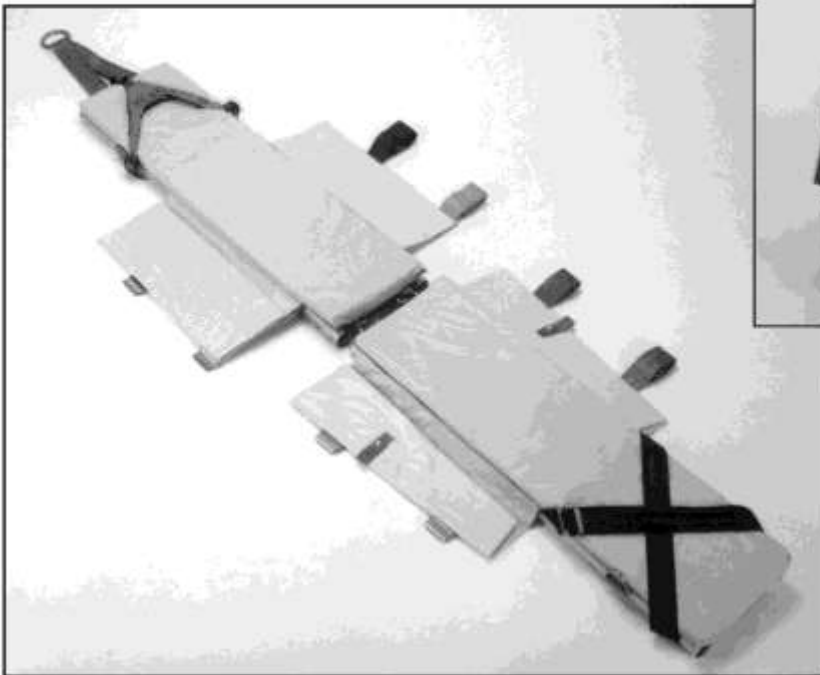




Paraguard Excel Rescue Stretcher



Operation and Maintenance Manual

PROPRIETARY NOTICE

The information and design disclosed herein are the property of Irvin-GQ Ltd and Ferno (UK) Ltd. Irvin-GQ Ltd and Ferno (UK) Ltd reserve all patent rights, proprietary design rights, manufacturing rights, reproducing use rights and sales rights thereto and to any articles disclosed therein, except to the extent that rights are expressly granted to others. The foregoing does not apply to vendor proprietary parts.

The Paraguard Excel and its associated parts are manufactured by Ferno (UK) Ltd under licence to Irvin-GQ Ltd.

Specifications are approximate and remain subject to change to allow the introduction of design improvements.

Disclaimer

This manual is not all-inclusive. Safe and proper use of this stretcher is solely at the discretion of the user. Safety warnings are included as a service to the user. All other safety measures taken by the user should be within and under consideration of the national, regional and local regulations and standards concerning usage. It is recommended that training of the proper use of this stretcher be provided before using the stretcher in an actual situation.

As our policy is one of continuous research and improvement, the right is reserved to alter the specifications without notice.

Paraguard is a registered trade design of Irvin-GQ Ltd., British designed and manufactured.

CE Marking

The CE symbol signifies that they have been certified in accordance with the Medical Devices Directive 93/42/EEC concerning Class 1 Medical Devices.

Type of Equipment:	Rescue Stretcher
Intended Use:	For specialised rescues

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Section 1

Introduction

PREFACE

This manual has been prepared to provide general instructions for proper usage and maintenance of the Paraguard Excel Rescue Stretcher.

Specific applications and operating techniques may vary from user to user. Ferno does not intend or recommend that this product be used for any purpose other than for which it is designed and outlined in this manual.

Any other use or application of this product becomes the complete responsibility of the owner/user.

Retain this manual for future reference and include it with the Paraguard Excel Rescue Stretcher in the event of transfer to new owners/users.

