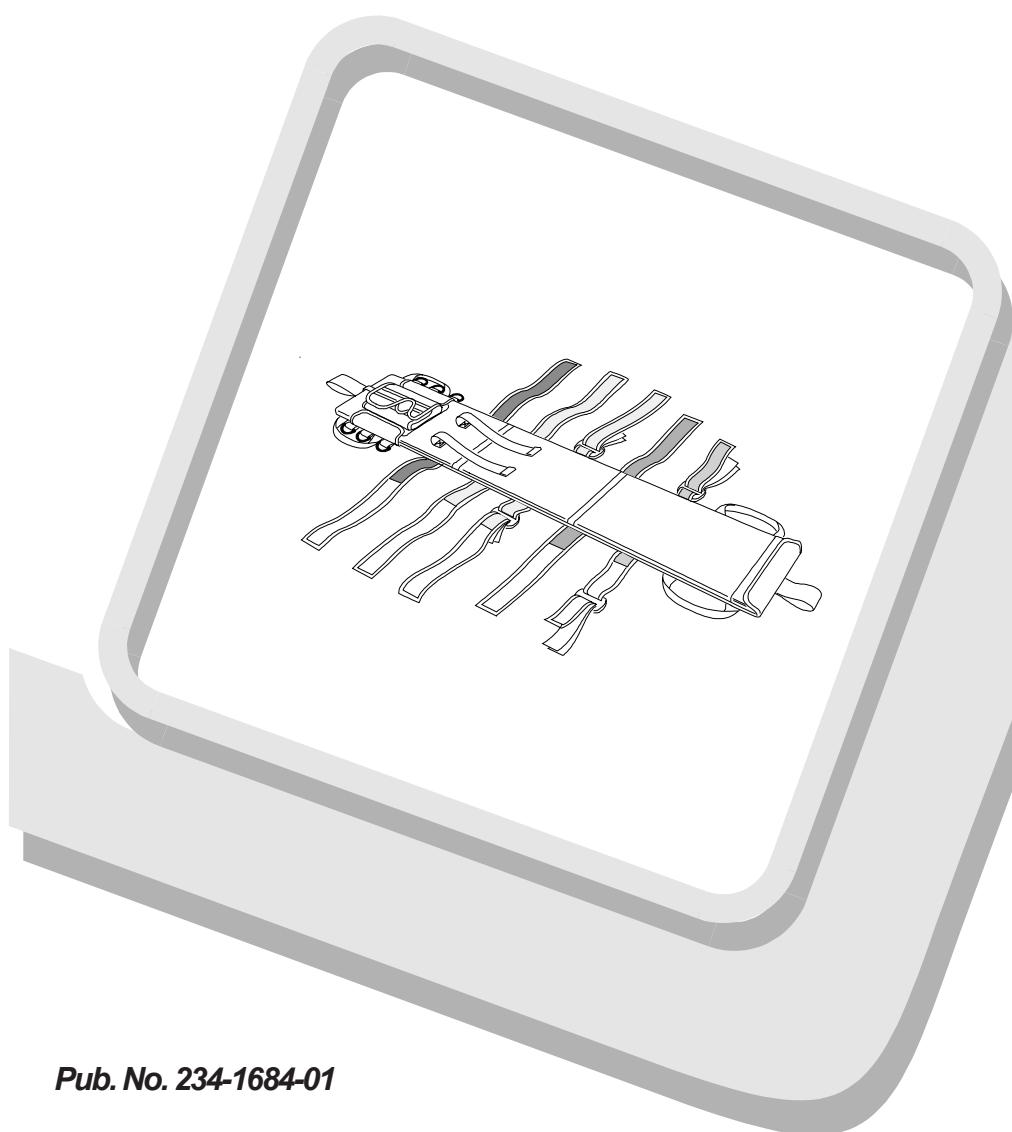


Model 78 Pedi-Pac™ Pediatric Immobilizer



Pub. No. 234-1684-01

**Users'
Manual**

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 Service.

