Owner & Repair
Parts Manual
LPS4500RL Hide-A-Way®
Trailer Side Gate

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LML00374-7/31/09
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GENERAL SPECIFICATIONS

CUSTOMER: ____________________________
MODEL: LPS
SERIAL #: ____________________________
CAPACITY: _______ lbs.
TYPE: Trailer Side Door Lift Gate
OPERATION: Power up/Gravity down
Power in/out
HYDRAULIC PRESSURE: 2000PSI – Up Function
800PSI – In/Out Function

RECOMMENDED HYDRAULIC OILS/LUBRICATION

<table>
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<th>HYDRAULIC OILS</th>
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<td>H-5606</td>
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HYDRAULIC TANK CAPACITY
2 ½ gallons

LUBRICATION
Grease
Rollers, if grease fitting provided
Lithium Base Grease

BATTERIES
Two (2) 12 V D.C. Group 31 Heavy Duty Lead Acid or AGM

ELECTRICAL COMPONENTS CONNECTIONS
Use battery terminal protection Bowman Part#21948

AMPERAGE DRAW OF MOTOR
When raising platform (empty) approximately 65 AMPS @ 13.5 volts.
At bypass approximately 195 AMPS @ 13.5 volts

LIFTING PRESSURE SETTING
With platform at floor level and pump in bypass 2000PSI

IN-OUT PRESSURE SETTING
When sliding gate in-out and pump in bypass 800PSI (rollers); 1000PSI (slide pads)

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 valves to operate.
OPERATING INSTRUCTIONS

Before operating the lift gate, read and understand this manual and all urgent warning decals.

_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, proceed with the following steps:

1. To relieve the tension on the auto lock, push the up switch (the gate will go up), pull the handle to release the auto lock.
2. Use the down switch to lower the 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 the ramp.

To lower the platform, use the down switch only.

To raise the platform, use the up switch only.

To store the gate in the over-the-road (stored) 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 upward. Run the gate all the way under the trailer until the lift stops.
4. Run gate up (use the up switch). The auto lock will latch.
5. Lower the gate until resting on the auto lock. Use the down switch only.
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. 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.
5. With the handle unscrew the valve on the bottom of the hand pump. This will let the gate down into its over the road position.

PREVENTATIVE MAINTENANCE

1. **Lubrication**
   This gate has been designed with greaseless bearings. All pivot or turning points have these special bearings. No lubrication is required. If rollers are supplied with great fittings, grease every 90 days using a lithium base grease.

2. **Hydraulic**
   With the platform on the ground, check the oil level. Fill to about 1” from the top of the tank.

3. **Electrical**
   Check for corrosion and/or loose connections.
## PREVENTATIVE MAINTENANCE SCHEDULE
### MAINTENANCE by CYCLES
#### MODEL LPS4500RL

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<thead>
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<th>CUSTOMER</th>
<th>GATE MODEL #</th>
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<tr>
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<tr>
<td>VEHICLE #</td>
<td>SERVICED BY</td>
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**v = OK**  **X = REPAIR**  **A = ADJUSTED**  **N = NOT APPLICABLE**

### 3000 MOTOR / PUMP COMPONENTS
- Check batteries for corroded, loose or broken connections
- Check batteries for proper voltage level and charging
- Check all wiring in pump box for corroded, loose or broken connections
- Check power unit solenoids for proper operation
- Check reservoir for proper oil level (Gate down on the ground, fluid level should be 1” from top of tank)
- Inspect circuit breakers and fuses for proper operation
- Check all fittings/hoses in power unit for tightness and leaks

### 3000 MOTOR / PUMP COMPONENTS (continued)
- Check charge line/power line for corroded, loose or broken connections at both ends
- Check amp draw of motor with fully charged batteries and tight clean connections
- Check all ground wires for corroded, loose or broken connections
- Clean all wiring connections in pump and battery box and spray with Fluid Film Corrosion Protection by Eureka Chemical.
- Check emergency hand pump for proper operation if equipped.
- Check hydraulic motor sprockets for worn bushings and proper operation.

