OWNER'S MANUAL

SEPJ-33 SEMI-ELECTRIC PALLET JACK

ACTUAL PRODUCT MAY NOT APPEAR EXACTLY AS SHOWN

WARNING

Do not operate or service this product unless you have read and fully understand the entire contents of this manual. Failure to do so may result in property damage, bodily injury or death.

BLUE GIANT®

ISSUE DATE: JANUARY, 2018 REV.0 (PART # 038-1079E)

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1.0 OWNER'S PURCHASE RECORD

OWNER'S PURCHASE RECORD Please record information for future inquiries and to validate warranty. (See Section 2.1 for warranty validation)	
Dealer:	**Date in Service:**
	Number of Units:
Owner's Name:	**Order Number:**
Serial Number:	**Year of Construction:**

The manufacturer offers a full line of dock levelers, dock safety equipment, accessories, ergonomic and scissor lift equipment, seals and shelters, and industrial trucks. Concurrent with a continuing product improvement program, specifications are subject to change without notice (see section 2.2 of this manual). Please contact the manufacturer for latest information. Some features illustrated may be optional in certain market areas.

2.0 INTRODUCTION

The following is a quick reference to important procedures that must be followed while using the VRC. It is not intended to cover, or suggest that it does cover, all procedures necessary to ensure safe operation. All operators should be aware of and abide by all workplace safety regulations applicable to the operation of the industrial truck. These laws and regulations include but are not limited to:

- The Occupational Safety and Health Act (USA)
- Occupational Safety and Health Acts for Individual States (USA)
- Canadian Material Handling Regulations

For additional information on these regulations as well as industry standards that may apply to this product, please contact:

American National Standards Institute (ANSI)
1430 Broadway
New York, NY 10018
Telephone: (212) 642-4900

Also a member of:

Loading Dock Equipment Manufacturers
A Product Section of Material Handling Industry of America
A Division of Material Handling Industry
8720 Red Oak Blvd, Suite 201
Charlotte, NC, 28217-3992
Telephone: (704) 676-1190

2.1 WARRANTY INFORMATION

Thank you for purchasing Blue Giant products. We appreciate your business, and are confident that our product will serve you for many years to come. In the event that you experience a problem with our product, our Warranty Center is here to support the Blue Giant product(s) that you have purchased.

To validate warranty on recently purchased equipment, please complete and submit your information with our online Warranty Registration at **www.bluegiant.com**.

DEALER INFORMATION
Name:
Contact:
Telephone:

For more information about Blue Giant Warranty Support, please contact your local Blue Giant Equipment dealer, representative or authorized partner near you. You may also visit www.bluegiant.com or phone 1.905.457.3900.

* Note that failure to validate warranty at the time of receipt can seriously affect the outcome of any claim.

2.2 EXCLUSION OF LIABILITY

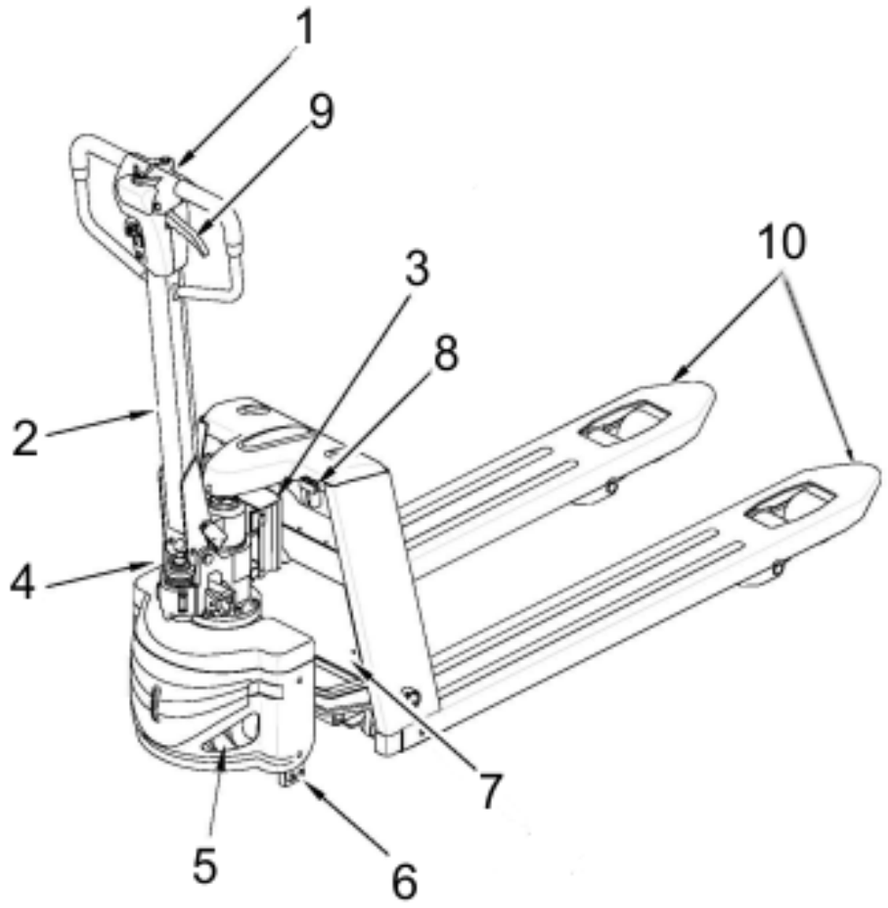
The manufacturer assumes no liability for damage or injury to persons or property which occur as a result of defects or faults in or incorrect use of dock equipment. The manufacturer also assumes no liability for lost profits, operating downtimes, or similar indirect losses incurred by the purchaser. Injury to third parties, irrespective of its nature, is not subject to compensation.

The manufacturer reserves the right to make changes at any time to the modules, components, and accessories, concurrent with its continuing product development program. Specifications, operating instructions, and illustrations included in this manual are subject to change without notice. Please contact manufacturer for the latest information.

2.3 MANUFACTURER'S NOTE

This electric pallet jack has been carefully inspected and tested at the manufacturer's plant prior to shipment, but should be checked upon receipt for transport damage. Any observed transport damage is to be listed on the signed copy of the freight document. Notify the freight forwarder of any damage WITHIN 48 HOURS.

3.0 TRUCK OVERVIEW



POS. #	DESCRIPTION	POS. #	DESCRIPTION
1	Control head	6	Balance block
2	Control handle	7	Batteries
3	Controller cover	8	Battery disconnect
4	Pump	9	Control Lever
5	Drive wheel	10	Forks

WARNING

Please refer to the data plate for the load capacity of the truck.
The truck can only be used on the level ground indoors, never use it on mezzanine or balcony area.
The truck should only be operated by authorized personnel.

4.0 GENERAL OPERATION

This section gives detailed operating instructions for the SEPJ-33 semi-electric pallet jack. The instructions are divided into the various phases of operations, such as operating lift, driving, and stopping. Routine precautions are included for safe operation.

4.1 OPERATING PRECAUTIONS

WARNING

Improper operation of the lift truck may result in operator injury, or load and/or lift truck damage. Observe the following precautions when operating the SEPJ-33 truck. indoors, never use it on mezzanine or balcony area. The truck should only be operated by authorized personnel.

The following safety precautions must be adhered to at all times.

- Do not operate this truck unless you have been trained and authorized to do so and have read all warnings and instructions in this manual and on the truck.
- All warnings and instructions must be read and understood before using the equipment.
- Equipment must be inspected by a qualified person on a regular basis.
- Do not operate this truck until you have checked its condition. Give special attention to wheels, horn, batteries, controller, lift system, brakes, steering mechanism, guards and safety devices.
- Operate truck only from designated operation position. Wear foot protection. Do not carry passengers.
- Observe applicable traffic regulations. Yield right of way to pedestrians. Slow down and sound horn at cross aisles and wherever vision is obstructed.
- Start, stop, travel, steer and brake smoothly. Slow down for turns and on uneven or slippery surfaces that could cause truck to slide or overturn. Use special care when traveling without load as the risk of overturn may be greater.
- Always look in direction of travel. Keep a clear view, and when load interferes with visibility, travel with load or lifting mechanism trailing.
- Do not overload truck. Check nameplate for load weight and load center information.
- Before lifting, be sure load is centered, forks are completely under load, and load is as far back as possible against the chassis.
- Do not handle loads which are higher than the chassis unless load is secured so that no part of it could fall backward.
- When leaving truck, neutralize travel control. Fully lower lifting mechanism and set brake. When leaving truck unattended, turn off power switch or optional key switch and remove key.

4.2 BEFORE OPERATION

Section 5.0 covers important inspection points on the SPEJ-33 lift truck which should be checked prior to operation. Depending on use, some trucks may require additional checks.

Section 5.0 shows a sample format for an Operator Checklist, which can be modified as necessary to fit your operation.

WARNING

Periodic maintenance of this truck by a qualified technician is required. If the truck is found to be unsafe and in need of repair, or contributes to an unsafe condition, report it immediately to the designated authority. Do not operate it until it has been restored to a safe operating condition. Do not make any unauthorized repairs or adjustments. All service must be performed by a qualified maintenance technician.

CAUTION

A qualified service technician should check the truck monthly for proper lubrication, proper fluid levels, brake operation, motor maintenance and other areas specified in section 5.4.

4.3 DURING BREAK-IN

During the first 100 hours of operation, operate the truck under light load conditions:

- Prevent the new battery from over discharging.
- Perform specified preventive maintenance services carefully and completely.
- Avoid sudden stop, starts or turns.
- Perform oil changes and lubrication earlier than specified.
- Limit load to 70-80% of the rated load.

5.0 OPERATOR CHECKS

ITEM	PROCEDURE	ITEM	PROCEDURE
Transmission and hydraulic systems	Check for signs of fluid leakage.	Wheels	Check drive wheel for cracks or damage. Move truck to check load for freedom of rotation.
Forks	Check for cracks and damage.	Hydraulic controls	Check operation of lift and lower to their maximum positions.
Safety signs	Check that warning labels, nameplate, etc., are in good condition and legible.	Brake	Check that brake actuates when steering arm is raised to upright position.
Horn	Check that horn sounds when operated.	Deadman/ Parking brake	Check that steering arm raises to upright position when released and brake applies.
Steering	Check for binding or looseness in steering arm when steering.	Battery disconnect	Check that battery can be disconnected and reconnected. Check for connector damage.
Travel controls	Check that speed controls on control head operate in all speed ranges in forward and reverse and that belly button switch functions.	Battery charge	Check the battery indicator.

SAMPLE OF OPERATOR CHECK LIST

BLUE GIANT®

Semi-Electric Pallet Jack
Daily Operator Check List

DATE: _____ OPERATOR: _____

VEHICLE NUMBER: _____ MODEL NUMBER: _____

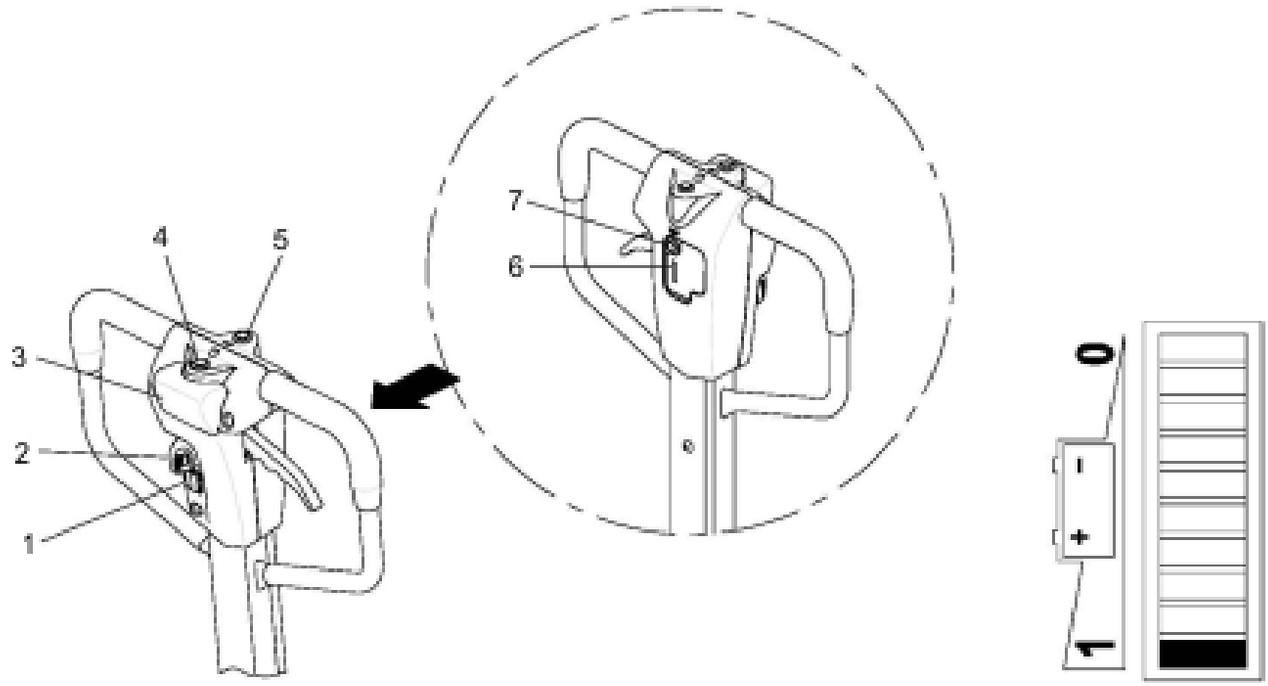
DEPARTMENT: _____ SHIFT: _____

HOUR METER READING - DRIVE: _____ HOIST: _____

CHECK	O.K. ✓	NEED MAINTENANCE
Casters		
Load Wheels		
Lift / Lower Control		
Forward and Reverse Controls		
Steering		
Floor Lock		
Hydraulic Leaks, Cylinders, Valves, Hoses, etc.		

July 31, 2017

5.1 CONTROLS



POWER BUTTON
The power button (1) is used to switch control current on and off.

KEY SWITCH (OPTIONAL)
The optional key switch is (2) has two positions, ON and OFF. Removing the key prevents use by unauthorized personnel.

BELLY-BUTTON BUTTON
The belly-button button (3) minimizes the possibility of the driver being pinned by the steering arm. If the switch presses against the operator while the lift truck is being driven toward the operator, the switch changes the direction of the lift truck.

FORWARD AND REVERSE BUTTONS
The forward button (5) and the reverse button (4) provide fingertip control for driving the truck.

BATTERY INDICATOR
When the key switch is turned on the battery charge indicator (6) displays the battery status. The colors of the LED represent the following conditions:

- The first LED lights when the battery is properly charged. As the battery charge decreases, additional LEDs will light.
- When the second to the last LED flashes, the battery is 70% discharged.
- When the last two LEDs flash alternately, the battery is 80% discharged and needs to be recharged.
- The battery indicator has a memory function, it can remember the battery power after the power is shut down. The next time the power is turned on, it will show the last level of discharge.

HORN BUTTON
The horn button (7) located on the front of the control head activates the horn.

5.2 OPERATION

FORWARD AND REVERSE TRAVEL

1. Turn on the power switch (1) and the optional key switch (2). Grasp the grips of the steering head so that the forward and reverse controls can be comfortably operated by either thumb.
2. Lower the steering arm to a comfortable position to disengage the brake and to energize the electrical circuits.
3. To move forward (with load in front), slowly press the forward button (5).
4. To change directions or to stop the truck, press the reverse button (4). The truck will come to a stop and then, unless the button is released, accelerate in the opposition direction.

BRAKING/EMERGENCY STOP

Pull out the battery disconnect (8). All electrical functions are cut out and the brake is applied.

AUTOMATIC BRAKING

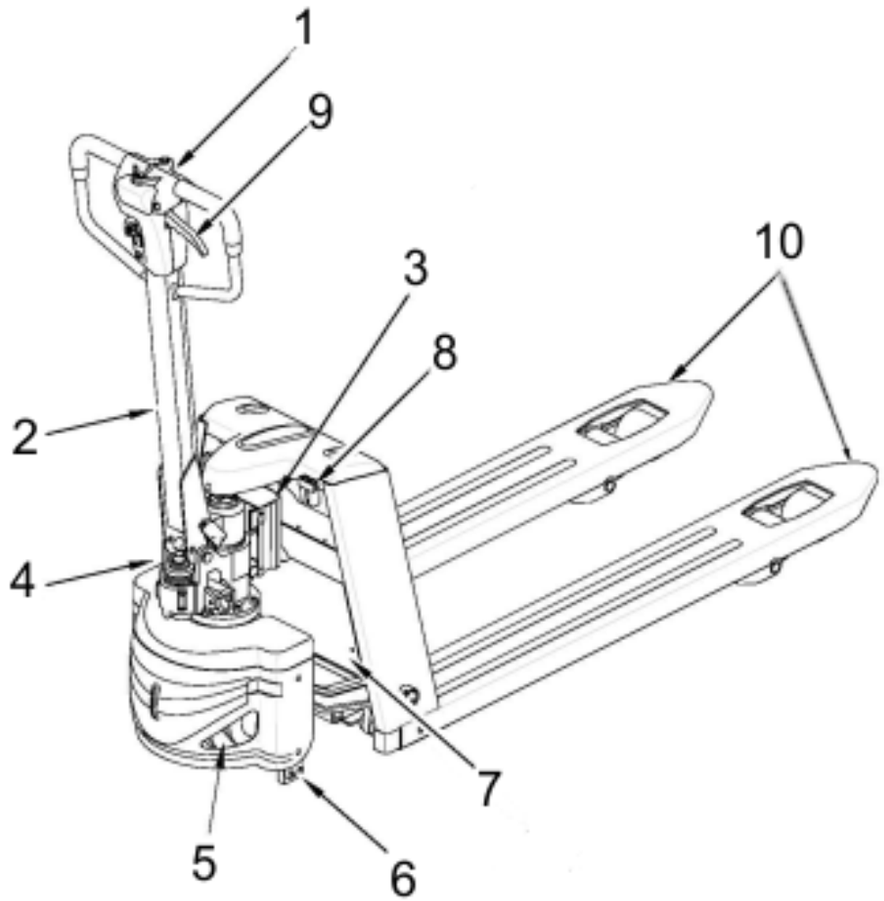
When the control handle (2) is released, it will automatically return to the vertical position and the brake will apply.