Proprietary Notice

The information disclosed in this manual is the property of Ferno-Washington, Inc., Wilmington, Ohio, USA. Ferno-Washington, Inc., reserves all patent 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.


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SECTION 1 - SAFETY INFORMATION

1.1 Safety Alerts

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

 WARNING
Improper use can cause injury. Use the Pedi-Pac only as described in this manual.
Improper operation can cause injury. Use the Pedi-Pac only as described in this manual.
Improper maintenance can cause injury. Maintain the Pedi-Pac only as described in this manual.
Improper parts and service can cause injury. Use only Ferno parts and Ferno-approved service on the Pedi-Pac.

1.2 Important Boxes

Important boxes are used in this manual to highlight and emphasize information relating to the text immediately preceding the box.

Important

1.3 Labels

Labels place important information from the users' manual on the Pedi-Pac where it is readily available to person(s) who may not have seen the manual.

Read and follow label instructions. Replace worn or damaged labels immediately. New labels are available from EMSAR® (page 13).

1.4 Before You Begin

Your service technician and bio-med technician should read and follow the instructions in *Inspecting the Pedi-Pac* before placing the Pedi-Pac in service (page 12).

SECTION 2 - LEARNING ABOUT THE PEDI-PAC

2.1 Pedi-Pac Description

The Model 78 Pedi-Pac Pediatric Immobilizer (Pedi-Pac) is a device designed to aid in stabilizing and immobilizing a pediatric trauma patient.

The Pedi-Pac is for professional use by a minimum of two trained operators.

The Pedi-Pac features include a plywood backboard with a removable nylon cover, an adjustable, color-coded restraint system, a head support, lifting handle, and cot attachment loops.

Included with the Pedi-Pac is a carrying case, a Pedi-Pad™, and two head/chin restraints.

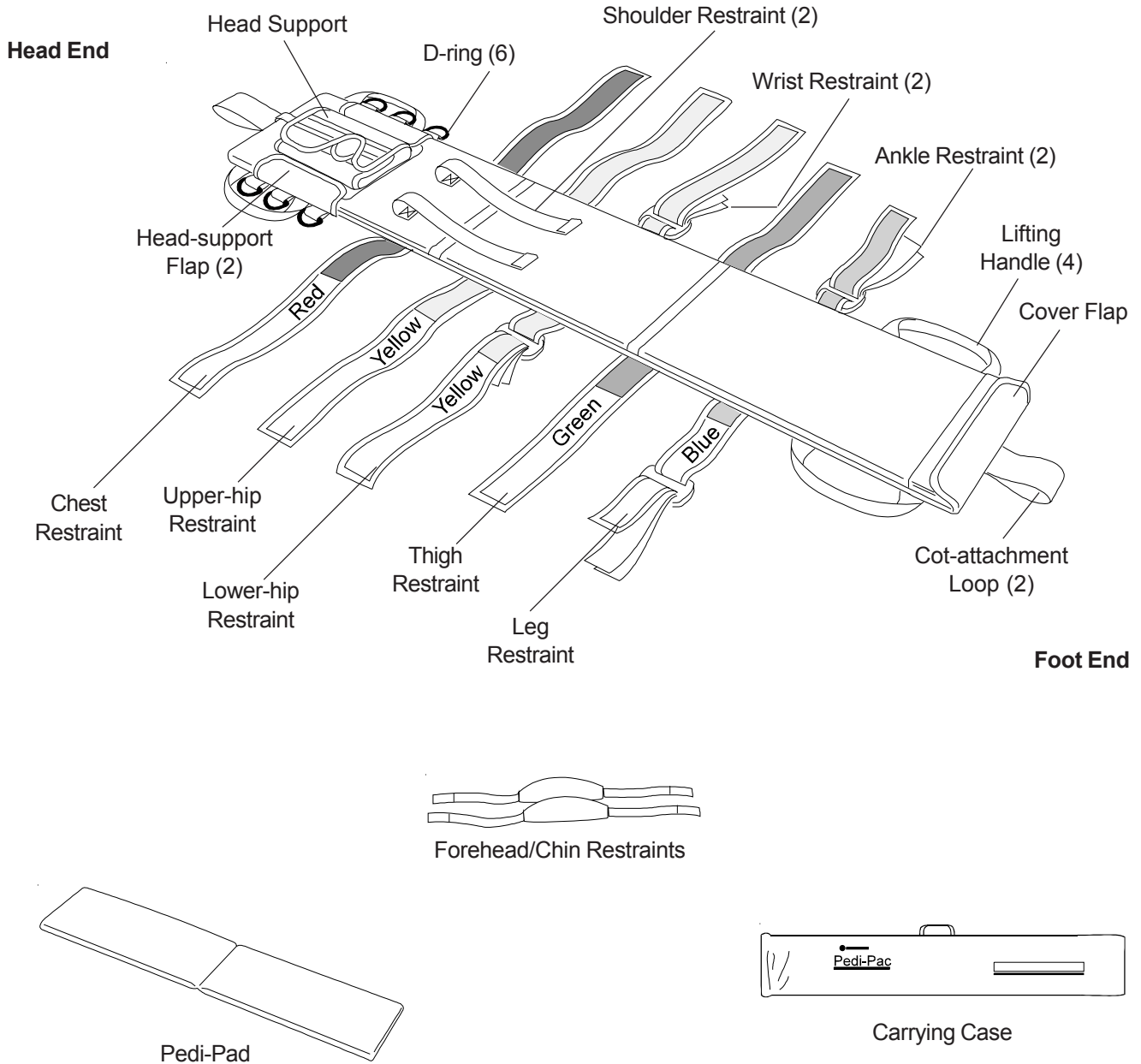
 WARNING
Improper use can cause injury. Use the Pedi-Pac only as described in this manual.

