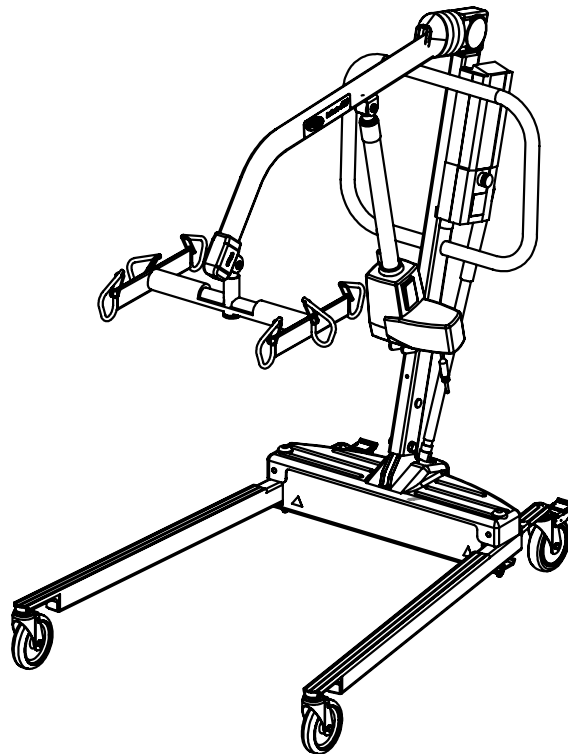


Electric Portable Patient Lift - RPA600-IE



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 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.

⚠ **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.

SYMBOL LEGEND

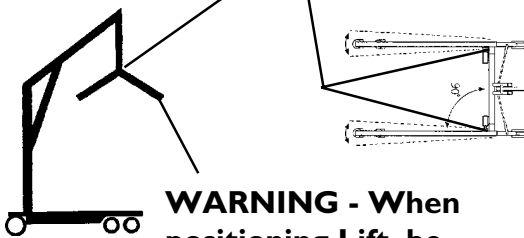


"ATTENTION, see instructions for use".

CAUTION - Pinch Points, fingers could be pinched.

Between Boom and Swivel Bar

Base of Lift

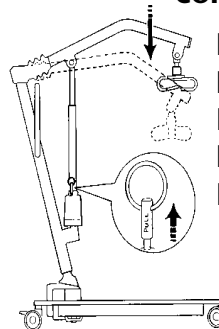


WARNING - When positioning Lift, be aware of the position of the Swivel Bar and the patient. Injury could occur.



"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 Ring. Push DOWN on Boom.

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

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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 or minor injury or both.

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** Emergency Stop Button **IMMEDIATELY**. **DO NOT** turn the Red Emergency Stop Button **OFF** while transmission is in progress.

MAINTENANCE

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


LABEL LOCATION

⚠ WARNING

Most pivot **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. B

⚠ 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.

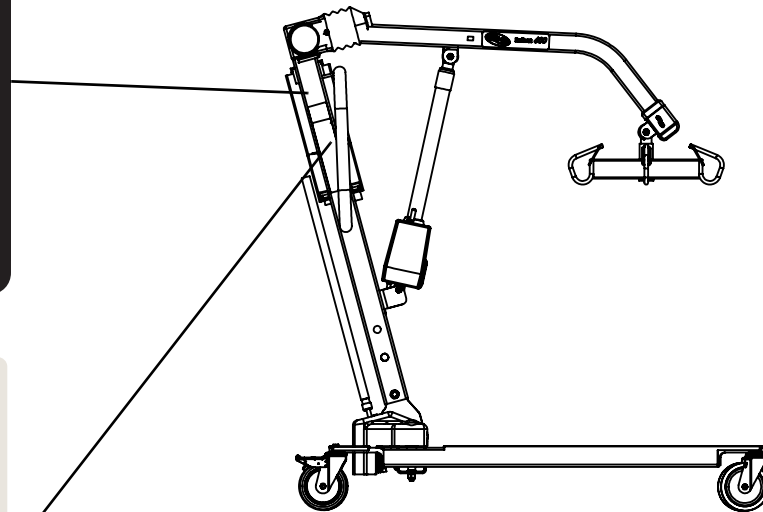
DO NOT lock the casters of the Patient Lift when lifting an individual. Casters **MUST** be left unlocked to allow Patient Lift to stabilize during lifting procedures.

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



PRODUCT PARAMETERS

Patient Lift RPA600-IE

	204.5 kg Electric Low- Profile	204.5 Electric Standard	272.7 kg Electric Heavy-duty
Height at Sling Hook-up - MAX.:	188 cm	193 cm	177.8 cm
Height at Sling Hook-up - MIN.:	61 cm	66 cm	76.2 cm
Base Width OPEN:	104 cm	104,1 cm	104,1 cm
Base Width CLOSED:	67,3 cm	67,3 cm	67,3 cm
Base Height (Clearance):	11,4 cm	17,3 cm	17,3 cm
Base Length:	121,9 cm	121,9 cm	121,9 cm
Caster Size (FRONT/REAR):	7,6/12,7 cm	12,7 cm	12,7 cm
Weight Capacity:	204,5 kg	204,5 kg	272,7 kg
Weight Out of Carton:	48,2 kg	48,2 kg	50,9 kg
Battery:	24V DC (RECHARGEABLE)	24V DC (RECHARGEABLE)	24V DC (RECHARGEABLE)
Charger Input:	100-240V AC	100-240V AC	100-240V AC
Charger Output/Charging Time:	29,5V DC Max 6 hrs	29,5V DC Max 6 hrs	29,5V DC Max 6 hrs
Audio Low Battery Alarm:	Yes	Yes	Yes
Motor Safety Devices:	Anti-Entrapment	Anti-Entrapment	Anti-Entrapment
*Approx. Lifts per Charge:	*100-200 Cycles per charge	*100-200 Cycles per charge	*100-200 Cycles per charge
Warranty Lift/Electronics:	3 Years/1 Year	3 Years/1 Year	3 Years/1 Year
Emergency Stop Button:	Yes	Yes	Yes

*NOTE: Varies depending upon load and stroke.

