



Owner's Manual FDCxxNP & FDCxxNPPD Fold-A-Vador® Rail Style



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LML00398-10-02-13

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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 instruction, 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 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:	<u>12 VOLT</u>
PLATFORM:	_____
SERIAL:	_____
OPTIONS	_____ _____ _____ _____
MAXIMUM HEIGHT:	56"
HYDRAULIC PRESSURE:	LOADED 2,500 PSI AT THE PUMP
AMP DRAW:	LOADED 235 UNLOADED 100
POWER UP	
GRAVITY DOWN OR POWER DOWN	

**WHEN PLACING PARTS ORDER, YOU WILL NEED
THE SERIAL# AND MODEL# OF THE GATE.**

WORDS OF CAUTION

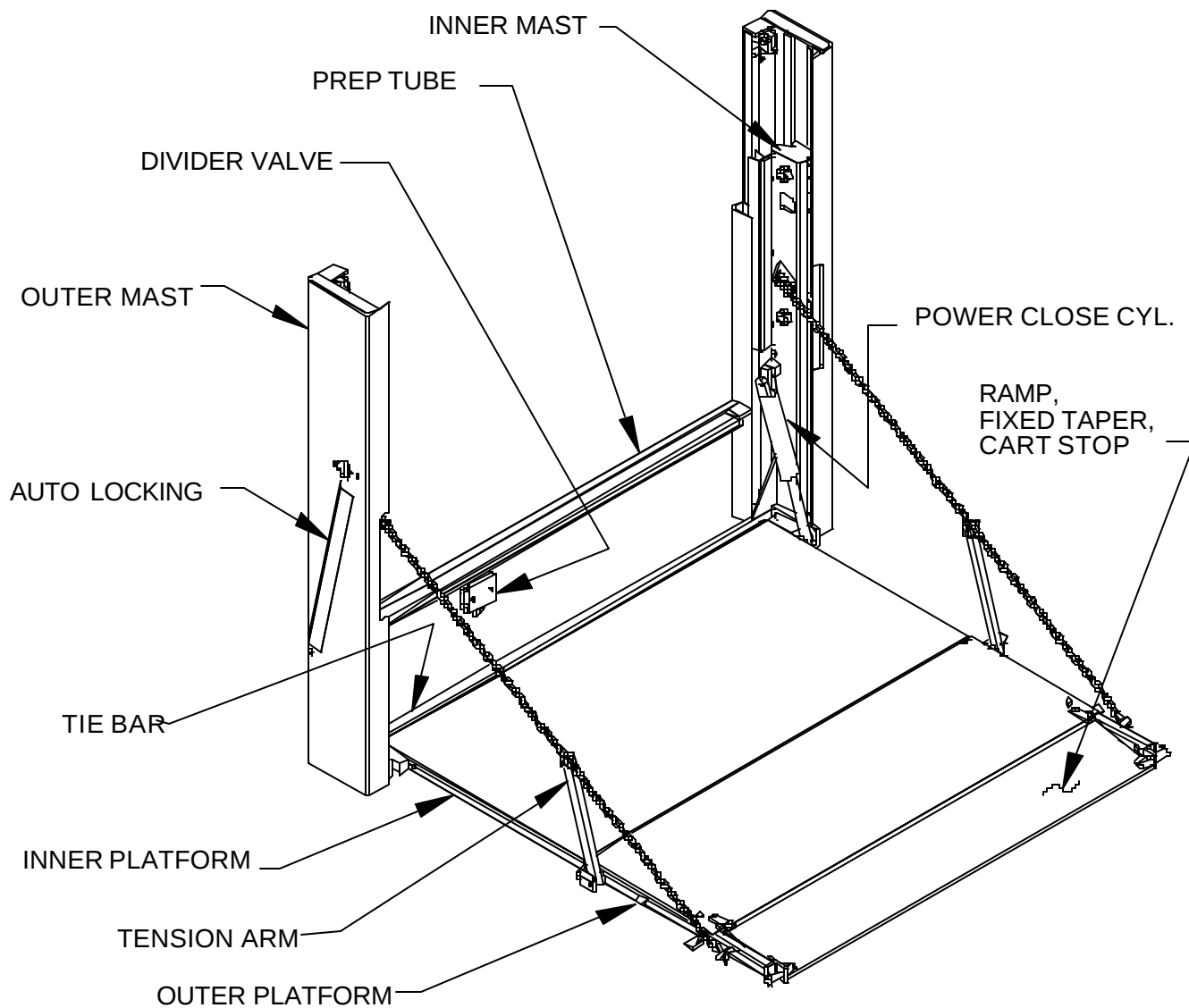
1. BEFORE ANY MAINTENANCE IS PERFORMED ON THIS UNIT, READ AND UNDERSTAND THIS MANUAL COMPLETELY.
2. DO NOT STAND ON OR BEHIND THE PLATFORM WHEN OPERATING GATE IN THE FOLDED POSITION.
3. DO NOT STAND IN FRONT OF THE PLATFORM WHEN LOWERING FROM VERTICAL POSITION OR OPERATING IN ANY MANNER.
4. MAKE SURE THE GROUND IS CLEAR UNDER THE PLATFORM WHEN LOWERING.
5. CHECK THE AREA AROUND THE UNIT FOR ANY PERSONS BEFORE OPERATING THE LIFT GATE.
6. THIS LIFT GATE SHOULD OPERATE SMOOTHLY AND THE ONLY NOISE THAT SHOULD BE HEARD IS THE POWER UNIT. ANY OTHER AUDIBLE SOUNDS OTHER THAN THE NORMAL POWER UNIT OPERATION SOUND SHOULD BE THOROUGHLY CHECKED AND THE CAUSE OF THE NOISE SHOULD BE LOCATED AND CORRECTED.
7. NEVER EXCEED THE RATED LOAD CAPACITY OF THIS GATE. DO NOT OVERLOAD - MAXIMUM RATED CAPACITY IS BASED ON AN EVENLY DISTRIBUTED LOAD OVER THE PLATFORM FLAT SURFACE. STAY WITHIN THE LOAD CENTER RESTRICTIONS.
8. ALWAYS LOAD AS CLOSE TO THE CENTER OF THE PLATFORM AND AS CLOSE TO THE CENTER OF THE TRUCK SILL AS POSSIBLE.
9. DO NOT ALLOW PERSONS TO OPERATE THE UNIT UNLESS THEY HAVE BEEN PROPERLY TRAINED TO DO SO.
10. USE ONLY FACTORY AUTHORIZED PARTS FOR REPLACEMENT.

THIS MANUAL REFLECTS MOST CHANGES AND UPDATES OF MATERIALS THAT ARE COMMON TO THIS TYPE OF LIFT GATE. SOME MAY DIFFER DUE TO INDIVIDUAL CUSTOMER REQUIREMENTS. THIS MANUAL HAS BEEN ESTABLISHED TO REFLECT THE COMMON ITEMS.

WARNING: THIS GATE HAS POLYMER GREASELESS BEARINGS IN THE ROLLERS, PLATFORM PIVOTS, AND CYLINDER. WHEN WELDING, BE SURE TO GROUND DIRECTLY TO THE COMPONENT BEING WELDED.

UNPLUG THE MAINTENANCE MINDER 2® CONTROLLER TO AVOID ANY DAMAGE TO THE UNIT.

GENERAL TERMINOLOGY



OPERATION OF THE LIFT GATE

Before operating the lift, read and understand the decal, urgent warning decals and the owner's manual.

Do not stand behind the lift gate while unfolding or using the platform.

To unfold the platform from the over-the-road position:

1. Momentarily fold the gate. Push the fold and up switches at the same time, as to ensure the gate is fully folded.
2. To relieve tension on the auto lock, push the up switch (gate will go up), pull the handle to release the auto lock.
3. Lower the platform by pushing the down switch until platform ears are at slots in outer mast.
4. Push the unfold switch (gate will unfold).

To dock load:

1. To relieve the tension on the auto lock, push the up switch (gate will go up), pull the handle to release the auto lock.
2. Lower the gate until the ears on the platform rest on the stops of the outer mast.
3. WARNING! Never use the platform as a "bridge" to a dock or other vehicle. Platform can fold unexpectedly and cause injury.

To lower platform, use the down switch only.

To raise platform, use the up switch only.

Safe loading of platform:

1. The cart stop or retention ramp must be in place whenever lifting or lowering a load. Also, see the urgent warning decal.

To fold platform:

1. Raise the platform off the ground about two feet.
2. Push the fold and up switch together using both hands. Platform will fold. Platform ears must pass through slots and go inside masts. Continue to raise the platform to the full up position, auto lock will latch.

MAINTAINING THE LIFT GATE

RECOMMENDED HYDRAULIC OILS

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
	Chevron	RYKON ISO-15	-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
	Chevron	AVIATION-A	-50° F to + 80° F
HYDRAULIC TANK CAPACITY			
2 ½ gallons			
LUBRICATION			
Grease	Militec #1		
Hinge Barrels (center platform)	W.W. Grainger – Part #6Y834 – Needle Nose Adapter		
Dry Lubricant	ZEP45 (do not use corrosive lubricants like WD40, etc.)		
	Dri Slide Multi-Purpose Lube (produced by Lubritek)		

LIFT GATE SPECIFICATION

BATTERIES	
Two (2) 12 V D.C. Group 31 Heavy Duty lead acid Dual Purpose, or AGM	
ELECTRICAL COMPONENTS CONNECTIONS	
Use battery terminal protection Bowman Part#21948	
AMPERAGE DRAW OF MOTOR	
When raising platform (empty) approximately 100 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	
MINIMUM VEHICLE FLOOR HEIGHT LADEN	
With main platform 36" – vehicle floor height 40" With main platform 42" – vehicle floor height 46"	
MAXIMUM VEHICLE FLOOR HEIGHT UNLADEN	
With main platform 36" – vehicle floor height 56" With main platform 42" – vehicle floor height 56"	
APPROXIMATE TIMES EMPTY AT 80° F WITH 2 GROUP 31 BATTERIES	
Time up: 24 – 28 seconds Time down(gravity down): 12 –14 seconds Time down(power down): 16 – 18 seconds	

PREVENTATIVE MAINTENANCE SCHEDULE

MAINTENANCE by CYCLES

FDC MODELS

DATE:

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

V = OK

X = REPAIR

A = ADJUSTED

N = NOT APPLICABLE

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
	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 poppet solenoids for proper operation		Check pressure setting of relief valve
	Check reservoir for proper oil level " Gravity Down " (Gate open and down on the ground, 1" from top of tank)		Clean all wiring connections in pump and battery box and spray with Bowman #21948 connection protection or equivalent
	Check reservoir for proper oil level " Power Down " (Gate open and up at floor level, 1" from top of tank)		Check charge line/power line for corroded, loose or broken connections at both ends
	Inspect circuit breakers and fuses for proper operation		Dual power units, run secondary unit for proper operation
	Check all fittings/hoses in power unit for tightness and leaks		

3000	STRUCTURAL COMPONENTS	3000	STRUCTURAL COMPONENTS
	Check switches for proper operation, check connections for tightness and corrosion		Remove hydraulic guard for fold cylinder line and check for loose/missing clamps, frayed lines and proper alignment
	Check all fittings/hoses on cylinders for tightness and leaks		Check lift gate for proper operation up and down
	Check fold cylinder for leaks/worn packing		Check lift gate for proper operation folding and unfolding
	Check for broken/missing roll pins at rollers, fold cylinder, primary/secondary platform pin		Check for impact damage on inner/outer masts
	Check snap rings on lift and fold cylinder pins		Check for broken/missing bolts at platform pins
	Check for broken/missing torsion bar assembly at platform		Check and re-weld any cracked/broken welds
	Check aluminum platform for loose bolts on side brackets and threaded plugs at hinge pins		Replace all safety and warning labels as needed

3000	LUBRICATION		PERIODICAL CHECK LIST
	Grease primary and secondary platform pin at grease holes with #1 lithium grease	12000	Check all pivot point bushings for wear or damage
	Grease power unit door hinge pins with #1 lithium grease	15000	Flush hydraulic system and change hydraulic oil
	Grease rollers with #1 lithium grease (if shafts are equipped with grease fittings) DO NOT use grease in roller tracks.		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

Check owner's manual for proper hydraulic oil, motor amp draw and pressure setting of power unit

Rev. 5-13-09

TROUBLE-SHOOTING – GENERAL MAINTENANCE

TROUBLE SHOOTING CHART

The following troubleshooting chart covers the standard power unit (12 volt power unit) used with the FDC.

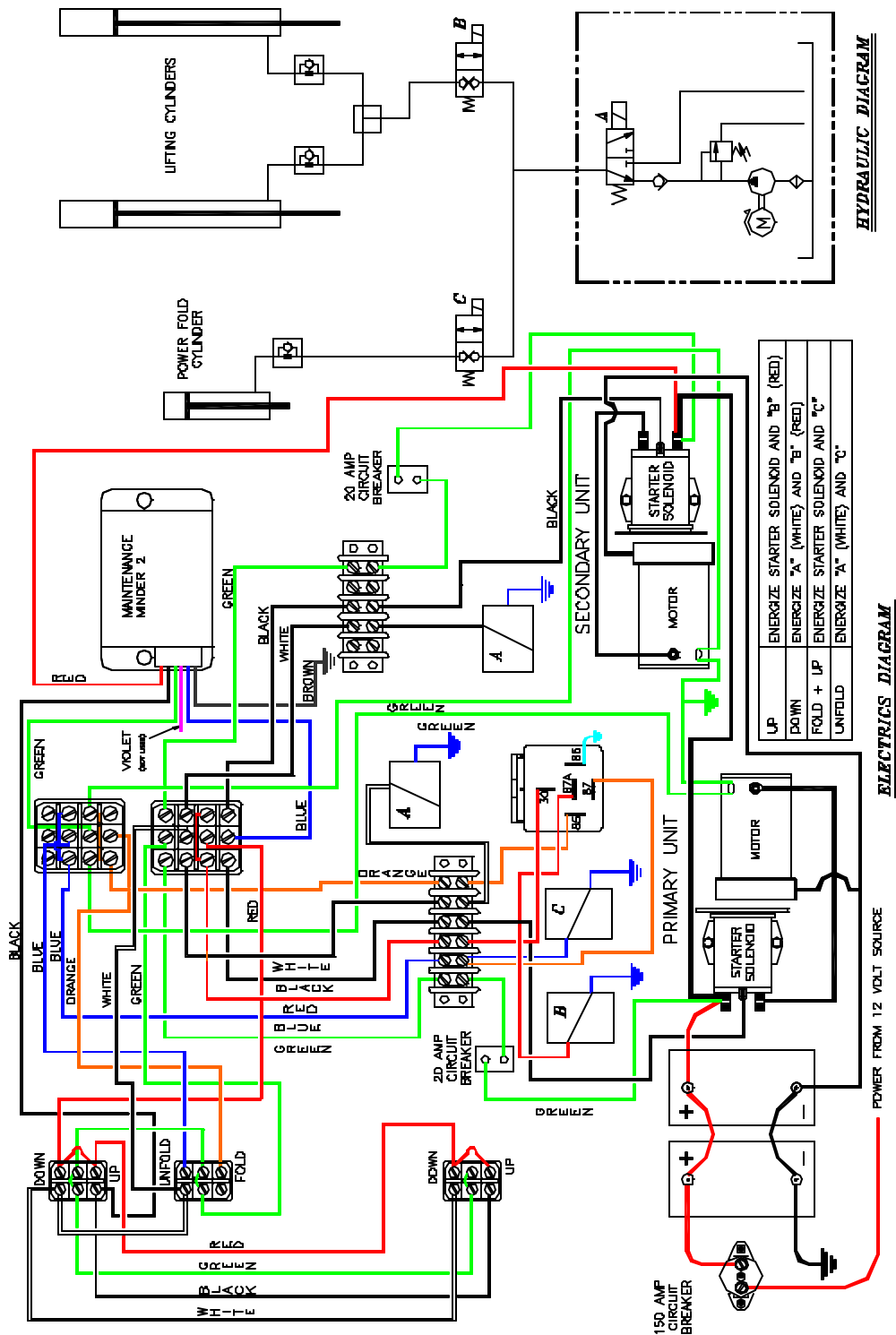
PROBLEM	PROBABLE CAUSE	REMEDY
Platform will not go up or reach the floor of the vehicle.	1. Battery is low. 2. Slave line is disconnected or connections are loose (battery and motor). 3. Insufficient oil in power unit tank.. 4. Poor switch connections.	1. Recharge the battery. 2. Connect the slave line properly. 3. Fill the power unit tank. 4. Clean and check switch connections.
Platform will not lower.	1. Battery is low. 2. Poor switch connections. 3. Check lowering valve.	1. Recharge the battery. 2. Clean and check switch connections. 3. Clean/replace as necessary.
Platform does not go up smoothly.	1. Insufficient oil in power unit tank. 2. Air lock in hydraulic system. 3. Dirt or foreign material in guides. 4. Mechanical wear.	1. Fill tank. 2. Run platform to stop. Open up bleeders in each ram while power unit is running. Close bleeders and refill the tank. 3. Clean guides with steam and check for excessive wear, obstructions, and burrs. 4. Replace worn parts.
Platform creeps down.	1. Hydraulic leak. 2. Ram seals failing. 3. Dirt under the ball of check valve, the ball is pitted or worn or the spring is weak. 4. Check lowering valve.	1. Check all hoses and fittings. 2. Replace ram seals. 3. Clean/replace as necessary.
Platform goes down slowly.	1. Excessive wear of mechanical components. 2. Restriction in hydraulic system. 3. Incorrect hydraulic oil in system for cold weather.	1. Insure free movement of all mechanical parts. 2. Check all hydraulic system components. 3. Use Mobile Aero-HFA in cold weather.
Platform goes up crooked.	1. Equalizer valve is out of adjustment. 2. Air trapped in one of the rams. 3. Tie bar is bent.	1. Adjust equalizer valve. 2. Bleed air out of the ram. 3. Straighten the tie bar.

