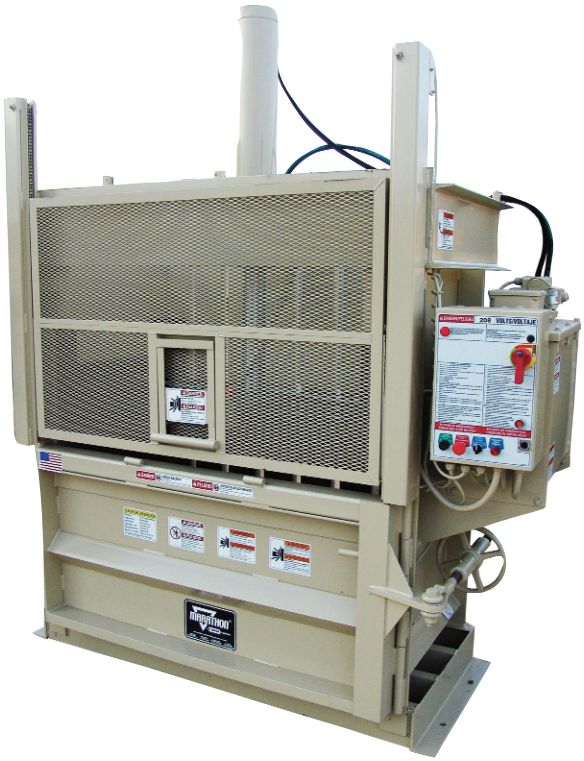
OPERATION, MAINTENANCE, AND INSTALLATION MANUAL

SPECIALTY VERTICAL BALERS



MODELS

V-4830 HD
V-6030 LP

MARATHON®

A DOVER COMPANY

Marathon Equipment Co. OMI Manual No. 0003SVB, Rev. 1/08

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INTRODUCTION

THANK YOU FOR PURCHASING A MARATHON VERTICAL BALER.

This baler is designed to give you reliable service and superior performance for years to come. Marathon is dedicated to ensuring every machine manufactured in our state-of-the-art facilities strengthens the legacy of innovation and quality that we have provided to our customers for over 40 years.

The purpose of this manual is to provide the owner and operator(s) with the necessary information to properly and safely install, operate, and maintain the baler. Also included are sections regarding troubleshooting and service procedures. The manual is not intended as a primary training source, but as a reference guide for authorized, trained personnel. Each person involved in the operation, maintenance and installation should read and thoroughly understand the instructions in this manual and follow **all** warnings.

Anyone involved in operation, maintenance, and installation of this baler should read, and understand the most current versions of all applicable standards:

- **ANSI Standard No. Z245.5 "Safety Requirements for Installation, Maintenance, and Operation"**
- **ANSI Standard No. Z245.51 "Safety Requirements For Baling Equipment"**
  A copy of these standards may be obtained from:
  ANSI
  25 West 43rd Street
  New York, NY 10036
- **OSHA Title 29 CFR, Part 1910.147**
  "Control of Hazardous Energy (lockout, and tag out)"

Any service or repair instructions contained in this manual should be performed by factory authorized personnel only.

If you should need assistance with your baler, please contact your distributor. When contacting your distributor, you will need to provide baler serial number, installation date, and electrical schematic number.

IF YOU HAVE ANY SAFETY CONCERNS WITH THE EQUIPMENT, OR NEED FURTHER INFORMATION, PLEASE CONTACT OUR SERVICE DEPARTMENT AT:

Marathon Equipment Company
P.O. Box 1798
Vernon, Al 35592-1798
Attn: Field Service Department
1-800-633-8974

PRE-OPERATING INSTRUCTIONS

WARNING: DO NOT OPERATE BALER UNTIL OPERATING INSTRUCTIONS ARE THOROUGHLY UNDERSTOOD. WEAR SAFETY GLASSES, AND GLOVES WHEN OPERATING THIS EQUIPMENT.

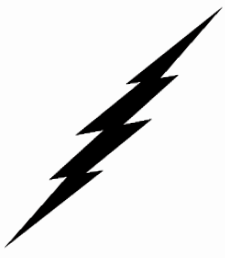
STAY CLEAR OF ALL INTERNAL, AND EXTERNAL MOVING PARTS WHEN OPERATING BALER. FAILURE TO DO SO COULD RESULT IN SERIOUS PERSONAL INJURY OR DEATH!

NEVER ENTER ANY PART OF BALER UNLESS DISCONNECT SWITCH HAS BEEN TURNED OFF AND LOCKED, AND ALL STORED ENERGY SOURCES HAVE BEEN REMOVED. See Lock-Out & Tag-Out Instructions in Maintenance section of this manual. Before starting baler, be sure no one is inside. Be certain that everyone is clear of all points of operation, and pinch point areas before starting.

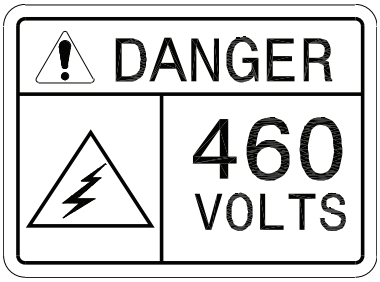
CAUTION: BE CERTAIN TURNBUCKLE AND LATCH ARE FULLY LOCKED IN PLACE ON BALE CHAMBER DOOR BEFORE STARTING BALER.

EMPLOYERS SHOULD ALLOW ONLY AUTHORIZED, AND THOROUGHLY TRAINED PERSONNEL TO OPERATE THIS BALER.
This baler is equipped with a key operated locking system. Keys should be in possession of only authorized personnel. Federal regulation prohibits operation by persons under 18 years of age. Turn off, and remove key after use.

The baler hydraulic system operates at high pressures, and at high temperatures. If you suspect a leak, **DO NOT CHECK WITH YOUR HANDS**, and avoid contact with piping, hoses, and cylinders.



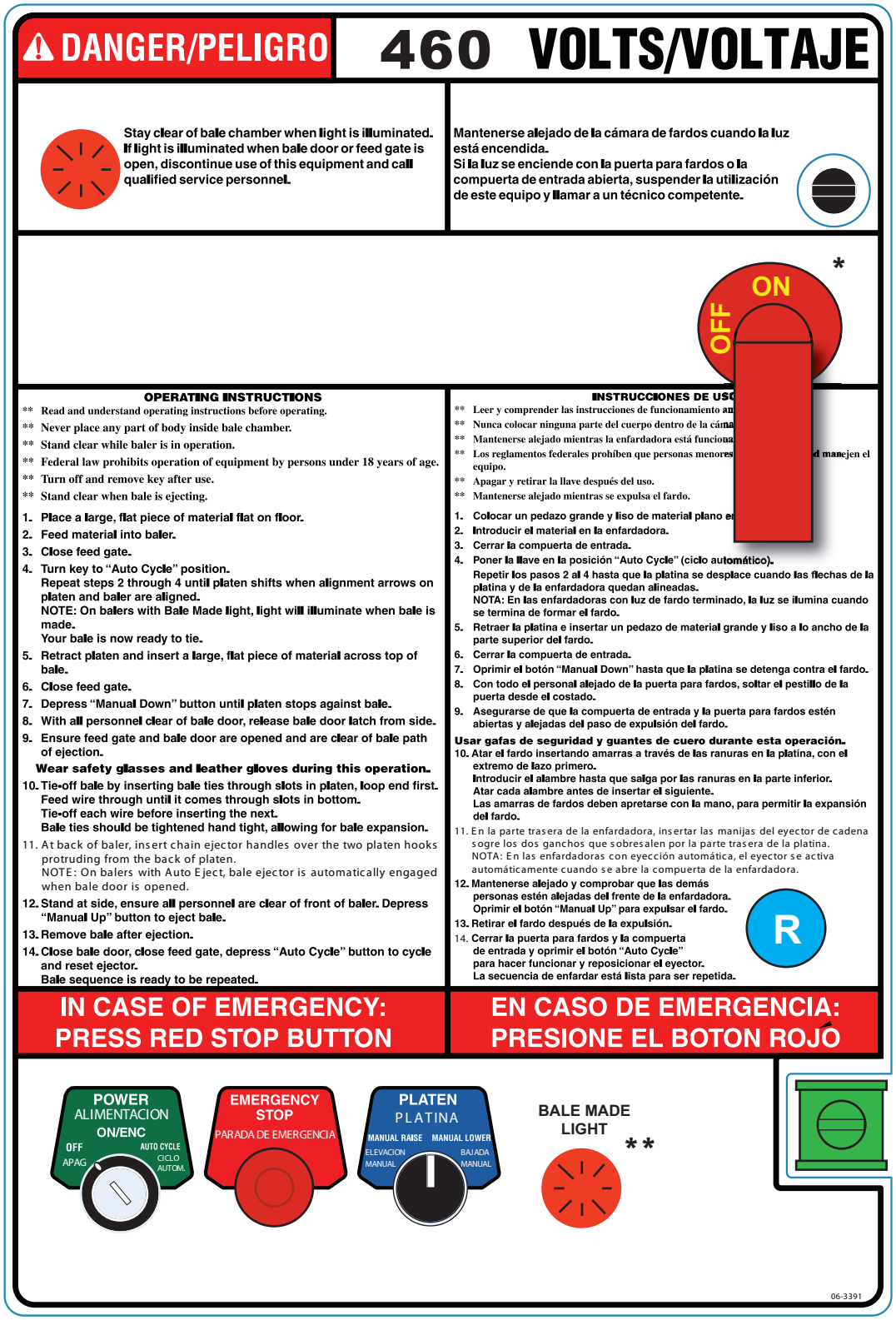
ONLY AUTHORIZED PERSONNEL SHOULD BE ALLOWED INSIDE PANEL BOX. The panel box contains high voltage components. **See Lock-Out & Tag-Out instructions in Maintenance section.**



SPECIFICATIONS

MODEL #	V-4830-HD	V-6030-LP
Performance		
Cycle Time:(empty)	58 seconds	34 seconds
Total Force:	56,550 lbs	56,550 lbs
Platen Face PSI:	43 PSI	37 PSI
Electrical		
Control Voltage	120 VAC	120 VAC
Motor:	10 HP	10 HP
RPM:	1750 RPM	1750 RPM
Hydraulic		
Pump:	10.5 GPM	10.5 GPM
Pressure:(3 Phase)	2200 PSI	2200 PSI
Pressure:(1 Phase)	1700 PSI	1700 PSI
Cylinder Bore:	6"	6”
Cylinder Rod:	3.5"	3.5”
Cylinder Stroke:	48"	30”
Reservoir Capacity:	22 GAL	22 GAL
Dimensional Data		
Feed Opening Height:	25"	19”
Feed Opening Width:	48"	60”
Feed Height:	49 1/2"	35”
Bale Size		
Width:	48"	60”
Depth:	30"	30”
Height:	48"	33”
Bale Door Clearance	48"	58”
Overall Height:	142 1/2”	105”
Overall Width:	77 1/4”	88”
Overall Depth:	43”	43"
Total Weight:	3,880 lbs	3,800 lbs
Bale Ties	14ga. X 14'	14ga. X 14'

CONTROL LAYOUT WITH OPERATING INSTRUCTIONS



*NON-FUSED DISCONNECT SWITCH (OPTIONAL)
**BALE MADE LIGHT (OPTIONAL)

CONTROLS DESCRIPTION

1. **EMERGENCY STOP** — (Red Pushbutton)
   Pressing the **EMERGENCY STOP** button will stop the machine immediately.

2. **OFF-ON-AUTO** — (Key Switch)
   (a) Turn **OFF-ON-AUTO** switch to **OFF** position and remove key when not in use.
   (b) Turn **OFF-ON-AUTO** switch to the **ON** position to operate baler with **MANUAL RAISE** and **MANUAL LOWER SWITCH**.
   (c) Turn **OFF-ON-AUTO** key switch to **AUTO** position and baler will start, platen will traverse **LOWER** and return to the load position (one complete cycle).

3. **PLATEN RAISE — PLATEN LOWER** (Selector Switch)
   Turn the switch to **RAISE** and hold to manually raise the platen. Turning the switch to **RAISE** and holding will raise the platen, with the feed gate and bale door opened or closed. This switch is normally used during bale ejection. It can also be used to interrupt the automatic cycle, and raise the platen should it become necessary. The **RAISE** switch is a “hold-to-run” control, meaning that the baler will stop when it is released. **WARNING: STAY CLEAR OF MOVING PARTS WHEN USING THE MANUAL RAISE SWITCH WITH THE FEED GATE OPEN**. Turn the switch to **LOWER** and hold to manually lower the platen. The feed gate, and bale door must be closed. It can be used to interrupt the auto cycle, and lower the platen should it become necessary. The **LOWER** switch is a “hold-to-run” control also, meaning that the baler will stop when it is released.

4. **CYCLE READY LIGHT** — (Red Light)
   This light will warn the operator of an interlock switch malfunction. If the light is on and the feed gate is in the up position, there is a problem. Discontinue use of the baler. Turn off power to the baler, and Lock-out/Tag-out per the instructions on page 2-1. Then contact a qualified service person. The light should be **ON** when the feed gate is in the down position, indicating the baler is ready for operation.

5. **BALE MADE LIGHT** — (Red Light) (Optional)
   This light will come on if enough material has been compacted to make a complete bale.

6. **EXTERNAL RESET** — (Manual Knob)
   Allows the operator to reset overload protection without opening the panel box.

