

Users' Manual



Model 173
Cot Fastening System

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. It is recommended that training on the proper use of this product 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.

Proprietary Notice

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**Additional Instructional Material
for the Model 173 Cot Fastener System:**

- 173-2 Installation Manual (Permanent Mounting) 234-1827
- 173-3 Installation Manual (Removable Mounting) 234-1828

EUROPEAN REPRESENTATIVE

Ferno (UK) Limited, Stubs Beck Lane, Cleckheaton
West Yorkshire BD19 4TZ, United Kingdom

Telephone	+44 (0) 1274 851999
Fax	+44 (0) 1274 851111
Internet	www.ferno.co.uk
	234-3468-00



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Ferno-Washington, Inc.
70 Weil Way
Wilmington, OH 45177-9371 U.S.A.

Telephone (Toll Free)	1.877.733.0911
Telephone	+1.937.382.1451
Fax (Toll Free)	1.888.388.1349
Fax	+1.937.382.6569
Internet	www.ferno.com

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1 - SAFETY INFORMATION

1.1 Warning

Warning notices indicate a potentially hazardous situation which, if not avoided, could result in injury or death.


WARNING

Improper or inadequate installation can cause injury. The installer must test the fastener setup to meet or exceed all applicable guidelines before using the setup in an ambulance.

A fastener installed without backing plates can fail in a crash. Use properly installed backing plates to secure the fastener at all mounting points.

Improperly installed backing plates can fail in a crash. Secure the backing plates to primary structural members of the ambulance at all mounting points.

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

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

Using a cot not designed for this fastener can cause injury. Use only compatible Ferno cots with the fastener.

A weakened fastener can cause injury. Removing and reinstalling a fastener can weaken the fastener. Install a new fastener when remounting an ambulance box.

A damaged fastener can cause injury. An ambulance accident can cause hidden fastener damage. Replace any fastener involved in an accident.

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

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

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

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

1.2 Important

Important notices emphasize important usage or maintenance information.

Important

1.3 Bloodborne Disease Notice

To reduce the risk of exposure to bloodborne diseases such as HIV-1 and hepatitis when using the fastener, follow the disinfecting and cleaning instructions in this manual.

1.4 Cot and Fastener Compatibility

Combining different manufacturers' products into a "mixed-component" cot/cot fastener system can increase the user's risk of injury and damage.

Ferno-Washington, Inc. strongly recommends that only Ferno-manufactured cots be used in Ferno-manufactured cot fasteners, and that only Ferno-manufactured cot fasteners be used for securing Ferno-manufactured cots in ambulances.

ANY COMBINATION OF A FERNO COT OR COT FASTENER WITH A NON-FERNO COT OR COT FASTENER IS MISUSE OF THE FERNO PRODUCT. Responsibility for the outcome of known, intentional misuse rests squarely on the misuser.

For additional information, see the *Cot Fastener Disclaimer* or contact Ferno Customer Relations (page 16).

1.5 Symbol Glossary

The symbols defined below are used in this users' manual. Ferno uses symbols recognized by the International Standards Organization (ISO), American National Standards Institute (ANSI) and the emergency medical services industry.

 General Warning - Potential Injury	 Product meets European Union Standards	 Lock
 Do Not Lubricate	 Lubricate	 Unlock

1.6 Responsibility of User to Maintain a Safe Fastener System

WHAT YOU MUST KNOW AS A USER:

The integrity of the fastener system relies heavily on:

- **the installer** to meet all required installation standards.
- **the user** to regularly inspect and maintain the system.

USER REQUIREMENTS:

1. **Inspect the fastener monthly (minimum) or more often with frequent use.** Check under the ambulance to see if exposure to the environment has damaged the backing plates, nuts or bolts. Replace the fastener if its integrity is in question.
2. **During inspections, verify that all fastener components are tight but DO NOT repeatedly tighten the bolts with powered equipment.** Over time, using powered tools to repeatedly tighten connections can cause damage to the fastener by compressing the nut and bolt through the backing plate. If inspection indicates the components are “pulling through” the backing plate, **immediately** take the ambulance out of service and install a new fastener with new backing plates.
3. **Consult your installer to ensure your fastener meets all applicable standards.**
 - In the U.S.A., the installer must install a test fastener and test the installation setup to **MEET OR EXCEED** the pull test stipulated in AMD Standard 004. Your installer should be able to show that your fastener has been installed using a method that is equal to one that passes this test.
 - In other nations, the installer must show that the fastener has been installed in a way that meets all standards and regulations for the country in which the fastener will be used.
4. **Make sure your fastener has been installed with backing plates beneath the ambulance floor at all mounting points.** If the backing plates are not present, **immediately** take the ambulance out of service and have a new fastener with backing plates installed.

