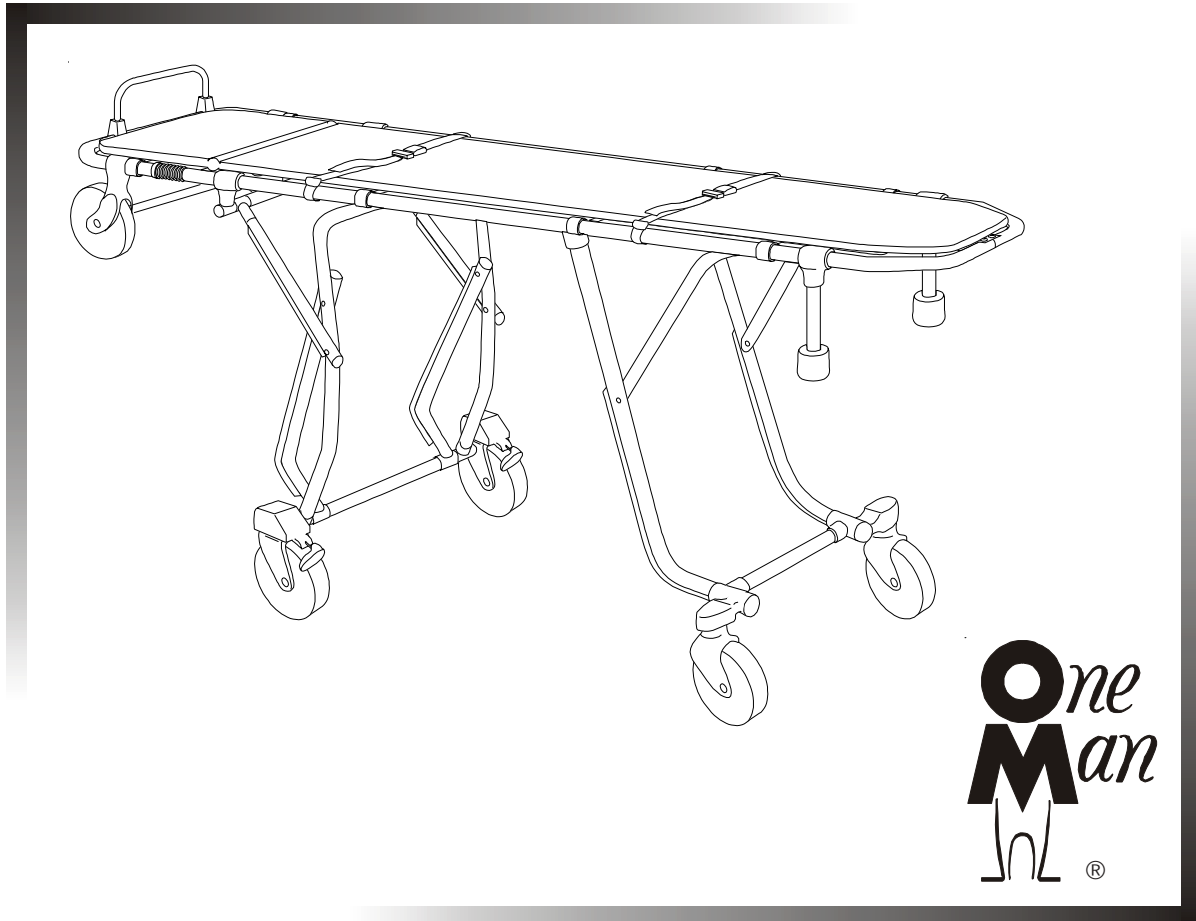




FERNO

Users' Manual



Model 27-1

Multi-Level First-Call Cot

July, 2001

Pub. No. 234-1862-03

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

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1 - SAFETY INFORMATION

1.1 Warning

The following warnings appear in this manual.

WARNING

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

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

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

An unrestrained body can fall off the cot. Use restraints to secure the body on the cot.

Helpers can cause injury or be injured. Maintain control of the cot, operate the controls, and direct any helpers.

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

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

1.2 Important

Boxes like the one below emphasize important information.

Important

Change cot levels only with the fold-down frame locked in the raised position. Changing cot levels with the fold-down frame lowered can damage the cot.

1.3 Bloodborne Disease Notice

OSHA (Occupational Safety and Health Administration) requires employers to protect workers from workplace exposure to bloodborne diseases such as HIV-1 and hepatitis. To reduce the risk of exposure when using the cot, follow the disinfecting and cleaning instructions in this manual.

For more information, visit www.osha.gov on the Internet or write to:

U.S. Department of Labor, OSHA
Office of Public Affairs, Room N-3647
200 Constitution Ave., NW
Washington, DC 20210

2 - ABOUT THE COT

2.1 Model 27-1 First-Call Cot Description

The Model 27-1 First-Call Cot (cot) is a mortuary-service product designed to transport the deceased. The cot is for professional use by one or more trained operators.

Cot features include 6-level positioning, 4 swivel wheels (2 with locks), fold-down frame for shortening cot, tapered operator end, and a pull handle.

Anodized tubing is used on the main frame to help keep hands clean. A mattress and a set of chest and leg restraints are included with the cot.

WARNING

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

2.2 General Specifications

Height*	
Level 6	34 in.
Level 5	29 in.
Level 4	25 in.
Level 3	21 in.
Level 2	16 in.
Level 1	10 in.
Loading Level **	25 in.
Length Overall	79 in.
with Fold-Down Frame Lowered	71 in.
Width Overall	24 in.
Weight	62 lb.
Maximum Load Limit	400 lb.

* To include pull-handle height, add 6 inches.
 ** Measured from ground to bottom of loading wheel.