TROUBLE SHOOTING CHART

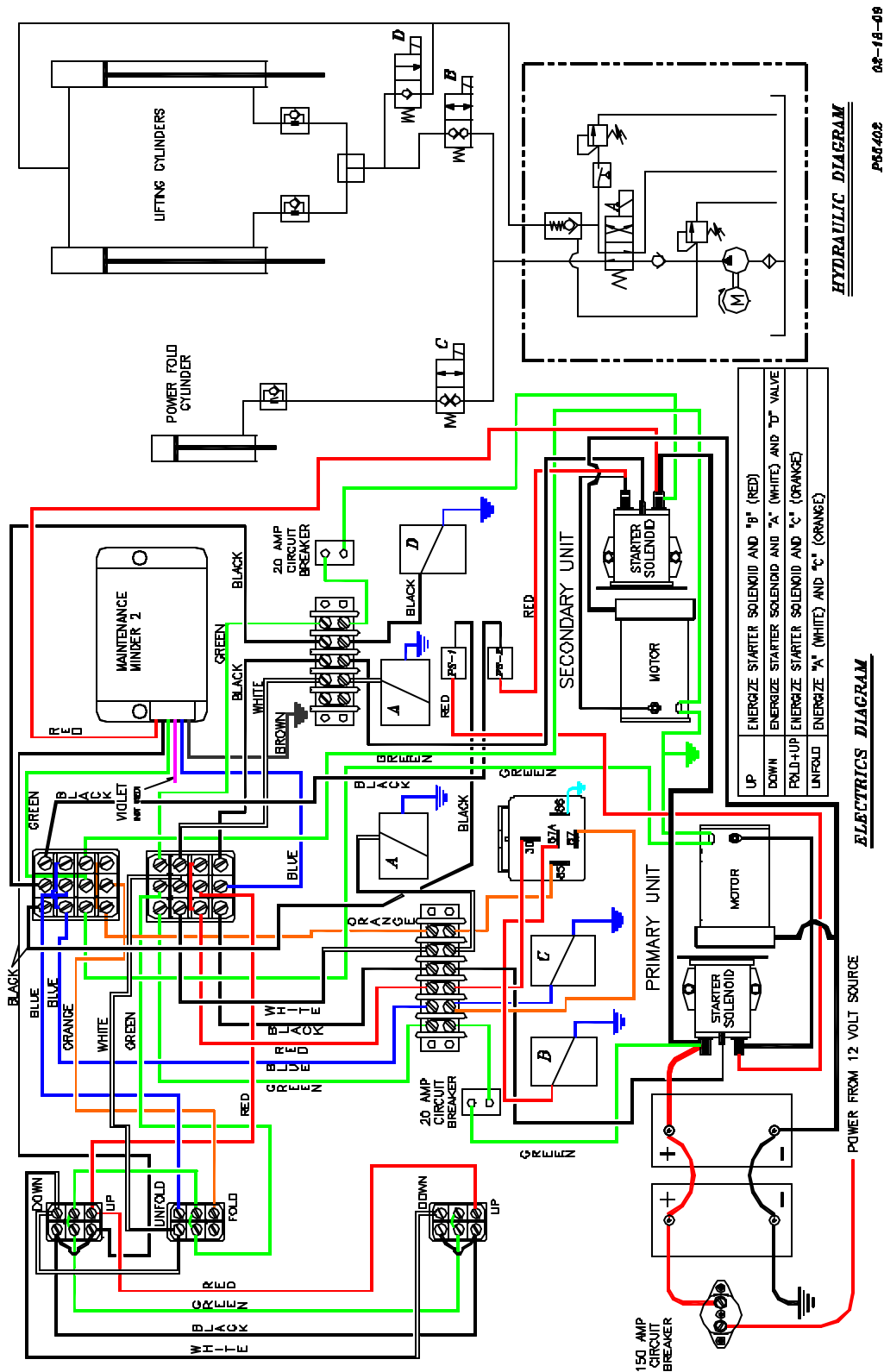
The following troubleshooting chart covers the standard power unit (12 volt power unit) used with the FDC.

PROBLEM	PROBABLE CAUSE	REMEDY
Platform comes down crooked.	1. Dirt in flow control, not adjustable. 2. Dirt in hydraulic line at the bottom of the ram. 3. Mechanical bind on one (1) side of gate. 4. Tie bar is bent.	1. Clean/replace flow control as necessary. 2. Clean hydraulic line and bleed ram. 3. Clean and inspect inner mast and rollers. Check wear of parts and replace if necessary. 4. Straighten tie bar.
Gate will not lift the rated load.	1. Hydraulic pump is worn. 2. Battery is too low.	1. Change the pump. 2. Recharge the battery to full charge.
Pump will not operate.	1. Battery too low. 2. Electrical hookup to motor not making contact. 3. Control switches are not making good contact. 4. Maintenance Minder™ solenoid has shut down the system due to low voltage condition. 5. Maintenance Minder 2 controller has shut down the system due to low voltage. Must maintain 8 volts minimum under load.	1. Recharge the battery and check to be sure that the slave line has a good connection. 2. Clean connections and re-tighten. 3. Clean and check the connections. 4. Recharge battery. 9.5 volts must be maintained under load. 5. Use the "Last Lift Menu" to read maximum and minimum voltages. Recharge battery.

ELECTRICAL DIAGRAM DUAL GRAVITY DOWN WITH TWO PLASTIC OIL TANKS

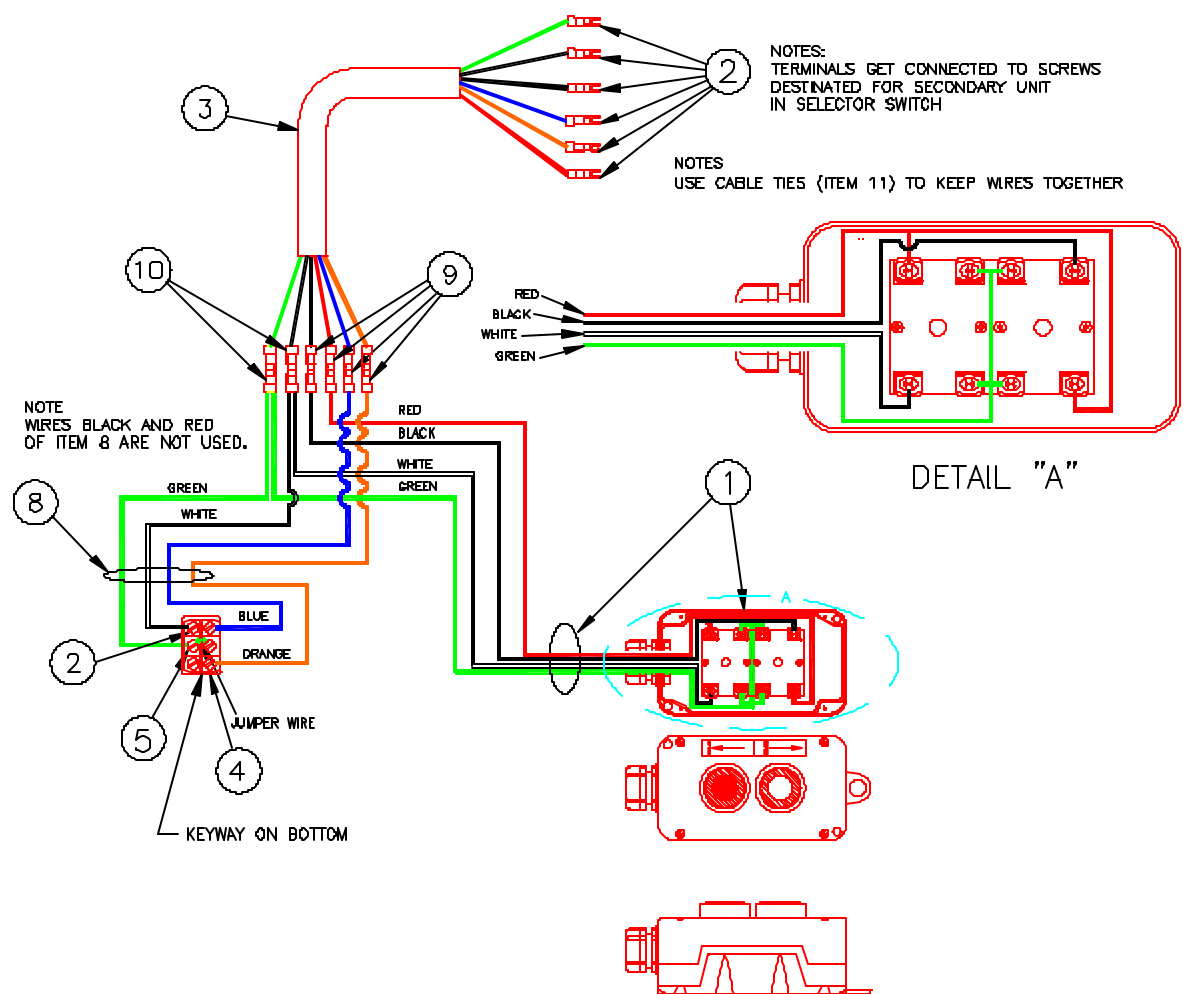


ELECTRICAL DIAGRAM DUAL POWER DOWN WITH TWO PLASTIC OIL TANKS



WALK AROUND ELECTRICS GRAVITY DOWN

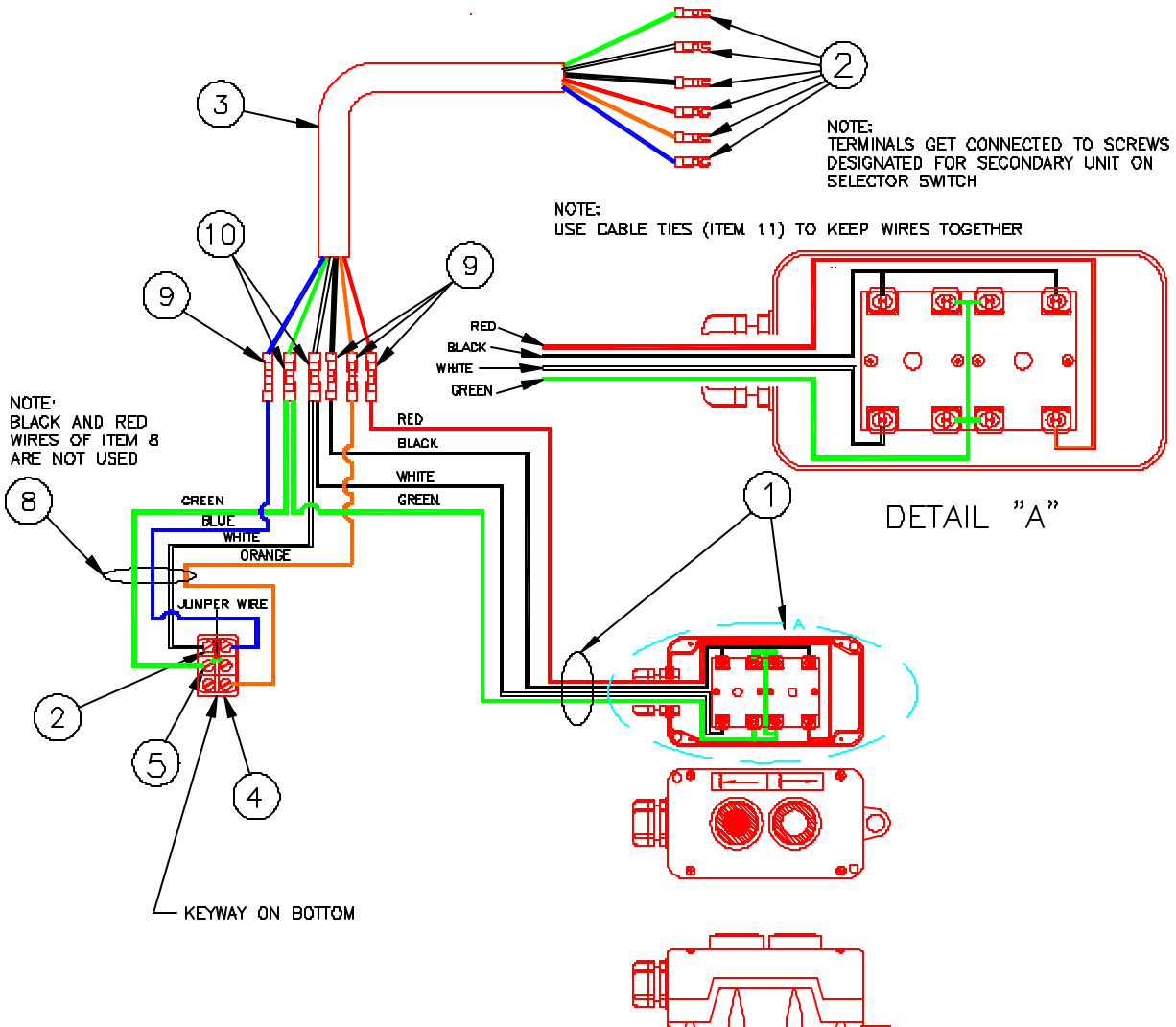
DUAL PWR. UNIT with TWO PLASTIC TANKS



INDEX NO.	REQD.	PART NO.	PART NAME	MATL.	MATERIAL SIZE
11	2	P46335	CABLE TIES		
10	2	P46157	BUTT CONNECTOR LARGE		12-10 WIRE
9	4	P46156	BUTT CONNECTOR SMALL		16-14 WIRE
8	1	P46475	CABLE 16-6		12" LG
7	1	P17518	SELF TAPPING SCREW		
6	1	P46450	LOOM CLAMP		
5	1	P46444	FORK TERM. LARGE		
4	1	AA-551-327	TOGGLE SWITCH ASSY		
3	1	P46475	CABLE (16-6)		20"
2	10	P46319	LOCKING FORK TERMINAL	SMALL	
1	1	BA-551-469	GRV. DOWN WALK AROUND SUB ASSY		
INDEX NO.	REQD.	PART NO.	PART NAME	MATL.	MATERIAL SIZE