### 3000 STRUCTURAL COMPONENTS
- Check for correct operation of the gate up, down, in, and out.
- Check wiring harness on side of gate for chaffed, frayed, or broken wires.
- Check wiring harness on side of gate for loose, broken, or missing clamps.
- Check the ground cable on side of gate for loose or corroded connections.
- Check hydraulic cylinders for leaks
- Check auto lock mechanisms for proper operation and adjust as needed.
- Check all warning lights for proper operation if equipped

### 3000 STRUCTURAL COMPONENTS (continued)
- Check IN/OUT chain for proper adjustment (no more than ½” play)
- Check all pivot points for loose, broken, or missing roll pins
- Check UP stops for proper positioning of the platform and adjust as needed.
- Check the IN/OUT stops for loose, broken, or missing bolts
- Check rollers for proper operation
- Check over-all gate for damage or broken welds and repair as needed.
- Check compression and tension arms for worn bushings

### 3000 LUBRICATION
- Standard Chain - Clean and lubricate the IN/OUT chain (do not use WD40 or acid base lubricants)
- Stainless Steel Chain should not require any lubrication.
- Grease power unit door hinge pins with #1 lithium grease

### 12000 PERIODICAL CHECK LIST
- Check all pivot point bushings for wear or damage
- Check hydraulic motor sprockets for worn bushings and proper operation.

### 15000 PERIODICAL CHECK LIST (continued)
- Flush hydraulic system and change hydraulic oil
- Clean and repaint as necessary

### MAINTENANCE MINDER² READINGS MENU 2
- Screen 1 # Lifts
- Screen 3 Service Faults
- Screen 4 Low Voltage Faults
- Screen 6 High Temperature Faults

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Rev. 3-27-09
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 exceeded the maximum continuous run time limit
- Give helpful trouble-shooting information on MENU 4, “Last Lift Info”

FAULT 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 fault signals will be repeated FOUR times except the service fault, which will be given just once. Controller will prevent power unit from operating during the time period when a fault signal is sounding (about 5 to 10 sec.). 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 the Maintenance Minder 2 logo at top of faceplate
3) Follow the instructions on the screen regarding a second button, which must be pressed while holding the RESET button 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 the 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 Faults (number of times gate was operated while PAST the maintenance limit)
High Pressure Faults (not being used, no sensor available)
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 – instructions will flash on screen after limit reached)

(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 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 Time (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 start solenoid contact welding.
Step 1: The platform was preset at the factory to be level to the floor of the trailer within ¼". 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 ¼" (turn the end in, this moves the tip off 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 stop must be adjusted to provide the ¼" clearance with the auto locking pin (see sketch 2).

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 ¼" to ½" from the edge of the threshold.

Step 4: Adjust the in stops. See sketch 2 and adjust for the ¼" dimension.
# TROUBLESHOOTING CHART

<table>
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<th>PROBLEM</th>
<th>PROBABLE CAUSE</th>
<th>REMEDY</th>
</tr>
</thead>
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| The motor is running, but the platform will not go up or reach the floor of the vehicle. | 1. Insufficient oil in power unit tank.  
2. Platform is over-loaded.  
3. Pressure setting is low. | 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. | 1. Low battery.  
2. Tripped circuit breaker.  
3. Power line is loose.  
4. Bad motor, starter or switch | 1. Recharge or replace battery.  
2. Reset the circuit breaker.  
3. Check the connections. If loose, tighten.  
4. To test-push the up switch, if motor does not run, jump the two 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. Use a test light to check (black wire). |
| Platform will not lower. | 1. Low battery.  
2. Bad ground or poor electrical connections.  
4. Check for obstructions in rails. | 1. Recharge or replace battery.  
2. Check connections, if loose-tighten. Check for corrosion and clean if necessary.  
3. Lower “C” valve (white wire). Must activate when the switch is pushed. Use test light to check.  
4. Visually check. |
2. Defective cylinder or piston seal.  
3. “C” valve (white wire) not closing.  
4. 4-way valve on hand pump may be open. | 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. Should be tightly closed. |
| Platform goes down slowly. | 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 | 1. Visually check.  
2. Check for bent or pinched lines.  
3. Clean and inspect.  
4. Use Mobile DTE 11 or Aero-HFA for extreme conditions. |
| Gate will not go out and/or in. | 1. Check for obstructions in rails.  
2. Low battery.  
3. Tripped circuit breaker.  
4. Power line is loose.  
5. Bad motor, starter or switch.  
6. Insufficient oil in power unit tank. | 1. Visually check.  
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 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”). |
POWER UNIT REPLACEMENT PARTS

FENNER (GOLD MOTOR) AND SMART START SOLENOID

Service Note: Starter Solenoid P33892A has been discontinued and will be replaced with P34016.
POWER UNIT REPLACEMENT PARTS

