



Explosion Proof Aerial  
Work Platforms.

## MODEL 2647EX

CLASS I, DIVISION 1, GROUP D HAZARDOUS ENVIRONMENT  
MOBILE ELEVATING WORK PLATFORM



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# 1. Introduction

The purpose of this manual is to provide users with a thorough understanding of the proper operating procedures necessary for the safe and efficient use of the **2647EX**.

**THIS MANUAL MUST BE RETAINED WITH THE UNIT AT ALL TIMES.**

Do not operate the lift without reading and understanding all the information in this manual. Familiarize yourself with the controls, their functions, and their limitations to maximize operating efficiency and safety. Review the decals attached to the machine before operating.

It is **your responsibility** to follow safe procedures while using the **2647EX**. The manufacturer cannot anticipate every application or operating condition, so **it is the user's responsibility** to ensure safe use.

You must also comply with all federal, state, and local safety regulations regarding aerial work platforms.

Bailey Specialty Aerial Work Platforms & Aerials reserves the right to modify products without prior notice. Manuals are updated regularly to reflect changes.

**Do not alter or modify this unit without prior written approval from Bailey Specialty Aerial Work Platforms.**

## 2. Service & Maintenance

Many parts used in the manufacture of the **2647EX** have specific properties. To maintain product integrity, purchase replacement parts through Bailey Specialty Aerial Work Platforms & Aerials. Only trained personnel should perform repairs and adjustments. Refer to the maintenance section for detailed information.

If you need assistance or have service-related questions, Bailey Specialty Aerial Work Platforms & Aerials personnel are available to help.

### 3. Warranty

Bailey Specialty Cranes & Aerials warrants to the purchaser that each new aerial work platform made by Bailey Specialty Cranes & Aerials, is free from defects in material and workmanship arising under normal use and service for a period of one (1) year after the original shipment of the aerial work platform from the plant of Bailey Specialty Cranes & Aerials.

The obligation and liability under this Warranty are expressly limited to repairing or at Bailey Specialty Cranes & Aerials' option, replacing free of charge at its factory in Muskego, WI or at an authorized repair facility designated by Bailey Specialty Cranes & Aerials, the defective part. In no event shall Bailey Cranes & Aerials or its suppliers be liable to the purchaser or any other person for transportation charges or for any incidental, collateral, special, or consequential damages, including without limitation damages for loss of profits, loss of customers, loss of goodwill, or work stoppage, claims by any party other than the purchaser, or any other similar damage or loss even if Bailey Specialty Cranes & Aerials, its suppliers, or its representatives have been advised of the possibility of such damages.

Parts claimed to be defective and for which repair or replacement is desired shall be returned transportation **prepaid** to the Bailey Specialty Cranes & Aerials factory for inspection. This Warranty applies to replacement parts provided under the terms of this Warranty only for the remainder of the Warranty period applicable to the original purchase.

Any operation of the equipment beyond rated capacity, improper use or application of the equipment, substitution upon it of parts not approved by Bailey Specialty Cranes & Aerials or alteration or repair of the equipment by any person not authorized by Bailey Specialty Cranes & Aerials shall, at Bailey Specialty Cranes & Aerials' option, void this Warranty. Bailey Specialty Cranes & Aerials shall have no liability or responsibility for damages resulting from an accident of the malfunction of equipment and components not supplied by Bailey Specialty Cranes & Aerials.

No agent, employee, distributor, dealer, or other representatives of Bailey Specialty Cranes & Aerials is authorized to modify this Warranty in any way. Accordingly, additional statements or presentations by any such representative, whether oral or written, do not constitute warranties by Bailey Specialty Cranes & Aerials and should not be relied upon as limited warranties of Bailey Specialty Cranes & Aerials and no attempt, effort, or promise to repair equipment by Bailey Cranes & Aerials or any such representative at any time shall modify or extend this Warranty in any way. If the purchaser has used its own order form, Bailey Cranes & Aerials will honor no additional or different warranty terms contained in the purchaser's form. This Warranty covers only new and unused aerial work platforms manufactured by Bailey Specialty Cranes & Aerials. Products or parts manufactured by others are covered only by such warranties as are extended to the purchaser by Bailey Specialty Cranes & Aerials' suppliers.

*This Warranty is in lieu of all other warranties, expressed or implied, including but not limited to warranties of merchantability and fitness for a particular purpose. Any applicable implied warranty shall be limited in duration to the warranty period.*

## 4. Ordering Parts

### 4.1. Ordering Parts

1. When ordering parts for your aerial work platform, ensure that you are able to give the model and serial number(s) of all units for which parts are needed. The serial numbers will assist in providing the correct parts for your machine(s).
2. If known, please specify the part number(s) for the part(s) you require, and always provide a complete description of all parts.
3. Email orders are preferable, though parts may be ordered by mail and telephone.
4. Parts needed for warranty repair must be purchased through Bailey Parts Department.
5. Bailey classifies its orders in the following ways:
  - **Emergency:** Top priority. All efforts are made to ship the order the day the order is received; when possible, parts must be pulled off the assembly line.
  - **Standard:** Order to be shipped within a 48-hour period.
  - **Stock:** Order to be shipped within 2 weeks.
6. Bailey has a \$25.00 Net Minimum billing charge per order.
7. All price quotations are valid for 90 days.
  - Parts are shown as shipped on the Bailey packing list and subsequent invoice but not received by the dealer/customer **MUST** be reported within 10 days after the date of shipment.
  - If the parts are still required, a **NEW** parts order must be submitted.
  - Shortages and discrepancies will be reviewed on an individual basis by the Parts staff and adjustments will be made accordingly.

**Invoice discrepancies regarding incorrect prices or discounts should be reported immediately to the Parts Department. Report the Sales Order Number and invoice number. Your request will be reviewed, and adjustments will be made accordingly.**

## 5. Safety

### 5.1. Safety Symbols

This manual contains important information on the safe use of your Bailey Specialty Aerial Work Platforms & Aerials equipment. Your failure to read, understand, and follow all safety rules, warnings, and instructions will unnecessarily expose you and others to dangerous situations. For your safety and the safety of those around you, you must operate your equipment as instructed in the operation section of this manual.

You, the operator, are the single most important factor for safety when using any piece of equipment. Learn to operate your equipment in a safe manner.



***"DANGER" INDICATES AN IMMINENTLY HAZARDOUS SITUATION, WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.***



***"WARNING" INDICATES A POTENTIALLY HAZARDOUS SITUATION, WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.***



***"CAUTION" INDICATES A POTENTIALLY HAZARDOUS SITUATION, WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY. IT IS ALSO USED TO ALERT AGAINST UNSAFE PRACTICES, AND FOR PROPERTY-DAMAGE-ONLY SITUATIONS.***

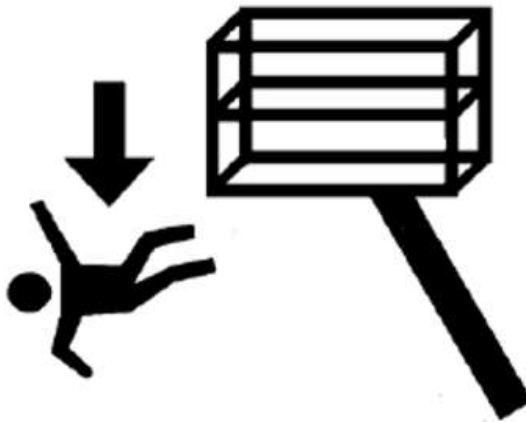
One final note: The best method to protect yourself and others from injury or death is to use common sense. If you are unsure of any operation, **DO NOT** start until you are satisfied that it is safe to proceed.