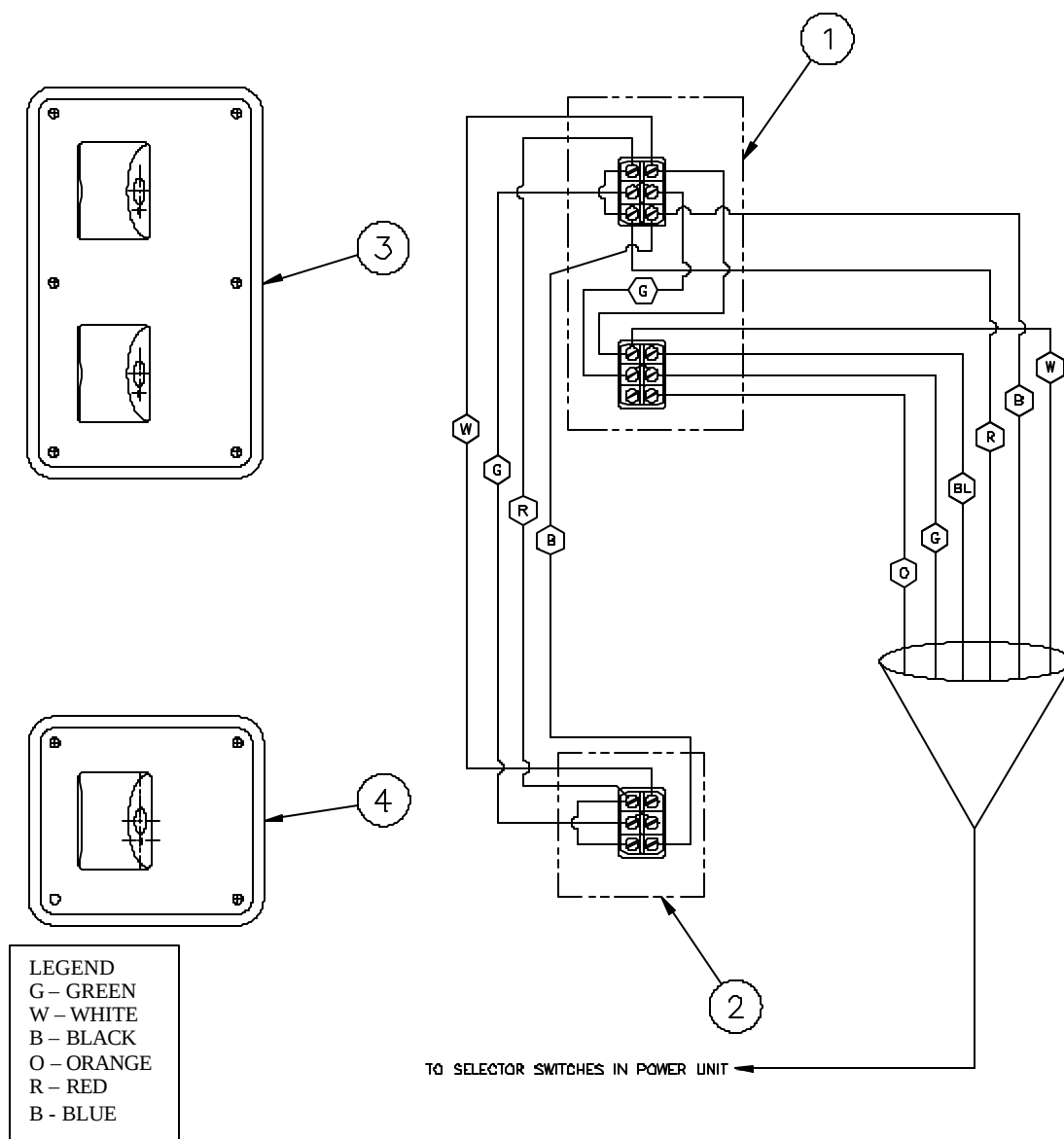
WALKAROUND ELECTRICS POWER DOWN

DUAL PWR. UNIT with TWO PLASTIC TANKS



11	2	P46335	CABLE TIES		
10	2	P46157	BUTT CONNECTOR LARGE		12-10 WIRE
9	4	P46156	BUTT CONNECTOR SMALL		16-14 WIRE
8	1	P46475	CABLE (16-6)		12"
7	1	P1751B	SELF TAPPING SCREW		
6	1	P46450	LOOM CLAMP		
5	1	P46444	FORK TERM LARGE		
4	1	AA-551-327	TOGGLE SWITCH ASSY		
3	1	P46475	CABLE (16-6)		20"
2	10	P46319	LOCKING FORK TERMINAL	SMALL	
1	1	BA-551-359	POWER DOWN WALK AROUND SUB ASSY		
INDEX NO.	REQD.	PART NO.	PART NAME	MATL.	MATERIAL SIZE

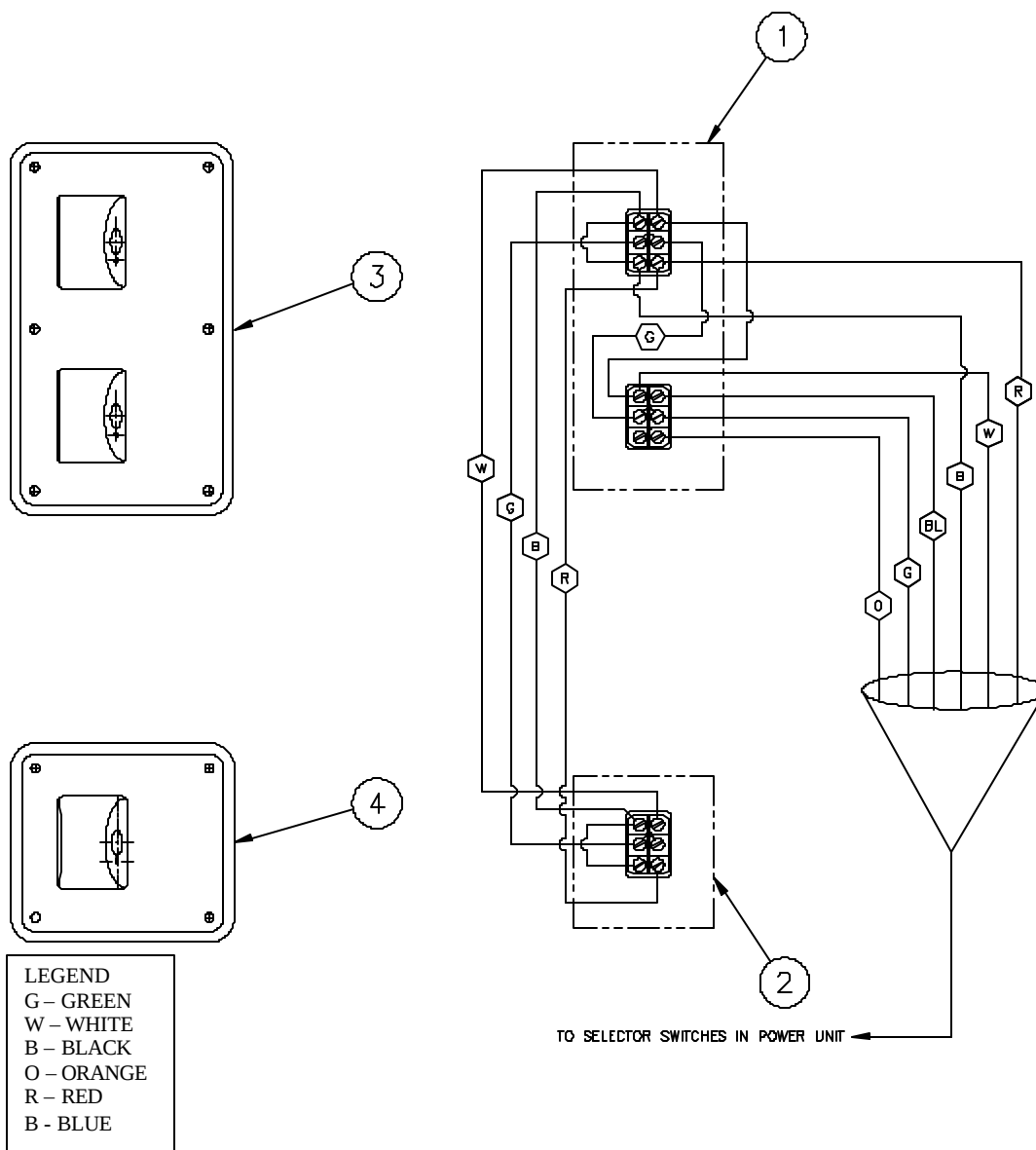
SWITCH WIRING GRAVITY DOWN NP SERIES



REPLACEMENT SWITCHES ARE SUPPLIED WITH THE NECESSARY HARDWARE TO CONNECT INTO THE EXISTING WIRING.

Index No.	Req.	Part No.	Part Name	Matl.	Remarks
1	1	AA-551-523	POTTED OUTER TWO SW. ASSY		
2	1	AA-551-524	POTTED INNER SINGLE SW ASSY		
3	1	BP-805-256	RECESSED SWITCH PLATE		
4	1	BP-805-258	RECESSED SINGLE SWITCH PLATE		
5	1	P46747	JACKETED WIRE - HIGH FLEX	16-4	10 FT. (120")
6	1	P46475	JACKETED WIRE	16-6	40 FT. (480")
7	10	P17518	SELF TAPPING SCREW		
8	1	P46445	CORD GRIP		IN OUTER MAST
9	1	P46139	CORD GRIP		IN INNER MAST

SWITCH WIRING POWER DOWN NPPD SERIES



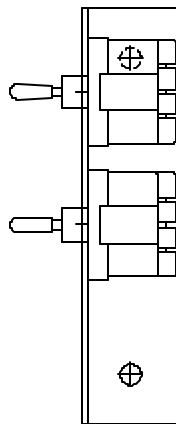
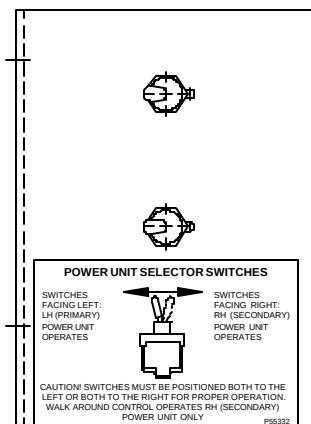
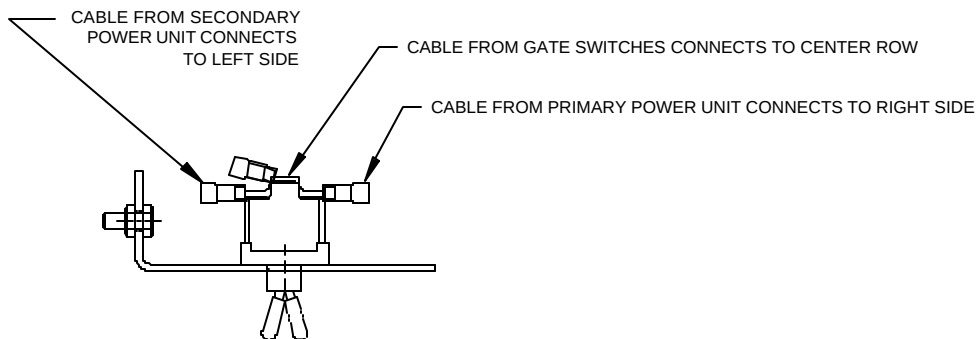
REPLACEMENT SWITCHES ARE SUPPLIED WITH THE NECESSARY HARDWARE TO CONNECT INTO THE EXISTING WIRING.

Index No.	Req.	Part No.	Part Name	Matl.	Remarks
1	1	AA-551-525	POTTED OUTER TWO SW. ASSY		
2	1	AA-551-522	POTTED INNER SINGLE SW ASSY		
3	1	BP-805-256	RECESSED SWITCH PLATE		
4	1	BP-805-258	RECESSED SINGLE SWITCH PLATE		
5	1	P46747	JACKETED WIRE - HIGH FLEX	16-4	10 FT. (120")
6	1	P46475	JACKETED WIRE	16-6	40 FT. (480")
7	10	P17518	SELF TAPPING SCREW		
8	1	P46445	CORD GRIP		IN OUTER MAST
9	1	P46139	CORD GRIP		IN INNER MAST

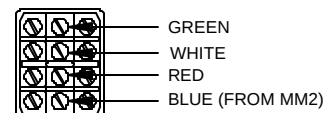
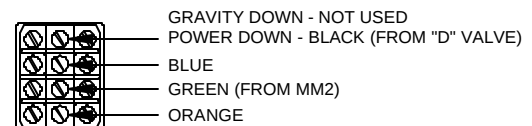
CONNECTING GATE ELECTRICS - GRAVITY DOWN AND POWER DOWN DUAL POWER UNIT with PLASTIC OIL TANKS

ROUTE THE CABLE FROM THE GATE SWITCHES INTO THE POWER UNIT ENCLOSURE AND CONNECT THE WIRE TERMINALS TO THE CENTER COLUMN OF THE SELECTOR SWITCHES AS SHOWN BELOW. BLUE, ORANGE, RED, WHITE, AND GREEN CONNECT TO THE SWITCH CENTER COLUMN. BLACK IS BUTT CONNECTED TO THE BLACK WIRE FROM THE MAINTENANCE MINDER 2.

NOTE: THE SELECTOR SWITCH BRACKET CAN BE UNBOLTED TO MAKE THE CONNECTIONS EASIER TO ACCESS.



CONNECTIONS
VIEWED FROM REAR

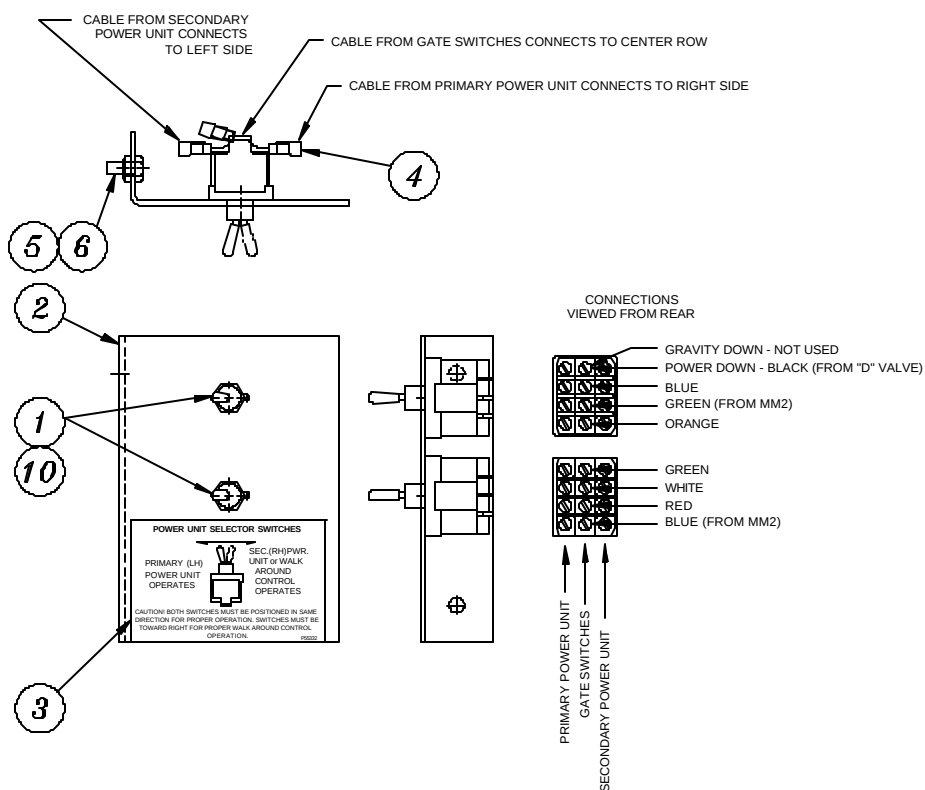


PRIMARY POWER UNIT
GATE SWITCHES
SECONDARY POWER UNIT

NOTE:
BLACK FROM GATE SWITCHES
IS BUTT CONNECTED TO THE
BLACK WIRE FROM THE MM2.

ELECTRIAL DIAGRAM – SELECTOR SWITCH DUAL POWER UNIT with PLASTIC OIL TANKS

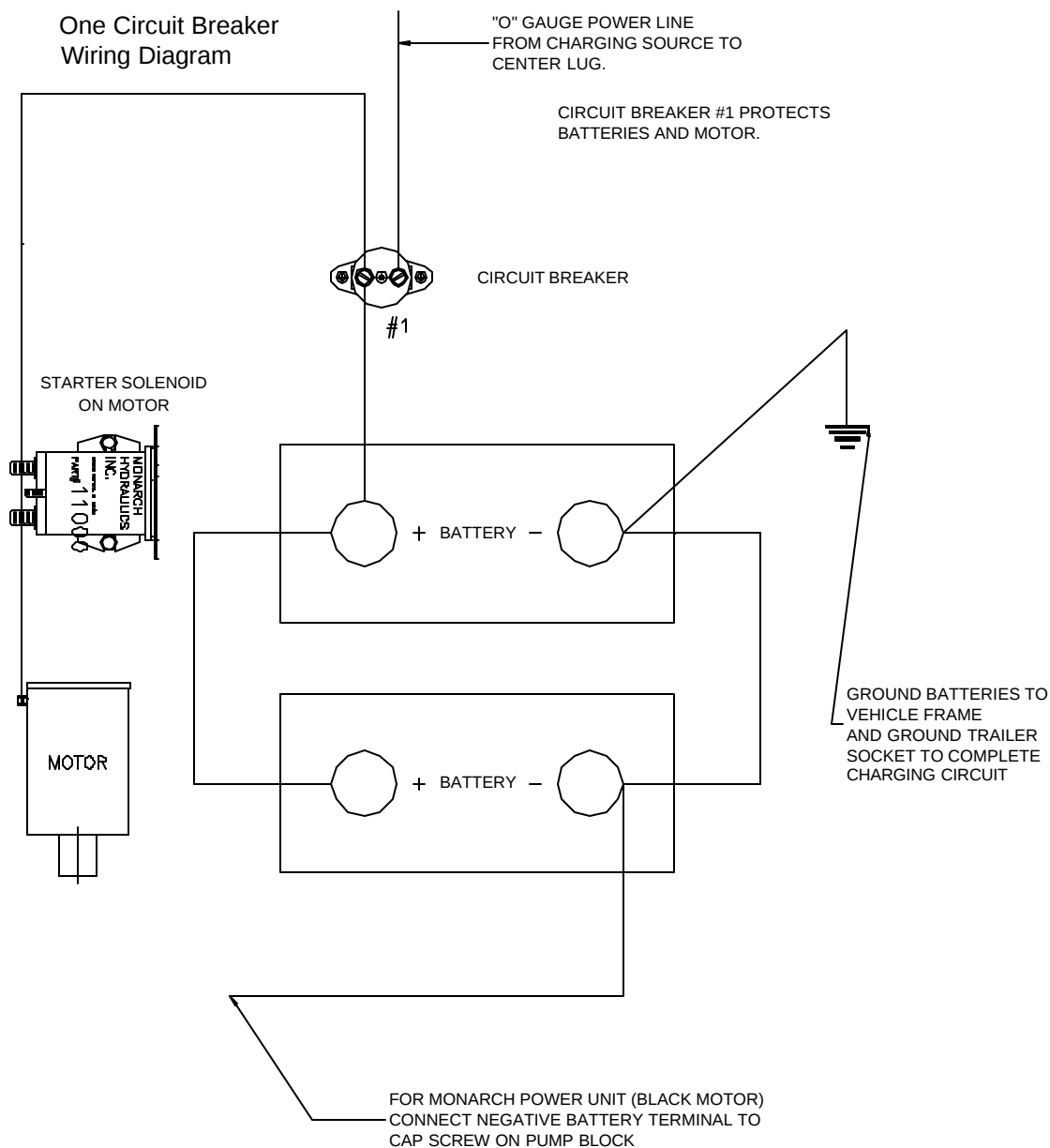
SELECTOR SWITCH PARTS – GRAVITY or POWER DOWN CONNECTIONS



