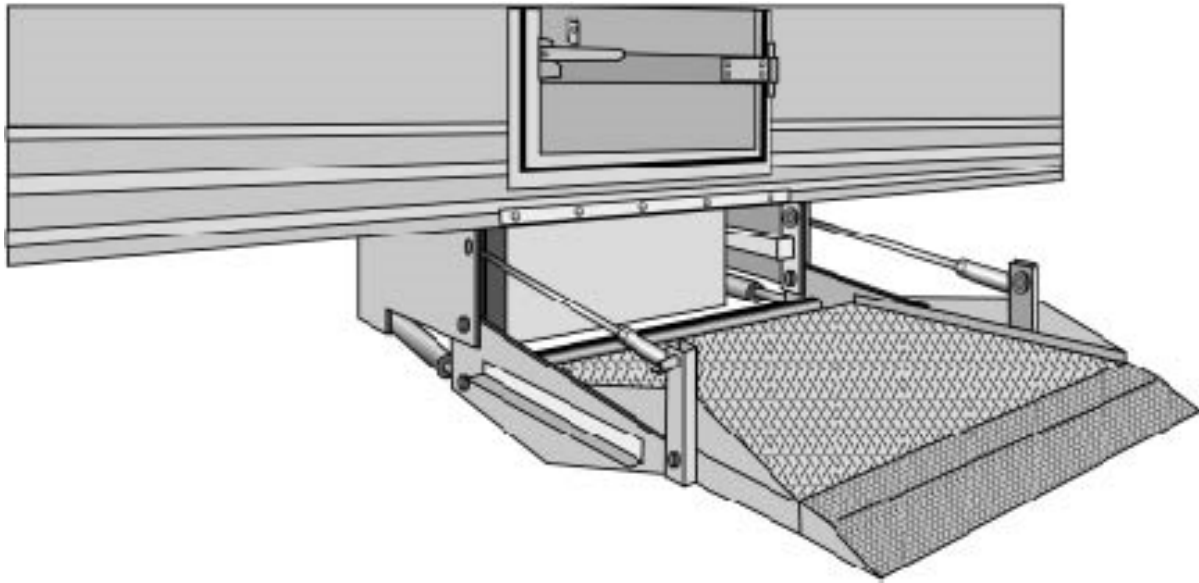




Owner's Manual

LPS4500RL Hide-A-Way®

Trailer Side Gate



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LML00374 6-9-17

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GENERAL SPECIFICATIONS

CUSTOMER: _____
 MODEL: LPS _____
 SERIAL #: _____
 CAPACITY: 4500 lbs.
 TYPE: Trailer Side Door Lift Gate
 OPERATION: Power up/Gravity down
 Power in/out
 HYDRAULIC PRESSURE: 2500PSI – Up Function
 800PSI – In/Out Function

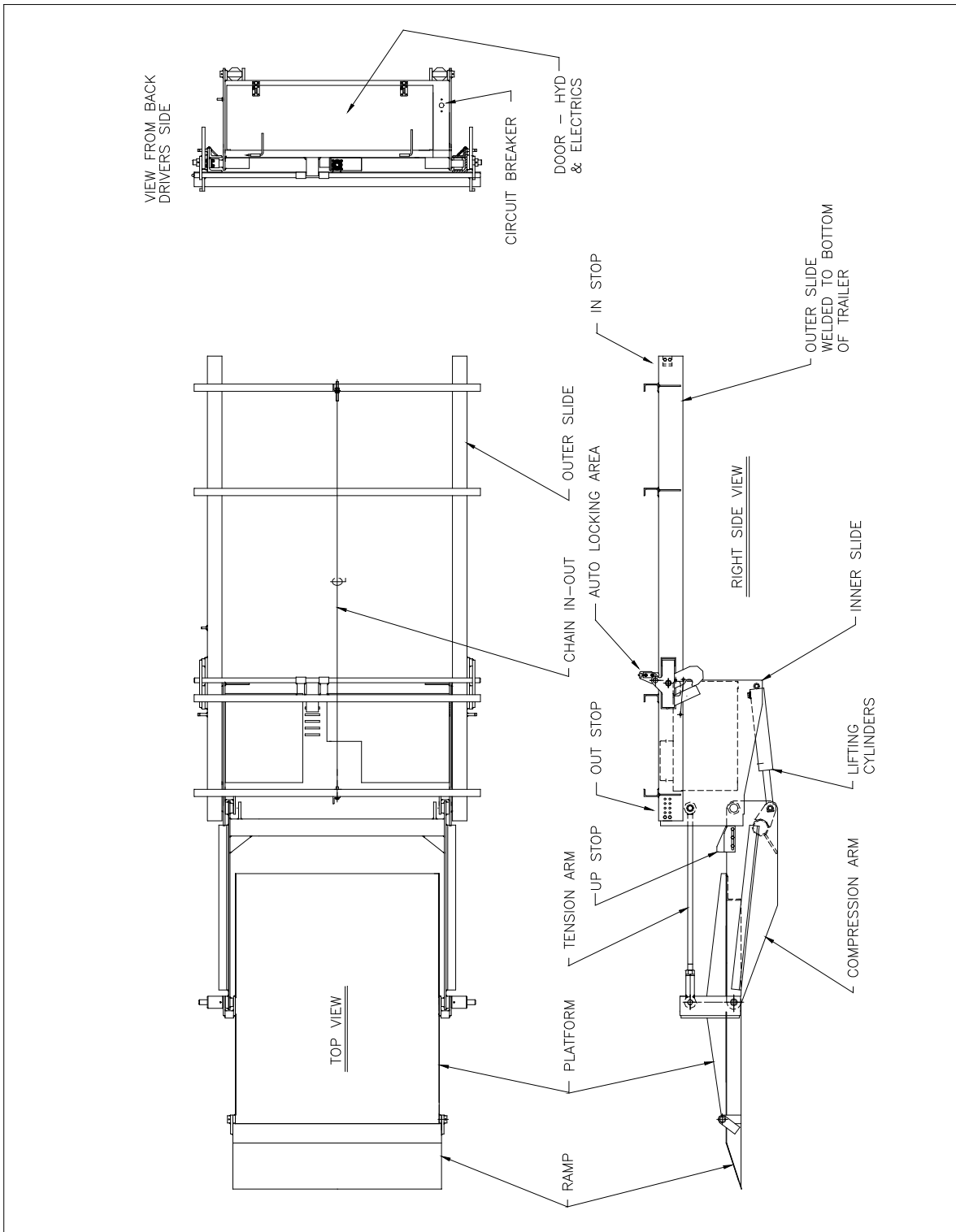
RECOMMENDED HYDRAULIC OILS / LUBRICATION

| HYDRAULIC OILS | Manufacturer | Type | Temp. Range |
|---|--|--------------|--------------------|
| Level 1 Normal Conditions | Mobile | DTE 11 | -15° F to + 150° F |
| | Shell | TELLUS-T15 | -15° F to + 150° F |
| | Exxon | UNIVIS-N15 | -15° F to + 150° F |
| Level 2 Cold Conditions | Mobile | AERO-HFA | -50° F to + 80° F |
| | Shell | AERO FLUID#4 | -50° F to + 80° F |
| | Exxon | UNIVIS-HVI13 | -50° F to + 80° F |
| | Mil | H-5606 | -50° F to + 80° F |
| HYDRAULIC TANK CAPACITY | | | |
| 2 ½ gallons | | | |
| LUBRICATION - GREASE | | | |
| Cam Rollers, Idler Sprockets, Auto-Lock shaft, cylinder pins, if grease fittings provided | Level 1 Normal Conditions NLGI #2 Lithium base grease Level 2 Cold Conditions NLGI #1 Lithium base grease DO NOT USE CHASSIS or 5 th WHEEL GREASE | | |
| BATTERIES | | | |
| Two (2) 12-Volt DC Group 31 Heavy-Duty Dual Purpose or AGM | | | |
| ELECTRICAL COMPONENTS CONNECTIONS | | | |
| Use Fluid Film Rust & Corrosion Protection by Eureka, except on Start Solenoid. On Start Solenoid, use Color Guard by Loctite, or Liquid Electrical Tape | | | |
| AMPERAGE DRAW OF MOTOR | | | |
| When raising platform (empty) approximately 115 AMPS @ 13.5 volts. At bypass approximately 235 AMPS @ 13.5 volts | | | |
| LIFTING PRESSURE SETTING | | | |
| With platform at floor level and pump in bypass 2500PSI | | | |
| IN-OUT PRESSURE SETTING | | | |
| When sliding gate in-out and pump in bypass 800PSI | | | |
| MINIMUM VEHICLE FLOOR HEIGHT LADEN | | | |
| With any size of platform – vehicle floor height 48” | | | |
| MAXIMUM VEHICLE FLOOR HEIGHT UNLADEN | | | |
| With any size of platform – vehicle floor height 58” | | | |
| APPROXIMATE TIMES EMPTY AT 80° F WITH 2 GROUP 31 BATTERIES | | | |
| Time up: 14 – 18 seconds, Time down(gravity down): 12 –16 seconds | | | |

WARNING:

The use of a battery charger as the sole power source to operate the lift gate is unauthorized and will prevent the lift gate from working properly. The lift gate must always be operated in conjunction with at least one (1) 12 volt heavy duty lift gate battery. A minimum of 9.5 volts must be maintained in order for the DOWM valve and 10.5 volts for the IN / OUT valves to operate.

GENERAL TERMINOLOGY



OPERATING INSTRUCTIONS

Before operating the lift gate, read and understand Urgent Warning decal and Owner's Manual.

Do not stand in front of the lift gate while unfolding or using the platform.

With the gate in the over-the-road / stored position, do the following steps to operate the gate:

1. To relieve the tension on the auto lock, push the up switch (gate will go up), pull the handle to release auto lock.
2. Use the down switch to lower lift until arms are parallel to the ground.
3. Stand to the side of the lift gate. Push the power in/out switch down, gate will run out, run the gate out until it stops and locks into its fully extended position.
4. Unfold ramp.

To lower the platform, use the down switch only.

To raise the platform, use the up switch only.

To store the gate in over-the-road position:

1. Raise the platform off the ground until the arms are parallel to the ground.
2. Fold ramp over.
3. Raise locking bar handle and push the in/out switch up. Run gate all the way under trailer until the lift stops.
4. Run gate up (use the up switch), auto lock will latch.
5. Lower the gate until resting on the auto lock. (Use the down switch).

EMERGENCY HAND PUMP OPERATION

If an emergency hand pump was supplied with this lift gate, its intended use is to restore the gate to the transit position.

CAUTION: Do not try to operate the power unit when using the hand pump.

Steps to secure the gate, so the trailer can be moved:

1. Remove the pump handle from the holder and insert into the hand pump socket.
2. Raise the platform off the ground about 6", pump up/down.
3. To retract the gate, disconnect the IN/OUT chain and manually push the gate under the trailer all the way until it stops.
4. Pump the gate until fully up. Gate must latch into the Auto-Lock hooks.
5. With the handle unscrew the valve on the bottom of the hand pump. This will let the gate rest down in the Auto-Lock hooks.

PREVENTATIVE MAINTENANCE SCHEDULE

MAINTENANCE by CYCLES

MODEL LPS4500RL

DATE: _____

| | | | |
|------------------|--|----------------------|--|
| CUSTOMER | | GATE MODEL # | |
| LOCATION | | GATE SERIAL # | |
| VEHICLE # | | SERVICED BY | |

√ = OK X = REPAIR A = ADJUSTED N = NOT APLICABLE

| 3000 | MOTOR / PUMP COMPONENTS | 3000 | MOTOR / PUMP COMPONENTS |
|------|---|------|--|
| | Check batteries for corroded, loose or broken connections | | Check charge line/power line for corroded, loose or broken connections at both ends |
| | Check batteries for proper voltage level and charging | | Check amp draw of motor with fully charged batteries and tight clean connections |
| | Check all wiring in pump box for corroded, loose or broken connections | | Check all ground wires for corroded, loose or broken connections |
| | Check power unit solenoids for proper operation | | Check pressure setting of relief valves |
| | Check reservoir for proper oil level (Gate down on the ground, fluid level should be 1" from top of tank) | | Clean all wiring connections in pump and battery box. Spray with Fluid Film Corrosion Protection by Eureka. Use Color Guard or Liquid Electrical Tape on Start Solenoid. |
| | Inspect circuit breakers and fuses for proper operation | | Check emergency hand pump for proper operation if equipped. |
| | Check all fittings/hoses in power unit for tightness and leaks | | Check hydraulic motor sprockets for worn bushings and proper operation. |

| 3000 | STRUCTURAL COMPONENTS | 3000 | STRUCTURAL COMPONENTS |
|------|---|------|---|
| | Check for correct operation of the gate UP, DOWN, IN, and OUT. | | Check IN/OUT chain for proper adjustment (no more than ½" play) |
| | Check wiring harness on side of gate for chaffed, frayed, or broken wires. | | Check all pivot points for loose, broken, or missing roll pins |
| | Check wiring harness on side of gate for loose, broken, or missing clamps. | | Check UP stops for proper positioning of the platform and adjust as needed. |
| | Check the ground cable on side of gate for loose or corroded connections. | | Check the IN/OUT stops for loose, broken, or missing hardware |
| | Check hydraulic cylinders for leaks | | Check rollers for proper operation |
| | Check hydraulic cylinder pins for loose, broken, or missing roll pins. | | Check over-all gate for damage or broken welds and repair as needed. |
| | Check Auto Lock mechanism for proper operation. Lubricate and adjust as needed. | | Check Compression and Tension Arms for worn bushings |
| | Check all warning lights for proper operation if equipped | | |

| 3000 | LUBRICATION | | PERIODICAL CHECK LIST |
|------|---|--------------|---|
| | Stainless Steel Chain should not require any lubrication. Lubricate Idler Sprockets, Auto-Lock shaft, Cam Rollers, and Cylinder Pins at base end. | 12000 | Check all pivot point bushings for wear or damage |
| | | 12000 | Check hydraulic motor sprockets for worn bushings and proper operation. |
| | | 15000 | Flush hydraulic system and change hydraulic oil |
| | | | Clean and repaint as necessary |

| MAINTENANCE MINDER ² READINGS MENU 2 | | | |
|---|-------------------------|-----------------------------|----------------------------------|
| Screen 1 # Lifts | Screen 3 Service Faults | Screen 4 Low Voltage Faults | Screen 6 High Temperature Faults |
| | | | |

TO RESET MAINTENANCE MINDER 2[®] after performing Preventative Maintenance, see page 8.

