

LEYMAN HIDE-A-WAY

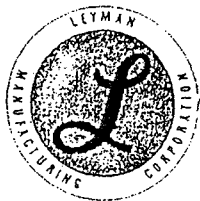
STG SERIES

INSTRUCTION

AND

REPAIR PARTS

MANUAL



LEYMAN MANUFACTURING CORPORATION

P.O. BOX 42393

CINCINNATI, OHIO 45242

A.C. 513 891-6210

In this folder are 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 in 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 weighing several hundred pounds.

Again, let us remind you that we have moving parts on this product weighing several hundred pounds, and when not under proper control can physically damage the operator. Because of the weights involved, carelessness, and training neglect make these units dangerous.

Do not overload this product, maintain it properly, stand clear of moving parts, and operate it as instructed.

This machine has a long life and will take some abuse. Just don't over do it.

Dates _____

Number _____

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GENERAL SPECIFICATIONS

CUSTOMER: _____

MODEL: **STG 2000** _____

CAPACITY: **000** _____

TYPE: **HIDE-A-WAY** _____

POWER: _____

PLATFORMS: _____

OPTIONS: _____

MAX. HEIGHT -

HYD. PRESSURE - LOADED 2000 P.S.I. AT PUMP

AMP DRAW -

POWER UP / GRAVITY DOWN

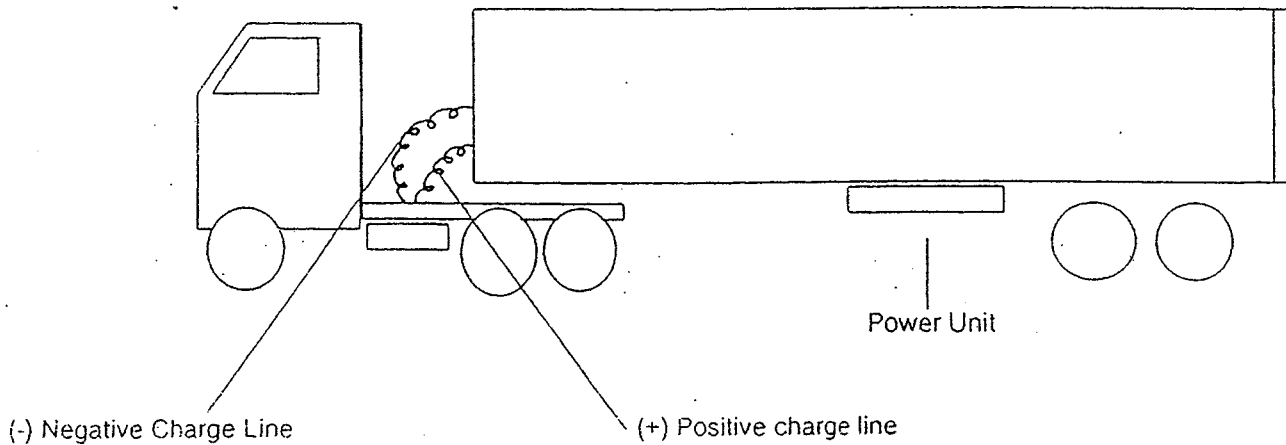
CAUTION

DUE TO THE NUMEROUS DIFFERENT TYPES AND GRADES OF STEELS AND ALUMINUMS USED IN THE PRODUCTION OF THE LIFTGATES NO MATERIAL MAY BE USED AS REPLACEMENT WITHOUT THE EXPRESSED WRITTEN PERMISSION OF LEYMAN MANF. CORP.

NOTE

THIS MANUAL REFLECTS MOST CHANGES AND UPDATES OF MATERIAL NUMBERS COMMON TO THIS TYPE OF LIFTGATES. SOME MAY DIFFER DUE TO CUSTOMER REQUIREMENTS. THIS MANUAL IS SET UP TO REFLECT COMMON ITEMS FOR ALL.

Grounding Recommendation for Tractor/ Trailers using the Maintenance Minder Starter Solenoid



The maintenance minder starter solenoid requires a minimum of 9.5 volts in order for the liftgate to operate. Utilization of a single positive cable does not provide sufficient ground. Therefore, recommended grounding for all tractor trailers with a liftgate is as follows:

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

And/or

2. Separate ground wire installed on chassis to 5th wheel on tractor.

NOTE: THE USE OF A BATTERY CHARGER AS THE SOLE POWER SOURCE TO OPERATE A LIFTGATE IS UNAUTHORIZED, AND WILL PREVENT THE LIFTGATE FROM WORKING PROPERLY. THE LIFTGATE MUST ALWAYS BE OPERATED IN CONJUNCTION WITH AT LEAST ONE 12 VOLT HEAVY DUTY LIFTGATE BATTERY. A MINIMUM OF 9.5 VOLTS MUST BE MAINTAINED IN ORDER FOR THE VALVES TO OPERATE.

STG
SERIES

OPERATING INSTRUCTIONS

CAUTION

BEFORE OPERATING THE LIFT, READ AND UNDERSTAND THIS DECAL, URGENT WARNING DECAL AND OWNER'S MANUAL.

DO NOT STAND IN FRONT OF LIFT GATE WHILE UNFOLDING OR USING PLATFORM.

WITH GATE IN THE OVER-THE-ROAD POSITION / STORED POSITION, DO THE FOLLOWING STEPS TO OPERATE GATE.

1. TO RELIEVE TENSION ON SAFETY CHAINS PUSH THE UP SWITCH (GATE WILL GO UP).
2. REMOVE SAFETY CHAINS FROM HOOKS ON EACH SIDE OF LIFT.
3. USE DOWN SWITCH TO LOWER LIFT UNTIL ARMS ARE PARALLEL TO THE GROUND.
4. STAND TO SIDE OF LIFT GATE. PUSH THE POWER IN/OUT SWITCH DOWN, GATE WILL RUN OUT, RUN GATE OUT UNTIL IT STOPS AND LOCKS IN ITS FULLY EXTENDED POSITION.
5. UNFOLD RAMP.

TO LOWER PLATFORM, USE THE DOWN SWITCH ONLY.

TO RAISE PLATFORM, USE THE UP SWITCH ONLY.

TO STORE GATE IN THE OVER-THE-ROAD POSITION:

1. RAISE PLATFORM OFF GROUND UNTIL ARMS ARE PARALLEL TO THE GROUND. (USE UP SWITCH)
2. FOLD RAMP OVER.
3. RAISE LOCKING BAR HANDLE AND PUSH THE IN/OUT SWITCH UP. RUN GATE ALL THE WAY UNDER TRAILER UNTIL LIFT STOPS.
4. RUN GATE UP. (USE UP SWITCH)
5. HOOK BOTH SAFETY CHAINS IN HOOKS ON EACH SIDE OF LIFT GATE.
6. LOWER GATE UNTIL CHAINS ARE TIGHT. (USE DOWN SWITCH)

LEYMAN MANUFACTURING CORPORATION

CINCINNATI, OH 45242
PHONE: (513) 891-6210

P55223

EMERGENCY HAND PUMP OPERATION

AN EMERGENCY HAND PUMP WAS SUPPLIED WITH THIS LIFT GATE TO ENABLE MANUAL OPERATION OF THE GATE IN THE EVENT OF A POWER FAILURE. THE INTERDED USE OF THIS HAND PUMP IS TO RESTORE THE GATE TO THE TRANSIT POSITION. DO NOT TRY TO OPERATE THE POWER UNIT WHEN USING THE HAND PUMP.

NOTE: ON GATES THAT ARE EQUIPPED WITH POWER IN AND OUT, THE CHAIN WILL HAVE TO BE DISCONNECTED TO MOVE THE GATE BACK. THIS CAN BE ACCOMPLISHED BY UNBOLTING THE CHAIN ANCHOR.

TO OPERATE THE HAND PUMP USE FIGURE 1, AND THE FOLLOWING INSTRUCTIONS:

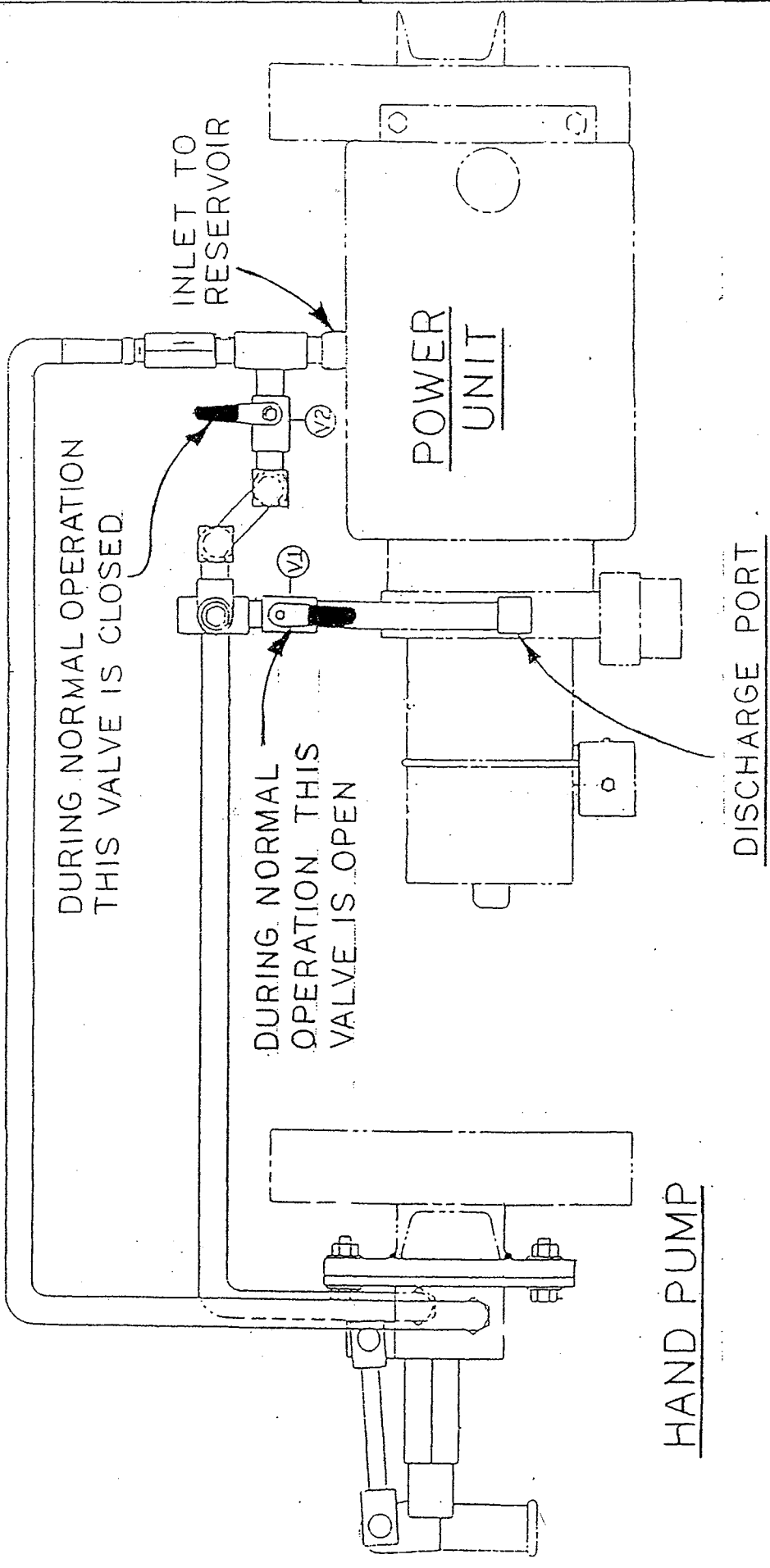
1. Locate valves V1 and V2 in the hydraulic circuit. V1 is in the pressure side of the hydraulic circuit, and close to the discharge port of the power unit. V2 is coupled directly or indirectly to the power unit reservoir.

TO RAISE PLATFORM:

2. Close valve V1.
3. Remove pump handle from holder and insert in hand pump socket.
4. Operate hand pump by moving handle back and forth.
5. Continue pumping until platform is high enough to attach stowing chains.
6. Manually push the platform all the way under the trailer. Attach safety chains to the snap hooks on each side of platform.
7. When stowing chains are attached to safety snap hooks, open valve V2. This will put tension in the stowing chains.

TO LOWER PLATFORM:

8. Platform can be lowered simply by opening valve V2 as done in step 6 of this procedure.



NOTE: VALVE ARE OPEN WHEN HANDLE IS PARALLEL WITH VALVE BODY

Trouble Shooting Chart

The following trouble shooting chart covers the standard power unit (stone 12 volt power unit) used with your HIDE-A-WAY gate. If your gate has an optional power unit, refer to the table of contents (optional power unit) when trouble shooting guide refers to std. 12 volt unit.

<u>Problem</u>	<u>Probable Cause</u>	<u>Remedy</u>
A. Platform will not go up or reach floor of vehicle.	1. Battery Low	1. Recharge Battery
	2. Slave Line disconnected or loose connections (Battery & motor).	2. Connect slave line properly. Tighten loose connections to battery & motor.
	3. Drain valve stuck open.	3. Check to see if drain valve is hot. Allow to cool and restart. If problem persists, replace drain valve.
	4. Insufficient oil in power unit tank.	4. Fill tank
	5. Poor switch connections.	5. Clean & check switch connections
B. Platform will not lower.	1. Battery low	1. Recharge battery
	2. Drain valve jammed in closed position.	2. See A3
	3. Poor switch connections.	3. Clean & check switch connections.
C. Platform does not go up smoothly.	1. Insufficient oil in power unit tank	1. Fill tank.
	2. Dirt or foreign material in rail guides.	2. Clean rail guides with steam and lubricate with grease. Use BG grease part # 600
	3. Mechanical wear.	3. Replace worn parts.

<u>Problem</u>	<u>Probable Cause</u>	<u>Remedy</u>
D. Platform creeps down	1. Hydraulic Leak	1. Check all hoses and fittings
	2. Cylinder seals failing	2. Replace cylinder seals.
	3. Dirt under ball of check valve, pitted or worn ball or weak spring	3. See pages
	4. Drain valve stuck partially open	4. See A3
E. Platform goes down slow	1. Improper adjustment of release stem in drain valve	1. Adjust drain valve stem, see,
	2. Insufficient lubrication on roller tracks and roller bearings	2. Lubricate roller tracks and roller bearings. Use BG grease - part # 600
	3. Excessive wear of mechanical components	3. Insure free movement of all mechanical parts
	4. Restriction in hydraulic system	4. Check all hydraulic system components.
	5. Incorrect hydraulic oil in system for cold weather application	5. Use Mobil DTE 13 in cold weather.

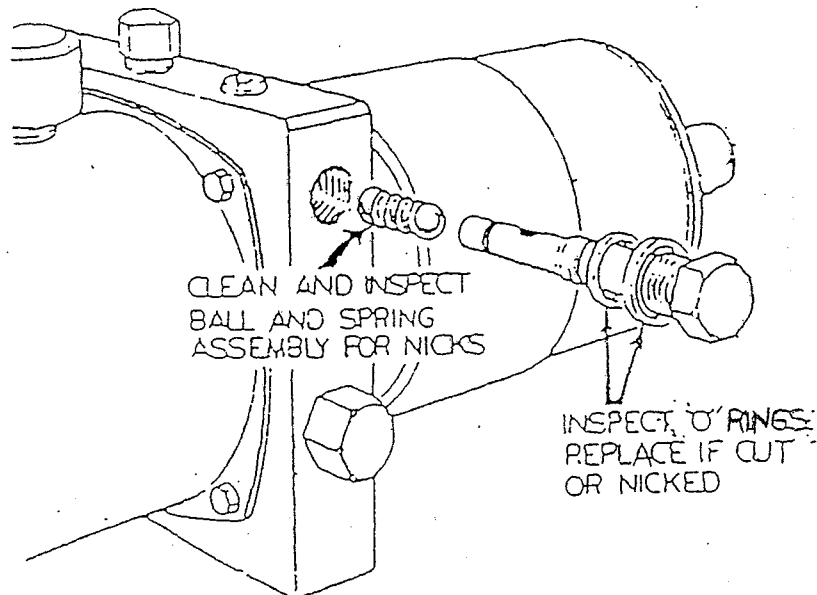
<u>Problem</u>	<u>Probable Cause</u>	<u>Remedy</u>
F. Platform comes down crooked	1. Flow control not adjust ABLE	1 REPLACE flow control
	2. Dirt in hydraulic line at bottom of ram	2. Clean hydraulic line and bleed rams
	3. Mechanical bind on (1) side of gate	3. Clean and regrease roller track, use BG grease - part # 600, check wear of parts and replace
G. Gate will not lift rated load	1. Relief valve setting is too low	1. Adjust relief valve
	2. Hydraulic pump worn	2. Change pump
	3. Drain valve stuck open	3. See A3
	4. Battery too low	4. Recharge battery to full charge
H. Pump will not operate	1. Battery too low	1. Recharge battery, check to see if slave line has good connection
	2. Electrical hookup to motor not making contact	2. Clean connections & retighten
	3. Control switches not making good contact	3. Clean and check connections
	4. Solenoid switch on motor faulty	4. Replace solenoid switch

General Maintenance

This section covers the detail information for the remedy column in the trouble shooting guide.