Index No.	Req.	Part Number	Part Name	Comments
1	2	P46599	SWITCH	
2	1	AP-551-442	SELECTOR SWITCH MTG PLATE	
3	1	P55332	SELECTOR SWITCH DECAL	
4	24	P46476	FORK TERMINAL	
5	2	P10517	BOLT	1/4-20 X 5/8
6	2	P23502	LOCK NUT	
7	1	P46475	CABLE 16-6	16-6 X 12"
8	2	P46250	LOOM CLAMP	
9	2	P17518	SELF TAPPING SCREW	
10	2	P46291	RUBBER BOOT	
11	1	P46186	CABLE 16-3	16-3 X 48"

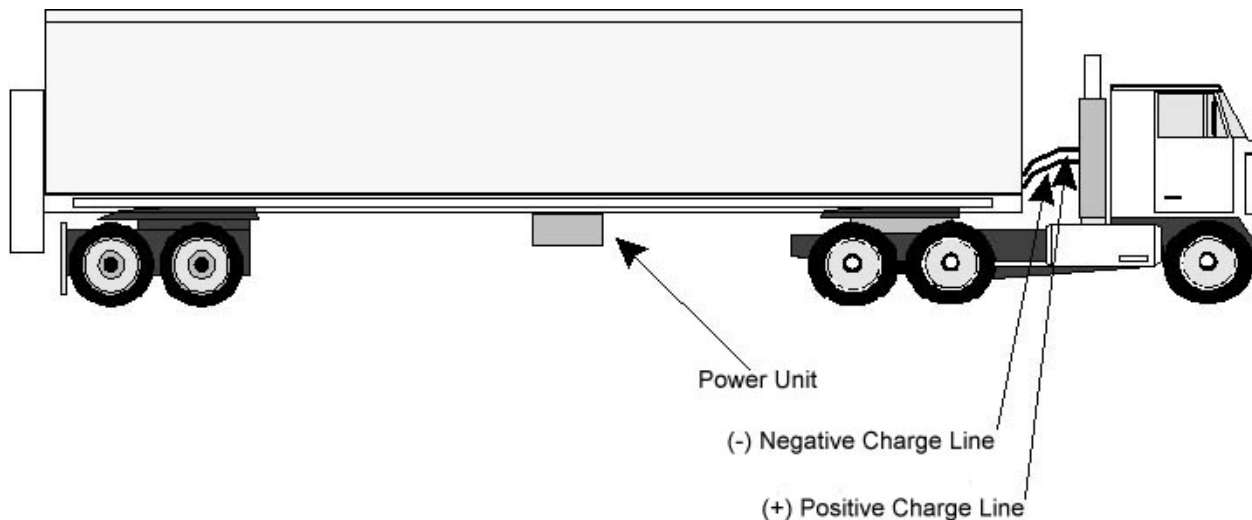
BATTERY HOOK UP

We recommend batteries with the following specifications:
12 Volt heavy duty lead acid Dual Purpose or AGM
B.C.I. Group – Size 31
Terminal Type – TS
Cold Cranking Amps - 580



FAILURE TO USE CORRECT BATTERIES WILL VOID WARRANTY

GROUNDING RECOMMENDATIONS FOR TRACTOR/TRAILER



The Maintenance Minder® requires a minimum of 9.5 volts in order for the FDC to operate. Utilization of a single positive cable does not provide sufficient ground. Therefore, our recommendation for grounding tractor/trailers with a FDC 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 FDC to operate.

NOTE:

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

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 of high temperature faults.
- Record of 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 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 rapids 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 while 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 – 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.

GENERAL TIPS

LIFT GATE

1. This gate can run up or down uneven from the vehicle floor by 1" to 1 ½" without damaging the mechanical workings on the gate.
2. The equalizer valve is only for adjusting the up stroke (while the gate is loaded).
3. The flow control valves are for controlling the down stroke only. They should be cleaned and/or changed in sets.
4. Determining if the tie bar is bent:
Raise the platform to its full up position (level to the vehicle floor). Push the down switch. If the tie bar is bent, one side will always drop quicker than the other. If you have a bent tie bar, it is best to straighten it. See this manual for information on how to straighten the tie bar.
Before adjusting or attempting to fix any of the four items above, check the following first:
 - a. Check the cylinder rods for lubrication. Dry rods may cause sticking or slow down the movement of the gate.
 - b. Check for bent inner mast.
 - c. Check to see if the back edge of the platform is hitting the floor level tube.
 - d. Check to see if the inner mast is rubbing on the outer mast. Some hitting is normal, but if it hinders the up/down operation, it must be lubricated.
5. Premature motor failure is almost always caused by low batteries.
6. Inadequate grounding is also a major reason for motor failure.

POWER UNIT

1. If the motor runs and the gate does not rise, you may have one of the these problems:
 - a. The Emergency Hand Pump Valve is open (or partially open).
 - b. You have a bad pump.
 - c. Manual valves are closed (dual power unit only).
2. To get the gate down, energize the two-way valve (white wire). *The motor will not run in this operation.*
3. To get the gate up, push one of the switches up. No valves must be shifted. *The motor will run.*
4. To unfold the platform, energize the two-way valve (orange wire). *The motor will not run in this operation.*
5. To fold the platform, energize the three-way valve (red wire). You must push the fold switch and the up switch. *The motor will run.*
6. If the unit has an emergency hand pump and the gate goes up, hits the up stops and the platform starts to fold, the ball valve is open (or partially open). To correct this, close the ball valve.
7. The pressure setting with platform at floor level and pump in bypass is 2500 PSI.

GENERAL TIPS DUAL POWER UNIT

with TWO PLASTIC TANKS

LIFTGATE

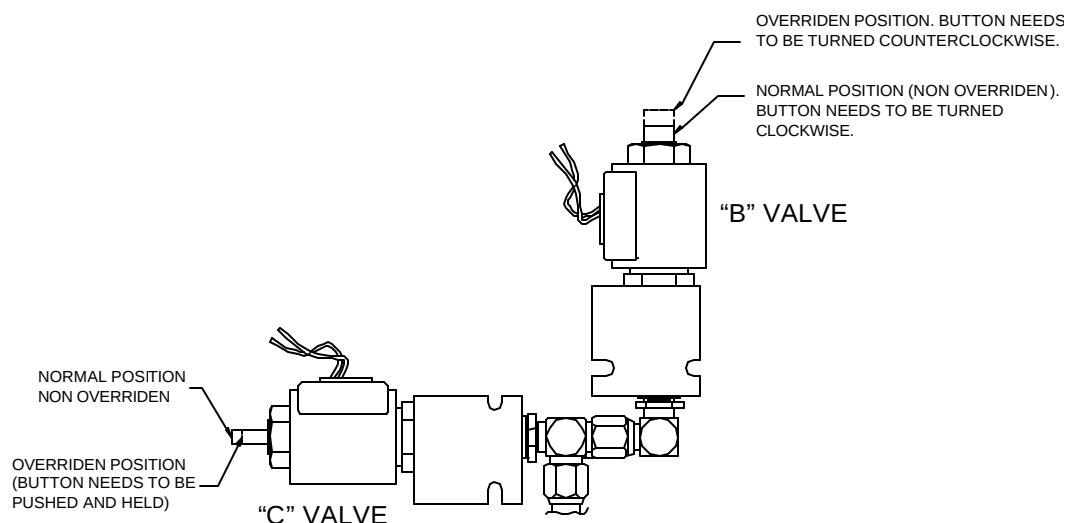
1. This gate can run up or down crooked 1" to 1-1/2" without hurting the gate.
2. Equalizer Valve – for adjusting the up stroke only, when the gate is loaded.
3. Flow Control Valves – for controlling the down stroke only. Clean or replace in sets.
4. Bent Tie Bar – how to tell if it is bent. Raise the platform to the full up position (level with the truck floor). Push the down switch. If the tie bar is bent, one side will always drop quicker than the other side. If bent, see the Maintenance Manual for information about the procedure. **BEFORE ADJUSTING OR ATTEMPTING TO FIX ANY OF THE FOUR ITEMS LISTED ABOVE, CHECK THE FOLLOWING FIRST:**
 - a. Check for bent inner mast.
 - b. Check to see if the back edge of the platform is hitting or binding against the floor level tube.
5. Premature motor failure is almost always caused by low batteries – batteries without the capacity to maintain the correct voltage during the operation of the gate.
6. Inadequate grounding is also a major reason for motor failure.

EMERGENCY OPERATION– POWER UNIT – GRAVITY DOWN

Operation desired	Symptoms	Directions to identify problem.	Did the gate do the desired operation?	Diagnosis
Up	The gate does not go up but the motor runs	Manually override two-way locking valve "B" (See figure on next page for overridden and non overridden positions)	Yes	"B" Valve or wiring is defective. Return valve to non overridden position once you have the gate in the stored position.
			No	Pump is bad.
Down	The gate does not go down	Manually override two-way locking valve "B" (See figure on next page for overridden and non overridden positions)	Yes	"B" Valve or wiring is defective. Return valve to non overridden position once you have the gate in the stored position.
			No	"A" Valve or wiring is defective.
Fold	The gate does not fold but the motor runs	Manually override two-way locking valve "C" (See figure on next page for overridden and non overridden positions)	Yes	"C" Valve or wiring is defective. Take the gate to the stored position using the push and hold override button.
			No	Pump is bad.
Unfold	The gate does not unfold	Manually override Two-way locking valve "C" (Check that platform has cleared the unfold locks on both sides).	Yes	"C" Valve or wiring is defective. Take the gate to the stored position using the push and hold override button.
			No	"A" Valve or wiring is defective.

GENERAL TIPS DUAL POWER UNIT

with TWO PLASTIC TANKS

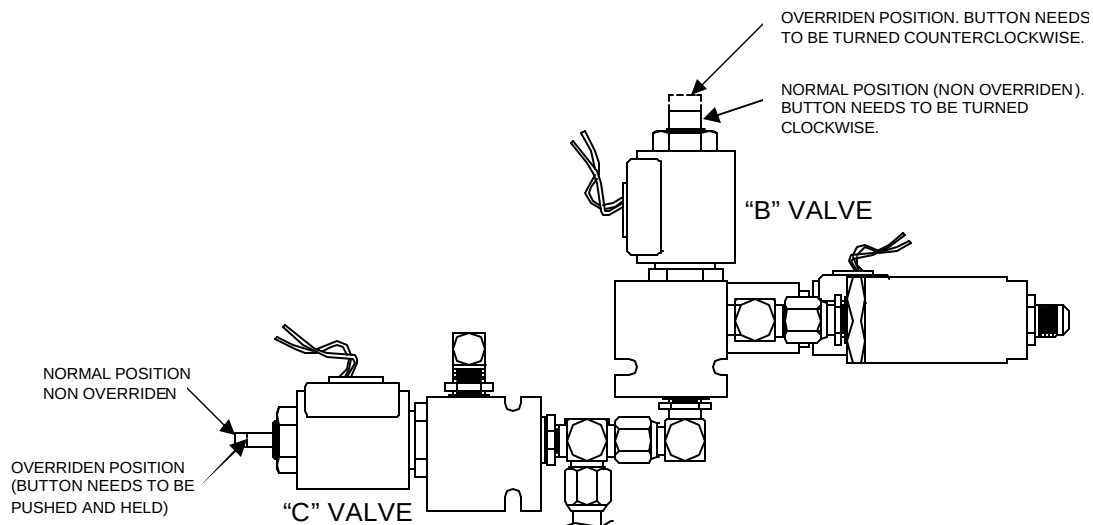
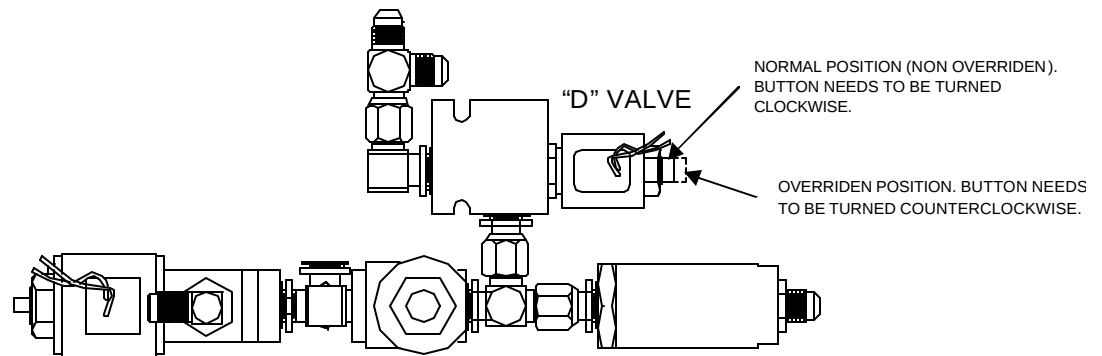


EMERGENCY OPERATION – POWER UNIT – POWER DOWN

Operation desired	Symptoms	Directions to identify problem.	Did the gate do the desired operation?	Diagnosis
Up	The gate does not go up but the motor runs	Manually override two-way locking valve "B" (See figure on next page for overridden and non overridden positions)	Yes	"B" Valve or wiring is defective. Return valve to non overridden position once you have the gate in the stored position.
			No	Pump is bad.
Down	The gate does not go down but the motor runs.	Manually override one-way locking valve "D" (See figure on next page for overridden and non overridden positions)	Yes	"D" Valve or wiring is defective. Return valve to non overridden position once you have the gate in the stored position.
			No	"A" Valve or wiring is defective.
Fold	The gate does not fold but the motor runs	Manually override two-way locking valve "C" (See figure on next page for overridden and non overridden positions)	Yes	"C" Valve or wiring is defective. Take the gate to the stored position using the push and hold override button.
			No	Pump is bad.
Unfold	The gate does not unfold	Manually override Two-way locking valve "C" (Check that platform has cleared the unfold locks on both sides).	Yes	"C" Valve or wiring is defective. Take the gate to the stored position using the push and hold override button.
			No	"A" Valve or wiring is defective.

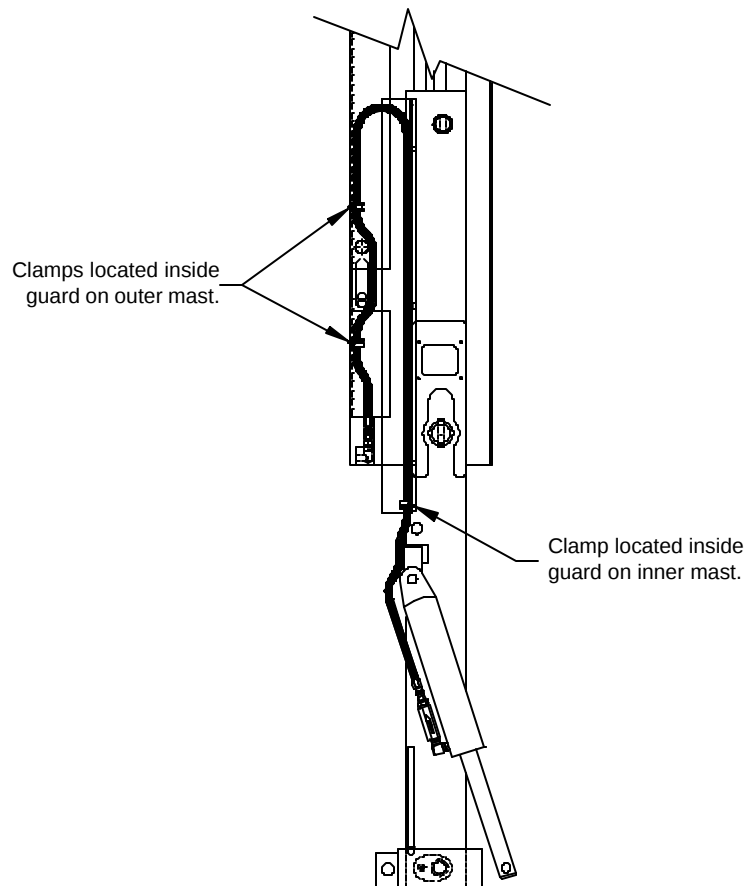
GENERAL TIPS DUAL POWER UNIT

with TWO PLASTIC TANKS



TO BLEED THE POWER FOLD CYLINDER

1. Unfold and lower the platform down to the ground.
2. Loosen the hose at the cylinder but do not remove completely.
3. Activate the pump (just long enough to product an air free stream of oil from the hose).
4. Re-tighten the hose and check the oil level in the reservoir tank. Note: hold line while tightening to ensure it does not twist.
5. Fold and unfold the platform several times. The platform should now fold and unfold smoothly.