General specifications are rounded to the nearest whole number. For detailed specifications, contact Ferno Customer Service (page 19). Ferno reserves the right to change specifications without notice.

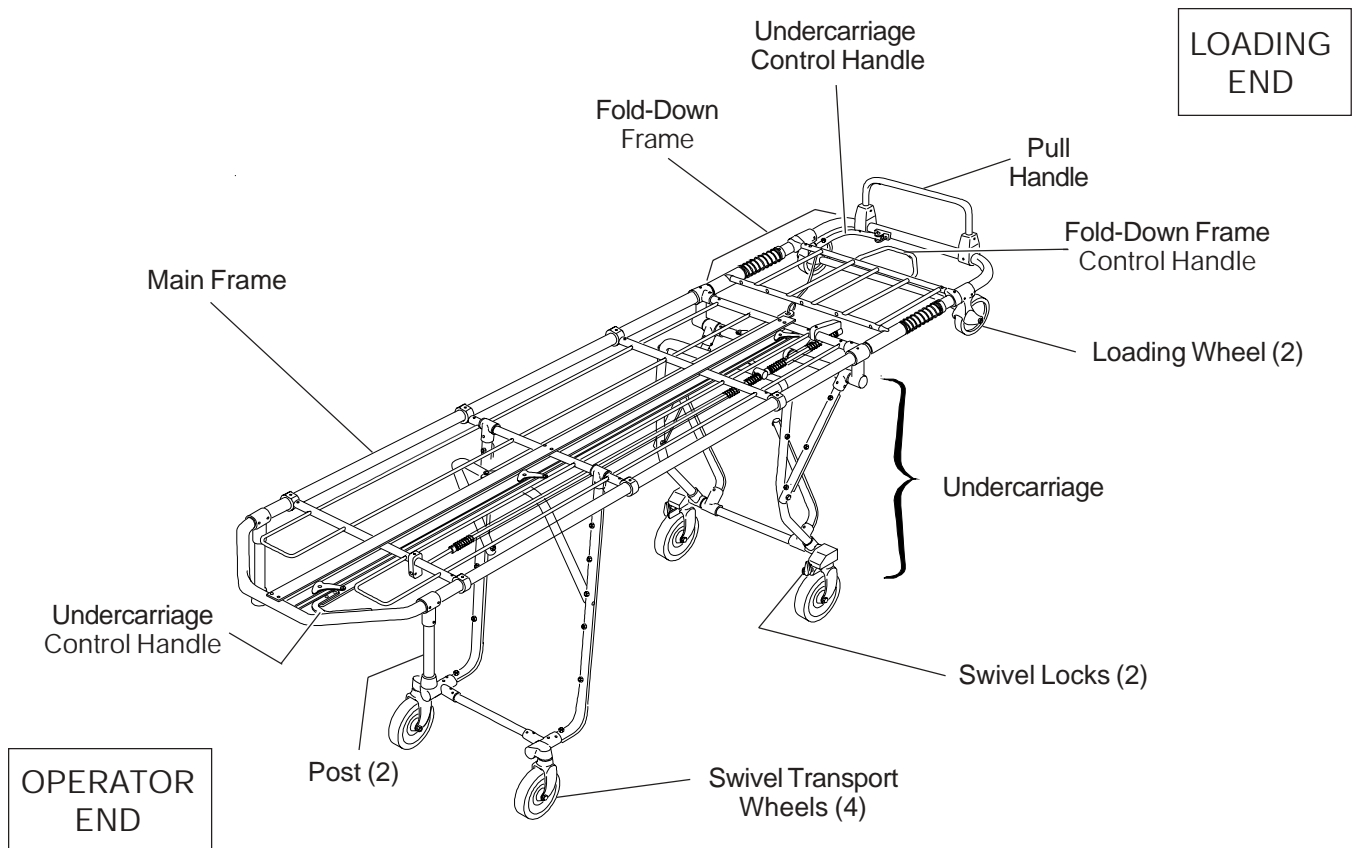
The vehicle bumper extension should not exceed 14 inches. The patient compartment should have a level floor large enough for the folded cot, and a cot fastener installed.

LOAD LIMIT



Inspect the cot if the load limit has been exceeded (see *Inspecting the Cot*, page 14).

2.3 Components



3 - OPERATOR SKILLS AND TRAINING

3.1 Skills

Operators using the cot need:

- a working knowledge of mortuary-service procedures
- a complete understanding of the procedures described in this manual.

3.2 Training

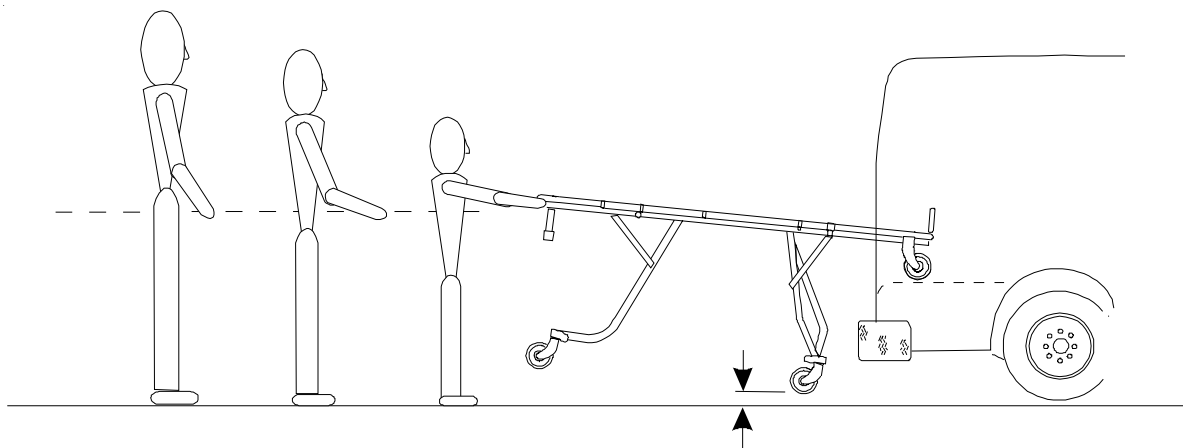
Trainees need to:

- read this manual.
- practice with the cot before using it in regular service.
- record their training information.

