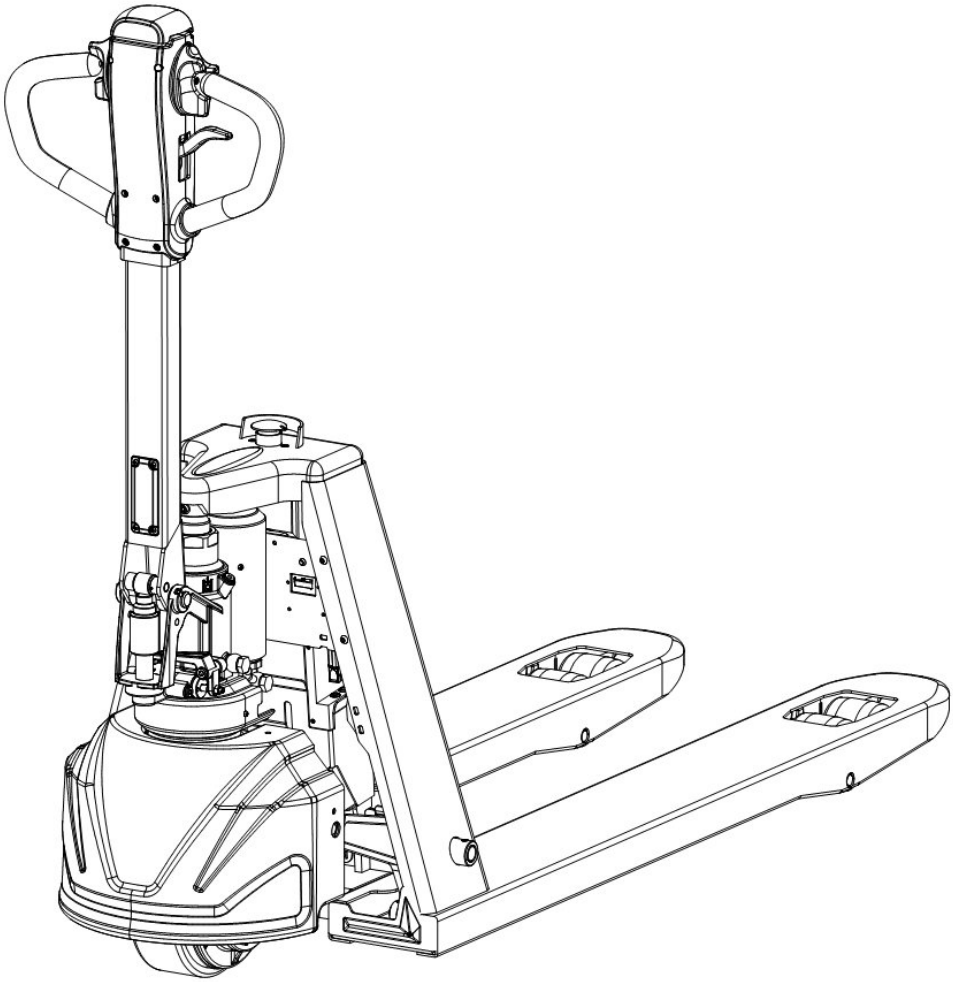
User's manual	Manual del usuario	Manuel de l'utilisateur
Customer Service US: 1-800-645-2986	Servicio de atención al Cliente US: 1-800-645-2986	Service à la clientèle Canada: 888-645-2986

Electric Pallet Jack, 3300 Lbs. Capacity

Models: B3180283



User Manual & Maintenance Guide

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Electric Pallet Jack

Electric Pallet Jack

WARNING + SAFETY NOTICE

- Do not operate this truck unless authorized, trained, and certified to do so and have read all warnings and instructions in this Operator's Manual and on this truck. Read, understand, and comply with the safety information on the truck's nameplate at all times.
- If any damage or safety issues are observed on the pallet truck, report them to the designated authority and do not use the truck until they are addressed by a qualified technician.
- This truck must not be modified without the manufacturer's written consent.
- Only operate this truck from designated operating position.
- Operate cautiously on ramps, slopes, and uneven floors. Travel slowly and do not angle -or turn to avoid turning when the truck is not on an even surface.
- Before operating, inspect the floor area it will be used on. Identify and avoid holes, drop-offs, bumps, and obstructions.
- Do not carry passengers on the pallet truck.
- Before and during all truck operations, ensure that adequate clearance is maintained between obstructions and energized electrical conductors/parts.
- Ensure loads are centered and avoid any obstructions in the truck's vicinity.
- Maintain a safe distance from obstacles in the truck's path. Ensure personnel in the vicinity are aware of the truck's movement. Travel at a safe speed for the conditions the truck is operating in.
- Yield right of way for pedestrians. Slow down and make others away of the pallet trucks presence in cross aisles and wherever vision is obstructed. Avoid operating in hazardous locations.
- Start, stop, travel, and steer smoothly. Slow down for turns and avoid turning on uneven or slippery surfaces that could cause the truck to slide or overturn.
- Always look in the direction of travel and keep a clear line of sight. When the load interferes with visibility, travel with the load trailing the user.
- Do not expose the truck or battery to water.
- is area to address important disclaimer, warranty information, or safety caution with appropriate clip art in the left. Background box width and height can be modified to fit text box.

CORRECT USE AND APPLICATION

The truck described in this operator manual is designed for lifting and transporting load units. It must be used, operated, and serviced according to the instructions provided in this manual. Any other type of use is beyond the scope of application and can result in damage to personnel, the truck or property. Avoid overloading the truck with loads which are too heavy or placed on one side. The data plate attached to the truck, or the load diagram, specifies the maximum load capacity and must be adhered to. All nameplates and safety signs on the truck should be cleaned regularly to maintain visibility.

USER RESPONSIBILITIES

For the purposes of this operator manual, the "user" is defined as any natural or legal person who either uses the truck themselves or on whose behalf it is used.
The user must ensure that the truck is used only for its intended purpose and that danger to the life and limb of the user and third parties is excluded.
Furthermore, accident prevention regulations, safety regulations and operating, servicing and repair guidelines must be followed. The proprietor must ensure that all truck users have read and understood this operator manual and that the truck user has obtained the necessary certifications to operate the truck. The owner must also read and understand the safety guidelines/ requirements as outlined in the applicable ANSI/ITSDF B56 series of standards.

Failure to comply with the operator manual shall invalidate the warranty. The same applies if improper work is carried out on the truck by the customer or third parties without the express written permission of Global Industrial.

MODIFICATIONS

The mounting or installation of additional equipment that affects or enhances the performance of the truck requires the written permission of Global Industrial. Local authority approval may also need to be obtained. However, local authority approval does not constitute approval from Global Industrial. If approval has been granted for a capacity change, the nameplate and safety signs on the truck must also be updated.

SAFETY REGULATIONS FOR TRUCK OPERATION

DRIVER AUTHORIZATION

The truck may only be used by trained personnel who have demonstrated the ability to drive, handle loads, and are authorized and certified to operate the truck.

DRIVER'S RIGHTS, OBLIGATIONS AND RESPONSIBILITIES

The driver must be informed of their duties and responsibilities, be instructed in the operation of the truck, and be familiar with the operator manual. The driver should also exercise careful judgment when operating the truck.

SAFETY PRECAUTIONS AND EQUIPMENT

The driver should not wear loose clothing, jewelry, or anything else that could pose a catch hazard while operating the truck. It is highly recommended that the driver wears personal protective equipment, such as, but not limited to, approved safety shoes, safety glasses, and gloves.

UNAUTHORIZED USE OF TRUCK

The driver is responsible for the truck during the time it is in use. Unauthorized persons should be prevented from driving or operating the truck. Do not carry passengers or lift personnel.

DAMAGE AND FAULTS

The supervisor must be immediately informed of any damage or faults to the truck. If the truck is not safe for operation (e.g., wheel issues), it must not be used until repaired.

REPAIRS

The driver must not perform any repairs or alterations to the truck. Repairs must only be done by an authorized, trained technician. The driver must never disable or adjust safety mechanisms or switches.

HAZARDOUS AREAS

A hazardous area is defined as the area in which a person is at risk due to truck movement, lifting operations, the load handler (e.g., forks or attachments), or the load itself. This also includes areas which can be reached by falling loads or lowering operating equipment.

- Unauthorized persons must be kept away from the hazardous area.
- If unauthorized personnel are still within the hazardous area, the truck shall be brought to a halt immediately.

SAFETY DEVICES AND WARNING SIGNS

Safety devices, warning signs, and warning instructions shall be strictly observed.

TRAVEL ROUTES AND WORK AREAS

Only use lanes and routes specifically designated for truck traffic. Unauthorized parties must stay away from work areas. Loads must only be stored in places specially designated for this purpose.

OPERATING CONDUCT

The operator must adjust the travel speed to suit the conditions of the workplace. The truck should be driven at a reduced speed when navigating bends, narrow passageways, swing doors, and blind spots. The driver must always maintain an adequate braking distance in front of the forklift. The operator must maintain full control of the truck at all times. Abrupt stops (except in emergencies), rapid U-turns, and passing through blind spots are prohibited.

NATURE OF LOADS

The operator must make sure that the load is in a satisfactory condition. Only carry loads that are positioned safely and securely. Use suitable precautions to prevent parts of the load from tipping.

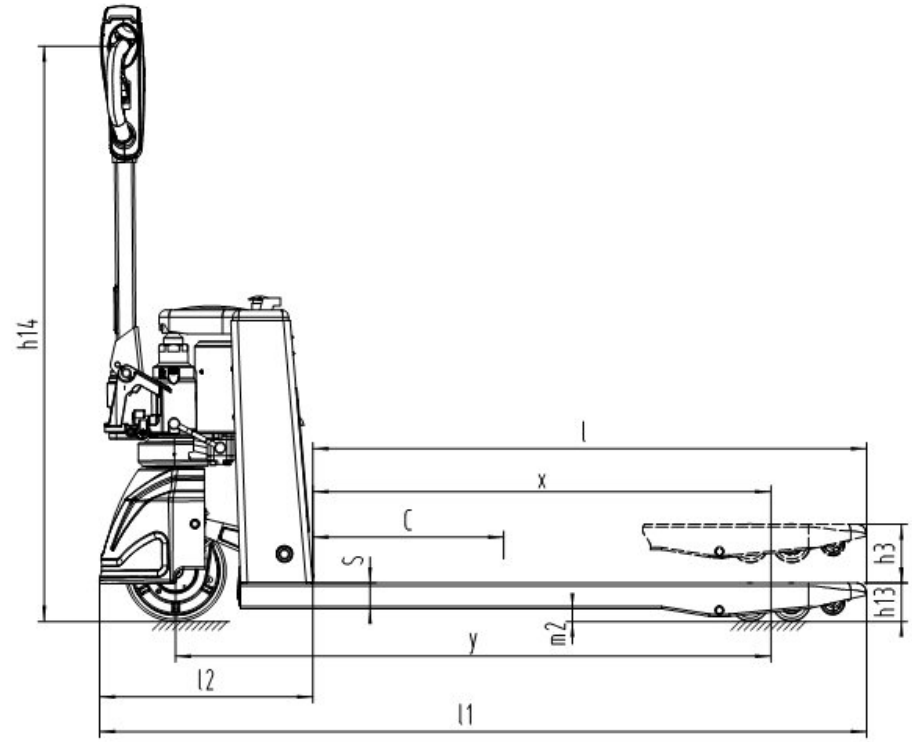
Electric Pallet Jack

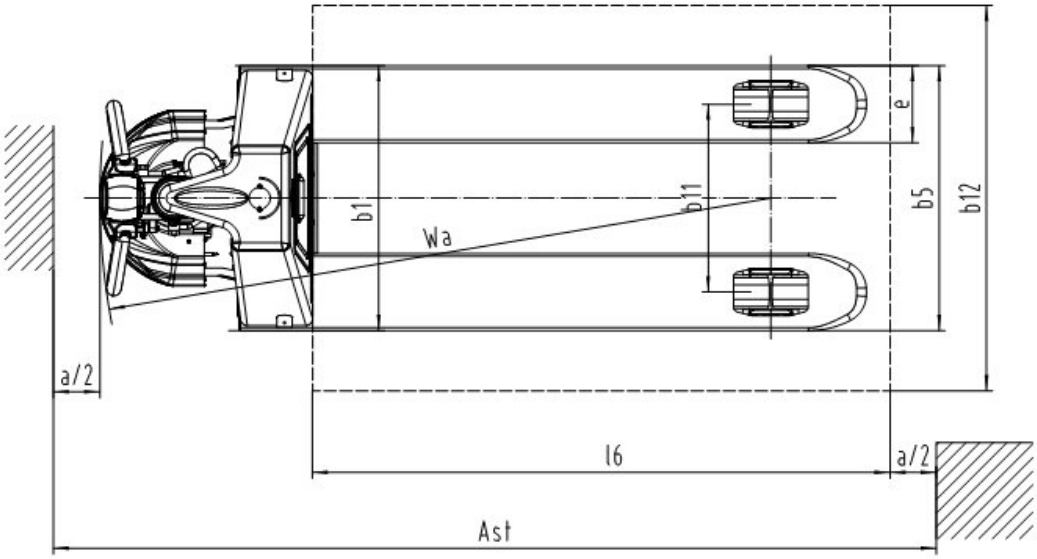
OPERATING CONDITIONS

This pallet truck is intended for indoor and outdoor use on hard, paved surfaces.
Do not operate pallet truck in environments where:

- The temperature is higher than 105° F (40° C) or lower than 15° F (-10° C).
- The relatively humidity exceeds 50%.
- The altitude exceeds 3300 ft (1000 m).
- The air contains dust and/or flammable or explosive gases that pose a risk of fire or explosion.
- The pallet truck is exposed to saline, acidic, or corrosive elements.
- The floor is uneven, damaged, or does not have sufficient load bearing capacity. Do not drive the truck on loose gravel or grass.

