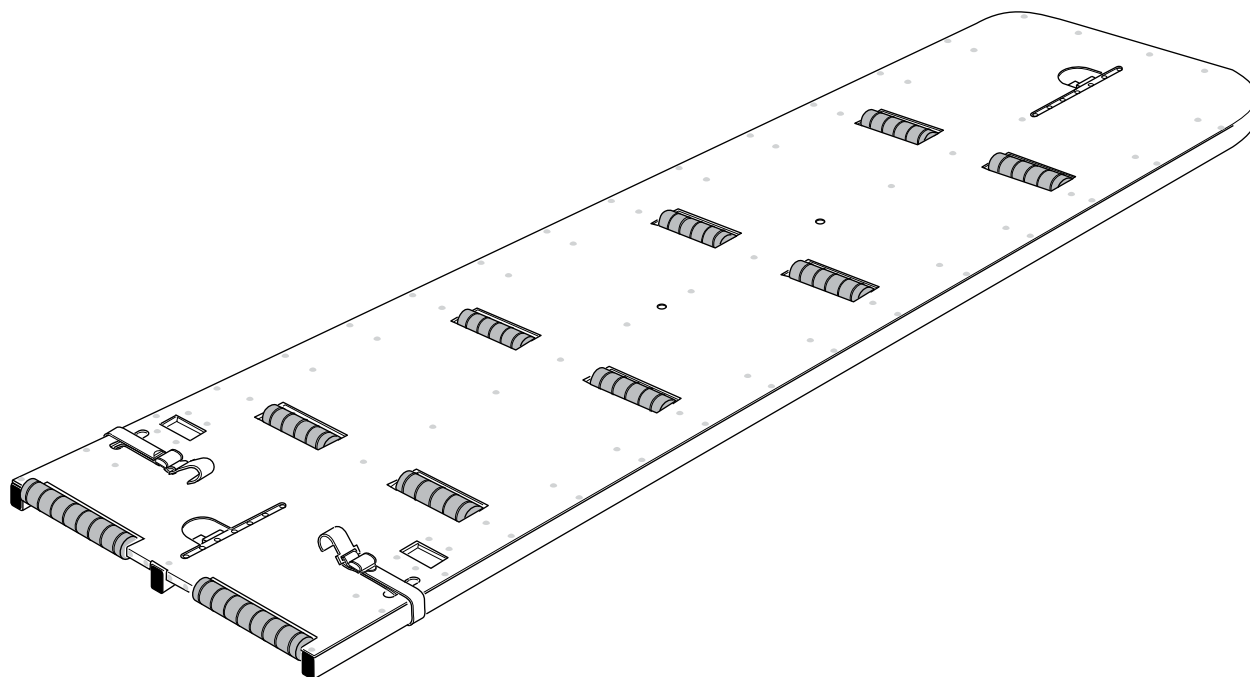




Model 156

Roller System



Read this Manual and Retain
for Future Reference 

FERNO[®]

Users' Manual

June 2019

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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
Telephone	1.937.382.1451
Fax (Toll-free)	1.888.388.1349
Fax	1.937.382.1191
Internet	www.ferno.com

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:

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

Telephone	Country Code +1.937.382.1451
Fax	Country Code +1.937.382.6569
Internet	www.ferno.com

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.

Proprietary Notice

The information disclosed in this manual is the property of Ferno-Washington, Inc., Wilmington, Ohio, USA. Ferno-Washington, Inc. reserves all intellectual property rights, proprietary design rights, manufacturing rights, reproduction use rights, and sales use rights thereto, and to any article disclosed therein except to the extent those rights are expressly granted to others or where not applicable to vendor proprietary parts.

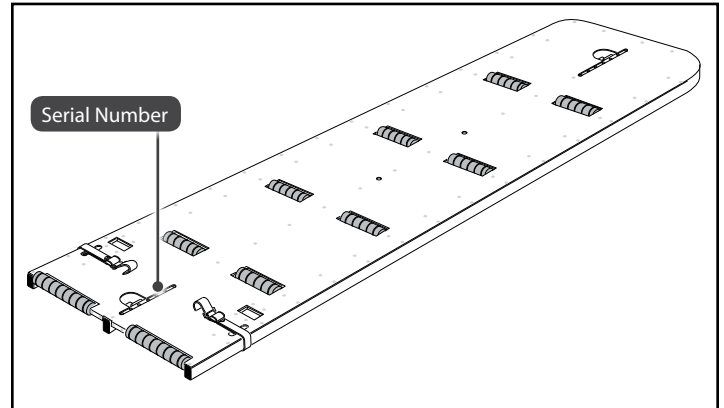
Limited Warranty Statement

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.



The Serial Label is located on the center bar, under the roller system.



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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 roller system.

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

Failure to use the mounting plates (provided) can cause injury. Install and use the mounting plates and roller system as described in this manual.

Improper installation can cause injury. Install the mounting plates and roller system as described in this manual.

