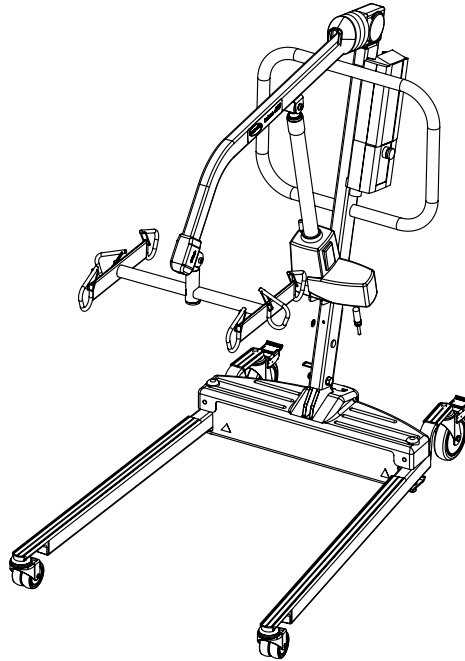


Electric Portable Patient Lift



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



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.

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.

NOTE: Updated versions of this manual are available on www.invacare.com.

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5. It will enable Invacare to improve product designs based on your input and needs.

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Complete and mail the form on the next page

Any registration information you submit will be used by Invacare Corporation only, and protected as required by applicable laws and regulations.



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Address _____

City _____ State/Province _____

Zip/Postal Code _____

Email _____ Phone No. _____

Fold
here

Invacare Model No. _____ Serial No. _____

Purchased From _____ Date of Purchase: _____

1. Method of purchase: (check all that apply)

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Self Parent Spouse Other

3. Product was purchased for use at:

Home Facility Other

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Price Features (list features) _____

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Doctor Therapist Friend Relative Dealer/Provider Other _____

Advertisement (circle one): TV, Radio, Magazine, Newspaper No Referral _____

6. What additional features, if any, would you like to see on this product?

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7. Would you like information sent to you about Invacare products that may be available for a particular medical condition? Yes No

If yes, please list any condition(s) here and we will send you information by email and/or mail about any available Invacare products that may help treat, care for or manage such condition(s):

8. Would you like to receive updated information via email or regular mail about the Invacare home medical products sold by Invacare's dealers? Yes No

9. What would you like to see on the Invacare website?

10. Would you like to be part of future online surveys for Invacare products? Yes No

11. User's Year of birth: _____

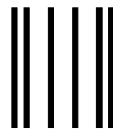
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Cut Along Line



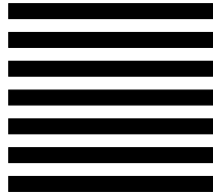
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SPECIAL NOTES

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 table below 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.

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.

WARNING

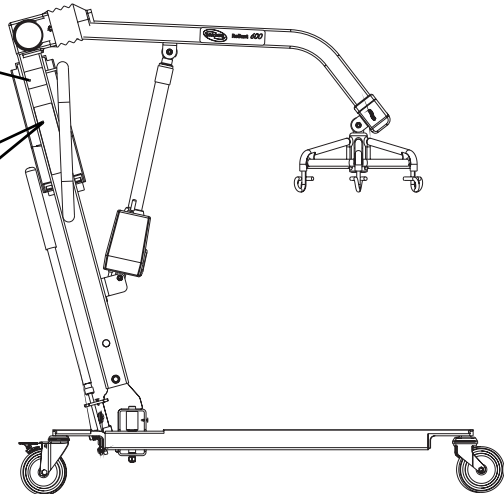
Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.

LABEL LOCATION

⚠ WARNING

Mast pivot under rubber boot must be tight to ensure safe use of your patient lift. Bolt must be checked at least every six (6) months in conjunction with periodic maintenance. See Owner's Manual.

P/N 1130200 Rev. A 01/05



⚠ WARNING



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

⚠ WARNING

WEIGHT LIMITATION 450 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 genuine INVACARE SLINGS and LIFT ACCESSORIES.

USE ONLY RELIANT 450 MODEL Components for maintenance and replacement.

Refer to Owner's Manual for periodic maintenance procedures.

Customer Service:
1-800-333-6900
1073698 REV. B 07/05

⚠ WARNING



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

⚠ WARNING

WEIGHT LIMITATION 600 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 genuine INVACARE SLINGS and LIFT ACCESSORIES.

USE ONLY RELIANT 600 Model Components for maintenance and replacement.

Refer to Owner's Manual for periodic maintenance procedures.

Customer Service:
1-800-333-6900
Rev. A 04/05 1070965

SPECIFICATIONS

Patient Lift

	450 lb.	600 lb.
	Low Profile RPL450-2	Low Profile RPL600-2
Height at Sling Hook-up - MAX.	74 inches	68 inches
Height at Sling Hook-up - MIN.	24 inches	28 inches
Base Width OPEN	41 inches	41 inches
Base Width CLOSED	26.5 inches	26.5 inches
Base Height (Clearance)	4.5 inches	4.5 inches
Base Length	48 inches	48 inches
Caster Size FRONT REAR	3 inches 5 inches	3 inches 5 inches
Sling Options	3 Styles	1 Style
Weight Capacity	450 lbs	600 lbs
Weight IN Carton	136 lbs	141 lbs
Weight OUT of Carton	109 lbs	115 lbs
Battery	24V DC (RCHBL)	24V DC (RCHBL)
Charger Input	100-240VAC	100-240VAC
Charger Output/Charging Time	29.5V DC Max 6 hrs	29.5V DC Max 6 hrs
Accessories	Digital Scale	Digital Scale
Audio Low Battery Alarm	Yes	Yes
Motor Safety Devices	Anti-Entrapment	Anti-Entrapment
*Approx. Patient Lifts per Charge	*100-200 Cycles per Charge	*100-200 Cycles per Charge
Warranty Electronics	1 Year	1 Year

*NOTE: Varies depending upon load and stroke.

Full Body, Divided Leg and Toileting Slings

	Full Body			Full Body w/Commode			Divided Leg				Toileting	Heavy Duty w/o Commode	Heavy Duty w/ Commode
	R110 R112*	R111 R113*	R114	R115	R116	R117*	R100P	R100	R101	R102	R121	R140*	R141*
Size:	M	L	XL	M	L	XL	P	M	L	XL	L	N/A	N/A
Width:	41.5	45.5	45.5	41.5	45.4	45.5	33	37.5	41	44.5	36	45	45
Commode Opening:	N/A	N/A	N/A	8	8	9	N/A	N/A	N/A	N/A	N/A	N/A	7
Length:	54.7	60.5	65.3	54.7	60.5	65.3	59.8	62.8	67.8	72.3	37	55	55
Commode Opening:	N/A	N/A	N/A	11	11	13	N/A	N/A	N/A	N/A	N/A	N/A	13
Back:	N/A	N/A	N/A	N/A	N/A	N/A	29.2	35.7	41.7	43.2	N/A	N/A	N/A
Weight Capacity:	450 lbs	450 lbs	450 lbs	450 lbs	450 lbs	450 lbs	450 lbs	450 lbs	450 lbs	450 lbs	450 lbs	600 lbs	600 lbs

*NOTE: Slings made of a mesh material.

NOTE: All dimensions are in inches except where noted.

Reliant Scale RLS6

Weight Range:	Up to 600 lbs. (272.7 kg)
Resolution:	+/- 0.2 lbs (0.1 kg)
Display:	Liquid Crystal Digital
Automatic Power Down:	Two minutes
Size:	5-3/4 L X 3-5/8 W X 4 H
Weight:	0.55 lbs
Power:	Nine Volt Alkaline battery (included)
Battery Life:	Approximately 1500 readings
Temperature Range:	50° to 104°F (10° to 40°C)

SECTION I—GENERAL GUIDELINES

⚠ WARNING

SECTION I - GENERAL GUIDELINES contains important information for the safe operation and use of this product. **DO NOT** use this product or any available optional equipment without first completely reading and understanding these instructions and any additional instructional material such as owner's manuals, service manuals or instruction sheets supplied with this product or optional equipment. If you are unable to understand the warnings, cautions or instructions, contact a healthcare professional, dealer or technical personnel before attempting to use this equipment - otherwise, injury or damage may occur.

DO NOT move a person suspended in a sling any distance. 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). Otherwise, injury or damage may occur.

DO NOT dispose of batteries in normal household waste. Device contains lead acid batteries. They must be taken to a proper disposal site. Contact your local waste management company for information.

Assembling the Patient Lift

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

Operating the Patient Lift

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

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.

Use common sense in all lifts. Special care **MUST BE** taken with people with disabilities who cannot cooperate while being lifted.

Invacare slings and patient lift accessories 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.

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 case.

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

DO NOT exceed maximum weight limitation of the patient lift. The weight limitation for the RPL450-2 (Low Base) is 450 lbs and the RPA600-2 (Low Base) is 600 lbs.

ALWAYS keep hands and fingers clear of moving parts to avoid injury.

Using the Sling

Use an Invacare approved sling that is recommended by the individual's doctor, nurse or medical assistant for the comfort and safety of the individual being lifted.

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.

Lifting the Patient

When using an adjustable base lift, the legs MUST be in the maximum Opened/Locked position before lifting the patient.

When the sling is elevated a few inches off the surface of the bed and before moving the patient, check again to make sure that the sling is properly connected to the hooks of the swivel bar. If any attachments are not properly in place, lower the patient back onto the stationary surface and correct this problem - otherwise, injury or damage may occur.

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

Invacare slings are made specifically for use with Invacare patient lifts. For the safety of the patient, DO NOT intermix slings and patient lifts of different manufacturers. Warranty will be voided.

Before transferring 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 patient suspended in a sling attached to the patient 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 does not recommend locking of the rear casters of the patient lift when lifting an individual. Doing so could cause the patient 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

When elevated a few inches off the surface of the stationary object (wheelchair, commode, or bed) and before moving the patient, check again to make sure that the sling is properly connected to the hooks of the swivel bar. If any attachments are not properly in place, lower the patient back onto the commode chair or the standard commode and correct this problem.

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

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

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 the bed or chair.

Mast pivot under the rubber boot must be tight to ensure safe use of the patient lift. Bolt must be checked at least every six months in conjunction with periodic maintenance.

