FROG XT4

USER MANUAL REV 3.1

DOC-000503(2)
Issue date: 16/03/2018
Original Instructions

reflexmarine

Introduction

This manual contains information for operating, maintaining and storing the FROG-XT4 personnel carrier. Appropriate training and pre-operational briefings should be provided for all personnel involved in the use of this device.

Risk awareness and planning - Crane transfers (like other forms of marine transfer) are complex operations and operators must take account of a wide range of operational variables. By their nature they usually require the management of an interface between two separate organisations (most frequently an installation operator and a vessel operator). It is essential that all the key risk factors are taken into account and proper planning and preparation is done and that all personnel involved are aware of their roles and have the necessary competence to perform them.

Best practice references - Please refer to Offshore Personnel Transfer by Crane. This is a separate document that contains comprehensive guidance and information on each element of operation. It is for those researching, planning, managing or carrying out the safest possible crane transfers.

10 Golden Rules: Personnel Transfer by Crane video also provides a useful overview of the key risks and considerations in planning crane transfer operations.

Key references

i. Offshore Personnel Transfer by Crane, Marine Transfer Forum, http://www.marinetransferforum.org/resources
ii. 10 Golden Rules: Personnel Transfer by Crane, Reflex Marine, https://www.youtube.com/watch?v=JDljjCqr2Zw

Safe and proper use of the FROG-XT4 is the responsibility of the user, taking due consideration to the information provided in this document. The user should ensure compliance with all relevant legislation and good industry practice.

Control of manual – This manual is controlled by Reflex Marine and may be revised from time to time. The latest revision may be obtained by contacting RML or by downloading the latest version from www.reflexmarine.com/support.

Note*: For the purposes of this manual RML will be deemed to mean Reflex Marine Limited*

Contents

1 Product Specifications

Table 1 Product Specifications

Model No.		XT4
Dimensions (Nominal)	Width 1	2110 mm
	Width 2	2110 mm
	Height	2180 mm
Weight	Maximum Gross Mass	1000 kg
	Tare Weight	500 kg
	Payload	500 kg
Materials	Frame	316 Stainless steel, A4 stainless fixings
	Central Column / Load Plate	316 Stainless/ Duplex Stainless
	Steel Components	All stainless except for floor grating
	Buoyancy	PE moulded shell with Polyurethane (PU) closed cell foam fill.
	Seat Base/ Seat Back	Polyolefin shell filled with polystyrene closed cell balls
	Landing Feet	EVA Foam
Operating Temperatures	Standard Model	-20°C to +50°C
	Arctic Model	-40°C to +50°C
Suspension	Springs	2 x Coated heavy duty coil spring
	Dampers	2 x Stainless steel 400mm recoil dampers
Seating	Seats	4 x Full Height Seats
	Harnesses	3 Point, Quick Release Buckle
	Grab Handles	2 Per Passenger
Lifting Points SWL	Main	1000 kg
	Backup	1000 kg
	Handling	1000 kg
Wire Rope Lifting Assembly	Safe Working Load	1240 kg
	Wire Rope	Anti-rotation wire rope
Number of Passengers	Standard	4
	Stretcher Mode	1 + Stretcher
Luggage Capacity	Light Luggage	Accessory available on request
	Large Luggage Tray	Accessory available on request
Impact Protection	Vertical impacts	4.5 m/s
	Lateral impacts	2 m/s
Stability	Horizontal	35°, for a load of 1-4 passengers.
	Self-Righting	Up to 180° inverted to the vertical position
Certification	Class	Attestation of Conformity Certificate No. MAC0000002 i01
Quality	System	Manufactured to ISO 9001:2008
Standards	National Technical Standards	UK, BS EN 1993 series: The Use of Structural Steel in Building.
	Industry European Standards	EC Machinery Directive EN 14121-1, BS EN 12100-10 Load Test – ILO152 / LOLER
	National Regulations	UK, PUWER / LOLER

2 Operating Parameters

2.1 General

The FROG-XT range has been designed to ensure passenger safety in the most demanding conditions.

There are a large number of factors that affect the safe conduct of marine personnel transfers. These include crew skill and experience, met-ocean conditions, landing areas, vessel station keeping capability and response to sea conditions, visibility and line of sight. A combination of many factors will determine the risk involved and careful planning is a prerequisite for safe operations (see Introduction)

2.1.1 Sea State

The FROG-XT4 has a suspension and damping system which prevents passengers from experiencing shock loads up to relative landing of 4.5 m/s. The maximum recommended significant wave height is based on the maximum relative velocity between the load (or hook) and the deck.

The calculated operational sea states detailed below are based on vertical impact speeds and bio-mechanical considerations. They reflect the ability to withstand such impacts with minimal risk of injury to the human body. However, there are many additional factors that may affect the safety of crane transfer operations. These include vessel station-keeping, crew competence, wind and visibility. The operator should always refer to general guidelines on crane transfers operations to assess overall risks.

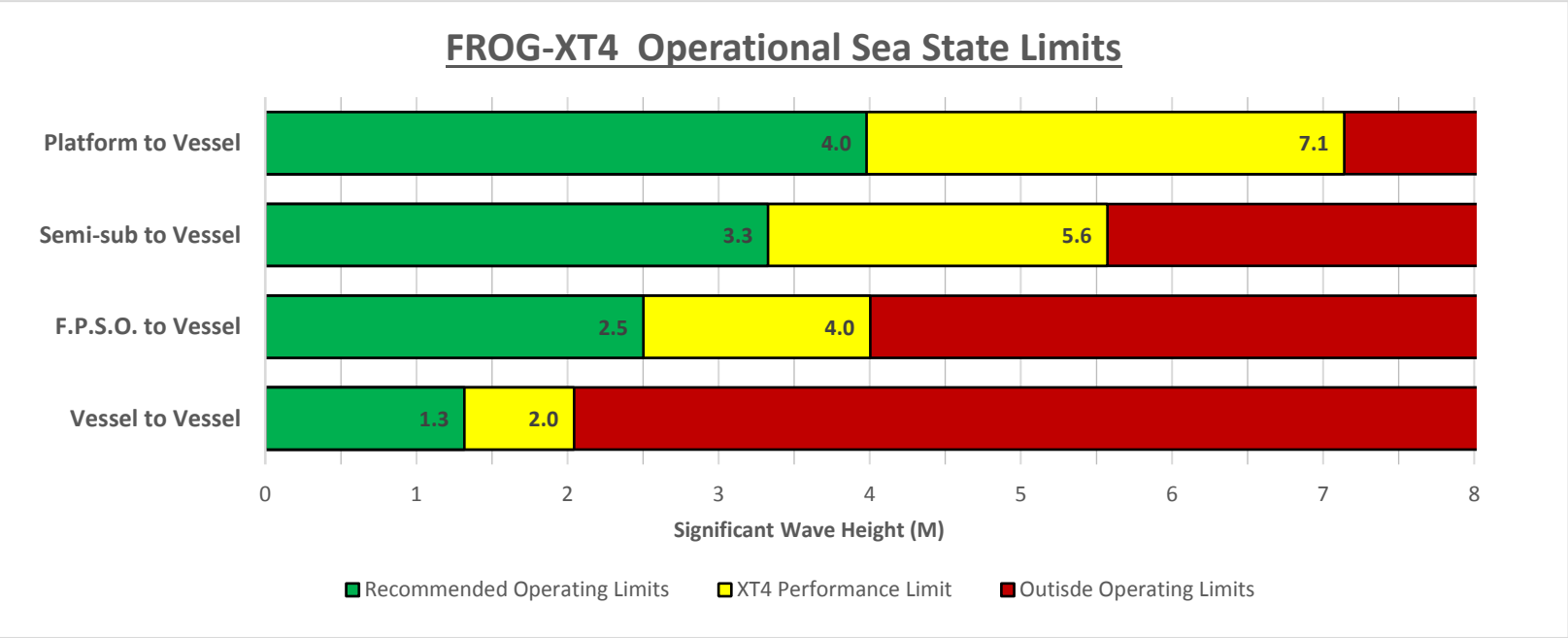
Technical note:

The calculation for relative velocity used here is based on the European offshore crane standard, BS EN 13852-1:2013. Whereby the maximum anticipated relative velocity between a load and a vessel deck, is given by the following;

Relative velocity = (0.5*Hook velocity)[1] + √ (Vessel deck velocity [2] + Boom tip velocity [2])

[1] Equal to 1.67 m/s (100 m/min) for lifts below 5 tonnes. Higher crane hook speeds may be available, and it follows that the higher the available crane speed the higher the possibility of a heavy landing or take off. However, with a qualified Crane Operator, it is considered unlikely that the FROG-XT will be landed at full hook speed on a deck rising at full speed.
If there are concerns about heavy landings, operators may wish to consider the following methods to reduce risks; dry runs without passengers, landing in centre of deck where there is less vessel movement, transferring fewer passengers to increase damping, using a hook speed indicator.

Table 2 FROG-XT4 Operating Parameters



Note:

- **Recommended Operating Limit** - This is the envelope in which it would normally be considered safe subject to due consideration of other risk factors.
- **XT4 Performance Limit** - This envelope is defined by the performance limits of the capsule and the theoretical translation to significant wave height by EN13852-1:2013. However, it is assumed that in such elevated sea states other risk factors may become substantial. Operations should not normally be performed in this range without conducting a thorough risk assessment. Contact Reflex Marine if you need assistance.
- **Outside operating Limit** - It is not recommended - sea states are above the safe design envelope of the capsule.