! WARNING

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

3.3 Height and Strength Considerations



When unloading the cot from a vehicle, the operator must be able to hold the cot high enough for each set of undercarriage legs to remain clear of the ground until they have unfolded completely and locked into place.

Supporting the weight of the cot can require greater strength from a short person than from a tall person.

For example, a short operator must raise and hold his/her arms higher than a tall operator to permit the cot undercarriage to unfold and lock.

Note: Use additional help as needed to lift the weight of the cot and body (see Using Additional Help, page 12).

4 - USING THE COT

4.1 Before Placing the Cot in Service

1. Personnel who will work with the cot need to read this manual.
2. Set up the cot, following instructions in *Setting up the Cot*, page 18.
3. Confirm that cot operates properly. Follow instructions in *Inspecting the Cot*, page 14.

4.2 General Guidelines for Use

1. The cot can be operated and maneuvered by one person if necessary, but operates and maneuvers more easily when controlled by two operators.
2. Operator(s) may need help when working with heavy loads. For information about placement and direction of helpers, see *Using Additional Help*, page 12.
3. Follow standard mortuary service procedures when operating the cot.
4. Always use restraints.
5. Stay with the cot at all times.

! WARNING

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

! WARNING

An unrestrained body can fall off the cot. Use restraints to secure the body on the cot.

4.3 Operating the Fold-Down Frame

The loading end of the main frame folds down to shorten the cot for use in confined areas such as hallways and elevators. To operate the fold-down frame:

1. With one hand, grasp corner of frame and slightly lift upward, then with other hand, squeeze fold-down-frame control handle (Figure 1).

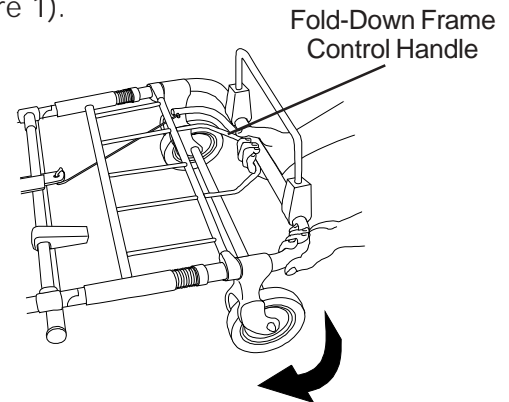


Figure 1 - Operating Fold-Down Frame Control Handle

2. Use both hands to swing the frame down.
3. To return the frame to the extended position, grasp the frame with one or both hands and swing it upward until it locks.

4.4 Changing Cot Levels Using Two Operators

Important

To avoid damaging the cot, always raise the fold-down frame to the extended position before changing cot levels.

LOWERING THE COT WITH TWO OPERATORS

1. Operators position themselves at opposite ends of the cot, facing each other.

- If fold-down frame has been lowered, loading-end operator raises frame and locks it in the extended position.
- Both operators grasp corners of main frame, using an underhand grip (Figure 2).

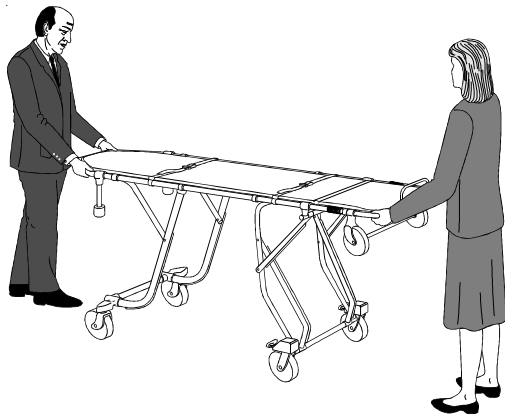


Figure 2 - Changing Cot Height with Two Operators

Important

Always lower the loading end of the cot before lowering the operator end.

- Loading-end operator squeezes undercarriage control handle and lowers his/her end of the cot until it nears the desired height, then releases control handle and continues lowering until undercarriage locks in place.
- Operator-end operator squeezes control handle and lowers his/her end of the cot until it nears the desired height, then releases control handle and continues lowering until undercarriage locks in place.

RAISING THE COT WITH TWO OPERATORS

- Operators position themselves at opposite ends of the cot, facing each other and grasping corners of main frame using an underhand grip (Figure 2).

Important

Always raise the operator end of the cot before raising the loading end.

- Operator-end operator squeezes control handle and raises his/her end of the cot until it nears the desired height, then releases control handle and continues raising until undercarriage locks in place.
- Loading-end operator squeezes undercarriage control handle and raises his/her end of cot until it nears desired height, then releases control handle and continues raising until undercarriage locks in place.

4.5 Changing Cot Levels Using One Operator

When changing cot levels without assistance, raise or lower the cot in stages. Placing the cot at too great a tilt can cause the body to slide off.

The proper procedure for changing levels with a body on the cot is to raise or lower the appropriate end of the cot a small amount, then raise or lower the other end a small amount, repeating until the cot is at the desired height and level.

