

MAINTENANCE & TROUBLESHOOTING MANUAL

PA-1030

MOBILE ELEVATING WORK PLATFORM



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1.1 | SAFETY SYMBOLS

Warnings and instructions that have a direct impact on safety are identified with the following signals:



"DANGER" indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.

FAILURE TO FOLLOW THIS WARNING WILL CAUSE DEATH OR PERSONAL INJURY.



"WARNING" indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

FAILURE TO FOLLOW THIS WARNING MAY CAUSE DEATH OR PERSONAL INJURY.



"CAUTION" indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or damage to equipment.

FAILURE TO FOLLOW THIS WARNING MAY CAUSE INJURY OR DAMAGE TO EQUIPMENT

1.2 | GENERAL RULES AND PRECAUTIONS

An operator of any type of work platform is subject to certain hazards that cannot be protected by mechanical means. It is therefore essential that operators be competent, careful, physically and mentally fit and thoroughly trained in safe operation of this machine.

Although Custom Equipment, LLC conforms to specified ANSI & OSHA, it is the responsibility of the owner to instruct operators with the safety requirements made not only by Custom Equipment, LLC, but by the various safety boards in your area, as well as additional requirements set forth by ANSI and OSHA. If you come across a situation that you think might be unsafe, stop the platform and request further information from qualified sources before proceeding.



MAINTENANCE INFORMATION IS FOR USE BY TRAINED PERSONNEL ONLY.

1.3 | SAFETY GUIDELINES



NEVER REACH BETWEEN SCISSOR LINKS OR PROP UP PLATFORM UNLESS MAINTENANCE LOCK IS IN PLACE.

Maintenance Lock

The maintenance lock must be placed into position whenever the machine is being serviced in the raised or partially raised position. Serious injury and/or death could result if maintenance lock is not used properly.

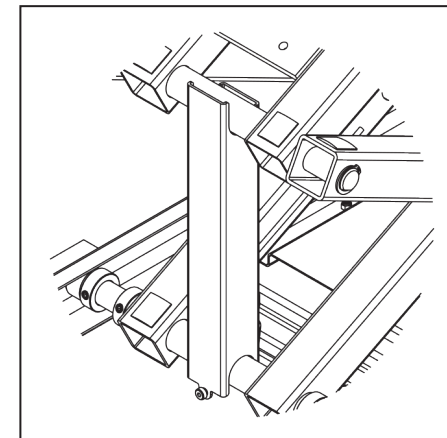


FIGURE 1: Maintenance Lock Use

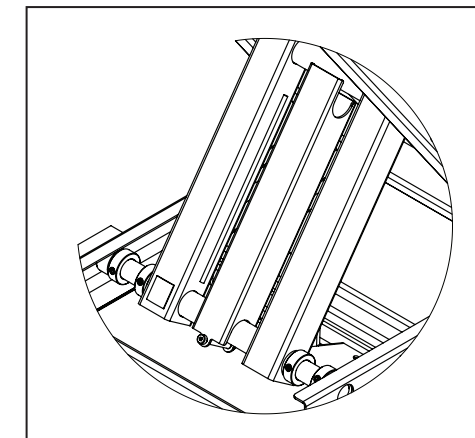


FIGURE 2: Maintenance Lock Storage



FAILURE TO COMPLY WITH THE LISTED SAFETY PRECAUTIONS MAY RESULT IN MACHINE DAMAGE, PERSONNEL INJURY, OR DEATH.

Other Guidelines

ALWAYS	observe and obey all warnings and cautions on machine and in manual.
ALWAYS	shut off all power controls before making any adjustments, lubricating or performing any other maintenance.
ALWAYS	disconnect battery during replacement of electrical components.
ALWAYS	remove all rings, watches, and jewelry when performing any maintenance.
ALWAYS	keep oil, grease, water, etc. wiped from standing surfaces and handholds.
ALWAYS	keep all support equipment and attachments stowed in their proper place.
ALWAYS	use only approved nonflammable cleaning solvents
NEVER	work under an elevated platform until maintenance locks have been engaged.
NEVER	wear long hair unrestrained or loose fitting clothing and neckties which may become caught on or entangled in equipment.

After maintenance, inspect the machine as described in the Pre-Delivery Inspection Checklist.

2.1 | CHARGING THE BATTERY

This unit is equipped with either a deep cycle 12-volt AGM maintenance-free battery or a deep cycle Group 27 battery. Batteries should be fully charged after each use. Opportunity charging can be done but the batteries should be fully charged at least every other day if they are used daily. Charge in a ventilated area as gases may be released through the pressure relief valve if the batteries are excessively over-charged.

NOTE: The surrounding temperature greatly affects the power reserve within a battery.

EXAMPLE: A battery that is 100% charged at 80° F (27°C) drops to 65% at 32°F (0°C) At 0°F (-18°C), this battery will drop to 40% efficiency.



WARNING

BATTERIES GENERATE EXPLOSIVE GASES. KEEP SPARKS AND FLAME AWAY FROM BATTERIES. DO NOT SMOKE WHILE CHARGING.

Do not operate unit while charging. Shortened battery life will result.

- Park the machine on a level surface
- Plug charger into AC outlet until charged.
- For best battery life, leave charger plugged in until machine will be used again, the charger will maintain the battery charge.



WARNING

DO NOT OPERATE UNIT WHILE CHARGING



CAUTION

NEVER ADD ACID TO BATTERY.

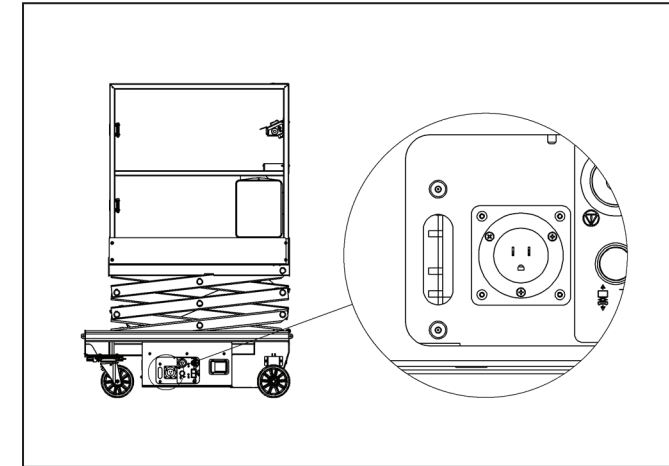
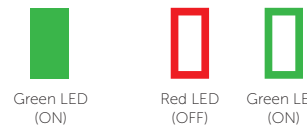


FIGURE 3: Battery Charger LED Display

How to read battery display

POWER	BATTERY 1 STATUS	
	CHARGING	READY



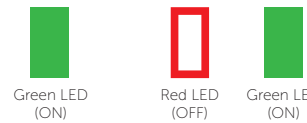
This display indicates that the power is on but there is no connection to a battery. The charger must see approximately five (5) volts on a battery to deliver D/C current.

POWER	BATTERY 1 STATUS	
	CHARGING	READY



This display indicates that power is on and that both outputs are delivering D/C current to the batteries.

POWER	BATTERY 1 STATUS	
	CHARGING	READY



This display indicates that power is on and that both outputs are finished charging and are in a float maintenance mode.

2.2 | BATTERY MAINTENANCE AGM BATTERIES

Battery cycle life will vary significantly depending on the depth of discharge. The deeper the depth of discharge the fewer cycles a battery will deliver. Conversely, the shallower the depth of discharge the more cycles a battery will deliver. To optimize the health of your battery, limit discharge to 80%.

The performance and life of a battery will vary with application, usage, temperature and depth of discharge. AGM batteries tend to deliver higher than their rated capacity (up to 10-15% higher) for ~30 cycles until they are "broken in" and settle at their rated capacity.

Operating batteries above 80°F (27°C) will yield runtime above the rated capacity and operating batteries below 80°F (27°C) will yield runtime below the rated capacity. Cold temperatures can significantly reduce battery capacity. Although higher temperatures increase the battery capacity they also accelerate corrosion and reduce overall battery life.