2.2 Recommended Operating Parameters

Table 3 Recommended Operating Parameters

Parameter	Recommendation	
Vertical Impact Protection	4.5 m/s	14.8 ft/s
Lateral Impact Protection	2 m/s	6.6 ft/s
Wind Speed	20 m/s	40 knots
Visibility	Crane Operator should have a clear view of the pickup and set down areas.	
Vessel Motion	10^0 Pitch and Roll	
Vessel Station-Keeping Radius	5 m	16 ft
Landing Area	Must be clear of any obstructions or hazards	
Landing Area on Vessel	6 m x 6 m	20 ft x 20 ft
Landing Area on Installation	4 m x 4 m	13 ft x x13 ft
Crane Requirements	Crane must be suitable for lifting personnel	

2.3 Crane Transfer Planning Tool

We have developed a planning tool that can be used to determine whether the conditions are suitable for transfers to take place.

Using the Crane Transfer Planning Tool

There are four main sections that need to be completed

i. Risk Assessment
ii. Pre-Transfer Checklist
iii. Passenger Log
iv. Post Transfer Review

The Crane Transfer Planning Tool can be found on the flash drive contained in your user pack, or alternatively you can download a copy from our website.

It is important that the conditions are assessed prior to every set of transfers as conditions are never exactly the same.

It is recommended that a trial run is always conducted as this provides real time feedback on the conditions.

The operator should always refer to general guidelines on crane transfers operations to assess overall risks.

If there is ever any concern about the conditions or the safety of the operations transfers should be stopped.

3 Using the FROG-XT

3.1 Safety Features

Protected Seating Position:

Seats are positioned directly behind the buoyancy panels providing maximum protection and minimised sense of exposure. The arrangement of the seats and individual entry / exit points allow rapid access and egress, allowing faster and more efficient transfers.

Fall Protection:
3-point harness system and grab handles protect from the risk of falling during transfer.

Vertical impact protection:

i. Seats mounted on a suspension system which consists of coil springs and recoil dampers
ii. Semi-upright secure seat position, cushioned saddle seat
iii. Impact absorbing EVA foam feet

Lateral impact protection:

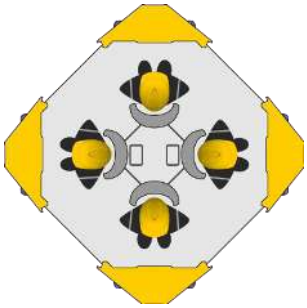
i. Stainless steel frame
ii. Buoyancy panels
iii. High backed headrest designed to reduce risk of whiplash
iv. Grab handles and pommel shaped seat cushion for secure seating position

Flotation:
Buoyancy panels ensure the carrier floats with both passengers and stretcher above the water line. All XT transfer capsules are performance tested for the most extreme immersion scenarios and self-right. All Frog-XT capsules self-rights up to 180° inverted to the vertical position in less than 10 seconds and will provide a stable floating platform in a wide range of conditions. Frog-XT capsules are also tested for their responses to free-fall into water.

3.2 Passenger Instructions

i. Enter carrier and take the seat to the left
ii. Fasten seat harness
iii. Keep hands and feet inside the carrier
iv. Hold the grab handles to keep body stabilised
v. Place feet onto the floor in front of the buoyancy panel
vi. Bear weight slightly onto feet in order to adopt a comfortable secure position especially during landing and take-off

3.3 Entry and Exit

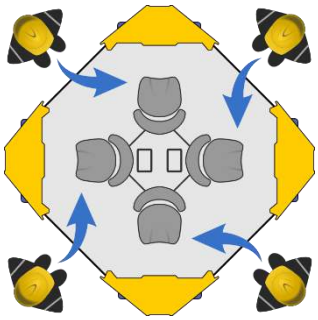


Passenger entry to and exit from should only be conducted with the carrier in a stable position on deck as advised by the crane operator to the deck crew member in charge of the transfer operation.

Note: All exiting passengers must be clear of the carrier before any new passengers attempt to board.

Each individual seat has a dedicated entry / exit point to prevent confusion and ensure an efficient operation. All passengers must enter and exit from the same direction. Chevrons on the buoyancy panels are present to indicate the direction of entry.

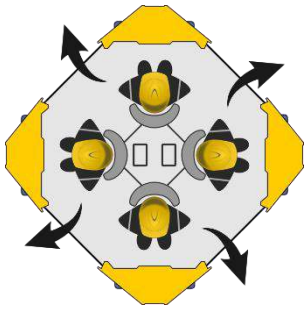
Entry



When advised to do so by the deck crew, passengers should proceed as directed to one of the four entrances (note trip hazard). When instructed, all passengers should enter the carrier and take the seat to their left.

Passengers should ensure they are securely seated and ensure the seat harness is securely fastened. Grab handles are provided on the tubular upright members either side of the buoyancy panel and passengers should grip these firmly or the harness straps whenever seated. Passengers should never place their hands near the load plate.

Exit



Following landing and when advised to do so by the deck crew, passengers should unfasten the safety harness, stand and exit the carrier (note trip hazard) by the exit to their left.

Passengers should move clear of the carrier as directed by the deck crew, ensuring they remain clear of the lifting assembly.

Passengers should remain alert to hazard posed by the sling (particularly in harsh weather with high deck motions). The sling position should be managed by the deck crew as required (see Deck Crew Instructions).

Note: It is recommended that when used to transfer only one passenger, passenger should be seated behind buoyancy panel A.

3.4 Deck Crew Instructions

Briefings

Deliver passenger briefings prior to every transfer lift and contain the following information:

i. Location specific instructions
ii. Loading and unloading procedures
iii. Emergency procedures
iv. Potential hazards
v. Seating position

Other Responsibilities

i. Highlight potential hazards to passengers e.g. trip hazards during entry/exit

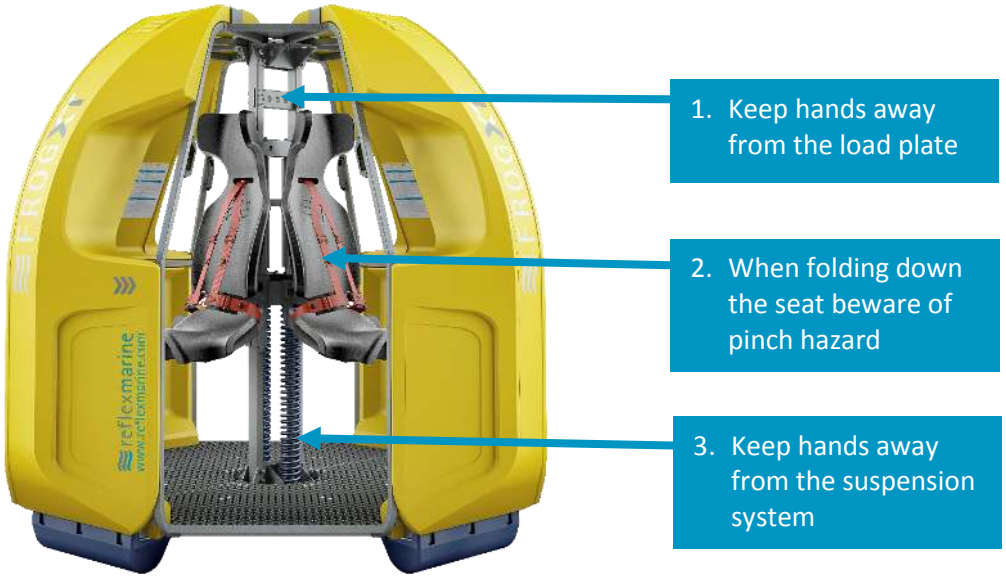
ii. Remain alert from any hazards as they arise and take appropriate action

iii. Check that passengers' harnesses are secure and correctly fitted

iv. When the carrier is in the static position on deck for passenger entry and exit, the wire rope lifting assembly will be in a static position and may obstruct one or more of the entry / exit points. Ensure passengers remain clear of the wire rope lifting assembly. Deck crew may need to hold the lifting assembly in a safe position from the carrier entrances.

v. Ensure passengers keep hands clear of any pinch points, as illustrated below.

Figure 1 Pinch Points

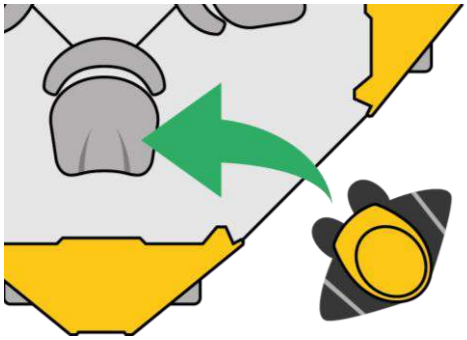


3.5 Passenger Instructions

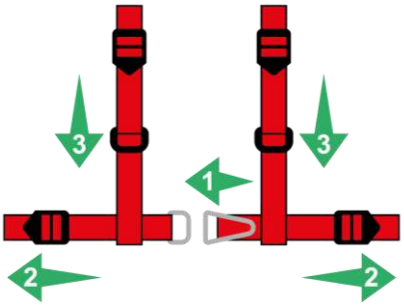
To make passenger entry more efficient, where possible, deck crew or passengers should loosen all harnesses prior to entering the carrier.

All passengers should be familiar with seating procedure and practice entry prior to operations.