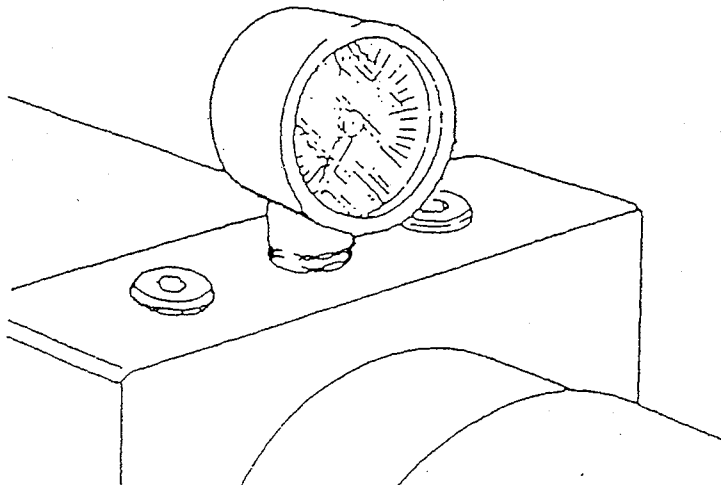
3.1 CHECK VALVE MAINTENANCE

The check valve can be removed, cleaned and inspected.



3.2 RELIEF VALVE MAINTENANCE

1. Lower gate platform to the ground. Locate power unit. Disconnect pressure line from power unit. Install a 3000 PSI pressure gauge with a 3/8 N.P.T. male thread into pressure port.



3.3 PUMP ASSEMBLY AND FILTER

Drain reservoir and remove from unit. Check filter for dirt or sludge. If filter is clean, the pump is at fault. Change pump assembly per parts breakdown

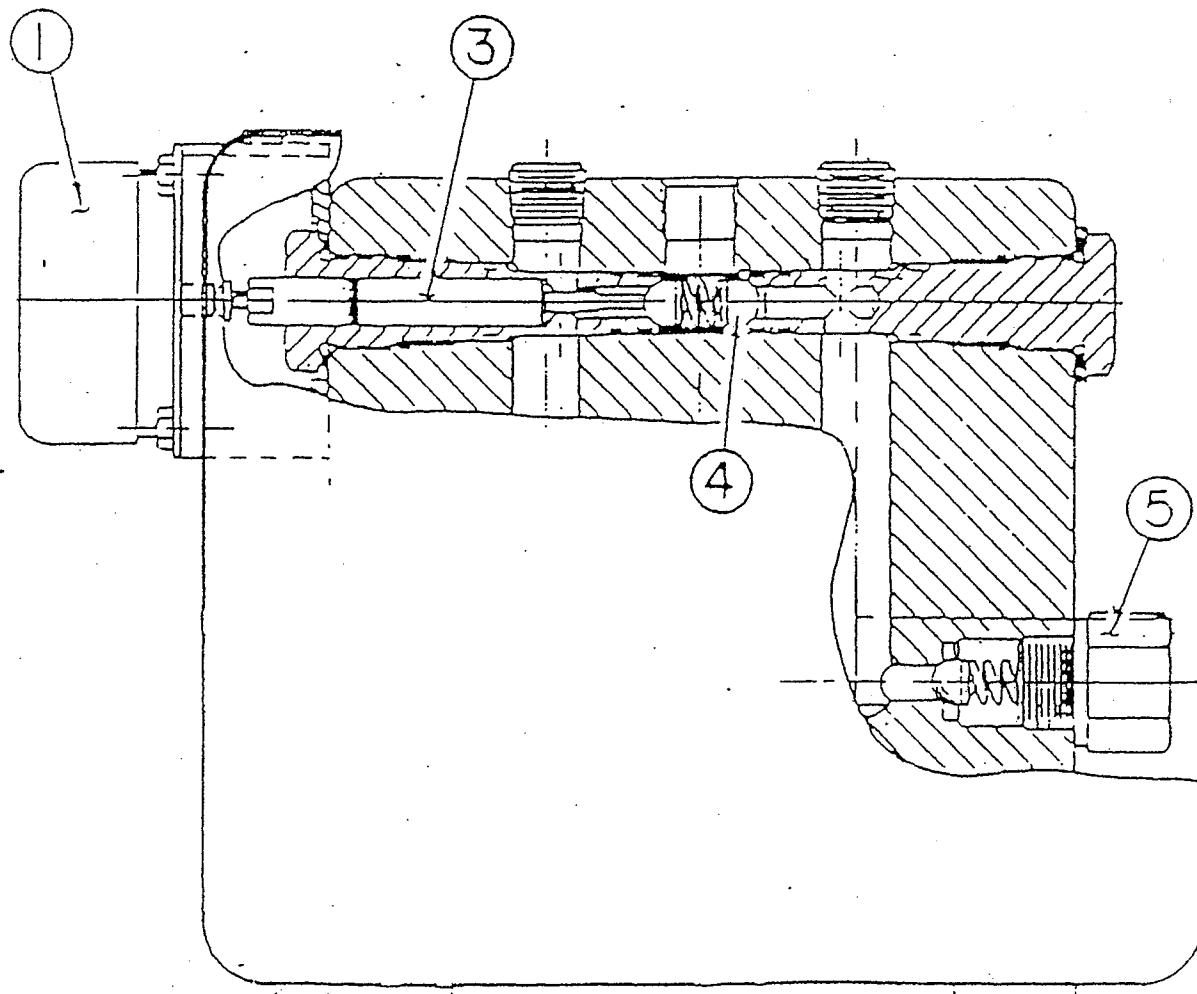
3.4 BATTERY GROUND

Insure battery has a good clean ground to power pack frame.

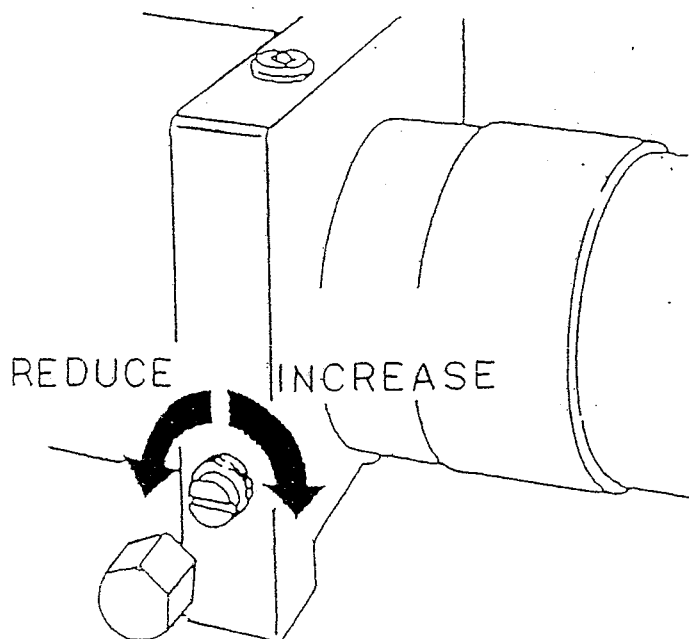
3.5 ADJUSTMENT OF DRAIN VALVE

PRINCIPLE OF OPERATION

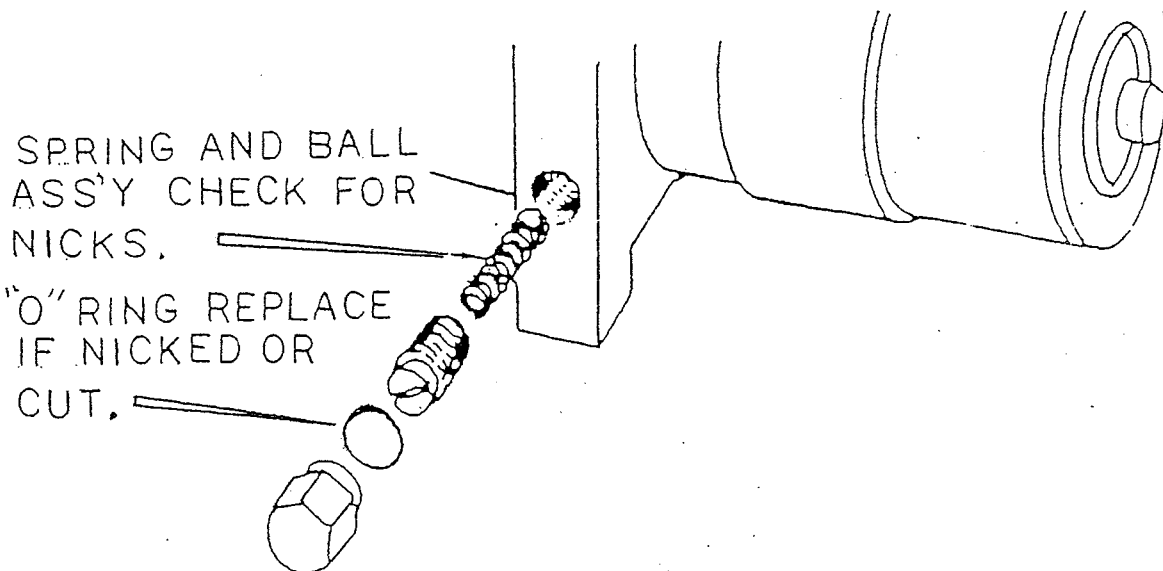
When the motor is operated, oil from the pump lifts the check valve ball (4) off its seat and flows out the outlet port. The adjustable relief valve (5) operates as a safety valve to prevent excessive pressure build up. When the motor is stopped, the check valve and release balls prevent fluid from flowing into the tank. When the DC solenoid (1) is energized, the armature shaft strikes the release stem (3) to knock the drain valve ball off its seat, allowing the fluid to drain and/or be metered back to the tank, depending upon the drain valve adjustment.



Remove hex cap from motor block. Push "UP" switch. Adjust relief pressure to 1800 PSI. After adjustment, press "UP" switch a few times to check pressure setting. Reinstall hydraulic pressure line and bleed all air from system.



If the relief pressure cannot be set properly, it may be necessary to remove and inspect the relief valve.



NOTE:

DO NOT SET RELIEF VALVE HIGHER THAN REQUIRED OR THE UNIT MAY BE DAMAGED.

TOOLS REQUIRED TO ADJUST DRAIN VALVE

- (1) 1/4" Hex Socket for 8-32 Thread Forming Screws (2) on Solenoid (1) and Solenoid Mounting Bracket Cover (3)
- (1) 3/8" Open End Wrench - Solenoid Terminal Nut (4)
- (2) 5/16" Open End Wrenches

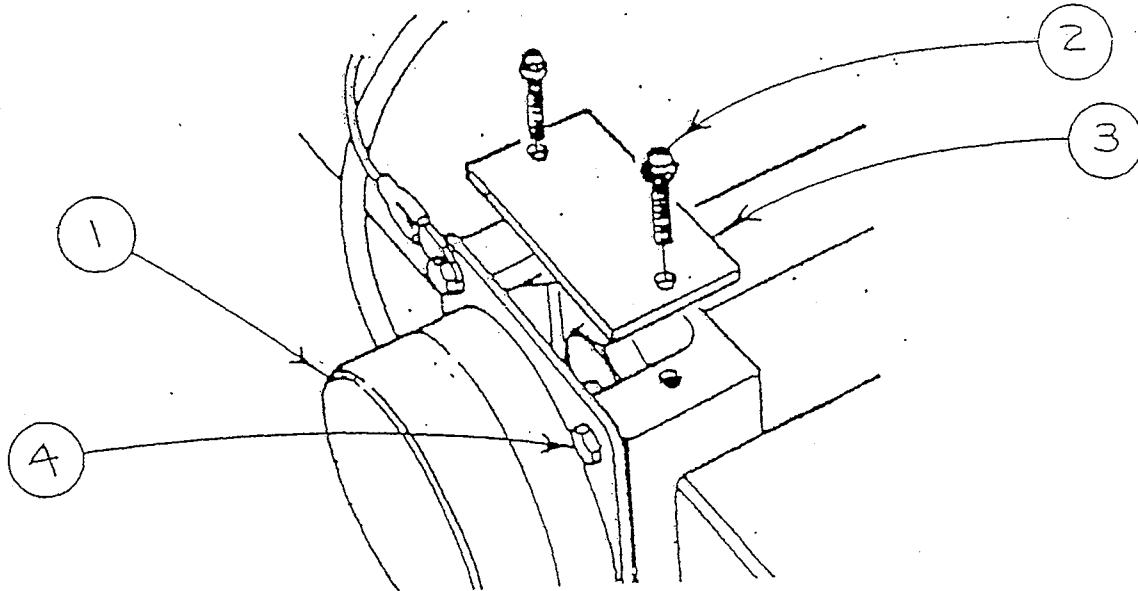
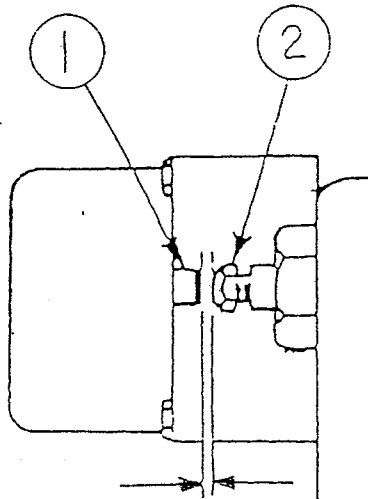


Illustration A

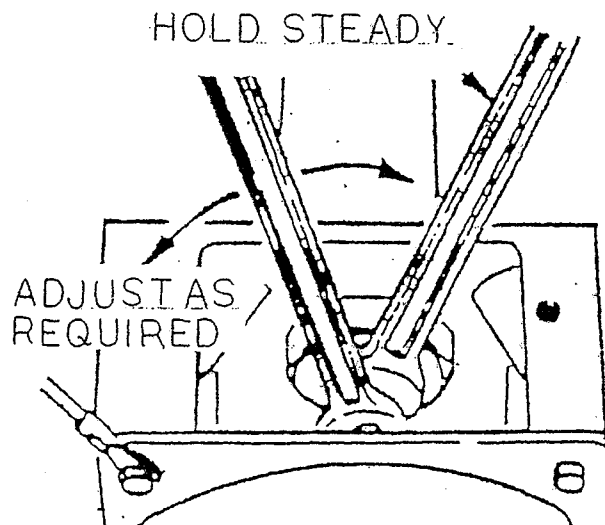
HOW TO ADJUST DRAIN VALVE

1. Remove the Solenoid Mounting Bracket Cover (3). Use 1/4" socket.
2. The Drain Valve Adjusting Screw (2) should be turned in clockwise, use two 5/16" OE wrenches, so that when the Solenoid (1) is energized there is a gap between the Solenoid Armature Shaft End (1) and Screw Head (2). See Illustration B.



ADJUSTING SCREW/
PLUNGER CAP

3. Introduce a pressure load on the hydraulic system.
Operate Pump/Motor with a load. (i.e., lift a small load off the ground slightly.)
4. With Solenoid energized (keep it on) and using two 5/16" wrenches, back out (CCW) Drain Valve Adjusting Screw so that it touches the Solenoid Armature Shaft End.



