

PLAY IT SAFE!

**OPERATION, MAINTENANCE
AND INSTALLATION MANUAL**

FOR

VERTICAL RECYCLER BALER

INCLUDING THESE MODELS:

V-4830

V-4830HD

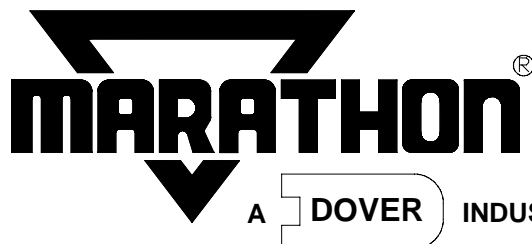
V-6030LP

V-6030

V-6030HD

V-6042LP

V-7230HD



**VERNON, AL - YERINGTON, NV - CLEARFIELD, PA
LEEDS, AL - FAYETTE, AL**

Marathon Equipment Co. OMI Manual No. 0003, Rev. 01/01

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INTRODUCTION

THANK YOU FOR PURCHASING A MARATHON VERTICAL BALER.

This product is designed to give you reliable service and superior performance for years to come. To guarantee top performance and the safest operation of the baler, each person involved in the operation, maintenance and installation of the baler should read and thoroughly understand the instructions in this manual and follow all warnings.

The employer(s) involved in the operation, maintenance and installation of the baler should read and understand the most current version of the following applicable standards:

ANSI Standard No. Z245.5, "Safety Requirements For Baling Equipment"
(A copy of this standard may be obtained from **Marathon Equipment Company, Field Service Department, at 1-800-633-8974**).

OSHA 29 CFR, Part 1910.147, "The control of hazardous energy (lockout/tagout)"

ALL SERVICE OR REPAIR PROCEDURES DESCRIBED IN THIS MANUAL SHOULD BE PERFORMED BY AUTHORIZED, FULLY TRAINED PERSONNEL.

Any service or repairs that go beyond the scope of this manual should be performed by factory authorized personnel only.

IF YOU SHOULD NEED FURTHER ASSISTANCE, PLEASE CONTACT YOUR DISTRIBUTOR. YOU WILL NEED TO PROVIDE THE BALER SERIAL NUMBER, INSTALLATION DATE, AND ELECTRICAL SCHEMATIC NUMBER TO YOUR DISTRIBUTOR.

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

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

1 OPERATION

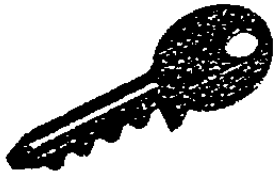
PRE-OPERATING INSTRUCTIONS



**STAND CLEAR WHILE
BALER IS IN OPERATION.**

WARNING: DO NOT OPERATE BALER UNTIL OPERATING INSTRUCTIONS ARE THOROUGHLY UNDERSTOOD.

NEVER ENTER ANY PART OF THE BALER UNLESS THE DISCONNECT SWITCH HAS BEEN TURNED OFF AND PADLOCKED. Before starting the baler, be sure no one is inside. Be certain that everyone is clear of all points of operation and pinch point areas before starting. **See Lock-Out & Tag-Out instructions in the Maintenance section.**

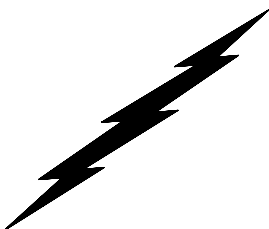


THE EMPLOYER SHOULD ALLOW ONLY AUTHORIZED AND TRAINED PERSONNEL TO OPERATE THIS BALER. This baler is equipped with a key operated locking system. The key(s) should be in the possession of only authorized personnel. Turn off and remove key after use.

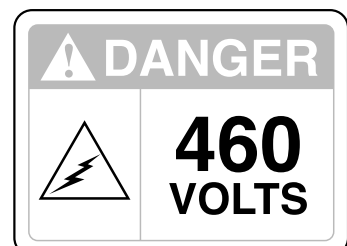
Federal regulation prohibits operation by persons under 18 years of age.

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

Pay close attention to the **RED WARNING LIGHT** on the control panel. If the light is illuminated when the feed gate is raised, there is a malfunction of the magnetic interlock system. **IN THIS EVENT, DISCONTINUE USE OF THE BALER AND LOCK-OUT & TAG-OUT THE BALER PER THE INSTRUCTIONS IN THE MAINTENANCE SECTION, PAGE 2-1.** Perform necessary repairs before continuing operation of the baler.