2.2 General Specifications

Specifications are rounded to whole numbers. For detailed specifications, contact Ferno Customer Service (page 14). Ferno reserves the right to change specifications without notice.

Length	48 in 122 cm
Height	75 in 191 cm
Width	9 in 23 cm
Weight	7 lb 3 kg
Load Limit	90 lb 41 kg
Size Limit	54 in 137 cm

2.3 Components



Note: The color names shown on the restraints are not actually on the product.

2.4 Adjustable Color-coded Restraints

The color-coded restraints adjust for proper alignment with each patient.

The color-coded restraints slide along a strap on the back of the Pedi-Pac (Figure 1). To adjust a color-coded restraint, slide the restraint up or down the slide strap.

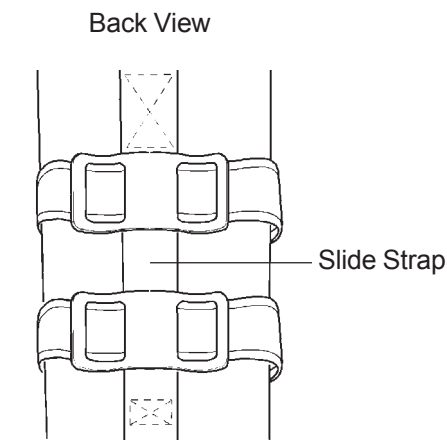


Figure 1

2.5 Adjustable Head Support

The head support adjusts to align with the patient's ears (Figure 2).

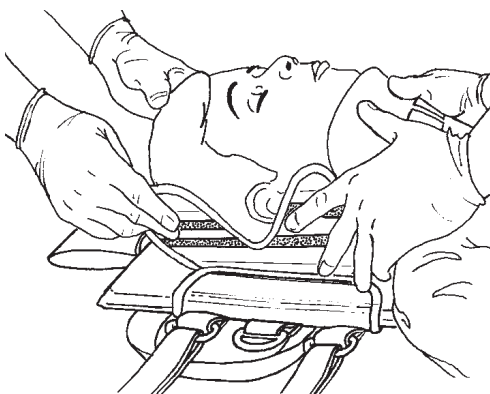


Figure 2

Slots in the head support allow EMTs to talk with the patient and to check the patient's ears for bleeding.

