



Scoop EXL

Stretcher Series



Read this Manual and Retain  for Future Reference

FERNO®

Users' Manual

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Ferno Customer Relations

For ordering assistance or general information:

CANADA AND THE U.S.A.

Telephone (Toll-free)	1.877.733.0911
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ALL OTHER LOCATIONS

For assistance or information, please contact your Ferno distributor. If you do not have a Ferno distributor, please contact Ferno Customer Relations:

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Disclaimer

This manual contains general instructions for the use, operation and care of this product. The instructions are not all-inclusive. Safe and proper use of this product is solely at the discretion of the user. Safety information is included as a service to the user. All other safety measures taken by the user should be within and under consideration of applicable regulations and local protocol. Training on the proper use of this product must be provided before using this product in an actual situation.


Retain this manual for future reference. Include it with the product in the event of transfer to new users. Additional free copies are available upon request from Customer Relations.

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Limited Warranty Statement

The products sold by Ferno are covered by a limited warranty, which is printed on all Ferno invoices. The complete terms and conditions of the limited warranty, and the limitations of liability and disclaimers, are also available upon request by calling Ferno at 1.800.733.3766 or 1.937.382.1451.



USERS' MANUALS

To request additional free users' manuals, contact Ferno Customer Relations, your Ferno distributor, or www.ferno.com.



Serial Number _____

The serial number is a series of numbers, located only on the patient-right torso panel.

Month/Year of Manufacture _____

The date of manufacture is molded into each panel and uses two circles: the arrows point to (A) Year of Manufacture and (B) Month of Manufacture. The example above shows a stretcher manufactured in March, 2017.



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1 - SAFETY INFORMATION

1.1 Warning

Warning safety alerts indicate a potentially hazardous situation that, if not avoided, could result in injury or death.

 WARNING
Untrained operators can cause injury or be injured. Permit only trained personnel to operate the stretcher.
Helpers can cause injury. Maintain control of the stretcher, operate the controls, and direct all helpers.
Improper use of the stretcher can cause injury. Use the stretcher only for the purpose described in this manual.
Improper operation can cause injury. Operate the stretcher only as described in this manual.
An unattended patient can be injured. Stay with the patient at all times.
An unrestrained patient can be injured. Use patient restraints to secure the patient on the stretcher.
Improper lifting can cause injury. Use trained operators to lift the stretcher only by hand, and only by grasping the handholds and main frame.
Improper bariatric transport can cause injury to the patient, operators and helpers. Follow local protocols and the instructions in this manual.
Heavy loads can cause injury. Use as many additional operators and helpers as needed to safely transport the patient.
Improper use and/or installation of the TSL-EXT accessory can cause injury. Use only with a bariatric patient. Use and install extenders only as described in this manual.
The stretcher is not designed for use in high-angle (technical) rescue. Do not attach ropes or bridles to stretcher handholds or pins. Secure the stretcher in a transport basket and attach lifting devices to the transport basket.
Improper lifting can cause injury. If local protocols allow, a mechanical lift may be used to move a patient a short distance. Follow the device manufacturer's guidelines for attaching lifting straps and lifting using the mechanical device.
Improper maintenance can cause injury. Maintain the stretcher only as described in this manual.
Improper parts and service can cause injury. Use only Ferno parts and Ferno-approved service on the stretcher.
Modifying the stretcher can cause injury and damage. Use the stretcher only as designed by Ferno.
Attaching improper items to the stretcher can cause injury. Use only Ferno-approved items on the stretcher.

1.2 Notice

Notices emphasize important, but not hazard-related information. Failure to follow Notices could result in product or property damage.

NOTICE

1.3 Tip

Tips provide recommendations for easier use of the product.

Tip

1.4 Bloodborne Disease Notice

To reduce the risk of exposure to blood or other potentially infectious materials when using the stretcher, follow the disinfecting and cleaning instructions in this manual.

1.5 Symbol Glossary

The symbols defined at right are used on the stretcher and/or in this manual. Ferno uses symbols recognized by the International Standards Organization (ISO), American National Standards Institute (ANSI) and the emergency medical services industry.



General Warning of Potential Injury



Load Capacity
(Safe Working Load in Pounds, kilograms, stone)



Read the Users' Manual



Operation Requires Two Trained Operators



Unlocked



Locked



Do Not Lubricate



Lubricate



Manufacturer



Authorized Representative in the European Community



Product meets European Union Standards



Magnetic-Resonance Conditional Under the Listed Conditions

1.6 MR Conditional Testing and Compliance

TESTING

The Ferno® Scoop EXL stretcher has been tested and is listed as “MR Conditional”. A product that is Magnetic-Resonance Conditional (called MR Conditional in this manual and on product labeling) has been shown to pose no hazards in a specified MR environment under listed conditions.

LISTED CONDITIONS OF USE

The Ferno® EXL Scoop stretcher has undergone testing and has been determined to be MR Conditional. In general, the stretcher is intended for use under the conditions listed here:

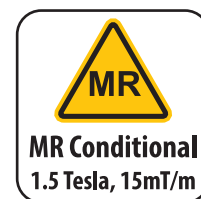
- Static magnetic field of 1.5-Tesla, 15mT/m
- Inside the MR environment

FERNO COMPLIANCE

Ferno adheres to the ASTM International classification and definitions found in the following document:

The American Society for Testing and Materials (ASTM) International, Designation: F2503-05, *Standard Practice for Marking Medical Devices and Other Items for Safety in the Magnetic Resonance Environments*. [Published August, 2005]

Non-clinical magnetic field interaction testing has been conducted by an independent, third-party testing service.



Magnetic-Resonance Rating Label

ASTM Contact Information

ASTM International
100 Barr Harbor Drive
P.O. Box C700
West Conshohocken, PA 19428-2959, USA
Internet: www.astm.org

2 - OPERATOR FOCUS

2.1 Operator Training

Operator using the stretcher:

- must read and understand this manual.
- must have training on proper use of the stretcher.
- must have a training on emergency-medical service and emergency patient-handling procedures.
- must have the physical ability to assist the patient.
- must practice with the stretcher before using it with a patient.
- must keep training records. For a sample training record sheet, see “Training Record” on page 24.