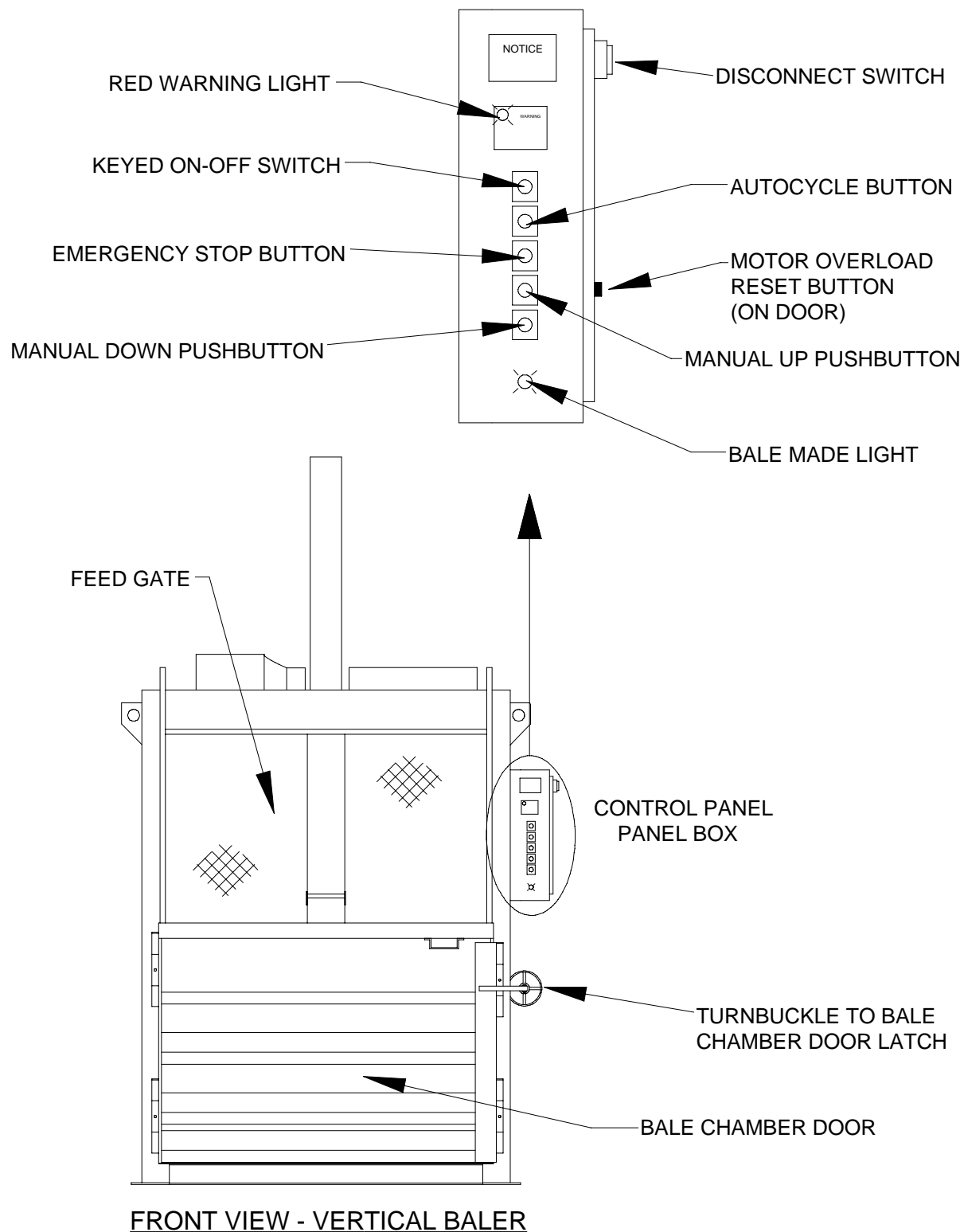


ONLY AUTHORIZED PERSONNEL SHOULD BE ALLOWED INSIDE THE PANEL BOX. The panel box contains high voltage components. **See Lock-Out & Tag-Out instructions in the Maintenance section.**



