

SERVICE MANUAL

TRANS•LIFT™ Resident Stand Assist From Hill-Rom



Product No. P444A

For Parts Or Technical Assistance
USA (800) 445-3720 Canada (800) 267-2337
International: Contact your distributor.

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TRANS•LIFT

Resident Stand Assist

Service Manual

Revisions

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Chapter 1

Introduction

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Chapter 1: Introduction

NOTES:

Purpose

This manual provides requirements for the TRANS•LIFT™ Resident Stand Assist normal operation and maintenance. It also includes a parts list (in chapter 5) for ordering replacement components.

Audience

This manual is intended for use by only facility-authorized maintenance personnel. Failure to observe this restriction can result in severe injury to people and serious damage to equipment.

Organization

This manual contains seven chapters.

Chapter 1: Introduction

In addition to a brief description of this service manual, chapter 1 also provides a product overview.

Chapter 2: Troubleshooting Procedures

Repair analysis procedures are contained in this chapter. These procedures are used to gather information, identify the maintenance need, and verify the effectiveness of the repair.

Chapter 3: Theory of Operation

This chapter describes the application of the mechanical and electrical systems employed in this product.

Chapter 4: Removal, Replacement, and Adjustment Procedures

Chapter 4 contains the detailed maintenance procedures determined necessary in chapter 2.

Chapter 5: Parts List

This chapter contains Hill-Rom's warranty, part-ordering procedure, and illustrated parts lists.

Chapter 6: General Procedures

Cleaning, preventive maintenance, and other general procedures are described in this chapter.

Chapter 7: Accessories

There are no accessories for the TRANS•LIFT™ Resident Stand Assist.

Typographical Conventions

This manual contains different typefaces and icons designed to improve readability and increase understanding of its content. Note the following examples:

- Standard text—used for regular information.
- **Boldface text**—emphasizes a word or phrase.
- **NOTE:**—sets apart special information or important instruction clarification.
- The symbol below highlights a WARNING or CAUTION:

Figure 1-1. Warning and Caution Symbol



- A WARNING identifies situations or actions that may affect patient or user safety. Disregarding a warning could result in patient or user injury.
- A CAUTION points out special procedures or precautions that personnel must follow to avoid equipment damage.
- The symbol below highlights an electrical shock hazard WARNING:

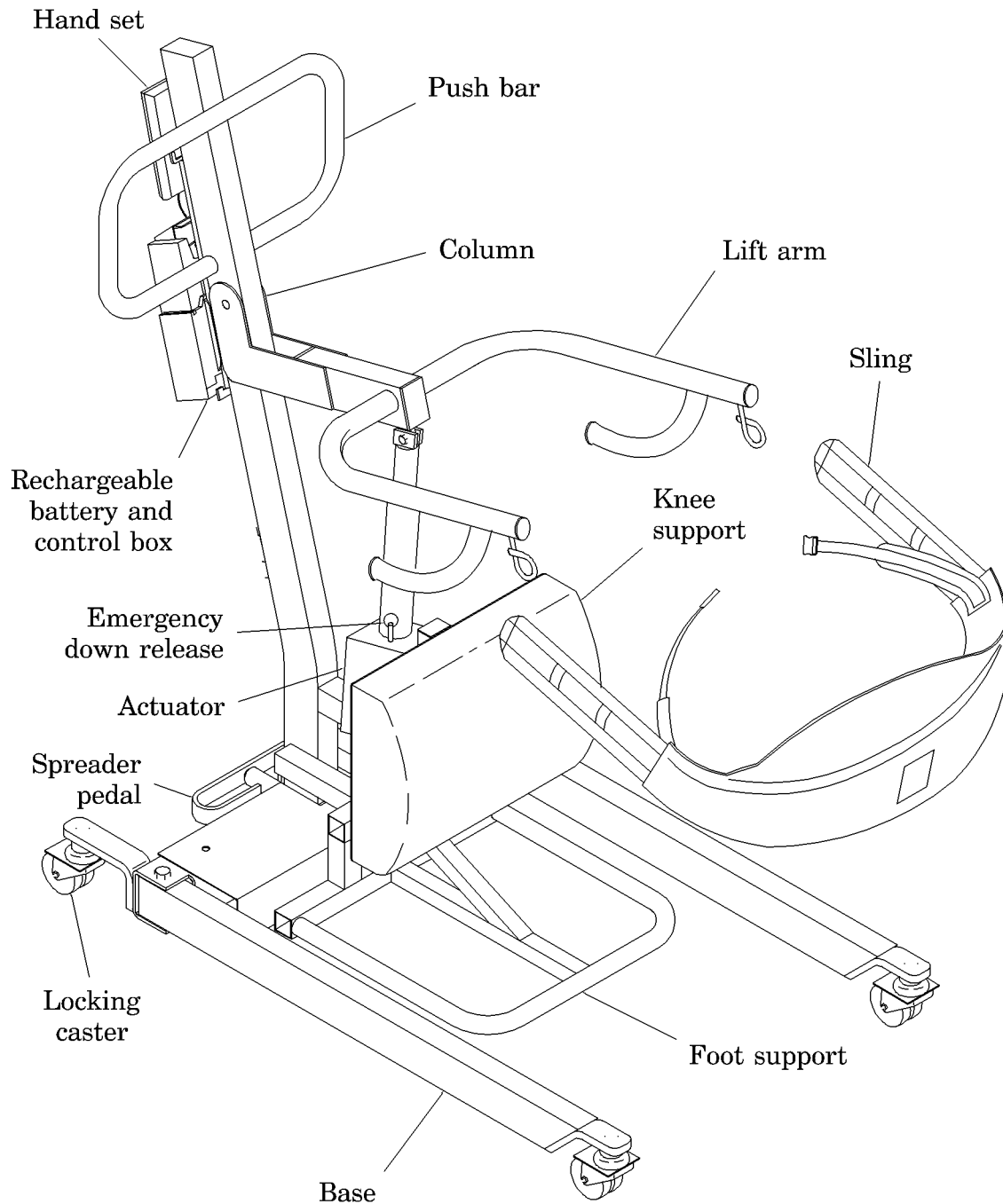
Figure 1-2. Electrical Shock Hazard Warning



Introduction

Overview

Figure 1-3. TRANS•LIFT™ Resident Stand Assist



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Today, with improvements in technology and changes in the way healthcare is delivered, Hill-Rom is designing products to continuously meet the changing needs of the healthcare industry.

The TRANS•LIFT™ Resident Stand Assist consists of a column stand assembly mounted on a casted base assembly. The spreader pedal widens the base frame to allow the resident access from a chair. The lift arm and adjustable stand assist sling are attached to the stand column subassembly. A battery pack powered actuator raises and lowers the lift arm and sling. The knee and foot supports are located below the lift arm. These provide additional support when standing and foot placement during resident transferring. A rechargeable battery pack supplies power for the TRANS•LIFT™ Resident Stand Assist. The battery pack stores enough power for approximately 40 assists. It is recharged by the wall mounted battery pack charger that plugs into a standard 110/120V AC power source.

The TRANS•LIFT™ Resident Stand Assist has been designed to be mobile but stable. The sturdy, steel frame with locking set brakes on the casters allows for easy positioning, locking, assisting, and moving. The TRANS•LIFT™ Resident Stand Assist is highly mobile and independent of an AC electrical source because it uses a rechargeable battery pack. The handset cord allows the caregiver the freedom to move around and operate the TRANS•LIFT™ Resident Stand Assist remotely while interacting with the resident. The TRANS•LIFT™ Resident Stand Assist will enhance caregiver productivity and quality of care for the less mobile and more dependent resident.

The TRANS•LIFT™ Resident Stand Assist can be used for several purposes, including using the stand to assist in walking. It can be used with or without the stand assist sling and is designed to increase the mobility of the user. The TRANS•LIFT™ Resident Stand Assist is capable of assisting a resident of up to 400 lb (181 kg) who is seated or resting on a surface as high as 40" (102 cm) off the floor.

The TRANS•LIFT™ Resident Stand Assist has been designed for the comfort and safety of the resident. Thick, slip resistant sling padding reduces the potential of sling slippage while supporting the resident. The lift arm and column stand are designed so that the resident does not come in contact with the actuator or the column stand during operation. The actuator has an emergency down release that slowly lowers the lift arm and the resident should battery power be lost. An emergency stop button, located on the control box, will shut down power to the TRANS•LIFT™ Resident Stand Assist in case of an emergency.

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System Features

The features of the TRANS•LIFT™ Resident Stand Assist include:

- Individual locking casters
- Adjustable base frame for easier chair access
- Integral actuator clutch
- Emergency stop button
- Emergency down release
- Magnetic backed handset
- Handset cord offers 360° caregiver access
- Audible low battery pack alarm
- Rechargeable battery pack
- Comfortable and adjustable full support stand assist sling
- Knee and foot supports for the resident
- Push bar provides a secure area to grip during resident transfer

Specifications

Physical Description

See table 1-1 on page 1-8 for TRANS•LIFT™ Resident Stand Assist specifications.

Table 1-1. Specifications

Feature	Dimension
Height (fully extended)	63.625" (161.61 cm)
Width	24" (61 cm)
Length	52" (132 cm)
Weight	117 lb (53.12 kg)
Caster size	3" (8 cm)
Floor to Base Clearance	4.625" (11.75 cm)
Maximum angle of inclination (up)	70°
Maximum angle of inclination (down)	14°
Minimum wall clearance	15" (38 cm)
Maximum resident weight	400 lb (181 kg)
Lift range	Floor level 0" (0 cm) to 40" (102 cm)
Storage relative humidity range	20 - 95%
Operating relative humidity	30 - 85%
Storage temperature range	-40°F - 150°F (-41°C - 65.5°C)
Ambient operating temperature range	50°F - 110°F (10°C - 43°C)
Sound level	<45 dBA at resident's ear

Electrical Description

Battery

24V DC

A fully charged battery will provide approximately 40 assists.

Battery Charger

110/120V AC, 60 Hz

Charging voltage: 27.6V DC ($\pm 2\%$).

Charging current: <650 milliampere.

Regulations, Standards, and Codes

TRANS•LIFT™ Resident Stand Assist meets specifications UL 2601-1.

Model Identification

See table 1-2 on page 1-9 for TRANS•LIFT™ Resident Stand Assist model identification.

Table 1-2. Model Identification

Model Number	Description
P444A	TRANS•LIFT™ Resident Stand Assist

Safety Tips

**WARNING:**

Only facility-authorized maintenance personnel should troubleshoot the TRANS•LIFT™ Resident Stand Assist. Troubleshooting by unauthorized personnel could result in personal injury or equipment damage.

**WARNING:**

Follow the product manufacturer's instructions. Failure to do so could result in personal injury or equipment damage.

**WARNING:**

Only facility-authorized maintenance personnel should perform preventive maintenance on the TRANS•LIFT™ Resident Stand Assist. Preventive maintenance performed by unauthorized personnel could result in personal injury or equipment damage.

**WARNING:**

Adhere to the "Infection Control Policies and Procedures" outlined in the *Safety Coordinator Reference Guide*. Failure to do so could result in the spread of infection.

**WARNING:**

Dispose of the TRANS•LIFT™ Resident Stand Assist sling in accordance with the proper disposal procedure as specified by the local regulating authority.

**WARNING:**

Dispose of the battery pack in accordance with the proper disposal procedure as specified by the local regulating authority. Failure to do so could result in personal injury.

**WARNING:**

Replace the sling after 20 machine washings, or 6 months of regular use, whichever comes first. Failure to do so could result in personal injury.

**WARNING:**

Set both rear brakes and press the emergency stop button on the control panel before attaching or removing the sling. Failure to do so could allow the stand assist to move or actuate, and personal injury could result.

**WARNING:**

Place the control pendant in its home position on the top of the main mast during travel to prevent inadvertent operation of the actuator. Failure to do so could result in personal injury.

**WARNING:**

Use caution when operating the spreader bar. Ensure the wheelchair is removed from the support legs before decreasing the width. Failure to do so could result in personal injury or equipment damage.

**WARNING:**

Ensure both the caster brakes are set prior to leaving the resident unattended. Failure to do so could result in personal injury.

**WARNING:**

Do not use a sling with a torn or damaged strap. Personal injury could result.

**WARNING:**

Use the stand assist for transfer only. Do not use the stand assist for transport. Personal injury could result.

**SHOCK HAZARD:**

Do not expose the unit to excessive moisture. Personal injury or equipment damage could occur.

**SHOCK HAZARD:**

Unplug the unit from its power source. Failure to do so could result in personal injury or equipment damage.

**CAUTION:**


Do not use bleach or chlorine to wash the sling. Equipment damage could occur.

**CAUTION:**

Do not use harsh cleaners, solvents, or detergents. Equipment damage could occur.


Warning and Caution Labels

Figure 1-4. Warning and Caution Labels



**W
A
R
N
I
N
G**

READ
ACCOMPANYING
DOCUMENTS
PRIOR TO USING
THIS DEVICE TO
TRANSFER A
RESIDENT.



**C
A
U
T
I
O
N**


READ USER
MANUAL PRIOR
TO USE.

TRANS•LIFT™ RESIDENT STAND ASSIST

Hill-Rom®

A HILLENBRAND INDUSTRY

Part Number (Reorder) 100-008-0033



CAUTION

REFER TO MANUAL FOR CLEANING DIRECTIONS.
MAXIMUM RESIDENT WEIGHT- 400LBS/180KG.
REPLACEMENT GUIDELINES - CHECK INTEGRITY OF
STRAPS PRIOR TO EACH USAGE. REPLACE SLING
AFTER 20 MACHINE WASHINGS OR 6 MONTHS OF
REGULAR USE, WHICHEVER COMES FIRST.


MARK OFF WITH PERMANENT PEN AFTER EACH WASHING

1	2	3	4	5	6	7	:	9	10	11	12
13	14	15	16	17	18	19	20				

CIRCLE MONTH/YEAR FOR BEGINNING OF SERVICE

MONTH	1	2	3	4	5	6	7	8	9	10	11	12
YEAR	98	99	00	01	02	03	04	05				

DATE OF MANUFACTURE



CAUTION

RESIDENT / PATIENT
ARMS MUST BE
POSITIONED
OUTSIDE OF
THIS SLING OR
HARNES.

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NOTES:

Chapter 2

Troubleshooting Procedures

2

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Getting Started



WARNING:

Only facility-authorized maintenance personnel should troubleshoot the TRANS•LIFT™ Resident Stand Assist. Troubleshooting by unauthorized personnel could result in personal injury or equipment damage.

Begin each procedure in this chapter with step 1. Follow the sequence outlined (each step assumes the previous step has been completed). In each step, the normal operation of the product can be confirmed by answering **Yes** or **No** to the statement. Your response will lead to another step in the procedure, a repair analysis procedure (RAP), or a component replacement. If more than one component is listed, replace them in the given order.

Start with **Initial Actions** to begin gathering information about the problem.

Perform the **Function Checks** to isolate or identify a problem and to verify the repair after completing each corrective action (replacing or adjusting a part, seating a connector, etc.).

