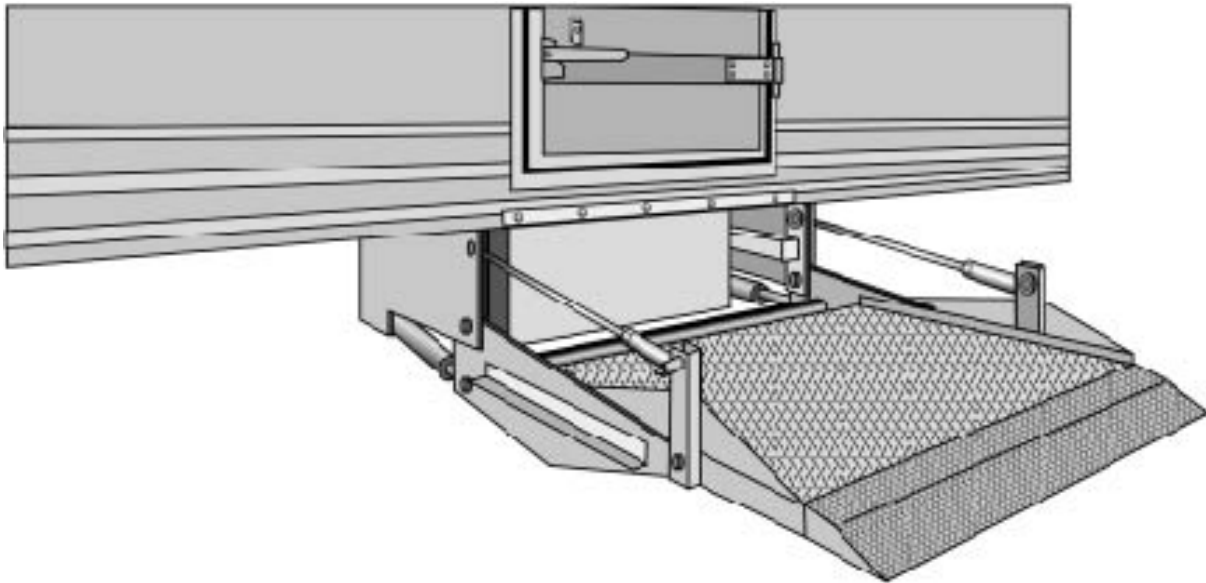




Installation Manual

LPS4500RL Hide-A-Way® Trailer Side Gate



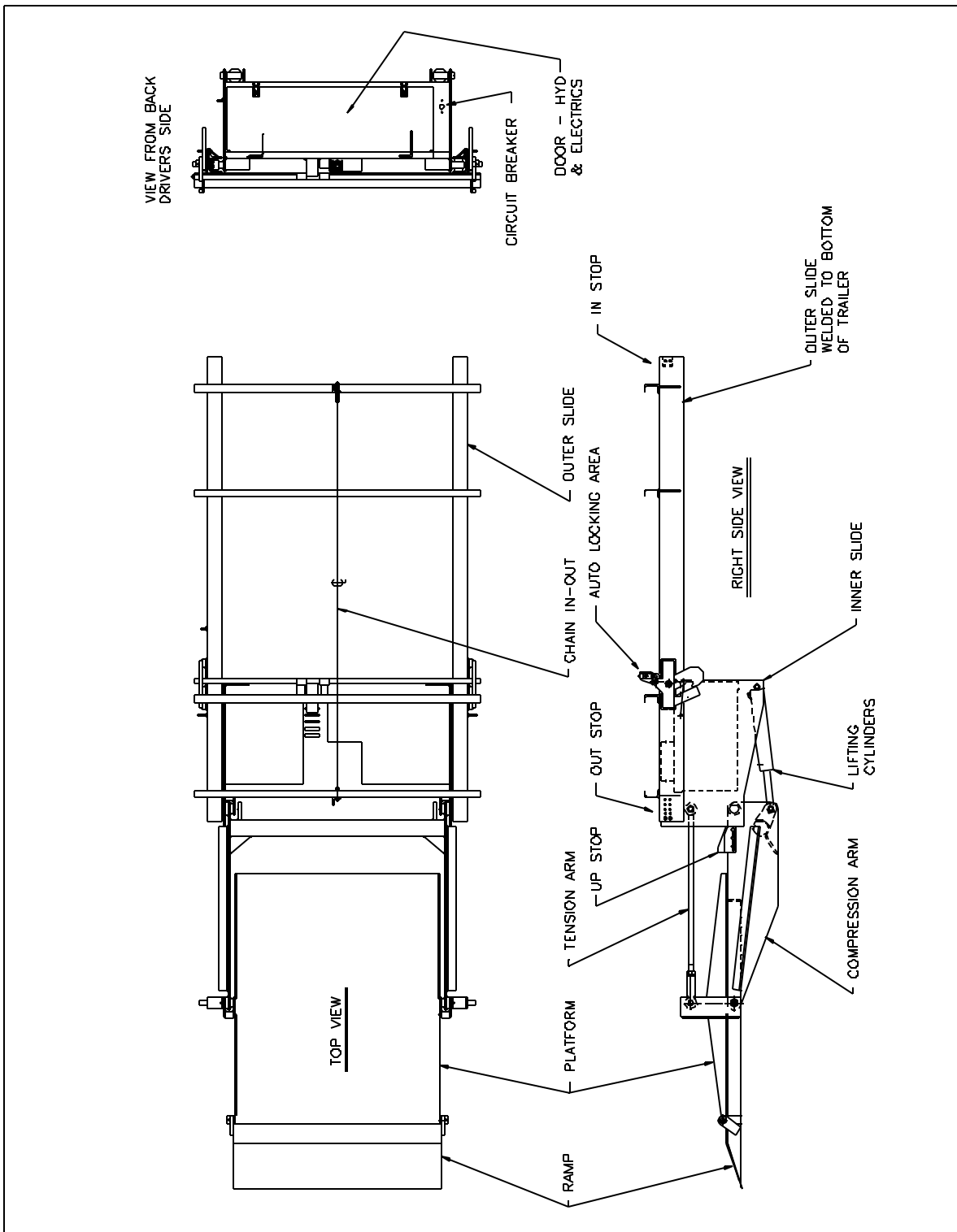
LEYMAN MANUFACTURING CORPORATION
10900 Kenwood Road
Cincinnati, OH 45242
1-866-LEYMAN-1 • 1-866-539-6261 • 513-891-6210
Fax 513-891-4901
www.leymanlift.com
sales@leymanlift.com

LML00373-3/4/13

TABLE OF CONTENTS

General Terminology	2
Before you Install the Lift Gate	3
General Specifications / Min. Space Required	4
Pre-installation of the Lift Gate	5
Side Door Mounting Information	6
Out Stop Mounting and Floor Thickness	7
Installation of the Lift Gate	8
Wiring Diagrams	9 - 13
Installation Adjustments	14
Grounding Recommendations	15
Charge Line	16
Recommended Oils and Lubrication	17
Emergency Hand Pump	18
Electrical Connections (Opt. 157 / Opt. 155)	19 - 20
Brake Lock-Up (Opt. 156)	21
Troubleshooting Guide	22
Operating Instructions	23
Operating the Emergency Hand Pump	24
Maintenance Minder 2 [®]	25 - 27
Installation of Safety Decals	28
Final Installation Inspection	29
Notes	30

GENERAL TERMINOLOGY



BEFORE YOU INSTALL THE LIFT GATE

1. Check the lift gate for shipping damage.
2. Remove the shipping bands, etc. if the gate was shipped vertically, set the gate on the ground.
3. Remove the box, open and read the installation manual. Check that all major parts have arrived, such as the electrical box, mud flap (if ordered), etc.
4. Inspect the area under the trailer where the lift gate is to be mounted. Be sure the area is clear of obstructions where the lift gate will be installed. Check the cross member material. If the cross members are made of aluminum, the aluminum conversion kit (Option #133TLS72) must be ordered and used to mount the lift gate.
5. 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.
6. Read the following pages prior to beginning the installation.
 - A. Pre-installation of the lift gate.
 - B. Side door mounting information.
 - C. Installation of the lift gate.
 - D. Installation adjustments.

GENERAL SPECIFICATIONS

CUSTOMER: _____

MODEL: LPS_____

CAPACITY: _____ lbs.