REGENERATIVE BRAKING

When the travel button (4 or 5) is released, the truck automatically brakes regeneratively. Once the truck slows down the brake then fully applies.

INVERSION BRAKING

Press the opposite direction travel button (4 or 5). The truck brake regeneratively until it starts to move in the opposite direction.



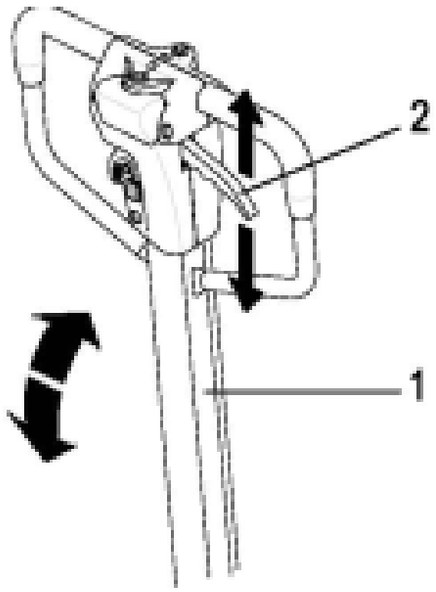
5.3 LIFT AND LOWER

LIFT
Push down on control lever (2) and move control handle (1) up and down until the desired lifting height is achieved. Reset lever (2) to the neutral position.

LOWER
Pull up on control lever (2) until the desired lower height is achieved. Reset lever (2) to the neutral position.

LOADING AND UNLOADING.
1. Move truck to location where load is to be picked up.
2. Move the truck into position so forks are within pallet or skid, and the load is centered over the forks and as far back as possible.
3. Raise forks to lift load.
4. Drive to area where load is to be placed.
5. Move truck to align load with its new position.
6. Lower the load until it rests squarely in place and the forks are free.
7. Slowly move the truck out from under the load.

PARKING
When finished with moving loads, return the truck to its maintenance or storage area. Turn off the power switch (1) and optional key switch (2) and remove the key. Disengage the battery disconnect (8). Charge batteries as necessary. Refer to battery care instructions, section 5.4.



5.4 PLANNED MAINTENANCE

Planned maintenance consists of periodic visual and operational checks, parts inspection, lubrication, and scheduled maintenance designed to prevent or discover malfunctions and defective parts. The operator performs the checks in section 5.2, and refers any required servicing to a qualified maintenance technician who performs the scheduled maintenance and any required servicing.

MONTHLY AND QUARTERLY CHECKS
Table on page 13 is a monthly and quarterly inspection and service chart based on normal usage of equipment eight hours per day, five days per week. If the lift truck is used in excess of forty hours per week, the frequency of inspection and service should be increased accordingly.

BATTERY CARE
The care and maintenance of the battery is very important to obtain efficient truck operation and maximum battery life.

Leakage voltage from battery terminals to battery case can cause misleading trouble symptoms with the truck's electrical system. Since components of the truck's electrical system are insulated from truck frame, leakage voltage will not normally affect truck operation unless a short circuit or breakdown of circuit wire insulation to truck frame occurs.

⚠ CAUTION

Gases produced by a battery can be explosive. Do not smoke, use an open flame, create an arc or sparks in the vicinity of the battery. Ventilate an enclosed area well when charging.

Batteries contain sulfuric acid which may cause severe burns. Avoid contact with eyes, skin or clothing. In case of contact, flush immediately and thoroughly with clean water. Obtain medical attention when eyes are affected. A baking soda solution (one pound to one gallon of water) applied to spilled acid until bubbling stops, neutralizes the acid for safe handing and disposal.

SAFETY RULES
Wear protective clothing, such as rubber apron, gloves, boots and goggles when performing any maintenance on batteries. Do not allow electrolyte to come in contact with eyes, skin, clothing or floor. If electrolyte comes in contact with eyes, flush immediately and thoroughly with clean water. Obtain medical attention immediately. Should electrolyte be spilled on skin, rinse promptly with clean water and wash with soap. A baking soda solution (one pound to one gallon of water) will neutralize acid spilled on clothing, floor or any other surface. Apply solution until bubbing stops and rinse with clean water.

- Do not bring any type of flame, spark, etc., near the battery. Gas formed while the battery is charging, is highly explosive. This gas remains in cell long after charging has stopped.
- Do not lay metallic or conductive objects on battery. Arcing will result.
- Do not touch non-insulated parts of DC output connector or battery terminals to avoid possible electrical shock.
- De-energize all AC and DC power connections before servicing battery.
- Do not charge a frozen battery.

VISUAL CHECKS	
INTERVAL	**INSPECTION OR SERVICE**
Monthly	Check electrical brake for proper operation.
	Check load wheels for wear. A poly load wheel must be replaced if worn to within 1/16 inch of hub. Check for separation from hub.
	Check drive wheel for wear. A poly drive wheel must be replaced if worn to within 3/4 inch of hub. Check for separation from hub.
	Inspect wiring for loose connections and damaged insulation.
	Inspect contactors for proper operation.
	Check deadman brake switch for proper operation.
Quarterly	Check lift for leakage.
	Check for excessive jerking of steering arm when stopping or starting.

5.5 BATTERY CARE AND CHARGING

⚠ CAUTION

Never smoke or bring open flame near the battery. Gas formed during charging is highly explosive and can cause serious injury.

1. Charge the battery only in areas designated for that use.
2. Battery terminals should be checked and cleaned of corrosion regularly. Good battery terminal contact is essential not only for operation, but also for proper charging of the battery.
3. The charging requirements will vary depending on the use of the truck. The battery should be given as equalizing charge on a weekly basis. This charge should normally be an additional three hours at the finish rate.
4. Make certain battery used meets weight and size requirements of truck. Never operate truck with an undersized battery.

BATTERY CLEANING

Always keep vent plugs tightly in place when cleaning battery. When properly watered and charged, the battery will remain clean and dry. All that is necessary is to brush or blow off any dust or dirt that may accumulate on them. However, if electrolyte is spilled or overflows from a cell, it should be neutralized with a solution of baking soda and water, brushing the soda solution beneath the connectors and removing grime from the covers. Then rinse the battery with cool water from a low pressure supply to remove the soda and loosen dirt. If batteries stay wet consistently, they may be either overcharged or over filled. This condition should be investigated and corrected.

MAINTENANCE FREE BATTERIES

Maintenance free batteries are completely sealed, will not require any watering and have a full 80% discharge available. Sealed maintenance free batteries contain a pressure release valve and under normal operating conditions do not require any special ventilation.

⚠ CAUTION

Do not try to open this battery or remove the pressure release valve.
Only under severe overcharging, such as connected to an improperly sized charger, will any significant amount of gasses be released from the battery. Also, being a valve regulated battery, it never requires watering.

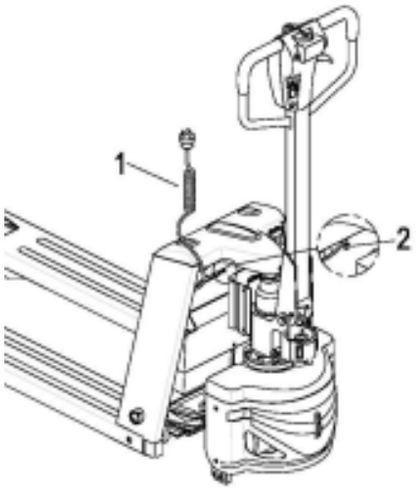
5.6 CHARGING BATTERIES

Charging requirements will vary depending on depth of discharge and temperature. Follow safety rules when placing a battery on charge.

Proceed as follows:

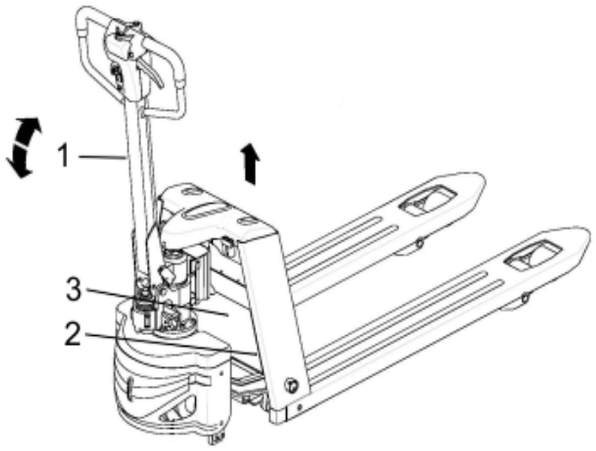
1. Park truck at charging station with forks lowered and turn the key switch off.
2. Check the condition of the AC cord and battery cables. If there are any cuts in the cable, any exposed wires, loose plugs or connectors, do not attempt to charge the batteries. Contact appropriate personnel for repairs to be made.
3. Pull out charger cord (1) and connect to the appropriate power supply. The LED (2) will indicate the charge status as follows:

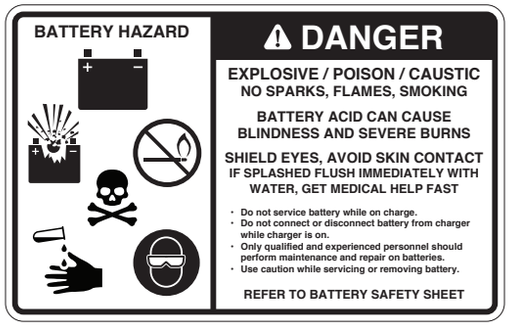
    a. Flashing red indicates the battery is charging.
    b. Green light indicates the battery is fully charged.
    c. Flashing yellow indicates that the charging.



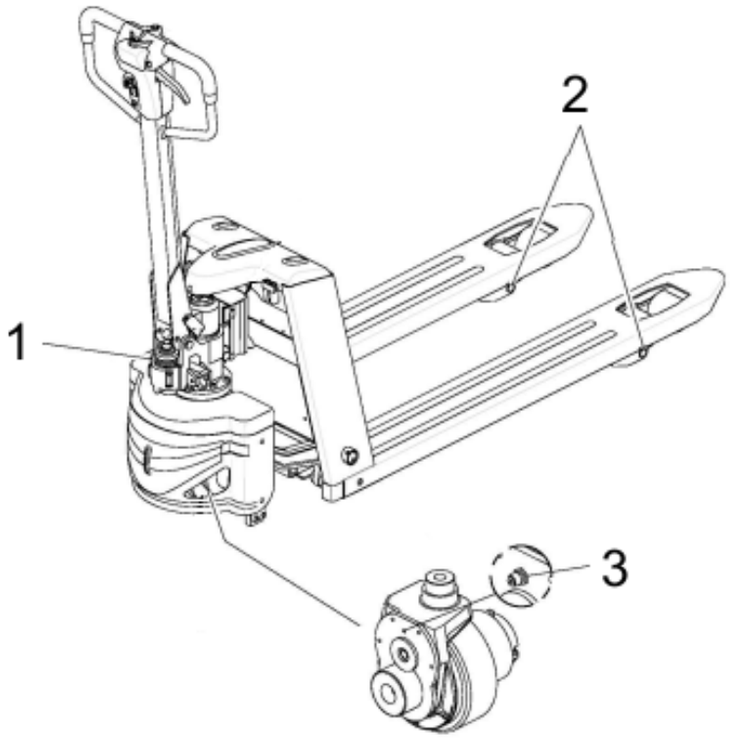
5.7 BATTERIES REPLACEMENT

1. Park the truck and turn off the power.
2. Lift the forks to the highest position by moving control handle (1) up and down and rotate handle (1) a few degrees to the left or right.
3. Remove two screws (2) and remove cover (3).
4. Tag and disconnect the battery cables.
5. Replace batteries.
6. Install in the reverse order of removal.





6.0 LUBRICATION



INDEX NO.	LOCATION	METHOD OF APPLICATION	TYPE	APPLICATION OF LUBRICANT
1	Hydraulic oil filter neck	Can	No.1	With lift carriage fully lowered, fill with hydraulic oil
2	Lift linkage fittings*	Brush	No.2	Lubricate contact surfaces
3	Transmission oil filler neck	Can	No.3	Fill with grease

* Raise lift carriage to gain access to grease fittings.

No.1: Hydraulic oil-HM32
No.2: Grease—Containing Mus2

7.0 TROUBLESHOOTING

MALFUNTION	PROBABLE CAUSE	CORRECTIVE ACTION
Truck will not travel nor will lift system operate.	1. Battery dead or disconnected. 2. Power switch (8) defective. 3. Optional keyswitch (8) defective. 4. Defective wiring.	1. Check battery connections and check battery voltage. 2. Bypass power switch to determine if it is malfunctioning. 3. Bypass keyswitch to determine if it is malfunctioning. 4. Check for open circuit. Repair as required.
Truck does not travel forward or reverse. All other functions operate normally.	1. Check all wiring. A loose connection may be the cause of malfunction. 2. Defective deadman switch (22). 3. Defective controller (2).	1. Tighten all loose connections before further troubleshooting. 2. Check and replace switch if defective. 3. Check for proper operation and replace if necessary.
Truck travels forward but not in reverse.	Defective reverse switch (5) in control head.	Check and replace switch if defective.
Truck does not slow with brake, or brake does not engage.	1. Defective deadman switch (22). 2. Defective electric brake.	1. Check deadman switch for continuity. If none found when the control arm is in the brake position, replace switch. 2. Replace brake.
Brake will not release.	1. Brake temperature above 281° F(140° C). 2. Open brake circuitry or wiring.	1. Allow to cool. 2. Make voltage checks
Brake drags.	Defective electric brake (2).	Replace.
Brake grabs.		
Abnormal noise and chatter when brake is applied.		
Oil sprays or flows from the top of the hydraulic assembly.	Defective hydraulic assembly.	Repair or replace hydraulic assembly.
Squealing sounds when lifting forks.	1. Oil level too low. 2. Lift linkage binding.	1. Identify oil leak. 2. Apply grease.
Forks do not lift to top.	Oil level too low.	Add oil to reservoir.
Forks lift, but will not go down.	Control rod (19) out of adjustment.	Loosen nut (21) and adjust nut (20) to allow lowering. Secure adjustment, tighten nut (21).
Load will not hold.	1. Control rod (19) out of adjustment. 2. Defective hydraulic assembly.	1. Loosen nut (21) and adjust nut (20) to allow lever (10) to return to neutral position. Secure adjustment, tighten nut (21). 2. Repair or replace hydraulic assembly.
Control handle does not return to the upright position.	1. Defective control handle. 2. Binding.	1. Replace control handle. 2. Check and free the binding item. Repair or replace as needed.
Truck moves forward when control handle is pulled down.	1. Belly-button switch defective. 2. Short in control head.	1. Check for short, and repair or replace as necessary. 2. Check wiring and repair as required.
Steering arm jerks excessively starting or stopping the truck.	Drive wheel worn.	Replace drive wheel if worn to within 3/4 inch of hub.
Drive motor is jerky.	Motor internally damaged or worn.	Replace motor.

7.1 CONTROLLER TROUBLESHOOTING

FAULT DETECTION

The controller provides diagnostics information to assist technicians in troubleshooting drive system problems. When a fault is detected it is stored inside the controller.

HAND HELD PROGRAMMER (OPTIONAL)

The hand held programmer is available that is designed specifically for use with the controller. The programmer is available through your Blue Giant dealer.

FAULT RECORDING

Fault events are recorded in the controller's memory. However, multiple occurrences of the same fault are recorded as one occurrence.

The fault event list can be loaded into the programmer for readout. The Special Diagnostics mode provides access to the controller's diagnostic history file. The history file contains the entire fault event list created since the diagnostic history file was last cleared. The standard diagnostics mode provides information about only the currently active faults.

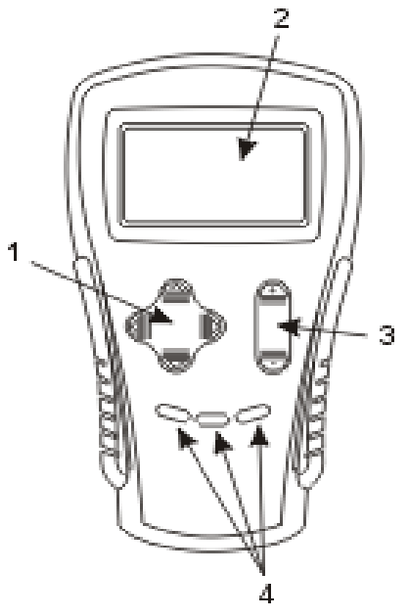
GENERAL CHECKOUT

Carefully complete the following checkout procedure.