## 5.2. Safety Rules and Precautions

- During operation, occupants in the platform must wear an approved full-body harness with a lanyard attached to an authorized lanyard anchorage point. Attach only one (1) lanyard per anchorage point.



- Enter and exit only through the gate of the platform, using extreme caution while entering or leaving. Ensure the platform assembly is fully lowered. Face the machine when entering or leaving the platform. Always maintain “three-point contact” with the machine, using two hands and one foot or two feet and one hand at all times during entry or exit.
- Before operating the machine, make sure all gates are closed and fastened in their proper position.

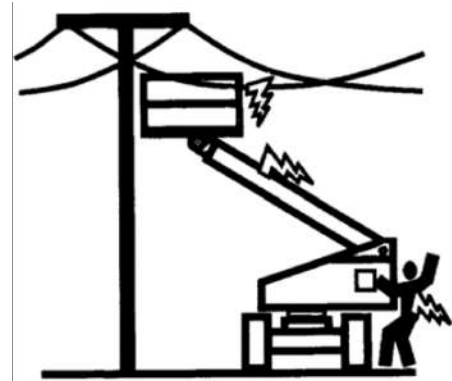






- **ELECTROCUTION HAZARD!! THIS MACHINE IS NOT INSULATED!!**

Maintain safe clearance from electrical lines and apparatus. You must allow for machine sway (side to side movement) when elevated, and electrical line movement. This machine does not provide protection from contact with or proximity to an electrically charged conductor.



- You must maintain a **CLEARANCE OF AT LEAST 10 FEET (3.05 M)** between any part of the machine, or its load, and any electrical line or apparatus carrying over 300 volts up to 50,000 volts. One foot (30.5 cm) additional clearance is required for each additional 30,000 volts.

**REQUIRED CLEARANCE FOR NORMAL VOLTAGE IN OPERATION NEAR HIGH VOLTAGE POWER LINES AND OPERATION IN TRANSIT WITH NO LOAD AND BOOM OR MAST LOWERED**

Normal Voltage, kV (Phase to Phase)	Min Required Clearance FT (M)
<b>Operation Near High Voltage Power Lines</b>	
To 50	10' (3.05)
Over 50 to 200	15' (4.60)
Over 200 to 350	20' (6.10)
Over 350 to 500	25' (7.62)
Over 500 to 750	35' (10.67)
Over 750 to 1000	45' (13.72)
<b>Operation in Transit with No Load and Boom Mast Lowered</b>	
To 0.75	4' (1.22)
Over 0.7 to 50	6' (1.83)
Over 50 to 345	10' (3.05)
Over 345 to 750	16' (4.87)
Over 750 to 1000	20' (6.16)

REF ASME/ANSI B30.5-1989

- **DEATH OR SERIOUS INJURY** will result from contact with, or inadequate clearance from, any electrically charged conductor.

## 5.3. Wind Speed and Safety Precautions

Do not operate the machine when wind speeds exceed 28 MPH (12.5 M/S).

Table 1-2. Beaufort Scale (For Reference Only)

Beaufort Number	Wind Speed		Description	Land Conditions
	mph	m/s		
0	0	0–0.2	Calm	Calm. Smoke rises vertically.
1	1–3	0.3–1.5	Light air	Wind motion visible in smoke.
2	4–7	1.6–3.3	Light breeze	Wind felt on exposed skin. Leaves rustle.
3	8–12	3.4–5.4	Gentle breeze	Leaves and smaller twigs in constant motion.
4	13–18	5.5–7.9	Moderate breeze	Dust and loose paper raised. Small branches begin to move.
5	19–24	8.0–10.7	Fresh breeze	Smaller trees sway.
6	25–31	10.8–13.8	Strong breeze	Large branches in motion. Flags waving near horizontal. Umbrella use becomes difficult.
7	32–38	13.9–17.1	Near Gale/Moderate Gale	Whole trees in motion. Effort needed to walk against the wind.
8	39–46	17.2–20.7	Fresh Gale	Twigs broken from trees. Cars veer on road.
9	47–54	20.8–24.4	Strong Gale	Light structure damage.

- Read and understand all safety and control information found on the machine and in this manual before operating the unit.
- Only trained, competent personnel should operate the aerial work platform.
- Be aware of all Government and Local rules that may apply to this machine and its safe operation.
- Prior to driving in the reverse direction, check for obstacles and obstructions. Give yourself adequate room for a gradual slow-down. Failure to observe the expected pathway could result in pinning between the machine and a potential obstruction.

- When raising the boom or a load, the machine must be on firm-level concrete with adequate load-bearing capacity.
- Sudden movements can cause the platform to move unexpectedly. Sudden motions can cause large sideways forces and the potential of tipping. Always move slowly when the boom is extended.
- **DO NOT** attempt to open any hydraulic line or component without first relieving all system pressures and shutting off fluid flow from the tank. itemize
- **DO NOT** alter, modify, or disable any safety devices or interlocks.
- **DO NOT** use the aerial work platform outdoors in electrical storms or high wind situations.
- Ensure that the area surrounding the mobile platform is clear of personnel and equipment before:
  - Driving the unit.
  - Raising, lowering, or extending the boom.
- Maintain a safe distance from overhead and ground obstacles, debris, drop-offs, holes, depressions, electrical wires, and other hazards to travel.
- Limit travel speed according to conditions of the ground surface, congestion, slope, location of personnel, or any other factors that could cause the hazard of collision or injury to personnel.
- **DO NOT** operate this machine while under the influence of any drugs or alcohol.
- **DO NOT** indulge in pranks, stunt driving, or horseplay while operating this machine.
- As the steering angle is increased, the side loads when driving are increased. Proceed with slow, gradual motion as the steering angles are increased.



- Complete the “**Operational Checklists**” found in this manual (see Table of Contents) at designated intervals.
- Ensure that the machine is in “**LOW**” drive speed while unloading from a truck or trailer. We do not recommend unassisted loading or unloading of aerial work platforms.
- Actuation of the red “**EMERGENCY STOP**” button will apply brakes immediately, causing an unexpected sudden stop and the potential of swinging loads.
- Never lower the boom into the ground. Leave adequate distance for the boom to ramp down to a stop when lowering near the ground.
- Whenever disengaging the drive torque hubs or before disconnecting from a towing vehicle, ensure that the unit cannot roll.

- Immediately report any erratic noises, vibrations, or malfunctions of the unit to your supervisor. The machine must be removed from service until diagnosis and any necessary repairs have been completed.
- Operating this equipment without all safety and control decals in place can be hazardous.



- **DO NOT** raise, extend, retract, tilt, rotate, or lower the boom into stationary objects, as this will cause damage to mechanical and hydraulic components.
- **DO NOT** use the boom functions to push or tow the unit or another vehicle.
- When traveling on asphalt or uneven surfaces with cracks or small steps, proceed slowly and be aware of the potential for side tipping. Small grades or slopes should be maneuvered primarily lengthwise, where stability is greatest.
- Avoid sudden braking or steering. Go slowly and leave more maneuvering room during cold weather operation until the machine is warm.