TYPE: Trailer Side Door Lift Gate, Pallet Handling

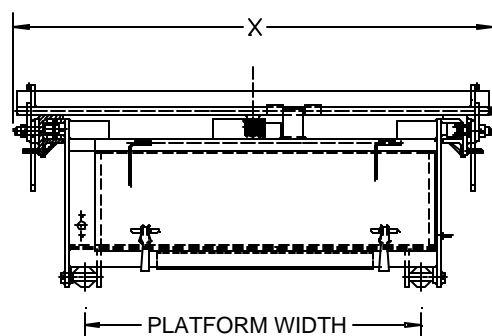
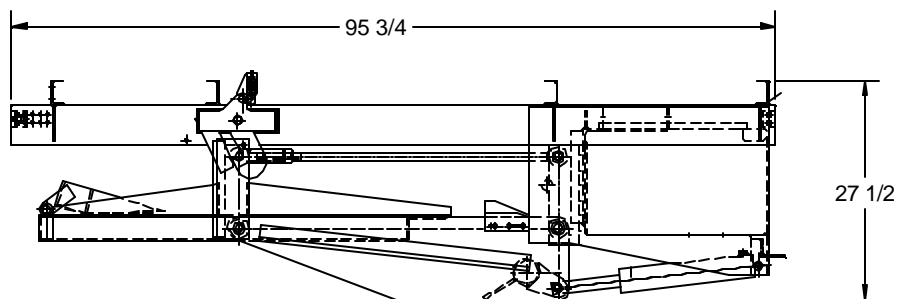
HYDRAULIC PRESSURE: 2500 PSI – Up Function
800 PSI – In/Out Function

OPERATION: Power UP/Gravity DOWN
Power IN/OUT

SERIAL #: _____

MINIMUM MOUNTING SPACE REQUIREMENTS

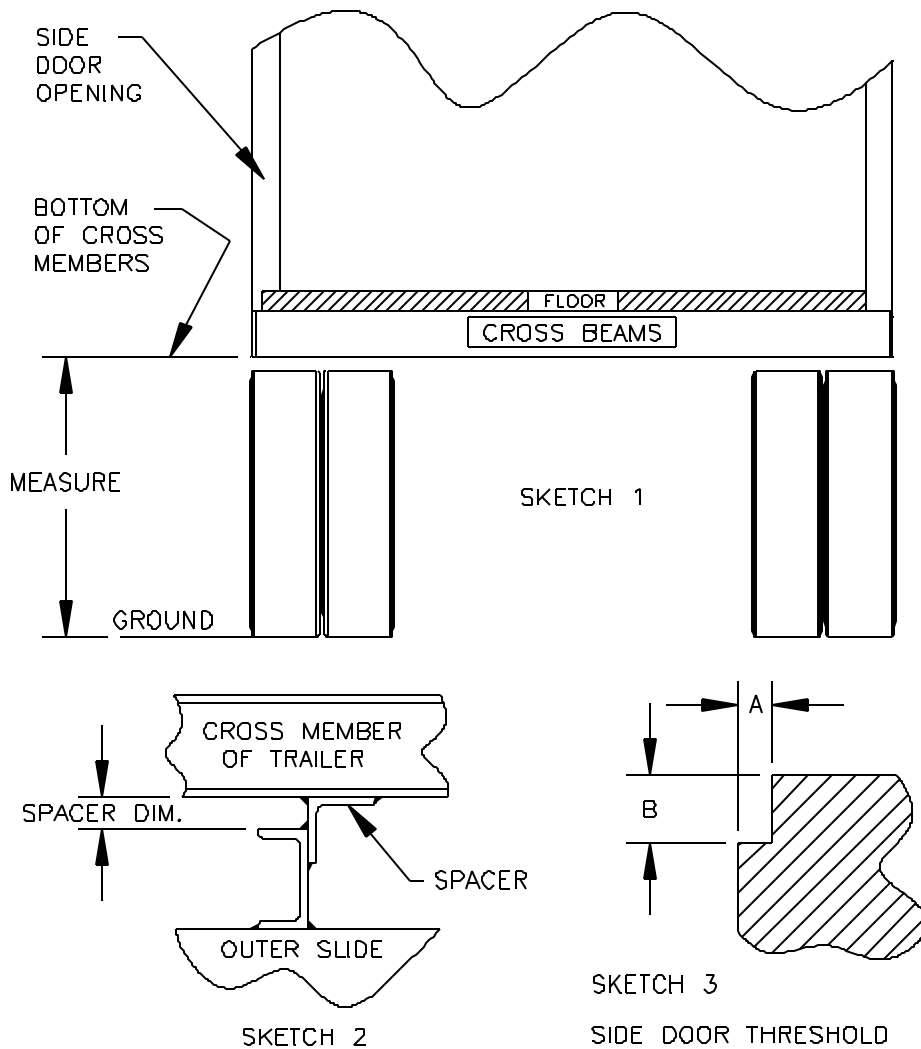
MINIMUM SPACE REQUIREMENTS NEEDED TO INSTALL THE LPS4500 SERIES GATE.



PLATFORM WIDTH	DIM. X WIDTH REQ.
42	DIM. X = 60
48	DIM. X = 66
60	DIM. X = 78
72	DIM. X = 90

PRE-INSTALLATION OF THE LIFT GATE

1. Measure from the bottom of the cross members to the ground. If this measurement is less than 47 inches, spacers will not be required. This measurement must be 41.5 inches minimum in order to yield 14 inches ground clearance for the gate. If the measurement is more than 47 inches, the amount in excess of 47 inches is the height of the spacer that must be added to the four channels at the top of the Outer Slide. See Sketches 1 and 2.
2. Check the side door threshold. See Sketch 3. For the platform to properly enter the opening, dimension "B" must be at least 1.5 times dimension "A".

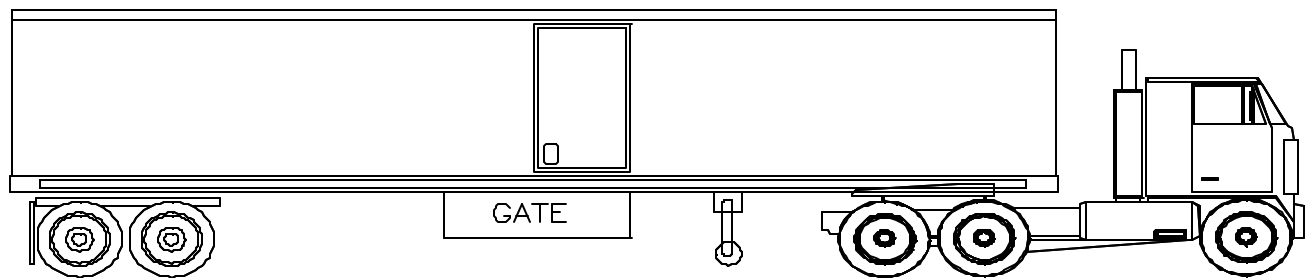


SIDE DOOR MOUNTING INFORMATION

For installation of Leyman side gates that are wider than the door opening, we recommend the gate be offset to the rear of the trailer, so when the door is opened, the platform will not hit the bottom edge of the door when in the full UP position.

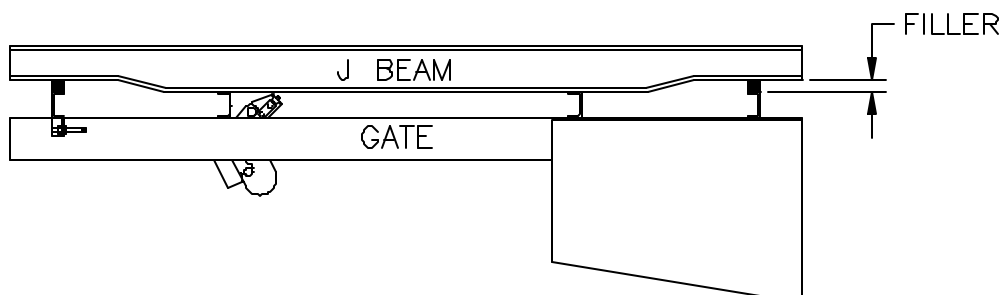
Depending on the side door threshold, the platform may not fill the gap between the floor and the platform. The preferred method to correct this is to ADD MATERIAL at the tip of the platform. Some LPS gates may ship with a 1" wide extension strip already on the platform tread plate. If so, trim the length of that extension strip already on the platform so that it fits inside the door width. Repair trimmed edges with galvanize zinc spray. Shake spray can vigorously before using.

If the LPS platform does not have a 1" extension strip built into the tread plate, then a 1/4" x 1" x 47" long stainless steel strip was included in the shipment. Add this to the platform edge as a gap-filler at the door threshold. Trim length to fit inside the threshold, remove the galvanize coating on the edge of the platform where welds will be made, and weld the extension strip in place. Use stainless steel welding wire for best results. Repair weld areas with galvanize zinc spray after welding. Shake spray can vigorously before using.