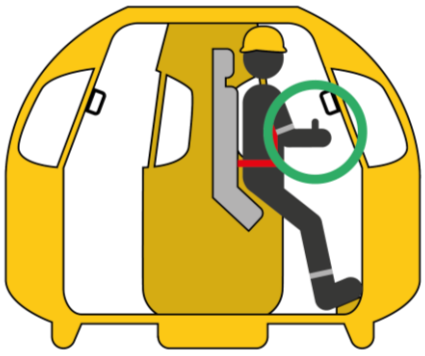
ENTRY



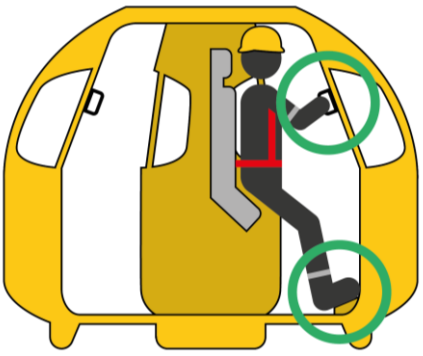
1 Take your allocated seat



2 Fasten buckle. Tightening lower straps, then upper straps



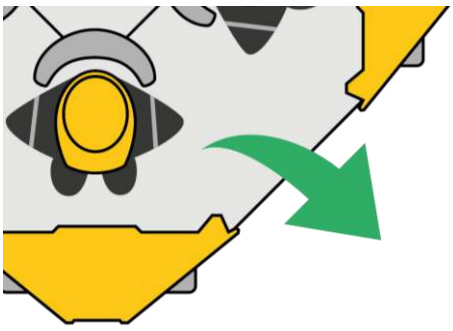
3 Give thumbs up when ready



4 Use handholds and keep feet inside

Exit

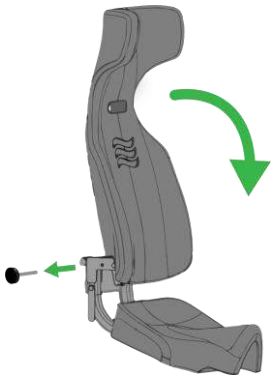
5 Wait for instructions



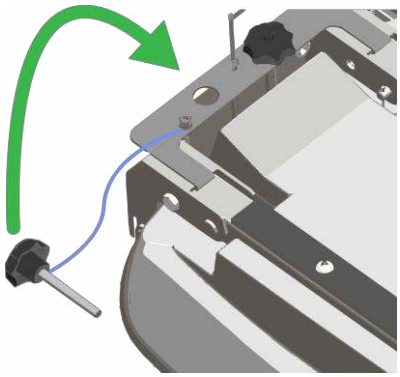
6 Exit and move to safe area

3.6 Stretcher Mode

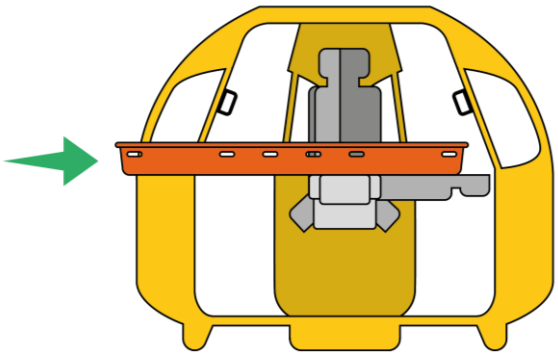
The following steps outline the procedure required to convert the FROG-XT4 into stretcher mode. For units XT4-126 onwards.



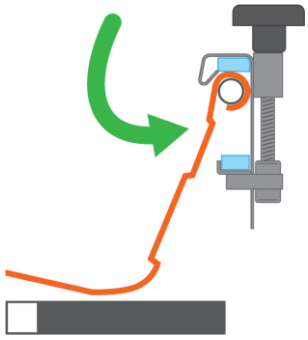
1 Remove thumb screws and fold down the seats behind buoyancy panels A and D



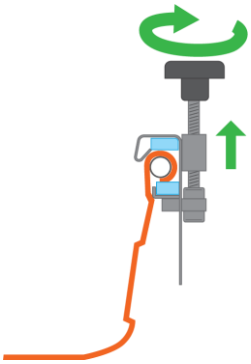
2 Place both thumb screws into place holder



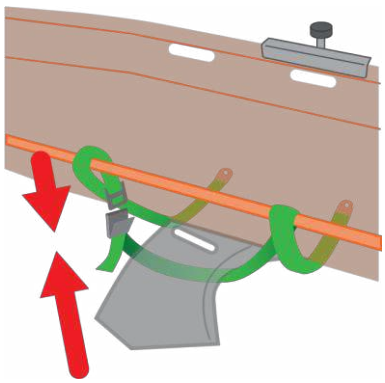
3 Slide stretcher in



4 Insert stretcher into clamp



5 Tighten thumbscrew



6 Attach straps to anchor points

The stretcher clamp has been designed to fit the Ferno Model 71 Basket stretcher.

Please note that not all stretcher types will fit. The specific stretcher in use should be test fitted prior to being used.

3.7 Carrying Luggage

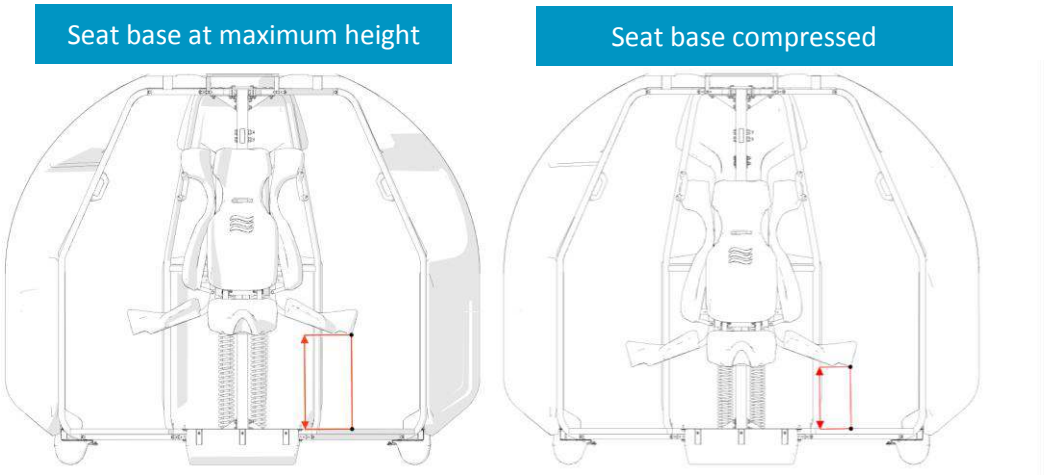
Luggage may be transferred with passengers however where practical, passenger luggage should be transferred separately in a cargo box or basket. This will minimise the risks from carrying out additional procedures whilst transferring personnel.

Two types of luggage containers are available as accessories: an under-seat light luggage box for small handheld items or under-seat floor containers for larger kit bags.

The following recommendations should be considered when transferring luggage:

i. The weight of the passengers plus the luggage should not exceed the SWL.
ii. All luggage items should be handled by deck-crew, not passengers, to minimise the time passengers spend in the hazardous zone.
iii. Items should be secured prior to passenger boarding and removed after passenger exit.
iv. Small, individual, hand-carry items such as laptop bags may be secured directly underneath a seat in one of two light luggage boxes. Items should not exceed 400 mm*(w)* x 300 mm*(l)* x 120 mm*(h)* (16" x 12" x 5") and 5 kg (11 lbs) per item.
v. Larger luggage may be secured in under seat floor containers. It is recommended that no more than 15 kg of luggage per person is loaded. Luggage should fit comfortably in the containers provided and remain secure. Height of luggage placed underneath seat should be restricted to 200 mm (8") so that it will not impede the damping system.