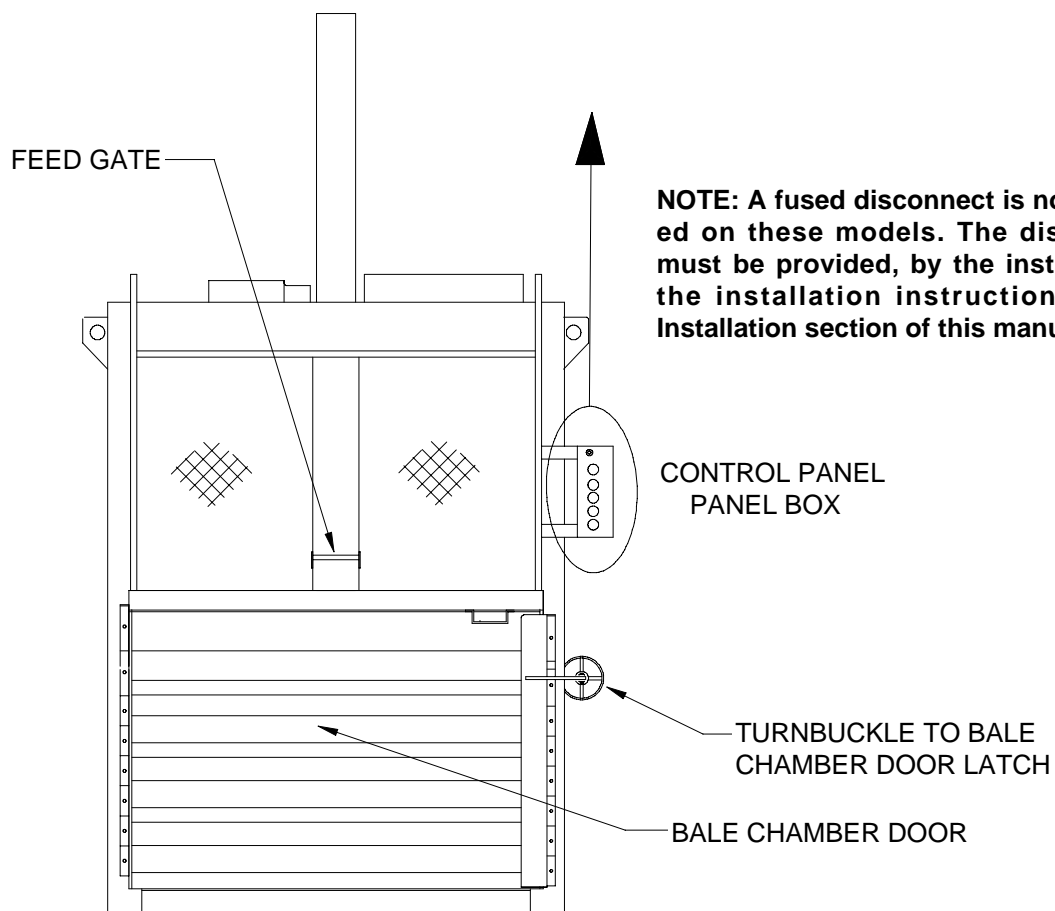
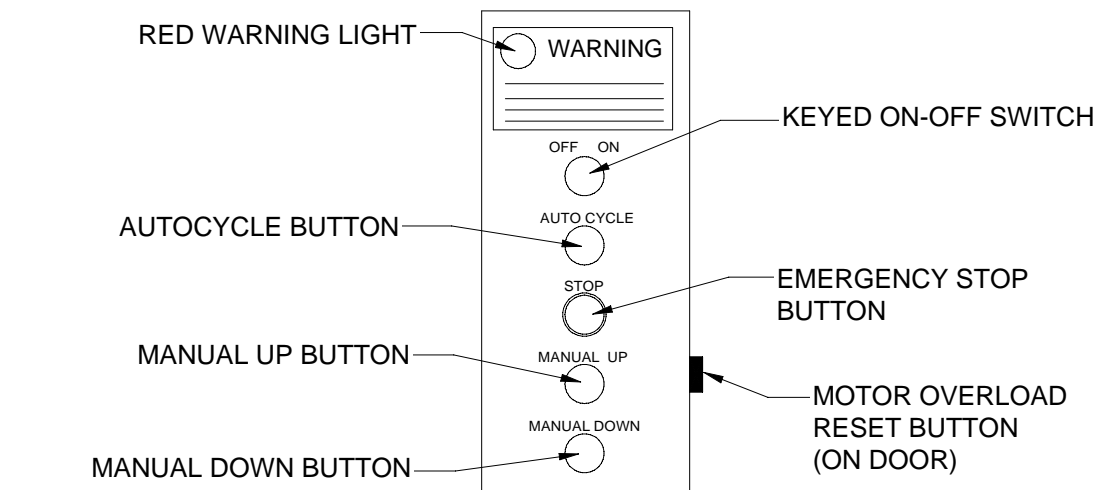
1 OPERATION