LOWERING THE COT WITH ONE OPERATOR

Important

Always lower the loading end of the cot before lowering the operator end.

- Stand at **loading end** of cot and grasp main frame corners with an underhand grip (Figure 3).

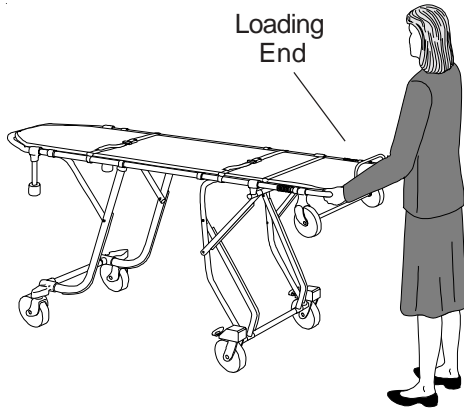


Figure 3 - One Operator Lowering Cot

2. Squeeze undercarriage control handle and lower loading end of cot until it nears desired height.
3. Release control handle and continue lowering cot until undercarriage locks into position.
4. Move to operator end of cot.
5. Grasp corners of cot main frame, squeeze control handle, and lower operator end of cot until it is nearly level with loading end.
6. Release control handle and continue lowering operator end of cot until undercarriage locks into place.

**RAISING THE COT
WITH ONE OPERATOR**

Important

Always raise the operator end of the cot before raising the loading end.

1. Stand at operator end of cot and grasp main frame with an underhand grip.
2. Squeeze control handle, and raise operator end of cot until it nears desired height.

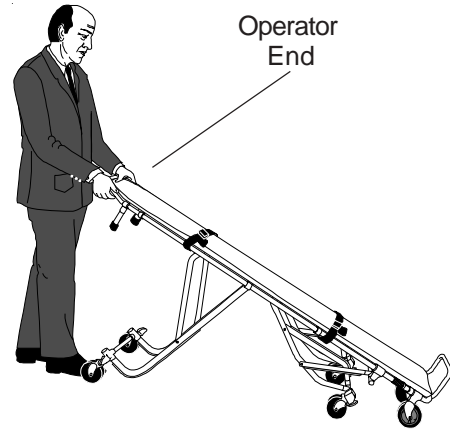


Figure 4 - One Operator Raising Cot

3. Release control handle and continue raising operator end of cot until undercarriage locks into position.
4. Move to loading end of cot.
5. Grasp corners of main frame with an underhand grip, squeeze undercarriage control handle, and raise loading end of cot until nearly level with operator end.
6. Release control handle and continue raising until undercarriage locks into place.

4.6 Transferring Body to Cot

1. Roll cot to body.
2. Position cot at height level with body.
3. Lock swivel wheels at loading end of cot.

To engage locks, raise levers to the vertical. To disengage, lower levers to the horizontal (Figure 5).

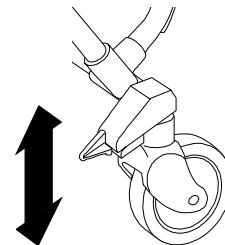


Figure 5 - Operating Swivel Locks

4. Unfasten restraints.
5. Transfer body onto cot.
6. Fasten restraints.
7. Raise cot to highest position before rolling.

4.7 Rolling the Cot

Use help as needed to safely control the weight of the body and cot (see *Using Additional Help*, page 12).

Roll cot on smooth, unobstructed surfaces whenever possible. Cross low obstacles such as door sills squarely and carefully by lifting and pulling the cot wheels over the obstacle.

Avoid high obstacles such as curbs whenever possible. If you cannot avoid such obstacles, use help to lift and carry the cot across them.

Roll the cot as follows:

1. Make sure restraints are fastened and cot is in highest position.
2. Push or pull the cot from either end.

Note: *Pushing the cot up an incline will be easier if you engage the swivel locks on the loading-end wheels and push from the operator end of the cot.*

4.8 Maneuvering Cot in Confined Areas

Lower the fold-down frame for easier maneuvering in confined areas such as hallways and elevators (Figure 6).

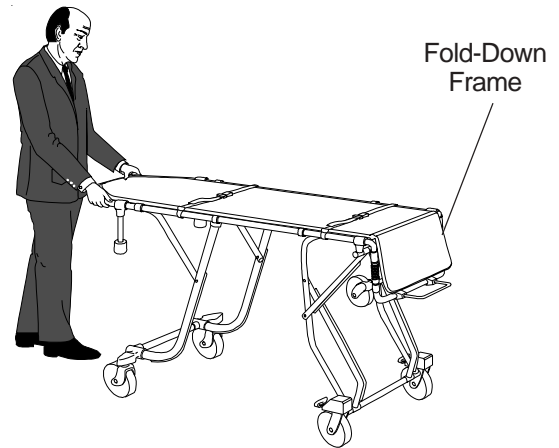


Figure 6 - Fold-Down Frame Lowered

If lowering the fold-down frame does not shorten the cot sufficiently, you can roll the cot in the tilted position, as follows:

1. Fasten restraints.
2. Raise fold-down frame and lock in the extended position.
3. Lower cot to lowest position.
4. Stand at **operator end** of cot, grasp corners of main frame, tilt cot onto loading wheels, and roll (Figure 7).

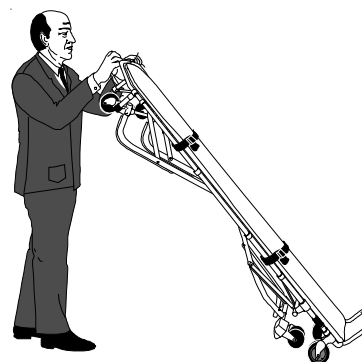


Figure 7 - Rolling Cot in Confined Areas

4.10 Loading Cot

1. Roll cot squarely to rear of vehicle.
2. Grasp corners of main frame with an underhand grip and roll both loading wheels onto vehicle floor (Figure 8).