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

Attaching improper items to the roller system can cause injury. Use only Ferno-approved items on the roller system. Improper operation can cause injury. Operate the roller system only as described in this manual.

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

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

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

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

Improper securing of the cot or casket can allow it to move in the vehicle and cause injury. Secure the roller system, cot and/or casket in the vehicle as described in this manual.

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.



1.4 Bloodborne Disease Notice

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

1.5 Symbol Glossary

The symbols defined here are used on the roller system and/or in this manual. Ferno uses symbols recognized by the International Standards Organization (ISO), American National Standards Institute (ANSI) and the mortuary services industry.



General Warning of Potential Injury



Read the Users' Manual



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



Product meets European Union Standards



Manufacturer



Authorized Representative in the European Community

2 - OPERATOR FOCUS

2.1 Operator Training

Operator using the roller system:

- must read and understand this manual.
- must have training on proper use of the roller system.
- must have a training on mortuary-service procedures.
- must have the physical ability to perform required functions related to the use of the roller system (e.g., loading and unloading a casket or mortuary cot into and out of the roller system).
- must practice with the roller system before using it with a casket or mortuary cot.
- must keep training records. For a sample training record sheet, see “Training Record” on page 14.

 **WARNING**

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

3 - ABOUT THE ROLLER SYSTEM

3.1 Description

The Ferno® Model 156 Roller system (called the roller system in this manual) is a mortuary device designed to ease the loading, unloading, and transporting of caskets and mortuary cots in a ground-based vehicle. It is for professional use by trained mortuary-service operators.

Bier pins (not supplied, available separately) and restraints help limit the movement of a casket or mortuary cot in the vehicle during transport.

The roller system secures to mounting plates installed on the floor of the vehicle. The roller system can be easily removed so the vehicle can be used for other purposes.

Features include 10 rollers (8 short and 2 long), two quick-release knobs, two cot restraints, and a variety of bier-pin attachment points to allow the use of caskets of different lengths.

COMPATIBILITY

- Ferno® Model 23 Cot Series
- Ferno® Model 24 Cot Series*
- Ferno® Model 27 Cot Series

Note: The roller system is not compatible with Ferno® 24-MAXX or 24-MiniMAXX series cots.

3.2 General Specifications

Specifications for the roller system 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 roller system can cause injury. Use the roller system only for the purpose described in this manual.