2.3 | BATTERY MAINTENANCE WET CELL BATTERIES

If this unit is equipped with a deep cycle 12-volt Group 27 battery, the care and maintenance of your battery has much to do with how well this unit functions. Battery wiring and water level should be checked monthly. Do not overfill. When the cells are too full, fluid will seep out when charging. The solution is at its proper strength when the battery is manufactured. Use distilled water and keep fluid up to proper level. When required, water should be added to battery after charging, unless water level is below the plates.

- Slide cabinet open to access battery.
- Remove battery caps and check fluid level.
- Fill each cell (if needed) to split ring with distilled water.
- Reinstall caps.
- Wash all dirt, debris, acid, etc., off battery whenever corrosion is detected. Use a solution of 5ml baking soda per 0.95 liters of warm water.
- Coat terminals with a commercially available coating.
- Close cabinet and latch in place.

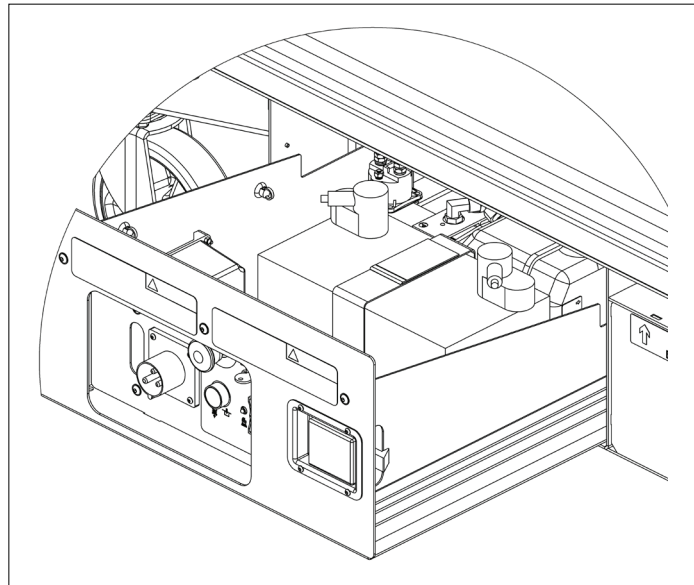


FIGURE 4: Battery Location

2.4 | LUBRICATION

Item	Specification	Frequency of Lubrication
Cylinder	Standard Machine Grease	Monthly

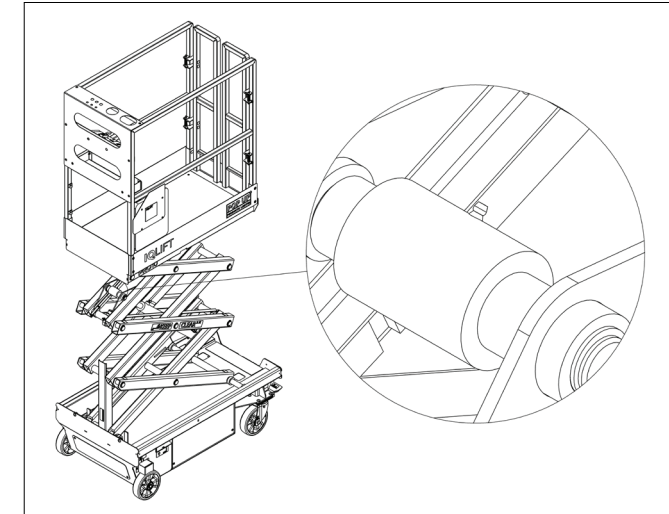


FIGURE 5: Cylinder Grease Points

2.5 | COMPONENTS REQUIRING ADJUSTMENT

Under normal use, no components should require adjustment. Contact the manufacturer if adjustments are required.

2.6 | EXAMINATION, REPAIR, REPLACEMENT OF LIMITED LIFE COMPONENTS

With proper use, regular battery charging, and regular inspection, there are no limited life components that require routine replacement.

2.7 | SAFETY DEVICES AND SYSTEMS REQUIRING CHECKS

Check safety functions as part of daily inspection:

Refer to the Pre-Start Inspection Checklist included in this and in the Operations & Safety Manual.

- Emergency Stop
- Enable Buttons
- Emergency Lowering
- Automatic Brakes
- Tilt Interlock

Check that the machine will not elevate if overloaded as part of routine inspection. (Refer to the Pre-delivery/Annual Checklist included in this manual.)

2.8 | STORAGE

After periods of storage, exposure to extremes of ambient conditions-heat, cold, moisture, dust etc. inspect the machine. Batteries will need to be charged. Refer to the Pre-Delivery/ Frequent Inspection Checklist in this manual.

2.9 | MAJOR ALTERATIONS OR REPAIRS

Any alterations must be approved by the manufacturer. Major repairs, which affect the stability, strength, or performance of the machine must also be approved by the manufacturer, recorded, and include machine inspection and testing. Never attach pipe racks, material lifting devices, or make any other alteration that is not part of the intended design of the machine.

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3.1 | INSPECTION & MAINTENANCE SCHEDULE

Regular inspection and conscientious maintenance is important to efficient economical operation of this machine. It will help to assure that equipment will perform satisfactorily with a minimum of service and repair.

Frequency and extent of periodic examinations may depend on national regulations.

Inspection/Maintenance	Frequency
Pre-Start Inspection	Daily
Battery (Wet Cell Batteries Only)	Monthly
Cylinder Lubrication	Monthly
Check Hydraulic Fluid Level	Monthly
Pre-Delivery Inspection	Annually (or as needed)
Contact the manufacturer for additional information	After major alterations or repairs which affect stability, strength or performance.



FAILURE TO PERFORM INSPECTIONS AND PREVENTATIVE MAINTENANCE AT RECOMMENDED INTERVALS MAY RESULT IN THE UNIT BEING OPERATED WITH A DEFECT THAT MAY RESULT IN INJURY OR DEATH OF THE OPERATOR.

The following inspection checklists are required and included in this manual:

- Pre-Start (Required before operation at each work shift)
- Pre-Delivery/Annual (Required at intervals not more than twelve months. This checklist may also be used when a Frequent (every 3 months) Inspection is needed, or after periods of storage.

MAINTENANCE ACCESS

The control tray can be opened for routine inspection (checking hydraulic fluid level, batteries, etc.). If additional access is needed, the side panel may be removed.