Perform the **Final Actions** after the Function Checks to verify the repair.

If troubleshooting procedures do not isolate the problem, call Hill-Rom Technical Support at (800) 445-3720 for assistance.

2

Initial Actions

Use Initial Actions to gather information from operators concerning problems with the TRANS•LIFT™ Resident Stand Assist. Note symptoms or other information concerning the problem that the operator describes. This information helps identify the probable cause.

1. Someone who can explain the problem is available.

Yes No



→ Go to “Function Checks” on page 2-4.

2. Ask that person to demonstrate or explain the problem. The problem can be duplicated.

Yes No



→ Go to “Function Checks” on page 2-4.

2

3. The problem is a result of improper operator action.

Yes No



→ Go to “Function Checks” on page 2-4.

4. Instruct the operator to refer to the procedures in the *TRANS•LIFT™ Resident Stand Assist User's Manual*. Perform the “Function Checks” on page 2-4 to ensure proper operation of the TRANS•LIFT™ Resident Stand Assist.

Function Checks

1. Initial Actions have been performed.

Yes No



→ Go to “Initial Actions” on page 2-3.

2. Push the unit along a level, uncarpeted floor.

The unit rolls smoothly, and no casters limp, bind, or wobble.

Yes No



→ Replace any caster that does not roll smoothly. Refer to “Front Caster” on page 4-3, or “Rear Caster” on page 4-5, as appropriate.

3. Engage the brakes on both rear wheels, and try to push the stand assist.

The stand assist moves.

Yes No



→ Go to step 6.

4. The stand assist moves straight ahead.

Yes No



→ If the stand assist veers to the left or right, change the locking caster on the side that moves (refer to procedure 4.2).

5. Replace both rear locking casters (refer to procedure 4.2), then continue with these function checks.

6. Press down on the leg spreader bar.

Both legs spread evenly, smoothly, and for the same distance.

Yes No



→ Go to RAP 2.1.

7. Press on the leg spreader bar and return the legs to their straight ahead position.

The legs move evenly, smoothly, and stop parallel to one another.

Yes No



→ Go to RAP 2.1.

8. Engage the brakes on the rear locking casters, and leave them set while you perform the rest of these function checks.

9. Inspect the sling.

The sling body and all straps and loops are free of cuts and tears.

Yes No



→ Replace the sling.

10. Inspect the lift arm.

The lift arm, including the actuator mounting node, is in good condition and shows no sign of cracks or distortion.

Yes No



→ Replace the lift arm (refer to procedure 4.13), then return to these function checks.

11. Inspect the column and push bar.

The column and push bar are in good condition and show no sign of cracks or distortion.

Yes No



→ Replace the column (refer to procedure 4.14), then return to these function checks.

12. Grasp the release handle on the top rear of the battery, lift up, and remove the battery from the column mounting bracket.

13. Inspect the column mounting bracket.

The column mounting bracket is securely attached to the column and shows no sign of distortion or damage to the battery locking lip.

Yes No



→ Replace the column mounting bracket (refer to procedure 4.10), then return to these function checks.

14. Install the battery on the column mounting bracket (refer to procedure 4.8).

15. The battery is making a continuous beeping sound.

Yes No



→ Go to step 17.

2

16. Recharge the battery, or replace the battery with a fully charged one then continue with these function checks.

17. Remove the handset pendant from the top of the column.

Slight pressure is required to release the handset pendant's magnetic grip on the column.

Yes No



→ Replace the handset pendant (refer to procedure 4.16), then continue with these function checks.

18. Place the back of the handset pendant against the side of the lift arm, then let go of it.

The handset pendant remains attached to the lift arm.

Yes No



→ Replace the handset pendant (refer to procedure 4.16), then continue with these function checks.



WARNING:

Do not stand directly under the lift arm while it is in motion. Personal injury could result.

19. Press the up (↑) button on the handset pendant.

The lift arm raises.

Yes No



→ Ensure that the battery is firmly seated on top of the control box. Ensure that the emergency stop button is in the out position. If the battery is firmly seated and the emergency stop is not set, go to RAP 2.5.

20. Press the down (↓) button on the handset pendant.

The lift arm lowers.

Yes No



→ Ensure that the battery is firmly seated on top of the control box. Ensure that the emergency stop button is in the out position. If the battery is firmly seated and the emergency stop is not set, go to RAP 2.5.

21. Press the up (↑) button on the handset pendant and raise the lift arm to its highest position.

22. Perform the following:

- a. Stand where you can conveniently grasp the lift arm.
- b. Press the down (↓) button on the handset pendant.
- c. When the lift arm begins to lower, grasp and hold the lift arm.

The lift arm stops and does not place any pressure (other than its own weight) on your hand.

Yes No

↓ → Replace the actuator (refer to procedure 4.12).

23. Perform the following:

- a. Raise the lift arm until it is in its highest position.
- b. Have a partner grasp the lift arm and place their full weight on it.
- c. Pull up and hold the emergency down release on the top of the actuator.

NOTE:

The lift arm will not descend unless there is significant weight applied.

The lift arm slowly drifts down to its lowest position.

Yes No

↓ → Replace the actuator (refer to procedure 4.12).

24. Perform the following:

- a. Press the up (↑) or down (↓) button on the handset pendant.
- b. After the lift arm has operated for a few seconds, push the emergency stop button on the face of the control box.

The lift arm movement immediately stops.

Yes No

↓ → Go to RAP 2.2.

25. With the emergency stop button pushed in, sequentially press the up (↑) and down (↓) buttons on the handset pendant.

The lift arm does not move.

Yes No

↓ → The lift arm does move. Go to RAP 2.2.

26. Turn the emergency stop button clockwise until it pops out.

27. Push the up (↑) and down (↓) buttons on the handset pendant.

The lift arm moves in the appropriate direction.

2

Yes **No**
 ↓ → Go to RAP 2.3.

28. Perform the following:

- a. Raise the lift arm until it is in its highest position.
- b. Have a partner grasp the lift arm and place their full weight on it.
- c. Use the tip of a ball point pen (or similar tool) to press in the emergency down release under the emergency stop button.

NOTE:

The lift arm will not descend unless there is significant weight applied.

The lift arm slowly drifts down to its lowest position.

Yes **No**
 ↓ → Replace the control box (refer to procedure 4.9). If this solves the problem, continue with these function checks. If not, replace the actuator (refer to procedure 4.12). If this solves the problem, continue with these function checks. If not, call Hill-Rom Technical Support at (800) 445-3720.

29. If necessary, connect the battery charger power cord to a 110/120V AC power source.

The “ON” LED on the battery charger remains lit as long as the unit is connected to an appropriate power supply.

Yes **No**
 ↓ → Go to RAP 2.6.

30. Place a partially or fully drained battery on the battery charger.

The “CHARGE” LED on the battery charger comes on.

Yes **No**
 ↓ → Go to RAP 2.6.

31. After no more than 4 hours, the “CHARGE” LED on the battery charger goes out.

Yes **No**
 ↓ → Go to RAP 2.6.

32. Install the charged battery on the control box, and use the handset pendant to raise and lower the lift arm.

The lift arm moves in the appropriate direction.

Yes **No**
 ↓ → Go to RAP 2.3.

33. The TRANS•LIFT™ Resident Stand Assist is operating normally. Go to “Final Actions” on page 2-9.

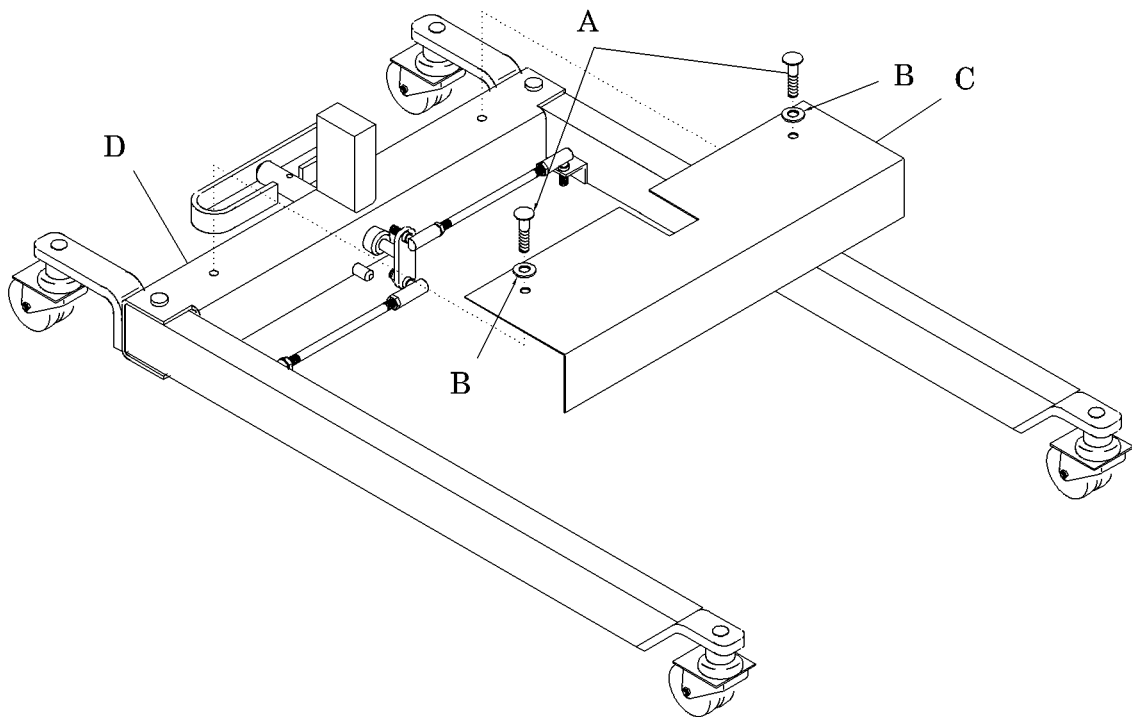
Final Actions

1. Complete the required preventive maintenance procedures. See “Preventive Maintenance Checklist” on page 6-9.
2. Complete all required administration tasks.

2.1 Leg Spreader Malfunction

1. Set the caster brakes.
2. Remove the two hex head bolts (A) and two flatwashers (B) securing the base cover (C) to the back support subassembly (D) (see figure 2-1 on page 2-10).

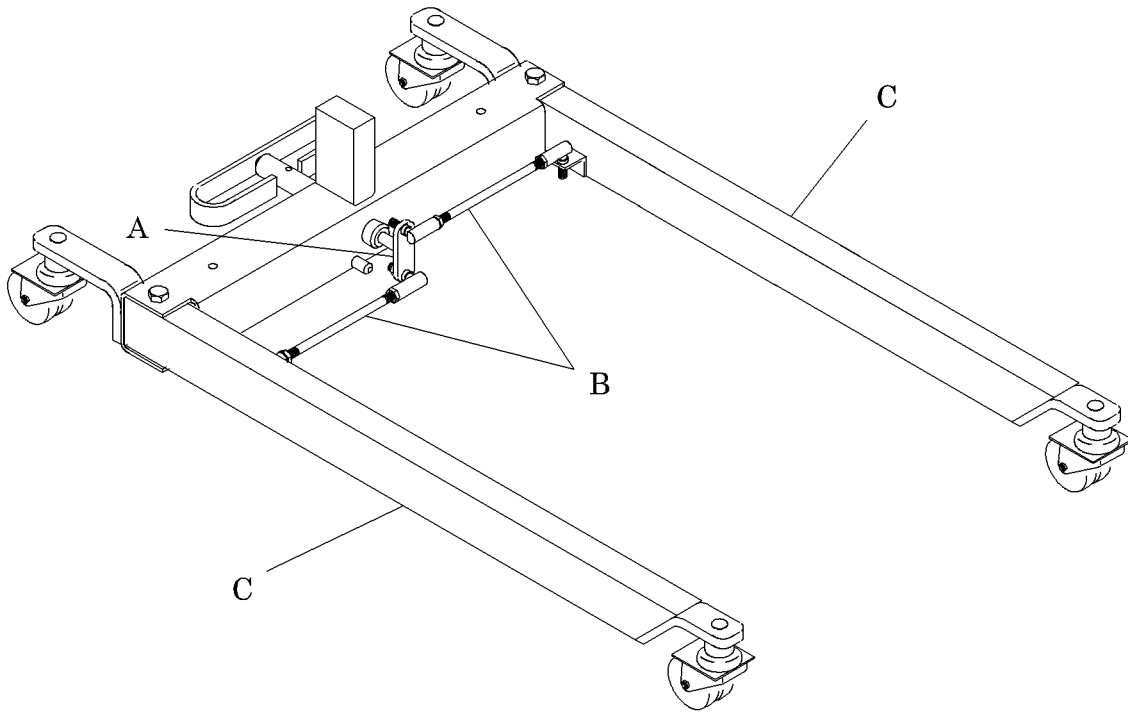
Figure 2-1. Base Cover



m173_015

3. Remove the base cover (C) from the back support subassembly (D).
4. Inspect the spreader shaft subassembly (A) (see figure 2-2 on page 2-11).

Figure 2-2. Spreader Mechanism



m173_028

The fasteners on the spreader shaft subassembly (A) are tight, and it is not bent or warped.

Yes **No**



→ Tighten any loose connections. If the spreader shaft subassembly (A) is bent or warped, replace it (refer to procedure 4.6). If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 5.

5. Inspect the tie rod assemblies (B).

The tie rod assemblies are firmly connected to the spreader shaft subassembly (A) and both leg subassemblies (C).

Yes **No**



→ Tighten any loose connections, and test the spreader bar action. If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 6.

6. Both tie rods are straight.

Yes **No**



→ Replace the bent tie rod(s) (refer to procedure 4.4). If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 7.

7. Perform the tie rod adjustment (refer to procedure 4.4).

This solves the problem.

Yes No

↓

→ Call Hill-Rom Technical Support at (800) 445-3720.

8. Go to “Final Actions” on page 2-9.

2.2 Control Box Malfunction

1. Firmly attach a new or freshly charged battery to the top of the control box, and securely clamp the battery to the column mounting post (refer to procedure 4.8).

2. Press the emergency stop button on the control box, then press either the up (↑) or down (↓) button on the handset pendant.

The lift arm does not move.

Yes No

↓

→ The lift arm does move. Replace the control box (refer to procedure 4.9). If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 3.

3. The handset pendant is firmly plugged into the bottom of the control box.

Yes No

↓

→ Properly align the handset pendant plug and insert it firmly into the bottom of the control box. If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 4.

4. The actuator cable is firmly plugged into the bottom of the control box.

Yes No

↓

→ Insert the actuator cable plug firmly into the bottom of the control box. If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 5.

5. Press either the up (↑) or down (↓) button on the handset pendant.

The lift arm moves in the appropriate direction while the emergency stop button is engaged.

Yes No

↓

→ Go to step 7.

6. Replace the control box (refer to procedure 4.9), then go to “Final Actions” on page 2-9.

7. Turn the emergency stop button clockwise to release it, and press either the up (↑) or down (↓) button on the handset pendant.

The lift arm moves smoothly in the appropriate direction.