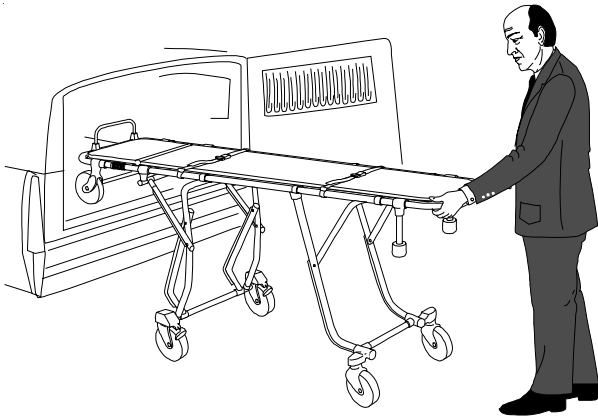


Figure 8 - Loading Cot

3. Push cot forward until loading-end legs contact vehicle bumper.
4. While supporting cot, squeeze and hold control handle and push forward. Both legs will fold as cot enters vehicle.
5. Continue supporting and pushing until cot is completely inside vehicle and you can rest operator end of cot on posts. Release control handle.
6. If cot must be repositioned, lift operator end of cot and move it. **Do not drag** cot posts on vehicle floor.
7. Secure cot in vehicle with Ferno-approved cot fastener.

4.11 Unloading Cot

1. Disengage cot fastener.
2. Grasp corners of main frame with an underhand grip. Supporting cot, squeeze and hold control handle and begin pulling cot from vehicle.
3. Hold cot high enough to allow operator-end legs to unfold completely and lock into place.
4. Release control handle as soon as operator-end legs have locked.
5. Continue pulling cot from vehicle, holding it high enough to allow loading-end legs to unfold completely and lock into place.

If the vehicle is parked facing downhill, you will need to hold the cot higher than normal to provide sufficient ground clearance for the legs to unfold completely and lock into place.

6. Always keep loading wheels on vehicle floor (Figure 9) until loading-end legs have locked into place. Then, lower cot until all four transport wheels are on ground.

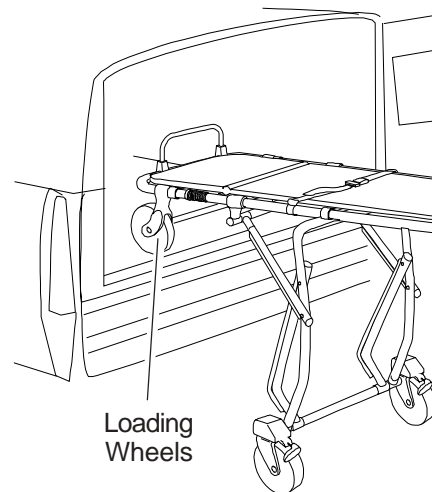


Figure 9 - Unloading Cot

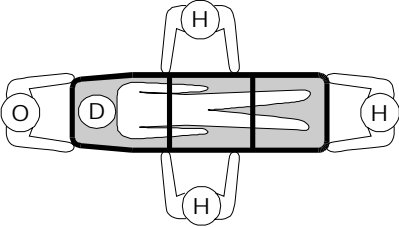
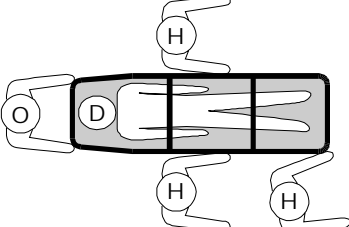
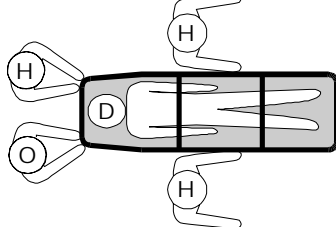
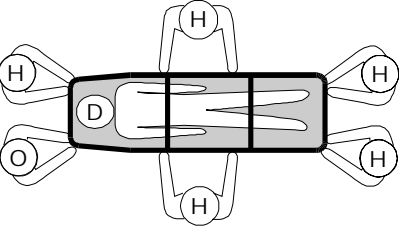
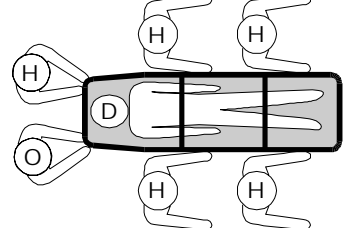
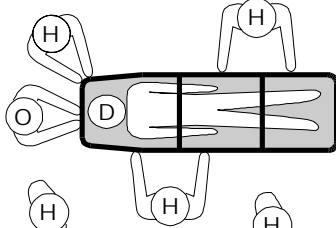
7. Roll cot away from vehicle.

4.12 Using Additional Help

Operating the cot requires a minimum of one trained operator. He/she may need help when working with heavy loads.

Operator should maintain control of the cot, operate the controls, and direct helpers.

The chart below shows suggested placement for operator and helpers.

Helpers	Changing Levels	Rolling	Loading/Unloading
One Operator + Three Helpers			
One Operator + Five Helpers			

Key: O = Operator H = Helper D = Deceased

! WARNING

Helpers can cause injury or be injured. Maintain control of the cot, operate the controls, and direct any helpers.

LOAD LIMIT



Inspect the cot if the load limit has been exceeded (see *Inspecting the Cot*, page 14).