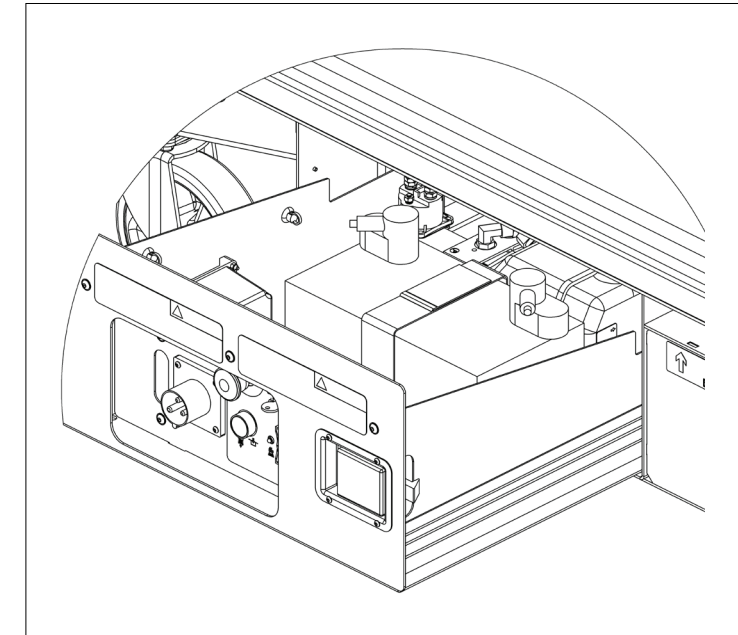


FIGURE 6: Control Tray Access

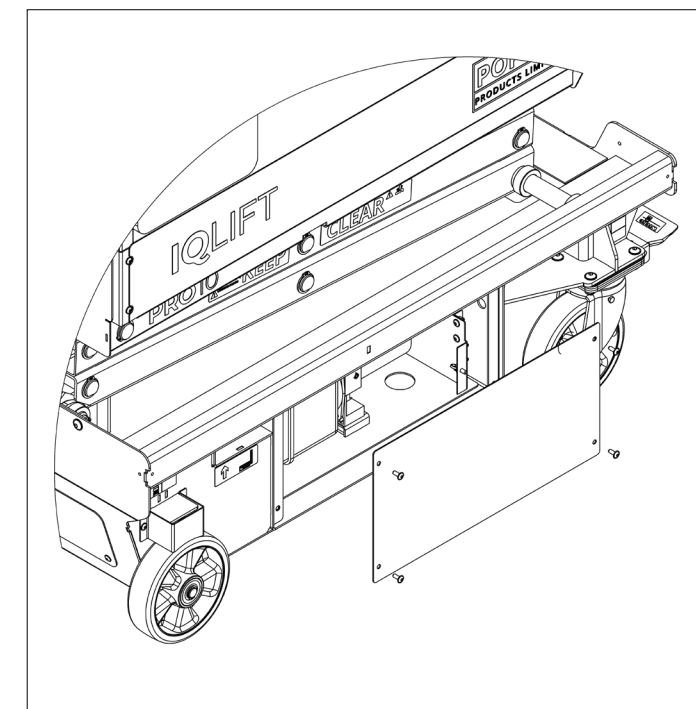


FIGURE 7: Side Access

3.2 | PRE-START INSPECTION CHECKLIST

Pre-start Inspection (Push-Around Models)



THIS CHECKLIST MUST BE USED AT THE BEGINNING OF EACH SHIFT OR AFTER EVERY SIX TO EIGHT HOURS OF USE. FAILURE TO DO SO COULD AFFECT THE SAFETY OF THE OPERATOR.

Model: _____ Serial Number: _____

- Keep inspection records up-to-date.
- Record and report all discrepancies to your supervisor.
- A dirty machine cannot be properly inspected.

Y-Yes/Acceptable	N-No/Unacceptable	R-Repaired	Y	N	R
VISUAL INSPECTIONS					
Check that there are no damaged, dented, or bent structural members.					
There are no loose or missing parts.					
Check that warning and instructional labels are legible and secure. Ensure the load capacity is clearly marked.					
Check the platform rails and safety gate for damage.					
Platform and base controls are not missing, damaged, frayed, or disconnected.					
Hydraulic hoses are not torn or loose, and there are no leaks. Check that hoses and cables have no worn areas or chafing.					
Check the tires for damage.					
Check that all snap rings are secure in grooves on pivot pins.					
FUNCTIONAL TESTS					
Gate closes automatically and latches (alignment can be adjusted with screw-on toe board or railing).					
Platform Controls: Check all switches and push buttons for proper operation.					
Emergency Stop (Stops all movement)					
Up/Down Controls (Elevates, Lowers, Enable button must be pressed).					
Base Controls: Check all switches and push buttons for proper operation.					
Emergency Stop (Stops all movement)					
Key Switch (Selects Platform Control, Ground Control, or Off).					
Alarm (Not damaged, sounds for descent).					
Up/Down Rocker Switch (Elevates/Lowers).					
Wheels: Front and rear wheels rotate freely.					
Brakes engage and hold when platform is elevated.					

Date: _____ Inspected by: _____

3.3 | PRE-DELIVERY / FREQUENT / ANNUAL INSPECTION CHECKLIST



AERIAL PLATFORMS SHALL BE INSPECTED, SERVICED, AND ADJUSTED TO MANUFACTURER'S REQUIREMENTS BY A QUALIFIED MECHANIC PRIOR TO EACH SALE, LEASE, OR RENTAL, AND EVERY 3 MONTHS OR 150 HOURS, WHICHEVER COMES FIRST, AND ANNUALLY.

Model: _____ Serial Number: _____

- Check each item listed below.
- Use proper operating, service, and maintenance manual for specific information and settings
- If an item is found to be unacceptable make the necessary repairs and check the "repaired" box.
- When all items are "acceptable", the unit is ready for service.
- If an item is found to be unacceptable, make the necessary repairs and check the "repaired" box. When all items are "acceptable," the unit is ready for service.

Y – Yes/Acceptable N – No/Unacceptable R – Repaired

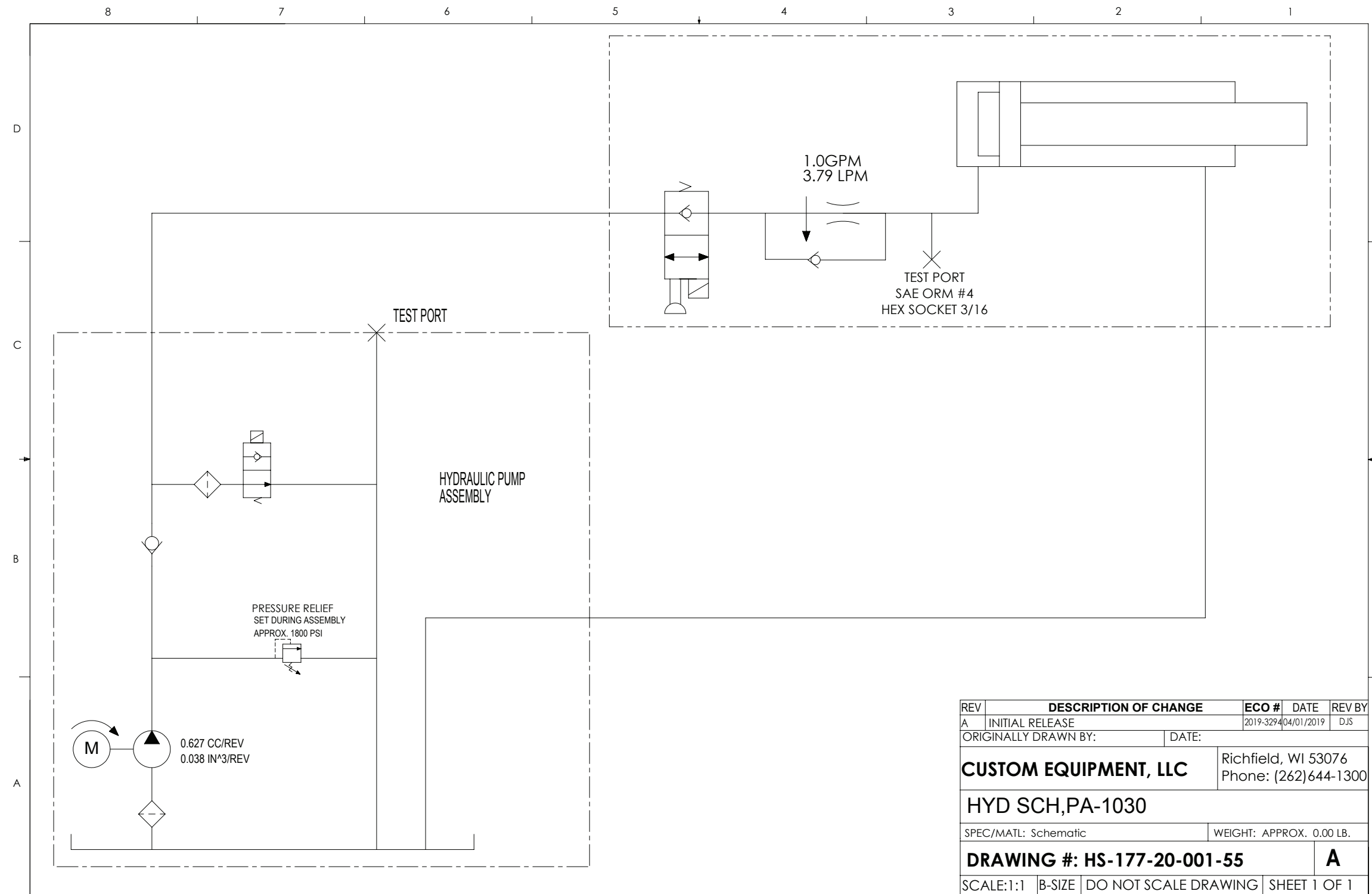
BASE:	Y	N	R	PLATFORM:	Y	N	R
Inspect slide tracks for damage				All rails in place/secure			
All frame bolts tight				No bent rails			
Pump Secure				No broken welds			
DC motor secure				Platform power outlet safe/working (if installed)			
Battery Hold Downs Secure				Entrance gate closes freely			
Batteries Fully Charged				Cables in place/secure			
Counterweights secured				Functions:			
Wheels: Grease casters				Elevate/Lower Operational			
Wheels: Bolts/Nuts Tight				Master Power Switch Breaks Circuits			
Maintenance Locks: Pins storage location				Emergency Stop Breaks Circuits			
All Shields/Guards in place				Emergency Down Operational			
Hydraulic Oil Level				Motion Alarms Functional			
Check all hydraulic hoses for leaks				Brakes: Operational			
Check all hydraulic fittings for leaks				Bubble Level in Place			
				When beginning to elevate, overload light and alarm activate. Then, if not overloaded, allows elevation to continue, and light and alarm stop.			
SCISSORS							
No Broken Welds				When overloaded, platform stops elevating.			
Ret. Rings Secure on Pivots				Check battery Voltage: <12.5V, charge.			
No Bent Beam Members				WIRING / OTHER:			
All rollers turn freely				Switches secure			
DECALS:							
Legibility				Contactors secure			
Correct capacity noted				Tight on terminals (no loose wiring)			
Proper placement quantity				Operator / Service Manual Included			
				Battery Charger Secure / Operational			