MAINTENANCE MINDER 2[®] OVERVIEW

Power unit is equipped with the Maintenance Minder 2[®] Controller. It will:

- Automatically keep track of maintenance intervals and warn the user when maintenance is due, based on the number of lifts.
- Record low voltage occurrences.
- Record high temperature faults.
- Record maximum run time faults, when a single operation exceeds the maximum continuous run time limit.
- Give helpful trouble-shooting information on MENU 4, “Last Lift Info”.

FAULTS CODES

A decal in the power unit enclosure lists the following signal codes for these faults:

| | |
|---------|--|
| 1 BEEP | Service Fault (reached the number of lifts when maintenance is due) |
| 2 BEEPS | Low Voltage Fault (check battery condition and power line connections) |
| 3 BEEPS | Max. Time Fault (exceeded the maximum continuous run time allowed) |
| 4 BEEPS | High Temperature Fault (unit will not run until motor cools) |

All faults signals will be repeated FOUR times, except the Service Fault signal. Controller will prevent power unit from operating during the time period when a fault signal is sounding (about 5 to 10 sec.) except for the Service Fault signal. The controller is also equipped with an anti-doorbelling feature, which prevents rapid ON/OFF operation of the power unit.

RESETTING after MAINTENANCE IS PERFORMED

To RESET the Maintenance Minder 2[®] after maintenance has been performed:

1. Go to MENU 2, hit “ENTER”, and toggle down to the “Reset All Info” screen.
2. Press and hold the hidden RESET button under Maintenance Minder 2[®] logo at top of faceplate.
3. Follow the instructions on the screen regarding a second button, which must be pressed to complete the reset operation.



MAINTENANCE MINDER 2[®] CONTROLLER MENUS

(Press MENU)

MENU 1 – LIFT GATE INFO

(Press ENTER, then ARROW DOWN for each item)

Model Number, Serial Number, Manufacture Date, Vehicle ID, Hardware Version, Firmware Version, Software Version.



(Press MENU and ARROW DOWN once)

MENU 2 – PERIOD INFO (data for current maintenance period)

(Press ENTER, then ARROW DOWN for each item)

Number of Lifts (gives the number during this maintenance interval and the set number when maintenance is due)

Motor ON (total motor run time in minutes for this maintenance period)

Service Fault (number of times gate was operated PAST the maintenance limit)

Max. Time Faults (times motor exceeded its maximum allowable continuous run time)

High Temperature Faults (times thermal switch in motor tripped, if switch provided)

Low Voltage Faults (times low voltage occurred)

Reset all Info (Reset data after performing maintenance, once maintenance limit is reached – see reset instructions on previous page)



MAINTENANCE MINDER 2[®] CONTROLLER MENUS

(Press **MENU** and **ARROW DOWN** twice)

MENU 3 – LIFE TIME INFO (data for the total life time of the gate)

(Press **ENTER**, then **ARROW DOWN** for each item)

Same items will appear as under PERIOD INFO, except this is LIFE TIME data.

Reset History (reviews history for each maintenance interval)

Press **ENTER**, then **ARROW DOWN** to show history. Most recent period is the highest #. Screen shows Period #, # of Lifts, and Total Run Time in minutes.



(Press **MENU** and **ARROW DOWN** three times)

MENU 4 – LAST LIFT INFO (Trouble Shooting Screen – it records data that occurred during the last lift made)

(Press **ENTER**, then **ARROW DOWN** for each item)

Supply Voltage (first voltage is the minimum voltage that occurred during the last lift – if below 6 volts gate will stop / second voltage is the supply voltage just before gate operation, must be at least 10 volts).

Motor ON (motor run time in seconds during last lift, gate will stop at 180 seconds).

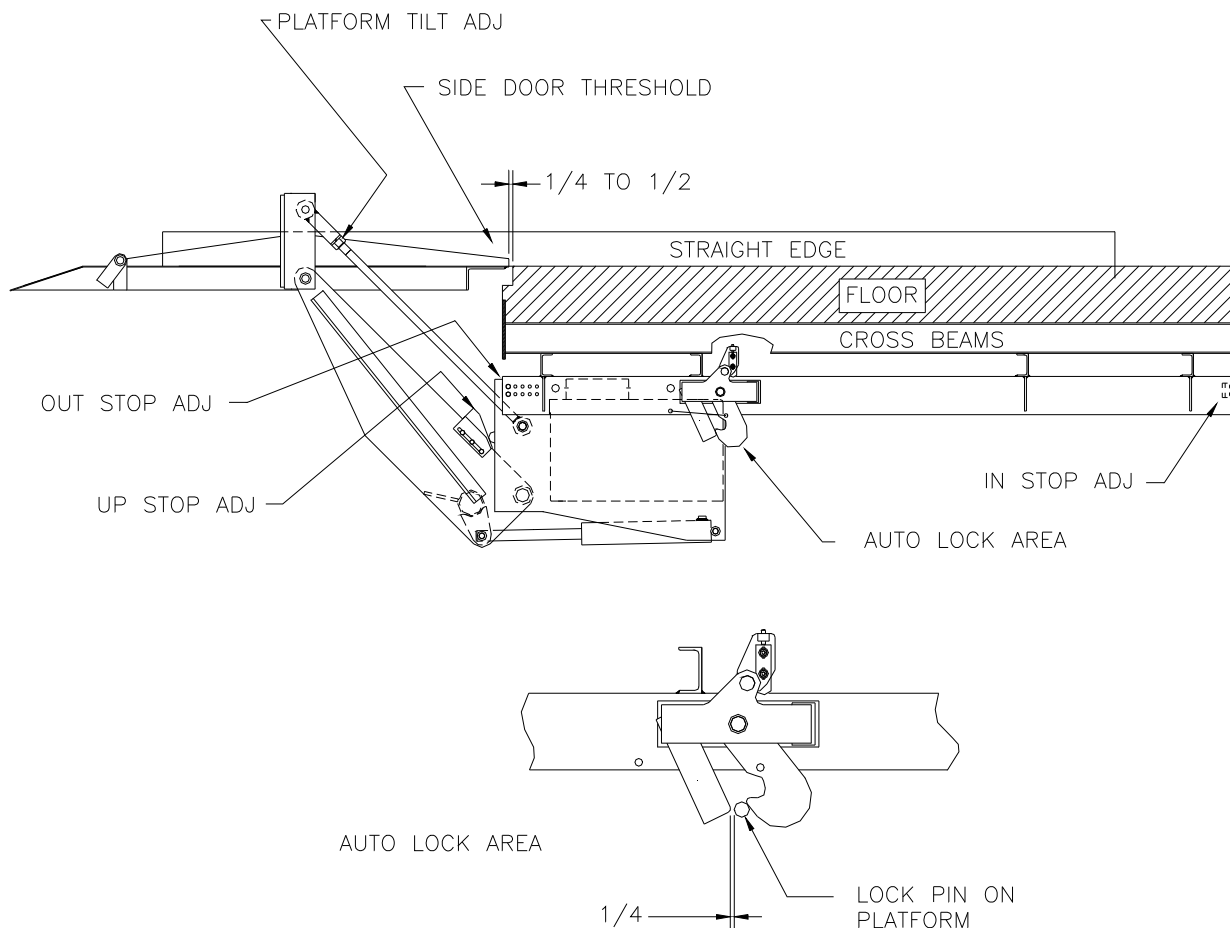
Window Time (time in milliseconds during the last lift that the voltage dropped in between 6 and 8 volts – must not be any longer than 3 seconds or gate will stop).



NOTE:

Controller has an anti-doorbelling feature. Motor will not operate if UP switch is toggled rapidly. This prevents welding of the start solenoid contacts.

INSTALLATION ADJUSTMENTS

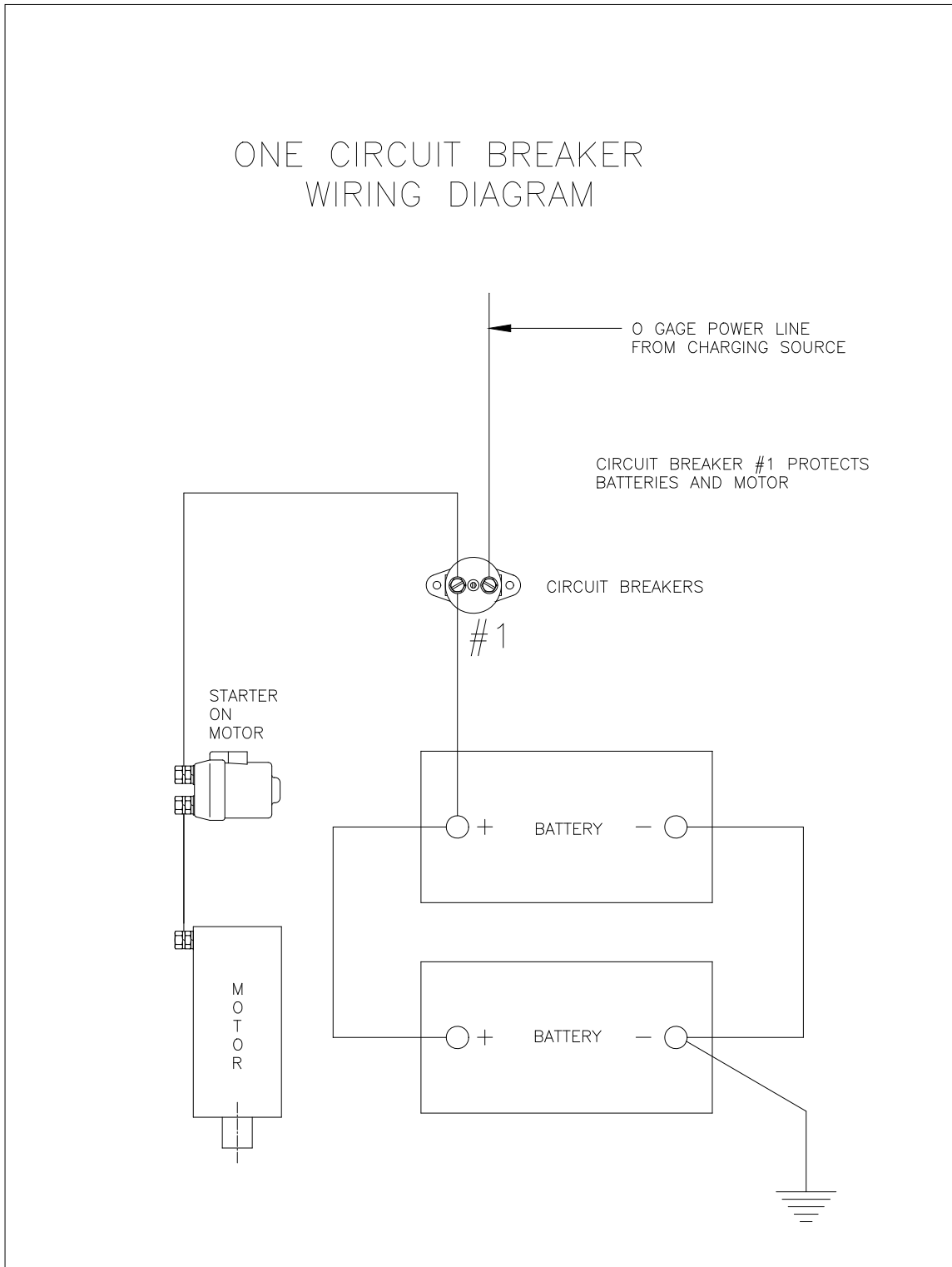


- Step 1: The platform was preset at the factory to be level to the floor of the trailer within $\frac{1}{4}$ ". With a straight edge, check this. If it is okay, proceed to step 2. If not, let the platform down to the ground. Remove the two (2) roll pins and the top Tension Arm pivot pins (one on each side).
NOTE: One full turn moves the tip of the platform $\frac{1}{4}$ " (turn the end in, this moves the tip of the platform up, unscrewing moves the tip of the platform down). Make necessary adjustments. Replace pins, raise the platform up and check. Repeat if necessary. Replace roll pins.
NOTE: Each side must be adjusted the same amount.
CAUTION: If this adjustment has been made, the IN stops must be adjusted to provide the $\frac{1}{4}$ " clearance with the Auto Lock pin (see lower sketch).
- Step 2: Adjust the UP stops. Platform should be even with the floor of the trailer.
- Step 3: Adjust the OUT stops. The tip of the platform should be $\frac{1}{4}$ " to $\frac{1}{2}$ " from the edge of the threshold.
- Step 4: Adjust the IN stops. See lower sketch and adjust for the $\frac{1}{4}$ " dimension