## 6. User Responsibilities

### 6.1. Personnel Training

This aerial work platform is a specialized lifting device; therefore, it must be operated and maintained only by authorized and qualified personnel who have demonstrated an understanding of the proper use and maintenance of the machine. It is essential that all personnel assigned to operate or maintain the machine undergo a thorough training program and checkout period to become familiar with its characteristics prior to operation.

Persons under the influence of drugs or alcohol, or who are subject to seizures, dizziness, or loss of physical control, must not be permitted to operate the machine.

### 6.2. Operator Training

Operator training must include instruction in the following areas:

1. Use and limitations of the controls and safety systems.
2. Knowledge and understanding of this manual, as well as the control markings, instructions, and warnings on the machine itself.
3. Awareness of all safety work rules of the employer and compliance with Federal, State, and local statutes, including training in the recognition and avoidance of potential hazards in the workplace—especially those related to the work to be performed.
4. Proper use of all required personal safety equipment, particularly the wearing of approved safety devices.
5. Sufficient knowledge of the machine's mechanical operation to recognize malfunctions or potential malfunctions.
6. Understanding the safest methods to operate the machine in environments with overhead obstructions, moving equipment, obstacles, depressions, holes, drop-offs, or other surface irregularities.
7. Knowledge of how to avoid hazards from unprotected electrical conductors.
8. Awareness of any other requirements specific to a given job or machine application.

### 6.3. Training Supervision

Training must be conducted under the supervision of a qualified person in an open area free of obstructions. Trainees must demonstrate the ability to safely control the machine in congested work locations before operating it independently.

## 6.4. Operator Responsibility

Operators must be instructed that they have both the responsibility and authority to shut down the machine in the event of a malfunction or any unsafe condition related to the machine or job site. Operators should request further information from their supervisor or an authorized Bailey Specialty Aerial Work Platforms & Aerials distributor before proceeding in uncertain situations.

## 6.5. Placards and Decals

Read and understand all placards and decals. **DO NOT** operate any machine on which **DANGER**, **WARNING**, **CAUTION**, or **INSTRUCTION** placards or decals are missing or illegible. Replace placards and decals if they are damaged, missing, or illegible.



# 7. Operation

## 7.1. Start-Up Procedures/Shift Checks

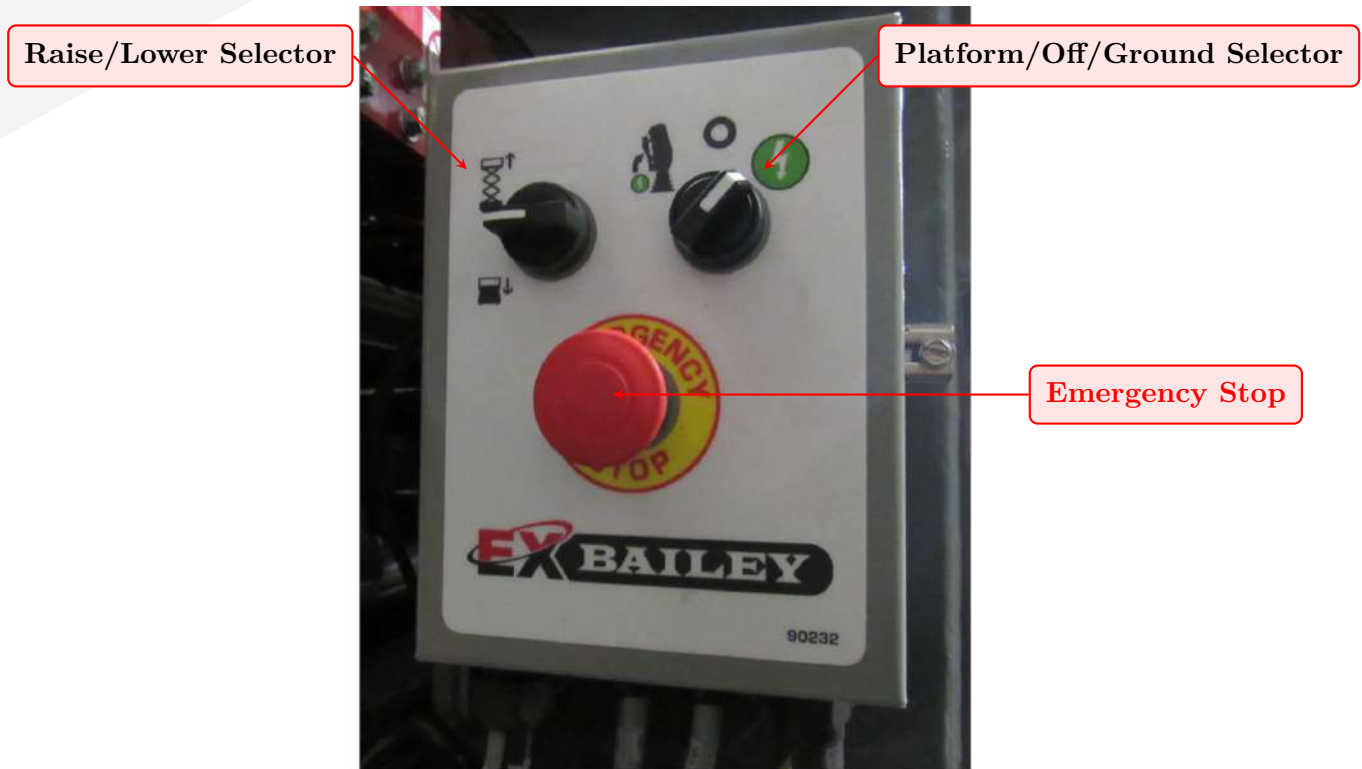
Before the **2647EX** is put into use each shift, the following checks should be completed to ensure that the machine is in good, safe operating condition:

- Open the battery box cover and inspect the battery cable connections. Verify that each connection is tight and secure.
- Visually inspect all machine components for missing parts, torn or loose hoses, hydraulic fluid leaks, torn or disconnected wires, and flat or damaged tires. Both compartment doors can be opened to inspect components inside.
- Check the hydraulic fluid level.
- Check the state of battery charge with the battery condition indicator.
- Check wheel lugs for torque markings.
- Inspect hoses and cables for worn areas.
- Check pivot pins for security.

Battery Disconnect



## 7.2. Ground Controls Description



## 7.3. Ground Controls Operation

1. Make sure you have read and understood the **Safety** and the **Machine Operation** sections of this manual prior to operating the **2647EX** Lift.
2. Release (pull out) the red **Battery Disconnect Switch** located atop the explosion-proof enclosure.
3. Note the state of battery charge on the **Battery Condition Indicator**.
4. At the ground controls, pull out the **Emergency Stop Switch**.
5. Rotate and hold the **Ground/Off/Platform** control selector in the ground position.
6. Rotate the **Raise and Lower** selector to raise or lower the platform.