OPERATING INSTRUCTIONS - MAKING A BALE

IN CASE OF EMERGENCY:
PRESS the large RED button to "STOP"

WARNING: SAFETY INTERLOCKS AND DEVICES ARE INSTALLED ON THIS MACHINE FOR YOUR PROTECTION. **NEVER DISABLE OR BYPASS ANY SAFETY DEVICE.** FAILURE TO COMPLY WITH THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH.

HOW TO MAKE A BALE:

1. Open the bale chamber door by turning the turnbuckle on the chamber door latch.
2. Place a large flat piece of cardboard inside bale chamber on baler floor.
3. Close the bale chamber door, and secure it with the turnbuckle.
4. Load material into baler through feed opening.
   NOTE: DO NOT OVERFILL BALER! Overfilling baler will result in serious damage to the feed gate that may prohibit operation of the baler. When loading material through the feed opening, keep material pushed away from the feed gate. This is especially imperative when the bale chamber is full and bale is approaching '**BALE MADE**' status. Overfilling at this stage will damage baler and incur costly repair.
5. Pull the feed gate down by the handle to close the feed gate.
6. To start the baler, insert key into switch, and turn to the ON position.
7. Turn switch to AUTO position. The platen will go down and return up to the loading position. As the platen returns fully to the up position, the feed gate will automatically open and the motor will stop.
8. Repeat steps 4 through 7 until the BALE MADE arrow decal on the feed gate is aligned with the BALE MADE arrow decal on the platen.

8A. (Optional) If the baler is equipped with the optional BALE MADE light, it will illuminate when the bale is made and ready to be tied and ejected.

NOTE: FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL!

NOTE: DO NOT OVERFILL BALER!

BALE TIE-OFF / BALE EJECT

When the **BALE MADE DECALS ARE ALIGNED**, follow tie-off procedure and eject finished bale from bale chamber.

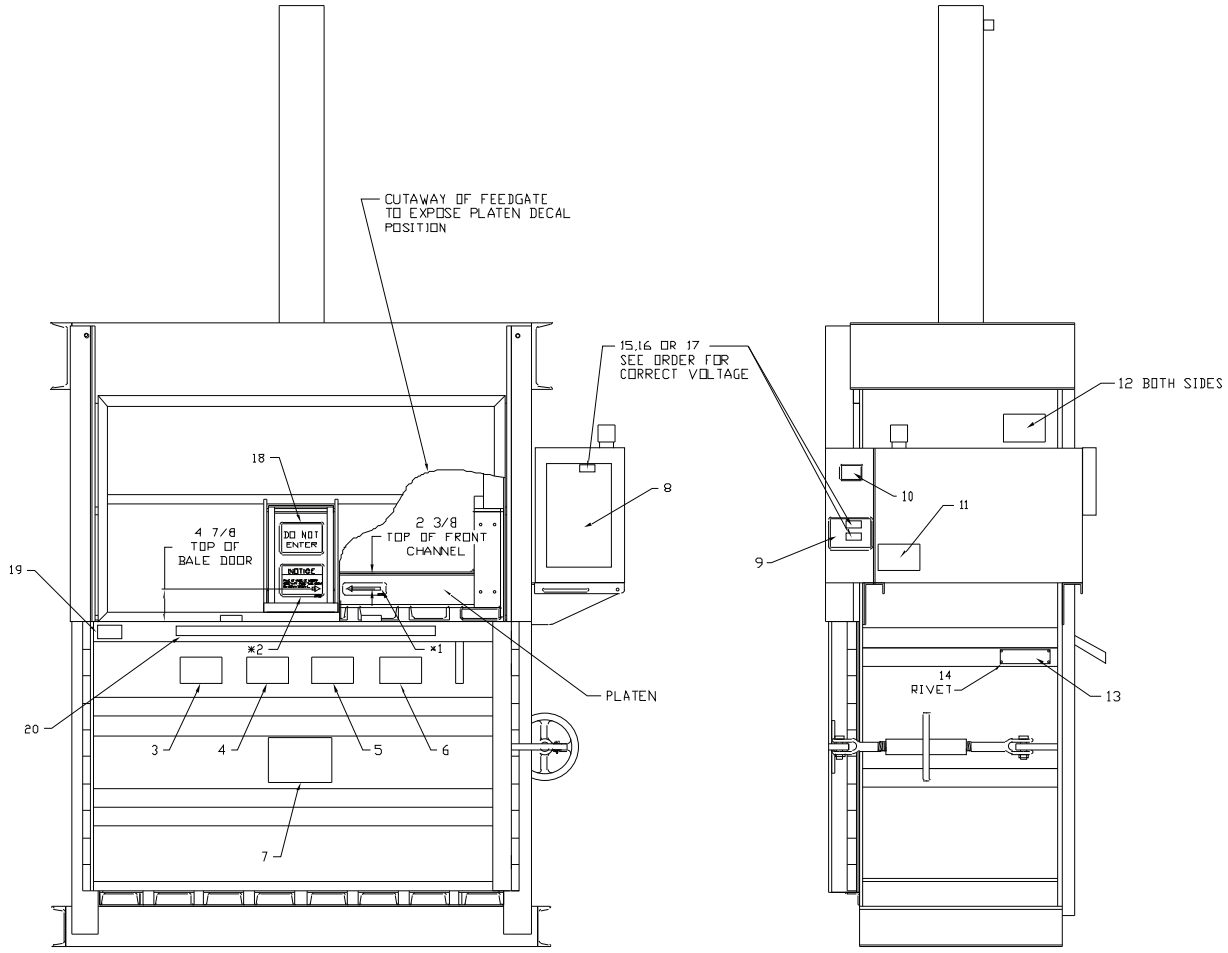
FOR BALE TIE-OFF & BALE EJECT:

CAUTION: WEAR SAFETY GLASSES AND LEATHER GLOVES DURING THE FOLLOWING PROCEDURE.

1. Turn PLATEN switch to **RAISE** and hold, until the feed gate opens.
2. Place a large flat piece of material across the top of the bale.
3. Turn PLATEN switch to **LOWER** and hold until platen is completely down.
4. Raise the feed gate completely. Open the bale chamber door by turning the turnbuckle on the chamber door latch.
5. **Caution:** Wear safety glasses and leather gloves during this operation.
6. Tie off bale by inserting bale ties through slots in platen, loop end first. Feed wire all the way through the slots in the platen. Go behind baler and feed wire all the way through the slots in the floor of baler. Tie each wire by first inserting the straight end through the loop end and cinching the slack, then twist the straight end back around itself several times to ensure it will hold.
7. Bale ties should be tightened only hand tight, allowing for bale expansion when bale door is opened and pressure is released.
8. Place a pallet in front of the baler for the completed bale to land. Attach the Ejector Chain to the Chain Eject Hook located on the platen at the rear of the baler.
9. **Caution**: Stand to the side of baler, all personnel must be clear of the front of the baler. Turn PLATEN switch to RAISE and hold until bale ejects, then release.
10. Remove bale with pallet jack or forklift.
11. Close, and latch the bale chamber door. Close feed gate.
12. Turn to AUTO position, baler will start, ram will travel down and return up to the load position and reset ejector.
13. Baling sequence is ready to be repeated.

DECAL PLACEMENT

Refer to the decal descriptions chart on the following page to match the reference numbers below to the description and part number for each decal. For images of decals, see page 1-10.



NOTE: LOCATIONS OF DETAILS 1 & 2 ARE CRITICAL!

The “BALE MADE” arrow on the feed gate (#2, decal 06-0651) MUST be placed where the vertical center of the arrow is exactly 4 7/8” from the top of the bale chamber door.

The “BALE MADE” arrow on the platen (#1, decal 06-0652) MUST be placed where the vertical center of the arrow is exactly 2 3/8” from the top of the front channel on the platen.

DECAL DESCRIPTIONS

WARNING DECAL REQUIREMENTS

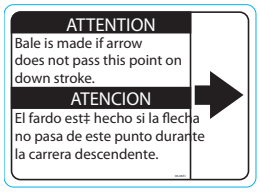
When your baler leaves the factory, several WARNING DECALS are installed for your protection. These labels are subject to wear & abuse due to the nature of the operation. THESE DECALS MUST BE MAINTAINED. Additional decals may be purchased through your distributor, by calling **1-800-633-8974**, or by logging onto **www.parts1stop.com**.

PART #	REF #	DESCRIPTION	QTY #
06-0652	1	ORANGE ARROW W/ 1" HEAD6" X 1 1/2 SP	1
06-0651	2	BALE MADE IF ARROW DOES NOT PASS THIS POINT	1
06-0121	3	NOTICE FEDERAL REGULATION PROHIBIT..UN	1
06-3123	4	CONFINED SPACE	1
06-0118	5	CAUTION STAND CLEAR WHILE OPERATIN	1
06-0115	6	NOTICE GATE MUST BE CLOSED BEFORE	1
06-0126	7	MARATHON EQUIPMENT COMPANY	1
06-3391	8	OPERATING INSTRUCTIONS FOR VB (EN & SP)	1
06-3044	9	DANGER VOLTS (W/BLANK)	1
06-0120	10	DANGER DISCONNECT & LOCK-OUT	1
06-0117	11	CAUTION STAND CLEAR WHEN	1
06-0133	12	DANGER STAY OFF...DO NOT CLIMB	2
06-0275	13	U.L. SERIAL TAG FOR VERTICAL BALER	1
05-0325	14	1/8 X 1/2 ALUM RIVETS	4
06-2684	15	208	3
06-2686	16	230	3
06-2690	17	460	3
06-0039	18	DANGER DO NOT ENTER	1
06-1839	19	AMERICAN FLAG	1
06-0116	20	DANGER KEEP HANDS OUT	1

DECAL IMAGES

To order replacement decals, contact your distributor or call our service department at **1-800-633-8974** or you can log on to **www.parts1stop.com**.

06-0651



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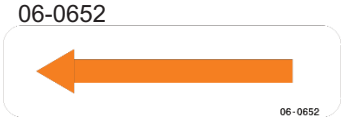

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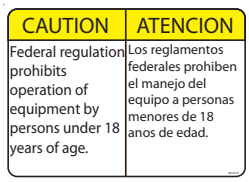

06-3123

06-0118

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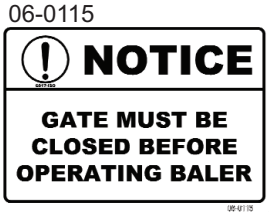

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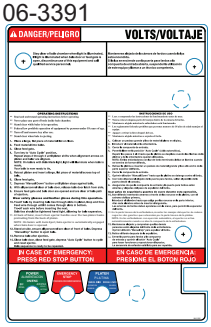

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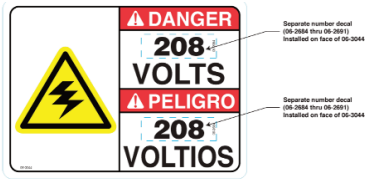

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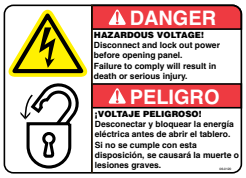


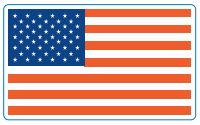
06-0117

06-0133

06-2684

06-0039

06-1839



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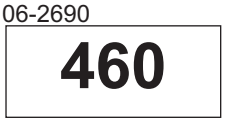
06-0116

06-2690



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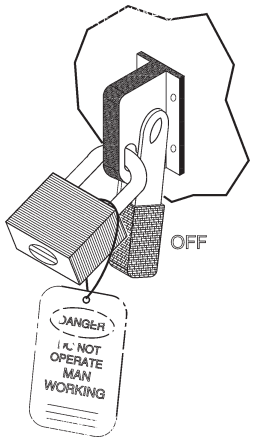
LOCK-OUT & TAG-OUT INSTRUCTIONS

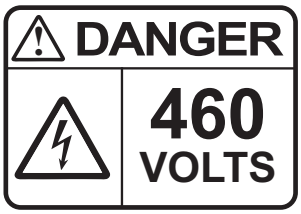


Before entering any part of the baler, be sure that all sources of energy have been shut off, all potential hazards have been eliminated, and the baler is locked-out, and tagged-out in accordance with OSHA, and ANSI requirements. Before servicing the hydraulic system or the inside of the bale chamber, the platen must be properly supported as shown on the next page. The specific lock-out and tag-out instructions may vary from company to company (i.e. multiple locks may be required, or other machinery may need to be locked-out and tagged-out). The following instructions are provided as minimum guidelines.

INSTRUCTIONS

1. Move the disconnect handle to the OFF position. The disconnect switch is located in the panel box of the machine.
2. Padlock the disconnect handle with a keyed padlock, and take the key with you. (To insert the lock through the lock tab on the disconnect handle, pull the lock tab out of the disconnect handle when the handle is in the OFF position.)
3. Along with the padlock, place an appropriate, highly visible, warning tag on the disconnect lever. The tag should provide a warning such as: " Danger: Do not operate equipment. Person working on equipment." or " Warning: Do not energize without the permission of _____."
4. After locking, and tagging the baler, try to start, and operate the baler (as outlined in the Operating Instructions) to make sure the lock-out and tag-out is effective. If the lock-out and tag-out is effective, remove the key from the key switch, and take it with you.

ELECTRICAL: The panel box contains high voltage components. Only authorized service personnel should be allowed inside the box. Authorized service personnel should be allowed inside the box only after the baler has been locked-out, and tagged-out.