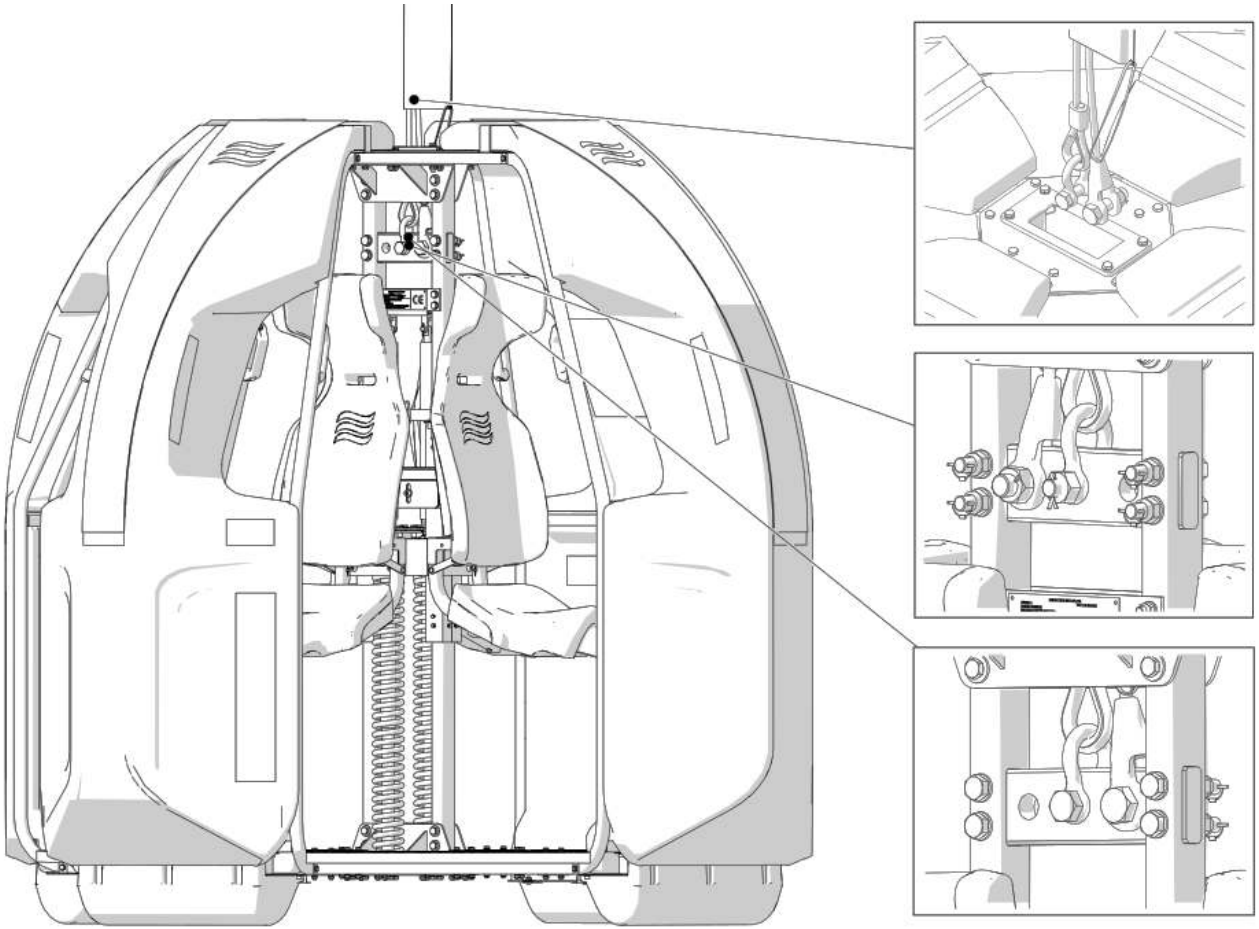
Figure 2 Luggage Height



vi. Heavy or large materials such as tools, boxes, or equipment should be transferred separately in suitable cargo box or basket.

3.8 Lifting Assembly Connection

Figure 3 Lifting Assembly



Lifting assembly is fitted to the FROG-XT4 by initially lowering it through the letter box opening at the top of the carrier.

The lifting assembly is fitted with two different terminations. The main leg is fitted with a bow shackle and the back-up leg is fitted with a spelter socket.

The main leg connects to the centre hole in the load plate and the backup leg connects to either the far right or far left hole.

A handling line can then be fitted to the other free hole in the load plate

3.9 Control of Lifting Assembly

The FROG-XT4 is designed to stay firmly on the deck of the vessel whilst passengers are entering or leaving the carrier. The Crane Operator must maintain slack in the line upon landing to allow for the vessel movement.

A designated deck crew member should be in charge of managing the position of the lifting assembly to ensure;

i. It remains clear of potential snagging points
ii. It does not encroach into the capsule
iii. It does not endanger passengers entering or exiting the capsule
iv. When lifting the capsule ensure the lifting assembly remain safely routed
vii. Only the designated deck crew, wearing appropriate PPE (i.e. gloves) should manage the position of the slings.

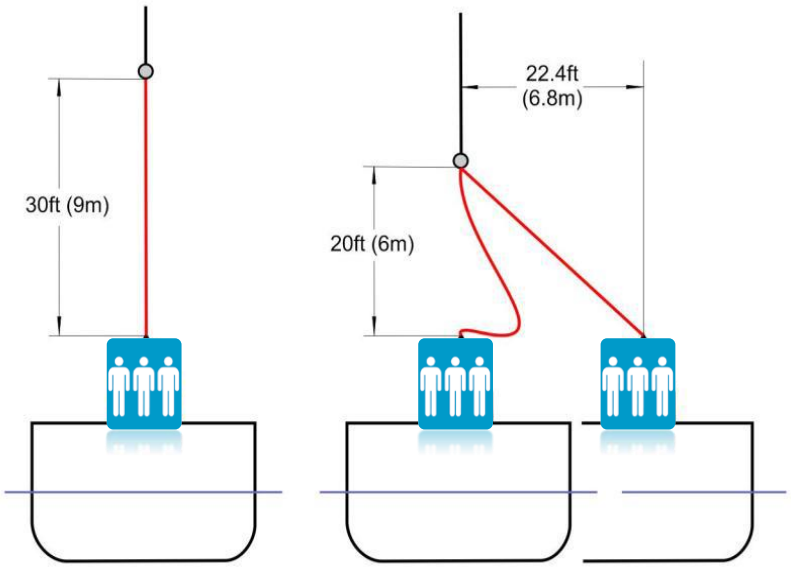
Table 4 Control of lifting assembly

Parameter	Recommendation
Ideal Sling Length	The recommended limits in this section are based on the use of the standard FROG-XT wire rope lifting assembly length of 30 ft (9 m).
Shorter Slings	For the use of shorter lifting assemblies an additional risk assessment combined with dry runs should be performed to establish safe operational routines and weather conditions. Using a shorter sling set also increases risks associated with the hook block being in close proximity to the capsule

Table 5 Sling lengths

Sling Length	Recommended Slack	Allowable Drift	Distance to the Crane Hook
30 ft	10 ft	22.4 ft	20 ft
20 ft	10 ft	17.3 ft	10 ft
10 ft	8 ft	9.8 ft	2 ft

Figure *4* Lifting assembly slack



4 Inspection & Maintenance

Following the recommended procedures set out in this section will help to ensure safe operation of the FROG-XT4.

4.1 Definitions

Transfer Lift

A transfer is defined as one pickup and put down when passengers are on board, or when the unit carries more than its tare weight.

Usage Category

This is defined by the number of transfer lifts per year. There are four different usage categories from low to very high.

Critical Parts

These are the identified set of load bearing parts.

Competent Person

A competent person is a person who has appropriate practical and theoretical knowledge and experience of the equipment. This will enable them to detect defects and weaknesses and to assess their importance in relation to the safety and continued use of the equipment. It is recommended that the competent person is sufficiently independent and impartial to allow objective decisions to be made.

Non-Destructive Testing

Although not considered necessary, some operators choose to carry out non-destructive testing prior to any re-installation of a critical part.

If this is done, then a dye penetrant test should be used, as any other tests may produce a false positive.

4.2 Care in use / Preventative maintenance

All components in the FROG-XT10 are designed for purpose and selected to be as durable as possible for their specific function. However, operational and storage environments can propagate deterioration if the equipment is not kept in good condition. Factors causing of deterioration can include:

- UV
- Sea Spray
- Dirt
- Humidity/
- Grease and chemical
- Radiated heat
- Wind
- Handling and operational damage.
- Sea water with high chlorine content
- High/ Excessive vibration
- Mould growth

Components that may specifically be affected by one or a combination of these factors are:

Wire rope lifting assembly. The wire rope lifting assembly 'sling' is the most safety critical and vulnerable component in the whole FROG assembly. It is vulnerable to damage from handling and operations and susceptible to corrosion from sea spray and moisture build-up. The lifting assembly should be inspected by a competent person prior to every use. To prevent damage or corrosion the following is advised:

- When not in use the lifting assembly is coiled and stored on the floor grating of the FROG;
- When not in use for long periods the lifting assembly should be removed from the FROG, the cover removed, and stored in a secure, dry place;
- If the FROG is kept on an open vessel deck and subject to sea spray, where possible, keep equipment covered or keep in a deck area sheltered from sea spray. Note: for high speed craft wind effects may cause covers to fray.

Seat damping springs. Sea spray, particularly on equipment that is kept on vessel open deck, can propagate corrosion and cracking in the springs therefore the following is advised in such situations:

- Where possible equipment is covered or kept in a deck area sheltered from sea spray. Note: for high speed craft wind effects may cause covers to fray;
- Springs are washed down with fresh water at regular intervals, i.e. after each voyage;
- Springs are inspected regularly. Specific inspection recommendations for springs can be found in the inspection checklist.
- Protection grease may be used to coat springs to reduce onset of corrosion.

Seat harnesses. A combination of the factors listed above can cause deterioration of the seat harnesses. These should be cleaned regularly with fresh water and mild detergent. When stored the harnesses should be fastened so that they do not flap in the wind. For longer durations of storage, it is recommended that the equipment is covered, or the harnesses are secured with cable ties. Signs of damage will be fraying and brittle webbing weave.

Landing feet. Heat radiated from deck can cause accelerated compression in the shock mitigation foam landing feet. For periods where the FROG-XT4 is stored for long periods it is recommended that the unit is chocked (raised) from the deck.

Transport and vibration. For longer periods of storage in environment with vibration, and when equipment is transported, the threaded fixings on the unit should be inspected to ensure no slackening has occurred.

General. The Frog-XT4 should be washed with fresh water regularly to prevent build-up of salt, dirt, and any contaminants.

4.3 Inspection Types

Table 6 Inspection Types

Inspection Type	Description
Pre-use Check	A check of key areas prior to each use without dismantling the assembly. Carried out by a competent person.
Visual	A careful and critical assessment of the components, carried out by a competent person without dismantling the assembly.
Examination	A careful and critical assessment of the components, carried out by a competent person. This should include dismantling the assembly and performing a visual assessment of the condition of each component, supplemented by other means such as measurement and non-destructive testing as considered necessary. For lifting assemblies this should include a visual inspection of the condition of each leg.
Post Load Test Inspection	A careful and critical assessment of the components following a proof load test. Carried out by a competent person without dismantling the assembly.