TECHNICAL PARAMETERS



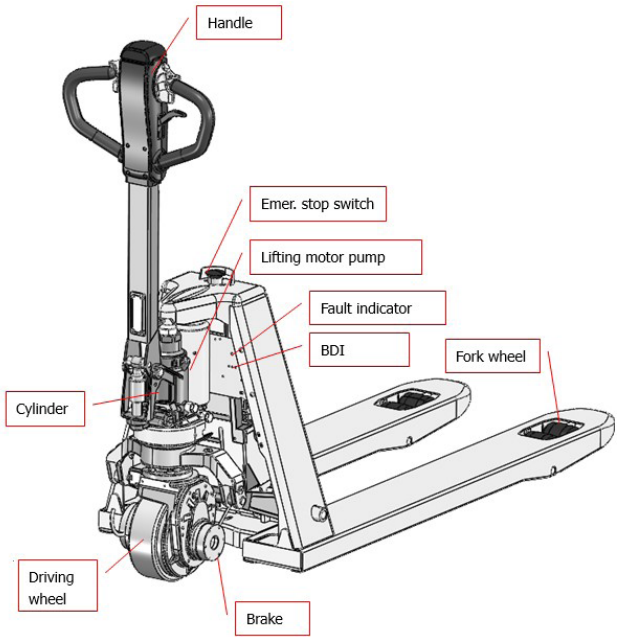


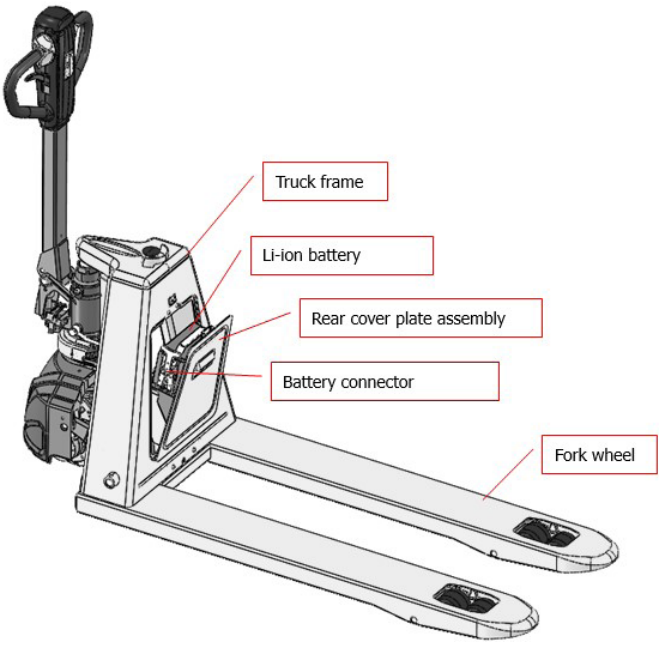
Electric Pallet Jack

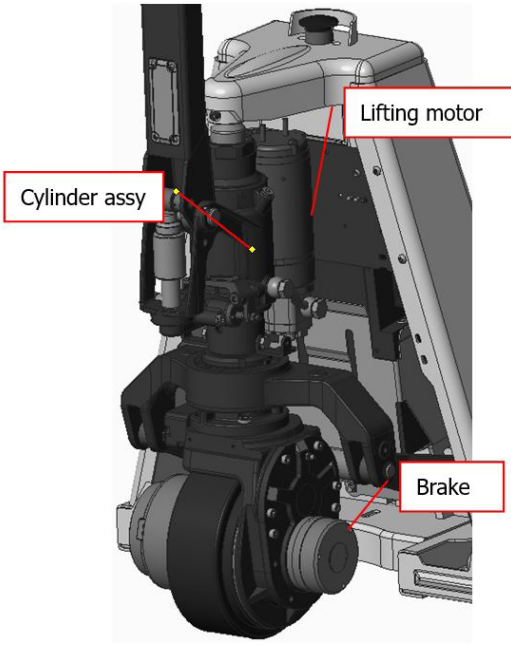
DIMENSION	VARIABLE / UNIT	VALUE
Vehicle Type		Electric
Drive Type		Walking
Load Capacity	Q (lbs)	3300
Load Center Distance	C (inch)	23-3/8
Fork Height, Lowered	h_{13} (inch)	3-1/8
Distance Between Wheels	Y (inch)	48-5/8 | 51-3/8
Wheel Type		Polyurethane
Front Tire Size	(inch)	8-1/4 x 3
Rear Tire Size	(inch)	3-1/8
Number of Wheels (Front/Rear)		1x | 2x
Lift Height	h_3 (inch)	4-3/8
Min/Max Height of Tiller	h_{14} (inch)	25 | 47-1/4
Overall Length	l_1 (inch)	62-1/4 | 65
Tiller to Face of Forks Length	l_2 (inch)	17
Overall Width	b_1 (inch)	21-5/8 | 27
Fork Dimensions	s/e/l (inch)	2 | 6-1/4 | 45-1/4 (48)
Overall Fork Width	b_5 (inch)	21-5/8 | 27
Wheelbase to Ground Distance	h_1 (inch)	1
Aisle Width for 40" x 48" Pallets	Ast (inch)	85-7/8 | 88-1/2
Aisle Width for 30" x 48" Pallets	Ast (inch)	80-3/4 | 82
Turning Radius	Wa (inch)	54-3/8 | 57
Travel Speed (Laden/Unladen)	mph	2.7 | 2.8
Max. Gradeability (Laden/Unladen)		5% | 20%
Driving Motor Power	kW	0.75
Lifting Motor Power	kW	0.5
Battery Voltage/Rated Capacity	V/Ah	24 | 20 (30)
Brake Type		Electric
Operating Noise Level	dB (A)	70
Service Weight (with battery)	lbs	251

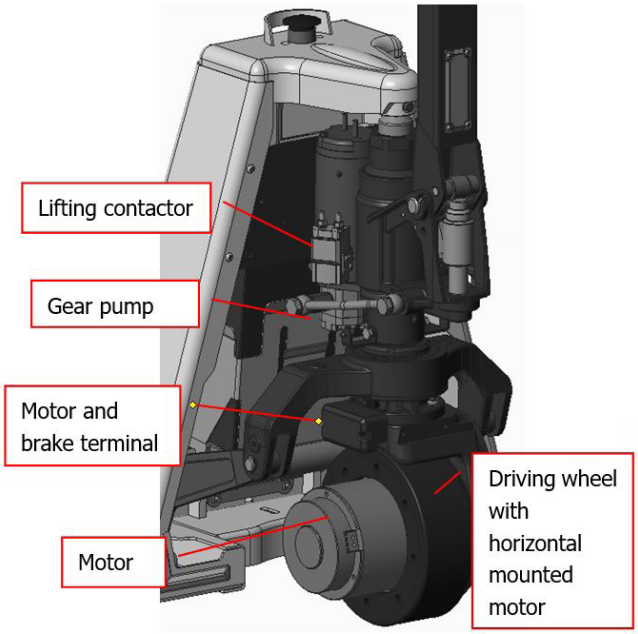
Electric Pallet Jack

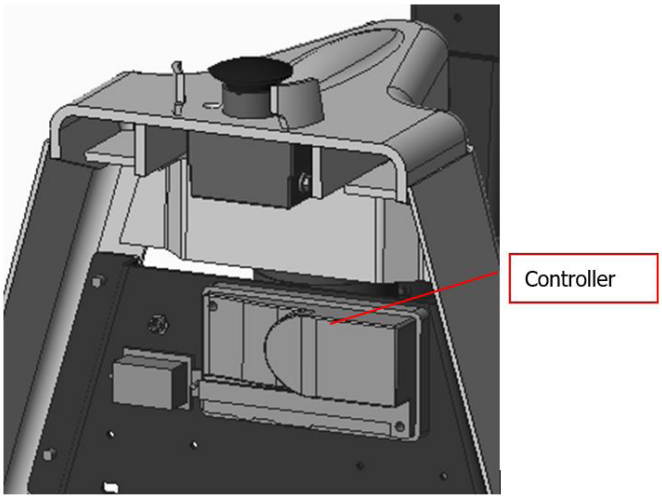
PALLET JACK BREAKDOWN











Electric Pallet Jack

HANDLE INSTALLATION

The pallet truck handle will need to be reattached to the pump body before use. Follow these steps to install the handle:

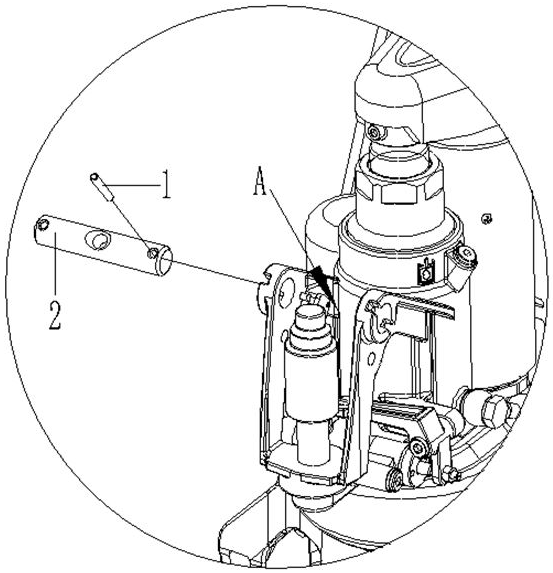


Figure 1

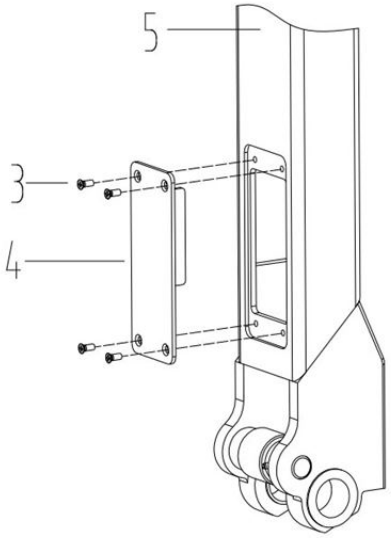


Figure 2

1. Refer to Figure 1: Remove the small pin (part #1) from the large pin (part #2), then pull out large pin.

2. Refer to Figure 2: Loosen the four screws (part #3), then remove the cover plate (part #4).

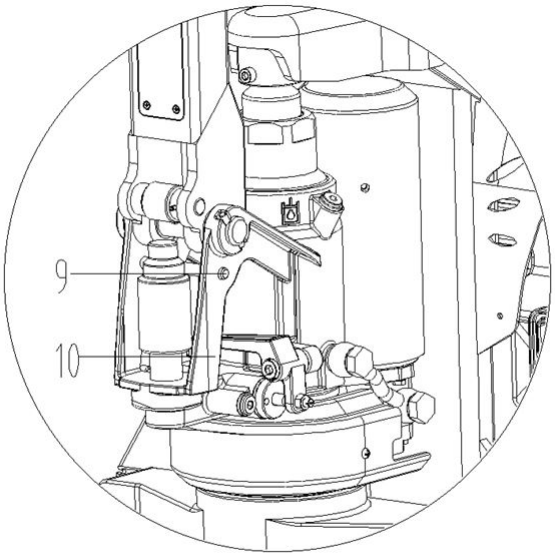


Figure 3

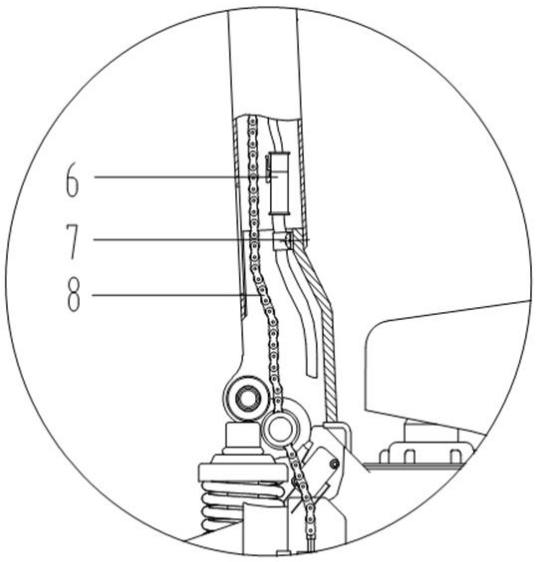


Figure 4

3. Refer to Figures 3 & 4: Take the entire handle assembly (part #5) and align the holes at the end to the holes on the body pump (part #10). Slide the large pin (part #2) through both holes. Thread the rod chain (part #8) through the hole in the large pin (part #2).

4. Refer to Figure 4: Pull the handle into a horizontal position and remove the locking pin (part #9). Save this pin for use when performing maintenance or repairs. Connect the wires of the handle assembly with the wire connectors (part #6) in the pump body

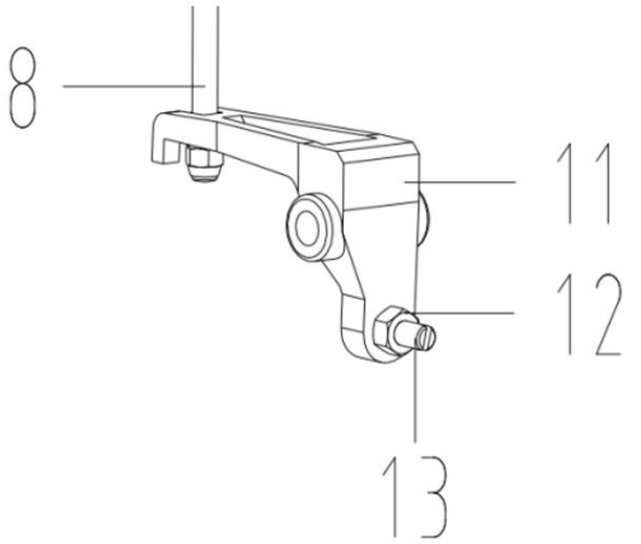


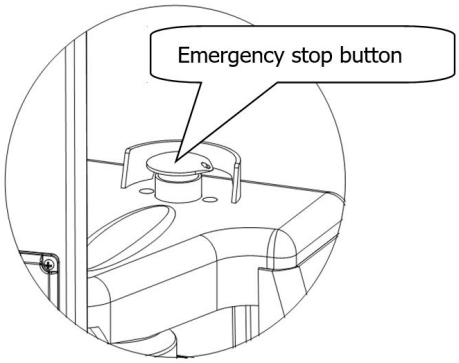
Figure 5

5. Refer to Figure 5: Connect the screw and nut at the end of the rod chain (part #8) into the groove of the release lever (part #11).
6. Reinsert the small pin (part #1) into the large pin (part #2). Reinstall the cover plate (part #4) and tighten the four screws (part #3).