COMMENTS:

Date: _____ Inspected by: _____

4.1 | HYDRAULIC SCHEMATIC

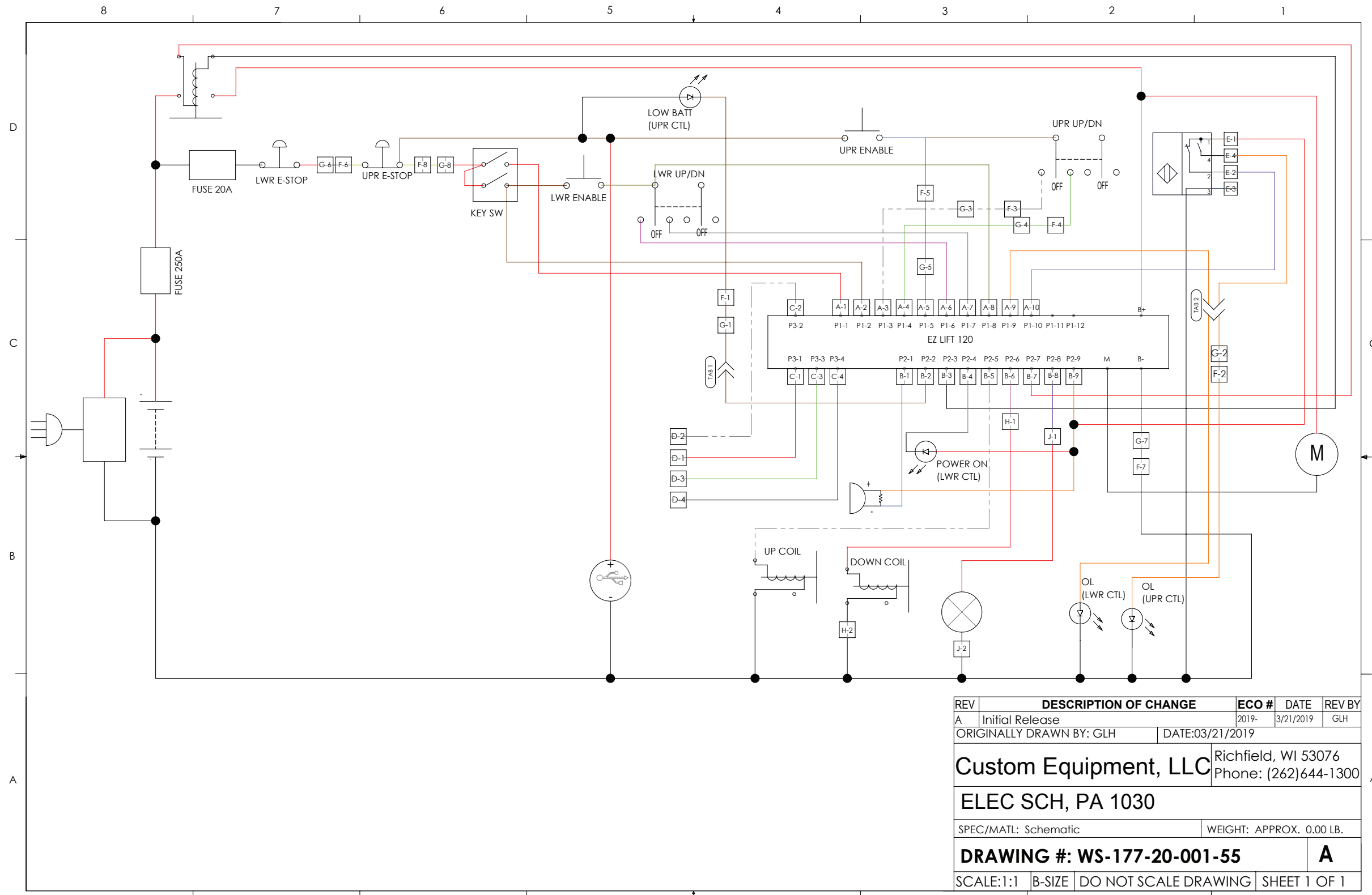
Part No HS-177-20-001-55



8 THIS DRAWING IS CONFIDENTIAL AND PROPRIETARY TO THE MANUFACTURER AND IS LOANED IN EXPECTATION THAT IT WILL BE KEPT CONFIDENTIAL AND USED ONLY FOR THE PURPOSE FOR WHICH IT IS LOANED.¹