FENNER (GOLD MOTOR) AND MAINTENANCE MINDER 2

- MOTOR W/ THERMAL SWITCH P46634
- MOTOR W/O THERMAL SWITCH P46340
- ADAPTER P33771
- THERMAL SWITCH P46614
- IN – OUT VALVE AND COIL ASSEMBLY (“A” OR “B”) P46358A
- 4-WAY VALVE COMPLETE – P33633
- "C" VALVE AND COIL ASSEMBLY P34057
- DOWN VALVE WHITE POSITIVE LEAD
- STARTER P34016
- TANK P33651
- O-RING P33654
- POWER UNIT COMPLETE (LESS FILTER) P33899
- INLINE FILTER – P33616
- MAINTENANCE MINDER 2 – P46608H
- NOT SHOWN PUMP P33652B

LEYMAN LIFT GATES
POWER UNIT REPLACEMENT PARTS
MONARCH (BLACK MOTOR) AND MAINTENANCE MINDER 2

NOT SHOWN:
PUMP ASSY P34056
SUCTION STRAINER P34089
MAINTENANCE MINDER 2®
CONTROLLER – P46608H

COMPLETE POWER UNIT (LESS FILTER) P34013A
INLINE FILTER - P33616
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<td>STREET ELBOW 1/2M TO 3/8F</td>
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# HYDRAULICS BOTTOM-SIDE REPLACEMENT PARTS

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2 | 2 | P33217 | MALE ELBOW | 1.5GPM
3 | 2 | P33671 | FLOW CONTROL | 1.5GPM
4 | 2 | SEE CHART | HYDRAULIC LINE | 1/4 NPT TO 1/4 HOSE
5 | 1 | P33606 | HYDRAULIC TEE | 3/8 – 1/4
6 | 2 | P33932 | BRASS MALE ELBOW | 1/4 NPT TO 1/4 HOSE
7 | 1 | P33699 | BRASS TEE | 3/8 – 1/4
8 | 1 | P33617 | REDUCER | 1/4 " POLY TUBE
9 | 2 | SEE CHART | 1/4 " POLY TUBE | WIRE TIE
10 | 4 | P46335 | WIRE TIE | P46335

## Gate width

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<th>Item 4 Hydraulic line w/ends</th>
<th>Item 9 Poly tube</th>
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**Replacement Bearings and Shafts**

**TOP VIEW**

**RIGHT SIDE VIEW**
CHAIN AREA REPLACEMENT PARTS

AA-817-124 FRONT CHAIN ANCHOR ASSY
P11021 BOLT, P26501 WASHER, P23501 LOCK NUT

P38554 #50 CHAIN
P38555 CONN. LINK

C5102-33A CHAIN MTG SCR
P23533 JAM NUT
P23511 LOCK NUT

(2) AP-817-304 SPROCKET SHAFT
(2) AA-706-027 IDLER SPROCKET
INCLUDES P43559 BEARING

(2) P26019 FLAT WASHER
(2) P24018 RETAINING RING

P25157 DRIVE SPROCKET
EMERGENCY HAND PUMP OPTION #184

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

LEYMAN LIFT GATES
EMERGENCY HAND PUMP OPTION #184
REPLACEMENT PARTS

<table>
<thead>
<tr>
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<td>Handle Holder</td>
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<td>10</td>
<td>2</td>
<td>P17518</td>
<td>Self Tapping Screw</td>
<td>10-32 x 1/2</td>
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WIRING DIAGRAM – SPX WITH SMART START SOLENOID
GOLD MOTOR AND NO TEMPERATURE SWITCH

POWER UNIT

UP

UP / DOWN

IN / OUT

NOTE

RED

GREEN

UP / DOWN

STARTER SOLENOID

POWER FROM 12 VOLT SOURCE

Position UP/DOWN switch box with handle to UP position while holding down the SMART START SOLENOID.

Apply NICD NPS-2 corrosion protection sealer, or equivalent, to all connections after soldering and crimping.
WIRING DIAGRAM – SPX WITH MAINTENANCE MINDER 2
GOLD MOTOR AND NO TEMPERATURE SWITCH

