

**VESTIL MANUFACTURING CORP.**  
2999 N. Wayne St., Angola, IN 46703  
Ph: 260-665-7586 · Fax: 260-665-1339  
E-mail: [sales@vestil.com](mailto:sales@vestil.com) · [www.vestil.com](http://www.vestil.com)

# OWNER'S MANUAL

## MODEL JMD-1000 MULTI-PURPOSE TOTE DUMPER

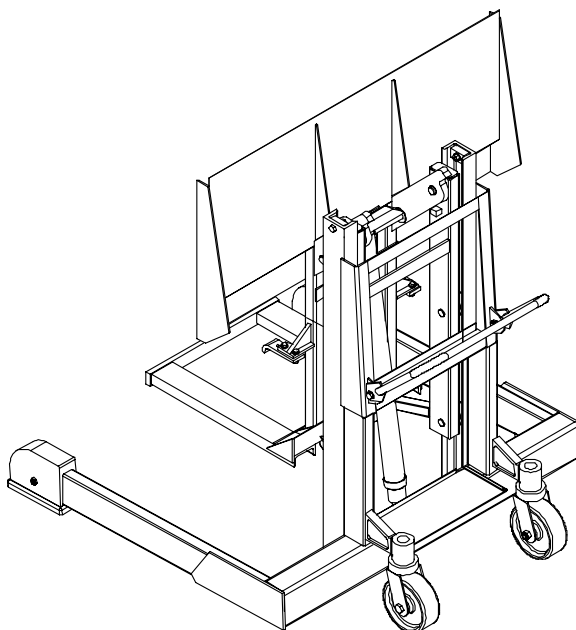
Serial number \_\_\_\_\_

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### IMPORTANT NOTES

Ensure that all employees understand and follow the following.

- Read and understand the owner's manual before using or servicing the tote dumper.
- The load must be removed and the carriage fully lowered before any work is performed on the tote dumper.
- Ensure that all safety and warning labels stay in place and are legible.
- Do not use the tote dumper if any damage or unusual noise is observed.
- Always watch the container carefully when the tote dumper is in operation.
- The tote dumper is intended for use only on compacted, improved surfaces.
- Do not use brake fluid or jack oils in the hydraulic system. If oil is needed, use an anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F, (ISO 32 cSt @ 40°C), or Dexron transmission fluid.
- Contact the manufacturer for any needed MSDS information.
- ◆ Do not perform any modifications to the tote dumper without the manufacturer's approval. Failure to receive authorization for changes to the equipment could void the warranty.
- ◆ Maintenance and repairs are to be done only by personnel qualified to perform the required work. Consideration will not be given for warranty repair labor charges without prior written authorization by the manufacturer.



### WHEN ORDERING

#### REPLACEMENT PARTS:

We take pride in using quality parts on the equipment we manufacture. We are not responsible for equipment problems resulting from the use of unapproved replacement parts.

To order replacement or spare parts for this equipment, contact the factory.

In any communication with the factory please be prepared to provide the machine's serial number, which is indicated on the machine dataplate.

### RECEIVING INSTRUCTIONS

Every unit is thoroughly tested and inspected prior to shipment. However, it is possible that the unit could incur damage during transit.

Inspect the unit closely when it arrives. *If you see evidence of damage or rough handling to either the packaging or to the product when it is being unloaded, immediately make a note of it on the Bill Of Lading!*

It is important that you remove the product's packaging upon its arrival to ensure that there is no concealed damage or to enable a timely claim with the carrier for freight damage.

Also verify that the product and its specifications are as ordered.

## **WARNINGS AND SAFETY INSTRUCTIONS, MODEL JMD**

**Ensure that all employees understand and follow the following instructions.**

- Read and understand the owner's manual before using or servicing the dumper.
- Inspect the tote for damage before each lift. Do not attempt to pick up the tote unless it is in good condition.
- Always have the floor lock engaged solidly with the floor surface when the dumper is in operation.
- Verify that the tote is engaged and held securely by the dumper before proceeding to raise the tote.
- Always watch the dumper and the tote carefully when the dumper is in operation.
- Stand away from the side of the dumper when it is in operation. Stay clear of any potential pinch and shear points.
- Be alert to the possibility of splashing or flying material when dumping loads.
- Do not use the dumper if any damage or unusual noise is observed.
- Do not perform any modifications to the dumper without the manufacturer's approval. Failure to receive authorization for changes to the equipment could void the warranty.
- Maintenance and repairs are to be done only by personnel qualified to perform the required work.
- The dumper must be fully lowered, power should be disconnected, and the tote should be removed from the dumper before any maintenance or repairs are performed on the dumper.
- Ensure that all safety and warning labels stay in place and are legible. See the labels page in this manual.
- Do not use brake fluid or jack oils in the hydraulic system. If oil is needed, use an anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F, (ISO 32 @ 40°C), or a non-synthetic automatic transmission fluid.
- Use only replacement parts either supplied or approved by the manufacturer.

## **OPERATION INSTRUCTIONS -- JMD**

### **Loading:**

The load rating is shown on the machine dataplate located at the lower right side of the frame (relative to the push handle side) . It indicates the net capacity of both the multi-purpose tote and the tote dumper. Injury to personnel or permanent damage to the dumper or could result from exceeding the listed capacity.

The multi-purpose tote dumper is designed to transport and dump material from our model MPT-1 ½ cubic yard polyethylene tote.

