SUMACHAY

SESR15

Electric Pallet Jack

Operation & Maintenance Manual

Rated Capacity: 3,300 lb (1,500 kg)

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Classification	Original Instructions

Legal Notice & Disclaimer

This manual contains the original operating instructions for the Sumachay SESR15 Electric Pallet Jack. It is intended to provide sufficient information for the safe operation, routine maintenance, and basic troubleshooting of this equipment.

These instructions must be read in full and understood before operating the equipment. Keep this manual accessible at all times for operator reference. If this manual is lost or damaged, contact Sumachay Lifts for a replacement.

Product Development
Sumachay Lifts reserves the right to modify the design, specifications, and equipment of this product at any time without prior notice. No representation made in this manual shall be construed as a warranty of any specific feature or configuration.

Limitation of Liability
Sumachay Lifts shall not be liable for any damage, injury, or loss resulting from failure to follow the instructions contained in this manual, unauthorized modifications to the equipment, use of non-genuine replacement parts, or operation of the equipment beyond its rated capacity or outside of its specified operating environment.

Intellectual Property
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Compliance
This equipment has been designed and manufactured in accordance with applicable safety and performance standards. It is the responsibility of the owner and operator to ensure continued compliance with all local, state, and federal regulations governing the use of powered industrial equipment.

Sumachay Lifts
Factory Direct — Industrial Material Handling Equipment
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Table of Contents

1 Safety Warnings & Precautions

This section outlines critical safety requirements for the operation and maintenance of the SESR15 Electric Pallet Jack. All operators must read and understand these warnings before operating the equipment.

1.1 General Safety Requirements

- Only trained and authorized personnel may operate this equipment. Operators must hold a valid powered industrial equipment certification, or equivalent qualification as required by applicable local regulations.
- Read this manual in its entirety before operating the pallet jack. Ensure a thorough understanding of all controls, safety devices, and operating procedures.
- Never carry or lift passengers on the forks or any part of the equipment.
- Always wear appropriate personal protective equipment (PPE), including steel-toed safety footwear, when operating or working near this equipment.
- Maintain a clear line of sight in the direction of travel at all times. If the load obstructs forward visibility, operate in reverse and use a spotter for guidance.
- Keep all safety labels, warning plates, and capacity markings clean and legible. Replace any damaged or missing labels immediately.

1.2 Operating Environment

The SESR15 is designed for indoor use on firm, flat, dry surfaces. The following environmental conditions must be maintained during operation:

Parameter	Requirement
Ambient Temperature	+5°C to +40°C (+41°F to +104°F)
Maximum Altitude	1,200 m (3,937 ft) above sea level
Maximum Relative Humidity	50% at +40°C; higher humidity permitted at lower temperatures
Floor Surface	Hard, flat, smooth, and free of debris
Minimum Lighting	50 lux at floor level

WARNING: Do not operate this equipment in environments containing flammable gases, explosive dust, corrosive chemicals, or acid/alkaline atmospheres.

1.3 Prohibited Uses

- Operating on ramps, inclines, or uneven surfaces.
- Transporting or lifting persons on any part of the equipment.
- Exceeding the rated load capacity shown on the capacity label.
- Operating in rain, standing water, or wet conditions.
- Using the equipment in cold storage or freezer environments.
- Making any modifications to the equipment without prior written authorization from Sumachay Lifts.
- Using non-genuine replacement parts or unauthorized accessories.
- Operating with damaged or malfunctioning safety devices.

1.4 Equipment Modifications

Any modification that may affect the rated capacity, stability, or safe operation of this equipment must be approved in writing by Sumachay Lifts prior to implementation. This includes, but is not limited to, changes affecting braking, steering, visibility, load capacity, or the addition of any accessories or attachments.

Following any approved modification, the capacity label, identification markings, and this operation manual must be updated accordingly. Equipment damage resulting from unauthorized modifications will void the warranty.

1.5 Safe Parking Procedures

- Park only on level ground. Never park on a ramp or incline.
- Lower the forks completely to the ground.
- Release the accelerator and allow the pallet jack to come to a complete stop.
- Turn off the key switch.
- For extended storage, disconnect the battery power connector.