## 7.4. Platform Controls Description

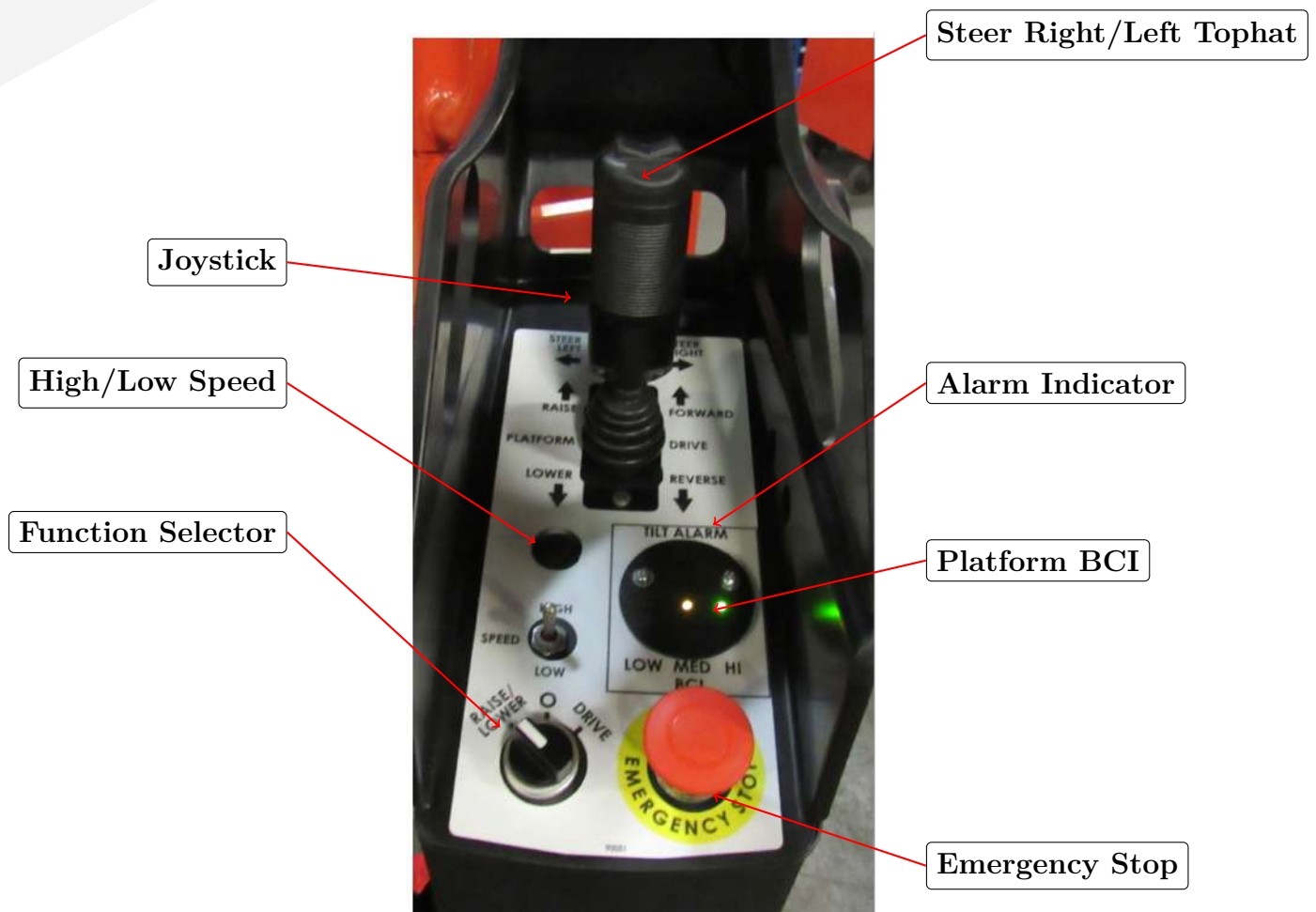


Figure 7.1: Platform Controls with Labeled Components

## 7.5. Platform Controls Operation

1. Make sure you have read and understood the **Safety** and the **Machine Operation** sections of this manual prior to operating the **2647EXLift**.
2. Depress the **Battery Disconnect Switch**.
3. At the ground controls, pull out the **Emergency Stop Switch**.
4. Turn the **Ground Selector** to **Platform**.
5. Enter the platform.
6. At the platform control console, pull out the **Emergency Stop Switch**.
7. Select the desired function mode: **Lift/Lower** or **Drive**.
8. Select **High Speed** or **Low Speed**. Low Speed is recommended when operating around machinery.
9. With the joystick centered, pull the joystick trigger.
10. Use the joystick to operate the desired function. The joysticks are typically proportional controls, meaning the function speed is proportional to the joystick direction. Platform lowering is single speed only.

The **2647EX** is equipped with a tilt sensor and a **Tilt Light** on the platform control console. The tilt sensor actuates when the machine is tilted **5 degrees** to the front or rear, or **5 degrees** to either side.

The Tilt Sensor is operational whenever the enable switch is depressed (the Tilt Light will flash momentarily when the Enable Switch is first depressed). If the Tilt Light comes on steady while operating the **2647EX**, the machine base is on a slope exceeding the machine's capability. While the tilt light is engaged, platform lift will be disabled.



The **2647EX** is intended for use on firm level ground only

## 7.6. Battery Condition Indicators (BCI)

There are two Battery Condition Indicators on the machine. One is on the platform and the other is on the ground, located inside the EX enclosure box, visible through the view windows. The ground BCI reads out the percentage of the battery. The platform readout is done using three LED indicators. The indicators light up with the pattern shown below:

- **Green LED only** – Battery at high: Charge > 80%
- **Green and Yellow** – Battery at medium-high: 80% > Charge > 65%
- **Yellow LED only** – Battery at medium: 65% > Charge > 45%
- **Red and Yellow** – Battery at medium-low: 45% > Charge > 30%
- **Red LED only** – Battery at low: 30% > Charge > 10%
- **Blinking Red** – Battery critically low: Charge < 10%



Figure 7.2: Ground Battery Condition Indicator (BCI)



Figure 7.3: Platform Battery Condition Indicator (BCI)

## 7.7. Driving the 2647EXLift



**ENSURE THAT THE ROUTE OF TRAVEL  
IS CLEAR OF PERSONNEL AND DEBRIS.**

1. Select **High Speed** or **Low Speed**.
2. Depress the **enable switch**. Slowly push the joystick forward to provide forward travel, or pull the lever backward for reverse travel. The speed will be proportional to the direction of travel.
3. To steer, depress the **top hat switch** to the right or left as required.
4. **High Speed** is only available when the platform is stowed. While raised, **Low Speed** will be automatically engaged.
5. When descending a ramp (incline), it is necessary to control the travel speed. To slow the unit, move the drive lever slowly towards the center “**neutral**” position.

### Travel Speed

When the arm set is fully lowered, **Low Speed** and **High Speed** modes are user selectable. Joystick lever movement will provide zero to full-speed travel. When the arm set is raised 8 feet, the machine will default to **low-speed mode only**. Joystick lever movement will then provide zero to half-speed travel.

## 7.8. Parking the 2647EXLift

For parking, the brakes are automatically applied when the drive lever is in the center “**neutral**” position.