Performing Maintenance

After the first year of use, the hooks of the swivel bar and the mounting brackets of the boom should be inspected every three months to determine the extent of wear. If these parts become worn, replacement must be made.

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

After the first twelve months of operation, inspect the swivel bar and the eye of the boom (to which it attaches) for wear. If the metal is worn, the parts **MUST** be replaced. Make this inspection every six months thereafter.

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

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

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

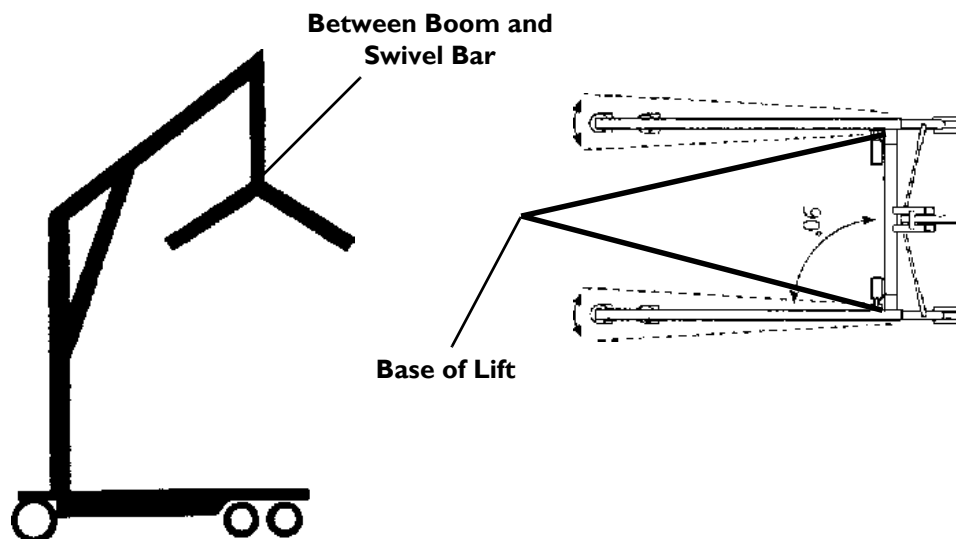
Electrical - Grounding Instructions

DO NOT, under any circumstances, cut or remove the round grounding prong from any plug. Some devices are equipped with three-prong (grounding) plugs for protection against possible shock hazards. Where a two-prong wall receptacle is encountered, it is the personal responsibility and obligation of the customer to contact a qualified electrician and have the two-prong receptacle replaced with a properly grounded three-prong wall receptacle in accordance with the National Electrical Code. If you must use an extension cord, use only a three-wire extension cord having the same or higher electrical rating as the device being connected. In addition, Invacare has placed RED/ORANGE WARNING TAGS on some equipment. DO NOT remove these tags. Carefully read battery/battery charger information prior to installing, servicing or operating your patient lift.

Pinch Points

⚠ WARNING

Pinch points exist between boom and swivel bar. Pinch points also exist at base of lift. When positioning lift, be aware of the position of the swivel bar and the patient. Injury could occur.



SECTION 2— INSTALLATION

Introduction

⚠ WARNING

Use only Invacare parts in the assembly of this patient lift. The base legs, mast, and boom assembly and the swivel bar are manufactured to specifications that assure correct alignment of all parts for safe functional operation.

Unpacking the Patient Lift

NOTE: For this procedure, refer to FIGURE 2.1

1. Unpack the components from the shipping carton.

NOTE: DO NOT remove the plastic wrap that secures the boom to the mast.

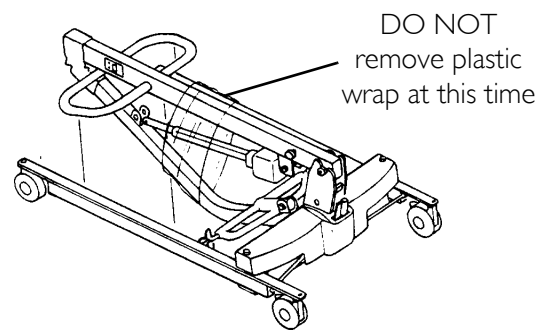


FIGURE 2.1 Unpacking the Patient Lift

Assembling the Mast to the Base

⚠ WARNING

The mast may be removed from the base for storage or transporting. Each time the mast is removed and returned to the base, the mast **MUST** be properly secured to the base assembly.

NOTE: For this procedure, refer to FIGURE 2.2 on page 18.

1. If locking-type casters are on the patient lift, lock them.
2. Remove the shoulder bolt, nut and washer, that secures the mast in the U-shape cut-out of the base.
3. Position the mast in an upright position and place the mast into the U-shaped cut-out of the base.
4. Insert shoulder bolt with washers through the base and mast.
5. Secure with nut.

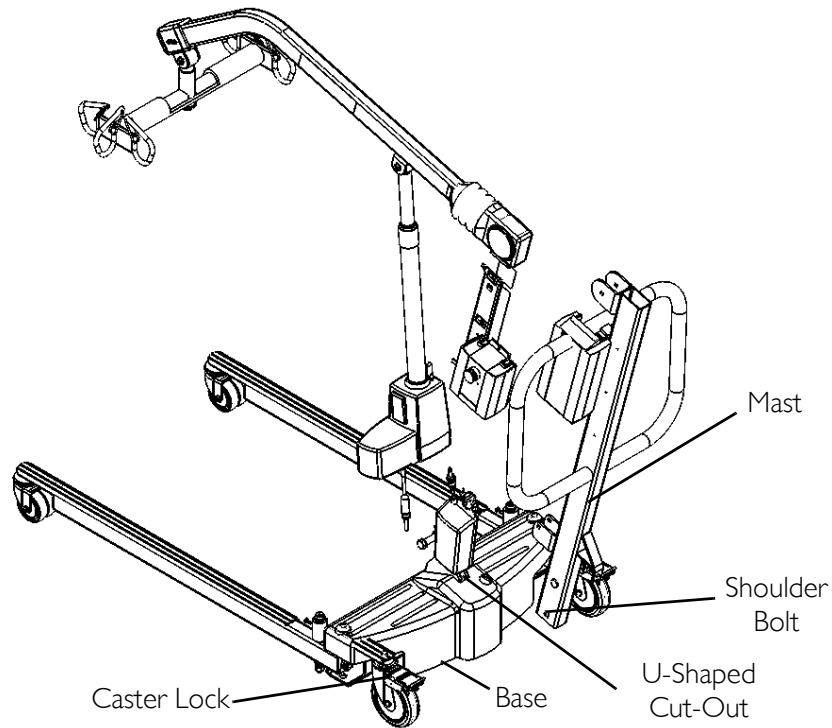


FIGURE 2.2 Assembling Mast to Base

Assembling the Boom Actuator

NOTE: For this procedure, refer to FIGURE 2.3.

1. Remove the shoulder bolt, washer and nut from the mounting bracket on the boom assembly.
2. Unpack the pinch guard from the patient lift carton.

NOTE: The bottom of the boom actuator assembly will already be assembled to the mast mounting bracket.

3. Cut the plastic-wrap that secures the boom and mast together.
4. Lift-up on the boom and place it on your left shoulder.
5. Let the boom actuator rest on shoulder and rotate the shaft extension of the actuator assembly until it lines-up with the mounting holes in the boom assembly.

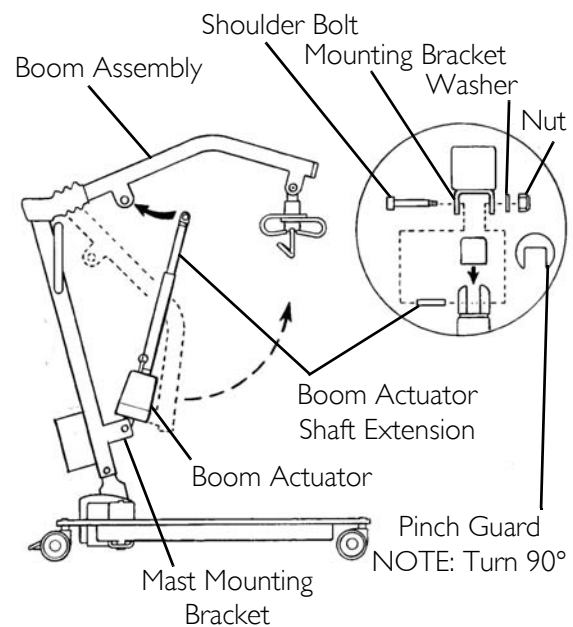


FIGURE 2.3 Assembling the Boom Actuator

6. Place the pinch guard over the shaft extension of the boom actuator.

7. Align the holes of the boom assembly mounting bracket with those of the boom actuator and insert the bolt. Secure with nut.

NOTE: Be sure that the bolt is completely through the holes of the boom assembly mounting bracket and the actuator assembly. The boom assembly will pivot easily if the mounting hardware is aligned properly when the boom assembly is secured to the mast.

CAUTION

DO NOT overtighten the nut and bolt. This damages the mounting bracket.

NOTE: The bottom of the actuator assembly will already be assembled to the mast mounting bracket.

Installing the Leg Actuator to the Base

NOTE: For this procedure, refer to FIGURE 2.4 on page 20.