Yes No

↓

→ Replace the control box (refer to procedure 4.9), then go to “Final Actions” on page 2-9

8. The problem is not a control box malfunction. Return to the “Function Checks” on page 2-4.

2.3 Battery Malfunction

1. Remove the battery from the column mounting post.
2. Set a voltmeter for DC and measure the current at the terminals on the bottom of the battery.

The current measures 24V DC.

Yes No

↓

→ Recharge the battery, or replace it with a fully charged battery. If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 3.

3. Install the battery on top of the control box (refer to procedure 4.8).
4. The battery is silent.

Yes No

↓

→ A beeping sound indicates a low battery condition. Recharge the battery or replace it with a fully charged battery. If this solves the problem, go to “Final Actions” on page 2-9. If not, call Hill-Rom Technical Support at (800) 445-3720.

5. Turn the emergency stop button clockwise to release it, if necessary, and push either the up (↑) or down (↓) button on the handset pendant.

The lift arm moves smoothly in the appropriate direction.

Yes No

↓

→ If the lift arm operates erratically, check to see that the battery is firmly connected to the control box and securely attached to the column mounting post. If the connection is good, but operation is unsatisfactory the likely cause is a bad terminal on the battery or control box. Replace the battery (refer to procedure 4.8). If this solves the problem, go to “Final Actions” on page 2-9. If not, replace the control box (refer to procedure 4.9). If this solves the problem, go to “Final Actions” on page 2-9. If not, call Hill-Rom Technical Support at (800) 445-3720.

6. The problem is not a battery malfunction. Return to the “Function Checks” on page 2-4.

2

2.4 Actuator Malfunction

1. Both the handset pendant and actuator cords are firmly plugged into the control box.

Yes No



→ Plug the cords firmly into the control box. If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 2.

2. The battery is firmly locked into the column mounting bracket.

Yes No



→ Lock the battery into the column mounting bracket. If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 3.

3. Plug a handset pendant from a working unit into the control box, and press either button.

The lift arm raises or lowers as appropriate.

Yes No



→ Replace the actuator (refer to procedure 4.12), then go to “Final Actions” on page 2-9.

4. Perform the following:

- a. Press and hold the up (↑) button on the handset pendant until the lift arm reaches its highest point.
- b. Have a partner grasp the lift arm and place their full weight on it.

NOTE:

The lift arm will not descend unless there is significant weight applied.

- c. Pull up on and hold the emergency down release on top of the actuator.

The lift arm drifts slowly down to its lowest position.

Yes No



→ Replace the actuator (refer to procedure 4.12), then go to “Final Actions” on page 2-9.

5. Perform the following:

- a. Press and hold the up (↑) button on the handset pendant until the lift arm reaches its highest point.
- b. Have a partner grasp the lift arm and place their full weight on it.

NOTE:

The lift arm will not descend unless there is significant weight applied.

- c. Use the tip of a ball point pen (or similar tool) to press in on the emergency down release under the emergency stop button on the control box.

The lift arm drifts slowly down to its lowest position.

Yes No

↓

→ Replace the actuator (refer to procedure 4.12). If this solves the problem, go to “Final Actions” on page 2-9. If not, replace the control box (refer to procedure 4.9). If this solves the problem, go to “Final Actions” on page 2-9. If not, call Hill-Rom Technical Support at (800) 445-3720.

6. Go to “Final Actions” on page 2-9.

2

2.5 Handset Pendant Malfunction

1. The handset pendant is securely plugged into the bottom of the control box.

Yes No



→ Plug the handset pendant securely into the bottom of the control box. If this solves the problem, go to “Final Actions” on page 2-9. If not, proceed with step 2

2. The emergency stop button is **out**.

Yes No



→ Turn the emergency stop button clockwise to release it. If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 3.

3. Place your hand on the actuator, and press the up (↑) button on the handset pendant.

You can feel slight vibrations from the actuator and the lift arm raises.

Yes No



→ Go to RAP 2.2 and rule out a control box malfunction before replacing the handset pendant (refer to procedure 4.16). If this solves the problem, go to “Final Actions” on page 2-9. If not, call Hill-Rom Technical Support at (800) 445-3720.

4. Press the down (↓) button on the handset pendant.

The lift arm lowers.

Yes No



→ Replace the handset pendant (refer to procedure 4.16). If this solves the problem, go to “Final Actions” on page 2-9. If not, call Hill-Rom Technical Support at (80) 445-3720.

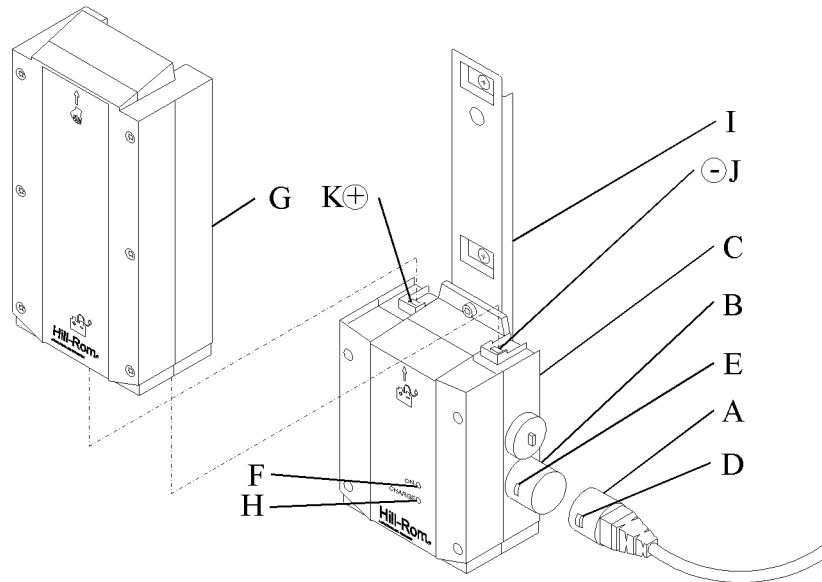
5. The problem is not a handset pendant malfunction. Return to the “Function Checks” on page 2-4.

2.6 Battery Charger Malfunction

1. The power cord is plugged into a 110V AC power source.

Yes	No
↓	→ Plug the power cord into an appropriate power source. If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 2.
2. The power cord (A) is securely locked into the receptacle (B) on the side of the battery charger (C) (see figure 2-3 on page 2-19).

Figure 2-3. Battery Charger Power Cord Connection



- | | |
|------------|--|
| Yes | No |
| ↓ | → Plug the power cord (A) into the receptacle (B) on the side of the battery charger (C). Ensure that the locking tabs (D) on the power cord (A) plug engage the locking slots (E) on the receptacle (B). If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 3. |



WARNING:

Use the appropriate voltage meter and setting when measuring voltage. Handle probes only by their insulated sections. Use extreme caution when placing probes on potentially live contact points. Contact with live electrical circuits can cause injury or death.

3. The “On” LED (F) is illuminated.

2

Yes No

↓

→ Check the power supply at the wall outlet. If the outlet **is not** delivering 110/120V AC, check the line circuit breaker or fuse. If the fuse or circuit breaker setting is good, have a qualified electrician repair the circuit or wall outlet. If the power supply at the wall outlet is appropriate, check the power supply at the charger end of the battery charger power cord. If the power supply at the charger end of the power cord is less than 110/120V AC, replace the power cord (refer to procedure 4.15). If this solves the problem, go to “Final Actions” on page 2-9. If not, continue with step 5.

4. Set the voltmeter for DC and check the reading at the battery charger terminals (J and K).

The voltage measures 27.6V DC ($\pm 2\%$), and the current measures < 650 mA.

Yes No

↓

→ Replace the battery charger (refer to procedure 4.15). If this solves the problem, go to “Final Actions” on page 2-9. If not, call Hill-Rom Technical Support at (800) 445-3720.

5. Place a drained battery (G) on the battery charger (C).

The “CHARGE” LED (H) lights.

Yes No

↓

→ Replace the battery charger (C) (refer to procedure 4.15). If this solves the problem, go to “Final Actions” on page 2-9. If not, call Hill-Rom Technical Support at (800) 445-3720.

6. The battery (G) stays in place without additional support.

Yes No

↓

→ Replace the wall mounting bracket (I) (refer to procedure 4.17), then go to “Final Actions” on page 2-9.

7. The battery charger recharges a drained battery in approximately 4 hours.

Yes No

↓

→ Replace the battery charger (refer to procedure 4.15), then go to “Final Actions” on page 2-9.

8. Go to “Final Actions” on page 2-9.

Chapter 3

Theory of Operation

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NOTES:

3

Theory of Operation

The TRANS•LIFT™ Resident Stand Assist consists of a column stand assembly mounted on a castered base assembly (see figure 3-1 on page 3-5). The base frame is widened by using the spreader bar pedal. The lift arm and adjustable stand assist sling are attached to the column stand subassembly. A battery powered actuator raises and lowers the lift arm and sling. The knee and foot supports are located below the lift arm. These provide additional support, for the resident, when standing and foot placement during resident transfer.

Braking

The rear casters are equipped with brakes. The brakes allow the TRANS•LIFT™ Resident Stand Assist to remain stationary during operation.

Actuator

The actuator motor is an electrically powered 24V DC unit that operates a screw drive to raise and lower a piston connected to the lift arm. A clutch in the motor prevents movement of the lift arm if it encounters any resistance when lowering the resident. The actuator also contains an emergency down release button. In the event of a battery failure while a resident is on the TRANS•LIFT™ Resident Stand Assist, the caregiver simply lifts and holds the emergency down release, and the resident slowly lowers onto a bed or chair.

Handset

The handset operates the actuator arm using separate up and down arrow buttons. The handset's magnetic back can conveniently attach to any metal TRANS•LIFT™ Resident Stand Assist surface. However, the handset should be placed on the area indicated by the placement label.

Battery

The TRANS•LIFT™ Resident Stand Assist is powered by a 24V DC rechargeable battery. The battery plugs into the top of the control unit on the column and locks onto the mounting bracket.

A fully charged battery will provide approximately 40 assists. After approximately 20 assists, the raising and lowering of the lift arm will begin to become noticeably slower than with a fully charged battery. In addition, an audible alarm sounds when the battery power is low.

3

Battery Charger

The battery charger mounts to a wall bracket at convenient height for the caregiver. A power cord connects the battery charger to a standard 110/120V AC power source. When a battery is placed on the charger, the charging connection is automatically made and the charging process begins. LEDs on the battery charger show the system status. An “On” LED indicates that the battery charger is plugged into a power source. A “Charging” LED remains lighted while the battery is charging. The “Charging” LED goes out when the battery is fully charged. A drained battery takes approximately 4 hours to fully charge.

Control Unit

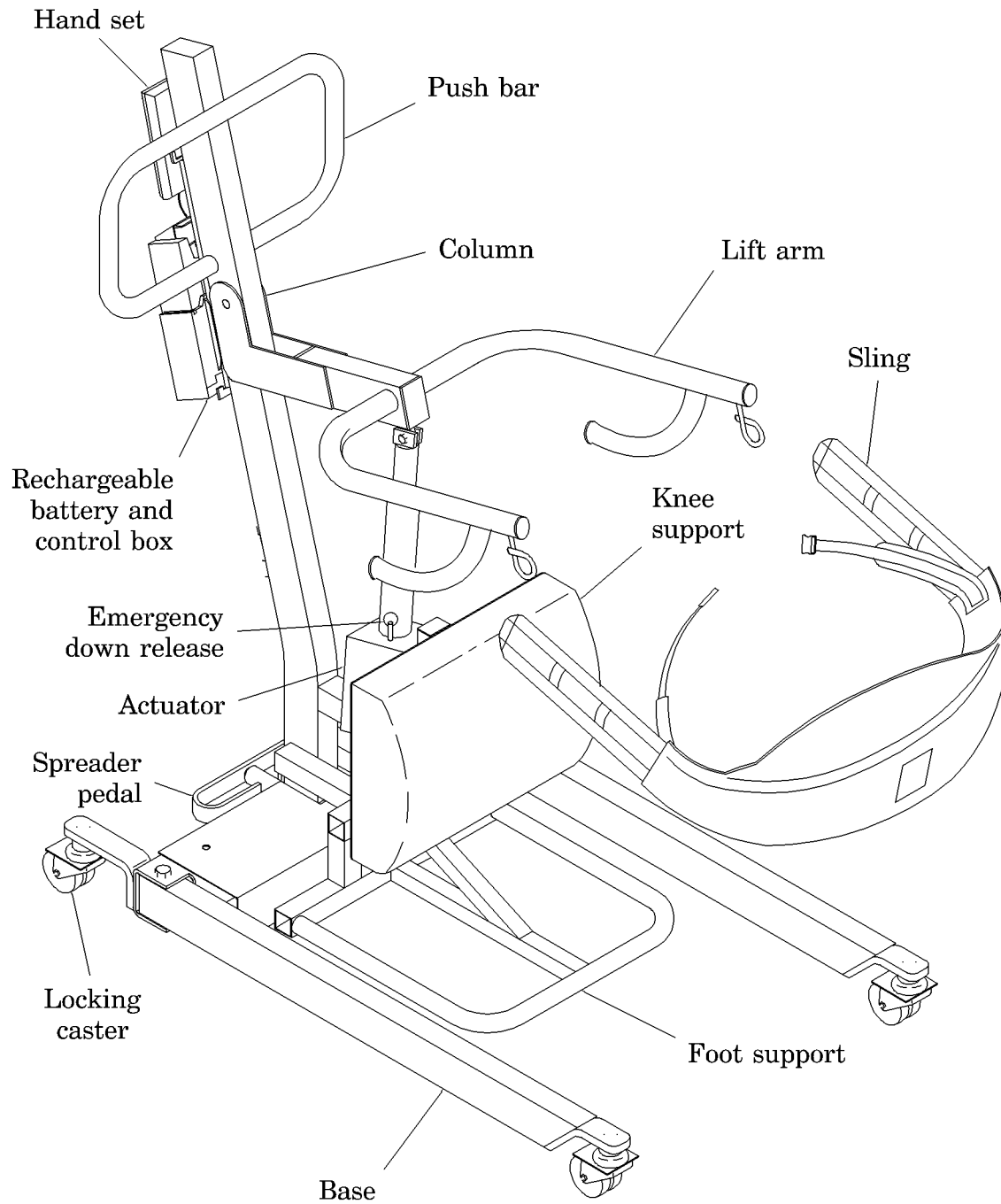
The control unit accepts input from the handset pendant and routes power and commands to the actuator. The handset pendant is attached to the control unit by a multi-pin cable connector. The control unit is attached to the actuator through a cord with a coaxial plug.

The signals the control box sends to the actuator manage the current to provide a soft start and soft stop. This provides a smooth assist with no startling jerk or bounce at the beginning and end of the assist movement.

When pushed, an emergency stop button on the face of the control unit shuts off all power to the actuator. A positive twist release of the emergency stop button is required to restore power and operate the actuator.

An emergency down release is located below the emergency stop button. This button will allow the lift arm to drift down to lower the resident in the event of a power failure. The emergency down function is activated by inserting the tip of a ball point pen (or similar tool) into the hole indicated by a down (↓) arrow icon.