CONTROLS FOR V-4830HD, V-6030HD, V-6030LP, & V-7230HD



1 OPERATION

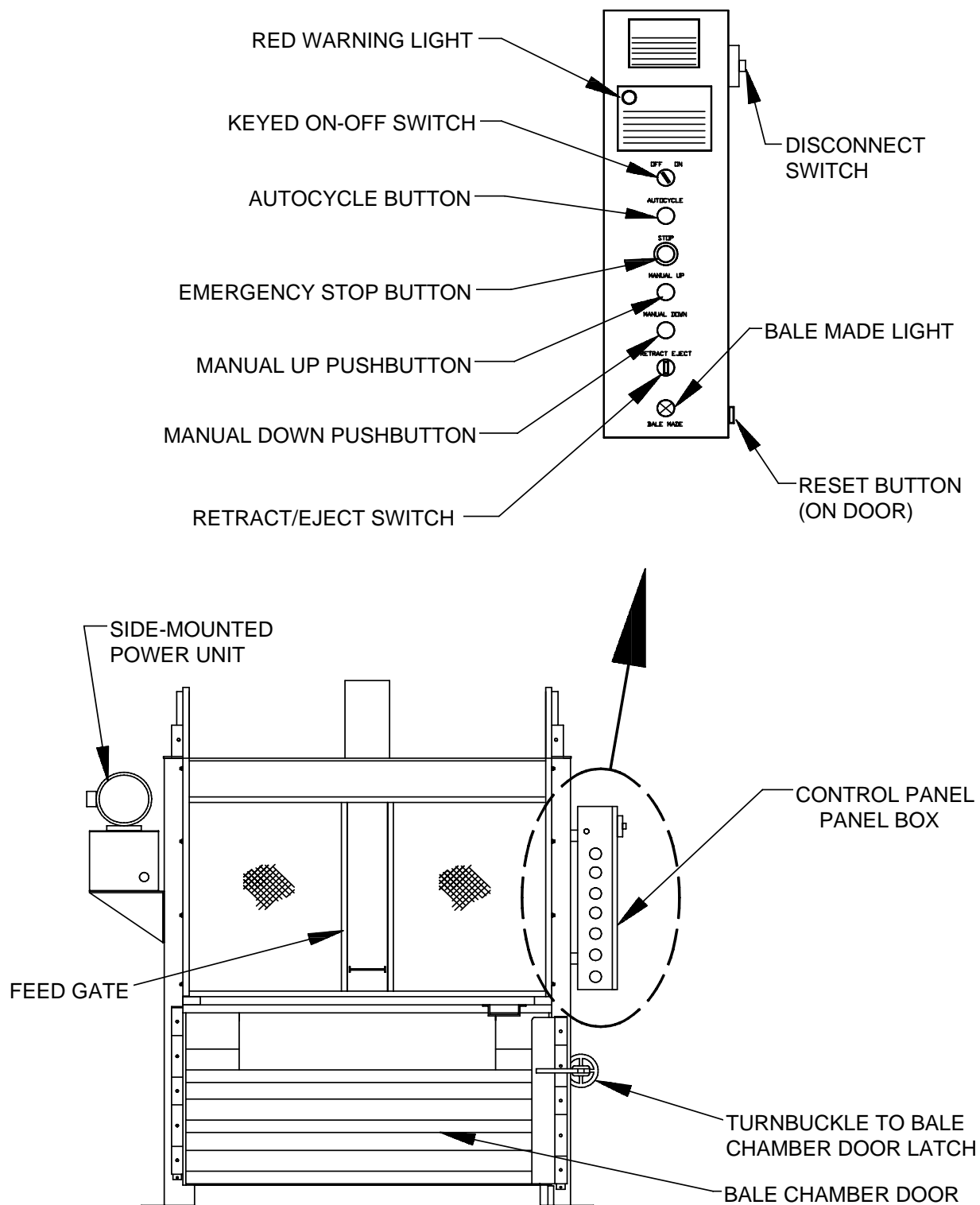
CONTROLS FOR V-6030 & V-4830



FRONT VIEW - VERTICAL BALER

1 OPERATION

CONTROLS FOR V-6042LP



FRONT VIEW - LOW PROFILE VERTICAL BALER

CONTROL DESCRIPTION

1. ON-OFF (Keyed Selector Switch)

Turning this switch to the ON position activates the other controls on the control station. The baler can not be operated unless the key is in the switch and the switch is in the ON position. The purpose of this switch is to allow only authorized and trained personnel to operate the baler. The key should be removed from the baler when not in use and should stay in the possession of only responsible and trained personnel.