Training Videos: Ferno cares about operator and patient safety. For training videos on the operation of the stretcher, visit our training website listed below, or scan the QR code on this page.

<https://www.youtube.com/user/fernoems>

 **WARNING**

**Untrained operators can cause injury or be injured.
Permit only trained personnel to operate the stretcher.**

Tip

Training

Scan the QR Code below with an internet-connected device to visit the Ferno training site.



2.2 Using Additional Help

Operating the stretcher requires a minimum of two trained operators. They may need additional help when working with heavy loads (patient plus equipment).

- Operators stand at each end of the stretcher, maintain control of the stretcher, operate the controls, and direct all helpers.
- Side helpers may need to walk sideways under some circumstances. Follow local protocols.
- Ferno recommends that helpers work in pairs to help maintain stretcher balance.

Refer to the chart for suggested placement for operators and helpers.

Tip

Directing Helpers

Trained operators position themselves at the ends of the Stretcher and operate the controls. Show helpers where to stand and how to grasp the Stretcher.

WARNING

Helpers can cause injury. Maintain control of the stretcher, operate the controls, and direct all helpers.



Load Capacity

Inspect the stretcher if the load capacity has been exceeded. See "Inspecting the Stretcher" on page 20.

Helpers	Rolling
Two Operators + Two Helpers	
Two Operators + Four Helpers	

Key: O = Operator H = Helper P = Patient

3 - ABOUT THE STRETCHER

3.1 Description

The Scoop EXL Stretcher (referred to as the stretcher in this manual) is a patient-handling device designed to “scoop” patients from the ground or floor in confined spaces, or when the patient needs to be moved with little change of body position. The stretcher is for professional use by a minimum of two trained operators.

The stretcher series comprises three models: EXL Stretcher; EXL Stretcher with Pins; and Mortuary Stretcher. Operation of all stretcher models is identical. The type of patient restraints selected or supplied varies.

FEATURES (ALL MODELS)

- Polymer panel material is X-ray translucent, impervious to fluids, and does not conduct heat or cold to the patient.
- Telescoping foot section adjusts to four locking positions for length adjustment
- Four corner handholds
- Eight side handholds
- Stretcher folds for storage
- Twin Safety Lock® coupling (each end)
- Set of 3 patient restraints
- Eight pins for attaching restraints with speed clips (Scoop EXL With Pins Only)

COLOR OPTIONS

- Scoop EXL: Red, Yellow
- Scoop EXL With Pins: Red, Yellow
- Mortuary Scoop EXL: Grey

3.2 General Specifications

Specifications are shown in the tables at right. General specifications are rounded. Metric conversions are calculated before rounding the Imperial measurement.

Ferno reserves the right to change specifications without notice. For more information, contact Ferno Customer Relations or your Ferno distributor (page 2).

WARNING

Improper use of the stretcher can cause injury. Use the stretcher only for the purpose described in this manual.

Specifications	Imperial	Metric
Load Capacity	500 lb	227 kg
Load Capacity (UK)		36 st
Weight	18 lb	8 kg
Stretcher Construction	Aluminum frame, HDPE plastic panels	

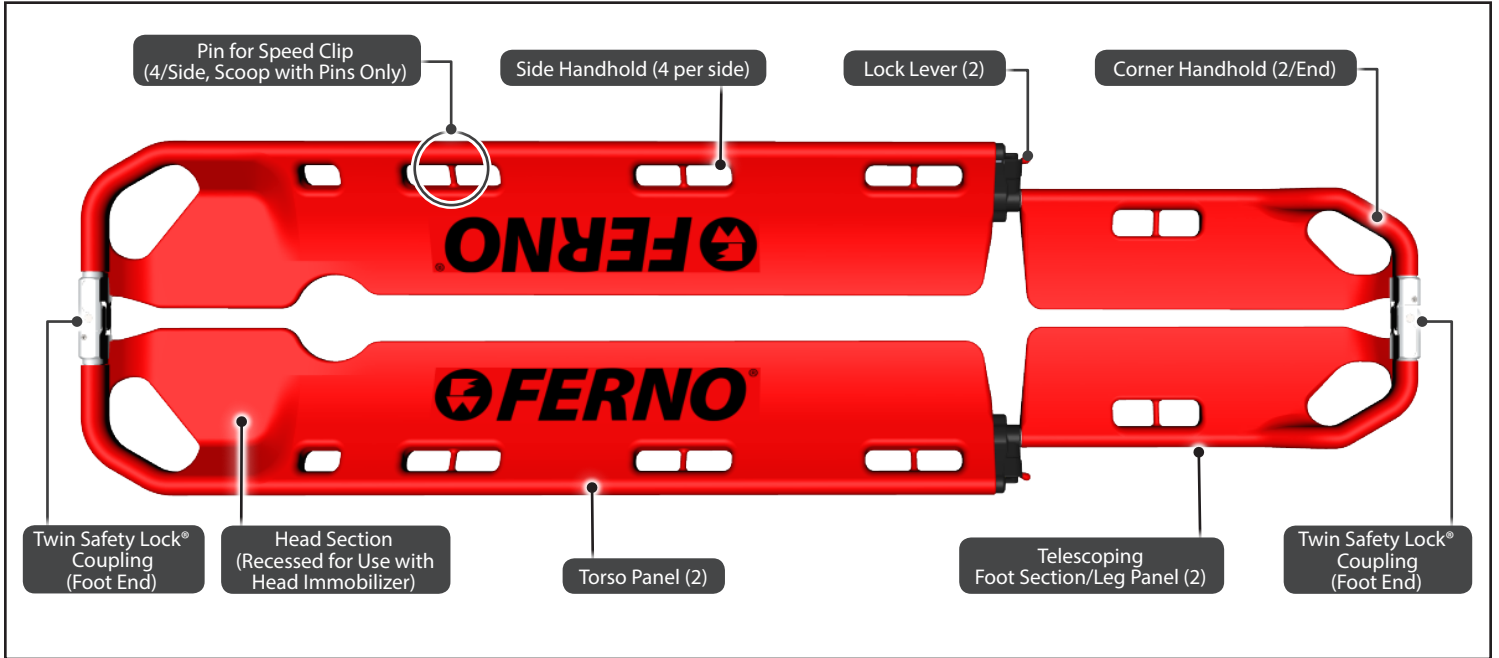
Dimensions	Imperial	Metric
Length		
Maximum (Position 4)	79 in	2000 mm
Position 3	74 in	1880 mm
Position 2	69 in	1755 mm
Minimum (Position 1)	64 in	1635 mm
Folded	47 in	1200 mm
Width	17 in	425 mm
Height		
Open for Use	2.75 in	70 mm
Folded	3.125 in	80 mm



Load Capacity

Inspect the stretcher if the load capacity has been exceeded. See “Inspecting the Stretcher” on page 20.