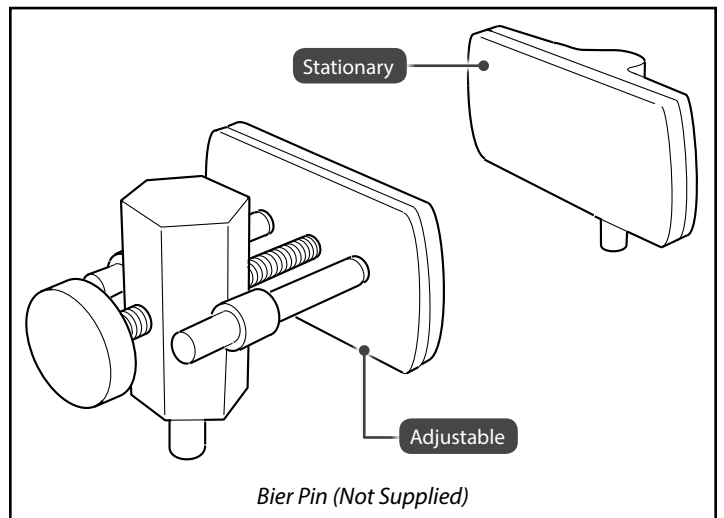
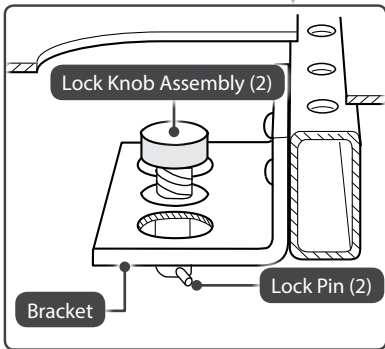
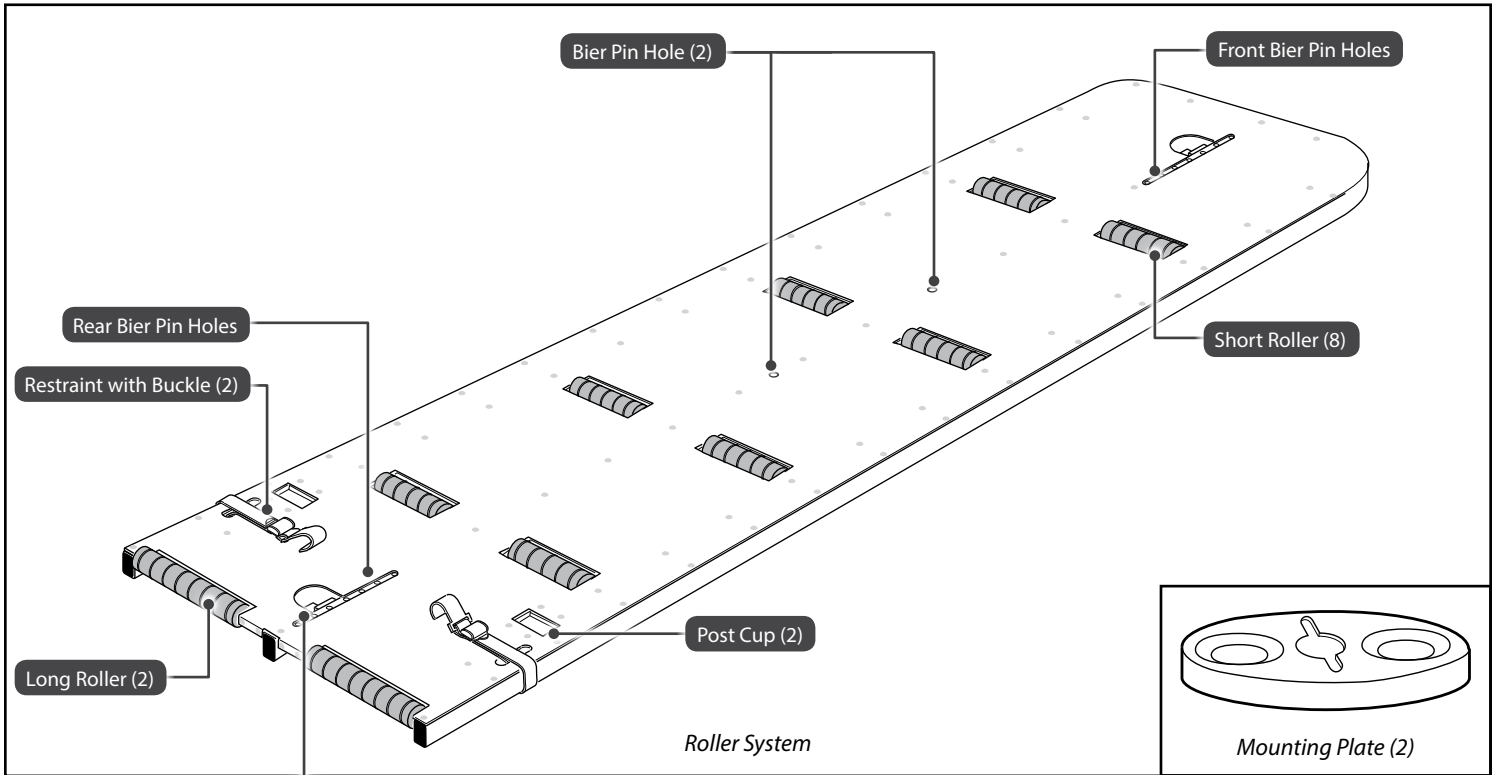


Load Capacity

Inspect the roller system if the load capacity has been exceeded. See “Inspecting the Roller System” on page 13.

Specifications	Imperial	Metric
Load Capacity	1000 lb	454 kg
Load Capacity (UK)		71.4 st
Weight	41 lb	18.6 kg
Construction	Aluminum with Steel Hardware	
Length	89 in	226 cm
Width	24 in	61 cm
Height	2 in	5 cm

3.3 Components



4 - INSTALLATION

4.1 Before Installing the Mounting Plates

- The roller system attaches to mounting plates installed on the vehicle floor.
- Installing the mounting plates requires the skills of a mechanic familiar with vehicle construction.
- Before installing the roller system, consult the vehicle manufacturer regarding the location of wiring, oxygen or fuel lines, and other elements under the vehicle floor, and about the vehicle warranty.
- Determine the location to install the roller system in the vehicle. Install the roller system in the center of the vehicle, or, if the vehicle interior is wide enough, two roller systems (sold separately) may be installed side-by-side (Figure 1 or Figure 2).

⚠ WARNING

Failure to use the mounting plates (provided) can cause injury. Install and use the mounting plates and roller system as described in this manual.

Improper installation can cause injury. Install the mounting plates and roller system as described in this manual.

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

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

NOTICE

Inspect the underside of the vehicle for anything (wiring, brake lines, fuel tank, oxygen lines or other elements) that might interfere with the installation.

