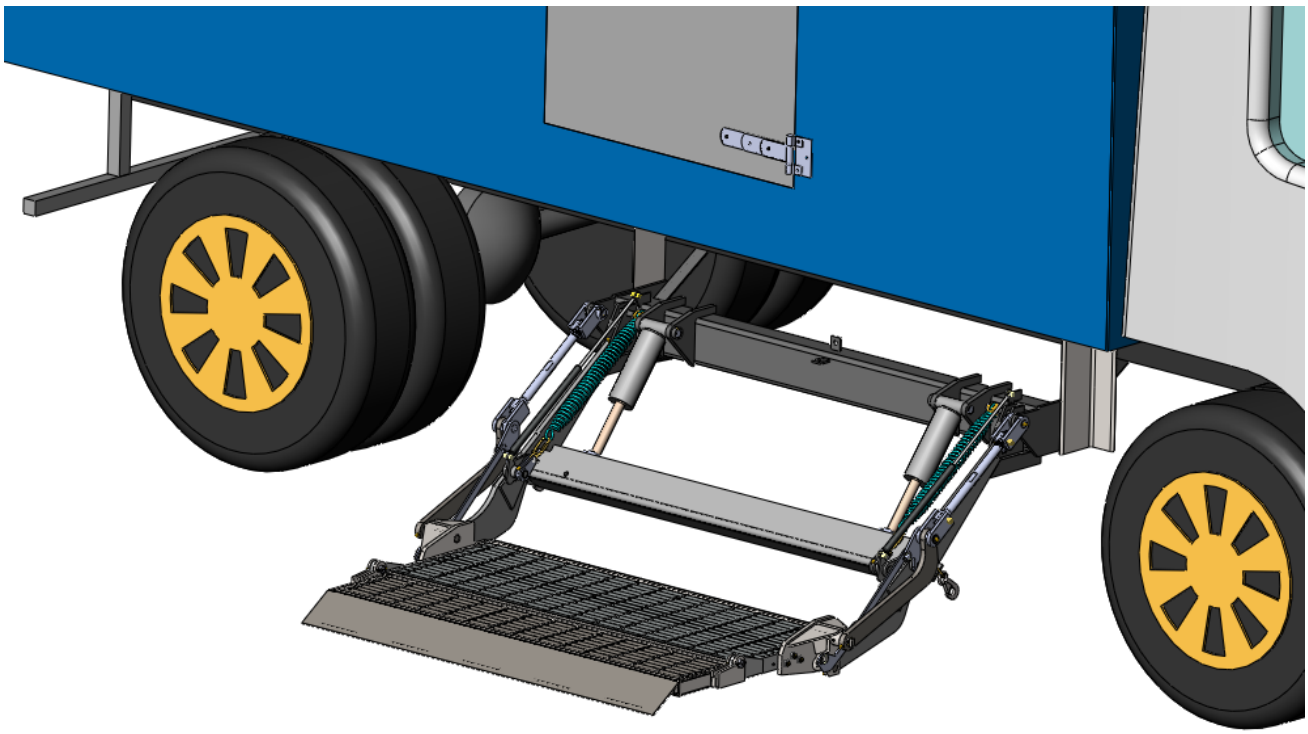
LEYMAN
LIFT GATES
Innovation. Service. Solutions.

Owner's Manual

LTS Hide-A-Way®
Truck Side Gate



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LML00410-11/6/15

TABLE OF CONTENTS

INTRODUCTION

This manual contains the operating procedures on the equipment your company is using that was manufactured by Leyman Manufacturing Corporation.

Past experience has indicated that it is most unwise to operate these units without proper instructions, which should be instituted by the purchaser.

While these products have certain safety features engineered into their design, they are all operated by human beings. Therein lies the problem of safety and one should always have caution in mind when operating this or any other machine that has parts that weigh several hundred pounds.

Again, let us remind you that there are moving parts on this product that weigh several hundred pounds. These parts, when not under proper control, can cause physical damage to the operator. Because of the weights that are involved; carelessness and neglect of training can make these units dangerous.

Do not overload this product. Maintain it properly. Stand clear of moving parts. Operate as instructed.

This lift gate has a long life expectancy and will take some abuse. Use good judgment when operating this equipment.

PLEASE FILL IN FOR YOUR RECORDS

Customer: _____

Model: _____

Capacity: _____

Type: _____

Power: 12 volt

Platform: _____

Serial #: _____

Options: _____

_____

_____

Maximum Height:	56”
Hydraulic Pressure:	Loaded 3,000 PSI at the pump (By-Passing)
AMP Draw:	Fully Loaded 265, Unloaded 130

When placing parts order, you will need the serial # and model # of the lift gate.

WORDS OF CAUTION

1. Before any maintenance is performed on this unit, read and understand this manual completely.

2. Do not stand on or behind the platform when operating gate in the folded position.

3. Make sure the ground is clear under the platform when lowering.

4. Do not stand in front of platform when lowering from vertical position or operating in any manner.

5. Never exceed the rated load capacity of this gate.

6. Do not allow persons to operate the unit unless they have been properly trained to do so.

7. Use only factory authorized parts for replacement.

8. Check the area around the unit for persons before operating the lift gate.

9. This lift gate should operate smoothly and the only noise that should be heard is the power unit. Any audible sounds other than the normal power unit operation sound should be thoroughly inspected and the cause of the noise should be pin-pointed and corrected.

10. Do not over load – the maximum rated capacity is based on an evenly distributed load all over the platform's flat surface.

11. Always load as close to the center of the platform and as close to the center of the truck sill as possible.

12. 150 Amp circuit breaker (not supplied) should be installed in the power line connected to starter solenoid. Locate circuit breaker near the battery source. Order from factory as option #111-Circuit Breaker.

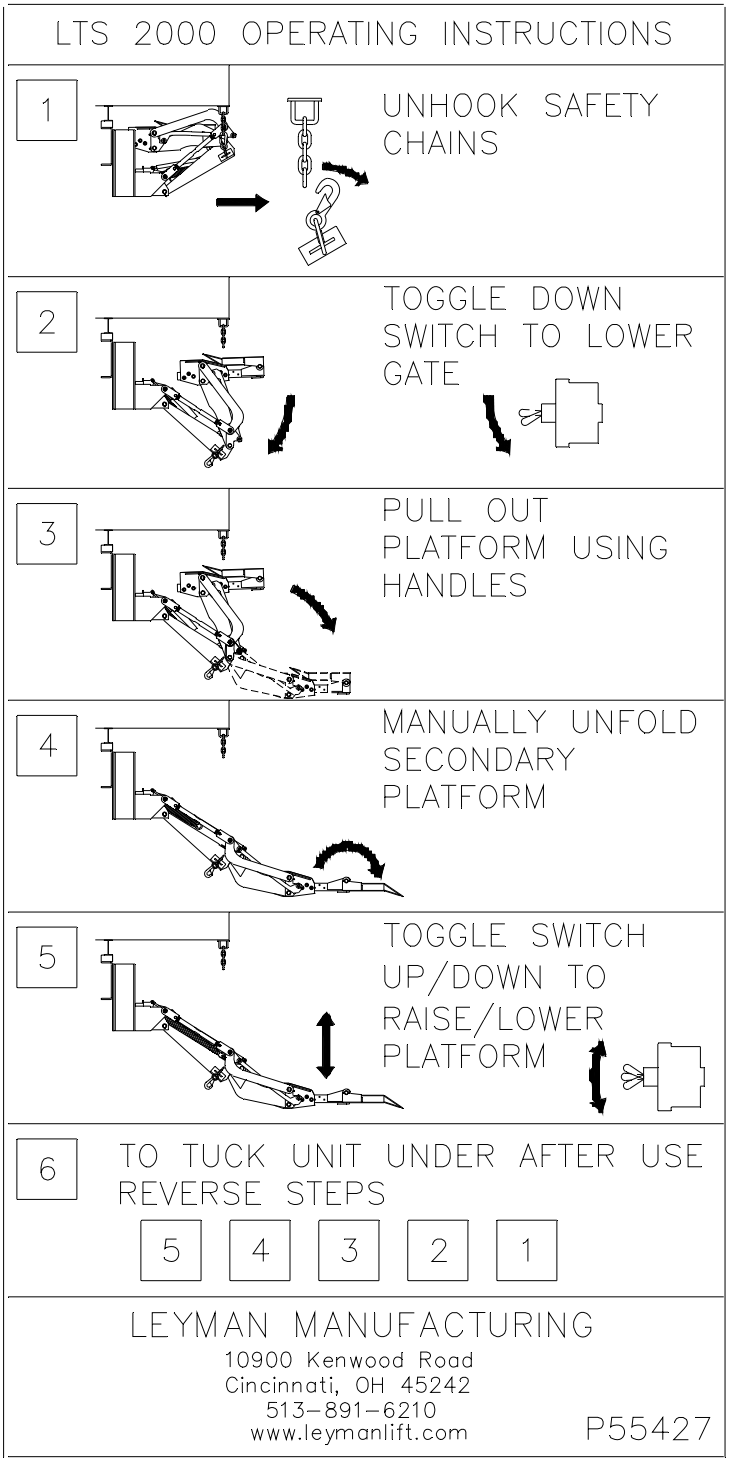
We urge the installation of a safety cut-off switch for all truck mounted lift gates. These are installed in the cab of the vehicle, so the power to the lift gate can be turned on/off.