Reliant Scale RLS6

Weight Range:	Up to 600 Lbs. (272.7 Kg)
Resolution:	+/- 0.2 Lbs (.1 Kg)
Display:	Liquid Crystal Digital
Automatic Power Down:	Two (2) minutes
Size:	5-3/4 L X 3-5/8 W X 4 H
Weight:	.55 Lbs
Power:	Nine (9) 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.

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 Electric Portable Patient Lift is 600 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

Assembling the Mast to the Base

NOTE: The mast assembly may be removed from the base for storage or transporting. The mast assembly MUST be properly secured to the base assembly before use.

NOTE: For this procedure, refer to FIGURE 2.1.

1. Put the base on a level surface so all casters make contact with the floor.
2. Lock the rear casters (Detail "A").
3. Remove the shoulder bolt, nut and washer, that secures the mast to the base.
4. Put the mast into the U-shaped cut-out in the base.
5. While supporting the mast, insert the shoulder bolt through the base, mast and washers.
6. Secure the mast in place with a nut.

DETAIL "A" - LOCKING/UNLOCKING REAR CASTERS

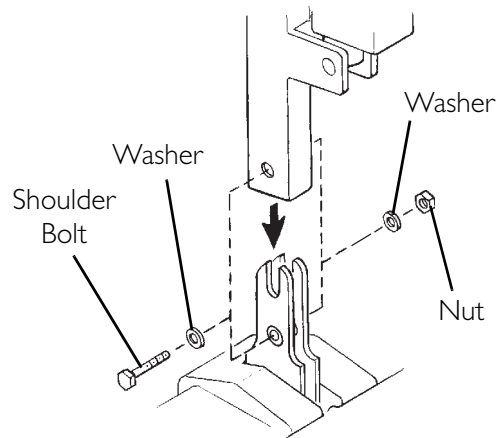
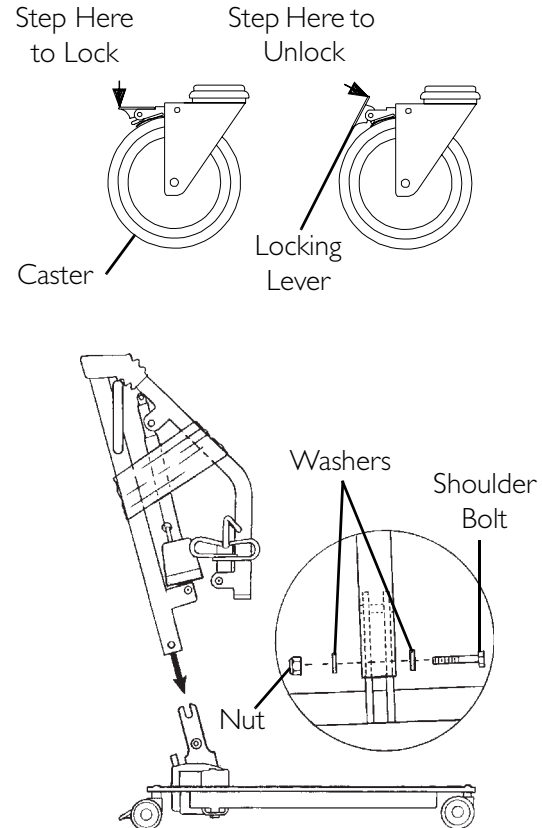


FIGURE 2.1 Assembling the Mast to the Base

Assembling the Electric Actuator to the Boom

NOTE: For this procedure, refer to FIGURE 2.2.

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 electric 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.

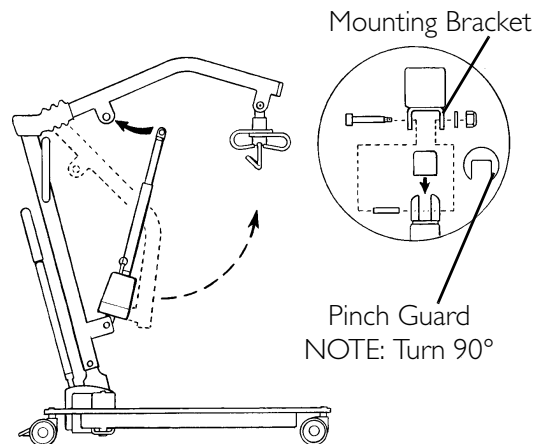


FIGURE 2.2 Assembling the Electric Actuator to the Boom

5. Let the actuator rest on your right-side of your chest and rotate the shaft extension of the actuator assembly until it lines-up with the mounting holes in the boom assembly.
6. Place the pinch guard over the shaft extension of the actuator.
7. Align the holes of the boom assembly mounting bracket with those of the 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.

8. Plug in the electrical connectors from the electric actuator to the bottom of the battery assembly.
9. Plug the pendant control into the bottom of the battery assembly.

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

Installing the Shifter Handle

NOTE: For this procedure, refer to FIGURE 2.3.

1. Line-up the shifter handle threads with threaded opening in the base.
2. Turn the shifter handle clockwise and securely tighten into the base.

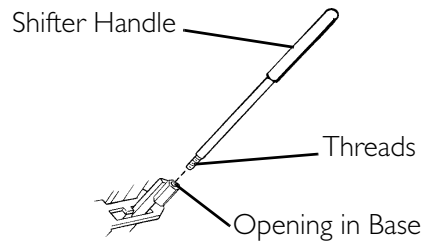


FIGURE 2.3 Installing the Shifter Handle

Attaching the Battery Charger Mounting Bracket to the Wall

NOTE: For this procedure, refer to FIGURE 2.4.

1. Place the battery charger 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. Put the battery charger mounting bracket onto the bottom mounting screw.
6. Drill the other two mounting holes.
7. Screw the mounting screws through the battery charger mounting bracket and into the wall. Tighten securely.

CAUTION

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

8. Put the battery charger in place on the mounting bracket.
9. Plug the battery charger into an electrical outlet.

NOTE: An LED will illuminate when power is applied to battery charger.

