

# PrimUS MEDICAL

## STS450 Sit-to-Stand Lift OWNER'S MANUAL



## STANDARD CONVENTIONS USED IN THIS MANUAL

Note: The information within this document is subject to change without notice. This manual includes important information about safety of personnel and equipment. As you read through this manual be aware of the four signal terms.



### **DANGER**

Information that appears under the DANGER description concerns the protection of personnel from direct and pending hazards that, if not avoided, will result in immediate, serious personal injury or death in addition to damage of the equipment.



### **WARNING**

Information that appears under the WARNING description concerns the protection of personnel from possible hazards that can result in injury or death in addition to damage of the equipment.



### **CAUTION**

Information that appears under the CAUTION description concerns the protection of personnel from possible hazards that may result in minor injury or damage of the equipment.

### **NOTE**

Information that appears under the NOTE description gives added information, which helps in understanding the item being described.

**TECHNICAL SPECIFICATIONS**

MAX-Height at Sling Hook-up	63"
MIN-Height at Sling Hook-up	34"
OPEN Base Width	36.5"
CLOSED Base Width	23"
Base Height (Clearance)	5"
Base Length	44.5"
FRONT/REAR Caster Size	3.5"
Weight Capacity	450lbs
Weight Out of Carton	120lbs
Battery	24v DC rechargeable
Charger Input	100-240V AC
Charger Output/Charging Time	29V DC/ 12 hrs*
Audible and LED Low Battery	Yes
Approximate Lifts per Charge	100-200 lifts per charge
Warranty Lift/Electronics	3yr / 1yr
Emergency Stop Button	Yes

\*Charging time is 12 hours if battery is completely depleted

\*\*Depends on the load and stroke

**SAFETY GUIDELINES**

Do not operate this equipment without reading and understanding this manual first. If you're not able to understand this manual, its warnings/cautions please contact Primus Medical tech support before attempting to use this equipment. Injury/damage may result.

Replacement parts/accessories for Primus Medical lifts must be reordered from Primus Medical. Replacement parts/accessories designed by other manufacturers are not recommended for the use with Primus Medical equipment.

Before assembling this product, check all parts for shipping damage. If there is damage to the equipment, DO NOT use the product. Contact Primus Medical for further instructions.

Primus medical lifts should never be used to transport patients/residents. The use of this product should be to move patients/residents from one place to another (such as from bed to wheelchair). It is not recommended that a patient/resident be suspended in a sling over ANY distance.

Transferring a patient/resident should not be done without the approval of a physician, nurse or medical assistant. The instruction manual should be read thoroughly and trained personnel should demonstrate how the lift should be used.

Use only approved slings designed for this lifter. An incorrect selection may cause injury. Please seek assistance if any doubt.

Primus Medical Standing and Transferring slings are designed to be used with Primus Medical lifts. Slings that are designed by other manufacturers should not be used. Use slings that are recommended for the patient/resident that is to be used with Primus Medical lifts.

Do not use lifter or sling if damages or signs of abnormal wear appear. Inspect prior to use.

DO NOT exceed maximum weight limit of this patient lift. The weight limit for the STS1450 is 450 lbs.

Injury may occur if patient/resident using the standing sling is not able to support most of their weight.

**Slings**

- Standing-This sling should be positioned at the patient/residents lower back with their arms on the outside of the sling.  
  
-Injury may occur if the belt on the sling is not snug. The patient/resident may slide out of the sling during transfer.

- Transfer-This sling should be positioned at the base of the patient/residents spine with their arms on the outside of the sling.

-Injury may occur if the patient/resident is raised to full standing position.

Inspect slings for wear and tear, loose stitching after they have been laundered. (See sling cleaning instructions).

Injury may occur if bleached, torn, cut, frayed or broken slings are unsafe. These should be disposed of immediately.

Slings should not be altered to fit the patient/resident. Please see size chart to order correct slings.

Sling attachments should be checked if the sling is removed from the lift. This is to make sure sling is attached correctly before the patient/resident is removed from the bed, chair or commode.

If the patient/resident is in a wheelchair, make sure the wheelchair is locked to prevent it from moving forward or backward.

Color coded sling straps should be used to connect sling evenly. These are also used to put patient/resident in numerous positions.

Always use the handles to push or pull the STS450 lift.

When placing the battery on the charger or control box, make sure there is a "clicking" sound when mounting. This confirms that the battery is attached to the charger.