All inspections should be:

i. Performed by a competent person
ii. Carried out as per the frequency indicated in the usage table
iii. Formally recorded

4.4 Frequency

The recommended frequency and type of inspection, test and maintenance is shown in Table 7. (SEE OVER). Please note:

i. If any doubt exists regarding the usage, then the maintenance strategy should revert to a more conservative higher usage category. This should also be considered if there is any concern over heavy impacts or overloads.
ii. This recommendation applies to change out of components parts only and does not replace or alter the inspection intervals as prescribed by the relevant legislation.
iii. The check, inspection, examination and test routine as detailed in this document should always be carried out on schedule.
iv. Where the carrier has experienced heavy vertical or lateral impacts, or sustained substantial damage, a detailed examination should be carried out to ensure integrity before conducting any further lifts. Details of all damage should be recorded in a damage report. Details of the cause of the damage should also be recorded, if known.

If damage to the frame has occurred, welds should be examined for cracks using dye penetrant.

v. Details of all repairs or modifications carried out should be recorded and copies of damage and repair / modifications reports should be sent to the party controlling the use of the FROG-XT.

vi. Lifting assembly covers should be removed if the wire rope lifting assembly is removed from service.

vii. Contact RML or one of our approved partners for technical advice on inspection, testing or maintenance. It is always helpful to provide detailed photos and reports along with any query to support@reflexmarine.com.

4.5 Supporting Documentation

Customer drawing pack

Every FROG-XT comes with a drawing pack that contains all of the relevant drawings to aid in its maintenance. This pack contains the following:

i. Assembly drawings
ii. Replacement parts, kit drawings
iii. Torque settings
iv. Operational stickers
v. Bill of materials

Certification pack

Every FROG-XT comes with a certification package, which includes, but not limited to, manufacturer's declaration of conformity, all of the critical parts certificates, load test certificates and the third-party release note and checklist.

If any further certification is required, please contact RML.

Component certification

RML retains copies of the certification for all units and components involved in their manufacture. Replacement copies are available on request.

4.6 FROG-XT4 Inspection and Maintenance Schedules

Table 7 FROG-XT4 Inspection and Maintenance Recommendation

FROG-XT4 RECOMMENDED INSPECTION AND MAINTENANCE SCHEDULES							
Usage Category No of Transfer Lifts per year	**Pre Use Check**	**Visual Inspection**	**Examination**	**Wire Rope Lifting Assembly Replacement**	**Critical Parts Replacement[2]** **Load Test** **Post Load Test Visual Inspection**	**Suspension System Replacement**	**Unit Replacement[1]**
Low <100	Prior To Every Use	6 months	12 months	12 months	36 months	4 Years	12 years
Medium 100 - 500		6 months	12 months	12 months	24 months	3 Years	8 years
High 500 - 2000		3 months	12 months	6 months	12 months	2 Years	6 years
Very High 2000 – **5000** [3]		3 months	6 months	3 months	6 months	1 years	4 years
	[1]This may be extended subject to a 'condition & service assessment' carried out by Reflex Marine or an Approved Partner *[2]Only applies to critical parts marked "consumable"* *[3]When exceeding 5000 lifts, please refer to the Ultra High section (4.7) for further inspection guidance*						

Ultra-High Usage

For any units exceeding 5000 lifts per year, this section provides additional inspection criteria.

Pre-use checks

i. Check load plate for wear, cracks, nicks, gouges, corrosion, and distortion of plate or holes.
ii. Check node plate weldment for cracks, nicks, gouges, corrosion, and distortion of plate or holes, paying particular attention to the welds.
iii. Check the folding seat support assembly, seat mounting cross member, Cantilever Weldment, sliding sleeve weldment for cracks, distortion, paying particular attention to the welds.
iv. Check hydraulic damper for leaks and that all fastening points are secure.

Visual inspection

i. In addition to the guidance it item 5 the node plate welds should be visually inspected for cracks.
ii. In addition to the guidance it item 6 all the welds on the seat base assembly, sliding carriage should be visually inspected.
iii. In addition to the guidance it item 7 the springs should be visually inspected for cracks
iv. In addition to the guidance it item 9 the foot mounting plate should be visually inspected for cracks and distortion.
v. In addition to the guidance it item 8, the floor grating should be visually inspected for sign of distortion, cracking, or corrosion. The welds should be visually inspected around the mounting plate for cracks.

Examination

i. In addition to the guidance it item 3, visually inspect the load plate for cracks and distortion. Particular attention should be paid to the holes in the load plate.
ii. In addition to the guidance it item 5, the welds on the lower node plate should be inspected using the dye penetrant technique for cracks. The welds on the upper node plate should be visually inspected for cracks.
iii. In addition to the guidance it item 6 all the welds on the seat base assembly, sliding carriage should be visually inspected.
iv. In addition to the guidance it item 8, the buoyancy panels should be removed and the pillar strut weldment should be visually inspected for cracks and distortion. Particular attention should be paid to the welds, holes and the inner ends of the pillar strut where they join the node weldment. The floor grating should be visually inspected for sign of distortion, cracking, or corrosion. The welds should be visually inspected around the mounting plates for cracks.

4.7 Load Test Procedure

Table 8 Load Test Requirements

Question	Response
When should a Proof Load Test be conducted?	i. After replacement of any critical parts. Does not apply to replacement of lifting assemblies. ii. After any suspected damage arising from overloading or impact. iii. If the history of the unit is uncertain. iv. If the inspection data plate is missing, illegible or out of date.
Who should conduct this test?	i. Independent 3rd party. ii. A competent and certified test person.
Does this test require a formal record?	Yes.
What equipment is required to perform this test?	i. Loading weights or sand bags (1500 kg). ii. Certified weighing scale or load cell. iii. Lifting equipment certified for > 5 Tonnes SWL. iv. A ladder or top access platform. v. An inspection frame or floor matting. vi. Good lighting.

Table 9 Load Test Instructions

Item	Instruction
Components Under Test	i. Main Lift Point / Backup Lift Point / Handling Point ii. Central Column Load Bearing Assembly. iii. Seats and Floor Structure.
Test Proof Load	1500 kg (3307 lb)
Test Proof Load Distribution	At the discretion of the competent person the proof load may be applied to the FROG-XT4 either solely on the floor or split between the floor and seats. For the latter the recommended distribution is; i. 500 kg (1102 lb) on seats spread equally between them. Seats and harnesses should be protected prior to loading with weight. If solid test weights are used the seats may be folded to create a flat platform. Wooden boards placed on folded seats will increase area for test weights, the test load should be concentrated towards the centre of the unit to prevent damage to the seat. ii. 1000 kg (2205 lb) placed on the floor and distributed evenly.
Basis of Test Proof Load	Twice Maximum Gross Weight, less Tare Weight*= 2 x 1000 kg – 500 kg = 1500 kg (3307 lb)
Crane Hook Load	2000 kg (4,410 lb)
Test Method	Lift the unit and hold static for 3 minutes.
Order	1st - Main Lift Point 2nd - Backup Lift Point 3rd - Handling Point

* *Note: The tare weight of the FROG-XT4 is approximately 500 kg (1,103 lb) but may vary slightly. Each FROG-XT4 must be weighed prior to load test.*

4.8 Data Plates

Inspection Data Plate

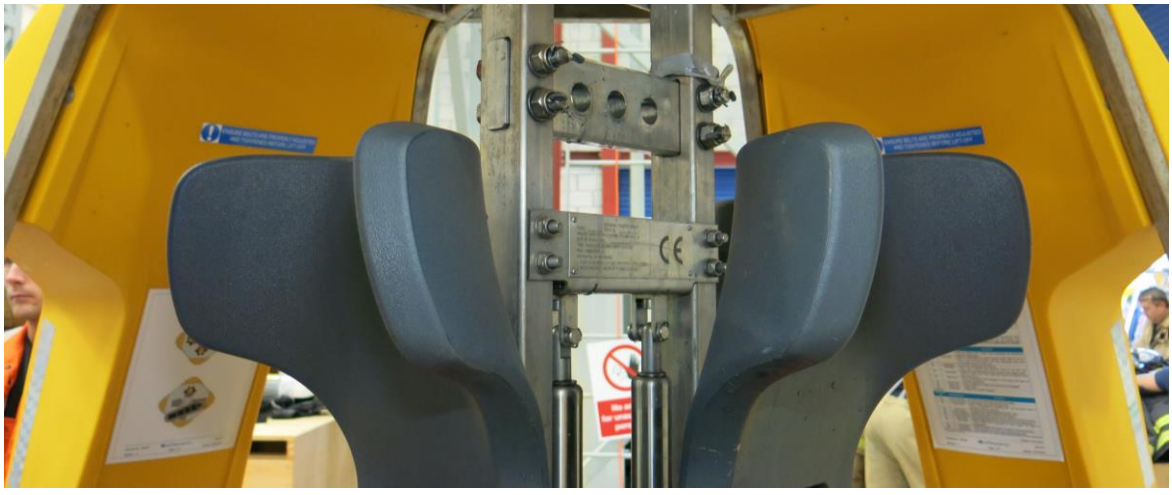
An inspection data plate will be issued and attached by the test house, which should show:

i. Tare Weight (kg)
ii. Pay load / SWL (kg)
iii. Maximum gross load (kg)
iv. The load test date (DD/MMM/YYYY)
v. Test load (kg)
vi. Serial number: XT4-XXX (where XXX is unit I.D. No)
vii. Model number: XT4
viii. Entry into service date (DD/MMM/YYYY)

Marker Plate

i. Model number: XT4
ii. Serial number: XT4-XXX (where XXX is unit I.D. No)
iii. Date of manufacture (DD/MM/YYYY)
iv. Tare weight (kg)
v. Pay load / SWL (kg)
vi. Maximum gross load (kg)
vii. Maximum number of passengers (standard & stretcher mode)