2. EMERGENCY STOP (Red Mushroom Head Pushbutton)

Depressing this button will stop the machine at any point in the cycle.

3. AUTOCYCLE (Green Pushbutton)

The AUTOCYCLE button can be used only when the feed gate and bale door are closed and the keyswitch is in the ON position. Once depressed, the AUTOCYCLE button will cause the platen to move to the fully down position and back to the fully raised position (one complete cycle).

4. MANUAL UP (Black Pushbutton)

This button will only start the baler with the keyswitch in the ON position. Depressing the button will raise the platen with the feed gate and bale door opened or closed. It 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 MANUAL UP button is a “Hold To Run” control, causing the baler to stop when it is released. **WARNING: STAY CLEAR OF MOVING PARTS WHEN USING THE MANUAL UP BUTTON WITH THE FEED GATE OPEN.**

5. MANUAL DOWN (Black Pushbutton)

This button will only start the baler with the keyswitch in the ON position. Depressing the button will lower the platen only if the feed gate and bale door are closed. It can be used to interrupt the automatic cycle and lower the platen should it become necessary. The MANUAL DOWN button is a “Hold To Run” control, causing the baler to stop when it is released.

6. RED WARNING LIGHT

This light will warn the operator of a magnetic 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 the baler and Lock-out and Tag-out per the instructions on page 2-1. Then call a qualified service person. The light SHOULD BE ON when the feed gate is in the down position.

7. BALE MADE LIGHT (Not included on V-6030 and V-4830 models)

This light will come on if enough material has been compacted to make a complete bale.

8. RETRACT/EJECT (Spring-centered Switch) (USED ON THE V-6042LP ONLY)

This spring-centered switch will eject the bale by means of a hydraulic ejector when the switch is held to the EJECT position. When the button is held to the RETRACT position, the ejector will retract. The MANUAL UP button must be depressed and held at the same time the RETRACT/EJECT switch is used.

1 OPERATION

OPERATING INSTRUCTIONS - MAKING A BALE

WARNING: DO NOT OPERATE BALER UNTIL OPERATING INSTRUCTIONS ARE UNDERSTOOD. See pages 1-3 through 1-5 for control panel layout and location.



**IN CASE OF EMERGENCY:
Push the large red button to
STOP**

WARNING: Interlocks and safety devices were installed on this unit for your protection. **Never disable or bypass any interlock or safety device.** Failure to comply with this warning could result in serious injury or death.

TO MAKE A BALE : HD & LP Units

1. **Feed material into baler.** If starting a new bale, place a large flat piece of material flat on the baler floor. NOTE: Do not attempt to overfill the feed chamber by forcing material into the chamber with the feed gate. This can cause gate release malfunction and may damage baler.
2. **Pull gate handle down to close feed gate.** NOTE: Check red warning light before closing feed gate. If gate is open and light is on, discontinue use of the baler and call for service.
3. **To start the baler, insert the key into the keyswitch and turn to the ON position.**
4. **Press the AUTOCYCLE button.** The platen will make a complete cycle down and back up. When the platen is in the full up position, the feed gate will automatically open and the motor will automatically shutdown.
5. Repeat steps 1 through 4 until platen stops in down position and "BALE MADE" light comes on.

NOTE: In normal operation, the feed gate will be open when you walk up to place material into the baler. For added security, the feed gate can be manually closed after the AUTOCYCLE(S). To open the gate, you will have to insert the key into the keyswitch and run the baler through a complete AUTOCYCLE.

1 OPERATION

OPERATING INSTRUCTIONS - MAKING A BALE

WARNING: DO NOT OPERATE BALER UNTIL OPERATING INSTRUCTIONS ARE UNDERSTOOD. See pages 1-3 through 1-5 for control panel layout and location.



**IN CASE OF EMERGENCY:
Push the large red button to
STOP**

WARNING: Interlocks and safety devices were installed on this unit for your protection. **Never disable or bypass any interlock or safety device.** Failure to comply with this warning could result in serious injury or death.