5. The Drain Valve Adjusting Screw is backed out an additional $\frac{1}{4}$ to $\frac{1}{2}$ turn to achieve the desired setting. The load should lower by this action. This setting of approximately .033 air gap before energizing and a .010" Ball lift-off allows the Solenoid to develop its maximum designed force with 75% of nominal voltage.
6. De-Energize the Solenoid.
7. Cycle the unit (raise the load) several times to check lowering rate. Turning the Screw in (CW) will slow the lowering rate (Ball isn't pushed off the seat as far), turning the Screw out (CCW) will speed the lowering rate. It also decreases the strength of the solenoid force.

INSTALLATION HELPS

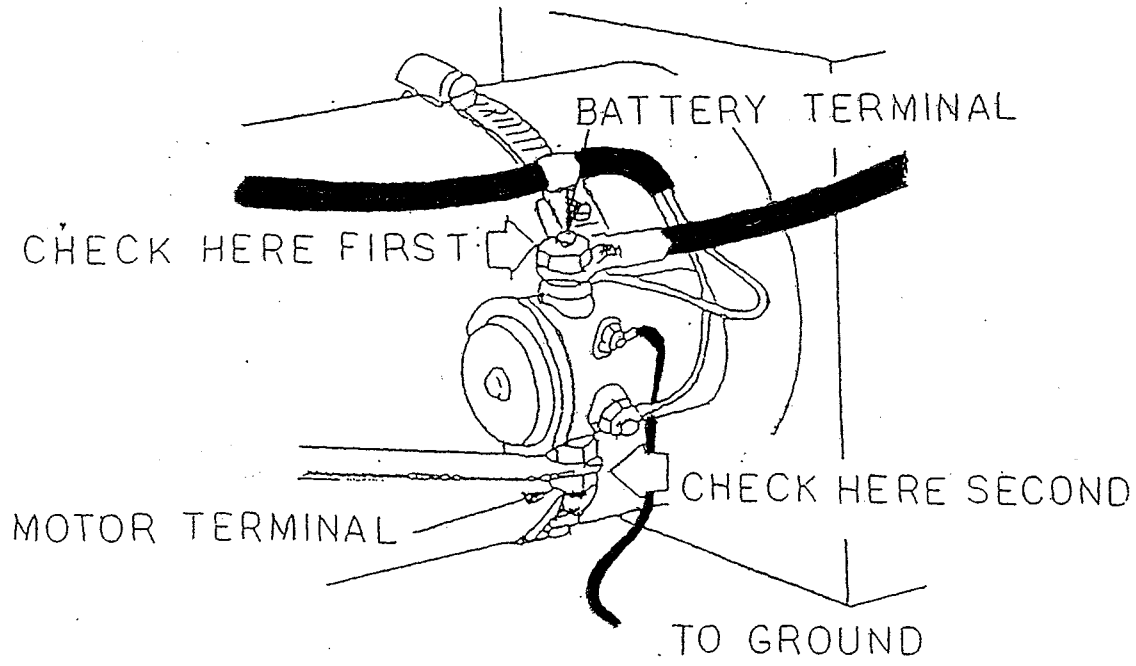
1. Don't overtorque the 8-32 Thread Forming Screws (2) or you'll strip them out. (30" lbs. to seat Screw).
2. Check Solenoid Armature Shaft for free movement - should have 1/16"+ movement.
3. Check Drain Valve Stem (with Solenoid removed) for movement - should push in with thumb pressure and spring back.
4. The Solenoid (1) has a 25% duty cycle rating (1:3 ratio "on" time to "off" time between cycles.) The D.C. Solenoid won't burn out if the Armature does not fully stroke (bottom out); however, the Solenoid does have a maximum "on time" of 30 minutes after which it requires 1-1/2 hours cooling off. A lower Voltage than its rating will reduce the force of the Solenoid.

SOLENOID SWITCH MAINTENANCE

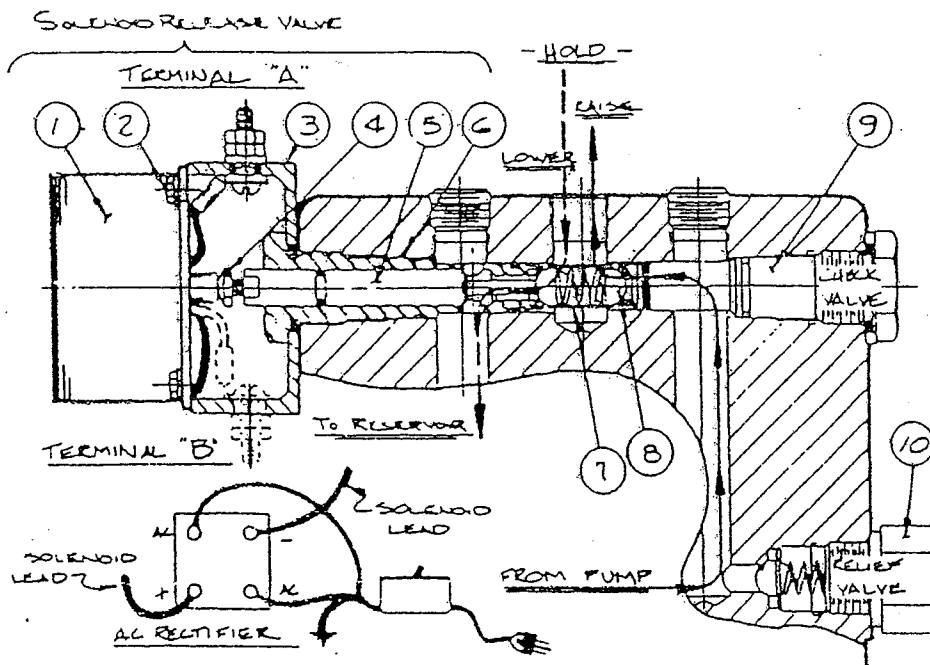
Check to see if power is being supplied to battery terminal on pump solenoid switch using a Volt/OHM meter

Check for 12 volts on solenoid terminal to motor while operating remote switch.

If 12 volts is NOT available, replace solenoid. If 12 volts is available, replace motor.



GENERAL INSTRUCTIONS FOR CHANGING OUT AND/OR ADJUSTING A STONE D.C. SOLENOID OPERATED N.C. (NORMALLY CLOSED) RELEASE VALVE.



HOW THE UNIT OPERATES

When the Motor is operated, oil from the Pump lifts the Check Valve Ball (8) off its seat and flows out the outlet port. The adjustable Relief Valve (10) operates as a safety valve to prevent excessive pressure build up. When the Motor is stopped, the Check Valve and Release Valve Balls prevent the load from dropping. When the DC Solenoid (1) is energized the Armature Shaft strikes the Release Stem (5) to knock the Release Valve Ball off its seat allowing the fluid to drain and/or be metered back to Reservoir depending upon the Release Valve adjustment.

HOW TO ADJUST RELEASE VALVE

- (1) Remove the Solenoid Mounting Bracket Cover (1/4" socket).
- (2) The Release Valve Adjusting Screw (4) should be turned in (clockwise) (2-5/16 OE wrenches) so that when the Solenoid (1) is energized there is a gap between the Solenoid Armature Shaft End and the Screw Head.
- (3) Introduce a pressure load on the hydraulic system. Operate Pump/Motor with a load. (ie., lift a small load off the ground slightly).
- (4) With Solenoid energized (keep it on) and using (2) 5/16" wrenches, back out (CCW) Release Valve Adjusting Screw so that it touches the Solenoid Armature Shaft End.
- (5) The Release Valve Adjusting Screw is backed out an additional 1/4 to 1/2 turn to achieve the desired setting. The load should lower by this action. This setting of approximately .033" air gap before energizing and a .010" Ball lift-off allows the Solenoid to develop its maximum designed force with 75% of nominal voltage.
- (6) De-energize the Solenoid.

- (7) Cycle the unit (raise the load) several times to check lowering rate. Turning the Screw in (CW) will slow the lowering rate (Ball isn't pushed off the seat as far), turning the Screw out (CCW) will speed the lowering rate. It also decreases the strength of the solenoid force.

TOOLS REQUIRED

- (1) 1/4" Hex Socket for 8-32 Thread Forming Screws (2) on Solenoid (1) and Solenoid Mounting Bracket Cover.
- (1) 3/8" Open End Wrench - Solenoid Terminal Nut (A) (B).
- (1) Off-set Screw Driver with .045" blade width - Solenoid Terminals (A) (B).
- (2) 5/16" Open End Wrenches - (Release Valve Adjusting Screw (4) & Release Valve Stem Flats (5)).

INSTALLATION HELPS

- (1) Don't overtorque the 8-32 Thread Forming Screws (2) or you'll strip them out. (30" lbs. to seat Screw).
- (2) Check Solenoid Armature Shaft for free movement - should have 1/16"+ movement.
- (3) Check Release Valve Stem (5) for movement (with Solenoid removed) - should push in with thumb pressure and spring return.
- (4) The Solenoid (1) has a 25% duty cycle rating (1:3 ratio "on" time to "off" time between cycles.) The D.C. Solenoid won't burn out if the Armature does not fully stroke (bottom out); however, the Solenoid does have a maximum "on time" of 30 minutes after which it requires 1-1/2 hours cooling off. A lower Voltage than its rating will reduce the force of the Solenoid.
- (5) SOLENOID TERMINALS (A) & (B)

For Grounded D.C. System (usually identified by DC motor with one Terminal.) One Solenoid Lead is connected to the Insulated Terminal (A) (2 fiber Washers & an O Ring-internal) and the other Lead (stripped and without Stakon) is clamped (grounded) between the Mounting Bracket (3) and the mounting face of Solenoid (1).

(Isolated Case - Terminal B (made grounded) by removing fiber Washers & O Ring and using flat steel Washers.)

FOR INSULATED DC SYSTEM (Identified by 2 Terminal DC Motor) Stakon Solenoid Leads are connected to insulated (2 fiber Washers and an O Ring) Terminals (A) & (B).

CAUTION - connect Solenoid Leads to avoid catching in Armature Shaft and not to touch metal Mounting Bracket (3).

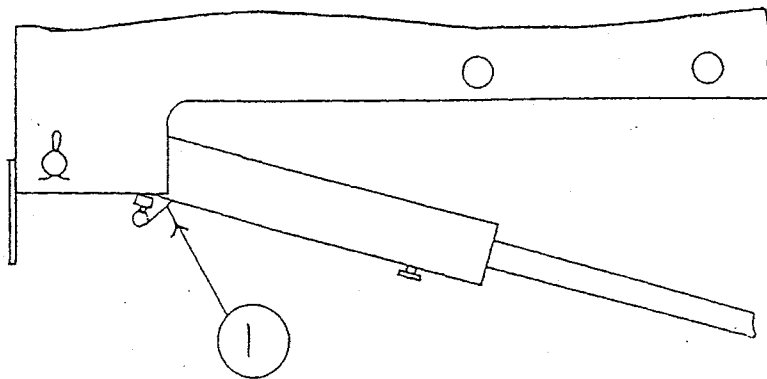
FOR AC SYSTEM - (uses a Rectifier to change Alternating Current Input to DC for the Solenoid). Terminals A & B are not used - Solenoid Leads with Female Disconnects are connected directly to Male Appliance Type Terminals on Rectifier (+ & -).

PREVENTATIVE MAINTENANCE

For trouble free operation, the following periodic checks should be observed:

A. HYDRAULIC SYSTEM

1. With the platform resting on the ground, check the oil reserve level. Be sure the oil reserve is full. If oil level is low, check the system for any sign of leakage, repair as required, and add hydraulic oil.
2. Do not allow contaminants to enter tank when filling.
3. Never use brake fluid.
5. Periodically visually inspect hydraulic cylinders (rams) for any sign of leaking. If there is leaking around the air breather (1), the packing inside the cylinder is bad and should be replaced.



*Recommended Hydraulic Oils and Lubrication
For
Leyman Lift Gates*

Level 1 - Hydraulic Oil (Normal Conditions)

<i>Manufacturer</i>	<i>Type</i>	<i>Temperature Range</i>
MOBIL	DTE	-10°F to +150°F
TEXACO	HD-31 or HD AZ 32	-10°F to +150°F
SHELL	TELLUP 32	-10°F to +150°F
GULF	HARMONY AW-32	-10°F to +150°F
ARCO	DURO AW 32	-10°F to +150°F
VALVOLINE	HD32 or AW 32 or ISO 32	-10°F to +150°F
CHEVRON	AWMV 32	-10°F to +150°F

Level 2 - (Cold Conditions)

MOBIL	DTE-11	-15°F to +150°F
SHELL	TELLUP -26	-15°F to +150°F
EXXON	UNIVIS -J-26	-15°F to +150°F

Level 3 - (Extreme Cold Conditions)

MOBIL	AERO-HFA	-50°F to +80°F
SHELL	AERO FLUID 4	-50°F to +80°F
EXXON	UNIVIS J13	-50°F to +80°F
MIL	H-5606	-50°F to +80°F

Lubrication Specifications:

Parts to Grease:

Use:

Guides & Rollers Use: >	Militec - 1 (800) 421-1048 #0 -40°F to +100°F #1 -20°F to +200°F
Hinge Barrels & Fittings Use: >	B.P. Products, Inc. Wichita KS Part # 60035-Multi Purpose Grease #35
Hinge Barrels (Center Platform) Use: >	W.W. Grainger Part # 6Y834-Needle Nose Adaptor for Grease Gun
Battery & Electrical Components Use: >	Bowman Battery Terminal Protector Part # 21948

B. SLIDES

1. At ground level check the slides for signs of dirt and or wear. Clean and lubricate with Lubriplate #130 or equivalent.
2. Check rollers for broken or bent parts. Replace as required, make sure nuts on roller shaft are tight.

C. ELECTRICAL SYSTEM

If it becomes necessary to replace the battery in your unit, be sure it is equivalent in capacity to the original 12 Volt System. The original battery is a 12 Volt Delco #1150.

1. Visually inspect the battery terminals and grounding cable for any sign of corrosion buildup. Clean if necessary.
2. Periodically check all electrical connections to insure proper contact.

D. MISCELLANEOUS

IMPORTANT: Never travel with pressure on the hydraulic system. Always make sure the platform is resting on the safety chain and hooked to snap hooks on platform before movement of the trailer. This is accomplished by raising the elevator to maximum height while in the stowed position, then connecting safety chain to snap hooks, Now momentarily press the "Down" button, this will also remove pressure from system.