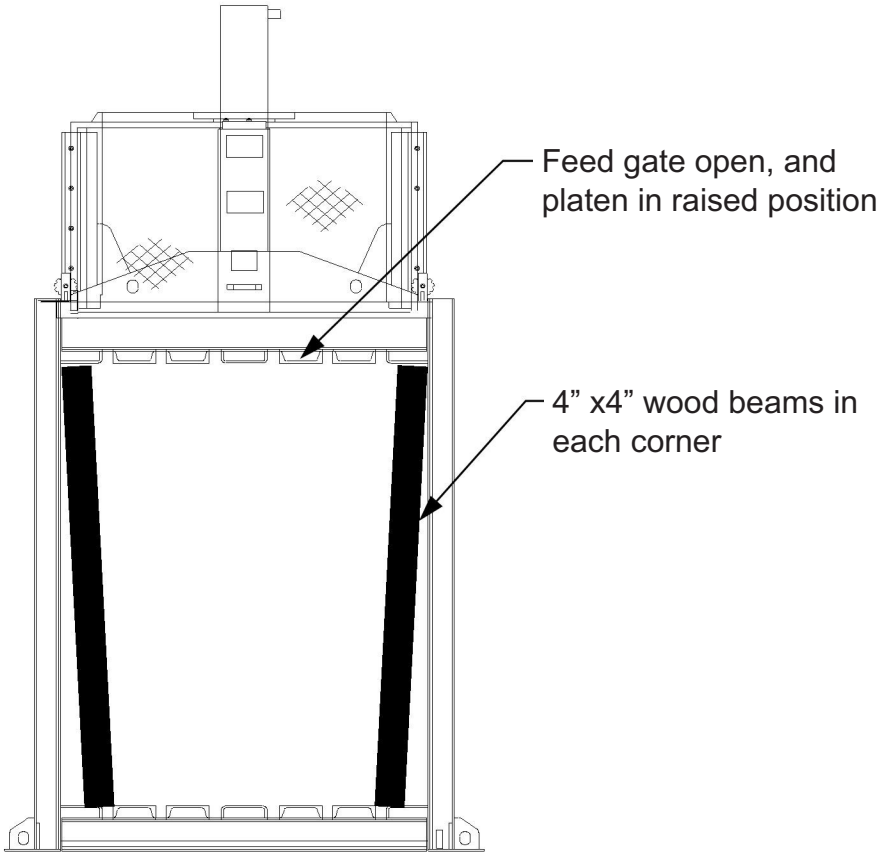
HYDRAULIC: Stored hydraulic energy must be removed from the baler hydraulic circuit for complete lock-out, and tag-out. Make sure that this energy has been relieved by manually pressing the solenoid valve pin located in the center of the coil end of each valve.

SUPPORTING OF PLATEN

WARNING: LOCK-OUT & TAG-OUT PRIOR TO ANY SERVICE OR REPAIR.
Before entering bale chamber for service, be sure that the platen is securely supported. At a minimum, use two wooden 4” x 4” beams (good condition), fixed to fit securely in each rear corner of the chamber while supporting the platen in the up position. The top end of each beam should be in the extreme corner, while the bottom end should be positioned over the outer tie slot in the floor. See diagram below.

DANGER: DO NOT CLIMB ON SIDES OF BALER. USE A LADDER OR PLATFORM WHEN WORKING ON TOP OF THE BALER OR OTHER AREAS OF THE BALER THAT CANNOT BE REACHED FROM GROUND LEVEL.

DANGER: PARTS OF THE PLATEN EXTEND ABOVE THE TOP OF THE BALER WHEN PLATEN IS FULLY RAISED.



PERIODIC MAINTENANCE & RECOMMENDED OIL

WARNING: BEFORE PERFORMING ANY MAINTENANCE OR SERVICE PROCEDURES ON THE BALER, MAKE SURE THE BALER IS LOCKED-OUT AND TAGGED-OUT PER THE INSTRUCTIONS ON PAGE 2-1. FOR MAINTENANCE INSIDE THE BALE CHAMBER, SEE THE PLATEN CHOCKING PROCEDURE ON PAGE 2-2.

MONTHLY

1. Check external hoses for chafing, rubbing, leakage, or other deterioration, and damage. Tighten all fittings as necessary. Check hydraulic cylinder, cylinder pin, and bolts for signs of wear, and fatigue.
2. Check for any obvious unsafe conditions, such as operator obstructions, in baler area.
3. Check oil level in hydraulic reservoir.
4. Lubricate the door hinge, and turnbuckle with oil.
5. Check platen guides for wear.
6. Apply a light coating of all purpose grease in the track for the Feed Gate.
7. Apply a light application of all purpose oil to the latch of the Feed Gate.

ANNUALLY

1. Replace the hydraulic fluid. See Recommended Oil.
2. Clean the top of the power unit to remove the dirt build up.

ANNUAL FILTER MAINTENANCE

1. The hydraulic filter should be cleaned or replaced.
2. The filter may be removed from the power unit through the cleanout cover in the top of the reservoir.
3. Care should be exercised in cleaning the filter to ensure that the element is not torn.
4. Clean the element with a soft brush, and standard industrial solvent.
5. Install filter after cleaning, and check fittings for tightness. Pump noise, and a "crackle" sound is most often caused by air entering the pump suction line. Tightening the suction fittings will usually eliminate the problem.

RECOMMENDED OIL

Citgo A/W Hydraulic Oil 46

PROCEDURES - CYLINDER REMOVAL

DANGER: DO NOT CLIMB ON SIDES OF BALER. USE A LADDER OR PLATFORM WHEN WORKING ON TOP OF THE BALER OR OTHER AREAS OF THE BALER THAT CANNOT BE REACHED FROM GROUND LEVEL.

DANGER: PARTS OF THE PLATEN EXTEND ABOVE THE TOP OF THE BALER WHEN PLATEN IS FULLY RAISED.

CYLINDER REMOVAL

1. Raise platen up to the top position by Turning **PLATEN** switch to **RAISE** and hold.
2. Disconnect, and Lock-out and Tag-out power per instructions on page 2-1.
3. Support platen with fork lift to relieve pressure from cylinder rod and pin connection, and to prevent platen from falling when pin is removed.
4. Remove bolts, and cotter pin from cylinder pin. This will disconnect cylinder pin from platen.
5. Remove platen from front of baler. **NOTE:** Units with cast guide shoes on the platen will need the shoes removed before the platen can be removed. The platen must be in the upper-most position to remove the shoes.
6. Turn on power, and retract cylinder rod.
7. Disconnect, and Lock-out and Tag-out power.
8. Disconnect one hydraulic hose at a time. Plug the hose port before disconnecting the other hose. **NOTE:** Remove hose fittings slowly.
9. **WARNING:** BE SURE HYDRAULIC CYLINDER IS SECURELY SUPPORTED BEFORE PROCEEDING.
10. With the hydraulic cylinder supported, loosen the 3/4” cylinder bolts, and locknuts.
11. Remove cylinder.
12. Before reinstalling cylinder, check cylinder pin, bolts, and cylinder rod for signs of fatigue. Do not reuse parts if wear or cracks are present.
13. To reinstall the cylinder, reverse the above steps.
14. Be sure to use new bolts, nuts, and cotter pins in the cylinder pin.

PROCEDURES - PRESSURE SETTING

DANGER: DO NOT CLIMB ON SIDES OF BALER. USE A LADDER OR PLATFORM WHEN WORKING ON TOP OF THE BALER OR OTHER AREAS OF THE BALER THAT CANNOT BE REACHED FROM GROUND LEVEL.

DANGER: PARTS OF THE PLATEN EXTEND ABOVE THE TOP OF THE BALER WHEN PLATEN IS FULLY RAISED.

HYDRAULIC SYSTEM PRESSURE SETTING

1. Turn **PLATEN** switch to **LOWER** and hold until platen is in the full down position.
2. Turn off the power, and perform the LOCK-OUT and TAG-OUT procedures described on page 2-1.
3. Remove the 1/4” plug from the gauge port located on the back of the power unit.
4. Install a pressure gauge in the gauge port 1/4” hole.
5. Remove the Lock-out and Tag-Out provisions, and turn on power to the baler.
6. Refer to the Specifications page on 1-3 for correct relief pressure setting. The baler operator must turn **PLATEN** switch to **LOWER** position and hold. The hydraulic pump will create pressure. Turn the adjustment screw on the relief valve clockwise to increase the pressure, or counterclockwise to decrease the pressure. Continue until pressure is correct.
7. Tighten locknut on adjustment screw.
8. Have the operator release the **PLATEN LOWER** switch, baler will stop.
9. Turn off the power, and perform the LOCK-OUT and TAG-OUT procedures described on page 2-1.
10. Remove the pressure gauge, and reinstall the 1/4” plug.
11. This procedure is complete.

ELECTRICAL CHARTS

ELECTRICAL RECOMMENDATIONS					
MOTOR SIZE	VAC	TOTAL FULL LOAD AMP	DUAL ELEMENT FUSE - MAX. SIZE	SERVICE DISCONNECT AMP SIZE	CIRCUIT BREAKER MAXIMUM SIZE
10 HP MAIN MOTOR	208	59	100	60	80
	230	54	90	60	70
	460	27	45	30	35
	575	22	35	30	30

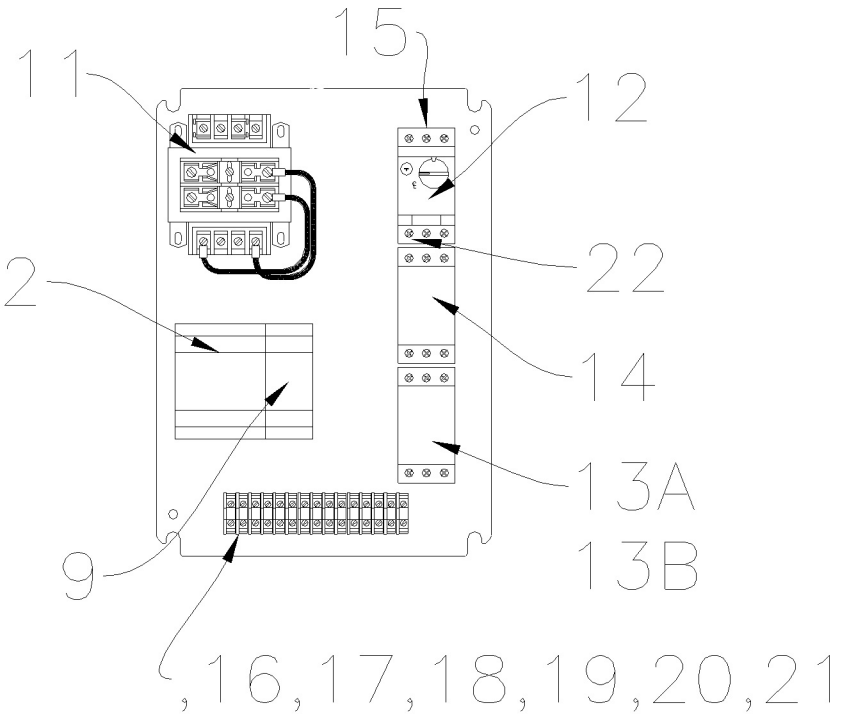
WIRE SIZE RECOMMENDATIONS					
MOTOR SIZE	VAC	UP TO 100'	UP TO 200'	UP TO 300'	Above 300'
10 HP MAIN MOTOR	208	6	4	2	consult factory
	230	8	4	3	
	460	12	10	8	
	575	12	12	10	

NOTE: Information provided is for reference. Always follow all electrical codes for the area to be installed.

REPLACEMENT PARTS LIST

PART #	HARDWARE	QTY	4830HD	6030LP
05-0256	WIRE BALE TIES 250/pcs		X	X
06-3471	6 X 48 X 3.5 CYL OSB	1	X	X
06-3472	EJECTOR CHAIN ASSY OSB	1	X	X
06-3473	EJECTOR CHAIN QUICK LINK OSB	1	X	X
06-3474	MAIN GATE HANDLE OSB	1	X	X
06-3475	WHEEL TURNBUCKLE OSB	1	X	X
06-3476	GT GUIDE TUBE ASSY EA OSB	1	X	X
06-3477	MAIN GATE ASSY OSB	1	X	X
06-3478	UHMW KIT OSB	1	X	X
06-3479	SWITCH MOUTING BRKT OSB	1	X	X
	HYDRAULIC ("A" Type)			
03-3665	MOTOR, 10 HP 3PH CLOSE COUPLING	1	X	X
02-4742	PUMP 10.5 GPM VANE W/DO5 PAD	1	X	X
02-0051	FITLER SUCTION 1 1/4 18 GPM 10	1	X	X
02-0215	GAUGE SIGHT LEVEL 5 INCH	1	X	X
02-0357	VALVE 4-WAY 05 C 3-POS SS	1	X	X
02-0197	BREATHER 3/4 FILLER	1	X	X
	HYDRAULIC ("T" Type)			
03-5374	MOTOR, 10 HP 3PH SUBMERSIBLE FR56	1	X	X
02-4988	GP-2AR-34 REVERSIBLE PUMP 10GPM	1	X	X
02-4993	PEC-8-3/4-100 STRAINERS	1	X	X
02-0215	SIDE OIL LEVEL GAUGE SG-5-T-G	1	X	X
99-7391	BREATHER	1	X	X
02-0357	VALVE	1	X	X
	ELECTRICAL			
03-0658	SWITCH PRESSURE W/72" STOW COR	1	X	X
03-0288	TRANSFORMER 150VA 208/230/460	1	X	X
03-0933	OPERATOR 22 SELECTOR 3 POS RT	1	X	X
03-0936	CONTACT BLOCK 1 N.O. F/22.5 GE	3	X	X
03-0937	CONTACT BLOCK 1 N.C. 22.5 GE	2	X	X
03-0939	OPERATOR 22 PUSH/PULL MSHRM HD	1	X	X
03-1344	LIGHT PILOT 22.5 RED LED 120VO	1	X	X
03-2689	OPERATOR 22 KEY SW 3 POS 2 MA	1	X	X
03-4730	PLC TELEMECANIQUE EXP. MOD. 4	1	X	X
03-4753	MOTOR STARTER IEC OVERLOAD 12-	1	X	X
03-4748	MOTOR STARTER IEC 32A 3P CONTA	1	X	X
03-4763	MOTOR STARTER IEC OVERLOAD 23-	1	X	X
03-4729	PLC TELEMECANIQUE 6 IN 4 OUT	1	X	X
03-0486	MOTOR STARTER EXT RESET	1	X	X
03-4926	ENCLOSURE 12 W 18 H 6 D NEMA 4	1	X	X
03-0496	ENCLOSURE 2 X 4 NEMA 4 BELL BO	1	X	X
03-0497	ENCLOSURE COVER 2 X 4 NEMA 4	1	X	X
06-3391	DECAL LEXAN F/VERTICAL BALER	1	X	X
06-2690	DECAL 460	1	X	X
06-2686	DECAL 230	1	X	X
06-2684	DECAL 208	1	X	X