U.S.A. STANDARDS NOTICE

The fastener is designed to securely hold a Ferno® chair cot inside an ambulance (See page 6 for a list of compatible cots). It has been designed and tested by Ferno to meet or exceed existing ambulance standards from:

- Ambulance Manufacturer’s Division (AMD) of the National Truck Equipment Association.
- Federal Ambulance Specification KKK-A-1822.

Ferno’s fasteners, when installed properly, meet or exceed all applicable U.S. standards.

Note: AMD and KKK-A-1822 standards are updated periodically. Current guidelines are available from these organizations. See page 7.

WARNING

Improper or inadequate installation can cause injury. The installer must test the fastener setup to meet or exceed all applicable guidelines before using the setup in an ambulance.

WARNING

A fastener installed without backing plates can fail in a crash. Use properly installed backing plates to secure the fastener at all mounting points.

WARNING

Improperly installed backing plates can fail in a crash. Secure the backing plates to primary structural members of the ambulance at all mounting points.

2 - OPERATOR SKILLS AND TRAINING

2.1 Skills

Operators using the fastener need:

- ❑ a working knowledge of emergency patient-handling procedures.
- ❑ a complete understanding of the procedures described in this manual.

2.2 Training

Trainees need to:

- ❑ follow a training program designed by their training officer.
- ❑ read this manual. For additional free users' manuals, contact your Ferno distributor or Ferno Customer Relations (page 16).

- ❑ be trained on fastener and cot operation before the vehicle with the fastener is placed in service.
- ❑ practice with the fastener before using it in regular service.
- ❑ be tested on their understanding of the fastener.
- ❑ record their training information. A sample training record sheet is provided on page 18.

WARNING

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

3 - ABOUT THE FASTENER

3.1 Cot Fastener Description

The Model 173 Cot Fastener (called the fastener in this manual) is a device designed to secure a Ferno® chair cot inside the patient compartment of a ground-based ambulance. See *Cot and Fastener Compatibility*, page 4 for compatibility information.

The fastener is for professional use only.

The fastener is a two-part system consisting of an antler and a rear hook (Model 173). Installation and mounting kits (Model 173-2 and 173-3) are sold separately. Fastener features include:

- Front antler secures cot loading wheels.
- Adjustable rear hook fastens directly to the cot frame.
- Optional removable mounting assemblies allow easy removal of antler and rear hook for cleaning.

COMPATIBLE COTS

- Ferno® Model 28 Chair Cot
- Ferno® Model 28-Z PROFlexx® Chair Cot

WARNING

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

WARNING

Using a cot not designed for this fastener can cause injury. Use only compatible Ferno cots with the fastener.

3.2 Installation Standards

In the United States, the fastener is designed for use with ambulances that conform to the Star of Life certification (meets Federal KKK-A-1822 Specifications and AMD standards).

In other nations, the fastener must be installed in a way that meets all local and national standards and regulations for the country in which the fastener will be used.

3.3 Mounting Kit Features

Two mounting kits are available to attach the Model 173 antler and rear hook to the ambulance floor:

- **Model 173-2 Mounting Kit:** The antler and the rear hook are permanently mounted to the floor.
- **Model 173-3 Mounting Kit:** The antler and the rear hook mount to aluminum floor plates. The floor plates allow the antler and rear hook to be easily removed for cleaning.

3.4 Before You Use the Fastener

To install the fastener, read and follow the instructions in the installation manual for your cot and mounting kit setup. As a user, be aware of the following:

- ❑ U.S.A. installers conforming to Star of Life certification must comply with Federal KKK Specifications and AMD standards (see “U.S.A. Installers,” this page).
- ❑ Fastener installation requires the use of backing plates at all mounting points. If your ambulance does not have the required backing plates, have them installed.
- ❑ Inspect the fastener regularly to ensure it is crashworthy. See *Inspecting the Fastener*, page 13.
- ❑ Install a new fastener when remounting an ambulance box. Removing and reinstalling an old fastener can weaken the fastener.
- ❑ If the ambulance is involved in a traffic accident, the fastener could sustain **hidden damage** (damage that is not visible to the eye). Replace the fastener if the ambulance is involved in a traffic accident.

U.S.A. INSTALLERS:

When installed properly, this fastener meets or exceeds all applicable KKK-A-1822 specifications and AMD standards.

For information about AMD standards, contact:

Ambulance Manufacturer’s Division
National Truck Equipment Association
37400 Hills Tech Drive
Farmington Hills, MI, 48331-3414

For information about Federal Ambulance Specifications:

Federal Supply Services
Specifications Section
Suite 8100, 470 E. L’Enfant Plaza, SW
Washington, DC 20407



WARNING

A weakened fastener can cause injury. Removing and reinstalling a fastener can weaken the fastener. Install a new fastener when remounting an ambulance box.