WARNING: Since this gate has bearings at the main pivot points, (Tension and Compression Arms and Platform pivots) any welding on these parts must be grounded directly to the part being welded, or you will damage the cylinder and hoses.

OPERATING THE LIFT GATE

- Before operating the lift, read and understand this decal, urgent warning decal, and the Owner's Manual.

- When pulling out platform in Step 3, be sure area behind is clear so you can safely step backward. Lifting arms should be fully lowered. Stand to the side when performing Step 4.



LEYMAN LIFT GATES®
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SAFETY AND PREVENTIVE MAINTENANCE INSPECTION
HIDE-A-WAY™ TUCK-UNDER STYLE GATE MODEL LTS

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

√ = OK A = ADJUSTED N = NOT APPLICABLE X = WRITE UP REPAIR

3 MO	6 MO	12 MO	MOTOR – PUMP AND COMPONENTS
			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, terminal strip, etc.)
			Check reservoir for correct amount of fluid (1" below top of tank, with platform unfolded and up)
			Inspect and check all circuit breakers. Replace if necessary.
			Check the charge line / power line for proper operation and connections at both ends.
			Remove and clean all pump solenoid cartridges.
			Replace hydraulic fluid in reservoir (see Owner's manual for recommended fluids).
			Check and adjust relief valve settings (3000 psi UP, 500 psi POWER DOWN). See page 17.
			Check brushes and armature in motor. Replace if necessary.
			Check amperage draw of motor (see page 3 for typical amp draw values)
3 MO	**6 MO**	**12 MO**	**LUBRICATION**
			Lightly lubricate ramp hinges.
			Lubricate grease fittings at all pivot points (total of 16).
3 MO	**6 MO**	**12 MO**	**LIFT GATE STRUCTURE INSPECTION**
			Raise and lower lift gate. Observe for correct operation. Platform should stop at truck bed height without touching side wall. Adjust travel by rotating cylinder rods, after loosen locking bolt. See page 7.
			Check empty platform for proper slope adjustment. Flat portion of platform should slope 3/8" toward truck bed. Adjust by rotating Tension Arm rods, after loosen locking bolt. See page 8.
			Check hoses and fittings for chaffing, rubbing and leaks.
			Check all pivot pins and bushings for wear. Repair immediately. See Warning below.
			Check operation of transit safety chains. Repair as necessary.
			Check lifting cylinders for leaks. Repack or replace as needed.
			Inspect for broken and / or missing roll pins and snap rings.
			Steam clean gate. Repair any structural welds as needed.
			Repaint where needed and replace and worn or missing safety decals.

SERVICED BY: _____ DATE: _____ Form Dec.-09

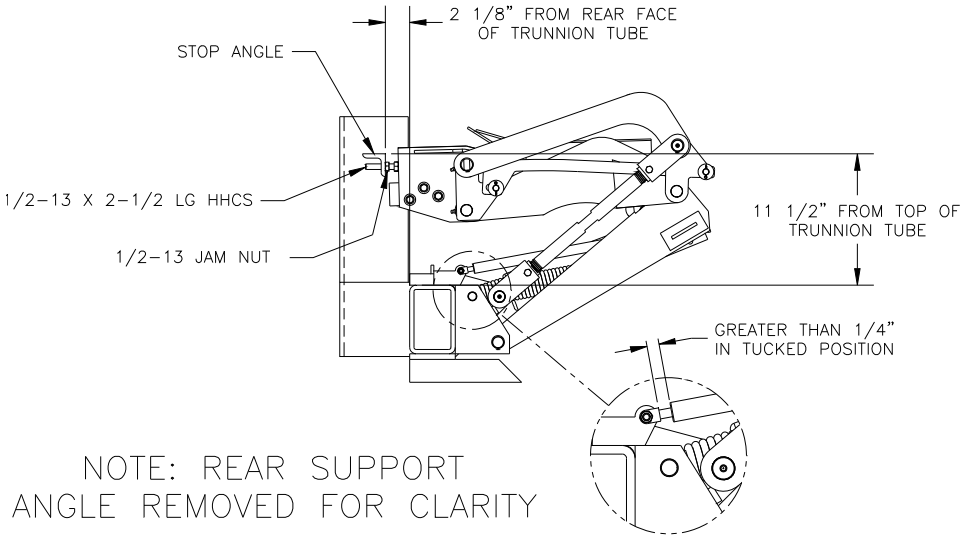
WARNING: Worn pivot pins or missing bushings must be replaced immediately. Failure to follow this warning could result in accident or injury.

Adjustments

ADJUSTING STOP POSITION at BED HEIGHT –
The cylinders act as the stops for the lift gate at truck bed height with the platform unfolded. Platform should stop at bed height with a slight gap between the platform edge and the truck body. To adjust the stop position of the platform, the cylinder rods must be completely retracted. Then loosen the locking bolt in the clevis and rotate the cylinder rods. See the pictures below. Threading the cylinder rods deeper into the clevis raises the platform. Re-tighten locking bolts. Both cylinders must be adjusted evenly.