3.3 Components



4 - USING THE STRETCHER

4.1 Before Placing the Stretcher in Service

- Before use, personnel who will work with the stretcher must read and understand this manual. Appropriate skills and training are also required. See “Operator Skills and Training” on page 6
- Attach the restraints, following the instructions in the users’ manuals provided with the restraints. Also see “Install the Patient Restraints” below.
- Confirm that the stretcher operates properly. See “Inspecting the Stretcher” on page 20.

4.2 Install the Patient Restraints

Before placing the stretcher in service, assign appropriate personnel to install the patient restraints.

Several restraint options are available. For restraint information (attaching, buckling, lengthening, shortening, cleaning) follow the instructions in the restraint users’ manuals (supplied separately). Keep restraint users’ manuals with this manual for future reference. For additional, free manuals, contact Ferno Customer Service (page 2).

Follow local protocols to apply patient restraints. For strapping options, refer to “Applying Restraints” on page 14.

To attach restraints to the stretcher (Figure 1):

- **Stretchers with Pins:** Open the speed-clip pin and attach the clip to the pin.
- **Stretchers without Pins:** Wrap the two-piece restraint around a handhold and thread the buckle or tang through the loop. Cinch tight.
- **MR Environment:** Use only plastic or nylon restraints with plastic buckles when the stretcher is in an MR environment. Speed-clip or metal-buckle restraints may not be MR-compatible.

4.3 General Guidelines for Use

- Medical advice is beyond the parameters of this manual.
- It is the users’ responsibility to ensure safe practices for the patient and themselves.
- A minimum of two trained operators is required.
- Follow standard emergency patient-handling procedures when operating the stretcher.
- **Operators work together and maintain control of the stretcher at all times.**
- Operators **must** communicate with one another and use coordinated movements to operate the stretcher.
- Operators must stay with the patient at all times.
- Always use patient restraints to secure the patient on the stretcher.
- Lift only the weight you can safely handle. Use additional help when working with heavy loads (patient and equipment). For placement of helpers, see “Using Additional Help” on page 7.

WARNING

Improper operation can cause injury. Operate the stretcher only as described in this manual.

An unattended patient can be injured. Stay with the patient at all times.

An unrestrained patient can be injured. Use patient restraints to secure the patient on the stretcher.

Improper restraints can cause injury. Use only plastic and/or nylon restraints in an MR environment. Speed-clip or metal-buckle restraints may not be MR-compatible.

NOTICE

Plastic-buckle restraints are secondary restraints. Do not use them on ambulance cots or other equipment requiring primary restraints. Use only as described in this manual or in restraint users’ manuals provided with the restraints.



4.4 Folding/Unfolding the Stretcher

The stretcher can be stored in the shortest unfolded position if space allows, or folded.

To unfold and prepare the stretcher for use (Figure 2):

1. Lay the folded stretcher flat on the floor or ground.
2. Lift the foot section off the torso panel and unfold until it lies flat.
3. Adjust the length and engage the lock-pin levers. See “Adjusting the Stretcher Length” on page 11.

To fold the stretcher:

4. Lay the stretcher flat on the floor or ground.
5. Move the lock-pin levers to the unlocked position.
6. Fully extend the foot section by extending it out until the hinges are completely visible.
7. Lift the foot section and fold it over onto the torso panel.



2

4.5 Adjusting the Stretcher Length

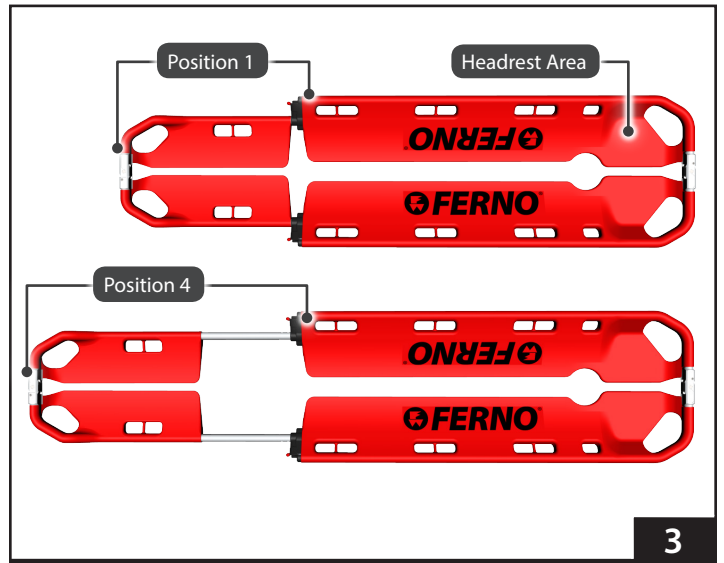
The stretcher adjusts to four locking positions to suit patients of various heights (Figure 3).

To determine if length adjustment is needed, position the stretcher beside the patient and align the headrest area with the patient’s nose. Adjust the foot section to extend a little beyond the patient’s feet.

Adjust the length of the stretcher before uncoupling the halves. This ensures equal adjustment to both halves.

To adjust the length of the stretcher:

1. Move the lock-pin lever on each side of the frame to the unlocked position (Figure 4). When the stretcher is lying face-up on a flat surface, the locked position is “down” and the unlocked position is “up.”
2. Pull the foot section outward to the desired length, stopping near one of the locking positions located at the holes along the foot-section frame.
3. Return both lock-pin levers to the locked position.
4. Push or pull the foot section a little until it locks into place.
5. Confirm both sides have locked.