1.1 INTRODUCTION

1.1.1 Precautions for Safety

To ensure safety and satisfaction with your Paraguard Excel Rescue Stretcher, all users should read these instructions completely, as well as the individual portions of recognised emergency care manuals, which relate to the application and use of rescue equipment.

1.1.2 Operator Skills

Minimum recommended skills are as follows:

- The strength, balance, co-ordination and common sense to safely operate the stretcher.
- The ability to select the proper equipment and procedures for the circumstances.
- Operators should have operator certification (or equivalent).
- The ability to understand and follow the procedures described in this manual.

1.1.3 Operator Training

Minimum recommended training is as follows:

- A training plan approved by an EMS training officer (or equivalent).
- Read and understand the instructions in this manual.
- Practice using the fully equipped stretcher with weight and under simulated conditions.
- Trainees should be tested to verify their understanding of stretcher operation.

The Paraguard Excel Rescue Stretcher, like any other emergency equipment, should be included in the users formal training programme.

Keep training records. Annual refresher training for all stretcher operatives is recommended.

1.1.4 General Principles

When moving casualties, always inform them of what you are going to do.

Always follow good lifting procedures as specified in the current manual handling regulations and your appropriate training manual.

Medical advice is beyond the parameters of this manual. It is the user's responsibility to ensure safe practices for the patient and themselves.

Placement techniques, heavy patients, rough terrain or unusual circumstances may require more rescuers.

WARNING

Only qualified personnel trained in the use of the Paraguard Excel Rescue Stretcher should use it.

Never exceed the maximum load capacity.

Every individual who may use the Paraguard Excel Rescue Stretcher should practice using it to become familiar with the procedures before placing it in service.

Improper lifting can cause injury. Always use recognised lifting techniques.

1.1.5 Safety Alerts

Safety alerts identify potential hazards to avoid. The following safety alerts appear in this manual:

WARNING

Only qualified personnel trained in the use of the Paraguard Excel Rescue Stretcher should use it.

Every individual who may use the Paraguard Excel Rescue Stretcher should practice using it to become familiar with the procedures before placing it in service.

Never exceed the maximum load capacity.

Improper maintenance can cause injury and unpredictable operation. Maintain the Paraguard Excel Rescue Stretcher only as described in this manual.

WARNING

Stretcher misuse can cause injury. Do **NOT** let helpers control the stretcher.

EMT's should maintain control and advise helpers how to assist with handling of the stretcher.

Improper lifting can cause injury. Always use recognised lifting techniques.

Paraguard Excel Rescue Stretcher modification can cause unpredictable operation and injury. Do not modify the Paraguard Excel Rescue Stretcher for any reason.

1.2 WARRANTY

1.2.1 Limited Warranty

Ferno (UK) Limited, warrants that its products will be free from material or workmanship defects for one year except as follows:

- a) External finishes (gel coat, decals, paint etc.) are warranted for 90 days.
- b) Soft goods (webbing, vinyl, fabric, foam etc.) are warranted for 90 days.
- c) Repairs and services are warranted for 90 days or until the end of the time period(s) above, whichever comes last.

This limited warranty applies when you use and care for the product properly. If the product is not used and cared for properly, the warranty is void. The warranty period begins the day the product is shipped from Ferno or the day you receive it if you have proof of the delivery date. Shipping charges are not covered by the limited warranty. We are not liable for shipping damages or damages sustained through using the product. **If a defect was found after the product has been placed in service, DO NOT return it to Ferno. Contact your dealer or Ferno Internal Sales Department for replacement information.**

1.2.2 Limitation of Liability

If a product or part is proven to be defective, Ferno will repair or replace it. At our option, we will refund the product's purchase price. In no event is Ferno liable for more than the selling price of the product. The purchaser accepts these terms in lieu of all damages.

Except for the limited warranty above, Ferno makes no other warranties, either expressed or implied. Ferno makes no implied warranties of merchantability and fitness for a particular purpose. In no event will Ferno be liable for any indirect or consequential damages sustained in connection with the delivery, use, or performance of its products.