MOUNTING ON "J" CHANNELS

NOTE: FILLER MATERIAL NOT SUPPLIED BY LEYMAN

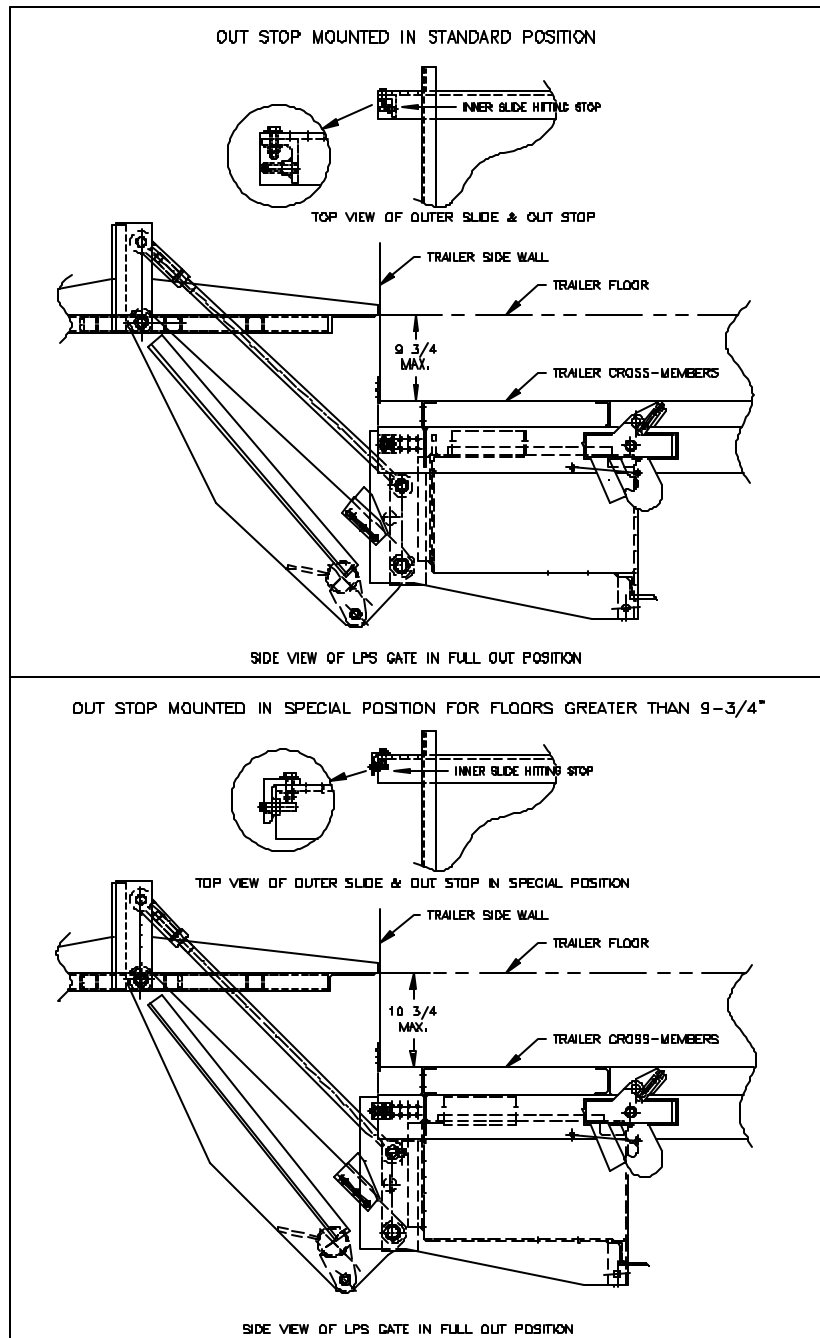


NOTE: Mounting to aluminum cross members, use kit #133TLS72.

OUT STOP MOUNTING AND FLOOR THICKNESS

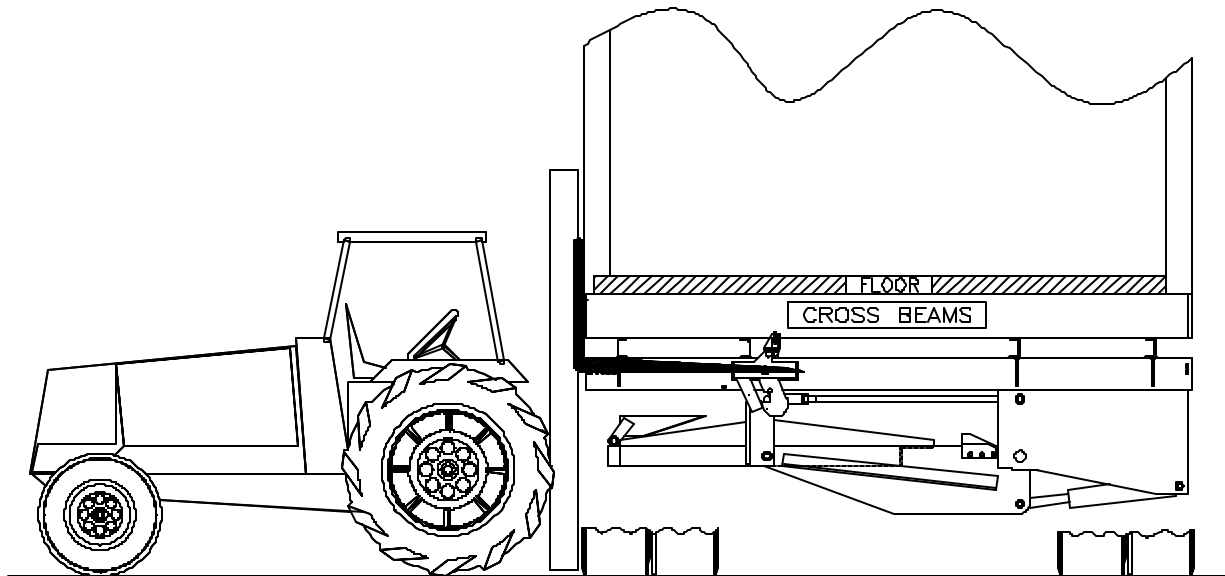
Determine the total floor thickness (vertical distance between the bottom of the cross-members and the top of the floor inside the trailer). If that dimension is 9-3/4" or less, leave the Out Stops mounted in the standard position. Mount Outer Slide rail face (fixed rail) flush with the rub rail.

If the total floor thickness dimension is larger than 9-3/4", the Out Stops must be flipped around as shown in the bottom half of the sketch below. In this case, the set screws in the Out Stops are reversed as well. **CAUTION!** Out Stops must be adjusted so that Front Chain Anchor does not strike Chain Cover Box.