1.6 Hazardous Zones

The hazardous zone includes the entire area occupied by the equipment, its load, and the full range of motion of the forks and any accessories. Unauthorized personnel must remain outside this zone at all times. If bystanders do not vacate the hazardous zone when warned, the operator must immediately stop the equipment.

1.7 Elevator and Loading Dock Use

Before entering an elevator or loading dock, the operator must verify that the rated floor load capacity is sufficient for the combined weight of the equipment and its load. Position the load facing inward and centered to avoid contact with walls or edges. When sharing an elevator, personnel may enter only after the equipment is safely positioned, and must exit before the equipment is moved.

2 Product Overview

The Sumachay SESR15 is a walkie-type electric pallet jack designed for horizontal transport of palletized loads in warehouse, distribution, and light manufacturing environments. It features a ring-rod hydraulic lifting system, brushless DC drive motor, integrated lithium-ion battery, and a microprocessor-based motor controller for precise speed regulation.

2.1 Key Features

- Brushless DC drive motor with frequency-controlled speed regulation for smooth, quiet operation.
- Integrated lithium-ion battery with built-in battery management system (BMS).
- Electromagnetic parking brake with automatic engagement on power-off.
- Regenerative braking for extended battery life and controlled deceleration.
- Emergency reverse function for operator protection against entrapment.
- Ergonomic tiller handle with proportional speed control and intuitive lift/lower buttons.
- Compact design for maneuverability in tight spaces and narrow aisles.

2.2 Intended Use

This equipment is designed exclusively for the horizontal transport and short-distance repositioning of palletized goods on smooth, level indoor surfaces. The operator walks behind the unit and controls direction and speed via the tiller handle. Lifting and lowering of the forks is controlled by buttons on the handle assembly.

Any use outside the scope described in this manual is considered misuse and may result in injury, equipment damage, or property loss. The owner and operator assume full responsibility for ensuring the equipment is used within its intended application.

2.3 Major Component Identification

Refer to the component diagram on the following page for identification of major assemblies and operator controls.

3. Introduction of the product

3.1 Model overview

This specification is for 1.5T Walike type electric pallet jack (hereafter as pallet jack)

3.2 Model Schematics

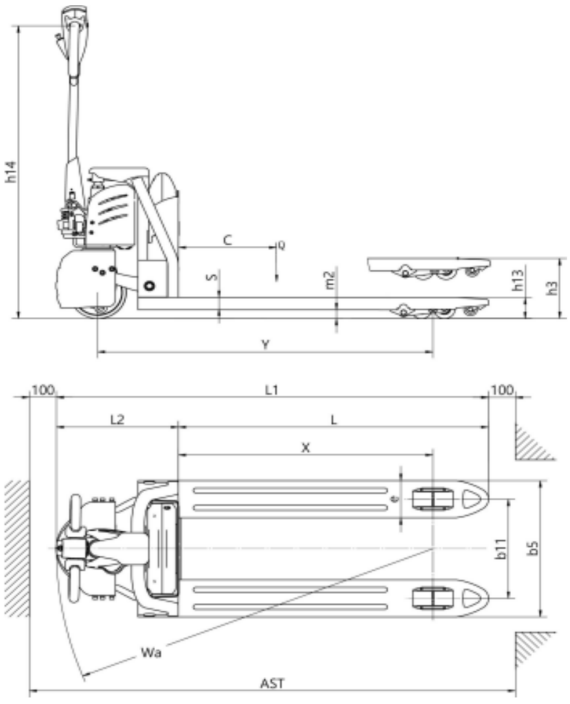


Figure 2-1: Major component identification

3 Technical Specifications

3.1 General Specifications

Parameter	Unit	Value
Model		SESR15
Type		Walkie Electric Pallet Jack
Rated Capacity	lb (kg)	3,300 (1,500)
Load Center	in (mm)	24 (600)
Battery Voltage	V	24
Battery Type		Lithium-Ion
Battery Capacity	Ah	20 / 40
Drive Motor		Brushless DC
Lift Motor		DC
Brake Type		Electromagnetic
Travel Brake		Regenerative

3.2 Charger Specifications

Parameter	Value
Input Voltage	AC 120V, 60 Hz
Output Voltage	DC 54.6V
Output Current	5A
Charger Type	Li-Ion Dedicated

IMPORTANT: Use only the lithium-ion charger supplied by Sumachay Lifts. Using a non-approved charger may cause battery damage, fire, or void the warranty.