Any legal action for breach of the limited warranty must be filed within one year of the date the breach of warranty is or should have been discovered.

1.2.3 Return Policy

No Product will be accepted without prior approval by Ferno. Merchandise accepted for repair or replacement will be evaluated against established criteria, including age and condition of the product and expected length of time to repair that product, as well as its ability to meet current industry standards. If repairable, an estimate will be provided to the customer before work begins. A cleaning charge may apply to returned products. Your Ferno Internal Sales Representatives will be happy to assist you.

1.2.3 Customer Service

If you have any questions or need assistance with your Ferno equipment, contact our Internal Sales Department:

Ferno (UK) Ltd
 Stubs Beck Lane
 Cleckheaton
 West Yorkshire
 BD19 4TZ
 Telephone..... +44 (0) 1274 851999
 Fax..... +44 (0) 1274 851111
 e-mail: service@ferno.co.uk

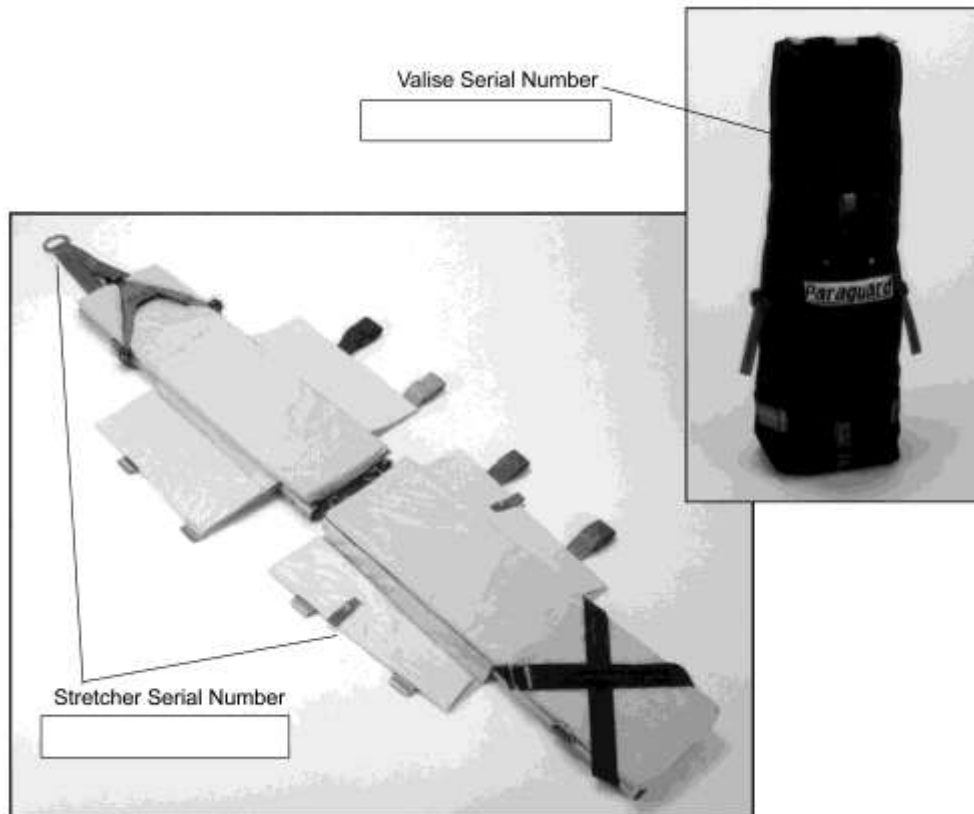
Please have the product serial number ready when contacting our Internal Sales Department.

The serial number is located on each of the lifting bridles and on the front of the valise (see photograph on the following page).