The electric line is routed along the hydraulic line to match the loop.
When re-attaching the lines, ensure that there is no "twist" in the line. "Twist" in the line can cause uneven or erratic tracking.

CHECK OIL LEVEL AFTER BLEEDING THE CYLINDER:

GRAVITY DOWN GATES – Check with platform unfolded and on ground.
POWER DOWN GATES – Check with platform unfolded and up at bed height.

BLEEDING THE LIFT CYLINDERS - GRAVITY DOWN

The FDC is shipped with the cylinders pre-filled with hydraulic fluid from the factory. *The cylinders must be bled before making any other adjustments.*

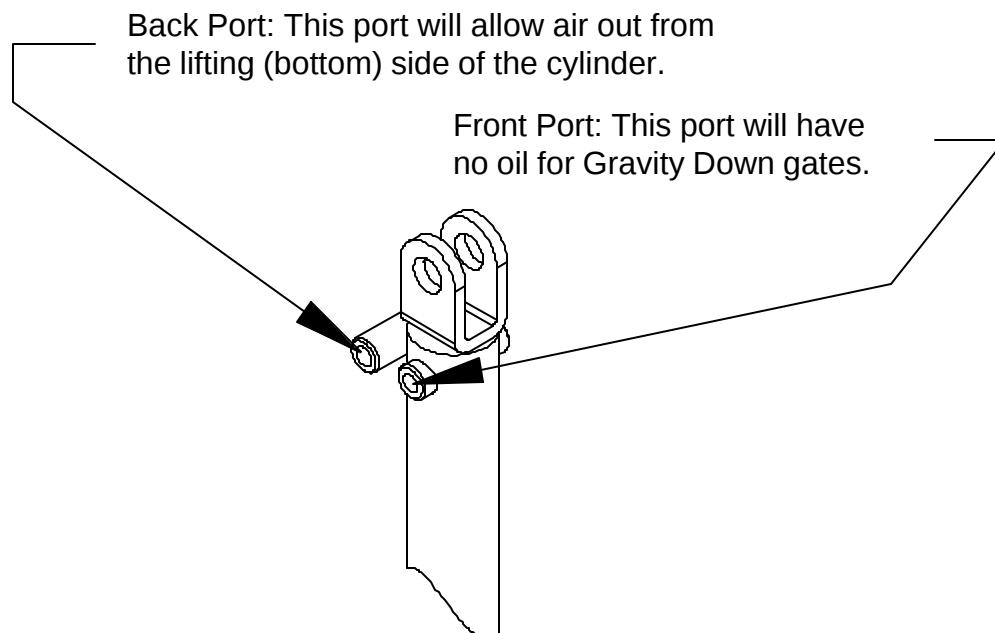
To Bleed the Lifting Cylinder – Bottom Side:

1. Unfold and lower the platform to the full down position. **CYLINDERS SHOULD BE EXTENDED TO THEIR FULL LENGTH (GATE EXTENDED DOWN 56") TO REMOVE AS MUCH AIR FROM THE BOTTOM SIDE OF THE CYLINDER AS POSSIBLE. DEPENDING ON THE FLOOR HEIGHT OF THE VEHICLE, IT MAY BE NECESSARY TO RAISE THE BODY OF THE VEHICLE OR LOWER THE GATE PLATFORM INTO A PIT TO ACHIEVE MAXIMUM CYLINDER EXTENSION.**
2. Loosen the plugs in the back ports (ports closest to the vehicle body), but do not remove completely.
3. Activate the pump just long enough to produce an air-free stream of oil from the ports.
4. Re-tighten the plugs in the ports, lower the platform to the full down position, and check the oil level in the reservoir tank. The oil level should be approximately 1" from the top of the tank, **except** for DUAL UNITS with individual plastic tanks where oil level should be 2" from top of tank. Add oil if necessary. On DUAL UNITS with individual plastic tanks, allow time for oil level to equalize between tanks.

To Bleed the Lifting Cylinders – Top Side

1. Not applicable on gravity down.

NOTE: FOR GRAVITY DOWN GATES, OIL LEVEL SHOULD ALWAYS BE CHECKED WITH THE PLATFORM UNFOLDED AND ALL THE WAY DOWN.



BLEEDING THE LIFT CYLINDERS – POWER DOWN

The FDC is shipped with the cylinders pre-filled with hydraulic fluid from the factory. *The cylinders must be bled before making any other adjustments.*

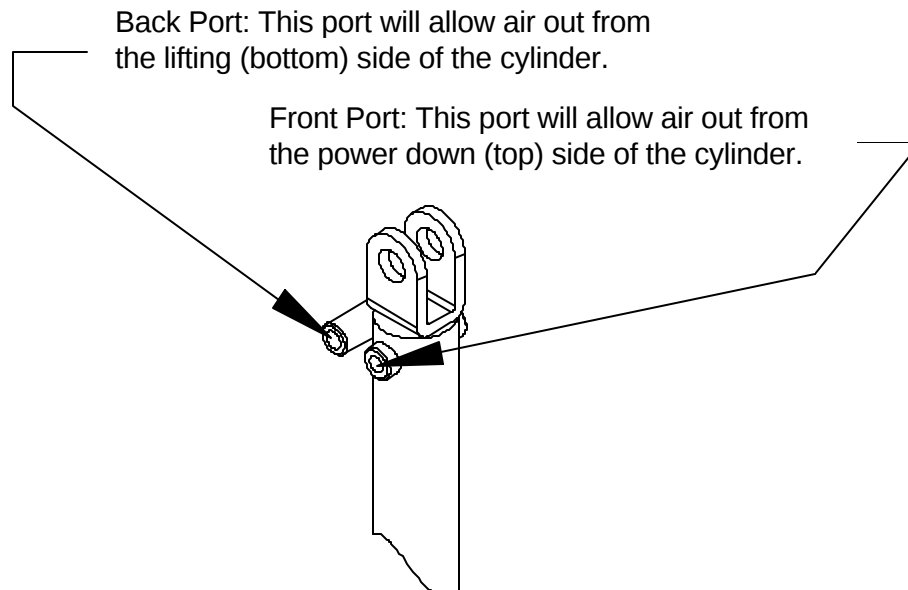
To Bleed the Lifting Cylinder – Bottom Side:

1. Unfold and lower the platform to the full down position. **CYLINDERS SHOULD BE EXTENDED TO THEIR FULL LENGTH (GATE EXTENDED DOWN 56") TO REMOVE AS MUCH AIR FROM THE BOTTOM SIDE OF THE CYLINDER AS POSSIBLE. DEPENDING ON THE FLOOR HEIGHT OF THE VEHICLE, IT MAY BE NECESSARY TO RAISE THE BODY OF THE VEHICLE OR LOWER THE GATE PLATFORM INTO A PIT TO ACHIEVE MAXIMUM CYLINDER EXTENSION.**
2. Loosen the plugs in the back ports (ports closest to the vehicle body), but do not remove completely.
3. Activate the pump just long enough to produce an air-free stream of oil from the ports.
4. Re-tighten the plugs in the ports, raise the platform to the full up position, and check the oil level in the reservoir tank. The oil level should be approximately 1" from the top of the tank **except** for DUAL UNITS with individual plastic tanks where oil level should be 2" from top of tank. Add oil if necessary. On DUAL UNITS with individual plastic tanks, allow time for oil level to equalize between tanks.

To Bleed the Lifting Cylinders – Top Side

1. Unfold and raise the platform to the full up position to remove as much air from the top side of the cylinder as possible.
2. Loosen the plugs in the front ports (ports furthest from the vehicle body) but do not remove completely.
3. Activate the pump just long enough to produce an air-free stream of oil from the ports.
4. Retighten the plugs in the ports, raise the platform to the full up position if not already there, and check the oil level in the reservoir tank. The oil level should be approximately 1" from the top of the tank, **except** for DUAL UNITS with individual plastic tanks where oil level should be 2" from top of tank. Add oil if necessary. On DUAL UNITS with individual plastic tanks, allow time for oil level to equalize between tanks.

NOTE: FOR POWER DOWN GATES, OIL LEVEL SHOULD ALWAYS BE CHECKED WITH THE PLATFORM UNFOLDED AND RAISED ALL THE WAY UP.



ADJUSTMENT OF THE EQUALIZER VALVE

NOTE:

Before making any adjustments, read the general tips page to be sure this is the problem.

Remember adjusting the equalizer valve will control the **up** stroke only.

Locate the equalizer valve. Stand on the unfolded platform, look at the back of the truck/trailer. The equalizer valve is about 4 inches below the floor line and to the left of center.

Back off the lock nut on the side that is running slow (lagging) turn the adjusting screw out $\frac{1}{4}$ turn, lock nut and try. Repeat if necessary.

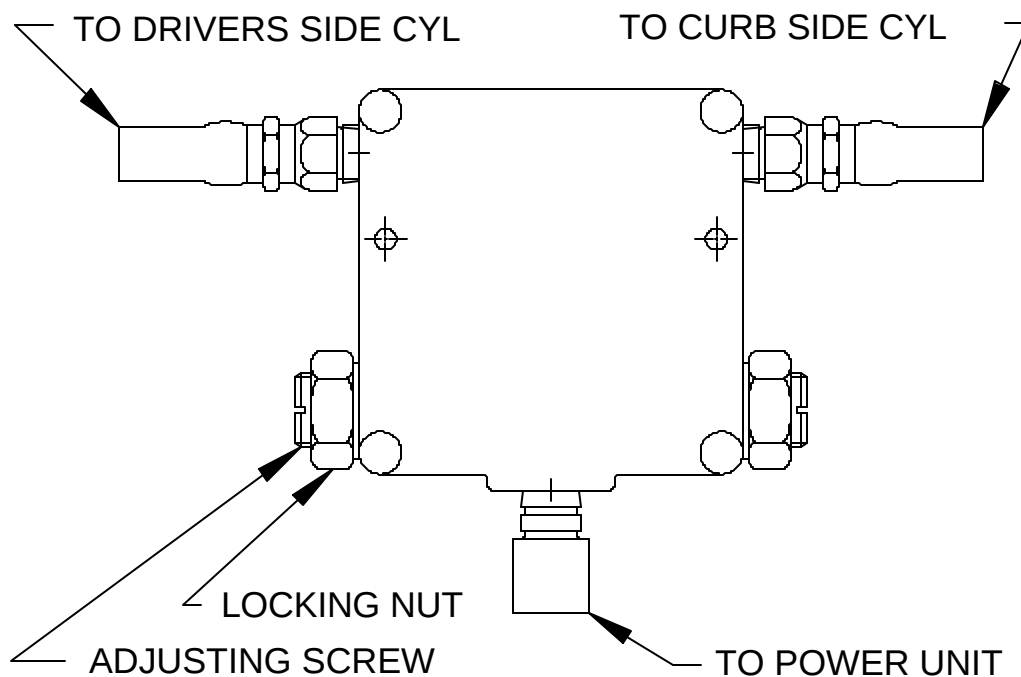
Although this can be done with no load on the platform, it normally helps to have a light load on the platform.

NOTE:

Turn the adjusting screw in = decreases the flow of oil

Turn the adjusting screw out = increases the flow of oil

Units shipped after 7/08 have a High Accuracy Equalizer Valve. We do NOT recommend adjusting these valves.



STRAIGHTENING THE TIE BAR

NOTE:

Before bending the tie bar, read the general tips page to be sure this is the problem.

To check that you have a bent tie bar, raise the platform to the full *up* position (level to the floor). Push the down switch, one side will always drop quicker than the other side. If one side is lower by more than one inch (1"), adjust the tie bar.

The tie bar is at the back edge of the platform. It is 1 ½" wide, and holds the two inner masts together.

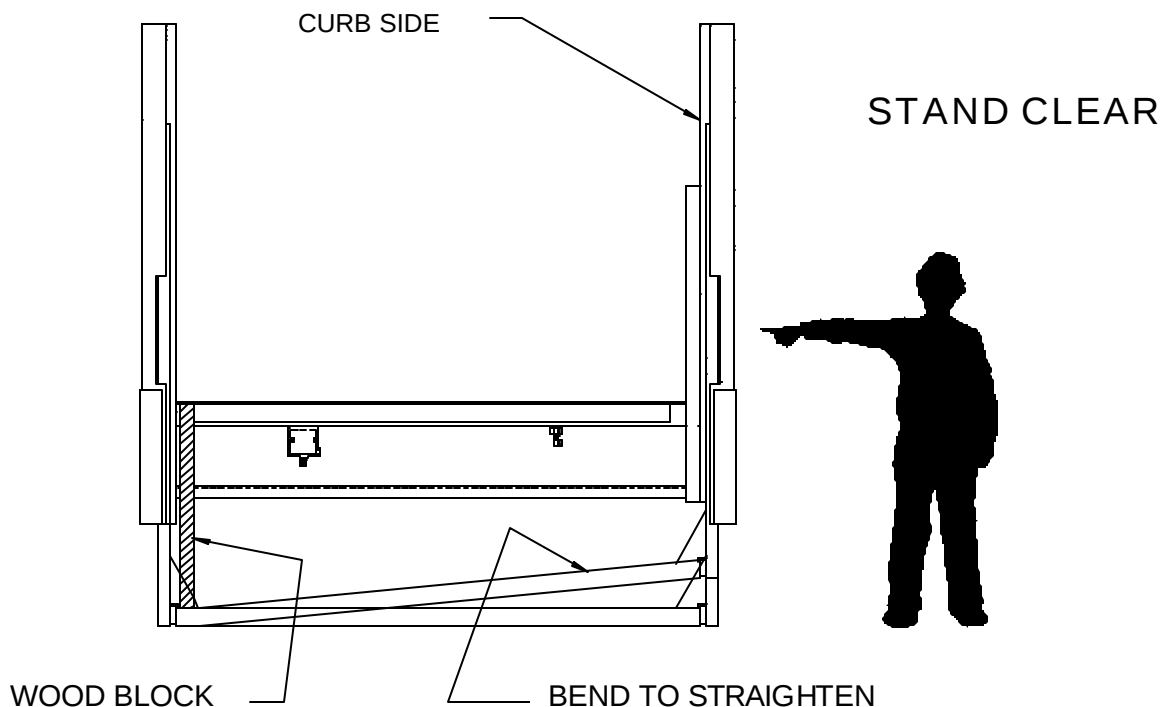
Acquire a piece of wood 4" x 4" x 2' long and place the wood between the tie bar and the up stop area near the floor line area. **Caution!** Check for cracked welds before proceeding. **Stand clear while performing this procedure.**

NOTE:

If the curbside is dropping first, place the wood on the driver's side. Run the gate up until the wood is secure, keep running the gate up another 6 to 8 inches. Let the gate down, remove the wood, cycle the lift gate to see if this has fixed the problem. If not, re-bend, except go up another inch or two. Keep repeating until corrected.

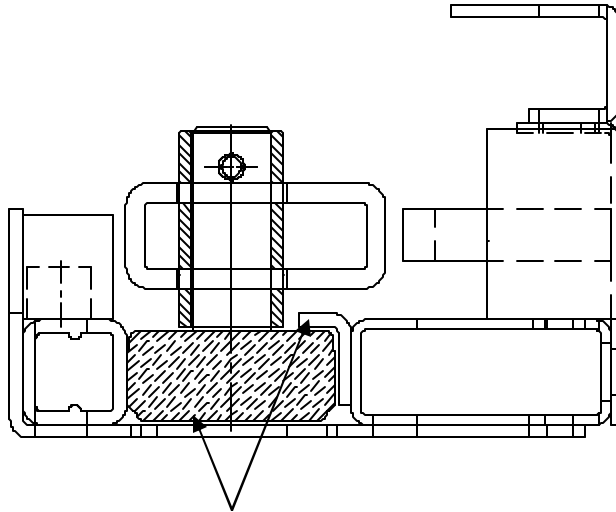
Sometimes, the power from the gate is not enough to correct the problem. If you have a hand pump, use it to take it up further. If you do not have a hand pump, use a floor jack and continue jacking the gate in an upward cycle.