To load the tote onto the dumper, ensure that the carriage is in the fully lowered position. Roll the higher side (the back side) of the tote up against the dumper's carriage, centered horizontally. The tote will be picked up automatically when the carriage is raised.

### **Operation:**

The dumper is supplied with a constant-pressure (dead-man) pushbutton control.

Pressing the "UP" pushbutton will turn on the power unit to raise the carriage. The carriage will raise only while the control is pressed. Upon releasing the control, the carriage will stop and hold its position. A limit switch will turn off the motor when the carriage reaches its maximum rotation angle.

Pressing the "DOWN" pushbutton will energize the lowering valve to allow the carriage to descend. Again, releasing the control will stop the carriage movement, and the unit will hold its position. Be certain no part of any person or object is under any part of the carriage before lowering the unit.

In the event that the load exceeds the dumping capacity, the hydraulic system's relief valve will open and not allow the unit to lift.

### **Safety:**

Keep all personnel clear of the machine when it is in operation.

Never use the dumper if it is in need of repairs or if it seems to be malfunctioning.

Use only with approved totes that are in good condition.

Notify maintenance personnel if you notice anything out of the ordinary, such as odd noises, erratic motion, or damage to any part of the lift or its components.

### **Ordering replacement parts:**

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To order replacement or spare parts for this equipment, contact the factory.

In any communication with the factory please be prepared to provide the machine's serial number, which is indicated on the machine dataplate.

## **Routine Maintenance & Safety Checks -- JMD**

- *Care should be taken to identify all potential hazards and comply with applicable safety procedures before beginning work.*
- *Fully lower the carriage to the floor before beginning any inspection or work on the unit.*
- *Only qualified individuals trained to understand mechanical devices and their associated electrical and hydraulic circuits should attempt troubleshooting and repair of this equipment*

### **(A) Before each use inspect for the following:**

- 1.) Frayed wires
- 2.) Oil leaks
- 3.) Pinched or chafed hoses
- 4.) Damaged or loose parts.
- 5.) Damage or structural deformation to the structural members, the cylinder brackets, etc.
- 6.) Unusual noise or binding, or evidence thereof.
- 7.) Floor lock makes solid contact with the floor surface.
- 8.) Proper functioning of the upper travel limit switch.

### **(B) In addition to the above, inspect monthly for:**

- 1.) The oil level. Oil should be 1" to 1½" below the reservoir's fill hole with the chute fully tilted.
- 2.) Worn or damaged hydraulic hoses and electrical wires.
- 3.) Proper operation of the tote lifting hooks.
- 4.) Pivot point wear at the hinge pins and cylinder ends.
- 5.) Intact pin and clevis retaining rings and / or fasteners.
- 6.) Looseness, wear, or damage to the casters' bearings, mounting hardware, or surface material.
- 7.) Excess wear to the floor lock friction pad.
- 8.) Unusual noises.
- 9.) Information and warning labels being in place and in good condition.
- 10.) The need to clean off dirt and debris.

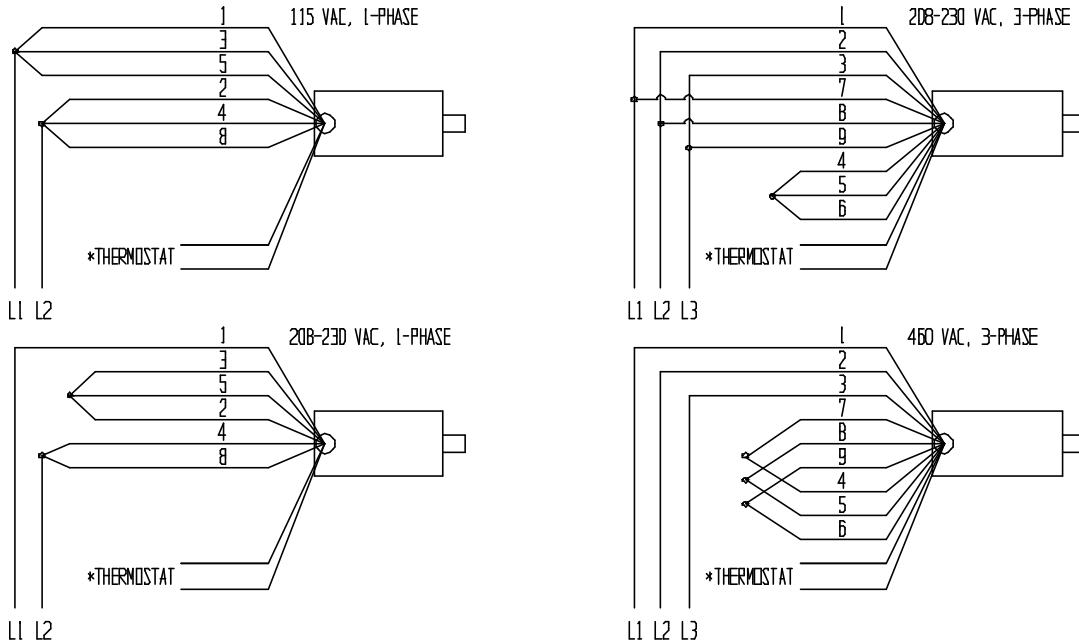
### **(C) Yearly inspection**

The oil should be changed if the oil darkens, becomes gritty, or turns a milky color (indicating the presence of water). Replace with an anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F, (ISO 32 @ 40°C). Ex: AW 32 or HO 150 hydraulic fluid, or Dexron transmission fluid.

