MANUALE

DISPOSITIVI ANTICADUTA

FALL PREVENTER DEVICE
1. GENERAL

Two lifting cables are needed for each lifeboat; one is fastened to the bow hook the other to the stern hook (pics 1&2). As both hooks must be loosened from the loop simultaneously, the disengagement has to be performed by remote control. Either release wires or hydraulics are used. It is, furthermore, common for the hooks to be mounted in bearings between two supporting plates, so that the plates, if correctly designed, help in loosening the loop when the hook turns. This notice is only applicable to davit-launched lifeboats fitted with on-load release hooks.

Failures of equipment can result in the premature opening of the on-load hook mechanism, causing the lifeboat to fall from the davits unexpectedly.

This means that any defects or faults in the operating mechanism, errors by the crew or incorrect resetting of the hook after being previously operated can result in premature release.

A ‘Fall Preventer Device’ (hereafter F.P.D.) can be used to minimize risk of injury or death by providing a secondary alternate load path in the event of premature release.

The device described here is a part of life saving appliance installed on the lifeboats; is an apparatus which provides additional safety during the launching and/or hoisting of a survival craft.

A F.P.D. comprised of a connecting line connected at its upper end to the suspension link. The lower end of the connecting line is connected to the released mechanism such normally a recovery lug or any other. The connecting line release means is releasable connected to a hang off lug assembly, which is attached to the on load release means. The connecting line has a longer length than the launch pendant, so that no load is carried by the connecting line unless the lifeboat is prematurely released.

For this type of F.P.D. no modification of a lifting appliance or lifeboat that is to be fitted to a ship are required. It designed and installed to not impede the correct releasing operation.

This device is to prevent the accidental fall of a lifeboat while the lifeboat is lowered/hoisted to/from the water during drills or emergency evacuation. When the lifeboat is fully waterborne or is at a safe height the lower end of this device will be disconnected from the connecting line. After that it will possible to operate the on load release system and the lifeboat will sail away from the vessel.

This type of F.P.D. has as a main component an appropriate textile strop and its releasing operation is achievable quickly and easily without risk for the crew member designed for this operation in all condition even when the lifeboat is floating. One type could be released from inside the lifeboat and the other must be released opening the lifeboat hatches but quickly and easily achievable by a person at each device from within the lifeboat. Once the F.P.D. is released it doesn’t interfere with the other operation which the lifeboat is submitted.
2. METHOD OF CHECKING BG Safe F.P.D. PROPER INSTALLATION

The F.P.D. is a preventer device for lifeboat to be installed between the hook structure, solid connected with the entire structure of the lifeboat, and the suspension link, included in the launching appliance. The F.P.D.installation is complementary to the lifeboat release system but it is not substitutive of such system. See also pic. 3.

The reference coupling point of our F.P.D. on the hook structure, even if in different positions, is present on all the most hooks models, the pendant recovery lug. In many cases on this hole is already installed an auxiliary hanger plate that has another service hole.

We supply two types of F.P.D.:

- the “TYPE 2” that must be released pulling directly from the BG Safe F.P.D. the foreseen safety pin. It requires the opening of the lifeboat hatches but quickly and easily achievable by a person at each device from within the lifeboat.

- the “TYPE 3”. On this one the releasing operation still must be performed pulling from the BG Safe F.P.D. the foreseen safety pin but it could be achievable from inside the lifeboat using a remote control. See also Fig.4.

* The “TYPE 1” where a shackle must be unscrewed from recovery lug, it requires opening of lifeboat hatches and need very special attention to the suspension block.

These first two types of F.P.D. work on the same work principle and also the installation procedure is the same the only difference is the safety pin removing operation.

2.1. BG Safe F.P.D.

**TYPE 2**

This BG Safe F.P.D. is composed by two omega shackles, one appropriate textile
strop and an interface between the F.P.D. upper part and the pendant recovery lug (with or without the auxiliary hanger plate). This device contains two safety pins: one allows a quick disconnecting operation and the other is the one which connects the interface to the hook structure. The textile strop is a continuous ring (round ropes) sewed in the middle, so as to create two loops. In one of them there is inserted one omega shackle, the same shackle is fixed at one of the ring composing the suspension block final part of the suspension cable.

The BG Safe F.P.D. interface is constituted of a metal body having two slots, in the lower part is installed the auxiliary hanger plate, and in the above slot there is installed a second omega shackle that is inserted again in the second textile strop loop. Both the omega shackle and the auxiliary hanger plate are kept and fixed in the work position using two safety pins inserted in the F.P.D. interface.

The lower safety pin once inserted in the foreseen F.P.D. interface passing hole and trough the auxiliary hanger plate hole. It is held in position using a washer and a beta split pin on one side and a mechanical stop on the other.