PICTURE SHOWS HOW TO STRAIGHTEN A BENT TIE BAR ON CURBSIDE. (CURB SIDE DROPS QUICKER)



LUBRICATING THE ROLLER TRACKS

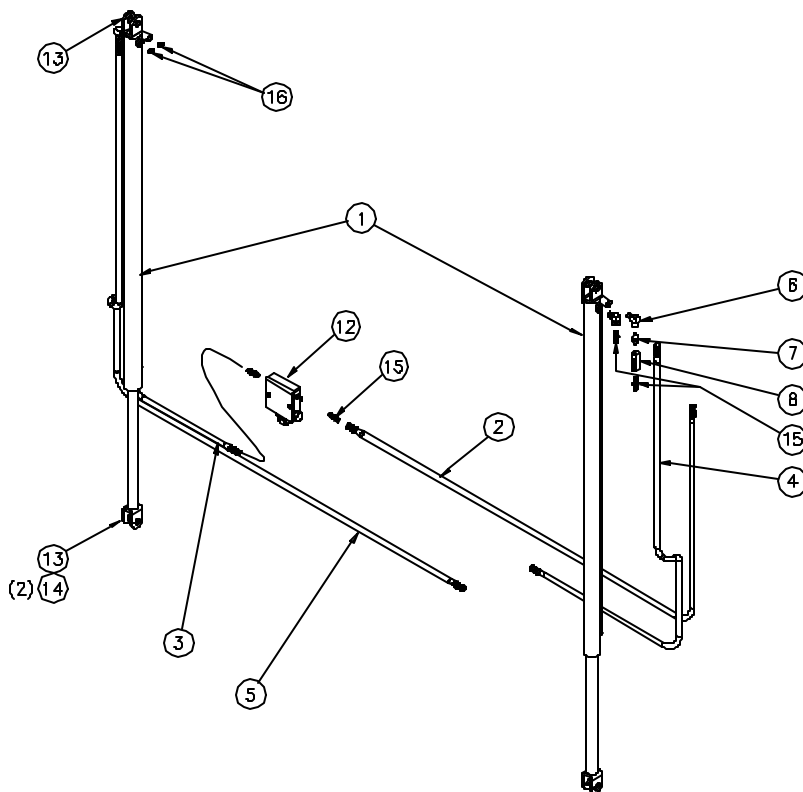
Do NOT use grease or oil to lubricate the roller tracks. Wet lubricants will allow dirt and grit to stick and cause premature wear.



If lubrication is necessary, use Dri-Slide dry lubricant from Lubritek.

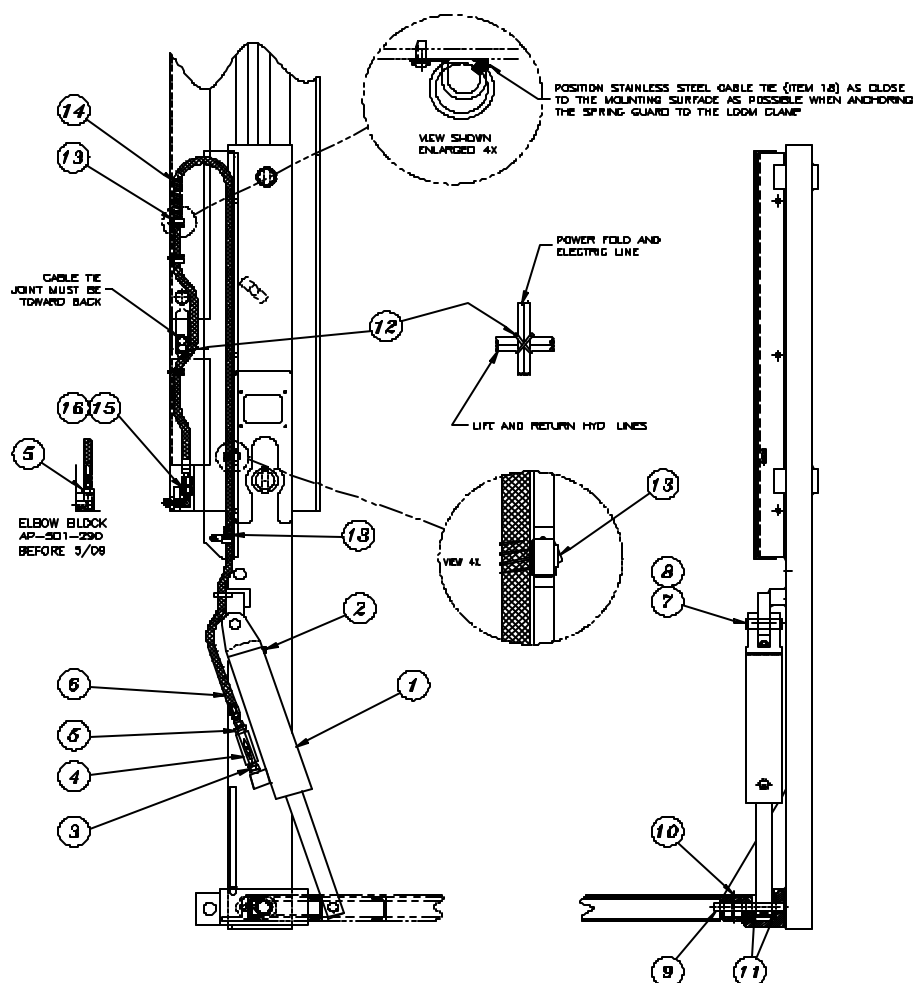
PARTS REPLACEMENT – HYDRAULIC ASSEMBLY

Index No.	Qty Req'd	Part Number	Part Name	Remarks
1	2	P33931	Hyd. Cylinder	54 Stroke
2	1	See chart	Hydraulic line assy (incl. item 15)	RH Lifting
3	1	See chart	Hydraulic line assy (incl. item 15)	LH Lifting
4	1	See chart	Hydraulic line assy (incl. item 15)	RH "Down" Line
5	1	See chart	Hydraulic line assy (incl. item 15)	LH "Down" Line
6	4	P33006	Street elbow 3/8	
7	2	P33064	Nipple Pipe 3/8	
8	2	P33619	Flow control 2.8 GPM	Gravity Down
8	2	P33914	Flow control 2.0 GPM	Power Down
9	8	P46251	Loom clamp ¾ in.	Not Shown
10	6	P17518	Self tapping screw	Not Shown
11	4	P46497	¾" Split loom	24" Lg ea.
12	1	P33547K	Equalizer with adapter fittings (incl. item 15)	SAE "O" Ring Ports
13	4	AA-811-328	Cylinder Pin with 2 snap rings	Not Shown
14	4	P43577	Cylinder Mounting Block Bearing	Not Shown
15	4	P34014	Straight Adapt. 3/8 NPT(M) – 9/16-18 JIC(M)	
16	4	P31048	Plug, Pipe 3/8 SHCS	



Drawing No.	Gate Width	Qty Req'd	RH Lifting Item 2	LH Lifting Item 3	RH "Down" Line Item 4	LH "Down" Line Item 5
CA-811-447	102"	1 ea.	BT-501-442-125	BT-501-442-081	BT-501-442-089	BT-501-442-128
CA-811-436	96"	1 ea.	BT-501-442-119	BT-501-442-081	BT-501-442-089	BT-501-442-121

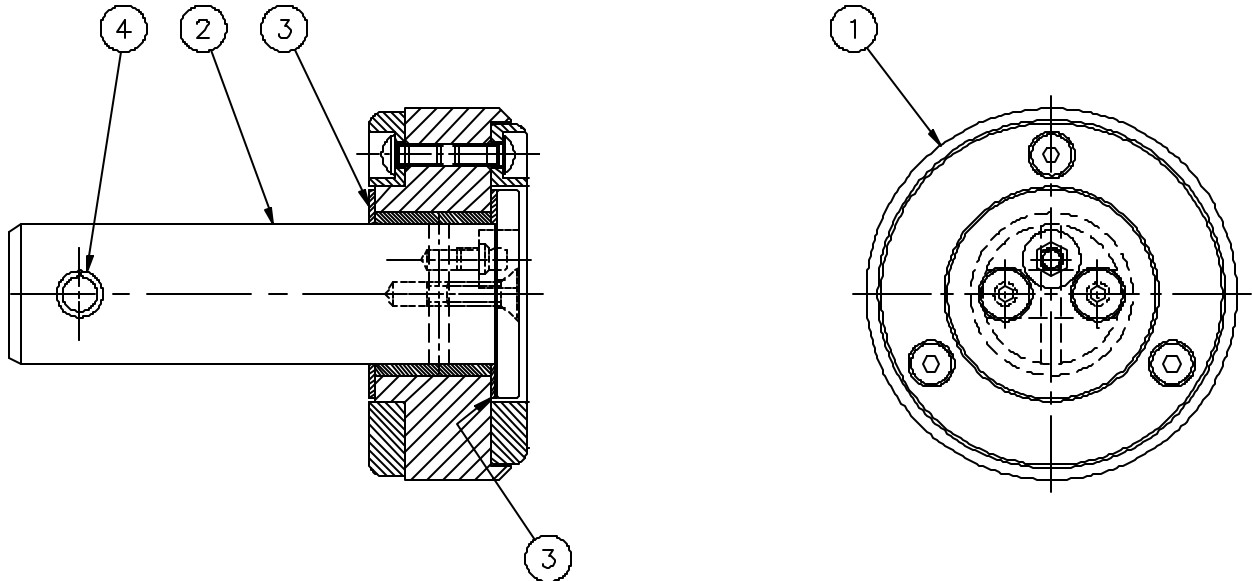
POWER FOLD ASSEMBLY



Index No.	Qty.	Part No.	Description
1	1	P33877	Hyd. Cylinder
2	1	P33915	Breather Vent - 1/8 NPT
2	1	P33646	Breather Vent - 3/8 NPT
3	1	P33064	Pipe Nipple
3	1	P33217	Male Elbow (used when cylinder port is recessed)
4	1	P33671	Flow Control - steel platform
4	1	P33984	Flow Control - alum. platform
5	1	P33750	Adapter (Qty. 2 if using elbow block)
6	1	AT-501-284-077	Hose Assembly
7	1	AP-811-200	Top Ram MTG Shaft
8	2	P24019	Retaining Ring
9	1	S754-005.500	Bottom Ram MTG Pin
10	1	P47532	Roll Pin
11	4	P26019	Washer
12	2	P46462	Cable Tie 11"
13	3	P46750	Stainless Steel Cable Tie
14	1	P34173	Spring Guard
15	1	P34106	Bulkhead Elbow
16	1	P34110	Straight Adapter

REPLACEMENT ROLLER

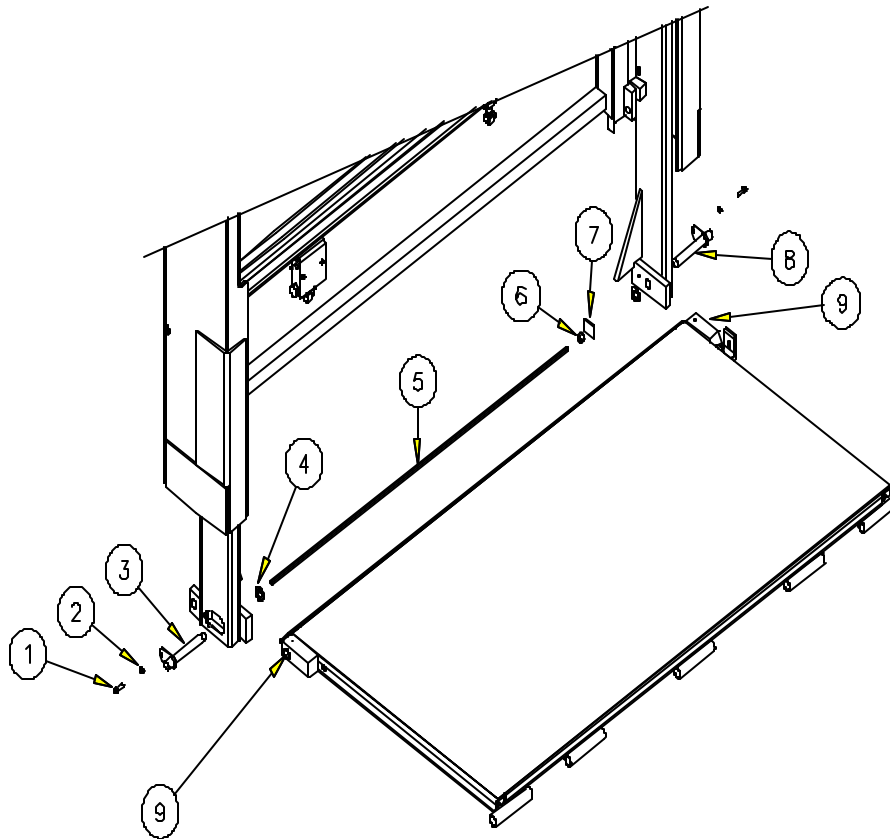
4" REPLACEMENT ROLLER PARTS GREASED / GREASELESS ROLLERS WITH SIDE PADS



ROLLER ASSEMBLY CAN BE ORDERED COMPLETE
UNDER PART NO. BA-818-435 OR BY INDIVIDUAL
COMPONENTS LISTED BELOW.

Index No.	Qty Req'd	Part Number	Part Name
1	1	BA-818-382	Roller Sub Assembly
2	1	BA-805-304	Roller Shaft Assy.
3	2	P43565	Thrust Bearing
4	1	P47507	Roll Pin
5	1	P32016	Grease Fitting

PLATFORM PINS AND BUSHINGS

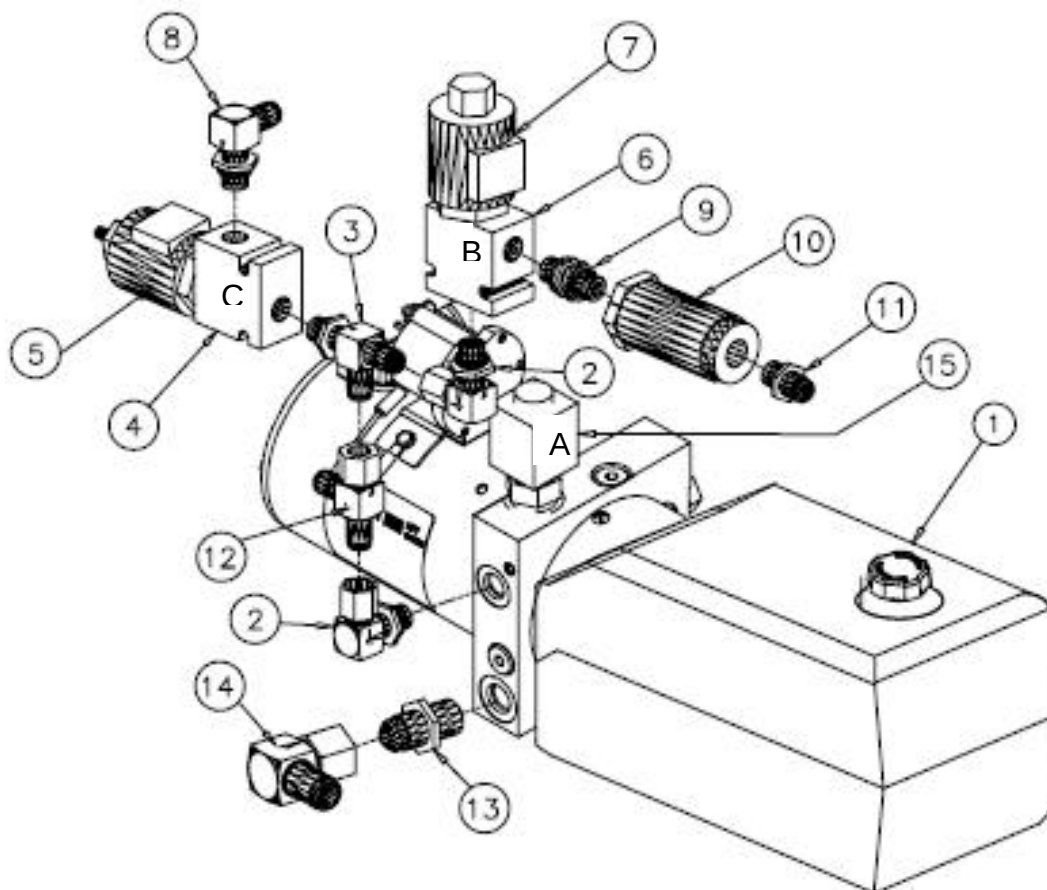


PLATFORM BEARING
(1 REQ'D EACH SIDE)

Index No.	Qty.	Part Number	Part Name	Material Size/Notes
1	2	P11048	Bolt	3/8 16 x 1 1/4 gr. 8
2	2	P26017	Washer Lock Split 3/8	
3	1	BA-818-205	Pin Sub Assy	Driver Side
4	2	P26020	Spacer Washer	
5	1	S790-060.000	Torsion Bar	60" lg
6	1	AP-808-108	Hex Sleeve	
7	1	S055-002.000	Mtg. Plate	
8	1	BA-818-206	Pin Sub Assy	Curb Side
9	2	P43567	Platform Bearing	