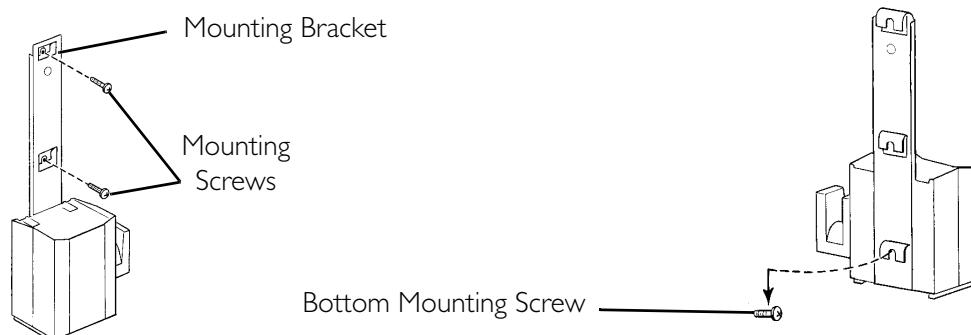


FIGURE 2.4 Attaching the Battery Charger Mounting Bracket to the Wall

SECTION 3—OPERATION

Introduction

⚠ WARNING

DO NOT attempt to transfer 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 of the bed surface. 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 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 Detail A of FIGURE 3.1.

- To Lock the Caster: Push tab down.
- To Unlock the Caster: Push tab up.

Raising/Lowering the Patient Lift

NOTE: For this procedure, refer to Detail B of FIGURE 3.1.

- To Raise the Patient Lift: Press the up (↑) button on the hand control.

NOTE: If the patient lift is raised to the highest level, it may be necessary to pull down gently on the lift arms before the mast will begin to lower. Pull down gently on both arms at the same time to avoid making the lift unstable.

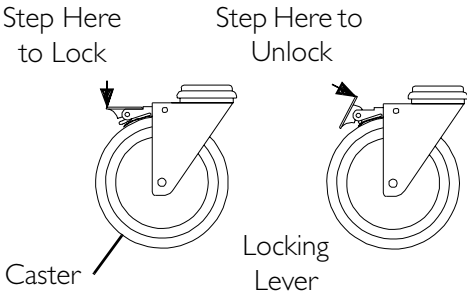
- To Lower the Patient Lift: Press the down button (↓) on the hand control.

Using the Emergency Stop

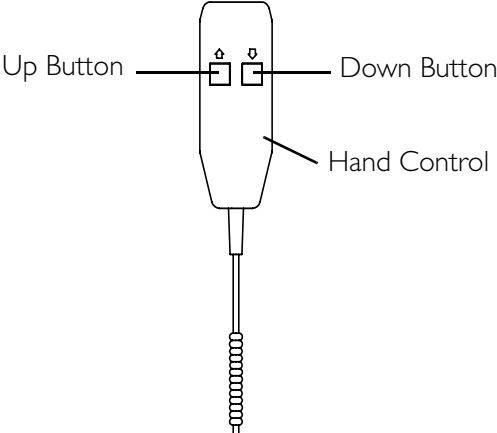
NOTE: For this procedure, refer to Detail C of FIGURE 3.1.

- Push the RED emergency button in to stop the lift arms from raising or lowering.
- To reset, rotate the emergency button clockwise.

**DETAIL "A" -
LOCKING/UNLOCKING REAR CASTERS**



DETAIL "B" - HAND CONTROL DETAILS



DETAIL "C" - EMERGENCY STOP

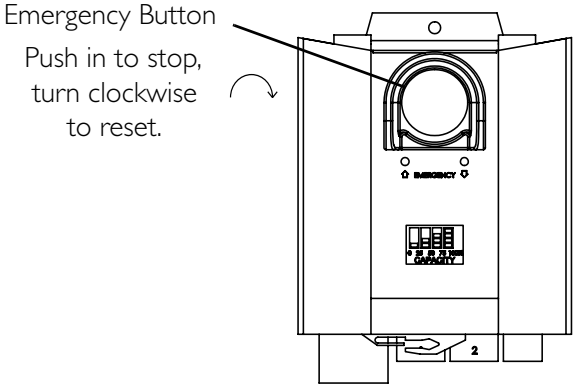


FIGURE 3.1 Operating the Patient Lift

Closing/Opening the Legs

NOTE: For this procedure, refer to FIGURE 3.2.

⚠ WARNING

If the shifter handle is **NOT** positioned completely into its mounting slot, **DO NOT** use the patient lift until the shifter handle is properly seated and the legs of the patient lift are locked in place. **Otherwise, injury and/or damage may occur.**

⚠ WARNING

The legs of the lift must be in the maximum open position and the shifter handle locked in place 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 and lock the shifter handle immediately.**

Closing the Legs

1. Stand at the rear of the patient lift and grasp the shifter handle with one hand and place the opposite hand on the steering handle of the mast for balance.

NOTE: The shifter handle MUST lock into its mounting slot to lock the legs in the full closed position.

2. Pull the shifter handle away from the patient lift and then to your left until it locks in the notch of the bracket (Detail "A").

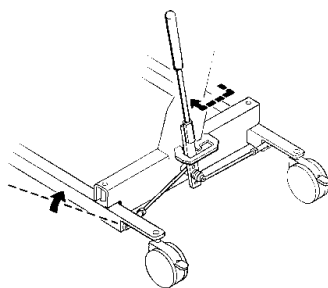
Opening the Legs

1. Stand at the rear of the patient lift and grasp the shifter handle with one hand and place the opposite hand on the steering handle of the mast for balance.

NOTE: The shifter handle MUST lock into its mounting slot to lock the legs in the full open position.

2. Pull the shifter handle away from the patient lift and then to your right (Detail "B").

DETAIL "A" - CLOSING THE LEGS



DETAIL "B" - OPENING THE LEGS

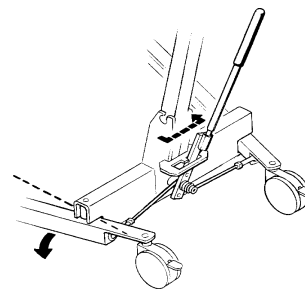


FIGURE 3.2 Closing/Opening the Legs

Activating a Mechanical Emergency Release

Primary Emergency Release

NOTE: For this procedure, refer to FIGURE 3.3.