OPERATION INSTRUCTIONS

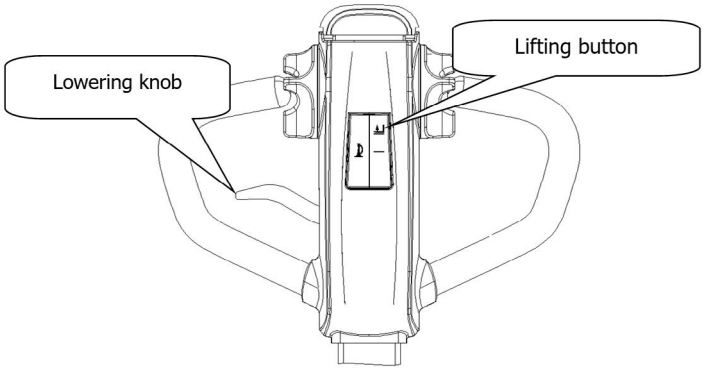
TURNING TRUCK ON

- Connect the fully charged battery to the power cable inside the pallet jack.
- Pull the emergency stop button upwards until it clicks.
- A red light on the back of the frame will indicate that the electric pallet jack is powered on.



LIFTING/LOWERING THE FORKS

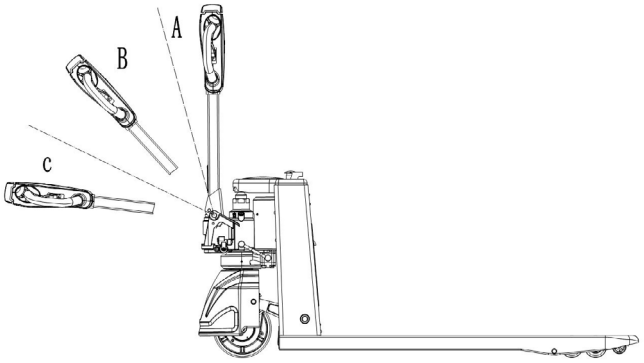
- To lift the forks, press the lifting button.
- To lower the forks, pull on the release lever.

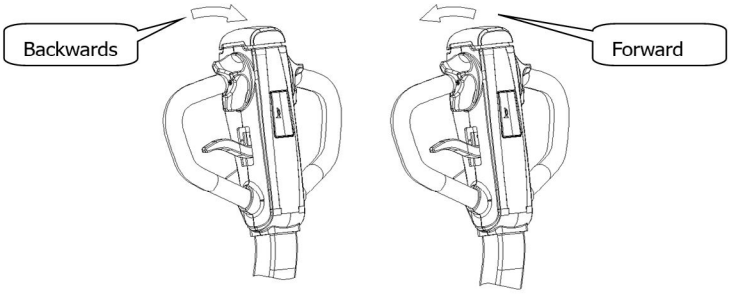


Electric Pallet Jack

MOVING THE TRUCK

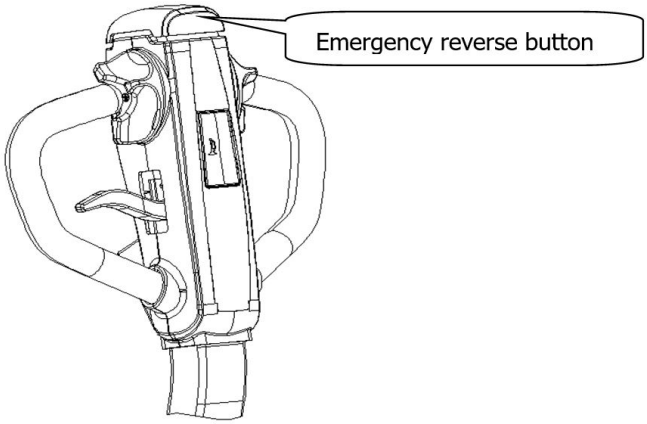
- Rotate the handle downwards so that it is positioned in Area B in the figure below.
- Rotate the accelerator to move the truck backwards or forwards.
  Note: If the handle is in areas A or C (see below figure), the truck will not move even when the accelerator is rotated.
- To stop the truck, release the accelerator. The regenerative brake will automatically slow the truck to a stop.
- To suddenly stop the truck, tilt the handle to areas A or C (see below figure). The brake will immediately lock the wheel.





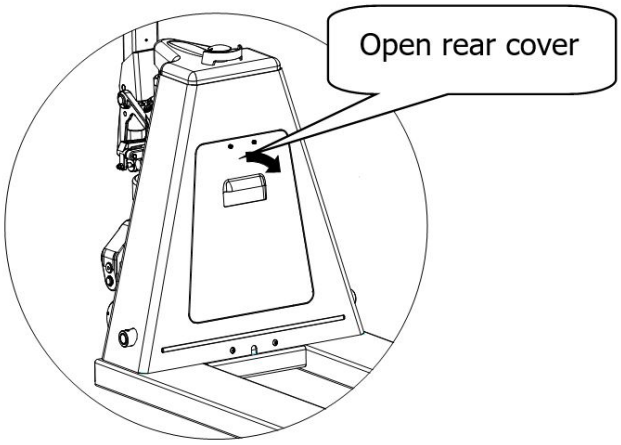
EMERGENCY STOP

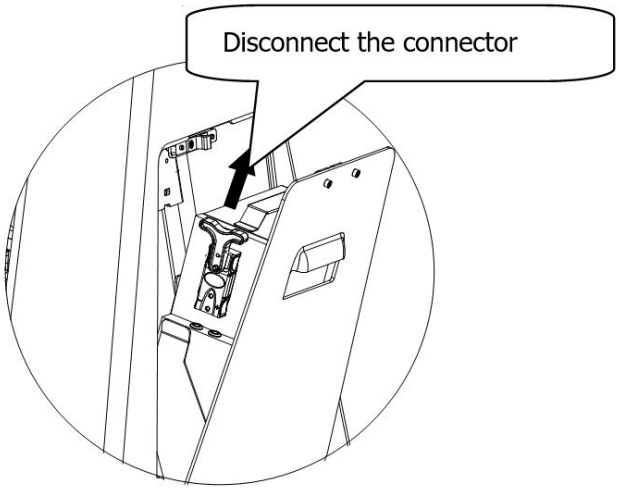
- The emergency reverse button is located at the end of the handle. When pressed, the truck will immediately stop, then travel in the opposite direction for a fixed distance.



PARKING THE TRUCK

- Move the truck to the desired parking location. Once the truck is turned off, the brakes will automatically engage.
- Lower the forks to the lowest position.
- Turn off the truck by engaging the emergency stop button and pressing it downwards
- If parking the truck for an extended period, open the rear cover and disconnect the battery.





LITHIUM-IRON BATTERY SAFETY PRECAUTIONS

Warning: Lithium-iron batteries are high energy density products and require proper safety precautions when in use or in storage. Proper maintenance should be carried out occasionally.

STORAGE SAFETY PRECAUTIONS

- Battery should be stored in an environment between 32°-85° F (0°-30° C), with a relative humidity below 75%. If stored at a lower temperature, the battery should be warmed up to 32° F before charging.
- When storing the battery for long term, the battery should be kept at above 5% change to prevent over discharge and below 50% charge to reduce damage risk in case of catastrophic failure.
- Battery should be stored in a dedicated warehouse or a separate room specifically equipped with flame-retardant and impact resistant walls.
    - Smoke detectors and alarms should be installed in the storage area. Fire prevention tools (such as fire blanks, high-temperature gloves, water-based fire extinguishers, etc.) should be easily accessible in the storage area.
    - Storage area should only be used to store batteries.
- Batteries in storage shall not be stacked. If the batteries are stored on metal shelves, the shelves must be insulated.
- Batteries in storage shall not be exposed to corrosive substances.
- Batteries in storage shall be kept at least 10 ft (3m) away from sources of fire and heat.
- If battery is not used for long periods of time, it should be disconnected from all electrical devices and fully charged once every 3 months to maintain its capacity.

CHARGING PRECAUTIONS

- The lithium iron battery must only be charged with the provided lithium battery charger.
- Power supply voltage should match the charger's input voltage, otherwise battery may experience a shortened lifespan and/or failure.
- A dedicated charging area should be established next to the outlet. It should have good ventilation and be kept a reasonable distance (10 ft or 3 m) away from fire and heat sources and flammable, combustible, or explosive materials.
- When charging:
    - The output port of the charger should be connected to the battery and the input plug should be inserted into an AC power outlet. The charger should be placed on a flat surface where it is not at risk of falling.
    - The charger should only be used when the temperature is between 32°-85° F (0°-30° C) and the relative humidity below 80%. Do not use the charger if it is raining or will be exposed to a high-humidity environment.
    - The battery should not be kept charging after reaching a full charge. The charging time should not exceed 8 hours. It is not recommended to leave the battery charging overnight.
- The charge indicator light will show the state of the battery:
    - A red indicator light indicates that the battery is currently charging.
    - A green indicator light indicates that the battery is fully charged.
- Unplug the charger from the outlet rise, then disconnect the battery from the charger. Avoid pulling on the wires when disconnecting the charger; instead, pull on the tab at the end of the charging cable.
- If the battery is drastically heating up during the charging process, immediately disconnect it from the charger and let it cool down.
- Do not use the charger if it has been damaged. The charger should be periodically maintained to keep it in working condition.

USAGE PRECAUTIONS

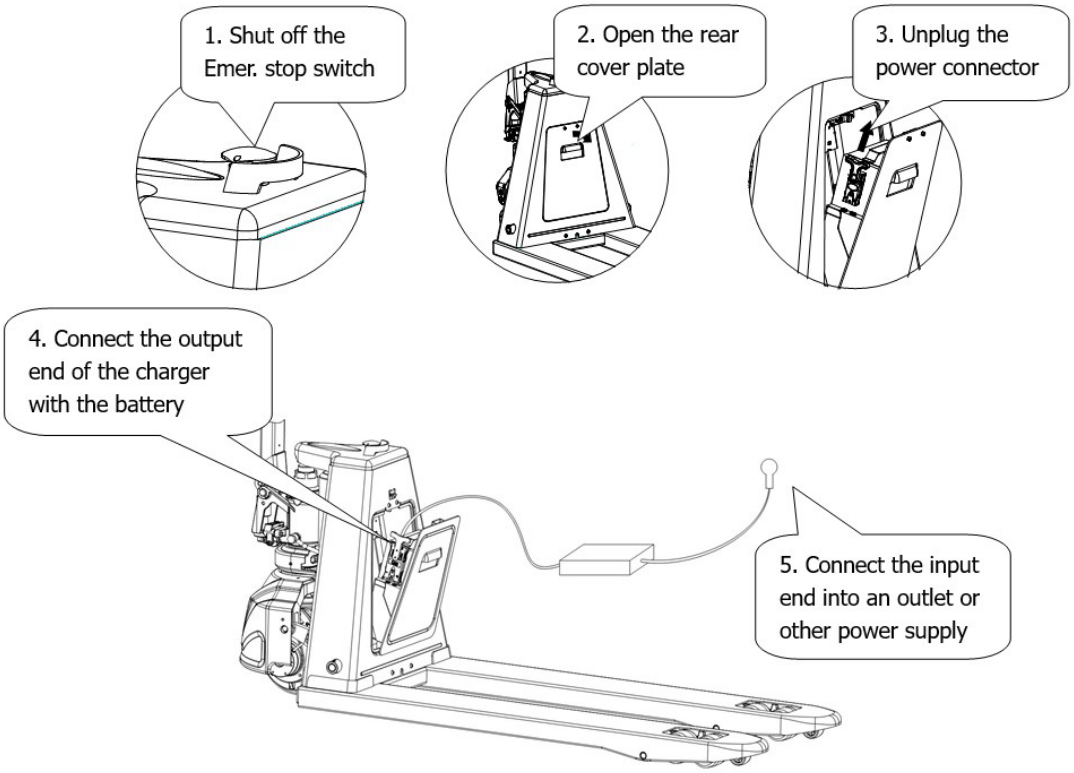
- The battery's operating temperature range is 15°-105° F (-10°-40° C).
- Do not use battery in environments that are exposed to flammable, explosive, or corrosive elements.
- The battery is meant for use with this electric pallet jack only. Do not use it as a power source for other electrical equipment.
- It is strictly prohibited to open, disassemble, or modify the battery.
- Do not link batteries together, in series or parallel, for use.
- Do not use the battery if it has visible deformation marks or damage.
- If battery is submerged in water or exposed to rain/water, stop using it immediately. Battery will need to be replaced as damaged electrical components can short circuit, which may cause severe injury and/or damage.
- Avoid linking the positive and negative leads of the battery, which will cause a short circuit.