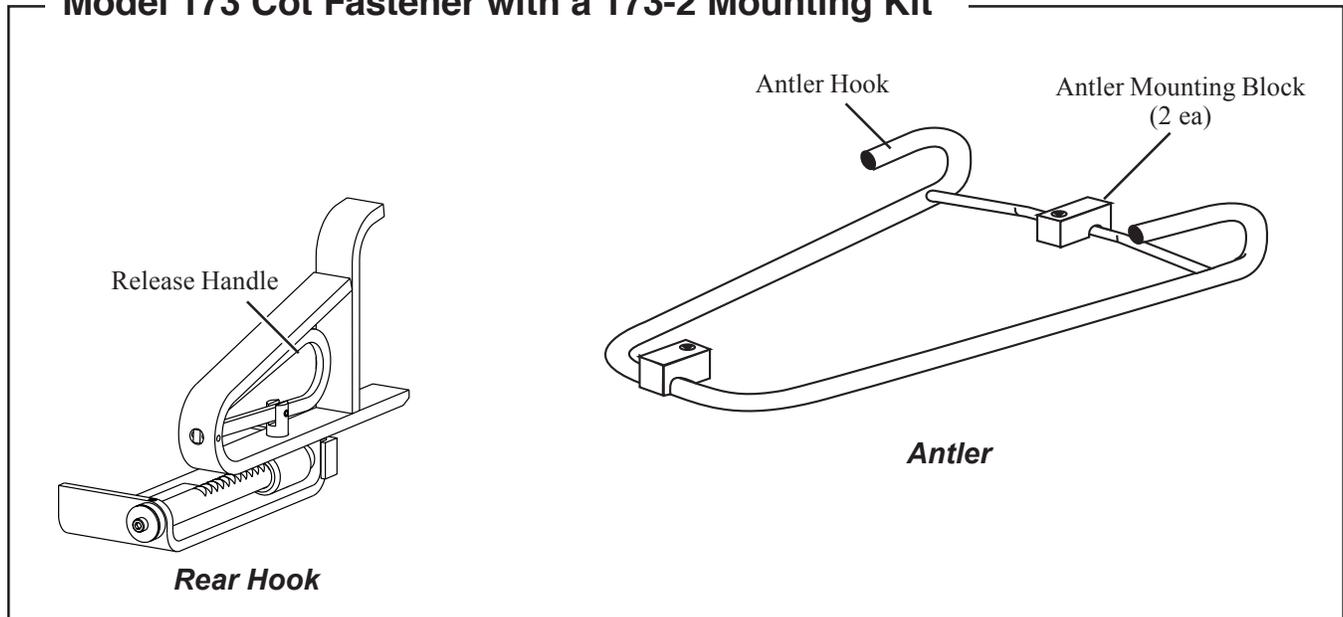
WARNING

A damaged fastener can cause injury. An ambulance accident can cause hidden fastener damage. Replace any fastener involved in an accident.