4.2 | ELECTRICAL SCHEMATIC

Part No WS-177-20-001-55

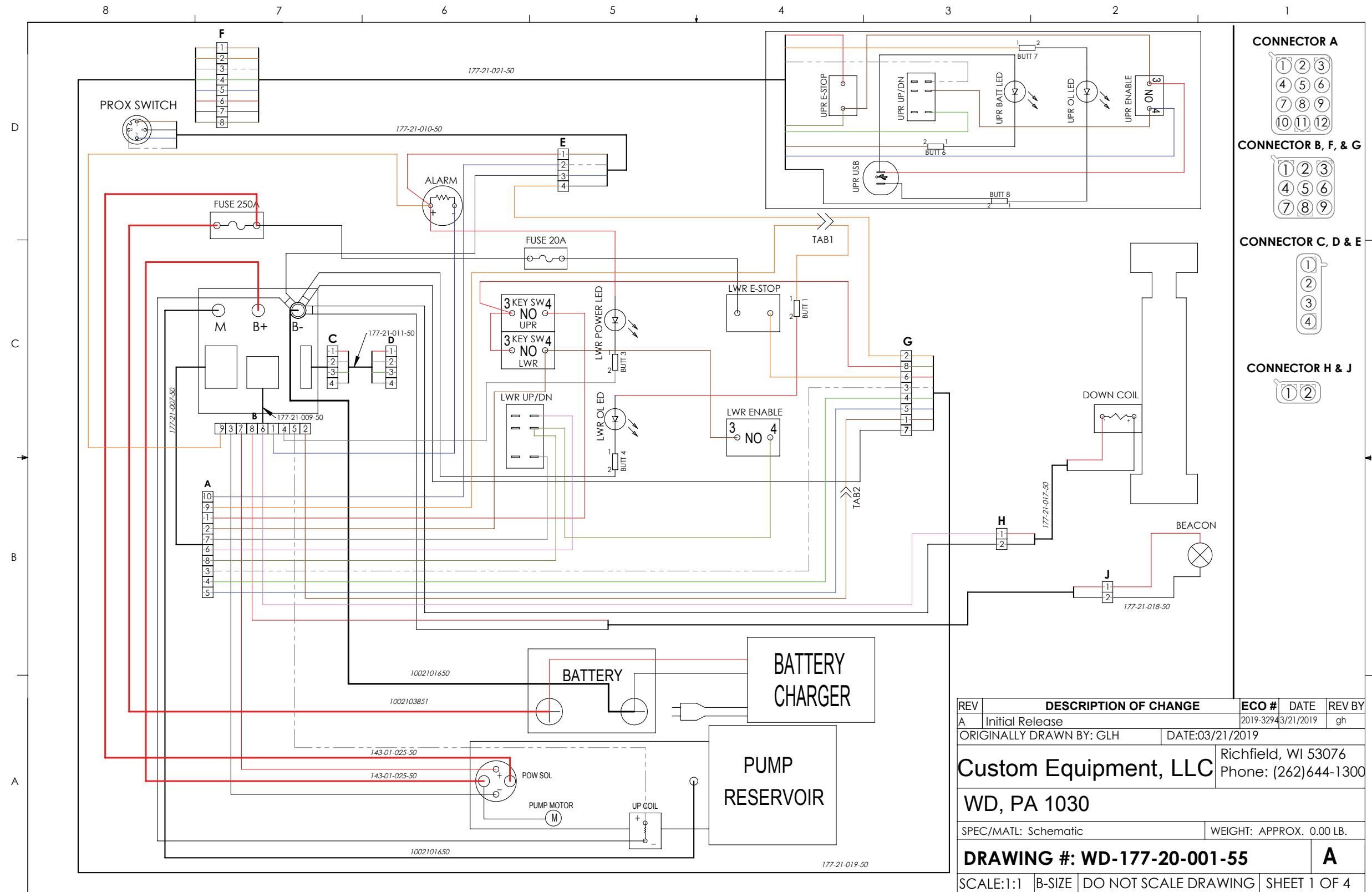


REV	DESCRIPTION OF CHANGE	ECO #	DATE	REV BY
A	Initial Release	2019-	3/21/2019	GLH
ORIGINALLY DRAWN BY: GLH		DATE:03/21/2019		
Custom Equipment, LLC			Richfield, WI 53076 Phone: (262)644-1300	
ELEC SCH, PA 1030				
SPEC/MATL: Schematic		WEIGHT: APPROX. 0.00 LB.		
DRAWING #: WS-177-20-001-55				A
SCALE:1:1	B-SIZE	DO NOT SCALE DRAWING	SHEET 1 OF 1	

THIS DRAWING IS CONFIDENTIAL AND PROPRIETARY TO THE MANUFACTURER AND IS LOANED IN EXPECTATION THAT IT WILL BE KEPT CONFIDENTIAL AND USED ONLY FOR THE PURPOSE FOR WHICH IT IS LOANED.

5.1 | WIRING DIAGRAM

Part No WD-177-20-001-55



REV	DESCRIPTION OF CHANGE	ECO #	DATE	REV BY
A	Initial Release		2019-3294/3/21/2019	gh
ORIGINALLY DRAWN BY: GLH		DATE:03/21/2019		
Custom Equipment, LLC		Richfield, WI 53076 Phone: (262)644-1300		
WD, PA 1030				
SPEC/MATL: Schematic		WEIGHT: APPROX. 0.00 LB.		
DRAWING #: WD-177-20-001-55				A
SCALE:1:1		B-SIZE		DO NOT SCALE DRAWING
SHEET 1 OF 4				

THIS DRAWING IS CONFIDENTIAL AND PROPRIETARY TO THE MANUFACTURER AND IS LOANED IN EXPECTATION THAT IT WILL BE KEPT CONFIDENTIAL AND USED ONLY FOR THE PURPOSE FOR WHICH IT IS LOANED.

5.2 | EZ LIFT DIAGNOSTICS

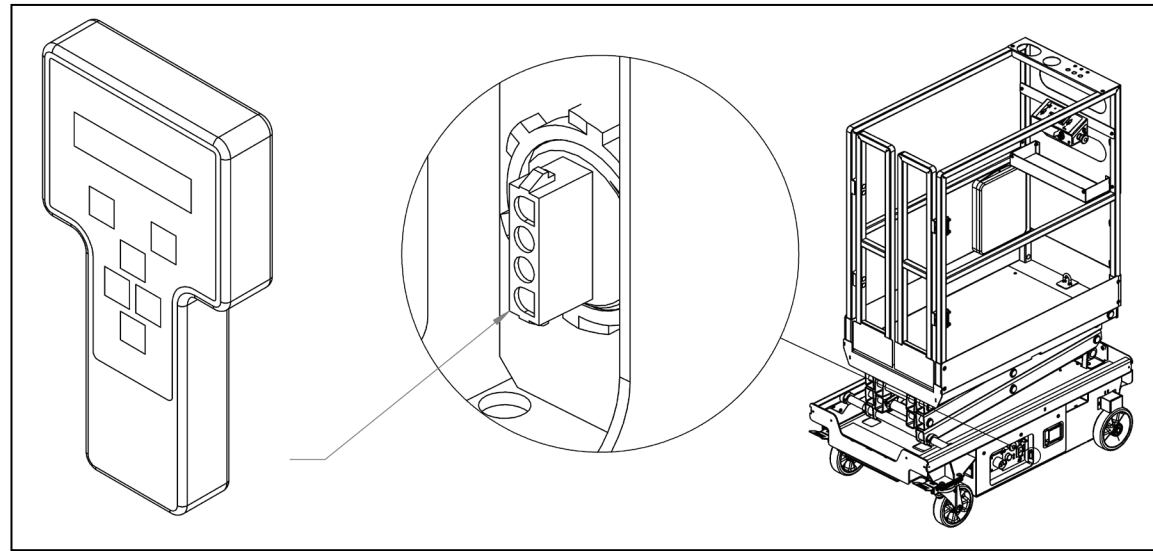


FIGURE 8: EZcal Diagnostic Connection

An EZcal tool can be connected to the diagnostic port on the lower control panel to provide access to a number of menus for diagnostic purposes.

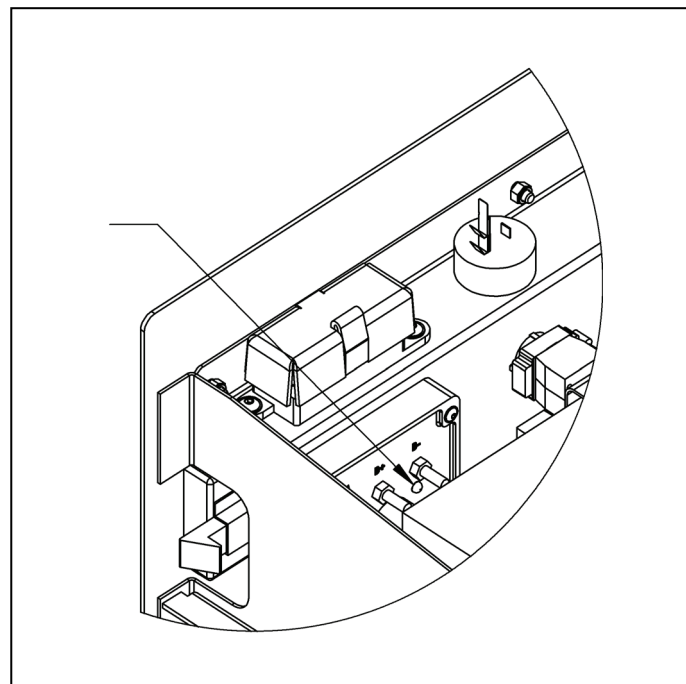


FIGURE 9: Diagnostic LED Location

If an EZcal is not available, an LED on the control board may be viewed to display flash codes.