TO MAKE A BALE : V-6030 & V-4830

1. **Feed material into baler.** If starting a new bale, place a large flat piece of material flat on the baler floor. NOTE: Do not attempt to overfill the feed chamber by forcing material into the chamber with the feed gate. This can cause gate release malfunction and may damage baler.
2. **Pull gate handle down to close feed gate.** NOTE: Check red warning light before closing feed gate. If gate is open and light is on, discontinue use of the baler and call for service.
3. **To start the baler, insert the key into the keyswitch and turn to the ON position.**
4. **Press the AUTOCYCLE button.** The platen will make a complete cycle down and back up. When the platen is in the full up position, the feed gate will automatically open and the motor will automatically shutdown.
5. Repeat steps 1 through 4 until the arrow on the platen dwells in direct line with the arrow on the NOTICE decal on the feed gate, before returning to the up position.

NOTE: In normal operation, the feed gate will be open when you walk up to place material into the baler. For added security, the feed gate can be manually closed after the AUTOCYCLE(S). To open the gate, you will have to insert the key into the keyswitch and run the baler through a complete AUTOCYCLE.

OPERATING INSTRUCTIONS - BALE TIE OFF/BALE EJECT FOR V-6030HD, V-4830HD, V-7230HD

When the BALE MADE light comes on, it is time to tie off the bale and eject the bale from the baler. See page 1-3 for control panel layout and location. See the following page for a diagram of the following steps.

FOR BALE TIE OFF & BALE EJECT (HD MODELS):

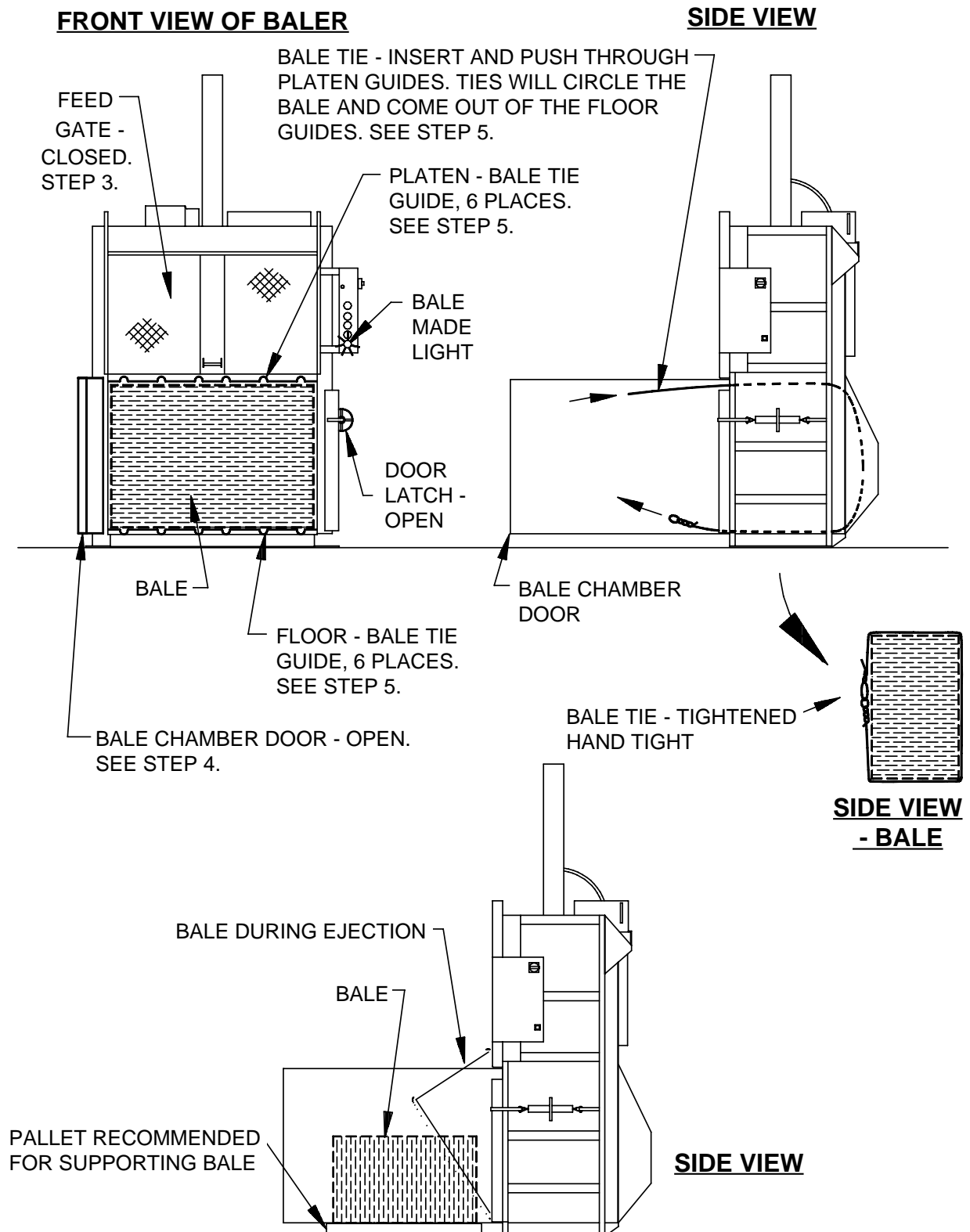
1. Depress the MANUAL UP button until the feed gate opens.
2. Insert a large, flat piece of material across the top of the bale.
3. Close feed gate and depress the AUTOCYCLE button. The platen will stop in the down position and the BALE MADE light will be illuminated.