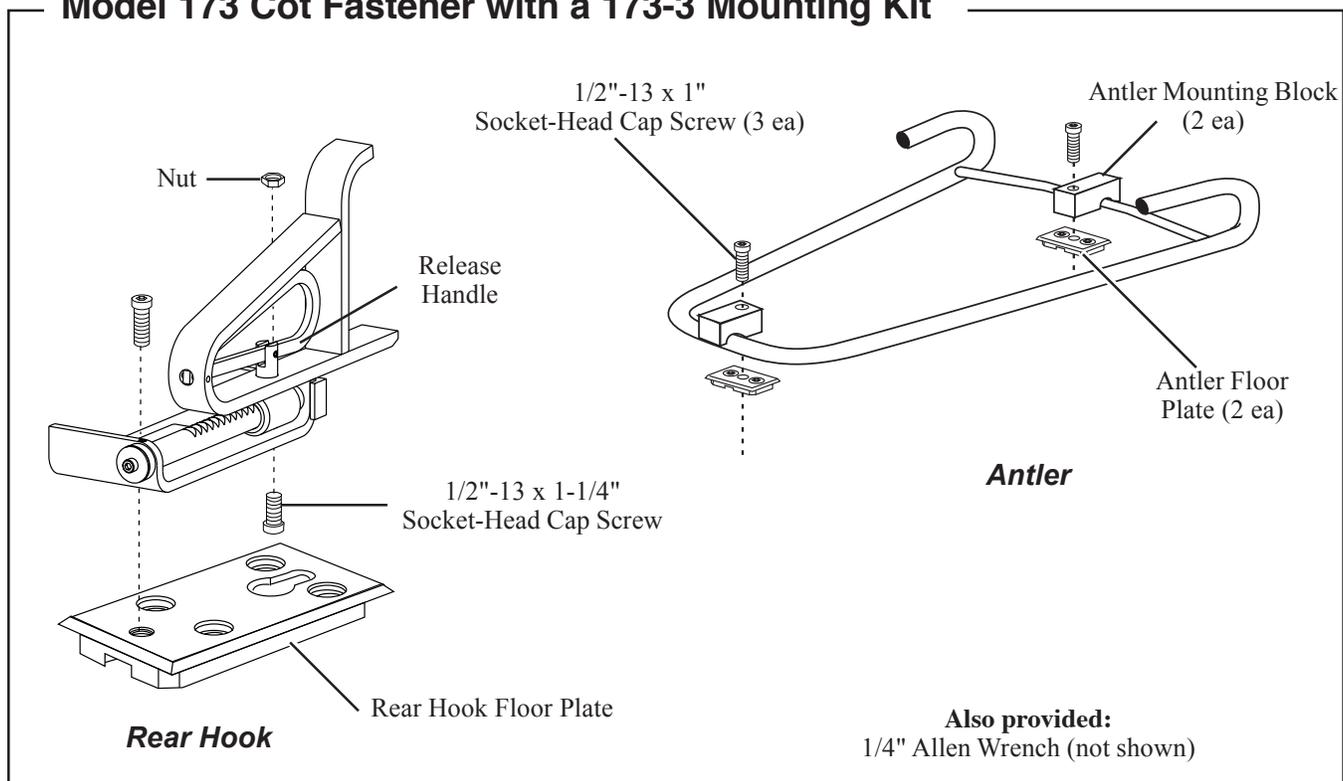
3.5 Components

This section shows the components of the two fastener setups. Your fastener setup will match one of the component drawings.

Model 173 Cot Fastener with a 173-2 Mounting Kit



Model 173 Cot Fastener with a 173-3 Mounting Kit



4 - USING THE FASTENER

4.1 General Guidelines for Use

- Personnel who will work with the fastener must be trained. See *Operator Skills and Training*, page 6.
- Use the fastener only when it has been installed properly for your cot.
- Confirm that the fastener operates properly. See *Inspecting the Fastener*, page 13.
- Use the fastener according to your local protocols and EMS guidelines.

4.2 Using the Rear Hook

The rear hook attaches to the cot foot-end frame and helps secure the cot in the fastener. To operate the hook:

- **To engage the rear hook:** Raise the hook upright (Figure 1) and push the hook forward (Figure 2) to engage the frame of the cot.

After securing the cot, verify that the hook is locked by attempting to pull the hook away from the cot without using the release handle. The hook should remain locked against the cot frame.

◦ If the cot is loose in the fastener after engaging the rear hook:

1. Push the cot further into the antler if possible, then press the rear hook firmly against the cot frame to engage the next locking tooth.

2. Adjust the hook. See *Adjusting the Rear Hook*, page 14. **Note:** only fasteners with serial numbers higher than **JJ 324105** have adjustable rear hooks.

- **To disengage the rear hook:** Squeeze the release handle (Figure 2) and pull the hook away from the cot (toward the rear of the ambulance), then lay the hook on the floor (Figure 1).

Note: Roll the cot into or out of the ambulance only with the rear hook disengaged and laying flat on the floor.

WARNING

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



Figure 1 - Raising the Rear Hook

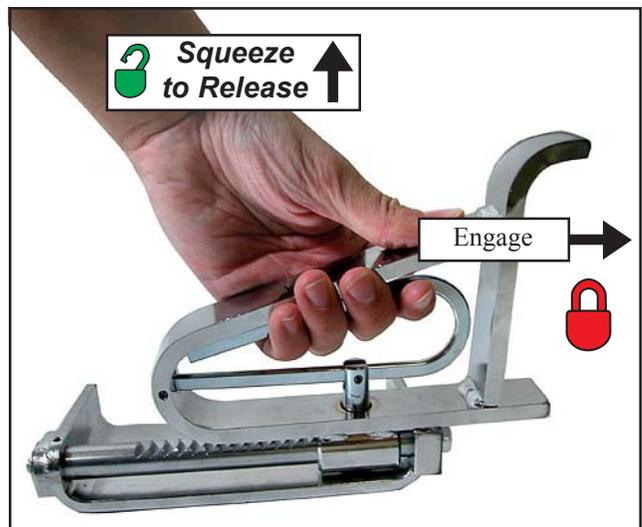


Figure 2 - Engaging the Rear Hook

4.3 Loading a Cot

1. Before loading the cot, verify that the rear hook is unlocked and is laying on the floor as shown in Figure 3 (see *Using the Rear Hook*, page 9).
2. Load the cot into the ambulance, following the instructions in the cot users' manual (Figure 4).
3. Guide the head end of the cot into the antler until the loading wheel crosstube on the cot rests firmly against the antler hooks (Figure 5).
4. Engage the rear hook (Figure 6).
5. Check that the rear hook is locked by attempting to pull the hook away from the cot without squeezing the release handle. The rear hook should remain locked against the cot.



Figure 3 - Fastener Ready for Cot



Figure 4 - Loading the Cot

4.4 Unloading a Cot

To release the cot from the fastener:

1. Squeeze the release handle (Figure 2, page 9) and slide the rear hook away from the foot end of the cot (Figure 6).
2. Lay the rear hook on the floor (Figure 3).
3. Unload the cot from the ambulance following the instructions in the cot users' manual.