LEYMAN MANUFACTURING CORPORATION
HIDE-A-WAY SIDE - DOOR GATE
SAFETY AND PREVENTIVE MAINTENANCE INSPECTION

Customer:	Vehicle No:
Location:	Liftgate No:

✓ = OK A = Adjusted N = Not Applicable ✖ = Write Up Repair

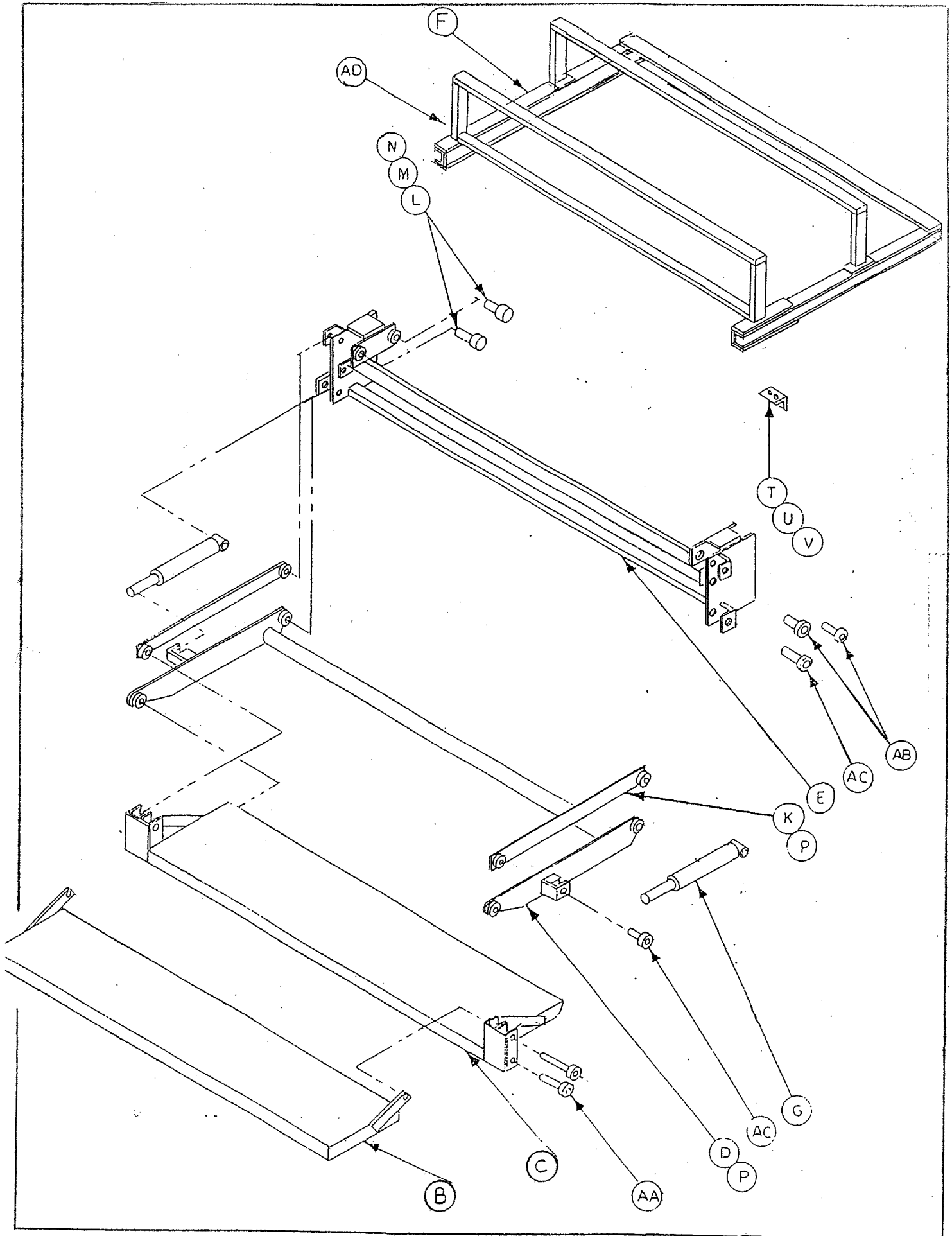
30	90	360	Motor / Pump and Components
			Check battery(ies) for water level and corrosion
			Check battery(ies) for proper charging level (see manual)
			Check solenoids for loose or corroded fittings and operation
			Check hoses and fittings for chaffing, rubbing and leaks
			Check reservoir for correct amount of fluid (platform on ground)
			Inspect fuse links and circuit breakers
			Check charge line and connections
			Remove and clean all Pump solinoids, coils and filters
			Replace hydraulic fluid in reservoir
			Check and adjust relief valve setting (see manual for settings)
			Replace motor solenoid
			Check brushes and armature in motor
30	90	360	Lubrication
			Lubricate bushing on parallel and lifts arms
			Lubricate bearings and rollers
			Clean and lubricate roller track
			Clean and lubricate chain sprockets
			Lightly lubricate platform hinges
			Soak drive chain in solution of 1/2 diesel fuel and 1/2 paint thinner
			Steam clean tracks and liftgate structure and re-lubricate
30	90	360	Liftgate Structure Inspection
			Operate liftgate, observe for correct operation
			Check bolts on angle stops in track, tighten if necessary
			Check ground cable connection on body of gate
			Check track for damage, repair as needed
			Check two hydraulic cylinders, collars and pins
			Check all bushings and pins, replace as necessary
			R and R roller bearings and clean and relubricate
			Steam clean and repair all structural welds
			Repaint where needed and replace all worn safety decals

Serviced by: _____ DATE _____
 Form 200
 Liftgate Maintenance

LEYMAN
HIDE-A-WAY

REPAIR PARTS

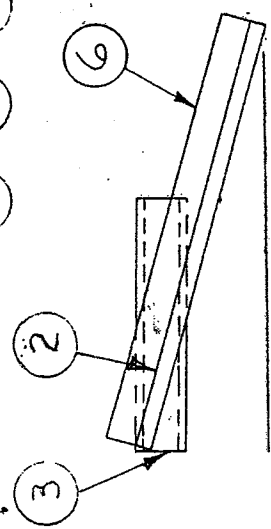
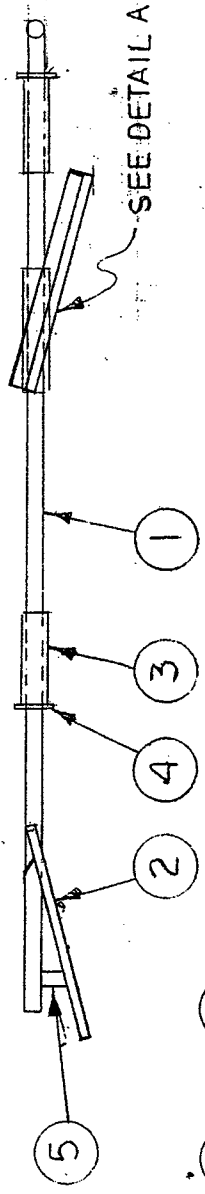
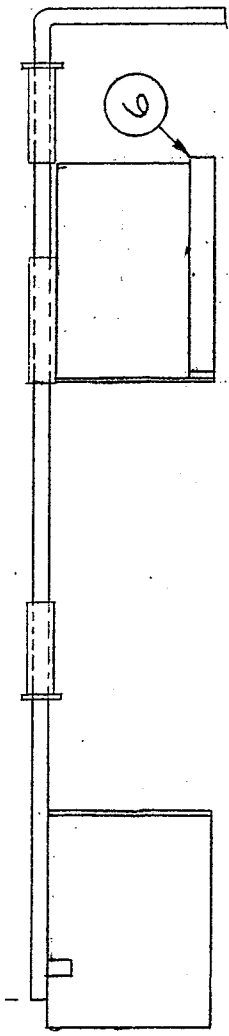
REPLACEMENT



GATE ASSY.	750-G
RAMP	
PLATFORM	
COMPRESSION (ARM)	750-0B3
SLIDE ASSY.	F750-0C
FRAME	L750-0C
HYDRAULICS	751-0B
ELECTRICS	BA551-
POWER IN/OUT	B750-0B
POWER UNIT	BA501-
POWER LINE	SL4022-
HAND PUMP	R5006-D
ROD LUBE KIT	RL5007-
CART STOP	B5001-12A
LOCK ASSY.	750-9B

AD	1		LOCK ASSY				
AC	4	V50010A1	PIVOT PIN				
AB	4	Q50010A3	PIVOT PIN				
AA	4	Q50010A4	PIVOT PIN				
Z							
Y	4		ADJUSTABLE FL STOP				
X	1	P38523	S HOOK				
W	1		LOCK (HOLD UP)				
V	4	P26004	WASHER				
U	4	P11030	BOLT				
T	2	A5002 2A	STOP				
S	2	5014 A	SAFETY SNAP HOOK				
R	2	P38515	OVER ROAD CHAIN				
P	12	P32012	GREASE				
N	4	P32015	GREASE				
M	4	P23523	LOCK NUT				
L	4	P37544	CAM ROLLER				
K	2	750-3 A	TENSION ARM				
J	1		POWER IN & OUT				
H	1		ELECTRICS				
G	1		HYDRAULICS				
F	1		FRAME				
E	1		SLIDE ASSY				
D	1		COMPRESSION ARM ASSY				
C	1		PLATFORM				
B	1		PLATFORM				
A	1		RAMP				NOT SHOWN
INDEX NO.	REQD.	PART NO.	PART NAME	MATL	MATERIAL SIZE	ENGINEERING REMARKS	WGT.

LEYMAN MANUFACTURING CORPORATION



PAGE 22

INDEX NO.	RECD.	PART NO.	PART NAME	MATL.	MATERIAL SIZE	ENGINEERING REMARKS	WGT.
7	2		BAR				
6	1		BAR				
5	1		STIFFENER				
4	2	P26004	WASHER				
3	3		SLEEVE				
2	2		LOCK TABS				
1	1		BAR				

LEYMAN MANUFACTURING CORPORATION

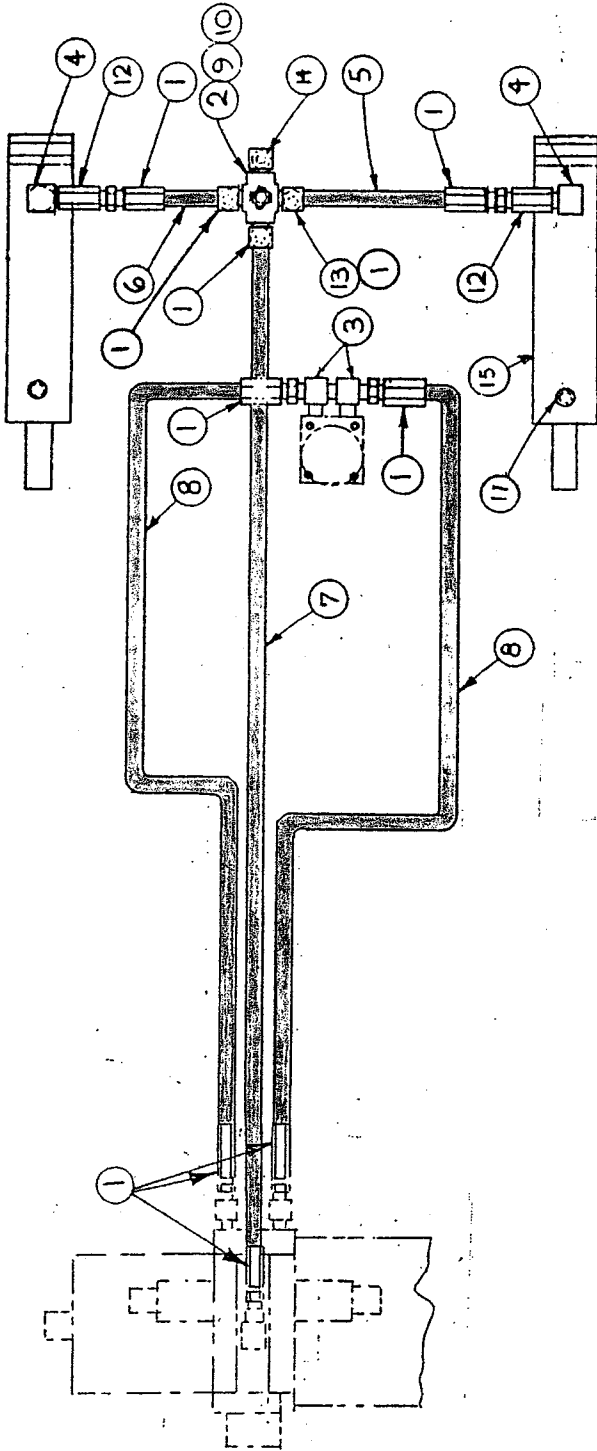
LOCK ASSY

USED ON	DRAWN	MODEL
QUANTITY RECD.	CHECK	ASSY.
TOTAL WEIGHT	APPR.	SUB. ASSY.
	ISSUED	DWG.

SCALE OF ASST. 750-91 B

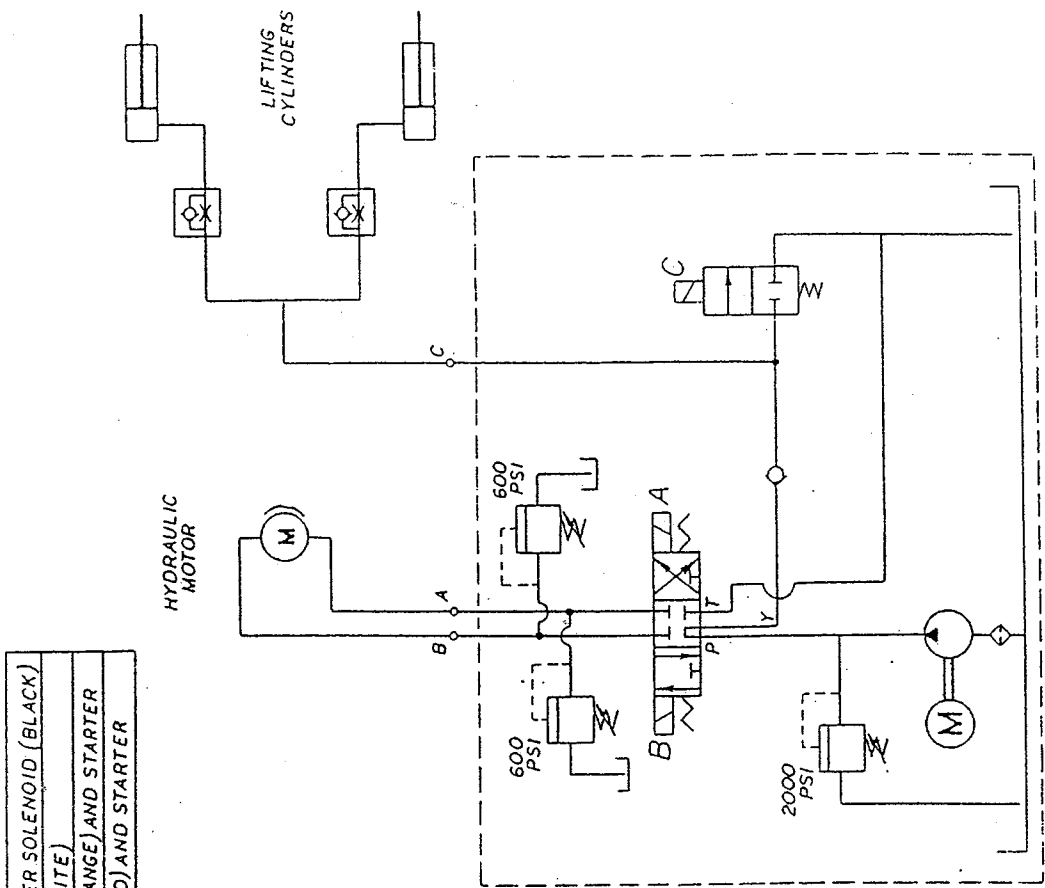
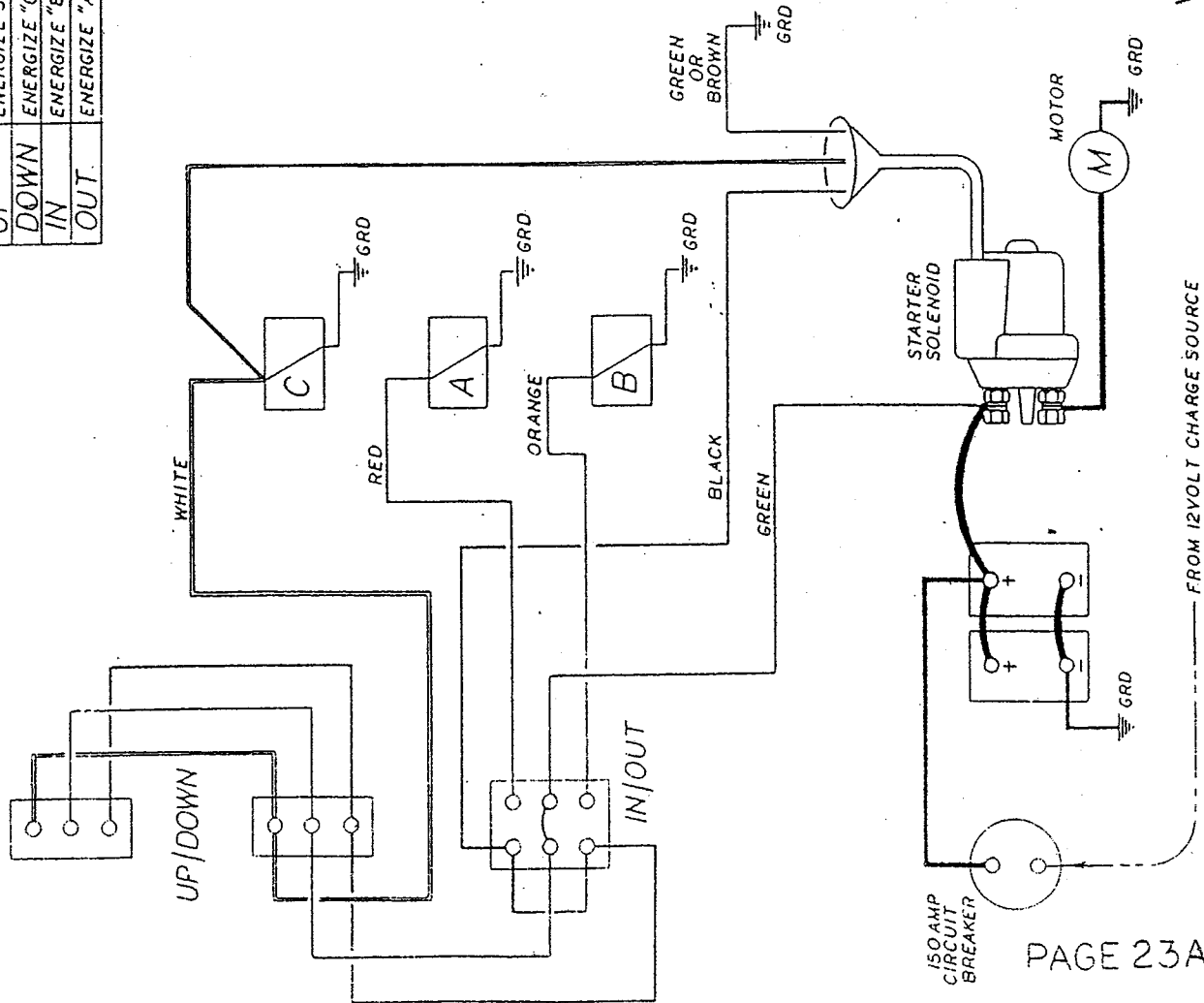
DETAIL A