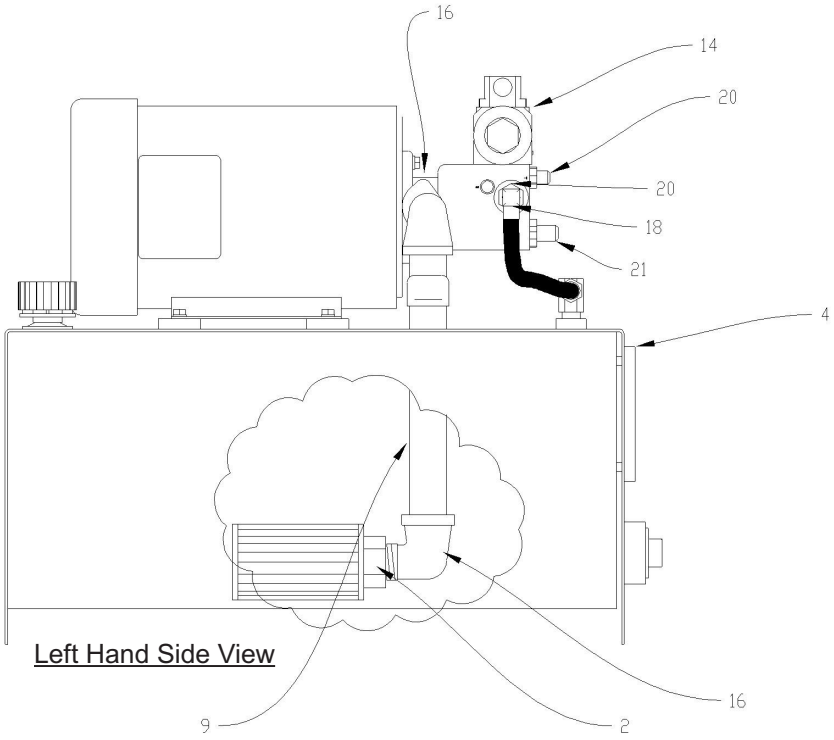
PANEL BOX LAYOUT & PARTS REFERENCE LIST



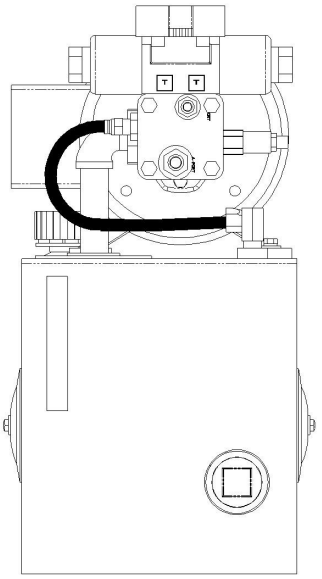
PART #	REF #	DESCRIPTION	QTY #
03-1344	1	LIGHT PILOT 22.5 RED LED 120VOLT GE	1
03-4729	2	PLC TELEMECANIQUE 6 IN 4 OUT	1
03-0939	3	OPERATOR 22 PUSH/PULL MSHRM HD RED GE	1
03-2865	4	CONTACT BLOCK FLANGE FOR 5 CONTACTS	1
03-0933	5	OPERATOR 22 SELECTOR 3 POS RTTO CENTER GE	1
03-2689	6	OPERATOR 22 KEY SW 3 POS 2 MAINT.SPRG RT TO	1
03-4783	7	ENCLOSURE	1
06-3391	8	DECAL LEXAN F/VB - OPERATING INSTRUCTIONS (EN & SP)	1
03-4730	9	PLC TELEMECANIQUE EXP. MOD. 4 IN 2 OUT	1
03-0288	11	TRANSFORMER 150VA 208/230/460PRI 120SEC	1
03-4748	14	MOTOR STARTER IEC 32A 3P CONTACTOR	1
03-4753	13A	MOTOR STARTER IEC OVERLOAD 12-18 AMPS **(460 Volts)**	1
03-4763	13B	MOTOR STARTER IEC OVERLOAD 23-32 AMPS **(208-230 Volts)**	1
03-4747	15	MOTOR STARTER IEC PHASE BARRIER	1
03-4437	16	TERMINAL BLOCK #22-10 35MM DIN GREY	24
03-4172	17	TERMINAL BLOCK #24-10 35MM DIN GRD GREEN	1
03-4169	18	TERMINAL BLOCK END BARRIER F/03-4168	2
03-4173	19	TERMINAL BLOCK END BARRIER F/03-4172	2
03-4441	20	TERMINAL BLOCK END STOP 35MM DIN	2
03-4438	21	TERMINAL BLOCK JUMPER 3 POLE INSULATED	4
03-0936	22	CONTACT BLOCK 1 N.O.	7
03-4761	22	MOTOR STARTER IEC BUSS CONNECTOR RIGID (OPTIONAL)	1
03-0937	23	CONTACT BLOCK 1 N.C.	4
03-4782	12	MOTOR STARTER IEC 24-32A MOTOR PROTECTOR (OPTIONAL)	1

POWER UNIT DRAWING - “A” TYPE

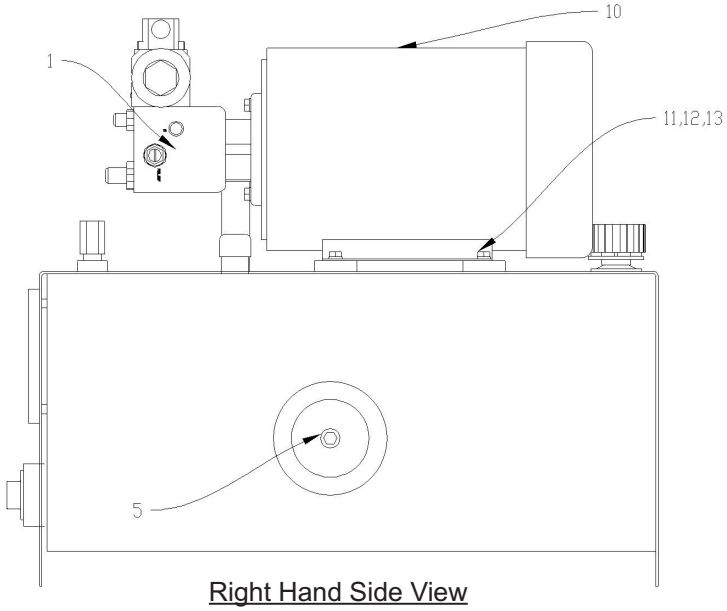
See next page for reference chart



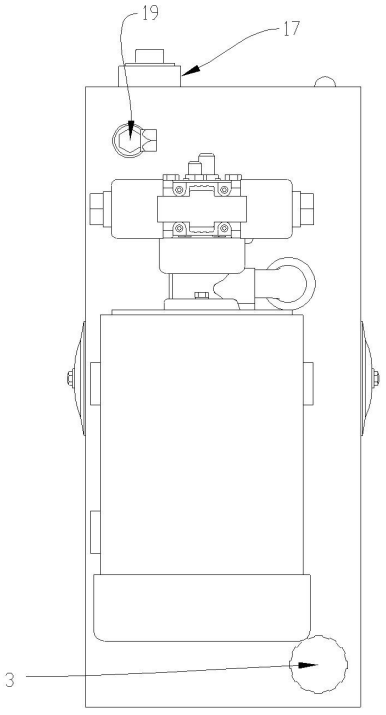
Left Hand Side View



End View



Right Hand Side View



Top View

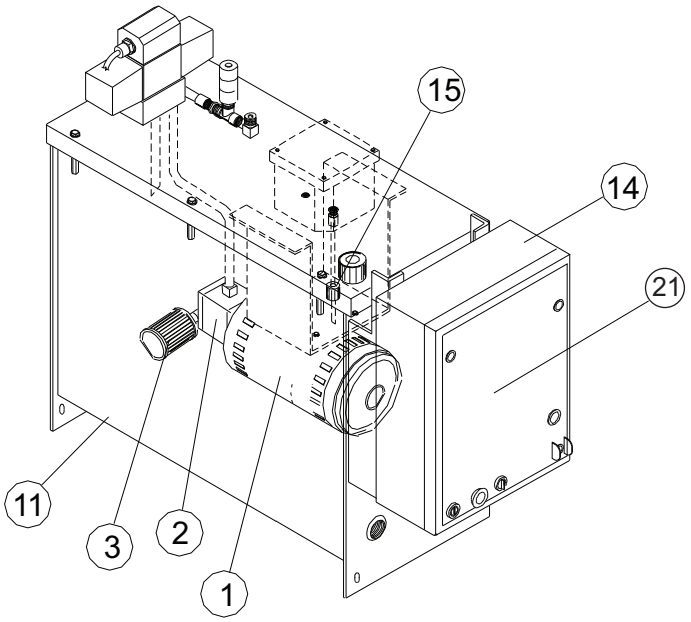
POWER UNIT REFERENCE LIST - “A” TYPE

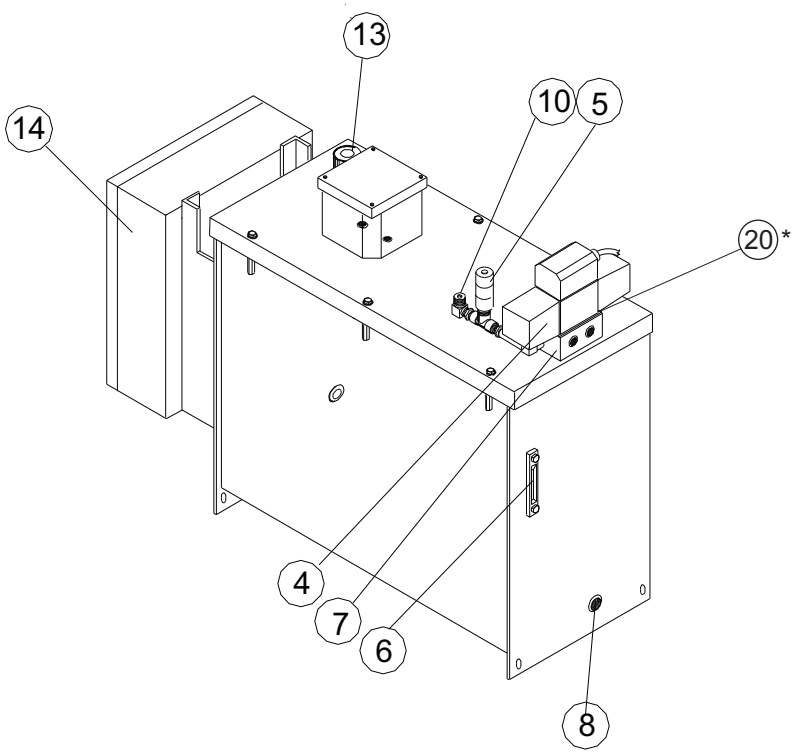
Match the reference numbers to the drawing on the previous page. To order replacement parts, please call our parts department at **1-800-633-8974** or log on to **www.parts1stop.com** to order online.

PART #	REF #	DESCRIPTION	QTY #
02-4703	1	PUMP 9 GPM VANE W/DO5 PAD	1
02-2232	2	FILTER SUCTION 1 1/4 NPT 100MESH 20GPM	1
02-0197	3	FILLER BREATHER 3/4	1
02-0215	4	GAUGE SIGHT LEVEL 5 INCH	1
02-0219	5	CLEAN OUT COVER 6	1
02-0948	6	HOSE END 1/2 WB X 8 JICF	4
30-2948	9	1 1/4 SCH 40 PIPE X 12 THRD BTH ENDS	1
03-3665	10	MOTOR 10HP 208/230/460V 60HZ 3PH CLOSE COUPLING	1
05-0155	11	BOLT 3/8-16 X 3/4 HEX HD	4
05-0159	12	WASHER 3/8 LOCK	4
09-1239	13	1/2 X 2 BAR X 2	4
02-0357	14	VALVE 4 WAY 05C 3 POSITION SOFT SHIFT	1
02-0218	15	FLANGE SUCTION 1 PIPE	1
02-0261	16	ELL 1 1/4 NPTM X 1 1/4 NPTF 90 SCH 40	2
02-0254	17	PLUG 2 NPT SQ HD	1
02-4210	18	ELL 8 JICM X 8 JICF SWV 90	1
02-0029	19	ELL 1/2 NPTM X 1/2 NPTF SWV 90	1
02-0940	20	ADAPTER 8 JICM X 12 ORM	2
02-0941	21	ADAPTER 8 ORM X 8 JICM	1
30-2882	22	TUBING 3/4 OD .095 WALL STEEL	1

POWER UNIT DRAWING - “T” TYPE

See next page for reference chart





*Relief valve not seen from this angle.