CAUTION: CLEAR ALL PERSONNEL FROM FRONT OF BALER BEFORE PROCEEDING WITH STEPS 4 THROUGH 8.

4. Release the bale chamber door latch on the side of baler and open the bale chamber door all the way. Feed gate is closed but will raise when the chamber door is opened.
5. **CAUTION:** Wear safety glasses and leather gloves during the following operation:
Tie off bale by inserting bale ties through the platen, "loop end" first. **Always insert bale ties through the tie slots in the platen, first.** Feed wire through until it comes out of the slot in the baler floor. Tie off each tie. Bale ties should be tightened only hand tight, allowing for bale expansion when released.
6. Standing at the side, make sure all personnel are clear of the front of the baler. Depress the MANUAL UP button.
7. Hold the MANUAL UP button until bale ejects, then release the button.
8. Remove bale.
9. Close and latch the bale chamber door. Close feed gate. Depress AUTOCYCLE to cycle and reset ejector. Bale sequence is ready to be repeated.

1 OPERATION

DIAGRAM - BALE TIE OFF/BALE EJECT FOR V-6030HD, V-4830HD, V-7230HD



OPERATING INSTRUCTIONS - BALE TIE OFF/BALE EJECT FOR V-6030LP

When the BALE MADE light comes on, it is time to tie off the bale and eject the bale from the baler. See page 1-3 for control panel layout and location. See the following page for a diagram of the following steps.

FOR BALE TIE OFF & BALE EJECT (V-6030LP):