POWER UNIT PARTS

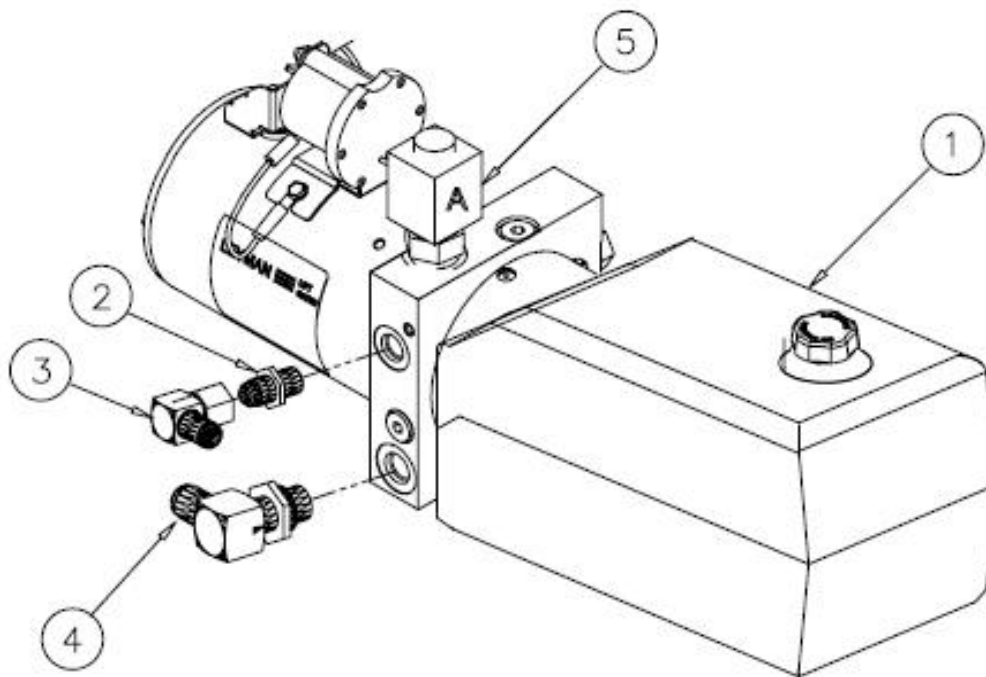
DUAL GRAVITY DOWN UNIT PRIMARY UNIT (FRONT, CA-501-429)



Index No.	Qty.	Part Number	Part Name	Material Size/Notes
1	1	P34117	Monarch Power Unit	
2	2	P34045	Elbow	
3	1	P34040	Tee	
4	1	P34047	Valve Alum. Block	For #8 Locking valve
5	1	P34131	Bi-Directional Locking Valve	#8, Poppet
6	1	P34133	Valve Alum. Block	For #10 Locking valve
7	1	P34132	Bi-Directional Locking Valve	#10, Poppet
8	1	P34020	Elbow	
9	1	P34050	Adapter	
10	1	P34046	Filter	
11	1	P34044	Adapter	
12	1	P34048	Tee	
13	1	P34135	Straight Adapter	
14	1	P34137	Elbow	
15	1	P34154	3way/2pos valve	"A" valve

POWER UNIT PARTS

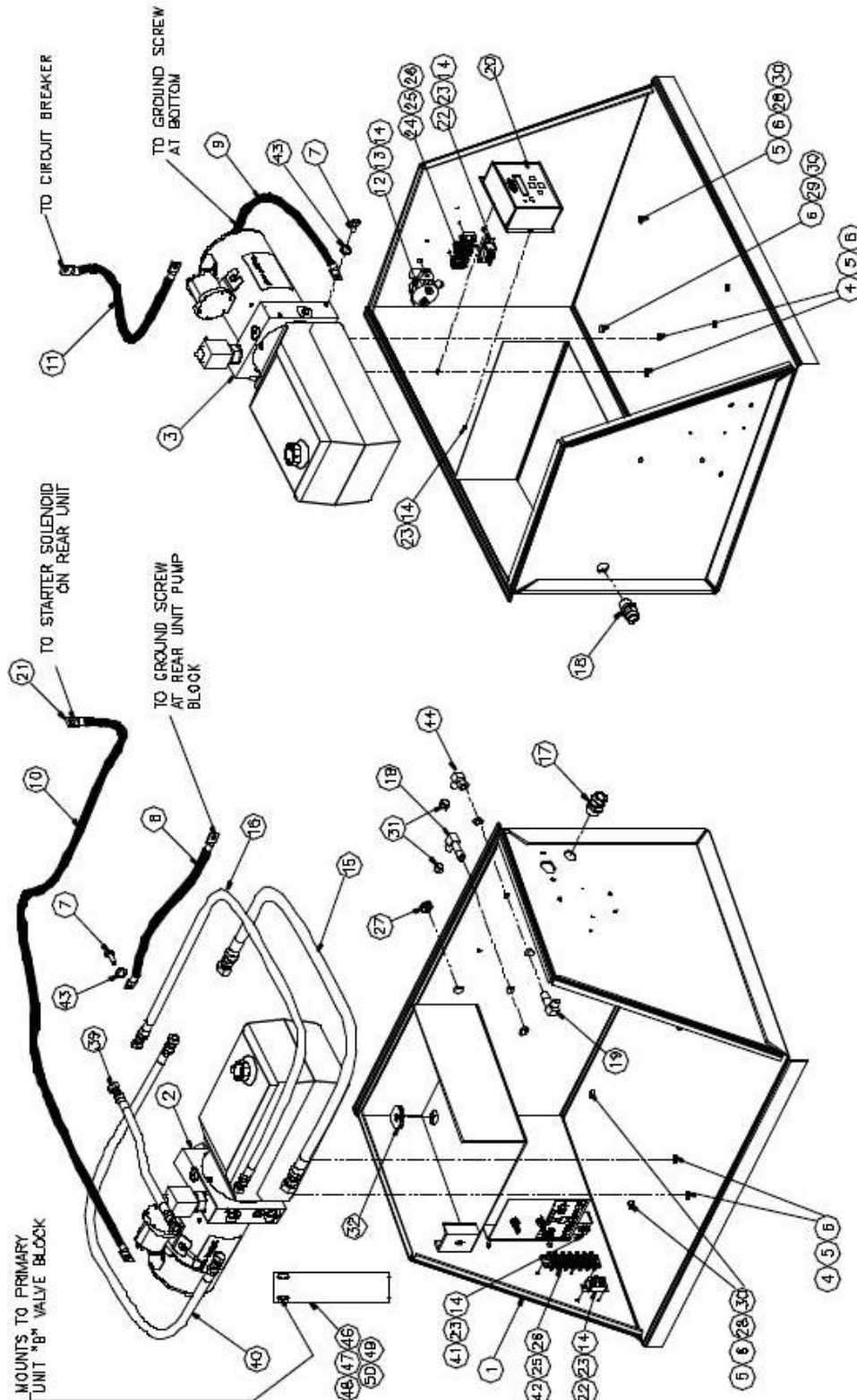
DUAL GRAVITY DOWN UNIT SECONDARY UNIT (REAR, CA-501-430)



Index No.	Qty.	Part Number	Part Name	Material Size/Notes
1	1	P34117	Monarch Power Unit	
2	1	P34044	Adapter	
3	1	P34051	Elbow	
4	1	P34134	Elbow	
5	1	P34154	3way/2pos Valve	"A" valve

POWER UNIT ASSEMBLY

DUAL GRAVITY DOWN ASSEMBLY (DA-501-433)



POWER UNIT ASSEMBLY

DUAL GRAVITY DOWN ASSEMBLY (DA-501-433)

Index No.	Qty.	Part Number	Part Name	Material Size/Notes
1	1	CA-658-323	Enclosure Assy.	
2	1	CA-501-429	Primary Power Unit	
3	1	CA-501-430	Secondary Power Unit	
4	4	P10526	Hex Bolt	3/18-16 x ¾
5	7	P26017	Split Lock Washer	3/8
6	11	P26501	Flat Washer	3/8
7	2	P10534	HH Cap Screw	5/8-18 x ¾
8	1	P46627	Battery Cable – Black	6 in
9	1	P46627	Battery Cable – Black	12 in
10	1	P46127	Battery Cable – Red	18 in
11	1	P46127	Battery Cable – Red	12 in
12	1	P46405	Circuit Breaker	
13	2	P18519	Screw	10-24 x 1
14	8	P23504	Lock Nut	10-24
15	1	AT-501-424-035	Hose Assembly	
16	1	AT-501-354-027	Hose Assembly	
17	1	P46139	Cord Grip	
18	1	P46445	Cord Grip	
19	2	P34106	Bulkhead Elbow	9/16-18 JIC (M)
20	1	P46608H	Maintenance Minder®	
21	8	P46403	Battery Terminal	3/8-16
22	2	P46236	20 AMP Circuit Breaker	
23	7	P19501	Screw	
24	1	P46474	Terminal Block	
25	4	P19519	Screw	
26	4	P23535	Lock Nut	
27	1	P25181	Grommet	
28	3	P10501	Bolt	3/8-16 x 1 G-2
29	1	P23538	Nut	3/8-16
30	4	P23501	Lock Nut	3/8-16
31	2	P34004	Cap Nut	9/16-18 27 Deg.
32	1	P25136	Grommet	
33	1	CA-551-474	Power Unit Elect. Assy	
34	1	P55337	Important Instruction Decal	
35	1	P55338	Fault Codes Decal	
36	1	P48007	Foam Tape	122In.
37	1	BA-551-475	Walk Around Electrics	

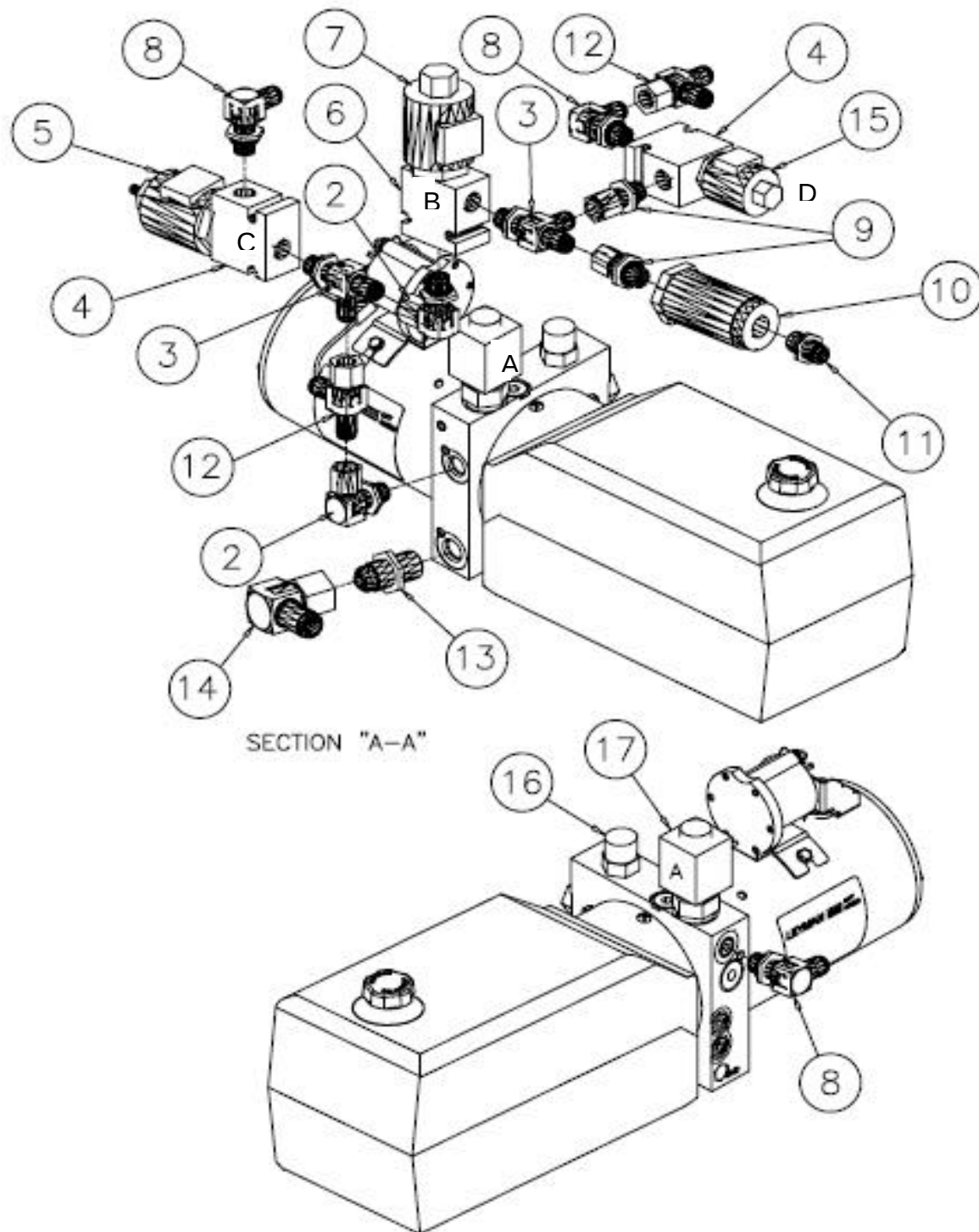
POWER UNIT ASSEMBLY

DUAL GRAVITY DOWN ASSEMBLY (DA-501-433)

Index No.	Qty.	Part Number	Part Name	Material Size/Notes
38	1	P55401	Elec/Hyd Diagram Decal	
39	1	AT-501-354-015	Hose Assy.	
40	1	AT-501-354-036	Hose Assy.	
41	1	P46487	Relay	
42	1	P46449	Terminal Block	
43	2	P27027	Lock Washer	5/16
44	1	P34051	Elbow	9/16 JIC (M) – 9/16 (F)
45	1	P55407	General Tips Decal	
46	1	AP-658-339	Valve Support Bracket	
47	6	P26001	¼ Flat Washer	
48	2	P10567	¼-20 x 2 HHCS	
49	4	P23502	¼ Lock Nut	
50	2	P10517	¼-20 x 5/8 HHCS	
51	1	P55185	Fold/Unfold Decal	

POWER UNIT PARTS

DUAL POWER DOWN UNIT PRIMARY UNIT (FRONT, CA-501-435)



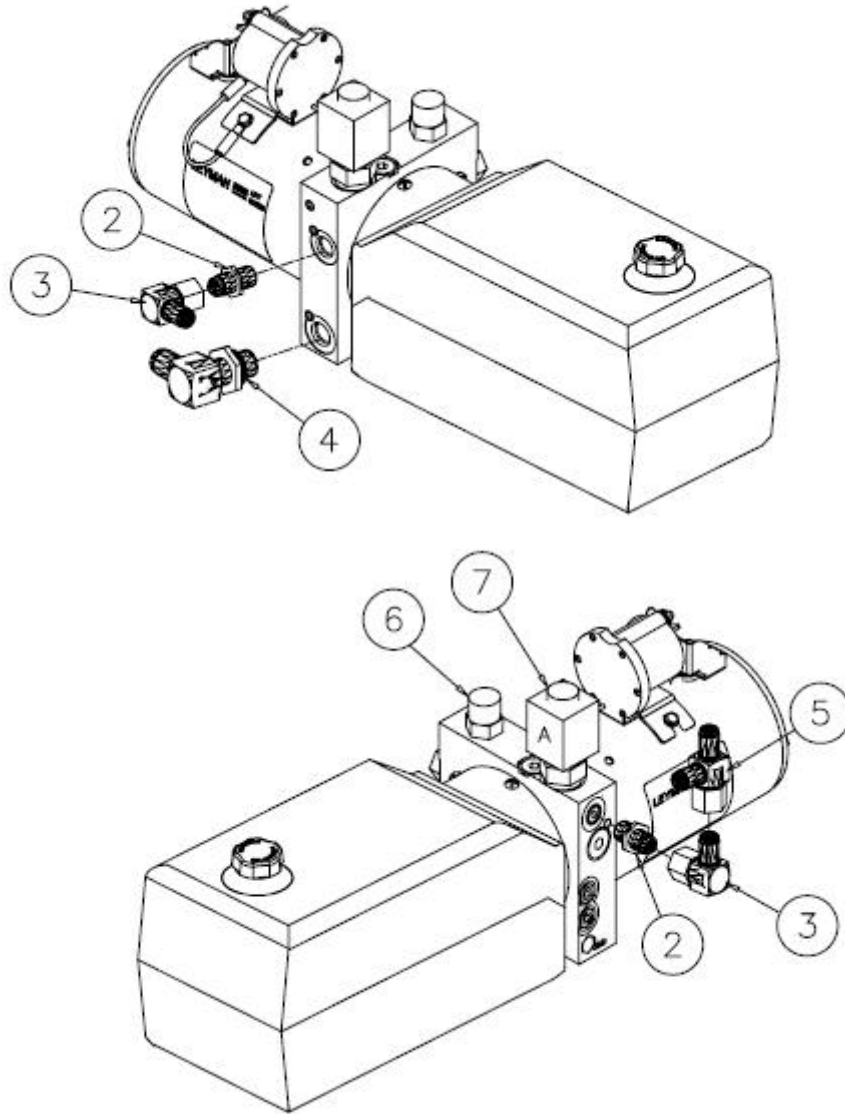
POWER UNIT PARTS

DUAL POWER DOWN UNIT PRIMARY UNIT (FRONT, CA-501-435)

Index No.	Qty.	Part Number	Part Name	Material Size/Notes
1	1	P34118A	Monarch Power Unit	
2	2	P34045	Elbow	
3	2	P34040	Tee	
4	2	P34047	Valve Alum. Block	For #8 Locking valve
5	1	P34131	Bi-Directional Locking Valve	#8, Poppet
6	1	P34133	Valve Alum. Block	For #10 Locking valve
7	1	P34132	Bi-Directional Locking Valve	#10, Poppet
8	2	P34020	Elbow	
9	2	P34042	Adapter	
10	1	P34046	Filter	
11	1	P34044	Adapter	
12	2	P34048	Tee	
13	1	P34135	Straight Adapter	
14	1	P34137	Elbow	
15	1	P34091	Locking Valve	#8, Poppet
16	1	P46693	Pressure Switch	
17	1	P34155	4way/2pos valve	"A" valve