POWER UNIT
UP DOWN IN OUT
ENERGIZE "C" WIRE AND STARTER

150 AMP CIRCUIT BREAKER
POWER FROM 12 VOLT SOURCE

UP DOWN IN OUT
ENERGIZE "B" (ORANGE) AND STARTER
ENERGIZE "C" (WHITE)
ENERGIZE "A" (RED) AND STARTER

WHITE ORANGE RED GREEN
MAINTENANCE MINDER 2

VIOLET WIRE NOT USED

20 AMP CIRCUIT BREAKER
GRID

POWER FROM 12 VOLT SOURCE
## BASIC ELECTRICS – WIRING DIAGRAM / REPLACEMENT PARTS

**SPX (GOLD MOTOR AND SMART START SOLENOID) THROUGH 2-03**

### Diagram Description

- **Red**: Positive Battery
- **Orange**: Start
- **White**: Neutral
- **Black**: Ground
- **Green**: Wedge

### Jumper Wires

- Energize Starter Solenoid
  - Up: Energize “C” White
  - Down: Energize “B” Orange
  - Out: Energize “A” Red

### Index No. Required Part No. Description Comments

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<tr>
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<td>CORD GRIP</td>
<td>FOR 16-6 CABLE</td>
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<td>CORD GRIP</td>
<td>FOR 16-3 CABLE</td>
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<td>3</td>
<td>P46300</td>
<td>HEAT SHRINK TUBE</td>
<td>3 PCS – EACH 2” LONG</td>
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<td>FEMALE CONNECTOR</td>
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<td>14</td>
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<td>P55222</td>
<td>IN/OUT DECAL</td>
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<td>1</td>
<td>P55317</td>
<td>“DO NOT OPEN” DECAL</td>
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<td>16</td>
<td>6</td>
<td>P46250</td>
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<td>17</td>
<td>6</td>
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<td>18</td>
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<td>P55267</td>
<td>Electrics/Hyd. Diagram</td>
<td>For Smart Start</td>
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### Other Parts

- **FOR OPT#157TLS ONLY**
  - Remove this black wire from switch and butt connect to Blue.
BASIC ELECTRICS – WIRING DIAGRAM / REPLACEMENT PARTS
SPX (3-03 THROUGH 12-06) AND MONARCH (6-06 THROUGH 7-08) W/MAINTENANCE MINDER 2

ROUTE 16-3 CABLE TO THE UP/DOWN SWITCH
WHITE
GREEN
BLACK
ROUTE 16-6 CABLE ALONG WITH GROUND STRAP FOR PROPER TRACKING

DO NOT OPEN UNLESS AUTHORIZED BY LEYMAN MANUFACTURING
APPLY DECAL TO LEFT SIDE OF BOX

ENERGIZE STARTER SOLENOID
UP ENERGIZE “C” WHITE IN ENERGIZE “B” ORANGE AND STARTER TO #30 ON RELAY, USED FOR OPT. #157 TLS ONLY

FOR OPT. #157 TLS ONLY - REMOVE THIS BLACK WIRE FROM SWITCH AND BUTT CONNECT TO BLUE.
ORANGE
RED
WHITE
BLACK
GREEN
CONNECT TO BLACK LEAD FROM MM2

INDEX NO. | REQ’D | PART NO. | DESCRIPTION | COMMENTS
---|---|---|---|---
1 | 1 | BA-551-317 | SWITCH BOX ASSEMBLY |
2 | 1 | P46445 | CORD GRIP |
3 | 1 | P46139 | CORD GRIP |
4 | 3 | P46300 | HEAT SHRINK TUBE |
5 | 3 | P46491 | FEMALE CONNECTOR |
6 | 1 | P46475 | CABLE 16-6 |
7 | 1 | P46156 | BUTT CONNECTOR |
8 | 1 | P46186 | CABLE 16-3 |
9 | 4 | P46444 | LARGE FORK TERMINAL |
10 | 1 | AA-551-327 | TOGGLE SWITCH |
11 | 2 | P46319 | SMALL FORK TERMINAL |
12 | 1 | P46235 | LARGE RING TERMINAL |
13 | 1 | P46236 | 20 AMP CIRCUIT BREAKER |
14 | 1 | P55222 | IN/OUT DECAL |
15 | 1 | P55317 | “DO NOT OPEN” DECAL |
16 | 6 | P46250 | LOOM CLAMP |
17 | 6 | P17518 | SELF TAPPING SCREW |
18 | 1 | P55342 | Electrics/Hyd. Diagram |
18 | 1 | P55345 | Electrics/Hyd. Diagram |
BASIC ELECTRICS – WIRING DIAGRAM / REPLACEMENT PARTS
MONARCH W/POTTED SWITCHES after 7-08

Route 16-5 cable along with ground strap for proper tracking.

Red
White
Red
Yellow

Do not open unless authorized by Leyman Manufacturing.