Figure 3-1. TRANS•LIFT™ Resident Stand Assist



3

m173_062

NOTES:

Chapter 4

Removal, Replacement, and Adjustment Procedures

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4.1 Front Caster

Tools required: Socket head wrench

Removal

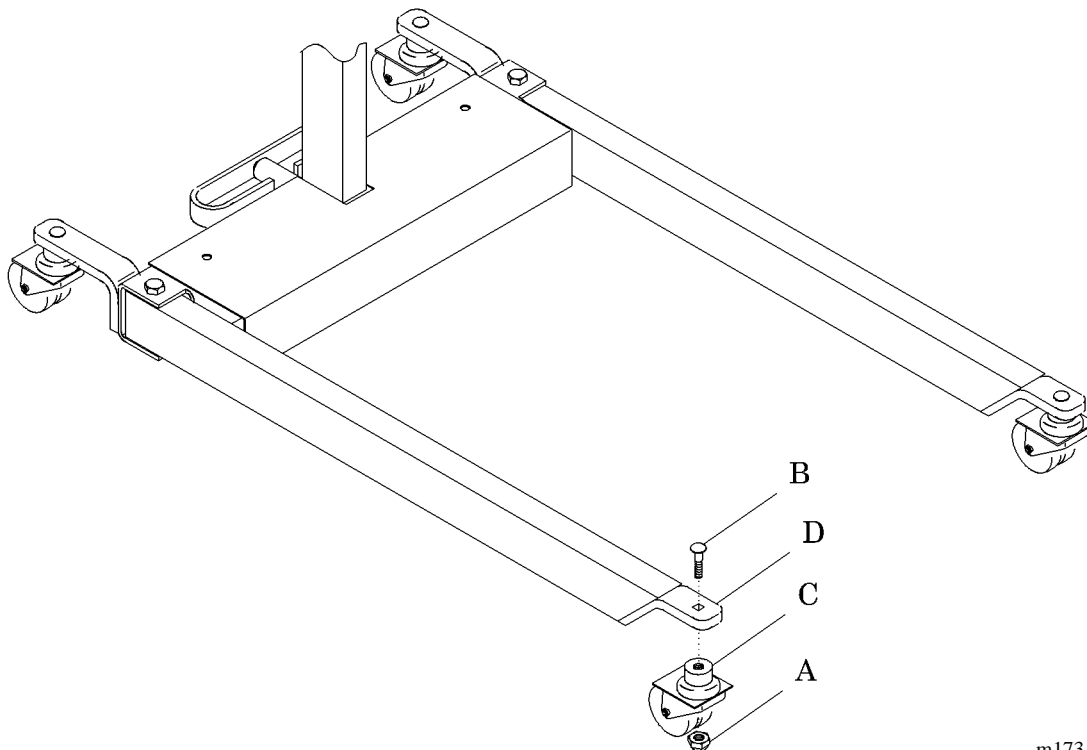


CAUTION:

Lay a sheet or other protective cloth on the floor before turning the unit on its back. Failure to do so could result in equipment finish damage.

1. Lay a sheet or other protective cloth on the floor. Place the unit on its back.
2. Remove the elastic stop nut (A) and carriage bolt (B) securing the front caster (C) to the leg subassembly (D) (see figure 4-1 on page 4-3).

Figure 4-1. Front Caster



3. Remove the front caster (C) from the leg subassembly (D).

Replacement



WARNING:

Use a new elastic stop nut. Installation of used elastic stop nuts could result in personal injury or equipment damage.

Perform the removal procedure in reverse order.

4.2 Rear Caster

Tools required: Socket head wrench

Removal

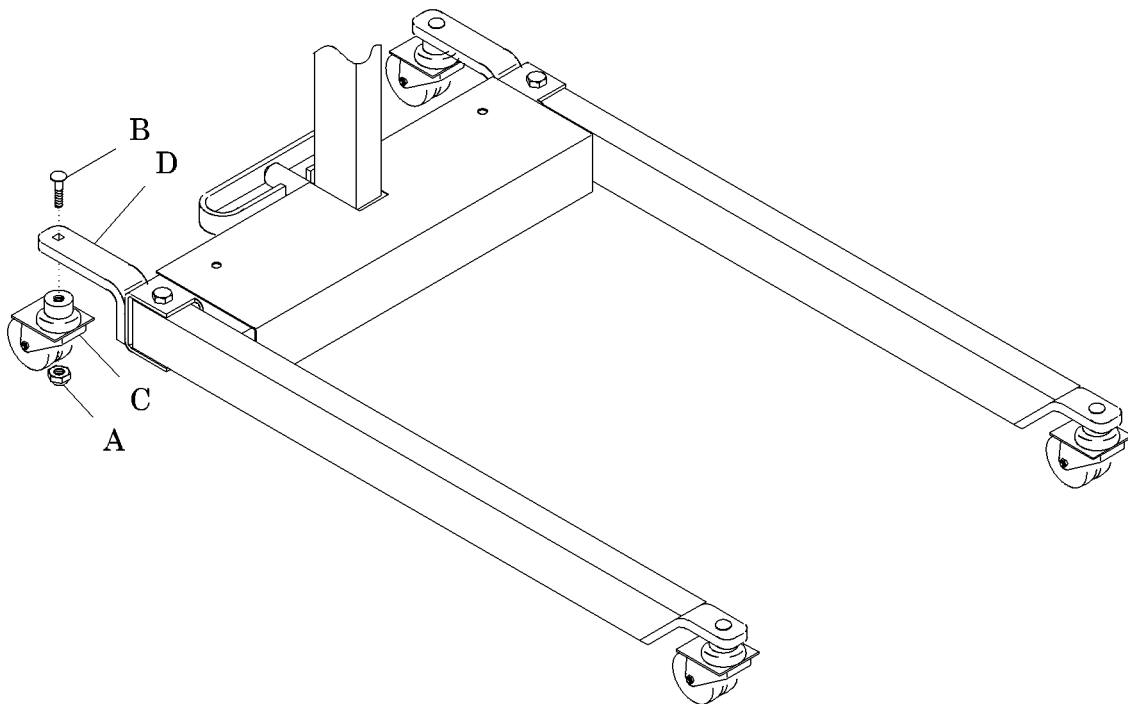


CAUTION:

Lay a sheet or other protective cloth on the floor before turning the unit on its side. Failure to do so could result in equipment finish damage.

1. Lay a sheet or other protective cloth on the floor. Place the unit on the side opposite from the caster being replaced.
2. Remove the elastic stop nut (A) and carriage bolt (B) securing the rear caster (C) to the back support subassembly (D) (see figure 4-2 on page 4-5).

Figure 4-2. Rear Caster



m173_011

3. Remove the rear caster (C) from the back support subassembly (D).

Replacement



WARNING:

Use a new elastic stop nut. Installation of used elastic stop nuts could result in personal injury or equipment damage.

Perform the removal procedure in reverse order.

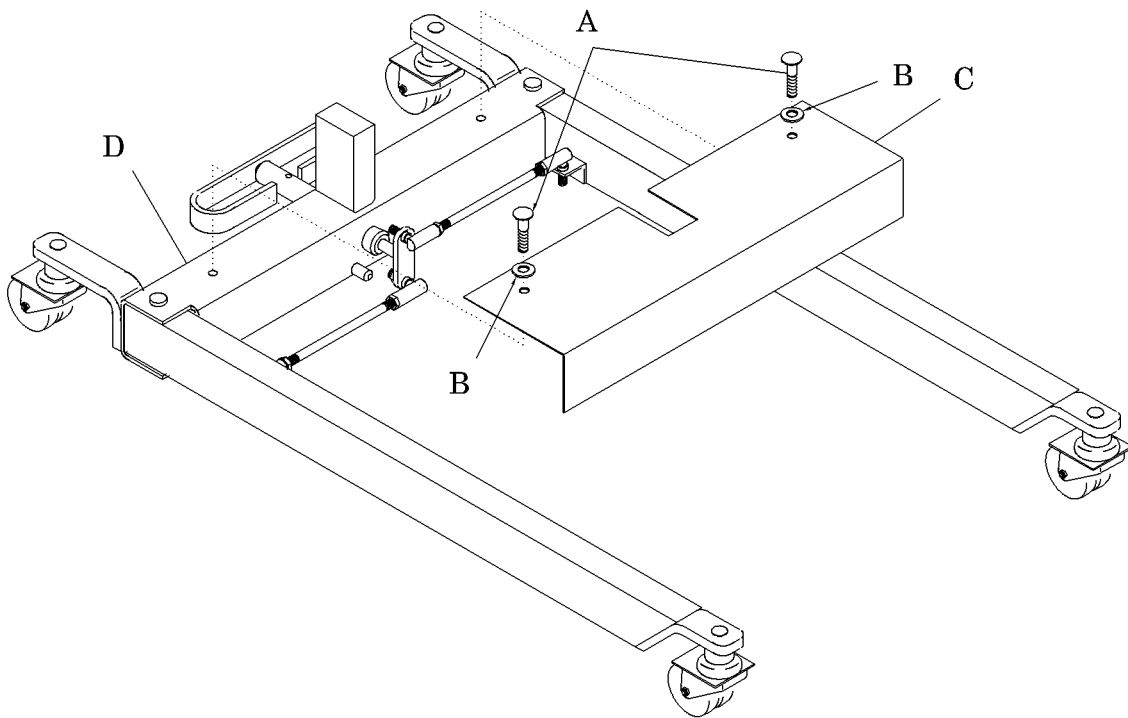
4.3 Base Cover

Tools required: Socket head wrench

Removal

1. Set the caster brakes.
2. Remove the two hex head bolts (A) and two flatwashers (B) securing the base cover (C) to the back support subassembly (D) (see figure 4-3 on page 4-7).

Figure 4-3. Base Cover



m173_015

3. Remove the base cover (C) from the back support subassembly (D).

Replacement

Perform the removal procedure in reverse order.

4.4 Tie Rod Assembly

Tools required: Socket head wrench

Removal

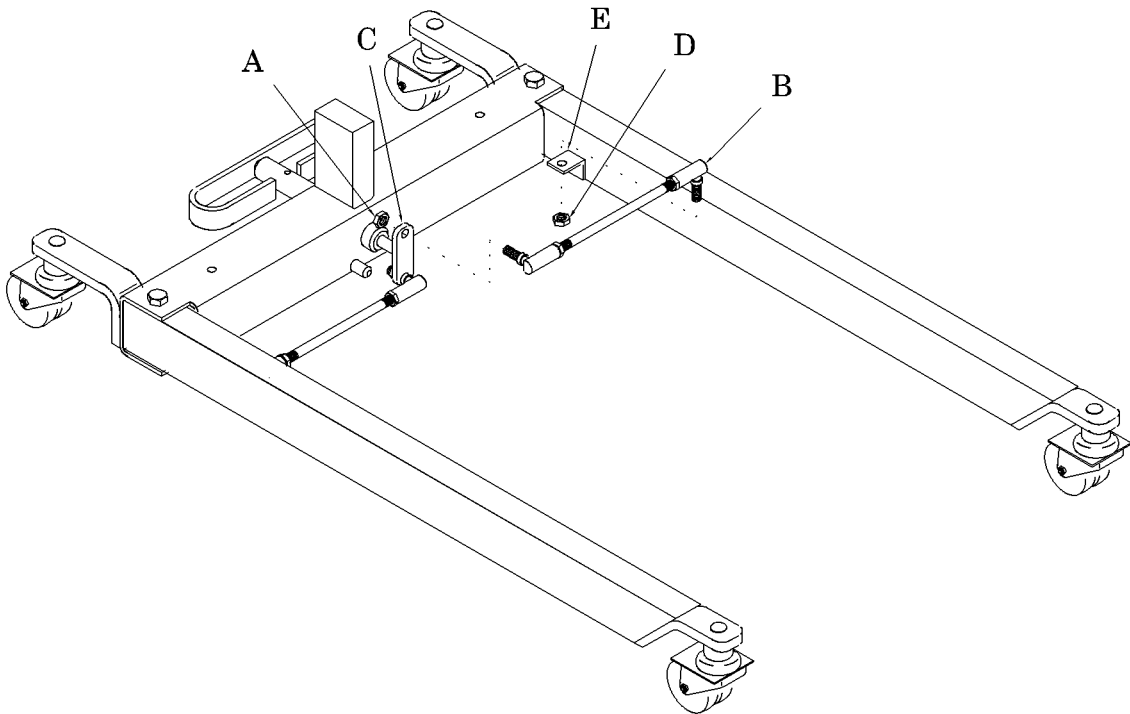


CAUTION:

Lay a sheet or other protective cloth on the floor before turning the unit on its back. Failure to do so could result in equipment finish damage.

1. Lay a sheet or other protective cloth on the floor. Place the unit on its back.
2. Remove the base cover (refer to procedure 4.3).
3. Remove the hex nut (A) securing the tie rod assembly (B) to the spreader shaft subassembly (C) (see figure 4-4 on page 4-8).

Figure 4-4. Tie Rod Assembly



m173_012

4. Remove the hex nut (D) securing the tie rod assembly (B) to the leg subassembly (E).
5. Remove the tie rod assembly (B).

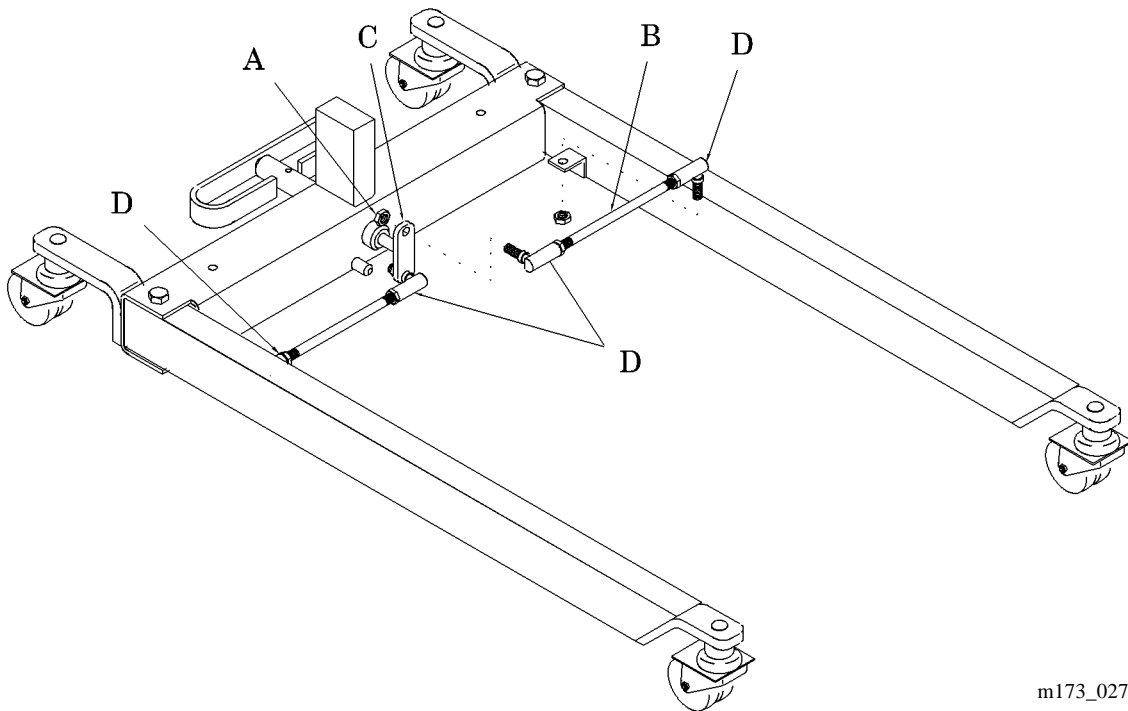
Replacement

1. Perform the removal procedure in reverse order.
2. Test the spreader bar function.
3. If necessary, perform the adjustment procedure below.
4. Install the base cover.