**RELEASE OF THE DRIVE LEVER WILL  
APPLY BRAKES IMMEDIATELY!**

**BRACE YOURSELF FOR UNEXPECTED PLATFORM  
MOVEMENT WHEN THE MACHINE SUDDENLY STOPS.**

### Shut Down Procedure

1. Return the platform to its fully lowered position.
2. Park the lift on a level surface.
3. Depress the platform **E-Stop** button.
4. Leave the platform and return to the ground controls.
5. Turn the ground controls selector switch to the **OFF** position.
6. Depress the ground controls **E-Stop** button.
7. Depress the battery disconnect button located on the electrical enclosure.

## 7.9. Using the VAA (Optional)

The VAA allows the operator to step up for higher reach. Ensure the VAA is attached to the platform on the sides and in the front. The VAA is to be entered by using the step to get up onto the platform. The gate can be opened to enter and is required to be closed and latched behind the operator. There are pins at the bottom of the upright so it can be locked in the upright position or released to be lowered even with the platform guardrails.

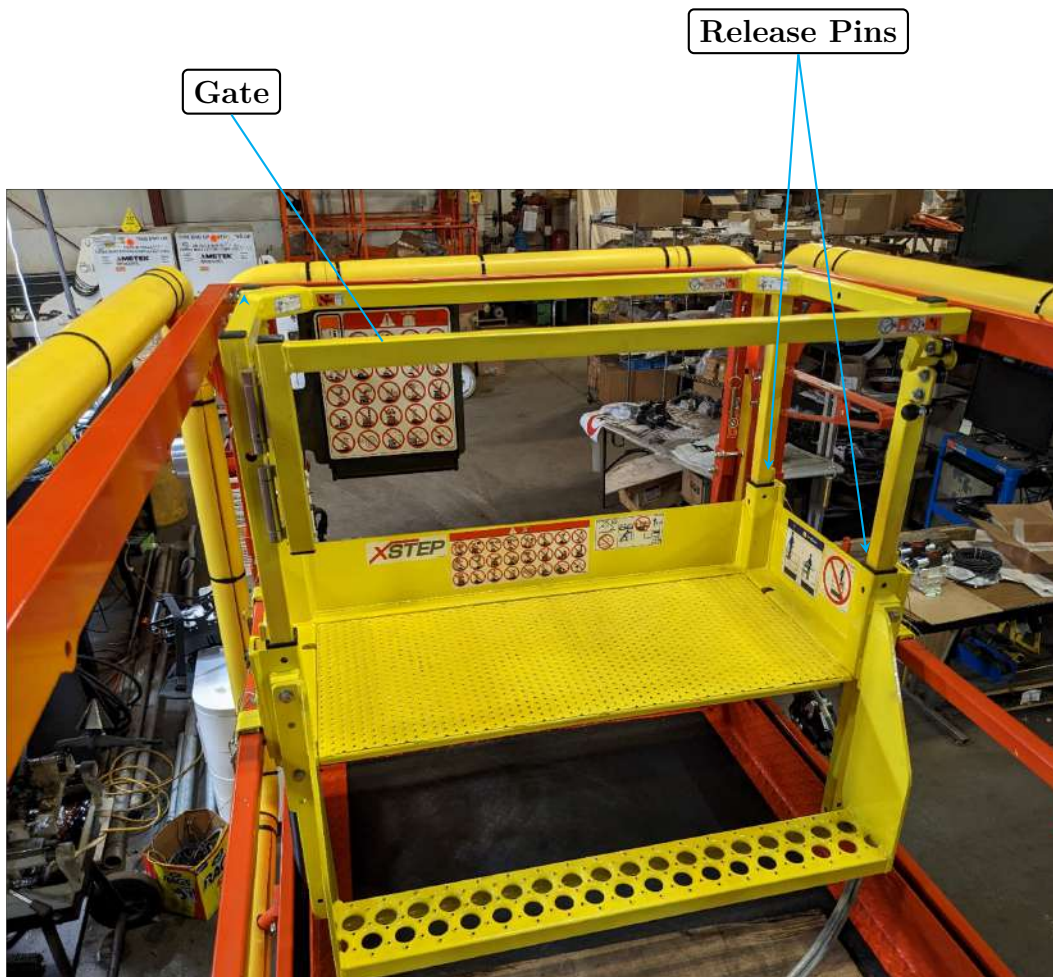
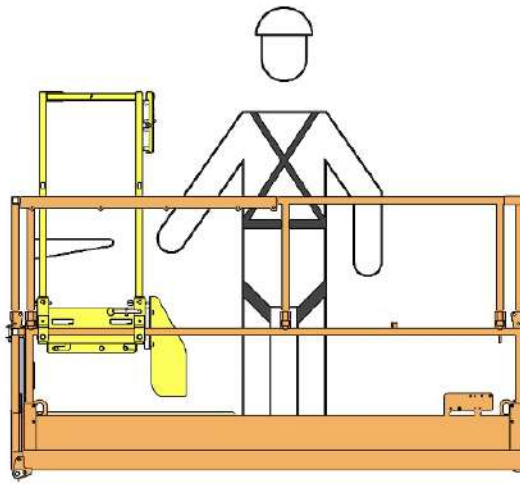


Figure 7.4: VAA with labeled components

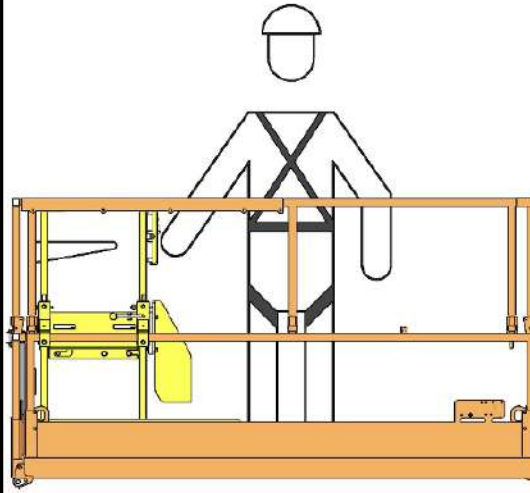


**FALL PROTECTION IS TO BE USED IF THE OPERATOR IS ON THE ELEVATED PLATFORM WITH THE VAA RAILS LOWERED AND A FALL HAZARD IS PRESENT.**

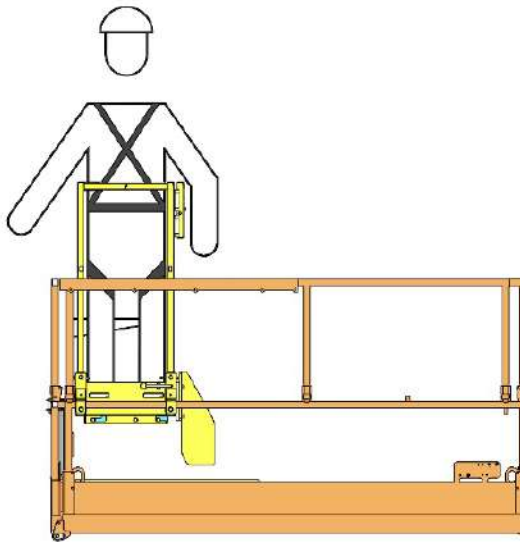
Operator Not On VAA  
VAA Handrails Raised  
Fall Protection Not Required