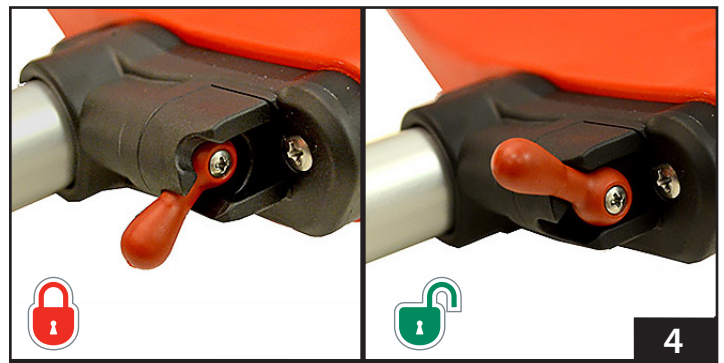


3

Tip

Adjust the Length

Adjust the length of the stretcher before uncoupling the halves. This ensures equal adjustment to both halves.

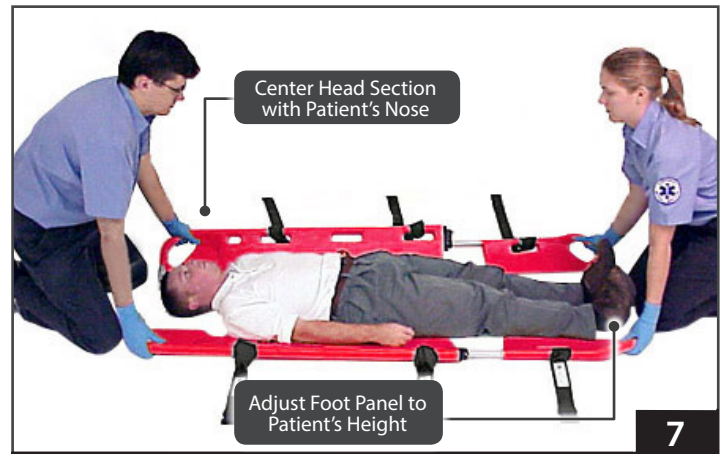


4

4.6 Applying the Stretcher

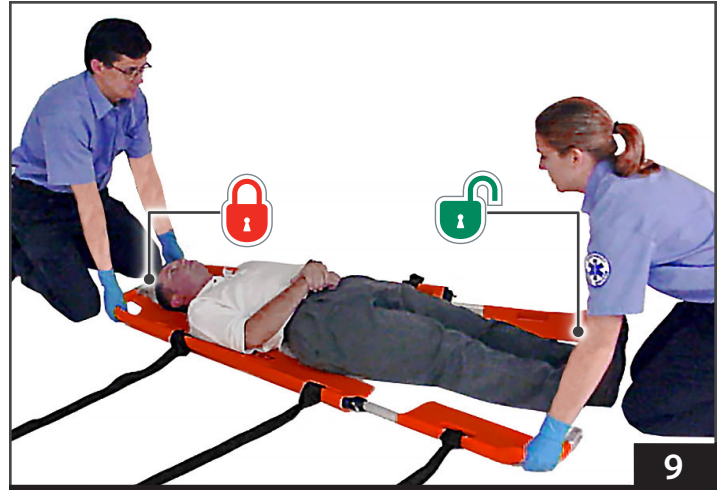
Follow local protocols and the instructions below to apply the stretcher to a patient:

1. Unfold the stretcher and adjust the length for the patient. See “Folding/Unfolding the Stretcher” and “Adjusting the Stretcher Length” on page 11.
2. Unfasten the restraints (if stored on stretcher).
3. Prepare the patient. Follow your local protocols to determine if a cervical collar and head immobilizer should be used with the patient.
4. Adjust the length of the stretcher as needed. See “Adjusting the Stretcher Length” on page 11.
5. To separate the stretcher halves, press both Twin Safety Lock levers (Figure 5 and Figure 6) at each end of the stretcher and pull the coupling halves away from each other.
6. Position half of the stretcher on each side of the patient, aligning the center of the headrest area with the patient’s nose (Figure 7).
7. Follow your local emergency patient-handling protocols to work the stretcher halves under the patient until the end couplings meet. Use care to avoid pinching or pulling the patient’s skin, hair, or clothing while working the stretcher halves into place.
8. To rejoin the stretcher halves, align the right and left halves of the head and foot couplings and push them together until the Twin Safety Locks engage.
9. Verify the Twin Safety Locks at both ends of the stretcher are fully engaged. To test for proper lock engagement, pull the coupling halves away from each other without pressing on the lock levers. The couplings will remain securely joined if the locks are fully engaged.
10. Fasten and adjust all patient restraints (Figure 8).



4.7 Applying the Stretcher in a “V” Configuration

1. Unfold the stretcher and adjust the length. See “Adjusting the Stretcher Length” on page 11.
2. Unfasten the restraints (if stored on stretcher).
3. Open only the foot-end coupling by pressing the Twin Safety Lock levers and pulling the foot-end halves of the stretcher apart to form an inverted “V” (Figure 9).
4. Position the stretcher with the patient’s head at the coupled head-end of the stretcher (Figure 9).
5. Follow local protocols to work the stretcher inward and under the patient. Work from head to foot until the coupling halves at the foot end meet. Use care to avoid pinching or pulling the patient’s skin, hair, or clothing while working the stretcher halves into place beneath the patient.
6. Push the foot-end coupling halves together until the Twin Safety Locks meet and lock.
7. Verify that the Twin Safety Locks at both ends of the stretcher are fully engaged. To test for proper lock engagement, pull the coupling halves away from each other without pressing on the lock levers. The couplings will remain securely joined if the locks are fully engaged.
8. Fasten and adjust all patient restraints.



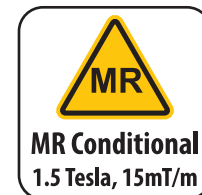
4.8 Using the Stretcher In an MR Environment

The stretcher has been shown to pose no hazards in a specified MR environment under listed conditions. See “MR Conditional Testing and Compliance” on page 5.

Select appropriate restraints for the environment in which the stretcher will be used.