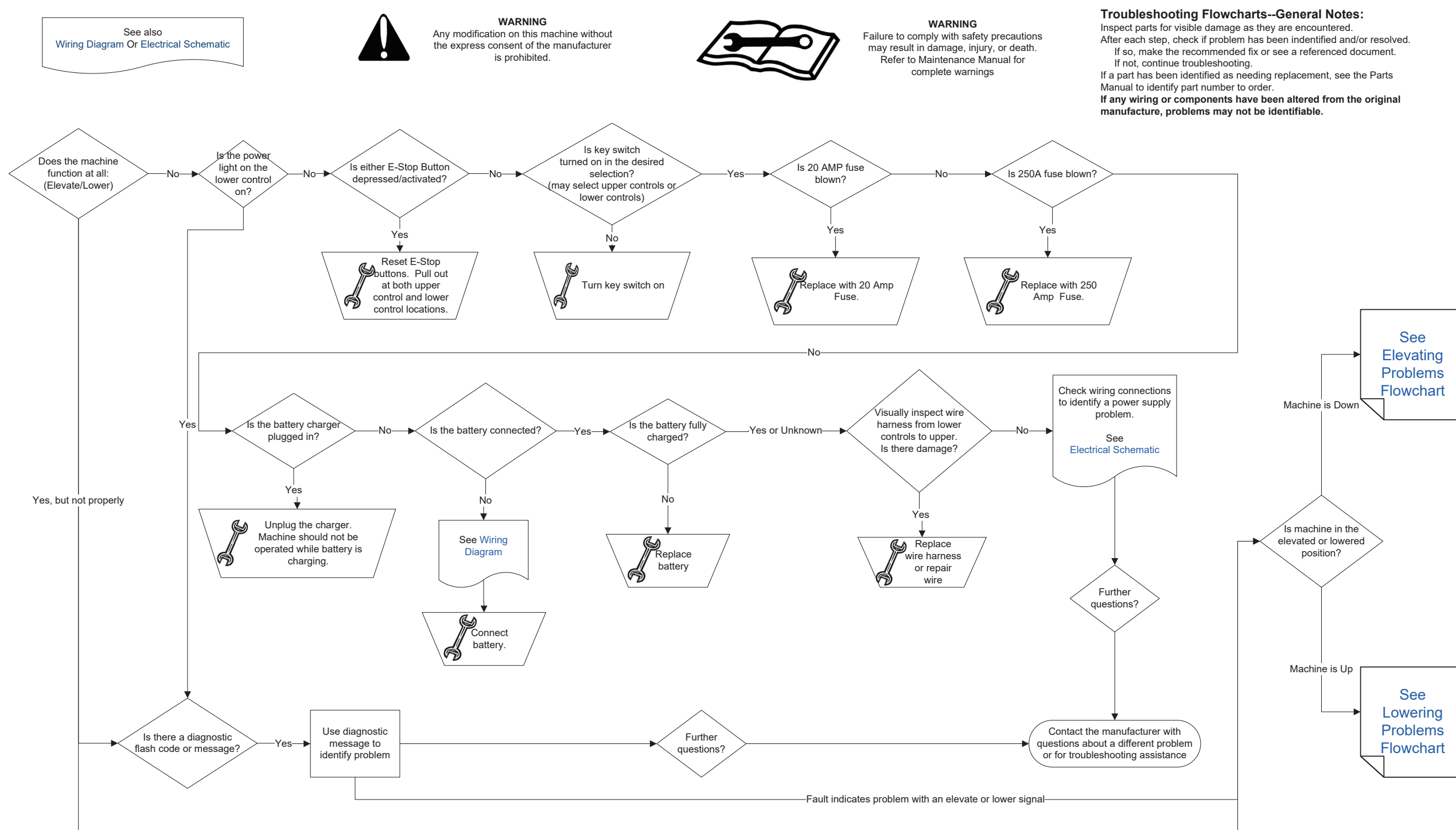
Flash Code	Message	Meaning
Steady	EVERYTHING OK	No problems detected
Steady	LIFTING/LOWERING	Elevating or Lowering in progress
9/9	FAULT: CHECK EMS	Fault detected with P1-1 and P1-2: Power--E-stop, key switch, 20 A fuse, etc.
2/2	FUNCTIONS LOCKED-ENABLE FIRST	Attempting to activate up/down movement without enable
2/2	FUNCTIONS FAULTY	Up and Down movements activated together
2/2	FUNCTIONS LOCKED-EXTERNAL SHUTDOWN	Not used on this model. (A programmed interlock)
2/2	FUNCTIONS LOCKED-TILTED	Vehicle is on a slope. (Or calibrated incorrectly)
2/2	FUNCTIONS LOCKED-ARMGUARD	Vehicle being lowered to the height that the elevation switch activated to temporarily stop movement.
2/2	ENABLE LOCKED	The enable button has been active for too long without requesting movement. (This would happen if someone tried to override the enable button to keep it in the active position, or inadvertently pushed the button, etc.)
4/4	FUNCTIONS LOCKED-BATTERY	Battery charge is less than 10.8V
6/3	FUNCTIONS LOCKED-ELEVATION SWITCH	Problem with the elevation switch. Lift did not get up in the expected time.
3/5	FUNCTIONS LOCKED-MOTOR LOADED	Problem with the pump motor
3/5	FAULT: MOTOR OVERLOAD!	Problem with the pump motor
3/5	FAULT: MOTOR/WIRING S/C	Problem with the pump motor
3/4	FAULT: POWERED OUTPUTS WHEN OFF	Problem with P2-5 (Up),6 (Down),7 (Main Contactor),8 (Beacon Light) powered when it should not be.
7/7	FAULT: POWER CIRCUITS GROUNDED	
3/3	FAULT: LINE CONTACTOR WELDED	Problem with the pump motor or main contactor connections.
4/2	FAULT: BAD INTERNAL SLAVE!	Internal control module fault.
3/3	FAULT: BAD INTERNAL 10V!	Internal control module fault.
1/1	TEST MODE ACTIVE	Test mode has been enabled on the EZCal. Cycle power to clear.
4/4	FAULT: SUPPLY TOO HIGH	Battery Voltage >32V
4/4	FAULT: SUPPLY TOO LOW	Battery Voltage <8V

6.1 | TROUBLESHOOTING FLOWCHART: POWER

Troubleshooting Step 1: Main Power

Troubleshooting Flowchart: PA-1030 Power

Troubleshooting Step 1: Main Power



See also
Wiring Diagram Or Electrical Schematic

WARNING
Any modification on this machine without the express consent of the manufacturer is prohibited.

WARNING
Failure to comply with safety precautions may result in damage, injury, or death. Refer to Maintenance Manual for complete warnings

Troubleshooting Flowcharts--General Notes:
Inspect parts for visible damage as they are encountered. After each step, check if problem has been identified and/or resolved. If so, make the recommended fix or see a referenced document. If not, continue troubleshooting. If a part has been identified as needing replacement, see the Parts Manual to identify part number to order. **If any wiring or components have been altered from the original manufacture, problems may not be identifiable.**