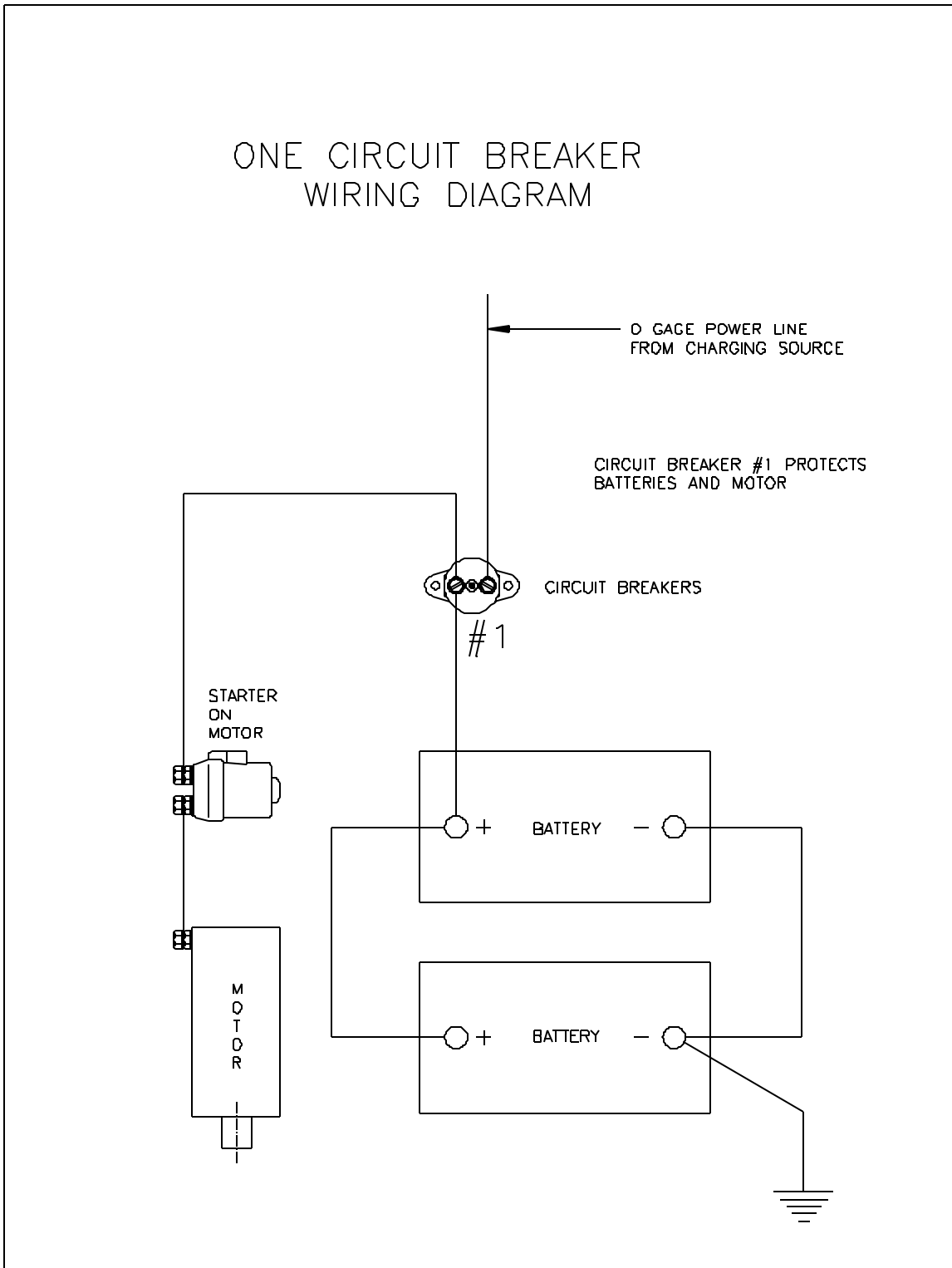
INSTALLATION OF THE LIFT GATE

1. Offset gate relative to the side door as shown on page 6, assuming a curb side mounting arrangement.
NOTE: The side edge of the platform, which must clear the door in the opened position, is 3-3/8 inches from the outside face of the Outer Slide (fixed rail).
2. Raise the lift gate, using a lift truck. See the sketch below. Position the forks under the spreaders (the four (4) three inch channels). Spread the forks as wide as possible.
CAUTION: Do not hit anything with the forks. "C" clamp the unit to the forks. Use two (2) "C" clamps.
3. Pick the unit up, and position it under the trailer. Line up the platform side edge so that it clears the door in the open position. The front edge of the Outer Slide (fixed rail) should be flush with the outside of the rub rail. Weld the four (4) corners to the cross members.
4. Mount the IN / OUT switch electrical box. See the wiring drawings for location information. Drawings are labeled "Toggle Switch Wiring" or "Walkaround Electrics". Finish wiring.
5. Install two (2) batteries.
6. With switches, lift the gate UP, lift up on the auto lock handle. Drop the platform down six inches. Run the gate outward. Carefully lift the platform up to the door threshold. Check for the fit of door opening. Alter, adjust, etc.
CAUTION: Do not ride on the gate yet, when only partially welded.
7. Complete welding. Weld all mounting channels on both sides to all cross members.
8. Make all adjustments. See the following pages for correct order and steps.
9. Install charge line.
10. Install all other options, and install the safety decals.
11. Touch-up any paint wherever necessary. Follow instructions on Extreme Shield Touch-Up paint kit. All paint in the heat affected zone (weld area) must be removed and re-painted.

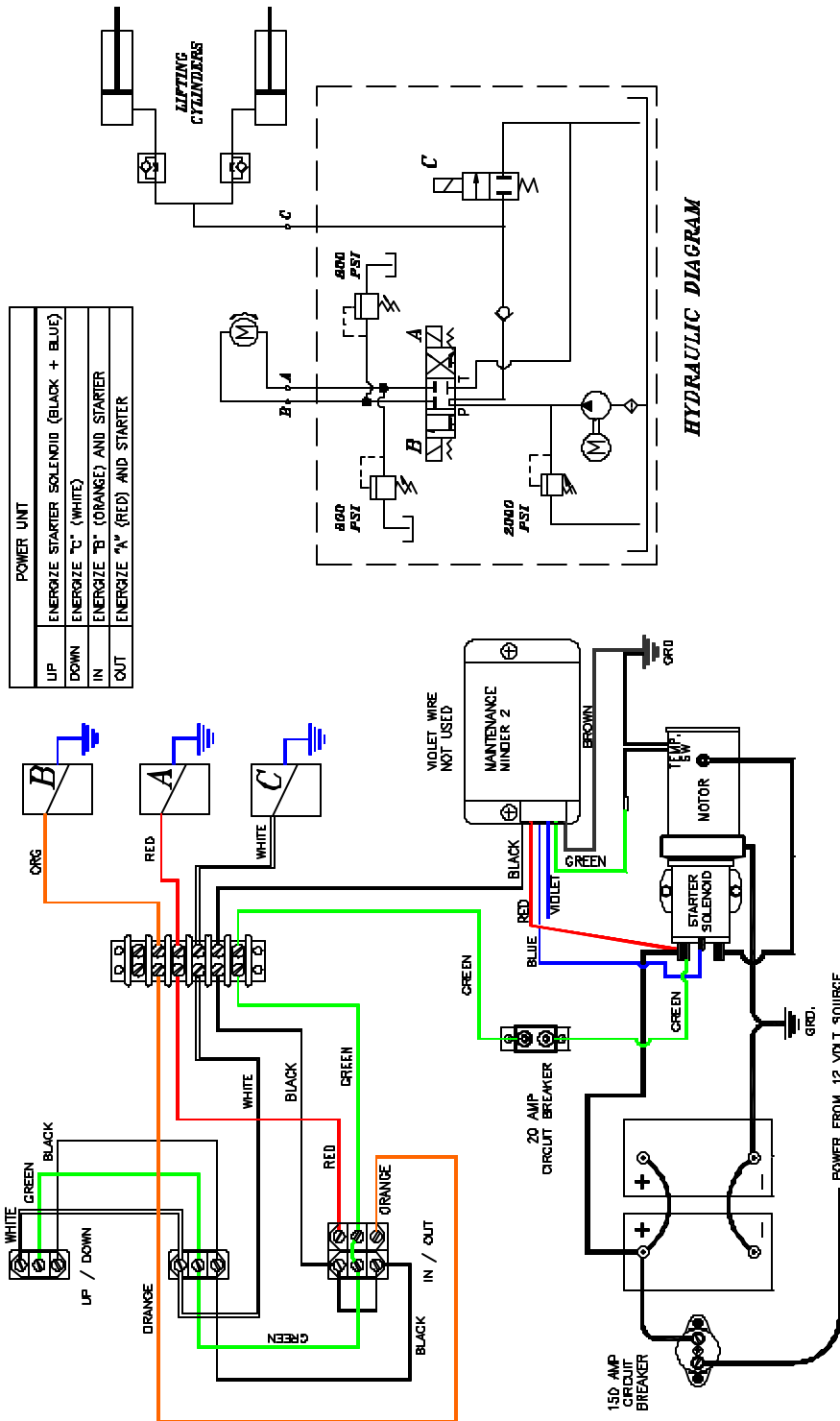


NOTE: It will be necessary to use "C" clamps to hold the gate to the forks of the lift truck.

ONE CIRCUIT BREAKER-WIRING DIAGRAM

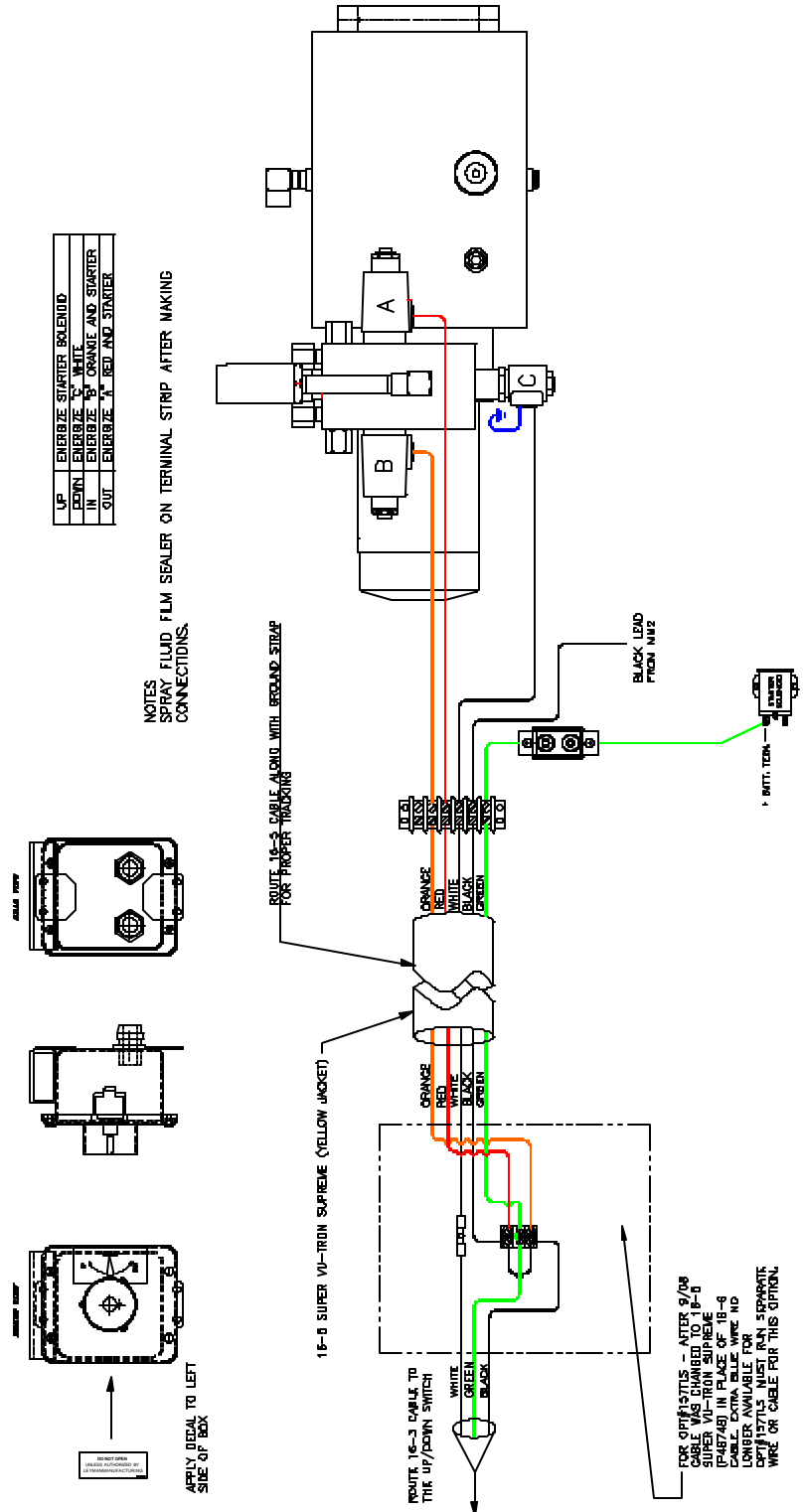


WIRING DIAGRAM (MM2 & TEMP. SW.)

