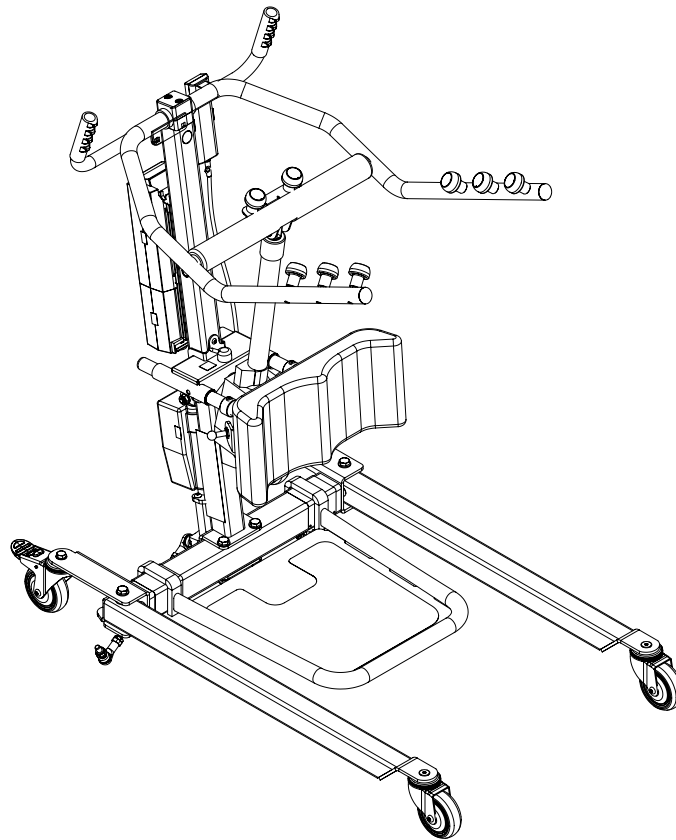


# Reliant™ 440 Patient Lift



**DEALER:** This manual **MUST** be given to the user of the patient lift.

**USER:** BEFORE using this patient lift, read this manual and save for future reference.

For more information regarding  
Invacare products, parts, and services,  
please visit [www.invacare.com](http://www.invacare.com)



*Yes, you can.®*

## **WARNING**

**DO NOT OPERATE THIS EQUIPMENT WITHOUT FIRST READING AND UNDERSTANDING THIS MANUAL. IF YOU ARE UNABLE TO UNDERSTAND THE WARNINGS, CAUTIONS AND INSTRUCTIONS CONTACT A QUALIFIED DEALER OR INVACARE TECHNICAL SUPPORT BEFORE ATTEMPTING TO USE THIS EQUIPMENT - OTHERWISE INJURY OR DAMAGE MAY RESULT.**

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## **ACCESSORIES WARNING**

Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.

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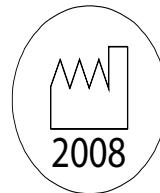
# SYMBOL LEGEND



"ATTENTION, see instructions for use".

**CAUTION** - Pinch Points, fingers could be pinched.

**WARNING** - When positioning Lift, be aware of the position of the Swivel Bar and the patient. Injury could occur.



"Date of Manufacture"  
Device contains Lead Acid batteries. **DO NOT** dispose of batteries in normal household waste. They **MUST** be taken to a proper disposal site. Contact your local waste management company for information.



**EMERGENCY**  
Mechanical Lowering - Pull **UP** on **EMERGENCY** Button. Push **DOWN** on Boom.

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# SPECIAL NOTES

Signal words are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. Refer to the following table for definitions of the signal words.

SIGNAL WORD	MEANING
DANGER	Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage or minor injury or both.

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## NOTICE

**THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.**

### RADIO FREQUENCY INTERFERENCE

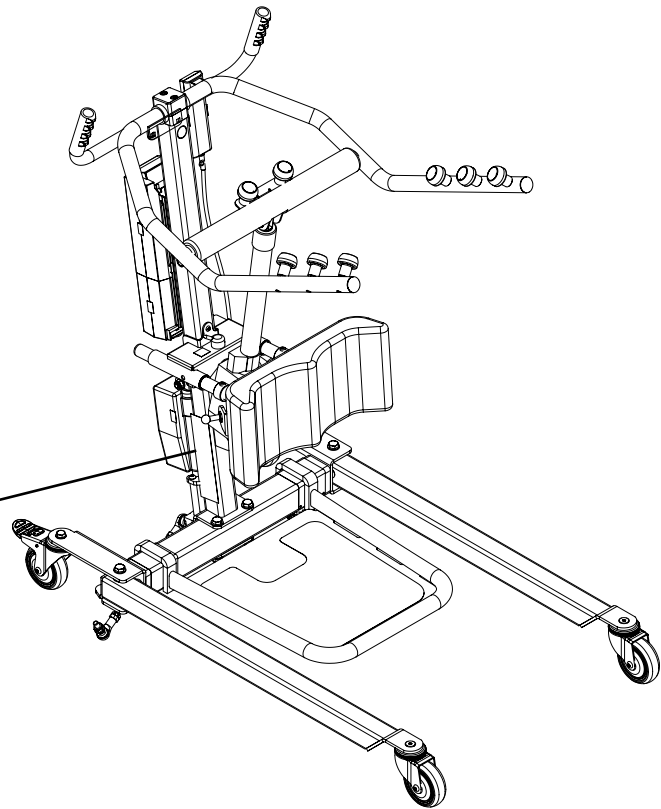
Most electronic equipment is influenced by Radio Frequency Interference (RFI). **CAUTION** should be exercised with regard to the use of portable communication equipment in the area around such equipment. If RFI causes erratic behavior, **PUSH** the **RED Power Switch OFF IMMEDIATELY**. **DO NOT** turn the **Power Switch ON** while transmission is in progress.

### MAINTENANCE

Maintenance **MUST** be performed **ONLY** by qualified personnel.

---

# LABEL LOCATION



**⚠ WARNING**



**BEFORE** using the Patient Lift, **READ** and **UNDERSTAND** the Owner's Manual for proper operation and safety procedures.

**⚠ WARNING**

**WEIGHT LIMITATION 440 lbs.**  
The Invacare Patient Lift is **NOT** a transport device. Moving a person suspended in a sling over **ANY** distance is **NOT RECOMMENDED**.

**DO NOT** roll casterbase over deep carpet, raised carpet bindings, door frames or any uneven surfaces that may cause the Patient Lift to tip over.

**DO NOT** lock the casters of the Patient Lift when lifting an individual. Casters **MUST** be left unlocked to allow Patient Lift to stabilize during lifting procedures.

**USE ONLY INVACARE SLINGS and LIFT ACCESSORIES.**

**USE ONLY RELIANT 440 MODEL** Components for maintenance and replacement.

Refer to Owner's Manual for periodic maintenance procedures.

Customer Service:  
1-800-333-6900  
1141472 REV. A 02/01/06

# TYPICAL PRODUCT PARAMETERS

## Reliant 440 Patient Lift

Height at Sling Hook-up - MAX.:	67 inches
Height at Sling Hook-up - MIN.:	39 inches
Base Width OPEN:	44 inches
Base Width CLOSED:	26 inches
Base Height (Clearance):	5 inches
Base Length:	41.5 inches
Caster Size (FRONT/REAR):	4 inches
Weight Capacity:	440 lbs
Weight Out of Carton:	116.5 lbs
Battery:	24V DC (RECHARGEABLE)
Charger Input:	100-240V AC
Charger Output/Charging Time:	29.5V DC Max 6 hours
Audio Low Battery Alarm:	Yes
Motor Safety Devices:	Anti-Entrapment
*Approx. Lifts per Charge:	*100-200 Cycles per charge
Warranty Lift/Electronics:	3 Years/1 Year
Emergency Stop Button:	Yes

\*NOTE: Varies depending on load and stroke.

# SECTION I—GENERAL GUIDELINES

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## **⚠ WARNING**

**SECTION I - GENERAL GUIDELINES** contains important information for the safe operation and use of this product.

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Check all parts for shipping damage before using. In case of damage, DO NOT use the equipment. Contact the Dealer for further instructions.

The Invacare patient lift is NOT a transport device. It is intended to transfer an individual from one resting surface to another (such as a bed to a wheelchair). Moving a person suspended in a sling over ANY distance is NOT recommended.

DO NOT attempt any transfer without approval of the patient's physician, nurse or medical assistant. Thoroughly read the instructions in this Owner's Manual, observe a trained team of experts perform the lifting procedures and then perform the entire lift procedure several times with proper supervision and a capable individual acting as a patient.

Invacare Stand Assist and Transfer slings are specifically designed to be used in conjunction with Invacare patient lifts. Slings and accessories designed by other manufacturers are not to be utilized as a component of Invacare's patient lift system. Use of these products is prohibited and will void the lift's warranty. Use the sling that is recommended by the individual's doctor, nurse or medical assistant for the comfort and safety of the individual that is being lifted.

## **Weight Limitation**

DO NOT exceed maximum weight limitation of the patient lift. The weight limitation for the Reliant 440 Patient Lift is 440 lbs.

## **Assembling the Lift**

DO NOT overtighten mounting hardware. This will damage mounting brackets.

## **Using the Sling**

Individuals that use the Stand Assist Sling MUST be able to support the majority of their own weight, otherwise injury may occur.

Stand Assist Slings: DO NOT use the stand assist sling in combination with the patient lift as a transport device. It is intended to transfer an individual from one resting surface to another (such as a bed to a wheelchair). Moving a person using the stand assist sling in combination with the patient lift over ANY distance is NOT recommended.