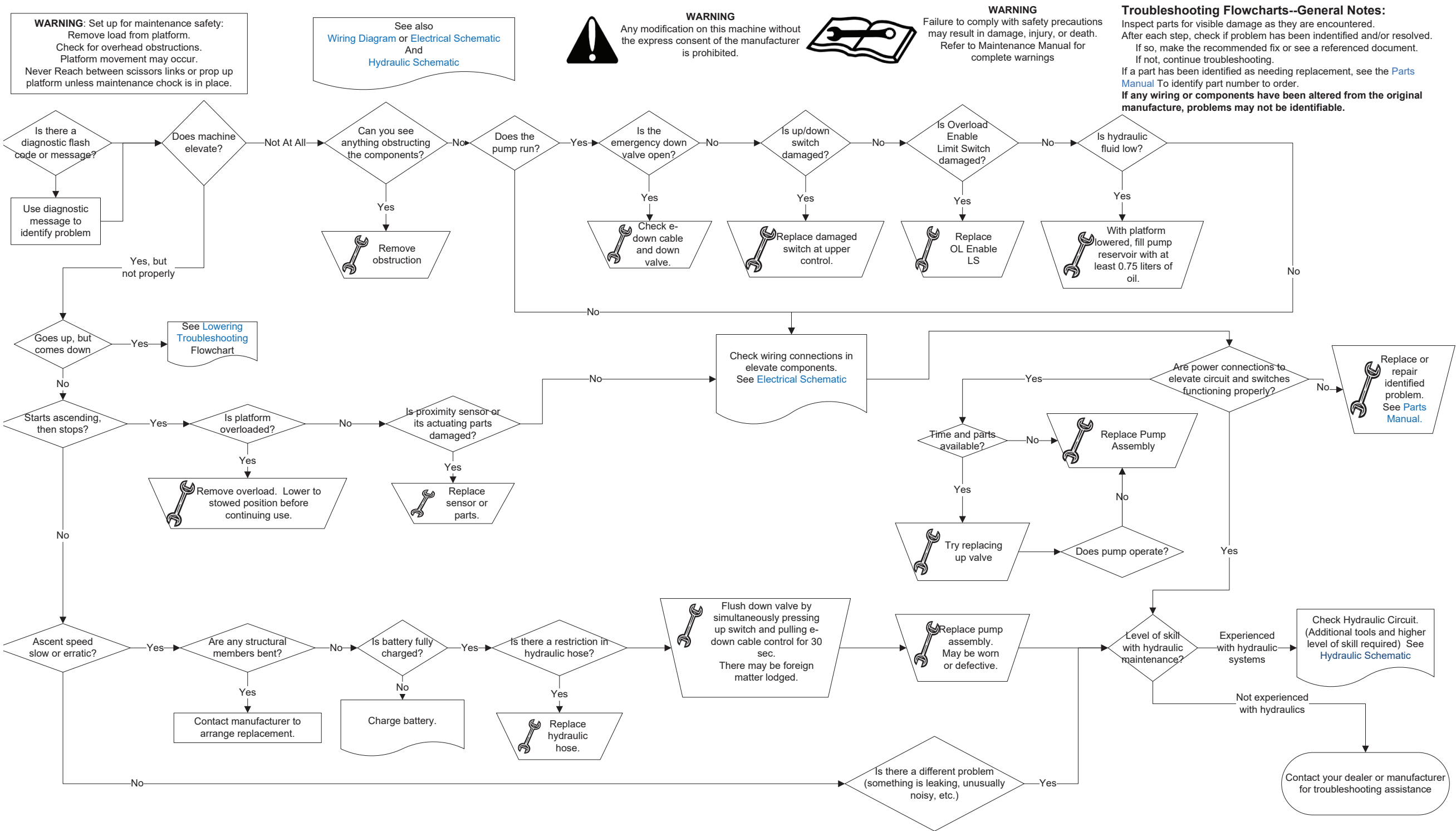
Revision: A

6.2 | TROUBLESHOOTING FLOWCHART: ELEVATING

Troubleshooting Step 2A: Elevating

Flowchart-PA-1030-Elevating

Troubleshooting Step 2A: Elevating



Reference Revision A

6.3 | TROUBLESHOOTING FLOWCHART: LOWERING

Troubleshooting Step 2B: Lowering

Flowchart: PA-1030-Lowering

Troubleshooting Step 2B: Lowering

WARNING: Set up for maintenance safety:
Remove load from platform.
Check for overhead obstructions.
Platform movement may occur.
Never Reach between scissors links or prop up platform unless maintenance pins are in place.

See also
[Wiring Diagram Electrical Schematic](#)
And
[Hydraulic Schematic](#)



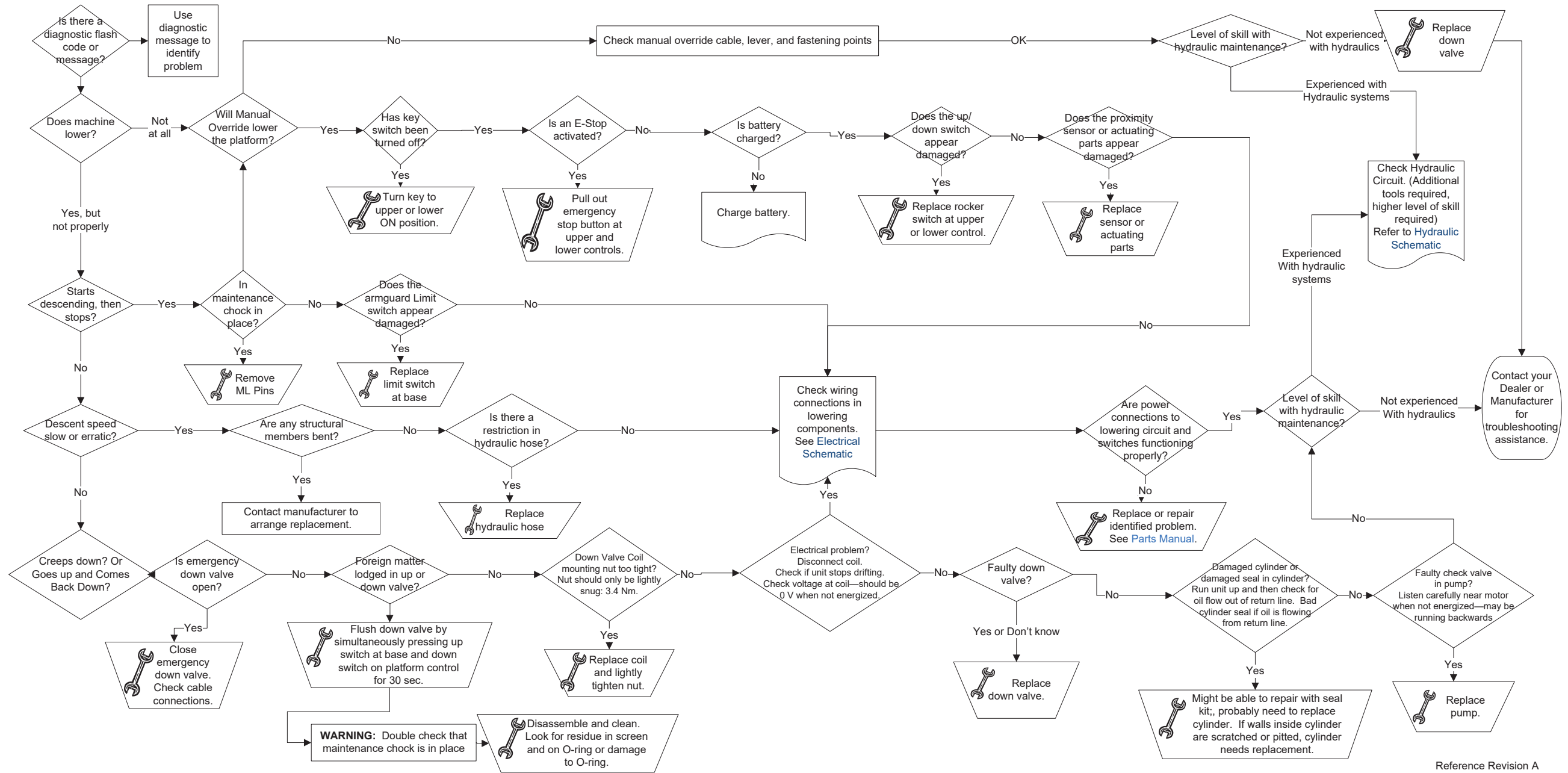
WARNING
Any modification on this machine without the express consent of the manufacturer is prohibited.



WARNING
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Troubleshooting Flowcharts--General Notes:

Inspect parts for visible damage as they are encountered. After each step, check if problem has been identified and/or resolved. If so, make the recommended fix or see a referenced document. If not, continue troubleshooting. If a part has been identified as needing replacement, see the [Parts Manual](#) to identify part number to order. **If any wiring or components have been altered from the original manufacture, problems may not be identifiable.**



Reference Revision A



USE ONLY MANUFACTURER APPROVED REPLACEMENT PARTS. USE OF NON-OEM PARTS WILL VOID WARRANTY.



REPLACEMENT OF THE FOLLOWING COMPONENTS WILL AFFECT THE STRENGTH, STABILITY, OR SAFETY FUNCTION OF THE UNIT: BATTERY, HYDRAULIC CYLINDER, AND ALL STRUCTURAL COMPONENTS.

Refer to the Hy-Brid Lifts Operation and Safety Manual for decal part numbers and locations.

In addition to the decals listed in the Operation and Safety Manual, a partial list of replacement parts . These represent current model revisions. A full parts manual is available from Hy-Brid Lifts.