**ASSEMBLY**

**Tools Needed:** 3/4" Wrench or Socket Needle Nose Pliers  
5/16" Hex Key Pliers  
17mm Wrench 14mm Wrench or Socket  
13mm Wrench 7/32" Allen Key  
3/16" Hex Key

**WARNING**

Bodily injury or damage to product may occur if mounting screws are not tightened securely.

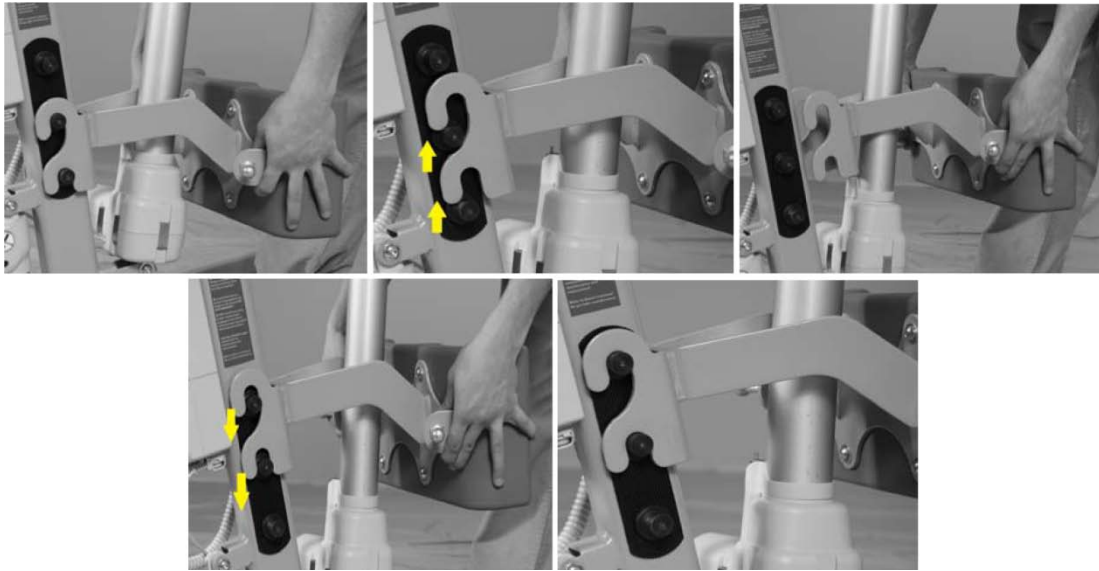
- Remove lift parts from box and place in area where all parts are visible.
- Remove (2) 5/16 bolts, washers and locknuts from base.
- Attach mast to base and tighten (2) 5/16 bolts and hold mast and base together.
- Attach tie rods under base. Place (2) studs up through the holes on each side and put on washers and screw on locknuts.
- Hold up actuator attached to mast. Slide knee pad mount over actuator. Secure mount to mast by hooking on studs.
- Attach knee pad to mount by using (4) 3/16 hex bolts.
- Attach arms to mast and actuator. Use the 5/16 hex bolt to attach arms to mast. Use the 7/32 hex bolt to attach arms to actuator.
- Attach footplate to base by hooking footplate into slots on either side of mast on base.
- Attach handle to mast by using (2) bolts, washers and locknuts.
- Plug actuator into control box.
- Connect battery to control box. Battery is properly connected when you hear "clicking" sound.
- Plug pendant into control box.

### Attaching Knee Pad

 **WARNING**

The knee pad must be attached to the lift or it will not work correctly or safely.

- Knee pad mount needs to be placed over actuator and hooked on mounting studs.
- Knee pad is to be attached to bracket by using (4) 3/16 hex bolts.
- Knee pad can be adjusted to fit patient by unhooking and using other mounting brackets.