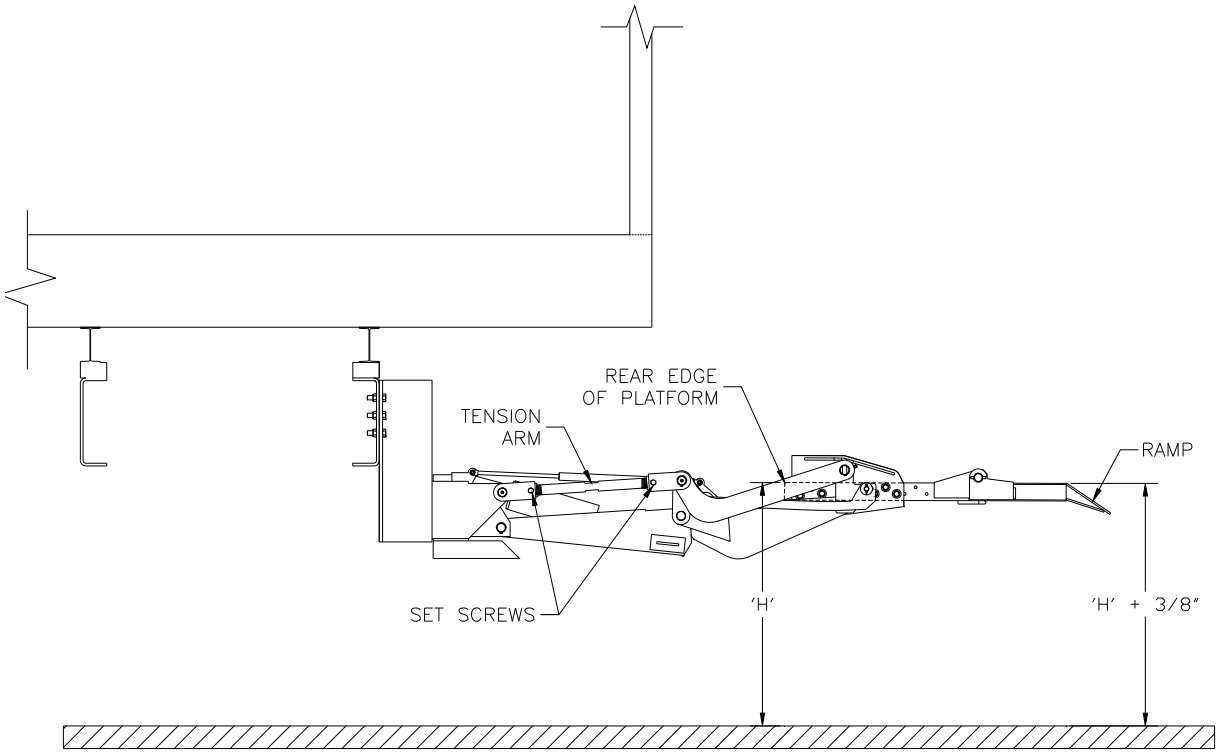
ROD RETRACTED ROD NOT RETRACTED

ADJUSTING FOLD POSITION UP STOPS –
The fold position stops are located back near the Main Frame Tube and Mounting Angles. **In the fold position, it is very important that the stops are adjusted so that gas springs do not completely collapse.** Over-travel on the gas springs will cause damage. See sketch below for proper adjustment.



Adjustments (cont.)

ADJUSTING PLATFORM SLOPE –
Platform slope is adjusted by rotating the threaded portion of the Tension Arm on each side. With the platform elevated and unloaded, the proper slope should be approximately 3/8” along the flat portion of the platform. See diagram. Loosen locking screws at the ends of each Tension Arm rod. Rotate rod to adjust, then re-tighten locking screws.



Recommended Hydraulic Oils*

Level 1 *Normal Conditions*

Manufacturer	Type	Temperature Range
Chevron	RYKON ISO-15	-15°F to 150°F
Mobil	DTE 11	-15°F to 150°F
Shell	TELLUS-T15	-15°F to 150°F

Level 2 *Cold Conditions*

Manufacturer	Type	Temperature Range
Chevron	AVIATION-A	-50°F to 80°F
Mobil	AERO-HFA	-50°F to 80°F
Shell	AERO FLUID #4	-50°F to 80°F
Mil	H-5606	-50°F to 80°F

*ISO 15 petroleum based fluid required; see chart for manufacturer cross reference. If necessary, use higher viscosity oil when temperatures are near 100° F.
* **DO NOT USE brake fluid or ATF.**

Recommended Grease

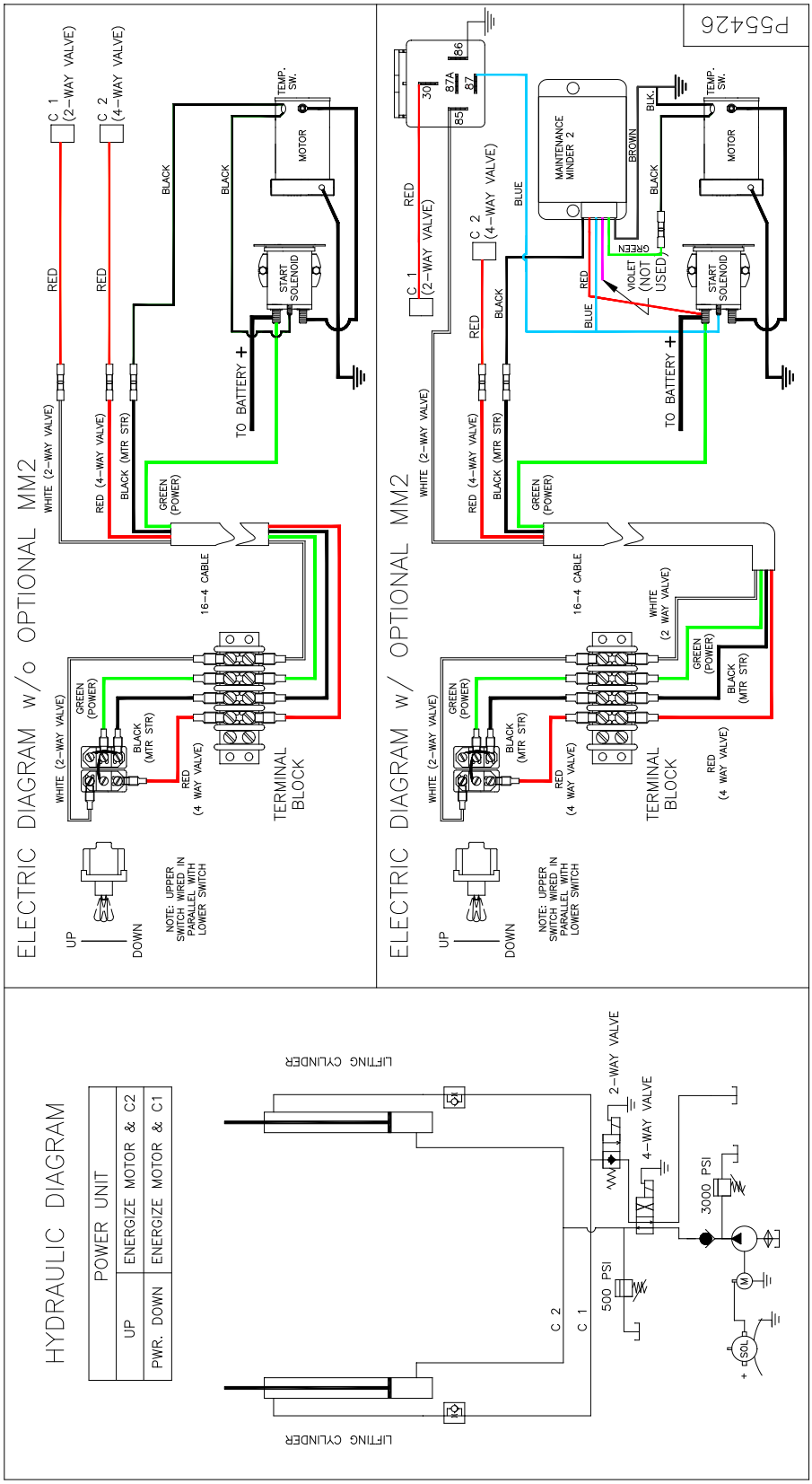
Manufacturer	Type
Militec	MILITEC #1 Grease

Recommended Electrical Terminal Sealer

Manufacturer	Type
Eureka	FLUID FILM SPRAY (all connections except start solenoid)
Loctite	COLOR GUARD (brush on start solenoid connections)