NOTE: This procedure will bring the boom down or lift it up if the hand control is not functioning properly.

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

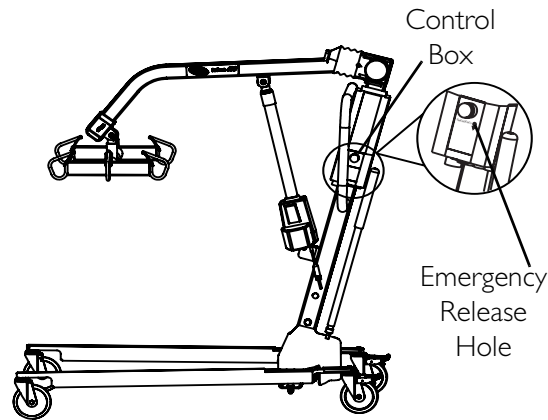


FIGURE 3.3 Primary Emergency Release

Secondary Emergency Release

NOTE: For this procedure, refer to FIGURE 3.4.

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

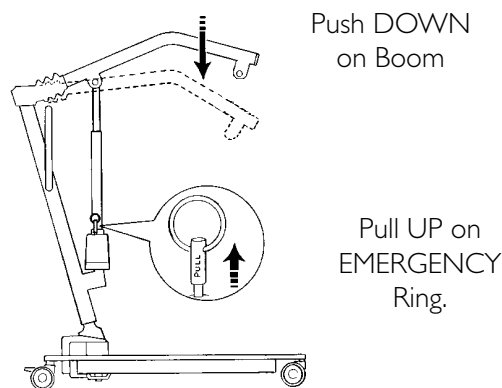


FIGURE 3.4 Secondary Emergency Release

Charging the Battery

NOTE: For this procedure, refer to FIGURE 3.5.

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

NOTE: An audible alarm will sound when battery is low.

1. Lift up on the handle on the back of the battery.
2. Lift the battery up and away from the control box.

CAUTION

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

3. Place the battery on the battery charger. Push the top of the battery against the mounting bracket until there is an audible click.

NOTE: The charge LED will illuminate. When charged, the LED will stop illuminating.

NOTE: It will take approximately four hours to charge a battery that requires a full charge.

4. Lift up on the handle on the back of the battery.
5. Lift the battery up and away from the battery charger.

CAUTION

Make sure there is an audible click when mounting battery onto the control box to ensure proper mounting. Otherwise, injury or damage may occur.

6. Place the battery on the control box. Push the top of the battery against the mounting bracket until there is an audible click.

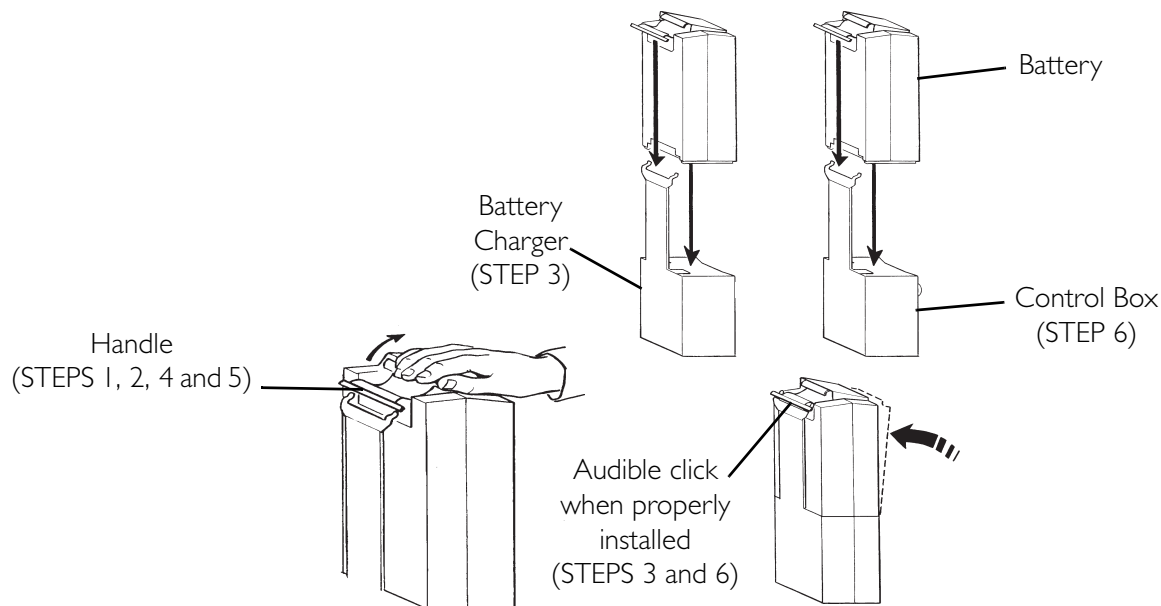


FIGURE 3.5 Charging the Battery

SECTION 4—LIFTING THE PATIENT

Preparing the Lift for Use

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 case.

Positioning the Lift

NOTE: For this procedure, refer to FIGURE 4.1.

NOTE: Refer to General Guidelines on page 9 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 lift must be in the maximum open position and the shifter handle locked in place 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 and lock the shifter handle immediately.

1. With the legs of the base open and locked, use the steering handle to push the patient lift into position.
2. Lower the patient lift for easy attachment of the sling.