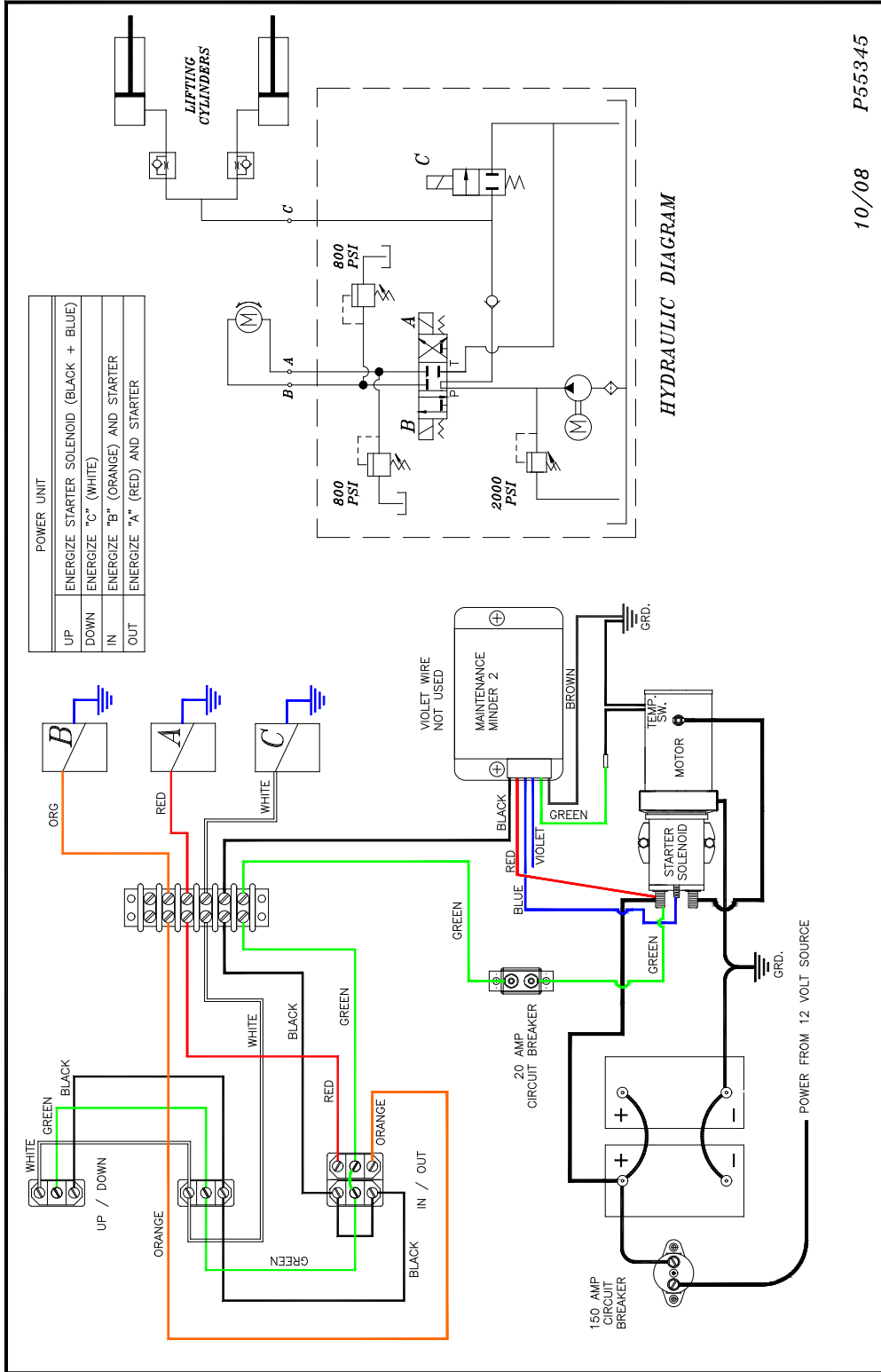
TROUBLESHOOTING CHART

| PROBLEM | PROBABLE CAUSE | REMEDY |
|--|---|---|
| The motor is running, but the platform will not go up or reach the floor of the vehicle. | <ol style="list-style-type: none"> 1. Insufficient oil in power unit tank. 2. Platform is over-loaded. 3. Pressure setting is low. | <ol style="list-style-type: none"> 1. Fill tank to the appropriate level. 2. Load only to the rated capacity. Remove some product if necessary. 3. Check and adjust the pressure to the proper setting. |
| The platform will not go up or reach floor level and the motor does not run. | <ol style="list-style-type: none"> 1. Low battery. Check Maintenance Minder 2[®] for Low Voltage faults. 2. Tripped circuit breaker. 3. Power line is loose. 4. Bad motor, starter or switch | <ol style="list-style-type: none"> 1. Recharge or replace battery. 2. Reset the circuit breaker. 3. Check the connections. If loose, tighten. Check for corrosion and clean if necessary. 4. To test-push the UP switch, if motor does not run, jump the two large terminals on the starter solenoid. The motor should run, if not, the motor is bad. If it does run, the solenoid is bad or is not getting a signal from the switch or the MM2. Use a test light to check. |
| Platform will not lower. | <ol style="list-style-type: none"> 1. Low battery. Need 10.5 volts to activate valve coils. 2. Bad ground or poor electrical connections. 3. Solenoid valve not opening. 4. Mechanical obstruction in gate. | <ol style="list-style-type: none"> 1. Recharge or replace battery. 2. Check connections, if loose-tighten. Check for corrosion and clean if necessary. 3. Drain valve "C" valve (white wire) must activate when DOWN switch is pushed. Use test light to check. 4. Visually check. |
| Platform creeps down. | <ol style="list-style-type: none"> 1. Hydraulic leak. 2. Defective piston seal in cylinder. 3. "C" valve (white wire), or check valve not closing. 4. Drain valve at base of optional Hand Pump may be open. | <ol style="list-style-type: none"> 1. Visually check for leaks. 2. Replace seals or cylinder. 3. Clean and inspect. 4. Check to see if valve on Hand Pump is closed tightly. Use end of Hand Pump handle. |
| Platform goes down slowly. | <ol style="list-style-type: none"> 1. Check for obstructions or damage to arms. 2. Restricted or pinched hydraulic lines. 3. "C" valve (white wire) not opening. 4. Incorrect hydraulic oil for cold weather operation | <ol style="list-style-type: none"> 1. Visually check. 2. Check for bent or pinched lines. 3. Clean and inspect. 4. Use recommended hydraulic oils for conditions present. |
| Gate will not go OUT and/or IN. | <ol style="list-style-type: none"> 1. Check for obstructions in rails. 2. Low battery. Check Maintenance Minder 2[®] for Low Voltage faults. 3. Tripped circuit breaker. 4. Power line is loose. 5. Bad motor, starter or switch. | <ol style="list-style-type: none"> 1. Visually check. Check Side Button adjustment 2. Recharge or replace battery. 3. Reset the circuit breaker. 4. Check the connections. If loose, tighten. Check for corrosion and clean if necessary. 5. To test: push OUT switch and motor does not run, jump the two large terminals on the starter solenoid. The motor should run, if it does not run, you have a bad motor. If it does run, the solenoid is bad or it is not getting a signal from the switch. Use test light to check (OUT is "A" valve "red wire", IN is "B" valve "orange wire"). |

CIRCUIT BREAKER WIRING DIAGRAM



WIRING DIAGRAM

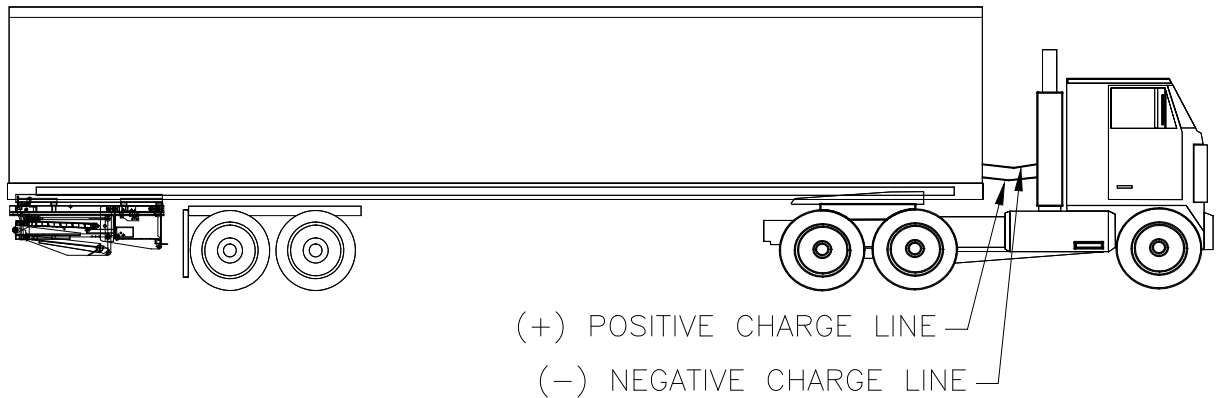


| POWER UNIT | |
|------------|--|
| UP | ENERGIZE STARTER SOLENOID (BLACK + BLUE) |
| DOWN | ENERGIZE "C" (WHITE) |
| IN | ENERGIZE "B" (ORANGE) AND STARTER |
| OUT | ENERGIZE "A" (RED) AND STARTER |

10/08 P55345

GROUNDING RECOMMENDATIONS

FOR TRACTOR/TRAILER USING MAINTENANCE MINDER 2[®] CONTROLLER



The Maintenance Minder 2[®] Controller requires a minimum of 10 volts to start and 8 volts to continue running the LPR lift gate. Power unit solenoid valves will require 10.5 volts to operate the coils. Utilization of a single positive cable often does not provide a sufficient ground for the charging circuit. Therefore, our recommendation for grounding tractor/trailers with the LPR gate is as follows:

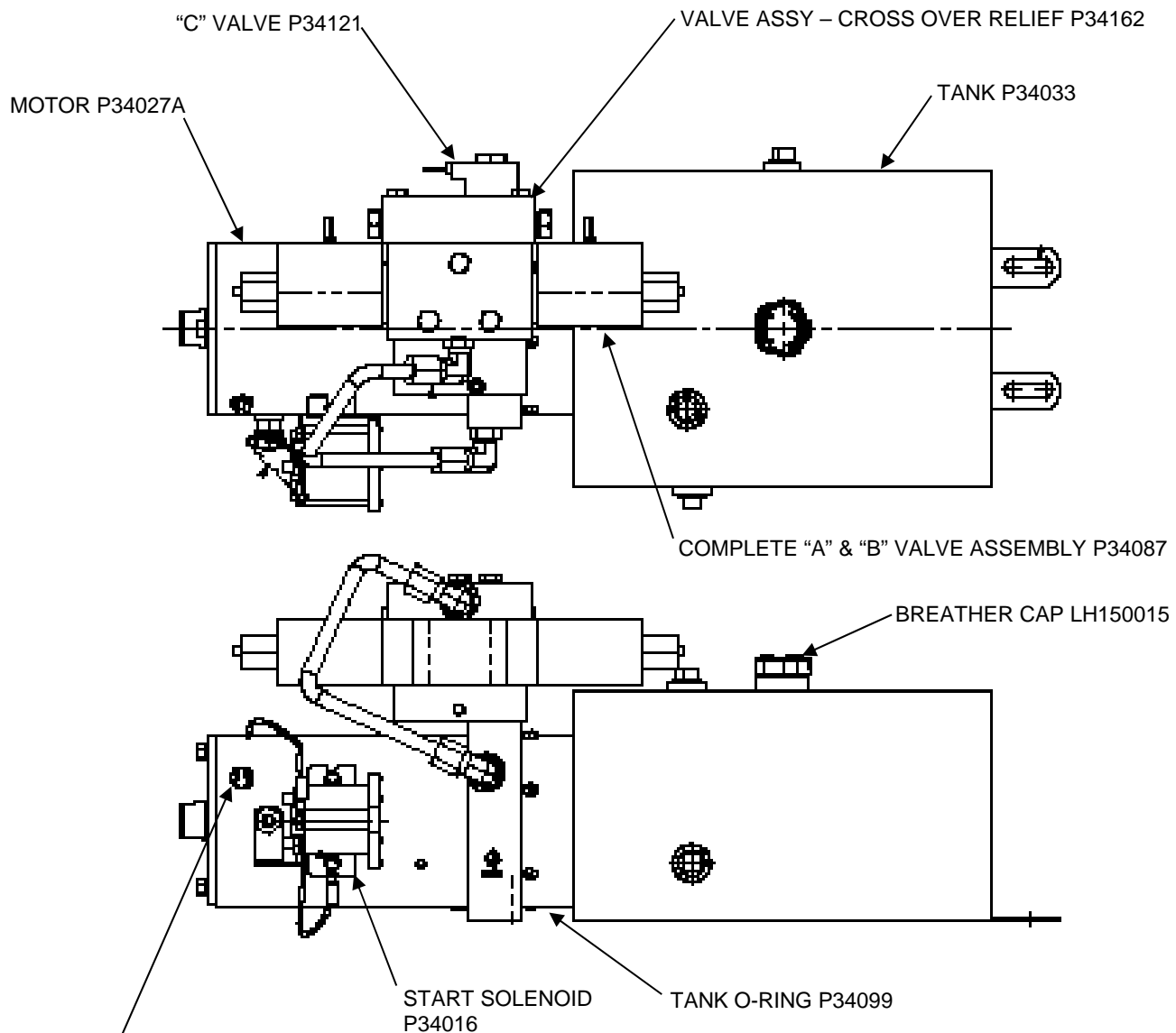
Use two (2) cables, one (1) positive and one (1) negative, both running to the tractor batteries.

NOTE:

The use of a battery charger as the sole power source to operate a LPR is unauthorized and will prevent the LPR from working properly. The lift gate must always be operated in conjunction with at least one (1) 12 volt heavy-duty dual purpose or AGM lift gate battery. A minimum of 10.5 volts must be maintained in order for the valves to operate.