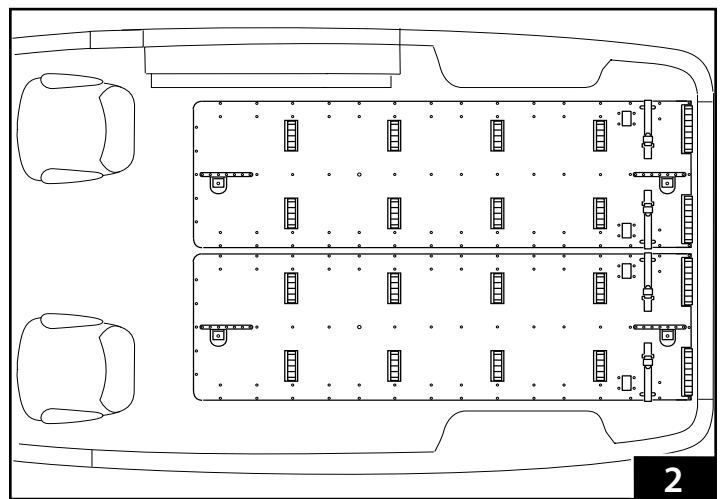
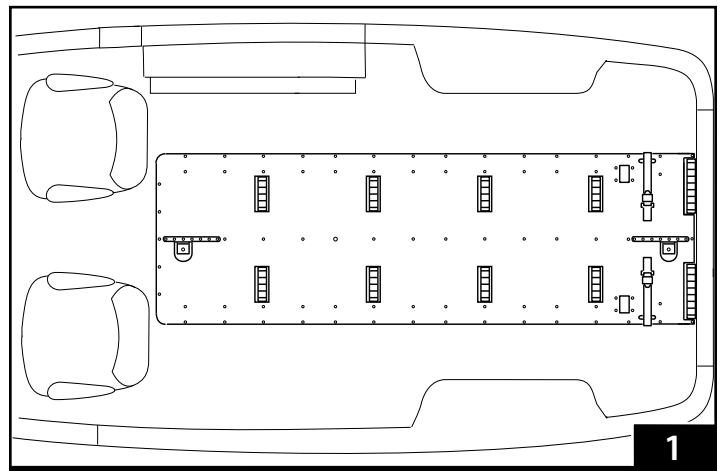
Loose items and debris on the vehicle floor can interfere with the operation of the roller system. Keep the floor clear.

Tip

Contact the Manufacturer

Contact the vehicle manufacturer for advice on avoiding obstructions such as the fuel tank, oxygen lines, etc.

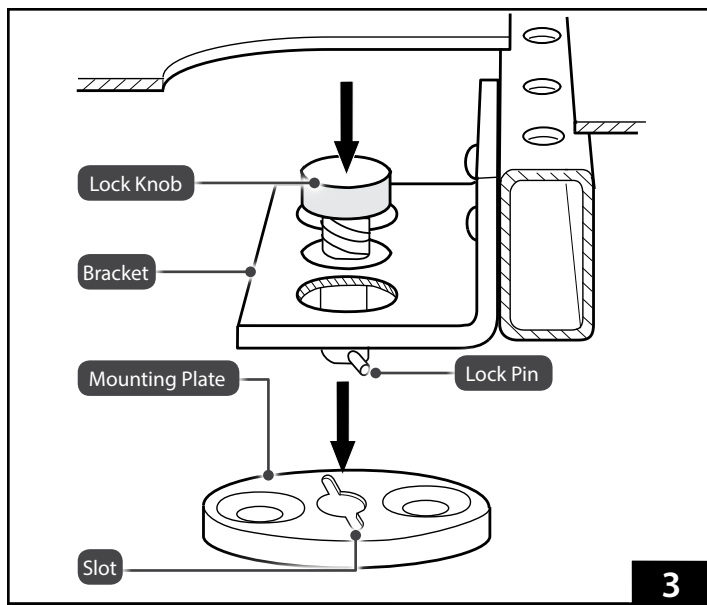
Also seek advice on installing support structure if needed, including backing plate positioning, material, and thickness.



4.2 Installing the Mounting Plates

1 - ATTACH THE MOUNTING PLATES TO THE TABLE

1. To attach a mounting plate, turn a lock knob and align the lock pin with the slot in a mounting plate (Figure 3).
2. Push the lock knob down, inserting the lock pin through the slot. Turn the lock knob $\frac{1}{4}$ turn until the mounting plate is attached.
3. Turn the mounting plate to align the holes in the mounting plate with the holes in the bracket. These holes are used to mark the location of the screw holes.
4. Repeat with the other mounting plate.