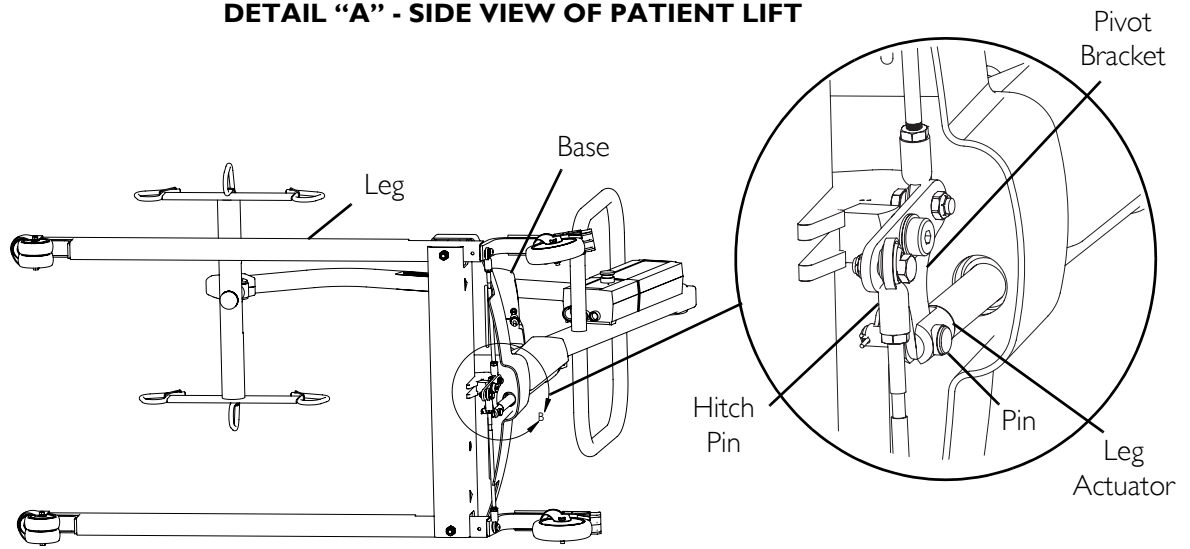
1. Slide the leg actuator into the slot in the base of the patient lift. See Detail "B".
2. Perform the following to secure the leg actuator to the pivot bracket (Detail "A"):

⚠ WARNING

Ensure that there is sufficient room to turn patient lift on its side and that floor area is clear of debris. Otherwise, injury to personnel or damage to patient lift may occur.

- A. Turn the patient lift on its side.
 - B. Position slot in leg actuator over the pivot bracket.
 - C. Install the pin through the leg actuator and pivot bracket and secure with hitch pin.
 - D. Return the patient lift to the upright position.
3. Perform the following to secure the leg actuator to the mast bracket (Detail "B"):
 - A. Position leg actuator between mast brackets.
 - B. Move the legs to align the holes in the leg actuator with the holes in the mast bracket.
 - C. Install the pin through the holes of the leg actuator and mast bracket and secure with hitch pin.
 4. Plug the pendant control (not shown) into the bottom of the control box.

DETAIL "A" - SIDE VIEW OF PATIENT LIFT



DETAIL "B"

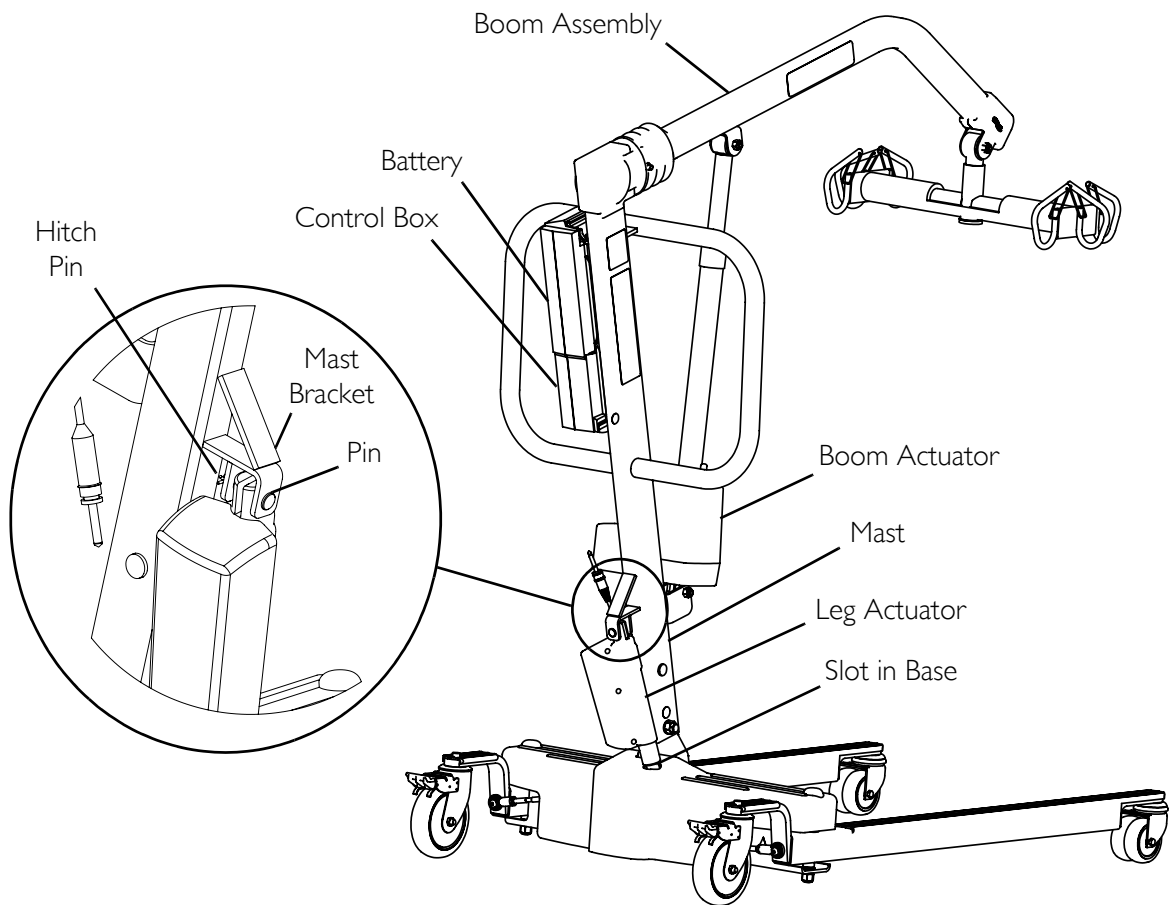


FIGURE 2.4 Patient Lift Components

Mounting the Battery Charger

NOTE: For this procedure, refer to FIGURE 2.5.

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.
9. Verify that ON is illuminated.

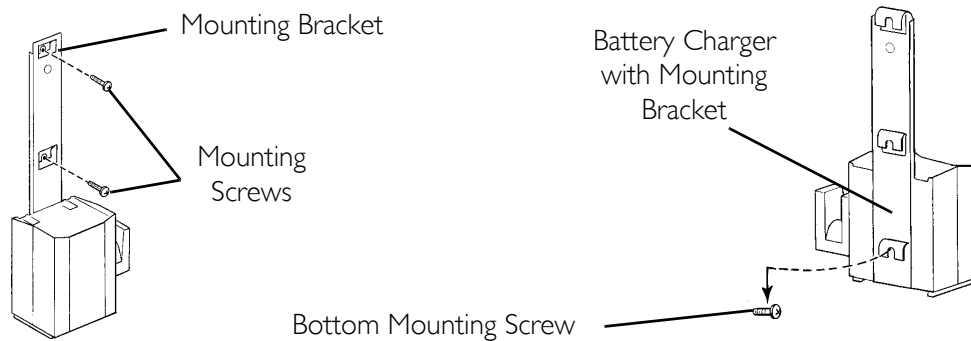


FIGURE 2.5 Mounting the Battery Charger

SECTION 3—OPERATING THE PATIENT LIFT

Introduction

⚠ WARNING

DO NOT attempt any transfer of a patient 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 patient lift must be in the maximum open position for optimum stability and safety. If it is necessary to close the legs to maneuver the patient lift under a bed, close the legs only as long as it takes to position the patient lift over the patient and lift the patient off the surface of the bed. When the legs of the patient lift are no longer under the bed, return the legs 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 with one assistant. The use of one assistant is based on the evaluation of the health care professional for each individual case.

Using the Pendant Buttons

⚠ WARNING

DO NOT lock the rear casters of the patient lift when lifting an individual. Locking the rear casters could cause the patient lift to tip and endanger the patient and assistants.

NOTE: For this procedure, refer to FIGURE 3.1 on page 23.

The pendant is used to raise/lower the boom or to open/close the legs of the base for stability when lifting a patient

Raising/Lowering the Boom

To raise the patient lift, press the boom up button (up arrow) to raise the boom and the patient.

To lower the patient lift, press the boom down button (down arrow) to lower the boom and the patient.

Opening/Closing the Legs

To open the legs, press the legs open button.

To close the legs, press the legs closed button.

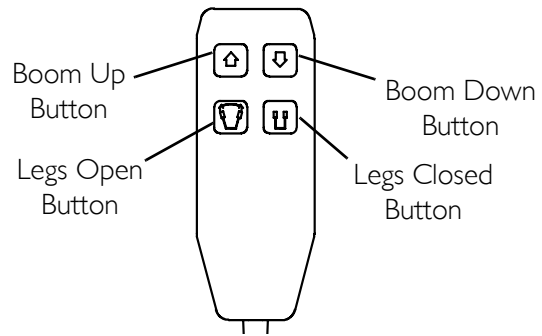


FIGURE 3.1 Pendant Buttons

Activating a Mechanical Emergency Release

Primary Emergency Release

NOTE: For this procedure, refer to FIGURE 3.2.

All patient lift actuators are equipped with a mechanical emergency release. The mechanical release will enable the actuator to retract without power. The actuator will only retract if a load is applied and the mechanical emergency release button is pulled. The red/orange emergency release button has emergency written upon it.

To activate the primary emergency release, insert a pen into the hole labeled emergency on the control box of the patient lift and push down on the boom at the same time.

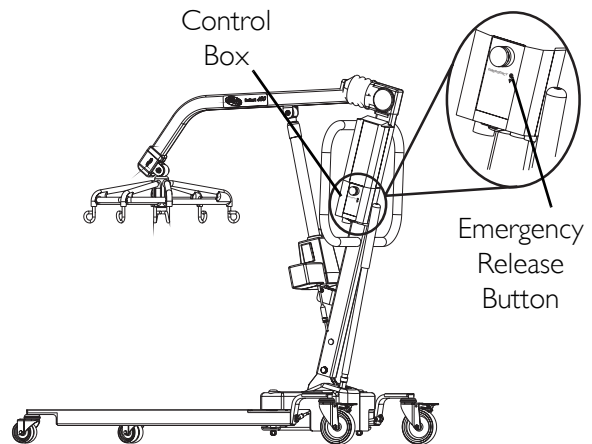


FIGURE 3.2 Primary Emergency Release

Secondary Emergency Release

NOTE: For this procedure, refer to FIGURE 3.3.