POWER UNIT REFERENCE LIST - “T” TYPE

Match the reference numbers to the drawing on the previous page. To order replacement parts, please call our parts department at **1-800-633-8974** or log on to **www.parts1stop.com** to order online.

Part #	Ref #	Description	Qty
03-5374	1	10 HP/3PH SUBMERSIBLE MOTOR FR56	1
02-4988	2	GEAR PUMP 10.5GPM	1
02-4993	3	3/4" STRAINER	1
02-0357	4	CONTROL VALVE VICKERS	1
02-4990	5	PRESSURE SWITCH, CD174 NASON 1000-3000PSI	1
02-0215	6	SIDE OIL LEVEL GAUGE SG-5-T-G	1
02-4991	7	ALL "O" RING DO2 SUBPLATE	1
02-2253	8	1" PIPE PLUG	1
99-7392	11	SUBMERSIBLE RESERVOIR 24"X13"X22", 20GAL	1
99-7391	13	BPS-40N12 3/4" BREATHER	1
03-4926	14	CONTROL PANEL 12"X18"X6" NEMA 4	1
02-4992	15	TEMP & OIL LEVEL SENSOR TL009	1
02-5086	20	RELIEF VALVE	1
06-3391	21	LEXAN DECAL - OPERATING INSTRUCTIONS	1
02-5006	22	TANK SEAL	1

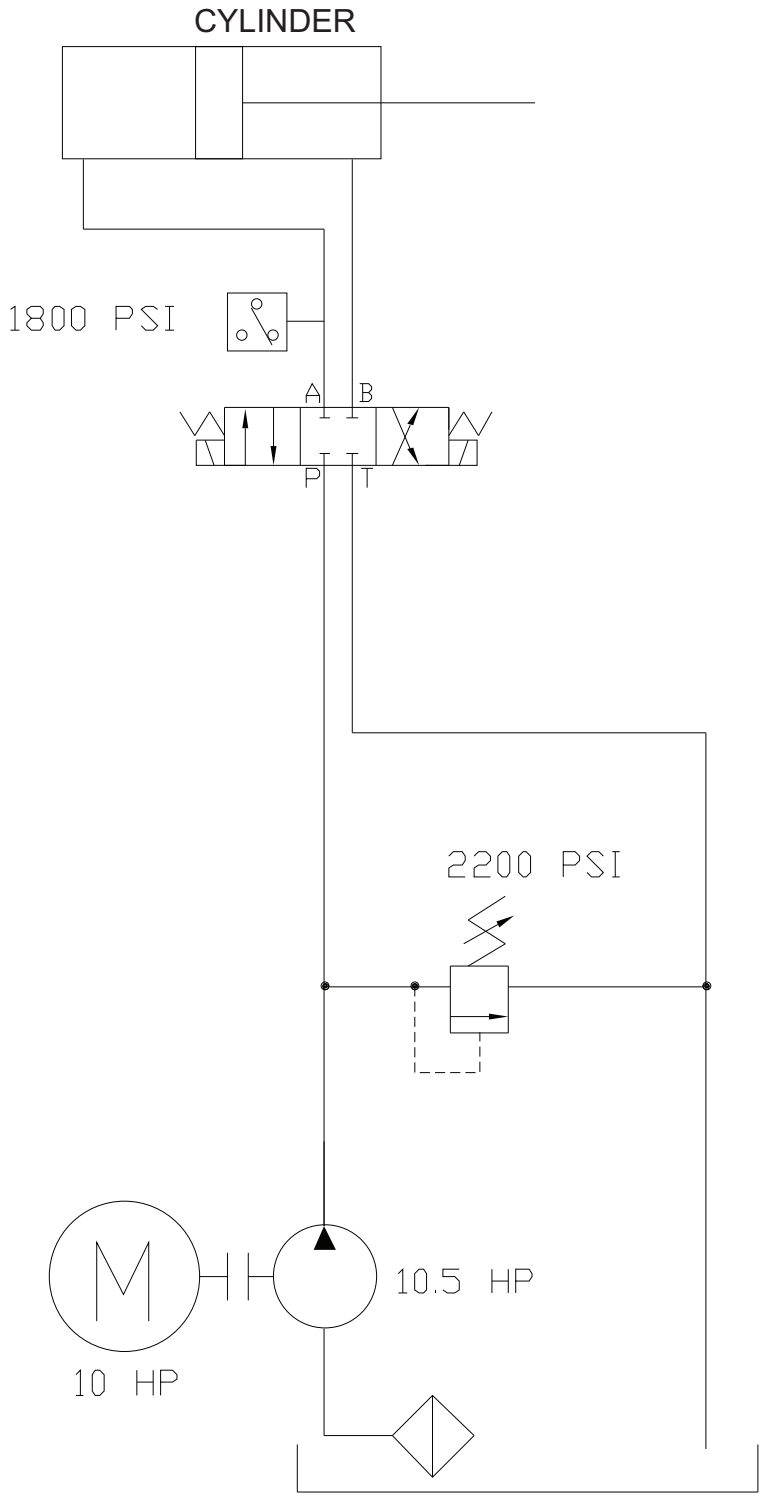
TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
UNIT WILL NOT START	(1) No electrical power to unit	(1A) Turn on main disconnect
	(2) No electrical power to control circuit	(2A) Check primary, and secondary sides of transformer
		(2B) Check for correct voltage. Check control fuses.
		(2C) Check stop button
		(2D) Check start button to be sure con tact closes when pressed
		(2E) Check magnetic interlock.
	(3) Over load circuit tripped	(3A) Check overload resets
	(4) Fuse Blown	(4A) Replace fuses
UNIT WILL NOT CONTINUE RUN-NING WHEN START BUTTON IS RELEASED	(1) Relay or contacts are inoperative	(1A) Check relay coil, contacts, & wiring
	(2) Motor Starter auxiliary contacts are inoperative	(2A) Check motor starter contacts, and wiring
	(3) Secondary contact on start button is inoperative	(3A) Check contact to be sure it is operating properly. Check wiring.
MOTOR RUNS BUT PLATEN DOES NOT MOVE NORMALLY	(1) Insufficient oil in reservoir	(1A) Fill reservoir with oil
	(2) Low relief pressure	(2A) Check relief pressure
		(2B) Clean orifice in relief valve & reset pressure
		(2C) Check o-rings on relief valve for damage or leakage
	(3) Oil leakage in cylinder	(3A) Check cylinder for bypassing
		(3B) Replace seal kit, inspect rod , and cylinder tube for scoring or nicks.
		(3C) Replace cylinder
	(4) Defective pump	(4A) Replace pump
	(5) Oil leakage from hose fittings	(5A) Tighten hose fittings
	(6) Low voltage	(6A) Check voltage
	(7) Pump may be driven in the wrong direction of rotation	(7A) Stop immediately to prevent seizure. Check direction of drive rotation (proper rotation direction is indicated by arrow on motor)
	(8) Pump shaft broken, or shaft key sheared	(8A) Disconnect hose and suction line from pump. Remove bolts connect ing pump to motor. Examine pump and motor shaft, replace if neces sary.
	(9) Intake pipe from reservoir blocked, or oil viscosity too heavy to prime	(9A) Drain system. Add clean fluid of proper viscosity, and specifications. Filter as recommended. Check system filter for cleanliness.
	(10) Intake air leaks (foam in oil or sounds like gravel in pump)	(10A)Check intake connections. Tighten securely, and flush system if required.
RAM WILL NOT REVERSE	(1) Solenoid valve is inoperative	(1A) Check coil in solenoid valve
	(2) Reverse button inoperative	(2A) Check reverse button contacts
	(3) Pressure Switch Inoperative	(3A) Check Pressure Switch
PUMP MAKES NOISE, SOUNDS LIKE GRAVEL INSIDE	(1) Partly clogged intake strainer or restricted intake pipe	(1A) Pump must receive intake fluid freely or cavitation results. Drain system, clean intake pipe, and clean or replace strainer
	(2) Defective bearing	(2A) Replace pump
	(3) Air leak at pump intake pipe joints	(3A) Tighten joints as required.

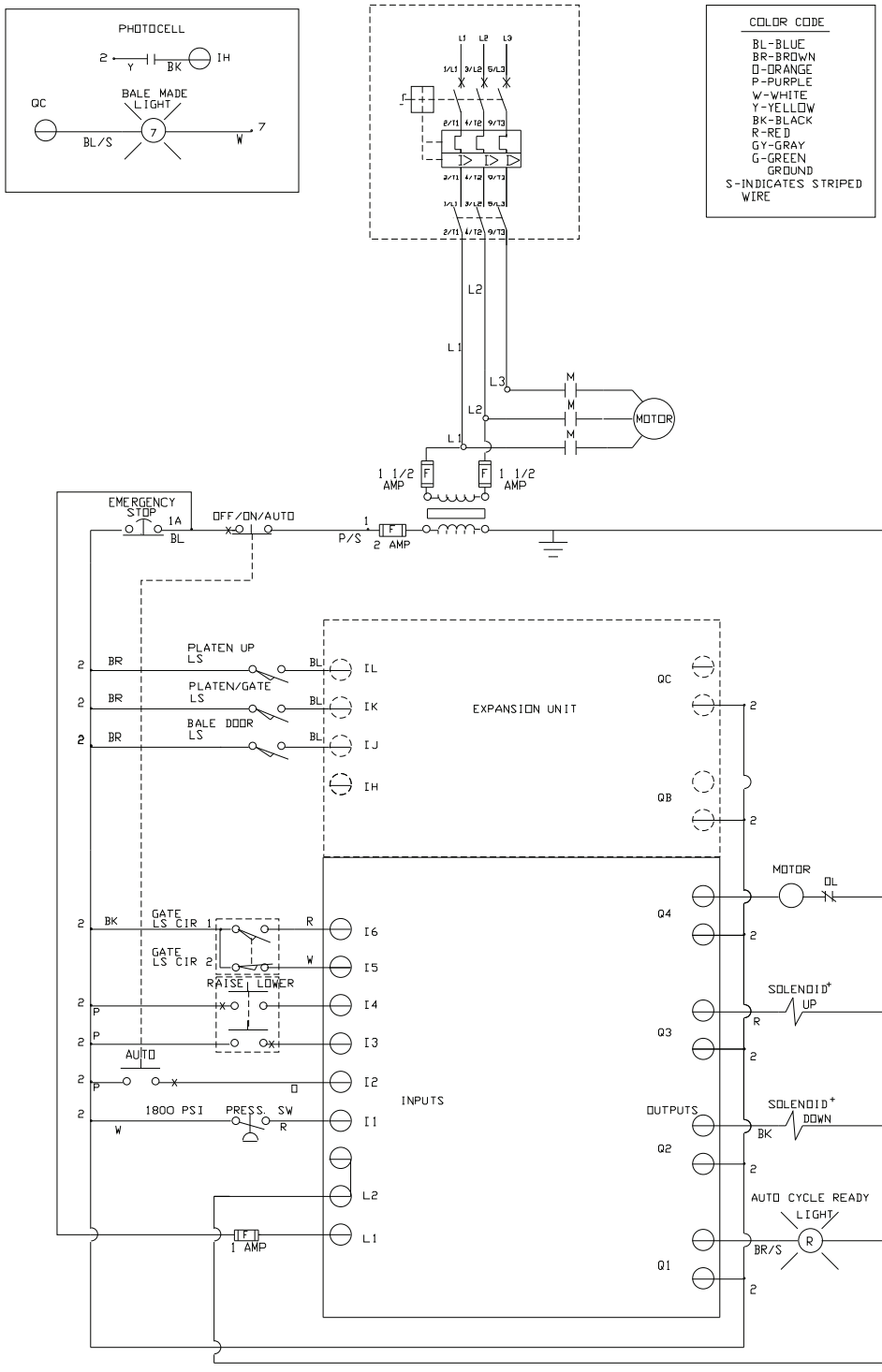
TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	SOLUTION
EXCESSIVE HEAT	(1) Continuous running	(1A) When over 140° Fahrenheit, the equipment should be shut down immediately, and allow time to cool. (1B) Install oil cooler (air or water type) (1C) Install oil temperature shut down switch
	(2) Excessive system leakage	(2A) Check system for bypassing or leaks
RAPID HYDRAULIC COMPONENT WEAR	(1) Abrasive matter in the hydraulic oil being circulated through pump	(1A) Install adequate filter or clean. (1B) Replace oil and clean tank
	(2) Viscosity of oil too low at working conditions	(2A) Replace oil with factory recommended viscosity
	(3) Pressure too high	(3A) Reduce pump pressures to factory specifications.
	(4) Air recirculation	(4A) Tighten all suction fittings.
ERRATIC OPERATION	(1) Valve sticking or binding	(1A) Disassemble/clean as necessary
	(2) Viscosity of oil too high	(2A) Replace oil with factory recommended viscosity
	(3) Air in system	(3A) Check for leaks, tighten fittings
	(4) Low oil	(4A) Fill reservoir with oil
	(5) Low voltage	(5A) Check primary & secondary sides of transformer for correct voltage.
UNIT DOES NOT SHUT DOWN WHEN FEED GATE OPENS	(1) Interlock Switch malfunction	(1A) Adjust or replace interlock switch(s)
OVERLOADS TRIP FREQUENTLY	(1) Heat caused from high amperage or low voltage	(1A) Check for correct voltage (incoming power). (1B) Check fuses or breakers at disconnect (1C) Check heater elements to be sure they are tight (1D) Check wiring from starter to motor to make sure all connections are tight (1E) Check motor leads to be sure all connections are tight (1F) Check system pressure, could be set to high **NOTE: Excessive overload tripping and/or motor or coil failures may occur if voltage surges or voltage drops are frequent in your area. This circumstance can be remedied by the installation of phase protectors which drop power to the motor if surges are present.**
GUIDE SHOES WEARING EXCESSIVELY ONLY ON ONE SIDE	(1) Material being loaded unevenly to one side	(1A) Distribute material evenly when loading the machine (1B) Shim the cylinder up on the opposite side from the wear