Electric Pallet Jack

QUICK BATTERY CHARGING

To quickly recharge the electric pallet jack:

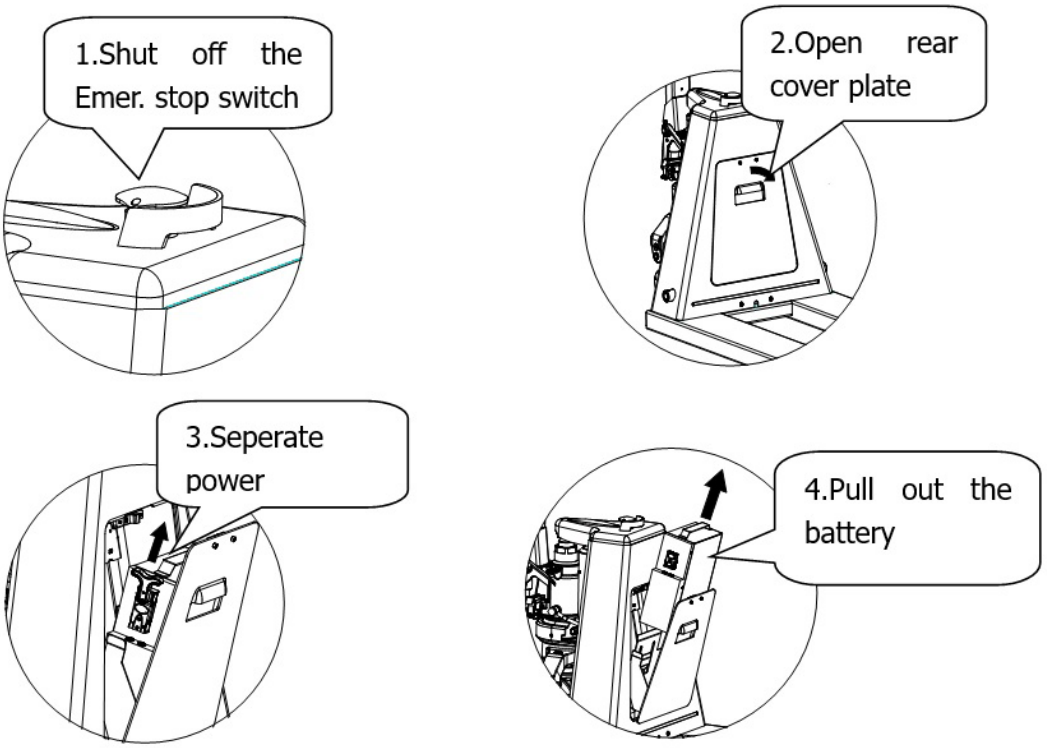
1. Engage the emergency stop button by pushing it all the way down.
2. Open the cover plate.
3. Disconnect the battery.
4. Connect the outlet end of the charger to a power source and the charging end to the battery.
5. Charge the battery until the indicator light on the charger is green.



BATTERY REPLACEMENT

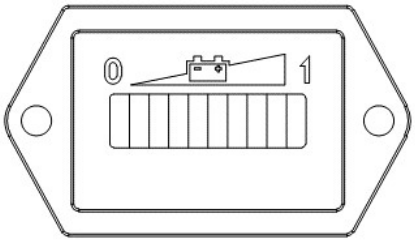
To replace the battery:

1. Engage the emergency stop button by pushing it all the way down.
2. Open the cover plate.
3. Disconnect the battery.
4. Pull out the battery.
5. Place the new battery into the battery seat. Reconnect the battery to the power cable. Close the cover plate.



BATTERY CHARGE INDICATOR

The battery discharge indicator (BDI) displays 10 colored light segments, ranging from green to red. When fully charged, the green light on the right side will be illuminated. When the battery is low on charge, the red light on the left side will be lit up. When the battery is nearly depleted, the red light on the left will blink, notifying the user that the battery needs to be recharged as soon as possible.

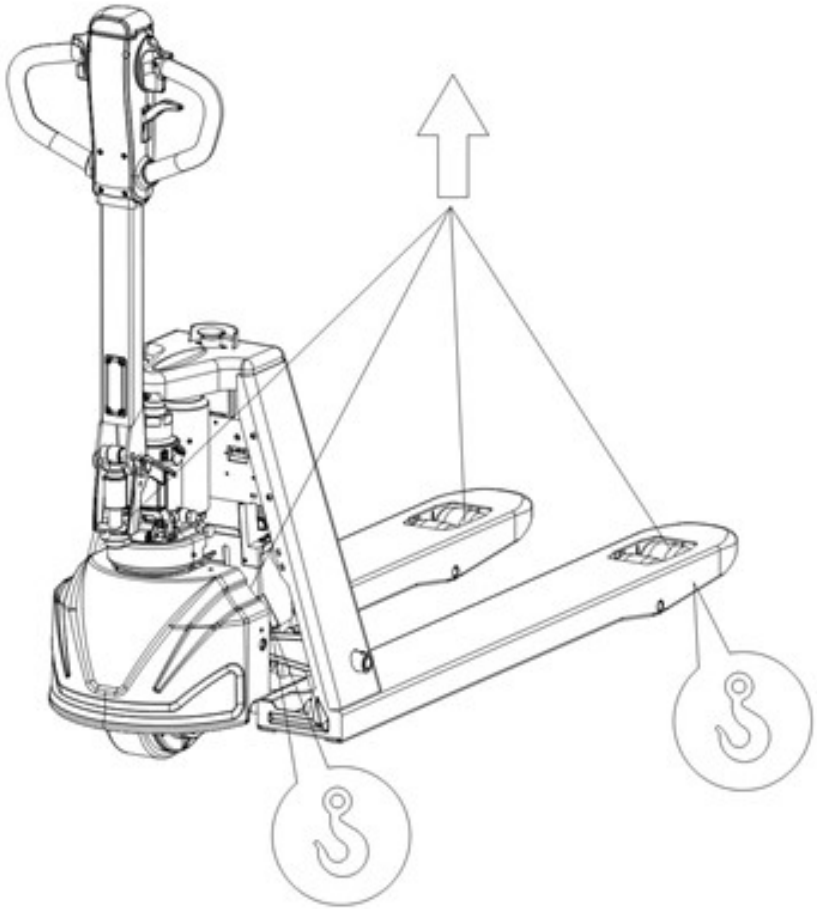


WASTE TREATMENT

Batteries and hydraulic oil must not be disposed of carelessly. They should be handled in accordance with relevant local laws and regulations, with careful attention to environmental protection.

HOISTING THE PALLET JACK

To hoist the pallet jack, fasten hooks to the attachment points on the truck shown below. Then slowly hoist it into the air. Avoid sudden movements when moving the truck.



MAINTENANCE

It is highly recommended to perform regular maintenance on the electric pallet jack to keep it in optimal working condition. Performing regular safety checks and noting any damages will help extend its service life. There are three types of recommended maintenance: daily, weekly, and periodic.

DAILY MAINTENANCE

- Inspect the pallet jack and keep it clean, removing any debris or buildup on the product.
- Inspect the quality of the power cable before use, ensuring that it is not damaged.

WEEKLY MAINTENANCE

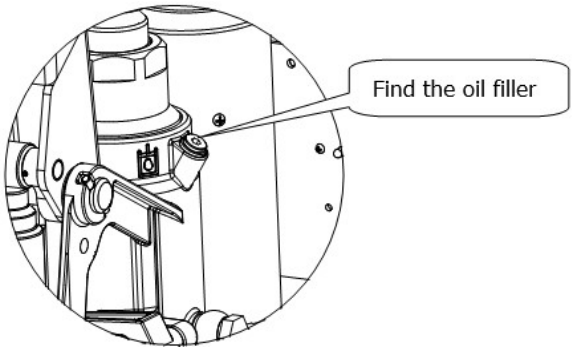
- Inspect all operational components and fasteners, making sure they are all there and undamaged. Check for abnormal wearing on mechanical parts, as that is an early indicator of part failure.
- Check for oil leakage.
- Check for abnormal rises in temperature or sparks when pallet jack is in operation.

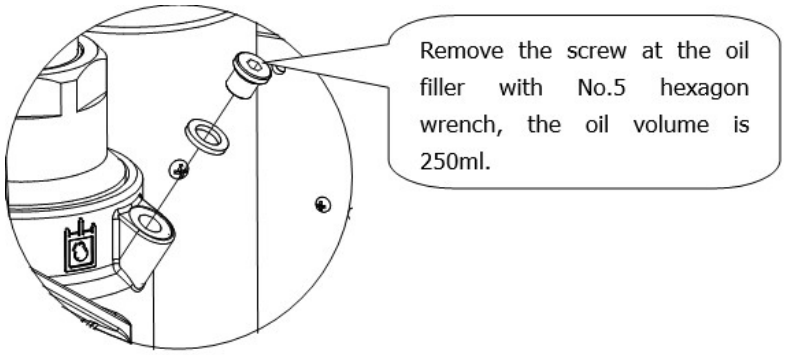
PERIODIC MAINTENANCE

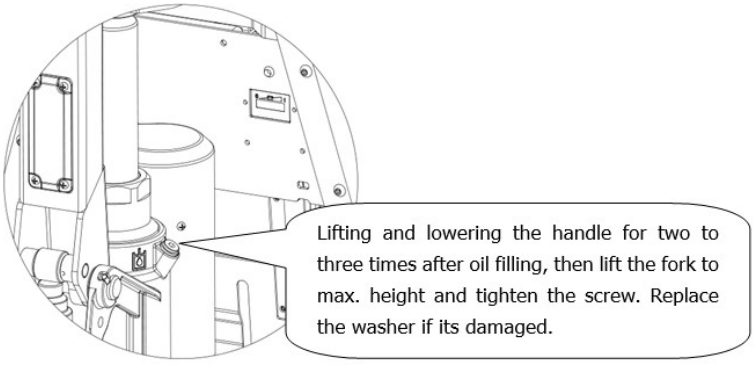
- Perform mechanical maintenance every 3 months.
    - Check if any fasteners are loose if they are, tighten them.
    - Check to see if the wheels rotate smoothly and if they are damaged.
    - Check if the forks can lift and lower without issues.
    - When the pallet jack is running, the noise generated should not exceed 75 dB.
- Perform electrical maintenance every 3 months.
    - Check to see if any of the electrical connectors are loose and need to be firmly reconnected.
    - Check all switches and buttons work properly.
    - Check that the electrical insulation is functioning properly. The resistance difference between the electrical components and the pallet jack body should be great than 0.5MΩ.
- Perform hydraulic maintenance every year
    - Check the hydraulic cylinder for damage and for internal and external leakage.
    - Check if the limit valve is working properly
    - It is recommended to replace the hydraulic oil every 12 months.

ADDING/REPLACING HYDRAULIC OIL

Standard ISO hydraulic oil is recommended. If operating at temperatures between -40° C and -5° C or -50° C and -10° C, it is recommended to use L-HV32 and L-HV15 cryogenic hydraulic oil respectively.







For	Specification	Quantity
Hydraulic Power Unit Tank	L-HV32	250 mL

TROUBLESHOOTING

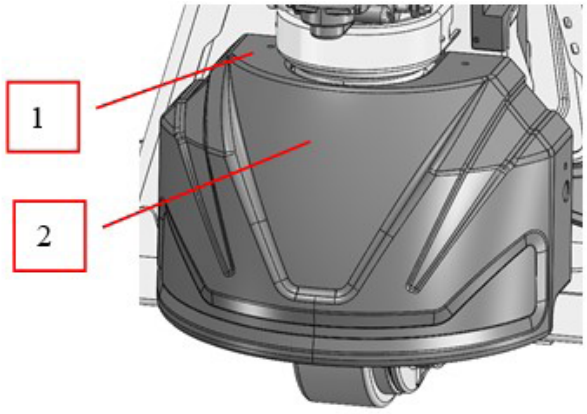
NO.	PROBLEM	POSSIBLE CAUSES	SOLUTION
1	Hydraulic oil leakage	1. Oil seal failure 2. Slight damage or wear on the surface of hydraulic pump components 3. Loose connection between parts	1. Replace the oil seal 2. Replace the damaged components 3. Check and retighten all the connections
2	Forks fail to lift up	1. Hydraulic oil is too viscous 2. There is not enough hydraulic oil in the pump 3. Foreign matter/debris in the oil 4. The hydraulic power unit is damaged	1. Replace the hydraulic oil 2. Add more hydraulic oil 3. Filter and remove the debris, or replace the hydraulic oil 4. Replace the hydraulic power unit.
3	Forks fail to lower	1. The manual lowering valve is not adjusted	1. Adjust the posiition of the valve screw on the release lever mechanism
4	Pallet jack doesn't move	1. Power supply switch has not been turned on 2. Battery has completely discharged 3. Brake has not been released 4. Fuse burned out	1. Turn on power 2. Charge the battery 3. Examine if the stroke switch on the lever is engaged due to a collision. Check if the braking switch has been reset
5	Battery does not charge	1. Charger was damaged	1. Replace the charger

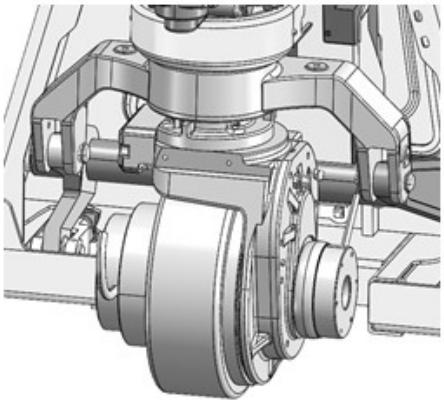
ACCESSORIES & SPARE PARTS

NO.	PART NAME	PART NUMBER	DESCRIPTION	QTY
1	Charger	B3180275	Charger for Lithium Iron Battery	1
2	Battery	B3180276	24V/20Ah UI Lithium Iron Battery	1