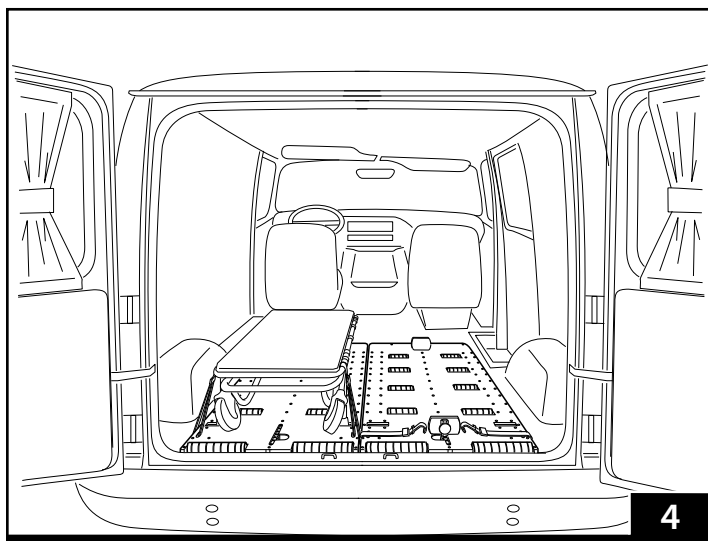


2 - MARK THE MOUNTING POSITION

1. Position one or both roller system(s) on the floor at the desired location(s), with the long rollers and post cups at the rear of the vehicle. Load and unload a cot on the roller system, then a casket, while checking the following (Figure 4):
 - o If two roller systems will be installed, confirm they will not interfere with each other
 - o Confirm the cot and/or casket load easily onto the roller system. If two roller systems will be installed, confirm that cots and/or caskets can be loaded onto each.
 - o Check the vehicle rear door for a lip or other obstruction that could interfere with loading. If interference is found, contact Ferno for assistance. See "Ferno Customer Relations" on page 2.
 - o Confirm the rear doors close securely when the roller system(s) are carrying cots and/or caskets.
 - o Confirm that mounting the roller system(s) at the desired locations will not damage or interfere with electrical wiring, brake lines, the fuel tank, or other vehicle elements.
2. Mark the mounting points on the floor through the mounting plates.
3. If the vehicle floor is carpeted, use a grease pencil to trace the edge of the mounting plate on the floor, then cut and remove a square section of carpeting to allow the mounting plate to sit flat on the floor.

NOTICE

Drilling through carpet may unravel the carpet. If the floor is carpeted, use a grease pencil to mark the mounting plate and mounting locations on the floor. Cut out a square section of carpet around the mounting plates before drilling.

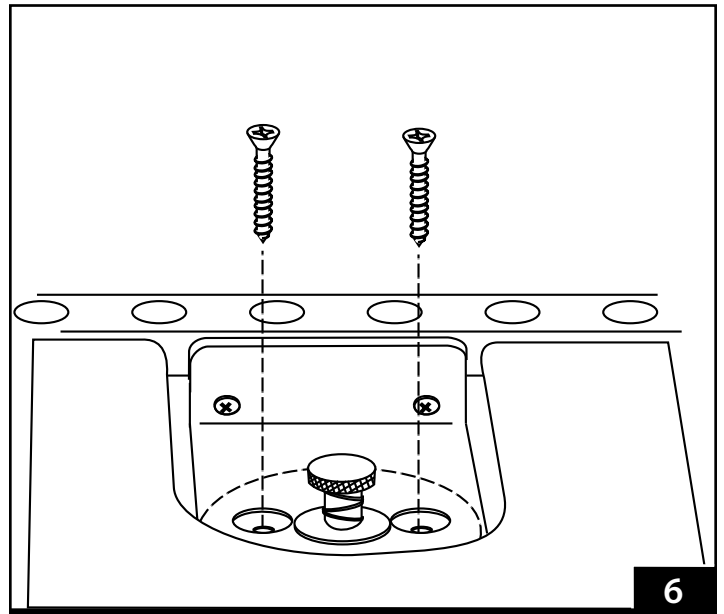
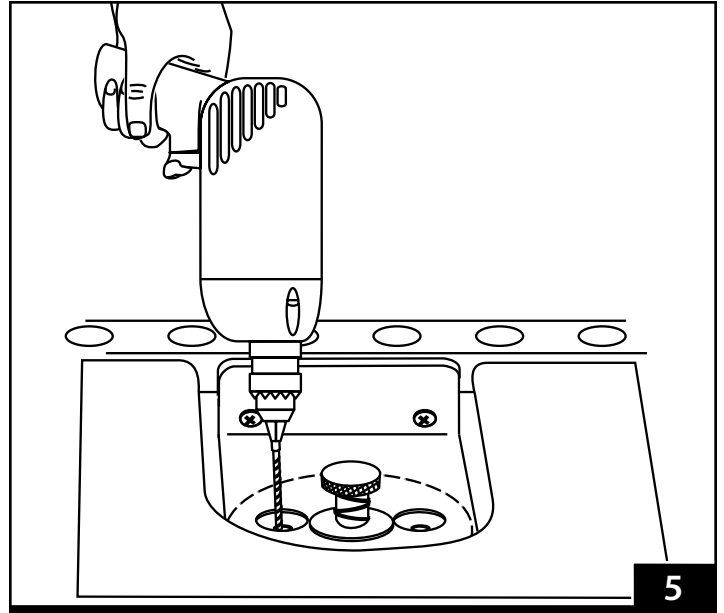


3 - INSTALL THE MOUNTING PLATES

Before drilling through the vehicle floor, contact the vehicle manufacturer for advice on:

- avoiding obstructions such as the fuel tank, oxygen lines, etc.
- installing support structure if needed, including backing plate positioning, material, and thickness.
- determining the appropriate length and type of fasteners to secure the mounting plate to the floor of your vehicle.