TYPICAL HYDRAULIC SCHEMATIC

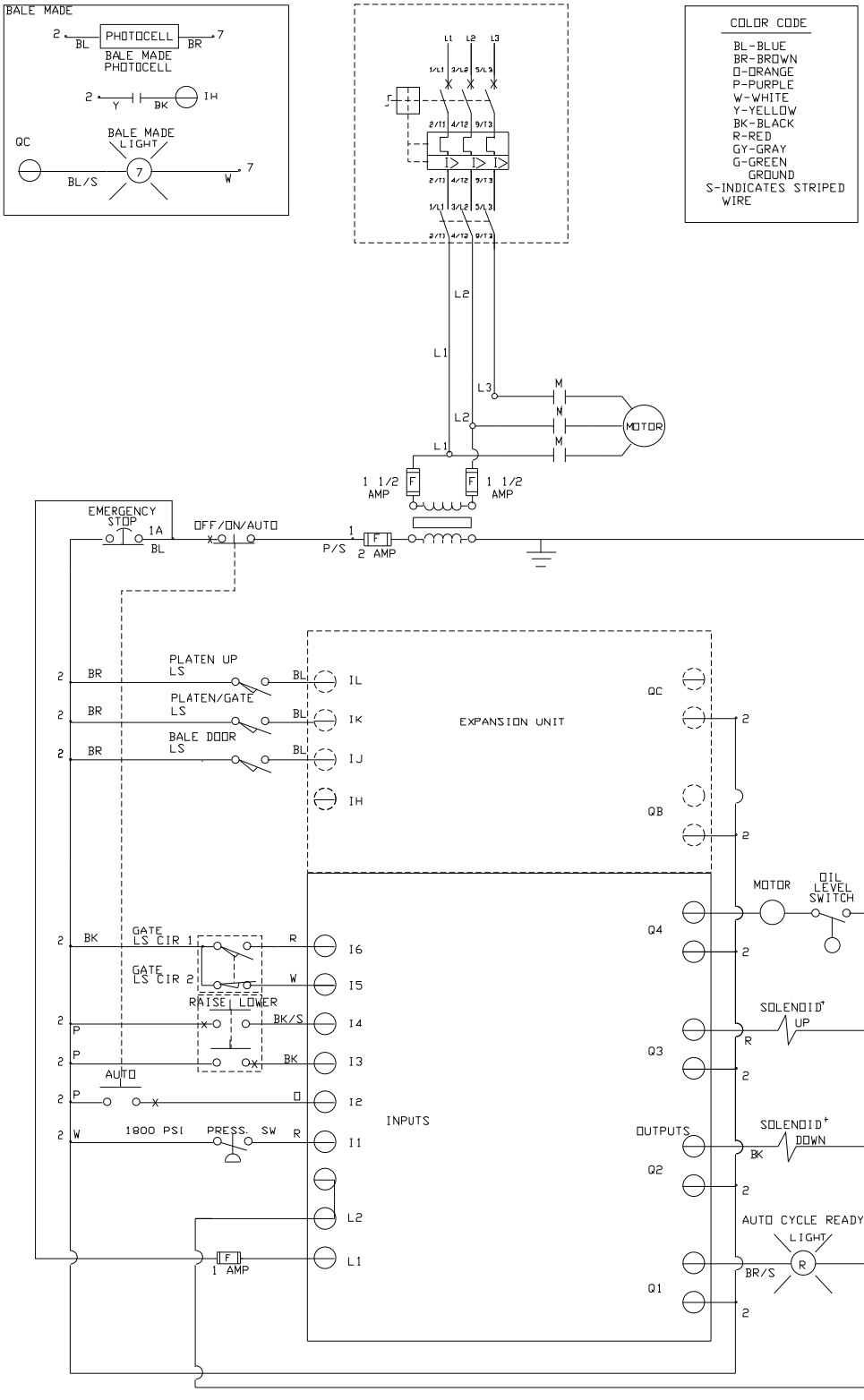


ELECTRICAL SCHEMATIC for A-Type Power Unit



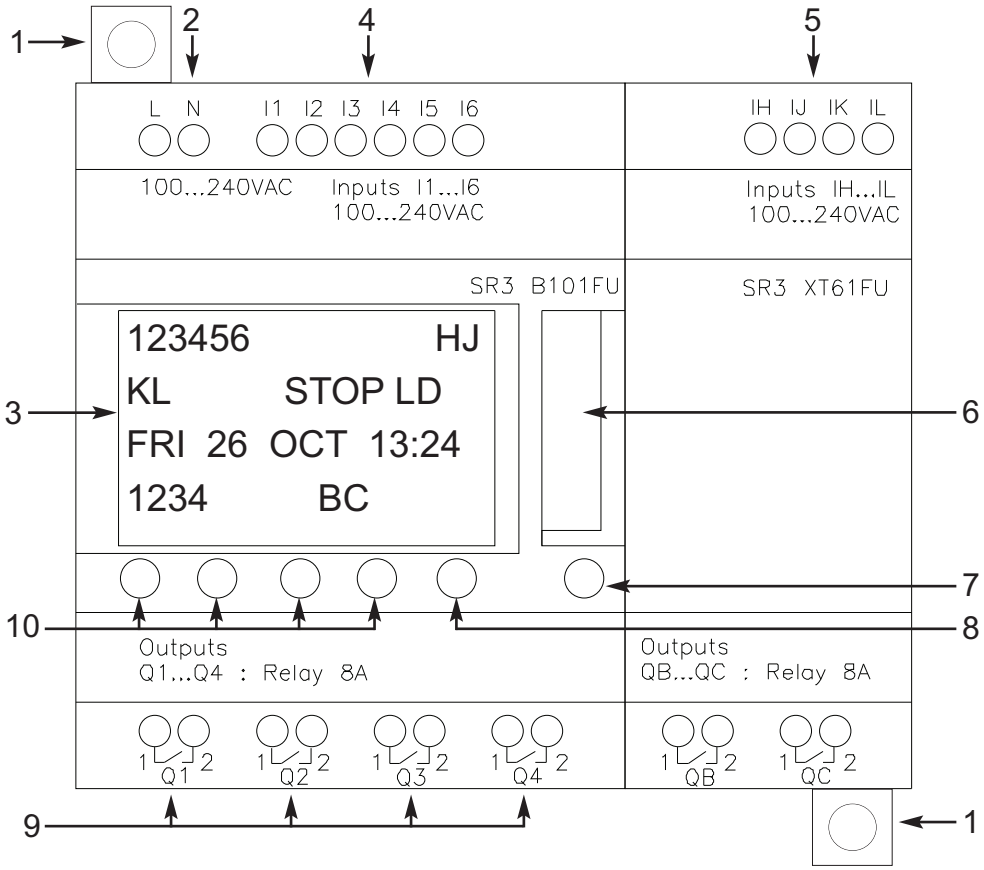
+ INDICATES COMPONENTS NOT COVERED IN UL LISTED PANEL.

ELECTRICAL SCHEMATIC for T-Type Power Unit



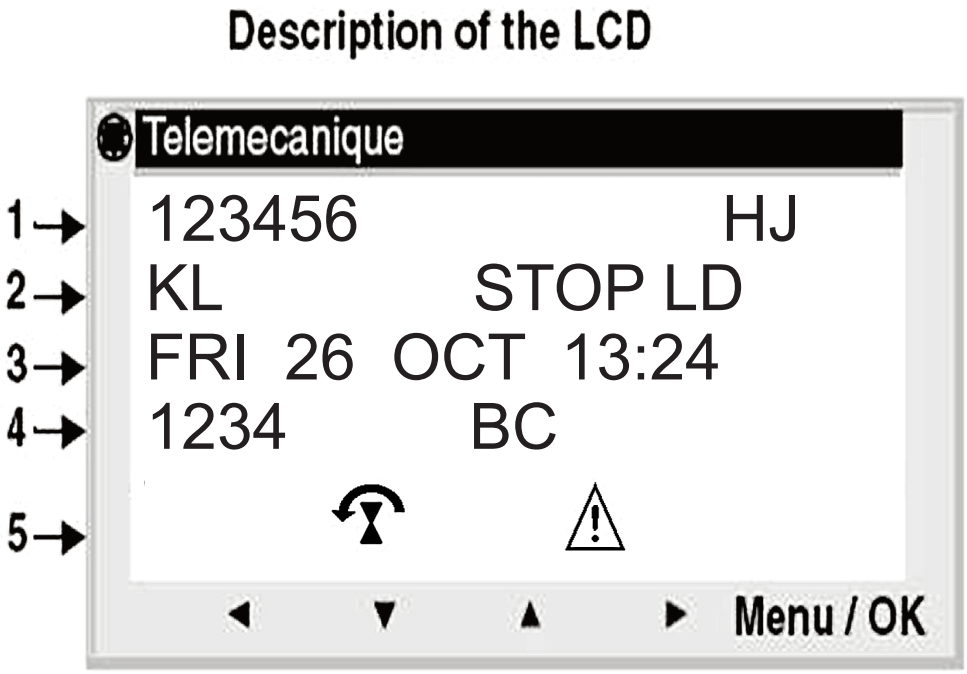
+ INDICATES COMPONENTS NOT COVERED IN UL LISTED PANEL.

LAYOUT & DESCRIPTION OF PLC



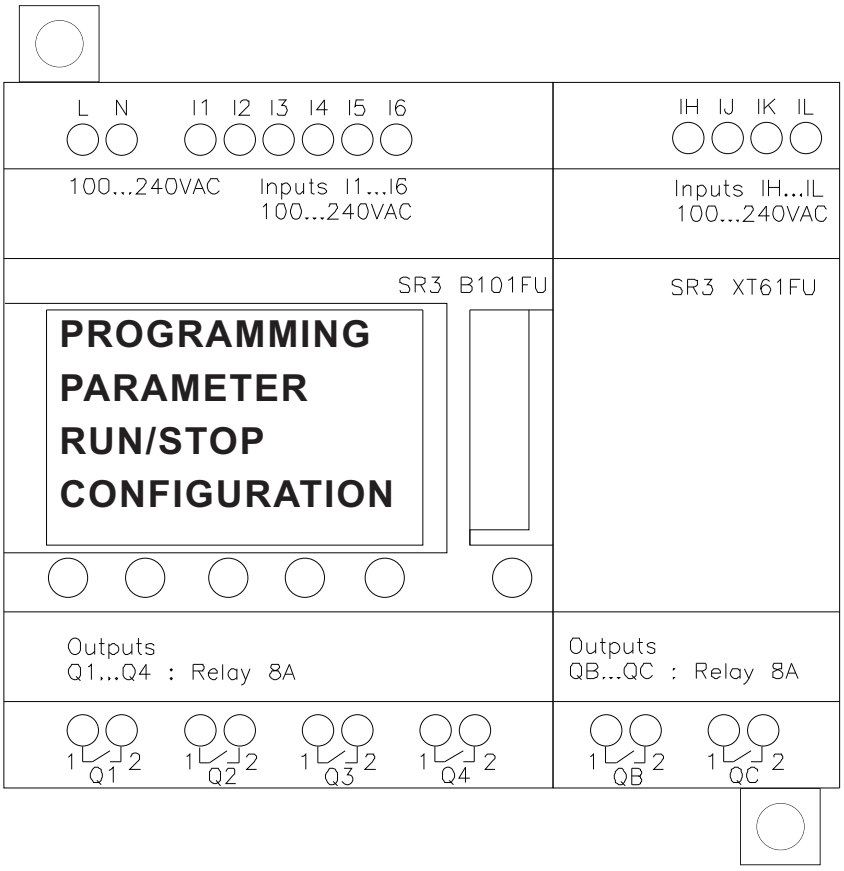
Reference	Description
1	Retractable mounting feet.
2	Screw terminal block for the power supply.
3	LCD, 4 lines, 18 characters
4	Screw terminal block for inputs
5	Screw terminal block for 0-10 Volt analog inputs usable in discrete mode on some models
6	Connector for backup memory or PC connection cable
7	Shift key
8	Selection and validation key
9	Relay output screw terminal block
10	Arrow keys or after first configuring them, Z pushbuttons

DESCRIPTION OF LCD



Reference	Description
1	Input status display
2	Display of the operating mode (RUN/STOP) and programming mode (LD/FBD)
3	Display of the date (day and time for products with clock)
4	Output status display
5	Contextual menus / pushbuttons / icons indicating the operating modes

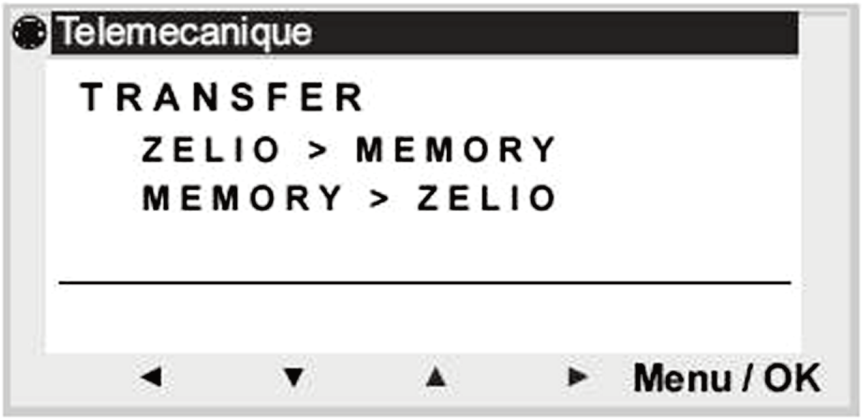
RUN / STOP PROGRAM DIRECTIONS



Steps	Directions
1	Press Menu/Ok Button this switches the screen to the Main Menu.
2	Press Arrow Up or Arrow Down to scroll to **Run / Stop**. (Flashing indicates location)
3	Press Menu/Ok.
4	Yes will be flashing to Run or Stop Program.
5	Press Menu/Ok to complete settings.