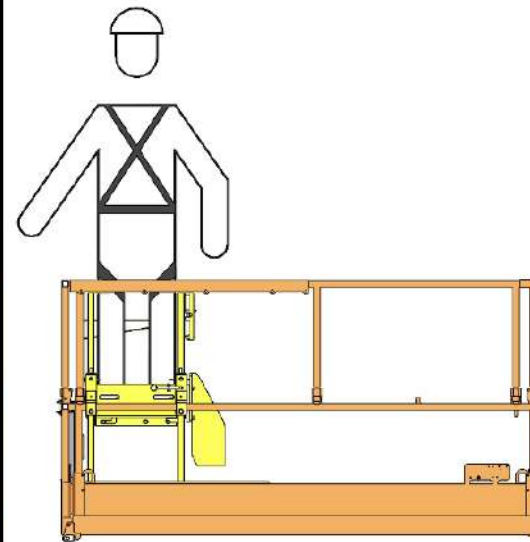
Operator Not On VAA  
VAA Handrails Lowered  
Fall Protection Not Required



Operator On VAA  
VAA Handrails Raised  
Fall Protection Not Required



Operator On VAA  
VAA Handrails Lowered  
Fall Protection Required



## 7.10. Operating the Powered Extension Platform (Optional)

The powered extension platform allows the operator to automatically extend and retract the extension platform through the use of a hydraulic cylinder and circuitry. The extension platform contains a small controller that is used to extend and retract the platform (please see below). In some equipped units, there are limit switches that detect if the deck is extended or in the process of being extended. In this case, all lift operations other than the extension platform functions are inoperative.

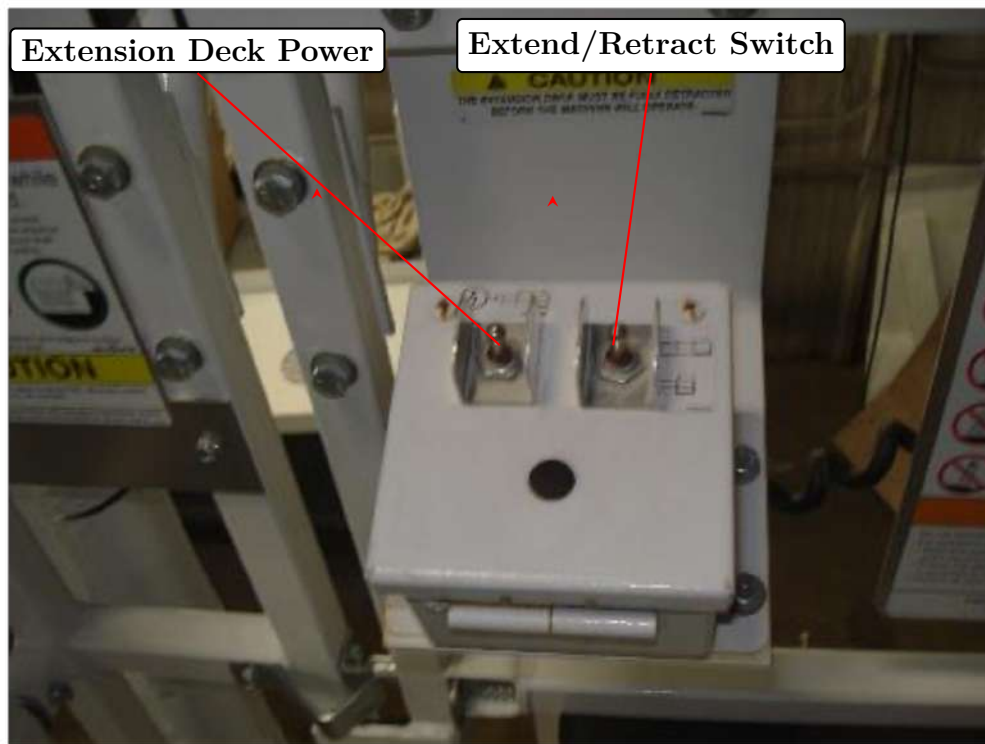


Figure 7.5: Powered Extension Platform Controls



## 7.11. Battery Charging Procedure

The battery tray is removable using the fork pockets located on the bottom of the tray. The top cover is held down by two separate latches that should be locked when the machine is in a hazardous environment. Once the latches are unlocked, the cover can be opened. The machine will not turn the motor on if the cover is open.



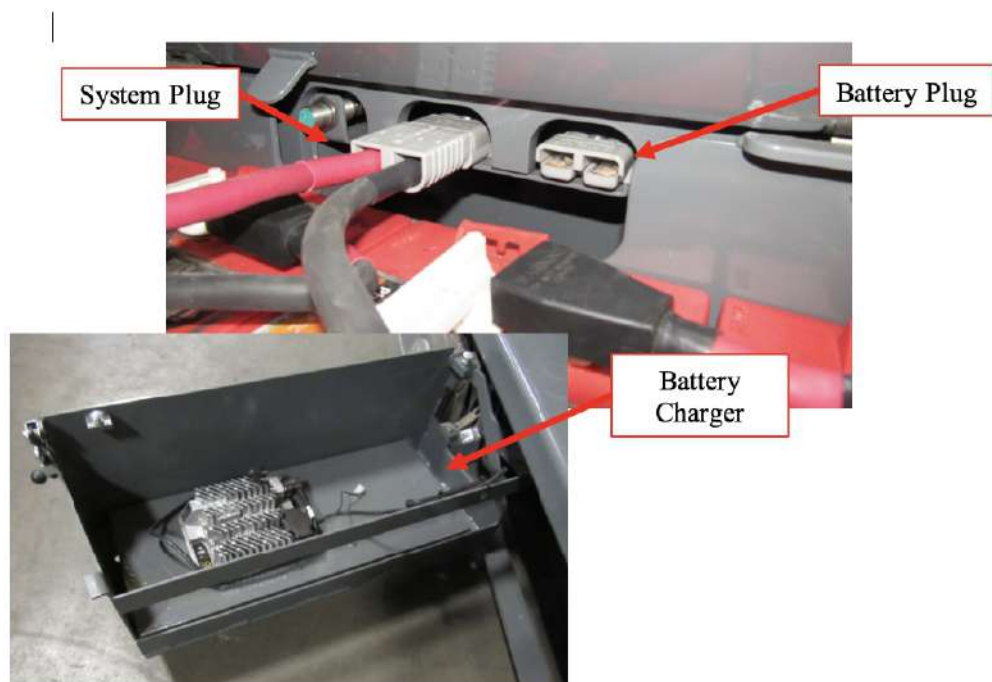
**Batteries may only be recharged in a non-hazardous environment.**

- Remove 2647EX from hazardous environment to a non-hazardous location.
- Depress the **Battery Disconnect Switch**.
- Open the lid of the battery container and switch to the charging plug.
  - The lift handle and latch cable are to be used to aid in opening the lid.
- The charger can be used with 110 VAC, 50 to 60 Hertz current and is located on the right side of the machine in the swinging tray.
- Connect the battery charger to 110 VAC.
- Charger operation is fully automatic and will shut off after batteries are fully charged. LEDs on the face of the charger show the approximate state of battery charge.
- After charging, disconnect line power, remove the charger power lead, and disconnect the battery charger from batteries (grey disconnect).
- Close and latch the battery tray door and lock the battery latches.