Stand Assist Slings: Before lifting the patient, make sure the bottom edge of the stand assist sling is positioned on the lower back of the patient and the patient's arms are outside the stand assist sling.

Stand Assist Slings: The belt **MUST** be snug, but comfortable on the patient, otherwise the patient can slide out of the sling during transfer, possibly causing injury.

Transfer Slings: Before lifting the patient, make sure the bottom edge of the transfer sling is at the base of the spine and the patient's arms are outside the transfer sling.

Transfer Slings: **DO NOT** raise the patient to a full standing position while using the transfer sling, otherwise injury may occur.

**DO NOT** use any kind of plastic back incontinence pad or seating cushion between patient and sling material that may cause the patient to slide out of the sling during transfer.

After each laundering (in accordance with instructions on the sling), inspect sling(s) for wear, tears, and loose stitching.

Bleached, torn, cut, frayed, or broken slings are unsafe and could result in injury. Discard immediately.

**DO NOT** alter slings.

Be sure to check the sling attachments each time the sling is removed and replaced, to ensure that it is properly attached before the patient is removed from a stationary object (bed, chair or commode).

If the patient is in a wheelchair, secure the wheel locks in place to prevent the chair from moving forwards or backwards.

When connecting slings equipped with color coded straps to the patient lift, the shortest of the straps **MUST** be at the back of patient for support. Using long section will leave little or no support for patient's back. The loops of the sling are color coded and can be used to place patient in various positions. The colors make it easy to connect both sides of the sling equally. Make sure that there is sufficient head support when lifting a patient.

## **Operating the Lift**

Make sure there is an audible click when mounting battery on the battery charger to confirm proper mounting. Otherwise, injury or damage may occur.

Use the handles to push or pull the patient lift.

## **Lifting the Patient**

Before positioning the legs of the stand up lift around the patient, make sure that the patient's feet are out of the way of the foot plate, otherwise injury may occur.

Adjustments for safety and comfort should be made before moving the patient. Patient's arms should be outside of the sling straps.

Before lifting a patient from a stationary object (wheelchair, commode or bed), slightly raise the patient off the stationary object and check that all sling attachments are secure. If any attachment is not correct, lower the patient and correct the problem, then raise the patient and check again.

During transfer, with the patient suspended in a sling attached to the lift, **DO NOT** roll caster base over objects such as carpet, raised carpet bindings, door frames, or any uneven surfaces or obstacles that would create an imbalance of the patient lift and could cause the patient lift to tip over. Use steering handle on the mast at **ALL** times to push or pull the patient lift.

Invacare recommends locking the rear swivel casters **ONLY** when positioning or removing the sling (stand assist or transfer) from around the patient.

Invacare does **NOT** recommend locking of the rear casters of the patient lift when lifting an individual. Doing so could cause the lift to tip and endanger the patient and assistants. Invacare **DOES** recommend that the rear casters be left unlocked during lifting procedures to allow the patient lift to stabilize itself when the patient is initially lifted from a chair, bed or any stationary object.

## Transferring the Patient

Before transferring, check that the product's weight capacity can withstand the patient's weight.

Wheelchair wheel locks **MUST** be in a locked position before lowering the patient into the wheelchair for transport.

## Performing Maintenance

Regular maintenance of patient lifts and accessories is necessary to assure proper operation.

After the first 12 months of operation, inspect all pivot points and fasteners for wear. If the metal is worn, the parts **MUST** be replaced. Perform this inspection every six months thereafter.

**DO NOT** overtighten mounting hardware. This will damage mounting brackets.

Casters and axle bolts require inspections every six months to check for tightness and wear.

# SECTION 2—ASSEMBLY

## Assembling the Patient Lift

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### **⚠ WARNING**

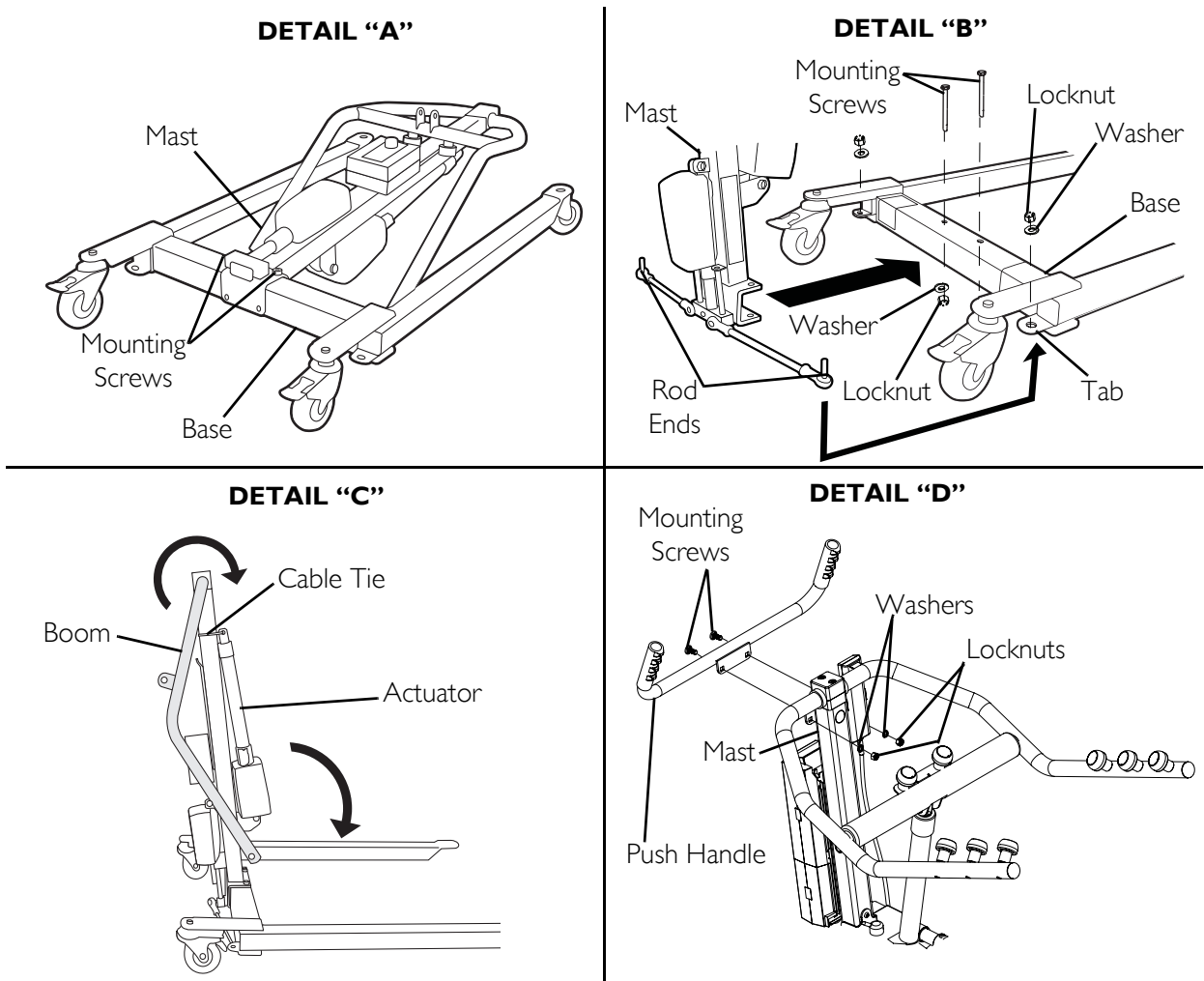
**Tighten mounting screws securely. Failure to do so may result in bodily injury or damage to the lift.**

---

*NOTE: For this procedure, refer to FIGURE 2.1 on page 12.*

*NOTE: The Reliant 440 is packed partially assembled for shipping purposes.*

1. Remove all contents from the box and place the unit on a workbench or table.
2. Remove the two mounting screws, washers, and locknuts connecting the mast to the base (Detail “A”).
3. Remove the mast from the base.
4. Position and re-attach the mast to the base using the two mounting screws, washers, and locknuts removed in STEP 2 (Detail “B”). Securely tighten.
5. Insert the pins of the rod ends up through the tabs on the base (Detail “B”).
6. Attach the pins of the rod ends to the tabs using the two locknuts and washers. Securely tighten.
7. Cut the cable tie securing the actuator (Detail “C”).
8. Swing the actuator forward so that it is out of the way.
9. Swing the boom up and over to the front.
10. Attach the push handle to the back of the mast using the two mounting screws, locknuts, and washers which are provided (Detail “D”).
11. Attach the kneepad. Refer to [Attaching the Kneepad](#) on page 13.