⚠ CAUTION

Put the vehicle up on blocks to get the drive wheel off the ground before beginning these tests.
Turn the keyswitch off and make sure the brake is applied, the throttle is in neutral, and the forward/reverse switches are open. Do not stand, or allow anyone else to stand directly in front of or behind the vehicle during the tests.

1. Disconnect the battery charger and connect the programmer to the 4-pin connector on the controller.
2. Turn the lift truck key switch to the ON position. The programmer should power up with an initial display (2), and the controllers Status LED should begin steadily blinking a single flash. If neither happens, check for continuity in the key switch circuit and controller ground.
3. Put the controller into the diagnostic mode by pressing the "Menu Navigation Key" (1). Using the Navigation key, select the Faults menu. Display the Faults menu by pressing the Right side of the Navigation key. Press the Right side of the Navigation key again to display the list of System Faults. The display should indicate "No Known Faults."
4. With the brake released, select a direction and operate the throttle. The motor should begin to turn in the selected direction. If it does not, verify the wiring to the forward/reverse switches and motor. The motor should run proportionally faster with increasing throttle.



5. Put the controller into the test mode by using the Navigation key (1) to select the "Monitor" menu. Select the Monitor mode by pressing the "Right" arrow on the Navigation key. Press the Navigation key "Down" arrow to scroll down to observe the status of the forward, reverse, brake, emergency reverse, and mode switches. Cycle each switch in turn, observing the programmer. Each input should show the correct state on the programmer.
6. Check the controller's fault detection circuitry
7. Take the vehicle off the blocks and drive it in a clear area. It should have smooth acceleration and good top speed.
8. Test the plug braking of the vehicle. The vehicle should smoothly slow to a stop and reverse direction, with the audible plugging tone.
9. Verify that all options, such as high pedal disable (HPD), static return to off (SRO), and anti-tie- down, are as desired.
10. Check to see whether the emergency reverse (belly button) feature is working correctly. Verify that the circuit is operational by momentarily disconnecting one of the emergency reverse wires. The vehicle should be disabled and a fault indicated.

DIAGNOSTIC HISTORY

The handheld programmer can be used to access the controller's diagnostic history file. When the programmer is connected to the unit, the error log file is automatically uploaded into the handheld programmer.

To see the present status of the unit, use the Menu Navigation Key (1) to select: Faults->System Faults.

To access this log, use the Menu Navigation Key to select: Faults->Fault History

The faults are shown as a code and descriptive text. If there are multiple faults, you have to scroll through the list using the Up and Down Buttons on the Menu Navigation Key.

The faults may be intermittent faults, faults caused by loose wires, or faults caused by operator errors. Faults such as HPD or over-temperature may be caused by operator habits or by overloading.

After a problem has been diagnosed and corrected, clearing the diagnostic history file is recommended. This allows the controller to accumulate a new file of faults. By checking the new diagnostic history file at a later date, you can quickly determine whether the problem has been completely fixed.

To clear the diagnostic history file, select: Faults->Clear Fault History.

You will be asked to confirm your actions. Use the "plus" arrow (+) for yes to clear the menu and the "minus" arrow (-) (3) to cancel your selection and not clear the Fault History.

TEST THE FAULT DETECTION CIRCUITRY

1. Put the vehicle up on blocks to get the drive wheel off the ground.
2. Turn off the key power switch (8) or key switch (8) depending what is on the truck.
3. Using an inline fuse holder fitted with a 10 amp fuse and alligator clips, connect the controller's M and B- terminals.
4. Turn on the power switch (9) and key switch (8). Release the brake and apply the throttle. The motor should not operate.
5. Leave the key switch on and remove the in-line fuse wire. The vehicle status should continue to remain off.
6. Cycle the key switch off and on. Release the brake and apply the throttle. The vehicle should now operate normally.

DIAGNOSTICS AND TROUBLESHOOTING

The motor controller provides diagnostics information to assist in troubleshooting drive system problems.

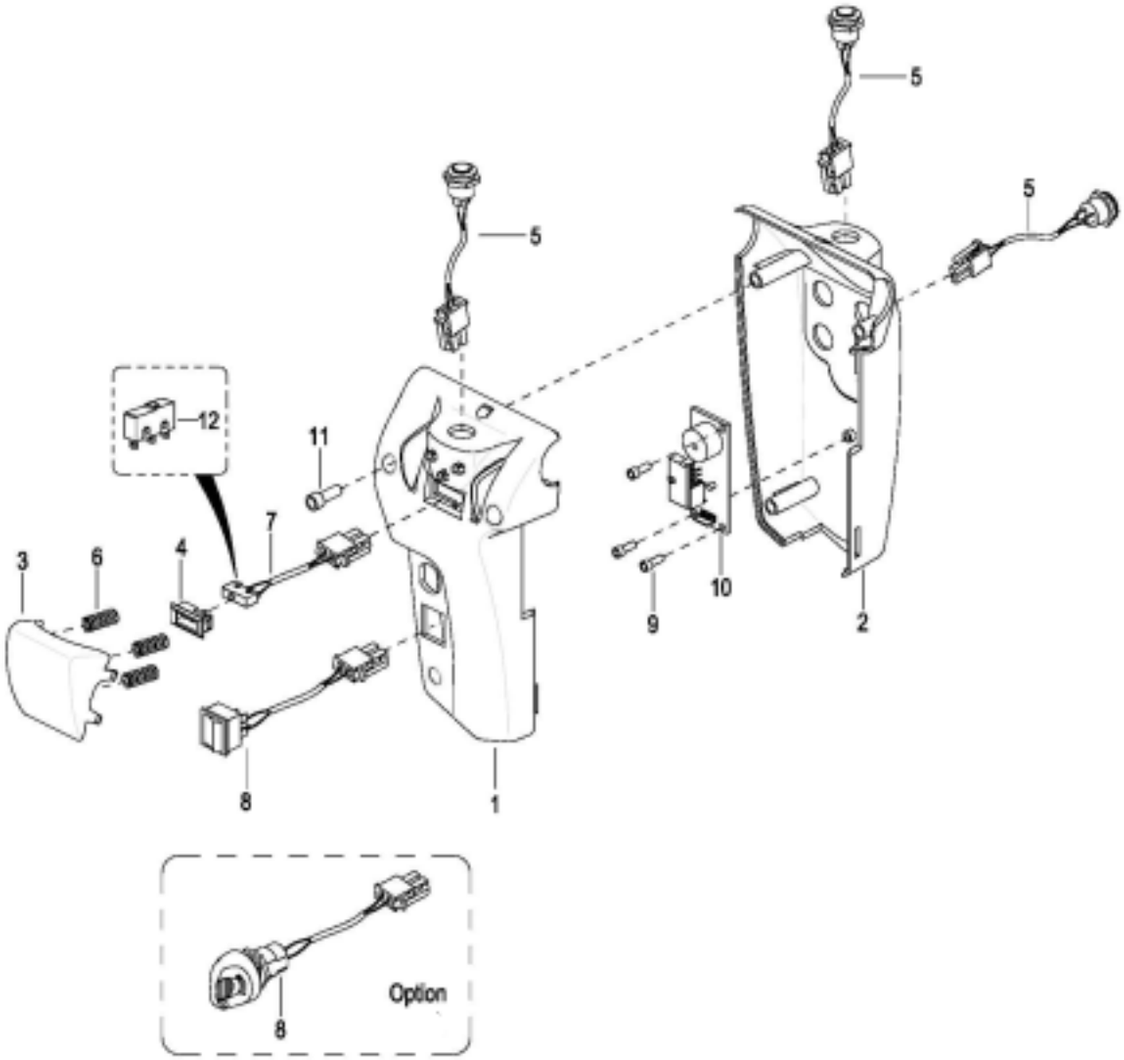
7.2 CONTROL HEAD

CONTROL HEAD REMOVAL

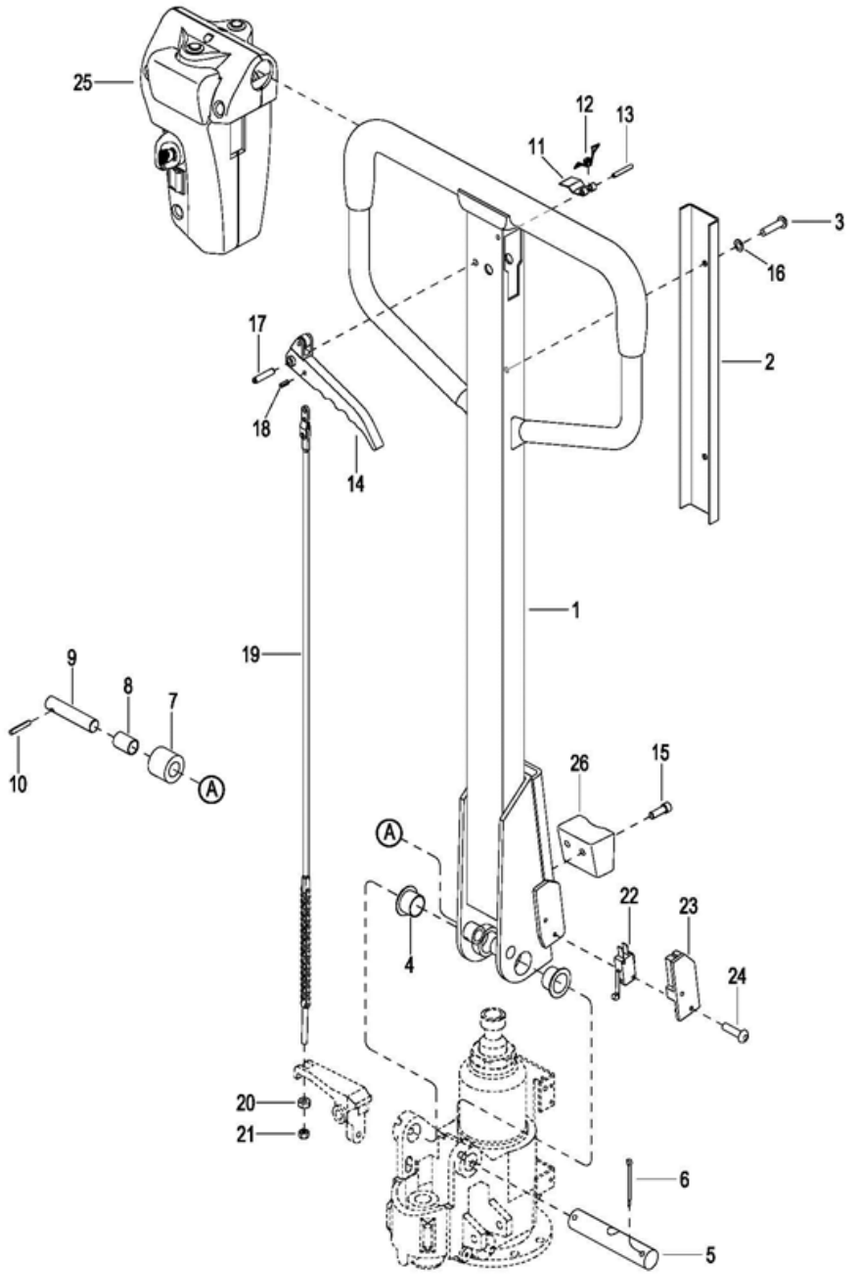
1. Turn off the power switch (8) or key switch (8) depending what is on the truck.
2. Remove three screws (11) and separate cover (1) and cap (2) from control handle (1).
3. Tag and disconnect harness (1) from switches (5, 7 and 8).

CONTROL HEAD INSTALLATION

1. Reconnect harness (1) to switches (5, 7 and 8).
2. Position cover (1) and cap (2) on control handle (1) and secure with three screws (11).
3. Turn on the power switch (8) or key switch (8) depending what is on the truck.



7.3 CONTROL HANDLE



7.4 REMOVAL AND INSTALLATION

BELLY-BUTTON SWITCH REPLACEMENT

1. Remove the control head.
2. Remove button (3) and springs (6) from cover (1).
3. Remove bracket (4) from cover (1) and remove switch (7).
4. Unsolder harness from switch (12).
5. Solder harness to new switch (12).
6. Position new switch in bracket (4) and install in cover (1).
7. Install the control head.

REVERSE SWITCH REPLACEMENT

1. Remove the control head .
2. Remove reverse switch (5) from the top of cover (1).
3. Position new switch (5) in cover (1).
4. Install the control head.

KEY SWITCH REPLACEMENT

1. Remove the control head.
2. Remove optional key switch (8) from the back of cover (1).
3. Position new switch (8) in cover (1).
4. Install the control head.

POWER SWITCH REPLACEMENT

1. Remove the control head.
2. Remove power switch (8) from the back of cover (1).
3. Position new switch (8) in cover (1).
4. Install the control head.

HORN SWITCH REPLACEMENT

1. Remove the control head.
2. Remove horn switch (5) from the front of cap (2).
3. Position new switch (5) in cap (2).
4. Install the control head.

FORWARD SWITCH REPLACEMENT

1. Remove the control head.
2. Remove forward switch (5) from the top of cap (2).
3. Position new switch (5) in cap (2).
4. Install the control head.

TRANSMISSION COVERS

REMOVAL

1. Turn off the power switch (8) or key switch (8) depending what is on the truck.
2. Remove cover (2).
3. Remove four screws (5), four lock washers (6) and four flat washers (7).
4. Remove cover (1).

INSTALLATION

1. Place cover (1) into position.
2. Secure with four screws (5), four lock washers (6) and four flat washers (7).
3. Turn on the power switch (8) or key switch (8) depending what is on the truck.

7.5 CONTROL HANDLE REMOVAL AND INSTALLATION

CONTROL ROD REMOVAL

1. Remove control head.
2. Remove cover (2) from control handle (1).
3. Remove nuts (21 and 20) from rod (19).
4. Remove pin (17) and remove control lever (14) with rod (19).
5. Remove pin (13) to remove spring (12) and leaf spring (11) from control handle (1).
6. Remove pin (18) to free rod (19) from lever (14).

CONTROL ROD INSTALLATION

1. Position rod (19,) and lever (14) together and install pin (18).
2. Position spring (12) and leaf spring (11) in control handle (1) and secure with pin (13).
3. Position control lever (14) with rod (19) in control handle (1) and secure with pin (17).
4. Position rod (19) in lever (10) and install nut (20) on rod (19)
5. Adjust nut (20) to obtain proper operation of lever (10).
6. Install nut (21) and jam against nut (20) to secure the adjustment.
7. Install cover (2) on control handle (1).
8. Install control head.

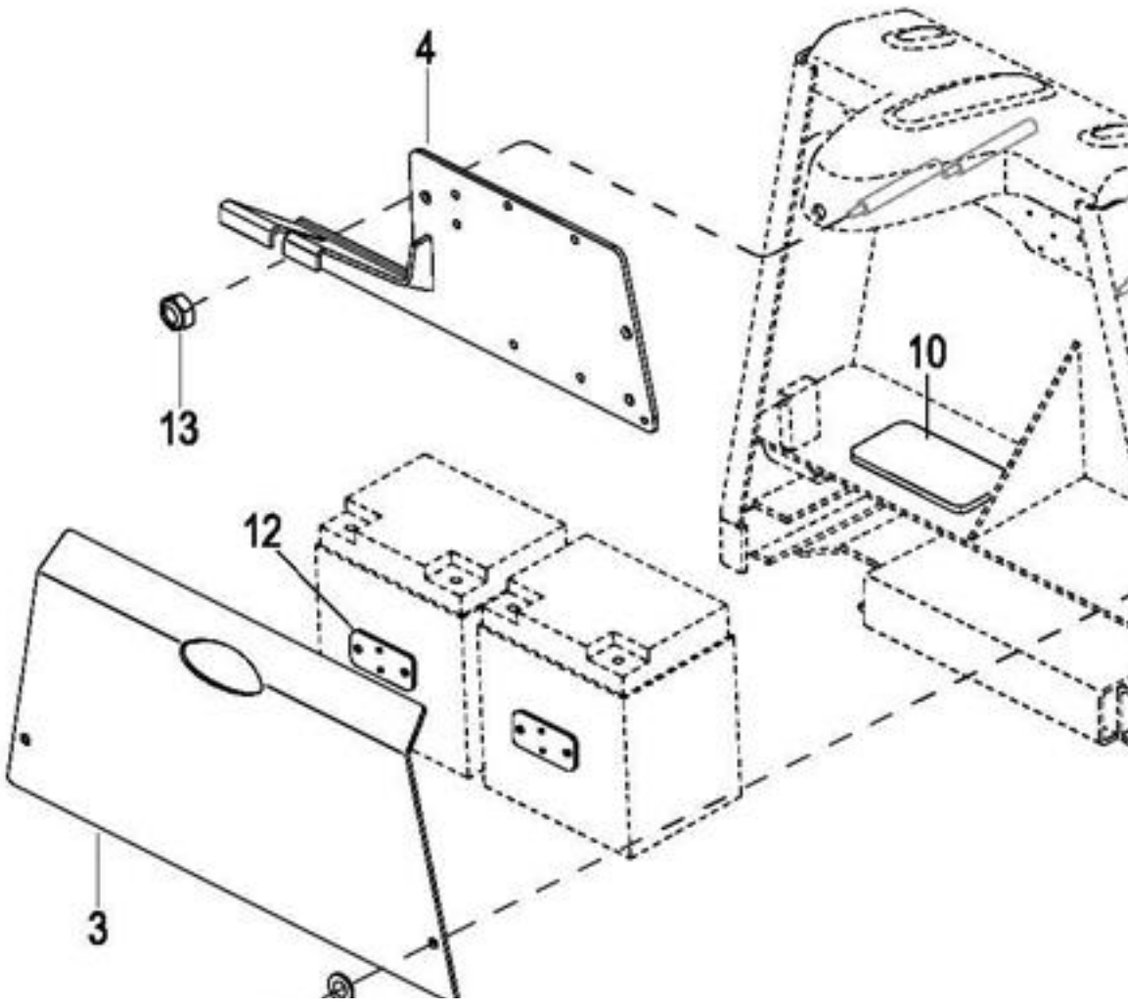
CONTROL HANDLE REMOVAL

1. Remove switch (22).
2. Remove control rod as described.
3. Attach a hoist to control handle (1).
4. Remove pins (6) from shaft (5).
5. Remove shaft (5) from control handle (1) and lift the handle from the hydraulic assembly.
6. Remove bushings (4) from control handle (1).
7. Remove pin (10) remove shaft (9), roller (7) and bushing (8) from control handle (1).
8. Remove two screws (27) and remove bumper.