NOTE: Use the primary emergency release first. The secondary emergency release is only a back-up to the primary emergency release.

In cases where the primary release is either not functioning or unreachable, a secondary emergency release may be used.

To activate the secondary release, pull up on the EMERGENCY ring and push down on the boom at the same time.

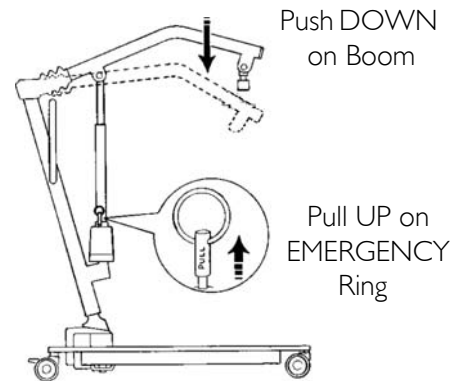


FIGURE 3.3 Secondary Emergency Release

Performing an Emergency Stop

NOTE: For this procedure, refer to FIGURE 3.4.

Press the RED/ORANGE emergency button on the control box to stop the boom assembly and patient from raising or lowering.

Rotate the RED/ORANGE emergency stop button clockwise to disengage the emergency stop.

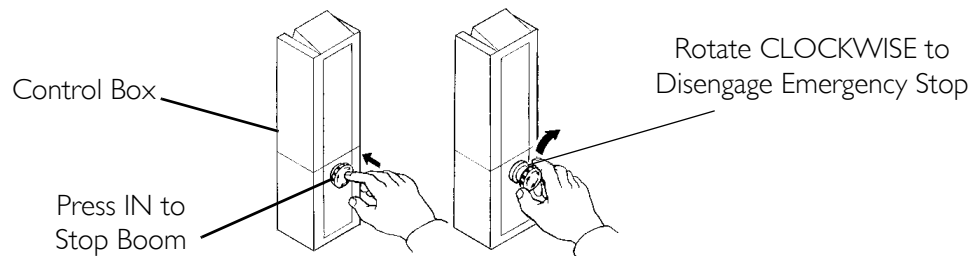


FIGURE 3.4 Performing an Emergency Stop

Charging the Battery

NOTE: For this procedure, refer to FIGURE 3.5 on page 25.

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.
2. Lift the battery up and out of the control box.

CAUTION

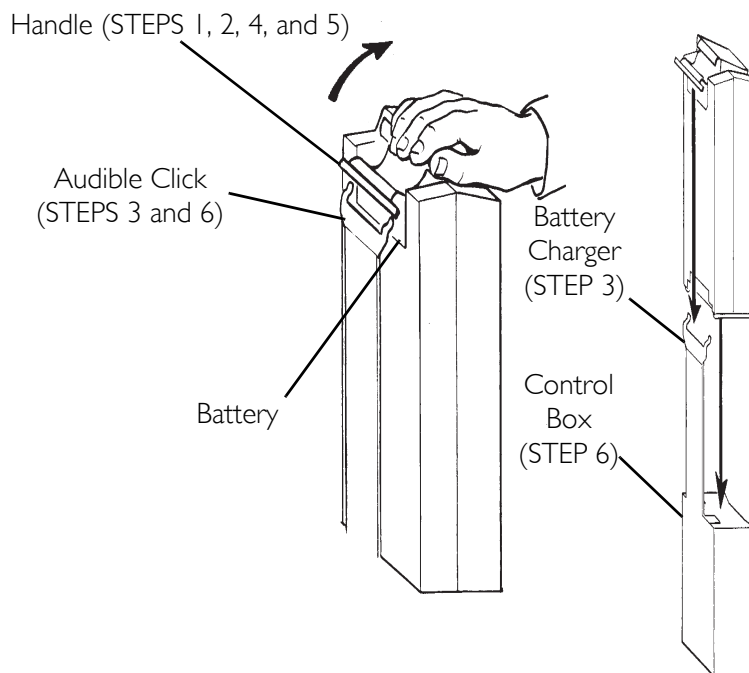
Make sure there is an audible click when mounting the battery on the battery charger to confirm proper mounting. Otherwise, injury or damage may occur.

3. Place the battery on the battery charger as shown in FIGURE 3.5. Make sure there is an audible click.

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

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

4. Lift up on the handle on the back of the battery.
5. Lift the battery up and out of the battery charger.
6. Reinstall the battery onto the control box as shown in FIGURE 3.5. Make sure there is an audible click.



NOTE: The battery mounts to the control box and battery charger as shown.

FIGURE 3.5 Charging the Battery

SECTION 4—LIFTING THE PATIENT

Introduction

NOTE: Invacare recommends that two assistants be used for all lifting preparation and transferring to/from procedures; however, 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 case.

Positioning the Patient Lift

NOTE: For this procedure, refer to FIGURE 4.1.

NOTE: Refer to General Guidelines on page 13 in this manual before proceeding further and observe all warnings indicated.

NOTE: Before positioning the legs of the patient lift under a bed, make sure that the area is clear of any obstructions.

⚠ WARNING

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

1. Press the legs open button on the pendant to open the legs of the patient lift to maximum.
2. Position the patient lift using the steering handle.
3. Press the boom down button on the pendant to lower the boom for easy attachment of the sling.

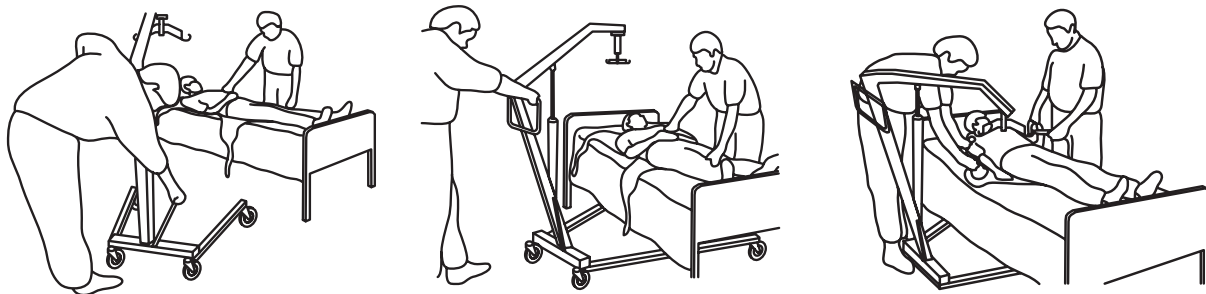


FIGURE 4.1 Positioning the Patient Lift

Attaching a Sling

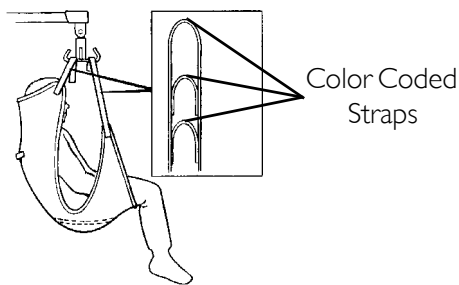
NOTE: For this procedure, refer to FIGURE 4.2.

1. Place the straps of the sling over the hooks of the swivel bar.
2. Match the corresponding colors on each side of the sling for an even lift of the patient.

NOTE: Model Nos. R110 - R117 Full Body Slings and Model No. R121 Toileting Sling have four sling straps. Model Nos. R100 - R102 Divided Leg Slings have six sling straps.

NOTE: Invacare Lift Swivel Bars have three hookup points per side. The middle hookup is ONLY used for slings that have three sets of straps per side.

DETAIL "A" - FULL BODY OR HEAVY DUTY SLING WITH OR WITHOUT COMMODE OPENING (FOUR STRAPS ONLY)



DETAIL "B" - DIVIDED LEG SLING WITH COMMODE OPENING (SIX STRAPS)

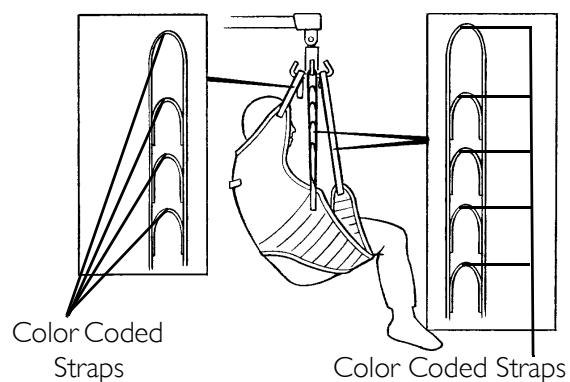


FIGURE 4.2 Attaching a Sling Using Color Coded Straps

Lifting/Moving the Patient

⚠ WARNING

DO NOT lock the rear casters of the patient lift when lifting an individual. Locking the rear casters could cause the patient lift to tip and endanger the patient and assistants.

DO NOT move the patient if the sling is not properly connected to the hooks of the swivel bar. When the sling is elevated a few inches off the surface of the bed and before moving the patient, check again to make sure that the sling is properly connected to the hooks of the swivel bar. If any attachments are **NOT** properly in place, lower the patient back onto the stationary surface and correct this problem - otherwise, injury or damage may occur.

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

DO NOT use slings and patient lifts of different manufacturers. Invacare slings are made specifically for use with Invacare patient lifts. Injury or damage may occur.

LIFTING THE PATIENT

NOTE: For this procedure, refer to FIGURE 4.3 and FIGURE 4.4 on page 29.

NOTE: When the patient is lifted from the bed (with the patient's head supported by the sling and/or an assistant), he/she will be raised to a sitting position (Detail "A" of FIGURE 4.4 on page 29).

1. Press the boom up button to raise the patient high enough to clear the bed.
The patient's weight will be fully supported by the patient lift.

NOTE: The boom will stay in position until the boom down button is pressed.

2. Place patient's arms inside of sling.
3. Swing the patient's feet off the bed when the patient is clear of the bed surface (Detail "B" of FIGURE 4.4 on page 29).
4. Move the patient lift away from the bed using the steering handle.
5. Turn the patient so that he/she faces the assistant operating the patient lift when moving the patient lift away from the bed (Detail "C" of FIGURE 4.4 on page 29).
6. Press the boom down button to lower the patient until his legs straddle the mast and his feet rest on the base of the patient lift.