Figure 5 FROG-XT4 Marker Plate



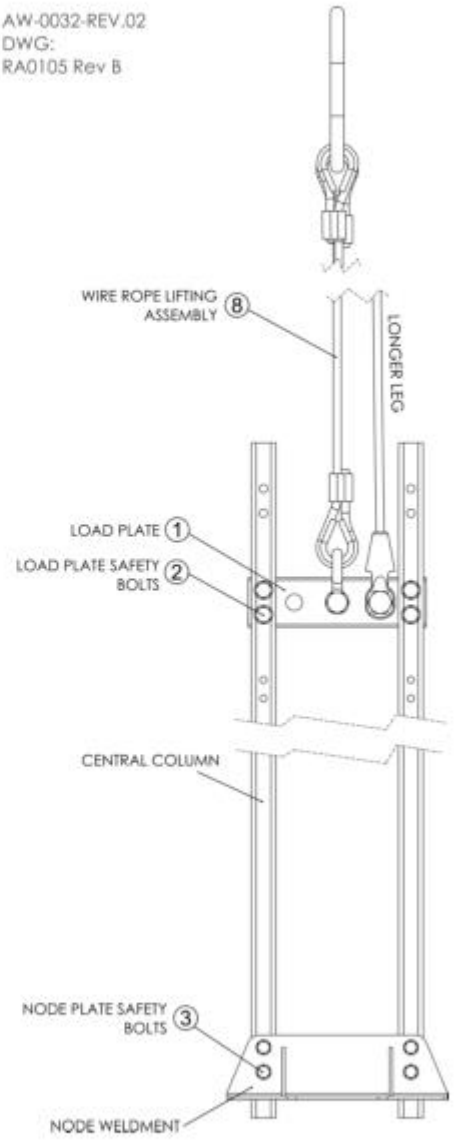
4.9 Pre-Use Check

FROGXT

PRE-OPERATIONAL VISUAL CHECK

1	Check **LOAD PLATE** is fully engaged and secure.
2	Check the **LOAD PLATE SAFETY BOLTS** are secure and nuts, split pins and tamper-proof seals are in position.
3	Check the **NODE PLATE SAFETY BOLTS** are secure and nuts, split pins and tamper-proof seals are in position.
4	Check all **FITTINGS, FRAME,** and **BUOYANCY** are in good order.
5	Check **SEAT HARNESSES** operate properly and attachment points are secure.
6	Check **SUSPENSION SYSTEM** operates properly and springs are pre-compressed. **SLIDING SLEEVES** must be in contact with the stoppers at the top.
7	Check **INSPECTION DATA PLATE** and all **CERTIFICATION** are in order.
8	Check **WIRE ROPE LIFTING ASSEMBLY** is correctly attached and in good order. Check **SHACKLE** and **SPELTER SOCKET** safety bolts are fitted with **SPLIT PINS**. Lifting Assembly should be in the **HIGH VISIBILITY COVER**.

AW-0032-REV.02
DWG:
RA0105 Rev B



Original Instructions

Drawing No: RP0108 reflexmarine ECN 186

Revision: C Page 1 of 1 Issued: 07/08/2014

reflexmarine

4.10 Visual Inspection Checklist Form

Frog XT4 Visual Inspection Checklist					
Unit Serial Number		**This Inspection Date**		**Inspected by**	
Usage Category		**Last Visual Inspection**		**Position/ Company**	
Installation / Vessel		**Last Examination**		**Signature**	
Avg. No of Transfers / Year		**Last Load Test**		**Original Inspection record filed in**	

Item No	Description	Comment / Serial Number/ Colour Code	Pass / Fail	Verified By
1.	**Wire Rope Lifting Assembly (Critical Part) (Consumable)** The wire rope lifting assembly (including attachments) must be visually inspected by a Competent Person. Note: High visibility cover must be completely removed to allow inspection of steel wire rope components. It should be replaced according to the usage of the FROG. This may be as frequently as every 3 months. Irrespective of apparent condition the lifting assembly should be replaced at least every 12 months.			
2.	**Load Plate Safety Bolts (Critical Part) (Consumable)** Visually inspect the 4 x M16 load plate safety bolts, nuts, split pins and tamper proof seals that connect the Load Plate to the central columns for wear or damage.			
3.	**Load Plate (Critical Part)** Visually inspect in situ for any signs of wear, cracks, deformation or other damage.			
4.	**Node Plate Safety Bolts (Critical Part) (Consumable)** Visually inspect the 4 x M12 node plate safety bolts, nuts, split pins and tamper proof seals that connect the node plates to the central columns for wear or damage.			
5.	**Node Plate (Critical Part)** Visually inspect in situ for any signs of wear, cracks, deformation or other damage.			
6.	**Seat Base Assembly and the Recoil Dampers** Visually inspect for any wear or damage and ensure that all bolts, clevis' and other fasteners are fully secure. Ensure that clevis pin threads are not visible on damper rods. Check to ensure that there is no sign of any fluid leaking onto the damper rods.			

<table>
<tr><th colspan="5">Frog XT4 Visual Inspection Checklist continued…</th></tr>
<tr><th>Item No</th><th>Description</th><th>Comment / Serial No./ Colour Code</th><th>Pass / Fail</th><th>Verified By</th></tr>
<tr><td>7.</td><td>Suspension
Check the condition and operation of the springs. Check for signs of deformation or cracking. If the springs show excessive corrosion (pitting or flaking of wire), or if springs have taken a pre-compression set then they should be changed out. Springs can be susceptible to yield over time. This can be verified by measuring the deflection of the seat base in-situ. The following check is recommended to identify whether the springs are fit for purpose:
In-situ spring check The top of the sliding sleeve should rest against the compression stop. If a space exists between the top of the sliding sleeve and the compression stops greater than 10mm, then the spring should be replaced.
Check the spring cap plate for any signs of deformation.</td><td></td><td></td><td></td></tr>
<tr><td>8.</td><td>Frame and Buoyancy
Visually inspect for any damage and ensure that all bolts and fasteners are tight and fully secure.</td><td></td><td></td><td></td></tr>
<tr><td>9.</td><td>Landing Feet
Examine the feet to ensure that they are in good condition and that they are properly secured to the capsule. Do not go underneath an active lift.
Notes:
i. Measure height of foot and replace if under 100 mm in height
ii. Small (20 mm in length) cuts are acceptable but feet should be replaced when damage larger than 20mm is present.</td><td>Foot<table><tr><td>A</td><td></td></tr><tr><td>B</td><td></td></tr><tr><td>C</td><td></td></tr><tr><td>D</td><td></td></tr></table></td><td></td><td></td></tr>
<tr><td>10.</td><td>Seat Harness Security
Visually inspect the seat harness attachment points and the harness webbing for any signs of wear, fraying or damage. Check that attachment points are secure.</td><td></td><td></td><td></td></tr>
<tr><td>11.</td><td>Seat Harnesses (sit-in)
Sit in each seat and check fastening and unfastening of each harness, to ensure correct operation.</td><td><table><tr><td>1</td><td></td><td>3</td><td></td></tr><tr><td>2</td><td></td><td>4</td><td></td></tr></table></td><td></td><td></td></tr>
</table>

Frog XT4 Visual Inspection Checklist continued…				
Item No	**Description**	**Comment / Serial No./ Colour Code**	**Pass / Fail**	**Verified By**
12.	**Inspection data plate** Check the date of the last examination/ inspection to ensure the unit will remain in compliance with requirements for at least 6 months. Update data plate to show visual examination has been done.			
13.	**Stickers -** Check that all of the stickers on the unit are in good condition and that none are missing or damaged. The sticker location drawing can be found in the drawing pack.			
14.	**Stretcher Fittings –** Visually inspect the stretcher fittings to ensure that they are all present and in good condition.			
	Storage			
15.	**Storage of FROG -** Check the storage cover is in good condition and not showing any signs of UV or wind degradation. Storage off the ground , use of spacer chocks whilst not in use			
16.	**Replacement Parts Stock -** Check condition of all associated replacement parts and accessories. Lifting assemblies should be stored in an appropriate dry place without high visibility cover fitted.			
	Reports		Complete Y/N	
17.	**Documentation / Report including Photographic Report**			
NOTES:				

4.11 Examination Checklist Form

Frog XT4 Examination Checklist					
Unit Serial Number		**This Inspection Date**		**Inspected by**	
Usage Category		**Last Visual Inspection**		**Position/ Company**	
Installation / Vessel		**Last Examination**		**Signature**	
Avg. No of Transfers / Year		**Last Load Test**		**Original Inspection record filed in**	

Item No	Description	Comment / Serial Number/ Colour Code	Pass / Fail	Verified By
1.	**Wire Rope Lifting Assembly (Critical Part) (Consumable)** Replace the wire rope lifting assembly according to the usage of the FROG. This may be as frequently as every 3 months. Irrespective of apparent condition the lifting assembly should be replaced at least every 12 months.			
2.	**Load Plate Safety Bolts (Critical Part) (Consumable)** Remove and visually inspect the 4 safety bolts for any signs of damage or strain. Visually inspect the 4 holes in the 2 central columns for signs of damage or strain. Replace appropriate parts according to the usage of the FROG XT or on the recommendation of a Competent Person / Inspector.			
3.	**Load Plate (Critical Part)** Remove and visually inspect the main Load plate for any signs of damage or strain. Replace on the recommendation of a Competent Person / Inspector.			
4.	**Node Plate Safety Bolts (Critical Part) (Consumable)** Remove and visually inspect the 4 safety bolts for any signs of damage or strain. Visually inspect the 4 holes in the 2 central columns for signs of damage or strain. Replace appropriate parts according to the usage of the FROG XT or on the recommendation of a Competent Person / Inspector.			