CONTROL HANDLE INSTALLATION

1. Install bumper (26) on handle (1) and secure with two screws (27).
2. Install shaft (9), roller (7) and bushing (8) in control handle (1) and secure with pin (10).
3. Install bushings (4) in control handle (1).
4. Position control handle (1) over the hydraulic assembly and secure with shaft (5) and pins (6).
5. Install control rod.
6. Install switch (22).

8.0 COMPARTMENT COVER



8.1 BRAKES

The brake system consists of a transmission mounted brake. This brake is spring applied and electrically released.

BRAKE ASSEMBLY REPLACEMENT

1. Block load wheels.
2. Remove transmission covers.
3. Disconnect electric brake (2) from harness (1).
4. Remove the three mounting screws (29) and the brake.
5. Place the new brake into position and secure with the three mounting screws.
6. Reconnect electric brake (1) to harness (1).
7. Remove load wheel blocks and check operation.
8. Install the transmission covers.

8.2 TRANSMISSION, DRIVE WHEEL, LOAD WHEEL

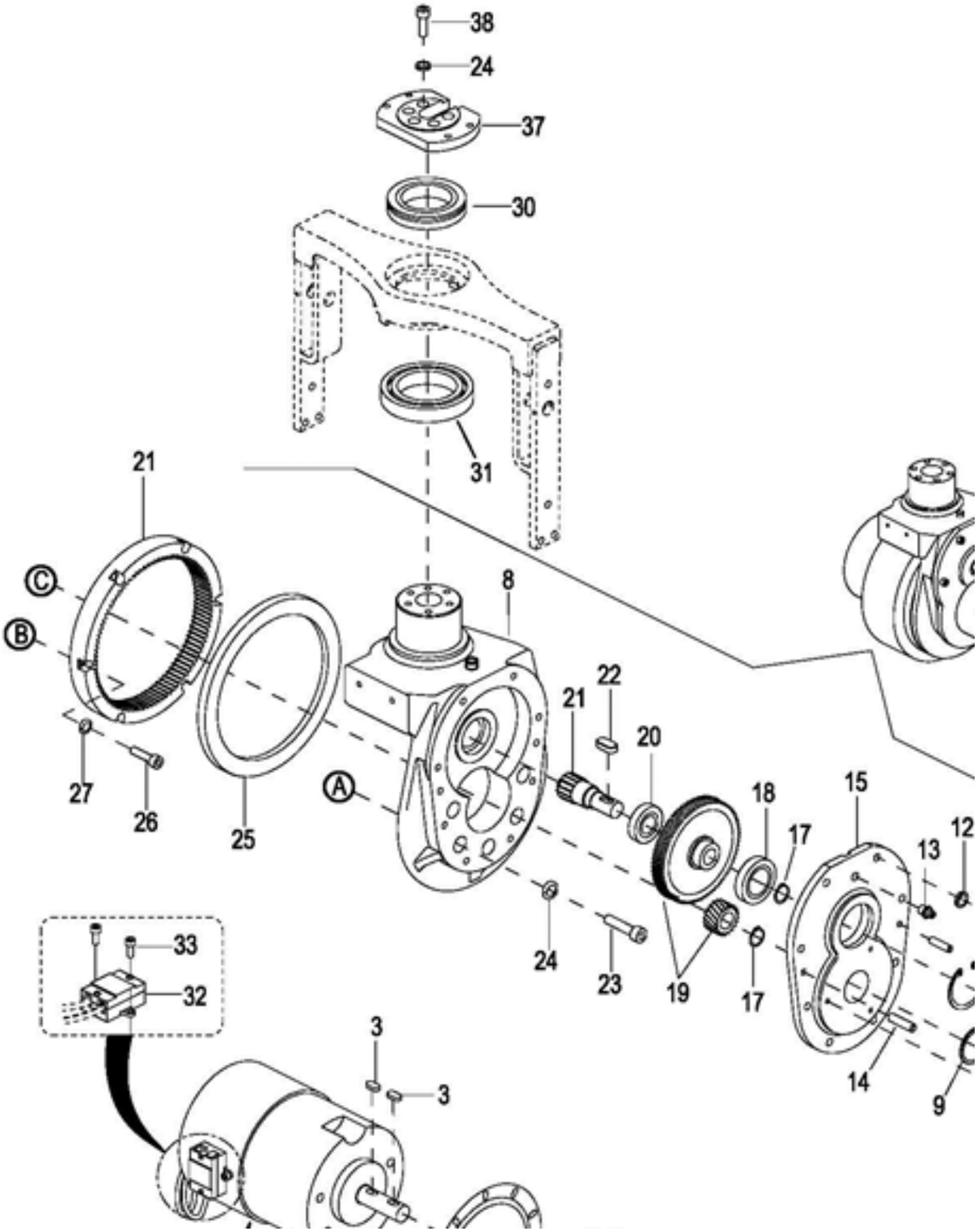
DRIVE WHEEL

1. Turn off the power switch (8) or key switch (8) depending what is on the truck.
2. Remove transmission covers.
3. Jack up the truck so the drive wheel is off the ground; then securely block the truck to prevent movement.
4. Disconnect cables (3 and 4) from drive motor.
5. Remove five screws (23), lock washers (24), and free motor (6) with drive wheel (4) from housing (8).
6. Remove the six screws (26), six lock washers (27) and gear (21).
7. Remove drive wheel (4) from motor (6).
8. Remove bearings (7) from wheel (4).
9. Install new drive wheel in reverse order of removal.
10. Install the transmission covers.
11. Turn on the power switch (8) or key switch (8) depending what is on the truck.

TRANSMISSION

1. Turn off the power switch (8) or key switch (8) depending what is on the truck.
2. Remove transmission.
3. Remove the brake (2).
4. Remove the control handle.
5. Remove four screws (2), four lock washers (3), four flat washers (4) and remove hydraulic assembly (1).
6. Support the housing (8) and remove five screws (38), five lock washers (24) and plate (37)
7. Free housing (8) from frame (2).
8. Install new transmission by reversing the steps above.

8.3 TRANSMISSION, MOTOR, BRAKE MOUTNING



9.0 LOAD WHEEL (SINGLE WHEEL)

REMOVAL

1. Raise forks.
2. Turn off the power switch (8) or key switch (8) depending what is on the truck.
3. Block the drive wheel to prevent the truck from rolling.
4. Jack up the forks to raise the load wheels off the floor. Securely block the forks in the raised position by positioning supports under both fork tips.

NOTICE

When shaft (12) is removed, load wheel assembly (14) will drop free.
Remove pin (11) securing shaft (12) and remove shaft (12) and load wheel assembly (14).

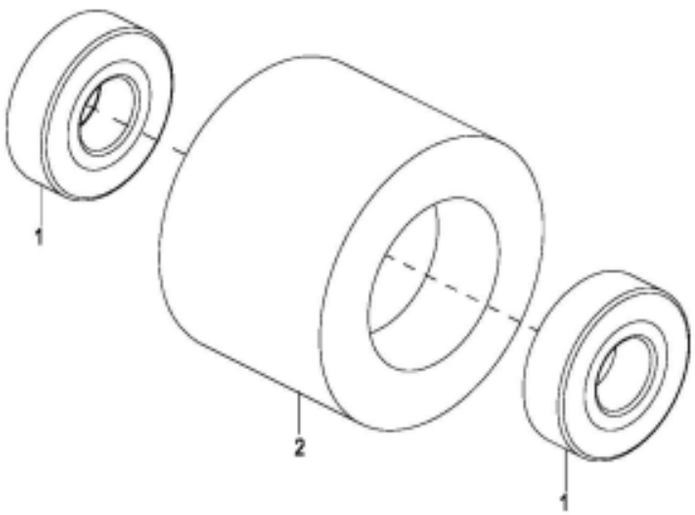
Inspect the load wheel assembly. If the load wheel is worn within 1/8" of the metal sleeve, or is cracked or damaged, replace the entire load wheel and bearing assembly. Blue Giant recommends that both load wheel assemblies be replaced at the same time. This ensures level and safe operation of the lift truck.

REPAIR

1. Remove bearings (1) from wheels (2).
2. Inspect bearings (1) and replace if necessary.
3. Reassemble bearings (1) in wheels (2).

LOAD WHEEL INSTALLATION

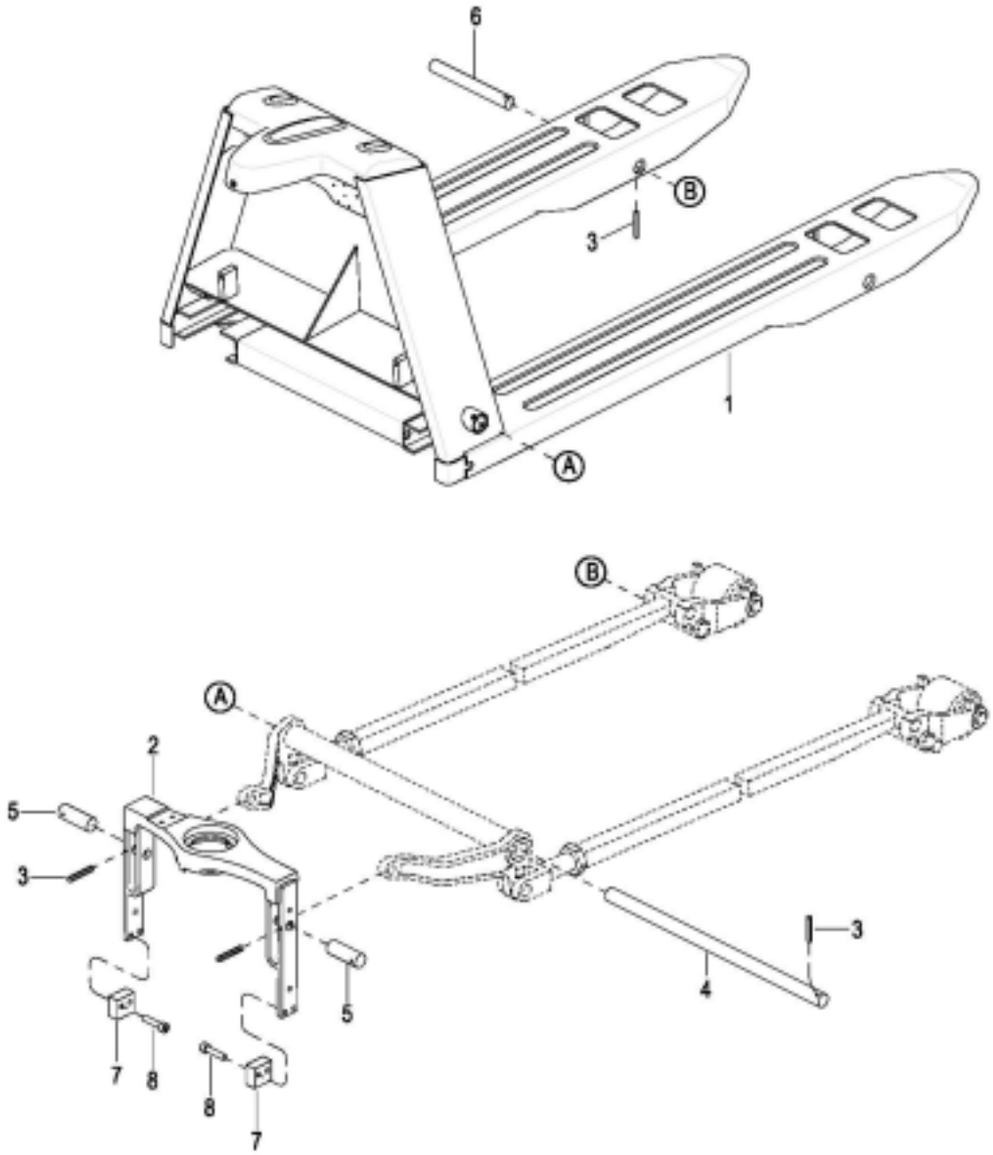
1. Position load wheel assembly (14) in wheel bracket (8).
2. Install shaft (12) and secure with pin (11).
3. Remove blocking from under the truck.
4. Lower the forks.
5. Turn on the power switch (8) or key switch (8) depending what is on the truck.



10.0 LIFT LINKAGE (SINGLE WHEEL)

REMOVAL

1. Lift complete truck to height sufficient to permit access to lift linkage under forks. Provide blocking under frame (1), transmission and at tips of the forks.
2. Turn off power switch (8) or key switch (8) depending what is on the truck.
3. Remove pins (3) and remove shafts (5).
4. Remove pins (3) from each side of frame (1). Support link assembly and remove shaft (4).
5. Remove pins (3) and remove shafts (6) and washers (2).
6. Lower link assembly to the floor.

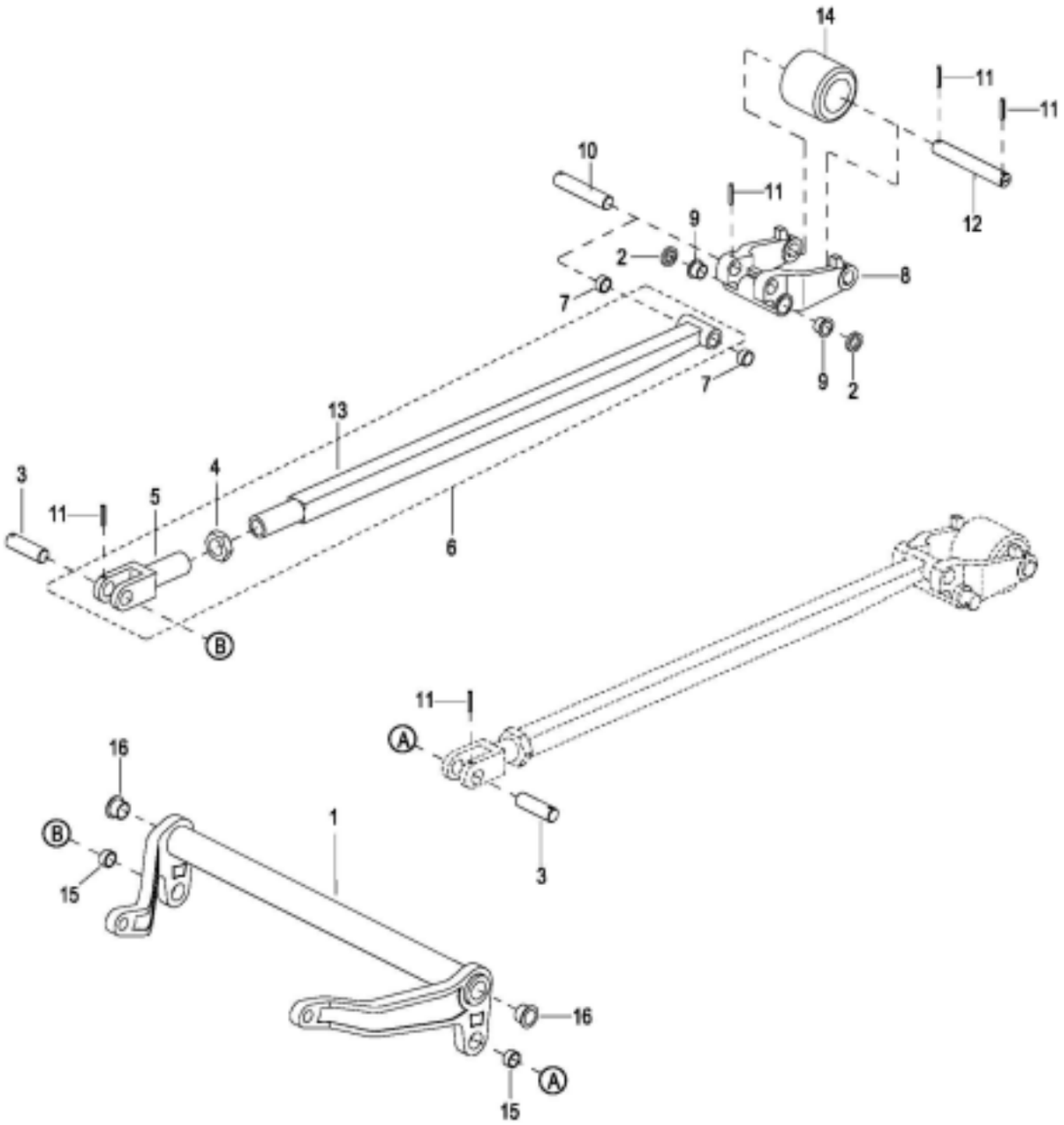


REPAIR

1. Remove pins (11), shafts (12) and load wheels (14) from brackets (8).
2. Remove pins (11) and shafts (10). Free brackets (8) from tension bars (6).
3. Remove bushings (9) from brackets (8) if replacement is necessary.
4. Remove pins (11) from tension bars (6) and free tension bars from link (1).
5. Loosen nuts (4) and remove clevises (5) from tension bars (13).
6. Install reassemble by reversing the steps above.