1.3 PRODUCT DESCRIPTION

Designed for a variety of specialised rescues, the Paraguard Excel Stretcher is compact, quick to apply and versatile. It is ideal for search and rescue operations in structural building collapse, industrial or confined space rescues. Constructed of quality synthetic material, stainless steel and aluminium alloys, the Paraguard Excel Stretcher is impervious to oil, water, grease and other petroleum products. It is also resistant to rot and corrosion and is unaffected by long-term storage.

Suitable for vertical or horizontal lifting, the Paraguard Excel Stretcher may be used for high building or helicopter rescues.



Valise Serial No.

Stretcher Serial No.

Four Point Lifting Sling Serial No.

(This is located on a label on the foot end (long) straps of the sling).

1.4 TECHNICAL SPECIFICATIONS*

	L x W x D (cm)	Weight	Max Load Capacity †
Paraguard Excel Rescue Stretcher c/w Pillow & Valise	Folded in Valise: 92 x 27 x 15	Packed – no accessories 11.5kg	136kg
	Deployed: 182 x 25 (exclud. Body flaps)	Packed – all accessories 16kg	
Four Point Lifting Sling			227kg

* All dimensions are approximate.

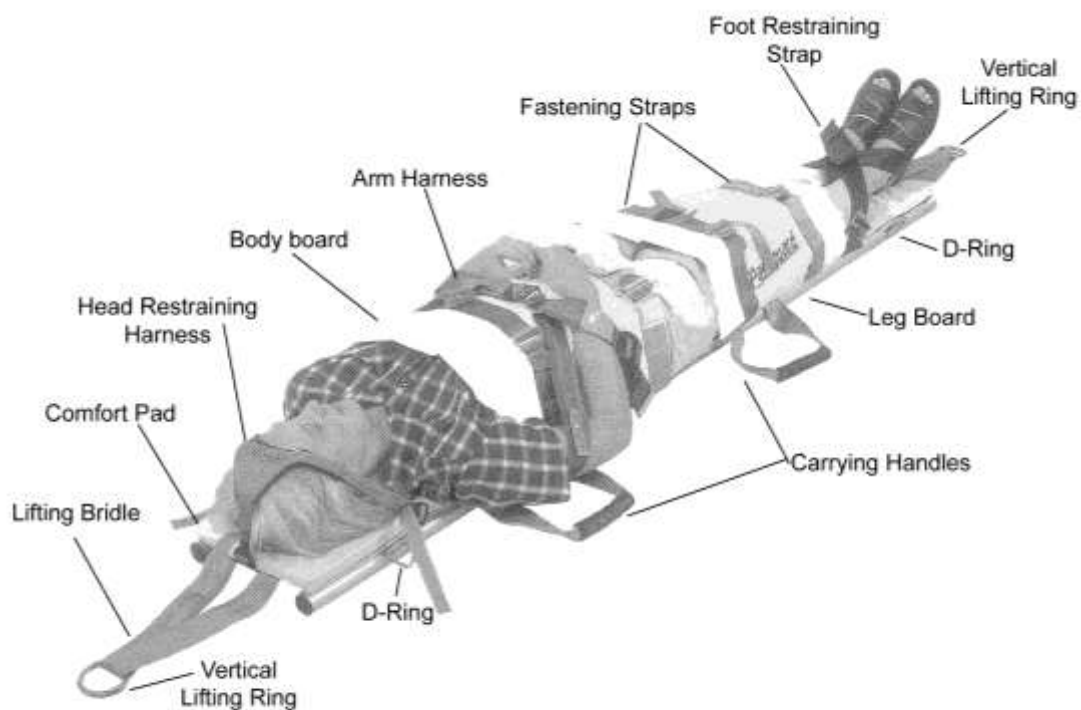
† Load limit is total weight distributed in accordance with basic human anatomy proportions. Users must consider the weight of the patient, equipment and accessories when determining the total load on the Paraguard Excel Rescue Stretcher. Ferno reserves the right to change specifications without notice.