Adjustment

1. Remove the hex nut (A) securing the tie rod assembly (B) to the spreader shaft subassembly (C) (see figure 4-5 on page 4-9).

Figure 4-5. Spreader Bar Adjustments



m173_027

2. Turn the tie rod turnbuckles (D) as needed to adjust the length.
3. Connect the tie rod assembly (B) to the spreader shaft subassembly (C).
4. Install the base cover.

4.5 Leg Subassembly

Tools required: Socket head wrench

Removal

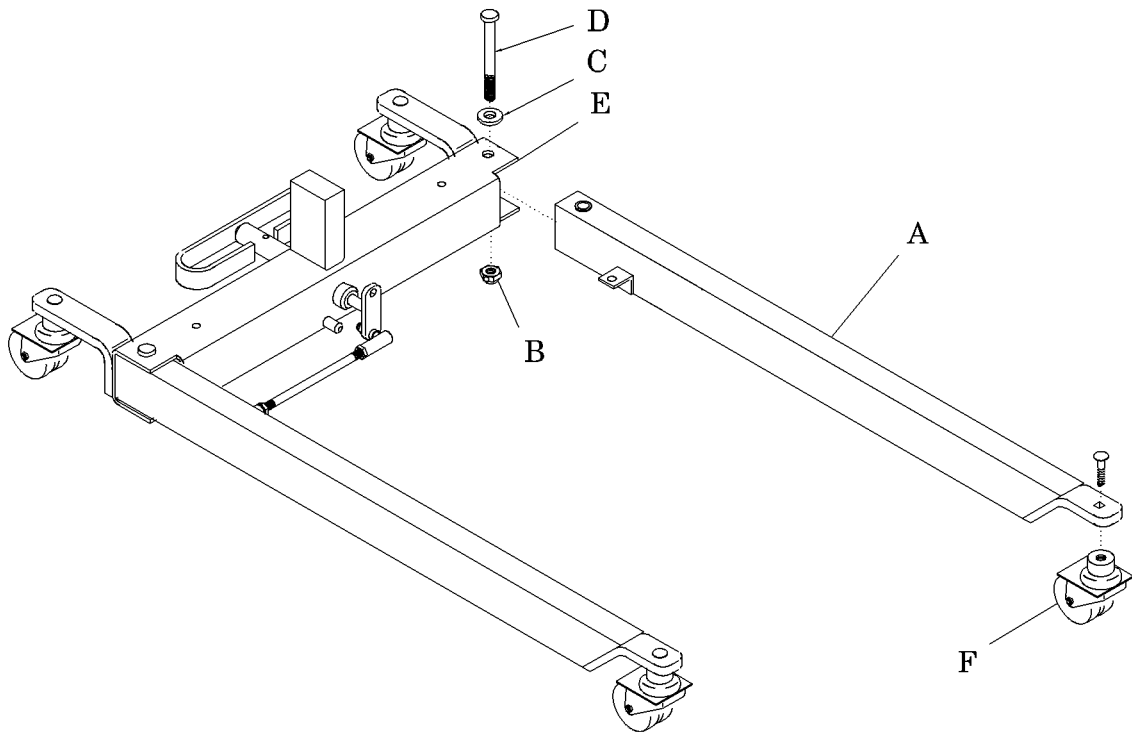


CAUTION:

Lay a sheet or other protective cloth on the floor before turning the unit on its back. Failure to do so could result in equipment finish damage.

1. Lay a sheet or other protective cloth on the floor. Place the unit on its back.
2. Remove the base cover (refer to procedure 4.3).
3. Remove the tie rod assembly from the leg subassembly (A) (refer to procedure 4.4) (see figure 4-6 on page 4-10).

Figure 4-6. Support Leg



m173_013

4. Remove the elastic stop nut (B), flatwasher (C), and shoulder bolt (D) securing the leg subassembly (A) to the back support subassembly (E).
5. Remove the leg subassembly (A) from the back support subassembly (E).

6. Remove the front caster (F) from the leg subassembly (A) (refer to procedure 4.1).

Replacement



WARNING:

Use a new elastic stop nut. Installation of used elastic stop nuts could result in personal injury or equipment damage.

Perform the removal procedure in reverse order.

4.6 Spreader Shaft and Pedal Subassemblies

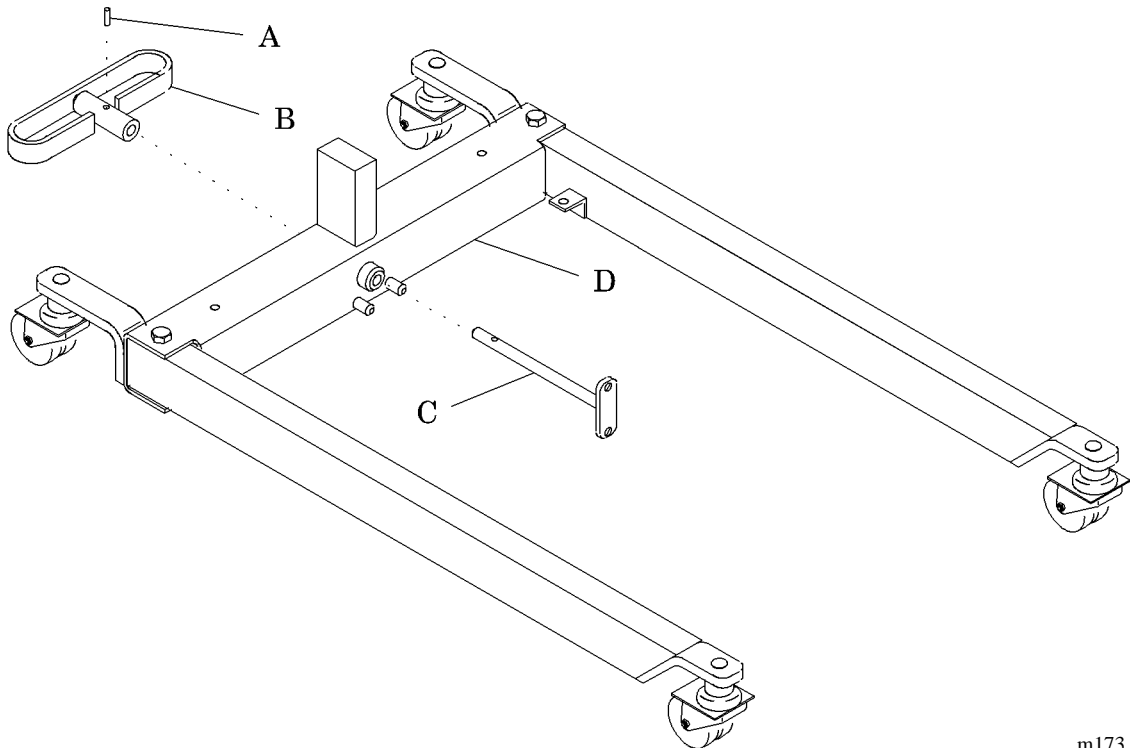
Tools required: Hammer and pick

Socket head wrench

Removal

1. Set the caster brakes.
2. Remove the base cover (refer to procedure 4.3).
3. Remove the tie rod assemblies (refer to procedure 4.4).
4. Remove the roll pin (A) securing the pedal assembly (B) to the spreader shaft subassembly (C) (see figure 4-7 on page 4-12).

Figure 4-7. Spreader Shaft and Pedal Subassemblies



m173_014

5. Remove the pedal subassembly (B) from the spreader shaft subassembly (C).
6. Remove the spreader shaft subassembly (C) from the back support subassembly (D).

Replacement

Perform the removal procedure in reverse order.

4.7 Base Assembly

Tools required: 3/8" open end wrench

Removal



WARNING:

Lock both rear casters before beginning any service on the unit. Failure to do so could result in personal injury.

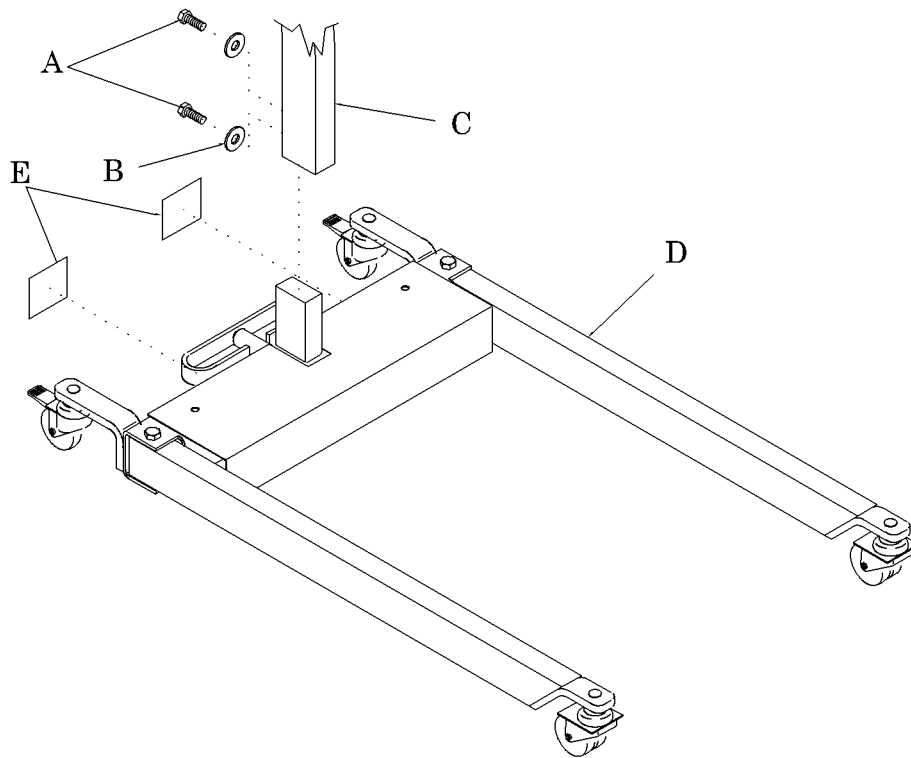
1. Set the brakes on both rear casters.



WARNING:

Push in the emergency stop button on the control box to lock out power and prevent inadvertant movement of the lift arm. Failure to do so could result in personal injury.

2. Push in the emergency stop button on the control box.
3. Remove the two bolts (A) and washers (B) that secure the column (C) to the base assembly (D) (see figure 4-8 on page 4-15).

Figure 4-8. Base Assembly Removal

m173_007

**WARNING:**

The column is heavy. Have a partner assist in lifting the column. Failure to do so could result in personal injury.

4. Lift the column (C) from the base assembly (D).

Replacement

1. Place the pedal spreader labels (E) onto the base assembly (D).
2. Perform the removal procedure in reverse order.

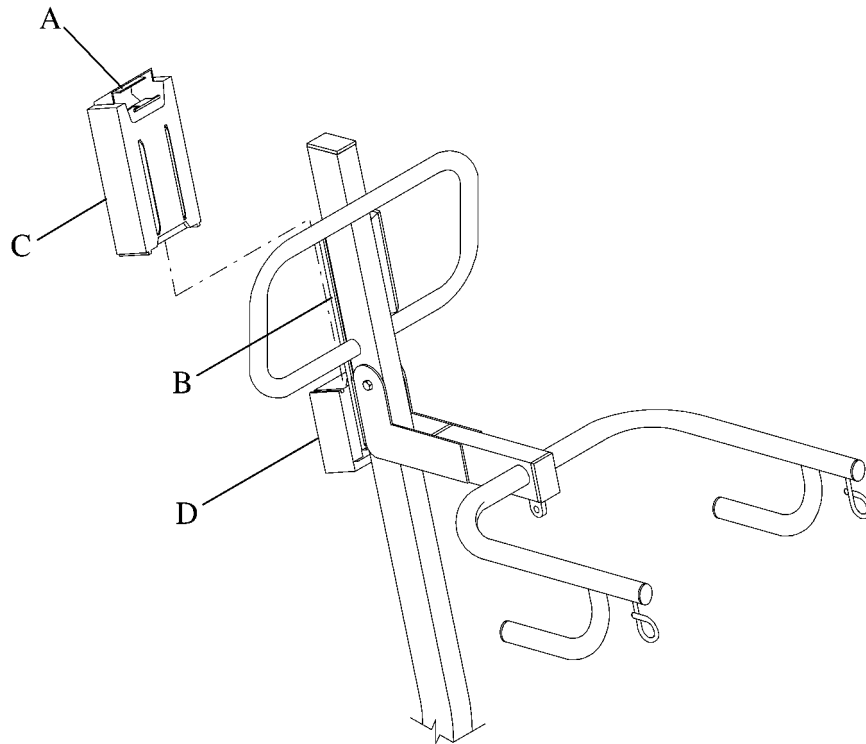
4.8 Battery Pack

Tools required: None

Removal

1. Pull the battery lock clamp (A) until it disengages the top of the mounting post (B) (see figure 4-9 on page 4-16).

Figure 4-9. Battery Pack Removal



m173_052

2. Remove the battery pack (C) from the control box (D).

Replacement

1. Perform the removal procedure in reverse order.
2. Check the TRANS•LIFT™ Resident Stand Assist for proper operation.

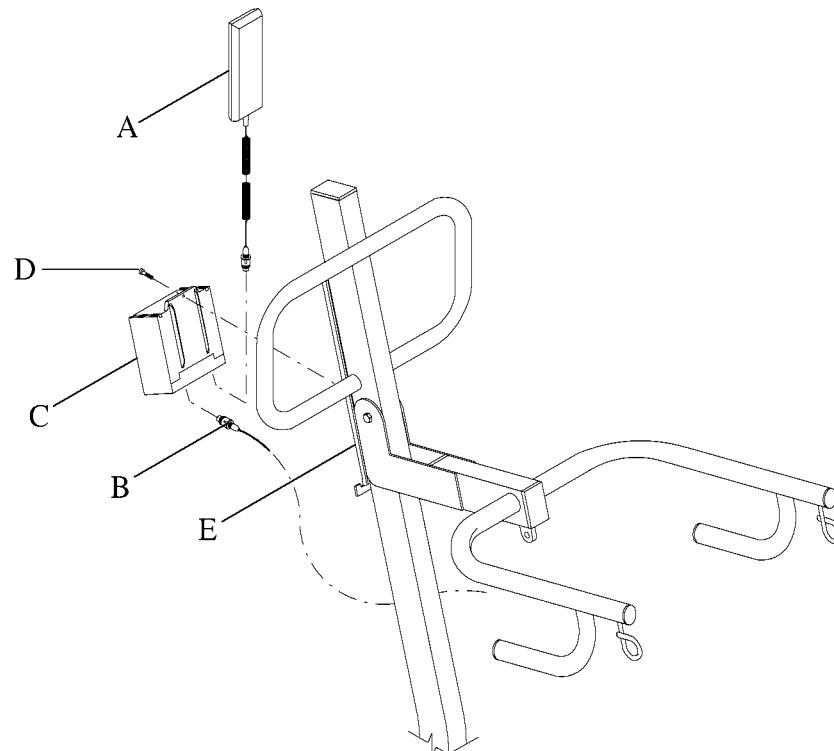
4.9 Control Box

Tools required: Screwdriver

Removal

1. Remove the battery pack (refer to procedure 4.8).
2. Disconnect the handset (A) and control box wiring harness (B) from the control box (C) (see figure 4-10 on page 4-17).