E - PROM TRANSFER MEMORY TO ZELIO

Description of the LCD

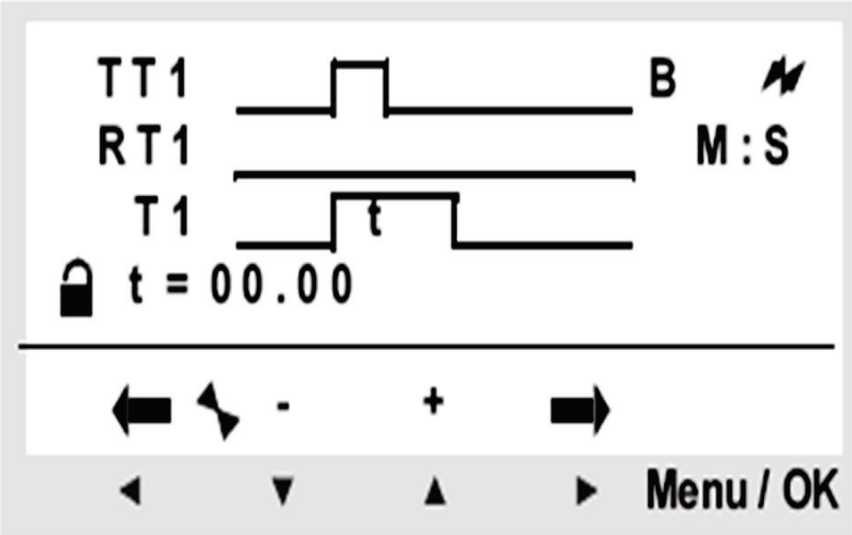


NOTE: Program must be stopped before transferring memory or changing program. Refer to page 2-19 for Stop program directions.

Steps	Directions
1	Press Menu/Ok.
2	Press Arrow Up and scroll to **Transfer**. Flashing indicates location.
3	Zelio to Memory will be Flashing
4	If correct Press Menu/Ok, If not go to next step.
5	Press Arrow Down, Transfer Memory to Zeloi will be Flashing,
6	If correct Press Menu/Ok
7	Transfer OK will Display
8	Press Menu/Ok
9	Press Arrow Up or Arrow Down to scroll to **Run / Stop**. (Flashing indicates location)
10	Press Menu/Ok.
11	Yes will be flashing to Run Program.
12	Press Menu/Ok to complete settings.

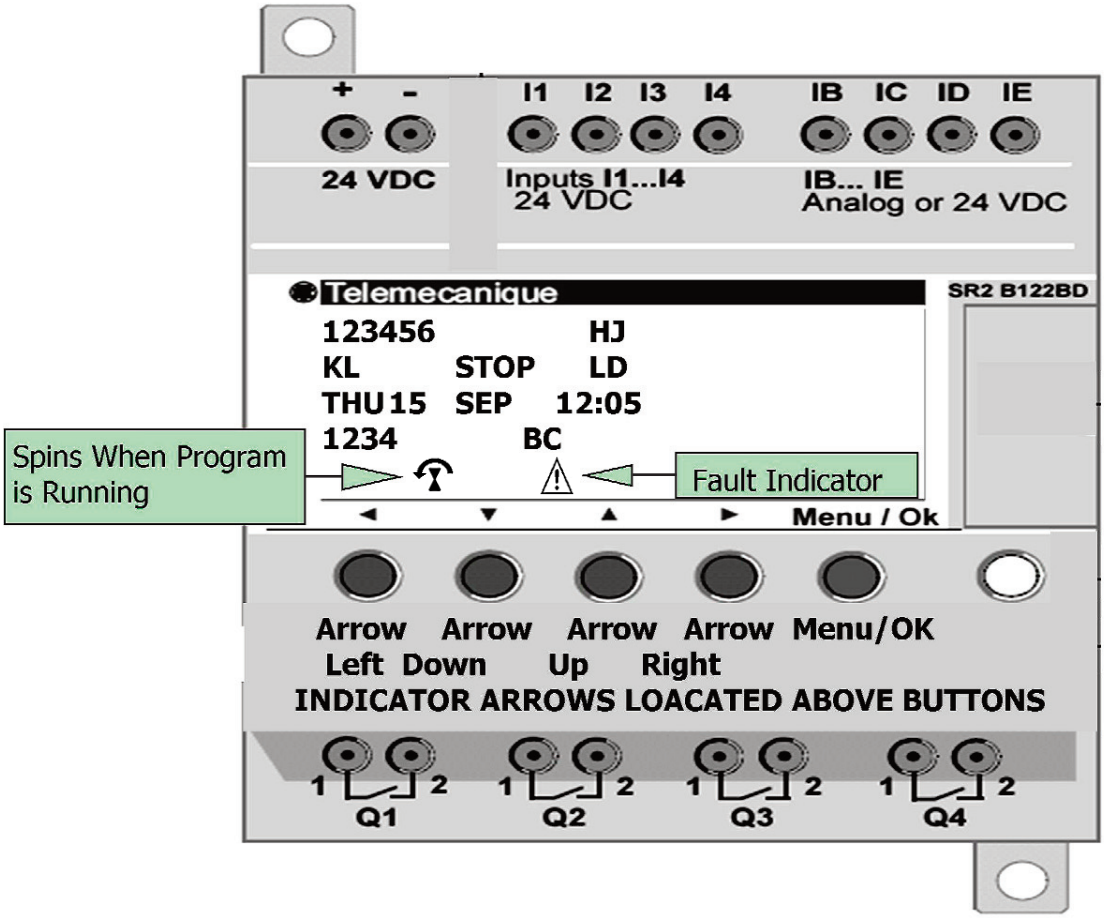
TIMER SETTING PROCEDURE

Description of the LCD



Steps	Directions
1	Press Menu/Ok.
2	Press Arrow Up and scroll to **PARAMETERS**. Flashing indicates location.
3	Press Menu/Ok.
4	Press Arrow Up and scroll to **T T5**. (timer 5)
5	Press Arrow Left to select. (t=000.0 will flash)
6	Press Arrow Up/Arrow Down to adjust timer setting. **(factory setting: 65.0 sec)**
7	Press Menu/Ok.
8	Yes will flash. Press Menu/Ok to confirm changes.
9	Press Arrow Left to select next timer.
10	Press Arrow Up or Arrow Down to scroll to **T T6**. (timer 6)
11	Press Arrow Left to select.
12	Press Arrow Up/Arrow Down to adjust correct timer setting. **(factory setting: 32.0 sec.)**
13	Press Menu/Ok.
14	Yes will flash. Press Menu/Ok to confirm changes.
15	Press Menu/Ok to complete Timer setting procedure.

CLEAR FAULT & START PROGRAM



Steps	Directions
1	Press Menu/Ok Button this switches the screen to the Main Menu.
2	Press Arrow Up and scroll to **Fault**. (Flashing indicates location)
3	Press Menu/Ok.
4	Yes will be flashing to Clear the fault.
5	Press Menu/Ok.
6	Press Arrow Up and scroll to **Run / Stop**. (Flashing indicates location)
7	Press Menu/Ok.
8	Yes will be flashing to **Run** Program.
9	Press Menu/Ok to complete settings.

FAULT LIST

Number	Description of Error
0	**No faults**
1	**Fault in writing to EEPROM** This fault defines transfer problems between the memory cartridge and the controller. If the fault occurs frequently, contact the after-sales service.
2	**Fault in writing to the clock.** If the fault occurs frequently, contact the after-sales service.
50	**Module firmware is damaged** Reload the firmware on the module and the user application. If this problem persists, contact the after-sales service.
51	**Watchdog overflow** Warning or error according to the selection made in the configuration menu (module display) or in the configuration window (Zelio Soft 2 programming workshop). The cycle time in the module is too short compared with the application program execution time programmed in the controller. If the application requires a strict sampling of the module inputs/outputs, lengthen the cycle time in the module. To do this, configure the information either in the CONFIGURATION menu (module display) or in the configuration window (Zelio Soft 2 programming workshop). If the application does not require the cycle time, in CONFIGURATION select: No Action for the WATCHDOG.
52	**The controller has executed an unknown operation** If the fault is permanent, reload the firmware on the module and the user application. If this problem persists, contact the after-sales service.
53	**Link between module and bus extension faulty** Check operation of the extension (connection, power supply, fault).
54	**Link between module and input/output extension faulty** Check operation of the extension (connection, power supply, fault).

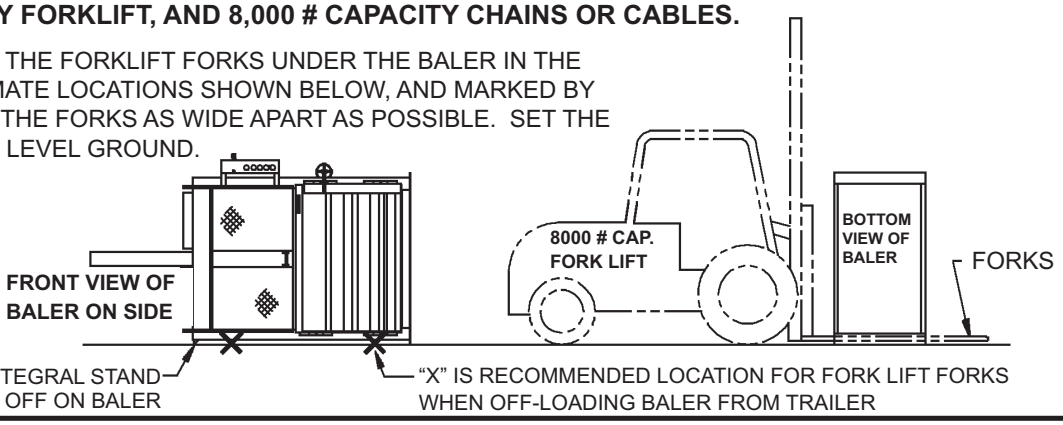
FAULT LIST (Continued)

Number	Description of Error
58	**A fault is present in the firmware (software specific to the controller) or on a part of the controller hardware.** If the fault is permanent, reload the firmware on the module and the user program. If this problem persists, contact the after-sales service.
59	**At the beginning of RUN on the module application: the application cannot switch to RUN as it is incompatible with the module physically connected to the supply.** If this problem occurs, contact the after-sales service.
60	**At the beginning of RUN on the module application: program incompatible with the bus extension physically connected to the supply.** If this problem occurs, contact the after-sales service.
61	**At the beginning of RUN on the module application: program incompatible with the Input/Output extension physically connected to the supply.** If this problem occurs, contact the after-sales service.
62	**Version (or release number) incompatibility when loading a program from the backup memory** If this problem occurs, contact the after-sales service.
63	**Hardware configuration incompatibility when loading a program from the backup memory** If this problem occurs, contact the after-sales service.

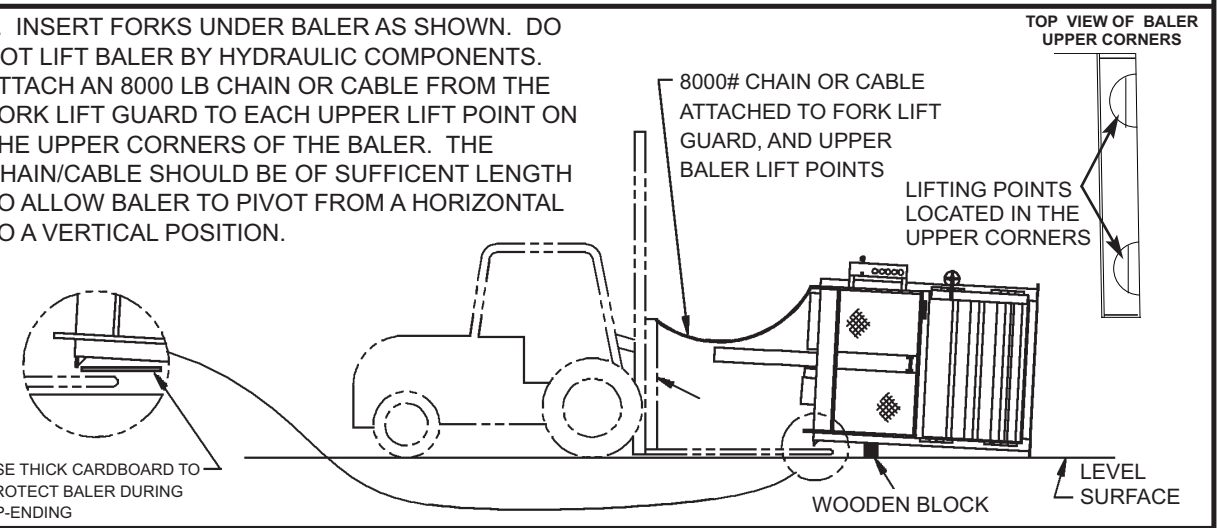
OFF-LOADING & UP-ENDING BALER

THE FOLLOWING REQUIRES AN EXPERIENCED FORK LIFT DRIVER, 8,000 # CAPACITY FORKLIFT, AND 8,000 # CAPACITY CHAINS OR CABLES.