INSTALLATION

1. Position link assembly under frame (1).
2. Raise link assembly into position and install shaft (4) through frame (1). Secure shaft (4) with pins (3).
3. Position wheel brackets (8) in frame (1) and install shafts (6). Secure shafts(6)with pins (3).
4. Position link assembly and install shafts (5). Secure shafts (3) with pins (2).
5. Remove blocking and lower the truck to the ground.
6. Turn on power switch (8) or key switch (8) depending what is on the truck.



11.0 HYDRAULIC SYSTEM SERVICING

HYDRAULIC ASSEMBLY REMOVAL

The hydraulic system and electrical system can be removed as an assembly to provide additional clearance for various maintenance procedures.

WARNING

When forks are raised, pressure exists in the hydraulic system lines and fittings. To ensure release of pressure, forks must be fully lowered and the batteries disconnected before performing any maintenance on the hydraulic system.

REMOVAL

1. Fully lower forks.
2. Turn off power switch (8) or key switch (8) depending what is on the truck.
3. Remove screw (5).
4. Lift the fork frame high enough to free piston rod from the frame. Provide blocking under forks.
5. Remove the controller (2).
6. Remove the transmission covers.
7. Remove the control handle.
8. Remove four screws (2), four lock washers (3), four flat washers (4) and assembly (1).

INSTALLATION

1. Position assembly (1) on the frame and secure with four screws (2), four lock washers (3), four flat washers (4).
2. Lift the fork frame and remove blocking from under forks. Slowly lower the fork frame inserting piston rod (7) in position in the fork frame.
3. Install screw (5).
4. Install the control handle.
5. Install the transmission covers.
6. Install controller (2).
7. Turn on power switch (8) or key switch (8) depending what is on the truck.

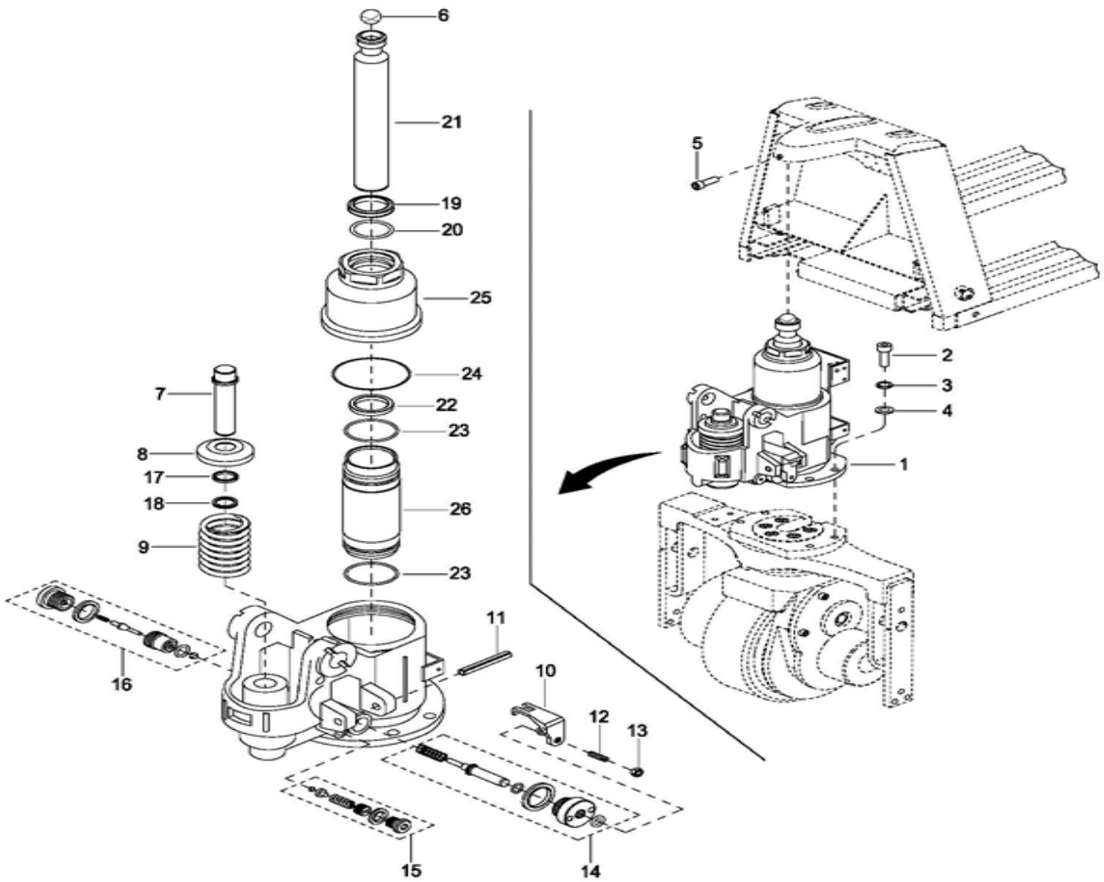
HYDRAULIC PUMP SPRING REPLACEMENT

1. Fully lower forks.
2. Turn off power switch (8) or key switch (8) depending what is on the truck.
3. Remove the control handle.
4. Remove piston rod (7), seat (8), wiper (17), seal (18) and spring (9).
5. Replace the spring and reassembly in reverse order.

HYDRAULIC ASSEMBLY REPAIR

1. Fully lower forks.
2. Turn off power switch (8) or key switch (8) depending what is on the truck.
3. Remove the control handle.
4. Refer to figure on page 28 for disassembly.
5. Reassembly in reverse order.

11.1 HYDRAULIC SYSTEM



12.0 ELECTRICAL CONTROL PANEL

NOTICE
Erratic operation of the truck may be caused by defective controller components. Before removing the electrical panel, perform troubleshooting procedures per section 7.0, to determine corrective action to be taken.

MAINTENANCE

There are no user-serviceable parts inside the controller. No attempt should be made to open the controller. Opening the controller may damage it and will void the warranty.

The controller is programmed at the factory specifically for the truck model on which it is equipped. It is important to replace the controller with the correct pre-programmed unit to assure proper performance settings intended for that particular truck.

It is recommended that the controller exterior be cleaned periodically, and if a Curtis Handset is available, this periodic cleaning provides a good opportunity to check the controller's diagnostic history file. It is also recommended that the controller's fault detection circuitry be checked whenever the vehicle is serviced.

CONTROLLER REMOVAL

1. Turn off power switch (8) or key switch (8) depending what is on the truck.
2. Remove screw (5), lock washer (6) and clamp (7) securing the wiring to the cover.
3. Remove remaining four screws (5), lock washers (6) and cover (1) and free the cover from the hydraulic assembly.
4. Tag and disconnect harness (2 and 3) from controller (2).
5. Tag and disconnect cables (2, 3, 4 and 6) from controller (2).
6. Remove two nuts (8), two lock washers (6), two screws (3) and separate controller (2) from cover (1).

CONTROLLER INSTALLATION

1. Position controller (2) in cover (1) and secure with two screws (3), two nuts (8) and two lock washers (6).
2. Reconnect harness (2 and 3) to controller (2).
3. Reconnect cables (2, 3, 4 and 6) from controller (2).
4. Secure cover with controller to the hydraulic assembly with four screws (5) and cover (1).
5. Secure wiring to cover (1) with clamp (7), lock washer (6) and screw (5).
6. Turn on power switch (8) or key switch (8) depending what is on the truck.

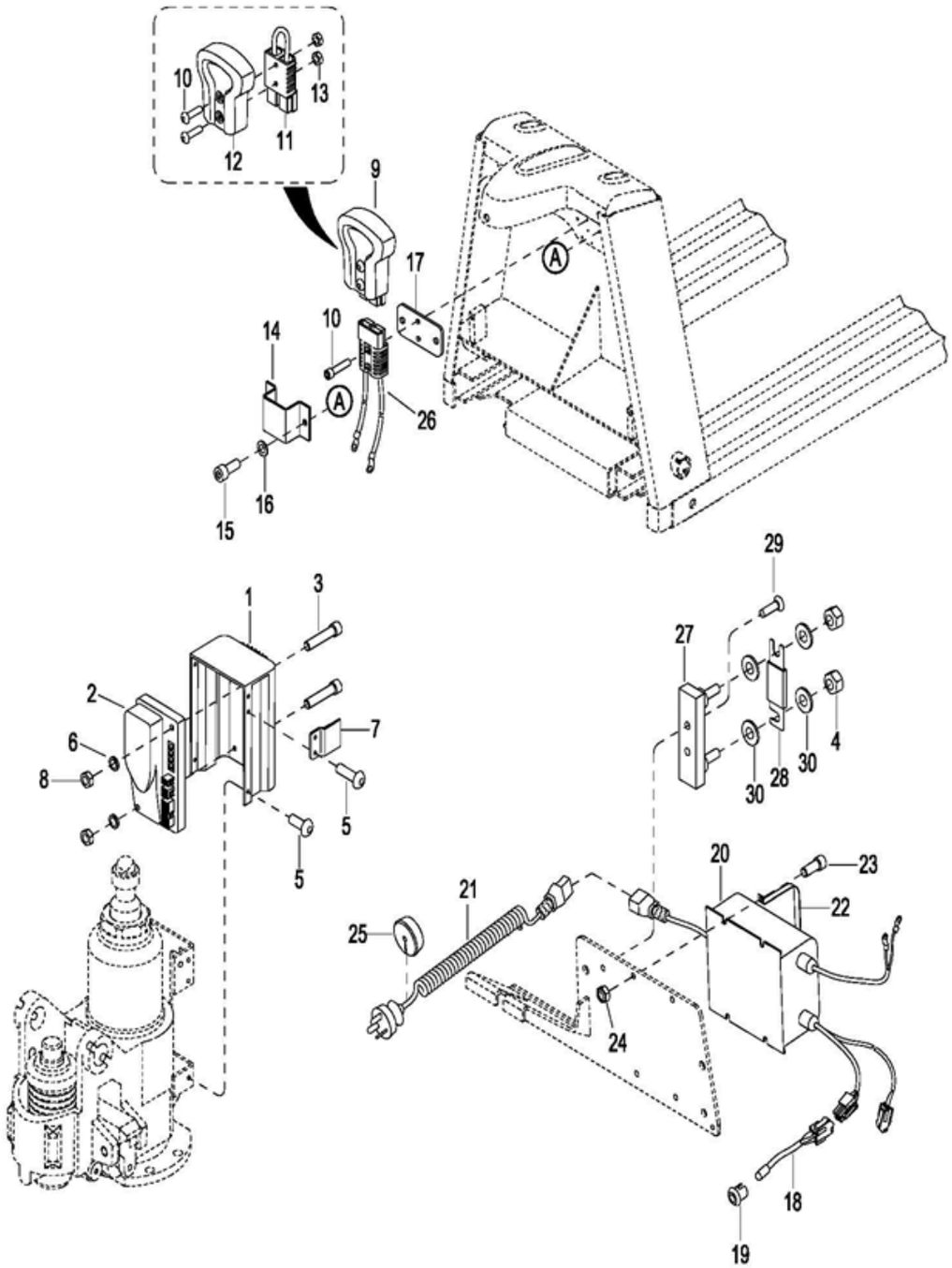
CHARGER REMOVAL

1. Turn off power switch (8) or key switch (8) depending what is on the truck.
2. Remove cap (25). Tag and disconnect cable (21) from charger (20).
3. Tag and disconnect charger lead from LED lamp (18).
4. Tag and disconnect remaining two charger leads.
5. Remove four nuts (24), four screws (23) and two brackets (22). Remove charger (20).

CHARGER INSTALLATION

1. Reposition charger (20) and secure with two brackets (22), four screws (23) and four nuts (24).
2. Reconnect charger lead to LED lamp (18).
3. Reconnect the two remaining charger leads.
4. Reconnect cable (21) to charger (20) and install cap (25).
5. Turn on power switch (8) or key switch (8) depending what is on the truck.

12.1 ELECTRICAL SYSTEM



BATTERY DISCONNECT REMOVAL

1. Turn off power switch (8) or key switch (8) depending what is on the truck.
2. Remove battery disconnect (9) from connector (26).
3. Tag and disconnect connector (26) from the battery and controller (2).
4. Remove two screws (15), two flat washers (16) and bracket (14).
5. Remove two screws (10) and remove battery disconnect (28) from the frame.

EMERGENCY DISCONNECT INSTALLATION

1. Position connector (28) on the frame and secure with two screws (10).
2. Install bracket (14) and secure with two screws (15) and two flat washers (16).
3. Reconnect connector (26) to the battery and controller (2).
4. Reinstall battery disconnect (9) to connector (26).
5. Turn on power switch (8) or key switch (8) depending what is on the truck.

DRIVE MOTOR

The drive motor exposed surfaces should be cleaned at least once a month to assure proper cooling of motor. Use an air hose to blow dust off of motor surfaces. The drive motor is replaceable but not repairable.

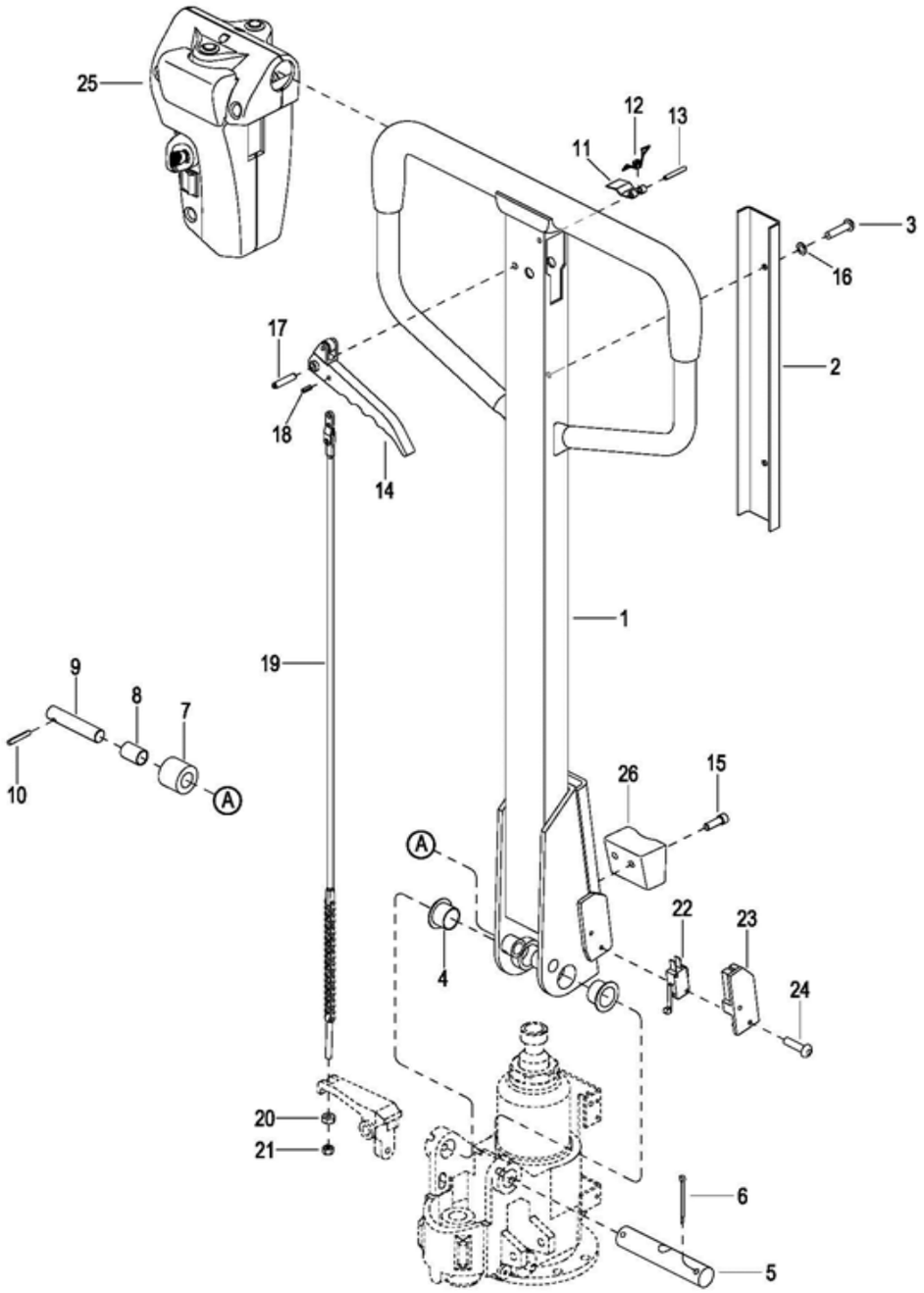
DEADMAN SWITCH REPLACEMENT

1. Turn off power switch (8) or key switch (8) depending what is on the truck.
2. Disconnect wiring from the deadman switch (22).
3. Remove the two screws (24), bracket (23) and switch (22).
4. Position the new switch (22), bracket (23) and secure with the two screws (24).
5. Turn on power switch (8) or key switch (8) depending what is on the truck.