Ferno recommends you drill a pilot hole through the vehicle floor at each mounting point (Figure 5) to confirm the mounting holes are at the expected locations. Then, use an appropriate-size drill bit, fasteners and/or other tools to install the mounting plates to the floor (Figure 6).



5 - USING THE ROLLER SYSTEM

5.1 Before Placing the Roller System In Service

- Before use, personnel who will work with the roller system must read and understand this manual. Appropriate skills and training are also required. See “Operator Focus” on page 5.
- Set up the roller system. See “Installation” on page 7.
- Confirm that the roller system operates properly. See “Inspecting the Roller System” on page 13.

5.2 General Guidelines for Use

- The roller system is for professional use only.
- Use the roller system only as described in this manual.
- Follow standard mortuary procedures when using the roller system.

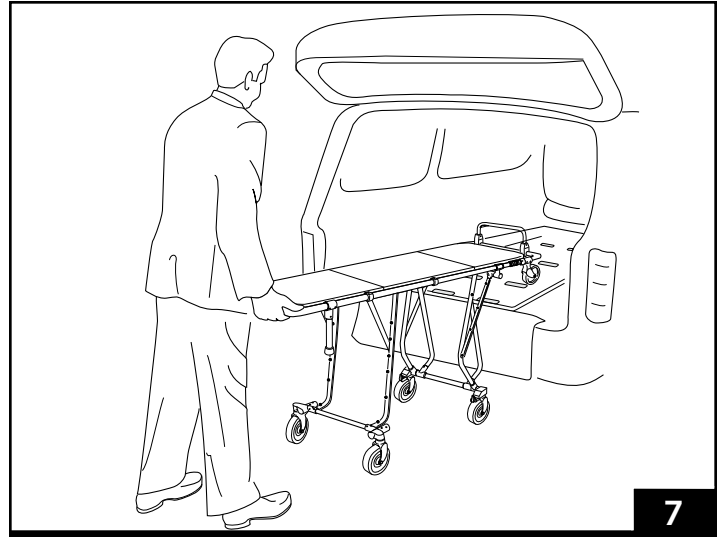
WARNING

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

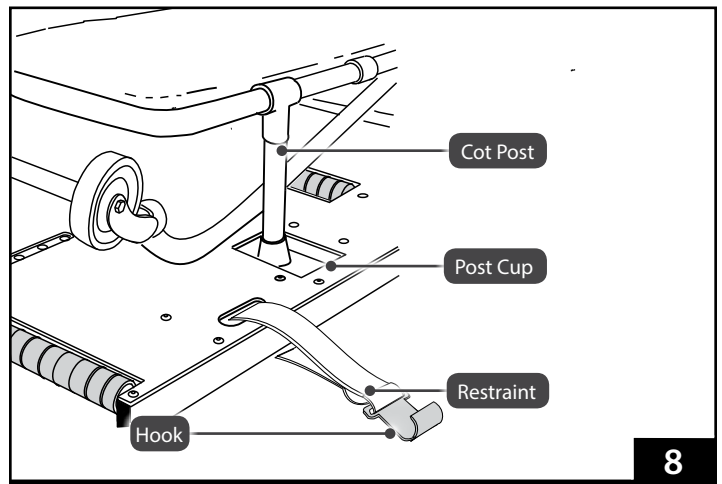
Improper securing of the cot or casket can allow it to move in the vehicle and cause injury. Secure the roller system, cot and/or casket in the vehicle as described in this manual.

5.3 Using a Mortuary Cot with the Roller System

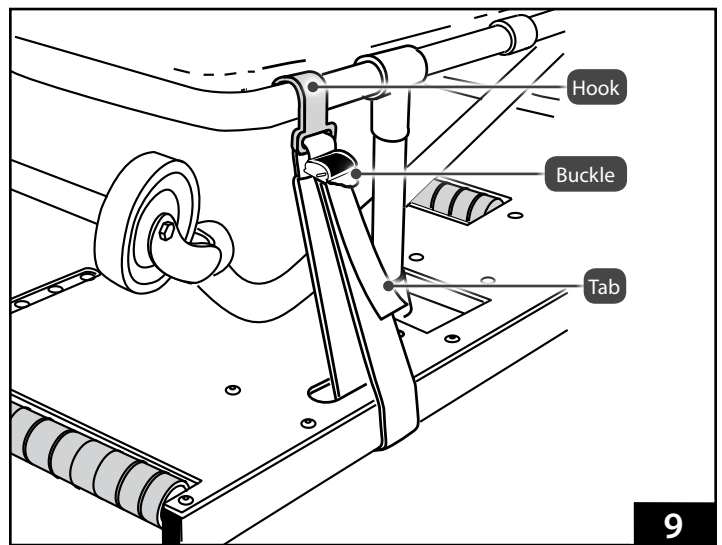
1. Remove the bier pins (not supplied) from the roller system.
2. Load the mortuary cot into the vehicle and onto the roller system, following the instructions in the cot users’ manual (Figure 7).
3. Push the cot forward until the cot posts rest in the roller system post cups (Figure 8).
4. Hook a restraint over the cot frame and pull the tab to tighten the restraint (Figure 9).
5. Repeat with the other restraint.
6. To unload the cot, loosen the restraint by pulling the buckle up. Unhook the restraint from the cot frame.
7. Unload the cot from the vehicle, following the instructions in the cot users’ manual.