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

7. Pull the patient lift away from the bed and then push it from behind with both hands firmly on the steering handle.

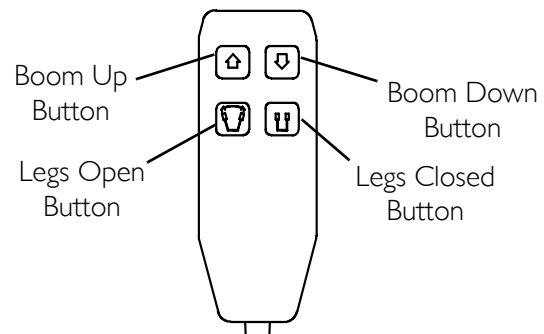
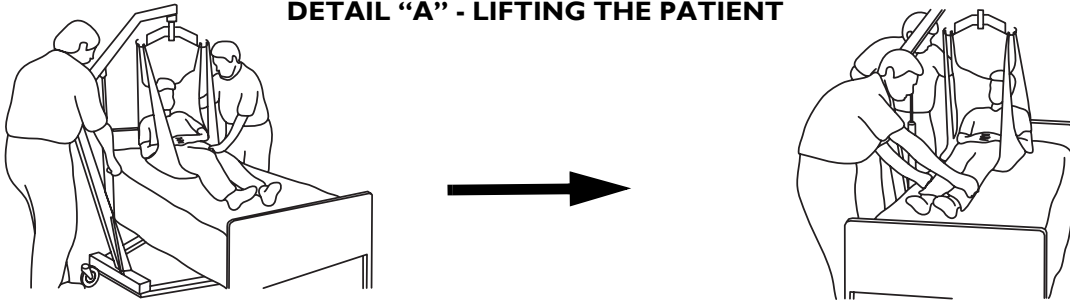
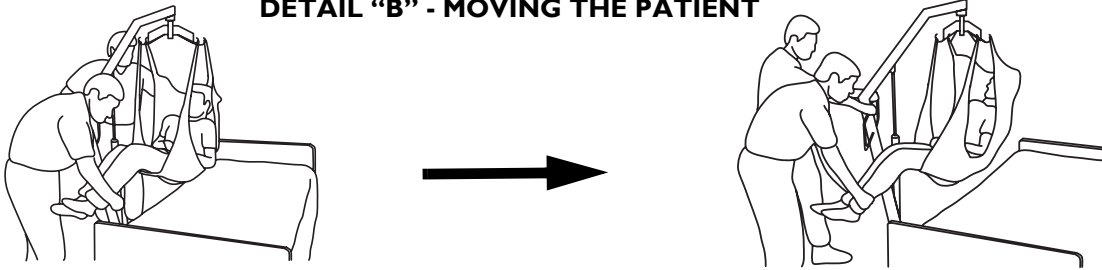


FIGURE 4.3 Pendant Buttons

DETAIL "A" - LIFTING THE PATIENT



DETAIL "B" - MOVING THE PATIENT



**DETAIL "C" - MOVING
THE PATIENT LIFT
AWAY FROM THE BED**



FIGURE 4.4 Lifting/Moving the Patient

SECTION 5—TRANSFERRING THE PATIENT

Introduction

⚠ WARNING

DO NOT attempt any transfer of a patient without approval of the patient's physician, nurse, or medical assistant.

DO NOT move the patient if the sling is not properly connected to the hooks of the swivel bar. When the sling is a few inches off the surface of the bed and before moving the patient, check to make sure that the sling is properly connected to the hooks of the swivel bar. If any attachments are **NOT** properly in place, lower the patient back onto the stationary surface and correct this problem - otherwise, injury or damage may occur.

Adjustments for safety and comfort should be made before moving the patient. The patient's arms should be inside the straps.

DO NOT use slings and patient lifts of different manufacturers. Invacare slings are made specifically for use with Invacare patient lifts. Otherwise, injury or damage may occur.

DO NOT lock the rear casters of the patient lift when lifting an individual. Locking the rear casters could cause the patient lift to tip and endanger the patient and assistants.

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

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 bed or chair.

The slings with commode openings are designed to be used with either a commode chair or standard commode.

NOTE: Invacare recommends that the sling remain connected to the swivel bar hooks during the patient's use of either the commode chair or standard commode.

NOTE: Invacare recommends that two assistants be used for all lifting preparation and transferring to/from procedures; however, 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 case.

Transferring to a Commode Chair

NOTE: For this procedure, refer to FIGURE 5.1.

1. Lift the patient from the bed. Refer to [Lifting the Patient](#) on page 26.
2. Press the boom up button to elevate the patient high enough to clear the arms of the commode chair. Their weight will be supported by the patient lift.
3. Guide the patient onto the commode chair. This may require two assistants.
4. Press the boom down button to lower the patient onto the commode chair leaving the sling attached to the swivel bar hooks.
5. When complete, recheck the sling for correct attachments.
6. Press the boom up button to raise the patient off the commode chair.
7. When the patient is clear of the commode surface (using the steering handles), move the patient lift away from the commode chair.

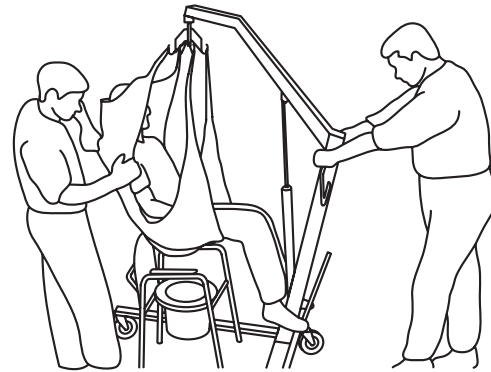


FIGURE 5.1 Transferring to a Commode Chair

8. To return the patient to bed, reverse [Lifting the Patient](#) starting on page 26.
9. To return or place the patient in a wheelchair, refer to [Transferring to a Wheelchair](#) on page 32.

Transferring to a Standard Commode

NOTE: The Invacare patient lift is NOT intended as a transport device. Moving a person suspended in a sling over any distance is NOT recommended. If the bathroom facilities are not near the bed or if the patient lift cannot be easily maneuvered towards the commode, then the patient MUST be transferred to a wheelchair and transported to the bathroom facilities before using the patient lift again to position the patient on a standard commode. Refer to [Transferring to a Wheelchair](#) on page 32.

1. Use an empty patient lift to check if the patient lift can maneuver around the commode.
2. If the patient lift can maneuver around the commode, lift the patient from the bed. Refer to [Lifting the Patient](#) on page 26.
3. Transport the patient to the bathroom facility.

4. Press the boom up/down buttons to elevate the patient high enough to clear the commode. Their weight will be supported by the patient lift.
5. Guide the patient onto the commode. This may require two assistants.
6. Press the boom down button to lower the patient onto the standard commode leaving the sling attached to the swivel bar hooks.
7. When complete, recheck the sling for correct attachments.
8. Press the boom up button to raise the patient off the commode.
9. When patient is clear of the commode surface (using the steering handle), move the lift away from the commode.
10. To return the patient to bed, reverse Lifting the Patient starting on page 26.
11. To return or place patient in a wheelchair, refer to Transferring to a Wheelchair on page 32.

Transferring to a Bathing Unit

NOTE: There are many portable bathing apparatus; this is an example of one. Refer to your particular portable bath instructions and use them in conjunction with this owner's manual.

1. Lift the patient from the bed. Refer to Lifting the Patient on page 26.
2. Press the boom up/down buttons to elevate the patient high enough to clear the bed and portable bath tub.
3. Slide the portable bath tub under the patient.
4. Press the boom down button to lower the patient into the portable bath tub.
5. Detach the sling from the swivel bar hooks.
6. Attach the portable bath tub straps to the patient lift.
7. Press the boom up button to raise the sides of the portable bath tub.
8. Bathe the patient.
9. Reverse this procedure to return the patient to bed.

Transferring to a Wheelchair

NOTE: For this procedure, refer to FIGURE 5.2 on page 33.

1. Lift the patient from the bed. Refer to Lifting the Patient on page 26.
1. Ensure the legs of the lift with patient in the sling are in the open position. Press the legs open button until in maximum open position.
2. Move the wheelchair into position.
3. Engage the rear wheel locks of the wheelchair to prevent movement of the chair.

⚠ WARNING

DO NOT place the patient in the wheelchair if the locks are not engaged. The wheelchair wheel locks **MUST** be in a locked position before lowering the patient into the wheelchair for transport. Otherwise, injury may result.

4. Use the straps or handles on the side and the back of the sling to guide the patient's hips as far back as possible into the seat for proper positioning.
5. Position the patient over the seat with their back against the back of the chair.
6. Begin to lower the patient either by opening the control valve or by pressing the boom down button.
7. Two assistants are recommended for this step - One assistant stands behind the chair and the other operates the patient lift. The assistant behind the chair pulls back on the grab handle (on select models) or sides of the sling to seat the patient well into the back of the chair.

NOTE: This will maintain a good center of balance and prevent the chair from tipping forward.

8. Leave the sling in place unless a divided leg sling was used. Remove a divided leg sling.
9. Reverse Lifting the Patient on page 26 to return to the seating surface of the wheelchair.