Use only plastic or nylon restraints with plastic buckles when the stretcher is in an Magnetic-Resonance (MR) environment. Speed-clip or metal-buckle restraints may not be MR-compatible.

⚠ WARNING
Improper restraints can cause injury. Use only plastic and/or nylon restraints in an MR environment. Speed-clip or metal-buckle restraints may not be MR-compatible.



Magnetic-Resonance Rating Label

4.9 Applying Restraints

The stretcher handholds provide options for attaching restraints. Select appropriate restraints and follow local protocols to properly restrain the patient.

Select appropriate restraints for the environment in which the stretcher will be used. If the stretcher will be placed in an MR environment, use only plastic and/or nylon restraints. Speed-clip or metal-buckle restraints may not be MR-compatible.

Options for applying restraints are shown below.

LATERAL RESTRAINT CONFIGURATION

This strapping method typically uses three restraints (Figure 10).

Apply restraints to stretcher handholds, with buckle and tang attached to opposite sides of the stretcher. Ferno recommends placing all the buckles at one side of the stretcher, and all tangs at the opposite side for ease of application.

Attach the restraints across the body.

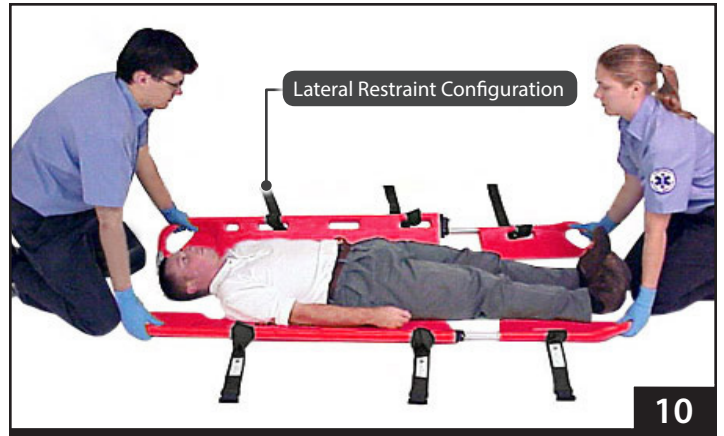
CRISS-CROSS CONFIGURATION

This strapping method typically uses four restraints. Refer to Figure 11.

- Apply two restraints across the abdomen/thorax in a criss-cross configuration.
- Apply one restraint across the legs.
- Apply one restraint near the feet/ankles.

To apply the restraints:

1. Buckle restraints before attaching them to the stretcher. Adjust restraint length as needed to secure the patient.
2. **Shoulder Restraint:** Attach the restraint at the patient's shoulder. Lay the restraint across the patient's shoulder and chest. Attach the other half to the opposite side of the stretcher, following your local protocols to select a location.
3. **Leg Restraint:** Attach across the legs.
4. **Foot Restraint:** Attach across the feet/ankles. For options, see "Applying the Foot Strap" on page 15.
5. Adjust all restraints (and head immobilizer, if used) to securely hold the patient.



APPLYING THE FOOT STRAP

The foot strap may be attached across the ankles and adjusted to secure the patient, or lengthened and applied in a Figure-8 configuration around the feet. To use the Figure-8 configuration:

1. Attach the restraint to one side of the stretcher.
2. Lengthen the restraint to allow the creation of the Figure-8 shape (Figure 12).
3. Cross the restraint and insert the feet into the loop (Figure 13).
4. Adjust the restraint so the feet are held securely (Figure 14).

Tip

Foot Restraint

If it is not medically appropriate to use the Figure-8 restraint configuration on the feet (such as when a splint is in place), attach the restraint laterally.



4.10 Lifting and Carrying the Stretcher

- Always lift and carry the stretcher by hand. Do not lift using ropes or bridles.
- For heavy rescue situations, secure the stretcher in a transport basket and attach the lifting devices to the basket.
- Use a minimum of two operators to lift the stretcher. Use two operators and two helpers to maintain stability of the stretcher when carrying an adult patient. See “Using Additional Help” on page 7.
- Lift only the weight you can safely handle. Use additional help as needed when lifting and carrying the stretcher. See “Using Additional Help” on page 7.

To carry the stretcher:

1. Operators position themselves at opposite ends of the stretcher. Show helpers where to stand and how to grasp the stretcher. See “Using Additional Help” on page 7.
2. Grasp the handholds with an underhand grip (palms up, Figure 15).
3. Use proper lifting techniques to lift and carry the stretcher and patient (Figure 16).

WARNING

Improper lifting can cause injury. Use trained operators to lift the stretcher only by hand, and only by grasping the handholds and main frame.

NOTICE

Do not attach ropes or bridles to stretcher handholds or pins. Lift and carry the stretcher by hand, grasping the handholds and main frame.

For heavy rescue situations, secure the stretcher in a transport basket and attach lifting devices to the basket.

For use with mechanical lifts, see “Using a Lifting Device” on page 18.



5 - BARIATRIC TRANSPORT

5.1 General Guidelines

When undertaking a bariatric transport:

1. Follow your local protocols for bariatric transport.
2. Use as many additional operators and helpers as needed to safely transport the patient. See "Using Additional Help" on page 7.
3. If the optional accessory Twin Safety Lock Extenders are used (Figure 17) follow the instructions in the section below.

5.2 Using Twin Safety Lock Extenders

The Twin Safety Lock Extenders (TSL-EXT) (optional, available separately) increase the width of the stretcher by 95 mm / 3.75" at each end of the stretcher. To order, see "Accessories" on page 23.

Use the TSL-EXT only with a bariatric patient.

To use the extenders:

1. Separate the stretcher halves.
2. Attach **ONLY one** extender between the Twin Safety Locks at the head end of the stretcher (Figure 18).
3. Attach **ONLY one** extender between the Twin Safety Locks at the foot end of the stretcher. A stretcher with properly-attached TSL-EXT is shown in Figure 19.

To remove the extenders:

1. Press the TSL-EXT levers to disconnect it from each half of the stretcher. Repeat at each end of the stretcher.
2. Completely remove the extenders from the stretcher. Store the extenders when not in use. Do not leave the TSL-EXT attached to stretcher.