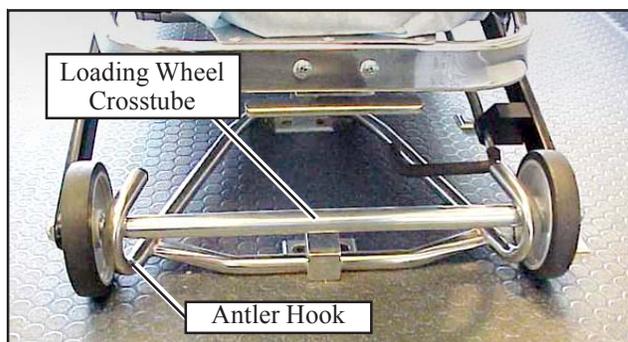


Figure 5 - Cot Head End in Antler

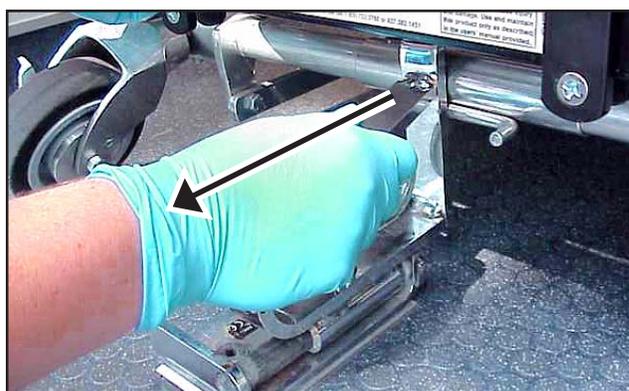


Figure 6 - Disengaging Rear Hook

4.5 Removable Antler (Model 173-3 only)

The antler of a fastener installed with the 173-3 mounting kit can be detached from the floor plates for cleaning.

To detach the antler, use a 1/4" Allen wrench (provided with the mounting kit) to remove the socket-head cap screws from the two antler mounting blocks (Figure 7), then remove the mounting blocks and antler from the mounting plates (not shown).

To attach the antler, place the antler on the floor with the antler hooks facing the rear of the ambulance. Use the 1/4" Allen wrench and the socket-head cap screws (provided in the mounting kit) to secure the mounting blocks and antler to the ambulance floor.

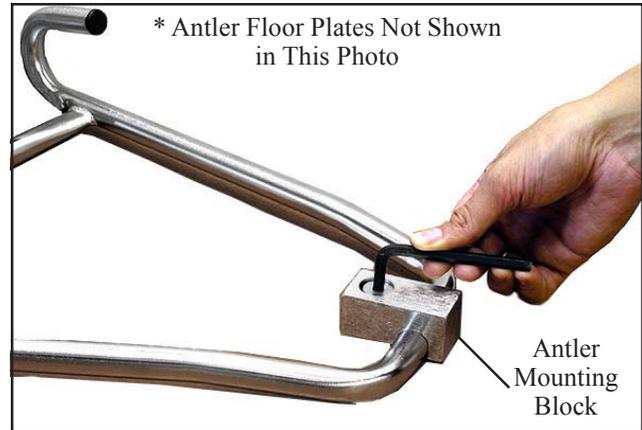


Figure 7 - Detaching the Removable Antler

4.6 Removable Rear Hook (Model 173-3 only)

The rear hook of a fastener installed with a 173-3 mounting kit can be detached from the floor plate for cleaning. To detach the rear hook:

1. Use the 1/4" Allen wrench (provided with the mounting kit) to remove the socket-head cap screw closest to the rear doors (Figure 8).
2. Slide the rear hook toward the rear doors to position the mount in the large end of the keyhole slot in the floor plate (Figure 9).
3. Lift the rear hook straight up to remove it from the mounting plate (Figure 9).

To attach the rear hook:

1. Place the rear hook on the floor plate with the hook facing the front of the ambulance and with the mount on the hook bottom in the large end of the floor plate keyhole (Figure 9).
2. Slide the rear hook toward the front of the ambulance to secure the mount in the small end of the floor plate keyhole (Figure 9).
3. Use the 1/4" Allen wrench to reattach the socket-head cap screw at the rear-door end of the rear hook.