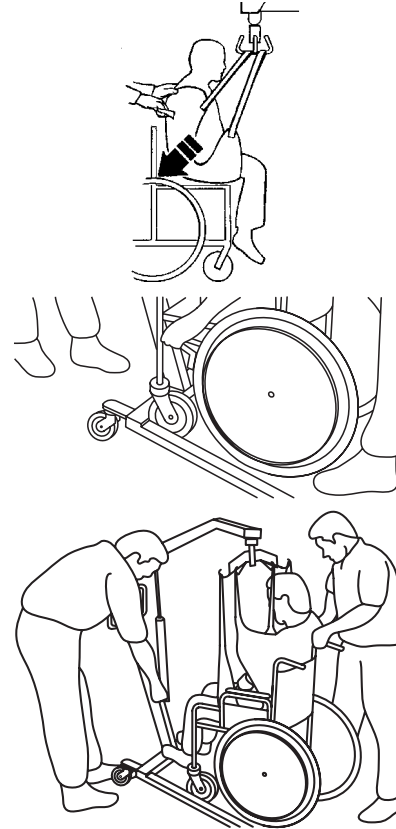


FIGURE 5.2 Transferring to a Wheelchair

SECTION 6— TROUBLESHOOTING

SYMPTOMS	FAULTS	SOLUTION
Patient lift feels loose.	Mast/base joint loose. Tie - Rods are loose.	Refer to <u>Installation</u> on page 17. Refer to <u>Maintaining the Base Adjustment</u> on page 39.
Casters/Brakes noisy or stiff.	Fluff or debris in bearings.	Refer to <u>Replacing Casters/Forks</u> on page 40.
Noisy or dry sound from pivots.	Needs lubrication.	Refer to <u>Lubricating the Lift</u> on page 36.
Actuator fails to lift or legs fail to open when button is pressed.	Hand-control or actuator connector loose. Battery low. RED emergency stop button pressed IN. Battery not connected properly to control box. The connecting terminals are damaged. Boom or leg actuator in need of service or load is too high.	Charge batteries. Refer to <u>Charging the Battery</u> on page 24. Rotate RED emergency stop button CLOCKWISE until it pops out. Reconnect the battery to the control box. Refer to <u>Charging the Battery</u> on page 24. Replace the battery pack. Refer to <u>Charging the Battery</u> on page 24. Refer to <u>Replacing the Boom Actuator</u> on page 37 or <u>Installing the Leg Actuator to the Base</u> on page 19. Contact your dealer.
Unusual noise from actuator.	Actuator is worn or damaged or spindle is bent.	Refer to <u>Replacing the Boom Actuator</u> on page 37 or <u>Installing the Leg Actuator to the Base</u> on page 19. 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.
Lift arms will not lower during a power retraction.	Shoulder bolt at the junction of the boom and mast may not be properly installed.	Refer to <u>Checking and Tightening Mast Pivot Bolt</u> on page 38.

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

SECTION 7— MAINTENANCE

Maintenance Safety Inspection Checklist

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

Regular cleaning will reveal loose or worn parts, enhance smooth operation and extend the life expectancy of the lift.

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

ITEM	INITIALLY	INSTITUTIONAL INSPECT/ADJUST MONTHLY	IN-HOME INSPECT EVERY SIX MONTHS
THE CASTER BASE Inspect for missing hardware. Base opens/closes with ease. Inspect casters and axle bolts for tightness. Inspect casters for smooth swivel and roll. Inspect and clear wheels of debris. Inspect pivot joints for wear.	X X X X X X	X X X X X X	X X X X X X
THE MAST Mast MUST be securely assembled to boom. Inspect for bends or deflections. Inspect pivot joints for wear.	X X X	X X X	X X X
THE BOOM Check all hardware and swivel bar supports. Inspect for bends or deflections. Inspect bolted joints of boom for wear. Inspect to ensure that the boom is centered between the base legs. Ensure that the bolt is tightly secured. Inspect pivot joints for wear.	X X X X X X	X X X X X X	X X X X X X
THE SWIVEL BAR Check the bolt / hooks for wear or damage. Check sling hooks for wear or deflection. Inspect pivot joints for wear.	X X X	X X X	X X X
ACTUATOR ASSEMBLY Inspect hardware on mast, boom, and base. Check for wear or deterioration. (IF DAMAGED, RETURN TO FACTORY). Cycle to ensure smooth quiet operation.	X X X	X X X	X X X
CLEANING Whenever necessary.	X	X	X
SLINGS AND HARDWARE CHECK ALL SLING ATTACHMENTS each time it is used to ensure proper connection and patient safety. Inspect sling material for wear. Inspect straps for wear.	X X X	X X X	X X X

The Invacare Patient Lift is designed to provide a maximum of safe, efficient and satisfactory service with minimum care and maintenance.

All parts of the patient lift 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 brakes, 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 them of the problem.

Lubricating the Lift

NOTE: For this procedure, refer to FIGURE 7.1.

The Invacare lift is designed for minimum maintenance. However, a six month check and lubrication should ensure continued safety and reliability.

Keep lift and slings clean and in good working order. Any defect should be noted and reported to your dealer as soon as possible.

The casters **MUST** swivel and roll smoothly. A light grease (waterproof auto lubricant) may be applied to the ball bearing swivel of the casters once a year. Apply more frequently if the casters are exposed to extreme moist conditions.

Lubricate all pivot points. Wipe all excess lubricant from lift surface.

Lubricate the following points:

- Swivel bar
- Boom mounting bracket
- Boom/mast mount
- Mast mounting bracket

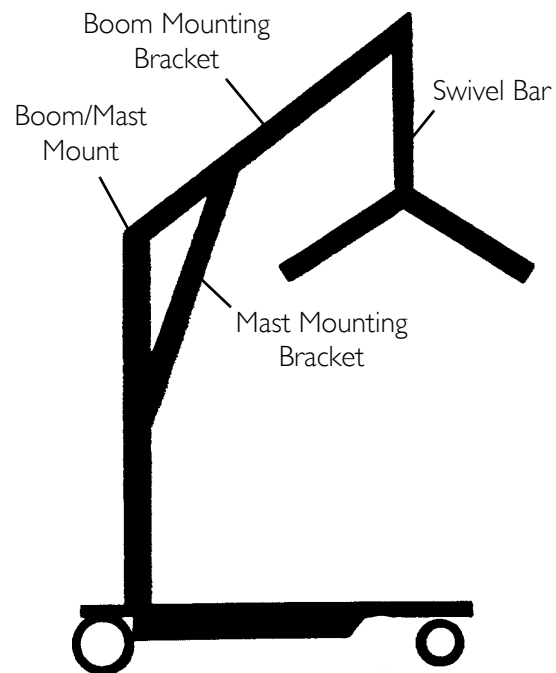


FIGURE 7.1 Lubricating the Lift

Detecting Wear and Damage

It is important to inspect all stressed parts, such as slings, spreader bar and any pivot for slings for signs of cracking, fraying, deformation or deterioration. Replace any defective 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 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 patient lift. The lift can be cleaned with non-abrasive cleaners.

Replacing the Boom Actuator

CAUTION

DO NOT overtighten the nut and bolt. This damages the mounting bracket.

NOTE: For this procedure, refer to FIGURE 7.2.

1. Remove the nut, washer and shoulder bolt that secure the boom actuator to the mast mounting bracket.
2. Rest the boom on your shoulder and remove the nut, bolt, plastic bushing and pinch guard from the boom mounting bracket.
3. Remove the boom actuator assembly.
4. Reverse steps for installation.

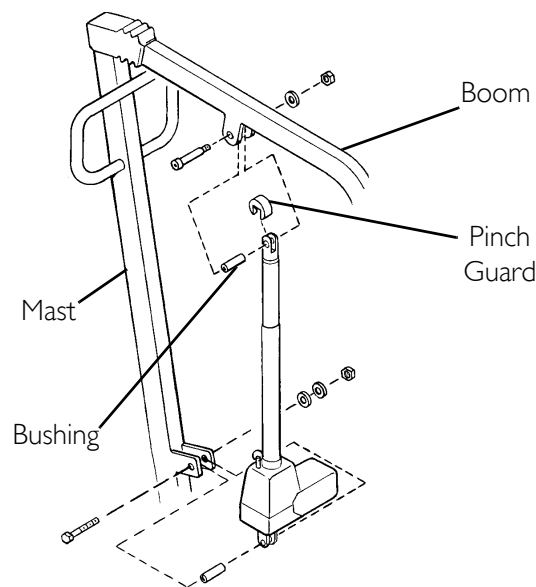


FIGURE 7.2 Replacing the Boom Actuator

Checking and Tightening Mast Pivot Bolt

NOTE: For this procedure, refer to FIGURE 7.3.

1. Lift up the back of the rubber boot and slide it off the mast along the boom.
2. Check that the bolt is through the bracket and the locknut is tight and secure.
3. If needed, do one or more of the following:
 - Tighten locknut and back-off the locknut 1/8 of a turn.
 - Replace the locknut.
4. Reposition the rubber boot.

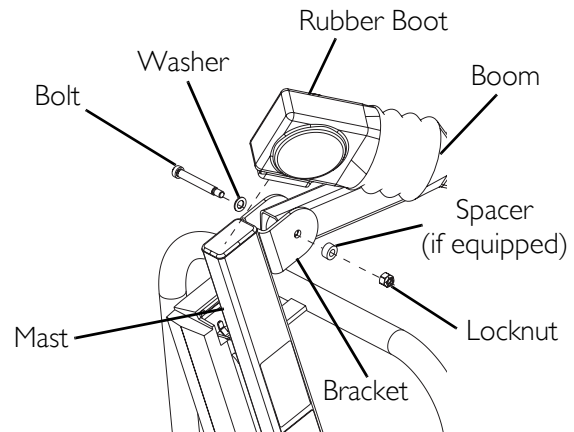


FIGURE 7.3 Mast Pivot Bolt

Replacing the Swivel Bar

⚠ WARNING

After the first year of use, the hooks of the swivel bar and mounting brackets of the boom should be inspected every six months to determine the extent of wear. If these parts become worn, replacement must be made.

NOTE: For this procedure, refer to FIGURE 7.4 on page 39.

1. The swivel bar comes attached to the boom with bolt, nut, washers, and pinch guard.

NOTE: Washers should be placed against both sides of the boom mounting bracket to eliminate damage.

NOTE: The swivel bar has three hooks on both ends to attach the sling that supports the patient during lift.

2. Remove existing hardware and replace the swivel bar.

CAUTION

DO NOT overtighten the nut and bolt. This damages the mounting bracket.