NOTICE

The load on the stretcher equals the patient's weight plus any attached accessories and other equipment carried on the stretcher. Exceeding the load capacity can damage the stretcher. Immediately inspect the stretcher and restraints for damage if the load capacity has been exceeded.

Use only metal-buckle restraints with the restraint extenders provided with the TSL-EXT. The extenders are not compatible with plastic-buckle restraints.

WARNING

Improper bariatric transport can cause injury to the patient, operators and helpers. Follow local protocols and the instructions in this manual.

Heavy loads can cause injury. Use as many additional operators and helpers as needed to safely transport the patient.

Improper use and/or installation of the TSL-EXT accessory can cause injury. Use only with a bariatric patient. Use and install extenders only as described in this manual.



6 - USING A LIFTING DEVICE

6.1 General Guidelines

HIGH-ANGLE (TECHNICAL) RESCUE

High-angle or Technical Rescue (also referred to as “heavy rescue”) requires specialized training, techniques, and equipment. Do not attempt high-angle rescue unless you have proper training.

The stretcher is not designed for high-angle rescue. In a high-angle rescue situation, secure the stretcher in a transport basket. Attach lifting devices only to the transport basket. Follow high-angle rescue techniques.

MECHANICAL LIFT

- Mechanical lifts such as the one shown in Figure 20 may be used to move a patient and stretcher a short distance (for example, from the floor to a bed).
- Do not exceed the load capacity of the lift or stretcher.
- Follow local protocols and the instructions in this manual to secure the patient on the stretcher.
- Follow the lift (and bridle) manufacturer’s instructions to secure the stretcher to the lifting device.
- Follow the lift manufacturer’s instructions to lift and move the stretcher with patient to a bed or other surface.
- Transfer the patient from the stretcher following local protocols.

WARNING

The stretcher is not designed for use in high-angle (technical) rescue. Do not attach ropes or bridles to stretcher handholds or pins. Secure the stretcher in a transport basket and attach lifting devices to the transport basket.

Improper lifting can cause injury. If local protocols allow, a mechanical lift may be used to move a patient a short distance. Follow the device manufacturer’s guidelines for attaching lifting straps and lifting using the mechanical device.



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7 - MAINTENANCE

7.1 Maintenance Schedule

The stretcher requires regular maintenance. Set up and follow a maintenance schedule. The table at right represents minimum intervals for maintenance. Keep maintenance records. For a sample record sheet, see "Maintenance Record" on page 27.

When using maintenance products, follow the manufacturers' directions and read the manufacturers' material safety data sheets.

7.2 Disinfecting and Cleaning the Patient Restraints

Remove the patient restraints from the stretcher. Disinfect and clean only as directed in the users' manuals provided with the patient restraints. Additional, free users' manuals can be obtained from Ferno. See "Ferno Customer Relations" on page 2.

7.3 Disinfecting the Stretcher

Wipe all surfaces with disinfectant. Follow the disinfectant manufacturer's instructions for application method and contact time. Ferno recommends you inspect the stretcher for damage as you disinfect it.

7.4 Cleaning the Stretcher

1. Remove the patient restraints and any accessories.
2. Hand clean all surfaces of the stretcher with warm water and a mild detergent. If the foot section requires cleaning, see the additional instructions below.
3. Rinse with warm, clear water. Dry the stretcher with a towel or allow it to air-dry.

Note: The stretcher panels are composed of a polymer material that does not require waxing.

CLEANING THE FOOT SECTION

If the foot section interior requires cleaning, remove the foot section and clean inside the tubes.

1. Fully extend the foot section to expose the hinges.
2. Engage the lock lever to access and remove three Phillips screws on each side (Figure 21). Use caution to avoid stripping the screws.
3. Remove the telescoping tubes from the channel to allow access to the interior of tubes and plastic body for cleaning.
4. Clean the tubes and inside the plastic body with warm, soapy water. Allow the components to dry completely before reassembly.
5. Lubricate the foot section sliding surfaces and couplings. See "Lubricating the Stretcher" on page 20.
6. Reassemble by sliding the foot section back inside the tubes until it locks.
7. Use a Phillips screwdriver to re-install the screws.

⚠ WARNING

Improper maintenance can cause injury. Maintain the stretcher only as described in this manual.

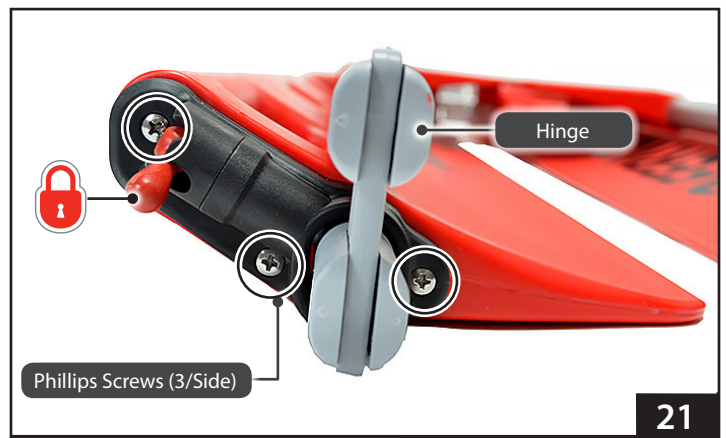
Minimum Maintenance	Each Use	As Needed	Monthly
Disinfecting (this page)	•		
Cleaning (this page)		•	
Inspecting (page 18)		•	
Lubricating (page 18)		•	

NOTICE

Disinfectants and cleaners containing bleach, phenolics, or iodines can cause damage. Do not use products containing these chemicals.

Water under high pressure, or steam, can penetrate joints, flush away lubricant, and cause corrosion. Use caution when cleaning moving parts such as joints and hinges, and reapply lubricant if needed. See "Lubricating the Stretcher" on page 20.

Using abrasive cleaning compounds or applicators on the stretcher can cause damage. Do not use abrasive materials to clean the stretcher.



7.5 Inspecting the Stretcher

Have your service's equipment maintenance personnel inspect the stretcher regularly. Follow the checklist at right and operate the stretcher through all its functions as described in this manual.