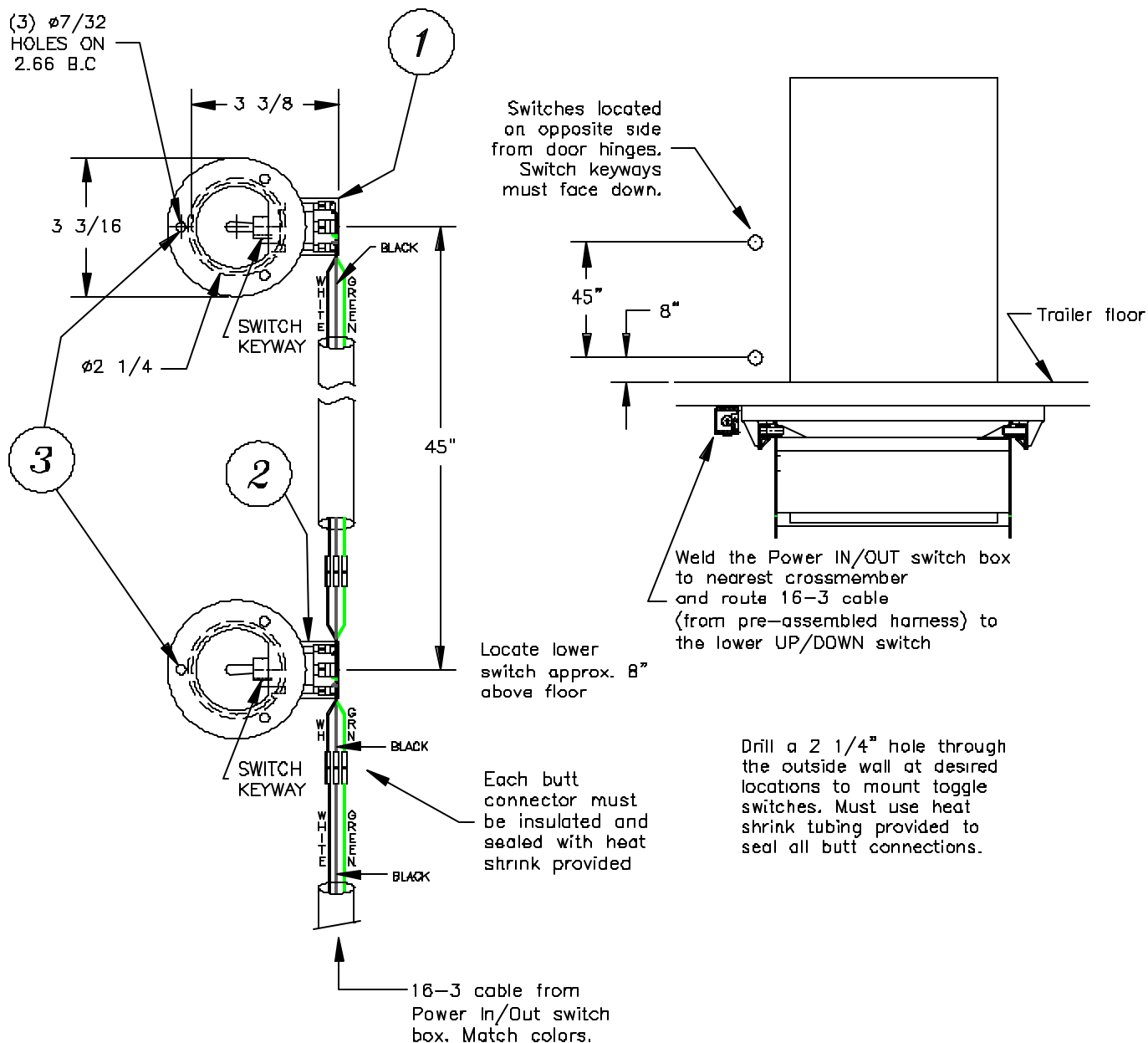


POWER UNIT	
UP	ENERGIZE STARTER SOLENOID (BLACK + BLUE)
DOWN	ENERGIZE 'C' (WHITE)
IN	ENERGIZE 'B' (ORANGE) AND STARTER
OUT	ENERGIZE 'A' (RED) AND STARTER

BASIC ELECTRICS - WIRING DIAGRAM



TOGGLE SWITCH WIRING



Index No.	Req'd	Part Number	Description	Comments
1	1	P46728	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

WALKAROUND ELECT. - OPT. 183TLS

VIEW TO THE BACK OF THE BOX AND TO A CROSS SECTION

OUTER SLIDE

OUTER SLIDE

TYPICAL MOUNTING (L-H. SHOWN)

21	1	P7210	LOCK BUT	1/4" X 1/4" X 1/4"	1/4" X 1/4"
20	2	P7210	ROUND HEAD SCREW	1/4" X 1/4" X 1/4"	1/4" X 1/4"
19	1	BSP-BRONZE BRASS	WIPER WARE	1/2" X 1/2" X 1/2"	1/2" X 1/2"
18	1	BSP-BRONZE BRASS	STOP WARE	1/2" X 1/2" X 1/2"	1/2" X 1/2"
17	1	P4344	LOCK BUT	1/2" X 1/2" X 1/2"	1/2" X 1/2"
16	1	P4344	ROUND HEAD SCREW	1/2" X 1/2" X 1/2"	1/2" X 1/2"
15	1	P4344	LOCK WIPER	1/2" X 1/2" X 1/2"	1/2" X 1/2"
14	1	P7210	SELF STOPPING SCREW	1/2" X 1/2" X 1/2"	1/2" X 1/2"
13	1	P4344	PUSH BUTTON BOX	1/2" X 1/2" X 1/2"	1/2" X 1/2"
12	1	P4344	COVER	1/2" X 1/2" X 1/2"	1/2" X 1/2"
11	1	P4344	STEEL PLUG	1/2" X 1/2" X 1/2"	1/2" X 1/2"
10	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
9	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
8	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
7	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
6	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
5	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
4	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
3	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
2	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
1	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"

16-4 WIRE FROM GATE [ROUNDED THROUGH COVER STRIP IN BACK OF BOX.] TERMINALS TO BE ADDED TO WIRING RIG BY INSTALLER

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

NOTE: COLOR CODED TO CONNECTIONS WIRING PUSH BUTTON UNIT

MOVE THIS BLACK WIRE TO THE BLUE TERMINAL WHEN OPT#157TLS FULL DUT POSITION SAFETY IS USED

QUALITY ASSURANCE TESTING

UP	BLACK WIRE CONNECTS TO GREEN WIRE
DOWN	WHITE WIRE CONNECTS TO GREEN WIRE
IN	BLACK AND ORANGE WIRES CONNECT TO GREEN WIRE
OUT	BLACK AND RED WIRES CONNECT TO GREEN WIRE

SCALE: 1/2" = 1"

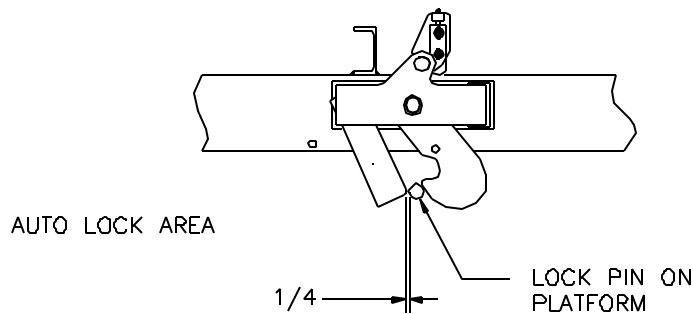
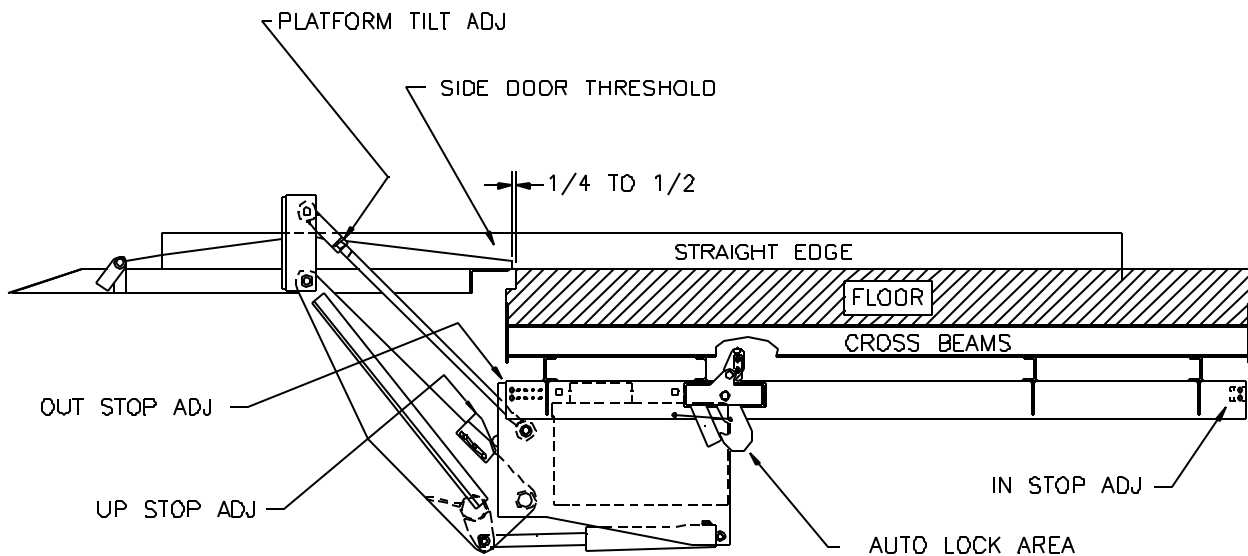
21	1	P7210	LOCK BUT	1/4" X 1/4" X 1/4"	1/4" X 1/4"
20	2	P7210	ROUND HEAD SCREW	1/4" X 1/4" X 1/4"	1/4" X 1/4"
19	1	BSP-BRONZE BRASS	WIPER WARE	1/2" X 1/2" X 1/2"	1/2" X 1/2"
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14	1	P7210	SELF STOPPING SCREW	1/2" X 1/2" X 1/2"	1/2" X 1/2"
13	1	P4344	PUSH BUTTON BOX	1/2" X 1/2" X 1/2"	1/2" X 1/2"
12	1	P4344	COVER	1/2" X 1/2" X 1/2"	1/2" X 1/2"
11	1	P4344	STEEL PLUG	1/2" X 1/2" X 1/2"	1/2" X 1/2"
10	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
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6	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
5	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
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3	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
2	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"
1	1	P4344	TERMINAL BLOCK	1/2" X 1/2" X 1/2"	1/2" X 1/2"