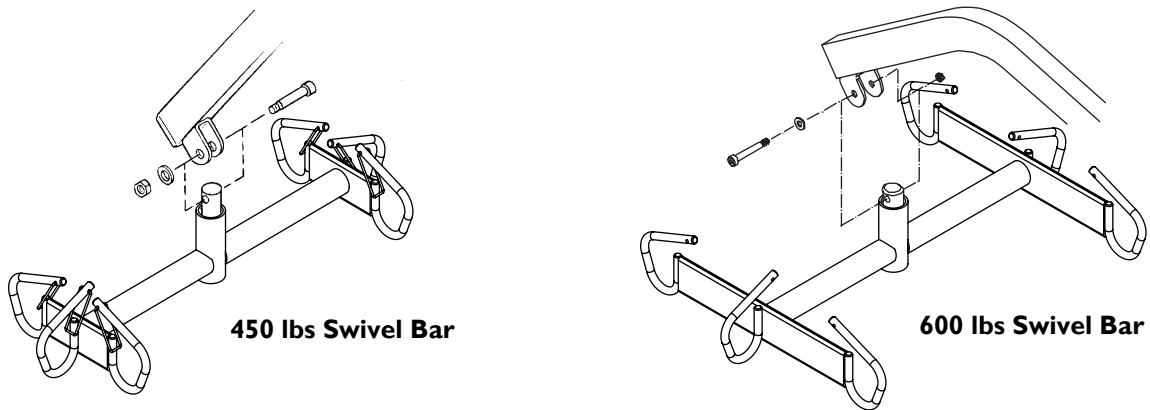


FIGURE 7.4 Replacing the Swivel Bar

Maintaining the Base Adjustment

NOTE: For this procedure, refer to FIGURE 7.5.

The base adjustment should not require any attention other than:

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

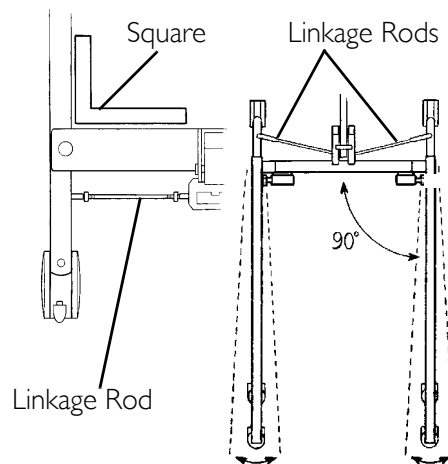


FIGURE 7.5 Maintaining the Base Adjustment

Replacing Casters/Forks

Replacing Rear Casters

NOTE: For this procedure, refer to FIGURE 7.6

1. Place the lift on its side.
2. Remove the bolt and locknut that secure the existing rear caster to the fork.

NOTE: The bushing will be loose and may fall out of the caster.

NOTE: Existing bushing will be reused. Examine and replace if worn.

3. Install the new/existing bushing into the new rear caster.
4. Line up the mounting holes in the new rear caster and the fork.
5. Install the bolt through the fork and new rear caster and tighten securely with the locknut.

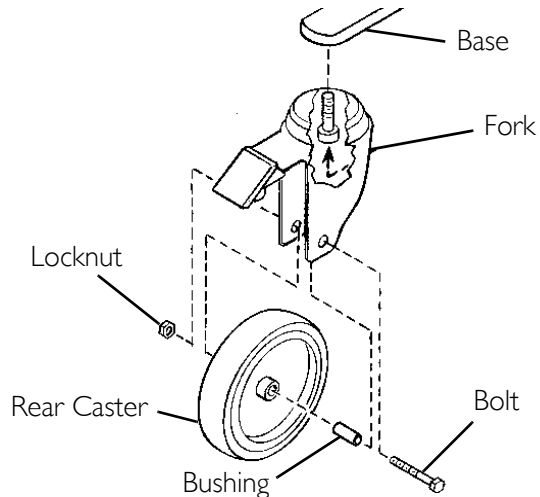


FIGURE 7.6 Replacing Rear Casters

Replacing Front Casters

NOTE: For this procedure, refer to FIGURE 7.7.

1. Place the lift on its side.
2. Remove the bolt and locknut that secure the existing front caster assembly to the fork.

NOTE: The front caster assembly consists of two casters and a washer in between.

NOTE: The washer will fall out from between the two casters.

NOTE: Washer will be reused. Examine and replace if worn.

3. Position the new/existing washer between the two new casters.
4. Line up the mounting holes in the new front caster assembly and the fork.
5. Install the bolt through the fork and the new front caster assembly and tighten securely with the locknut.

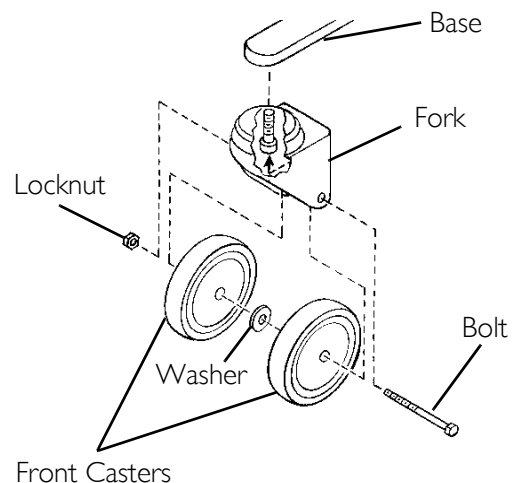


FIGURE 7.7 Replacing Front Casters

Replacing Forks

⚠ WARNING

Ensure that there is sufficient room to turn patient lift on its side and that floor area is clear of debris. Otherwise, injury to personnel or damage to patient lift may occur.

1. Place the patient lift on its side.
2. Remove the front or rear caster from the lift. Refer to Replacing Casters/Forks on page 40.
3. Unscrew the existing fork from the base.
4. Install the new fork onto the base.
5. Install the front or rear caster onto the patient lift. Refer to Replacing Casters/Forks on page 40.
6. Stand the patient lift back up.

SECTION 8— ACCESSORIES

Reliant Scale RLS6

The Reliant Scale is a compact precision scale system designed specifically for the Invacare Patient Lift System.

⚠ WARNING

DO NOT install or use this equipment without first reading and understanding these instructions. If you are unable to understand the **Warnings, Cautions or Instructions**, contact a healthcare professional, dealer or technical personnel before attempting to install this equipment - otherwise, injury or damage may occur.

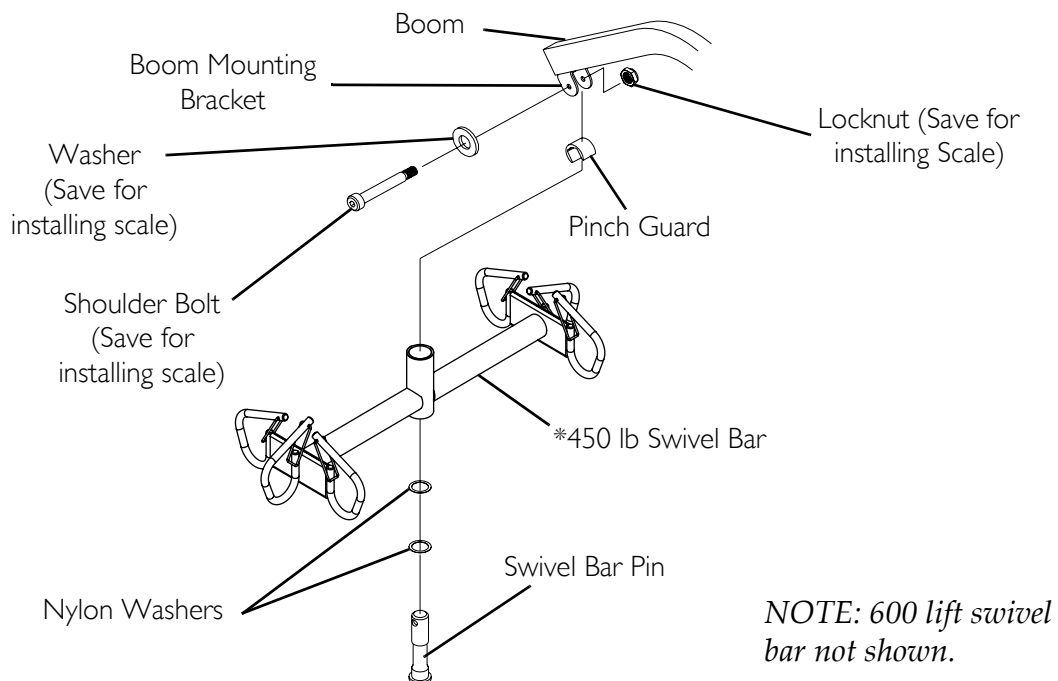
Removing the Swivel Bar

NOTE: For this procedure, refer to FIGURE 8.1.

1. Remove the shoulder bolt, locknut, pinch guard and washer which secure the swivel bar to the boom mounting bracket.

NOTE: Save the shoulder bolt and locknut to secure the Reliant Scale to the boom. The pinch guard will not be used when the scale is installed. Save the pinch guard for future use of the swivel bar without scale.

NOTE: Removing the swivel bar hardware will release the swivel bar, two nylon washers and the swivel bar pin. Save the swivel bar pin and the two nylon washers for future use of the swivel bar without the scale.



NOTE: 600 lift swivel bar not shown.

FIGURE 8.1 Removing the Swivel Bar

Installing the Reliant Scale

⚠ WARNING

Patient and sling MUST be removed from the lift during ALL installation procedures.

NOTE: For this procedure, refer to FIGURE 8.2.

1. Position the load cell assembly of the Reliant Scale into the boom mounting bracket. Refer to Detail "A".

NOTE: Use 1/4-inch nylon washer.

2. Secure the Reliant Scale to the boom mounting bracket with a shoulder bolt, two nylon washers and a locknut. Securely tighten. Refer to Detail "A" for washer orientation.

NOTE: Ensure the shaft of the shoulder bolt passes through both sides of the boom mounting bracket.

3. Insert swivel bar pin with two nylon washers through the swivel bar. Refer to Detail "B".
4. Align the mounting holes in the swivel bar pin with the mounting holes in the load cell assembly. Refer to Detail "B".
5. Secure swivel bar pin to the load cell assembly with the provided mounting screw and locknut. Securely tighten. Refer to Detail "B".

⚠ WARNING

After ANY adjustments, repair or service and BEFORE use, make sure all attaching hardware is tightened securely - otherwise injury or damage may occur.