POWER UNIT REPLACEMENT PARTS

MONARCH POWER UNIT (before 11/09)



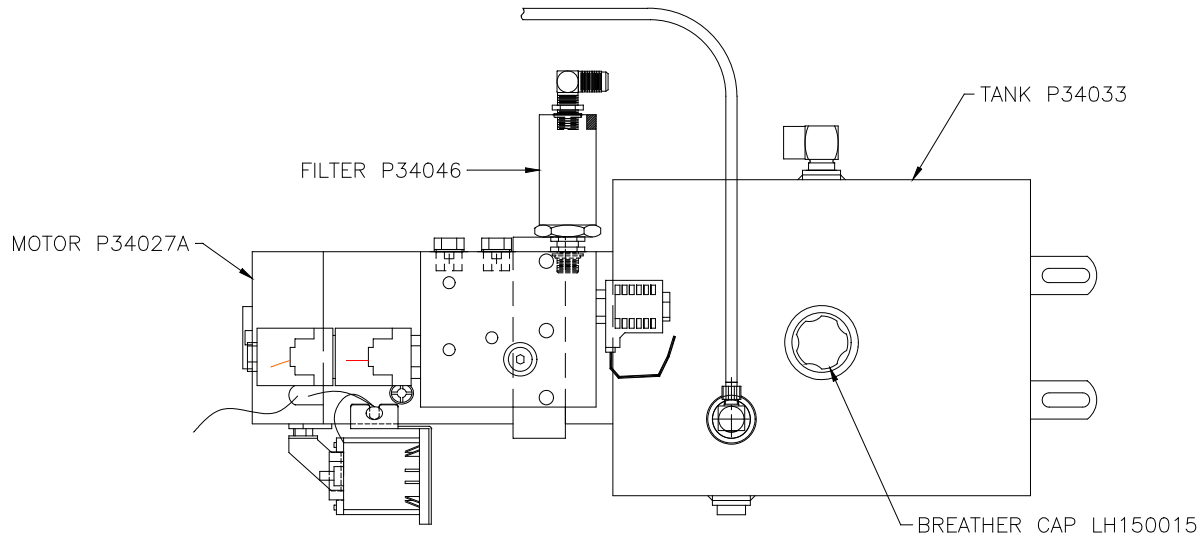
TEMP. SWITCH P34056 THRU 5/07 FOR BOSCH MOTORS.
TEMP SWITCH NOT AVAILABLE SEPARATELY FOR PRESTOLITE MOTORS

NOT SHOWN:
PUMP ASSY P34056
SUCTION STRAINER P34089
INLINE FILTER – P33616
MAINTENANCE MINDER 2@
CONTROLLER – P46608H

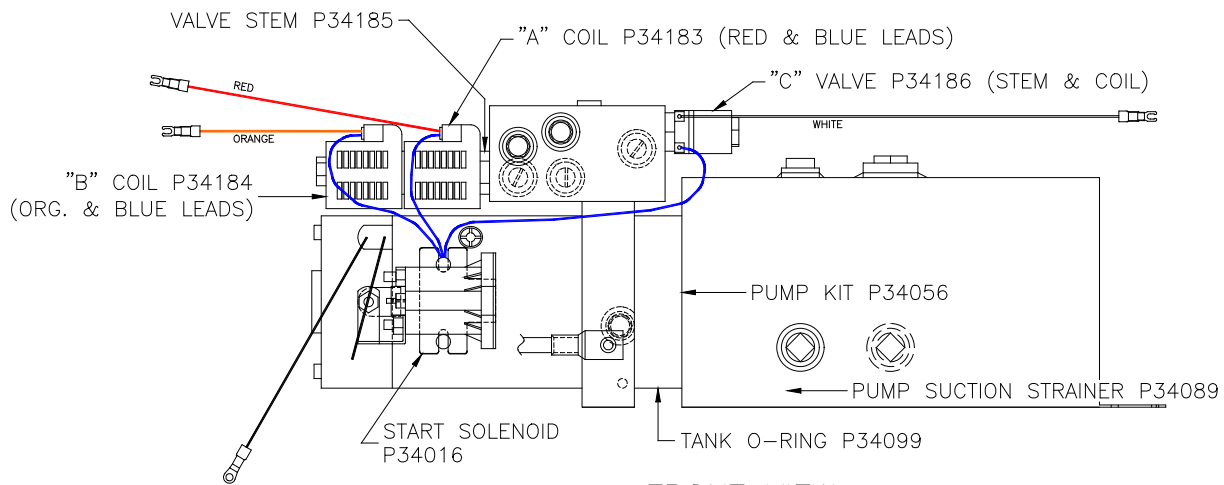
COMPLETE REPLACEMENT POWER UNIT
ASSEMBLY (including FILTER) - CA-501-446
Note: Power Unit will be the "AFTER 11/09" version

POWER UNIT REPLACEMENT PARTS

MONARCH POWER UNIT (after 11/09)



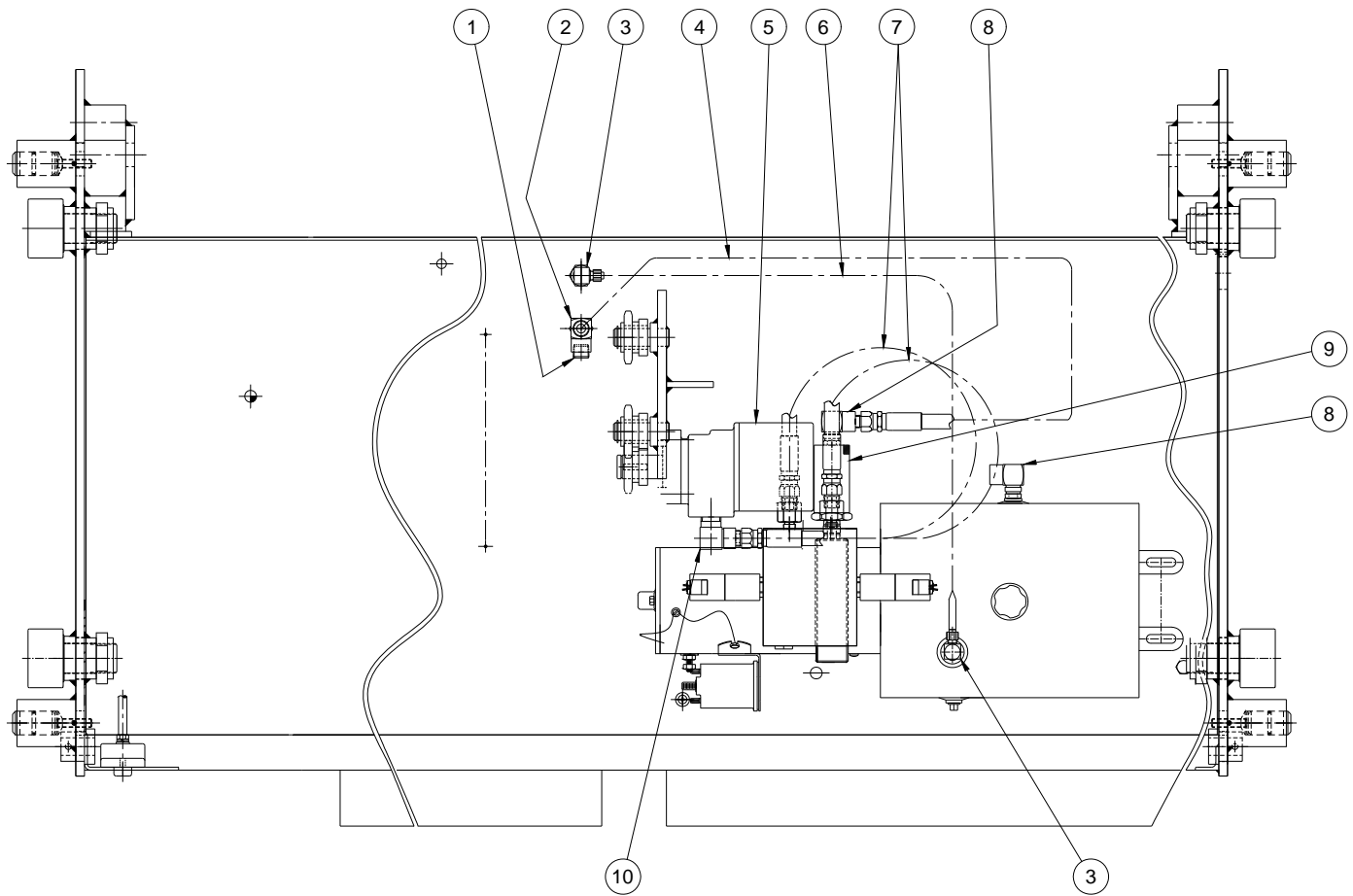
TOP VIEW



FRONT VIEW

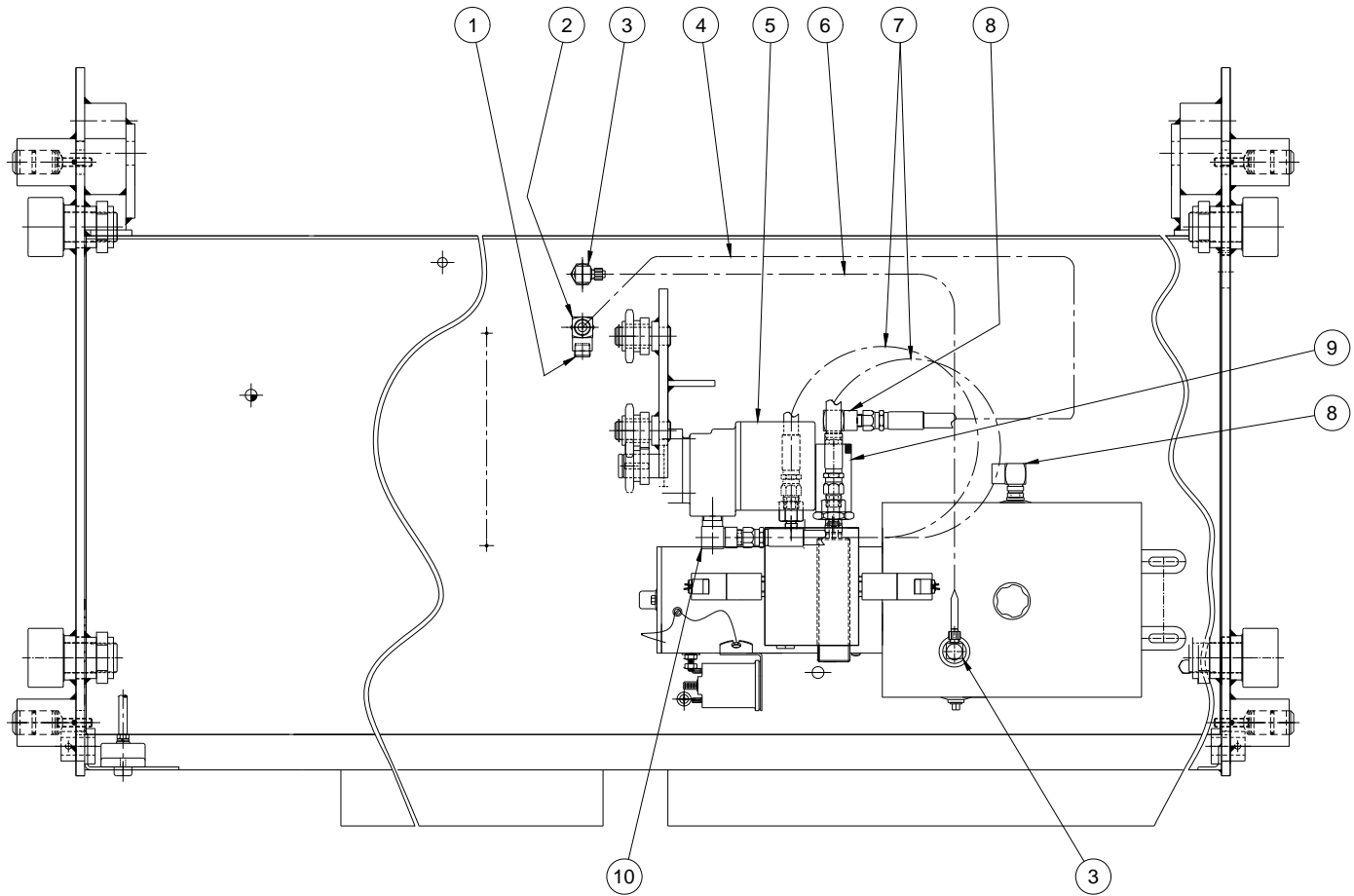
COMPLETE POWER UNIT (LESS FILTER AND FITTINGS) P34171
MAINTENANCE MINDER 2[®] CONTROLLER P46608H

HYDRAULICS - INTERIOR PARTS (before 11/09)



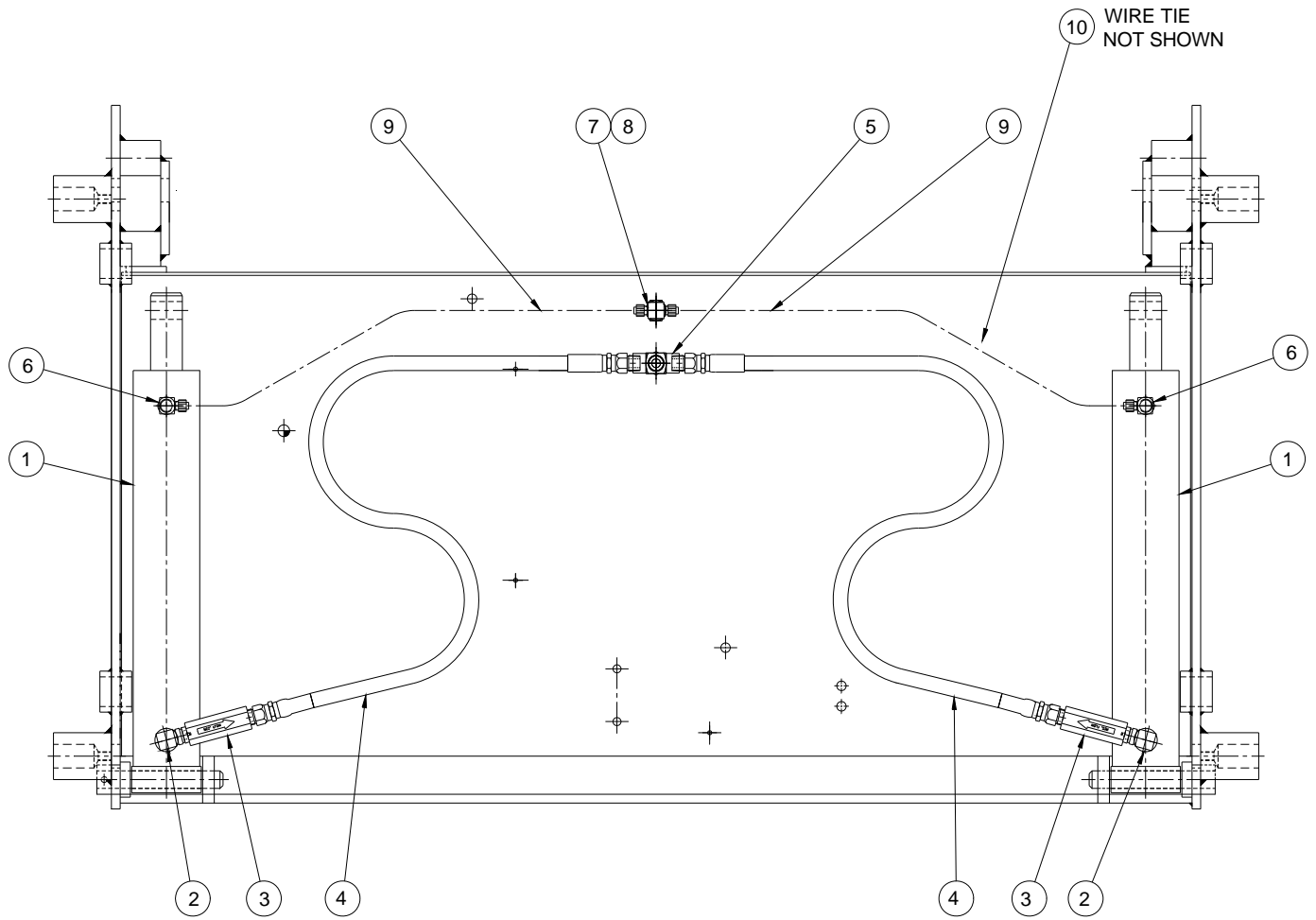
| Index No. | Req'd | Part Number | Description | Comments |
|-----------|-------|----------------|------------------|---------------------|
| 1 | 1 | P31048 | PIPE PLUG | 3/8 |
| 2 | 1 | P33216 | STREET TEE | 3/8 |
| 3 | 2 | P33932 | BRASS MALE ELBOW | 3/8NPT TO 1/4" HOSE |
| 4 | 1 | AT-501-100-027 | HYDRAULIC HOSE | |
| 5 | 1 | P33625 | HYDRAULIC MOTOR | |
| 6 | 1 | P33702-026 | 1/4" POLY TUBE | |
| 7 | 2 | AT-501-292-020 | HYDRAULIC HOSE | |
| 8 | 2 | P33006 | STREET ELBOW | 3/8 |
| 9 | 1 | P33616 | INLINE FILTER | |
| 10 | 2 | P33202 | STREET ELBOW | 1/2M TO 3/8F |