7



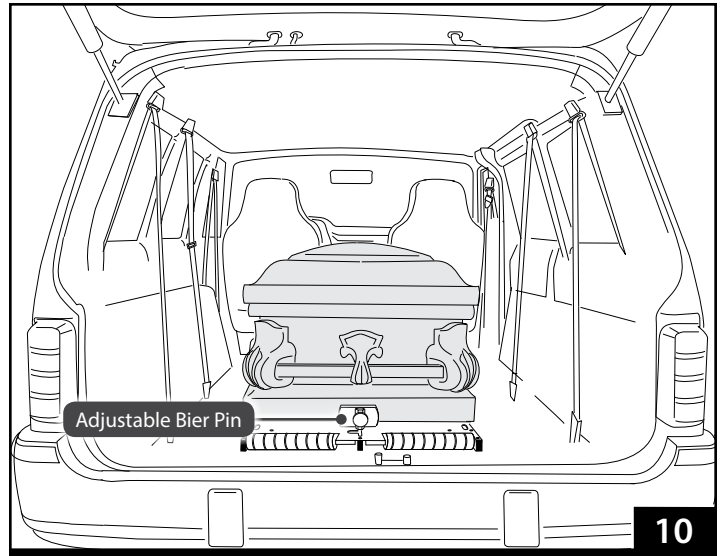
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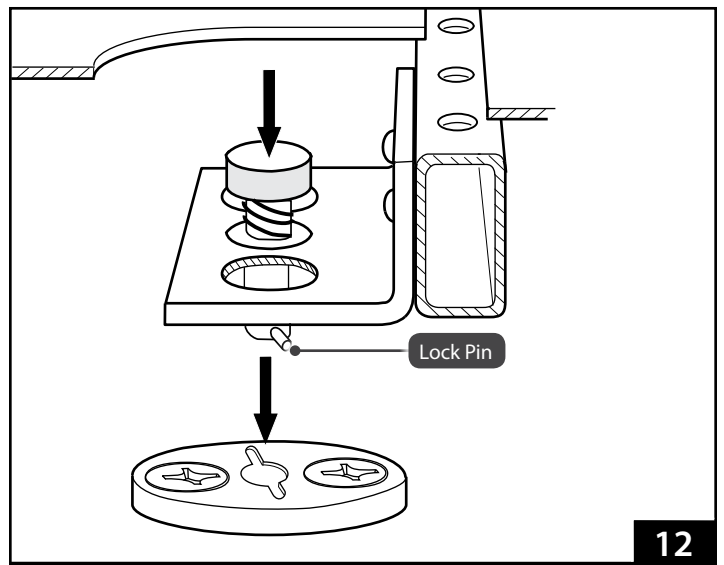
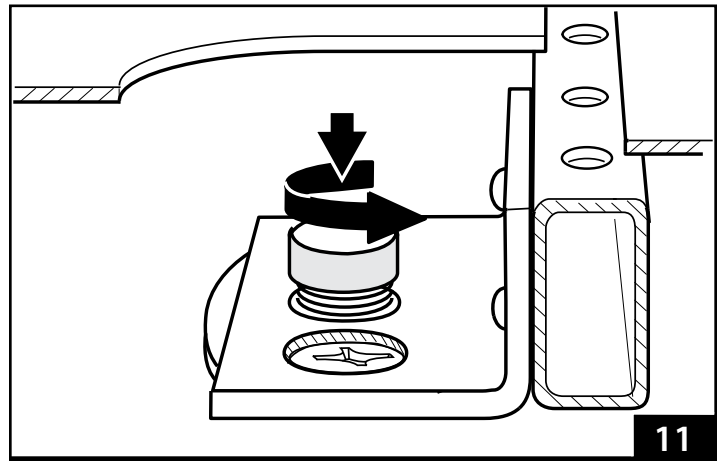
5.4 Using a Casket with the Roller System

1. Place a stationary bier pin (not supplied) in one of the front bier-pin holes.
2. Load the casket onto the roller system and push the casket against the stationary bier pin.
3. Place an adjustable bier pin (not supplied) in one of the rear bier-pin holes (Figure 10). Tighten the adjustable bier pin to secure the casket on the roller system.
4. To unload the casket from the vehicle, remove the adjustable bier pin and roll the casket off the roller system.