16-5 Supreme Vu-Tron Supreme (Yellow Jacket)
Green
Black
White
Red
Orange
Green
Black
White
Black
Green
White
Red
Orange

Front View
Rear View

Energize “A” red and starter
Energize “B” orange and starter
Energize “C” white

Energize starter solenoid

Out
In
Down
Up

Route 16-3 cable to the up/down switch

Apply decal to left side of box

Index No. | Req’d | Part No. | Description | Comments
---|---|---|---|---
1 | 1 | BA-551-317 | SWITCH BOX ASSEMBLY | For 16-6 cable
2 | 1 | P46445 | CORD GRIP | For 16-3 cable
3 | 1 | P46139 | CORD GRIP |
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

Leyman Lift Gates
TOGGLE SWITCH ELECTRICS WIRING AND REPLACEMENT PARTS
SWITCHES BEFORE 7-08

16-3 cable from Power In/Out switch box

Locate lower switch approx. 8” above floor

Drill a 2 1/8” hole through the outside wall at desired locations to mount toggle switches. After making all connections to the switches, seal the connections with NOCO NCP-2 corrosion protection sealer, or equivalent.

<table>
<thead>
<tr>
<th>Index No.</th>
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<td>2</td>
<td>AA-551-326</td>
<td>TOGGLE SWITCH</td>
<td>Includes rubber boot</td>
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<td>2</td>
<td>P46292</td>
<td>DISH PAN</td>
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<td>P46250</td>
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<td>8</td>
<td>4</td>
<td>P17518</td>
<td>SELF TAPPING SCREW</td>
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</tbody>
</table>
TOGGLE SWITCH ELECTRICS WIRING AND REPLACEMENT PARTS
SWITCHES AFTER 7-08

16-3 cable from Power In/Out switch box. Match colors.

Each butt connector must be insulated and sealed with heat shrink provided.

Locate lower switch approx. 8” above floor

Switches located on opposite side from door hinges. Switch keyways must face down.

Drill a 2 1/4” hole through the outside wall at desired locations to mount toggle switches. Must use heat shrink tubing provided to seal all butt connections.

<table>
<thead>
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<tr>
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<td>TOP UP/DOWN SWITCH ASSY</td>
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</table>
Walk Around Electrics (Option #183)

Before 9-08

16-6 wire from gate (routed through cord grip in back of box)

Note: The white wire in the 16-5 cable (from the in/out switch to the terminal strip) is not used.

Move this black wire to the blue terminal when OPT#157TLS full out position safety is used.
## Walk Around Electrics (Option #183)

Before 9-08

<table>
<thead>
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<th>Index No.</th>
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<td>COIL CORD</td>
<td>1/2 LENGTH</td>
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<td>P46319</td>
<td>FORK TERMINAL - SMALL</td>
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</tr>
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<td>4</td>
<td>P46444</td>
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<td>17</td>
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<td>P23504</td>
<td>LOCK NUT</td>
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</table>
**Walk Around Electrics (Option #183)**

*After 9-08*

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

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

- **NOTE:** APPLY COLOR GUARD TO CONNECTIONS INSIDE PUSH BUTTON UNIT

---

**Diagram Notes:**
- 1: JUMPER WIRE
  - WHITE
  - GREEN
  - BLACK

- 2, 3, 4: WIRE CONNECTIONS
  - GREEN
  - BLACK
  - RED
  - ORANGE

- 5: TERMINAL PIN CONNECTIONS

---

**Diagram Symbols:**
- 1: Push Button Unit
- 2: Jumper Wire
- 3: Terminal Pin Connections
- 4: Wire Connections
- 5: Terminal Pin Connections
- 6: Gate Wiring
- 7: Cord Grip
- 8: Terminal Strip
- 9: Gate Connection
- 10: Gateway Connection
# Walk Around Electrics (Option #183)

**After 9-08**

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<td>P23504</td>
<td>LOCK NUT</td>
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<td>1</td>
<td>P56554</td>
<td>STEEL PLUG</td>
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Option #155 (LIGHTS AND SENSORS)

ELECTRIC CONNECTIONS AND PARTS

CAUTION
SENSOR MUST BE CONNECTED TO THE RELAY AND THE RELAY GROUNDED BEFORE POWER IS APPLIED OR THE SENSOR WILL BE DAMAGED

CAUTION
SENSOR MUST BE CONNECTED TO THE RELAY AND THE RELAY GROUNDED BEFORE POWER IS APPLIED OR THE SENSOR WILL BE DAMAGED
## Option #155 (LIGHTS AND SENSORS)