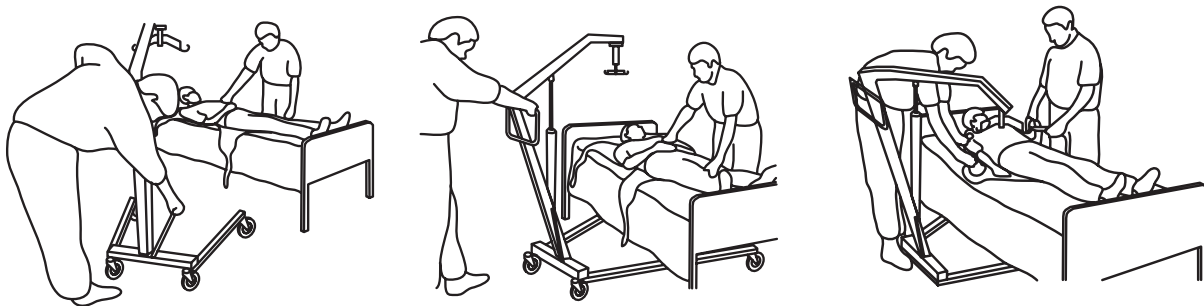


FIGURE 4.1 Positioning the Lift

Attaching a Sling to the Swivel Bar

⚠ WARNING

The maximum weight capacity of the RPA600-IE patient lift is 600 lbs. **DO NOT** exceed the maximum weight capacity of the patient lift otherwise, injury or damage may occur.

Before using the sling, read and understand all operating instructions provided in the sling owner's manual.

Bleached, torn, cut, frayed or broken slings are unsafe and could result in injury. Discard **IMMEDIATELY**. **DO NOT** alter slings in any way.

Invacare slings are made specifically for use with Invacare Patient Lifts. For the safety of the patient, **DO NOT** use slings and patient lifts of different manufacturers.

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

NOTE: The Invacare Swivel Bars have three hookup points per side.

⚠ WARNING

The patient lift **MUST** be moved with the push handles on the mast assembly - otherwise, injury or damage may occur.

DO NOT move the patient outside the center of gravity achieved after the patient is suspended in the sling and the patient lift adjusts.

3. Lift the patient. Refer to [Lifting/Moving the Patient](#).
-

Lifting/Moving the Patient

⚠ WARNING

DO NOT lock the rear casters of the lift when lifting an individual. Locking the rear casters could cause the 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. Patient's arms should be inside of the straps.

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.

NOTE: For this procedure, refer to FIGURE 4.2.

NOTE: When the patient is lifted from the bed or the floor (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 4.2).

1. Press the up button on the hand control to raise the patient high enough to clear the bed surface. The patient's full body weight will be supported by the lift.

NOTE: The boom will stay in this position until the up or down buttons are pushed on the hand control.

2. Place the patient's arms inside of the sling.
3. When the patient is clear of the bed surface, swing their feet off the bed (Detail "B" of FIGURE 4.2).
4. Using the handle, move the patient lift away from the bed.
5. Turn the patient so that he/she faces assistant operating the patient lift (Detail "C" of FIGURE 4.2).
6. Press the down button to lower the patient so that his/her feet rest on the base of the lift, straddling the mast.

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

7. Push the lift with both hands firmly on the steering handle.

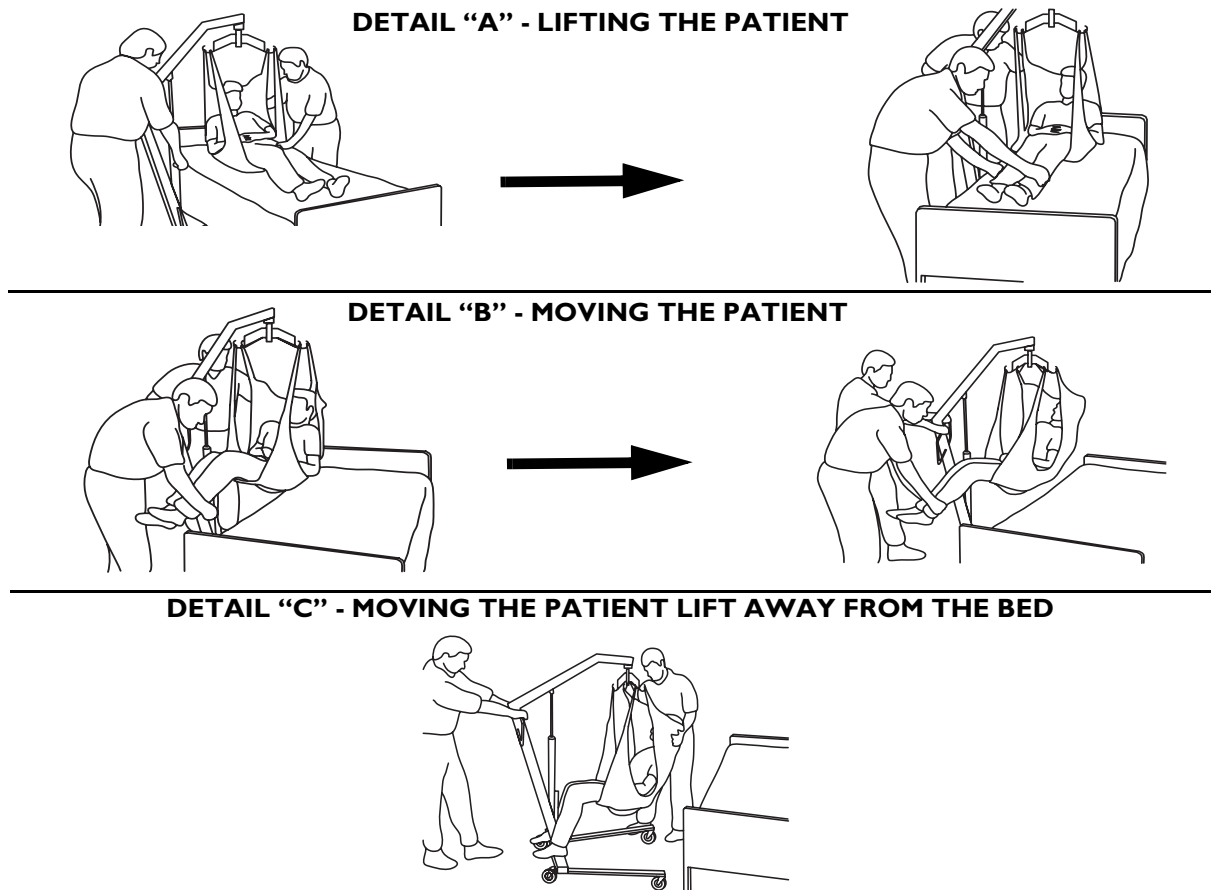


FIGURE 4.2 Lifting/Moving the Patient

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 19.
2. Press the UP button on the hand control 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 DOWN button on the hand control 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 UP button on the hand control 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.
8. To return the patient to bed, reverse [Lifting the Patient](#) on page 19.
9. To return or place the patient in a wheelchair, refer to [Transferring to a Wheelchair](#) on page 24.