If inspection shows damage or excessive wear, remove the stretcher from service until repair is made. See "Parts and Service" on page 22.

Inspection Checklist

- Are all components present?
- Is the stretcher free of excessive wear?
- Do all moving parts operate smoothly and properly?
- Does the stretcher lock properly into each position?
- Are the coupling pins securely in place. See "Inspecting the Coupling Pins" on page 21.
- For stretchers with pins, are all eight speed-clip pins securely in place?
- Are the patient restraints properly installed?
- Is patient-restraint webbing in good condition with no cuts or frayed edges?
- Are patient-restraint buckles free of visible damage and do they operate properly?
- For restraints with speed clips, do the speed-clip pins function properly?
- Do installed accessories operate properly without interfering with stretcher operation?

7.6 Lubricating the Stretcher

Disinfect and clean the stretcher before applying lubricant. Use the lubricants designated below to lubricate the stretcher. Do not lubricate points marked with the "do not lubricate" symbol.

LUBRICATION POINTS

- | | |
|--------------|---|
| 1. Hinges | White Lithium Grease or Dry-Coating Teflon™ |
| 2. Lock Pins | SAE 30-weight oil (1-2 drops) |

LUBRICATION-FREE ITEMS

- | | |
|---|------------------|
|  Lock Levers | Do not lubricate |
|---|------------------|

Tip

Applying Lubricant

Use a small amount of lubricant (one or two drops). Lubricate identical points on each side of the stretcher. After applying lubricant, wipe off any excess.



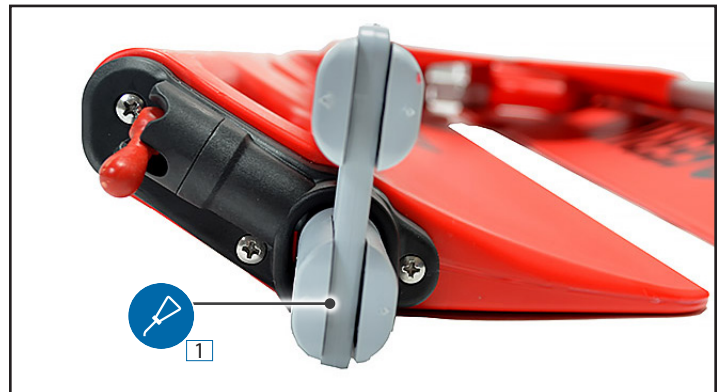
Do Not Lubricate



Lubricate

NOTICE

Lubricating parts that should not be lubricated allows dirt and foreign particles to collect on those parts, resulting in damage. Lubricate **only** the numbered reference points shown.



7.7 Inspecting the Coupling Pins

Each half-coupling contains a pin (Figure 22). During assembly, Loctite® threadlocker is applied to the pins. Follow the instructions in this section to inspect and reinstall a coupling pin.

If inspection indicates damage or excessive wear, take the stretcher out of service until repairs are made. See “Parts and Service” on page 22.

INSPECTING THE PINS

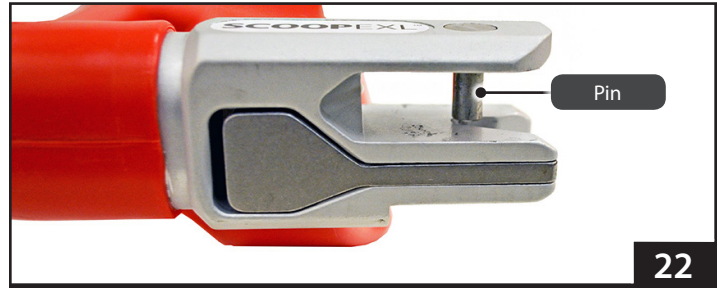
1. Select pliers that are maximum 1/2 inch (13 mm) thick. Wrap tape around the jaws to help prevent damage to the pins.
2. Attempt to unthread the first pin. If the pin holds and you cannot unthread it without extra effort, it is secure and no repair is needed on that pin.
3. Repeat for each pin (4 total). If you are able to unthread the pin, follow instructions in “Reinstalling a Pin” below.

REINSTALLING A PIN

1. Finish removing the loose pin.
2. Clean the threads of the pin, plus the mating threads in the lock with acetone or an appropriate Loctite cleaner/primer (not supplied). Allow the threads to dry completely.
3. Apply 1-2 drops of Loctite® 271™ threadlocker (red in color, not provided) to the threads at each end of the pin. Install the pin immediately. Wipe off any excess threadlocker.
4. Let the threadlocker cure for a minimum of one hour.

NOTICE

Allow Loctite® threadlocker to dry for a minimum of one hour before using the stretcher. Full cure time is eight hours.



8 - PARTS AND SERVICE

8.1 U.S.A. and Canada

In the United States and Canada, to order parts or for professional repair, contact EMSAR® – the only agent authorized by Ferno to manage, service, and repair Ferno products.

Telephone (Toll-Free)	1.800.73.EMSAR
Telephone	1.937.383.1052
Fax	+1.937.383.1051
Internet	www.EMSAR.com

WARNING

Improper parts and service can cause injury. Use only Ferno parts and Ferno-approved service on the stretcher.