## MOTOR & TRANSFORMER CONNECTION DIAGRAMS

**CAUTION!** *If the motor voltage is changed, the wire on the control transformer's primary wire has to be changed to match the new motor voltage also.*

MOTOR LEAD CONNECTION DIAGRAM FOR ALL  
.5HP, .75HP AND 3HP SINGLE-PHASE MOTORS AND FOR  
ALL 2HP, 5.5HP, AND 6.5HP THREE-PHASE MOTORS

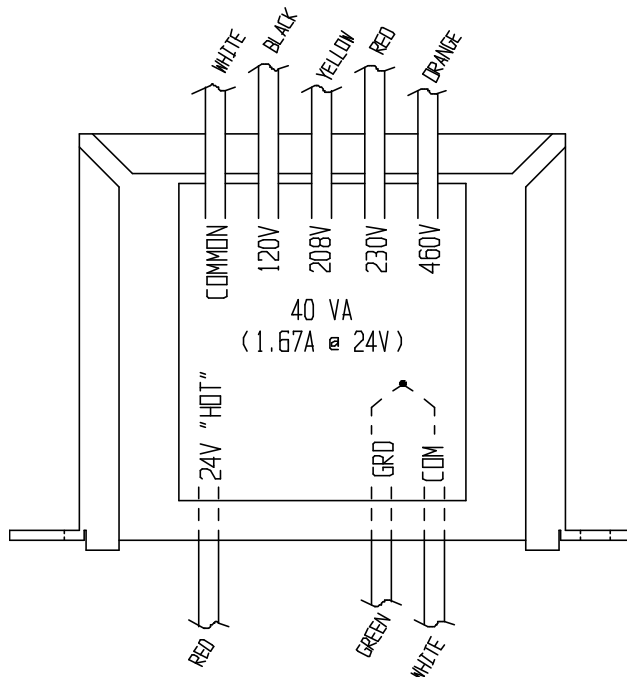


\* The two thermostat leads go to: 1) the grounded side of the transformer secondary, and; 2) the motor relay coil, in either order.