To adjust the head support, open the head-support flaps (Figure 3).

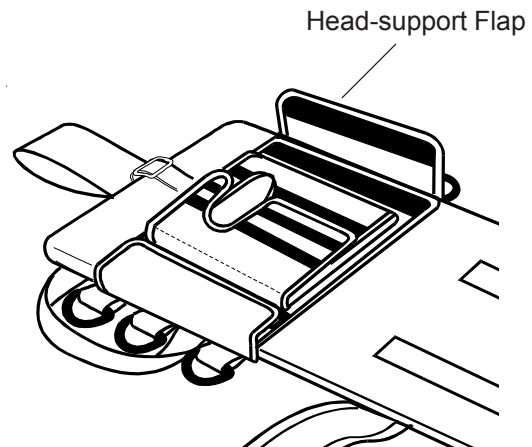


Figure 3

Move the head support up or down, then close the flaps.

Tighten the head-support strap, if needed.

2.6 Pedi-Pad

The Pedi-Pad can help maintain the cervical spine in a neutral position. (Figure 4).

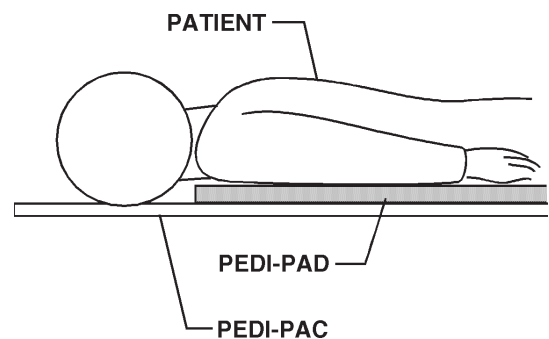


Figure 4

The Pedi-Pad attaches to the Pedi-Pac with hook and loop fasteners (Figure 5).

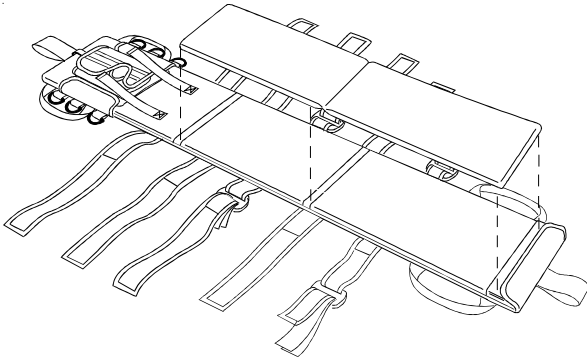


Figure 5

Consult your EMS medical advisor about the use of padding with a pediatric patient whom you suspect has a cervical-spine injury.

SECTION 3 - OPERATOR SKILLS AND TRAINING

3.1 Skills

- Operators should have a working knowledge of emergency patient-handling procedures.
- Operators should have the ability to assist the patient.
- Operators should have a complete understanding of the procedures described in this manual.

3.2 Training

- Trainees should follow a training program designed by your training officer.
- Trainees should read this manual and view the video tape.
- Practice with the Pedi-Pac before using it in regular service.

Test each trainee's understanding of the Pedi-Pac.
Keep training records. A convenient form is provided on page 15.

SECTION 4 - USING THE PEDI-PAC

4.1 General Information

Pedi-Pac operation requires a minimum of two trained operators.

Read *Learning About the Pedi-Pac* (page 4) before using the Pedi-Pac.

Follow standard emergency pediatric patient-handling procedures when operating the Pedi-Pac.

Stay with the patient at all times and always use patient restraints.

Use good lifting techniques when operating the Pedi-Pac. See *Operator Skills and Training* (page 7).

4.3 Set Up the Pedi-Pac

Remove the Pedi-Pac from its carrying case (Figure 6).