TOLERANCE
 FRACTIONS = 1/8
 DECIMAL = .001
 DR. HOLE = .001-0.002
 ANGLE = 1/4"
 UNLESS OTHERWISE NOTED



15	2	P33645	HYDRAULIC RAM	OBS	P33733
14	1	P31050	PIPE PLUG	SG. HD.	
13	4	P33006	STREET ELL.	LENZ	
12	2	P33671	FLOW CONTROL	AMBAC	
11	1	SEE TABLE	ROD LUB KIT		
10	1	P23501	HEX. NUT	FLEXLOC	
9	1	P26501	WASHER	RATED	
8	2		SYNPLEX HOSE	SYNPLEX	
7	1		SYNPLEX HOSE	SYNPLEX	
6	1		SYNPLEX HOSE	SYNPLEX	
5	1		SYNPLEX HOSE	SYNPLEX	
4	2	P33217	STREET ELL.	LENZ	
3	2	P33202	STREET ELL.	LENZ	
2	1	AAS006-2A	FEMALE PIPE CROSS		
1	10	P33610	MALE SWIVEL	SYNPLEX	
MODEL NO.		PART NO.	PART NAME	MAT'L.	MATERIAL SIZE
LEYMAN MANUFACTURING CORPORATION					
USED ON	TOLERANCE	PART NAME			
STRAPE	FRACTIONAL 1/16	PART NAME			
UNIT	DECIMAL 2-DIGIT	HYDRAULICS			
	1/16 INCH 2-DIGIT	SCALE ~			
	1/32 INCH 2-DIGIT	SH. OF AMPL. DWG.			
	1/64 INCH 2-DIGIT	751 0 B			
	NOTE	ENGINEERING REVISIONS			
		TOTAL WGT.			

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

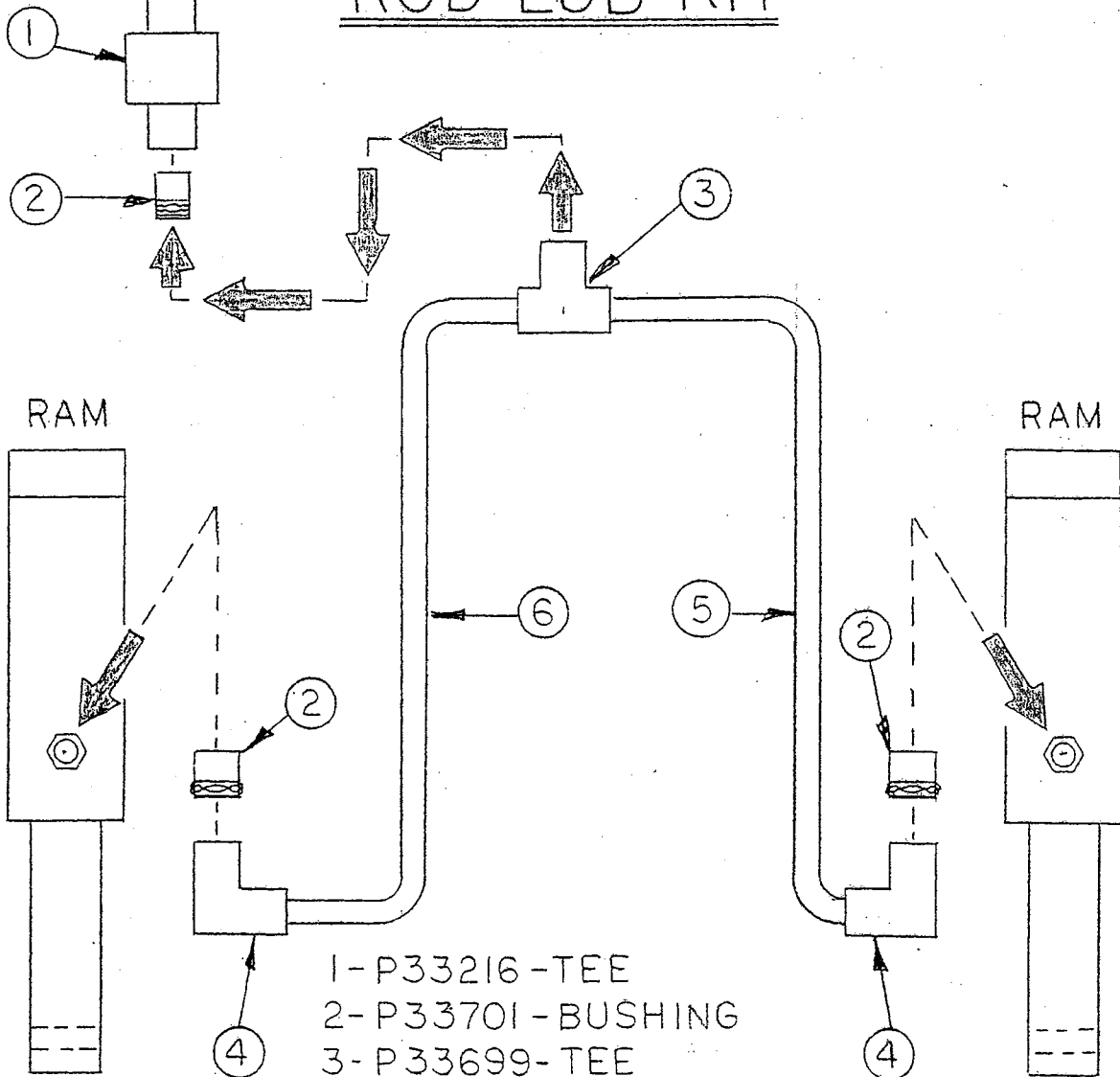


HYDRAULIC DIAGRAM
 TLR STG
 WITH SMART START SOLENOID

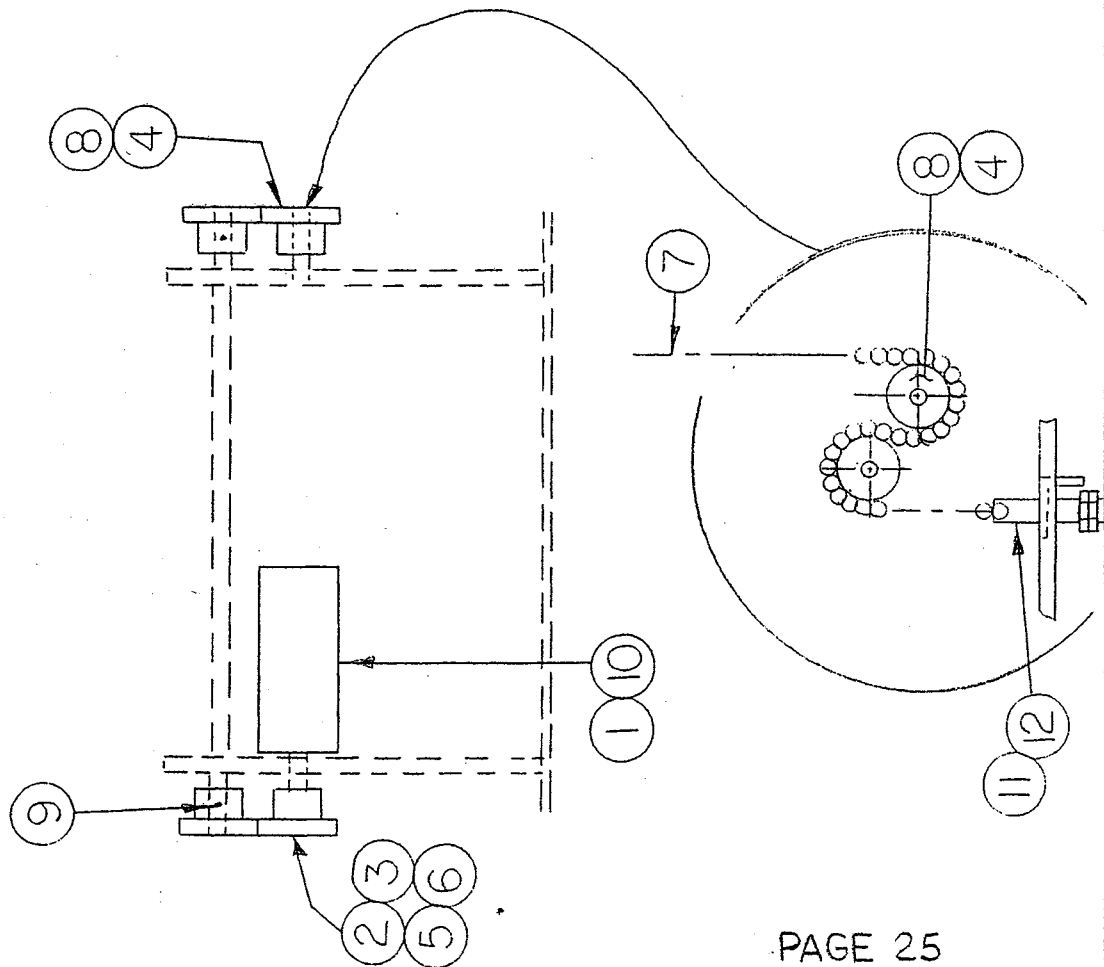
TO
HAND
PUMP

POWER
UNIT

ROD LUB KIT



- 1-P33216-TEE
- 2-P33701-BUSHING
- 3-P33699-TEE
- 4-P33700-ELL
- 5-P33702-TUBING x 37"
- 6-P33702-TUBING x 28"



INDEX NO.	RECD.	PART NO.	PART NAME	MATL.	MATERIAL SIZE	REMARKS
18						
17						
16	1	P33064	NIPPLE			NOT SHOWN
15	1	P33209	FEMALE ELBOW			NOT SHOWN
14	2	AT	HYD. LINE ASS'Y			NOT SHOWN
13	1	P33006	STREET ELL			NOT SHOWN
12	2	C510233A	CHAIN ANCHOR			
11	2	P23500	FLEXLOC NUT			
10	4	P10501	HH CAP SCREW			
9	2	P47500	ROLL PIN			
8	2	P24016	RETAINING RING			
7	2	P38500	ROLLER CHAIN		51" LONG	
6						
5	4	P38501	CONNECTING LINK			
4	1	A5008-3A	IDLER SPROCKET			
3	2	P25158	SHAFT SPROCKET			
2	1	P25157	DRIVE SPROCKET			
1	1	P33625	HYDRAULIC MOTOR			

LEYMAN MANUFACTURING CORPORATION

PART NAME

DRAWN

CHECK

APPR.

TOLERANCE
 FRACTIONS ± 1/16
 DECIMAL ± .005
 DR. HOLE ± .003-.000
 ANGLE ± 1/4°
 UNLESS OTHERWISE NOTED

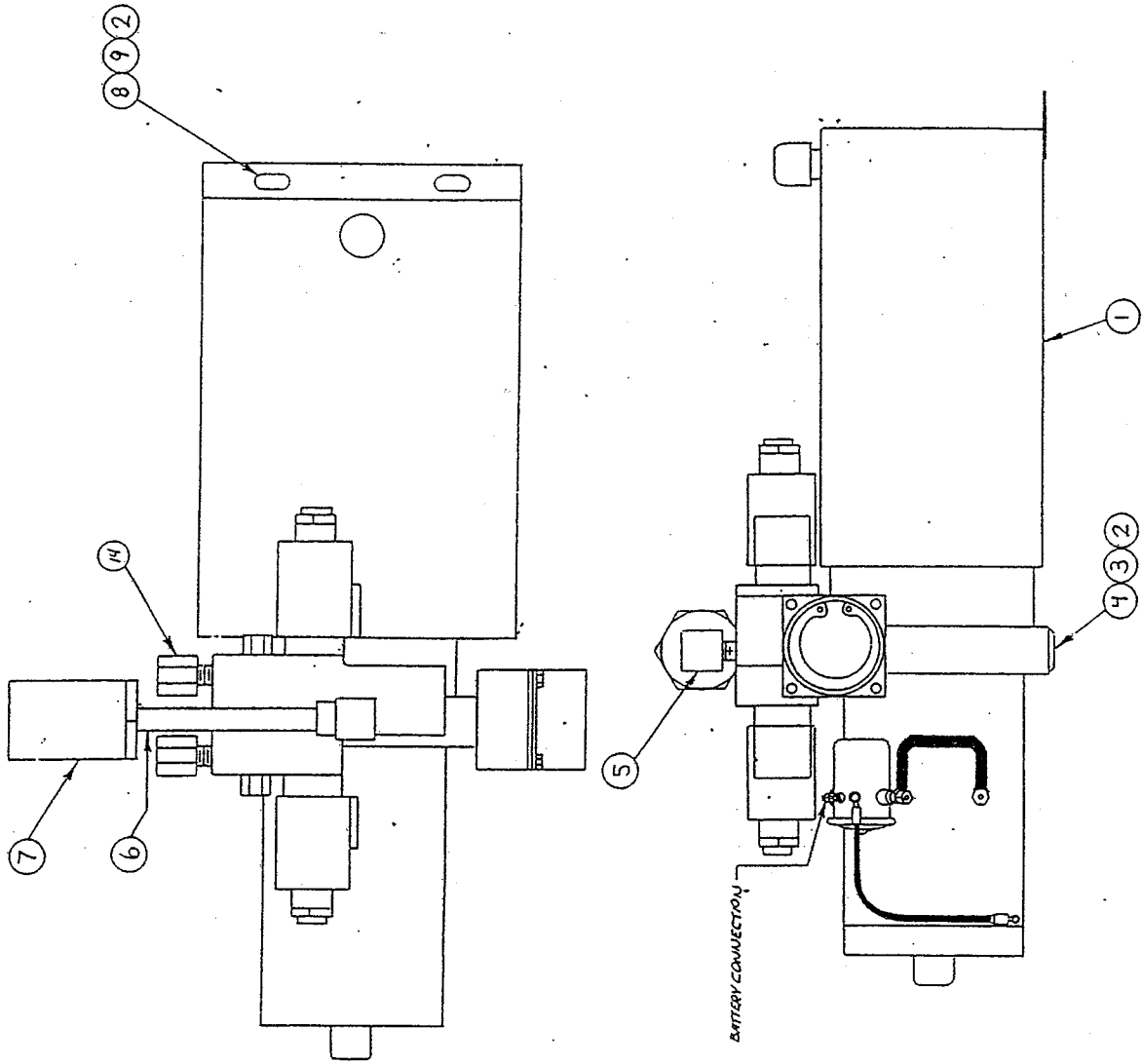
POWER IN & OUT

MODEL ASSY.