Figure 8 - Removing the SHCS

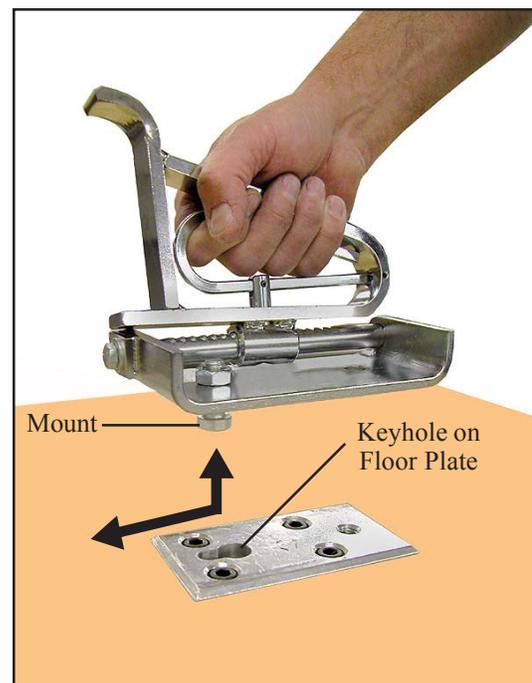


Figure 9 - Detaching/Attaching Removable Rear Hook

5 - MAINTENANCE

5.1 Maintenance Schedule

The fastener requires regular maintenance. Set up and follow a maintenance schedule. A sample maintenance record sheet is provided on page 19. The table at right represents minimum intervals for maintenance.

When using maintenance products, follow the manufacturers' directions and read the manufacturers' material safety data sheets. You can purchase a recommended disinfectant from your Ferno distributor or Ferno Customer Relations (page 16).

5.2 Disinfecting and Cleaning the Fastener

To disinfect: Wipe all surfaces with disinfectant. Follow disinfectant manufacturer's directions. Ferno recommends inspecting the fastener for obvious damage as you disinfect it.

To clean: Hand wash all parts of the fastener with warm water and a mild detergent. Use a brush with stiff bristles to remove stains. Do not use a metal wire brush. Rinse with warm, clear water. Dry with a towel or allow the fastener to air-dry.

The antler, rear hook, and mounting hardware installed with a Model 173-3 mounting kit can be removed for easier cleaning (see page 11).

5.3 Lubricating the Fastener

As needed, apply a small amount of a lubricant such as EZ-1 or white lithium grease to the rear hook shaft (Figure 10).

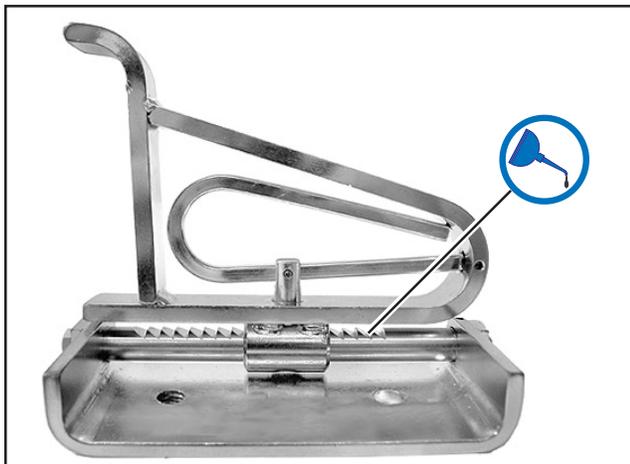


Figure 10 - Lubricate the Rear Hook Shaft

WARNING

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

Minimum Maintenance Intervals	Each Use	As Needed	Each Month
Disinfecting (this page)		•	
Cleaning (this page)		•	
Lubricating (this page)		•	
Inspecting (page 13)		•	•
Adjusting (page 14)		•	

Important

Disinfectants and cleaners containing bleach, phenolics, or iodines can harm the fastener. Use caution when disinfecting and cleaning with products containing these chemicals.

Important

Water under high pressure penetrates joints, flushes away lubricant, and causes corrosion. Do not use a high-pressure washer, or steam, to clean the fastener.

Important

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

5.4 Inspecting the Fastener

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

If the inspection shows damage or excessive wear, remove the fastener from service until repair is made. See *Parts and Service*, page 15.

Important

If the required backing plates are not installed, immediately take the fastener out of service and have the backing plates installed. Then, install a new fastener.

Important

Make sure all connections are tight, but **do not overtighten the hardware**. Overtightening, especially with powered tools, can cause the nut and bolt beneath the ambulance floor to pull through the backing plate.

If inspection indicates the components are pulling through the backing plate, immediately take the fastener out of service and install a new fastener with new backing plates.

INSPECTION CHECKLIST

- Are all parts in good condition (no cracks, corrosion, or damage)?
- Do all moving parts operate smoothly and properly?
- Does the cot load and unload properly?
- Do the antler hooks properly engage the cot's head-end crosstube?
- Does the rear hook properly engage the cot?
- For removable components: Does the fastener lock properly to the floor mounting plates?
- Monitor the ambulance floor, including beneath the ambulance, and check for fastener integrity. Is the fastener setup worn? Has exposure to the environment caused visible damage?
- Are the required backing plates present, and are they securely welded to a primary structural member of the ambulance floor?
- Is all the hardware tight?