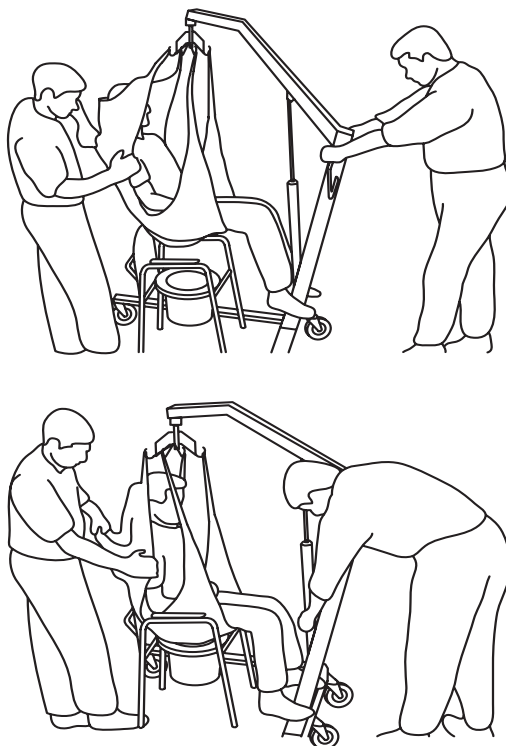


FIGURE 5.1 Transferring to a Commode Chair

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.

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 19.
3. Transport the patient to the bathroom facility.
4. Press the UP/DOWN buttons on the hand control 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 DOWN button on the hand control 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 UP button on the hand control 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 on page 19.
11. To return or place patient in a wheelchair, refer to Transferring to a Wheelchair.

Transferring to a Wheelchair

NOTE: For this procedure, refer to FIGURE 5.2.

1. Lift the patient from the bed. Refer to Lifting the Patient on page 19.
2. 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.
3. Move the wheelchair into position.
4. Engage the 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.

5. 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.
6. Position the patient over the seat with their back against the back of the chair.
7. Begin to lower the patient pressing the DOWN button on the hand control.
8. Use two assistants - 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.

9. Leave the sling in place unless a divided leg sling was used. Remove a divided leg sling.
10. Reverse Lifting the Patient on page 19 to return to the seating surface of the wheelchair.

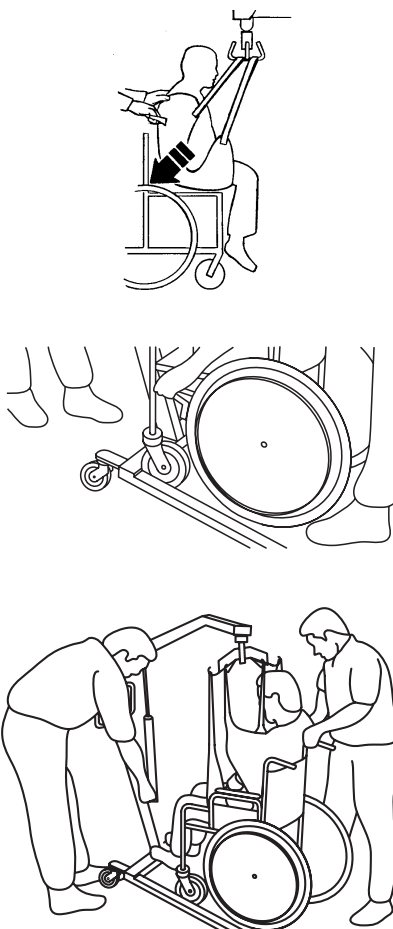


FIGURE 5.2 Transferring to a Wheelchair

SECTION 6—TROUBLESHOOTING

SYMPTOMS	FAULTS	SOLUTION
Patient Lift feels loose.	Mast/Base joint loose. Tie - Rods are loose.	Refer to Assembly on page 11.
Noisy or dry sound from pivots.	Needs lubrication.	Refer to Lubricating the Lift on page 28.
Electric actuator fails to lift 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. Electric actuator in need of service or load is too high.	Charge batteries. Refer to Charging the Battery on page 18. Rotate RED emergency stop button CLOCKWISE until it pops out. Reconnect the battery to the control box. Refer to Charging the Battery on page 18. Replace the battery pack. Refer to Charging the Battery on page 18. Refer to Replacing the Electric Actuator on page 29. Contact your Dealer.
Unusual noise from actuator.	Actuator is worn or damaged or spindle is bent.	Refer to Replacing the Electric Actuator on page 29. 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 Checking and Tightening Mast Pivot Bolt on page 30.

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

SECTION 7— MAINTENANCE

Maintenance Safety Inspection Checklist

ITEM	INITIALLY	INSTITUTIONAL INSPECT/ADJUST MONTHLY	IN-HOME INSPECT EVERY SIX (6) 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.	X X X X X	X X X X X	X X X X X
SHIFTER HANDLE Operates smoothly. Locks adjustable base whenever engaged.	X X	X X	X X
THE MAST Mast MUST be securely assembled to boom. Inspect for bends or deflections.	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. Check the mast pivot bolt under the rubber boot. Ensure that the bolt is tightly secured.	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.	X X	X X	X X
ELECTRIC ACTUATOR ASSEMBLY Check for leakage. Inspect hardware on mast and boom. 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 X X X
THE PUMP HANDLE Check for smooth operation.	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

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

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

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

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 Invacare 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 him/her of your 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.

Refer to FIGURE 7.1 for lubrication points. Lubricate all pivot points. Wipe all excess lubricant from lift surface.