**FIGURE 2.1** Assembling the Patient Lift

## Attaching the Kneepad

### ⚠ WARNING

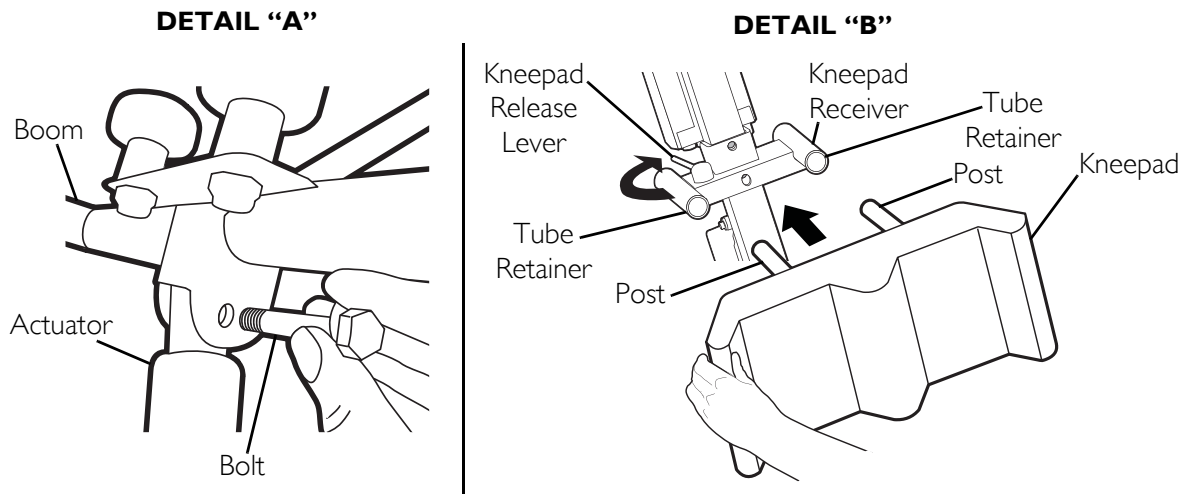
The kneepad is an integral part of the lift and **MUST** be attached so that the lift can function correctly and safely.

### CAUTION

When connecting the actuator to the boom, **DO NOT** over-tighten the bolt because this will deform the clevis and restrict the pivot.

*NOTE: For this procedure, refer to FIGURE 2.2 on page 13.*

1. Connect the top of the actuator to the boom using the bolt provided (Detail "A").
2. Insert the two posts of the kneepad into the tube retainers of the kneepad receiver while turning the kneepad release lever in a clockwise direction (Detail "B").
3. Release the kneepad release lever.
4. Slide the kneepad in or out until it is locked into position.



**FIGURE 2.2** Attaching the Kneepad

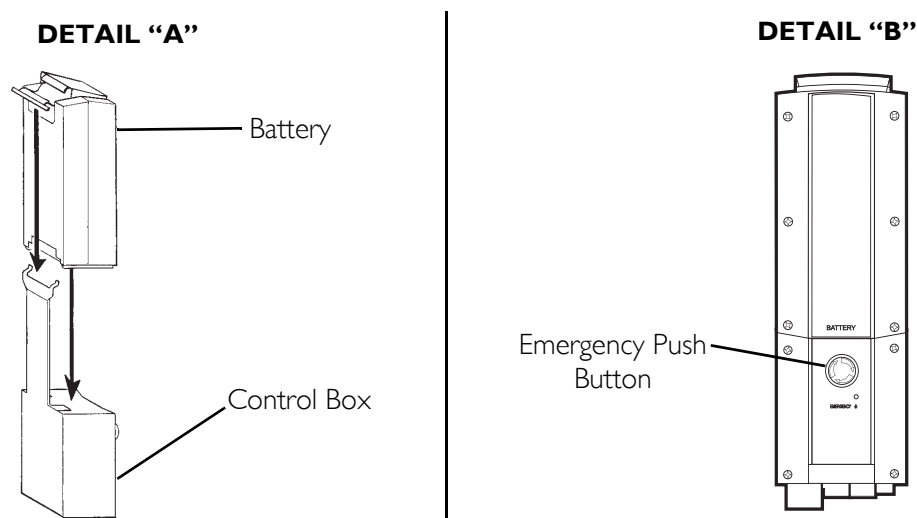
## Attaching the Battery

### **⚠ WARNING**

Ensure there is an audible click when installing the battery either on the battery charger or control box. Otherwise, injury or damage may occur.

*NOTE: For this procedure, refer to FIGURE 2.3.*

1. Install the battery into the control box and ensure there is an audible click (Detail “A”).
2. Ensure that the control box emergency push button is set to the Off (out) position (Detail “B”).
3. If the control box emergency push button is set to the On position, turn the button  $\frac{1}{4}$  turn clockwise, and the button will pop out.



**FIGURE 2.3** Attaching the Battery

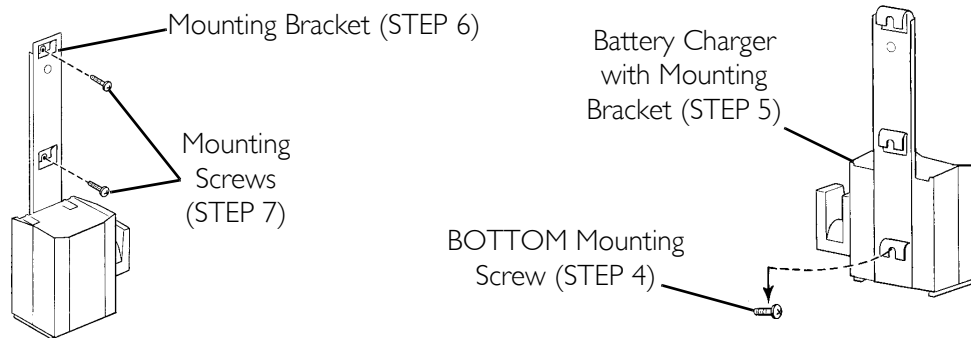
## Mounting the Battery Charger

*NOTE: For this procedure, refer to FIGURE 2.4.*

*NOTE: Refer to your local regulations concerning proper mounting procedures.*

1. Place the battery charger with mounting bracket on the wall at the desired position.
2. With a pencil, mark the middle hole position.
3. Measure down 6½ inches from the pencil mark and drill one mounting hole.
4. Install the bottom mounting screw until there is an approximate 1/8-inch gap between the screw head and the wall.
5. Install the battery charger with mounting bracket onto the bottom mounting screw.
6. Drill the remaining two mounting holes.
7. Install the two remaining mounting screws through the mounting bracket and into the wall. Tighten securely.
8. Plug the battery charger into the wall electrical outlet.

*NOTE: The On LED should illuminate.*



**FIGURE 2.4** Mounting the Battery Charger

# SECTION 3—OPERATION

## Introduction

### ⚠ WARNING

**DO NOT** attempt any transfer without approval of the patient's physician, nurse or medical assistant. Thoroughly read the instructions in this **Owner's Manual**, observe a trained team of experts performing the lifting procedures and then perform the entire lift procedure several times with proper supervision and a capable individual acting as a patient.

The legs of the lift **MUST** be in the maximum open position for optimum stability and safety. If it is necessary to close the legs of the lift to maneuver the lift under a bed, close the legs of the lift only as long as it takes to position the lift over the patient and lift the patient off the surface of the bed. When the legs of the lift are no longer under the bed, return the legs of the lift to the maximum open position.

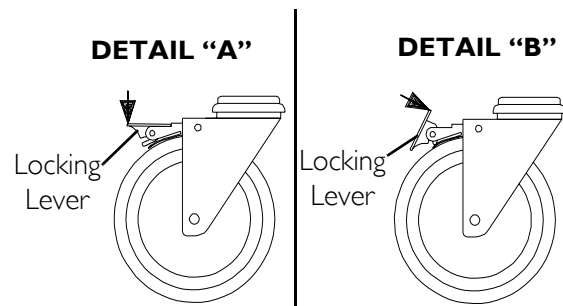
*NOTE: Invacare recommends that two assistants be used for all lifting preparation and transferring to/from procedures; however, the patient lift can be operated by one assistant. The use of the patient lift by one assistant should be based on the evaluation of the health care professional for each individual case.*

## Operating the Patient Lift

### Locking/Unlocking the Rear Casters

*NOTE: For this procedure, refer to FIGURE 3.1.*

1. Perform one of the following:
  - **LOCKING** - Press **DOWN** on the bottom of the locking lever (Detail "A").
  - **UNLOCKING** - Press the top of the locking lever (Detail "B").



**FIGURE 3.1** Locking/Unlocking the Rear Casters

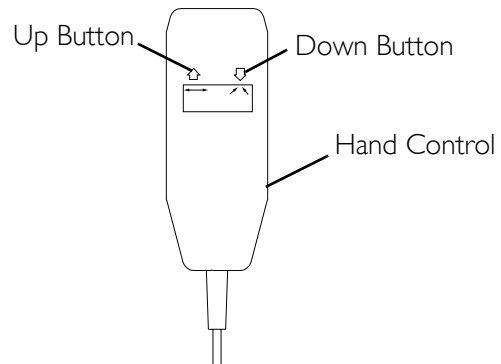


## Raising/Lowering the Patient Lift

*NOTE: For this procedure, refer to FIGURE 3.2.*

1. Perform one of the following:
  - Raising Lift - Press the Up button on the hand control to raise the lift arms and the patient.
  - Lowering Lift - Press the Down button on the hand control to lower the lift arms and the patient.

*NOTE: If the stand-up lift is in the full Up position, it may be necessary to pull down slightly on the lift arms before the mast will lower.*

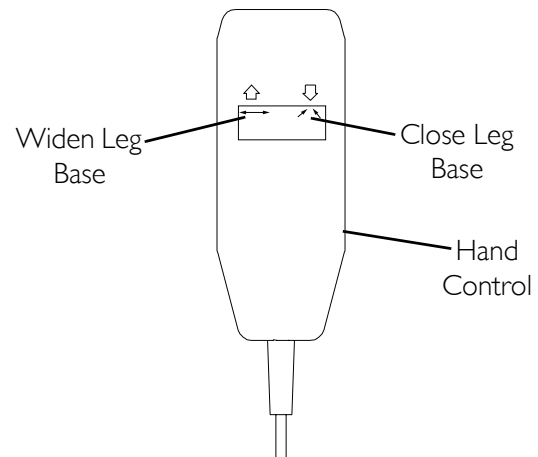


**FIGURE 3.2** Raising/Lowering the Patient Lift

## Closing/Opening Leg Base

*NOTE: For this procedure, refer to FIGURE 3.3.*

The bottom row of the hand control is used to open or close the legs of the base for stability prior to lifting a patient. Pressing the left button widens the leg base; the right button closes the leg base.

