staffe di fissaggio;(A)
- 3) Inserire le chiavi sulla testa quadra del perno delle bocchette di fissaggio;(B)
- 4) per aprire i ganci tirare **CONTEMPORANEAMENTE LE CHIAVI** a prua e a poppa


**4 EMERGENCY HOOK RELEASE (Fig. 6.8)**
**A) LIFEBOAT IN WATER (Fig. 6.8)**

**IMPROPER USE OF THE HOOK RELEASE BY STEM CAN RESULT IN SERIOUS INJURY.**

- 1) *Open forward and aft hook hatches*
- 2) *Remove emergency release wrench from clips (A)*
- 3) *Secure wrenches on square cambolts (B)*
- 4) *Pull forward and aft wrenches towards operators **SIMULTANEOUSLY** to release hooks*



New hooks for Lifeboats no. 1 and no. 2 have a "pin". These hooks did not.

 Bloccaggio dei ganci / Engage hooks

Page from Caribbean Fantasy SOLAS Training Manual. Information for hooks previously installed on LB no. 1 and no. 2.

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Section: **DESCRIPTION**

Subject : **HOOK ARRANGEMENT**

## **KH6.5 "ON LOAD" LIFTING HOOKS**

The lifeboat has two lifting hooks, one forward and the other aft. The hooks are connected to each other by use of a teleflex cable and will release simultaneously when operated and maintained as prescribed.

The normal hook release is carried out from the hook release arrangement fitted on the aft hook, to the right of the helmsman.

*The hook release system is based on the torsion lock principle and is described as follows:*

The main hook (1) is locked in position by the torsion lock (2). When operating the hook release arm (3), the hook release mechanism will rotate the torsion lock (2) and eventually the main hook (1) will be free to rotate. Because of the eccentricity between the link (4) (wire fall) and the main hook shaft (5) the hook will release immediately.

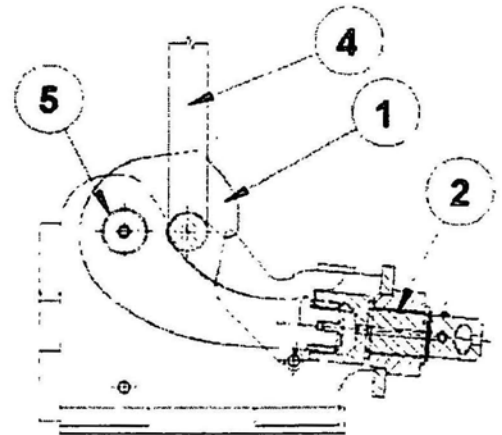
When the lifeboat is waterborne, the air trapped in the hydrostatic interlock will be compressed which again moves the hydrostatic membrane. The displacement is transferred by use of a teleflex cable (6) from the hydrostatic interlock to the hook release lock (7). At the same instance, a red pawl (8) will come in sight indication that the lifeboat is waterborne.

The hook release procedure is described in Chapter 2.9 connecting the forward and aft hook. The hydrostatic interlock is installed to ensure that the hooks are locked and secured when the lifeboat is hanging in the davits. In an emergency the hydrostatic device can be over-ridden. This is accomplished by first smashing the Plexi glass (10) followed by moving the exposed red lever (behind the glass) upwards to manually moved the red pawl (8). The release arm (3) may then be operated.

Page from Lifeboat no. 3 operations and maintenance Manual. Page contains information for the previous hook arrangement.

### **IMPORTANT**

Read the *HOOK Manual* before use.  
Be Acquaint with the *HOOK* and its *OPERATION*.



Note: New hooks for lifeboat no. 3 have a pin. These hooks did not.