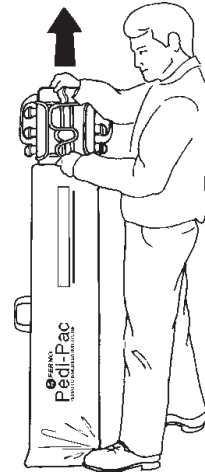


Figure 6

Lay the Pedi-Pac beside the patient.

Position the top of the shoulder restraints in line with the top of the patient's shoulders (Figure 7).

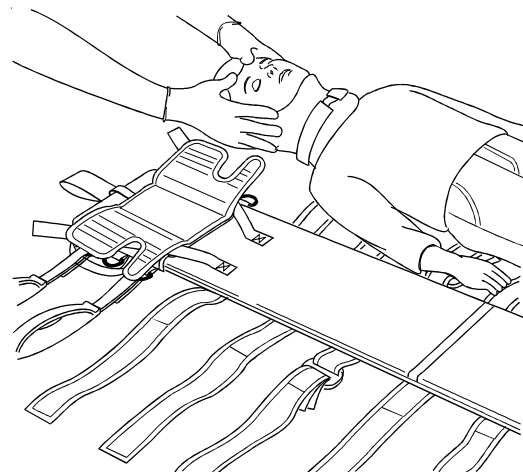


Figure 7

Unfasten and lay the restraints aside.

Align the slots in the head support with the patient's ears.

WARNING

Improper operation can cause injury. Use the Pedi-Pac only as described in this manual.

4.2 Prepare the Patient

Use the Pedi-Pac with a patient who is between 28 - 54 inches in height and weighs between 20 - 90 pounds. (A child approximately 2- to 10-years of age.)



Keep the load limit of the Pedi-Pac in mind when working with a heavy patient.

If you suspect the load limit has been exceeded, inspect the Pedi-Pac.

Immobilize the patient's head and neck (cervical spine) with a cervical collar or similar device.

Open the head support.
Align the color-coded restraints with the patient as follows:

Chest restraint (red) - even with patient's armpits.

Upper-hip restraint (yellow) - just above the patient's hips (on the iliac crest).

Lower-hip restraint (yellow) - just below the patient's hips.

Thigh restraint (green) - just above patient's knees.

Leg restraint (blue) - even with patient's ankles.

When padding is needed, place the Pedi-Pad on the Pedi-Pac.

When individual leg immobilization is needed, fasten the leg restraint.

4.4 Apply the Pedi-Pac

Transfer the patient onto the Pedi-Pac using a method approved by your EMS medical advisor. Maintain stabilization of the patient's head and neck during the transfer and while applying the Pedi-Pac.

Fasten the color-coded restraints over the patient in a progressive sequence (*Example: red-yellow-yellow-green-blue*, Figure 8).

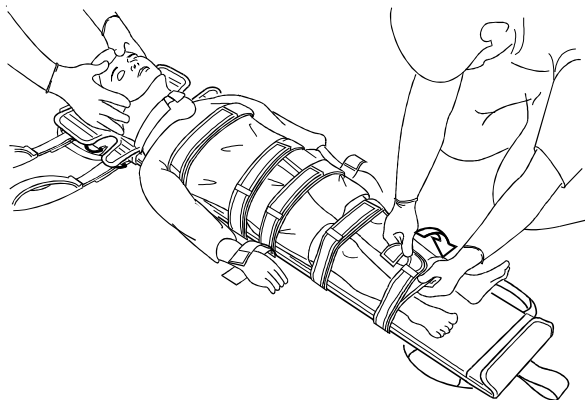


Figure 8

Fasten the wrist restraints (Figure 9).

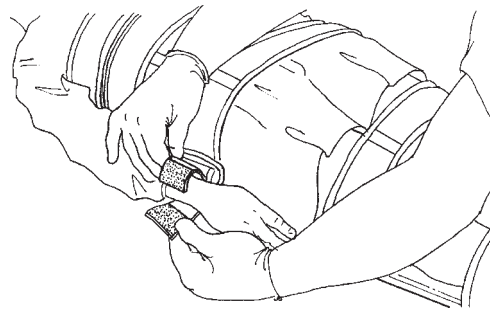


Figure 9

Tighten the restraints to limit movement but not to impair circulation.