1. Swivel Bar
2. Boom Mounting Bracket
3. Boom/Mast Mount
4. Mast Mounting Bracket

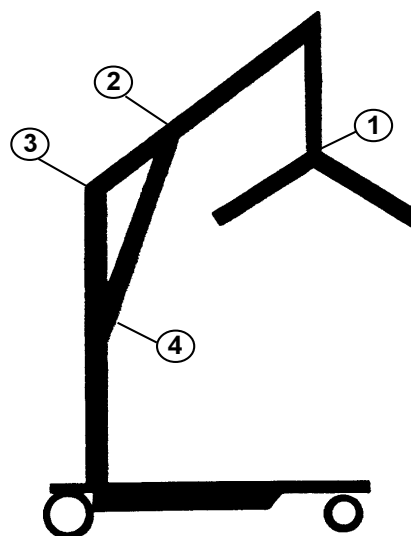


FIGURE 7.1 Lubricating the Lift

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 Electric Actuator

NOTE: For this procedure, refer to FIGURE 7.2.

1. Remove the nut, washer and shoulder bolt that secure the electric 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 electric actuator assembly.
4. Reverse steps for installation.

CAUTION

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

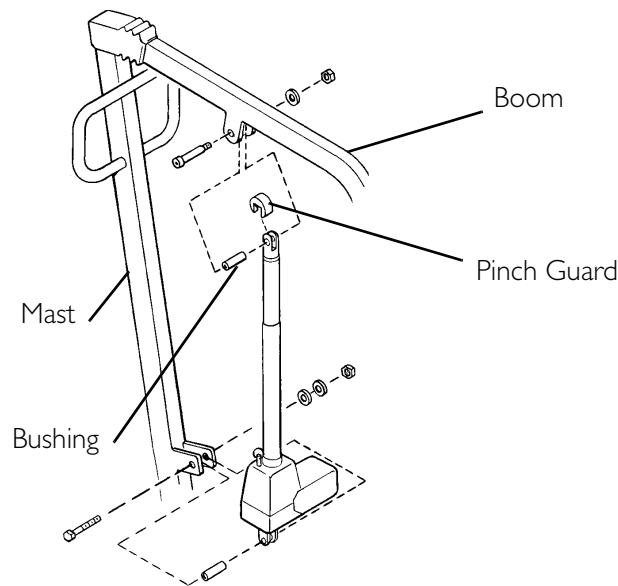


FIGURE 7.2 Replacing the Electric Actuator

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.

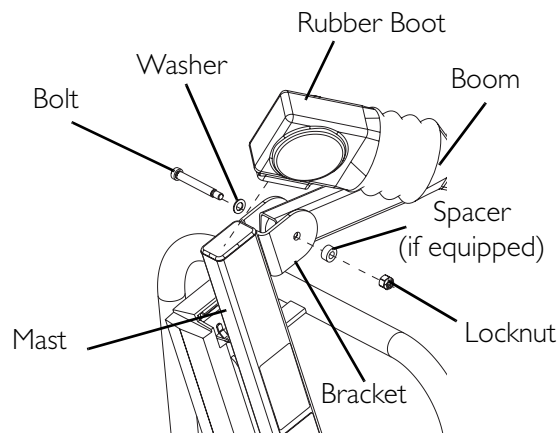


FIGURE 7.3 Checking and Tightening Mast Pivot Bolt

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.

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.

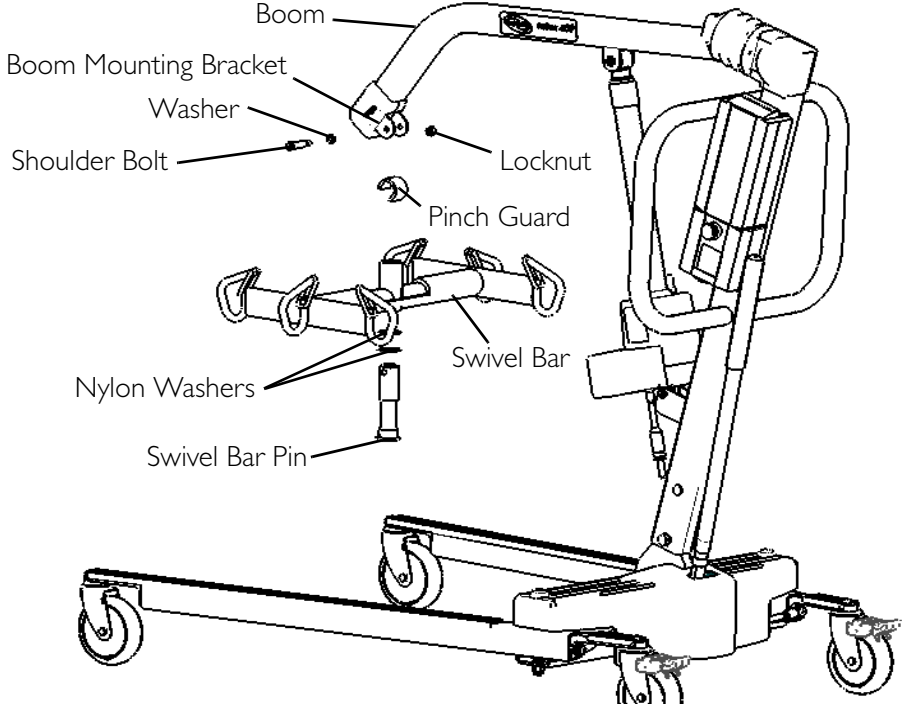


FIGURE 7.4 Replacing the Swivel Bar

SECTION 8—ACCESSORIES

Reliant Scale RLS6

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

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.