Figure 4-10. Control Box Removal



m173_053

3. Remove the control box mounting screw (D) and control box (C) from the mounting post (E).

Replacement

1. Perform the removal procedure in reverse order.
2. Check the TRANS•LIFT™ Resident Stand Assist for proper operation.

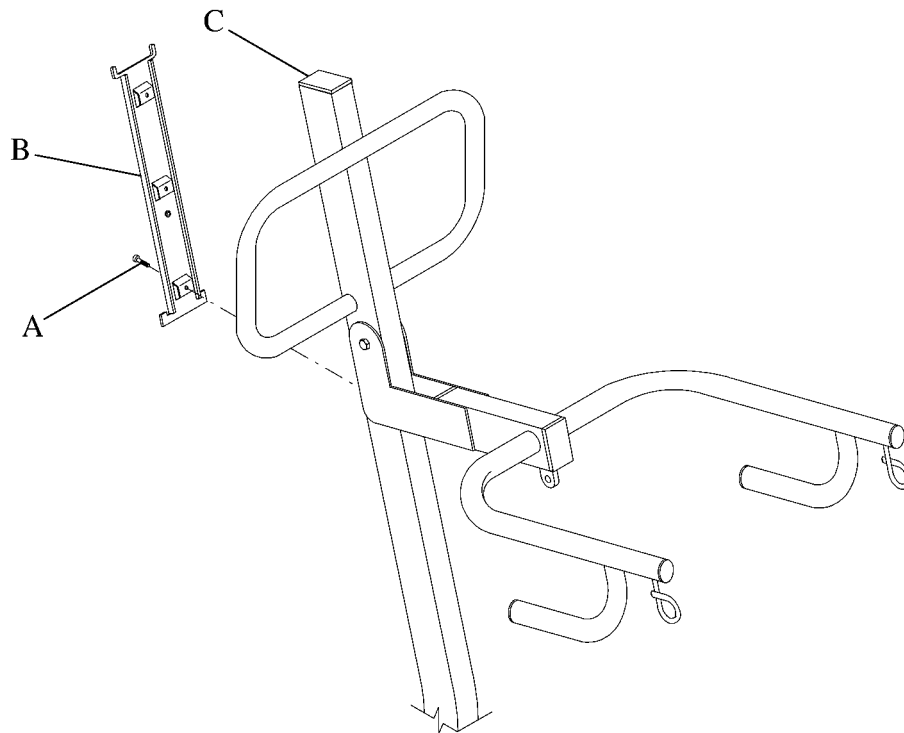
4.10 Mounting Post

Tools required: Screwdriver

Removal

1. Remove the battery pack (refer to procedure 4.8).
2. Remove the control box (refer to procedure 4.9).
3. Remove the screws (A) and mounting post (B) from the column stand subassembly (C) (see figure 4-11 on page 4-18).

Figure 4-11. Mounting Post Removal



m173_054

Replacement

Perform the removal procedure in reverse order.

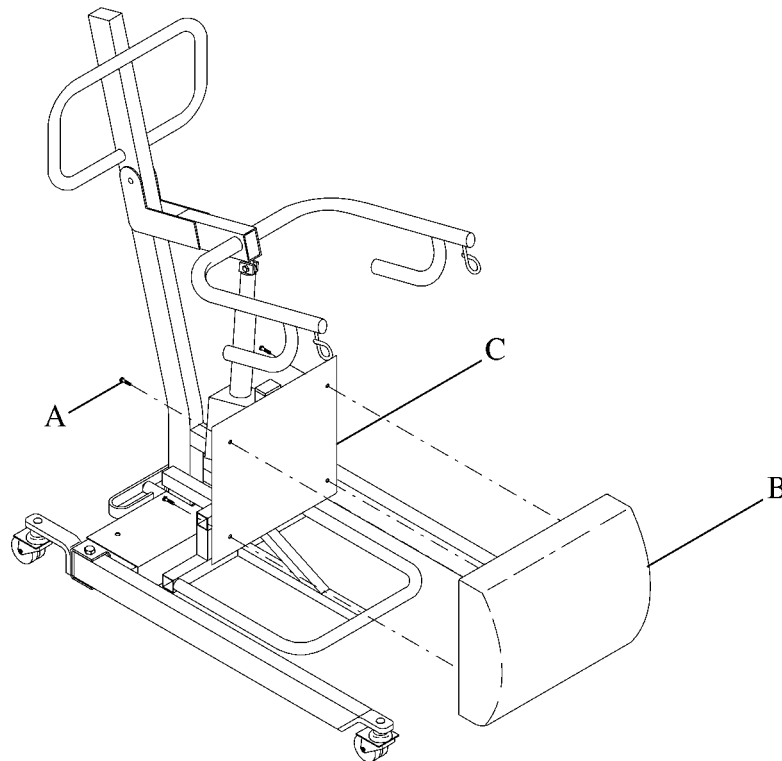
4.11 Knee Pad Assembly

Tools required: Screwdriver

Removal

Remove the hex head bolts (A) and knee pad assembly (B) from the knee support (C) (see figure 4-12 on page 4-19).

Figure 4-12. Knee Pad Assembly Removal



m173_055

Replacement

Perform the removal procedure in reverse order.

4.12 Actuator

Tools required: 3/8" open end wrench

Removal



WARNING:

Lock both rear casters before beginning any service on the unit. Failure to do so could result in personal injury.

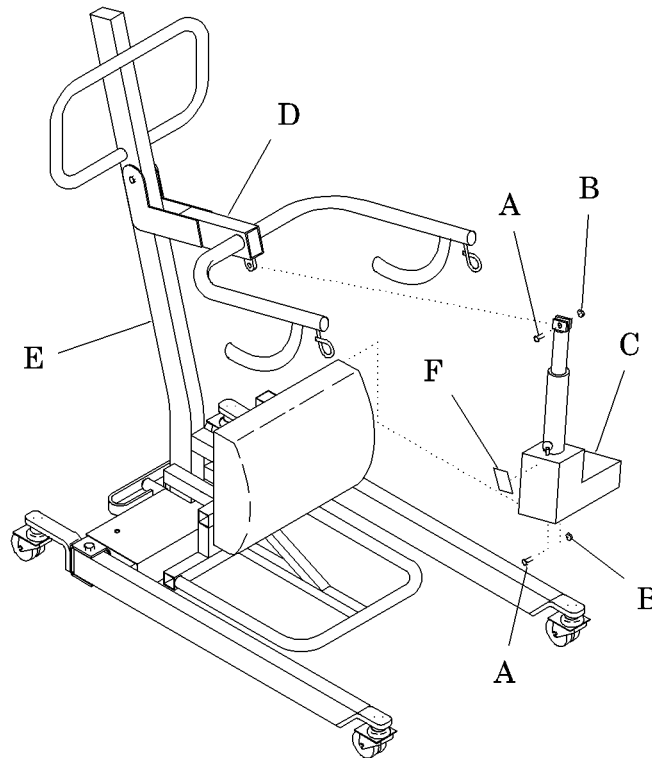
1. Set the brakes on both rear casters.
2. If possible, lower the lift arm to its lowest position.



WARNING:

Push in the emergency stop button on the control box to lock out power and prevent inadvertant movement of the lift arm. Failure to do so could result in personal injury.

3. Push in the emergency stop button on the control box.
4. Disconnect the control box wiring harness prior to actuator removal.
5. Remove the plastic plugs (A) and elastic stop nuts (B) from the actuator (C) (see figure 4-13 on page 4-21). Discard the elastic stop nuts (B).

Figure 4-13. Actuator Removal

m173_056

6. Remove the actuator (C) from the lift arm (D) and column stand assembly (E).

Replacement

1. Place the emergency down label (F) onto the actuator (C).



WARNING:

Use a new elastic stop nut. Installation of used elastic stop nuts could result in personal injury or equipment damage.

2. Perform the removal procedure in reverse order.
3. Check the actuator for proper operation.

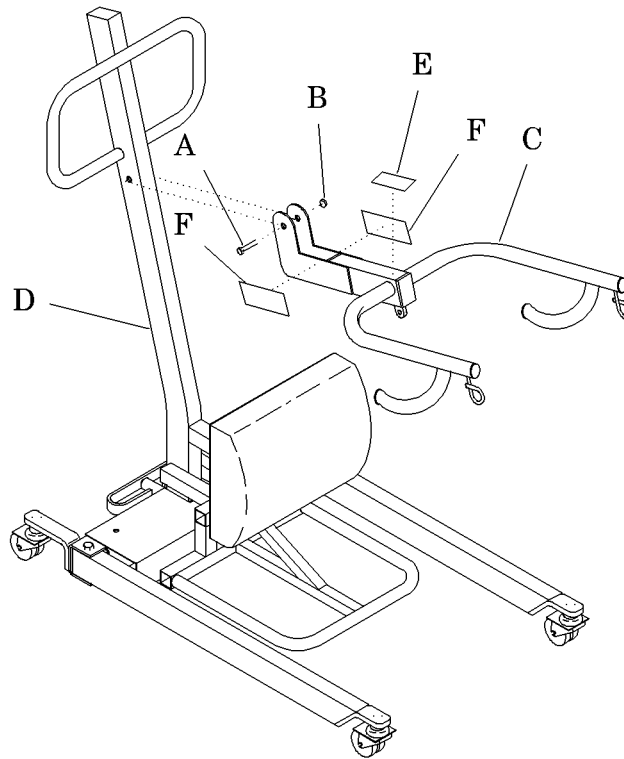
4.13 Lift Arm

Tools required: Socket head wrench

Removal

1. Disconnect the control box wiring harness.
2. Remove the actuator (refer to procedure 4.12).
3. Remove the shoulder bolt (A) and elastic stop nut (B) from the lift arm assembly (C) (see figure 4-14 on page 4-22). Discard the elastic stop nut (B).

Figure 4-14. Lift Arm Removal



m173_057

4. Remove the lift arm assembly (C) from the column stand assembly (D).

Replacement

1. Place the read caution label (E) and the two name labels (F) onto the lift arm assembly (C).

**WARNING:**

Use a new elastic stop nut. Installation of used elastic stop nuts could result in personal injury or equipment damage.

2. Perform the removal procedure in reverse order.
3. Check the TRANS•LIFT™ Resident Stand Assist for proper operation.

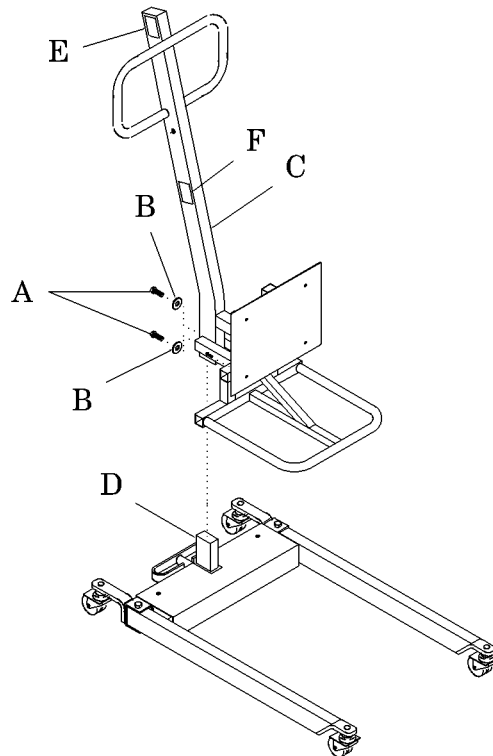
4.14 Column Stand Assembly

Tools required: 3/8" open end wrench

Removal

1. Disconnect the control box wiring harness.
2. Remove all attachments to the column stand assembly.
3. Remove the two hex head bolts (A) and two flatwashers (B) from the column stand assembly (C) (see figure 4-15 on page 4-24).

Figure 4-15. Column Stand Assembly Removal



m173_058

4. Remove the column stand assembly (C) from the base (D).

Replacement

1. Place the two pendant storage labels (E) and the data plate label (F) onto the column stand assembly (C).
2. Perform the removal procedure in reverse order.

4.15 Battery Charger

Tools required: Small screwdriver
Phillips screwdriver

Removal

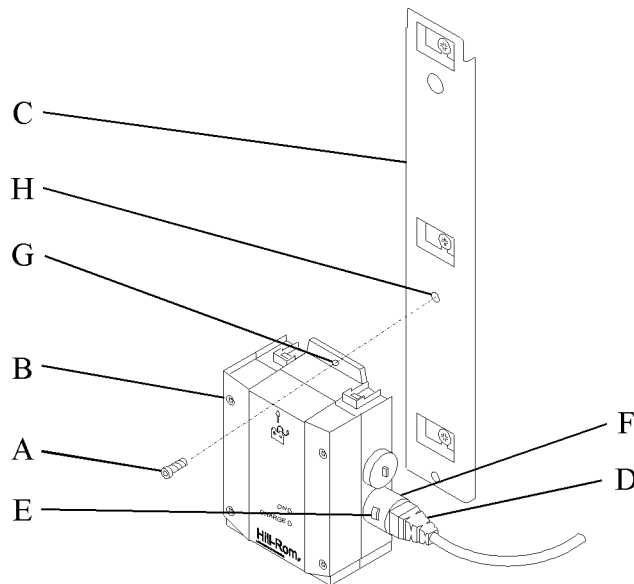


SHOCK HAZARD:

Unplug the unit from its power source. Failure to do so could result in personal injury or equipment damage.

1. Unplug the power cord from its power supply.
2. Remove the screw (A) that holds the battery charger (B) to the wall mounting bracket (C) (see figure 4-16 on page 4-25).

Figure 4-16. Battery Charger Mounting



m173_005

3. As you pull on the battery charger plug (D), use a small screwdriver to press the power cord plug locks (E) into the battery charger receptacle (F).
4. Pull the power cord plug (D) from the battery charger receptacle (F).