5.5 Removing and Replacing the Roller System in a Vehicle

1. To remove the roller system from the vehicle, push down and turn a lock knob 1/4 turn until the lock pin is released from the mounting plate (Figure 11).
2. Repeat with the second lock knob.
3. Lift the roller system out of the vehicle.
4. To replace the roller system in the vehicle, align a lock pin with the slot in a mounting plate (Figure 12).
5. Push the lock knob down to insert the lock pin through the slot. Turn the lock knob left or right 1/4 turn to secure the lock pin in the mounting plate.
6. Repeat with the second lock knob.



6 - MAINTENANCE

6.1 Maintenance Schedule

The roller system 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 15.

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

⚠ WARNING

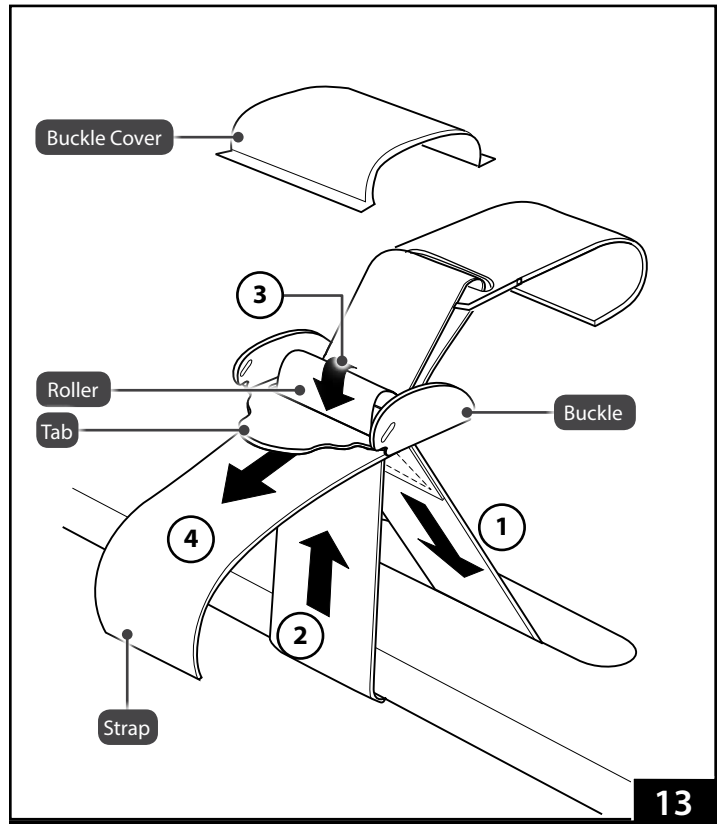
Improper maintenance can cause injury. Maintain the roller system only as described in this manual.

Minimum Maintenance	Each Use	As Needed	Monthly
Disinfecting (this page)		•	
Cleaning (this page)		•	
Inspecting (page 13)		•	•

6.2 Disinfecting and Cleaning the Patient Restraints

To remove the patient restraints from the roller system (Figure 13):

1. To remove the restraints from the roller system, use a small flat-blade screwdriver to pry off the buckle cover.
2. Unthread the restraint from the buckle and roller system.
3. Place the restraints in a mesh laundry bag. Machine wash them on cold/cold using the delicate cycle and a mild detergent. Allow them to air dry.
4. Thread the restraints through the buckle as shown in Figure 13.
 - Insert the loose end of the strap through the slot in the roller system (1) and around the edge of the roller-system frame (2).
 - Orient the buckle as shown. Thread the loose end of the strap over the buckle roller (3) and under the buckle tab (4).
 - Orient the buckle cover as shown and attach to the buckle.



6.3 Disinfecting the Roller System

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

6.4 Cleaning the Roller System

1. Remove the restraints.
2. Hand clean all surfaces of the roller system with warm water and a mild detergent.
3. Rinse with warm, clear water. Dry the roller system with a towel or allow it to air-dry.

NOTICE

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

6.5 Inspecting the Roller System

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

If inspection shows damage or excessive wear, remove the roller system from service until repair is made. See "Parts and Service" below.

Inspection Checklist

- Are all components present?
- Is the roller system free of excessive wear?
- Are the mounting plates securely attached to the floor?
- Does the roller system attach securely to the mounting plates?
- Do all moving parts operate smoothly and properly?
- Is the restraint webbing in good condition with no cuts or frayed edges?
- Are the restraint buckles free of visible damage and do they operate properly?

7 - PARTS, SERVICE, ACCESSORIES

7.1 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 roller system.

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

7.2 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.

7.3 Accessories

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

When using accessories, be aware of any special considerations which may be affected by the addition of the accessory/accessories to the roller system.

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

Description	Part Number
Model 575 Bier Pin Storage Plate	081-5750
Model 576 Bier Pin Set (1 stationary, 1 adjustable)	069-5760
Model 577-A Adjustable Bier Pin	069-5770
Model 577-S Stationary Bier Pin	069-5780

Aviation

Military

Mortuary

EMS

Rescue