HYDRAULICS - INTERIOR PARTS (after 11/09)



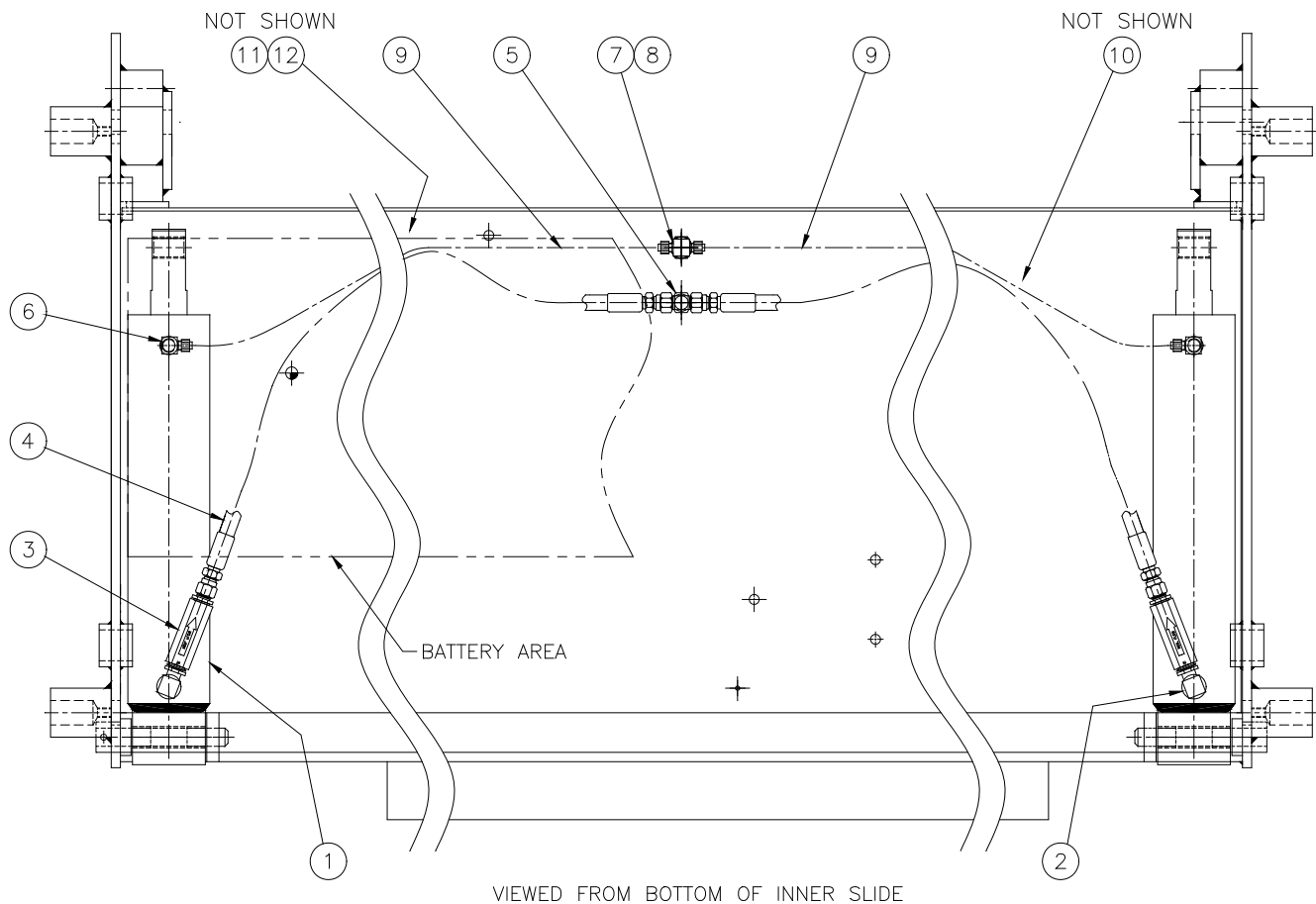
| Index No. | Req'd | Part Number | Description | Comments |
|-----------|-------|----------------|------------------|---------------------|
| 1 | 1 | P34004 | CAP NUT | JIC 9/16-18 |
| 2 | 1 | P34048 | TEE | JIC 9/16-18 M-M-F |
| 3 | 2 | P33932 | BRASS MALE ELBOW | 3/8NPT TO 1/4" HOSE |
| 4 | 1 | AT-501-354-027 | HYDRAULIC HOSE | 3/8 w/JIC ENDS |
| 5 | 1 | P33625 | HYDRAULIC MOTOR | |
| 6 | 1 | P33702-026 | 1/4" POLY TUBE | |
| 7 | 2 | AT-501-292-020 | HYDRAULIC HOSE | 1/4 NPT - 3/8 NPT |
| 8 | 2 | P34020 | ELBOW | SAE O-RING - JIC |
| 9 | 1 | P34046 | INLINE FILTER | |
| 10 | 2 | P33202 | STREET ELBOW | 1/2(M) TO 3/8(F) |

HYDRAULICS BOTTOM-SIDE PARTS (before 11/09)



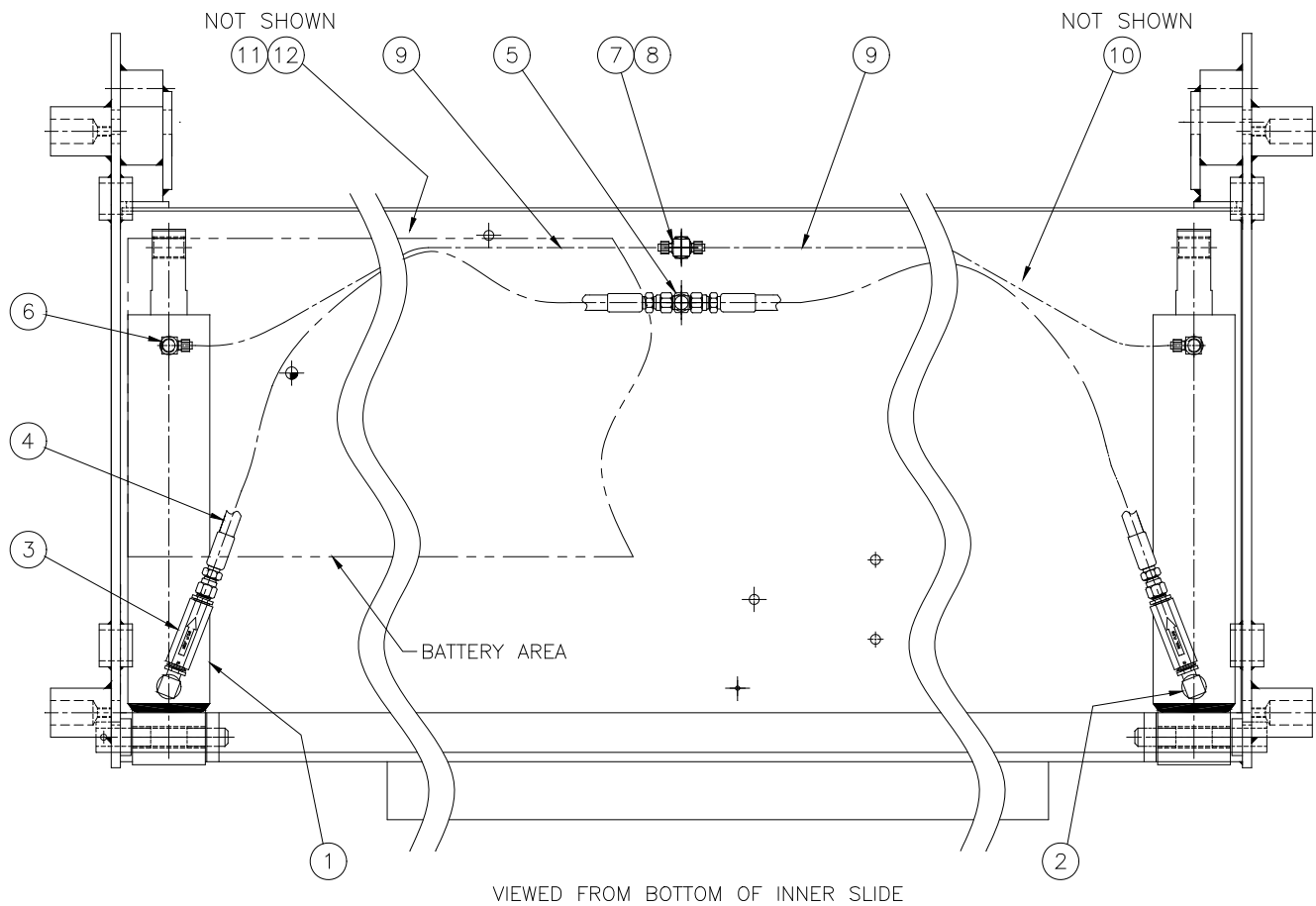
| Index No. | Req'd | Part No. | Description | Comments |
|-----------|-------|----------------|-----------------------|---------------------|
| 1 | 2 | P33944 | HYD. CYL. (2.5" BORE) | Seal Kit – P33905 |
| 2 | 2 | P33217 | MALE ELBOW | |
| 3 | 2 | P33671 | FLOW CONTROL | 1.5GPM |
| 4 | 2 | AT-501-100-041 | HYDRAULIC LINE | 3/8 NPT |
| 5 | 1 | P33606 | TEE | |
| 6 | 2 | P33932 | BRASS MALE ELBOW | |
| 7 | 1 | P33699 | BRASS TEE | 1/4 NPT TO 1/4 HOSE |
| 8 | 1 | P33617 | REDUCER | 3/8 – 1/4 |
| 9 | 2 | P33702-037 | 1/4 " POLY TUBE | |
| 10 | 4 | P46335 | WIRE TIE | |

HYDRAULICS BOTTOM SIDE PARTS (11/09 - 9/10)



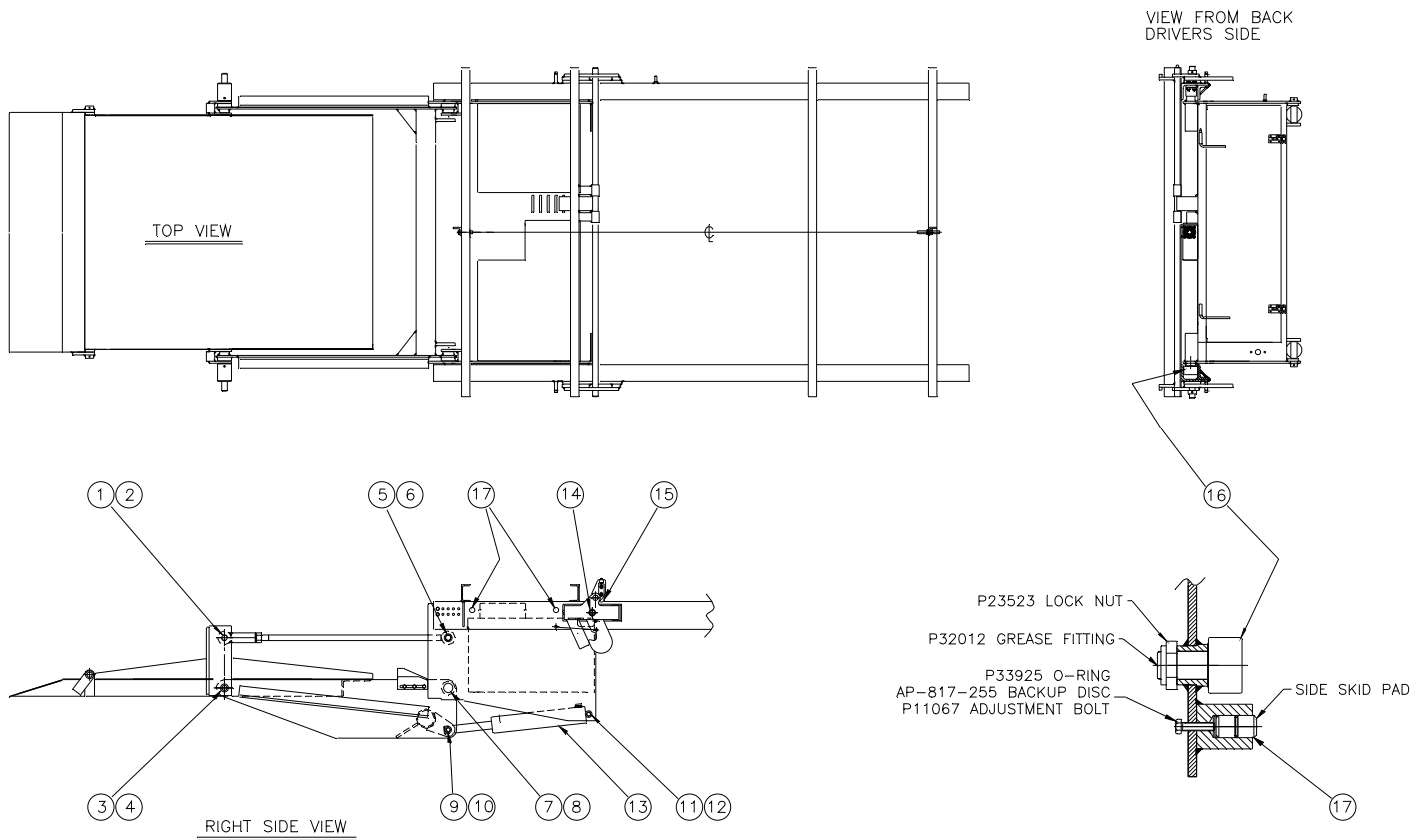
| Index No. | Req'd | Part No. | Description | Comments |
|-----------|-------|----------------|-----------------------|---------------------|
| 1 | 2 | P33944 | HYD. CYL. (2.5" BORE) | Seal Kit - P33905 |
| 2 | 2 | P333217 | MALE ELBOW | |
| 3 | 2 | P33671 | FLOW CONTROL | 1.5GPM |
| 4 | 2 | AT-501-354-040 | HYDRAULIC LINE | |
| 5 | 1 | P34105 | BULKHEAD TEE | |
| 6 | 2 | P33932 | BRASS MALE ELBOW | |
| 7 | 1 | P33699 | BRASS TEE | 1/4 NPT TO 1/4 TUBE |
| 8 | 1 | P33617 | REDUCER | 3/8 NPT - 1/4 NPT |
| 9 | 2 | P33702-037 | 1/4 " POLY TUBE | |
| 10 | 4 | P46335 | WIRE TIE | |
| 11 | 2 | P46251 | LOOM CLAMP | |
| 12 | 2 | P17518 | SELF-TAP SCREW | |