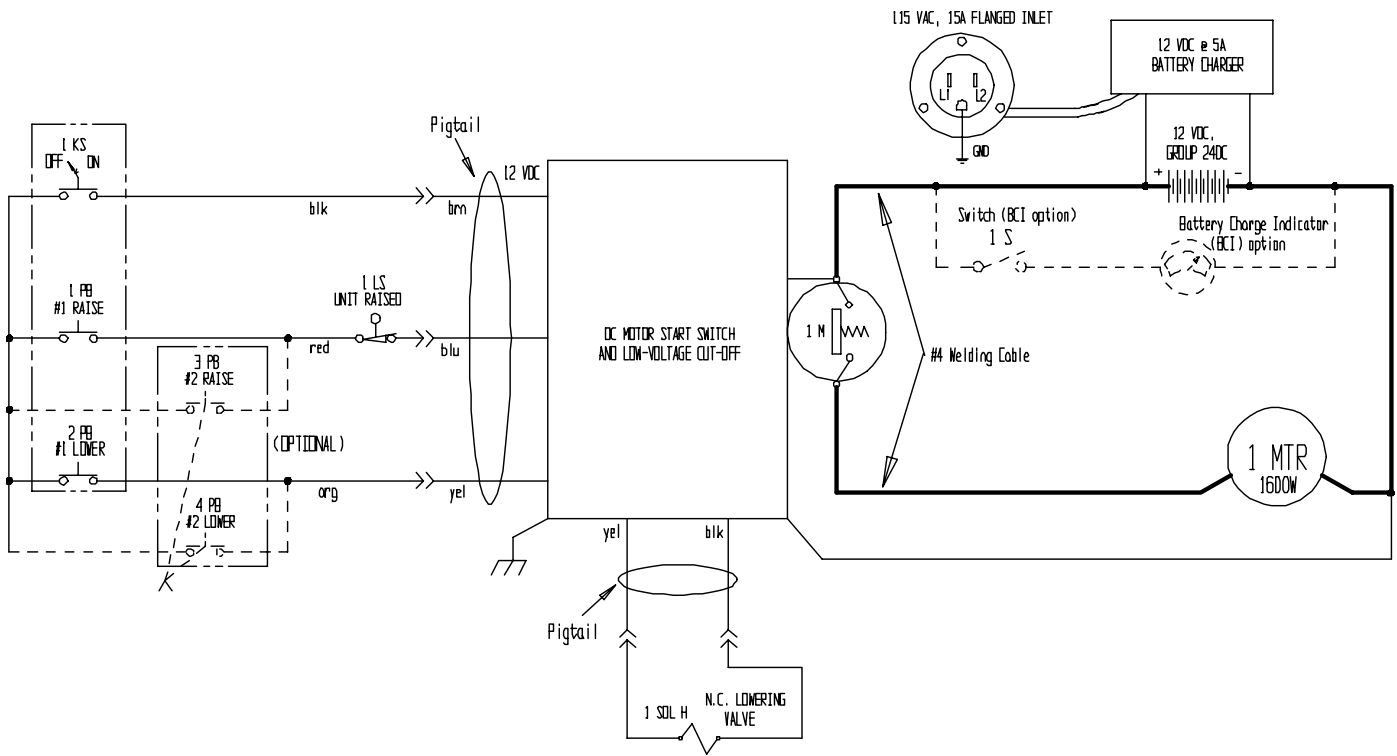


**BE SURE ALL POWER IS OFF BEFORE ATTEMPTING TO WORK ON THIS EQUIPMENT!**

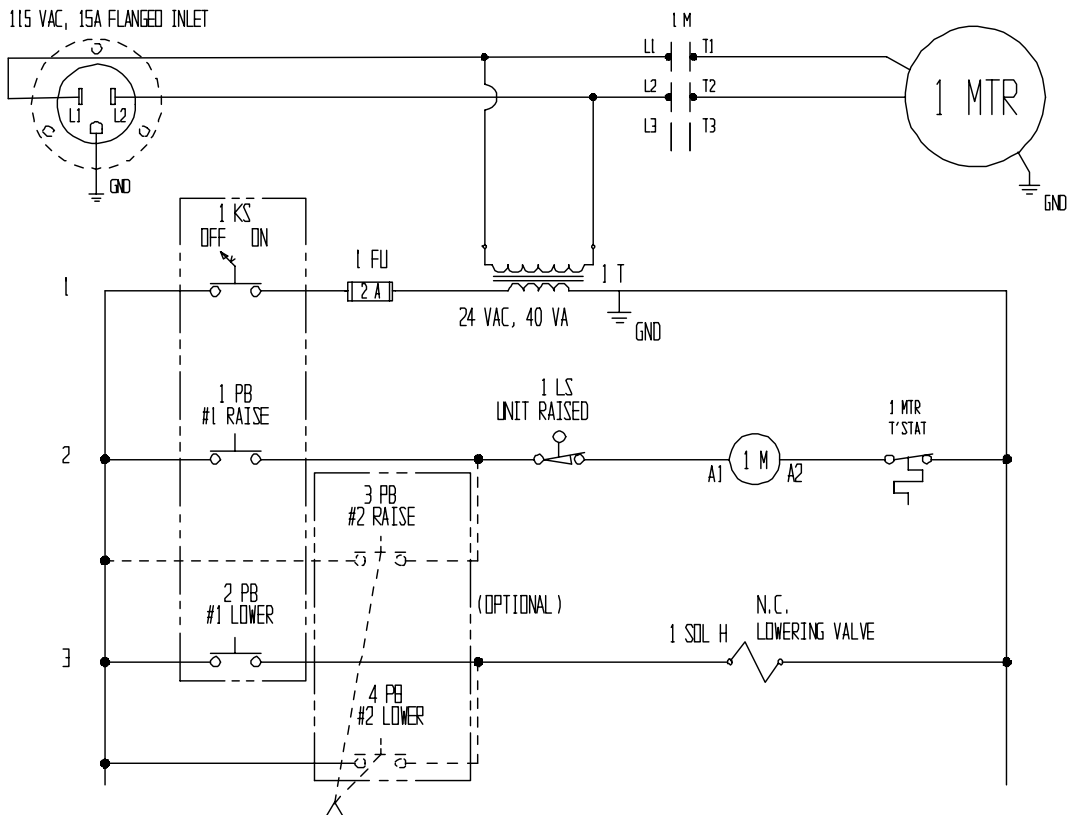
**CAUTION: SERVICE WORK SHOULD BE PERFORMED ONLY BY TRAINED & QUALIFIED PERSONNEL**



# ELECTRICAL DIAGRAMS – MODULAR POWER UNITS



OVERCURRENT & SHORT-CIRCUIT PROTECTION, AND DISCONNECT, ARE TO BE PROVIDED BY THE END-USER PER THE NEC (NFPA 70) AND LOCAL CODES.