4 Controls & Instruments

This section describes the operator controls and instrument panel on the SESR15 tiller handle assembly.

4.1 Tiller Handle Controls

- **Key Switch:** Located on the instrument panel. Turn to the ON position to power up the electrical system. Turn to OFF and remove the key when parking.
- **Accelerator (Butterfly Throttle):** Located on the tiller handle grip. Rotate gradually to increase travel speed. Releasing the accelerator initiates regenerative braking.
- **Lift Button:** Press and hold to raise the forks. Release to stop lifting.
- **Lower Knob:** Rotate or hold to lower the forks. Release to stop lowering.
- **Horn Button:** Located at the center of the tiller handle. Press to sound the audible warning horn.
- **Emergency Reverse Button:** Located at the end of the tiller handle. When the operator's body contacts this button, the pallet jack immediately decelerates and reverses direction briefly, then stops. This prevents the operator from being pinched between the equipment and an obstacle.

4.2 Battery Capacity Indicator

The battery capacity indicator on the instrument panel displays the remaining charge level using a segmented LED bar. As battery capacity decreases, the illuminated segments reduce in sequence. The indicator colors correspond to the following charge ranges:

Indicator Color	Charge Level
Green	70–100%
Orange	30–60%
Red (Blinking)	0–20%

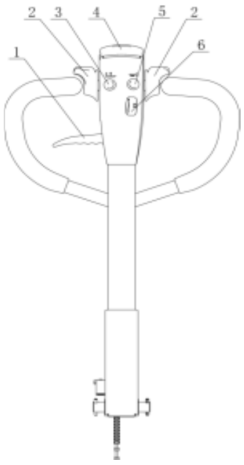
When the battery charge reaches a critically low level, the system will emit an audible alarm and disable the lift function. The pallet jack will continue to travel at reduced speed to allow the operator to return the unit to the charging area. Recharge the battery promptly.

4.3 Handle Assembly Diagram

4. Operating principle

The SESR15 Pallet Jack with battery as power producer and controlled by electrical and hydraulic, pallet jacks can do some actions like walking, turning, pallet fork lift etc.

Operating mechanism diagram:



1. Falling knob 2. Driving button 3. Lifting button 4. Emergency Reverse Button 5. Horn 6. Electricity meter

5. Operating principle

5.1 Running system:

The pallet jack is powered by a battery, which is realized by controlling the AC motor on the drivewheel. The speed of walking is realized by frequency conversion control motor speed, which is controlled by the accelerator.

5.2 Steering system:

The steering of the moving car is driven by the handle lever through the handle lever to drive the drive motor to realize the steering.

Figure 4-1: Tiller handle controls and operating positions

5 Operating Instructions

5.1 Pre-Operation Inspection

Before each shift, the operator must perform the following checks to verify that the equipment is in safe working condition:

- Check the battery charge level on the instrument panel.
- Inspect the forks for visible damage, cracks, or deformation.
- Verify that all safety labels and the capacity plate are present and legible.
- Test the lift and lower functions.
- Test the horn.
- Test the braking system by slowly driving forward and releasing the accelerator.
- Test the emergency reverse function.
- Inspect the drive wheel and load wheels for excessive wear or damage.
- Inspect the hydraulic system for leaks (cylinder, hoses, valve block).

If any deficiency is found during the pre-operation inspection, do not operate the equipment. Report the issue to the supervisor and tag the unit out of service until repaired.

5.2 Starting the Equipment

1. Connect the battery power connector (if disconnected).
2. Insert the key and turn the key switch to the ON position.
3. Verify that the battery indicator displays adequate charge.
4. Move the tiller handle into the operating range (position B). The handle must be within the driving zone for the pallet jack to respond to accelerator input.