Replacement

1. Align the opening on the battery charger mounting tab (G) with the mounting hole (H) on the wall mounting bracket (C).
2. Install a screw (A) to attach the battery charger (B) to the wall mounting bracket (C).
3. Align the locks on the battery charger plug (D) with the openings in the battery charger receptacle (F).
4. Insert the battery charger plug (D) on the power cord into the battery charger receptacle (F) until the plug locks snap into place.

4

4.16 Handset Pendant

Tools required: None

Removal



WARNING:

Lock both rear casters before beginning any service on the unit. Failure to do so could result in personal injury.

1. Set the brakes on both rear casters.

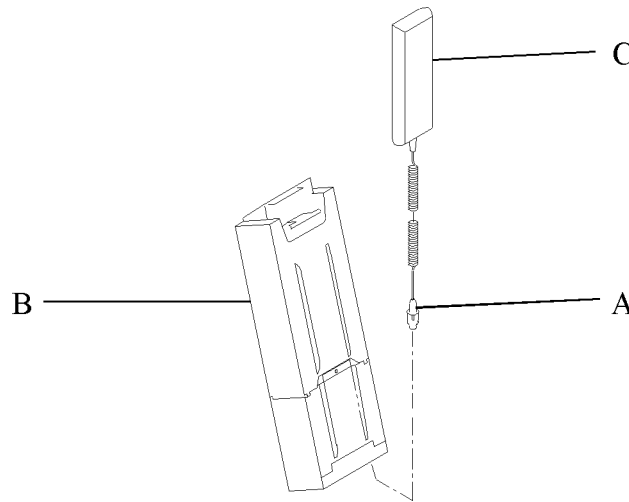


WARNING:

Push in the emergency stop button on the control box to lock out power and prevent inadvertent movement of the lift arm. Failure to do so could result in personal injury.

2. Push in the emergency stop button on the control box.
3. Pull the handset pendant plug (A) from its slot in the bottom of the control box (B) (see figure 4-17 on page 4-28).

Figure 4-17. Handset Pendant Attachment to Control Box



m173_021

4. Detach the handset pendant (C) from the top of the column.

Replacement

1. Place the magnetic back of the handset pendant (C) against the pendant storage label on the top of the column.

NOTE:

The handset pendant plug must be completely inserted into the control box in order to achieve the solid connection required for reliable operation.

2. Insert the handset pendant plug (A) into the slot on the bottom of the control box (B).

4.17 Wall Mounting Bracket

Tools required: Screwdriver

Removal

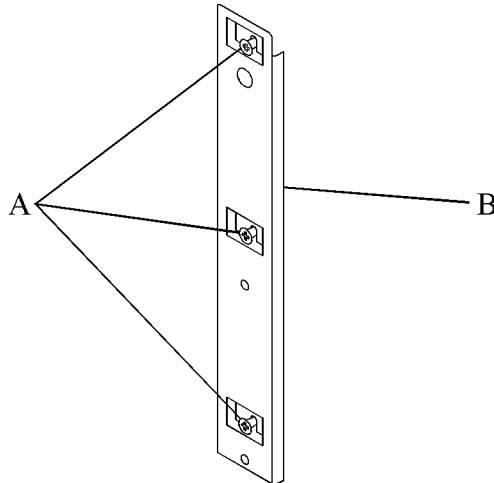
1. Lift the battery pack off the battery charger.
2. Remove the battery charger from the wall mounting bracket (refer to procedure 4.15).

NOTE:

It is not necessary to completely remove the screws that secure the wall mounting bracket to the wall. Back them out far enough to be free of the mounting bracket.

3. Back out the three screws (A) that hold the wall mounting bracket (B) (see figure 4-18 on page 4-29).

Figure 4-18. Wall Bracket Attachment



m173_009

4. Lift the wall mounting bracket (B) until the screws (A) will clear the hanger slots.

Replacement

Perform the removal steps in reverse order.

4

Chapter 5

Parts List

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NOTES:

Warranty

HILL-ROM COMPANY, INC. LIMITED WARRANTY

Hill-Rom Company, Inc. (Hill-Rom) has a long tradition of providing superior products and service to our customer. Our goal is "Total Customer Satisfaction". In that spirit, Hill-Rom is proud to offer the following warranty.

GENERAL WARRANTY (APPLICABLE UNLESS A SPECIFIC WARRANTY IS LISTED)

Hill-Rom warrants to the original purchaser that its products and replacement parts shall be free from defects in material and workmanship for a period of one (1) year from date of delivery. Hill-Rom's obligation under this warranty is expressly limited to supplying replacement parts and/or service for, or replacing, at its option, any product which is, in the sole discretion of Hill-Rom, found to be defective. In addition to the foregoing one year warranty, Hill-Rom warrants to the original purchaser that the frame and welds on its products will be free from structural defects for the life of the product. Any product upgrade or modification initiated by Hill-Rom does not affect the original product warranty.

SPECIFIC WARRANTIES

MATTRESS WARRANTIES

Hill-Rom warrants to the original purchaser that its mattress product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery. However, electro mechanical mattress components (compressors, valves, printed circuit boards, hoses, and couplers) are covered by the general one (1) year warranty.

EXPENDABLES WARRANTIES

A sixty (60) day limited warranty from date of delivery applies to expendable parts such as cushions, coverlets, software diskettes, locator badge batteries, dome light incandescent bulbs, overhead fluorescent tubes, heating elements, temperature probes, filter sheets, and microspheres. This warranty is limited to replacement of the parts covered.

TO OBTAIN PARTS AND SERVICE

In the United States, call Hill-Rom Technical Support Department at (800) 445-3720, Monday through Friday. In Canada, call Hill-Rom Technical Support Department at (800) 267-2337, Monday through Friday. Outside the United States and Canada, call your authorized Hill-Rom Distributor. In order to expedite service, we request you furnish the following information: customer identification number, product model number, serial number, and description of problem. A qualified specialist will provide, via telephone (United States and Canada), or FAX (Outside the United States and Canada), troubleshooting assistance for facility personnel and provide necessary parts to make repairs. If troubleshooting determines the need for on-site technical service, a qualified service representative will be dispatched. Replacement of non-technical items will be the responsibility of the customer. If requested by Hill-Rom, products or parts for which a warranty claim is made shall be returned prepaid to Hill-Rom's factory.

OUT OF WARRANTY EXCHANGE POLICY

After the expiration of the original warranty, upon request, Hill-Rom will ship as a replacement, components such as selected: motors and printed circuit boards, for like units returned to Hill-Rom by the original purchaser at a substantial savings. Please call Hill-Rom Technical Support Department for current pricing.

PARTS AVAILABILITY POLICY

Hill-Rom will offer parts for new and remanufactured products for ten (10) years from date of sale; for communications products for five (5) years from date of sale.

Note: Some original component parts and assemblies may not be available; functional equivalents may be substituted.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS OF PURPOSE. HILL-ROM'S OBLIGATION UNDER THESE WARRANTIES SHALL NOT INCLUDE ANY LIABILITY FOR LOSS OF PROFITS, DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES OR DELAYS.

Some states, provinces, or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply. Any improper or negligent use, any alterations or repairs not in accordance with Hill-Rom's manuals or performed by others in such manner as in Hill-Rom's sole judgment affects the product materially and adversely, shall void these warranties. These warranties do not cover failures due to misuse, abuse, neglect, or lack of routine maintenance. No employee or representative of Hill-Rom is authorized to change these warranties in any way or grant any other warranty unless in writing and signed by a Hill-Rom officer. These warranties provide specific legal rights; but, there may be other available rights, which vary from state to state, province to province, or country to country.

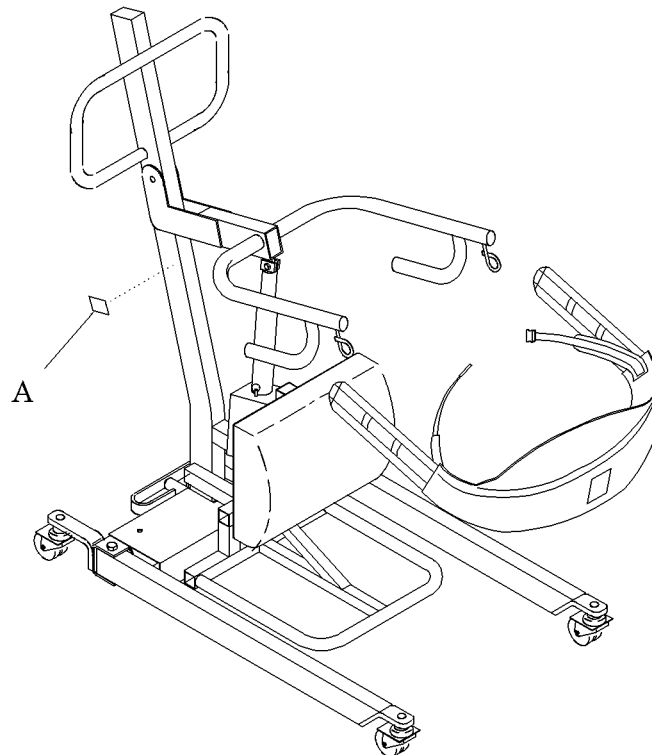
Revised April 17, 1997

NOTES:

Service Parts Ordering

Using the parts lists in this manual, identify the part number(s) you require. Find the product number and serial number on the product identification label (A) (see figure 5-1 on page 5-5).

Figure 5-1. Product Identification Label Location



m173_003

Call Hill-Rom Technical Support at (800) 445-3720 with the following information:

- Six-digit customer account number
- Purchase order number
- Product number
- Serial number
- Part number(s)

Hill-Rom also provides a fax number to promptly order parts, request part prices and availability, or follow up on a service order. The fax number is (812) 934-8472.

To order parts, a \$40.00 minimum will prevent a charge for processing your order.

Terms:

- Net 30 days
- F.O.B. Batesville, IN
- Prepaid shipping charges added to invoice
- All orders shipped UPS ground unless specified

Address all inquiries to:

ATTN TECHNICAL SUPPORT—PARTS
HILL-ROM COMPANY
1069 STATE ROUTE 46 E
BATESVILLE IN 47006-9167

Address all return goods to:

ATTN SERVICE STORES
DISTRIBUTION CENTER DOOR D23
HILL-ROM COMPANY
COUNTY ROAD 300E
BATESVILLE IN 47006-9167

NOTE:

To eliminate possible delays or incorrect billings, **do not** return any items without a Return Material Authorization (RMA) number. When a return is requested, an RMA packet is included with each order. This packet includes an RMA number, instructions, and a shipping label. If an RMA number is not available, obtain one by phoning Hill-Rom Technical Support at (800) 445-3720.

Exchange Policy

The following are Hill-Rom's policies for in-warranty and out-of-warranty exchanges.

In-Warranty Exchanges

In some cases, Hill-Rom will request that parts/products be returned for inspection. When this occurs, you are expected to return parts/products within 30 days of receipt of the exchange part. If you fail to return the inoperative parts/products within the 30 day period, Hill-Rom will invoice your facility for the full selling price of the parts/products.

NOTE:

The preceding billing procedure pertains **only** to parts/products that Hill-Rom requests to be returned.

In some cases, the invoice accompanying the parts will show the full selling price (only for Hill-Rom's internal use). Do not confuse this price with your price.

Do not return any parts without an RMA number. When parts/products have been requested to be returned, Hill-Rom will include an RMA packet with the parts/products shipment. If an RMA number is not available, obtain one by phoning Hill-Rom Technical Support at (800) 445-3720.

Out-of-Warranty Exchanges

You are expected to return the inoperative parts/products within 30 days of receipt of the exchange part. Hill-Rom will include an RMA packet with the parts/products shipment. If an RMA number is not available, obtain one by phoning Hill-Rom Technical Support at (800) 445-3720. If you fail to return the inoperative parts/products within 30 days, Hill-Rom will invoice your facility for the full selling price of the parts/products. Upon return of the inoperative parts/products, Hill-Rom will issue a credit for the discounted price.

Recommended Spare Parts

See table 5-1 on page 5-8 for a recommended spare parts list to service five units or more.

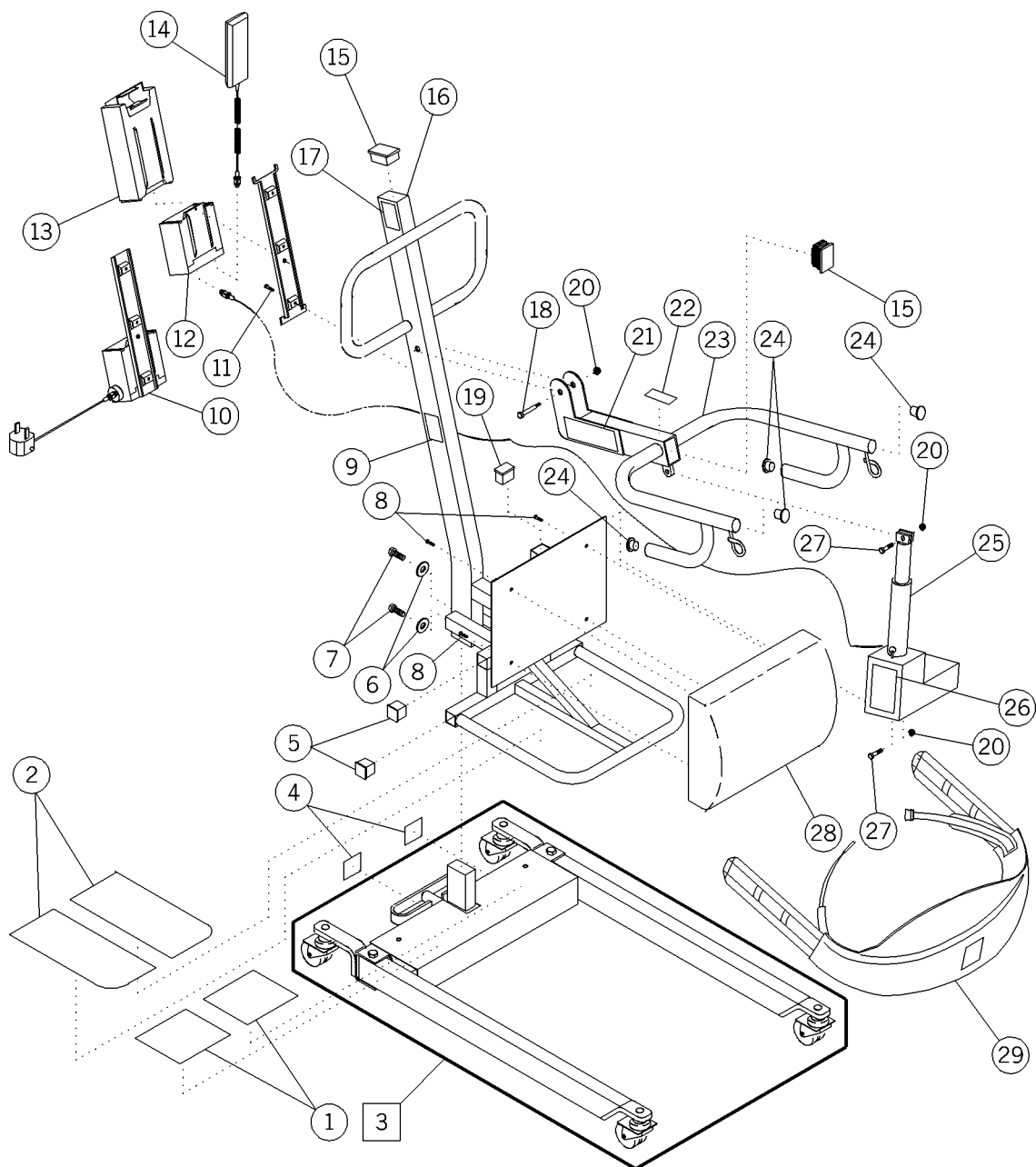
Table 5-1. Recommended Spare Parts

Part Number	Quantity	Description
100-008-0033	2	Stand assist sling assembly
030-019-0104	1	Hand set
030-014-0010	1	Battery pack
100-007-0038	1	Non-slip tape
330-001-0022	1	Caster, front
330-001-0023	1	Caster, rear
001-003-0039	2	Bolt, carriage 3/8"—#16 x 1 1/2"
001-004-0089	2	Nut, 3/8"—#16 elastic stop
433-010-0025	1	Knee pad assembly
130-001-0026	1	Paint, touch-up, cool grey