HYDRAULICS BOTTOM SIDE PARTS (after 9/10)



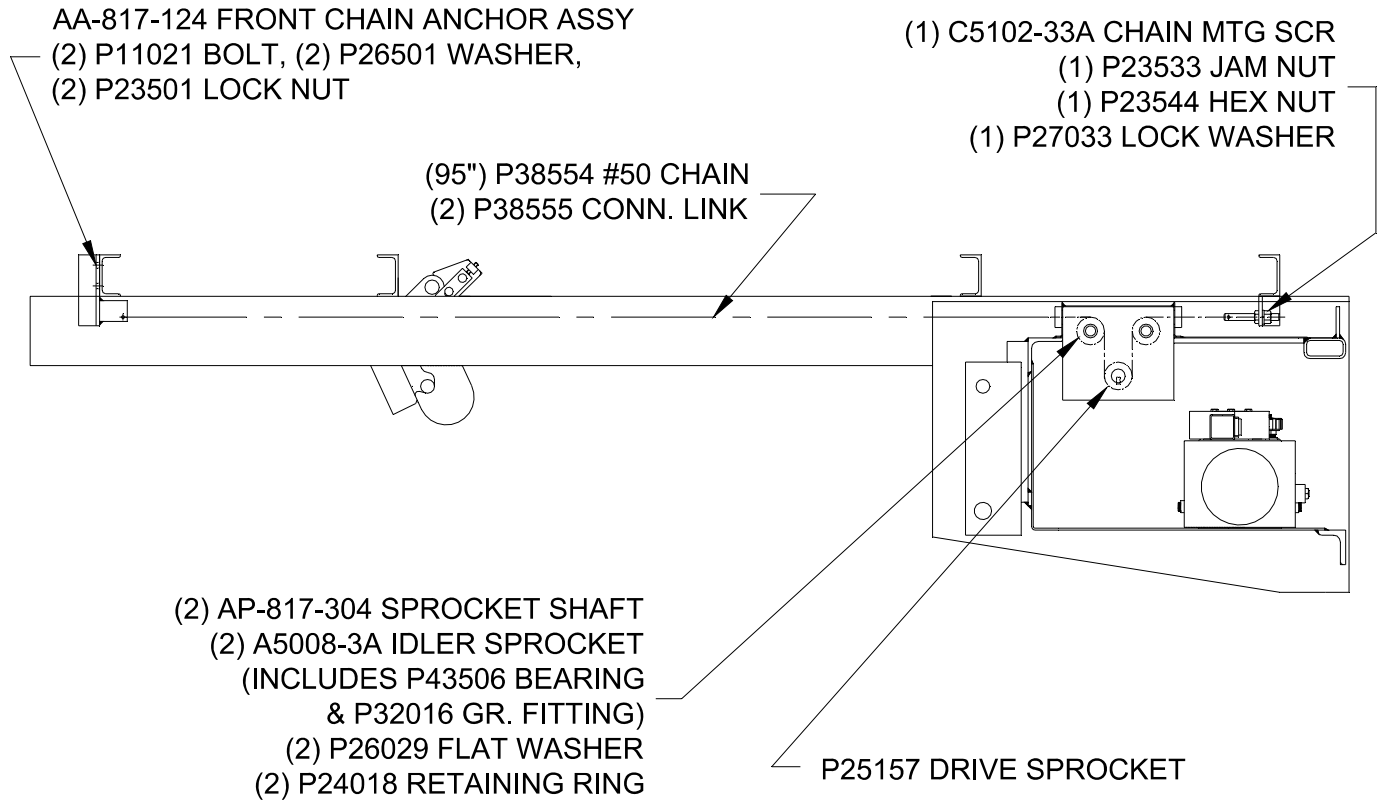
| Index No. | Req'd | Part No. | Description | Comments |
|-----------|-------|----------------|--------------------|---------------------------------|
| 1 | 2 | P34182 | HYDRAULIC CYLINDER | 3" BORE x 12" STROKE |
| 2 | 2 | P34041 | MALE ELBOW | SAE O-RING (M) – SAE O-RING (M) |
| 3 | 2 | P34161 | FLOW CONTROL | 2.0 GPM |
| 4 | 2 | AT-501-354-040 | HYDRAULIC LINE | |
| 5 | 1 | P34105 | BULKHEAD TEE | |
| 6 | 2 | P33932 | BRASS MALE ELBOW | |
| 7 | 1 | P33699 | BRASS TEE | 1/4 NPT TO 1/4 TUBE |
| 8 | 1 | P33617 | REDUCER | 3/8 NPT – 1/4 NPT |
| 9 | 2 | P33702-037 | 1/4 " POLY TUBE | |
| 10 | 4 | P46335 | WIRE TIE | |
| 11 | 2 | P46251 | LOOM CLAMP | |
| 12 | 2 | P17518 | SELF-TAP SCREW | |

REPLACEMENT BEARINGS AND PINS

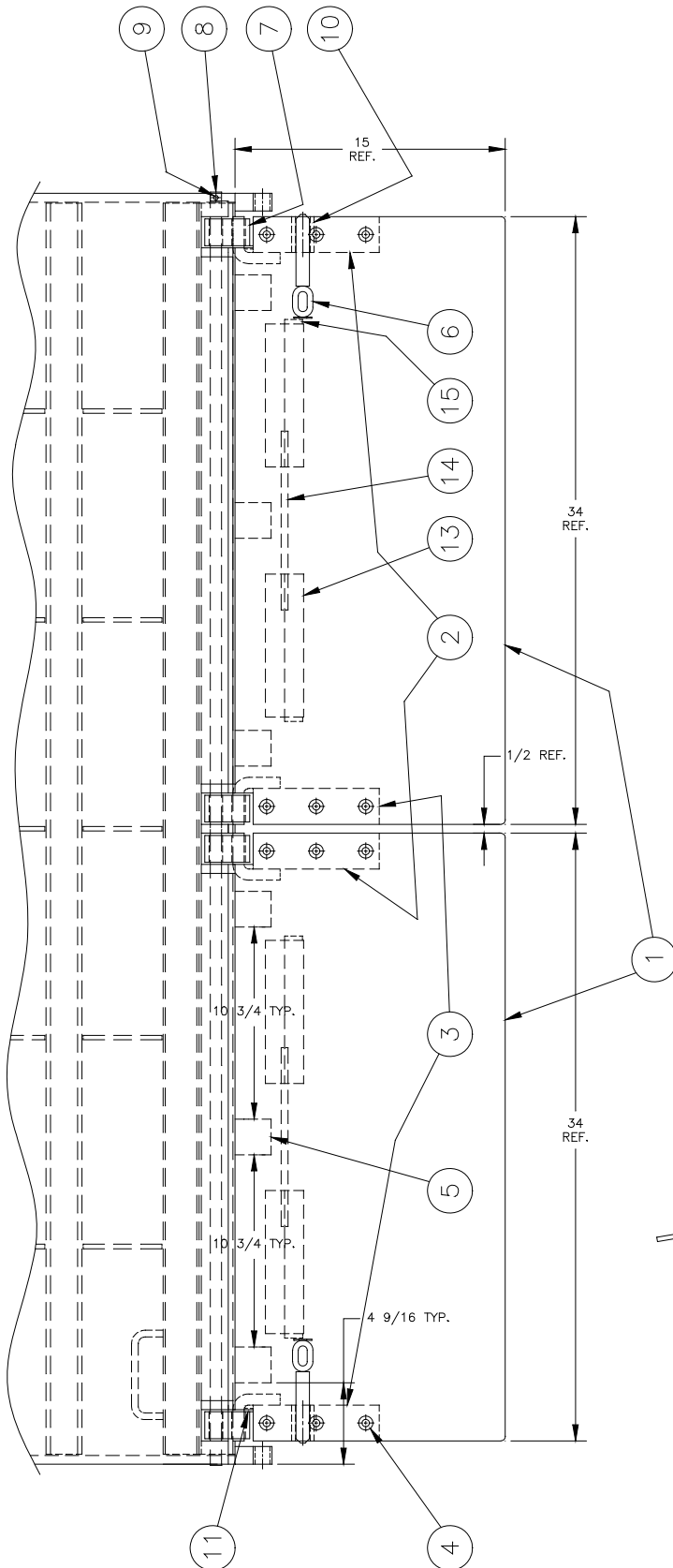


| Index # | Req'd | Part # | Part Name | Matl. Size |
|---------|-------|-------------------------|----------------------------|-------------------------------------|
| 1 | 2 | P43567 | Bearing | 1 id. x 1-1/2 lg. |
| 2 | 2 | BA-817-844 / BP-817-472 | Pin & Boss / Pin only | 1 dia. x 7-5/8 lg. |
| 3 | 2 | P43567 | Bearing | 1 id. x 1-1/2 lg. |
| 4 | 2 | AP-817-842 | Pin (Comp Arm to Platform) | 1 dia. x 3-5/8 lg. |
| 5 | 2 | P43567 | Bearing | 1 id. x 1-1/2 lg. |
| 6 | 2 | AP-817-842 | Pin (Tension arm to Inner) | 1 dia. x 3-5/8 lg. |
| 7 | 2 | P43566 | Bearing | 1-1/4 id. x 1-1/2 lg. |
| 8 | 2 | AP-817-843 | Pin (Comp Arm to Inner) | 1-1/4 dia. x 3-5/8 lg. |
| 9 | 4 | P43620 | Bearing (cyl. rod end) | 3/4 id. x 5/8 lg. |
| 10 | 2 | AA-817-742 | Pin Kit (Rod end w/hdw) | 3/4 dia. x 3-3/4 lg. |
| 11 | 4 | P43573 | Bearing (cyl. base end) | 3/4 id. x 3/4 lg. |
| 12 | 2 | AA-817-743 | Pin (Base end w/hdw) | 3/4 dia. x 6-1/8 lg. |
| 13 | 2 | See Pages 20 - 22 | Hyd. Cylinder | |
| 14 | 2 | P43570 | Bearing | 1 id. x 1/2 lg. |
| 15 | 2 | AP-817-233 | Skid Pad | Pushes "J" Hook |
| 16 | 4 | P37544 | Roller | Ref. P23523Nut & P32012 Gr. Fitting |
| 17 | 4 | AP-817-044 | Side Skid Pad | 1 od. x 1-13/16 lg. |
| | 8 ea. | P11062 and P23502 | Bolt and Lock Nut | Use w/items 4, 6, 10, 12 |
| | 2 ea. | P11063 and P23502 | Bolt and Lock Nut | Use w/item 8 |
| | 2 | P47538 | Roll pin | Use w/item 2 |
| | 8 | P32016 | Grease Fitting | Use w/items 2, 4, 6, 8 |