5 - MAINTAINING THE COT

5.1 Maintenance Schedule

The cot requires regular maintenance. Set up and follow a maintenance schedule. The following chart represents minimum maintenance.

	Each Use	As Needed	Each Month
Disinfecting (this page)	●		
Cleaning (this page)		●	
Waxing (this page)		●	
Inspecting (page 14)		●	●
Lubricating (page 15)		●	

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

Contact Ferno Customer Service to order Ferno disinfectants and cleaners (see page 19).

WARNING

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

Important

Disinfectants and cleaners containing bleach, phenolics, or iodines can cause damage. Disinfect and clean only with products that do not contain these chemicals.

5.2 Disinfecting, Cleaning, and Waxing the Cot

1. Remove restraints and mattress from cot.
2. Wipe all surfaces of cot with disinfectant. Follow disinfectant manufacturer's directions. Ferno recommends inspecting the cot for obvious damage as you disinfect it.
3. Clean all surfaces of cot with warm water and a mild detergent. Use a stiff-bristled brush if necessary.
4. Rinse cot with warm water.
5. Dry cot with towel, or allow to air dry.
6. To help protect appearance of cot, periodically apply a coat of automotive wax to clean, dry metal surfaces.

Important

This cot contains anodized tubing. Using abrasive cleaning compounds or applicators will remove the anodization and will damage the cot's appearance. Do not use abrasive materials to clean the cot.

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 cot.

5.3 Disinfecting/Cleaning Mattress

1. Remove mattress from cot.
2. Wipe mattress with disinfectant, following disinfectant manufacturer's instructions.
3. Wash the mattress with warm, soapy water and a soft cloth.
4. Rinse the mattress with clear water.
5. Hang to dry or dry with a towel.

5.4 Disinfecting/Cleaning Restraints

1. Remove restraints from cot.
2. Spray metal buckles with disinfectant cleaner and wipe with clean cloth, following disinfectant manufacturer's instructions. Do **not** immerse buckles in liquid.
3. Add a disinfectant cleaner to warm water, following instructions on container.
4. Grasp buckles and immerse restraint webbing in disinfectant solution for time directed in disinfectant manufacturer's instructions. Do **not** immerse buckles.
5. Grasp buckles and repeatedly dip restraint webbing in clear water to rinse. Do **not** immerse buckles.
6. Hang restraints to air dry.

5.5 Inspecting the Cot

Have your service's equipment maintenance personnel follow the instructions in *Using the Cot*, pages 7-12, and check the following:

- Are all components present?
- Is the cot free of excessive wear?
- Do all moving parts operate smoothly and properly?
- Does the cot roll smoothly?
- Is restraint webbing in good condition with no cuts or frayed edges?
- Are restraint buckles free of visible damage and do they operate properly?
- Is mattress in good condition?

If inspection shows damage or excessive wear, remove the cot from service until repair is made (see *Repair Parts and Service*, page 16).

5.6 Lubricating the Cot

Lubricate the cot using WRL-191-S lubricant, EZ-1 lubricant, 30-weight oil, and the diagram below. Lubricate right and the left sides.

A = WRL-191-S or EZ-1 Lubricant

- 1A - Fold-Down Frame Hinges (2)
- 2A - Leg Return Spring (1)
- 3A - Release Linkage (4)
- 4A - Release Handle Mount Hdwre. (2)
- 5A - Drop Frame Sliding Bars (3)
- N/S - I-Beam Plunger-Pin Assy. (3)

B = SAE 30-Weight Oil

- 6B - Loading Wheel Bearings (2)
- 7B - Transport Wheel Bearings (4)
- 8B - Under Release Handle Sleeves (2)
- 9B - Undercarriage Frame Joints (6)

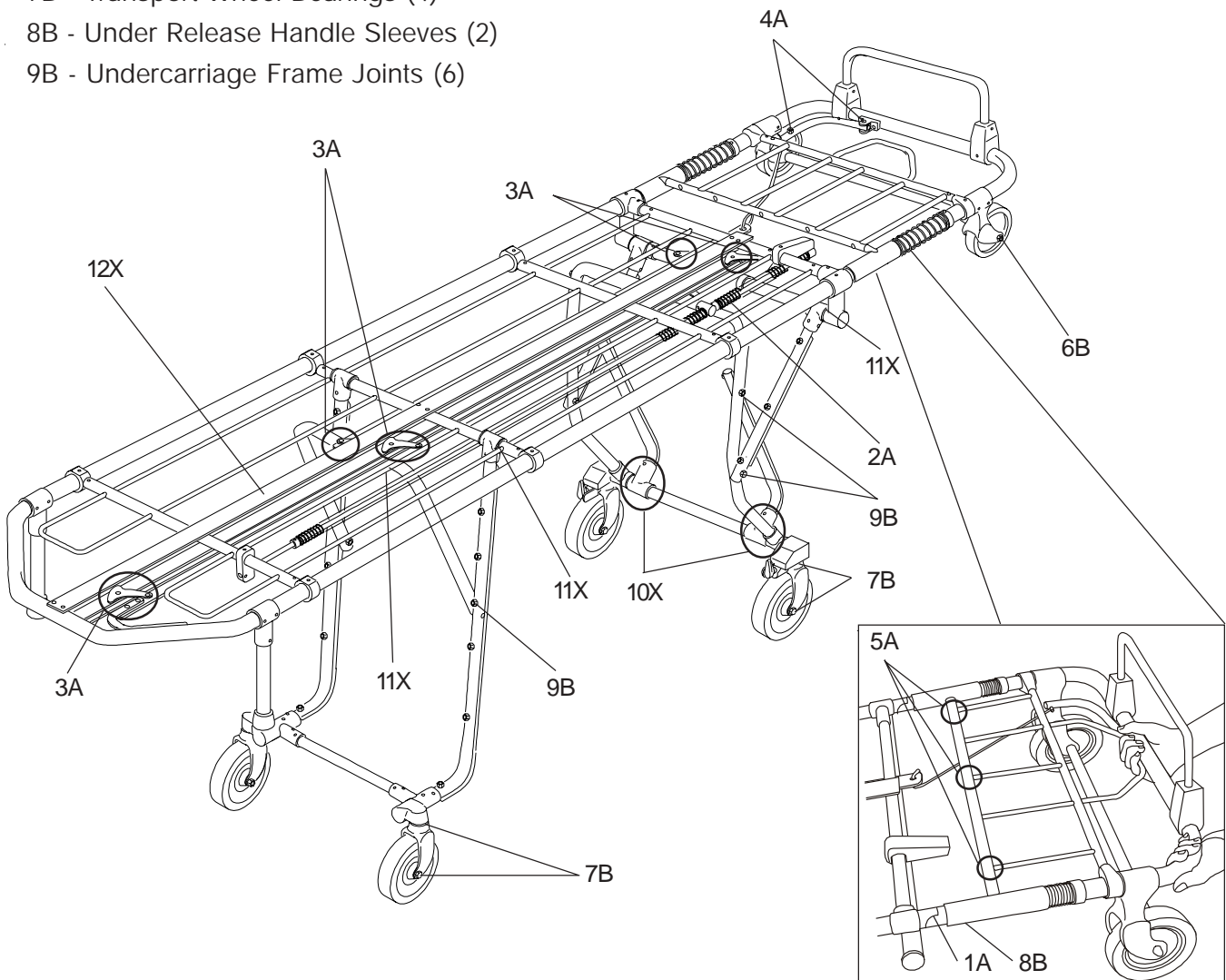
Legend

1A

The number (1) corresponds to the name of the part requiring lubrication. N/S = Not Shown	The letter (A) indicates the type of lubricant to be used on the part. Parts that should not be lubricated are indicated by an X.
--	---

X = Do Not Lubricate

- 10X - Stationary T-Castings
- 11X - Delrin Bearings
- 12X - I-Beam Channel
- N/S - Sidearm Bearings (if equipped)



6 - REPAIR PARTS AND SERVICE

6.1 General Information

To order parts or for professional cot repair, contact EMSAR®.

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, fax or visit EMSAR's web site for details.



800.73EMSAR (Phone)
937.383.1051 (Fax)
www.EMSAR.com (Internet)