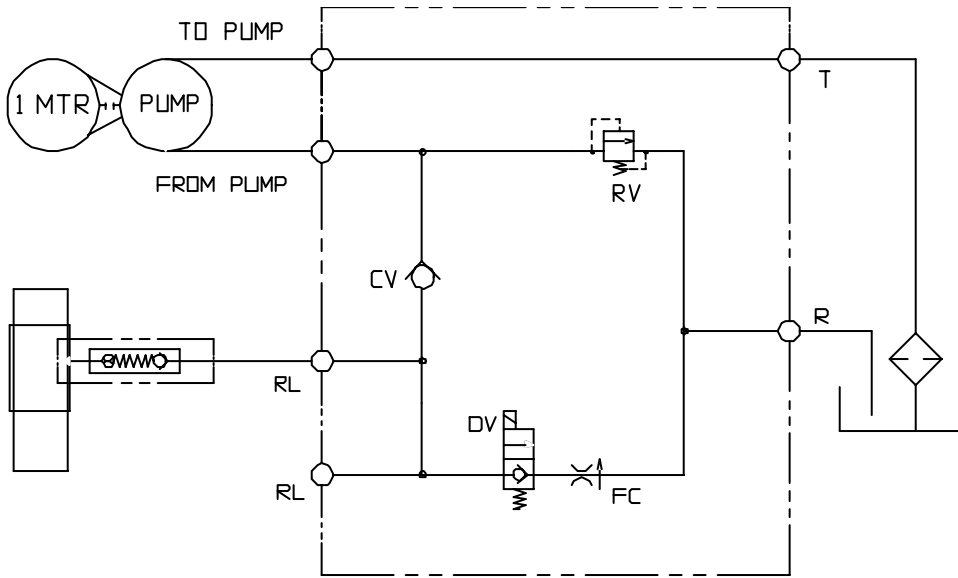


**BE SURE ALL POWER IS OFF BEFORE ATTEMPTING TO WORK ON THIS EQUIPMENT!**  
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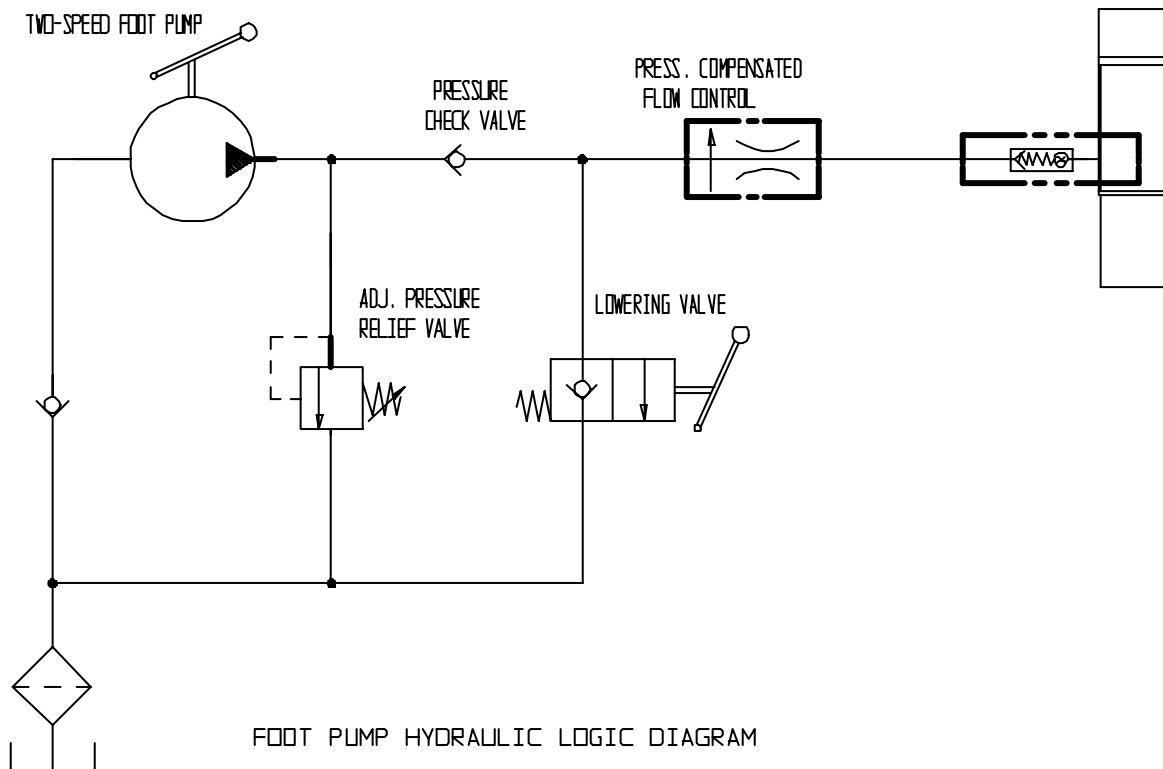
## HYDRAULIC DIAGRAM – LIFT-HOLD-LOWER CIRCUITS

- Care should be taken to identify all potential hazards and comply with applicable safety procedures before beginning work.
- Fully lower the carriage to the floor before beginning any inspection or work on the unit.
- Only qualified individuals trained to understand mechanical devices and their associated electrical and hydraulic circuits should attempt troubleshooting and repair of this equipment

**CAUTION:** Do not use brake fluid or jack oils in the hydraulic system. If oil is needed, use an anti-wear hydraulic oil with a viscosity of 150 SUS at 100°F (ISO 32 @ 40°C), or non-synthetic transmission fluid.