13.0 PARTS BREAKDOWN

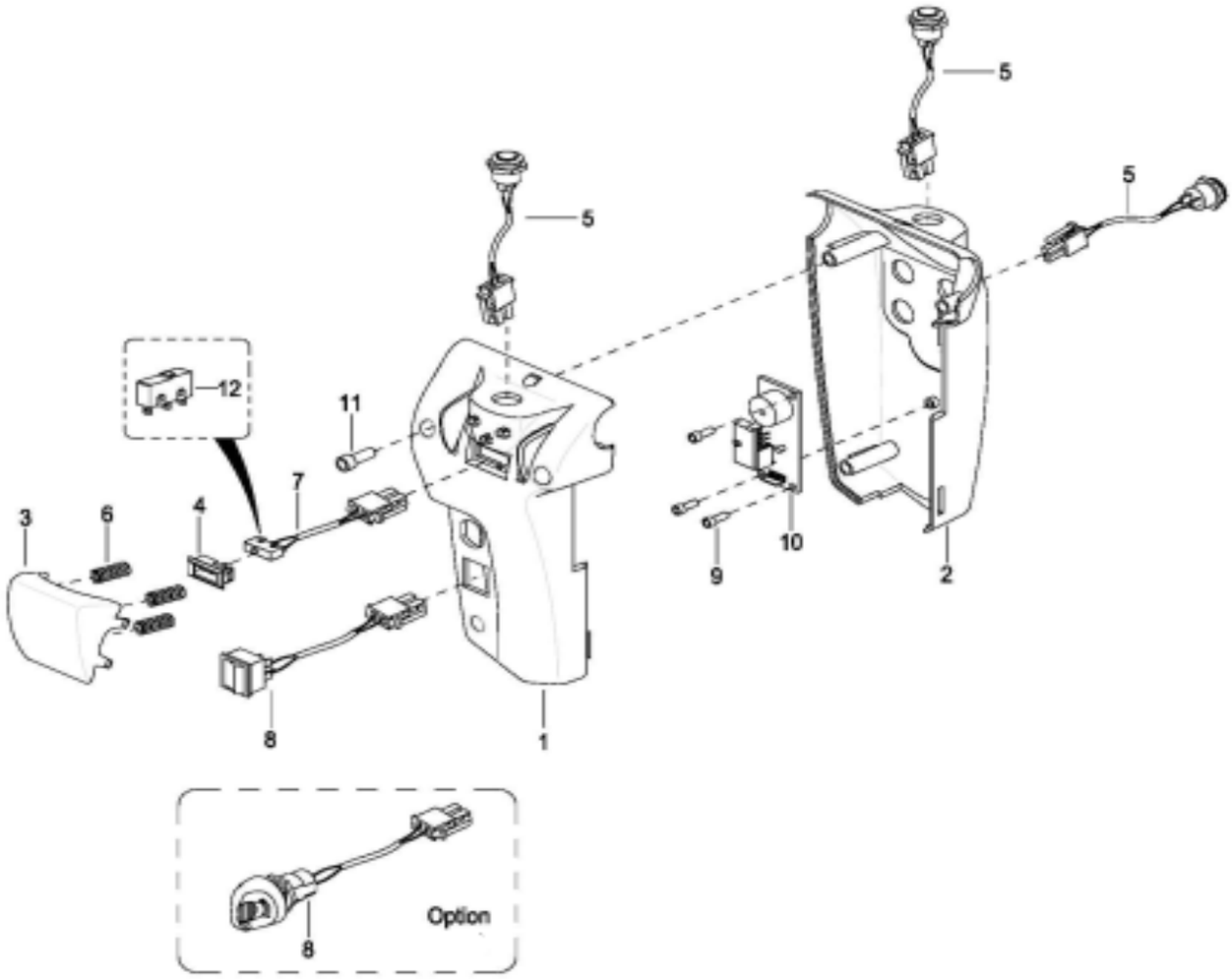
Following is an illustrated parts breakdown of assemblies and parts associated with the SEPJ-33 Truck.

STEERING ARM



POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-320000-00	CONTROL HANDLE	1	
2	1121-300001-00	COVER	1	
3	0000-000179-00	SCREW	2	
4	0000-000908-00	BUSHING	2	
5	1121-300004-00	SHAFT	1	
6	0000-001232-10	COTTER PIN, M4 X 50	2	
7	1121-300003-00	ROLLER	1	
8	0000-001242-10	BUSHING, 1220	1	
9	1121-300002-00	SHAFT	1	
10	0000-001233-10	PIN, M4 X 20	1	
11	1121-330001-00	LEAF SPRING	1	
12	1121-330002-00	TORSIONAL SPRING	1	
13	0000-000679-00	PIN, M4 X 30	1	
14	1121-330004-00	CONTROL LEVER	1	USED UP TO SERIAL # E2410609
14a	1121-330003-00	ROLLER	1	NOT PICTURED - USED UP TO SERIAL # E2410609
14b	0000-001234-10	ROUND PIN Ø4×18	1	NOT PICTURED - USED UP TO SERIAL # E2410609
14c	1121-330004-00-B	CONTROL LEVER	1	USED FROM SERIAL # E2410610
15	0000-000077-00	SCREW M6×12	2	
16	0000-000380-00	FLATWASHER Ø6	2	
17	0000-001235-10	PIN, M6 X 30	1	
18	0000-001236-10	PIN, M4 X 12	1	
19	1121-330006-00-B	PULL ROD	1	
20	0000-000108-00	NUT	1	
21	0000-000923-00	NUT	1	
22	1115-500017-00	LIFT LIMIT SWITCH ASSEMBLY	1	
23	1115-500014-00	BRACKET	1	
24	0000-001238-00	SCREW, M3 X 16	2	
25	1121-310000-00-B	CONTROL HEAD	1	USED UP TO SERIAL # E2410609
25a	1121-310000-0A-B	CONTROL HEAD	1	USED FROM SERIAL # E2410610
26	2107-300001-00	BUMPER	1	USED UP TO SERIAL # 424170700
26a	1121-300005-00	BUMPER	1	USED FROM SERIAL # 424170701

14.0 CONTROL HEAD



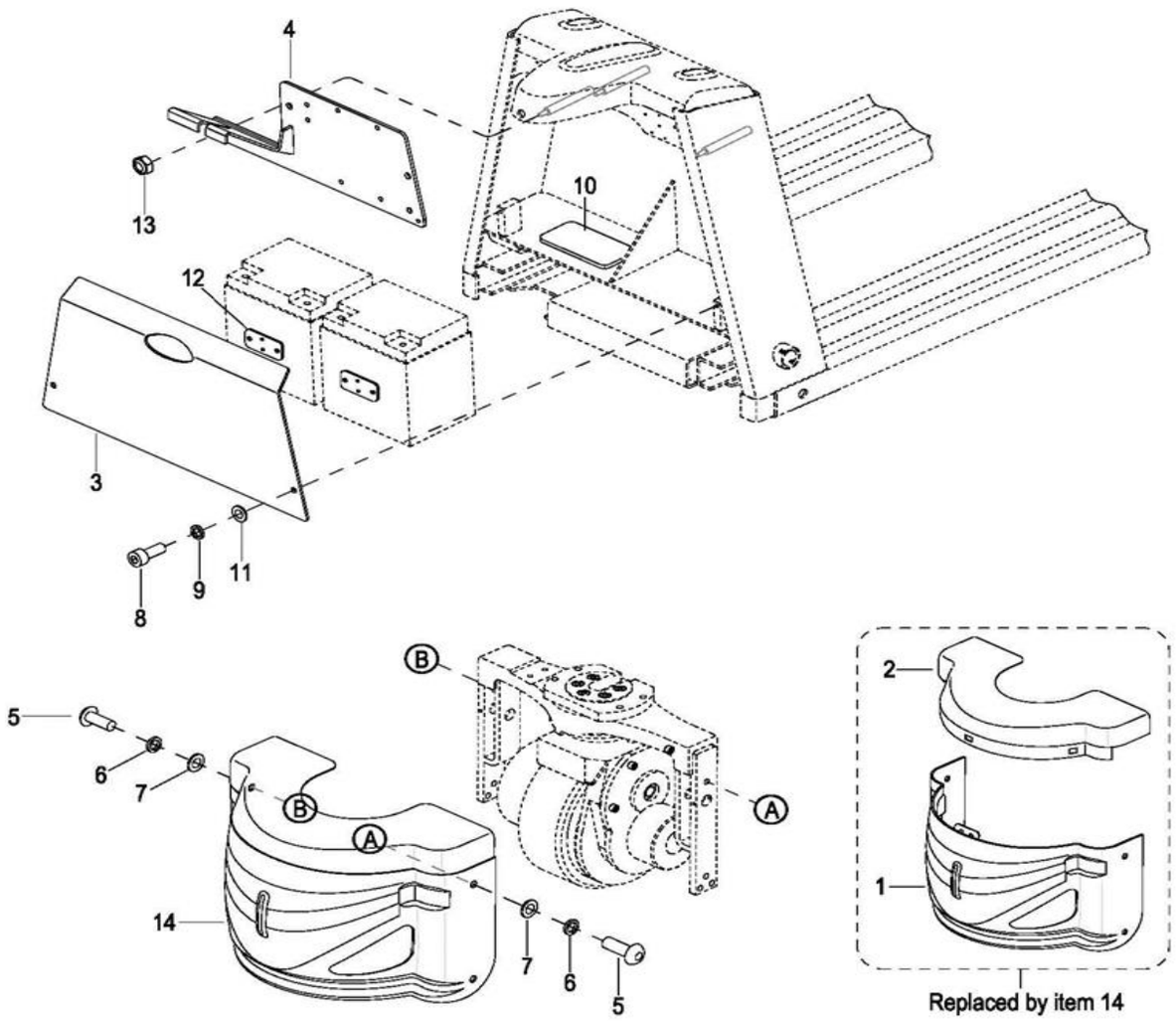
USED UP TO SERIAL #E2410609

POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
—	1121-310000-00-B	CONTROL HEAD	1	
1	1121-310002-00	COVER	1	
2	1121-310001-00	CAP	1	
3	1121-310003-00	BUTTON, REVERSE	1	
4	1280-360013-00	BUTTON BRACKET	1	
5	1121-522000-00	FOR, REV & HORN SWITCHES	3	
6	1121-310004-00	SPRING	3	
7	1121-521000-00	BELLY-BUTTON SWITCH ASSY	1	
8	1121-523000-00	POWER SWITCH	1	USED UP TO SERIAL # E2319422
8a	1115-520019-0A	KEY SWITCH	1	STANDARD AS OF SERIAL # E2319423, BEFORE THAT IT WAS OPTIONAL.
9	0000-001243-00	SCREW, M3 X 6	3	
10	1121-520005-00	BATTERY DISCHARGE	1	
11	0000-000004-00	SCREW	3	
12	1220-560002-00	BELLY-BUTTON SWITCH	1	

USED UP TO SERIAL #E2410610

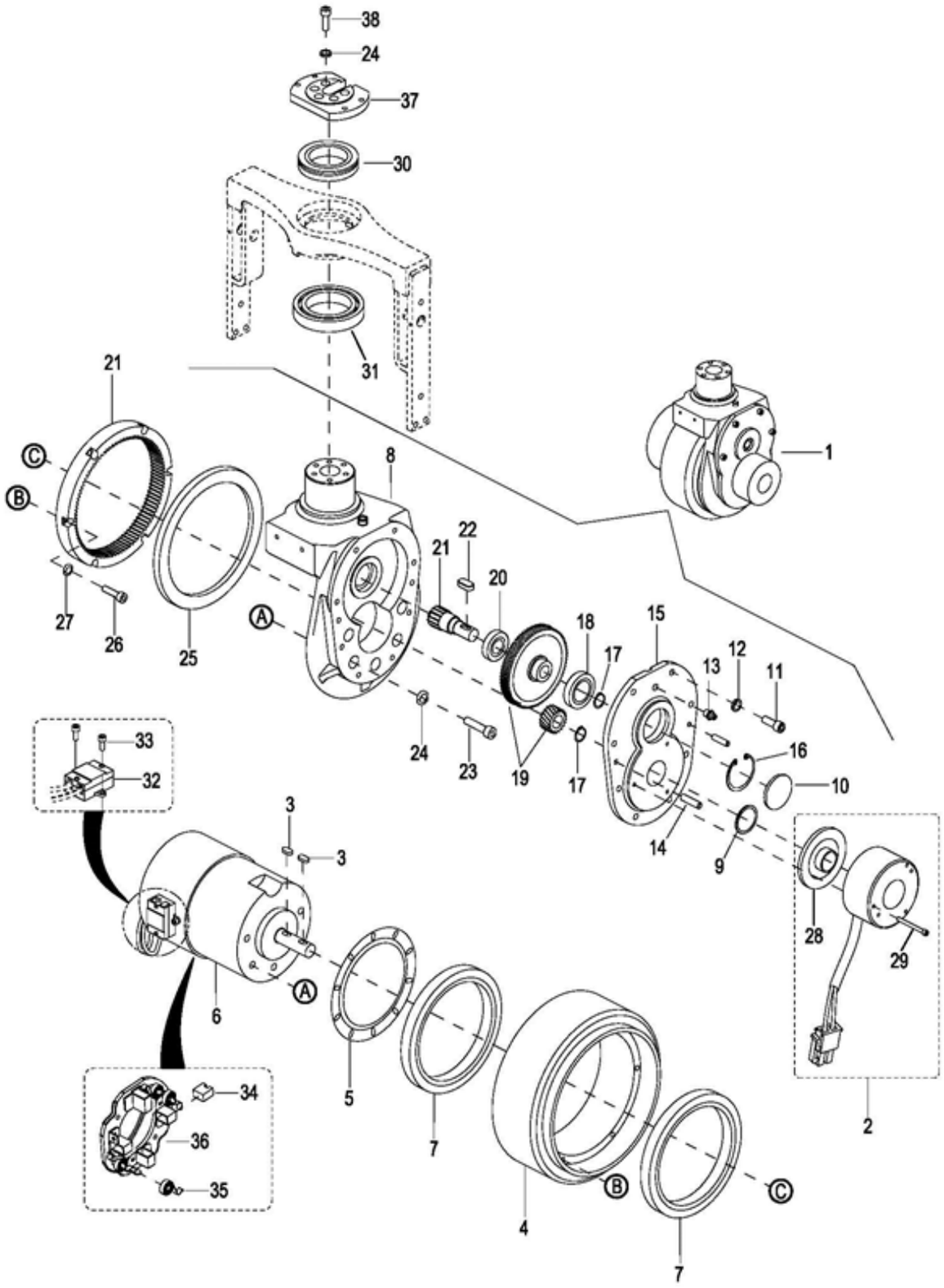
POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
—	1121-310000-0A-B	CONTROL HEAD	1	
1	1121-310002-0A-B	COVER	1	
2	1121-310001-0A-B	CAP	1	
3	0000-000004-00	SCREW M5×12	3	
4	1121-310003-00	BUTTON REVERSER COVER	1	
5	1121-310004-00	SPRING	1	
6	0000-001243-00	SCREW M3×6	3	
7	1121-520013-00	INTEGRATED MODULE	1	
8	0000-001133-00	O-RING Ø3.15×1.8	3	
9	1115-500016-00	KEY	1	ONE SET OF KEYS (2)

15.0 COMPARTMENT COVER



POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-141000-00	LOWER COVER	1	USED UP TO SERIAL NUMBER 424210520 AFTER THAT REPLACED BY POS. #14
2	1121-140001-00	UPPER COVER	1	
3	1121-100002-10	BATTERY COVER, FRAME WIDTH 27" (685MM)	1	FRAME WIDTH 27" (685MM)
4	1121-100001-0A	CHARGER BRACKET	1	USED UP TO SERIAL NUMBER E2320233
4a	1121-510000-00	CHARGER BRACKET	1	USED FROM SERIAL NUMBER E2320234
5	0000-000912-00	SCREW	4	
6	0000-000159-00	LOCK WASHER	4	
7	0000-000176-00	WASHER	4	
8	0000-000077-00	SCREW	2	
9	0000-000056-00	WASHER	2	
10	2112-410005-00	RUBBER CUSHION	2	
11	0000-000380-00	FLAT WASHER	2	
12	1121-100004-00	RUBBER CUSHION	2	
13	0000-000923-00	NUT	3	
14	1121-143000-00	COVER		USED FROM SERIAL NUMBER 424210521