Bring the shoulder restraints over the patient's shoulders, and fasten the shoulder restraints to the chest restraint (Figure 10).

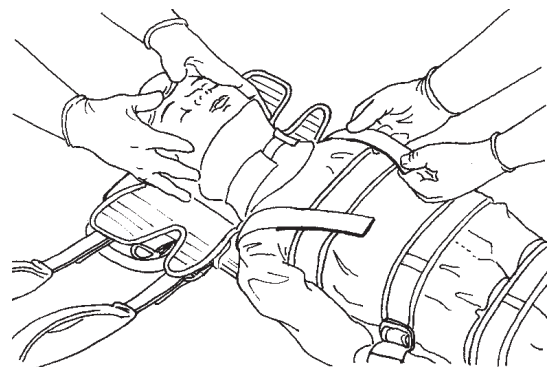


Figure 10

Fasten the ankle restraints for individual leg immobilization, if needed (Figure 11).

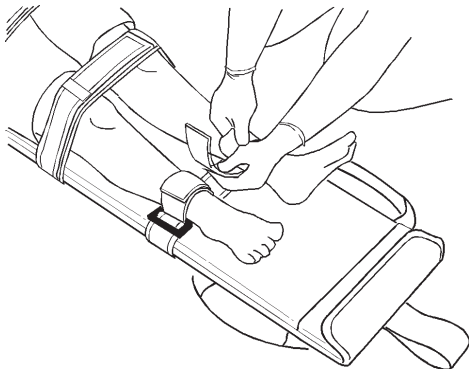


Figure 11

Place a forehead/chin restraint on the patient's forehead (Figure 12).

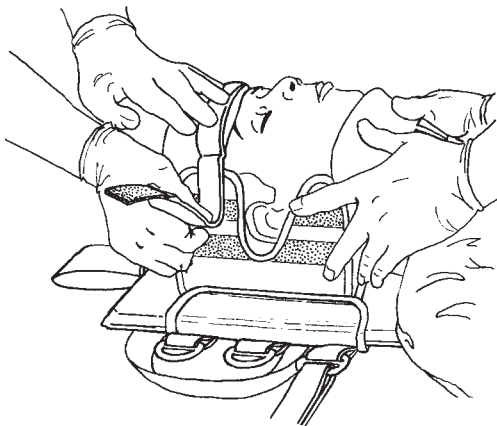


Figure 12

Press the forehead/chin restraint against the fastening strips on the sides of the head-support flaps.

Thread each end of the forehead/chin restraint through a D-ring (Figure 13).

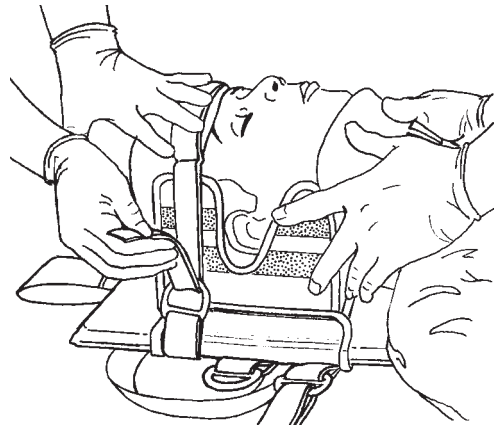


Figure 13

Fasten the end of the forehead/chin restraint to the fastening strip on the top of the forehead/chin restraint. Tighten the forehead/chin restraint snugly.

Use the second forehead/chin strap to secure the patient's chin, if needed.

Wrap the head-support around the patient's head. The slots in the head support should be in line with the patient's ears.

4.5 Transport the Patient

USING AN AMBULANCE COT

Use an ambulance cot (cot) equipped with three restraints.

Unfasten the restraints on the cot.