QUALITY ASSURANCE TESTING

UP	BLACK WIRE CONNECTS TO GREEN WIRE
DOWN	WHITE WIRE CONNECTS TO GREEN WIRE
IN	BLACK AND ORANGE WIRES CONNECT TO GREEN WIRE
OUT	BLACK AND RED WIRES CONNECT TO GREEN WIRE

SCALE: 1/2" = 1"

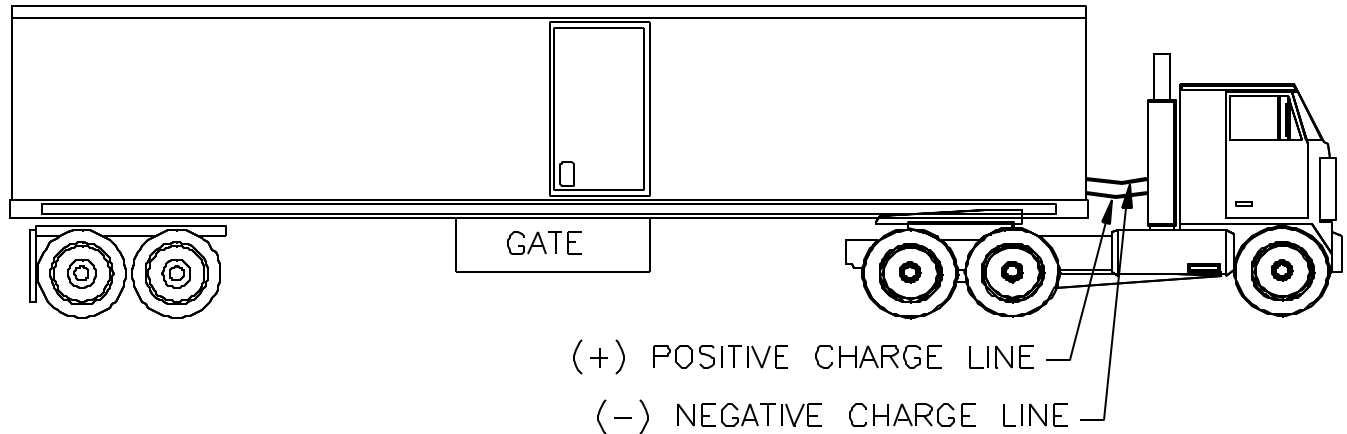
INSTALLATION ADJUSTMENTS



- 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 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 $\frac{1}{4}$ " 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 $\frac{1}{4}$ " to $\frac{1}{2}$ " from the edge of the threshold.
- Step 4: Adjust the In Stops. See Sketch 2 and adjust for the $\frac{1}{4}$ " dimension.

GROUNDING RECOMMENDATIONS

FOR TRACTOR/TRAILER USING THE MAINTENANCE MINDER SOLENOID OR MAINTENANCE MINDER 2™ CONTROLLER



The Maintenance Minder™ solenoid requires a minimum of 9.5 volts in order for the LPS™ to operate. Utilization of a single positive cable does not provide sufficient ground. Therefore, our recommendation for grounding tractor/trailers with a LPS™ gate are as follows:

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

The Maintenance Minder 2™ Controller requires that a minimum of 8 volts be maintained under load in order for the LPS to operate.

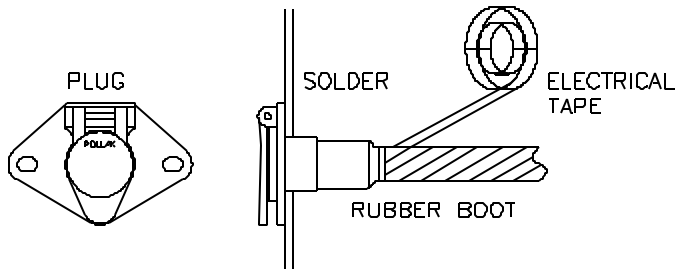
NOTE:

The use of a battery charger as the sole power source to operate a LPS™ is unauthorized and will prevent the LPS™ 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.

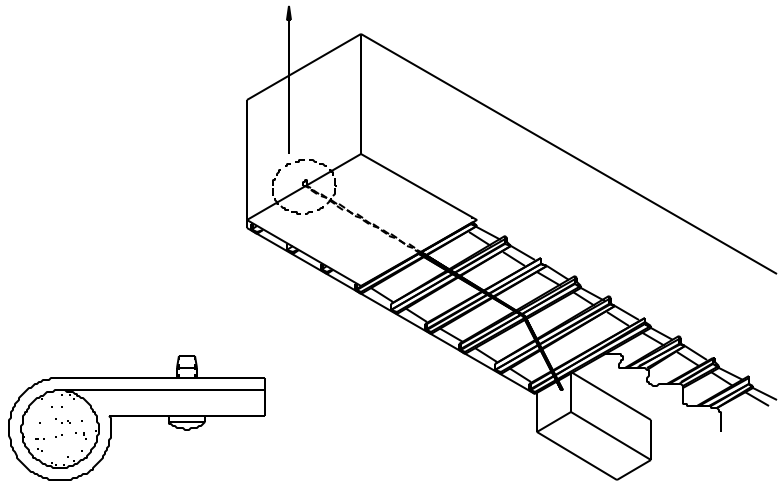
CHARGE LINE

When installing the charge line, be sure the cable goes through three (3) "I" beams at the very least, past the fifth wheel plate and the clear vinyl loom. Mount the remaining cable with loom clamps and self tapping screws to the "I" beams.

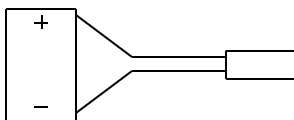
USE "0" GAUGE CABLE AT MINIMUM



WE RECOMMEND THAT YOU USE AT LEAST A 90 AMP ALTERNATOR ON THE TRACTOR TO RECHARGE THE BATTERIES ON THE LPS™.



TRACTOR PLUG



Run the power line wire with wiring harness on lift gate.

The plug that is on the tractor must have a hot wire and ground wire to the lug that plugs into the trailer.

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

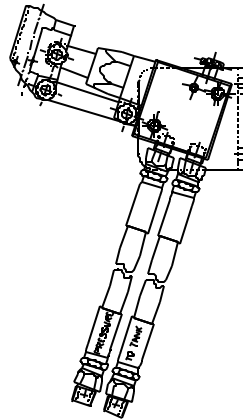
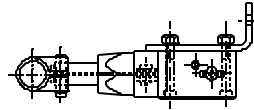
HYDRAULIC OILS	Manufacturer	Type	Temp. Range
Level 1 Normal Conditions	Mobile	DTE 11	-15° F to + 150° F
	Shell	TELLUS-T15	-15° F to + 150° F
	Exxon	UNIVIS-N15	-15° F to + 150° F
Level 2 Cold Conditions	Mobile	AERO-HFA	-50° F to + 80° F
	Shell	AERO FLUID#4	-50° F to + 80° F
	Exxon	UNIVIS-HVI13	-50° F 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 ends, 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:

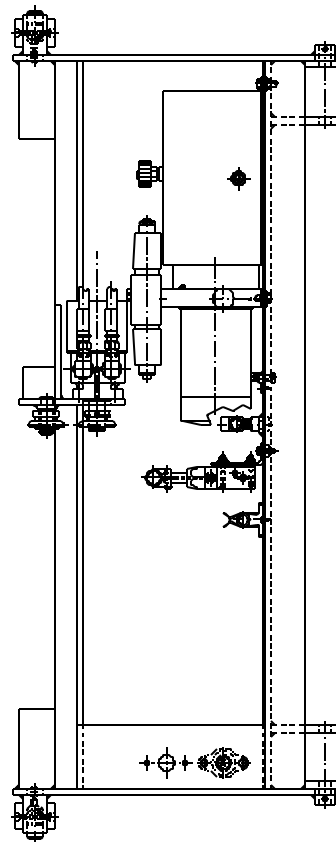
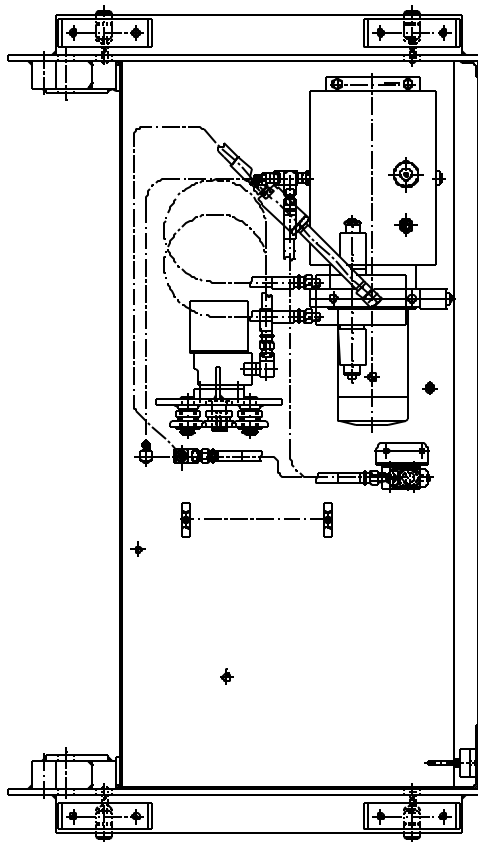
The use of a battery charger as the sole power source to operate the lift gate is unauthorized and will prevent the lift gate from working properly. The lift gate must always be operated in conjunction with at least one (1) 12 volt heavy duty lift gate battery. A minimum of 9.5 volts must be maintained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

EMERGENCY HAND PUMP

OPTION #107TLS

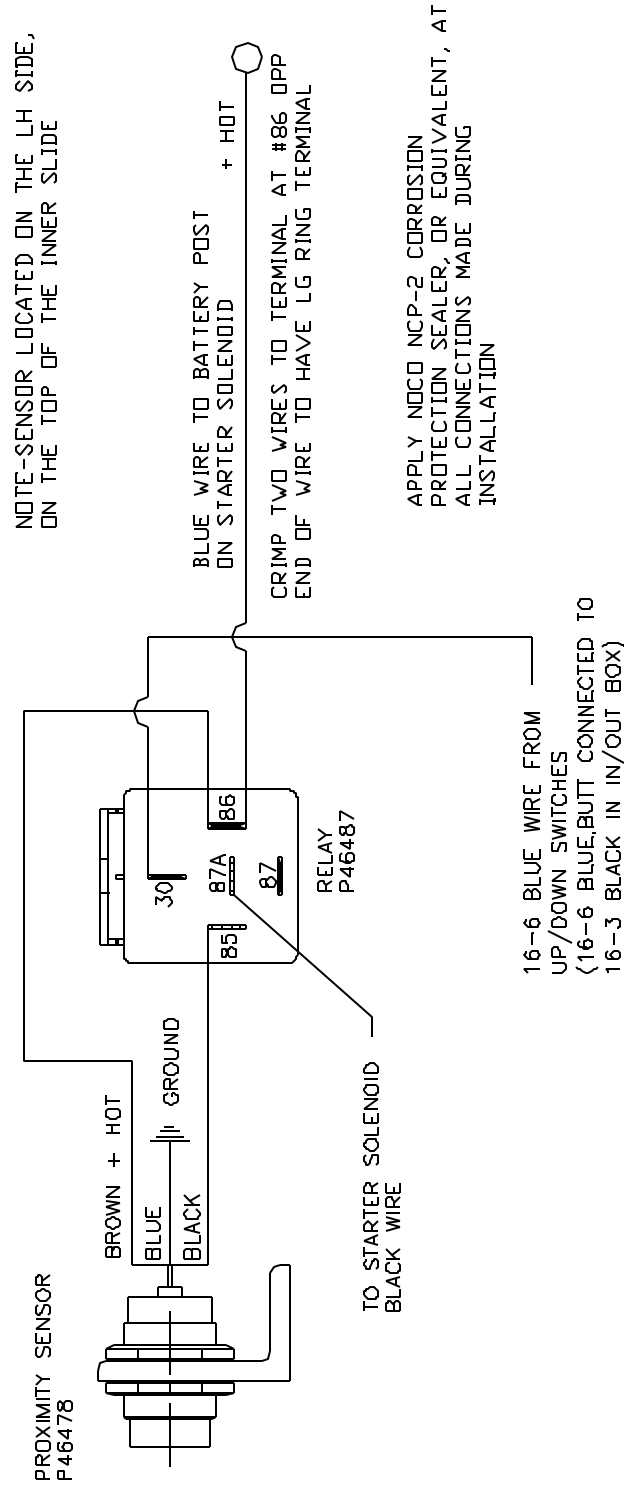


REMOVE TWO PIPE PLUGS
ONE FROM HYD TANK AND
ONE FROM TEE IN FLOOR



ELECTRICAL CONNECTIONS

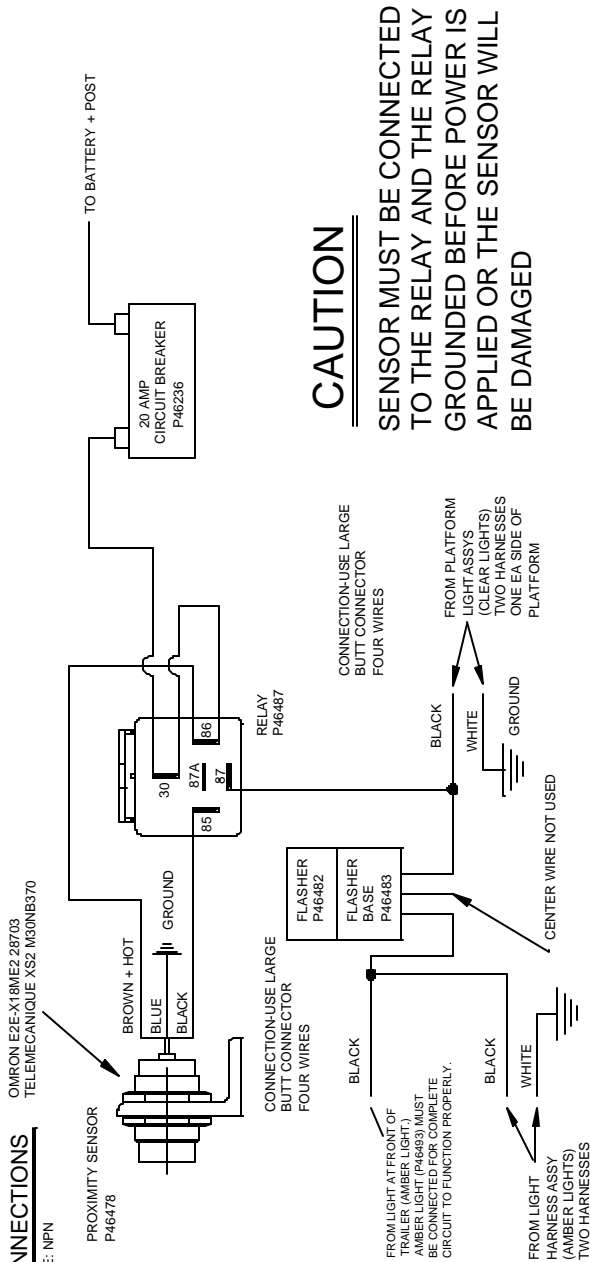
FULL OUT POSITION SAFETY - OPTION #157TLS