Frog XT4 Examination Checklist continued…				
Item No	**Description**	**Comment / Serial Number/ Colour Code**	**Pass / Fail**	**Verified By**
5.	**Node Plate (Critical Part)** Visually inspect the Node plate for any signs of damage or strain. Replace on the recommendation of a Competent Person / Inspector.			
6.	**Seat Base Assembly and the Recoil Dampers** Visually inspect for any wear or damage and ensure that all bolts, clevis' and other fasteners are fully secure. Ensure that clevis pin threads are not visible on damper rods. Check to ensure that there is no sign of any fluid leaking onto the damper rods.			
7.	**Suspension** Check the condition and operation of the **springs.** Check for signs of deformation or cracking. If the springs show excessive corrosion (pitting or flaking of wire), or if springs have taken a pre-compression set then they should be changed out. Springs can be susceptible to yield over time. This can be verified by measuring the deflection of the seat base in-situ. The following check is recommended to identify whether the springs are fit for purpose: **In-situ spring check:** the top of the sliding sleeve should rest against the compression stop. If a space exists greater than 10mm, then the spring should be replaced. **Recoil Dampers** Ensure that the damper rod-end threads are not visible below the clevis pin eye. Ensure no sign of any fluid leaking onto the damper rods. Recoil Dampers should also be disconnected at one end so that their operation can be checked and to check for any bowing of the damper rods. Check the spring compression plate for any signs of deformation.			
8.	**Frame and Buoyancy** Visually inspect for any damage and ensure that all bolts and fasteners are tight and fully secure.			

<table>
<tr><th colspan="5">Frog XT4 Examination Checklist continued…</th></tr>
<tr><th>Item No</th><th>Description</th><th>Comment / Serial Number/ Colour Code</th><th>Pass / Fail</th><th>Verified By</th></tr>
<tr><td>9.</td><td>Landing Feet
Examine the feet to ensure that they are in good condition and that they are properly secured to the capsule. Do not go underneath an active lift.
Notes:
i. Measure height of foot and replace if under 100 mm in height
ii. Small (20 mm in length) cuts are acceptable but feet should be replaced when damage greater than 20mm is present.</td><td>Foot<table><tr><td>A</td><td></td></tr><tr><td>B</td><td></td></tr><tr><td>C</td><td></td></tr><tr><td>D</td><td></td></tr></table></td><td></td><td></td></tr>
<tr><td>10.</td><td>Seat Harness Security –
Visually inspect the seat harness attachment points and the harness webbing for any signs of wear, fraying or damage. Check that attachment points are secure.</td><td></td><td></td><td></td></tr>
<tr><td>11.</td><td>Seat Harnesses (sit-in)
Sit in each seat and check fastening and unfastening of each harness, to ensure correct operation.</td><td><table><tr><td>1</td><td></td><td>3</td><td></td></tr><tr><td>2</td><td></td><td>4</td><td></td></tr></table></td><td></td><td></td></tr>
<tr><td>12.</td><td>Inspection data plate- Check the date of the last examination/ inspection to ensure the unit will remain in compliance with requirements for at least 6 months. Update data plate to show visual examination has been done.</td><td></td><td></td><td></td></tr>
<tr><td>13.</td><td>Stickers – Check that all of the stickers on the unit are in good condition and that none are missing or damaged. The sticker location drawing can be found in the drawing pack.</td><td></td><td></td><td></td></tr>
<tr><td>14.</td><td>Stretcher Fittings – Test fit a stretcher to ensure that all of the fittings are present and in good condition.</td><td></td><td></td><td></td></tr>
<tr><td>15.</td><td>Load Test - On critical parts replacement, a load test must be conducted. This is to be done by an independent test house company, nationally recognised and in accordance with ILO 152.</td><td></td><td></td><td></td></tr>
<tr><td>16.</td><td>Post Load Test Visual Inspection – If a load test is done, conduct and report a post load test visual inspection.</td><td></td><td></td><td></td></tr>
</table>

Frog XT4 Examination Checklist continued…				
Item No	**Description**	**Comment / Serial Number/ Colour Code**	**Pass / Fail**	**Verified By**
	Storage			
17.	**Storage of FROG -** Check the storage cover is in good condition and not showing any signs of UV or wind degradation. Storage off the ground, use of spacer chocks whilst not in use			
18.	**Replacement Parts Stock -** Check condition of all associated replacement parts and accessories. Lifting assemblies should be stored in an appropriate dry place without high visibility cover fitted.			
	Other			
19.	**Clean –** Has the unit been cleaned			
	Reports		Complete Y/N	
20.	**Documentation / Report including Photographic Report**			
NOTES:				

4.12 Post Load Test Inspection Checklist Form

Unit No		**This Inspection Date**		**Inspected by**	
Usage Category		**Load Test Date**		**Position/ Company**	
Installation / Vessel		**Load Test Report/Ref**		**Signature**	
Avg No of Transfers / Year		**Load Test Authority**		**Original Inspection record filed in**	

Item No	Description	Comment	Pass / Fail	Verified By
1.	**Load Plate (Critical Part) -** Visually inspect in situ for any signs of wear, cracks, deformation or other damage.			
2.	**Load Plate Safety Bolts (Critical Part) (Consumable)-** Visually inspect the 4 x M16 safety bolts, nuts, split pins and tamper proof seals that connect the load plate to the central columns for wear or damage.			
3.	**Node Plate (Critical Part) -** At the bottom end of central columns, visually inspect all of the node plate fittings and check that all bolts are secure. Do not go underneath an active lift.			
4.	**Node Plate Safety Bolts (Critical Part) (Consumable)-** Visually inspect the 4 x M12 node plate safety bolts, nuts, split pins and tamper proof seals that connect the node plates to the central columns for wear or damage.			
5.	**Recoil Dampers -** Visually inspect for any wear or damage and ensure that all bolts, clevis' and other fasteners are fully secure. Ensure that there is no sign of any fluid leaking onto the damper rods.			
6.	**Seat Base Assembly -** Visually inspect for any wear or damage and ensure that all bolts and other fasteners are fully secure.			
7.	**Suspension -** Check the spring condition and test the operation of the springs. Check that the top of the sliding sleeve is engaged against the compression stops.			
8.	**Landing Feet -** Examine the feet to ensure that they are in good condition after the load test. The feet will normally recover full height sometime after the load test weight is removed.			
9.	**Frame and Buoyancy -** Visually inspect for any damage and ensure that all bolts and fasteners are tight and fully secure.			
10.	**Inspection Data Plate -** Check the date of the last load test has been correctly inserted and is indelibly legible.			
	Reports		Complete Y/N	
11.	**Documentation / Report including Photographic Report**			
NOTES:				

5 Handling & Storage

5.1 Stock Inspections

Before entering service your new FROG-XT4 needs to be inspected to ensure that fit for use and to make sure that there is as much time as possible available on the certification. These guidelines are **NOT** applicable to units and parts that have already been put into service.

Storage Actions

i. Remove lifting assembly from unit

ii. Place all items into clean dry storage

iii. Remove any lifting assembly covers

iv. Chock up unit to prevent foot damage

In Stock Inspections – You should follow the below table for any carriers or replacement parts that are held in storage.

Type	In Stock Visual Inspection	Shelf Life
Transfer capsules	1 Year	5 Years
Wire Rope Lifting Assembly	6 months	2 Years
Other replacement Parts (not lifting assemblies)	None	NA

Prior to First Use - You should follow the below table before using your equipment for the first time.

Type	Transfer carriers	Wire Rope Lifting Assembly	Replacement Parts
Visual Inspection	Yes	Yes	Yes
Load Test & Post Load Test Visual Inspection	<2year old = No >2year old = Yes	No	No
Update Data Plate	Yes	NA	NA
Update Certificates	Yes	Yes	No
Certificate of Thorough Examination	No	Yes	No
Stamp Entry into Service Date	Yes	No	No

5.2 Forklift

Care should be taken when handling the carrier with a forklift truck to avoid damage to the underside (landing feet, cross braces or base of the central lifting column). Alternatively, the carrier may be secured to a pallet specifically designed for use with forks.

5.3 Crane

When lifting the carrier with short chain or strop, a temporary shackle should be fixed to the handling lifting point. Care must be taken not to damage the lifting assembly. **Shackle should not be fitted through the thimble of the lifting assembly eyes.**

5.4 Securing

For deck fastening, place any straps across the top of the floor grating.

5.5 Inspection

Before and after transportation the carrier must be inspected to check for damage sustained in transit. The unit must not be used if any structural damage is observed. If any damage has been observed a visual inspection should be carried out to determine the extent of the damage.

5.6 Preparation for Road Transport

Prior to shipping, the seat harnesses must be secured by securing the buckle together and then tightening the harness straps. This will prevent seat harnesses flapping and damaging the seating area. It is recommended that the carrier is covered for shipping either with a FROG-XT weatherproof protective cover or other heavy-duty tarpaulin material.

5.7 Shipping

The FROG-XT4 will fit in a standard or high-cube container. If transported on flat rack it must be secured. Recommended securing points are the radial / peripheral floor braces and the back-up eye. To protect it from excess loading, the main lift-eye should not be used as a securing point. Feet must be supported to prevent collapse; this can be done by placing suitable chocks or props under the unit.

5.8 Storage

The FROG-XT range has been designed to cope with the harsh conditions on an offshore installation or vessel; however, it is important to protect the unit as much as possible from any hazardous elements and UV degradation. The FROG-XT should be stored under a FROG-XT weatherproof cover whilst not in use.