1.5 ACCESSORIES

Standard accessories include a Four Point Lifting Sling, Slot-In Carrying Handles, Shoulder Harness, Foul Weather Sheet and Valise.

For further information contact Ferno (UK) Ltd Internal Sales Department at the address shown in Section 1.2.4.

1.6 UNIT IDENTIFICATION



1.7 PRE-SERVICE CHECKS

Refer to Section 3.1.3 of this manual to perform a pre-service check.

WARNING
Paraguard Excel Stretcher modification can cause unpredictable operation and injury. Do not modify the Paraguard Stretcher for any reason.

Section 2 Principles of Operation

2.1 USING THE PARAGUARD EXCEL RESCUE STRETCHER

2.1.1 Further Operator Skills and Training

- Operators need the ability to use the Paraguard Excel Stretcher as instructed in this manual.
- Operators need the ability to assist the casualty.
- When moving casualties, an EMS training officer or medical advisor needs to approve the training programme.
- Trainees need to read this manual as part of the training programme.
- Trainees need to be tested on Rescue Stretcher operation before they use the Stretcher.
- Operators should practice using the Paraguard Excel Stretcher before using with a casualty.

2.1.2 Operating Guidelines

- Inform the casualty before moving or lifting the Paraguard Excel Stretcher.
- Stay with the casualty and control the Stretcher at all times.
- Keep the casualty restrained when using the Stretcher.
- Use help when needed to ensure casualty and emergency/rescue personnel safety.

2.1.3 Using Additional Help

Two trained emergency/rescue personnel are needed to effectively use the Paraguard Excel Stretcher. When using additional help, emergency/rescue personnel should maintain control of the stretcher while directing helpers.

WARNING
<p>Stretcher misuse can cause injury. Do NOT let helpers control the Stretcher.</p> <p>Trained operators should maintain control and advise helpers how to assist handling the Stretcher.</p> <p>Improper lifting can cause injury. Always use recognised lifting techniques.</p>

Keep the load limit of the Stretcher in mind throughout all rescue procedures. Take care when working with very heavy casualties.

2.2 STORAGE

This Rescue Stretcher should be stored in a well-ventilated place, away from extremes of hot, cold and moisture including high humidity and salt laden atmospheres.

2.3 PREPARING THE STRETCHER FOR USE

Paraguard Excel in valise. See Figure 1.



Figure 1

Remove the Paraguard Excel Stretcher from the valise and lay the Paraguard Excel on the ground, poles uppermost. See Figure 2.



Figure 2

Engage locking sleeves by pressing the spring-loaded plunger and sliding the locking sleeve towards the locking pin.

Engage the locking sleeve until the locking pin is in view in the slot. Rotate locking sleeve 90° clockwise.

Ensure that the spring-loaded plunger re-engages in the locking sleeve. This is vital to prevent damage to the locking sleeve and poles and to ensure that the poles cannot separate. See Figure 3.

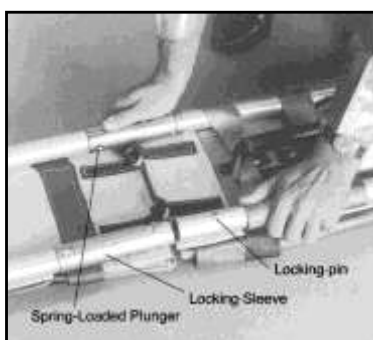


Figure 3

Unclip the handle retaining straps and the GREEN strap buckle. See Figure 4. If a vertical lift is planned, unclip the GREY vertical lifting rings.

NOTE: This operation will be very difficult if left until the stretcher has been turned over and the casualty is strapped in.



Figure 4

Remove the head pad from the pouch. Secure the pillow to the head end of the stretcher by passing the straps under the stretcher and closing the Velcro.

Slacken off the GREY head restraining harness.

Lay out the Body and Leg Boards and unclip the BLACK foot-restraining strap. See Figure 5. The Paraguard Excel Stretcher is now ready for positioning the casualty.