POWER UNIT PARTS

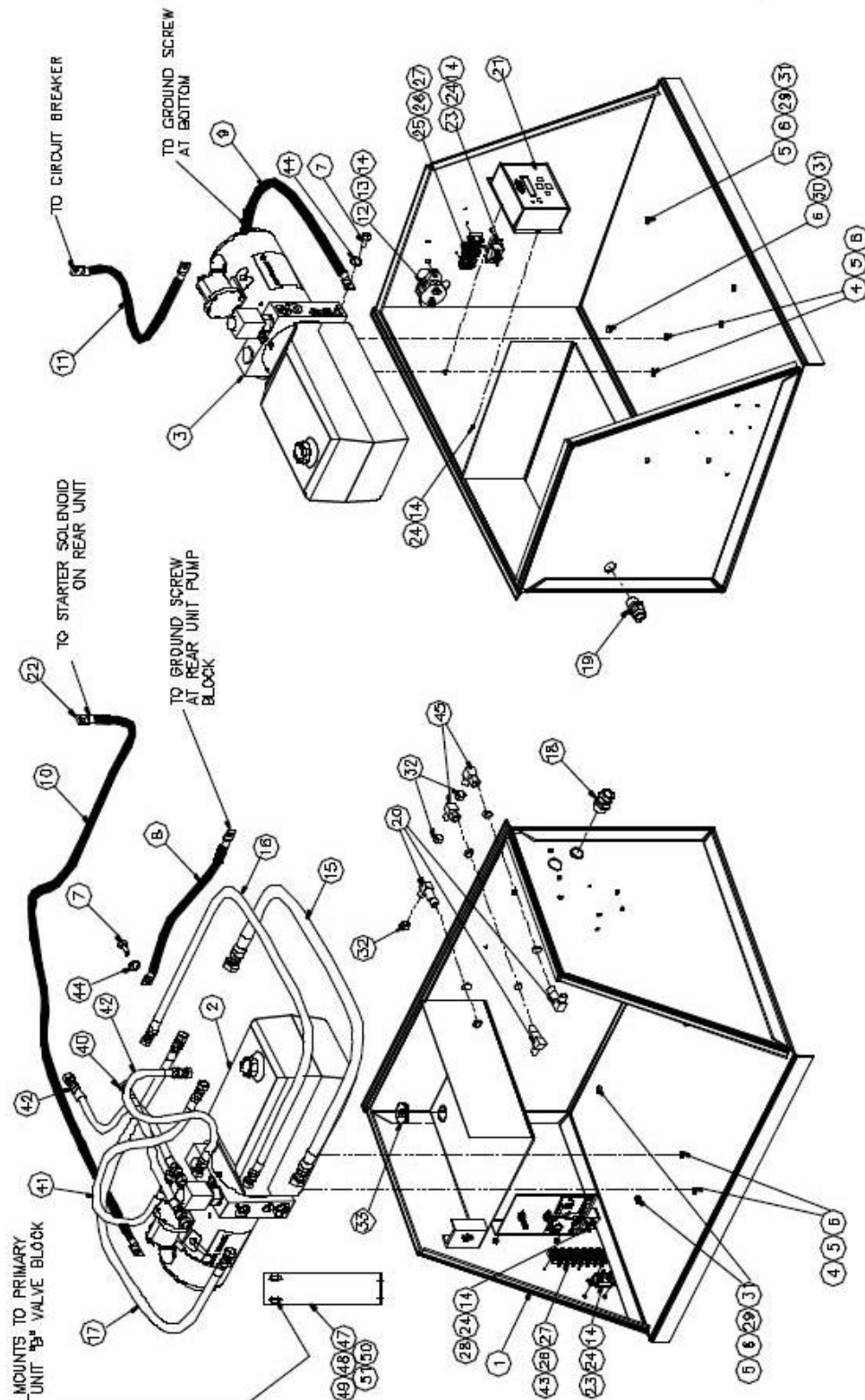
DUAL POWER DOWN UNIT SECONDARY UNIT (REAR, CA-501-436)



Index No.	Qty.	Part Number	Part Name	Material Size/Notes
1	1	P34118A	Monarch Power Unit	
2	2	P34044	Adapter	
3	2	P34051	Elbow	
4	1	P34134	Elbow	
5	1	P34048	Tee	
6	1	P46693	Pressure Switch	
7	1	P34155	4way/2pos valve	"A" valve

POWER UNIT ASSEMBLY

DUAL POWER DOWN ASSEMBLY (DA-501-434)



POWER UNIT ASSEMBLY

DUAL POWER DOWN ASSEMBLY (DA-501-434)

Index No.	Qty.	Part Number	Part Name	Material Size/Notes
1	1	CA-658-323	Enclosure Assy.	
2	1	CA-501-435	Primary Power Unit	
3	1	CA-501-436	Secondary Power Unit	
4	4	P10526	Hex Bolt	3/18-16 x ¾
5	7	P26017	Split Lock Washer	3/8
6	11	P26501	Flat Washer	3/8
7	2	P10534	HH Cap Screw	5/8-18 x ¾
8	1	P46627	Battery Cable – Black	6 in
9	1	P46627	Battery Cable – Black	12 in
10	1	P46127	Battery Cable – Red	18 in
11	1	P46127	Battery Cable – Red	12 in
12	1	P46405	Circuit Breaker	
13	2	P18519	Screw	10-24 x 1
14	9	P23504	Lock Nut	10-24
15	1	AT-501-424-035	Hose Assembly	
16	1	AT-501-354-027	Hose Assembly	
17	1	AT-501-354-036	Hose Assembly	
18	1	P46139	Cord Grip	
19	1	P46445	Cord Grip	
20	3	P34106	Bulkhead Elbow	9/16-18 JIC (M)
21	1	P46608H	Maintenance Minder®	
22	8	P46403	Battery Terminal	3/8-16
23	2	P46236	20 AMP Circuit Breaker	
24	7	P19501	Screw	
25	1	P46474	Terminal Block	
26	4	P19519	Screw	
27	4	P23535	Lock Nut	
28	1	P46487	Relay	
29	3	P10501	Bolt	3/8-16 x 1 G-2
30	1	P23538	Nut	3/8-16
31	4	P23501	Lock Nut	3/8-16
32	2	P34004	Cap Nut	9/16-18 27 Deg.
33	1	P25136	Grommet	
34	1	CA-551-474	Power Unit Elect. Assy	
35	1	P55337	Important Instruction Decal	
36	2	P27027	Lock Washer	5/16
37	1	P48007	Foam Tape	122 in.

POWER UNIT ASSEMBLY

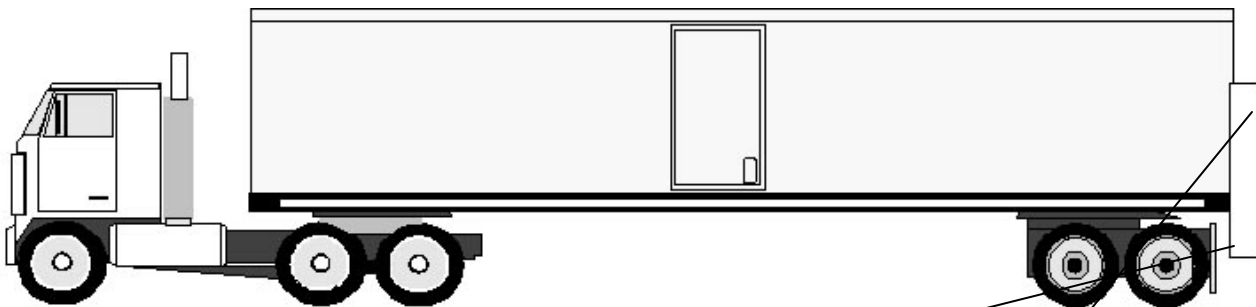
DUAL POWER DOWN ASSEMBLY (DA-501-434)

Index No.	Qty.	Part Number	Part Name	Material Size/Notes
38	1	BA-551-477	Walk Around Electrics	
39	1	P55402	Elec/Hyd Diagram Decal	
40	1	AT-501-354-015	Hose Assembly	
41	1	AT-501-354-020	Hose Assembly	
42	2	AT-501-354-013	Hose Assembly	
43	1	P46449	Terminal Block	
44	2	P27027	Lock Washer	5/16
45	2	P34051	Elbow	9/16 JIC (M) – (F)
46	1	P55412	General Tips – PWR Down	
47	1	AP-658-339	Valve Support Bracket	
48	6	P26001	¼ Flat Washer	
49	2	P10567	¼ - 20 x 2 HHCS	
50	4	P23502	¼ Lock Nut	
51	2	P10517	¼ - 20 x 5/8 HHCS	
52	1	P55185	Fold/Unfold Decal	

INSTALLATION OF THE WARNING SIGNS/DECALS

STREET SIDE DECALS

Warning Signs and Decals will be replaced at any time
FREE OF CHARGE



P55295

Will receive two of these decals. One
goes on each side at bottom of outer mast

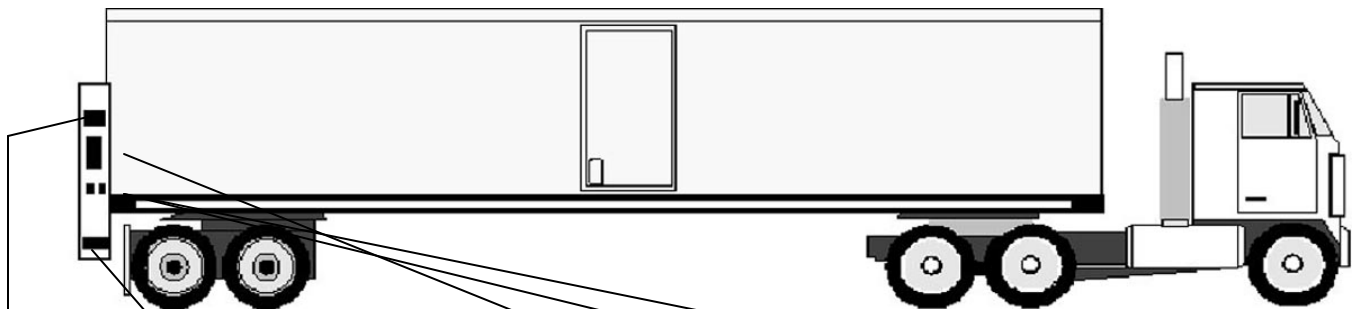


P55309

INSTALLATION OF THE WARNING SIGNS/ DECALS

CURB SIDE DECALS

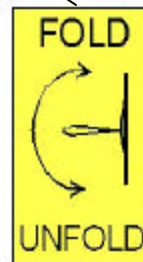
Warning Signs and Decals will be replaced at any time
FREE OF CHARGE



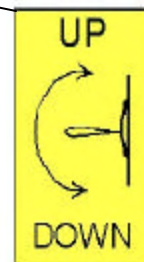
P55295



P55214 →



P55185

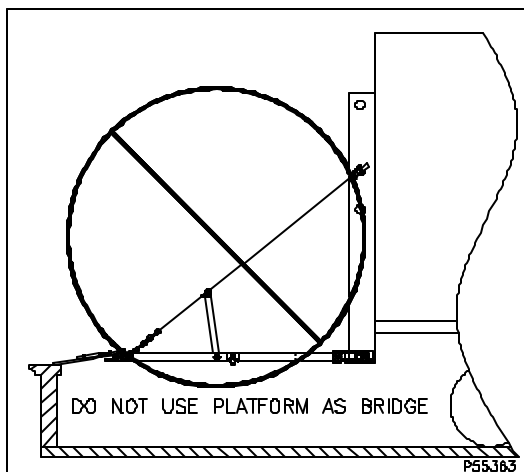


P55221

Mount each decal next to the
Corresponding toggle switch.



P55157



P55363

Will receive two of these decals. One goes on outer Mast as marked, the other goes on inner mast next to the switch

INSTALLING SAFETY DECALS

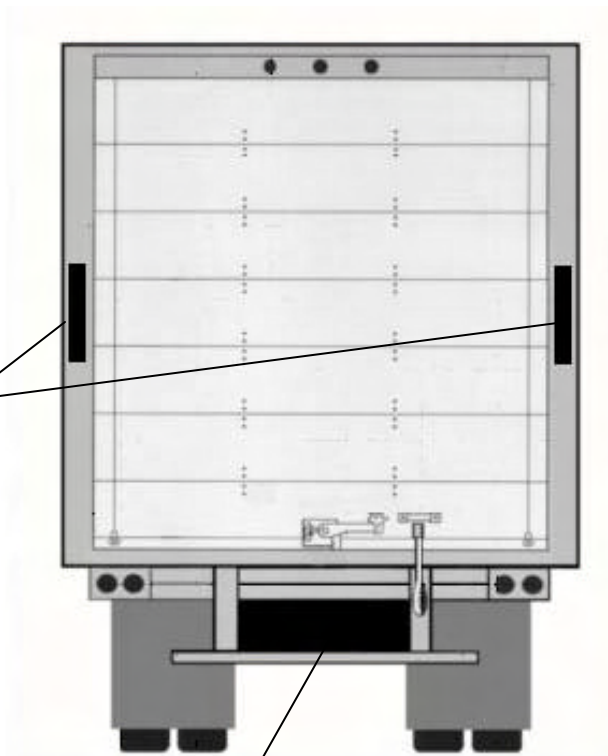
REAR OF VEHICLE DECALS

Warning Signs and Decals will be replaced at any time
FREE OF CHARGE



P55296

Will receive two of these decals
One goes on each side of the outer mast



CAUTION KEEP FEET FROM EDGE OF PLATFORM

P55138

MODEL AND SERIAL NUMBER TAGS

Serial No. is also located in MENU 1 of Maintenance Minder 2®

Serial number tag is located inside power unit box.

LEYMAN  LIFT GATES	
10900 KENWOOD ROAD CINCINNATI, OHIO 45242 513-891-6210 WWW.LEYMANLIFT.COM	
MODEL	FDC65RM-8084RRL
SERIAL NO.	269999
CAPACITY	6500 lbs.
MANUFACTURE DATE	12-15-06

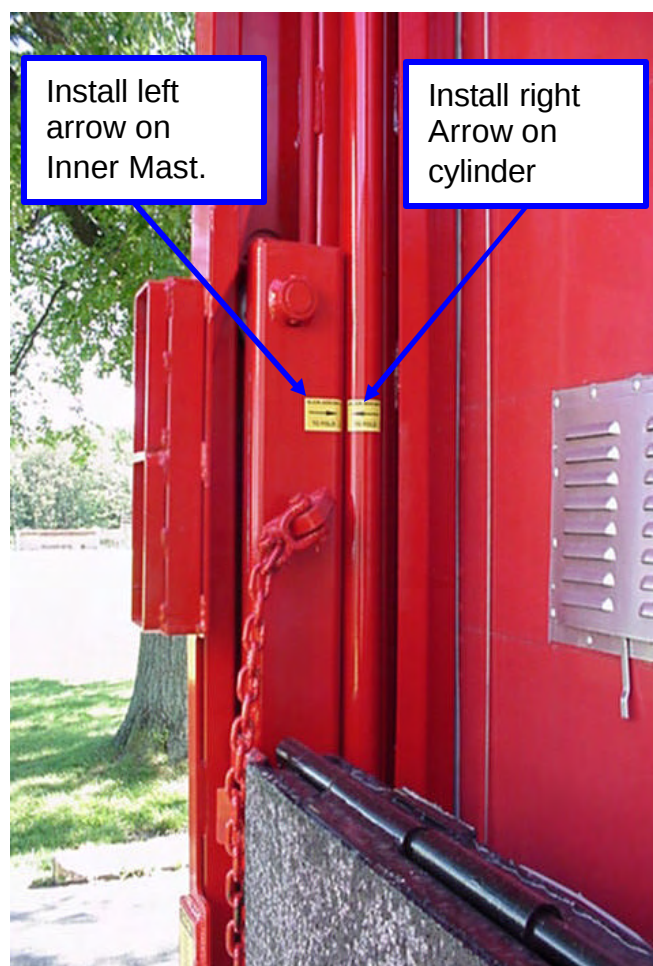
P55358

Model number tag is located on the left-hand outer mast.

LEYMAN  LIFT GATES	
10900 KENWOOD ROAD CINCINNATI, OHIO 45242 513-891-6210 WWW.LEYMANLIFT.COM	
MODEL	FDC65RM-8084RRL
CAPACITY	6500 lbs.
MANUFACTURE DATE	12-15-06
PATENTS PENDING	

AA-999-172

ALIGN ARROWS DECALS



P55417

Not shown: Max capacity decal.

Safety decal sets can be ordered complete under the following numbers

Set number	Description	capacity	Max Capacity decal (included in set)
AA-999-131	Decal set	3500 lbs.	P55211
AA-999-113	Decal set	4500 lbs.	P55193
AA-999-132	Decal set	5500 lbs.	P55194
AA-999-133	Decal set	6500 lbs.	P55301

Identification decal set (Model, Serial No., Vertical Leyman name decals) can be ordered under decal set **AA-999-146**. When ordering, the model and serial number must be specified.

[illegible]