6. Weigh the patient. Refer to Operating the Scale on page 44 and Weighing the Patient on page 45.

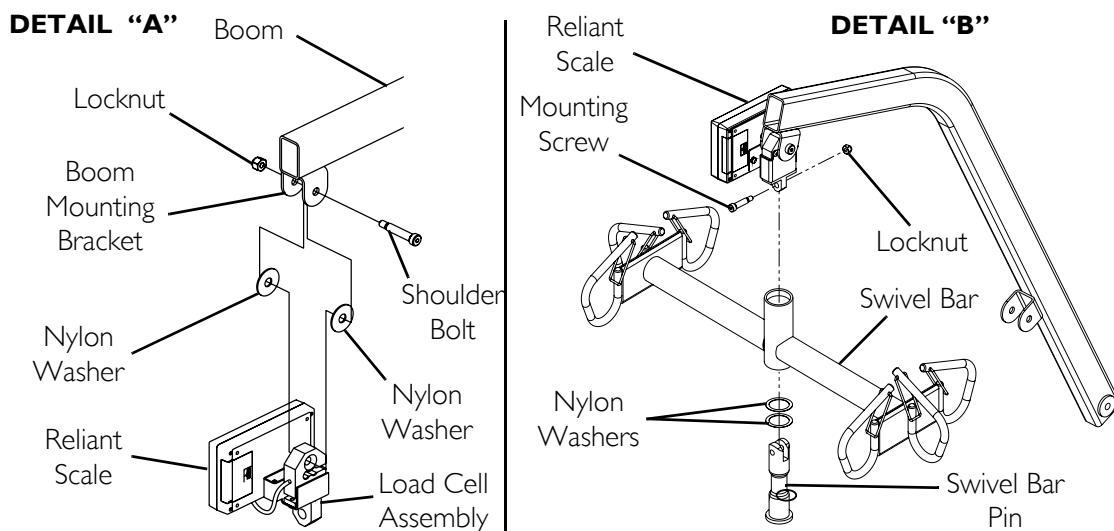


FIGURE 8.2 Installing the Reliant Scale

Operating the Scale

Keypad Functions

NOTE: For this procedure, refer to FIGURE 8.3.

KEY	INDICATOR DISPLAYED	INDICATOR LOCATION	DEFINITION
ON OFF	OFF	Center of Display Window	Pressing this key will apply power to the scale and turn the unit on. When the scale is already on, pressing the button will turn the unit off.
ZERO	ZERO	Lower Left Corner of the Display Window	Pressing this key when the scale is on will reset the weight shown in the display window to zero.
UNITS	lb or kg	Upper Right Corner of the Display Window	The function of this key is to change the unit of measurement from pounds (lb) to kilograms (kg).
LOCK UNLOCK	LOCK	Lower Right Corner of the Display Window	This key is used to lock or unlock a weight value in the display window. <i>NOTE: Weight displayed is a STORED weight and not the current weight when the key is used in the lock position.</i>
N/A	LO BAT	Center of Display Window	Indicator is shown in the display window to notify when battery is low.

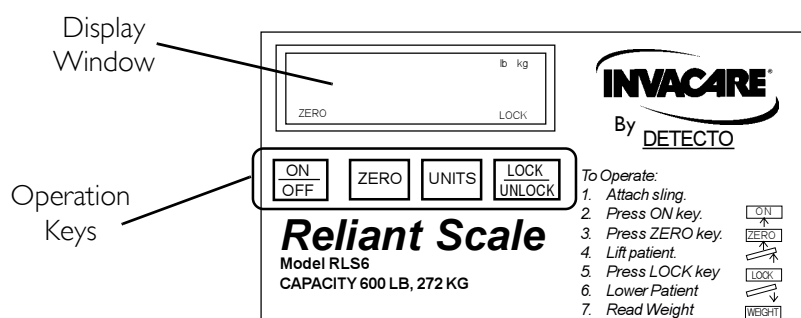


FIGURE 8.3 Operating the Scale - Keypad Functions

Weighing the Patient

⚠ WARNING

The weight capacity is limited to the lowest rated capacity of any one of the components in use (e.g. Patient Lift, Sling or Scale). The patient's weight **MUST not exceed the lowest rated capacity of any component.**

1. Attach sling straps to the swivel bar. Refer to Attaching a Sling on page 27.

NOTE: For improved accuracy on the 450 and 600 Reliant lifts, attach all sling straps to the center hooks on both sides of the swivel bar. However, patient comfort may require a different configuration of sling straps.

2. Press the ON/OFF key.

⚠ WARNING

DO NOT operate key strokes with pointed objects (e.g. pencils, pens, fingernails, etc.) Otherwise damage to the key pad will result.

NOTE: The display will indicate the last weight that was measured. The word "LOCK" will be seen in the display box.

NOTE: The ZERO key is pressed in order to avoid capturing the weight of the sling and the hardware. If the ZERO key is not pressed the weight of the sling and the weight of the hardware will be included in the weight displayed. NOT ZEROING OUT WILL GIVE A FALSE READING OF THE USER'S TRUE WEIGHT.

3. Press the ZERO key. When the ZERO key is pushed the following will happen:
 - A. The scale will reset to zero and the word "ZERO" will appear in the display.
 - B. The lock function will then be turned off and the word "LOCK" will disappear from the display.

NOTE: The scale is now active and continually updating the weight display.

4. Place the patient in the sling. For patient placement instructions refer to Operating the Patient Lift on page 22.
5. Activate the lift mechanism to raise the patient until they are completely supported by the lift. For patient lifting instructions, refer to Lifting the Patient on page 26.
6. Note the weight display.
7. When the weight display becomes stable press the LOCK button to lock the weight display. This will be indicated by the word "LOCK" appearing in the display window.

NOTE: Should it be necessary to unlock the weight while the patient is still supported by the lift, the UNLOCK button may be pressed. The weight will unlock and the word "LOCK" will disappear from the display window. The weight value will then be updated. Once the weight becomes stable the weight can be locked again by pressing the LOCK button.

NOTE: Stable being defined as the weight fluctuating two tenths of a pound. For example, a patient weighing one hundred pounds, the scale will fluctuate between 99.8 and 100.2 until the LOCK key is pressed. Fluctuation of the weight displayed is normal as noted above. Press the LOCK button to lock the weight.

NOTE: The UNITS button can be pressed to toggle between units of pounds and kilograms. This is indicated by lb or kg appearing in the display window.

8. The lift may now be lowered and the sling removed from the patient.

NOTE: The patient's weight will continue to be seen in the display window. The display will turn off automatically after a two minute period of non-use [no changes in weight exceeding five pounds (two kilograms)]. You can NOT adjust the time delay for automatic shut off. After the display has turned off, the weight may be recalled by pressing the ON/OFF button. The unit can be turned off by pressing the ON/OFF button a second time.

Replacing the Battery

NOTE: For this procedure, refer to FIGURE 8.4.

NOTE: The scale is powered by a nine volt alkaline battery that should provide approximately 1500 readings before needing replacement.

When battery replacement is needed, LO BAT will appear on the display. Perform the following:

1. Slide the battery door open in the direction of the arrow.
2. Remove existing battery.
3. Install the new battery.
4. Reinstall the battery door.

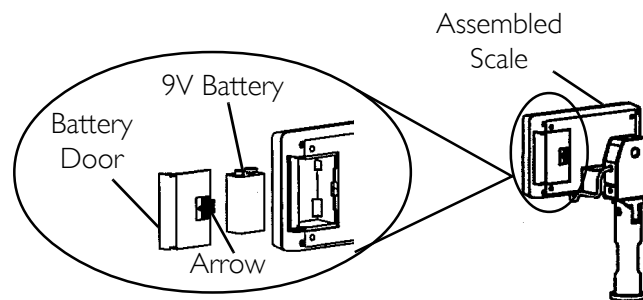


FIGURE 8.4 Replacing the Battery

Calibrating the Reliant Scale

NOTE: The Reliant Scale will be pre-calibrated at the factory with the load cell. Should it be necessary to re-calibrate the scale, follow the instructions outlined below.

1. The patient and the sling must be removed from the scale to properly calibrate the Reliant Scale. For removing the patient instructions refer to Operating the Patient Lift on page 22. For sling detachment instructions refer to Lifting the Patient on page 26.

2. With the Reliant Scale on, remove the four screws on the back of the enclosure and remove the front cover to expose the PC board.
3. Press the CAL button located on the PC board. The CAL switch is not labeled but is the only button on the PC board located in the lower right corner. Once the CAL button is pushed "CAL1" will be seen in the display window.

NOTE: CAL1 selects the calibration mode using 50 pounds of calibrated weight. CAL2 selects the calibration mode for use with 200 pounds of calibrated weight. Pressing the UNITS key toggles between CAL1 and CAL2.

4. When the desired calibration mode is displayed, press the LOCK/UNLOCK key.

NOTE: The display window will now show UnLd.

5. Ensure that there is no load on the scale and press the ZERO key.
6. The display window will show a dashed line (-----) scrolling across and then the word LOAD will appear in the display window.
7. Perform one of the following:
 - A. FOR CAL1 OPTION - support 50 pounds of calibrated weight from the scale and press the ZERO key.
 - B. FOR CAL2 OPTION - support 200 pounds of calibrated weight from the scale and press the ZERO key.
8. The display window will show a dashed line (-----) scrolling across and then the word DONE will appear in the display window.
9. Remove the weight from the scale and press the LOCK/UNLOCK key.

NOTE: The unit will now be in a temporary test mode and will not lock the weight display. This will allow weight to be loaded and unloaded to check the calibration.

10. Turn the unit off by pressing the ON/OFF key.
11. Turn the unit on by pressing the ON/OFF key.

NOTE: Scale will now be in normal operation.

Troubleshooting

SYMPTON	PROBABLE CAUSE	SOLUTIONS
Unit does NOT work properly.	Battery failure.	Check battery. Replace if necessary.
Battery has been replaced and unit still does NOT work properly.	--	Contact Invacare for service at 1-800-333-6900

Display Codes

CAL

CALIBRATION REQUIRED - Indicates improper stored calibration data, calibration is necessary.

OCAP

OVER CAPACITY - Indicates a weight exceeding the capacity has been loaded on the scale.

NOTES

NOTES

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 slings, 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.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, IF ANY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE DURATION OF THE EXPRESSED WARRANTY PROVIDED HEREIN AND THE REMEDY FOR VIOLATIONS OF ANY IMPLIED WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT PURSUANT TO THE TERMS CONTAINED HEREIN. INVACARE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER.

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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