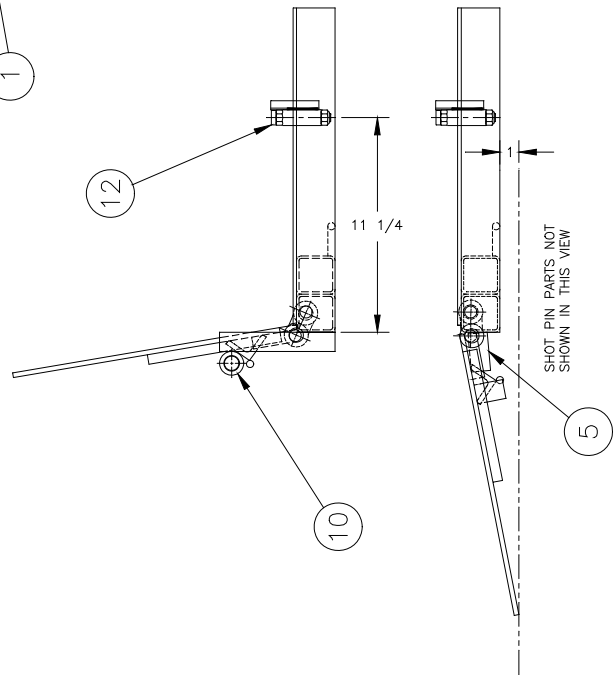
CHAIN AREA REPLACEMENT PARTS



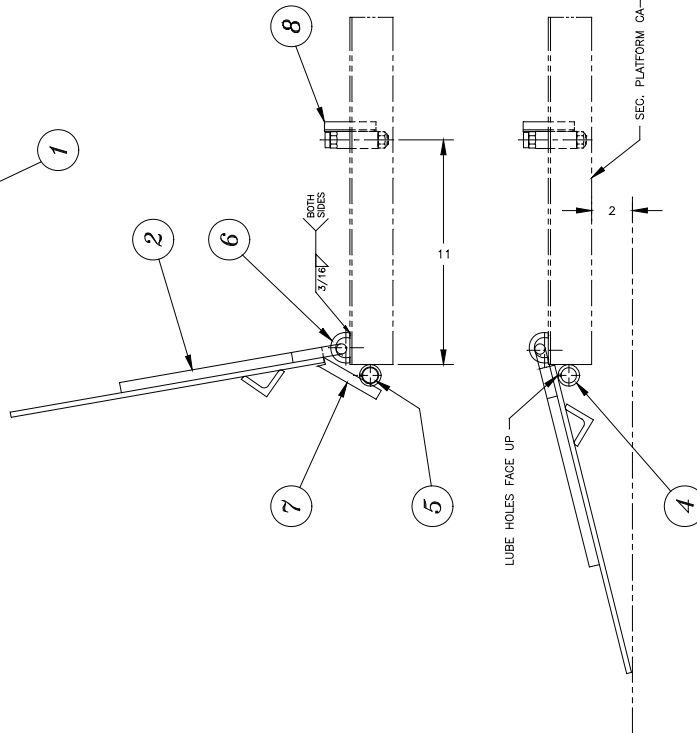
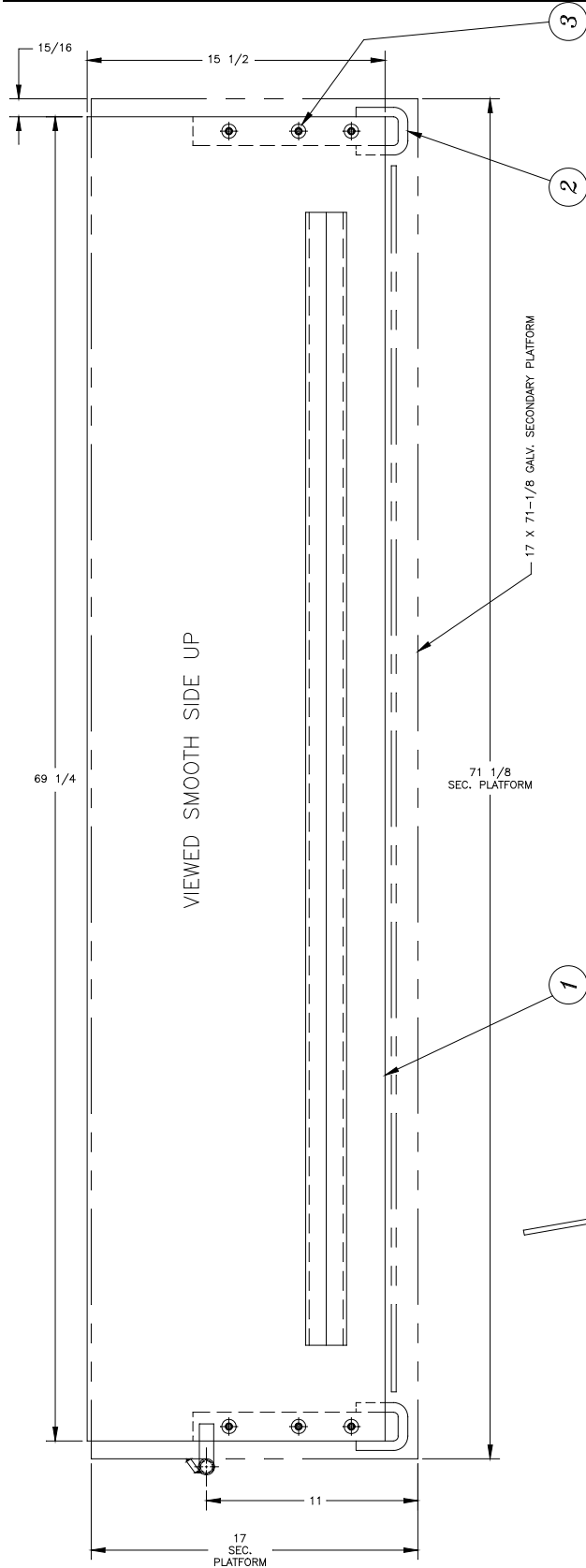
DUAL RETENTION RAMP PARTS (Std.)



| | | | | | |
|-----------------|----|--------------|--------------------------|-------------|----------------------------|
| 15 | 4 | A022-001.500 | STOP PLATE | AL RECT BAR | 1/4 X 1 X 1-1/2 LG |
| 14 | 2 | A134-008.000 | HANDLE | AL RND BAR | 3/8 DIA. X 8 LG |
| 13 | 4 | A161-008.000 | REINFORCING ANGLE | AL ANGLE | 1-1/2 X 1-1/2 X 1/4 X 8 LG |
| 12 | 2 | AA-989-199 | LATCH ASSY. | | |
| 11 | 2 | S024-000.250 | HINGE PIN STOP | | 3/16 X 1/2 X 1/4 LG. |
| 10 | 2 | S429-002.000 | SHOT PIN BARREL | RND TUBE | 1-1/4 OD X 13/16 ID X 2 LG |
| 9 | 1 | P47514 | ROLL PIN | | 1/4 X 1-1/2 LG. |
| 8 | 1 | BP-817-443 | HINGE ROD, PLATED | | |
| 7 | 4 | BA-817-442 | HINGE LINK | | |
| 6 | 2 | BA-817-454 | SHOT PIN | | |
| 5 | 6 | SZ34-002.000 | SUPPORT BLOCK | HR FLAT | 1 X 2 X 2 LG. |
| 4 | 12 | P18525 | FLAT HD. HEX SOCKET SCR. | SS (PLT) | 3/8-16 X 7/8 LG. |
| 3 | 2 | BA-817-439 | HINGE PLT. ASSY LH | | |
| 2 | 2 | BA-817-438 | HINGE PLT. ASSY RH | | |
| INDEX/REQD. NO. | 1 | BA-817-437 | AL RET. RAMP WELDMENT | | |
| | | PART NO. | PART NAME | MATL. | MATERIAL SIZE |

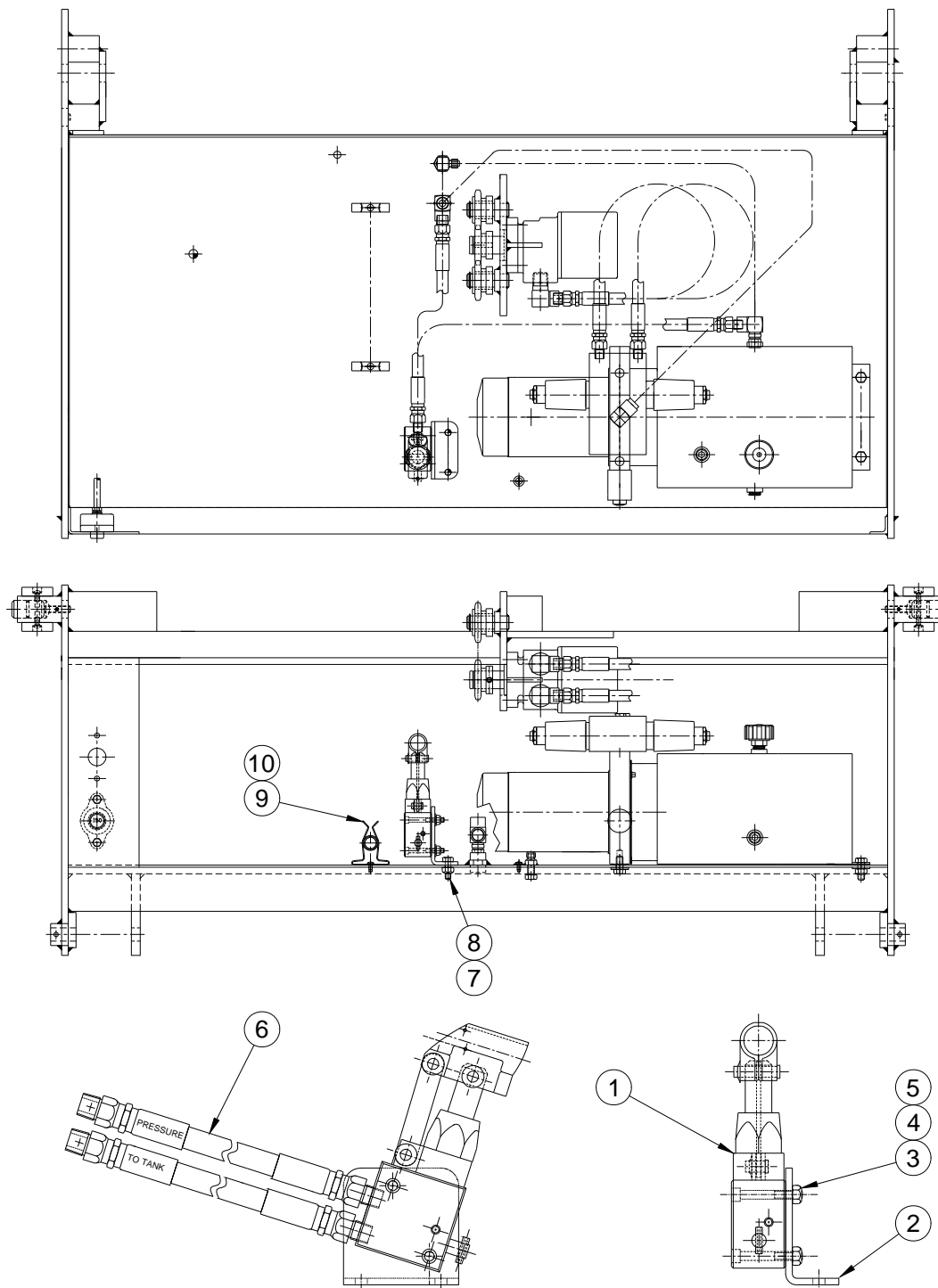


SINGLE RETENTION RAMP PARTS (Opt.)



| | | | | | |
|--------------|---|------------|-------------------------|----------|----------------------|
| 8 | 1 | AA-999-199 | LATCH ASSY. | | |
| 7 | 2 | AP-451-752 | HOLD-UP TAB | | |
| 6 | 2 | AP-817-422 | HINGE BARREL | | |
| 5 | 1 | BP-817-434 | RR SHAFT, PLATED | OD RND | 3/4 DIA X 69-1/4 LG. |
| 4 | 1 | BP-817-433 | SUPPORT TUBE | BLK PIPE | 3/4 SCH 40 X 65 LG. |
| 3 | 6 | P18525 | FLAT HD HEX SOCKET SCR. | SS (PLT) | 3/8-16 X 7/8 LG. |
| 2 | 2 | BA-817-420 | HINGE PLATE ASSEMBLY | | |
| 1 | 1 | BA-817-432 | RR TREAD PLATE | ALUM | |
| INDEX REQ'D. | | PART NO. | PART NAME | MATL. | MATERIAL SIZE |

EMERGENCY HAND PUMP OPTION #184



REMOVE TWO PIPE PLUGS
ONE FROM HYD TANK AND
ONE FROM TEE IN FLOOR

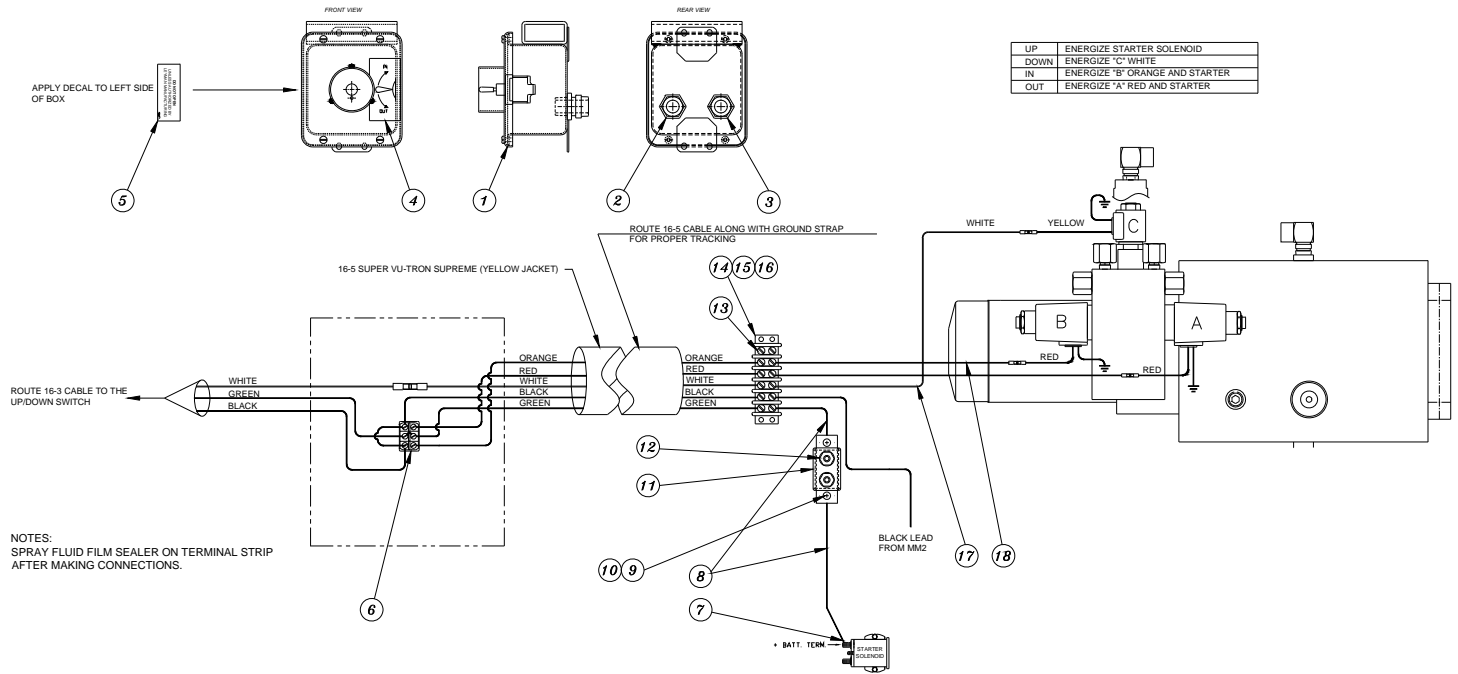
EMERGENCY HAND PUMP OPTION #184

REPLACEMENT PARTS

| Index No. | Req'd | Part Number | Description | Comments |
|-----------|-------|----------------|--------------------|---------------|
| 1 | 1 | P33902 | Hand Pump | |
| 2 | 1 | AP-501-267 | Mounting Bracket | |
| 3 | 2 | P15541 | Soc. Hd Cap Screw | 1/4 - 20 x 2 |
| 4 | 2 | P26001 | Flat Washer | 1/4 |
| 5 | 2 | P23502 | Lock Nut | 1/4 - 20 |
| 6 | 2 | AT-501-292-020 | Hydraulic Line | |
| 7 | 2 | P10040 | Hex Hd Cap Screw | 5/16 – 18 x 1 |
| 8 | 2 | P23510 | Lock Nut | 5/16 |
| 9 | 2 | P46192 | Handle Holder | |
| 10 | 2 | P17518 | Self Tapping Screw | 10 - 32 x 1/2 |