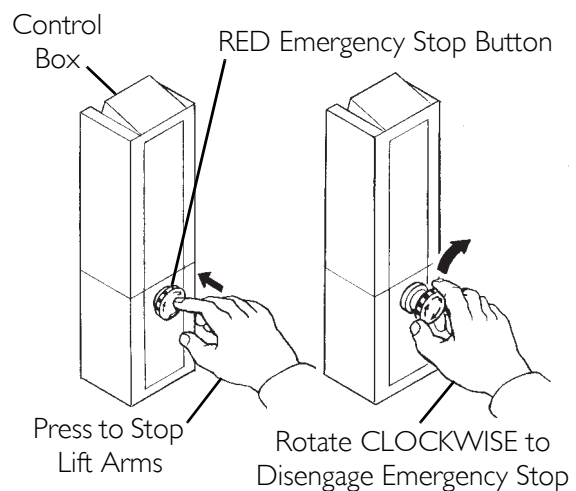


**FIGURE 3.3** Closing/Opening Leg Base

## Using the Emergency Stop

*NOTE: For this procedure, refer to FIGURE 3.4.*

- Press the RED emergency stop button on the control box to stop the lift arms and patient from raising or lowering.
- To disengage, rotate the RED emergency stop button **CLOCKWISE** until it pops out.



**FIGURE 3.4** Using the Emergency Stop

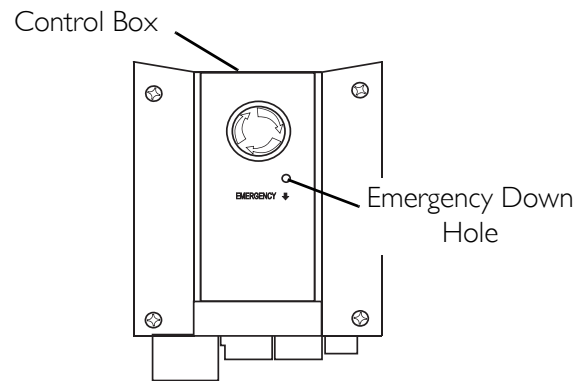
## Activating a Mechanical Emergency Release

### Primary Emergency Release

*NOTE: For this procedure, refer to FIGURE 3.5.*

*NOTE: This procedure will bring the boom down if the hand control is not functioning properly.*

To activate the primary emergency release, insert a pen into the hole labeled Emergency Down on the control box.



**FIGURE 3.5** Primary Emergency Release

### Secondary Emergency Release

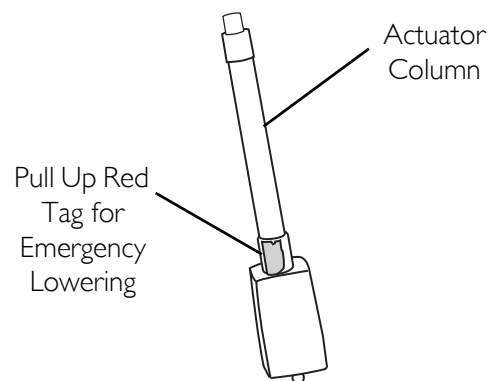
*NOTE: For this procedure, refer to FIGURE 3.6.*

*NOTE: All patient lift actuators are equipped with a mechanical emergency release. The mechanical release will enable the actuator to retract without power.*

*NOTE: Use the primary emergency release first before using the secondary emergency release procedure. This procedure should only be used if the primary emergency release procedure is not functioning or is unreachable.*

*NOTE: The lift MUST be under a load for the mechanical release to function.*

To activate the secondary emergency release, pull up on the RED emergency grip and pull down on the boom at the same time.



**FIGURE 3.6** Secondary Emergency Release

## Charging the Battery

NOTE: For this procedure, refer to FIGURE 3.7 on page 19.

NOTE: Invacare recommends the battery be recharged daily to prolong battery life.

NOTE: An audible alarm will sound (horn will beep) when battery is low.

1. Lift up on the handle on the back of the battery (Detail "A").
2. Lift the battery up and out from the control box.

### **⚠ WARNING**

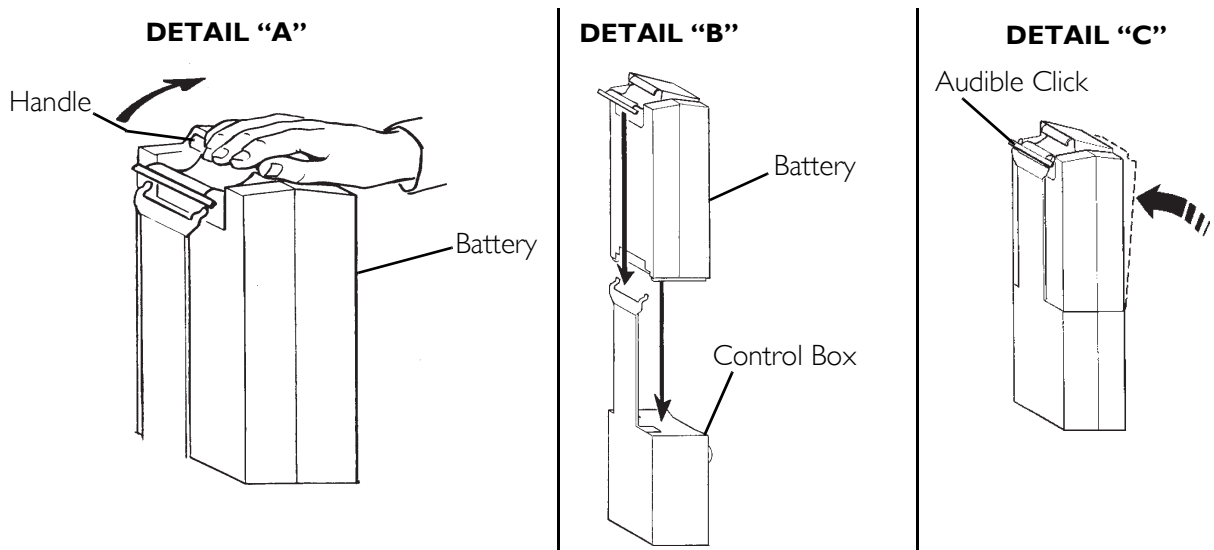
**Make sure there is an audible click when mounting battery either on the battery charger or the control box to confirm proper mounting. Otherwise, injury or damage may occur.**

3. Place the battery on the battery charger (Detail "B").
4. Ensure there is an audible click (Detail "C").

NOTE: The charge LED will illuminate. When charging is complete, the charge LED will stop illuminating.

NOTE: A battery needing to be fully recharged will take approximately four hours.

5. Lift up on the handle on the back of the battery (Detail "A").
6. Lift the battery up and out away from the battery charger.
7. Reinstall the battery onto the control box (Detail "B").
8. Ensure there is an audible click (Detail "C").



NOTE: The battery is shown being removed from and installed into a control box. Removing and installing a battery into a battery charger is done the same way.

**FIGURE 3.7** Charging the Battery

# SECTION 4—TRANSFERRING FROM

## Lifting Preparation

*NOTE: Although Invacare recommends that two assistants be used for all lifting preparation, transferring from and transferring to procedures, our equipment will permit proper operation by one assistant. The use of one assistant is based on the evaluation of the health care professional for each individual.*

---

### **⚠ WARNING**

**STANDING SLINGS** - Before lifting the patient, make sure the bottom edge of the standing sling is positioned on the lower back of the patient, and the patient's arms are outside the standing sling.

**TRANSPORT SLINGS** - Before lifting the patient, make sure the bottom edge of the transport sling is at the base of the spine, and the patient's arms are outside the transport sling.

Invacare does **NOT** recommend locking the rear casters of the stand-up lift when lifting and transferring an individual. Doing so could cause the lift to tip and endanger the patient and assistants.

Invacare does recommend that the rear casters of the stand-up lift be left unlocked during lifting and transferring procedures to allow the stand-up lift to stabilize itself when the patient is initially lifted from and transferred to a chair, bed or any stationary object.

---

## Lifting the Patient

*NOTE: For this procedure, refer to FIGURE 4.1 on page 22.*

1. Instruct the patient to do the following:
  - A. Hold onto the lift arms below the black knobs on both sides of the stand-up lift.
  - B. Lean back into the standing or transport sling.
2. Ensure the following:
  - A. Patient's knees are secure against the knee pad.
  - B. Patient's feet are positioned on the footplate.
  - C. The bottom edge of the:
    - Standing sling is positioned on the lower back.
    - Transport sling is at the base of the patient's spine.
  - D. The patient's arms are outside of the standing or transport sling.
  - E. The rear casters are unlocked.
  - F. The legs of the stand-up lift are in the maximum open position.