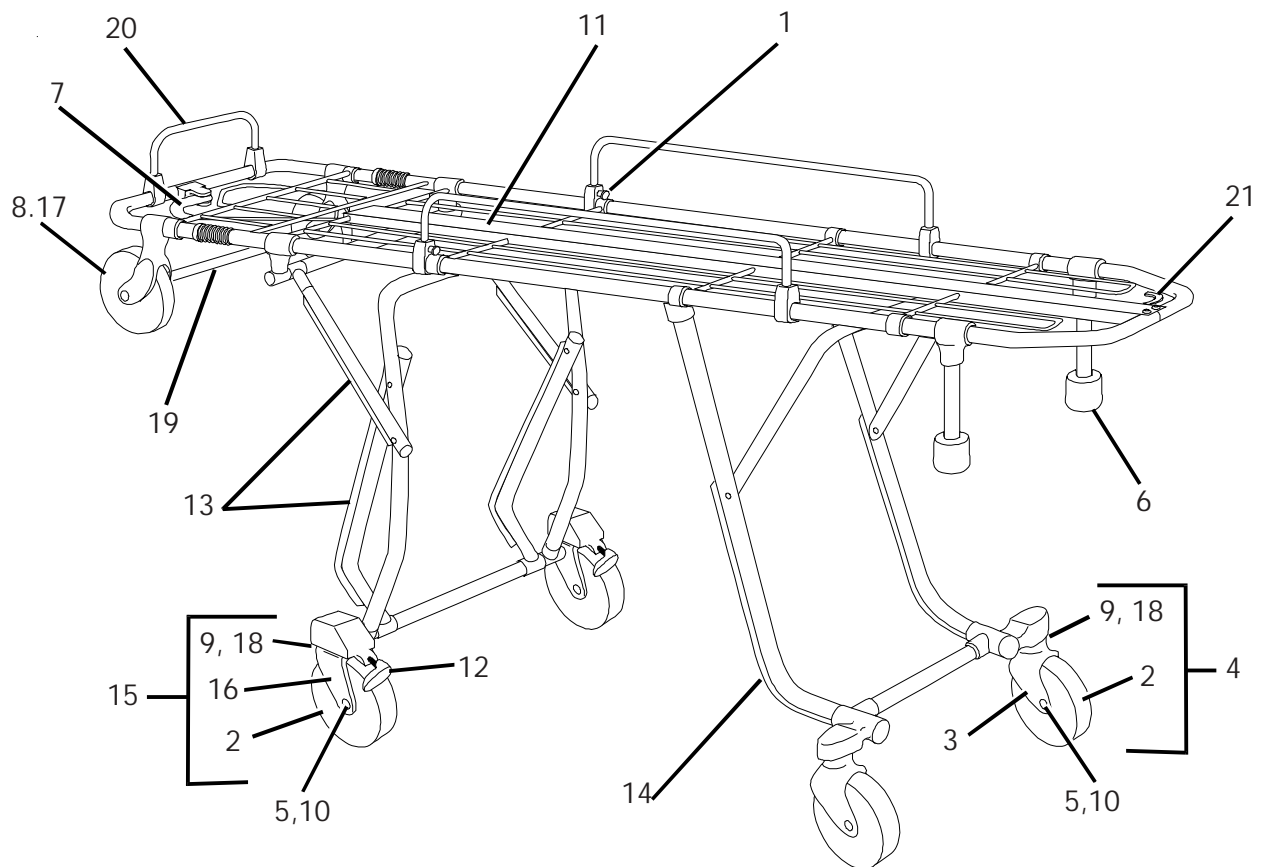
! WARNING

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

6.2 Model 27-1 Parts List

Ref. #	Description	Part #
1	Sidearm pin w/knob & spring	090-0032
2	5" Wheel w/3/8" bearings, axle, bolt, and nut	090-0060
3	Fork w/bearings & shank pin	090-0070
4	5" Swivel caster assy. complete	090-0080
5	Axle bolt w/nut for 5" wheel	090-0180
6	#20 Crutch tip (pr.) inserts	090-0560
7	Load-end release handle	090-0953
8	5" Load wheel with bearing (old style - black)	090-0960
9	1/2" Bearing (pr.)	090-1259
10	3/8" Bearing (pr.)	090-1266
11	Leg return spring	090-2856
12	Lock lever pin and spring	090-2905
13	Load-end scuff strips (4)	090-4017

Ref. #	Description	Part #
14	Op.-end scuff strips (2)	090-4018
15	Load-end swivel caster complete	090-4019
16	Load-end fork w/bearings	090-4020
17	5" Load wheel with sleeve, bearing (new style - grey)	090-4054
18	Drilled shank pin with nut	090-4122
19	Loading-end axle, 27-1/27-2 kit	090-4197
20	27-1 Split footrest assy.	090-5582
21	Op.-end release handle	090-4074
n/s	New 5" Ultra Glide wheel kit	090-5522
n/s	I-Beam cover	039-0266
n/s	5/16" Bearing (pr.) for wheel with brake	090-4278
n/s	5" Swivel caster with lock assembly, complete	090-0081



7 - SETTING UP THE COT

7.1 Attaching Pull Handle to Foot End of Cot

1. Insert pull handle into pull-handle castings, matching taped end of pull handle with taped casting.
2. Use a hammer to insert the roll pins (supplied) in pre-drilled holes in the pull-handle castings (Figure 11).

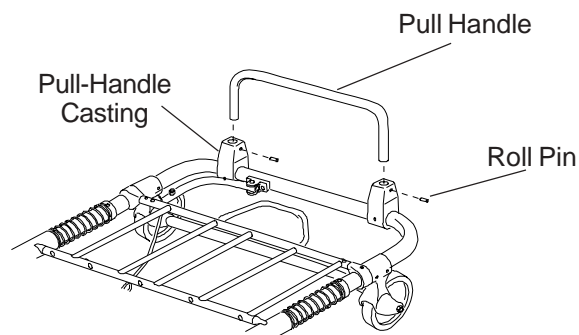


Figure 11 - Attaching Pull Handle

7.2 Attaching Mattress to Cot

There are six hook-and-loop tabs on the underside of the mattress (Figure 12). Lay the mattress on the cot and fasten the tabs around the adjacent frame tubes.

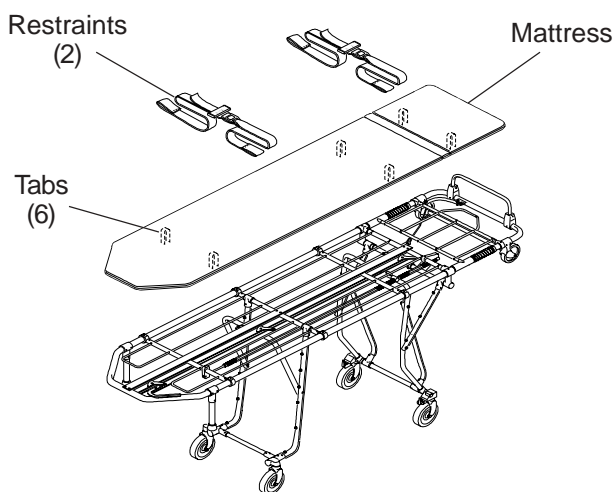


Figure 12 - Attaching Mattress

7.3 Attaching Restraints to Cot

Two-piece chest and leg restraints are supplied with the cot. To attach them to the cot:

1. Separate restraint halves by pushing release button on receiver and pulling the halves away from each other (Figure 13).

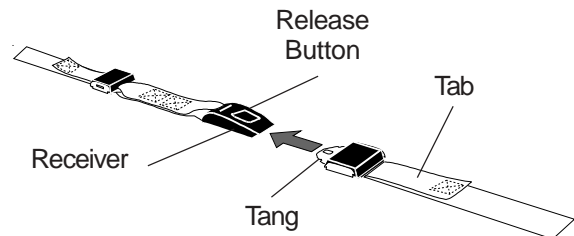


Figure 13 - Restraints

2. Position restraints at points on cot frame appropriate for securing torso and legs.
3. Wrap a restraint piece around main frame and pull tang or receiver through loop at end of restraint (Figure 14).

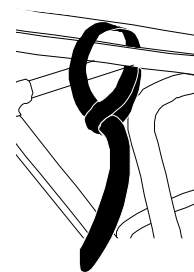


Figure 14 - Attaching Restraint

4. Pull the strap until the loop is tight on the frame.
5. Attach the other half of the restraint to the opposite side of the cot.
6. Fasten restraints by inserting tangs into receivers.
7. Pull tab to tighten restraints.

8 - 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.

9 - FERNO CUSTOMER SERVICE

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

For assistance with the cot, contact Ferno Customer Service.

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

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