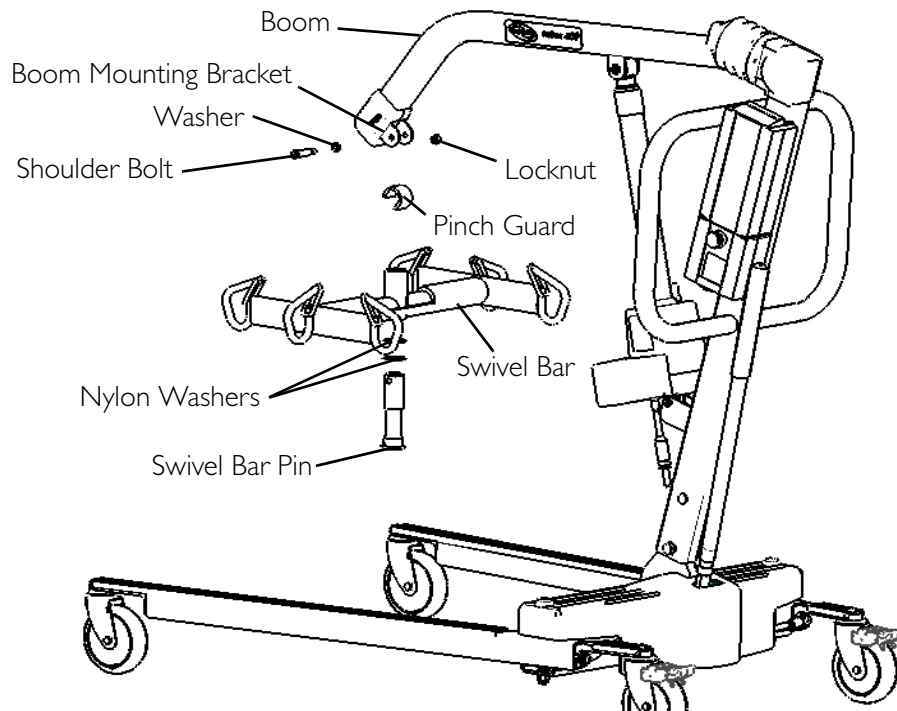


FIGURE 8.1 Removing the Swivel Bar

Installing the Reliant Scale

NOTE: For this procedure, refer to FIGURE 8.2.

⚠ WARNING

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

1. Position the load cell assembly of the Reliant Scale into the boom mounting bracket. Refer to Detail "A" in FIGURE 8.2.

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" in FIGURE 8.2 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" in FIGURE 8.2.
4. Align the mounting holes in the swivel bar pin with the mounting holes in the load cell assembly. Refer to Detail "B" in FIGURE 8.2.
5. Secure swivel bar pin to the load cell assembly with the provided mounting screw and locknut. Securely tighten. Refer to Detail "B" in FIGURE 8.2.

⚠ 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 34 and Weighing the Patient on page 35.

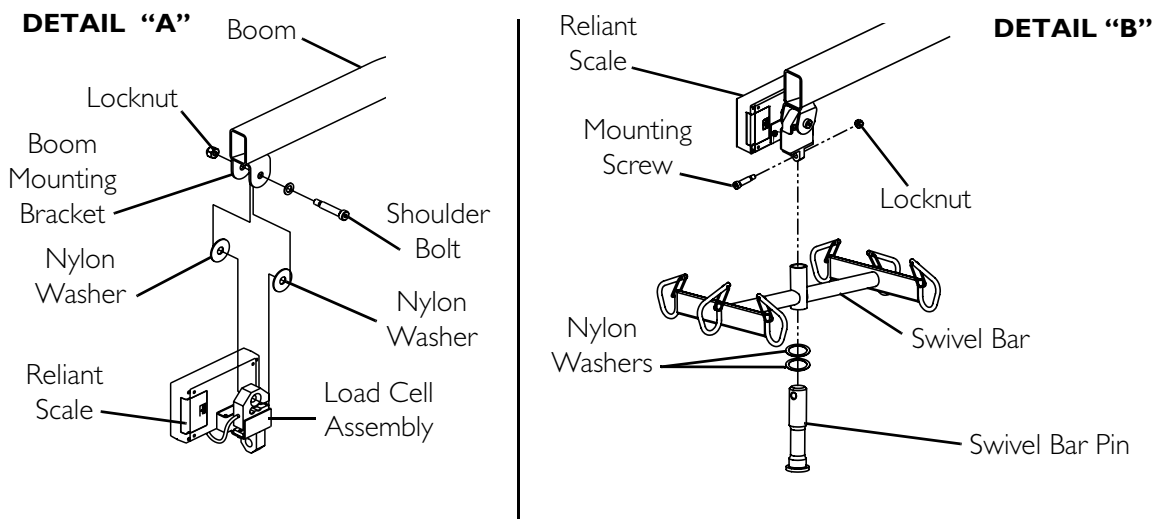


FIGURE 8.2 Installing the Reliant Scale

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.

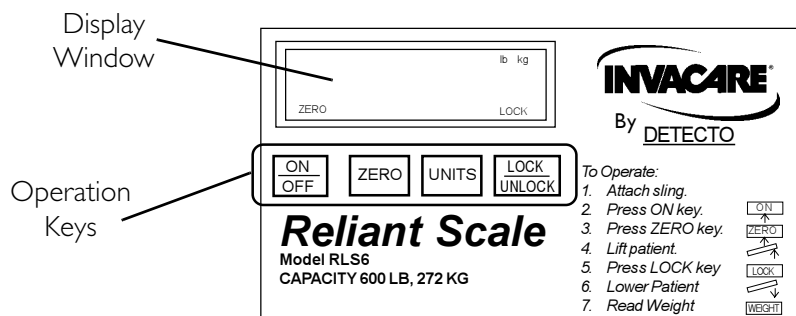


FIGURE 8.3 Operating the Scale - Keypad Functions

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. For proper attachment instructions refer to Attaching a Sling to the Swivel Bar on page 20.

NOTE: For improved accuracy on the 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 ZERO-ING 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 Operation on page 14.
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 19.
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.

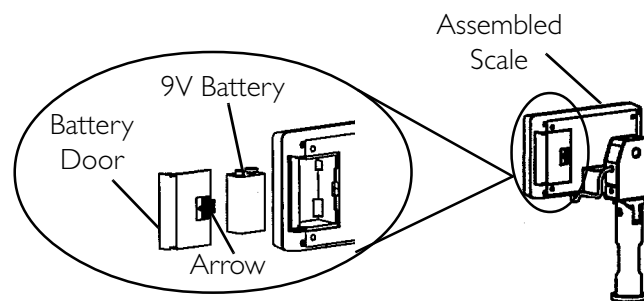


FIGURE 8.4 Replacing the Battery

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 Operation on page 14. For sling detachment instructions refer to Lifting the Patient on page 19.
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

LIMITED WARRANTY

Available At:

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