5.9 Feet Deformation during Storage

Prolonged periods of exposure to hot decks and self-weight can cause permanent set deformation of the elastomeric feet. If the carrier is to be stored for prolonged periods a set of chocks should be used to lift the feet away from the deck. Any chocks used should fit properly underneath the main base frame to ensure that any exposed bolt heads are not impinged. The chocks can be pre-laid on the deck ready for landing.

5.10 Replacement Parts

Replacement parts should be stored in dry clean environments and be suitably labelled and tagged.

6 Replacement Parts

6.1 Introduction

Replacement parts can be supplied as individual items or as appropriate kits. Prior to ordering any replacement parts or kits, establish the serial number which is stamped on the data plate. The serial number is XT4- XXX where XXX represents a three-digit number.
RML holds replacement parts and accessories in stock. We are able to supply most individual components. A full list of parts is contained in the drawing pack, which is issued with every unit.
It may be advisable to hold an inventory of frequently replaced parts. This will help to ensure the continued safe operation of the carrier. Minimum stock quantities will be influenced by:

i. Remoteness of location and certifying authority
ii. Downtime implications
iii. Criticality of maintaining crew and emergency response (Medevac) access.
iv. Usage
v. Customs processing time
vi. Delivery cost for small parts

RML can recommend stock items and quantities for your operation.

It is recommended that only genuine OEM parts (including lifting assemblies) are used.

6.2 Kits

The following kits are available for routine and non-routine maintenance. Ordering an appropriate kit is more economical than replacing individual parts.

Kit Name	Part Number	Contents
Lifting Assembly Kit	RA0116	Wire Rope Lifting Assembly Lifting Assembly Cover Associated Fixings
Replacement Parts Kit	RA0117	Critical Parts Minus the Wire Rope Lifting Assembly
Critical Part Kit	RA0090	Critical Parts
Harness Kit	RA0118	4 X Harnesses
Landing Foot Kit	RA0303	4 X Feet plus Associated Fixings
Full Service Kit	RA0120	1x Lifting Assembly Kit 1 X Replacement Parts Kit 1 X Harness Kit 1 X Landing Foot Kit
Suspension Kit	RA0132	2 X Springs 2 X Recoil Dampers Associated Fixings

6.3 Parts identification

Each assembly or part is assigned a part number which provides the unique identification of the part /assembly.

Where material grades and material traceability are deemed to be safety critical these components will be allocated unique component numbers which will be stamped or etched as required.

Components that require unique identification are referenced in the parts list.

For bolts, where etching is impractical, batches will be colour coded and a note added to the mill certificate to identify the colour used.

6.4 Accessories

The following accessories are available from RML to maximise operational effectiveness. They can be supplied with the carrier or ordered separately.

Strobe Light

Provides greater visibility at night and in poor weather conditions. High-intensity: light weight, waterproof to 300 m, Flash Rate 50 per min and also provides 6-mile visibility. C cell battery powered, fitted to the overhead protection plate in the FROG-XT.
Note: This strobe is not certified for use in hazardous areas. A zoned strobe light is available on request.

Basket Stretcher

Essential for conducting emergency medical transfers, RML supply a rigid stretcher that is compatible with the FROG-XT4.

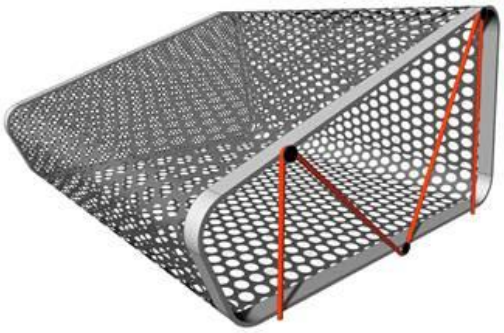
Protective Cover

A silver reflective protective cover which is made of flame resistant fabric (BS7837) and protects against degradation from UV light and the weather.

Luggage Options

Light Luggage Holder

This is a small holder that attaches to the underneath of 2 seats, allowing for small, hand-held items such as laptop bags to be loaded and transported by the FROG-XT4.



Large Luggage Tray

RML can provide a solution for larger items of luggage that will not fit into the light luggage holder. It is attached to the floor grating underneath the passenger seat. Please contact RML for further information.

For a complete list of accessories please contact RML

7 Certificates

7.1 EC Attestation of Conformity

TÜV SÜD BABT

Attestation of Conformity

No: MAC000002 i01

Holder of Certificate	**Reflex Marine Old School House, School Hill, Shortlanesend, Truro, Cornwall, TR4 9DU, UK**
Location of Equipment	**Woolard and Henry, Stoneywood Park, Dyce, Aberdeen AB21 7DZ, UK**
Product/System	**XT4 Personnel Transportation capsule**
Test/Assessment Reports	**28185 Issue 1**
Standards	**BS EN ISO 12100: 2010**
Technical Documentation File Identity	**XT4 2-12-2013**

This Attestation of Conformity is issued on a voluntary basis on a voluntary basis according to Council Directives 2006/42/EC related to Machinery. It confirms that the listed equipment, which is not listed under Annex IV of Directive 2006/42/EC, complies with the protection requirements of the listed Directive. It refers to the sample submitted for testing and Inspection and only relates to this sample in the build state and configuration at the time of test/inspection.

Date 13-02-2014

TÜV SÜD BABT is an accredited Certification body of TÜV SÜD. This Attestation has been issued in accordance with the Certification Regulations of TÜV SÜD BABT. For further details related to this attestation please contact BABT@tuv-sud.co.uk

The CE marking may be used on the equipment described above subject to the equipment meeting the requirements of all applicable Directives, and the issue of all necessary documentation including the Declaration of conformity.

TÜV SÜD BABT • TÜV SÜD Group
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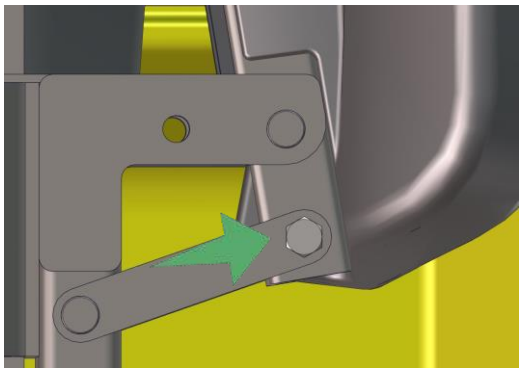
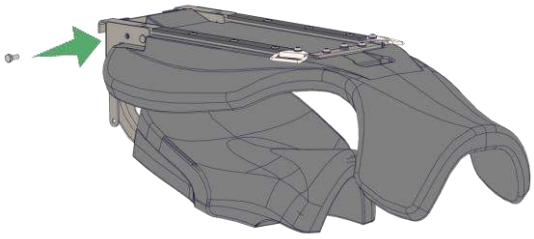
Accounts Department – accounts@reflexmarine.com

Appendix A - Stretcher Conversion Instructions Units XT4-001 to XT4-125

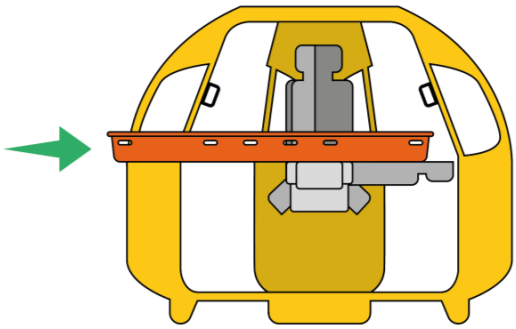
The following steps outline the procedure required to convert the FROG-XT4 into stretcher mode.



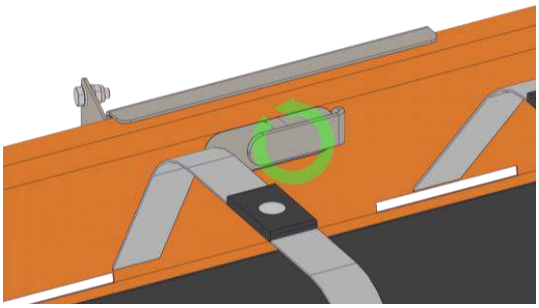
1 Remove fixings and fold down seat



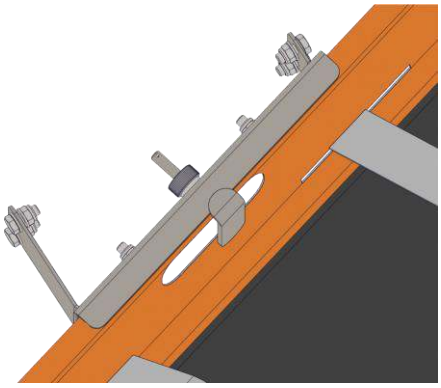
2 Refit fittings



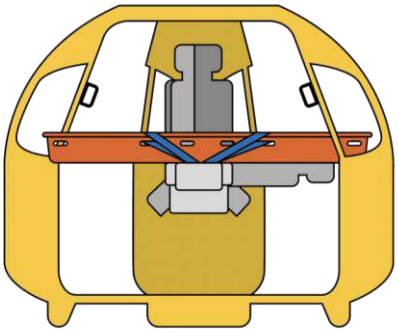
3 Slide stretcher in



4 Rotate clamp anti-clockwise 90 degrees



5 Tighten thumbscrew



6 Attach straps to anchor points

The stretcher clamp has been designed to fit the Ferno Model 71 Basket stretcher.

Please note that not all stretcher types will fit. The specific stretcher in use should be test fitted prior to being used.

Để biết giá cả hoặc thêm thông tin, vui lòng liên hệ với AZMarine theo thông tin chi tiết bên dưới

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