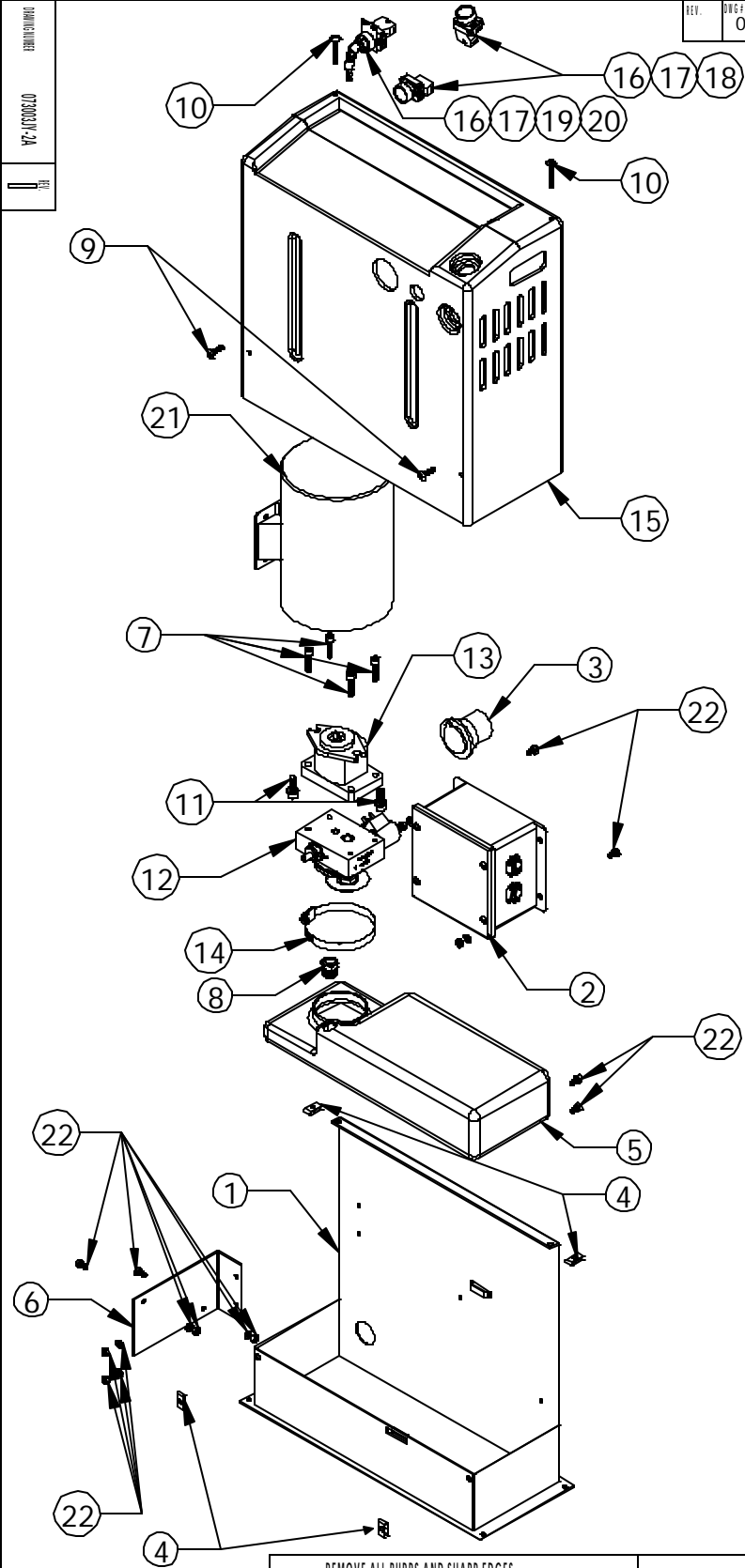
GEAR PUMP HYDRAULIC LOGIC DIAGRAM



FOOT PUMP HYDRAULIC LOGIC DIAGRAM

DRAWING NO. 073003JY-2A

REV.	BUG#	REV.	ECR#	DATE	REVISIONS	INITIAL
	073003JY-2A					



ITEM	REQ	PART NO.	DESCRIPTION
1	1	4JY1119	BASE
2	1		ELECTRIC BOX (SEE PAGE 2)
3	1	21-034-005	AC ADAPTER PLUG
4	4	37927	TINNERMAN CLIP
5	1	99-023-001	RESERVOIR
6	1		MOTOR BRACE
7	4	23255	SHCS UTILITY GRADE
	4	33687	HIGH COLLAR LOCK WASHER
8	1	BV-48	BREATHER
9	2	29185	TPHMS, Z PLATED
10	2	29201	TPHMS, Z PLATED
11	2	23305	SHCS UTILITY GRADE
	2	33688	HIGH COLLAR LOCK WASHER
	2	33008	USS FLAT WASHER Z PLATED
12	1	01-627-010	MANIFOLD ASSM (SEE PAGE 2)
13	1	01-143-906	PUMP
14	1	HS52	CLAMP, WORM GEAR
15	1	091802JY	FIBERGLASS COVER
16	3	ZB2BZ009	BASE, CONTACT BLOCK
17	3	ZB2BE101	CONTACT BLOCK N.O.
18	2	ZB2BA2C	OPERATOR, BLACK, NON-ILLUM.
19	1	ZB2BG4C	SWITCH, KEY, 2 POSITION
20	1	01-134-007	LEGEND, ON - OFF
21	1	99-135-003	MOTOR, ELECTRIC, 1PH
22	6	11005	HHCS, Z PLATED
	6	33004	USS FLAT WASHER, Z PLATED
	6	33618	LOCK WASHER, Z PLATED
	6	36102	HEX NUT, Z PLATED

REMOVE ALL BURRS AND SHARP EDGES		
CONCENTRIC	.006 TIR	.060 TIR
ANGLES	+/- 0° 30'	+/- 1° 0'
DECIMALS	X.XXX +/- .005 X.XX +/- .010 X.X +/- .025	+/- .015
FRACTIONS	+/- 1/32	+/- 1/16
TOLERANCE	MACHINE	WELDMENT

**T & S EQUIPMENT COMPANY**

SCALE: NTS      APPROVED BY: \_\_\_\_\_      DRAWN BY: J. YOUNG

DATE: 07/30/03      SIZE: A

**AC MODULAR POWER UNIT**

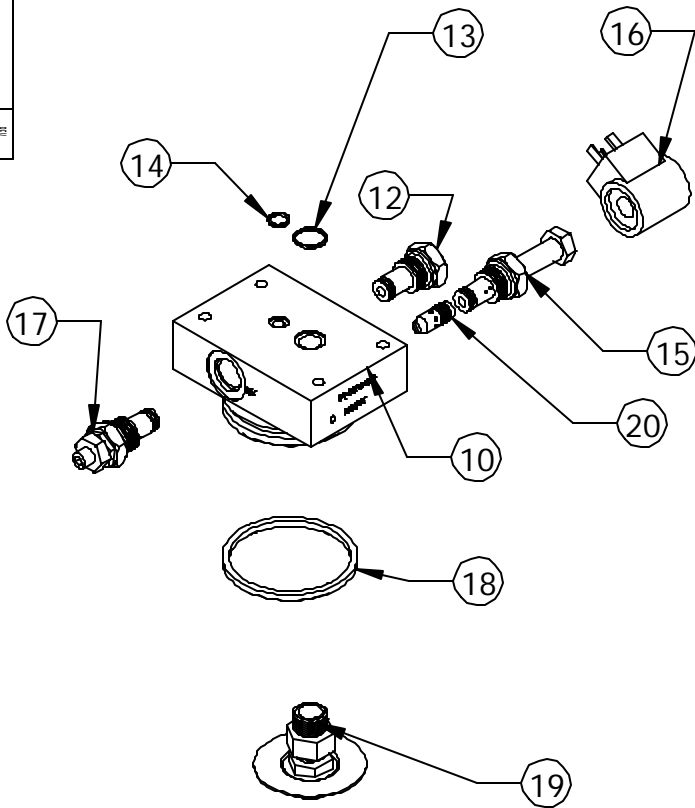
MATERIAL: \_\_\_\_\_      DRAWING NUMBER: 073003JY-2A      REV: \_\_\_\_\_