Use the lifting handles to lift the patient immobilized in a Pedi-Pac onto the cot.

To secure the Pedi-Pac to the cot, thread the head-end cot restraint through the cot-attachment loop at the head end of the Pedi-Pac (Figure 14).

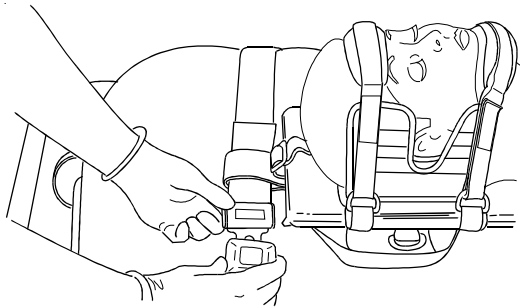


Figure 14

Fasten the head-end cot restraint.

Thread the foot-end cot restraint through the cot-attachment loop at the foot end of the Pedi-Pac.

Fasten the foot-end cot restraint.

Fasten the center cot restraint over the patient's hip area (Figure 15).

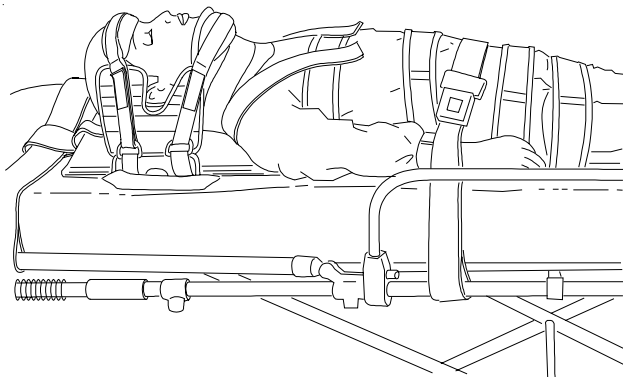


Figure 15

USING OTHER EMERGENCY EQUIPMENT

When transporting the Pedi-Pac on other emergency equipment (such as a basket stretcher), use restraint and transportation techniques approved by an EMS medical advisor.

4.6 Remove the Patient from the Pedi-Pac

Unfasten the restraints.

Transfer the patient off of the Pedi-Pac.

Note: Inform the emergency room personnel that cutting the restraints is not necessary.

Shoulder restraints and cot-attachment loops are not replaceable.

If the color-coded restraints are cut or damaged, replacement restraints are available (*Repair and Service*, page 15).

4.7 Pack the Pedi-Pac

The Pedi-Pac should be completely dry before being packed.

Insert the backboard into the cover, and close the cover flap.

Attach the head support and the Pedi-Pad, and fasten the restraints.

Slide the Pedi-Pac into its carrying case.

4.8 Maintenance Schedule

The Pedi-Pac requires regular maintenance. Set up and follow a maintenance schedule.

Use the following maintenance schedule as a minimum.

	Each Use	As Needed	Each Month
Disinfecting (page 12)	•		
Cleaning (page 12)		•	
Inspecting (page 12)			•

When using a maintenance product, follow the manufacturers' directions and read the manufacturers' material safety data sheet.

Contact Customer Service to order Ferno cleaners and disinfectants (page 14).

! WARNING

Improper maintenance can cause injury. Maintain the Pedi-Pac only as described in this manual.

DISINFECTING THE PEDI-PAC

Disinfect the Pedi-Pac after each use.

Remove the head support and the Pedi-Pad.

Open the cover flap, and remove the backboard (Figure 16).