The upper safety pin is the one that designed crew member will remove from the BG Safe F.P.D.. This operation disconnects the BG Safe F.P.D. as secondary alternate load path. This safety pin, once inserted in the foreseen F.P.D. interface passing hole and trough the second omega shackle hooked at textile strop loop, is held in position using on one side a mechanical stop and on the other side a flexible pin.
CHECK LIST:
The BG Safe F.P.D. does not have to be absolutely over painted

Generally indication: check for corrosion, deformation, wear, breakage of wires or in the textile rope external sheath. Check moving condition. If 10 % reduction of nominal diameter/ thickness has been detected the component must be substituted

The upper omega shackle must be firmly hooked with a suspension link ring. The provided nut correctly screwed in the shackle pin and the split ring inserted and fixed

The textile strop loop must be inserted (hooked) with the upper omega shackle. The strop does not have to be entangled anywhere, does not have to be snagged in the omega shackle pin thread, it must be undamaged, it must be adherent and tight to the suspension link.

The lower omega shackle must be firmly hooked with the upper safety pin installed in the BG Safe F.P.D. interface and must be inserted (hooked) again in the second textile strop loop. The omega shackle must have the provided nut correctly screwed in the shackle pin and the split ring inserted and fixed. The textile strop does not have to be entangled anywhere, does not have to be snagged in the omega shackle pin thread, it must be undamaged.

The upper safety pin is the one that the designed crew member will remove from the BG Safe F.P.D. must be correctly inserted in the BG Safe F.P.D. interface (See also Fig.6). Check the integrity of the
sphere and its free movement.

The lower safety pin must engage firmly and correctly the auxiliary hanger plate hole, the washer and a beta split pin on one side must be correctly inserted and fixed.

2.2 BG Safe TYPE 3

Substantially this type has the same prerogative and the main features of the TYPE 2. The difference, as already described above, consist in the possibility to disconnect the BG Safe F.P.D. using a remote control (by wire) located inside the lifeboat. See also Fig. 7

CHECK LIST:

The BG Safe F.P.D. does not have to be absolutely painted

Generally indication: check for corrosion, deformation, wear, breakage of wires or in the textile rope external sheath. Check moving condition. If 10 % reduction of nominal diameter/ thickness has been detected the component must be substituted

The upper omega shackle must be firmly hooked with a suspension link ring. The provided nut correctly screwed in the shackle pin and the split ring inserted and fixed

The textile strop loop must be inserted (hooked) with the upper omega shackle. The strop does not have to be entangled anywhere, does not have to be snagged in the omega shackle pin thread, it must be undamaged, it must be adherent and tight to the suspension link.

The lower omega shackle must be firmly hooked with the upper safety pin installed in the BG Safe F.P.D. interface and must be inserted (hooked) again in the second textile strop loop. The omega shackle must have the provided nut correctly screwed in the shackle pin and the split ring inserted and fixed. The textile strop does not have to be entangled anywhere, does not have to be snagged in the omega shackle pin thread, it must be undamaged.

The remote control wire must be firmly and correctly locked in the safety pin, the auxiliary handle must be correctly screwed in the safety pin and free to move, no obstacle in the safety pin stroke space. Check the integrity of the flexible pin and the looseness of the flexible pin screw. No visual damage and no looseness in the remote control cable and in its sheath and in all the equipments of the remote control system inside and outside the lifeboat.

The lower safety pin must engage firmly and correctly the auxiliary hanger plate hole, the washer and a beta split pin on one side must be correctly inserted and fixed.

2.2 BG Safe TYPE 1

This type of FPD is just shackle + strop device, very special care shall be used in the unscrew of shackle in case the lifeboat is afloat, due to fast movements of the suspension block overhead.

CHECK LIST:

The upper omega shackle must be firmly hooked with a suspension link ring, the lower omega shackle must be firmly hooked with the recovery lug. Depending of installation design could be installed only the lower shackle where the strop is passing through the suspension ring. The provided nut correctly screwed in the shackle pin and the split ring inserted and fixed

The textile strop loop must be inserted (hooked) with the upper omega shackle. The strop does not have to be entangled anywhere, does not have to be snagged in the omega shackle pin thread, it
must be undamaged, it must be adherent and tight to the suspension link.

3. LAUNCHING and RECOVERY OPERATION

The ship’s Master or the officer in charge of any lifeboat lowering or lifting operation should ensure that the lifeboat F.P.D. are fitted before commencing any drill, testing, inspection or maintenance where persons are in the lifeboat. The principles of safety and health at work apply to drills as well. Hanging-off pennants should only be used for maintenance purposes and not during training exercises.

The ship’s crew must be fully trained in the operation of the F.P.D. fitted to the lifeboat on their ship.

It should be taken into account that with certain types of ship such as oil, gas or chemical tankers it may not be possible to use the BG Safe F.P.D. TYPE 2 because in eventual abandon ship situation the release mechanism of the device is not inside the lifeboat. This problematic is covered using the BG Safe F.P.D. TYPE 3, the one with the remote control system.