16.0 TRANSMISSION MOTOR, BRAKE MOUNTING



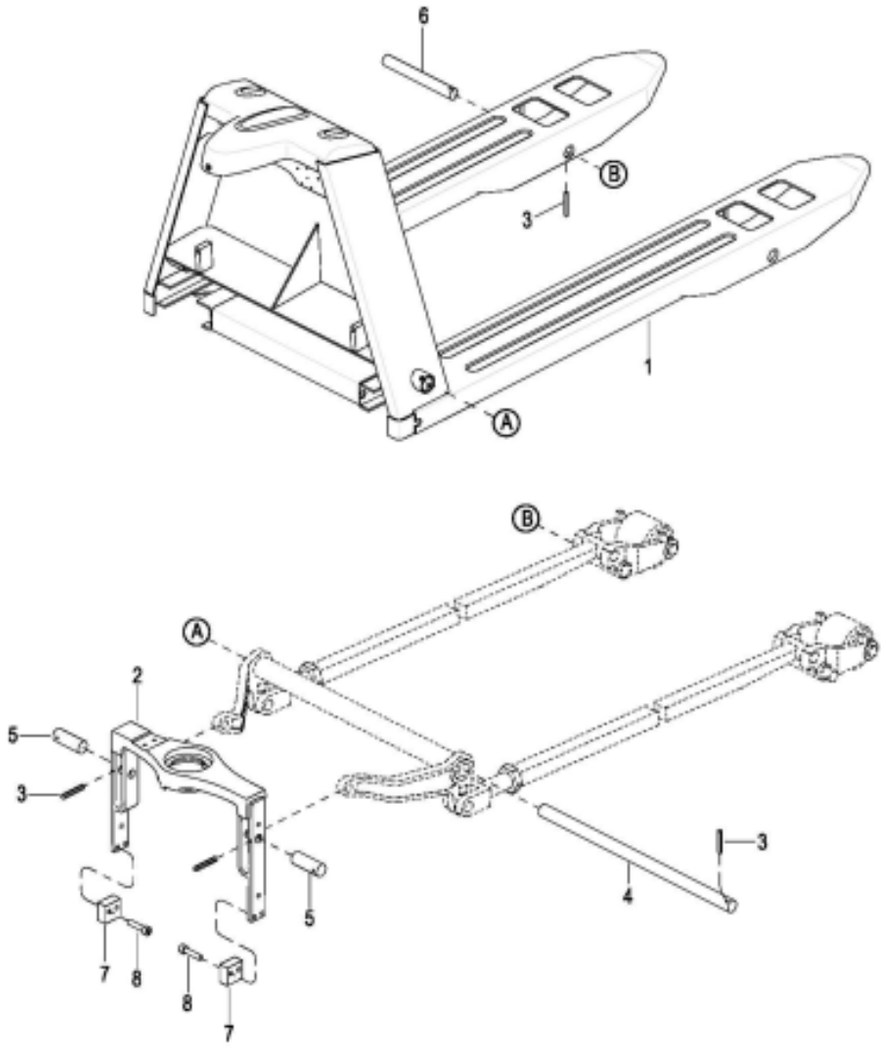
USED UP TO SERIAL #426150000

POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-200000-00	DRIVE UNIT	1	INCLUDES 2 - 27
2	1115-520012-00	BRAKE ASSEMBLY	1	
3	0000-000662-00	KEYWAY	2	
4	1115-220000-00	DRIVE WHEEL	1	
5	1115-200010-00	DRIVE BAFFLE	1	
6	1115-230000-00	MOTOR	1	
7	0000-000663-00	BEARING	2	
8	1121-210001-00	TRANSMISSION HOUSING	1	
9	0000-000671-00	OIL SEAL	1	
10	1115-200007-00	TRANSMISSION CAP	1	
11	0000-000386-00	SCREW	8	
12	0000-000056-00	WASHER	8	
13	0000-000013-00	GREASE FITTING	1	
14	0000-000704-00	PIN	2	
15	1115-200001-00	GEAR BOX CAP	1	
16	0000-000658-00	CLIP	1	
17	0000-000659-00	CLIP	2	
18	0000-000667-00	BEARING	1	
19	1115-GSX-10	SPIRAL GEAR SET	1	INCLUDES TWO GEARS POS. # 19
20	0000-000680-00	BEARING	1	
21	1115-GSX-20	GEAR RING SET	1	INCLUDES TWO GEARS POS. # 21
22	0000-000660-00	KEY	1	
23	0000-000026-00	SCREW	5	
24	0000-000159-00	LOCK WASHER	10	
25	0000-000670-00	OIL SEAL	1	
26	0000-000661-00	SCREW	6	
27	0000-000206-00	WASHER	6	
28	1115-240001-00	BRAKE DISC	1	
29	0000-000665-00	SCREW	3	
30	0000-001230-00	BEARING	1	
31	0000-001231-00	BEARING	1	
32	1115-231000-00	TERMINAL BLOCK	1	
33	0000-000004-00	SCREW	2	
34	1115-230001-00	BRUSH	4	
35	1115-230002-00	BRUSH SPRING	4	
36	1115-230003-00	BRUSH HOLDER	1	
37	1121-200001-00	CONNECTING PLATE	1	
38	0000-000151-00	SCREW	5	

USED UP TO SERIAL #426150001

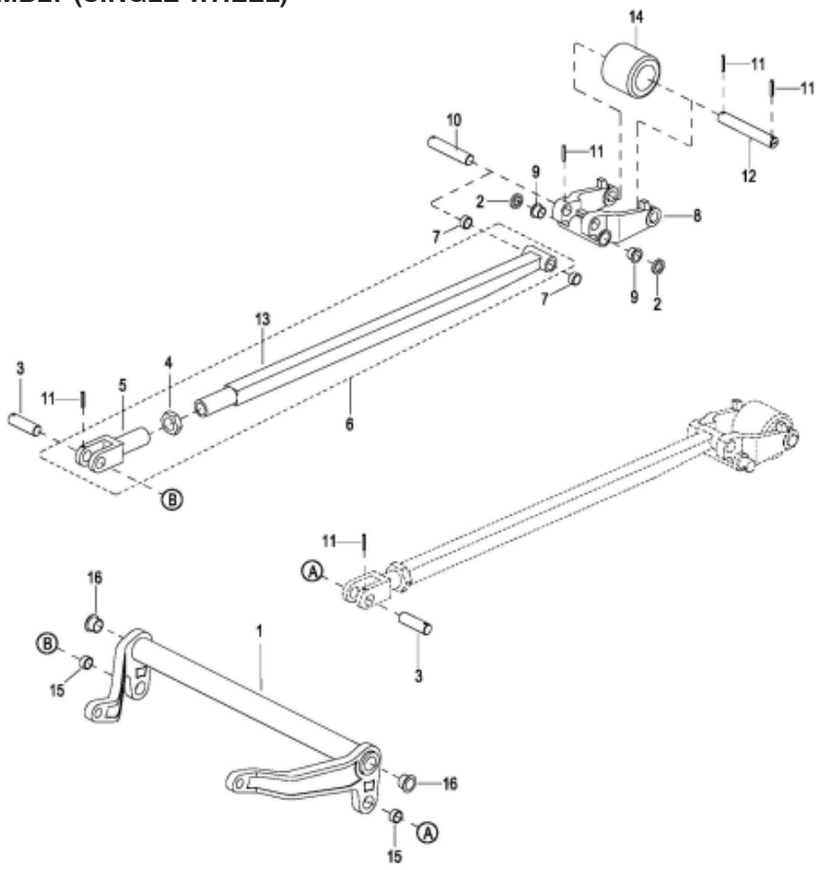
POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-200000-A0	DRIVE UNIT	1	INCLUDES 2 - 27
2	1115-520012-00	BRAKE ASSEMBLY	1	
3	0000-000662-00	KEYWAY	2	
4	1115-220000-A0	DRIVE WHEEL	1	
5	1115-200010-00	DRIVE BAFFLE	1	
6	1115-230000-00	MOTOR	1	
7	0000-000663-00	BEARING	2	
8	1121-210001-00	TRANSMISSION HOUSING	1	
9	0000-000671-00	OIL SEAL	1	
10	1115-200007-00	TRANSMISSION CAP	1	
11	0000-000386-00	SCREW	8	
12	0000-000056-00	WASHER	8	
13	0000-000013-00	GREASE FITTING	1	
14	0000-000704-00	PIN	2	
15	1115-200001-00	GEAR BOX CAP	1	
16	0000-000658-00	CLIP	1	
17	0000-000659-00	CLIP	2	
18	0000-000667-00	BEARING	1	
19	1115-GSX-10	SPIRAL GEAR SET	1	INCLUDES TWO GEARS POS. # 19
20	0000-000680-00	BEARING	1	
21	1115-GSX-20	GEAR RING SET	1	INCLUDES TWO GEARS POS. # 21
22	0000-000660-00	KEY	1	
23	0000-000026-00	SCREW	5	
24	0000-000159-00	LOCK WASHER	10	
25	0000-000670-00	OIL SEAL	1	
26	0000-000661-00	SCREW	6	
27	0000-000206-00	WASHER	6	
28	1115-240001-00	BRAKE DISC	1	
29	0000-000665-00	SCREW	3	
30	0000-001230-00	BEARING	1	
31	0000-001231-00	BEARING	1	
32	1115-231000-00	TERMINAL BLOCK	1	
33	0000-000004-00	SCREW	2	
34	1115-230001-00	BRUSH	4	
35	1115-230002-00	BRUSH SPRING	4	
36	1115-230003-00	BRUSH HOLDER	1	
37	1121-200001-00	CONNECTING PLATE	1	
38	0000-000151-00	SCREW	5	
39	1115-200001-A0	INNER RIM	1	

17.0 FRAME (SINGLE WHEEL)



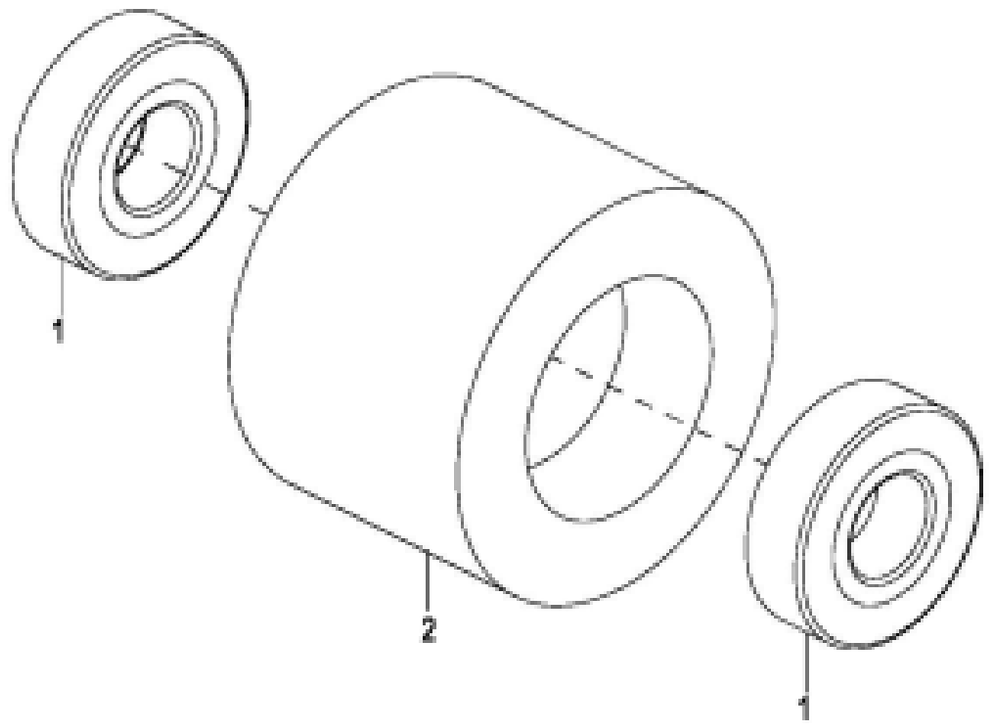
POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-110000-1A-02	FORK FRAME, FRAME WIDTH 27", FORK LENGTH 4	1	FRAME WIDTH 27" (685MM) FORK LENGTH 48" (1220MM)
2	1121-120000-00	BACK FRAME	1	
3	0000-000708-00	ROLL PIN	5	USED UP TO SERIAL NUMBER E24150468 AND 424150330
3a	0000-001456-00	ROLL PIN	5	USED FROM SERIAL NUMBER 424150331
4	1121-130001-10	LONG SHAFT	1	
5	1121-130002-00	SHORT SHAFT	2	
6	1115-130004-0A	FRONT PULL ROD SHAFT	2	
7	1121-100003-00	BLOCK	2	
8	0000-000322-00	SCREW	4	

18.0 LIFT LINK ASSEMBLY (SINGLE WHEEL)



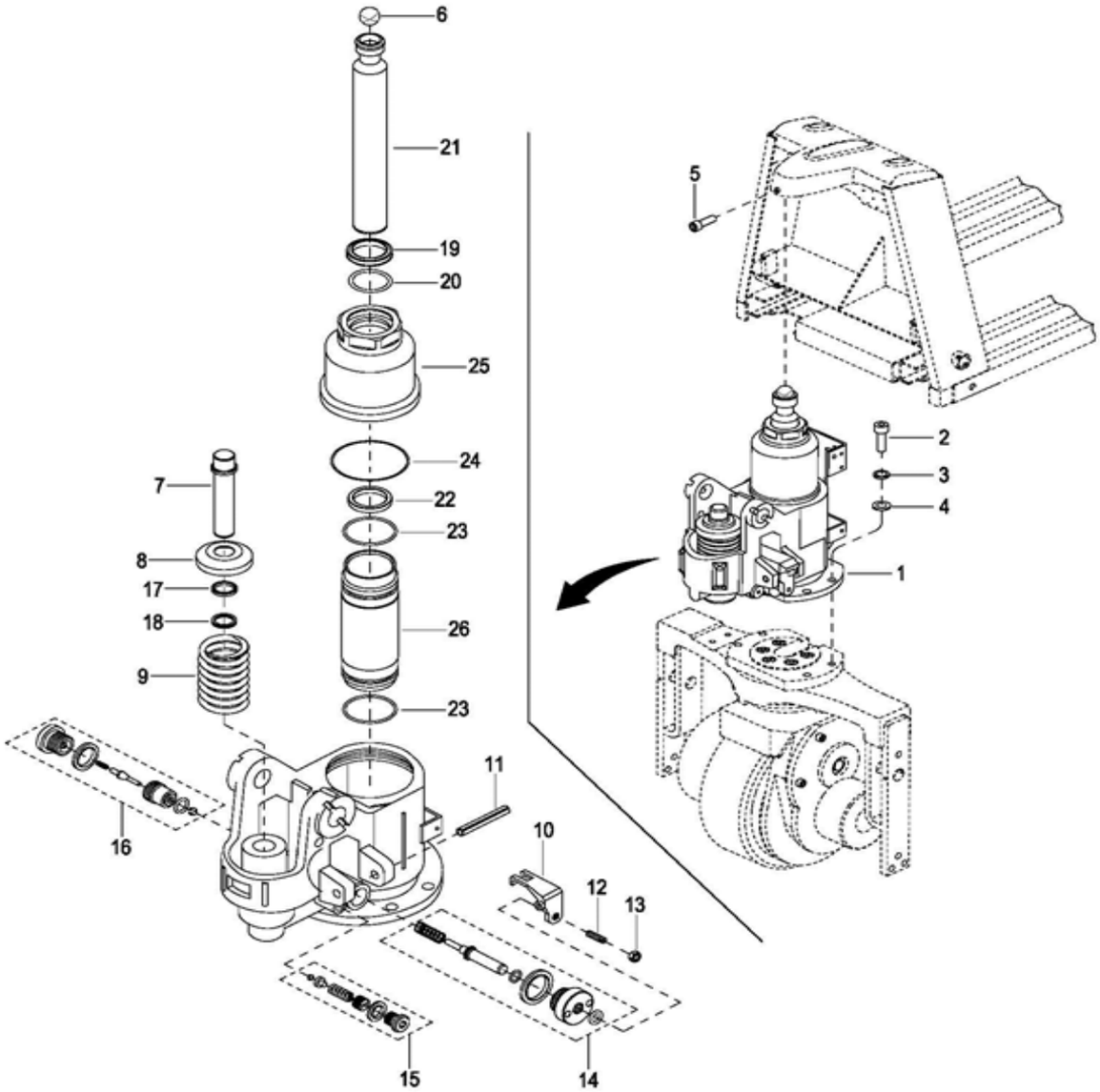
POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-131000-10	DOWN LINK, FRAME WIDTH 27"	1	FRAME WIDTH 27" (685MM)
2	1115-130008-00	LOAD WHEEL SHAFT ROLLER	4	
3	1121-130003-00	SHAFT	2	
4	0000-000101-00	NUT	2	
5	1121-132001-00	ROD END	2	
6	1115-132000-00-11	LONG LINK, FORK LENGTH 48"	2	FORK LENGTH 48" (1220MM)
7	0000-000907-00	BUSHING	4	
8	1115-130005-4A	WHEEL BRACKET	2	
9	0000-000908-00	BUSHING	4	
10	1115-130003-00	LOAD WHEEL BRACKET PIVOT SHAFT	2	
11	0000-000708-00	ROLL PIN	5	USED UP TO SERIAL NUMBER E24150468 AND 424150330
11a	0000-001456-00	ROLL PIN	5	USED FROM SERIAL NUMBER 424150331
12	1115-130007-40	LOAD WHEEL SHAFT	2	
13	1115-132200-00-11	LONG ROD FORK LENGTH 48"	1	FORK LENGTH 48" (1220MM)
14	1115-133000-40	LOAD WHEEL ASSY. (WITH BEARINGS)	2	
15	0000-000011-00	BUSHING	2	
16	0000-001241-00	BUSHING	2	