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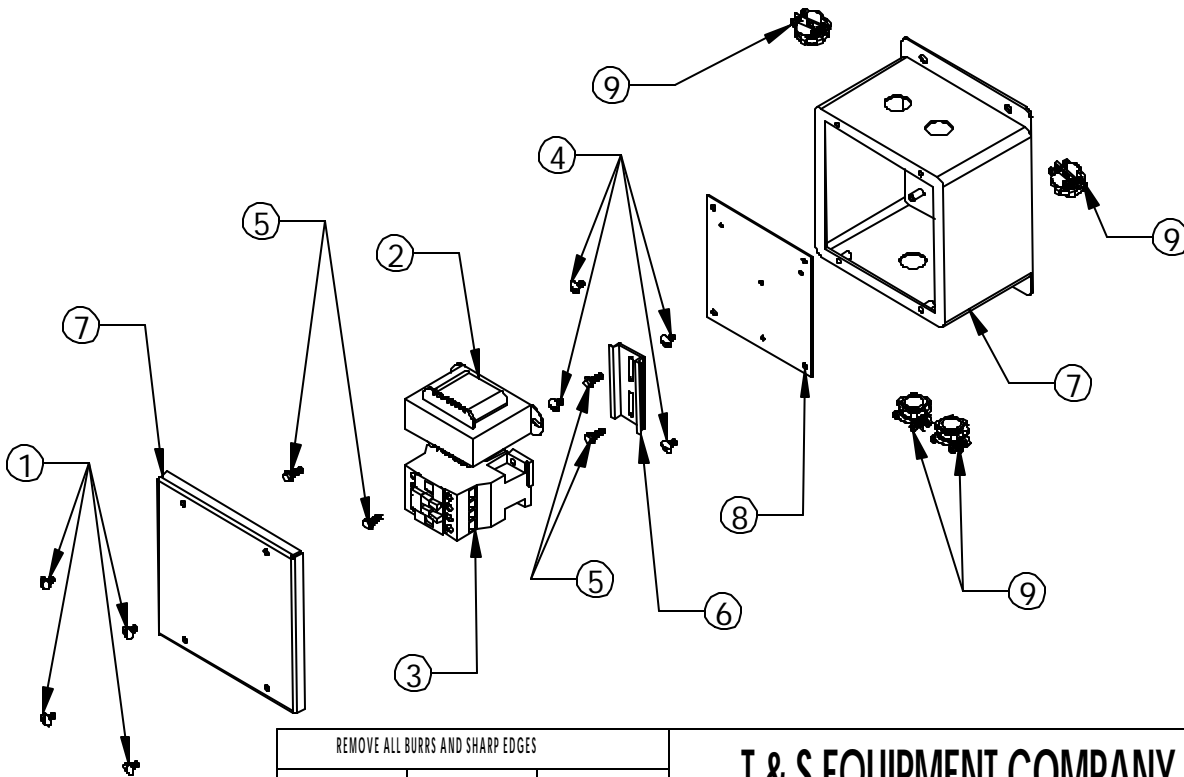


DRAWING NO. 073003JY-2B

REV.	DWG #:	REV.	ECR #	DATE	REVISIONS	INITIAL
	073003JY-2B					



ITEM	REQ	PART NO.	DESCRIPTION
1	4	71616	TSHMS, SS
2	1	01-129-001	TRANSFORMER
3	1	132560	CONTACTOR, MOTOR
4	4	27531	PHSMS, Z PLATED
5	4	32028	HWH TEK DRILL & TAP
6	3"	TB-TRACK	RAIL, DIN
7	1	01-029-006	JUNCTION BOX
8	1	AB66JP	PANEL, JUNCTION BOX
9	4	C500	CONNECTOR, ROMEX, 2 SCREW
10	1	01-127-010	MANIFOLD
11	1	6801-06-06-NOW	MJ-MAORB 90 DEG.
12	1	99-153-011	VALVE, CHECK
13	1	568-015-BN70	O-RING
14	1	568-011-BN70	O-RING
15	1	99-153-015	VALVE, CARTRIDGE, NC
16	1	99-034-008	COIL, 24V AC
17	1	99-153-006	VALVE, PRESSURE RELIEF
18	1	568-334-BN70	O-RING
19	1	99-531-005	FILTER
20	1	99-153-038	FLOW CONTROL, 1.0 GPM



REMOVE ALL BURRS AND SHARP EDGES		
CONCENTRIC	.006 TIR	.060 TIR
ANGLES	+/- 0° 30'	+/- 1° 0'
DECIMALS	X.XXX +/- .005 X.XX +/- .010 X.X +/- .025	+/- .015
FRACTIONS	+/- 1/32	+/- 1/16
TOLERANCE	MACHINE	WELDMENT