### Additional Battery Maintenance Guidelines

- Batteries should be fully charged before use.
- Battery connectors should be tight and intact.
- Vent caps should be installed and tight.
- Batteries should be clean at all times.
- Batteries should be watered after charging.
  - The water used for watering should be distilled.
- Avoid charging if temperatures exceed 120°F.

- Batteries should be replaced in a set, not one at a time.
- As batteries age, charging times will increase and water checks will need to be performed more frequently.
- Do not leave batteries unused in the machine for extended periods. Disconnect the batteries if the machine will remain unused for over 60 days.



## 8. Transporting

### Unloading Instructions



**TO AVOID A SERIOUS PERSONAL INJURY OR DEATH, ENSURE THAT THE MACHINE IS IN “LOW” DRIVE SPEED WHILE UNLOADING FROM A TRUCK OR TRAILER.**

- Inspect the outside of the unit (including the underside) for damage. Inspect all hoses, boom sections, and cables for chafing or road damage. Confirm that all wheel lug nuts are tight (refer to specifications).
- Remove all machine tie-downs. Remove wheel chocks, if used. Switch the **GROUND/PLATFORM** switch to **PLATFORM**.
- Enter the platform and test all platform functions.
- Carefully drive the unit off the truck or trailer.
- Before placing the unit into service, all operators must read and understand the contents of this Operator's Manual.

### Loading Instructions

- Enter the platform.
- Carefully drive the unit onto the truck or trailer.
- Tie-down locations are at each corner of the chassis. Use four  $\frac{1}{2}$ -inch, “Grade 7” chains from each of the tie-down lugs.

**Ratchet-type load binders are recommended.** If using lever-type load binders, wire or strap them shut, or wrap chains around them to prevent opening.

## 9. Emergency Procedures

### 9.1. Emergency Lowering of the 2647EX Lift



**IF THE UNIT FAILS TO OPERATE  
WHEN THE PLATFORM IS RAISED OR EXTENDED,  
DO NOT ATTEMPT TO CLIMB DOWN THE SCISSOR  
ASSEMBLY.**

**SERIOUS INJURY MAY RESULT.**

1. Make sure you have read and understood the Safety and Machine Operation Sections of this manual prior to operating the 2647EX Lift.
2. At the Ground Control panel, pull out the **Emergency Stop Switch**.
3. Turn the Ground Key Switch to the ground position.
4. Ensure there are no obstructions preventing the platform from being lowered (including personnel).
5. Attempt to lower the platform using the ground controls.
6. If unsuccessful, locate the **Emergency Lower Valve** at the front of the hydraulic tray.
7. Pull out the **Red Mushroom Handle** to bypass the cylinder holding valve, allowing the platform to lower by gravity.



Figure 9.1: Emergency Lowering Control Location

## 9.2. Un-Powered Emergency Towing



**THIS PROCEDURE REQUIRES RELEASING THE VEHICLE BRAKES. THIS RESULTS IN NO MEANS TO STOP THE UNIT'S TRAVEL. BAILEY SPECIALTY CRANES & AERIALS RECOMMENDS USING THIS PROCEDURE ONLY IN CASE OF EMERGENCY, AND ONLY FOR A SHORT DISTANCE.**

**BE AWARE OF UNIT RUNAWAY ON SLOPING SURFACES. TOWING SPEED SHALL NOT EXCEED 1 M.P.H. (1.6 K.P.H).**

1. Park vehicle on level ground.

**NOTE:** The 2647EX lift is equipped with tie-down lugs (front and rear of the chassis) that can be used for towing the unit. The chains or ropes must be of sufficient capacity to move the unit. The 2647EX unit may also be forklifted instead of towed.



**ALWAYS CHOCK THE WHEELS BEFORE YOU RELEASE THE BRAKES TO PREVENT UNEXPECTED MACHINE MOVEMENT ON SLOPES.**

2. Block or chock wheels to prevent machine rolling.
3. Depress Power Disconnect Button and unplug batteries.  
*Do not use hydraulic power with brakes released.*
4. Locate brake pin brakes on the back of the machine inside of the wheels.

5. Using a wrench, rotate the pin mechanism until brakes are fully disengaged.
6. Open free wheel valve by turning fully counterclockwise (CCW).
7. After towing, reset brakes by reengaging the powered drive system:
  - Close both free wheel valves by turning fully clockwise (CW).
  - Reconnect power and pull out the red disconnect button inside the hydraulic compartment.
8. **Make sure pin brakes reengage before driving the machine.**

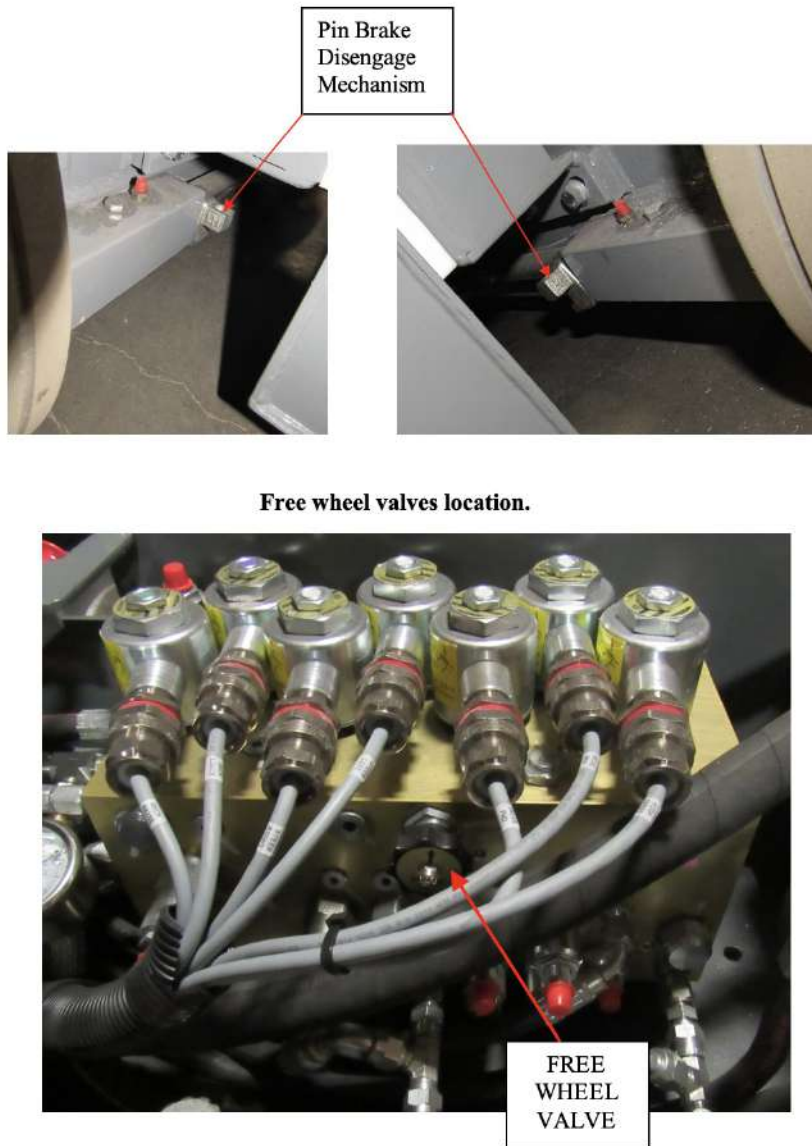


Figure 9.2: Un-Powered Emergency Towing

# 10. Maintenance Schedule

Regular maintenance ensures the safe and efficient operation of the 2647EX lift. Follow the schedule below for inspections and service intervals.