19.0 LOAD WHEEL (SINGLE WHEEL)



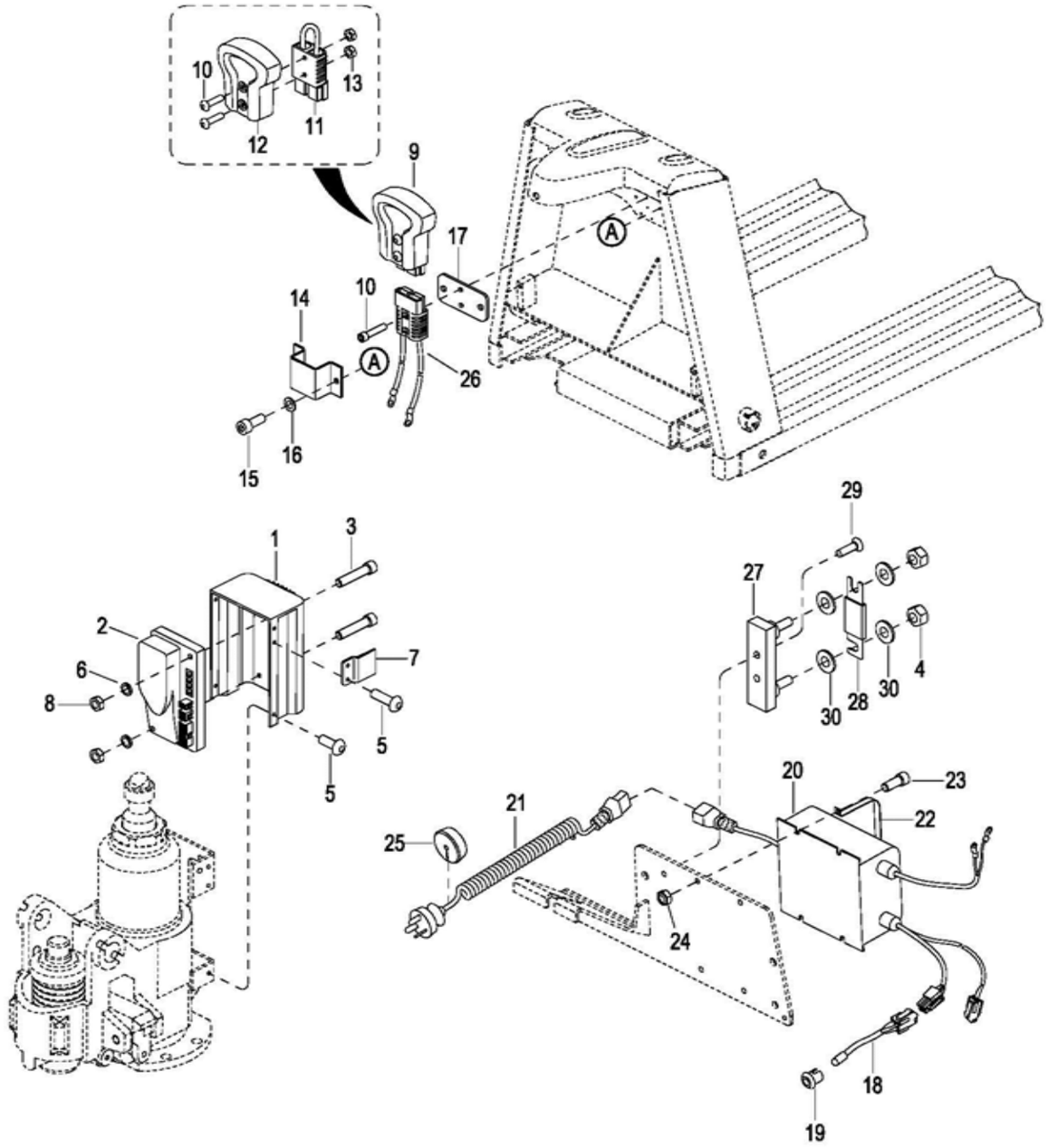
POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
—	1115-133000-40	LOAD WHEEL ASSY	1	
1	0000-000020-00	BEARING	2	
2	1115-133002-40	LOAD WHEEL	1	

20.0 HYDRAULIC SYSTEM



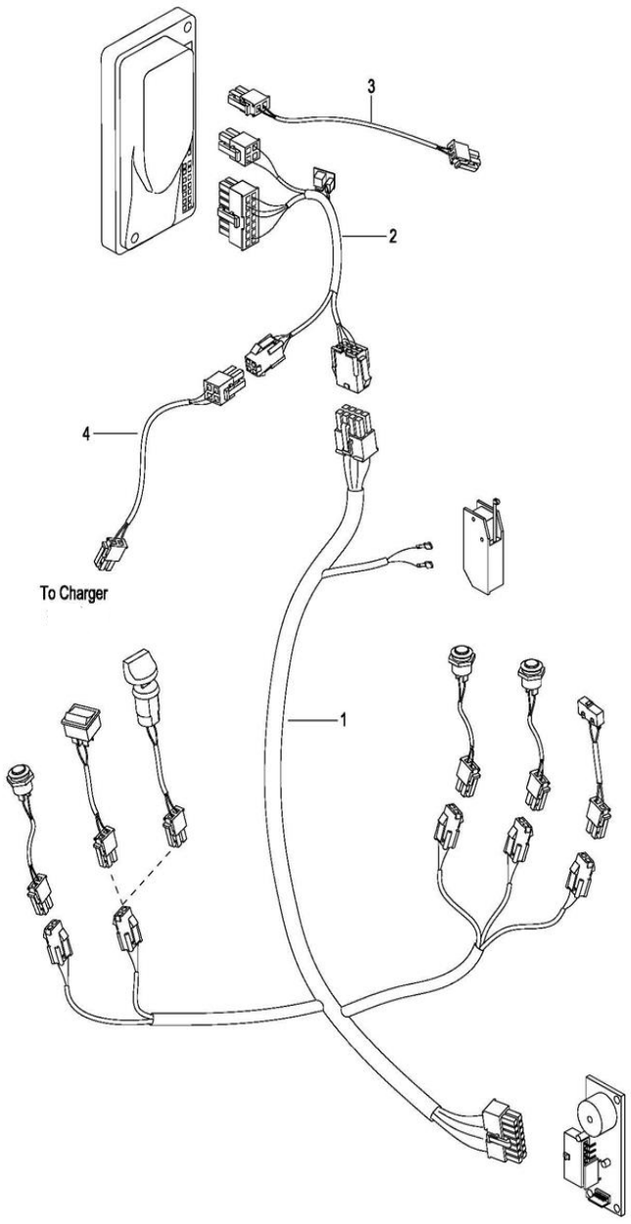
POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-410000-00	HYDRAULIC ASSEMBLY	1	INCLUDES 6-26
2	0000-000151-00	SCREW	4	
3	0000-000159-00	LOCK WASHER	4	
4	0000-000176-00	WASHER	4	
5	0000-000077-00	SCREW	1	
6	1121-410001-00	STEEL BALL	1	
7	1121-410007-00	PISTON ROD	1	
8	1121-410008-00	SPRING SEAT	1	
9	1121-410009-00	SPRING	1	
10	1121-410010-00	PRESSURE RELEASE LEVER	1	
11	0000-001237-10	PIN, M8 X 45	1	
11a	1121-410011-00	ROD	1	
12	0000-000108-00	NUT	1	
13	1121-410012-00	UNLOADING VALVE	1	
14	1121-410013-00	RELIEF VALVE	1	
15	1121-410014-00	CONTROL VALVE	1	
16	1121-410015-00	RING, WIPER 18	1	
17	1121-410016-00	XY SEAL 18	1	
18	1121-410017-00	RING, WIPER 32	1	
19	1121-410018-00	O-RING 32 X 3.55	1	
20	1121-410002-00	PISTON ROD	1	
21	1121-410019-00	SEAL 32	1	
22	1121-410020-00	O-RING 37.5 X 2.65	2	
23	1121-410021-00	O-RING 65 X 2.65	1	
24	1121-410022-00	CAP	1	
25	1121-410023-00	CYLINDER	1	
26	1121-ZZG-0A	SEAL KIT FOR HYDRAULIC ASSY	1	INCLUDES 17-20 & 22-24

20.1 HYDRAULIC SYSTEM CONT.



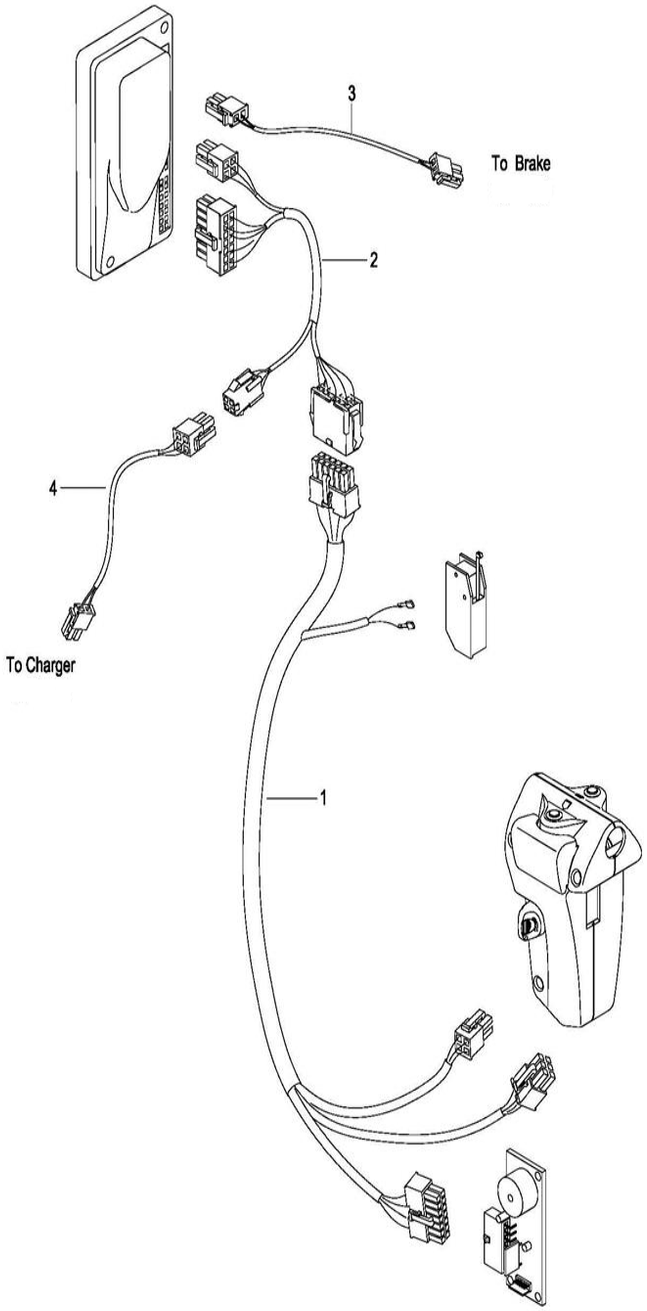
POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-142000-00	CONTROLLER COVER	1	
2	907200-17	CONTROLLER	1	
3	0000-000121-00	SCREW	2	
4	0000-000196-00	NUT M8	2	
5	0000-000651-00	SCREW	5	
6	0000-000122-00	LOCK WASHER	2	
7	1121-500002-00	CLAMP	1	
8	0000-000139-00	NUT M4	2	
9	1121-500004-10-B	BATTERY DISCONNECT ASSY	1	
10	0000-000981-00	SCREW, M3 X 20	4	
11	1121-532000-00	BATTERY DISCONNECT	1	
12	1121-500004-00	T HANDLE	1	
13	0000-000982-00	NUT, M3	2	
14	1115-100006-Z0	MOUNTING BRACKET	1	
15	0000-000077-00	SCREW	2	
16	0000-000380-00	FLAT WASHER	2	
17	1121-100004-00	RUBBER CUSHION	1	
18	1121-520007-00	LED LAMP	1	
19	1115-510009-00	LED SOCKET	1	
20	1121-520004-0A	CHARGER - 4A	1	
21	1115-500006-10	CHARGER CABLE	1	
22	1115-500009-00	CHARGER BRACKET	2	
23	0000-000004-00	SCREW	4	
24	0000-001026-00	NUT M5	4	
25	1115-120002-00	CHARGER CAP	1	
26	1121-531000-0A	BATTERY CONNECTOR	1	
27	1120-540001-00-B	FUSE HOLDER	1	
28	1115-510003-00	FUSE 100A	1	
29	0000-000126-00	SCREW	2	
30	0000-000176-00	WASHER	4	

30.0 WIRING HARNESS



USED UP TO SERIAL #E2410609

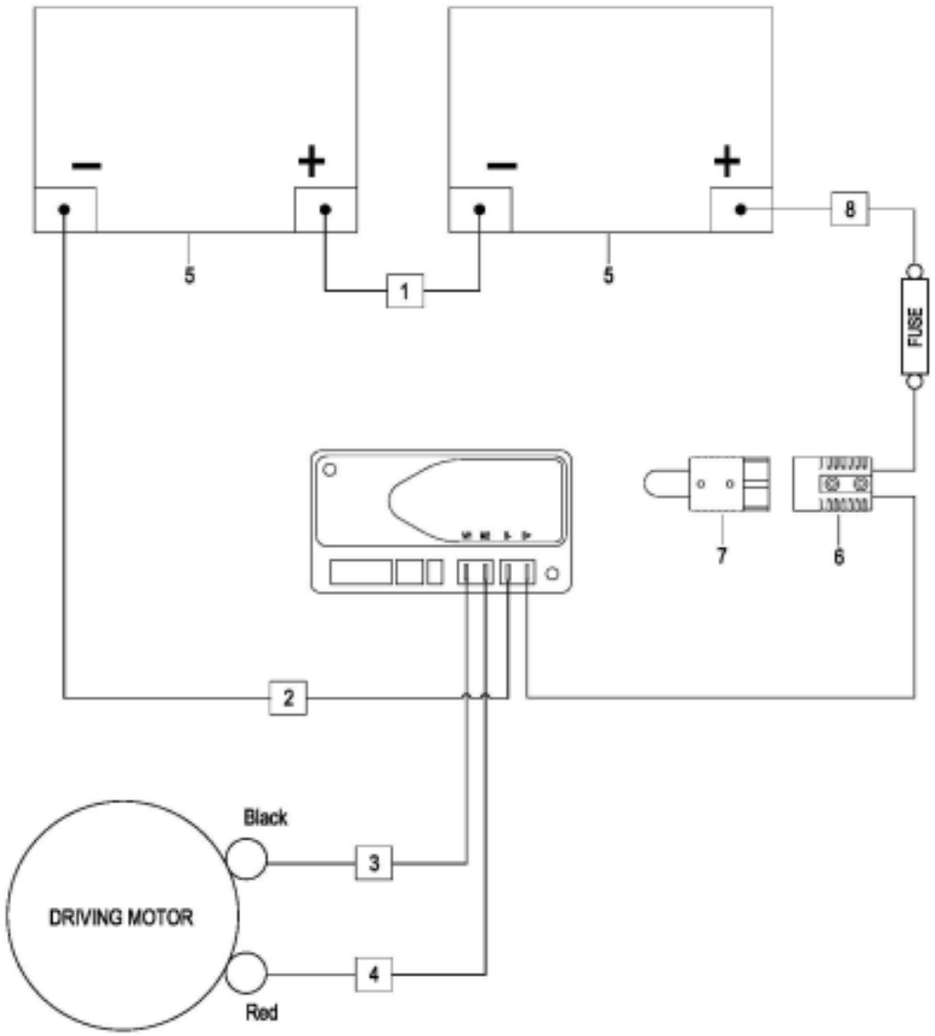
POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-520001-00	HARNESS, MASTER		
2	1121-520002-00	CONTROLLER WIRE HARNESS	1	
3	1121-520006-0A	BRAKE WIRE HARNESS	1	
4	1121-520008-00	CHANGER WIRE HARNESS	1	



USED UP TO SERIAL #E2410610

POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-520011-00	HARNESS, MASTER	1	
2	1121-520012-00	CONTROLLER WIRE HARNESS	1	
3	1121-520006-0A	BRAKE WIRE HARNESS	1	
4	1121-520008-00	CHANGER WIRE HARNESS	1	

30.1 WIRING CABLES



USED UP TO SERIAL #E2410610

POS.	PART NUMBER	DESCRIPTION	QTY.	NOTES
1	1121-530002-00	CABLE, BATTERY CONNECTOR	1	
2	1121-530001-0A	CABLE, B-	1	
3	1121-530003-00	CABLE, M1	1	
4	1121-530004-00	CABLE, M2	1	
5	1121-500001-00	BATTERY	2	
6	1121-531000-0A	BATTERY CONNECTOR	1	
7	1121-532000-00	BATTERY DISCONNECT	1	
8	1121-530005-00	FUSE-BATTERY CABLE	1	

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