LIGHTS & SENSOR - OPT. 155TLS

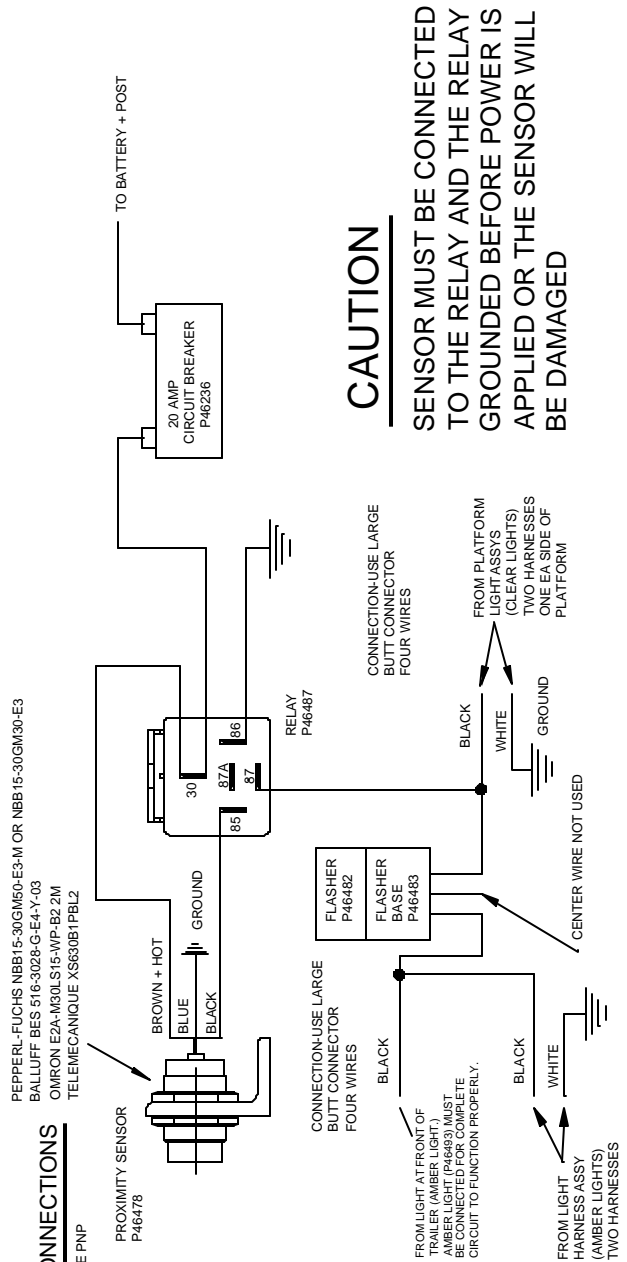
ELECTRICAL CONNECTIONS

SENSOR OUTPUT TYPE: NPN

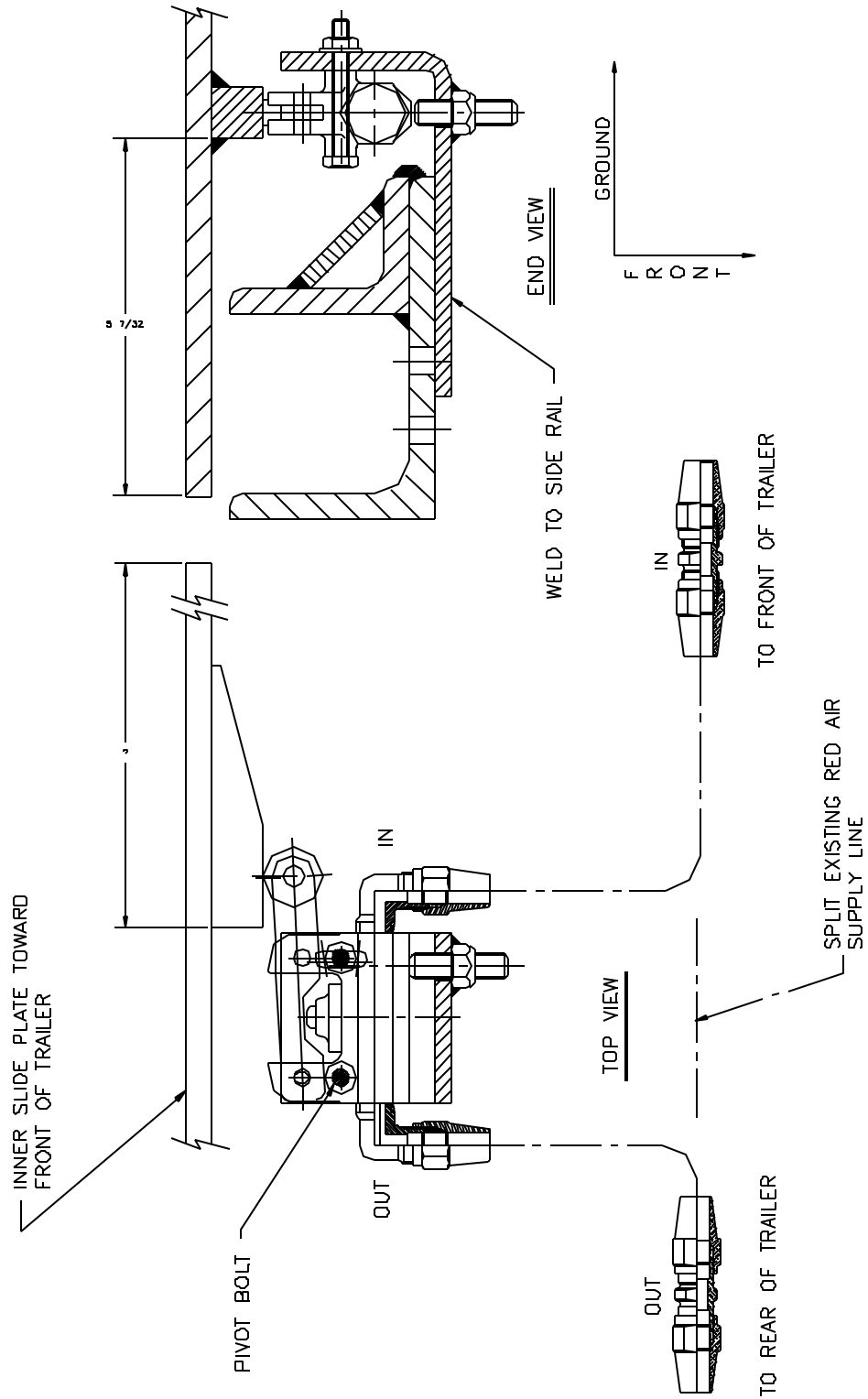


ELECTRICAL CONNECTIONS

SENSOR OUTPUT TYPE PNP (PREFERRED)



BRAKE LOCK-UP - OPTION #156TLS



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. Low battery. Green light on starter solenoid must be on to run or check MM2 for voltage faults. 2. Insufficient oil in power unit tank. 	<ol style="list-style-type: none"> 1. Recharge or replace battery. 2. Fill tank to 1 inch from top w/platform down.
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. Green light on starter solenoid must be on to run or check MM2 for 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 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.	<ol style="list-style-type: none"> 1. Low battery. Green light on starter solenoid must be on to run or check MM2 for voltage faults. 2. Bad ground or poor electrical connections. 3. Solenoid valve not opening. 4. Check for obstructions in rails. 	<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. Lower "C" valve (white wire). Must activate when the 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 cylinder or piston seal. 3. "C" valve (white wire) or check valve not closing. 4. Drain valve on 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. Should be tightly closed.
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 oils for Level 1 or Level 2 conditions.
Gate will not go out and/or in.	<ol style="list-style-type: none"> 1. Check for obstructions in rails. 2. Low battery. Green light on starter solenoid must be on to run or check MM2 for voltage faults. 3. Tripped circuit breaker. 4. Power line is loose. 5. Bad motor, starter or switch. 6. Insufficient oil in power unit tank. 	<ol style="list-style-type: none"> 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").

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.

OPERATING THE EMERGENCY HAND PUMP

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 and locked.
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.

MAINTENANCE MINDER 2 CONTROLLER MENUS

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”.

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 fault signals will be repeated FOUR times, except Service Fault. Controller will prevent power unit from operating when a fault signal is sounding (about 10 sec.), except Service Fault. The controller has an anti-doorbelling feature, which prevents rapid ON/OFF operation of 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 while PAST the maintenance limit)

Low Voltage Faults (times low voltage occurred)

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

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

High Pressure Faults (not being used, no sensor available)

Reset all Info (Reset data after performing maintenance, once maintenance limit is reached – follow instructions for resetting AFTER maintenance is performed.



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 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 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
- P55294** CAUTION Do Not Stand....
- P55193** 4500 lb. Maximum Capacity

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)



FINAL INSTALLATION INSPECTION

CUSTOMER:		
LOCATION:		
VEHICLE#:	LIFT GATE MODEL#:	LIFT GATE SERIAL#:

√ = OK N = NOT APPLICABLE

	WELDING/ADJUSTMENTS
	Gate is welded secure to bottom of cross members
	Up Stops are adjusted at Compression Arm (to set platform flush with floor of trailer)
	Out Stops adjusted (the platform should be ¼" to ½" from the edge of the threshold)
	In Stops adjusted (the Auto Lock pin should be ¼" gap from hook)
	ELECTRIC'S
	Check that battery holds downs are anchored securely
	Check battery(ies) for proper charge level. PROPER CHARGE LEVEL:
	Check all wiring connections for tightness (batteries, switches, etc.). All connections heat shrink sealed or coated.
	Inspect and check all circuit breakers
	Charge line/power line (through cross members with rubber grommets if you prefer)
	Charge line/power line (clamped to bottom of cross members with loom clamps)
	Switch cable routed with ground cable from power unit to IN / OUT Switch Box.
	Switch cable, ground cable, and charge line all move free and clear during IN / OUT operation.
	Check operation of toggle switches
	Check operation of lights and sensor (OPT. 155TLS only)
	HYDRAULIC/GREASE
	Check reservoir for correct amount of fluid (oil level 1 inch from top with platform on ground)
	Check hydraulic hoses and fittings for leaks
	Check lifting cylinders for leaks
	OPERATION OF GATE
	Raise and lower lift gate. Observe for correct operation
	Operate lift gate IN-OUT. Observe for correct operation
	PAINTING AND SAFETY STICKERS
	Repaint where needed
	Check hydraulic cylinder rods for over spray
	Install all safety and operation stickers

SERVICED BY: _____ DATE: _____