A750-B

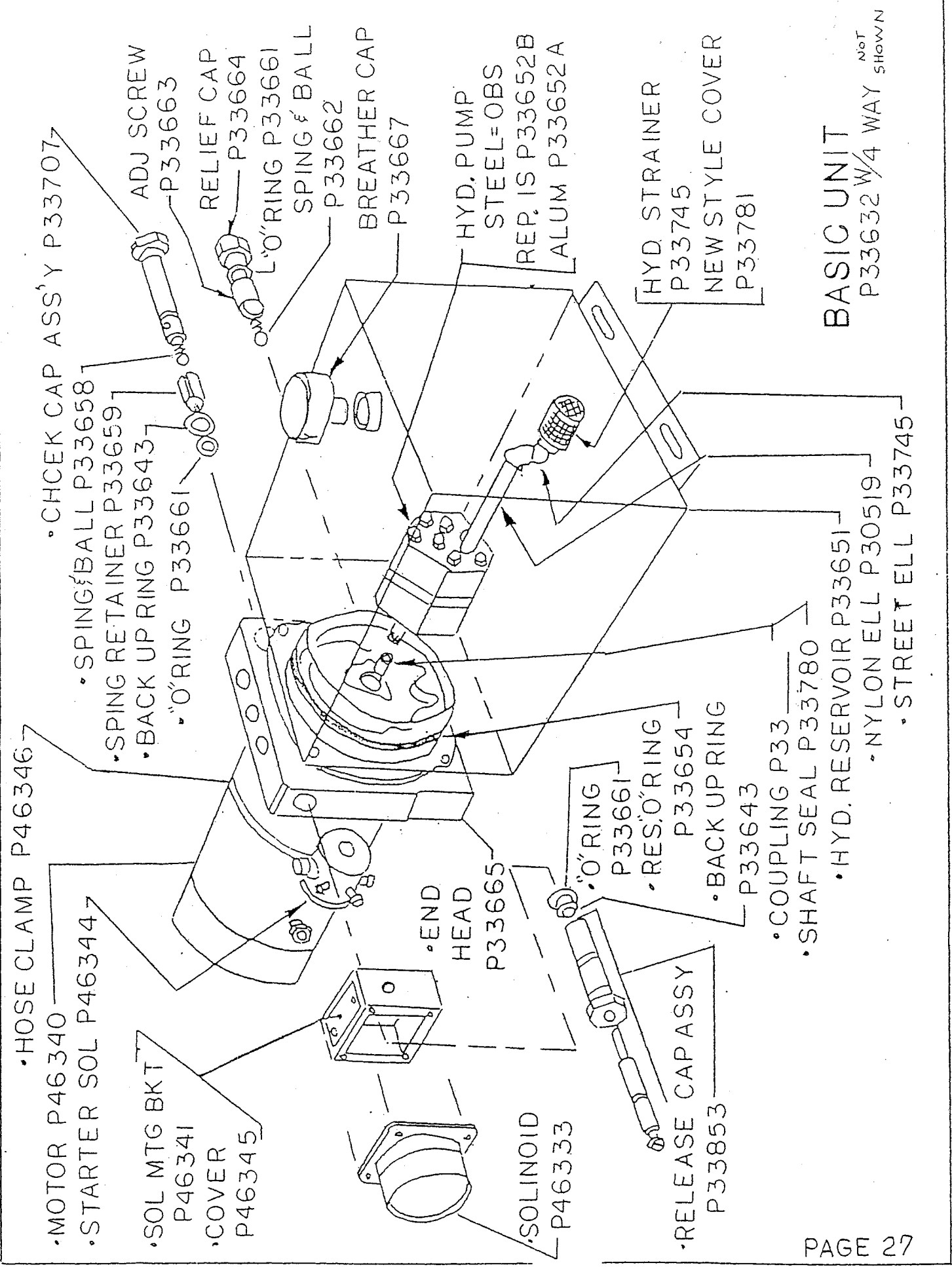
TOTAL WEIGHT SCALE

SH. 1 OF 1



QTY	PART NO.	PART NAME	MATL.	MATERIAL BISE	REMARKS	NOT.
14	2	P33701		PIPE REDUCING CONN.		
11	1	P17550		GROUND SCREW		
10	2	P23501		HEX NUT		
9	2	P23501		HEX HD CAP SCREW		
8	2	P33616		INLINE FILTER		
7	1	P33098		PIPE NIPPLE		
6	1	P33098		PIPE NIPPLE		
5	1	P33006		STREET ELBOW		
4	2	P26017		HEX HD CAP SCREW		
3	2	P26017		LOCK WASHER		
2	10	P26501		FLAT WASHER		
1	1	P33632		POWER UNIT		
LEYMAN MANUFACTURING CORPORATION						
DRAWN 6/7/87						
CHECKED						
DESIGNED						
APP'D						

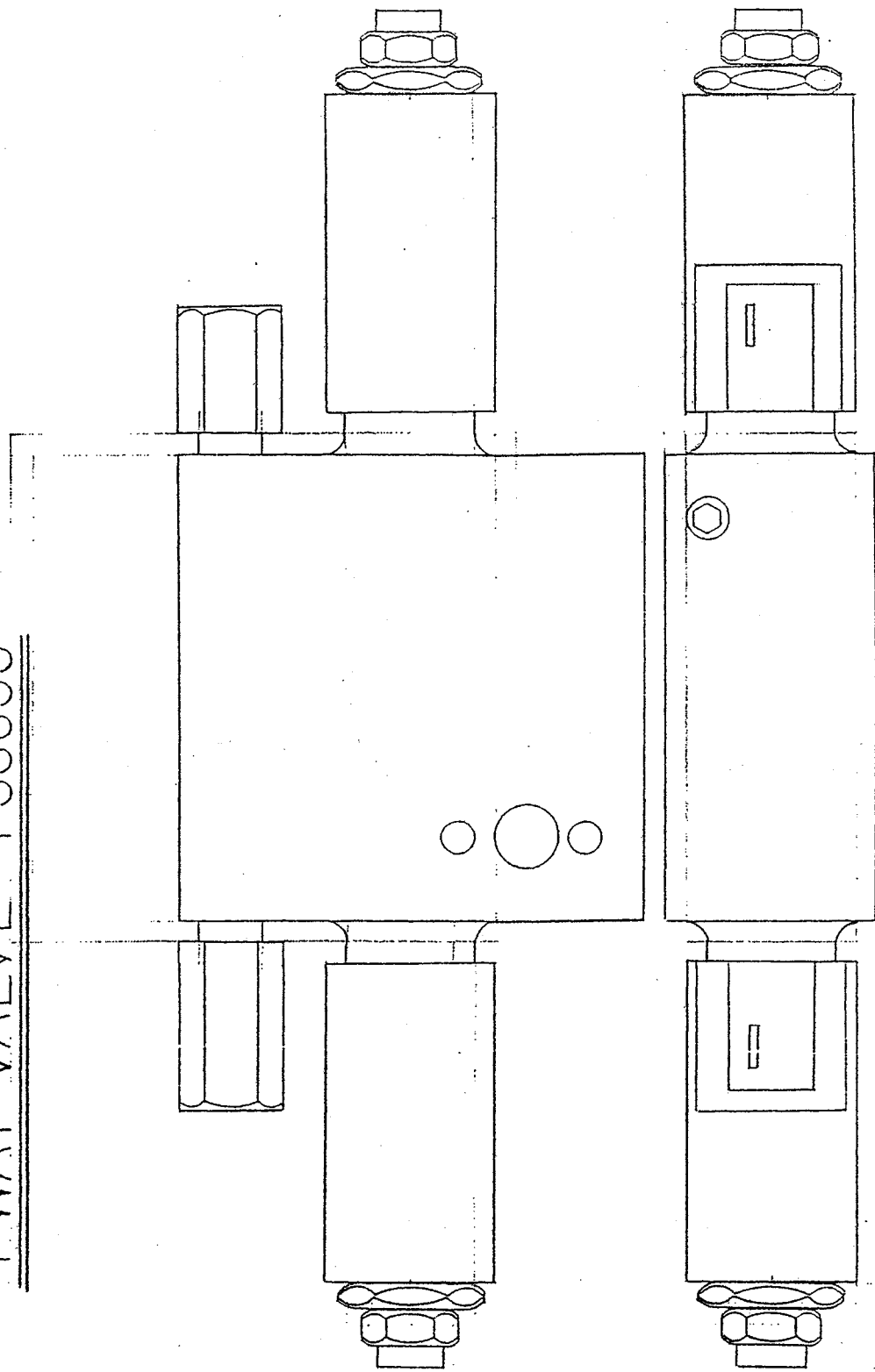
TOTAL WEIGHT		SCALE 1/2
PART NAME		REV. 06
POWER UNIT ASSEMBLY		
MATERIAL		
NICKEL		
ASTM		
C A -501-108		



BASIC UNIT

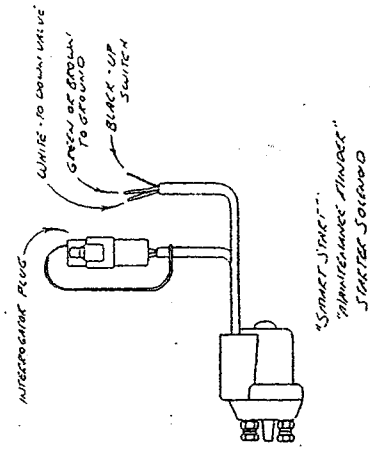
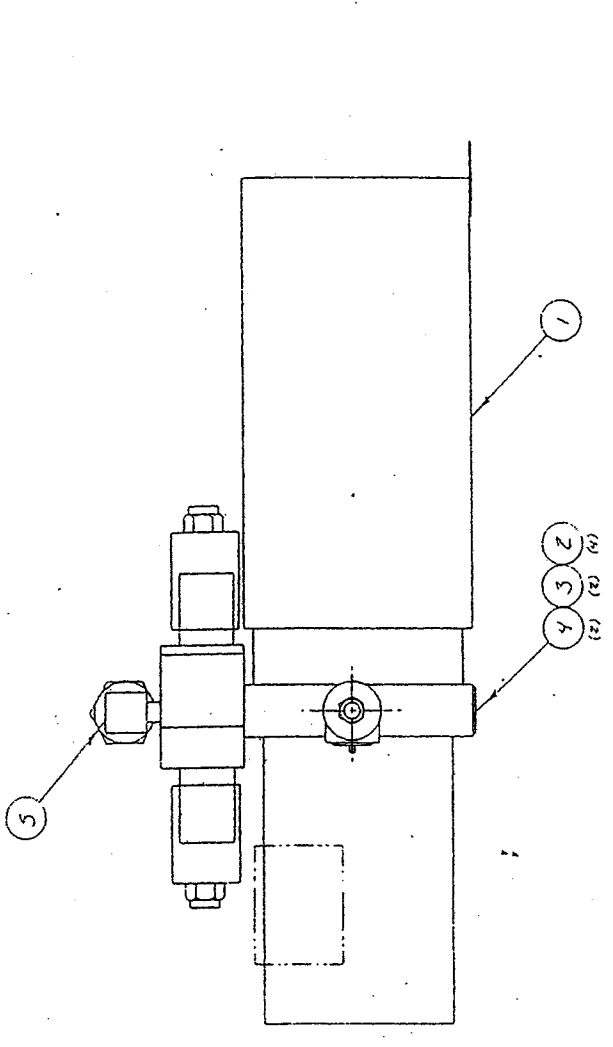
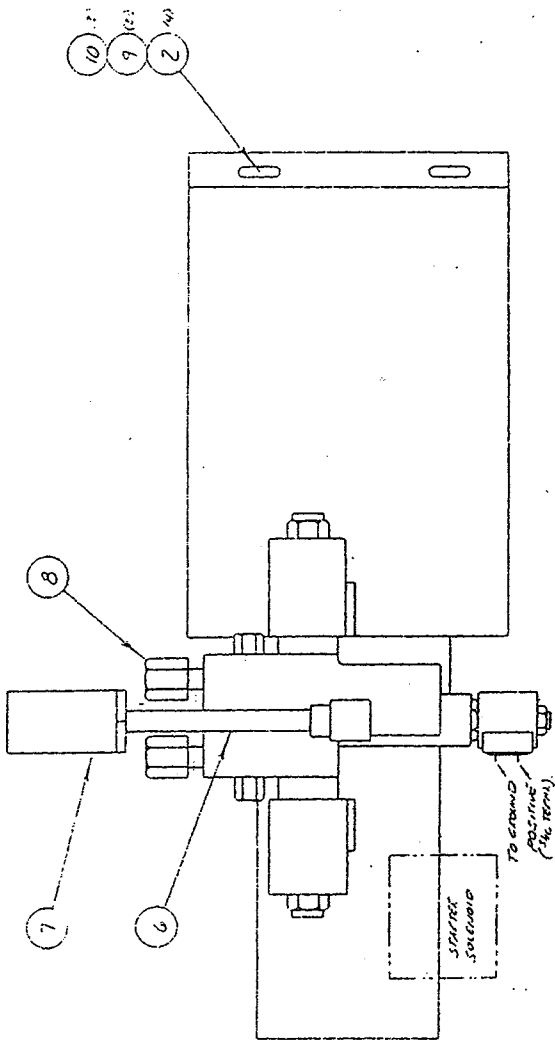
P33632 W/4 WAY ^{NOT} _{SHOWN}