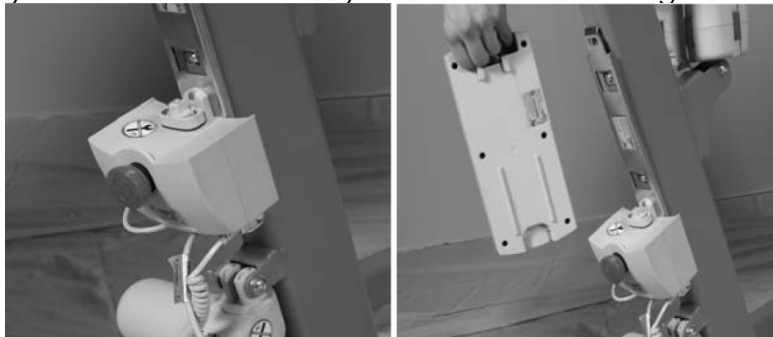


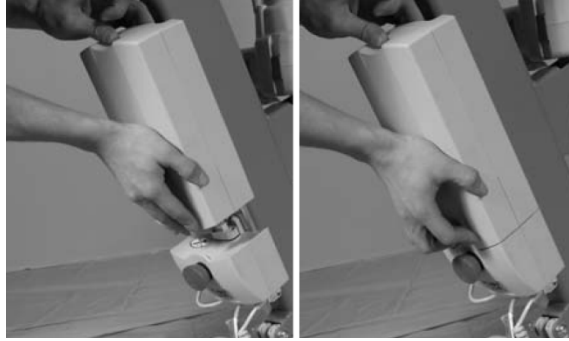
### Attaching Battery

 **WARNING**

Injury or damage may occur if a "clicking" sound is not heard when battery is being attached to control box.

- Slide battery onto control box and you will hear a "clicking" sound.





- Make sure that the emergency stop button is in the off (out) position.



- If the emergency stop button is in the on (in) position, turn clockwise until it pops out.



## OPERATING

### **WARNING**

The legs of the lift must be open all the way for stability and safety. If the lift needs to be placed under a bed, close the legs for the amount of time it takes to position the lift above the patient/resident and lift them off the bed or surface they are at. When the legs of the lift are no longer under the bed, make sure they are opened to the maximum.

**NOTE:** Primus Medical advises that two people prepare and transfer the patient/resident to and from procedures; the lift can be operated by one person. The use of one person operating the lift should be based on evaluation of each patient/resident.



### Locking and Unlocking Casters

- Lock-Press down on the locking lever

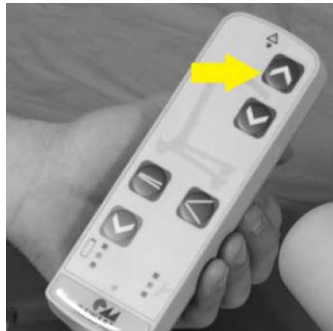


- Unlock-Press the top of the locking lever



### Raising and Lowering Lift

- Raising-Press the arrow up button on the hand control to raise the lift arms



- Lowering- Press the arrow down button on the hand control to lower the lift arms



### Closing or Opening Leg Base

- The middle two buttons of the hand control is used to open or close the legs of the base for stability or safety before lifting a patient/resident. Pressing the left button closes the leg base; the right button widens the leg base.



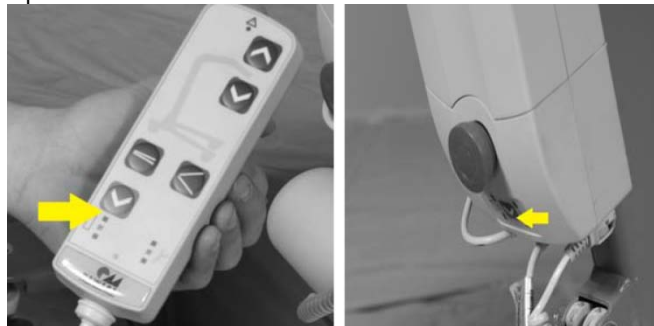
### Using the Emergency Stop

- Press the RED emergency stop button on the control box to stop the lift arms and patient/resident from raising or lowering.
- To release, rotate the RED emergency stop button clockwise until it pops out.

### Primary Emergency Release

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

- To activate the primary emergency release, press down on the RED down arrow on the hand pendant or control box.