DISASSEMBLY INSTRUCTIONS -MECHANICAL COMPONENTS

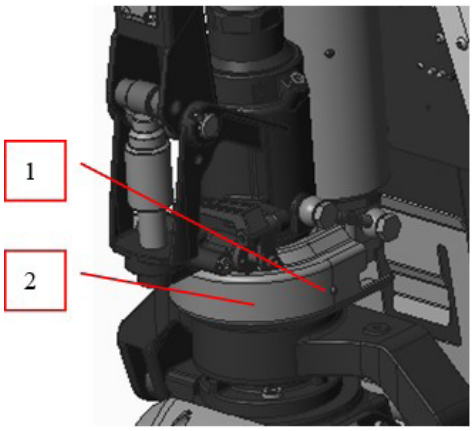
MOTOR COVER

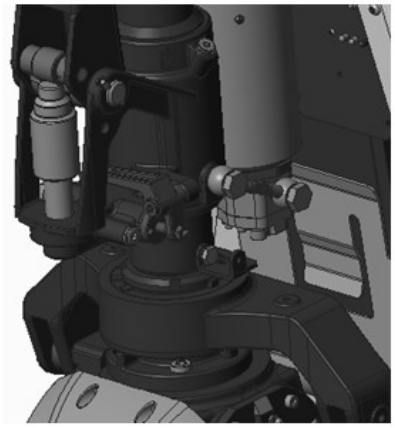




1. Unscrew the two screws (part #1)
2. Remove the motor cover (part #2)

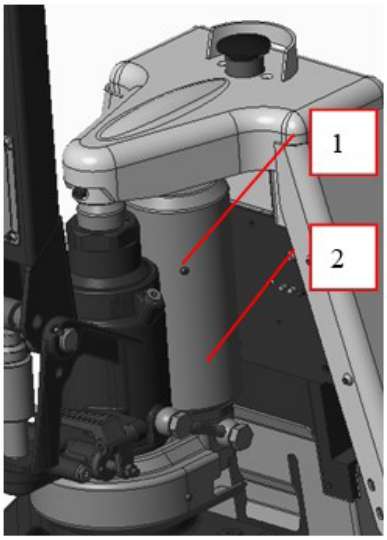
TRIM COVER

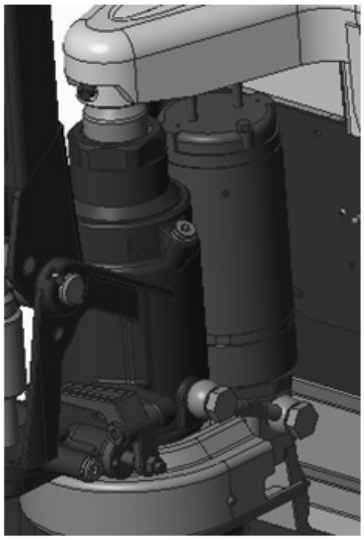




1. Unscrew the two screws (part #1) on opposite sides of the cover
2. Remove the trim cover (part #2)

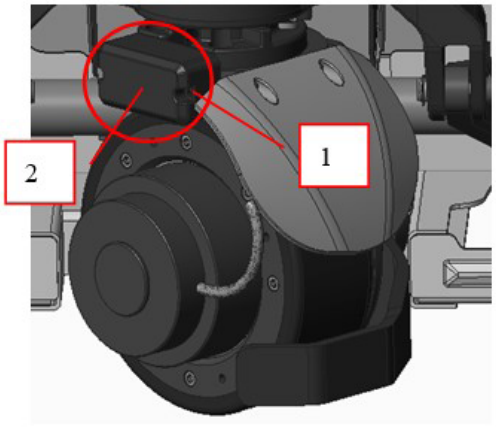
MOTOR HOUSING



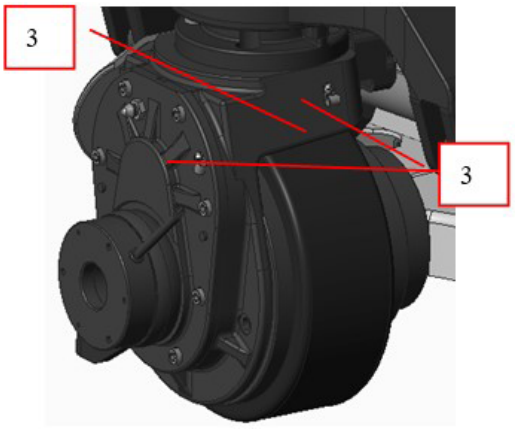


1. Unscrew the two screws (part #1) on both sides of the motor pump
2. Rotate the steering gear 90° then pull out the motor housing (part #2)

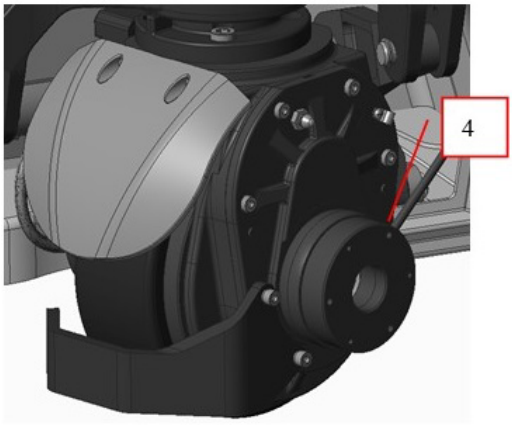
WHEEL BRAKE



1. Rotate the steering gear assembly 90°to the right so that the plastic cover (part #2) is facing outward. Remove the screws (part #1), then the plastic cover, and finally the internal brake harness connector.

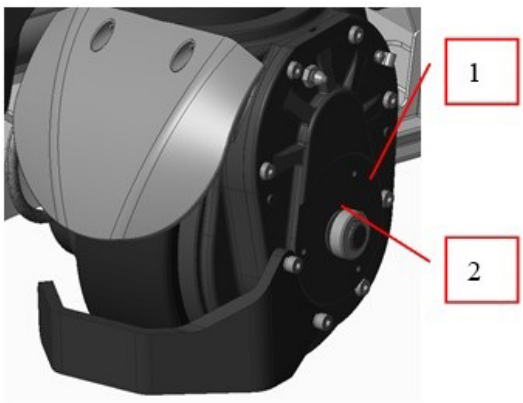


2. Remove two brake harness clamps (part #3).

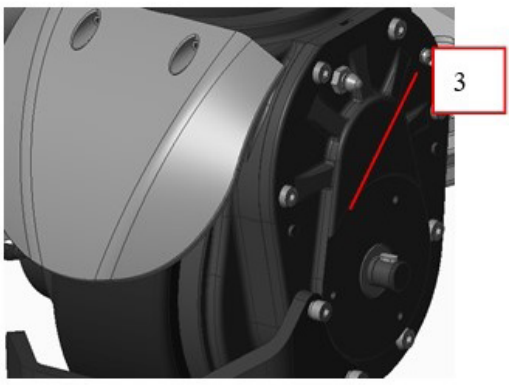


3. Turn the steering gear assembly 90° to the left and remove the brake screws (part #4).

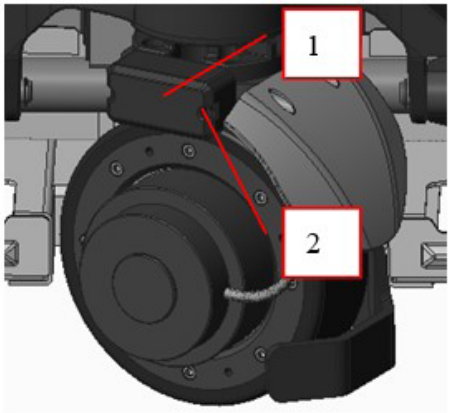
BRAKE SHAFT SLEEVE & MOTOR



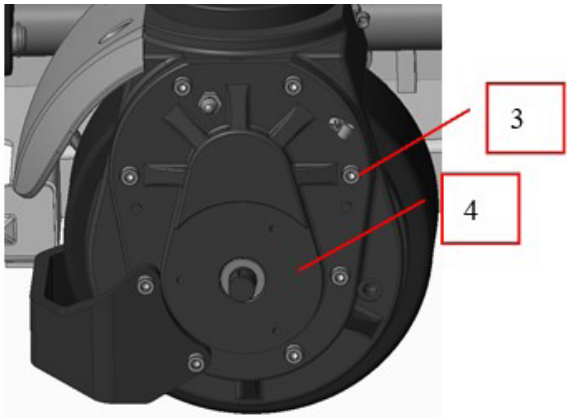
1. Remove the circlip (part #1) on the motor shaft, then remove the shaft sleeve (part #2).



2. Remove the flat key (part #3). Store this somewhere to avoid losing it.

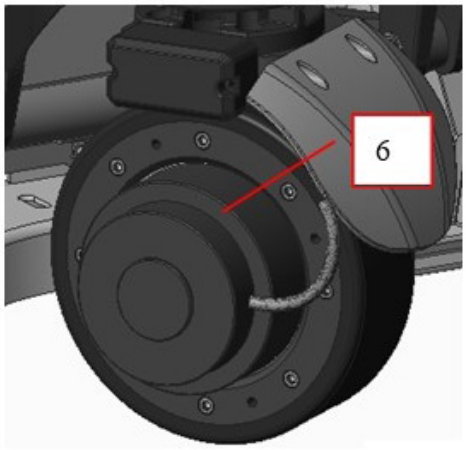


3. Turn the steering gear 90° to the left. Remove the screws (part #1), then remove the plastic cover (part #2). Separate the motor line inside the plastic cover from the main harness.

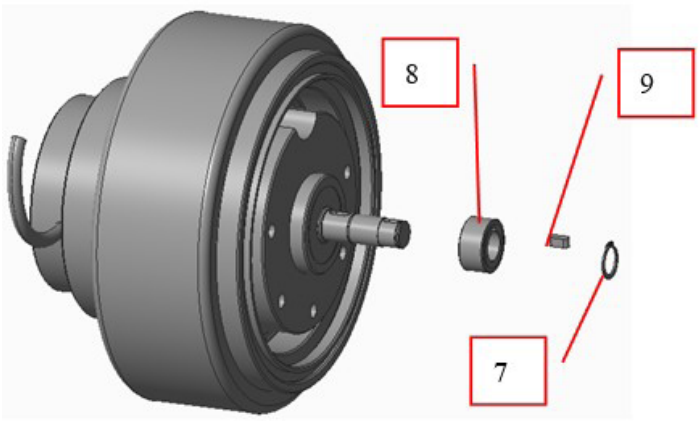


4. Turn the steering gear 90° degrees to the right (from the original position) and remove the eight screws (part #3) on the gearbox end cover. Remove the end cap (part #4).

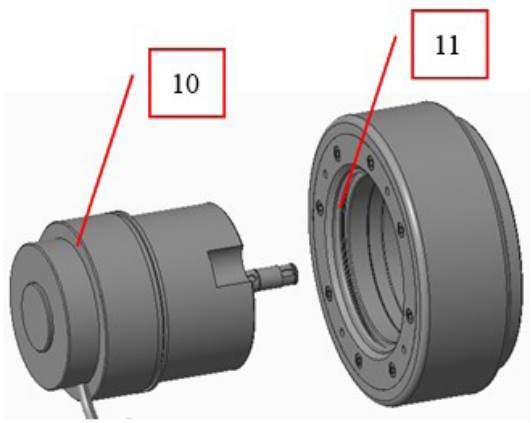
5. Remove the five motor screws (part #5).



6. Take out the motor assembly (part #6) out of the wheel.

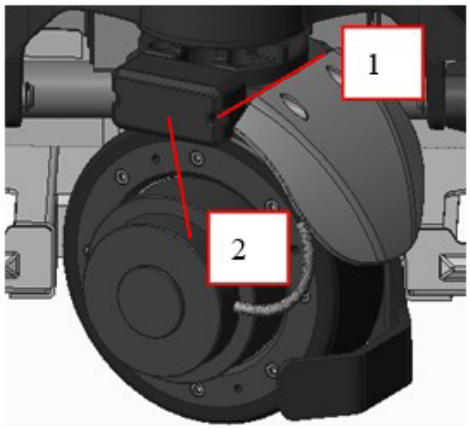


7. Remove the circlip (part #7), gear (part #8), and flat key (part #9) from the shaft end of the motor.

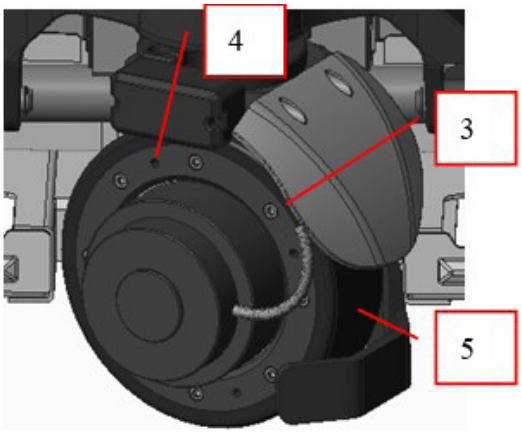


8. Separate the motor (part #10) from the motor assembly (part #11) and remove it.

WHEEL

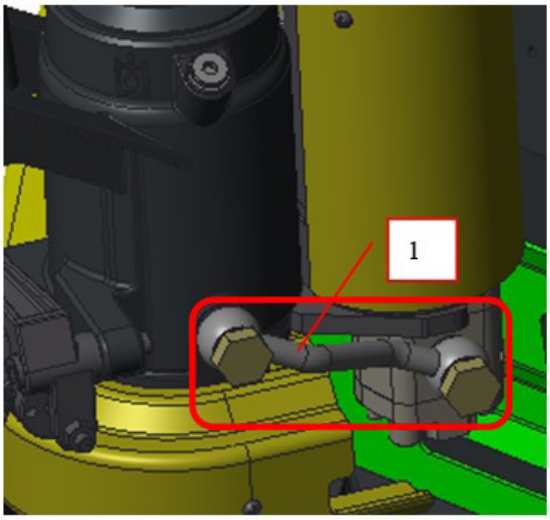


1. Turn the steering gear 90° degrees to the left, remove the screw (part #1). Remove the plastic cover (part #2) and separate the motor line inside the plastic cover from the main harness.