Figure 5

2.4 SECURING THE PATIENT

Using recognised patient handling techniques position the casualty on the Paraguard Excel with their head level with the top of the stretcher.

Position the head restraining harness on the casualty's forehead using the top strap.

Secure the casualty's head using the adjuster at the side of the head. See Figure 6.

NOTE: The casualty may be wrapped in a Foul Weather Sheet to provide additional protection. See Figure 15.



Figure 6

Secure the casualty's body in the body-boards using the BLUE and YELLOW straps. See Figure 7.



Figure 7

Locate the casualty's arms in the GREEN harness as shown and tighten the strap. See Figure 8.



Figure 8

Secure the casualty's legs in the leg-boards using the RED and GREY straps. See Figure 9.



Figure 9

Secure the casualty's feet by passing the BLACK strap over the legs, round under the instep and back over the legs as shown. See Figure 10.

The casualty is now securely located in the Paraguard Excel Stretcher, ready for evacuation.



Figure 10

2.5 CARRYING A CASUALTY TO SAFETY

The casualty may be evacuated to safety using the built-in side carrying handles. See Figure 11.



Figure 11

2.6 LIFTING A CASUALTY TO SAFETY

2.6.1 Using the Four-Point Lifting Sling

Unlock the four Karabiners by turning the knurled locking thimbles. Clip the Karabiners to the D-rings as shown ensuring that the two shorter straps marked "HEAD" with the fluorescent markers are at the head end. See Figure 12.

The longer straps are for use at the foot end. Lock all four Karabiners by rotating the knurled locking thimbles. Secure the side carrying handles to the GREEN strap and the leg-board using the GREY straps and press-studs.



Figure 12

2.6.2 Using the Slot-In Carrying Handles

These carrying handles are fitted by pushing them onto the main Paraguard poles at each end. See Figure 13.

The carrying handles should be pushed on until the spring-loaded plungers engage.

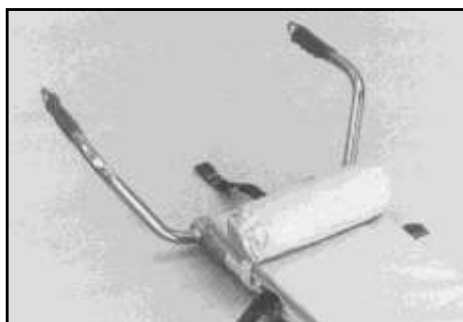


Figure 13

2.6.3 Using the Shoulder Harness

The shoulder harness is fitted as shown and clipped to the carrying handles using the snap hooks provided. See Figure 14.

NOTE: The shoulder harness can only be used in conjunction with the carrying handles. The height of the Paraguard Excel can be altered by adjusting the length of the straps on the shoulder harness.



Figure 14

2.7 USING THE FOUL-WEATHER SHEET

Lay the foul-weather sheet on the ground and open out flat. Position the casualty on the sheet and wrap the casualty inside using the Velcro enclosures provided. See Figure 15.

Place the casualty on the Paraguard Excel Stretcher as shown in Figure 6.

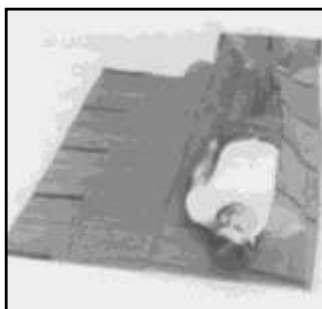


Figure 15

2.8 PACKING THE PARAGUARD EXCEL STRETCHER AFTER USE

Before packing the stretcher away, ensure that all the straps are tidy and ready for use. When folding the stretcher to pack away in the valise, ensure the posts are innermost. The stretcher will then open; poles uppermost ready to locate in the locking sleeves.

2.9 BACKPACKING THE VALISE

Adjust the valise waist and shoulder straps to ensure comfortable backpacking. See Figure 16.