If any on-load release hook is subject to a premature or unintentional release, the Master should provide a full report of the circumstances of the incident.
The following points should be considered when conducting drills, testing, inspections, or maintenance of lifeboats and launching appliances:

The Officer in charge of the lowering operations should verify the correct fitting of the F.P.D.s (fore and aft) before the lifeboat is boarded and any davit harbor pins or gripes are removed. The BG Safe F.P.D.s are readily visible by the Officer in charge, persons inside the lifeboat and the person at the winch controls.

Before removing any securing devices the on-load release systems should be inspected to ensure that the hooks are properly locked;

There should be clear visual indication to the helmsman of the lifeboat that the F.P.D. is fitted or not, this is achieved by using the WARNING TAGS which each BG Safe F.P.D. is equipped. In fact the personnel in charge of the F.P.D. disconnect operation, once the operation is done will remove the WARNING TAG from each BG Safe F.P.D. (fore and aft) and will bring them to the helmsman cockpit. At this point the helmsman, that usually is also the person in charge for releasing the lifeboat, seeing both the WARNING TAGS will have the confirmation that the F.P.D. are disconnected so he can proceed with the other operations.

In order to simulate emergency use, the BG Safe F.P.D. should be disconnected (remove safety pins) when the lifeboat is just touching the water but with weight still on the falls. The lifeboat should then be lowered until it is fully waterborne and the drill continue by activating the on-load release mechanism in the normal manner.

On recovery, the lifeboat should be re-connected to the falls and the BG Safe F.P.D. re-connected
and the WARNING TAGS must be re-applied on the BG Safe F.P.D. once the lifeboat is just over the sea level and weight is on the wire so that action of swells is not touching the boat, the on-load release mechanism checked paying particular attention to ensure that the interlock has reset and the hooks are properly locked. Once confirmed, recovery to embarkation deck or stowage position can continue. When the lifeboat is recovered it should be stowed and checked that everything is ready again for emergency operation as for vessel procedures.

4. INSPECTION AND MAINTENANCE

The frequency of the BG Safe F.P.D. Inspection and Maintenance follow the same timing decided for the on-load release equipment used on ships. We suggest a weekly inspection as usually is suggested for the release equipment.

Personnel undertaking inspections, maintenance and adjustment of lifeboats, launching appliances and associated equipment should be fully trained and familiar with these duties.

All appropriate documentation for the maintenance and adjustment of F.P.D., lifeboats, launching appliances and associated equipment is available on board.

Fall preventer strops must not be used for any other purpose and should be fitted to the lifeboat at all times or stowed so that they are readily accessible.

The BG Safe F.P.D. does not have to be absolutely over painted, if accidentally the F.P.D. during the inspection/maintenance the F.P.D. results painted it must be substituted.

The BG Safe F.P.D. doesn’t need to be lubricated.

The BG Safe F.P.D. is designed to allow the transfer of load from the hook mechanism to the strop with minimal movement (drop) of the boat in the event of a release mechanism failure. If the BG Safe F.P.D. is subject to an unintentional dynamic shock loading, then the textile strop should be replaced and the associated attachment points inspected. In such cases the Master should provide a full report of the circumstances of the incident.

The textile strop should be inspected in accordance with the Merchant Shipping Lifting Operations and Lifting Equipment Regulations and replaced maximum every 5 years. The material of the textile strop is rot proof, corrosion-resistant, not be unduly affected by seawater, oil or fungal attack and UV resistant. If during the inspection/maintenance the textile rope external sheath appear damaged (little cuts, spots with excessive wear) it must be substituted.
Detailed maintenance/repair work should be conducted by the manufacturer representative or a person appropriately trained and certified by the manufacturer for the work in accordance with MSC/Circ.1093.

Generally indication: check for corrosion, deformation, wear, breakage of wires or in the textile rope external sheath. Check moving condition. If 10% reduction of nominal diameter/thickness has been detected the component must be substituted.

About the inspection/maintenance see also what reported in the check list paragraph 2.1/2.2

4.1 WEBBING SLING GENERAL KNOWLEDGE

A visual check on the condition of the wire ropes ling to identify obvious damage or deterioration which might affect its fitness for use.

Examination periods should be determined by a competent person, taking into account the application, environment, frequency of use and similar matters, but in any event, slings should be visually examined at least annually by a competent person to establish their fitness for continued use. Damaged slings should be withdrawn from service, never attempt to carry out repairs to the slings yourself. Web slings must be removed from service when damaged. Each sling must be visually Inspected prior to each use for acid or caustic burns, melting or charring snags puncture stears or cuts and broken or worn stitching if the core warning yams show, the sling must also be removed from service. Any damage evident in the cover indicates potential damage to the load bearing core. These checks should extend to any fittings and lifting accessories used in association with the sling. The following are examples of defects or damage likely to affect the fitness of slings or continued safe use.

TO BE REMOVED FROM SERVICE
ESEMPI DI SISTEMI DI SGANCIO DIFFICILMENTE RAGGIUNGIBILI

Da notare in tutte le immagini la posizione dell’operatore rispetto al punto di aggancio del Fall Preventer Device.
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ESEMPI DI SISTEMI DI SGANCIO CONTROLLATI IN REMOTO