5.5 Adjusting the Rear Hook

The rear hook of fasteners with Serial Numbers **JJ 324105** and higher is adjustable. To adjust the rear hook, first place the cot in the fastener and verify that the head-end crosstube is engaged in the fastener antler. Then engage the rear hook as closely as possible against the cot. Follow the appropriate instructions below to adjust the hook forward or rearward on the ratchet bar shaft.

ADJUSTING THE HOOK FORWARD:

1. Lower the hook momentarily and use a 3/32" Allen wrench to loosen the set screw located **on top** of the ratchet bar shaft (Figure 11). Do not remove the set screw - loosen it only. Then raise and engage the hook. (If you can't raise the hook, the set screw is too loose.)
2. Use a 5/32" Allen wrench to **loosen** the socket head cap screw at the rear of the ratchet bar, Figure 11. (To loosen: turn counter-clockwise).
3. At the front of the ratchet bar shaft, use a 7/16" socket or box wrench to **tighten** the hex-head cap screw and shaft, Figure 12. (To tighten: turn clockwise).
4. Repeat Steps 2 and 3 until the cot is held firmly in place by the hook with no front-to-back slack or wiggling.

Note: If the shaft cannot be adjusted any further forward, move the hook itself forward by one locking ratchet position, then adjust the shaft using this position.

5. Use the 5/32" Allen wrench to tighten the socket head cap screw at the rear of the ratchet bar. Verify that both front and rear screws are tight.
6. Disengage the hook and tighten the set screw with the 3/32" Allen wrench.

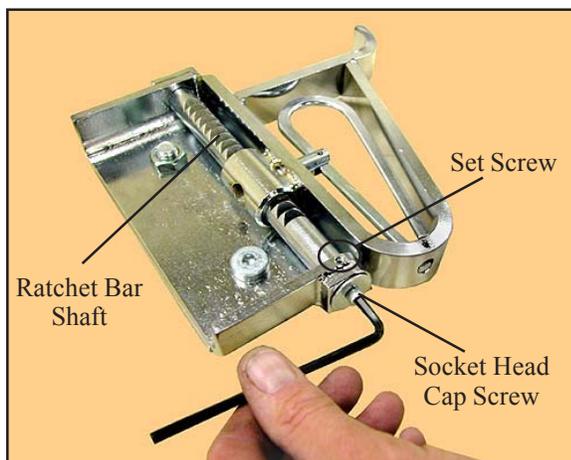


Figure 11 - Adjusting the Set Screw and Socket Head Cap Screw

ADJUSTING THE HOOK REARWARD:

1. Lower the hook momentarily and use a 3/32" Allen wrench to loosen the set screw located **on top** of the ratchet bar shaft (Figure 11). Do not remove the set screw - loosen it only. Then raise and engage the hook. (If you can't raise the hook, the set screw is too loose.)
2. At the front of the ratchet bar shaft, use a 7/16" socket or box wrench to **loosen** the hex-head cap screw and shaft, Figure 12. (To loosen: turn counter-clockwise).
3. At the rear of the ratchet bar shaft, use a 5/32" Allen wrench to **tighten** the socket head cap screw, Figure 11. (To tighten: turn clockwise).
4. Repeat Steps 2 and 3 until the cot is held firmly in place by the hook with no front-to-back slack or wiggling.

Note: If the shaft cannot be adjusted any further rearward, move the hook itself rearward by one locking ratchet position, then adjust the shaft using this position.

5. Use the 7/16" wrench to tighten the hex-head cap screw at the front of the ratchet bar. Verify that both front and rear screws are tight.
6. Disengage the hook and tighten the set screw with the 3/32" Allen wrench.

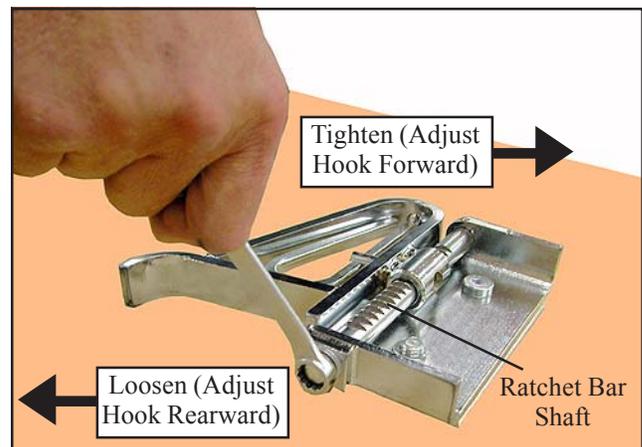


Figure 12 - Adjusting the Shaft

6 - PARTS AND SERVICE

6.1 U.S.A. and Canada

To order parts or for professional cot fastener repair, contact EMSAR® - the only agent authorized by Ferno to manage, service, and repair Ferno products. EMSAR factory-trained technicians use Ferno-approved parts and repair procedures. EMSAR has a franchise location serving you. For details, please contact EMSAR.