Figure 16

Section 3 Routine Inspection and Maintenance

3.1 ROUTINE INSPECTION

The Paraguard Excel Rescue Stretcher requires regular inspection to maintain the safety and performance of the stretcher. Clean and inspect the stretcher as described in this section.

3.1.1 Cleaning

After use:

The comfort pads are removable to aid cleaning.

Clean using a detergent solution and rinse thoroughly in fresh water. Allow to air dry.

3.1.2 Inspection

Have a qualified maintenance person follow the schedule below and inspect the stretcher at the recommended intervals.

Every month	If stored in positions exposed to high humidity or salt laden atmospheres.
Every three months	If stored in externally mounted stowage which may permit some ingress of moisture.
Every twelve months	If stored in a well ventilated place away from extremes of hot, cold and moisture.

3.1.3 Paraguard Excel Inspection

- Check that the plungers located at both the head and foot ends and on the locking sleeves operate freely.
- Do the locking sleeves engage properly?
- Look along the poles from one end for signs of distortion. Also check poles for corrosion.
- Check vertical lifting rings, straps and attachment points for damage.
- Do the restraining straps and carrying handles show any sign of damage?
- Check the D-rings for distortion and corrosion.
- Check the head restraint straps for damage and buckles for operation.
- Do the chest and body boards show any sign of wear and tear?
- Do the chest and body board restraining straps, including the foot strap have any cuts, tears or signs of fraying?
- Check that all buckles engage and disengage.
- Check the pillow for general damage and ensure the Velcro still operates.
- Check the comfort pads for wear and tear.

Valise

- Check the zip is not damaged and slides freely.
- Check waist, shoulder straps and carrying handle straps for damage. Do the fasteners operate freely?
- Check base for damage.
- Check the canvas has no tears.

Four Point Lifting Sling

- Do the Karabiners open and close freely and does the lock mechanism operate?
- Check the lifting ring for corrosion and all straps for damage.

Carrying Handles

- Check for distortion and corrosion. Do the joints fit freely?

Carrying Harnesses

- Check snap-hooks for corrosion and ensure that the gate snaps shut.
- Check webbing for damage.

Pillow

- Check for general damage.
- Check Velcro still operates.

Foul Weather Sheet

- Check general condition.
- Check for rips, tears and holes.

If the Paraguard Excel is damaged in any way, take it out of service until it has been repaired or replaced as necessary.

WARNING
Improper maintenance can cause injury and unpredictable operation. Maintain the Paraguard Excel Rescue Stretcher only as described in this manual.

3.2 REPAIR AND SERVICE

A damaged stretcher should be returned immediately to Ferno (UK) Limited for repair. (See sections 1.2.1 to 1.2.4).

Contact your dealer or the Ferno (UK) Internal Sales Department at:

Ferno (UK) Limited
Ferno House
Stubs Beck Lane
Cleckheaton
West Yorkshire
BD19 4TZ

Telephone.....+44 (0) 1274 851999

Fax.....+44 (0) 1274 851111

3.3 LIMITATIONS ON REPAIRS

- Replacement strap assemblies and repairs to damaged straps should be carried out only once.
- Minor damage to the body and leg boards can be repaired using patches. A maximum of six patches are allowed.
- Up to six patches are permitted on a comfort pad, after which the pad needs replacing.
- Repairs to the valise are limited to renewing the zip, harness buckles and renewing the base plate. A maximum of six patches on the canvas are also allowed.
- Damaged or corroded Karabiners on the Four Point Lifting System can be replaced. No further repairs are permissible.

3.4 TRAINING RECORD

[illegible]

3.5 INSPECTION RECORD

[illegible]

3.6 MAINTENANCE RECORD

[illegible]

Ferno (UK) Ltd

Ferno House, Stubs Beck Lane, Cleckheaton, West Yorkshire, England, BD19 4TZ

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e-mail: service@ferno.co.uk

Stock Code: 2003-0037