---

### **⚠ WARNING**

**When elevated slightly off the surface being transferred from and before moving the patient, check again to make sure that the sling is properly connected to the attachment points of the stand-up lift. If any attachments are NOT properly in place, lower the patient back onto the surface and correct this problem.**

**Adjustments for safety and comfort should be made before moving the patient.**

**Invacare standing and transport slings are specifically designed to be used in conjunction with the Reliant 440. Slings and accessories designed by other manufacturers or other Invacare slings are not to be utilized as a component of Invacare's stand-up lift system. Use only Invacare standing and transport slings and lift accessories to maintain patient safety and product utility.**

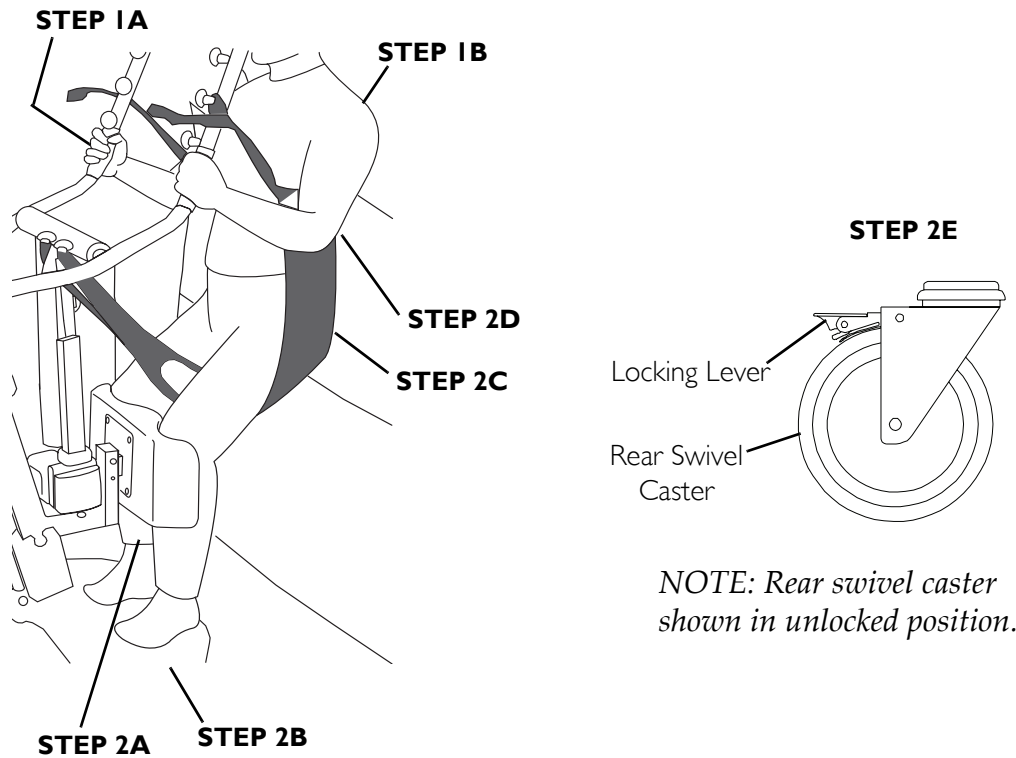
**If transferring the patient from a wheelchair, the wheelchair wheel locks MUST be in the locked position.**

- 
3. When transferring the patient from a wheelchair, lock the wheel locks of the wheelchair.
  4. Press the up button to raise the patient above the surface (bed, wheelchair or commode) being transferred from. The patient should be elevated just high enough to clear the surface with their weight fully supported by the lift.

*NOTE: The lower center of gravity provides stability to make the patient feel more secure and the lift easier to move.*

*NOTE: The lift arms will stay in position until the down button is pressed.*

5. Move the patient to the desired surface. Refer to Moving the Patient on page 22.



**FIGURE 4.1** Lifting the Patient

## Moving the Patient

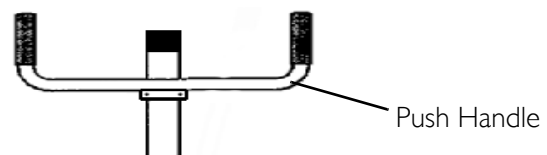
### **⚠ WARNING**

**STANDING SLINGS - DO NOT** use the standing sling in combination with the stand-up lift as a transport device. It is intended to transfer an individual from one resting surface to another (such as a bed to a wheelchair). Moving a person using the standing sling in combination with the stand-up lift over any distance is not recommended.

During transfer, with patient suspended in a sling attached to the lift, **DO NOT** roll stand-up lift over objects such as carpet, raised carpet bindings, door frames, or any uneven surfaces or obstacles that would create an imbalance of the stand-up lift and could cause the stand-up lift to tip over. Use push handle on the mast at all times to push or pull the stand-up lift.

*NOTE: For this procedure, refer to FIGURE 4.2.*

1. Using the push handle, slowly move the patient to the desired surface.
2. Refer to [Transferring to](#) on page 23 before lowering the patient onto the desired surface.



**FIGURE 4.2** Moving the Patient

## SECTION 5—TRANSFERRING TO

*NOTE: Although Invacare recommends that two assistants be used for all lifting preparation, transferring from and transferring to procedures, our equipment will permit proper operation by one assistant. The use of one assistant is based on the evaluation of the health care professional for each individual.*

### Transferring Patient To Wheelchair

*NOTE: For this procedure, refer to FIGURE 5.1 on page 24.*

1. Move the wheelchair into position (Detail “A”).

---

#### **⚠ WARNING**

**Wheelchair wheel locks MUST be in the locked position before lowering the patient into the wheelchair.**

---

2. Ensure that the wheelchair wheel locks are in the locked position.
3. Position the patient over the wheelchair.
4. Press the down button and lower the patient into the wheelchair.

---

#### **⚠ WARNING**

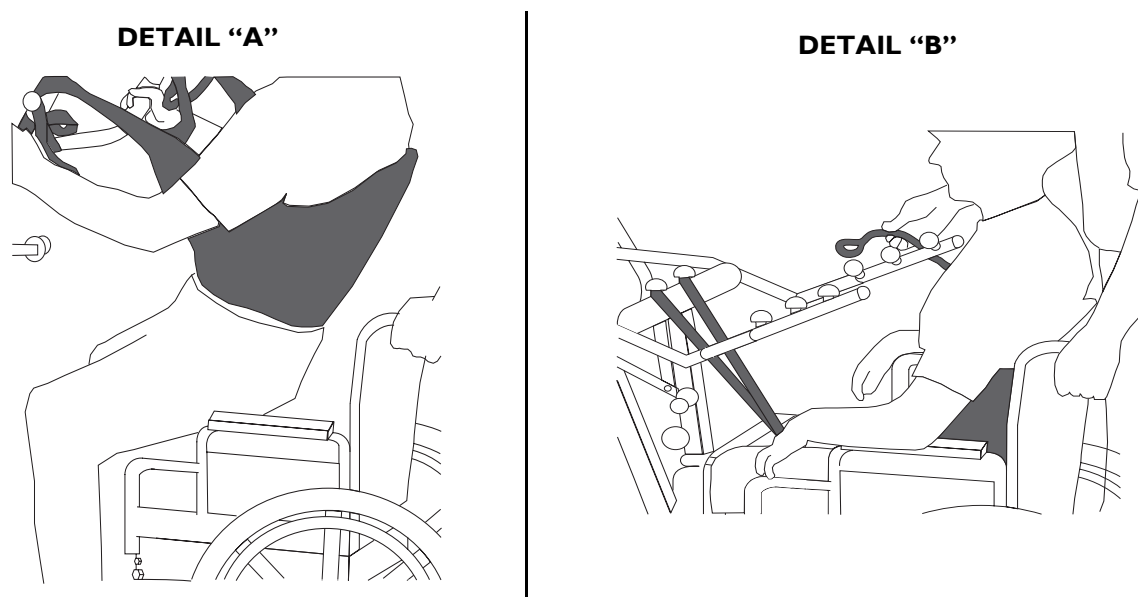
**Invacare recommends locking the rear swivel casters of the stand-up lift only when positioning or removing the sling (standing or transport) from around the patient.**

---

5. Lock the rear swivel casters of the stand-up lift. Refer to Locking/Unlocking the Rear Casters on page 16.
6. Unhook the standing or transport sling from all attachment points on the stand-up lift (Detail “B”).
7. If equipped, unfasten the leg strap from around the patient's legs.
8. Instruct the patient to lift their feet off the footplate.