Telephone (Toll-free) 1.800.73.EMSAR
 Telephone (Worldwide)..... 1.937.383.1052
 Fax (Worldwide) 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 fastener.

 **WARNING**

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

6.2 Worldwide

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

6.3 Parts List

Description	Part #
Installation Template	082-2205
Rear Hook	090-3513
Rear Hook Floor Plate (1 ea.)	090-0266
Antler	090-3512
Antler Floor Plate (1 ea.).....	090-0265
Antler Mount. Block (Removable, 2 ea.)	090-4055
Small Parts Kit*	090-5523

*Includes 1/2"-13 jam nut (1 ea.) and 1/2"-13 x 1" socket-head cap screws (4 ea.).

7 - FERNO CUSTOMER RELATIONS

Customer service and product support are important aspects of each Ferno product.

Please have the serial number of your Ferno cot fastener available when calling Ferno Customer Relations, and include it in all written communications.

For assistance, please contact Ferno Customer Relations:

Telephone (Toll-free)..... 1.877.733.0911
 Telephone 1.937.382.1451
 Fax (Toll-free) 1.888.388.1349
 Fax 1.937.382.6569
 Internet..... www.ferno.com



Serial Number _____

Cot Fastener Disclaimer

Ferno-Washington, Inc. (Ferno), cot fasteners are designed for use only with Ferno cots. **NO WARRANTY OR REPRESENTATION IS MADE WITH RESPECT TO THE ADAPTABILITY OR SUITABILITY OF COT FASTENERS FOR USE WITH COTS (OTHER THAN FERNO COTS), AND ALL SUCH WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OF FITNESS FOR SUCH PURPOSES, ARE EXPRESSLY DISCLAIMED. FOR WARRANTY AND DISCLAIMER INFORMATION OF COT FASTENERS USED WITH FERNO COTS SEE FERNO'S WARRANTY AND DISCLAIMER STATEMENT.**

8 - LIMITED WARRANTY

Ferno products are warranted to be free from defects in material and workmanship for a period of one year, except as follows:

- External finishes (gelcoat, paint, powdercoat, decals, etc.) are warranted for 90 days.
- Soft goods (webbing, vinyl, fabric, foam, etc.) are warranted for 90 days.
- Stainless whirlpool tanks are warranted against tank shell leakage and corrosion for 5 years.
- Mortuary products (except hydraulic parts and soft goods) are warranted for 2 years.
- Ambulance cots and ambulance transporters (except external finish and soft goods) are warranted for 2 years.
- EZ Glide™ Chairs are warranted for 2 years.
- 59-E Evacuation Chairs are warranted for 15 years.
- EMS bags (replaceable bottom excluded) and backboards are warranted for lifetime replacement. (Damage caused by accident, abuse, misuse or improper care will be repaired at a reasonable charge for which you will be informed prior to the repair work being done.)
- Integrated Charging System (ICS) is warranted for 2 years.
- Fiberglass pools have a structural warranty of 5 years against leaking through the vinyl ester resin. Fading is specifically excluded from the structural warranty. Chips and/or scratches caused by accident, abuse and misuse are specifically excluded from the structural warranty.
- Vinyl pool liner welded seams are warranted to be free of defects in manufacturing or workmanship for a period of 5 years. Vinyl pool liner welded seam warranty specifically excludes non-Ferno labor charges, cost of replacement water, replacement chemicals, or any owner-related damage that may occur. Warranty is void if the liner is exposed to excessive heat or cold, chemical abuse or lack of proper chemical maintenance. Chemicals should not be allowed to settle onto the liner as chemicals can bleach the color. The pH of the pool water must be properly maintained and balanced. Fading, wrinkling and liner slippage are specifically excluded from this warranty.

Ferno repairs are warranted for 90 days from the date of repair.

This limited warranty applies only when you use and care for the product as described in the instructions provided with the product. Improper use and care may void this warranty. 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 this limited warranty. Ferno is not liable for shipping damages or damages sustained through using the product.

Non-Ferno products sold by Ferno retain the product manufacturer's original warranties and guarantees. Such warranties and guarantees, if any, are solely those of the product manufacturer. Ferno offers no warranties or guarantees of any kind additional to those of the product manufacturer, nor does Ferno assume any liability for products manufactured by others.

Limitation of Liability

If a product is proven defective, Ferno will repair or replace it, or, at our option, refund the item'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 for its own product or for the products of others. 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.

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

Limited Warranty Claims and Disputes

Contact Ferno Customer Service promptly if you receive a product from Ferno that you suspect is defective. A representative will assist you with the claim procedure. Before sending any product to Ferno obtain a return authorization number from Ferno Customer Service.

Ferno-Washington, Inc.	Telephone	1.800.733.3766
70 Weil Way	Fax	1.800.388.1349
Wilmington, OH 45177-9371	Email	www.ferno.com