Maintenance Task	Shift Service	Weekly Service	Semi-Annual Service	Annual Service	Four-Year Service
<b>Hydraulic System</b>					
<b>Hydraulic Hoses</b>					
Visual Inspection for secure installation	X			X	X
Check For Signs of Leakage	X			X	X
Check for Chafing and Incorrect Routing through arm stack & door	X			X	X
<b>Hydraulic Fluid Reservoir</b>					
Reservoir Full Mark with deck lowered	X			X	X
Drain Clean and Refill Reservoir				X	X
<b>Hydraulic Filter &amp; Breather</b>					
Check for Proper Installation; Check for leakage	X			X	X
Inspect and Clean Debris			X	X	X
Replace Filter Element			X	X	X
<b>Hydraulic Cylinders (Lift, Steer Brake)</b>					
Check For Signs of Leakage	X			X	X
Check for Proper Installation		X		X	X
Clean any debris		X		X	X
<b>Drive Motors</b>					
Functioning Properly		X		X	X
Check For Signs of Leakage	X			X	X

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Maintenance Task	Shift	Weekly	Semi-Annual	Annual	Four-Year
<b>Scissor Stack</b>					
Check Pins & Retainers For Secure Installation		X		X	X
Lubricate Slide Bearing		X			
Check For Distortion or Excessive Wear			X	X	X
Check for Cracked or Broken Welds			X	X	X
Remove & Inspect Pivot Pins and Bushings					X
Check Operation of Scissors Maintenance Support		X	X	X	X
Inspect Aluminum Pothole Shaft Wear Plate			X	X	X
Inspect Lower Slider Pads for Clearance with Base				X	X
<b>Platform Arm</b>					
Check Handrails for Secure Installation		X		X	X
Test Bump Switch Operation	X			X	X
Inspect Roll-out Assembly For Ease of Motion		X		X	X
Visual Inspection for Damage, Distortion or Excessive Wear		X		X	X
Visual Inspection Lanyard Anchorage Points for Damage, Distortion or Excessive Wear	X			X	X
Decal Affixed and Legible			X	X	X
<b>Chassis</b>					
Visually Inspect Tires for Damage		X		X	X
Torque Wheel Nut/Bolts		X		X	X
Inspect Steering Linkage		X		X	X
Check Insulation of Conductive Wheel Asm to Steel Plate Less than 250,000 Ohms			X	X	X

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Maintenance Task	Shift	Weekly	Semi-Annual	Annual	Four-Year
Inspect Wheel Bearings			X	X	X
Inspect Aluminum Brake Shafts			X	X	X
Inspect Pluger Valve Wear Plate			X	X	X
<b>Function Controls</b>					
Operates Properly	X			X	X
Return to Center	X			X	X
Enable Trigger Functions Returns Properly	X			X	X
Platform & Ground Emergency Stops Operate properly	X			X	X
High Speed Enable Valve Verify Low speed When Elevated			X	X	X
Drive Brake Counterbalance Valve Functioning Properly			X	X	X
Manual Decent Valve Functions Properly			X	X	X
<b>Power System</b>					
Batteries Mounted Secure No Leaks		X		X	X
Check for Proper Battery Electrolyte Level		X		X	X
<b>Battery Cable &amp; Connectors</b>					
Inspect for Cracks, Tears or Other Damage		X		X	X
Verify that the Connections are Tight and Secured with Lock Nuts and Bonding Glue is Intact		X		X	X
Inspect for Loose or Eroded Connection Between Cable and Cable End		X		X	X

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Maintenance Task	Shift	Weekly	Semi-Annual	Annual	Four-Year
<b>Battery Door Cut-Out Switch</b>					
Verify that the Machine is Disabled when the Door is Opened		X		X	X
<b>Electrical System</b>					
<b>EX Conduit and Fittings</b>					
Visually Inspect Fitting and Conduit for Cracks or Wear		X		X	X
Verify that They at Least Hand Tight		X		X	X
<b>EX Electrical Enclosure</b>					
Verify that the Cover is Fully Closed and Tight	X			X	X
Inspect Glass Cover for Damage		X		X	X
Inspect for Condensation			X	X	X
Verify Current and Voltage limits on IS Relays			X		
Verify that the Intrinsically Safe/High Power Barrier is Correctly Installed and Undamaged			X	X	X
Verify Insulation Between Hot and Neutral legs to Chassis Ground			X	X	X
<b>EX Emergency Stop</b>					
Inspect That it is Fully Threaded and Tight				X	X
Check for Proper Operation		X		X	X
<b>Motor Enclosure</b>					
Visual inspection for missing or loose fasteners		X		X	X
Re-torque Cover Fasteners (25 Ft-Lbs)			X	X	X
Inspect Motor Enclosure for Condensation Build-up			X	X	X

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Maintenance Task	Shift	Weekly	Semi-Annual	Annual	Four-Year
<b>Main Electrical Contactors</b>					
Replace Contact Kit Including Spring and Bushing			X	X	X
<b>Electric Motor</b>					
Inspect Brush Commutator Running for Excessive Sparking > 1/16" Spark			X	X	X
Inspect Carbon brush Leads for Discoloration (Blue Cast)			X	X	X
Inspect Commutator for Uneven Color			X	X	X
Inspect Length of Carbon Brushes. Replace when Flush with Top of Holder			X	X	X
<b>General</b>					
Operators Manual In Storage Box		X		X	X
All Decal/Placards Secure and Legible	X			X	X
<b>Note:</b> Underlined Items are Critical for Maintaining Hazardous Environment Status					
<b>Note:</b> Annual Service and 4-Year Includes all Items in Shift, Weekly and Semi Annual Service					

*For detailed service procedures, refer to the Service Manual.*

# 11. Specifications

## Hydraulic Pressure Settings

### FUNCTION

### SETTING

Main Relief ..... 3000 PSI (193 bar)

## Battery Specifications

Four (4) 6 VDC Deep Cycle 258 Amp-Hour capacity

## Bolt Torque Specifications

Wheel lug bolts ..... 120 ft-lbs (122 Nm) dry  
Electrical Enclosure Bolts ..... 25 ft-lbs (40 Nm) Lubricated

SPECIFICATIONS	2647EX
Working Height	31 ft 8 in
Raised Platform Height	25 ft 8 in
Lowered Platform Height	46 in
Platform Size	42x83 in
Platform Capacity	1000 <b>lbs</b>
Overall Width	48 in
Overall Length	108.3 in
Stowed Height	90 in
Deck Extension	4 ft
Clearance (Stowed)	3.5 in
Clearance (Raised)	0.7 in
Wheelbase	69 in
Weight	7000 <b>lbs</b>
Batteries	4×6V
Charger	20 Amp
Gradeability	25%

Table 11.1: 2647EX Specifications