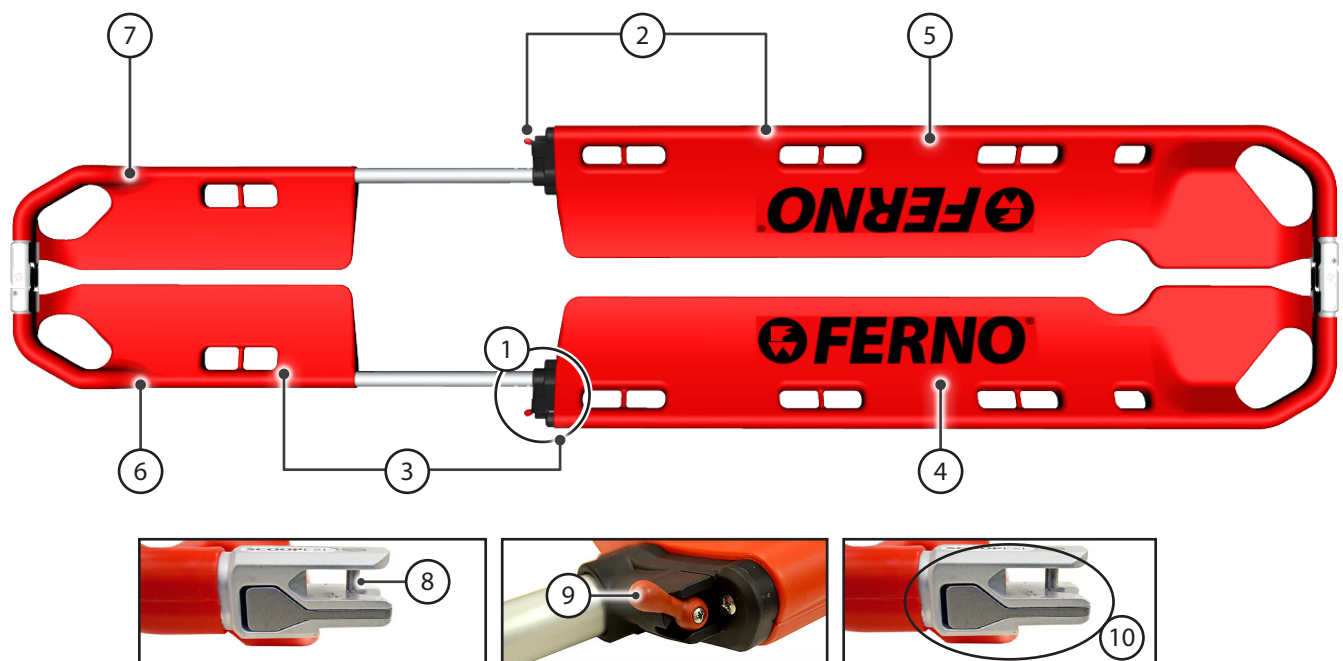
Modifying the stretcher can cause injury and damage. Use the stretcher only as designed by Ferno.

8.2 Worldwide

To order Ferno parts, and for professional repair, contact your Ferno distributor. Your distributor is the only agent authorized by Ferno to manage, service, and repair Ferno products.

8.3 Parts List

Ref #	Description	Red Part #	Yellow Part #	Grey Part #
1	Two folding hinges (right/left) + two lock pin levers	190-1041	190-1041	190-1041
2	Two folding hinges (right/left) + two lock pin levers + two torso panels (right/left)	190-2161	190-1042	190-2167
3	Two folding hinges (right/left) + two lock pin levers + two foot panels (right/left)	190-2162	190-1043	190-2168
4	Folding hinge + lock pin lever + torso panel (patient left only)	190-2163	190-1044	190-2169
5	Folding hinge + lock pin lever + torso panel (patient right only)	190-2164	190-1045	190-2170
6	Folding hinge + lock pin lever + foot panel (patient left only)	190-2165	190-1046	190-2171
7	Folding hinge + lock pin lever + foot panel (patient right only)	190-2166	190-1047	190-2172
8	Pin for Twin Safety Lock, M8X.75 (pair)	190-1584	190-1584	190-1584
9	Lock-pin lever for telescoping frame (pair, w/screws)	190-1671	190-1671	190-1671
10	Twin Safety Lock w/screw and spring (each)	190-1758	190-1758	190-1758



9 - ACCESSORIES

Ferno offers a full line of accessories approved for use with the stretcher. Follow all instructions in accessory users' manuals. Keep the instructions with this manual.

When using accessories, be aware of any special considerations such as doorway heights and widths, or other factors which may be affected by the addition of the accessory/accessories to the stretcher.

Contact Ferno Customer Relations (page 2) or your Ferno distributor for product information.

 **WARNING**

Attaching improper items to the stretcher can cause injury. Use only Ferno-approved items on the stretcher.

Description	Part #
Scoop EXL Twin Safety Lock Extenders	083-2274
449WizLoc Cervical Collar (3-pack)	082-2074
455 HeadHugger Disposable Head Immobilizer (1 ea.)	083-2093
455 HeadHugger Disposable Head Immobilizer (10 pack)	083-2092
Universal Scoop Storage Brackets	081-9876
770 Fastrap Restraint System	031-3916

Model 430 (Metal Buckle) Restraint

Style	Black	Orange
2 pc., 5' (1524 mm)	031-3892	031-3891
2 pc., 7' (2134 mm)	031-3911	031-3912
2 pc., 9' (2743 mm)	031-3305	031-4013
1 pc., 7' (2134 mm)	031-3910	031-3887
1 pc., 9' (2743 mm)	031-3899	031-3889

Model 430P (Plastic Buckle) Restraint

Style	Black	Orange
2 pc., 5' (1524 mm)	031-3797	031-3917
2 pc., 7' (2134 mm)	031-3801	031-3919
1 pc., 7' (2134 mm)	031-3894	031-4011

Model 439 (Metal Buckle) Restraints, Set of Three

Style	Black	Orange
1 pc., 7' (2134 mm)	031-3083	031-2660

Model 436-i Restraint With Speed Clips

Style	Black	Buckle
2 pc., 5' (1524 mm)	031-4124	Plastic
2 pc., 5' (1524 mm)	031-4122	Metal
2 pc., 7' (2134 mm)	031-4125	Plastic
2 pc., 7' (2134 mm)	031-4123	Metal

Model 436 Restraint With Speed Clips (Set of 4)

Style	Black	Buckle
2 pc., 5' (1524 mm)	031-4120	Plastic
2 pc., 5' (1524 mm)	031-4118	Metal
2 pc., 7' (2134 mm)	031-4121	Plastic
2 pc., 7' (2134 mm)	031-4119	Metal

TRAINING RECORD

Date	Printed Name	Signature	Training Method			Trainer Initials
			Read Manual	Video/ Online	Hands-On	

TRAINING RECORD

Date	Printed Name	Signature	Training Method			Trainer Initials
			Read Manual	Video/Online	Hands-On	

MAINTENANCE RECORD

Date	Maintenance Performed	By

Aviation

Military

Mortuary

EMS

Rescue