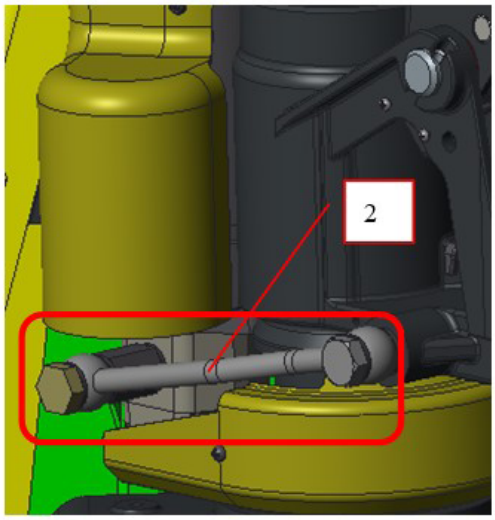


2. Remove the eight screws (part #3) on wheel. Insert M6 x 30 screw (not included) into the auxhilary holes (#4), then remove the wheel (part #5).

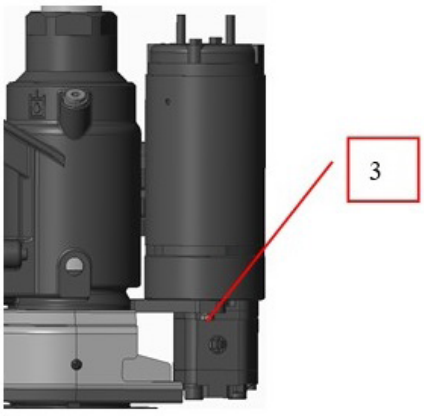
MOTOR PUMP



1. Before starting, lower the forks to the lowest position.
2. Remove the oil inlet pipe (part #1). Hydraulic oil will spill out from the pipe, so it is recommended to have a container ready to catch the oil.



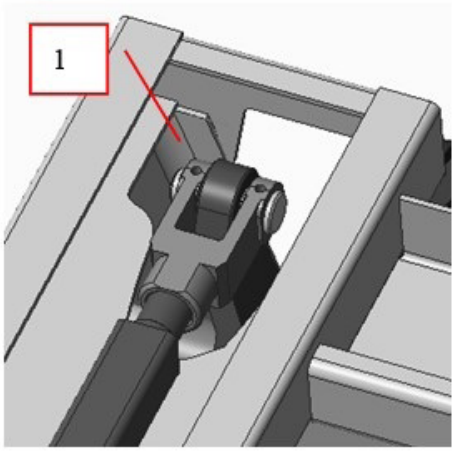
3. Remove the oil outlet pipe (part #2).



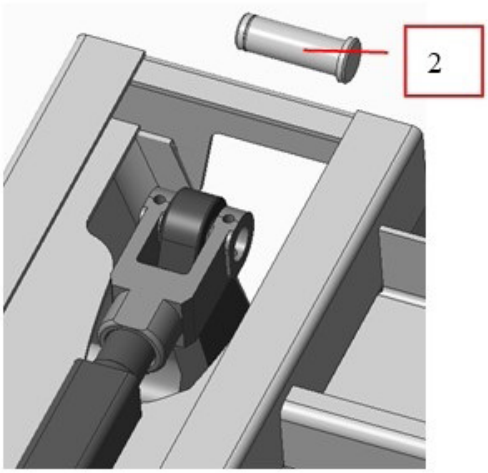
4. Remove the two screws on the left and right side of the motor pump (part #3)

5. Gently remove the motor pump.

ADJUSTING THE CONNECTING ROD LENGTH

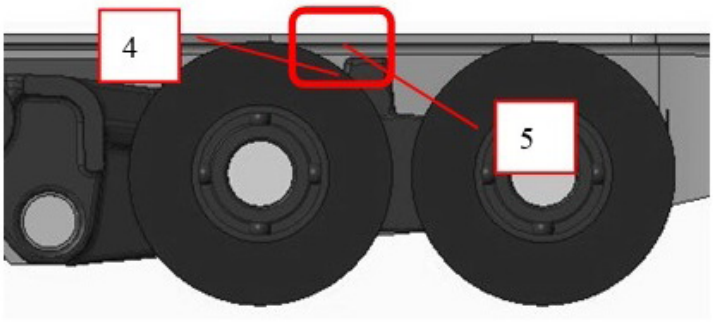


1. 1. Remove the elastic pin (part #1)



2. Remove the pin shaft (part #2)

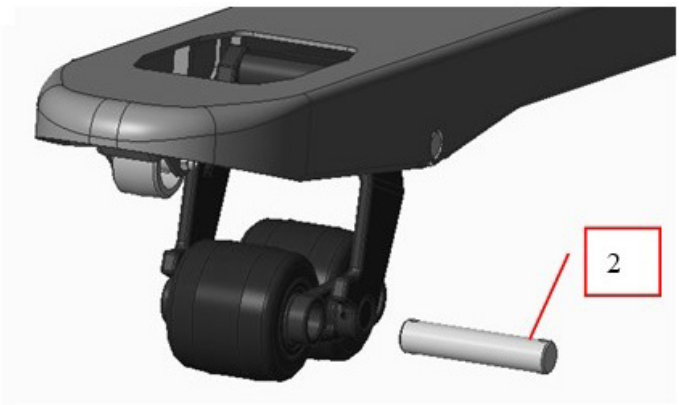
3. Turn the connector hinge (part #3) clockwise to reduce the length of the connecting rod and counter-clockwise to increase the length.
4. Reattach the elastic pin (part #1) and the pin shaft (part #2).



5. After adjusting the length, the pallet jack should be level when lifting. The clearance between the wheel frame (#4) and the bottom of the fork (#5) should be greater than 0.04” (1 mm).

FORK WHEEL

1. Remove the two spring pins (part #1)



2. Remove the pin shaft (part #2)

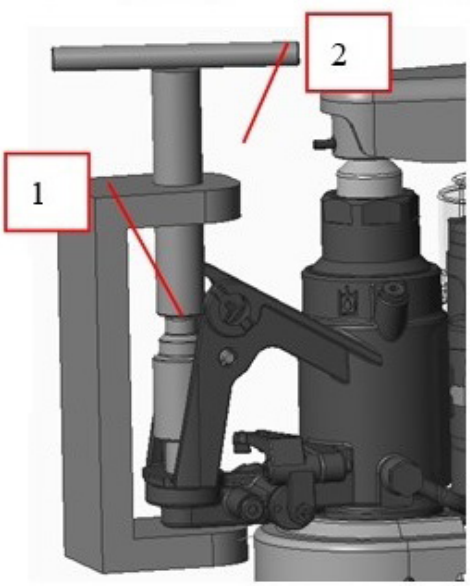
Electric Pallet Jack

(CONTINUED)

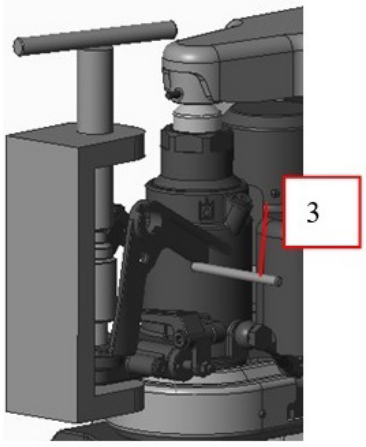
3. Take out the wheel (part #3). Repeat for the other wheel if pallet jack has two wheels per side

HANDLE SPRING

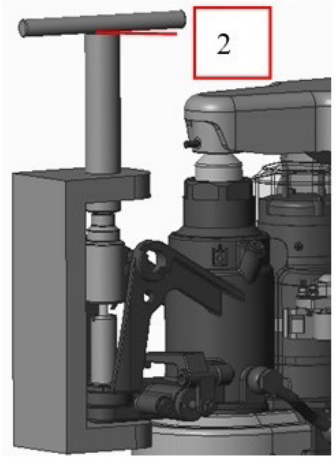
1. Before removing the handle spring, the handle must be removed from the pallet jack.



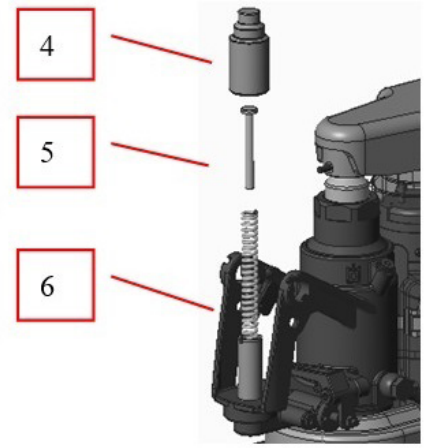
2. Using a clamp or other specialized tool (part #1), turn the tool handle (#2) so that the spring is compressed to the maximum. Otherwise, the locking rod cannot be removed.



3. Remove the locking rod (part #3).



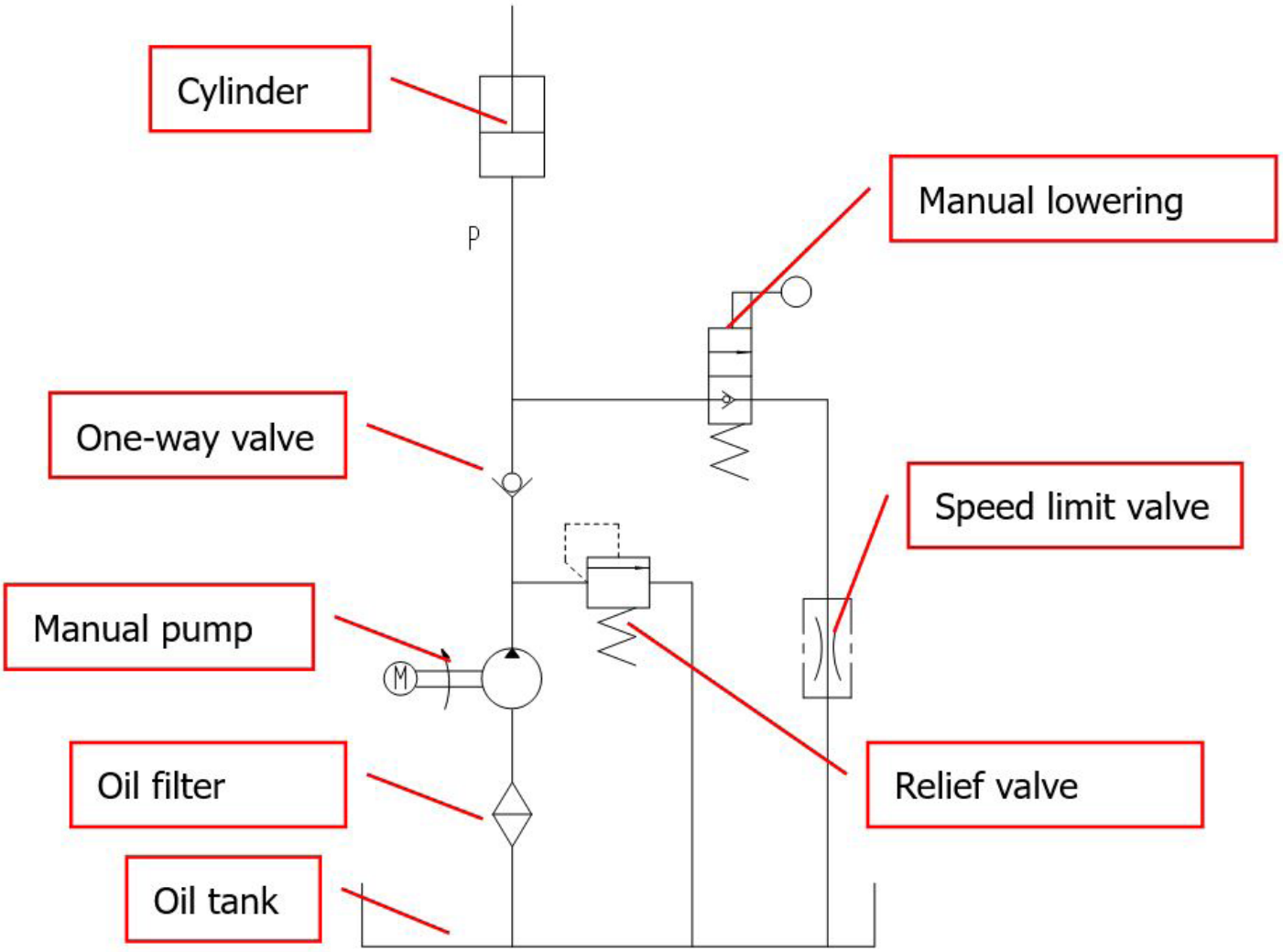
4. Rotate the clamp/tool handle (#2) the opposite direction to release pressure on the spring. Remove the tool.



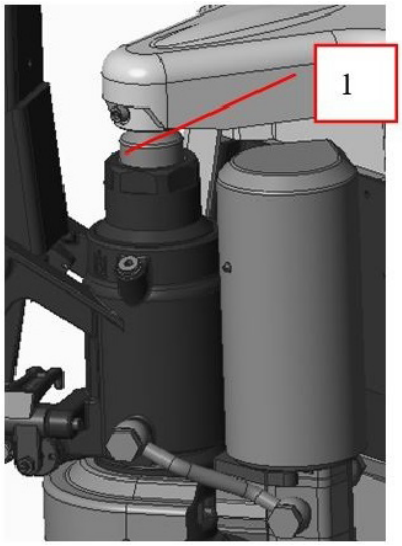
5. Remove the outer sleeve (part #4), spring core (part #5), and spring (part #6).
6. Replace the spring then reinstall all the parts, following the previous steps in reverse order.