4 WAY VALVE P33633

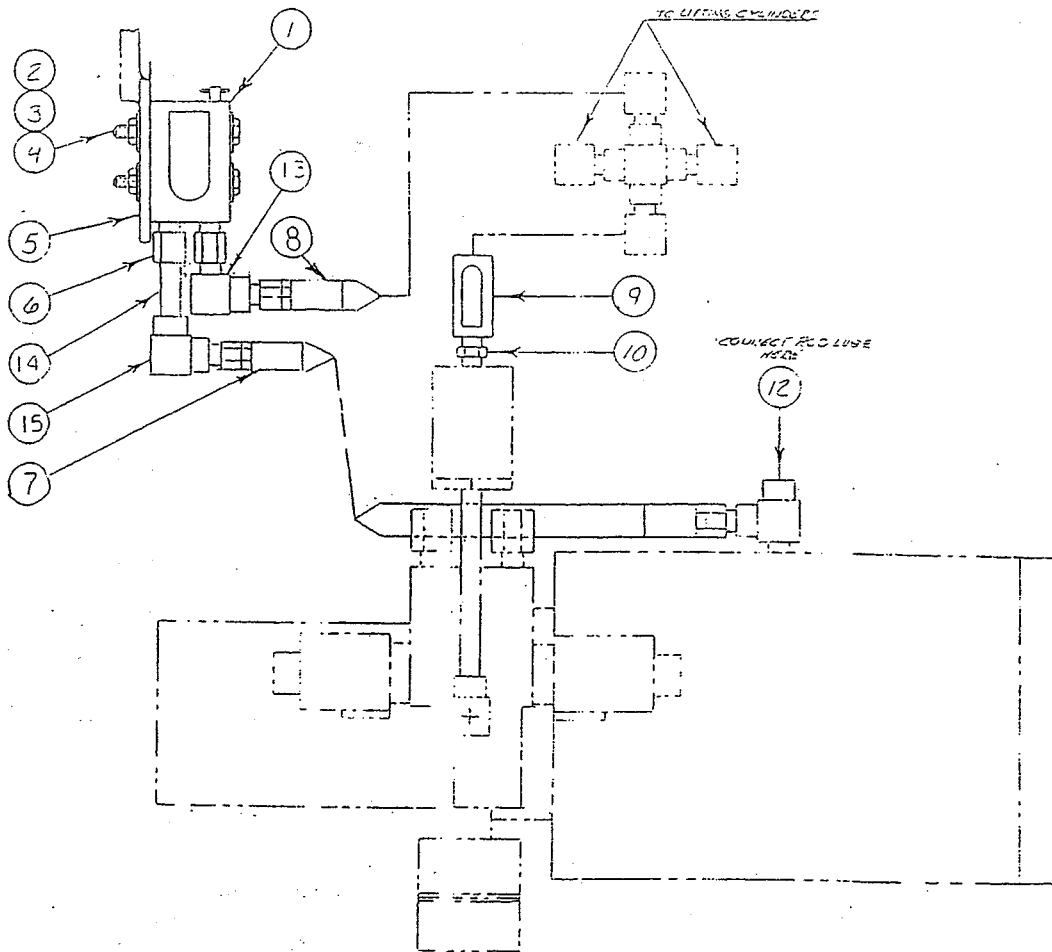


NOTE ON COIL

P46358A COIL, 1 TERM; 2 3/4 BLK; 3 3/8 SHAFT —



QTY	REQD	PART NO.	PART NAME	MATL	MATERIAL SIZE	REMARKS	NOT.
13	2	AWG107	WIRE TERMINAL				
14	1	AWG171	GRINDING BLADE	BLUE	1/2" x 1/4"		
15	1	AWG318	SCREW DRIVER (TOP)				
16	2	P11101	SCREW		3/16" x 1/4"		
17	2	P11101	SCREW		3/16" x 1/4"		
18	2	P11101	SCREW		3/16" x 1/4"		
19	2	P11101	SCREW		3/16" x 1/4"		
20	2	P11101	SCREW		3/16" x 1/4"		
21	1	P11101	SCREW		3/16" x 1/4"		
22	1	P11101	SCREW		3/16" x 1/4"		
23	1	P11101	SCREW		3/16" x 1/4"		
24	1	P11101	SCREW		3/16" x 1/4"		
25	1	P11101	SCREW		3/16" x 1/4"		
26	1	P11101	SCREW		3/16" x 1/4"		
27	1	P11101	SCREW		3/16" x 1/4"		
28	1	P11101	SCREW		3/16" x 1/4"		
29	1	P11101	SCREW		3/16" x 1/4"		
30	1	P11101	SCREW		3/16" x 1/4"		
31	1	P11101	SCREW		3/16" x 1/4"		
32	1	P11101	SCREW		3/16" x 1/4"		
33	1	P11101	SCREW		3/16" x 1/4"		
34	1	P11101	SCREW		3/16" x 1/4"		
35	1	P11101	SCREW		3/16" x 1/4"		
36	1	P11101	SCREW		3/16" x 1/4"		
37	1	P11101	SCREW		3/16" x 1/4"		
38	1	P11101	SCREW		3/16" x 1/4"		
39	1	P11101	SCREW		3/16" x 1/4"		
40	1	P11101	SCREW		3/16" x 1/4"		
41	1	P11101	SCREW		3/16" x 1/4"		
42	1	P11101	SCREW		3/16" x 1/4"		
43	1	P11101	SCREW		3/16" x 1/4"		
44	1	P11101	SCREW		3/16" x 1/4"		
45	1	P11101	SCREW		3/16" x 1/4"		
46	1	P11101	SCREW		3/16" x 1/4"		
47	1	P11101	SCREW		3/16" x 1/4"		
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49	1	P11101	SCREW		3/16" x 1/4"		
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51	1	P11101	SCREW		3/16" x 1/4"		
52	1	P11101	SCREW		3/16" x 1/4"		
53	1	P11101	SCREW		3/16" x 1/4"		
54	1	P11101	SCREW		3/16" x 1/4"		
55	1	P11101	SCREW		3/16" x 1/4"		
56	1	P11101	SCREW		3/16" x 1/4"		
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58	1	P11101	SCREW		3/16" x 1/4"		
59	1	P11101	SCREW		3/16" x 1/4"		
60	1	P11101	SCREW		3/16" x 1/4"		
61	1	P11101	SCREW		3/16" x 1/4"		
62	1	P11101	SCREW		3/16" x 1/4"		
63	1	P11101	SCREW		3/16" x 1/4"		
64	1	P11101	SCREW		3/16" x 1/4"		
65	1	P11101	SCREW		3/16" x 1/4"		
66	1	P11101	SCREW		3/16" x 1/4"		
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68	1	P11101	SCREW		3/16" x 1/4"		
69	1	P11101	SCREW		3/16" x 1/4"		
70	1	P11101	SCREW		3/16" x 1/4"		
71	1	P11101	SCREW		3/16" x 1/4"		
72	1	P11101	SCREW		3/16" x 1/4"		
73	1	P11101	SCREW		3/16" x 1/4"		
74	1	P11101	SCREW		3/16" x 1/4"		
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81	1	P11101	SCREW		3/16" x 1/4"		
82	1	P11101	SCREW		3/16" x 1/4"		
83	1	P11101	SCREW		3/16" x 1/4"		
84	1	P11101	SCREW		3/16" x 1/4"		
85	1	P11101	SCREW		3/16" x 1/4"		
86	1	P11101	SCREW		3/16" x 1/4"		
87	1	P11101	SCREW		3/16" x 1/4"		
88	1	P11101	SCREW		3/16" x 1/4"		
89	1	P11101	SCREW		3/16" x 1/4"		
90	1	P11101	SCREW		3/16" x 1/4"		
91	1	P11101	SCREW		3/16" x 1/4"		
92	1	P11101	SCREW		3/16" x 1/4"		
93	1	P11101	SCREW		3/16" x 1/4"		
94	1	P11101	SCREW		3/16" x 1/4"		
95	1	P11101	SCREW		3/16" x 1/4"		
96	1	P11101	SCREW		3/16" x 1/4"		
97	1	P11101	SCREW		3/16" x 1/4"		
98	1	P11101	SCREW		3/16" x 1/4"		
99	1	P11101	SCREW		3/16" x 1/4"		
100	1	P11101	SCREW		3/16" x 1/4"		



15	1	P33209	FEMALE ELBOW
14	1	P33220	NIPPLE
13	1	P33006	STREET ELBOW
12	1	P33216	STREET TEE
11	1	RL-500T-B	ROD LUBE KIT
10	1	P33064	NIPPLE
9	1	P33208	BALL VALVE
8	1	AF50100-020	HYD. LINE ASS'Y
7	1	AF50100-024	HYD. LINE ASS'Y
6	2	P33101	ADAPTER
5	1	AP501-154	HAND PUMP MTS.
4	2	P23501	NUT
3	4	P26501	FLAT WASHER
2	2	P11038	BOLT
1	1	P33769	HAND PUMP
PROJ. NO.	REQD.	PART NO.	PART NAME

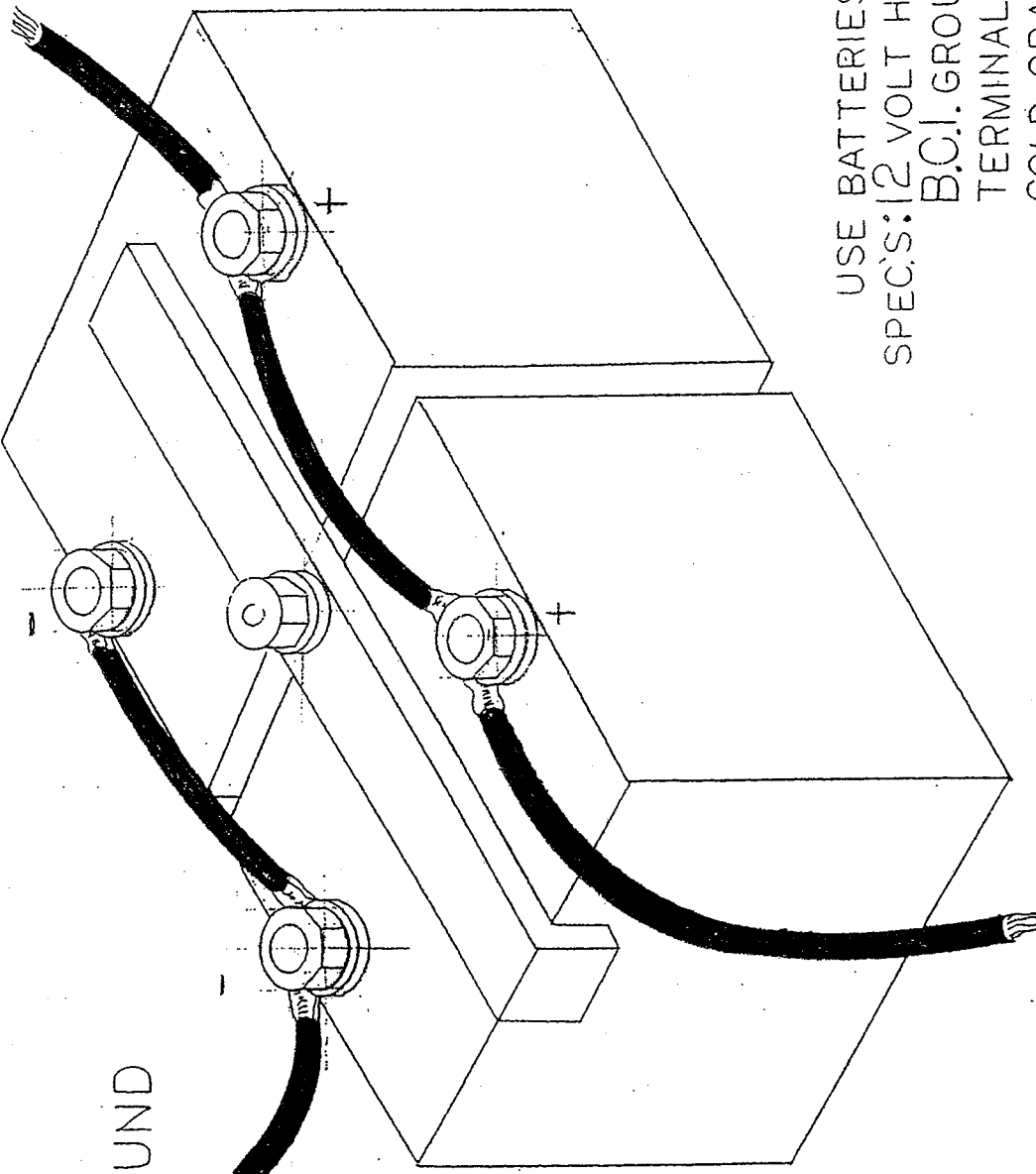
LEYMAN MANUFACTURING CORPORATION			
TOLERANCE FRACTIONS 1/16 DECIMAL .003 DR. HOLE .003-.005 ANGLE 1/4" UNLESS OTHERWISE NOTED	DRAWN	PART NAME HAW HAND PUMP ASS'Y	MODEL
	CHECK		ASSY.
	APPR.		CA
TOTAL WEIGHT		SCALE 1/2"	SH. OF

BATTERY HOOK-UP DATA

FROM POWER SOURCE

TO GROUND

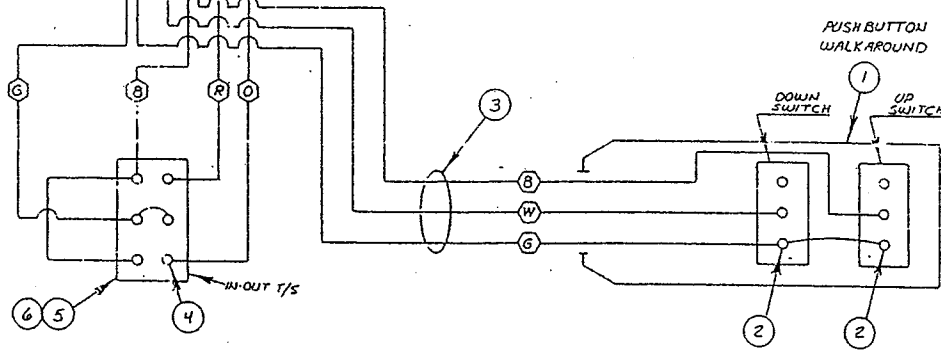
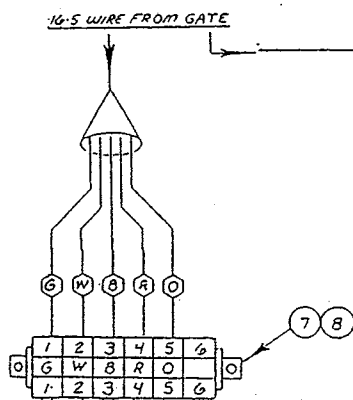
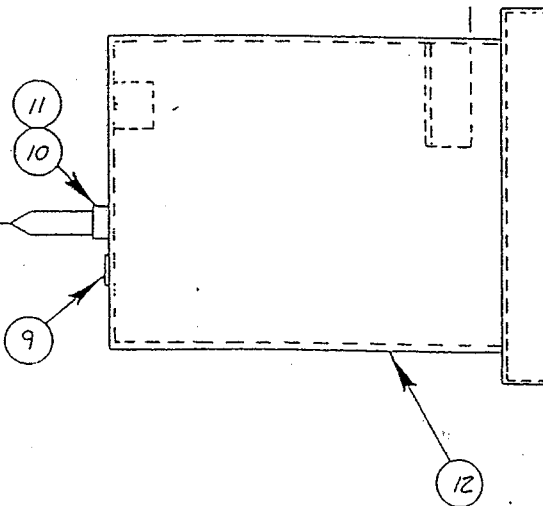
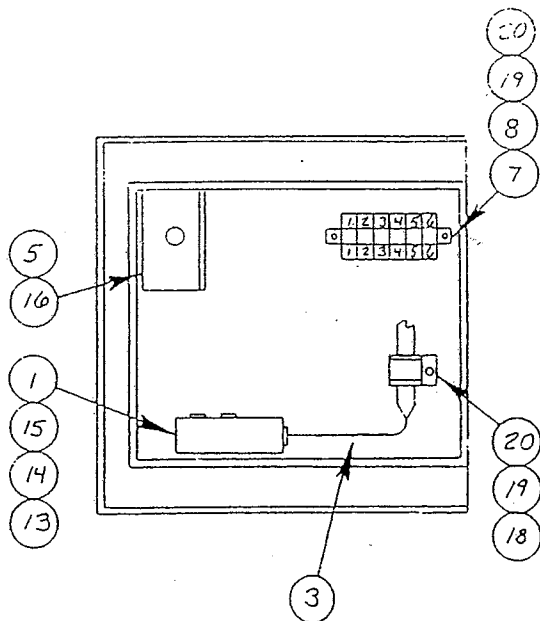
② 12 VOLT BATTERIES
IN PARALL



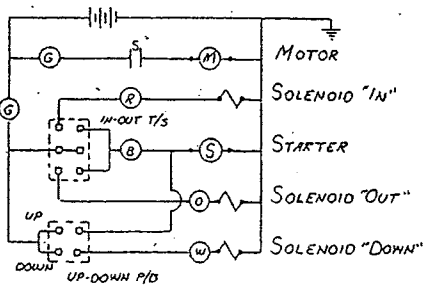
USE BATTERIES WITH THE FOLLOWING
SPEC'S: 12 VOLT HIGH CYCLE TYPE,
B.C.I. GROUP-SIZE 31
TERMINAL TYPE T.S.
COLD CRANKING AMPS-580

TO STARTER SOLENIOD

NOTE: FAULIRE TO USE CORRECT BATTERIES
WILL VOID WARRANTY.