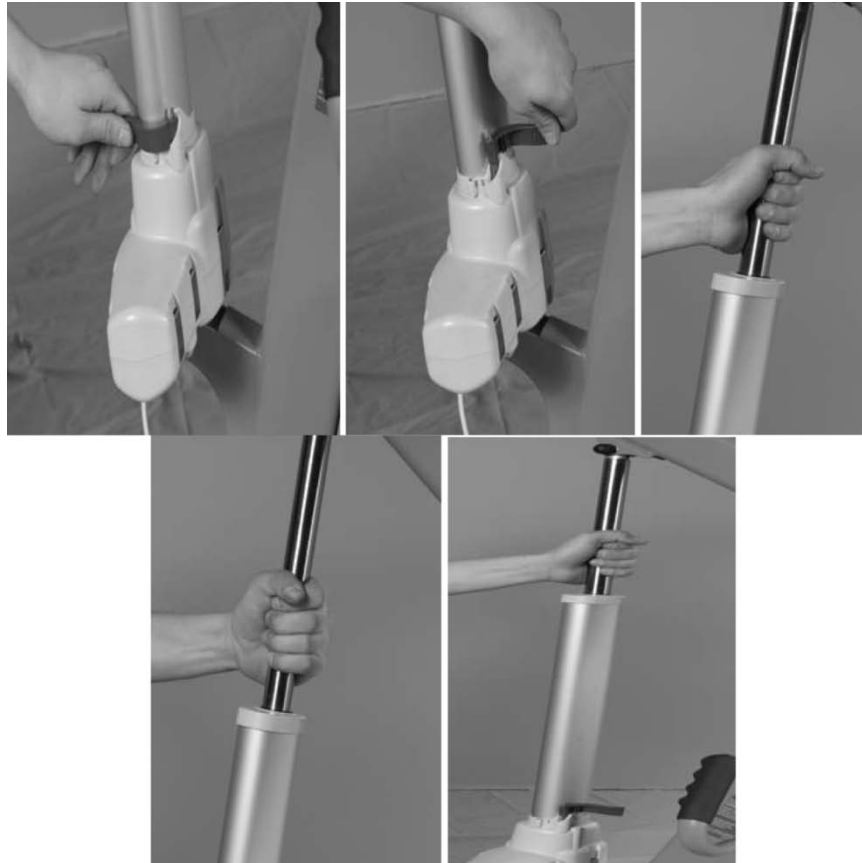


### Secondary Emergency Release

**NOTE:** All patient/resident lift actuators have a mechanical emergency release. The mechanical release will enable the actuator to retract without power.

**NOTE:** The primary emergency release should be used first before the secondary emergency release. This should only be used if the primary is not functioning or cannot be reached.

- To activate the secondary emergency release, push the RED lever back at the base of the shaft column. You can then twist the actuator shaft until the lift is lowered all the way.



### Charging Battery

- To charge battery, first remove battery from control box.
- Plug the small black charger to wall outlet.
- Plug the other end of charger directly into the battery.
- If the battery is fully depleted it must charge for a 12 hour period. If the battery is being charged at the end of the day it must charge for a 6 hour period.
- When charging is finished place battery back on control box. Battery is correctly in place when you hear "clicking" sound.

### Transferring Patient/Resident



**WARNING**

#### Standing Sling

- This sling should be positioned at the patient/residents lower back with the patient/residents arms on the outside of the sling.

### Transfer Sling

- This sling should be positioned at the base of the patient/residents spine with arms on the outside of the sling.
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It is not recommended that the casters be locked on the STS1450 when lifting or transferring. This may cause the lift to tip and injury may occur to the patient/resident or staff.

### Lifting Patient/Resident

Instruct the patient/resident:

- Hold onto the top bar of the lift arms where the black grip handles are on both sides of the STS1450.
- Lean back into the standing/transport sling.

Make Sure:

- Patient/residents knees are fixed against the knee pad.
- Patient/residents feet are placed on the footplate
- The bottom edge:
  - Standing sling is positioned on the lower back
  - Transport sling is at the base of the spine
  - Patient/residents arms are outside of the standing or transfer sling
  - Rear casters are unlocked
  - Legs of STS1450 are open to the maximum position

### WARNING

When beginning to transfer patient/resident from a surface, check to make sure that the sling is properly connected to the attachment points of the STS lift. If the attachments are not on properly, lower the patient/resident back onto the surface and attach properly. These adjustments should be made before moving patient/resident for safety and comfort.

Primus medical slings are made for the STS1450 lift. Other slings and accessories made by other manufacturers should not be used with the STS1450. Only use Primus Medical standing and transferring slings and accessories to keep the patient safe and product life. If the patient/resident is being transferred from a wheelchair, make sure the locks are in the locked position.

- When transferring the patient from a wheelchair, make sure wheels are locked.
- Press the arrow up button to raise the patient/resident from surface (bed, wheelchair or commode) being transferred from. The patient/resident should be raised high enough to clear the surface with their weight being fully supported by the lift.