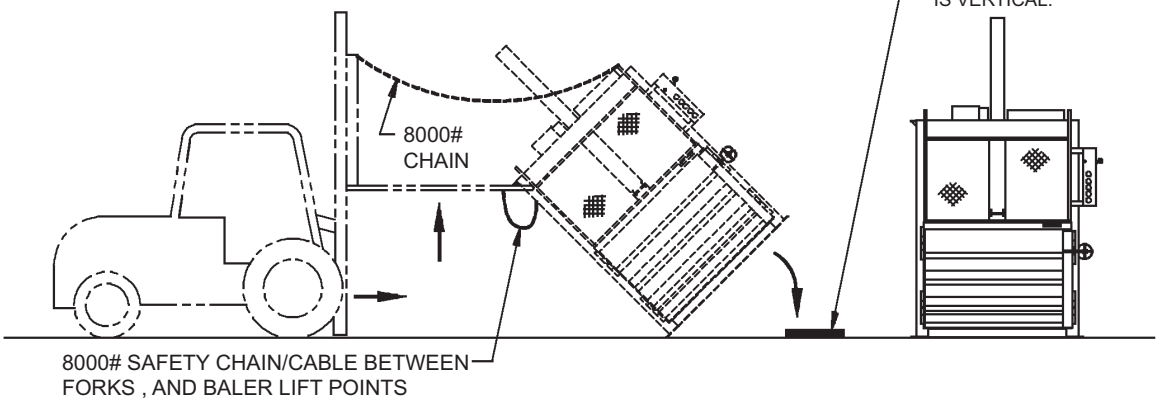
1. INSERT THE FORKLIFT FORKS UNDER THE BALER IN THE APPROXIMATE LOCATIONS SHOWN BELOW, AND MARKED BY "X". KEEP THE FORKS AS WIDE APART AS POSSIBLE. SET THE BALER ON LEVEL GROUND.



2. INSERT FORKS UNDER BALER AS SHOWN. DO NOT LIFT BALER BY HYDRAULIC COMPONENTS. ATTACH AN 8000 LB CHAIN OR CABLE FROM THE FORK LIFT GUARD TO EACH UPPER LIFT POINT ON THE UPPER CORNERS OF THE BALER. THE CHAIN/CABLE SHOULD BE OF SUFFICENT LENGTH TO ALLOW BALER TO PIVOT FROM A HORIZONTAL TO A VERTICAL POSITION.



3. BEFORE UP-ENDING BALER, ATTACH A SAFETY CHAIN FROM EACH FORK TO THE UPPER LIFT POINTS ON THE BALER THAT ARE CLOSEST TO THE FORKS (SEE BELOW). TO UP-END THE BALER, SLOWLY RAISE THE FORKS, AND DRIVE FORWARD IN A STRAIGHT LINE.

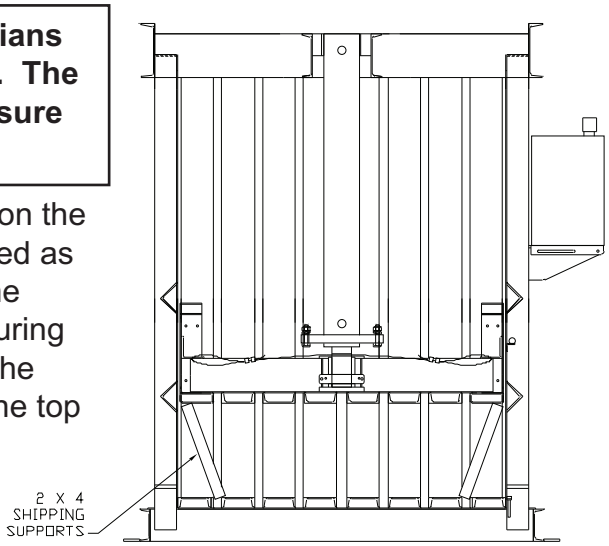


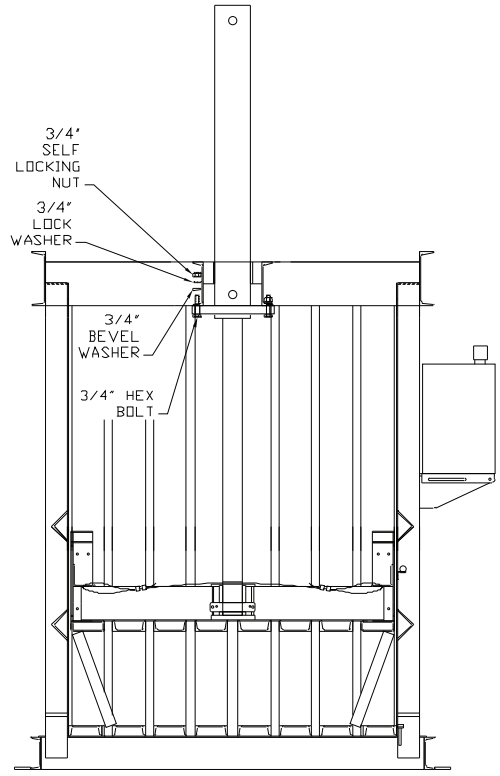
RAISING THE PLATEN (UNITS SHIPPED W/CYLINDER LOWERED)

DANGER: Only qualified service technicians should perform the following procedure. The hydraulic cylinder operates at high pressure and can cause serious injury or death.

When the baler is shipped in a vertical position the cylinder and platen are lowered and supported as shown in the drawing to the right*. Part of the installation process involves raising and securing the cylinder prior to using the baler. Follow the procedure below to connect the cylinder to the top of the baler.

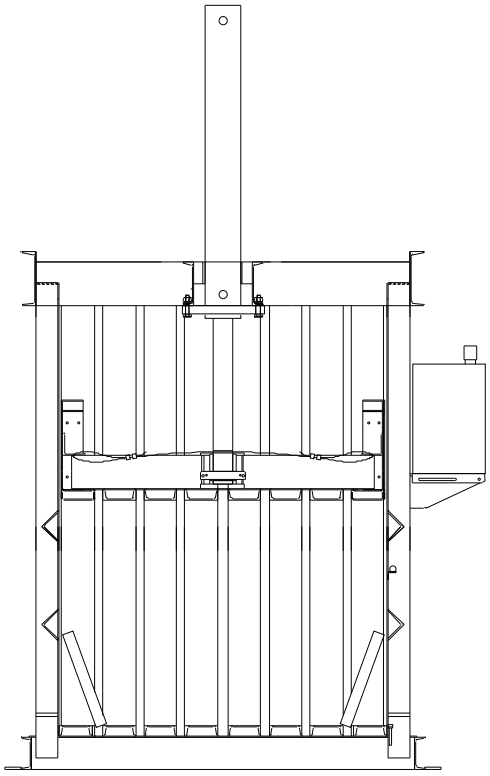
*Feed gate and bale door not shown in these drawings for clarity purposes.





Step 1 - Connect power to the baler, turn on and lower the platen via the controls, thus raising the cylinder into position.

Step 2 - Align holes in cylinder mounting plate with holes in pinning channels and secure with 3/4" provided hardware (as shown).



Step 3 - Once the cylinder is secured, raise the platen and remove the 2" x 4" wood shipping supports to be discarded.

GENERAL INSTALLATION INSTRUCTIONS

CAUTION:

Review this manual before beginning the installation. Study the jobsite, and installation requirements carefully to be certain all necessary safeguards and/or safety devices are provided to protect all personnel, and equipment during the installation, and as a completed system.

These instructions are not intended as a substitute for training, and experience in proper use, safety procedures, maintenance, or installation of this equipment.

This baler is designed for indoor use ONLY.

Marathon does not assume responsibility for the installation procedures of this equipment. Conformance to applicable local, state, and federal laws concerning installation rests with the customer.

ANCHORING TO CONCRETE PAD

The concrete pad should be level, and a minimum of 3000 PSI concrete, steel reinforced, 6” thick. Anchor baler to floor using anchor plates on sides of baler base. Four 3/4” diameter anchor bolts required, Red Head type recommended.

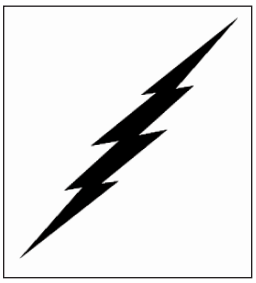
DECALS

Installation of the baler is not complete until an inspection of the warning decals has been made. Decals should be clearly visible, legible, securely applied, and in the proper location. For decal description, and location, see DECALS, and DECAL PLACEMENT on pages 1-8 & 1-9.

DANGER: DO NOT CLIMB ON SIDES OF BALER. USE A LADDER OR PLATFORM WHEN WORKING ON TOP OF THE BALER OR OTHER AREAS OF THE BALER THAT CANNOT BE REACHED FROM GROUND LEVEL.

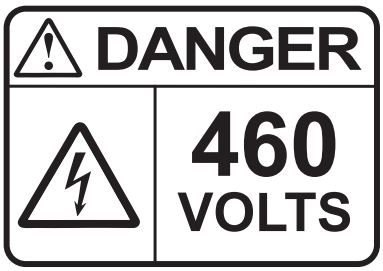
DANGER: PARTS OF THE PLATEN EXTEND ABOVE THE TOP OF THE BALER WHEN PLATEN IS FULLY RAISED.

ELECTRICAL INSTALLATION



The panel box contains high voltage components. Only authorized service personnel should be allowed inside.

See Lock-Out & Tag-Out instructions in the Maintenance section.



WARNING: BEFORE MAKING ANY ELECTRICAL CONNECTION, BE SURE THAT THE DISCONNECT SWITCH HAS BEEN LOCKED-OUT, AND TAGGED-OUT PER THE INSTRUCTIONS ON PAGE 2-1.

1. Use the FUSE, AND CIRCUIT BREAKER chart, and the WIRE SIZE chart on page 2-6 of this manual for reference during the electrical installation.

2. Before connecting power to the baler, check the incoming line voltage with a voltmeter. Also, check voltage wiring in the baler panel box. If the baler is not wired to the proper voltage, make necessary corrections before proceeding.

3. A lockable disconnect switch is provided in the panel box. Three phase power should be connected to the top of this switch (a single phase option is also available). Be careful not to let incoming wires touch each other. A properly sized equipment ground wire should be connected to the enclosure ground lug.

DANGER: All equipment should be grounded per the National Electric Code.

GROUND INSTRUCTIONS

This appliance must be connected to a grounded, metal, permanent wiring system; or an equipment grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the appliance.

If there is any doubt whether the equipment is properly grounded, a qualified electrician should be consulted.

START-UP INSTRUCTIONS

WARNING: BEFORE START-UP, REPLACE THE 3/4" PLUG ON THE POWER UNIT RESERVOIR WITH THE FILLER BREATHER CAP. THIS CAP IS SHIPPED INSIDE OF THE PANEL BOX.

DANGER: DO NOT CLIMB ON SIDES OF BALER. USE A LADDER OR PLATFORM WHEN WORKING ON TOP OF THE BALER OR OTHER AREAS OF THE BALER THAT CAN NOT BE REACHED FROM GROUND LEVEL.

DANGER: PARTS OF THE PLATEN EXTEND ABOVE THE TOP OF THE BALER WHEN PLATEN IS FULLY RAISED.

CAUTION: MAKE SURE PERSONS, AND MATERIAL ARE CLEAR OF CHARGE BOX AREA.

1. After the electrical connections are complete, check motor rotation by doing the following:
2. Close bale chamber door, and feed gate.
3. Turn disconnect switch to the ON position.
4. The operator should turn **PLATEN** switch to **LOWER** for five seconds, and then release. Check motor rotation by watching the fan rotation on end of motor. There is a rotation decal on the motor showing correct rotation. Check the direction of platen movement. If it moves down, direction of motor rotation is correct. If platen doesn't move down, perform Lock-out and Tag-out procedures as described in the Maintenance section on page 2-1. Switching any two of the three incoming electric wires to the motor starter will change the motor/pump rotation.
5. With the platen fully raised, check to be sure the oil reservoir is filled to the 3/4 level on the sight gauge (Refer to the Periodic Mainteance on page 2-2 for hydraulic oil recommendations). The hydraulic system pressure has been factory set.
6. The baler is equipped with an electrical interlock which prevents the use of the **AUTO**, and **LOWER** switches when the feed gate is in the up position. If either of these buttons start the baler when the feed gate is up, discontinue use of the baler until repairs have been made.
7. **MAKE SURE THAT THE OPERATORS ARE TRAINED IN THE PROPER USE OF THIS EQUIPMENT.**

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