5.3 Driving

With the tiller handle in the operating range (position B), gradually rotate the accelerator to begin moving. The travel direction is determined by the tiller handle orientation: pushing the handle moves the pallet jack forward (forks leading), and pulling the handle moves it in reverse.

CAUTION: Always accelerate gradually. Rapid acceleration is prohibited. Adapt travel speed to the surrounding conditions, especially when navigating corners, narrow aisles, doorways, or areas with pedestrian traffic.

5.4 Braking

The pallet jack provides multiple braking methods:

- **Regenerative Braking:** Releasing the accelerator engages regenerative braking, which decelerates the pallet jack smoothly and feeds energy back to the battery.
- **Directional Braking:** Moving the accelerator from one travel direction directly to the opposite engages regenerative braking until the unit stops, then begins moving in the new direction.
- **Handle Position Braking:** Moving the tiller handle to the upper or lower braking zone (positions A or C) engages the electromagnetic brake. Releasing the handle causes it to return to the upper braking zone automatically.

- **Emergency Reverse:** If the operator's body contacts the emergency reverse button at the end of the tiller handle, the pallet jack immediately decelerates and reverses briefly to release the operator from any pinch point.

5.5 Lifting and Lowering

To raise the forks, press and hold the lift button on the tiller handle. The hydraulic pump will activate and the forks will rise. Release the button to stop the lift at the desired height.

To lower the forks, hold or rotate the lower knob on the tiller handle. The forks will descend in a controlled manner. Release the knob to stop lowering.

NOTE: The lift motor is not rated for continuous operation. Avoid prolonged, uninterrupted lifting cycles. Allow a brief interval between successive lifts to prevent motor overheating.

5.6 Load Handling Procedures

5.6.1 Picking Up a Load

1. Approach the pallet squarely, with the forks aligned to the pallet openings.
2. Slowly drive the forks fully into the pallet until the load contacts the fork heel.
3. Bring the pallet jack to a complete stop.
4. Press the lift button to raise the load to adequate transport height (forks just clear of the floor).
5. Check that the load is stable and centered before moving.
6. Slowly reverse away from the stack, ensuring clearance on all sides.

5.6.2 Placing a Load

1. Approach the destination area at reduced speed.
2. Align the pallet jack squarely with the placement location.
3. Slowly drive forward into position.
4. Bring the pallet jack to a complete stop.
5. Lower the forks until the load is fully supported by the floor or rack.
6. Verify that the path behind is clear, then slowly reverse to withdraw the forks.

CAUTION: Never exceed the rated load capacity of 3,300 lb (1,500 kg). Always center the load at the rated load center of 24 in (600 mm). Offset or unbalanced loads reduce the effective capacity and may cause instability.

5.7 Electrical Schematic

The following diagram shows the electrical system layout for the SESR15.

buttons on the operating handle. The lifting action is controlled by a single action oil circuit on the valve block. This model of the hydraulic system pressure can only be adjusted on the valve block, has been debugging good, before they go out after they leaving our factory, If not the Sumachay Lifts after-sales personnel or professional maintenance personnel are strictly forbidden to adjust themselves, so as to avoid safety accident.

6. Electrical schematic diagram

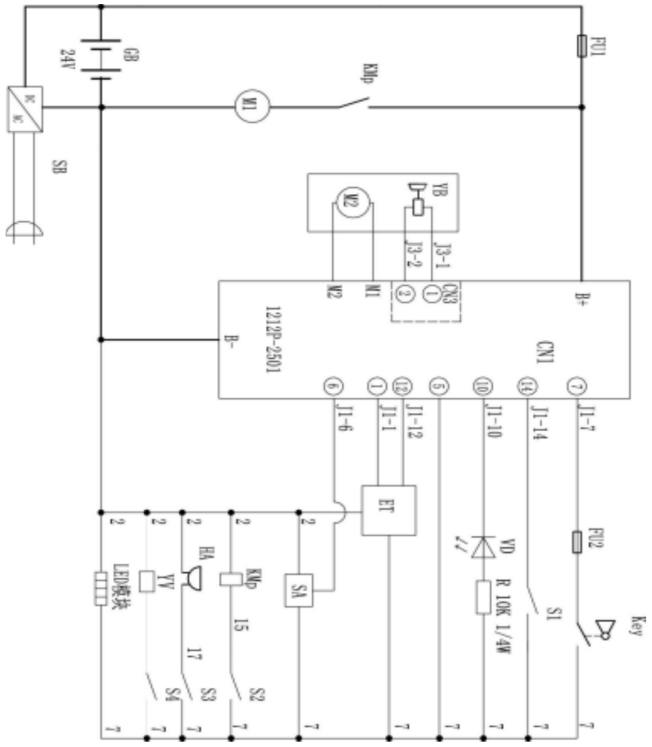


Figure 5-1: Electrical system schematic

5.8 Hydraulic Schematic

The following diagram shows the hydraulic circuit layout for the SESR15.

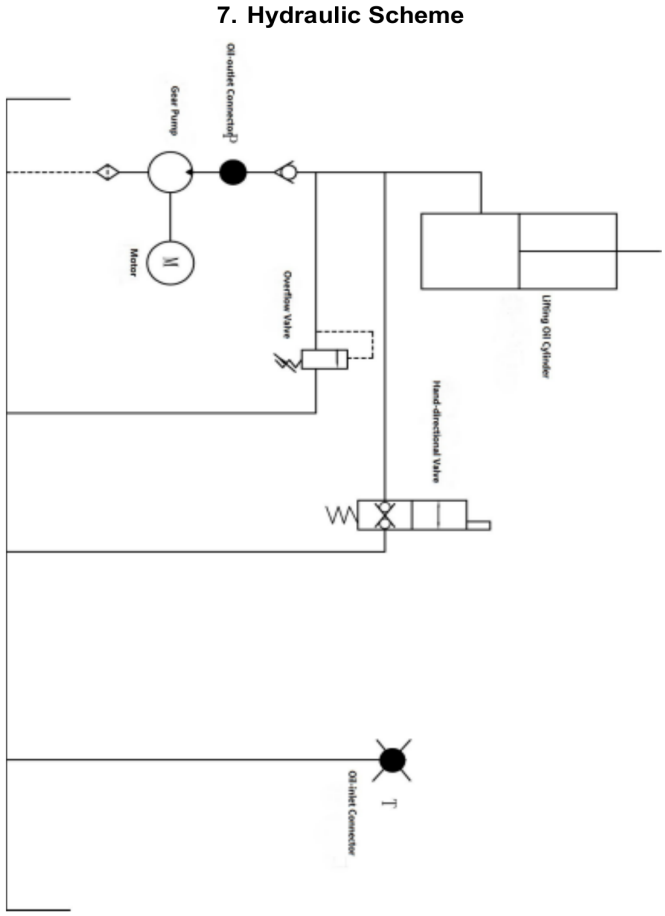


Figure 5-2: Hydraulic system schematic

6 Maintenance Schedule

Regular maintenance is essential for the safe and reliable operation of the SESR15. Failure to perform maintenance at the prescribed intervals may result in equipment malfunction and poses a potential risk to personnel and property.

6.1 Maintenance Intervals

The following maintenance intervals apply to single-shift operation under normal conditions. For multi-shift operations, dusty environments, or extreme temperature conditions, shorten the intervals proportionally.

Code	Interval	Description
W	Every 50 hours	At least once per week
A	Every 250 hours	At least once every 3 months
B	Every 500 hours	At least once every 6 months
C	Every 2,000 hours	At least once every 12 months

6.2 Maintenance Checklist

System	Ref	Maintenance Task	W	A	B	C
Brake	1.1	Inspect electromagnetic brake air gap			•	
Electrical	2.1	Test all operator switches and controls	•			
	2.2	Test alarm system and safety devices		•		
	2.3	Inspect wiring for damage; verify terminal connections			•	
	2.4	Test microswitch settings and function	•			
	2.5	Inspect motor controller			•	
	2.6	Check cable routing and motor mounting hardware			•	
Power Supply	3.1	Check battery condition and performance		•		
	3.2	Inspect battery charging connector			•	
	3.3	Verify battery cable connections are secure			•	
Drive System	4.1	Listen for abnormal gearbox noise			•	
	4.2	Inspect drive mechanism; lubricate as needed		•		
	4.3	Inspect drive wheel and load rollers for wear			•	
	4.4	Check wheel bearings and mounting hardware			•	
Frame	5.1	Inspect frame for cracks or damage			•	
	5.2	Verify all labels and markings are present			•	
	5.3	Check mast mounting hardware			•	
Hydraulic	6.1	Test hydraulic system function		•		
	6.2	Inspect hoses, fittings, and connections for leaks		•		
	6.3	Inspect cylinder and piston for wear and sealing			•	
	6.4	Check and adjust load chain tension			•	
	6.5	Inspect load wheels			•	
	6.6	Inspect forks for wear, cracks, or deformation			•	
	6.7	Check hydraulic oil level			•	
	6.8	Replace hydraulic oil				•

6.3 Break-In Period

During the initial 50–100 operating hours (or within the first two months of use), the following additional maintenance tasks must be performed:

- Inspect and tighten all wheel mounting hardware.
- Inspect all hydraulic components for leaks; tighten fittings as needed.
- Replace the hydraulic filter element.

6.4 Hydraulic Oil

When checking the hydraulic oil level, the forks and mast must be fully lowered. The oil level should be visible in the sight glass or at the minimum fill line on the reservoir. Replace hydraulic oil at least once every 12 months (2,000 operating hours). Replace hydraulic hoses every 6 years, or whenever hydraulic assemblies are replaced.

6.5 Repair Preparation

Before performing any maintenance or repair work:

- Park the pallet jack on a level surface.
- Lower the forks to the lowest position.
- Turn off the key switch.
- Press the emergency stop button (if equipped).
- Disconnect the battery power connector.

After completing repairs, verify the brake, emergency stop, horn, and all operator controls before returning the equipment to service.

NOTE: All replacement parts must be genuine Sumachay Lifts parts. Used parts, oils, and fluids must be disposed of in accordance with applicable local environmental regulations.

7 Troubleshooting

The following table lists common issues, their probable causes, and recommended corrective actions. If the issue persists after performing the recommended actions, contact Sumachay Lifts Authorized Service for assistance.

Symptom	Probable Cause	Corrective Action
Pallet jack does not move	Battery connector is disconnected	Check and reconnect the battery connector
	Key switch is in the OFF position	Turn the key switch to the ON position
	Emergency stop switch is activated	Release the emergency stop switch
	Battery is depleted	Recharge the battery
	Charger is connected (charging in progress)	Disconnect the charger before operating
	Fuse is blown	Inspect and replace the fuse
Forks do not lift	Equipment is not powered on	Follow the steps above for 'does not move'
	Low hydraulic oil level	Check and refill hydraulic oil
	Fuse is blown	Inspect and replace the fuse
	Load exceeds rated capacity	Reduce load to within rated capacity
	Lift switch is faulty or has poor contact	Inspect and replace the lift switch
Forks do not lower	Contaminated oil blocking the control valve	Clean the control valve; replace oil if needed
	Solenoid valve is stuck or damaged	Inspect or replace the solenoid valve
Forks do not stop lifting	Lift limit microswitch is faulty	Disconnect power; replace the microswitch
Travels in one direction only	Direction switch or cable has poor contact	Inspect the direction switch and reconnect cables
Very slow travel speed	Wiring connection is loose	Check battery indicator and inspect all wiring
Sudden or jerky startup	Motor controller is faulty	Replace the motor controller
	Forward/reverse handle does not reset properly	Repair or replace the handle control assembly

If the corrective actions listed above do not resolve the issue, do not attempt further repairs. Contact Sumachay Lifts Authorized Service for diagnosis and repair by qualified technicians.

8 Lithium Battery Guide

The SESR15 is equipped with a lithium-ion battery pack. This section provides essential guidelines for safe charging, handling, storage, and disposal of the battery.