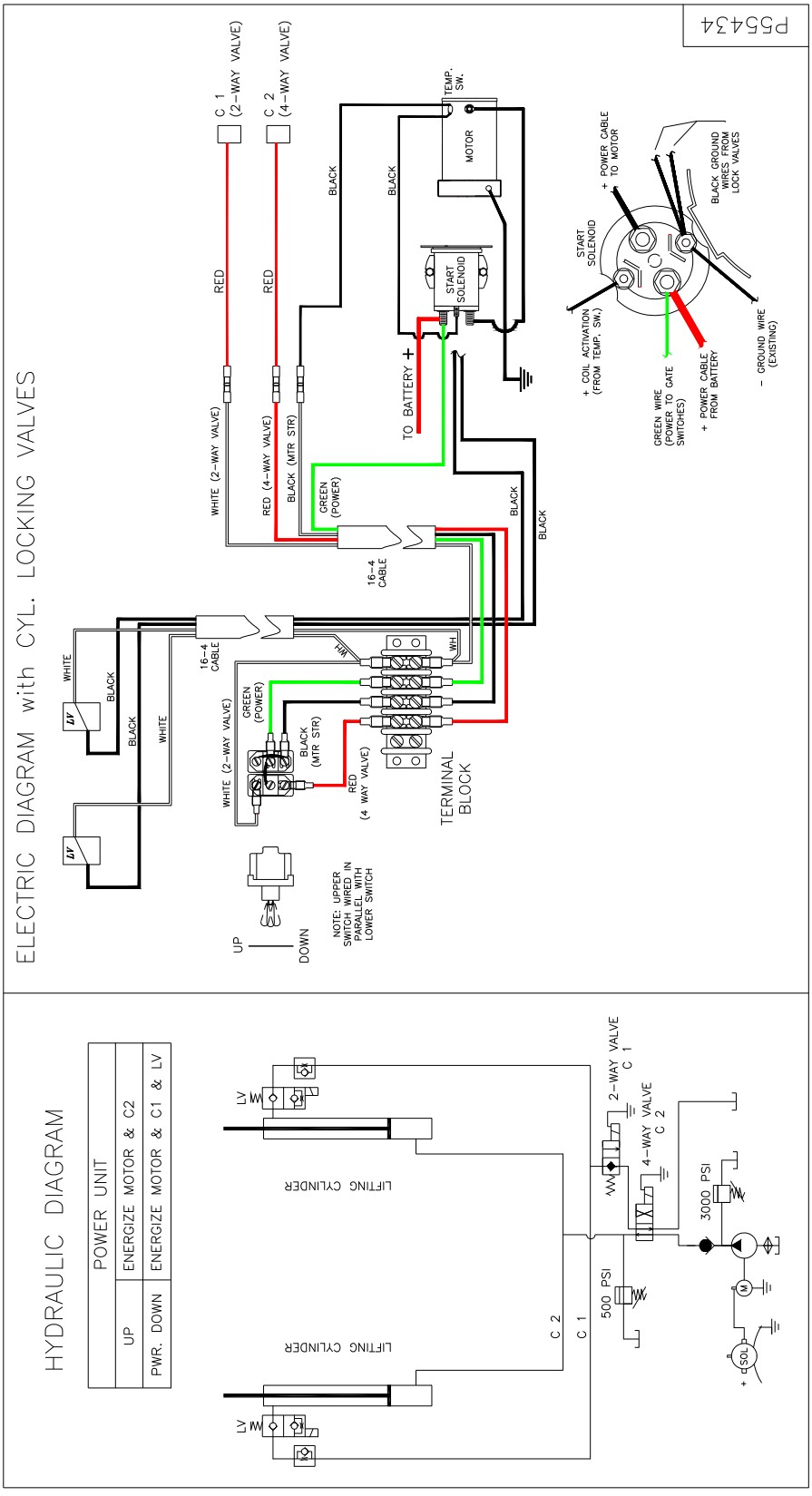
LTS WIRING / HYDRAULIC DIAGRAM

(without Cylinder Lock Valves)



LTS WIRING / HYDRAULIC DIAGRAM

(with Cylinder Lock Valves, standard after 11/2010)