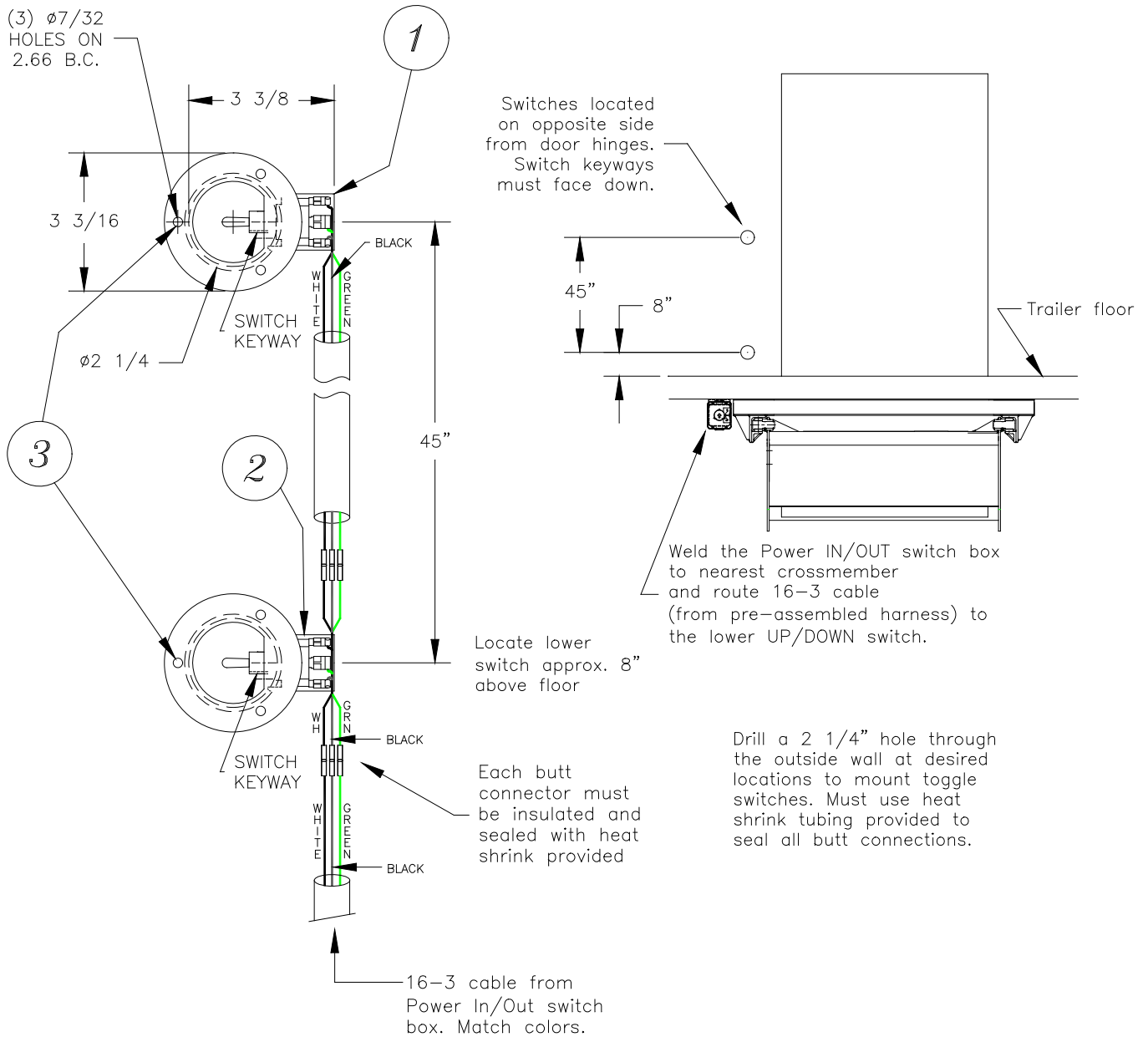
BASIC ELECTRICS – REPLACEMENT PARTS

MONARCH W/POTTED SWITCHES



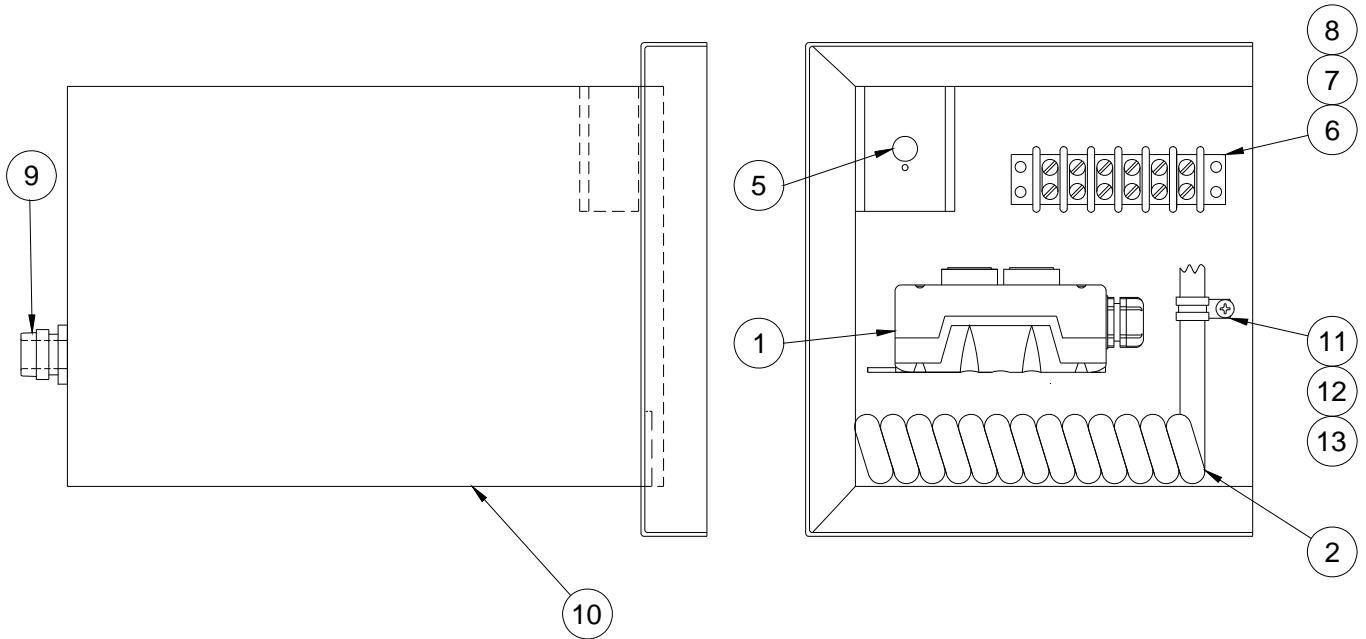
| Index No. | Req'd | Part No. | Description | Comments |
|-----------|-------|------------|---------------------------|-------------------------------|
| 1 | 1 | BA-551-317 | SWITCH BOX ASSEMBLY | |
| 2 | 1 | P46445 | CORD GRIP | FOR 16-5 CABLE |
| 3 | 1 | P46517 | CORD GRIP | FOR 16-3 CABLE |
| 4 | 1 | P55222 | IN/OUT DECAL | |
| 5 | 1 | P55317 | "DO NOT OPEN" DECAL | |
| 6 | 1 | AA-551-537 | IN/OUT POTTED SWITCH ASSY | |
| 7 | 1 | P46235 | LARGE RING TERMINAL | |
| 8 | 2 | P46301 | WIRE - GREEN | 12" LONG EA. |
| 9 | 2 | P19501 | SCREW | 10-24 X 1/2 |
| 10 | 2 | P23504 | NUT | |
| 11 | 1 | P46236 | 20 AMP CIRCUIT BREAKER | |
| 12 | 2 | P46507 | SMALL RING TERMINAL | |
| 13 | 10 | P46319 | FORK TERMINAL | |
| 14 | 1 | P46449 | TERMINAL BLOCK | |
| 15 | 2 | P19510 | SCREW | |
| 16 | 2 | P23535 | LOCK NUT | |
| 17 | 1 | P46631 | WHITE SHRINK TUBE | 18" Use to identify wire lead |
| 18 | 1 | P46632 | ORANGE SHRINK TUBE | 18" Use to identify wire lead |
| 19 | 1 | P55345 | Electrics/Hyd. Diagram | For MM2, +temp switch |

TOGGLE SWITCH REPLACEMENT PARTS



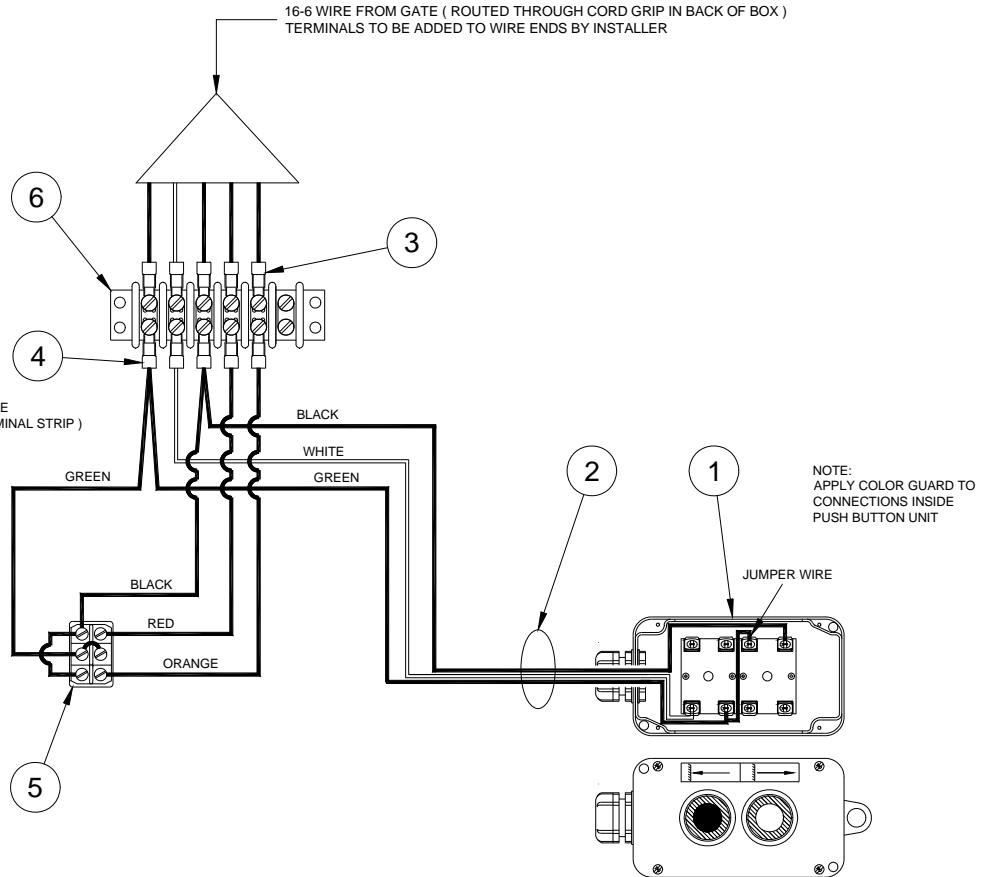
| Index No. | Req'd | Part Number | Description | Comments |
|-----------|-------|-------------|-------------------------|------------------------|
| 1 | 1 | AA-551-538 | TOP UP/DOWN SWITCH ASSY | Incl. Recess Sw. Plate |
| 2 | 1 | P46729 | LOWER UP/DOWN SWITCH | Incl. Recess Sw. Plate |
| 3 | 6 | P17536 | SHEET METAL SCREW | |
| 4 | 4 | P46250 | LOOM CLAMP | NOT SHOWN |
| 5 | 4 | P17518 | SELF TAPPING SCREW | NOT SHOWN |
| | 2 | P46292 | RECESSED SW. PLATE | Ref. Items 1 & 2 |
| | 2 | P46291 | RUBBER HALF BOOT | Ref. Items 1 & 2 |

Walk Around Electrics (Option #183)



16-6 WIRE FROM GATE (ROUTED THROUGH CORD GRIP IN BACK OF BOX)
 TERMINALS TO BE ADDED TO WIRE ENDS BY INSTALLER

NOTE: THE WHITE WIRE IN THE 16-5 CABLE
 (FROM THE IN/OUT SWITCH TO THE TERMINAL STRIP)
 IS NOT USED



NOTE: APPLY COLOR GUARD TO CONNECTIONS INSIDE PUSH BUTTON UNIT

Walk Around Electrics (Option #183)

| Index No. | Req'd | Part Number | Description | Comments |
|-----------|-------|-------------|---------------------------|------------|
| 1 | 1 | P46636 | 2-BUTTON CONTROL | |
| 2 | 1 | AP-551-212 | COIL CORD | 1/2 LENGTH |
| 3 | 8 | P46319 | FORK TERMINAL - SMALL | |
| 4 | 2 | P46444 | FORK TERMINAL - LARGE | |
| 5 | 1 | P46745 | POTTED TOGGLE SWITCH ASSY | |
| 6 | 1 | P46449 | TERMINAL BLOCK | |
| 7 | 2 | P19519 | ROUND HEAD SCREW | |
| 8 | 2 | P23535 | LOCK NUT | |
| 9 | 1 | P46445 | CORD GRIP | |
| 10 | 1 | P46138 | PUSH BUTTON BOX | |
| 11 | 1 | P46250 | LOOM CLAMP | |
| 12 | 1 | P19501 | ROUND HEAD SCREW | |
| 13 | 1 | P23504 | LOCK NUT | |
| 14 | 1 | P56554 | STEEL PLUG | NOT SHOWN |

REPLACEMENT OF SAFETY DECALS

Leyman Manufacturing will replace safety stickers at any time **FREE OF CHARGE**.

Locate the following decals on trailer side wall near door –

- P55236** Operating Instructions
- P55157** Urgent Warning – Read Before Operation (Qty. 2)
- P55294** CAUTION Do Not Stand....
- P55442** Maximum Capacity Decal - LPS

Locate the following decal on trailer side wall under door threshold –

- P55138** Keep Feet from Edge....

Locate the following decals at Toggle Switches –

- P55222** IN / OUT
- P55221** UP / DOWN (Qty. 2)