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

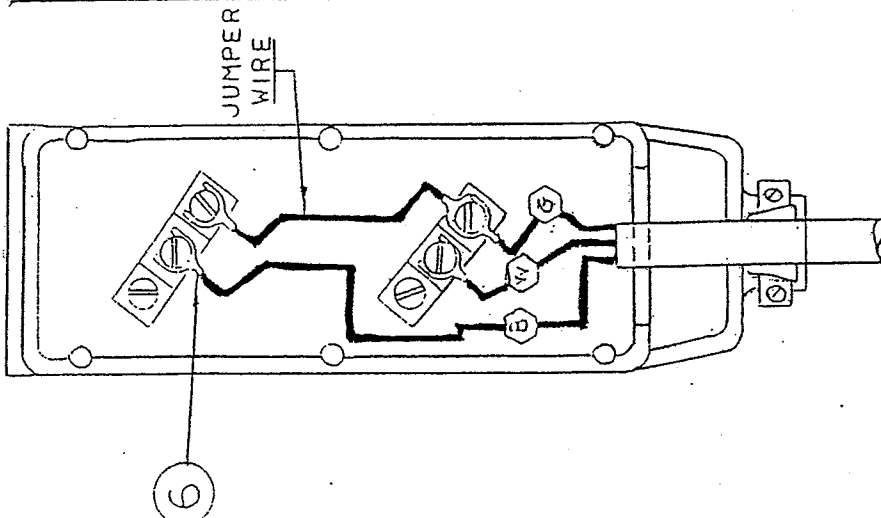
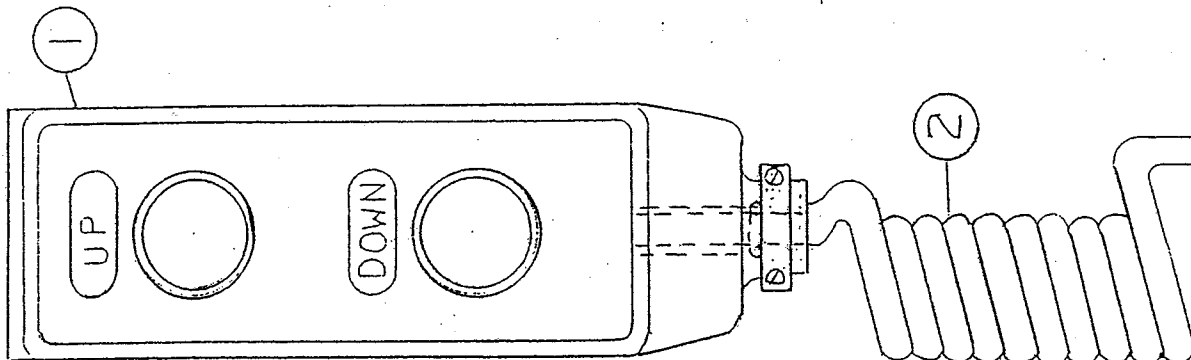
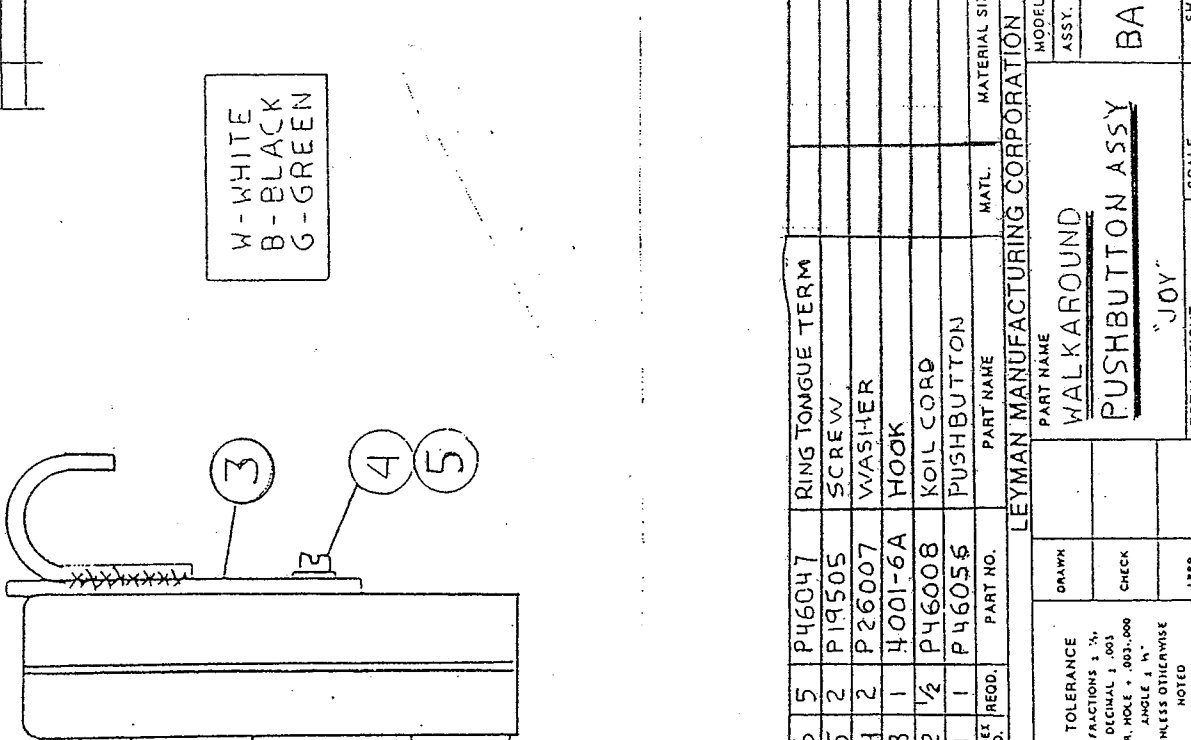


LEGEND	
B	- BLACK
W	- WHITE
G	- GREEN
R	- RED
O	- ORANGE

CA-501-103 WALKAROUND ELECTRICS

22	1		BRACE	H.R.S. FLAT			
21	1		SUPPORT ANGLE	ANGLE			
20	3	P23504	HEX NUT				
19	3	P19501	BOLT				
18	6	P46250	LOOM CLAMP				
17	5	P17518	SELF TAPPING SCREW				
16	1	AP-551-016	T/S BRACKET				
15	2	P26007	WASHER				
14	2	P19505	ROUND HEAD SCREW				
13	1	4011-6A	PUSHBUTTON HOOK				
12	1	P46138	PUSHBUTTON BOX				
11	1	P46036	CONDUIT LOCKNUT				
10	1	P46445	STR. CONNECTOR				
9	1	P56554	HOLE PLUG				
8	1	P46395	TERMINAL BLK. END				
7	2	P46382	TERMINAL BLOCK				
6	1	P46443	JACKETED WIRE	16-5	20" LG.		
5	1	P46442	TOGGLE SWITCH				
4	8	P46319	LOCKING FORK TERM.				
3	1/2	P46008	KOIL KORD				
2	5	P46047	RING TONGUE TERM.				
1	1	P46056	W/A PUSHBUTTON				

INDEX NO.	RECD.	PART NO.	PART NAME	MATL.	MATERIAL SIZE	REMARKS	WGT.
LEYMAN MANUFACTURING CORPORATION							
TOLERANCE FRACTIONS ± 1/16 DECIMAL ± .003 OR. HOLE + .003-.000 ANGLE ± 1/2° UNLESS OTHERWISE NOTED		DRAWN	PART NAME WALK AROUND ELECTRICS (SIDE GATE)			MODEL	
		CHECK				ASSY.	
		APPR.	TOTAL WEIGHT	SCALE	SH. OF		
						C A -551-103	

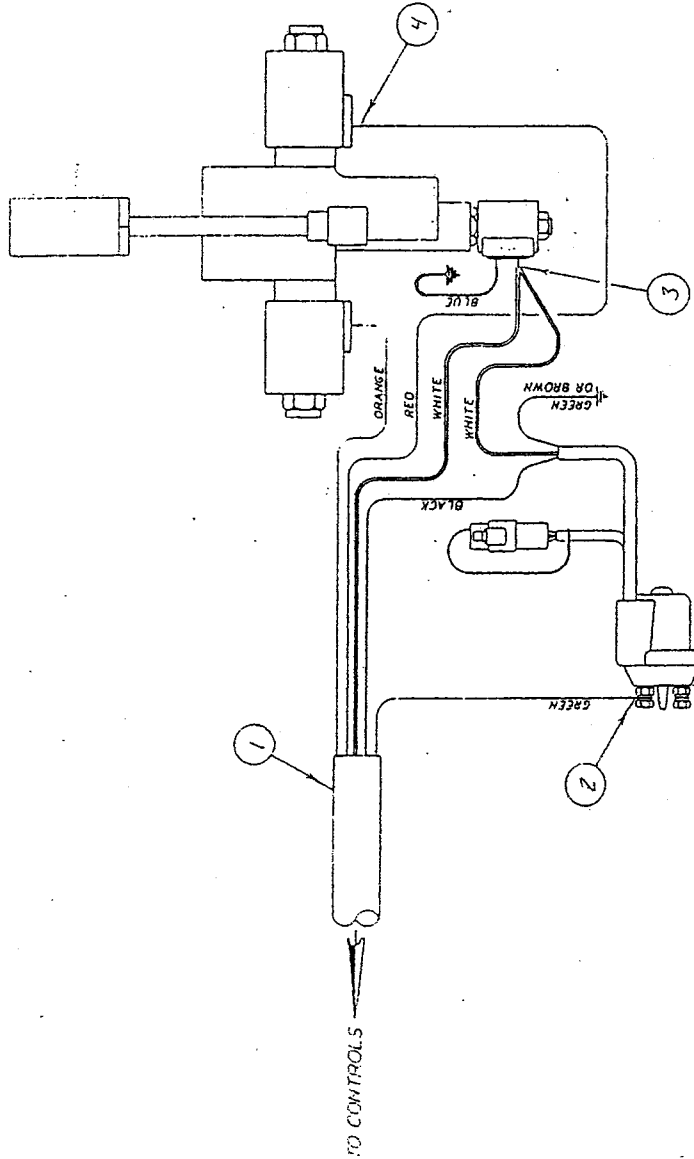


INDEX NO.	RECD.	PART NO.	PART NAME	MATL.	MATERIAL SIZE	REMARKS	WG.
6	5	P46047	RING TONGUE TERM				
5	2	P19505	SCREW				
4	2	P26007	WASHER				
3	1	4001-6A	HOOK				
2	1/2	P46008	KOIL CORD				
1	1	P46055	PUSHBUTTON				

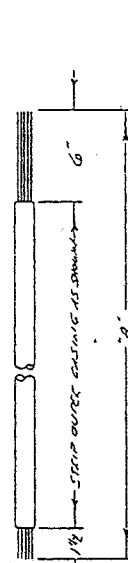
LEYMAN MANUFACTURING CORPORATION	
PART NAME	WALKAROUND
MODEL	PUSHBUTTON ASSY
ASSY.	BA-551-065
TOTAL WEIGHT	"JOY"
SCALE	
SH.	OF

TOLERANCE
 FRACTIONS 3/4
 DECIMAL 1.003
 DR. HOLE + .0031.000
 ANGLE 1/4"
 UNLESS OTHERWISE
 NOTED

INSIDE OF BUTTON



DRAWING NO.	LENGTH "A"	GAGE WIDTH
CS-551-215-001	18.17 (21.5")	4.32 - .04
002	30.17 (36.0")	6.0 - .2



NOTES:

1. STOCKS TO BE MADE WITH STANDARD RIBS (1000) THE TWISTED CONNECTIONS ON THE BLACK WIRE.

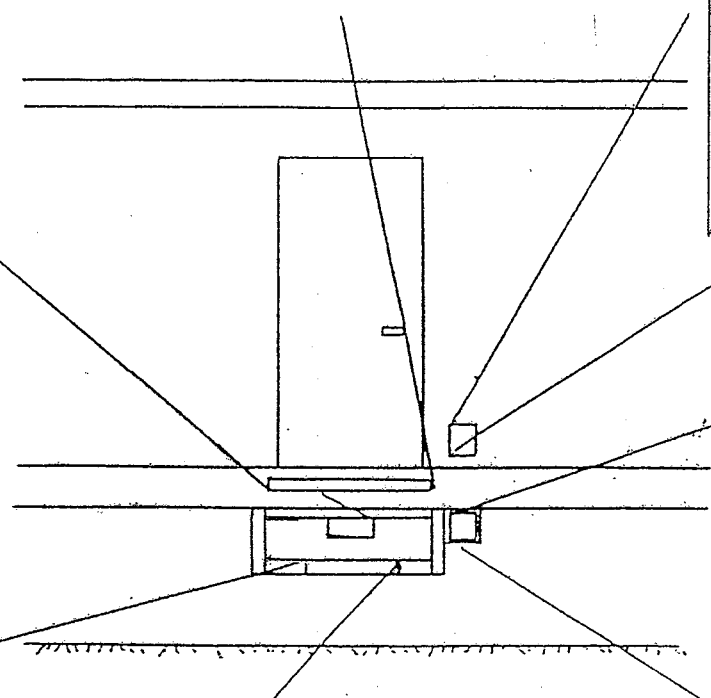
WARNING:
 SELECTING THE LEADS ON THE "DRUM" WIRE WILL CAUSE PERMANENT DAMAGE TO THE SOIL.

QTY	PART NO.	PART NAME	MATL.	MATERIAL SIZE	RELEASE	WGT.
8	PA2147	ELECTRIC/PLUG BRACKET				
7	PA2150	LEAD CLAMP				
6	PA2158	SPR DETACHING STOP				
5	PA2160	SPRING PINS		3"		
4	PA2168	W. SPRING END (PUSH)				
3	PA2171	W. SPRING END (PUSH)				
2	PA2175	CHEST PINS (PUSH)				
1	PA2185	WATERED WIRE		16.5 x 7"		
WGT. NO.	PART NO.	PART NAME	MATL.	MATERIAL SIZE	RELEASE	WGT.
		LEYMAN MANUFACTURING CORPORATION				
DRAWN		PART NAME		MODEL		
CHECKED		BY		ASSY.		
APPROVED		DATE		SCALE		
TOLERANCE		LEYMAN MANUFACTURING CORPORATION				
DIMENSIONS UNLESS OTHERWISE SPECIFIED		BASIC ELECTRONICS				
UNLESS OTHERWISE SPECIFIED		(SHEET 1 OF 2)				
NOTE		C 7-551-215				
		TOTAL WEIGHT				
		SH. OF				

INSTALLATION OF SAFETY SIGNS STG-2000-C

CAUTION KEEP FEET FROM EDGE OF PLATFORM
LEYMAN MANUFACTURING CORP. CINCINNATI, OHIO

CAUTION
 DO NOT STAND IN FRONT OF LIFT GATE WHEN OPERATING IN AND OUT OR UP AND DOWN
 MAXIMUM LOAD 2000 LBS.
LEYMAN MANUFACTURING CORP. CINCINNATI, OHIO



LOCATED ON SIDE OF TRUCK ADJACENT TO DOOR.

THE SURFACE TO WHICH THIS LABEL IS TO BE APPLIED MUST BE FREE FROM OIL, GREASE, AND OTHER CONTAMINANTS.
Based on standard lift gate loading. Apply with care. Proper use is essential. If the label does not adhere to the surface, it should be removed and replaced with a new one.

URGENT WARNING
ELEVATING GATE INSTRUCTIONS
 Before Operating Lift, Be Sure You Understand

1. Improper operation of this lift can result in serious personal injury. Do not operate unless you have been properly instructed and have read, and are familiar with, the operating instructions. If you do not have a copy of the instructions please obtain them from your employer, distributor, or lessor, as appropriate, before you attempt to operate the lift.
2. Be certain the vehicle is properly and securely braked before using the lift.
3. Always inspect this lift for maintenance or damage before using it. If there are signs of improper maintenance, damage to vital parts, or slippery platform surfaces, do not use the lift. Do not attempt your own repairs, unless you are specifically trained.
4. Do not overload. See the Lift Literature and/or Rating Label on the lift for the rated load. Remember that this limit applies to both raising and lowering operations.
5. Each load should be placed in a stable position as near as possible to the center of the platform.
6. Never stand in or move through or allow anyone else to stand in or move through the area in which the lift may operate or into which an upset load might fall.

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LEYMAN LIFT GATE
CINCINNATI OHIO

CUSTOMER: _____

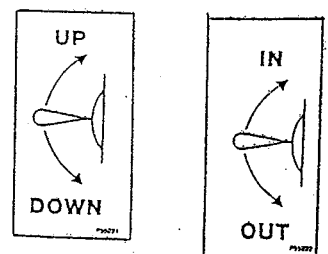
SERIAL NO. _____

COLOR: _____

REMARKS: _____

SIGNED: _____

DATE: _____



LIFT GATE BY
LEYMAN MFG. CORP
 CINCINNATI, OH. 45242

P55157

SERIAL NO. _____

OPERATING INSTRUCTIONS
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* ALL DECALS WILL BE REPLACED FREE AT ANYTIME.