*NOTE: Assist the patient if necessary.*

9. Remove the standing or transport sling from around the patient.
10. Pull the stand-up lift away from the wheelchair.



**FIGURE 5.1** Transferring Patient To Wheelchair

## Transferring Patient to Bed

*NOTE: For this procedure, refer to FIGURE 5.2 on page 25.*

*NOTE: The lift arms will stay in position until the down button is pressed.*

1. Position the patient as far over the bed as possible (Detail "A").

*NOTE: If patient is being transferred from a surface that is lower than the bed, press the up button to raise the patient above the surface of the bed. The patient should be elevated just high enough to clear the bed with the weight fully supported by the lift. The lower center of gravity provides stability, making the patient feel more secure and the lift easier to move.*

2. Press the down button and lower the patient onto the bed.

### **⚠ WARNING**

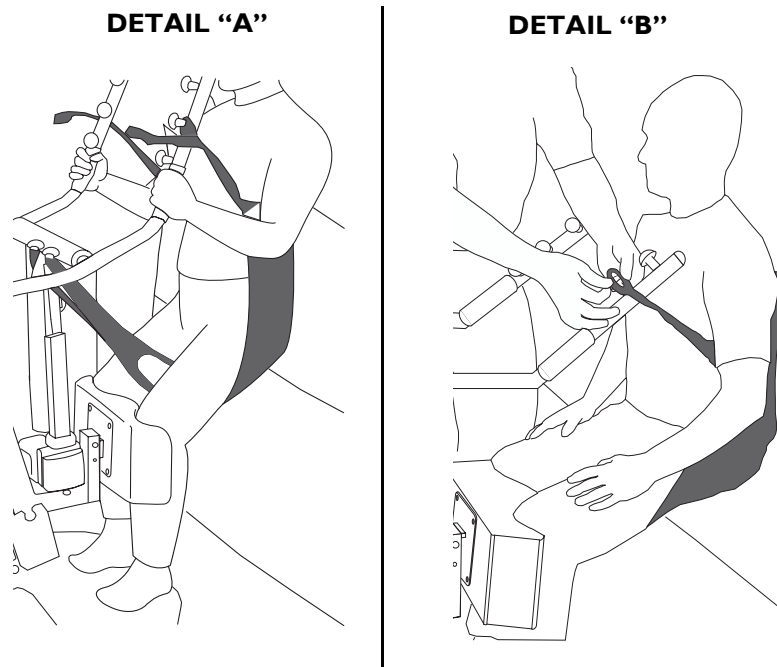
**Invacare recommends locking the rear swivel casters of the stand-up lift only when positioning or removing the sling (standing or transport) from around the patient.**

3. Lock the rear swivel casters of the stand-up lift. Refer to Locking/Unlocking the Rear Casters on page 16.
4. Unhook the standing or transport sling from all attachment points on the stand-up lift (Detail "B").
5. If equipped, unfasten the leg strap from around the patient's legs.
6. Instruct the patient to lift their feet off the footplate.

*NOTE: Assist the patient if necessary.*

7. Remove the standing or transport sling from around the patient.
8. Pull the stand-up lift away from the bed.





**FIGURE 5.2** Transferring Patient to Bed

## Transferring Patient to Commode

*NOTE: For this procedure, refer to FIGURE 5.3 on page 26.*

1. Position the patient over the commode (Detail "A").
2. Press the down button and lower the patient onto the commode.

---

### **⚠ WARNING**

**Invacare recommends locking the rear swivel casters of the stand-up lift only when positioning or removing the sling (standing or transport) from around the patient.**

---

3. Lock the rear swivel casters. Refer to [Locking/Unlocking the Rear Casters](#) on page 16.

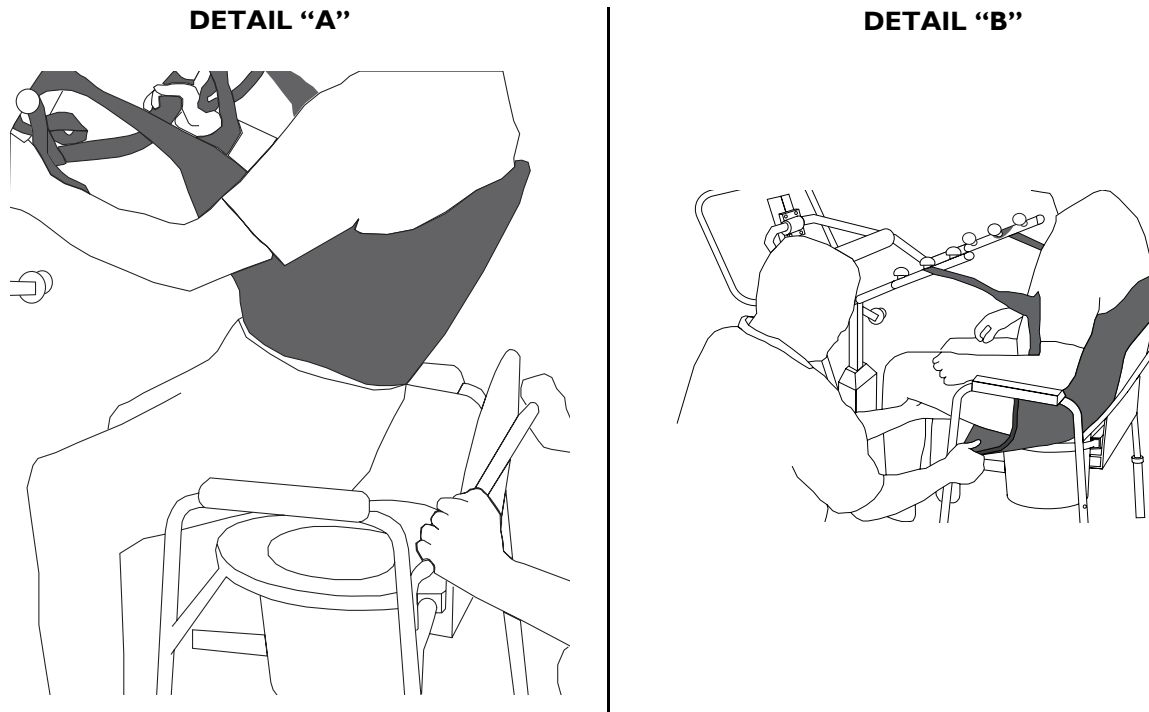
4. Perform the procedures applicable to the type of sling:
  - Standing Sling (Models R130 and R131)
    - i. Unhook the standing sling from the attachment points on the stand-up lift.
  - Transport Sling (Models R134 and R136)
    - i. Unhook the transport sling from the bottom attachment points on the stand-up lift.
    - ii. Lift up on the patient's legs and remove the thigh supports from underneath the patient (Detail "B").
    - iii. If desired, unhook the transport sling from the top attachment points on the stand-up lift.

*NOTE: The patient can remain in the upper portion of the transport sling while using the commode.*

5. If equipped, unfasten the leg strap from around the patient's legs (Detail "B").
6. Instruct the patient to lift their feet off of the footplate.

*NOTE: Assist the patient if necessary.*

7. Remove the standing or transport sling from around the patient.
8. Pull the stand-up lift away from the commode.
9. Once the patient is ready to be transferred, refer to Lifting Preparation on page 20.



**FIGURE 5.3** Transferring Patient to Commode

# SECTION 6— USING THE PATIENT LIFT AS A STANDING AID

*NOTE: For this procedure, refer to FIGURE 6.1 on page 28.*

*NOTE: The Reliant 440 lift can be used as an aid to lift a person from a seated to a standing position. A minimum of two caregivers is required for this procedure.*

## Standing Procedure

1. Ensure that the patient is capable of walking.
2. Lift and remove the footplate from the base (Detail “A”).
3. Remove the kneepad (Detail “B”).
  - A. Turn the kneepad release lever in a clockwise direction.
  - B. Pull out the kneepad from the tube retainers of the kneepad receiver.
  - C. Release the kneepad release lever.
4. Ensure that the patient is in a sitting position to begin the procedure.
  - A. If the patient is in bed and requires assistance to come to a sitting position, raise the back of the bed.
  - B. Place the lift over the bed with the lift arms angled toward the patient.
  - C. Press down on the bottom of the locking lever to lock the lift wheels (Detail “C”).
  - D. Instruct the patient to grasp the lift arms.
  - E. As the lift arms are raised, the patient should move legs to the side of the bed until a sitting position on the side of the bed is assumed.

*NOTE: The caregivers should assist as needed.*

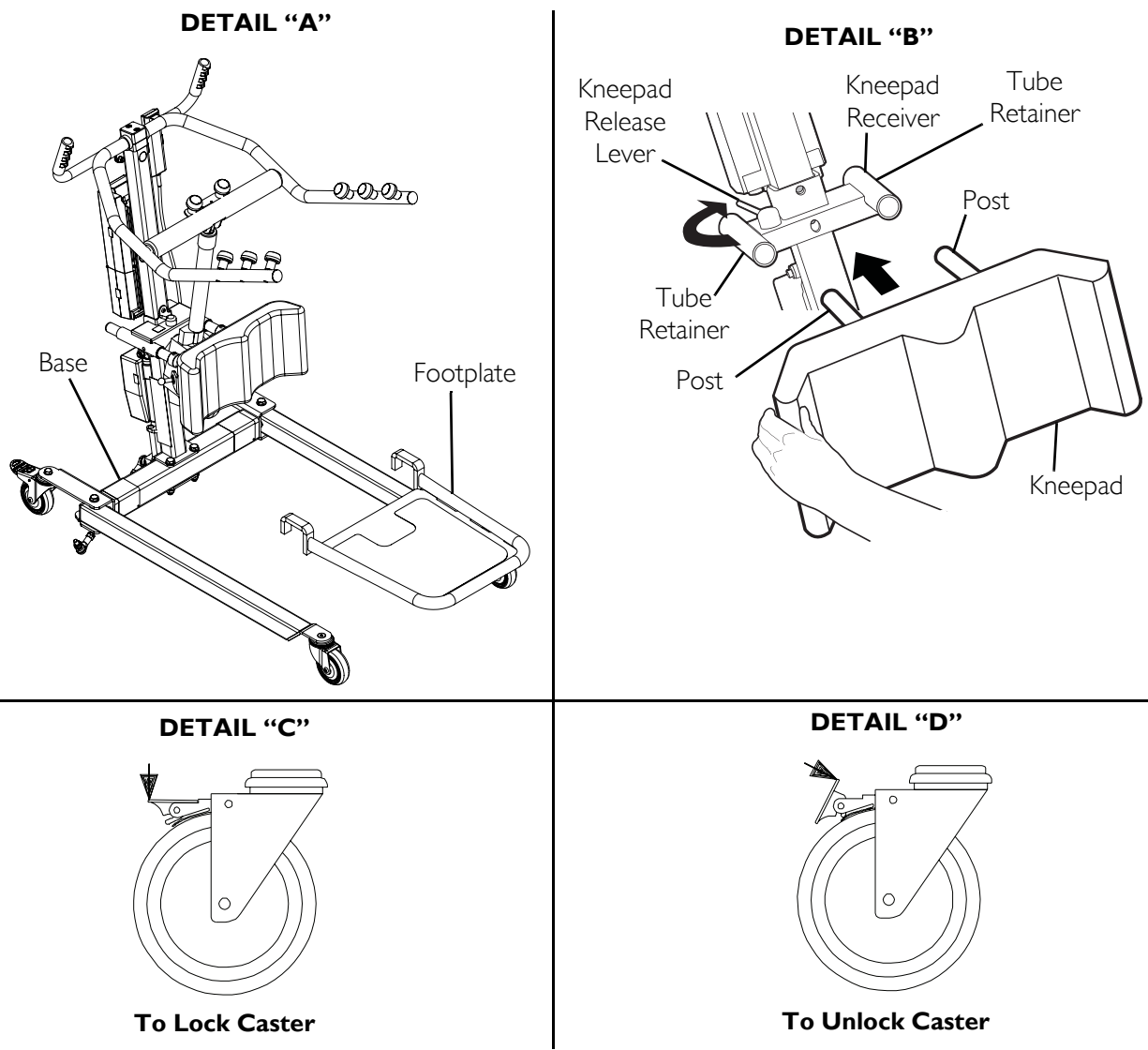
  - F. Press the top of the locking lever to unlock the lift (Detail “D”).
  - G. Pull the lift away as needed to accommodate the patient’s feet and legs over the side of the bed.
5. With one caregiver on each side of the patient, place a gait belt on the patient.
6. Ensure that the patient is wearing shoes with skid-proof soles.
7. If the patient is on the bed, raise the bed if possible while ensuring that the patient’s feet remain on the floor.
8. If a walker is to be used, place the walker in front of the patient.
9. Advance the lift toward the patient so that the patient can easily reach the lift arms.
10. Lock the lift wheels (Detail “C”).
11. Instruct the patient to grasp the lift arms.