### ELECTRIC CONNECTIONS AND PARTS

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<td>Weld to inner slide cover</td>
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<td>Sensor target</td>
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<td>Relay</td>
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<td>P46482</td>
<td>Flasher</td>
<td>Blk wire on sol to blk wire</td>
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<td>1</td>
<td>P46483</td>
<td>Flasher base</td>
<td>Blk wire on sol to blk wire</td>
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<td>1</td>
<td>P46236</td>
<td>Circuit breaker</td>
<td>20 amp, auto reset</td>
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<tr>
<td>8</td>
<td>4</td>
<td>P17518</td>
<td>Self tapping screw</td>
<td>CirB-2, relay-1, flasher base-1</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>P46751</td>
<td>Large ring terminal</td>
<td>To starter lg hot post</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>P46318</td>
<td>Female terminal push on</td>
<td>For relay connections</td>
</tr>
<tr>
<td>11</td>
<td>5</td>
<td>P46047</td>
<td>Small ring terminal</td>
<td>To circuit breaker &amp; 3 grounds</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
<td>P46157</td>
<td>Lg butt connector</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>BA-551-193</td>
<td>Light harness assy</td>
<td>Includes all lights</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>P46017</td>
<td>Black wire 16-GA</td>
<td>600” To front of trailer</td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>P46017</td>
<td>Black wire 16-GA</td>
<td>8” From clear lights to relay</td>
</tr>
<tr>
<td>16</td>
<td>1</td>
<td>P46301</td>
<td>Green wire 16-GA</td>
<td>3” From relay 30 to relay 86</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>P46301</td>
<td>Green wire 16-GA</td>
<td>8” From relay to circuit breaker</td>
</tr>
<tr>
<td>18</td>
<td>1</td>
<td>P46301</td>
<td>Green wire 16-GA</td>
<td>48” From circuit breaker to battery</td>
</tr>
<tr>
<td>19</td>
<td>2</td>
<td>P46017</td>
<td>Black wire 16-GA</td>
<td>180” From relay to clear lights</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>P46665</td>
<td>Female terminal push on</td>
<td>For double wire connection</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>P46739</td>
<td>Cord grip</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>1</td>
<td>P46740</td>
<td>Black nylon nut</td>
<td></td>
</tr>
</tbody>
</table>
Option #157 (FULL OUT POSITION SAFETY)

ELECTRIC CONNECTIONS AND PARTS

**ELECTRICAL CONNECTIONS**

**CAUTION**

SENSOR MUST BE CONNECTED TO THE RELAY AND THE RELAY GROUNDED BEFORE POWER IS APPLIED OR THE SENSOR WILL BE DAMAGED

**Index No.** | **Req’d** | **Part Number** | **Description** | **Comments**
--- | --- | --- | --- | ---
1 | 1 | P46478 | Proximity sensor | 
2 | 1 | P46487 | Relay | 
3 | 1 | AP-817-139 | Sensor mount | Weld to inner slide cover
4 | 1 | S566-024.000 | Sensor out target | 2 x 1-1/2 x 1/8 x 24
5 | 1 | S566-003.000 | Sensor in target | 2 x 1-1/2 x 1/8 x 3
6 | 4 | P46318 | Female connector | For relay connections
7 | 1 | P46156 | Butt connector | Blk wire on sol to blk wire
8 | 1 | P17518 | Self tapping screw | To mount relay
9 | 1 | P46751 | Large ring terminal | 
10 | 1 | P46471 | Blue wire – 24” lg. | To provide power to relay
INSTALLATION 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 –

<table>
<thead>
<tr>
<th>Decal Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P55236</td>
<td>Operating Instructions</td>
</tr>
<tr>
<td>P55157</td>
<td>Urgent Warning – Read Before Operation</td>
</tr>
<tr>
<td>P55294</td>
<td>CAUTION Do Not Stand….</td>
</tr>
<tr>
<td>P55193</td>
<td>4500 lb. Maximum Capacity</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Decal Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P55138</td>
<td>Keep Feet from Edge….</td>
</tr>
</tbody>
</table>

Locate the following decals at Toggle Switches –

<table>
<thead>
<tr>
<th>Decal Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P55222</td>
<td>IN / OUT</td>
</tr>
<tr>
<td>P55221</td>
<td>UP / DOWN (Qty. 2)</td>
</tr>
</tbody>
</table>