DISASSEMBLY INSTRUCTIONS -HDYRAULIC COMPONENTS

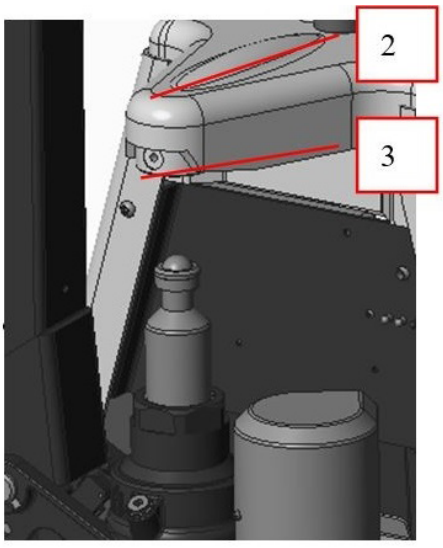
HYDRAULIC SCHEMATIC DIAGRAM



CYLINDER SEAL REPLACEMENT

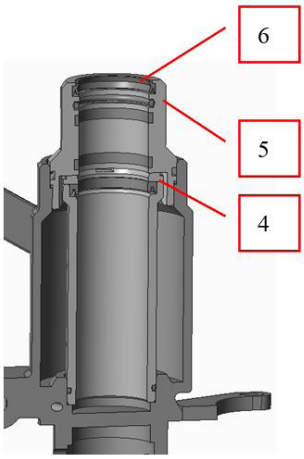


1. Remove the screw (part #1)



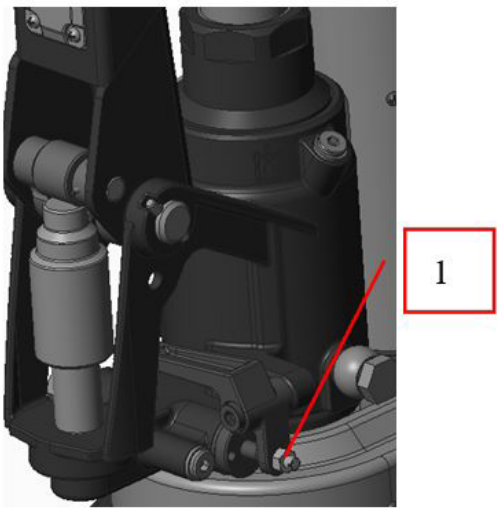
2. Lift the frame (part #2) so that the frame and plunger rod (part #3) are disengaged.

(CONTINUED)

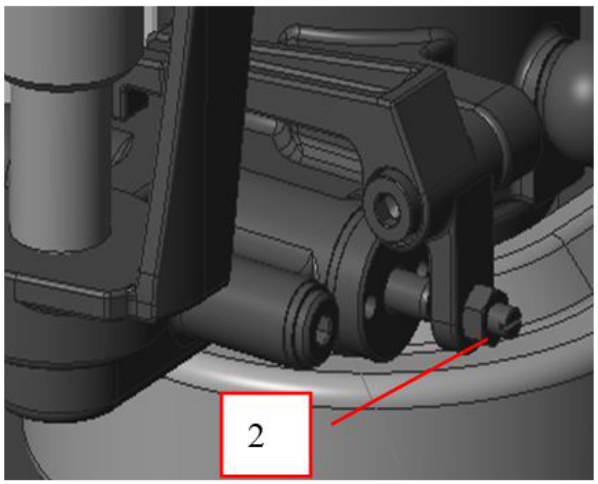


3. Remove the seals in the plunger rod (parts #4, 5, 6) and install the new ones.
4. Reattach the cylinder to the frame and add the screws back.

ADJUSTING THE LOWERING SPEED

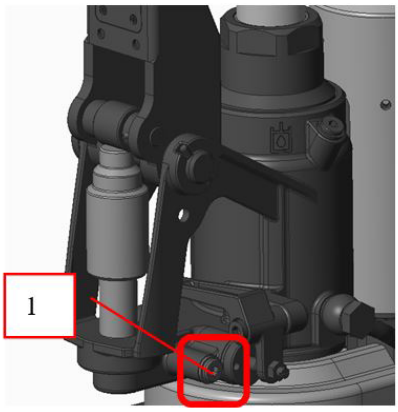


1. Locate the valve adjustment screw (part #1).

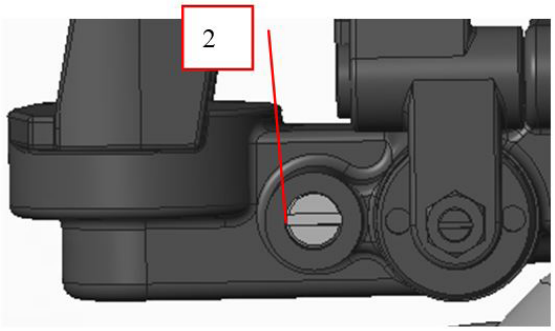


2. Using a flat head screw driver, turn the screw (part #2) clockwise to increase the lowering speed and counter-clockwise to reduce the lower speed.

ADJUSTING THE SYSTEM PRESSURE



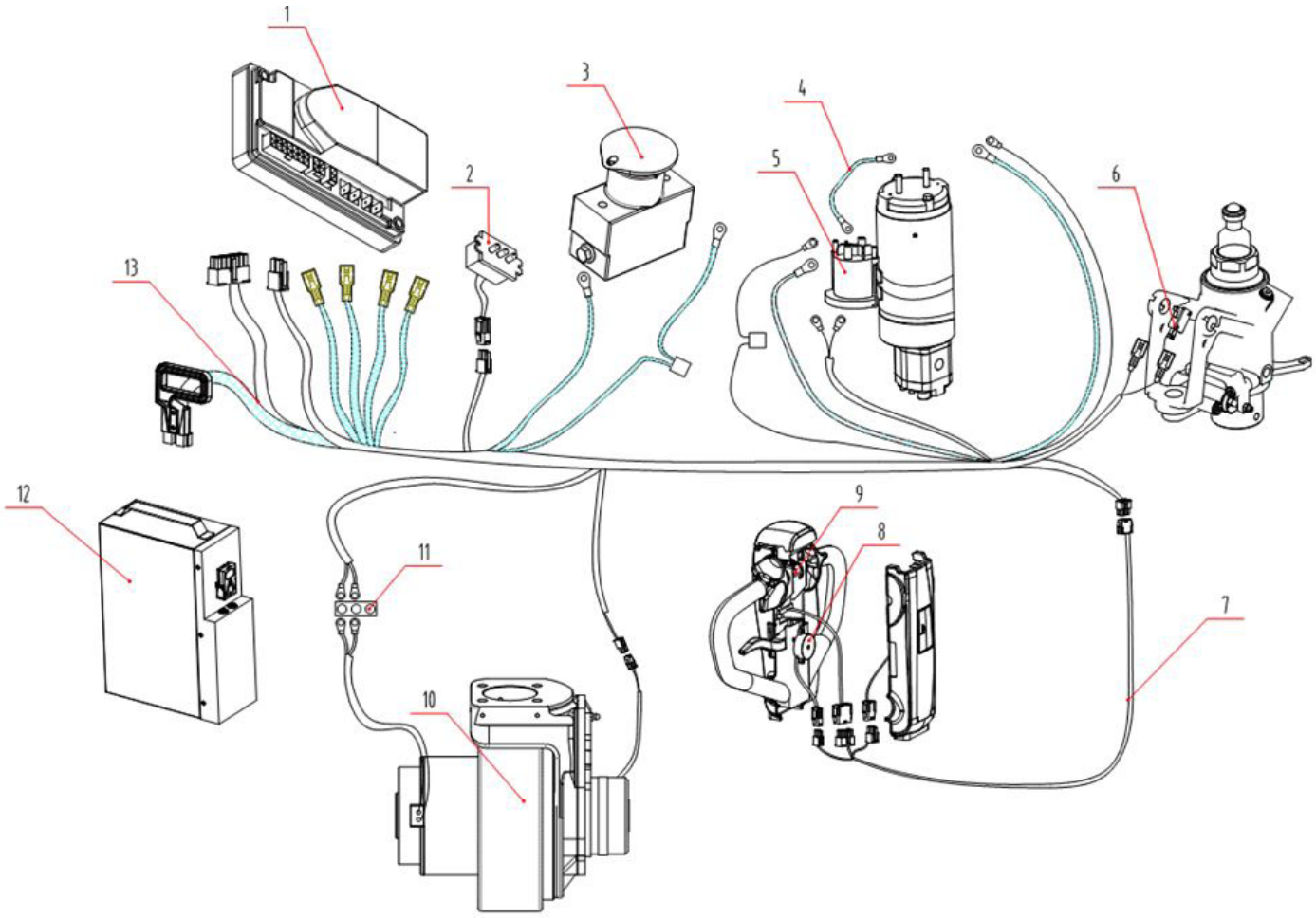
1. Locate the pressure adjustment valve and remove the screw (part #1)



1. Using a flat head screwdriver, turn the screw (part #2) clockwise to increase the pressure. The maximum pressure is not allowed to exceed 115% of the rated load. After adjusting the pressure, add the original screw back (part #1) and re-tighten it.

ELECTRICAL SYSTEM

ELECTRICAL SYSTEM DIAGRAM

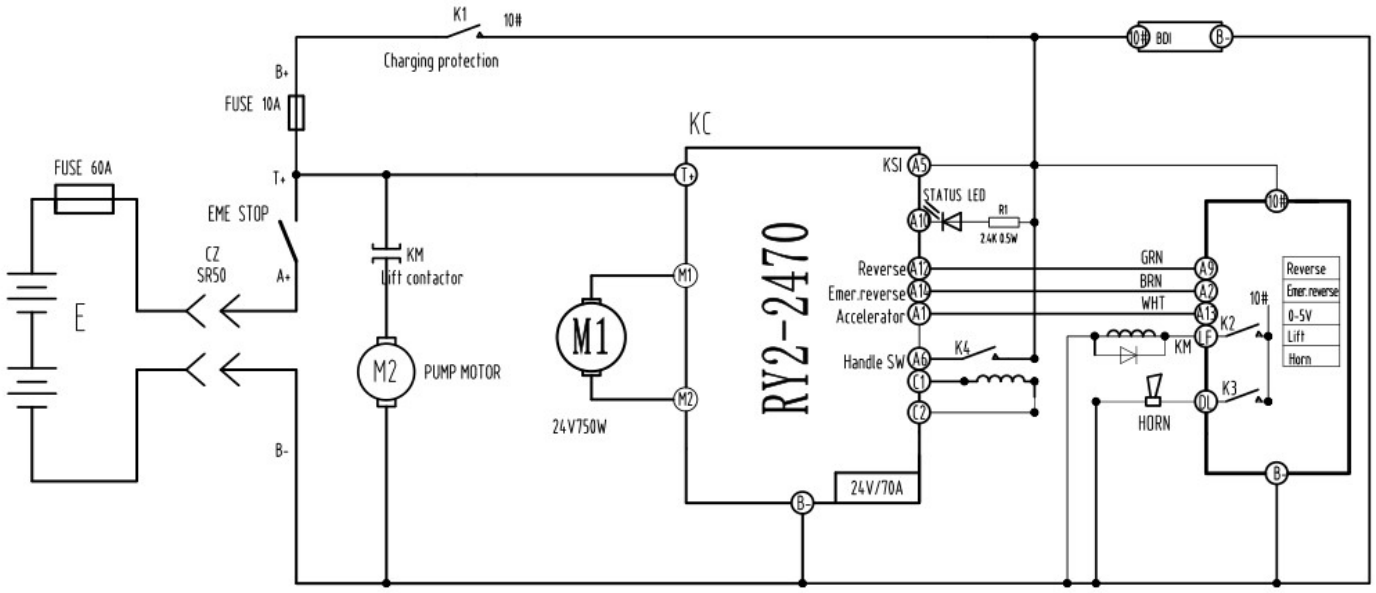


NO.	PART NO.	PART NAME
1	CBD15.01-01	Controller
2	733.01.0224.02	BDI
3	730.01.0080.01	DC Power Switch
4	CBD12W-Li.01.02-03	P+ Wiring
5	CBD12W.13-02	Contactor
6	730.12.0201.02	Micro Switch
7	CBD15.01.02-02	Handle Harness
8	CBD15WE.01.03-02	Buzzer
9	740.01.0009.01	Handle
10	082.01.0210.02	Driving Wheel with Mounted Motor Assembly
11	835.06.0003.03	Terminal Box
12	718.24.0020.02	Li-Battery Assembly
13	CBD15.01.02-01	Truck Body Harness

NOTE: Parts diagram for illustration purpose only.

Electric Pallet Jack

ELECTRICAL SCHEMATIC DIAGRAM



PRINCIPLE DESCRIPTION

When Moving:

Plug in the battery connector and turn on the emergency stop switch (EME STOP). When the handle is pulled down, the handle switch is closed (A6 = 24V). When the accelerator is rotated forward, the accelerator A1 outputs a 0-5V analog voltage, the brake is applied, and the controller power module drives the motor forward. The motor speed is proportional to the output voltage of the accelerator. In reverse, the accelerator is rotated in the opposite direction (A12 = 24V). At the same time, the accelerator A1 outputs a 0-5V analog voltage, the brake is applied, the motor rotates in reverse, and the speed is proportional to the output voltage of the accelerator.