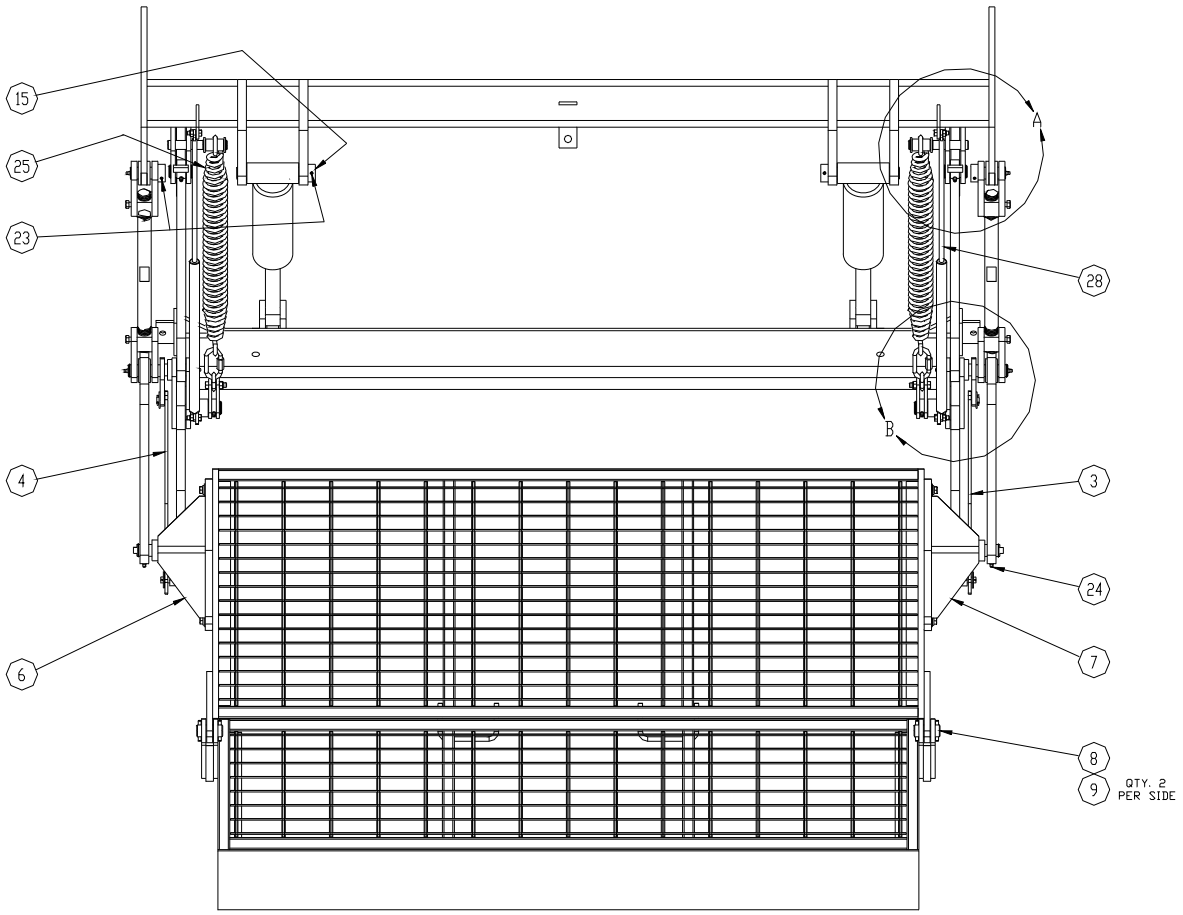


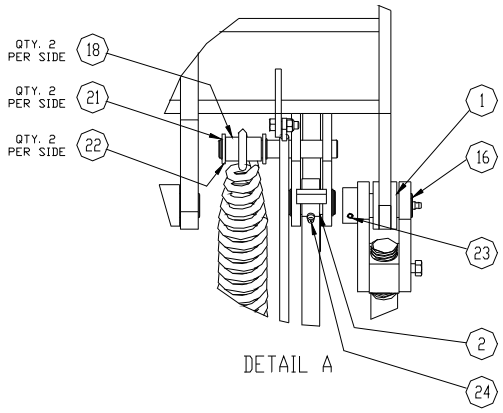
TROUBLE SHOOTING CHART

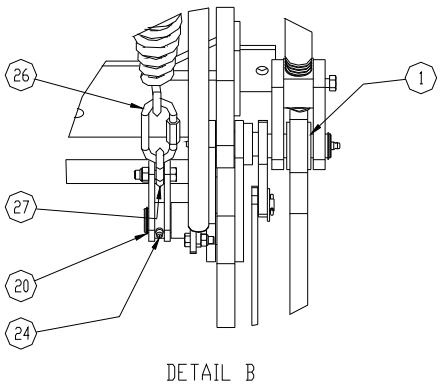
LTS MODEL

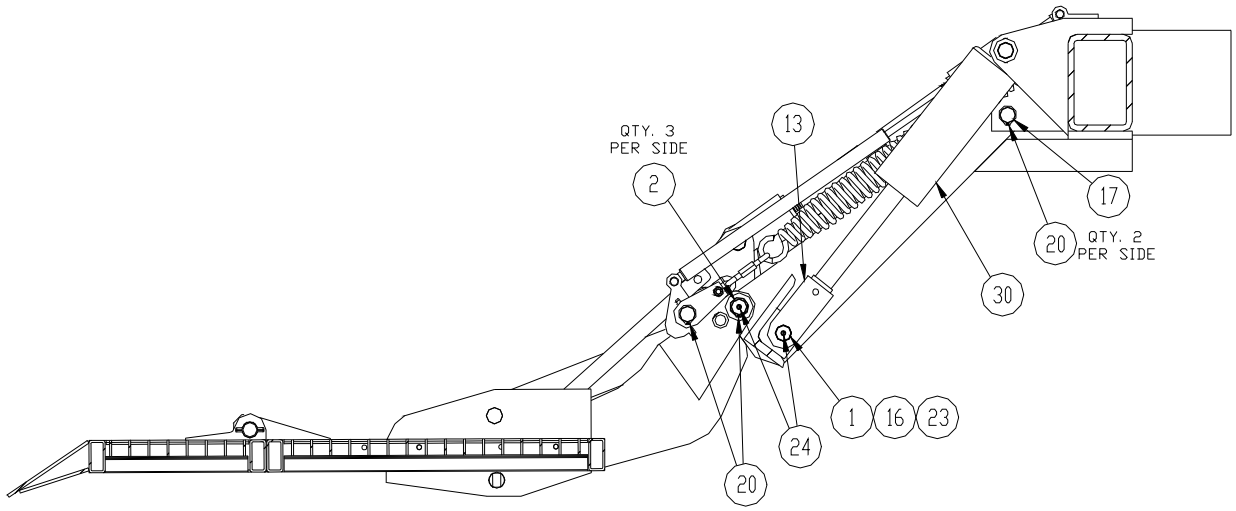
PROBLEM	*PROBABLE CAUSE*	*REMEDY*
The motor is running, but the platform will not go up, or reach floor of vehicle, or gate will not lift rated load.	1. Insufficient oil in power unit tank. 2. C2 (4-way) valve stuck or not activating. 3. Power unit relief valve is set too low.	1. Add oil to proper level. 2. Clean stem and/or check wiring. 3. Check UP relief valve setting (3000 psi) using gauge.
The platform will not go up or reach floor level and the motor does not run.	1. Battery is low. 2. Power line is loose. 3. Poor switch connections. 4. Cab switch is turned off. 5. Defective starter solenoid. 6. Tripped circuit breaker.	1. Recharge the batteries. 2. Check the connection, if loose, tighten. Check for corrosion and clean, if necessary. 3. See #2. 4. Turn the switch on. 5. Replace part. 6. Reset the circuit breaker.
Platform will not lower.	1. Battery is low. 2. Bad ground or electrical connection. 3. C1 (2-way) valve is bad. 4. Cylinder Lock Valves not activating.	1. Recharge the batteries. 2. Check for corrosion and tighten. 3. Check coil / connections. 4. Set valves in manual over-ride position, temporarily, to test. Fix cause.
Platform creeps downward.	1. Defective piston seal in at least one cylinder. 2. C1 (2-way) valve or Cylinder Lock valves are not seating or are partially open, or check valve is not seating.	1. Remove UP hose at front of Frame Tube. Cap off lift connection. One cylinder is defective if gate continues to creep down. 2. Clean and inspect.
Platform goes down slowly.	1. C1 (2-way) valve not fully open or is clogged. 2. Lines are restricted or flow control valves are clogged.	1. Clean or replace the C1 valve. 2. Check for bent or pinched lines. Clean or replace the flow control valves.
Platform goes up slowly	1. Low battery voltage or poor power line connection. 2. Manual over-rides on Cylinder Lock valves are activated.	1. Recharge battery. Clean and check all power line connections. 2. Manual over-rides should be pushed in and turned clockwise for normal operation.

REPLACEMENT PARTS








QTY. 3
PER SIDE
2
13
17
20
QTY. 2
PER SIDE
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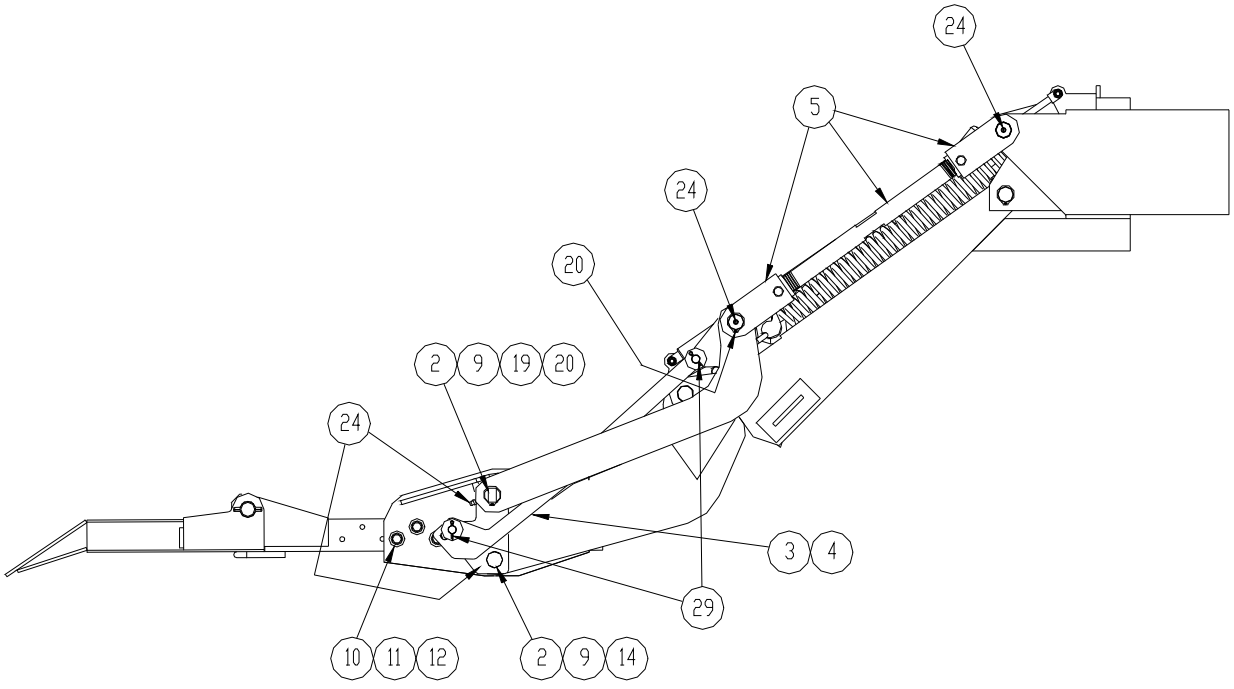
1
16
23
24
20


24
5
24
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2
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24
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12
2
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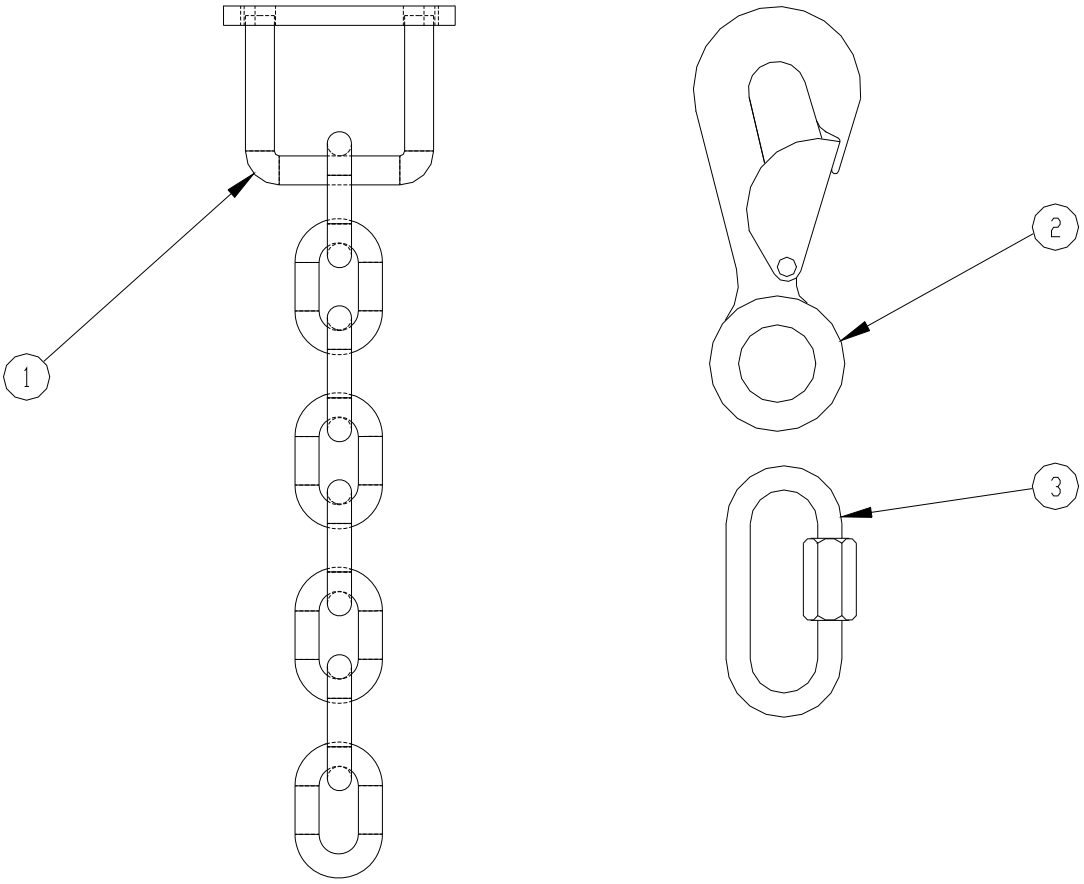
14