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

- The patient/resident can now be moved to desired surface.

### Moving the Patient/Resident



#### Standing Sling

- This is not to be used with STS1450 as a transfer device. It is to be used to transfer from one surface to another (bed to wheelchair). It is not recommended that the STS1450 and standing sling be used to move a patient/resident over a long distance.
- While the patient/resident is being lifted, **DO NOT** push STS1450 over any objects such as, carpet, raised carpet bindings, door frames or uneven surfaces that could throw the lift off balance and cause the lift to tip over. The push handle should always be used to push or pull the stand-up lift.
- To move the patient/resident to desired surface, use the push handle.
- Read transferring before lowering patient/resident to desired surface.

### Transferring Patient/Resident to Wheelchair

- The wheelchair should be placed behind the STS1450



Make sure the wheelchair is locked before lowering patient/resident into wheelchair.

- Make sure wheelchair wheel locks are in locked position.
- Position the patient/resident over the wheelchair.
- Use the hand control down button to lower the patient/resident into the wheelchair.



It is recommended by Primus Medical that the rear casters of the STS1450 be locked when placing or removing sling (standing or transfer) from around the patient/resident.

- The rear casters should now be locked.
- Unfasten the sling from all points
- If the patient/resident has the leg strap around their legs that should also be removed.
- The patient/resident may now remove their feet from the footplate.

**NOTE:** If the patient/resident need help assist them

- The sling should be removed from around the patient/resident.
- The STS450 should be removed from the wheelchair.

### Transferring Patient/Resident to Bed

- The patient/resident should be placed as far over the bed as possible.

**NOTE:** If the surface that the patient/resident is on is lower than the bed, lift the patient/resident just above the surface of the bed. The patient/resident should be fully supported by the lift. The patient/resident should feel stable and secure and the STS1450 should be easier to move, due to the lower center of gravity.

- Use the hand control and push the down button to lower the patient onto the bed.



### **WARNING**

It is recommended by Primus Medical that the rear casters of the STS1450 be locked when placing or removing sling (standing or transfer) from around the patient.

- The rear casters should now be locked.
- Unfasten the sling from all points.
- If the patient/resident has the leg strap around their legs that should also be removed.
- The patient/resident may now remove their feet from the footplate.

**NOTE:** If the patient/resident needs help assist them.

- The sling should be removed from around the patient/resident.
- The STS1450 should be removed from the bed.

### Transferring Patient/Resident to Commode

- The patient/resident should be placed over the commode.
- Use the hand control and push the down button to lower the patient/resident onto the commode.



### **WARNING**

It is recommended by Primus Medical that the rear casters of the STS1450 be locked when placing or removing sling (standing or transfer) from around the patient/resident.

- The rear casters should now be locked.
- Complete the action appropriate for the type of sling
  - Standing (item#)
    - Unfasten the standing sling from all points on the STS1450.

-Transfer (item#)

- Unfasten the transfer sling from the bottom attachment points on the STS1450.
- Lift the patient/residents legs and remove the thigh supports from underneath the patient/resident.
- You can either leave or unfasten the top of the transfer sling.

**NOTE:** While using the commode the patient/resident can stay in the upper portion of the transfer sling.

- If the patient/resident has the leg strap around their legs that should be removed.
- The patient/resident may now remove their feet from the footplate.

**NOTE:** If the patient/resident needs help assist them.

- The sling should be removed from around the patient/resident.
- The STS1450 should be removed from the commode, refer back to Lifting Patient/Resident (pg#12-13).