NOTES:

TRANS•LIFT™ Resident Stand Assist—P444A

Figure 5-2. TRANS•LIFT™ Resident Stand Assist—P444A



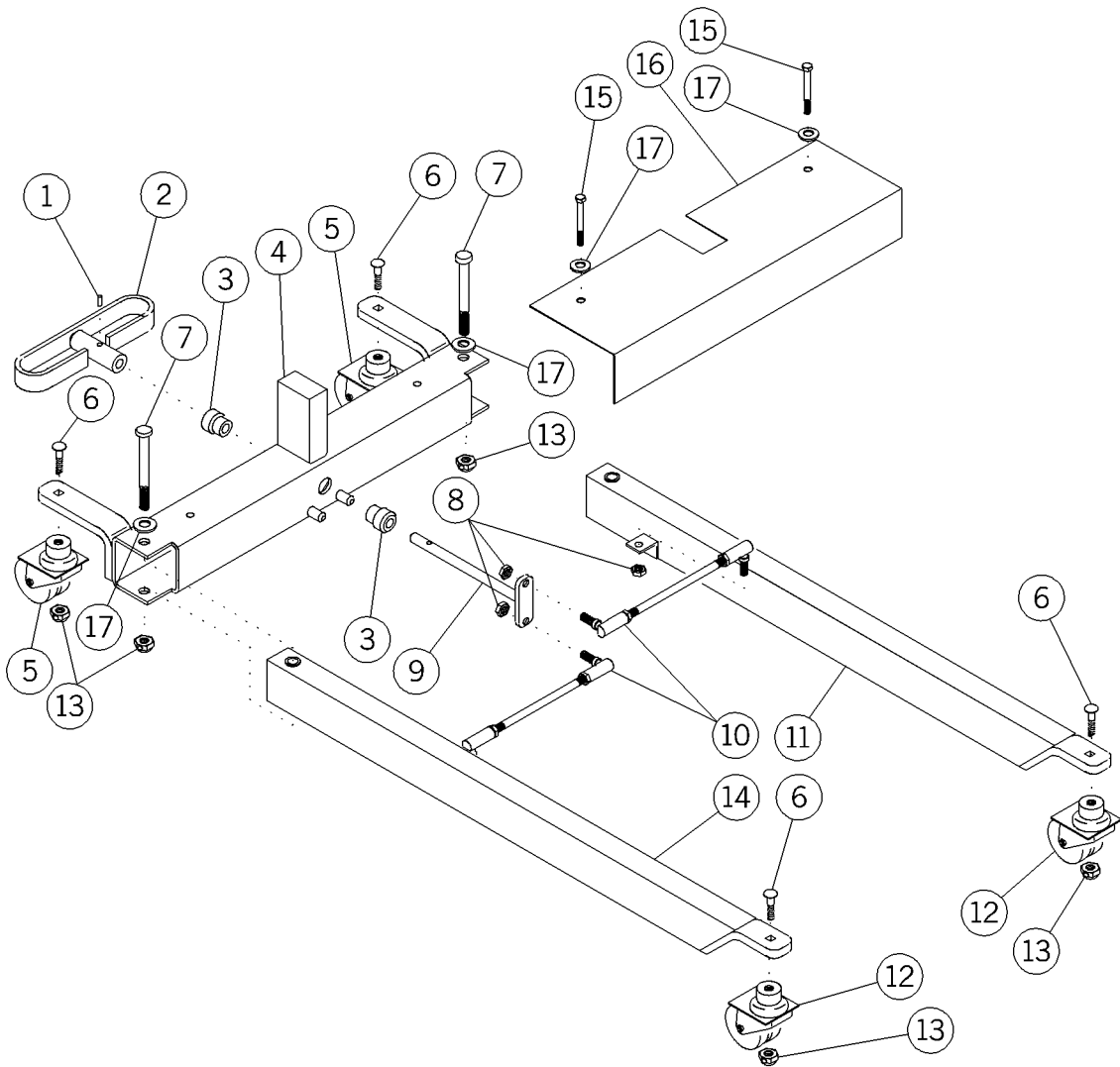
m173_002

Table 5-2. TRANS•LIFT™ Resident Stand Assist—P444A

Item Number	Part Number	Quantity	Description
1	100-008-0038	2	Non-slip, tape cover
2	100-007-0038	2	Non-slip tape
3	433-010-0015	1	Base assembly
4	060-001-0513	1	Label, pedal, spreader
5	001-007-0010	2	Plug, square 1 1/4" cap
6	001-022-0048	2	Washer, flat 1/2"
7	001-003-0041	2	Bolt, 1/2"—#13 x 1"
8	001-003-0046	4	Bolt, 1/4"—#20 x 1" hex head
9	Reference only	1	Label, data plate, stand
10	030-019-0103	1	Charger, battery
11	001-033-0098	3	Screw, self-tapping #10 x 3/4"
12	030-019-0102	1	Box, control
13	030-014-0010	1	Battery pack
14	030-019-0104	1	Hand set
15	001-007-0008	2	Plug, plastic cap
16	433-010-0023	1	Stand column subassembly
17	060-001-0508	2	Label, pendant storage
18	001-003-0038	1	Bolt, shoulder
19	001-007-0011	1	Plug, square 1 1/2" cap
20	001-004-0089	3	Nut, 3/8"—#16 elastic stop
21	060-001-0505	2	Label, sling name, stand
22	060-001-0520	1	Label, read caution
23	433-010-0022	1	Arm, lift subassembly
24	001-007-0009	4	Plug, round 1 1/4" cap
25	030-018-0024	1	Actuator, stand assist
26	060-001-0511	1	Label, down emergency
27	001-003-0044	2	Bolt, 3/8"—16 x 1 1/2" hex head
28	433-010-0025	1	Knee pad assembly
29	100-008-0033	1	Stand assist sling assembly

Base Assembly

Figure 5-3. Base Assembly



5

m173_001

Table 5-3. Base Assembly

Item Number	Part Number	Quantity	Description
1	001-002-0025	1	Pin, roll, 1/4"
2	433-010-0017	1	Pedal subassembly
3	742-001-0008	2	Bushing, spreader
4	650-070-0040	1	Back support subassembly
5	330-001-0023	2	Caster, rear
6	001-003-0039	4	Bolt, carriage
7	001-003-0047	2	Bolt, shoulder 1/2" x 3"
8	001-004-0090	4	Nut, hex
9	433-010-0016	1	Spreader shaft subassembly
10	433-010-0014	2	Tie rod assembly
11	650-070-0013	1	Leg, lh subassembly
12	330-001-0022	2	Caster, front
13	001-004-0089	6	Nut, elastic stop, 3/8"
14	650-070-0039	1	Leg, rh subassembly
15	001-003-0040	2	Bolt, hex head
16	650-070-0017	1	Cover, base
17	001-022-0048	4	Washer, flat 1/2"

NOTES:

Chapter 6

General Procedures

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NOTES:

Cleaning and Care



WARNING:

Follow the product manufacturer's instructions. Failure to do so could result in personal injury or equipment damage.



WARNING:

Adhere to the "Infection Control Policies and Procedures" outlined in the *Safety Coordinator Reference Guide*. Failure to do so could result in the spread of infection.



SHOCK HAZARD:

Do not expose the unit to excessive moisture. Personal injury or equipment damage could occur.



CAUTION:

Do not use bleach or chlorine to wash the sling. Equipment damage could occur.



CAUTION:

Do not use harsh cleaners, solvents, or detergents. Equipment damage could occur.

General Cleaning

Clean the TRANS•LIFT™ Resident Stand Assist with a lightly dampened cloth or sponge and ordinary disinfectants. Do not use excessive liquid.

Steam Cleaning

Do not use any steam cleaning device on the TRANS•LIFT™ Resident Stand Assist. Excessive moisture can damage the mechanisms in this unit.

Hard to Clean Spots

To remove difficult spots or stains, use standard household cleaners and a soft bristle brush. To loosen heavy, dried-on soil or excreta, you may first need to saturate the spot.

Disinfection

Dilute disinfectants and germicides as specified on the manufacturer's label.

Stand Assist Sling Cleaning

1. Clean the TRANS•LIFT™ Resident Stand Assist sling using normal laundry procedures, mild detergents, and equipment.
2. Do not use chlorine based cleaning products or bleaches on the TRANS•LIFT™ Resident Stand Assist sling.
3. Wash the sling for at least 3 minutes at a minimum temperature of 160°F (71°C), not to exceed maximum temperature of 176°F (80°C). Dry in a conventional dryer at a maximum temperature of 176°F (80°C).



WARNING:

Dispose of the TRANS•LIFT™ Resident Stand Assist sling in accordance with the proper disposal procedure as specified by the local regulating authority.

4. Replace the sling after 20 machine washings or 6 months of regular use, whichever comes first.

Battery Pack Disposal



WARNING:

Dispose of the battery pack in accordance with the proper disposal procedure as specified by the local regulating authority. Failure to do so could result in personal injury.

Lubrication Requirements



WARNING:

Follow the product manufacturer's instructions. Failure to do so could result in personal injury or equipment damage.



CAUTION:

Do not use silicone-based lubricants. Equipment damage could occur.

Oilite bearings and bushings are utilized in several places on the system. By retaining oil, the pores give a self-lubricating quality to the bearings and bushings. If any silicone-based lubricant is applied to the bearings and bushings or anywhere else on the system, this self-lubricating quality is neutralized.

It is safe to apply the following lubricants to the system:

- P/N 8252 M-1 penetrating oil (small bottle—apply to the oilite bushings and bearings)
- P/N SA3351 lithium grease (small tube)

Preventive Maintenance



WARNING:

Only facility-authorized maintenance personnel should perform preventive maintenance on the TRANS•LIFT™ Resident Stand Assist. Preventive maintenance performed by unauthorized personnel could result in personal injury or equipment damage.

The TRANS•LIFT™ Resident Stand Assist requires an effective maintenance program. We recommend that you perform annual preventive maintenance (PM) and testing for Joint Commission on Accreditation of Healthcare Organizations (JCAHO). PM and testing not only meet JCAHO requirements but will help to ensure a long, operative life for the TRANS•LIFT™ Resident Stand Assist. PM will minimize downtime due to excessive wear.

The following PM schedule guides the technician through a normal PM procedure on the TRANS•LIFT™ Resident Stand Assist. During this PM process, check each item on the schedule, and make the necessary adjustments.

Follow the PM schedule with the corresponding PM checklist. This checklist is designed to keep a running maintenance history and subsequent repair costs for one TRANS•LIFT™ Resident Stand Assist. However, your facility can modify this checklist or design another to fit your needs. Keeping close records and maintaining the TRANS•LIFT™ Resident Stand Assist are two effective ways to reduce downtime and ensure the patient remains comfortable.

Preventive Maintenance Schedule

Table 6-1. Preventive Maintenance Schedule)

Function	Procedure
Sling assembly	Check the condition of the stand assist sling prior to each use. Inspect the integrity of the straps prior to each use. Replace the stand assist sling after 20 machine washings or 6 months of regular use, whichever comes first.
Hand set	Test the hand set pendant for proper operation of all functions. Inspect the handset pendant cord for cuts, nicks, or breaks.
Lift limits	Run the lift arm to the full upper and lower limits to ensure proper function of the limit switches.
Emergency stop button	Check the operation of the emergency stop button. Verify the lift arm does not operate when the emergency stop button is engaged. Verify the lift arm operates when the emergency stop button is disengaged.
Actuator emergency down release	Check the function of the emergency down release pin. Place a 120 lb (54 kg) weight inside the sling assembly. Run the lift arm to the full upper limit, and pull the actuator emergency down release pin. Ensure the lift arm slowly drifts to the lowest position. Replace the actuator emergency down release pin, and run the lift arm to the full upper limit. Ensure the lift arm does not drift down.
Frame	Inspect all welds on the lift arm, column, and base for stress fractures or weakening.
Lift arm bolts and elastic stop nut	Check the bolt and elastic stop nuts on the lift arm for tightness. If an elastic stop nut is removed, replace it. Do not reuse elastic stop nuts.
Front casters	Check the retaining bolt tightness. If removed, replace the locking nut. Do not reuse the elastic stop nuts.
Rear casters	Check the retaining bolt tightness. If removed, replace the locking nut. Do not reuse the elastic stop nuts.
Rear caster braking	Activate the brakes. Test the brakes to see if the unit moves.
Leg spreader	Check the operation of the leg spreader. Tighten all the leg spreader mechanism bolts. If an elastic stop nut is removed, replace it. Do not reuse elastic stop nuts.
Overall appearance	Check the appearance of the unit. Use touch-up paint as necessary. Inspect the labels, and replace as necessary.
Battery charger power cord and plug	Inspect the battery charger power cord for cuts, nicks, or breaks.

Table 6-2. Preventive Maintenance Checklist

Date		Function	
Manufacturer Hill-Rom Company, Inc.			Sling assembly
			Hand set
			Lift limits
			Emergency stop button
			Actuator down release
			Frame
			Lift arm bolts and elastic stop nuts
			Front casters
Model Number			Rear casters
			Rear caster braking
			Leg spreader
			Overall appearance
			Battery charger power cord and plug
Serial Number			
Total Cost for This Page			Labor Time:
			Repair Cost:
			Inspected By:
			Legend L=Lube C=Clean A=Adjust R=Repair or Replace O=Okay N=Not Applicable Remarks:

Tool and Supply Requirements

The following tools are required to service the TRANS•LIFT™ Resident Stand Assist.

- Screwdriver
- Phillips head screwdriver
- 3/8" open end wrench
- Socket wrench set
- Hammer and pick
- Clean sheet or protective cloth

NOTES:

Chapter 7

Accessories

Chapter Contents

The TRANS•LIFT™ Resident Stand Assist has no accessories.

NOTES:
