PRO SPOT
QUALITY WELDING SYSTEMS

Instruction Manual

BATTERY-OPERATED LIFTING TABLE
MNL-PRO-BPLT Ver. 1.5

About Pro Spot

Pro Spot International specializes in quality welding and repair products for the collision repair industry. Pro Spot owns numerous patents for special welding equipment and applications, and works with the largest auto manufacturers in the world. Pro Spot is a proud 'MADE IN THE USA' manufacturer in Carlsbad, CA. The turnkey facility includes Design, Engineering, Machine and Sheet Metal Shops, Powder Coating, Assembly, Training and Customer Support. The Pro Spot equipment line includes resistance spot welders, aluminum & steel dent repair systems, pulse MIG welders, rivet guns and tools, dust-free sanding systems, fume extraction and more.

Pro Spot Training and Services

Pro Spot provides on-going training to all of our distributors and their technicians, therefore, all owners of Pro Spot products receive complete training first hand. Pro Spot has two ASE certified training programs that are I-CAR Alliance approved. Pro Spot has a fully equipped training facility at their Headquarters in Carlsbad, CA, as well as in Nashville, TN, and Denver, CO, for groups to come in and train on all products. To stay up-to-date, Pro Spot offers their unique support.prospot.com which includes technical documentation and more to access online.

ASE Continuing Automotive Service Education
CERTIFIED TRAINING PROVIDER

I-CAR INDUSTRY TRAINING ALLIANCE

Pro Spot is constantly striving to improve. Whether that means designing innovative equipment, implementing cutting edge technical support or further improving their already extensive training programs, Pro Spot is always looking for ways to better our customer's experiences.

PRO SPOT
QUALITY WELDING SYSTEMS

Pro Spot International, Inc.
5932 Sea Otter Place
Carlsbad, CA 92010

Toll Free: (877) PRO SPOT
Phone: (760) 407-1414
Fax: (760) 407-1421

E-mail: info@prospot.com
Web: www.prospot.com

TABLE OF CONTENTS

1.1 ABOUT PRO-BPLT

Our new battery-operated lifting table is designed for handling heavy components in automotive service and repair environments, including electric vehicle (EV) battery packs and drivetrains. Its robust design and powerful lifting capabilities enable technicians to securely raise and lower parts with ease and precision. The lift's platform is adjustable, making it adaptable for a range of applications beyond battery and drivetrain removal, such as removing and installing engines, transmissions, and other equipment.

One of its unique features is the mobility provided by a battery-powered system, allowing for smooth and flexible movement across the shop floor without the need for cumbersome cords or additional power sources. This wireless operation minimizes workspace congestion, enhancing safety and efficiency, especially in high-traffic areas.

These tables feature adjustable heights ranging from a standard 29.75 inches (75.5 cm) to a full extension of 77 inches (196.5 cm) and are engineered to support up to 3,307 lbs (1500 kg), making them well-suited for managing even the heaviest EV components. With ergonomic controls, the lifting process is streamlined, allowing technicians to work efficiently with minimal physical strain. Fine height adjustments are easy to make, providing precise alignment and positioning for smooth component removal and installation.
This versatile lift is invaluable in modern automotive workshops, where EV servicing demands safe, reliable solutions to handle high-voltage battery packs and delicate drivetrain components. The battery-operated lift table is also durable and low maintenance, designed to withstand the demands of daily use in busy service environments.

1.2 SAFETY

WARNING! For your safety, read this manual carefully.

Be very careful, as incorrect handling can cause serious damage to materials and people. The necessary precautions for use and safety are listed below:

- The machine installation and service personnel must possess adequate electrical knowledge. Operators must be specially trained and certified. Unauthorized modifications to the machine components or usage beyond the specified scope, without manufacturer approval or adherence to the provided instructions, can directly or indirectly damage the machine.
- Avoid exposing the lift to extreme temperatures and humidity. Do not place it near heat sources, faucets, air humidifiers, or furnaces. Protect the lift from excessive dust, ammonia, alcohol, solvents, spray adhesives, and rain.
- During machine operation, non-operators must remain at a safe distance. Perform daily inspections of the lift and refrain from using it if it is faulty or has damaged parts. Only use original equipment parts for repairs and replacements.
- Do not exceed the lift's rated load capacity, which is specified on the nameplate. Ensure customers and bystanders stay clear of the lifting area during operation. Keep the lift area free of obstructions, grease, oil, waste, and other contaminants.
- Before use, raise the lift and ensure the support is securely in contact with the battery. Adjust the lift to the proper working height. Note that removing or installing certain vehicle components can significantly shift the vehicle's center of gravity, potentially causing instability. Use safety brackets to maintain balance.
- Always use appropriate tools and protective gear, such as overalls and safety shoes. Pay close attention to all safety labels on the machine. Avoid contact with hair, loose clothing, hands, or other body parts while the lift is in operation. Never remove or disable the machine's safety devices.
- The recommended hydraulic oil for this machine is AW-32 or AW-46. Use only within the specified safety range.
- Allow all assemblies to cool completely before storage. Ensure cords and fittings are fully relaxed during storage. Do not place the lift outdoors or in areas exposed to rain. If unavoidable, special protective measures should be arranged with the manufacturer.

The operating instructions must remain clearly legible and complete at the machine's operating location.

Verify the entire device list before installation. If you encounter any issues, contact your distributor immediately.

Hands and feet must not be placed under the platform.

The device should only be moved with a load when all the way down.

Staying under the platform is allowed only when the maintenance support rod is properly inserted.

Climbing or standing on the platform is prohibited.

2.0 USAGE

This model is designed for the removal and installation of electric vehicle battery packs as well as traditional automobile engines and gearboxes, facilitating vehicle maintenance.

2.1 LIFT TABLE FEATURES

- The lifting table offers six degrees of motion, ensuring comprehensive position adjustments for user needs.
- It features a battery driven hydraulic drive and pedal drive for precise positioning control.
- Powered by two lead-acid batteries, it requires no external power source, enhancing convenience.
- The hydraulic drive ensures smooth lifting operations.
- The lifting button is integrated into the forklift truck handle for easy operation, with real-time power monitoring displayed on the screen.
- A pallet jack style lift is included for easy mobility.
- Large adjustment dials allow platform angle adjustments in all directions.

2.2 SPECIFICATIONS

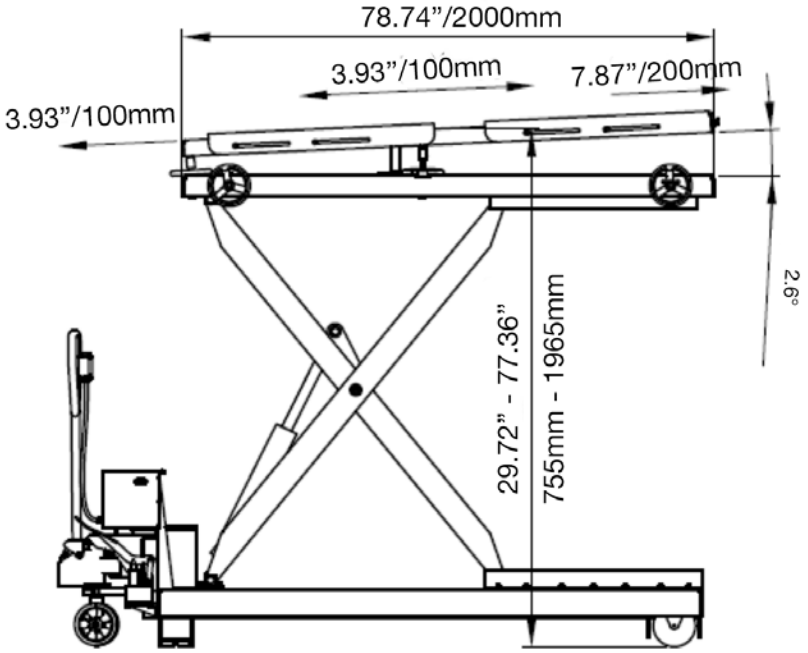
Rated load	3307lbs / 1500kg
Maximum lifting height	77.3622” / 196.5cm
Lowest height	29.75” / 75.55cm
Platform length	78.75”~ 86.6” / 2m~2,2mm
Platform width	32.3” / 82cm
Rise time with load	≤60s
Drop time with load	>20s

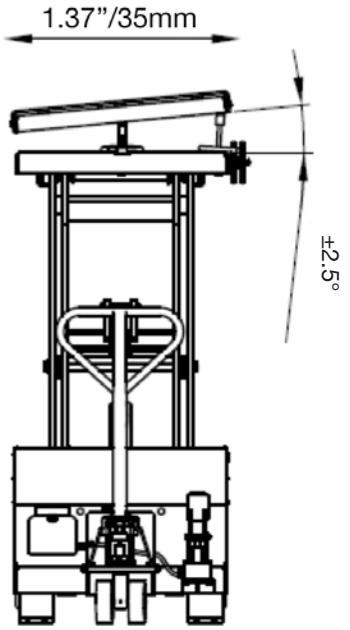
Motor wattage	0.75kw
Motor voltage	DC24V
Tilt angle of the platform in the X direction	±2.6°
Tilt angle of the platform in the Y direction	±2.5°
Travel distance of the platform along the X axis	7.9” / 200mm
Travel distance of the platform along the Y axis	±1.38” / ±35mm

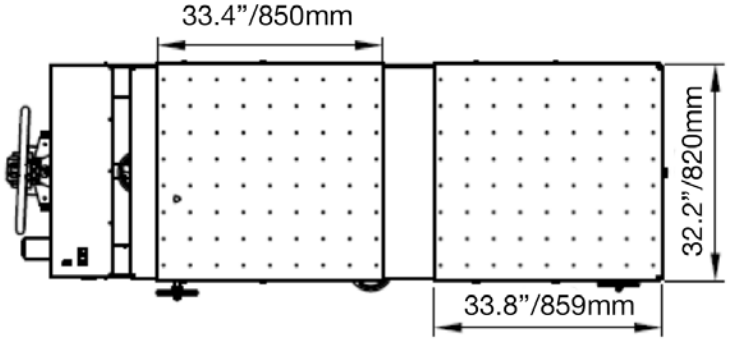
2.3 OPERATING ENVIRONMENTAL REQUIREMENTS

- Operating temperature: 23°F - 104°F (5°C - +40°C)
- Maximum humidity: 80% with temperature 86°F (+30°C)
- Transport/storage temperature: 23°F - 104°F (5°C - +40°C)
- Designed for indoor use.

3.0 PRODUCT DIAGRAM



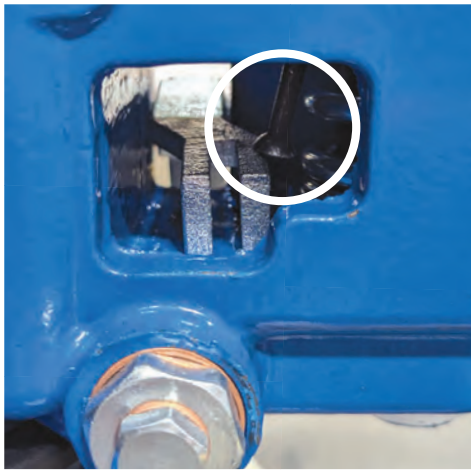




4.1 PRO-EVBL HANDLE INSTALLATION

Looking down the handle mount, notice the small hole within the center opening.

Be sure that the hanging chain on the handle attachment feeds through the smaller hole in the center of the mount port.

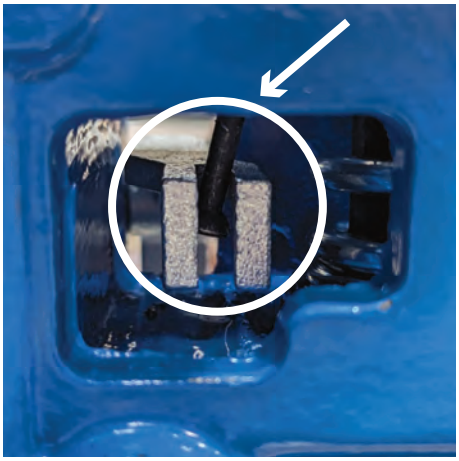


From the side, locate the hanging chain. The chain will now feed through the silver alignment mount.

Install one bolt to lightly secure the handle.

Push down on the right side of the silver alignment mount to tilt the other side upward.

While pushing down on the right side of the silver alignment mount, use your left hand to feed the chain through the channel.
Do this by pulling the chain past the lip and sliding it inward.



Ensure the chain is properly fed through the channel.

Attach the wire harness to the port on the back of the Battery Lift Table.

Install the final two bolts to secure the handle to the Battery Lift Table.

5.1 OPERATING PRECAUTIONS

- Carefully read all warning signs before operating the machine.
- Hydraulic valves are adjusted at the factory and must not be modified by the user. Unauthorized adjustments can result in the user assuming full responsibility for any resulting consequences.
- The machine is intended for use only for its specified purpose. Misuse of the machine may lead to serious injury or property damage

5.2 PREPARATION BEFORE OPERATION

- Apply general-purpose lithium-based grease evenly to the contact surface of the upper slide block and all sliding surfaces.
- Only authorized personnel should be present in the work area.
- Exercise caution during machine startup.
- There remains a potential risk of danger in certain situations, so caution is advised.
- Fill the hydraulic station tank with 3L of hydraulic system oil, either AW-32 or AW-46.

5.3 DURING OPERATION

- Verify that the motor power supply is installed correctly and that the battery power supply is active (real time power status can be viewed on the display).
- Ensure all connection bolts are securely tightened.

ATTENTION! Do not operate the lift if it is broken, or has damaged or missing parts. It must not be used until it is inspected and repaired by authorized personnel.

5.4 LIFTING OPERATION

- Clear debris from the area around the lift.
- Position the lift under the service vehicle.
- Turn on the battery power switch.
- Press the lift button to raise the platform to the appropriate height, then release the button to stop upward movement (figure 1).
- Use the pedal to fine-tune the height of the working platform, ensuring accurate contact between the table and the battery pack (figure 2).
- Adjust the contact position between the working platform and the battery by turning the handwheels on the sides of the working platform.
- Handle Facing Jack Mechanism: Adjusts Tabletop pitch forward/back. Turn clockwise to pitch backward, and counterclockwise to pitch forward. (figure 3).
- Two Side Handwheels: Adjusts Lower Table. Turn the handwheel to rotate/swivel the Lower Table left or right. (figure 3).
- Middle Handwheel: Adjusts the Tabletop roll. Turn the middle handwheel to tilt/roll the table left/right.
- Secure the vehicle battery or other items by using the clamp on the working platform.

Lift and Lower Buttons

Figure 1

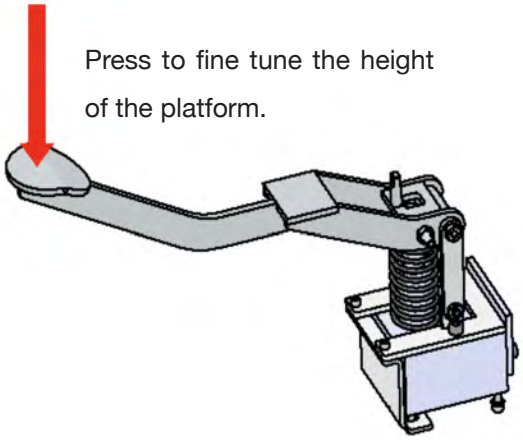


Figure 2

The Lower Table can swivel left/right. The Tabletop can tilt (Roll) left/right AND (Pitch) forward/back. The adjustable Tabletop Plates can be extended forward/back.

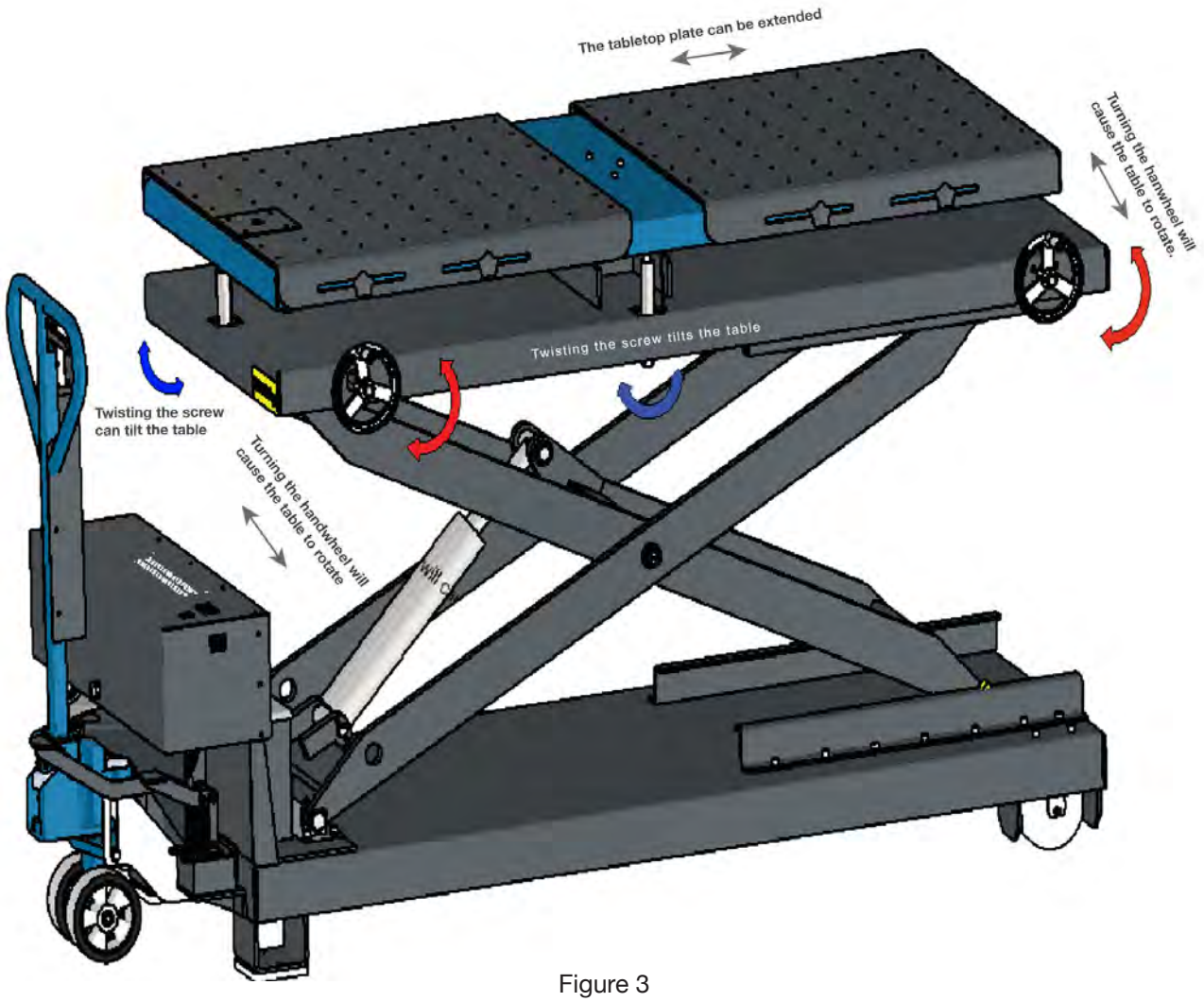


Figure 3

Before use, inspect all pipe joints and ports for oil leaks. If any leaks are found, do not use the lift. Remove the leaking joints, reseal them, reinstall the connector and check again for oil leaks.

When fully charged, the lift can be used up to 30 times.

5.5 LOWERING OPERATION

- Clear the area beneath and around the lift.
- Press the down button to lower the working platform (pic. 1).

ATTENTION! When the lift is not in use, ensure the power supply is turned off.

5.6 JACK HANDLE OPERATION

- Lifting: Move the Jack handle to position 2 (figure 4) and press the toggle rod repeatedly, allowing it to move back and forth between position 3 and position 4. Continue until the lift reaches the desired height, then stop the operation.
- Returning to initial position: Move the lift handle to position 1 (figure 4), and the lift will automatically return to the initial height.

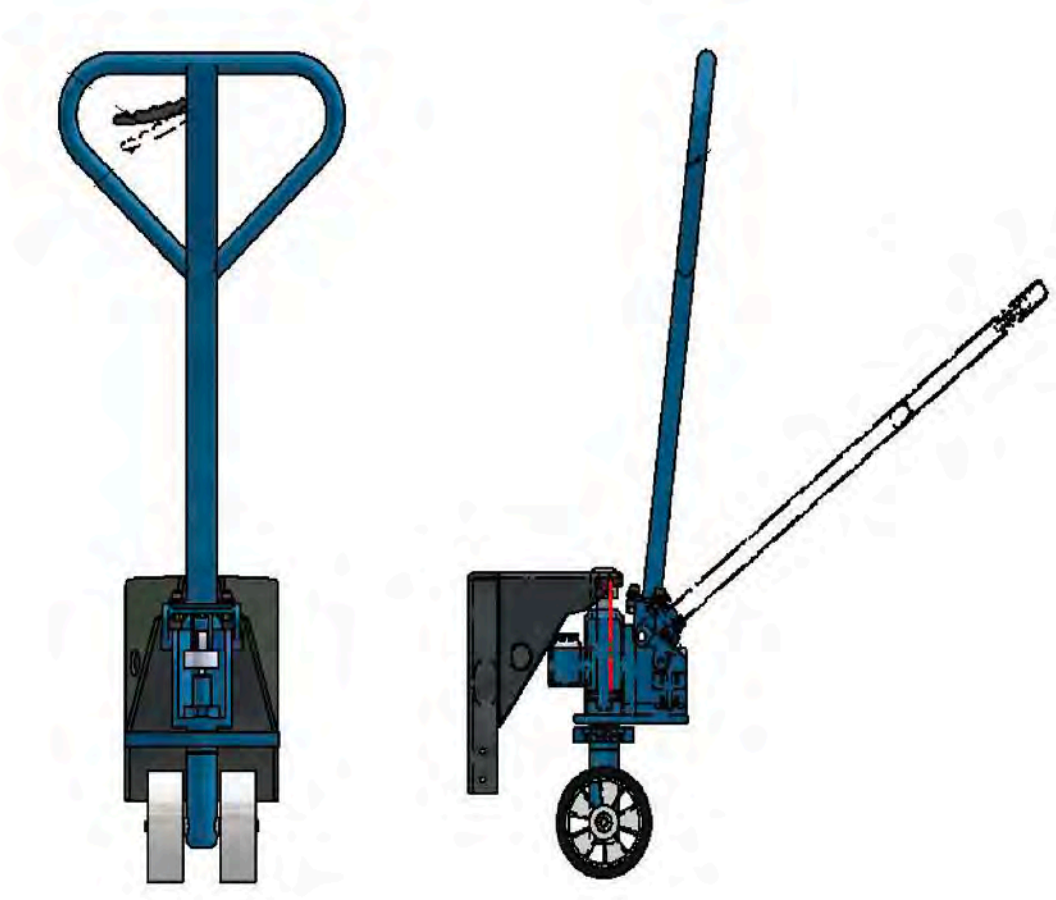


Figure 4

5.7 LOAD DISTRIBUTION

Full load: the load is distributed over the whole plane.

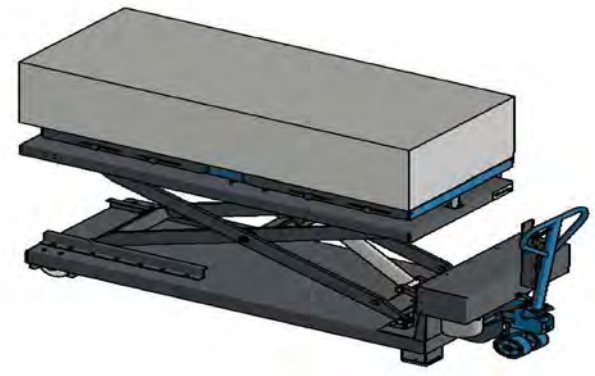


Figure 5

Half load: the load distributed on half plane.

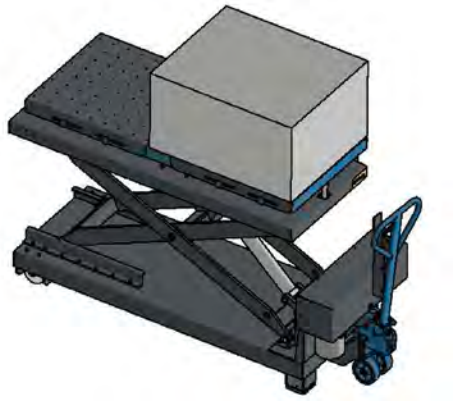


Figure 6

6.0 TROUBLESHOOTING AND MAINTENANCE

6.1 TROUBLESHOOTING

ISSUE	POSSIBLE CAUSE	TROUBLESHOOTING METHOD
Motor not running	• Circuit breakers or thermal relays tripped. • Incorrect voltage supplied to the motor. • Electrical connection is incorrect. • Motor burnout.	• Close the circuit breaker or press the blue reset button on the thermal relay to reset it. • Verify the power supply, power cable connections, power cable specifications and lengths to ensure the correct voltage is supplied to the motor. • Connect cables correctly according to the electrical schematic diagram. • Replace motor.
The motor runs but does not lift the lift	• Lowering valve is stuck in open position. • Hydraulic pump contains air. • Suction tubing is disconnected from the hydraulic pump. • Low oil level.	• Repair or replace the lowering valve. • Ensure all suction pipe connections are secure. • Replace the suction tubing. • Refill the oil tank to proper level.
The lift came down slowly	• Foreign objects in descending valve or check valve. • External oil leak.	• Clean the descending valve or check valve and maintain clean hydraulic oil. • Identify and repair any external oil leaks.

ISSUE	POSSIBLE CAUSE	TROUBLESHOOTING METHOD
Motor operates and lift operates without a load, but cannot lift with load	• Low motor voltage. • Foreign objects in descending valve or check valve. • Improperly adjusted safety valve. • Overloaded lift.	• Verify the power supply, power cable connections, power cable specifications and lengths to ensure the correct voltage is supplied to the motor. • Clean the descending valve or check valve and maintain clean hydraulic oil. • Adjust the safety valve pressure. • Ensure the load does not exceed the lift's specified capacity.
Slow lifting speed or oil flow out of the refilling cap	• Air and oil are mixed. • Return pipe is loose or disconnected.	• Perform full stroke lifts several times to eliminate air, then let the lift rest in its lowest position overnight. • Ensure all suction pipe connections are properly secured. Reattach the return pipe if it is disconnected or loose.

6.2 MAINTENANCE

Keep the machine clean

- Wipe the machine regularly with a dry cloth to keep it clean. Always cut off the power supply before cleaning to ensure safety.
- Clean the working environment frequently and maintain cleanliness. A dusty environment can accelerate wear on parts and shorten the machine's service life.

Hydraulic fluids, lubricants and cleaners:

- May irritate or damage the skin, eyes, or respiratory tract.
- Follow safety instructions carefully.
- Wear safety equipment, such as gloves, goggles, and protective clothing.
- Use a protective respirator if needed.
- Avoid contact with skin. If in contact with skin, wash the affected area thoroughly.
- Avoid contact with eyes. If contact occurs, rinse immediately with water and seek medical attention.

Preparation before maintenance and inspection

- Restrict access to the work area for non-authorized personnel.
- Install signs to prohibit use of the machine and alert personnel.
- Remove any load from the machine.
- Lock the machine to prevent accidental activation.
- Prepare a receiving tank or truck to ensure hydraulic fluids, lubricants, or cleaners do not contaminate the floor or drain.

ATTENTION: Always secure the platform before performing maintenance on a raised machine to prevent accidental descent.

After maintenance and inspection

- Remove all used materials, tools, and other items from the work area.
- Verify that all safety devices are operational and unobstructed.
- Dispose of waste hydraulic fluids, lubricants, and cleaning agents in compliance with environmental regulations.

Maintenance inspection

- Ensure the slider is properly lubricated with high-quality heavy lubricating grease (lithium-based grease).
- Inspects all moving parts for wear, disturbance or damage.
- Visually examine all hydraulic lines for signs of wear:
  - ◊ Look for damage on the outer sheath, such as cracks, bends, cuts, shedding, wear, etc.
  - ◊ Check for hose deformation under both non-pressurized and pressurized conditions.
  - ◊ Verify there are no leaks between hoses and attachments.
  - ◊ Ensure the hoses are properly secured to their attachments.
  - ◊ Replace damaged hydraulic hose.

Hydraulic system maintenance

- *Cleaning and Oil Replacement:*

Clean the hydraulic tank and replace the oil after the first six months of use. Thereafter, clean the hydraulic system and replace the oil annually.

- *Seal replacement:*

If oil leakage is detected, inspect the machine carefully. If the leakage is due to worn sealing materials, replace the seals immediately, following the original specification.

6.3 BATTERY

Battery Specs:

- Voltage - 12V
- Amp-Hour - 36 minimum
- CCA - 300 minimum
- Group Size - 51R

6.4 STORAGE AND DISPOSAL

Storage

When the equipment needs to be stored for a long time, follow these steps:

- Unplug the power supply.
- Lubricate all required parts: such as moving contact surfaces of slides, etc.
- Empty all oil and liquid reservoirs.
- Cover the device with a plastic cover to prevent dust accumulation.

Disposal:

- Unplug the power supply.
- Dispose of the equipment in accordance with local laws and regulations**.**

7.0 WARRANTY

This warranty applies exclusively to end users and distributors who have purchased our products through authorized channels. Pro Spot International Inc. guarantees the mechanical and electrical components of its products against defects in materials or workmanship for a period of 12 months from the date of delivery. The warranty does not cover damage resulting from misuse, unauthorized modifications, use for unintended purposes, failure to operate according to the provided instructions, or other factors beyond normal use. Compensation for damage to vehicle instruments caused by equipment defects is limited to repair or replacement. Pro Spot International Inc. is not responsible for any indirect or incidental losses. The nature of any damage to the equipment will be determined by Pro Spot International Inc. using its established inspection procedures. No agent, employee, or representative of Pro Spot International Inc. is authorized to make any assurances, recommendations, or promises regarding the company's products.

PRO SPOT
QUALITY WELDING SYSTEMS

Pro Spot International, Inc.
5932 Sea Otter Place
Carlsbad, CA 92010

Toll Free: (877) PRO SPOT
Phone: (760) 407-1414
Fax: (760) 407-1421

E-mail: info@prospot.com
Web: www.prospot.com