## TROUBLESHOOTING

Effect	Cause	Corrective Action
Lift feels loose	<ul style="list-style-type: none"> <li>-Mast or base is loose</li> <li>-Tie-rods loose</li> </ul>	<ul style="list-style-type: none"> <li>-Make sure mast or base bolts are tightened</li> <li>-Make sure tie-rods are tightened</li> <li>-Refer back to Assembly of Lift</li> </ul>
Casters are noisy or stopping	<ul style="list-style-type: none"> <li>-Debris or object in bearings o under caster</li> </ul>	<ul style="list-style-type: none"> <li>Remove any debris or objects that may be in the bearing or in the way of the casters</li> </ul>
Lift fails or base legs do not open when pendant is in use	<ul style="list-style-type: none"> <li>-Pendant cord loose</li> <li>-Battery is low</li> <li>-Emergency stop button is pressed IN</li> <li>-Battery not connected to control box</li> <li>-Actuators are loose or not connected properly</li> <li>-Control box is damaged</li> </ul>	<ul style="list-style-type: none"> <li>-Make sure pendant is correctly plugged into control box</li> <li>-Charge battery</li> <li>-Turn red emergency button clockwise until it pops out</li> <li>-Make sure you hear “clicking” sound when placing battery on control box</li> <li>-Make sure actuators are connected to control box</li> <li>-Make sure actuators are connected to boom and mast properly</li> <li>-Replace the control box</li> <li>-Contact Primus Medical</li> </ul>
Unusual noise coming from actuator	<ul style="list-style-type: none"> <li>-Actuator may be damaged</li> </ul>	<ul style="list-style-type: none"> <li>-Replace the actuator that is damaged</li> <li>-Contact Primus Medical</li> </ul>
Lift arms will not lower in highest position	<ul style="list-style-type: none"> <li>-Lift arms need a minimum weight load to lower from highest position</li> </ul>	<ul style="list-style-type: none"> <li>-Slightly pull down on lift arms</li> </ul>



## MAINTENANCE

**NOTE:** Maintenance should be done on a regular basis to prolong the life of the equipment.

### INITIAL INSPECTION

- Inspect base for missing hardware.
- Make sure the base opens and closes with ease.
- Inspect casters and axle bolts for tightness.
- Inspect casters for smooth swivel and role.
- Make sure there is no debris around casters.
- Make sure mast is secure to the boom.
- Inspect mast for bends or deflections.
- Inspect the lift arms and links for bends or deflections.
- Make sure lift arms are centered between the base legs.
- Inspect actuator for wear and tear.
- Make sure actuator operates smoothly and quietly.
- Clean lift when necessary, this will expose loose or worn parts, enhance smooth operation and extend the life of the lift.
- Inspect sling attachments each time the sling is used to ensure proper connection and patient safety.
- Inspect sling material and straps for wear and tear.

### REPLACING ACTUATOR



#### WARNING

A qualified personnel must perform this procedure.

- The actuator power cord must be disconnected from the control box.
- Remove the 7/32 hex bolt connecting the actuator to the arms of the lift.
- Remove the knee pad from around the actuator.
- Remove the 7/32 hex bolt connecting the actuator to the mast of the lift.
- The actuator should now be disconnected from the lift.
- Replace the actuator and reverse the previous steps.



#### WARNING

Mounting hardware should not be over tightened due to causing damage to mounting brackets.

## REPLACING CASTERS



### **WARNING**

A qualified personnel must perform this procedure.

#### **Front Casters**

- To remove caster, the locknut, washer, spacer and 7/32 hex screw that secures caster to base leg should be removed.
- The caster should be removed now.
- To install new caster, reverse previous steps.

#### **Rear Casters**

- To remove caster, the locknut, washer, spacer and 7/32 hex bolt that secures caster to base should be removed.
- The caster should be removed now.
- To install new caster, reverse previous steps.

## **Primus Medical, LLC Warranty**

Primus Medical Lift, Model STS1450, is guaranteed for a 3 year period from the date of delivery. This guarantee is against defects in materials and craftsmanship under normal use and service.

Welds are covered under lifetime<sup>1</sup> warranty of the product. Steel structural components are covered under the 3 year warranty from the date of delivery. There is a 1 year warranty on electrical and mechanical parts and components.

Damage caused by use in inappropriate environmental conditions, mistreatment or failure to maintain the product in agreement with user and service instructions is not covered under warranty. Any change, adjustments, or repair unless performed or authorized in writing by Primus Medical, will void the warranty.

### **Parts**

Primus Medical lifts contain a variety of parts that wear from normal use. Some parts are not covered under the 1 year warranty (batteries). Primus Medical's responsibility under this warranty is limited to supplying replacement parts, servicing or replacing, at its option, which is found to be faulty by Primus Medical.

Warranty replacement parts are covered by the warranty until the products 1 year warranty period expires. For warranty replacement, Primus Medical requests that broken parts be sent back to them for evaluation. A credit will be issued only after the inspection.

### **Service**

A majority of service requests can be handled by the facility maintenance department with assistance from the Primus Medical technical support. If a Primus Medical technician is required one will be provided by Primus Medical at our discretion.

Most parts can be shipped next day air at the customer's expense.

This warranty is extended to the original purchaser of the equipment.