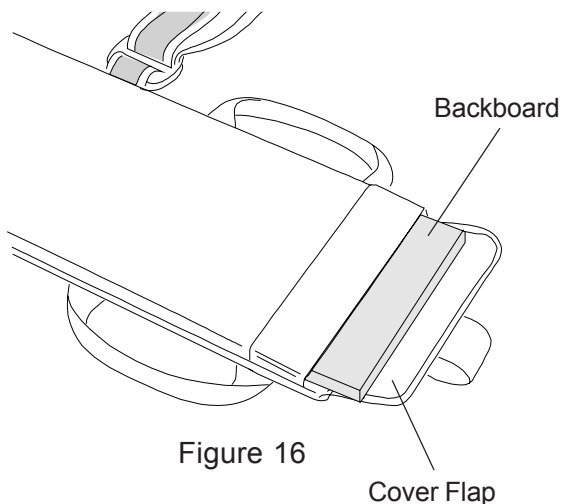


Figure 16

Wipe all surfaces with disinfectant. Follow the disinfectant manufacturer's directions. As you wipe the Pedi-Pac down, inspect the Pedi-Pac for obvious damage, excessive wear, or missing components.

CLEANING THE PEDI-PAC

Disinfect the Pedi-Pac.

Remove the head support and the Pedi-Pad.

Open the cover flap, and remove the backboard
Remove the backboard from the cover.

Clean the cover, backboard, Pedi-Pad, and carrying case with cold soapy water and a stiff brush.

Wash the forehead/chin restraints in cold soapy water.

Rinse all parts in cold water.

Towel off excess moisture.

Allow the Pedi-Pac to air dry completely before reassembling and packing it.

Alternative Cleaning Method

The cover and carrying case can be professionally dry cleaned.

Disinfect the Pedi-Pac.

Dry clean using an 8-minute cycle.

INSPECTING THE PEDI-PAC

Have your service technician or an EMSAR® service technician follow the instructions in *Using the Pedi-Pac* and check the following:

- Are any parts missing?
- Are the cover, Pedi-Pad, forehead/chin restraints, and backboard in good condition?
- Are the restraints, lifting handles, and cot-attachment loops in good condition (free of frays and cuts)?
- Do the restraints and all other fastening strips fasten and unfasten properly?
- Are the D-rings and plastic slides (attaching the color-coded restraints to the slide strap) free of cracks?

If the inspection indicates a need to service the product, see *Repair Parts and Service*.

SECTION 5 - REPAIR PARTS AND SERVICE

EMSAR® is 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. Phone or fax for details.

To order parts or for professional product repair, contact EMSAR.



800.73.EMSAR (Phone)
937.383.1051 (Fax)

⚠ WARNING

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

Part #	Description	Qty.
090-4107	Pedi-Pad	1
090-4104	Forehead/Chin Restraints	1
090-5056	Backboard	1

Part #	Description	Qty.
090-4106	Carrying Case	1
090-5019	Plastic Slide Replacements	1
090-4103	Color-coded Restraints with wrist and ankle restraints	1

SECTION 6 - LIMITED WARRANTY

Limited Warranty Summary

Ferno-Washington, Inc. (Ferno) warrants the products we manufacture to be free from defects in material and workmanship for one year except as follows:

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

This limited warranty applies when you use and care for the product properly. If the product is not used and cared for properly, the warranty is void. The warranty period begins the day the product is shipped from Ferno or the day you receive it if you have proof of the delivery date. Shipping charges are not covered by the limited warranty. We are not liable for shipping damages or damages sustained through using the product.

Limited Warranty Obligation

If a product or part is proven to be defective, Ferno will repair or replace it. At our option, we will refund the product's purchase price. The purchaser accepts these terms in lieu of all damages.

This is a summary of the limited warranty. The actual terms and conditions of the limited warranty and the limitations of liability and disclaimers are available upon request by calling 800.733.3766 or 937.382.1451.

SECTION 7 - CUSTOMER SERVICE

Record product information below. Please have the following information available when contacting Ferno Customer Service,

Model Number 78
Date Received _____
Purchased From _____
Used in Vehicle Number _____

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

For assistance with the Pedi-Pac contact Ferno Customer Service.

Ferno-Washington
Attn: Ferno Customer Service
70 Weil Way
Wilmington, Ohio 45177-9371

Telephone 800.73.FERNO
 937.382.1451
Fax..... 937.382.1191

TRAINING RECORD

Date	Name	Description

MAINTENANCE RECORD

Date	Description	By