Item #	Part #	Qty	Description
1	P43617	6	Pre-Lube Bearing 1” ID x 1” LG.
2	P43616	12	Pre-Lube Bearing 1” ID x 3/4” LG.
3	BA-803-157	1	Fold Link Assy. RH
4	BA-803-158	1	Fold Link Assy. LH
5	BA-803-090	2	Front Tension Arm Assy.
6	BA-803-089	1	Hinge Assy. LH
7	BA-803-092	1	Hinge Assy. RH
8	AP-800-236	2	Ramp Pin
9	P47531	8	Roll Pin 1/4" x 1-3/4” LG.
10	P11048	12	HHCS 3/8-16 x 1-1/4
11	P26017	12	Split Lock Washer 3/8
12	P26501	12	Flat Washer 3/8
13	BA-803-194	2	Clevis RH Threaded
14	BP-803-093	2	Platform Pin Lower
15	AP-803-108	2	Cylinder Pin
16	AP-803-107	4	Clevis Pin
17	AP-803-106	2	Rear Compression Arm Pin
18	P43618	4	Bronze Bushing
19	BP-803-087	2	Platform Pin Upper
20	P24020	12	Retaining Ring (1” dia. pin)
21	P24018	4	Retaining Ring (3/4” dia. pin)
22	P26019	4	Washer 3/4 SAE
23	P47514	6	Roll Pin 1/4 x 1-1/2
24	P32016	16	Grease Fitting
25	P25229	2	Extension Spring
26	P38545	4	Rapid Link
27	P38546	1 Link ea.	5/16 Transport Chain
28	P34177	2	Gas Spring
29	P29009	4	Cotter Pin
30	P34169	2	Hydraulic Cylinder
	P34147	2	Flow Control Valve 1.5 GPM
	AT-501-354-023	4	Hydraulic Line Assy. 23” LG. (on lift gear)
	AT-501-354-081	2	Hydraulic Line Assy. 81” LG. (lift gear to P/U)

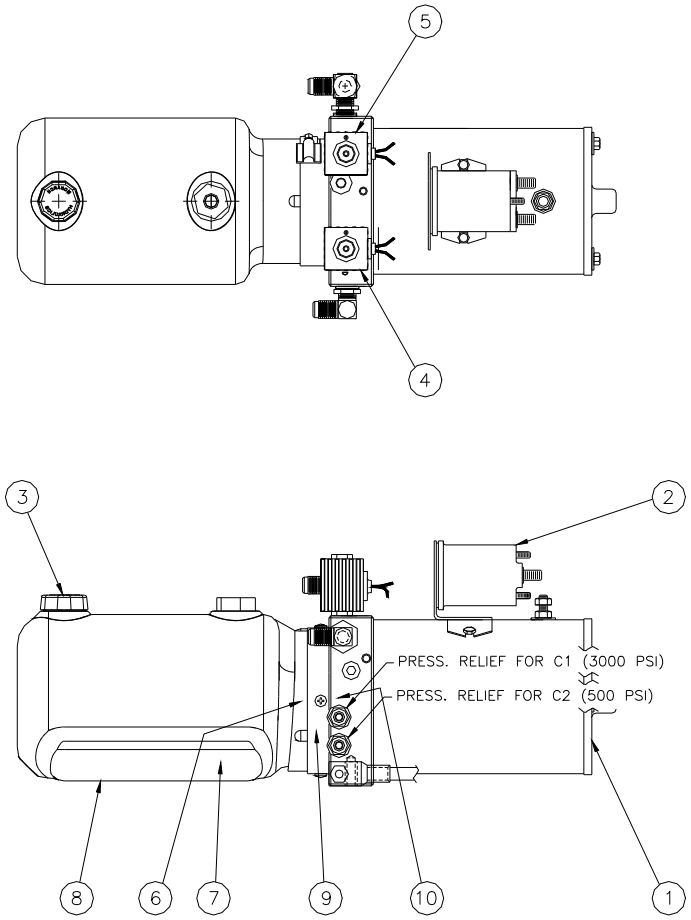
OVER-THE-ROAD LOCKS



Item #	Part #	Qty	Description
1	BA-803-131	2	Chain Mount Assembly
2	P38540	2	Safety Snap Hook
3	P38545	2	Rapid Connecting Link

LTS POWER UNIT

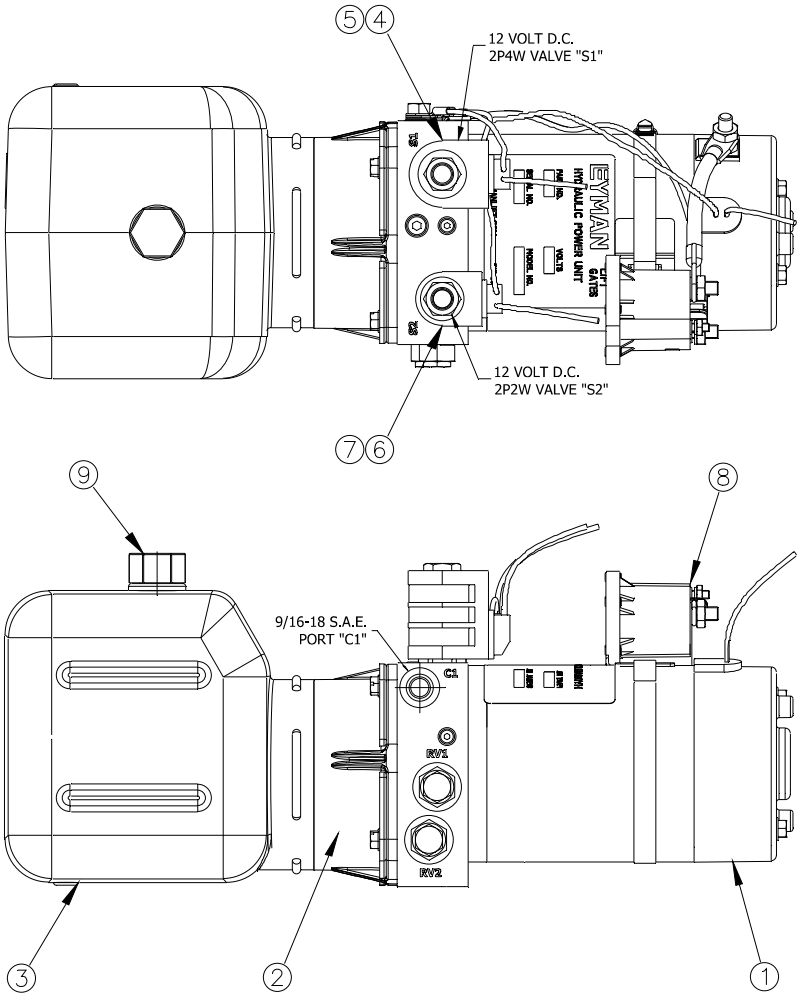
Used through 8-12-15



	Part #	Description
	P34073	Power unit (complete)
1	P33992A	Motor
2	P34016	Start Solenoid
3	LH150015	Breather Cap
4	P34025	C1 Solenoid Valve, 2-way, 2-position
5	P34080	C2 Solenoid Valve, 4-way, 2-position
6	P34056	Pump Kit (includes tank O-ring and shaft seal)
7	P34089	Suction Screen
8	P34100	Poly Tank
9	P34099	Tank O-ring
10	P34156	Shaft Seal