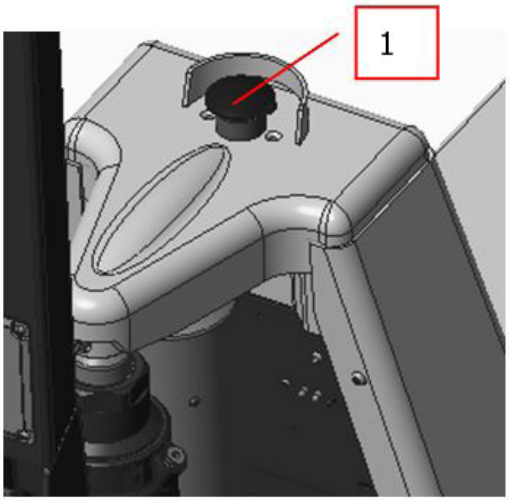
When lifting:

When the lifting button on the handle is pressed, the LF line is energized, the lifting contactor KM is activated, the contact is energized, the motor M2 is energized, and the pump oil is lifted.

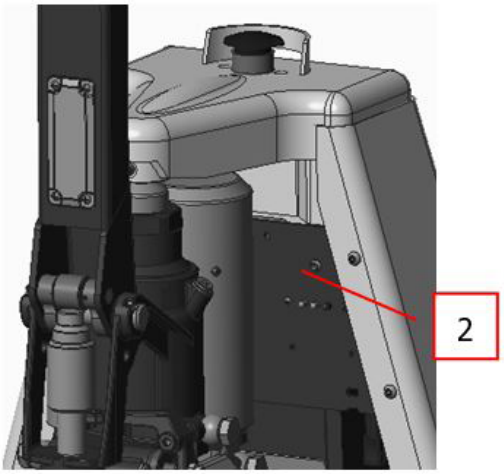
CONTROLLER SPECIFICATIONS

(1) Controller type: permanent magnet brush control
(2) Standby current: less than 0.5mA
(3) 5V sensor power supply current: 40mA
(4) Power supply voltage: 24V
(5) Power supply current: 150mA
(6) Working voltage: 24V
(7) Standard accelerator input: 0-5V
(8) Under voltage / overvoltage: 14V / 34V

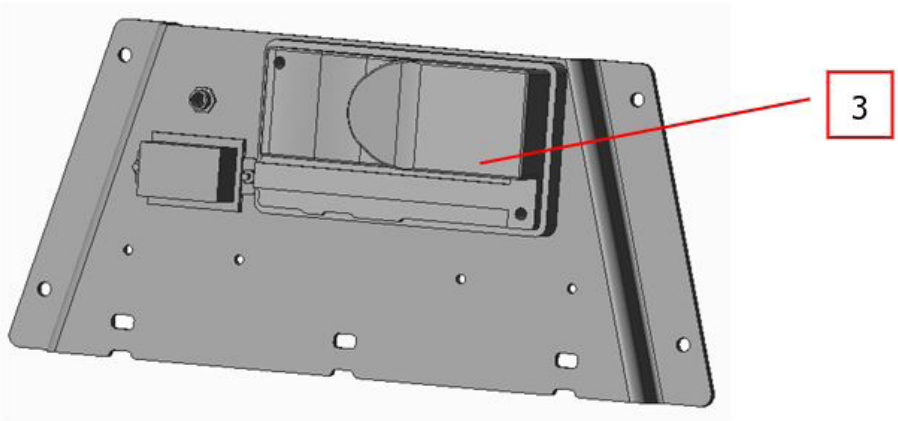
REMOVING THE CONTROLLER



1. Turn off the truck by pushing the emergency stop switch (#1) down.

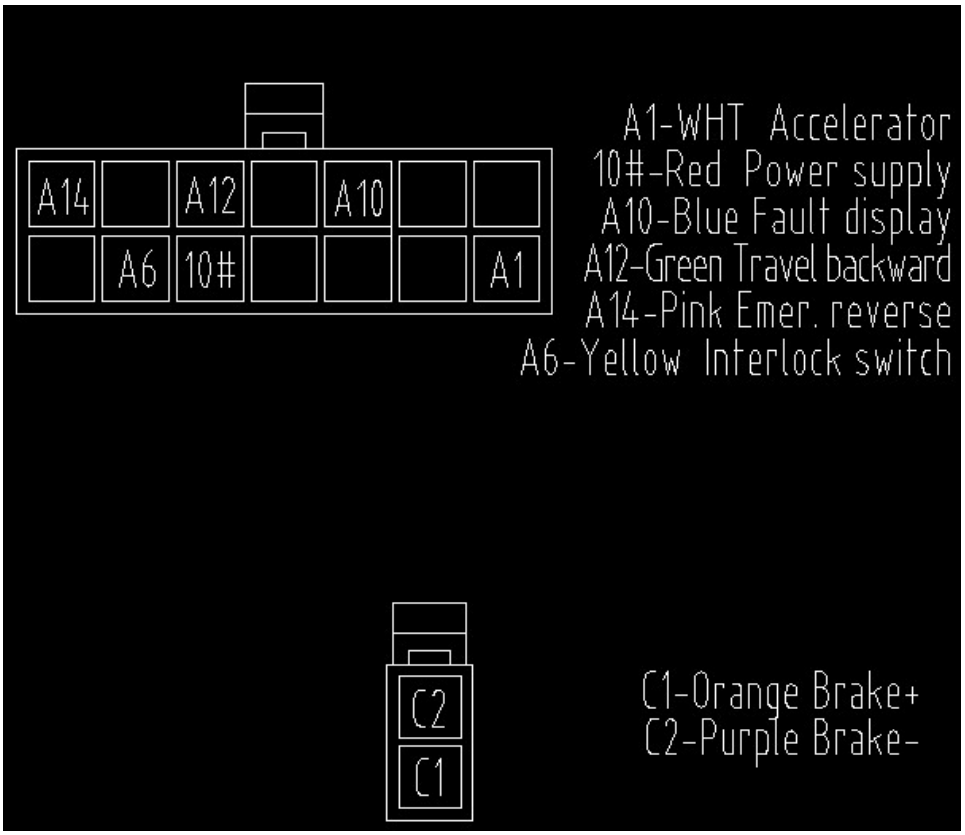


2. Remove the controller mounting plate screws (part #2)



3. Remove the controller from the rear of the mounting plate (part #3).

CONTROL WIRING



1: Line A1 is accelerator 0 ~ 5V signal
2: Line A6 is an interlock switch, effective at high level
3: Line A10 is fault display signal line
4: Line A12 is reverse switch, effective at high level
5: Line A14 is emergency reverse switch, high level is effective
6: Line 10 is 24V positive power supply
7: Line C1 is brake positive signal
8: Line C2 is brake negative signal

WIRING SPECIFICATIONS

Power line:
Red: B +, connected to battery positive pole
Black: B -, connected to battery negative pole
Yellow: M1, connected to motor M1
Green: M2, connected to motor M2

CONTROL ERROR TABLE

1	THERMAL FAULT	1.1	Over/low temperature cutoff	1. Temperature > 176° F or < 14° F
				2. Overloaded
				3. Operating in extremely harsh environments
				4. EM brakes do not release normally
2	THROTTLE FAULT	1.2	Potentiometer slide or low voltage out of range	1. Accerlerator input circuit shorted or is open
				2. Accelerator potentiometer failure
				3. Accelerator type selection error
3	SPEED POT FAULT	1.3	Speed limit potentiometer failure	1. Short circuit in the wiring of the speed limiter potentiometer
				2. Speed limit potentiometer circuit is open
4	UNDERVOLTAGE FAULT	1.4	Battery voltage too low	1. Battery voltage < 17V
				2. Poor/damaged battery or controller wiring

5	OVERVOLTAGE FAULT	1.5	Battery voltage too high	1. Battery voltage > 31V
				2. The charger is still connected when the vehicle is turned on
				3. Poor contact between the battery and leads
6	MAIN OFF FAULT	2.1	Main contactor coil drive "off" fault	1. Wrong opening of main contactor coil
7	EMR SEQUENCING FAULT [1212P]	2.2	Wrong sequence of operations	1. Emergency reverse switch is activated without the key (if applicable)
	MOTOR STALLED [1212]		Motor blocking	1. Motor is blocked or stuck
8	MAIN FAULT	2.3	Main contactor failure	1. Main contactor not adhering or open circuit
				2. Main contactor coil drive error
9	MAIN ON FAULT	2.4	Main contactor coil drive "on" fault	1. Main contactor coil is closed incorrectly
10	PUMP SRO FAULT 91212P]	2.5	Pump operation sequence error	1. Pump switch acts before key switch
11	WIRING FAULT	3.1	HPD failture time is greater than 10 seconds	1. Incorrect operation of accelerator
				2. Accelerator port or mechanical part of accelerator failed
12	BRAKE ON FAULT	3.2	Brake open fault	1. Open circuit of EM brake cell
				2. Short circuit of EM brake cell
13	PRECHARGE FAULT	3.3	Precharge cault	1. Controller damage
				2. Low battery voltage
14	BRAKE OFF FAULT	3.4	Brake off fault	1. Open circuit of EM brake cell
				2. Short circuit of EM brake cell
15	HPD FAULT	3.5	HPD failure	1. Wrong operating sequence of accelerator, key switch, and/or input
				2. Wrong adjustment of accelerator
16	CURRENTSENSE FAILSAFE	4.1	Current detection fault	1. Motor or motor wiring short circuit
				2. Controller failure
17	HARDWARE FAILSAFE	4.2	Motor voltage out of range	1. Motor voltage does not match accelerator input
				2. Motor or motor coil short circuit
				3. Controller failure
18	EEPROM CHECKSUM FAULT	4.3	EEPROM failure	1. Electronically erasable programmable read-only memory (EEPROM) failure
19	MOTOR OPEN [1212]	4.4	Motor open circuit	1. Motor open circuit
20	BATTERY DISCONNECT FAULT	4.5	Battery failure	1. Battery failure
				2) Poor battery terminal contact

Electric Pallet Jack

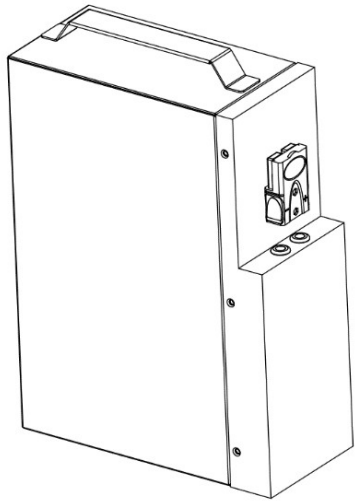
LITHIUM IRON BATTERY INFORMATION

Specifications:

TEST ITEM	UNIT	SPECIFICATION	TESTING METHOD
Rated Capacity	Ah	20	4A charge and 10A discharge
Min Capacity	Ah	19.0	4A charge and 10A discharge
Nominal Voltage	V	25.2	
Open Circuit Voltage	V	≥25.2	Fully charge battery, then test voltage after 1 hr
Internal Resistance	mΩ	≤2	Fully charge battery, then test AC internal resistance after waiting 1-4 hrs
Weight	kg	8	Weight the battery
Appearance		No damage or leakage to casing	Visually inspect battery and surrounding area
Storage Performance	° F	14° F - 113° F	

Charge Performance:

TEST ITEM	UNIT	SPECIFICATION
Charge Mode		CC/CV
Charge Current	A	4-8
Charge Cut-off Voltage	V	29.4
Charge Cut-off Current	mA	400
Charge Time	hour	3-5
Ambient Temperature	° F	32° F - 113° F



BMS Parameters:

NO.	ITEM	MIN.	NOMINAL	MAX.	UNIT
1	Max. Charge Voltage	29.20	29.40	29.60	V
2	Max. Charge Current		5	10	A
3	Max. Discharge Current		15	20	A
4	Overcharge Protection Voltage	4.15	4.20	4.25	V
5	Overcharge Release Voltage	4.05	4.10	4.15	V
6	Delay Time of Overcharge	0.96	1.20	1.44	S
7	Over-Discharge Protection Voltage	2.70	2.80	2.88	V
8	Over-Discharge Release Voltage	2.85	2.90	2.95	V
9	Delay Time of Over-Discharge	115	144	172	ms
10	Release Method of Short/Over-Discharge/Over Current Protection	Remove the load			
11	Release Method of Over-Discharge Protection	Charge the battery			
12	Normal Current MOSFET Temperature Rise (at maximum load)		149	176	° F
13	Operating Temperature Range	-4	77	113	° F
14	Storage Temperature Range	-4	77	140	° F

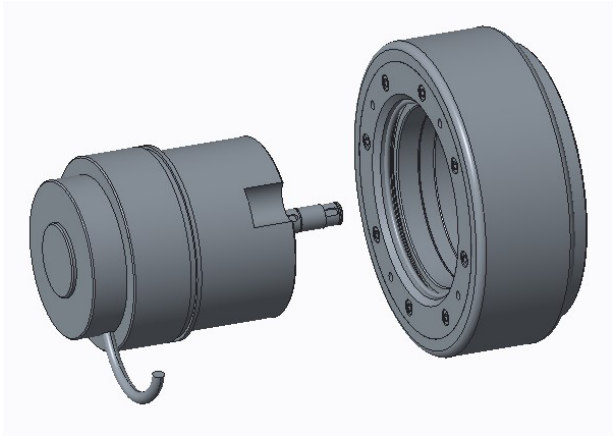
Electric Pallet Jack

CHARGER INFORMATION

INPUT VOLTAGE	AC 110V/220V
INPUT FREQUENCY	60/50 Hz
OUTPUT VOLTAGE	DC 29.4V
OUTPUT CURRENT	6A

DRIVING MOTOR INFORMATION

RATED VOLTAGE	24V DC
RATED POWER	750W
RATED SPEED	2650 RPM ±10%
RATED TORQUE	2.7 N.m
RATED CURRENT	41A±10%
INSULATION GRADE	F



Power line: yellow-M1, green-M2

HANDLE CONTROLS INFORMATION

LEAD WIRE COLOR	FUNCTION
RED	Power +24V
BLACK	B- 0V
BLUE	Foward
GREEN	Backward
WHITE	Accelerator Signal 0-SV
BROWN	Emergency Reverse