**T & S EQUIPMENT COMPANY**

SCALE: NTS      APPROVED BY: \_\_\_\_\_      DRAWN BY: J. YOUNG

DATE: 07/03/03      SIZE: A

**AC MODULAR POWER UNIT**

MATERIAL: \_\_\_\_\_      DRAWING NUMBER: 073003JY-2B      REV: \_\_\_\_\_

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## **SINGLE-ACTING CIRCUIT (STD. LIFT-HOLD-LOWER) TROUBLESHOOTING**

*Only qualified individuals trained to understand mechanical devices and their associated electrical and hydraulic circuits should attempt troubleshooting and repair of this equipment*

**!** *Care should be taken to identify all potential hazards and comply with applicable safety procedures before beginning work.*

*Consult the factory for problems at time of installation, or for any problems not addressed below*

### **(Problem, observation, remedy)**

Unit doesn't raise, motor doesn't run.

No power supply voltage. Tripped branch circuit breaker or fuse(s).

Use a meter and conventional electrical troubleshooting techniques to determine cause of the fault.

No control voltage. Blown control relay fuse due to short in controls.

Use a meter and conventional electrical troubleshooting techniques to determine the cause of the fault.

Unit doesn't raise, but motor runs.

Suction screen blocked; air being drawn into the suction hose; reservoir not vented.

Solenoid valve stuck open by contamination or bent valve stem.

Check valve stuck open by contamination.

Unit doesn't raise (or raises slowly); noticeable noise (hum, buzz, chatter, or squeal); motor or pump becomes warm quickly.

Solenoid valve stuck open.

Low control voltage causing relay coil chatter.

Pressure relief opening.

Unit raises, but motion is jerky.

Bleed air from the cylinder per manual's instructions in the hydraulic section.

Unit raises, but lowers very slowly when the motor stops.

Solenoid stuck open slightly by speck of contamination or a bent valve stem.

Check valve stuck open by speck of contamination.

Unit raises, but lowers quickly when the motor stops.

Solenoid valve stuck open by contamination or bent valve stem.

Check valve stuck open by contamination.

Unit doesn't lower.

A "snap" or "click" can be heard upon pressing the "DN" button due to a velocity fuse locking.

Bleed air from the cylinder per the owner's manual's instructions.

Check the load against the unit's capacity rating.

Perimeter pinch point guard has lost continuity.

Check for a made switch, bad connection in the wiring, or a broken wire.

Solenoid coil circuit has lost continuity, or coil is bad.

Check the coil using a meter's diode-check feature. (Checking with the meter's ohms function will not give an accurate indication.)

Unit lowers, but motion is jerky.

Air in hydraulic system, esp. the cylinder.

Bleed air from the cylinder per the owner's manual's instructions in the hydraulic section.

Unit lowers, but slower than usual.

Flow spool stuck.

Check the flow spool per the owner's manual's instructions in the hydraulic section.

Return line (3/8" clear hose) pinched off.

Unit lowers, but faster than usual.

Flow spool stuck.

Check the flow spool per the owner's manual's instructions in the hydraulic section.

Overload protection trips repeatedly.

Motor is single-phasing, if power supply is three-phase.

Check supply voltage at disconnect, motor contactor, and motor to find where one leg of voltage is being lost.

Low supply voltage (typically only with 115V units).

Check the supply voltage when the motor is operating under load conditions.

# **ONE-YEAR PRODUCT WARRANTY**

## **ONE YEAR LIMITED WARRANTY**

For the original purchaser, the manufacturer warrants against defects in materials and workmanship that develop during normal service and proper use for a period of one year after the date of shipment (not to exceed 15 months after date of manufacture).

Any part that is determined by the manufacturer to be defective in material or workmanship will be, as the exclusive remedy, repaired or replaced at the manufacturer's option.

Any items returned to the factory must be pre-authorized with a return authorization number and have shipping costs prepaid. (All non-warranty returns are subject to a minimum 20% restocking fee.)

Labor costs for warranty repairs and/or modifications are not covered unless done at the manufacturer's facilities or pre-approved by the manufacturer. Any modifications or repairs performed without prior written approval of the manufacturer can void the warranty.

Warranty claims must be made in writing within said year.

This limited warranty gives the purchaser specific legal rights which vary from state to state.

## **LIMITATION OF LIABILITY**

To the extent allowable under applicable law, the manufacturer's liability for consequential and incidental damages is expressly disclaimed. The manufacturer's liability in any event is limited to, and shall not exceed, the purchase price paid. Misuse will, and modification might, void the product's warranty.

This warranty does not apply to claims made due to unauthorized repairs or alterations, freight damage, negligence, accidents, abuse, misuse, or misapplication of the equipment.

This warranty does not cover costs of labor or consequential damages including, but not limited to: business interruption costs; lost profits, or; lost business opportunities.

Warranty shall not be honored for equipment having past-due invoices.

## **WARRANTY DISCLAIMER**

The manufacturer has made a diligent effort to accurately illustrate and describe their products. However, such illustrations and descriptions are for the sole purpose of identification, and do not express, imply, or warrant that a given product is merchantable or fit for a particular purpose, or that the product will necessarily conform to the illustrations or descriptions. All product specifications are subject to change without notice.

## **DISPOSITION**

The manufacturer will make a good faith effort to effect prompt correction or other adjustment with respect to any product that proves to be defective within the Limited Warranty Period.

The provisions of the warranty shall be construed and enforced in accordance with the Uniform Commercial Code and laws as enacted in the State of Indiana.