Refer to our website, www.hybridlifts.com for more complete part listings and earlier revisions. Several parts are model-, serial number-, or manufacture date-specific. Contact your dealer for replacement part availability and pricing.

7.1 | SELECTED REPLACEMENT PARTS



USE ONLY MANUFACTURER APPROVED REPLACEMENT PARTS. USE OF NON-OEM PARTS WILL VOID WARRANTY.



REPLACEMENT OF THE FOLLOWING COMPONENTS WILL AFFECT THE STRENGTH, STABILITY, OR SAFETY FUNCTION OF THE UNIT: BATTERY, HYDRAULIC CYLINDER, AND ALL STRUCTURAL COMPONENTS.

Refer to the Operation & Safety Manual0 for decal part numbers and locations.

In addition to the decals listed in the Operation & Safety Manual a partial list of replacement parts is included in this manual. These represent current model revisions. A full parts manual is available on our website hybridlifts.com.

The following materials require special means of disposal:
 HYDR-032: Hydraulic fluid: Do not dispose in a drain to water source. Take to a recycling center.
 ELEC-047-4 or ELEC-047-5: Batteries: Take to a recycling center.

The following list is a partial list of common replacement parts. A more complete parts handbook is available on request. Some parts are model-, serial number-, or manufacture date-specific. Contact your dealer for replacement part availability and pricing.

Description	Part Number	Notes
DECAL KIT, PA-1030	177-21-080-55-K	
PLATFORM CONTROL ASSEMBLY	177-21-006-55	
MAIN WIRE HARNESS	177-21-019-50	
BUTTON,PUSH GREEN	ELEC-602-KIT	
BUTTON,PUSH/PULL RED E-STOP	ELEC-071-KIT	
CONTACT BLOCK,NC	ELEC-072	
CONTACT BLOCK,NO	ELEC-603	
ROCKER SWITCH	ELEC-133B	
CHARGER,12V,06A PCS	ELEC-746	
GATE SPRING	HARD-302	
BRAKE SPRING	HARD-690	
HYDRAULIC OIL FLUID	HYDR-032	Not available as a replacement part. Replace with Flomite #150, Dexron II, Mobil-DTE 2 or equivalent 32 weight implement oil.
DOWN VALVE	HYDR-007-2E-5	
SWIVEL CASTER ASSEMBLY	WHEE-764	
WHEEL,700 MM	WHEE-765	
MANUAL BOX 8.5X11X1 W/GASKET	HARD-603	

LIMITED WARRANTY

Warranty Statement—Two Year Agreement

LIMITED WARRANTIES

Subject to the terms, conditions and limitations set forth herein, Custom Equipment, LLC (the "Company") warrants to the first end-user ("Buyer") that:

Limited Product Warranty

For a period of 24 months from the date that a new product manufactured by the Company ("Product") is delivered to the Buyer, the Product will (i) conform to the specifications published by the Company for such Product as of the date of delivery; and (ii) be free of any defect in material and/or workmanship under normal use and maintenance; and

Extended Structural and Chassis Warranty

For a period of 60 months from the date that the Product is delivered to the Buyer, the chassis and other structural components of such Product will be free from defects in material and/or workmanship under normal use and maintenance.

EXCLUSIONS / WHAT IS NOT COVERED

The following items are NOT covered under this Limited Warranty:

Defects in, and damage or loss relating to, any batteries incorporated by the Company into or made a part of the Product. Any such defects, damage or loss shall be exclusively covered by the battery manufacturer's warranty, if any. For more information regarding the battery warranty, the Buyer should contact the battery manufacturer using the contact information shown on the battery;

Damage or loss resulting from or caused by carrier handling;

Damage or loss resulting from or caused by normal wear and tear, weathering, lack of use or use with incompatible equipment or software;

Damage resulting from or caused by improper maintenance, improper handling or storage, improper use, abuse, neglect, operation beyond rated capacity, or operation after discovery of defective or worn parts;

Any part, component or assembly altered or modified in any way not approved in writing by the Company;

Damage to any equipment or parts not manufactured by the Company; and
Acts of God, accidents or any other causes beyond the Company's reasonable control.

MAKING A WARRANTY CLAIM

As a prerequisite to making any claim under this Limited Warranty, Buyer must give the Company written notice of any suspected defect promptly after discovery. Such notice shall specifically identify the suspected defect, the original delivery date and complete Buyer identification and location information. The Company will not accept any Product for warranty service without receiving Buyer's written notice and issuing a return goods authorization. If requested by the Company, Buyer shall return the defective Product, or parts, components or assemblies thereof, to the Company, F.O.B. Company's designated location. All returned Products or parts, components or assemblies thereof that are replaced under this Limited Warranty shall become the property of the Company. The Company reserves the right to review Buyer's maintenance and operation records and procedures to determine if the alleged defect(s) were due to any of the items listed in Sections 2 of this Limited Warranty. The Company shall not be liable for any claim under this Limited Warranty if Buyer fails to satisfy the conditions set forth in this Section.

EXCLUSIVE WARRANTY REMEDIES

Exclusive Repair or Replace Remedy

The Company's sole obligation and Buyer's exclusive remedy with respect to any defect in the Product occurring during the warranty periods set forth in Section 1 of this Limited Warranty shall be for the Company, at its option, to repair or replace (or have one of its designated authorized dealers repair or replace) the Product or part, component or assembly thereof that contains a defect in materials or workmanship. The Company reserves the right, at its discretion, to use new, re-manufactured or refurbished replacement parts. Notwithstanding anything in this Limited Warranty to the contrary, the Company shall not be obligated to replace the entire Product if a covered defect can be remedied by the repair or replacement of a defective part, component or assembly. The Company shall be responsible for the cost of all parts and labor charges, up to the Maximum Labor Amount determined in accordance with Section 4(b) of this Limited Warranty, necessary to remedy such defect.

Labor Charges

If field repairs or parts replacement are necessary on any Product covered by this Limited Warranty, the Company will reimburse its designated authorized dealer for those direct labor costs incurred to perform such field repairs or parts replacement up to the maximum amount specified in the Company's current Field Service Rate (hereinafter, the "FSR") or in any 'Flat Rate Guides' or similar agreement established with the authorized dealer (such maximum amount shall be referred to in this Limited Warranty as the "Maximum Labor Amount"). Current versions of the Company's FSR and Flat Rate Guides are incorporated by reference into this Limited Warranty. For a current copy of the Company's FSR and Flat Rate Guides, Buyer should contact the Company at 1-866-334-0756. Buyer shall be responsible for any costs or fees due to the authorized dealer in excess of the Maximum Labor Amount.

DISCLAIMER OF OTHER EXPRESS AND IMPLIED WARRANTIES

Except for the limited warranties set forth in section 1 above, the company makes no other representations or warranties and hereby disclaims all express or implied representations or warranties regarding the product, including, without limitation, any implied warranty of merchantability, non-infringement of proprietary or third-party rights or fitness for a particular purpose. There are no warranties which extend beyond the description on the face hereof. No employee or representative of the company or any of its authorized dealers is authorized to modify any term, condition or limitation in this limited warranty unless such modification is made in writing and signed by an officer of the company.

LIMITATION OF LIABILITY

Notwithstanding anything in this warranty to the contrary, in no event shall the company or any of its affiliates or subsidiaries be liable to buyer for any indirect, special, exemplary, punitive or consequential damages (including lost profits, lost revenue, down time, loss of business opportunity or other economic losses), whether in an action in contract or tort (including negligence and strict liability) or otherwise, even if the company has been specifically advised of the possibilities of such damages.

Version 1.15.16

SECTION 9 | INSPECTION & REPAIR LOG

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DATE	BY	MAINTENANCE, EXAMINATION, OR REPAIR	COMMENTS

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HY-BRID LIFTS™

BY CUSTOM EQUIPMENT LLC

Push-Around Mobile Elevating Work Platform
Maintenance & Troubleshooting Manual
PA-1030

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"Hy-Brid Lifts" is a trademark of Custom Equipment, LLC.
These machines may comply with ANSI A92.3 requirements.

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