12. Ensure that the patient's feet are directly under them.
13. Begin raising the lift arms.
14. On a count of three, instruct the patient to pull and stand-up while the caregivers support with the gait belt.

**⚠ WARNING**

**DO NOT lift the patient.**

15. Once the patient is standing, unlock the lift wheels (Detail "D").
16. Remove the lift to allow the patient to walk.



**FIGURE 6.1** Standing Procedure

# SECTION 7— TROUBLESHOOTING

SYMPTOMS	FAULTS	SOLUTION
Stand-up lift feels loose.	Mast/base joint loose.  Tie - rods are loose.	Tighten the mounting screws that secure the mast to the base. Refer to <a href="#">Assembling the Patient Lift</a> on page 11. Refer to <a href="#">Maintaining the Base Adjustment</a> on page 34.
Casters/brakes noisy or stiff.	Fluff or debris in bearings.	Replace casters.
Electric actuator fails to lift when button is pressed.	Hand-control or actuator connector loose.  Batteries low.  RED emergency stop button pressed IN.  Battery not connected properly to control box.  The connecting terminals are damaged.  Electric actuator in need of service or load is too high.	Check connections.  Charge batteries. Refer to <a href="#">Charging the Battery</a> on page 19.  Rotate RED emergency stop button CLOCK-WISE until it pops out.  Reconnect the battery to the control box. Refer to <a href="#">Charging the Battery</a> on page 19.  Replace the battery pack. Refer to <a href="#">Charging the Battery</a> on page 19.  Refer to <a href="#">Replacing Electric Actuator</a> on page 33. Contact your Dealer.
Unusual noise from actuator.	Actuator is worn or damaged or spindle is bent.	Refer to <a href="#">Replacing Electric Actuator</a> on page 33. Contact your Dealer.
Lift arms will not lower in uppermost position.	Lift arms require a minimum weight load to lower from the uppermost position.	Pull down slightly on the lift arms.

*NOTE: If problems are not remedied by the suggested means, please contact your dealer or Invacare.*

# SECTION 8— MAINTENANCE

*NOTE: Follow the maintenance procedures described in this manual to keep your patient lift in continuous service.*

## Safety Inspection Checklists

### Inspect/Adjust Initially

- Inspect caster base for missing hardware.
- Ensure that the caster base opens/closes with ease.
- Inspect the casters and axle bolts for tightness.
- Inspect casters for smooth swivel and roll.
- Ensure that casters are free of debris.
- Ensure that the mast is securely assembled to the boom.
- Inspect the mast for bends or deflections.
- Inspect the lift arms and linkage hardware and attachment points.
- Inspect the lift arms and linkage for bends or deflections.
- Inspect the bolted joints of the lift arms for wear. Refer to Detecting Wear and Damage on page 32.
- Ensure that the lift arms are centered between the base legs.
- Inspect the electric actuator assembly for wear or deterioration. Refer to Detecting Wear and Damage on page 32.
- Ensure that the electric actuator assembly operates smoothly and quietly.
- Clean the lift whenever necessary. Regular cleaning will reveal loose or worn parts, enhance smooth operation and extend the life expectancy of the lift.
- Inspect all sling attachments each time they are used to ensure proper connection and patient safety.
- Inspect sling material for wear. Refer to Detecting Wear and Damage on page 32.
- Inspect the straps for wear. Refer to Detecting Wear and Damage on page 32.

### Institutional Inspect/Adjust Monthly

- Inspect caster base for missing hardware.
- Ensure that the caster base opens/closes with ease.
- Inspect the casters and axle bolts for tightness.
- Inspect casters for smooth swivel and roll.
- Ensure that casters are free of debris.

- Ensure that the mast is securely assembled to the boom.
- Inspect the mast for bends or deflections.
- Inspect the lift arms and linkage hardware and attachment points.
- Inspect the lift arms and linkage for bends or deflections.
- Inspect the bolted joints of the lift arms for wear. Refer to Detecting Wear and Damage on page 32.
- Ensure that the lift arms are centered between the base legs.
- Inspect the electric actuator assembly for wear or deterioration. Refer to Detecting Wear and Damage on page 32.
- Ensure that the electric actuator assembly operates smoothly and quietly.
- Clean the lift whenever necessary. Regular cleaning will reveal loose or worn parts, enhance smooth operation and extend the life expectancy of the lift.
- Inspect all sling attachments each time they are used to ensure proper connection and patient safety.
- Inspect sling material for wear. Refer to Detecting Wear and Damage on page 32.
- Inspect the straps for wear. Refer to Detecting Wear and Damage on page 32.
- Check that all labels are present and legible. Replace if necessary.

### **In-Home Inspect/Adjust Every Six Months**

*NOTE: For individual home use, a full inspection is required prior to each new user.*

- Inspect caster base for missing hardware.
- Ensure that the caster base opens/closes with ease.
- Inspect the casters and axle bolts for tightness.
- Inspect casters for smooth swivel and roll.
- Ensure that casters are free of debris.
- Ensure that the mast is securely assembled to the boom.
- Inspect the mast for bends or deflections.
- Inspect the lift arms and linkage hardware and attachment points.
- Inspect the lift arms and linkage for bends or deflections.
- Inspect the bolted joints of the lift arms for wear. Refer to Detecting Wear and Damage on page 32.
- Ensure that the lift arms are centered between the base legs.
- Inspect the electric actuator assembly for wear or deterioration. Refer to Detecting Wear and Damage on page 32.
- Ensure that the electric actuator assembly operates smoothly and quietly.

- ❑ Clean the lift whenever necessary. Regular cleaning will reveal loose or worn parts, enhance smooth operation and extend the life expectancy of the lift.
- ❑ Inspect all sling attachments each time they are used to ensure proper connection and patient safety.
- ❑ Inspect sling material for wear. Refer to Detecting Wear and Damage on page 32.
- ❑ Inspect the straps for wear. Refer to Detecting Wear and Damage on page 32.
- ❑ Inspect all pivot points and fasteners for wear. If the metal is worn, the parts **MUST** be replaced.

### **Care and Maintenance of Stand-Up Lift**

*NOTE: Follow the maintenance procedures described in this manual to keep the stand-up lift in continuous service.*

The Reliant 440 is designed to provide a maximum of safe, efficient and satisfactory service with minimum care and maintenance.

All parts of the Reliant 440 are made of the best grades of steel, but metal-to-metal contact will wear after considerable use.

There is no adjustment or maintenance of either the casters or wheel locks, other than cleaning, lubrication and checking axle and swivel bolts for tightness. Remove all debris, etc. from the wheel and swivel bearings. If any parts are worn, replace these parts immediately.

If you question the safety of any part of the lift, contact your Dealer immediately and advise him/her of your problem.

### **Detecting Wear and Damage**

It is important to inspect all stressed parts, such as slings and any pivot for slings for signs of cracking, fraying, deformation or deterioration. Replace any damaged or worn parts immediately and ensure that the lift is not used until repairs are made.

### **Cleaning the Sling and the Lift**

The sling should be washed regularly in water (maximum water temperature of 180°F (82°C)) and a biological solution. A soft cloth, dampened with water and a small amount of mild detergent, is all that is needed to clean the stand-up lift. The lift can be cleaned with non-abrasive cleaners.