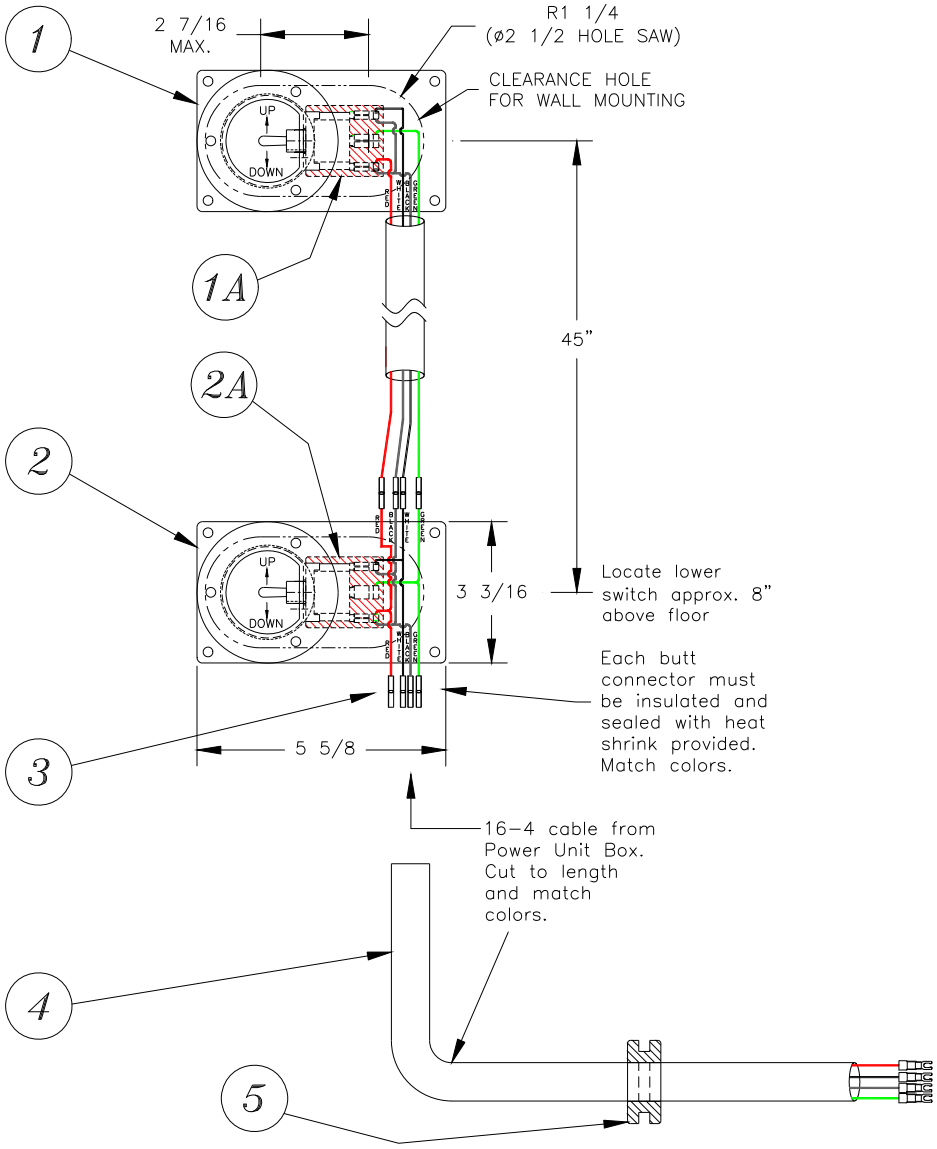
LTS POWER UNIT

AFTER 8-13-15



ITEM	PART NO.	DESCRIPTION
	P34219	Power Unit (complete)
1	P34221	Motor
2	P34222	Pump Kit
3	P34229	Reservoir Tank
4	P34230	C2 Valve Stem 2P4W
5	P34231	C2 Coil (Size 10)
6	P34232	C1 Valve Stem 22P2W
7	P34233	C1 Coil (Size 8)
8	P34016	Starter Solenoid
9	P34234	Breather Fill Cap

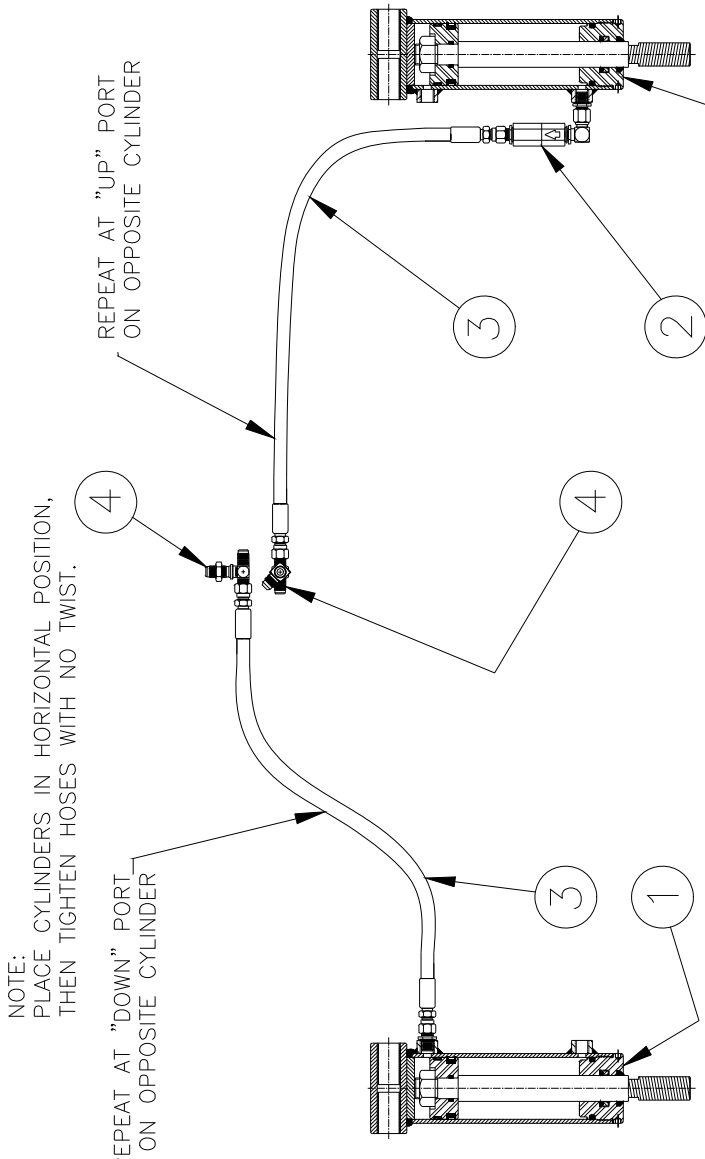
RECESSED SIDE MOUNT SWITCHES



Item #	Part #	Description
1	BA-551-566	Upper Up/Down Switch Assy (potted sw, hsg, plate)
1A	P46764	Upper Potted Switch only
2	BA-551-567	Lower Up/Down Switch Assy (potted sw, hsg, plate)
2A	P46765	Lower Potted Switch only
3	P46727	Heat Shrink 3/16 ID (1 1/2" per connection)
4	BA-551-561	16-4 Cable Assy with fork terminals at one end
5	P25181	Grommet