8.1 Battery Specifications

Parameter	Value
Battery Chemistry	Lithium-Ion
Nominal Voltage	24V
Available Capacities	20 Ah / 40 Ah
Operating Temperature Range	+5°C to +45°C (+41°F to +113°F)
Charging Temperature Range	+5°C to +45°C (+41°F to +113°F)
Environmental Compliance	Mercury-free, Cadmium-free

8.2 Charging Instructions

- Use only the lithium-ion charger supplied by Sumachay Lifts. Using a non-approved charger may cause battery damage, fire, or personal injury, and will void the warranty.
- Connect the charger to the battery charging port. Do not reverse the polarity.
- If the battery becomes noticeably hot during charging, stop charging immediately. Allow the battery to cool completely before resuming.
- When disconnecting the charger, grasp the connector handle firmly. Do not pull on the cable.
- Do not charge the battery in temperatures below +5°C (41°F) or above +45°C (113°F).

8.3 Battery Safety Precautions

WARNING: Failure to follow these precautions may result in fire, explosion, or serious personal injury.

- Do not short-circuit the battery terminals. Short-circuiting may cause permanent damage.
- Do not incinerate or dispose of the battery in fire. This may cause the release of toxic gases or explosion.
- Do not weld directly to the battery.
- Do not expose the battery to extreme temperatures, deep discharge cycles, or repeated overcharging.
- Do not handle a hot battery. Allow it to cool before touching.
- When disconnecting the battery, always grasp the connector handle — never pull the cable.
- After extended use, if the battery is warm, allow it to cool in a well-ventilated area before recharging.
- Do not immerse the battery in water or expose it to liquids.
- Do not attempt to disassemble, crush, or puncture the battery. Battery electrolyte is hazardous to skin and eyes, and may damage clothing.
- Keep the battery out of reach of children.
- Never smoke or use open flames when handling or charging the battery.
- Maintain at least 6.5 ft (2 m) of clearance from combustible materials when charging.
- Ensure the charging area is well-ventilated and equipped with fire suppression equipment.

8.4 Battery Storage

If the equipment will be stored for an extended period, charge the battery to approximately 50–70% capacity before storage. During long-term storage, perform a charge-discharge cycle at least once every three months to maintain battery health. Store the battery in a cool, dry environment within the specified temperature range.

8.5 Battery Removal and Installation

1. Park the pallet jack on a level surface and turn off the key switch.
2. Disconnect the battery power connector by grasping the handle firmly.
3. Remove the battery from the battery compartment by lifting vertically.
4. To install, lower the replacement battery into the compartment and reconnect the power connector.

8.6 Battery Disposal

Spent lithium-ion batteries must be disposed of in accordance with all applicable local, state, and federal regulations. Do not dispose of batteries in general waste. Contact a licensed battery recycling facility or your local waste management authority for proper disposal procedures.

9 Warranty & Support

For warranty service, replacement parts, technical support, or any questions regarding this equipment, contact Sumachay Lifts directly.

Company	Sumachay Lifts
Website	www.sumachay.com
Email	sales@sumachay.com
Service	Sumachay Authorized Service

About Sumachay Lifts

Sumachay Lifts is a factory-direct provider of industrial material handling equipment, including electric pallet jacks, electric stackers, and related warehouse solutions. By maintaining direct relationships between the factory and the end user, Sumachay Lifts provides competitive pricing, simplified procurement, and responsive technical support.

OEM Parts Availability

Genuine Sumachay replacement parts are available for all models. Using genuine parts ensures continued compliance with the original equipment specifications and maintains warranty coverage. Contact Sumachay Lifts or your authorized service provider to order parts.

Compliance Statement

All Sumachay Lifts equipment is designed and manufactured in accordance with applicable safety and performance standards for powered industrial equipment. Specific compliance certifications are indicated on the equipment data plate.

Terminology

Term	Definition
Pallet Jack	A powered, walk-behind material handling device used for horizontal transport of palletized loads.
Tiller Handle	The operator control arm used for steering, acceleration, and braking.
Load Center	The horizontal distance from the fork face to the center of gravity of the load, used to determine rated capacity.
Regenerative Braking	A braking method in which the drive motor acts as a generator, converting kinetic energy back to electrical energy st
Electromagnetic Brake	A spring-applied, electrically released brake that engages automatically when power is removed.
BMS	Battery Management System — the electronic circuit that monitors and protects the lithium-ion battery.

End of Document — SESR15 Operation & Maintenance Manual — Rev 1.0 — March 2026