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## Replacing Electric Actuator

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### **⚠ WARNING**

**This procedure MUST be performed by a qualified technician.**

---

*NOTE: For this procedure, refer to FIGURE 8.1 on page 34.*

1. Disconnect the actuator power cord from the bottom of the control box.
  2. Remove the bottom locknut, the two bottom washers, and the bottom mounting screw that secure the electric actuator to the mast mounting bracket.
  3. Remove the two plastic caps (not shown in drawing) covering the top locknut and the top mounting screw.
- 

### **⚠ WARNING**

**Rest the lift arm on your shoulder when removing the electric actuator to prevent it from swinging loose and causing injury or damage.**

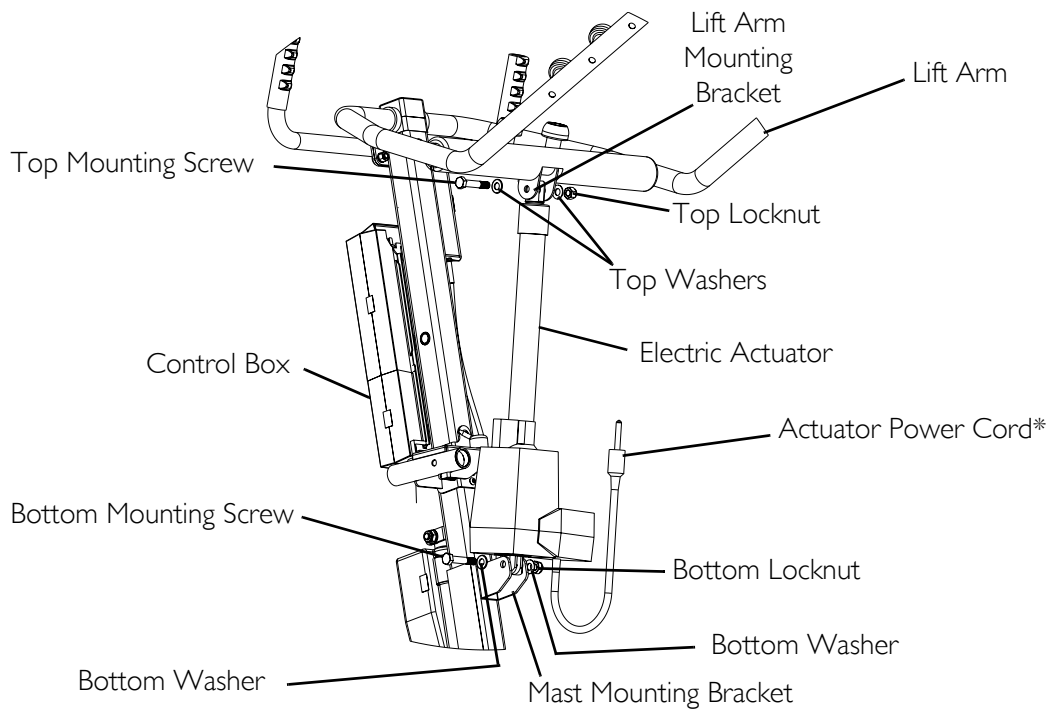
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4. Rest the lift arm on your shoulder and remove the top locknut, top mounting screw, and the two top washers from the lift arm mounting bracket.
  5. Remove the electric actuator.
  6. Reverse STEPS 1-5 for installation.
- 

### **⚠ WARNING**

**DO NOT overtighten the mounting hardware to prevent damaging the mounting brackets.**

---



*NOTE: The two plastic caps covering the top locknut and the top mounting screw are not shown.*

*\*NOTE: Actuator power cord shown disconnected from the control box.*

**FIGURE 8.1** Replacing Electric Actuator

## Maintaining the Base Adjustment

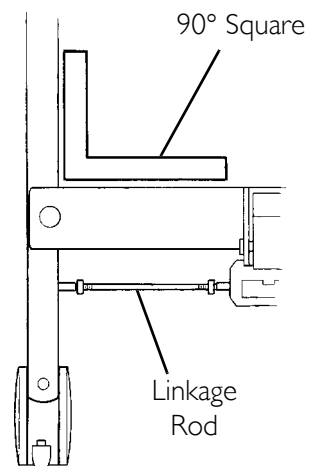
### **⚠ WARNING**

**This procedure MUST be performed by a qualified technician.**

*NOTE: For this procedure, refer to FIGURE 8.2.*

The base adjustment should not require any attention other than:

1. Check the squareness of the legs when in the closed position.
2. Place a 90° square on the inside of the legs and base to determine the 90° alignment.
3. Adjust the linkage rods until 90° alignment is achieved.



**FIGURE 8.2** Maintaining the Base Adjustment

## Replacing the Casters

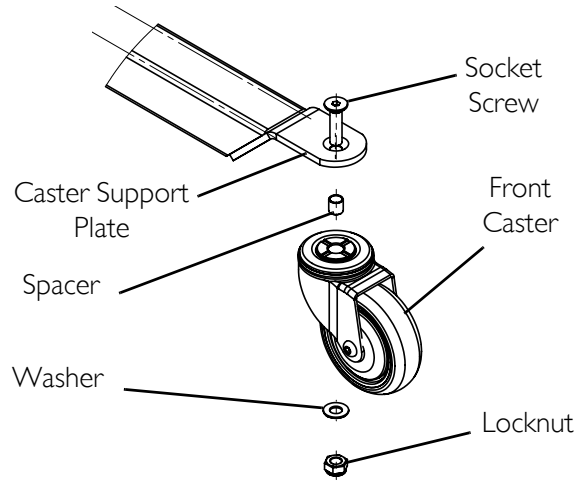
### ⚠ WARNING

This procedure **MUST** be performed by a qualified technician.

### Front Caster

*NOTE: For this procedure, refer to FIGURE 8.3.*

1. Remove the locknut, washer, spacer and socket screw that secures the front caster to the caster support plate.
2. Remove the existing front caster.
3. Reverse STEPS 1-2 to install the front caster.

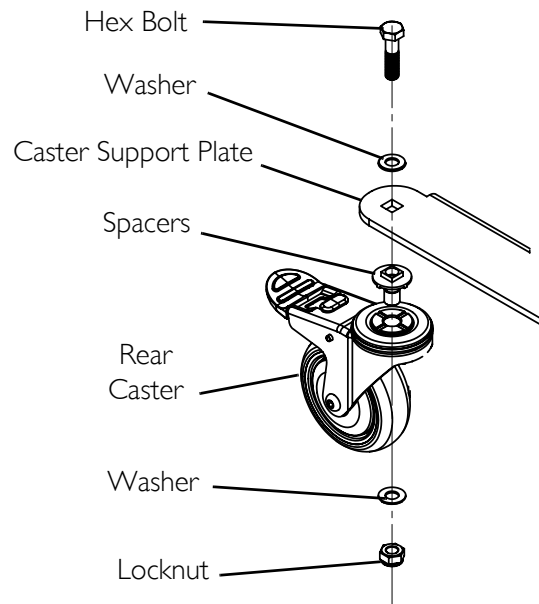


**FIGURE 8.3** Replacing the Casters - Front Caster

### Rear Caster

*NOTE: For this procedure, refer to FIGURE 8.4.*

1. Remove the hex bolt, two washers, spacers and locknut that secure the rear caster to the caster support plate.
2. Remove the existing rear caster.
3. Reverse STEPS 1-2 to install the rear caster.



**FIGURE 8.4** Replacing the Casters - Rear Caster

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# LIMITED WARRANTY

**PLEASE NOTE: THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.**

This warranty is extended only to the original purchaser/user of our products.

This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

Invacare warrants the products manufactured to be free from defects in materials and workmanship for a period of three years on the lift and one year on the electric components from the date of purchase. If within such warranty period any such product shall be proven to be defective, such product shall be repaired or replaced, at Invacare's option. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. Invacare's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the dealer from whom you purchased your Invacare product. In the event you do not receive satisfactory warranty service, please write directly to Invacare at the address on the back cover, provide dealer's name, address, date of purchase, indicate nature of the defect.

Invacare Corporation will issue a serialized return authorization. The defective unit or parts **MUST** be returned for warranty inspection using the serial number, when applicable as identification within 30 days of return authorization date. **DO NOT** return products to our factory without our prior consent. C.O.D. shipments will be refused; please prepay shipping charges.

**LIMITATIONS AND EXCLUSIONS: THE FOREGOING WARRANTY SHALL NOT APPLY TO SERIAL NUMBERED PRODUCTS IF THE SERIAL NUMBER HAS BEEN REMOVED OR DEFACED, PRODUCTS SUBJECTED TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE OR STORAGE, PRODUCTS MODIFIED WITHOUT INVACARE'S EXPRESS WRITTEN CONSENT (INCLUDING, BUT NOT LIMITED TO, MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS; PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF INVACARE, OR TO A PRODUCT DAMAGED BY CIRCUMSTANCES BEYOND INVACARE'S CONTROL, AND SUCH EVALUATION WILL BE SOLELY DETERMINED BY INVACARE. THE WARRANTY SHALL NOT APPLY TO PROBLEMS ARISING FROM NORMAL WEAR OR FAILURE TO ADHERE TO THE INSTRUCTIONS IN THIS MANUAL.**

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**SOME STATES DO NOT ALLOW EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGE, OR LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE EXCLUSIONS AND LIMITATIONS MAY NOT APPLY TO YOU.**

**THIS WARRANTY SHALL BE EXTENDED TO COMPLY WITH STATE OR PROVINCIAL LAWS AND REQUIREMENTS.**

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*Yes, you can.*