HYDRAULIC CYLINDER ASSEMBLY

Without Cylinder Lock Valves

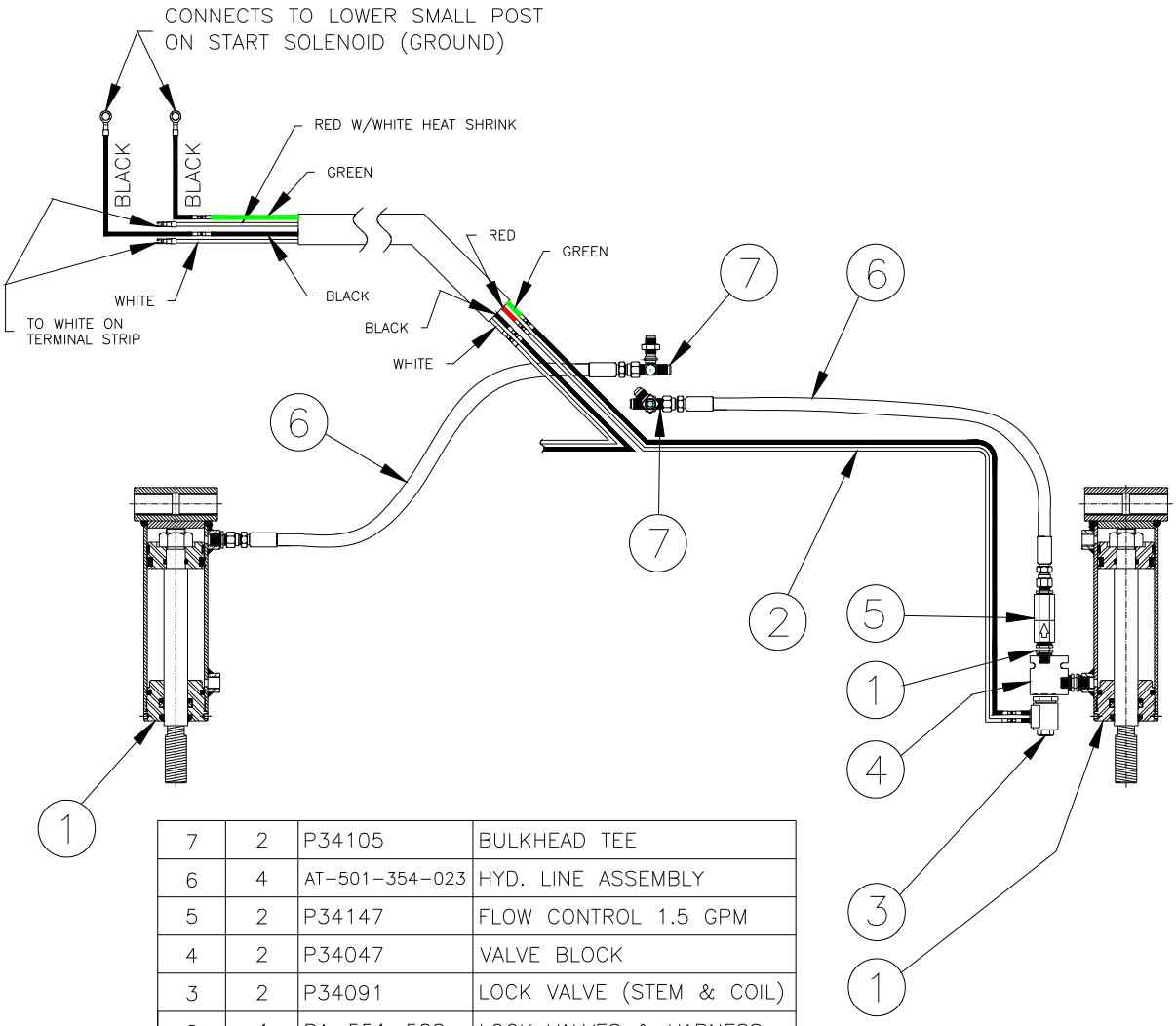


INDEX NO.	REQD.	PART NO.	PART NAME
4	2	P34105	BULKHEAD TEE
3	4	AT-501-354-023	HYD. LINE ASSY.
2	2	P34147	FLOW CONTROL 1.5 GPM
1	2	P34169	CYL. 3" BORE X 5.88" STK.

HYDRAULIC CYLINDER ASSEMBLY

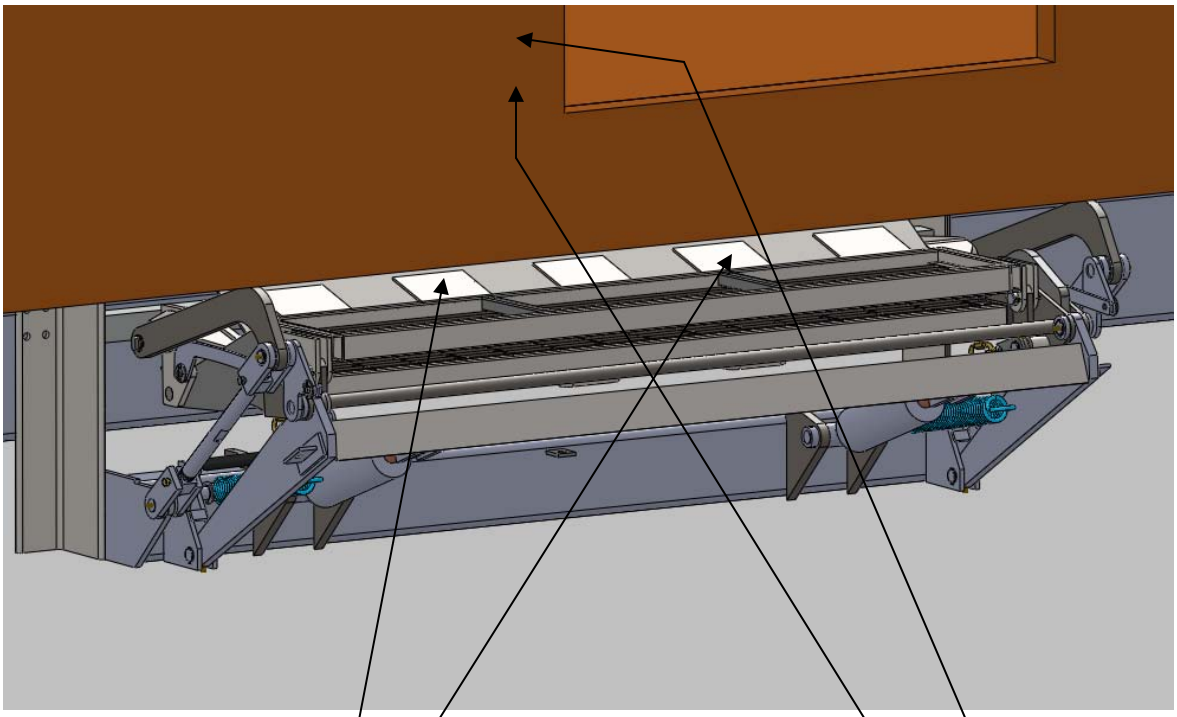
With Cylinder Lock Valves

POSITION LTS GATE WITH CYLINDERS IN THE HORIZONTAL POSITION. THEN ASSEMBLY HOSES AND TIGHTEN, WITH NO TWIST IN HOSES.
LOCK VALVE ARRANGEMENT SHOWN ON RIGHT SIDE ONLY FOR CLARITY.
"POWER DOWN" HOSE SHOWN ON LEFT SIDE ONLY.



INDEX NO.	REQD.	PART NO.	PART NAME
7	2	P34105	BULKHEAD TEE
6	4	AT-501-354-023	HYD. LINE ASSEMBLY
5	2	P34147	FLOW CONTROL 1.5 GPM
4	2	P34047	VALVE BLOCK
3	2	P34091	LOCK VALVE (STEM & COIL)
2	1	BA-551-588	LOCK VALVES & HARNESS
1	2	P34169	CYL. 3" BORE X 5.88" STK.

DECAL PLACEMENT



STAND CLEAR
(Bottom of Ramp)
P55429 (2)

UP / DOWN
Toggle Switch
P55221 (2)

Operation Instructions
P55427

Max Capacity Decal
P55297

Urgent Warning
P55199

Read and Understand
P55203

Shut Off Power
P55201