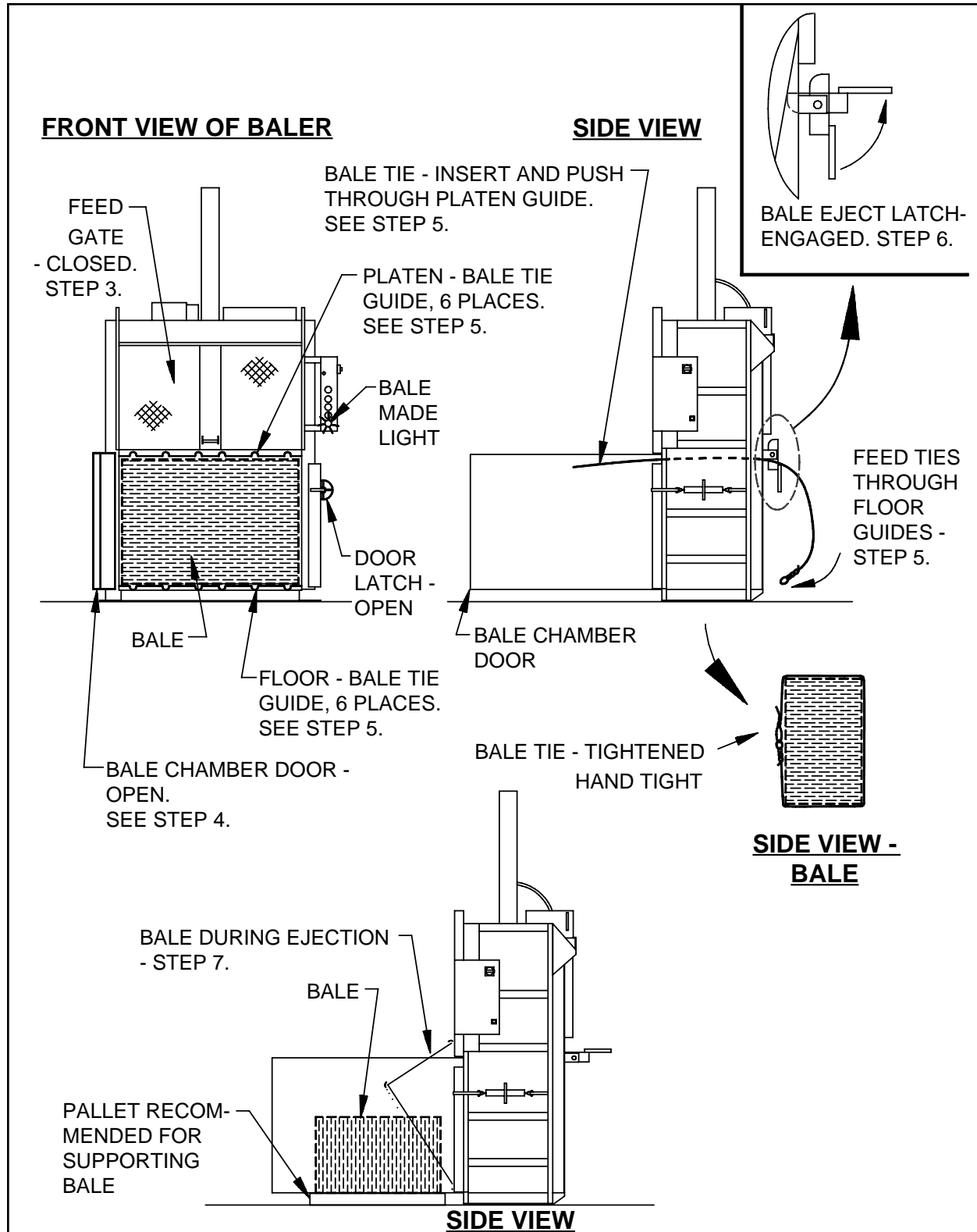
1. Depress the MANUAL UP button until the feed gate opens.
2. Insert a large, flat piece of material across the top of the bale.
3. Close feed gate and depress the AUTOCYCLE button. The platen will stop in the down position and the BALE MADE light will be illuminated.

CAUTION: CLEAR ALL PERSONNEL FROM FRONT OF BALER BEFORE PROCEEDING WITH STEPS 4 THROUGH 8.

4. Release the bale chamber door latch on the side of baler and open the bale chamber door all the way. Feed gate is closed but will raise when the chamber door is opened.
5. **CAUTION:** Wear safety glasses and leather gloves during the following operation:
Facing the front of the bale, tie off bale by inserting bale ties (loop end first) through the platen. **Always insert bale ties through the tie slots in the platen, first.** Go to the rear of the baler and feed the loop end of the bale ties down and through the aligned tie slots in the floor. Finally, go to the front of the baler and tie each of the ties. Bale ties should be tightened only hand tight, allowing for bale expansion when released.
6. Before ejecting the bale, go to the rear of the baler and manually engage the bale eject latch (WARNING: Never engage eject latch if bale door is closed). To engage the latch, pull (rotate) the latch handle up all the way. Standing at the side, make sure all personnel are clear of the front of the baler. Depress the MANUAL UP button.
7. Hold the MANUAL UP button until bale ejects, then release button.
8. Remove bale.
9. Close and latch bale chamber door. Close feed gate. Depress AUTOCYCLE to cycle and reset ejector. Bale sequence is ready to be repeated.

1 OPERATION

DIAGRAM - BALE TIE OFF/BALE EJECT FOR V-6030LP



OPERATING INSTRUCTIONS - BALE TIE OFF/BALE EJECT FOR V-6042LP

When the BALE MADE light comes on, it is time to tie off the bale and eject the bale from the baler. See page 1-5 for control panel layout and location. See the following page for a diagram of the following steps.

FOR BALE TIE OFF & BALE EJECT (V-6042LP):

1. Depress the MANUAL UP button until the feed gate opens.
2. Insert a large, flat piece of material across the top of the bale.
3. Close feed gate and depress the AUTOCYCLE button. The platen will stop in the down position and the BALE MADE light will be illuminated.

CAUTION: CLEAR ALL PERSONNEL FROM FRONT OF BALER BEFORE PROCEEDING WITH STEPS 4 THROUGH 8.

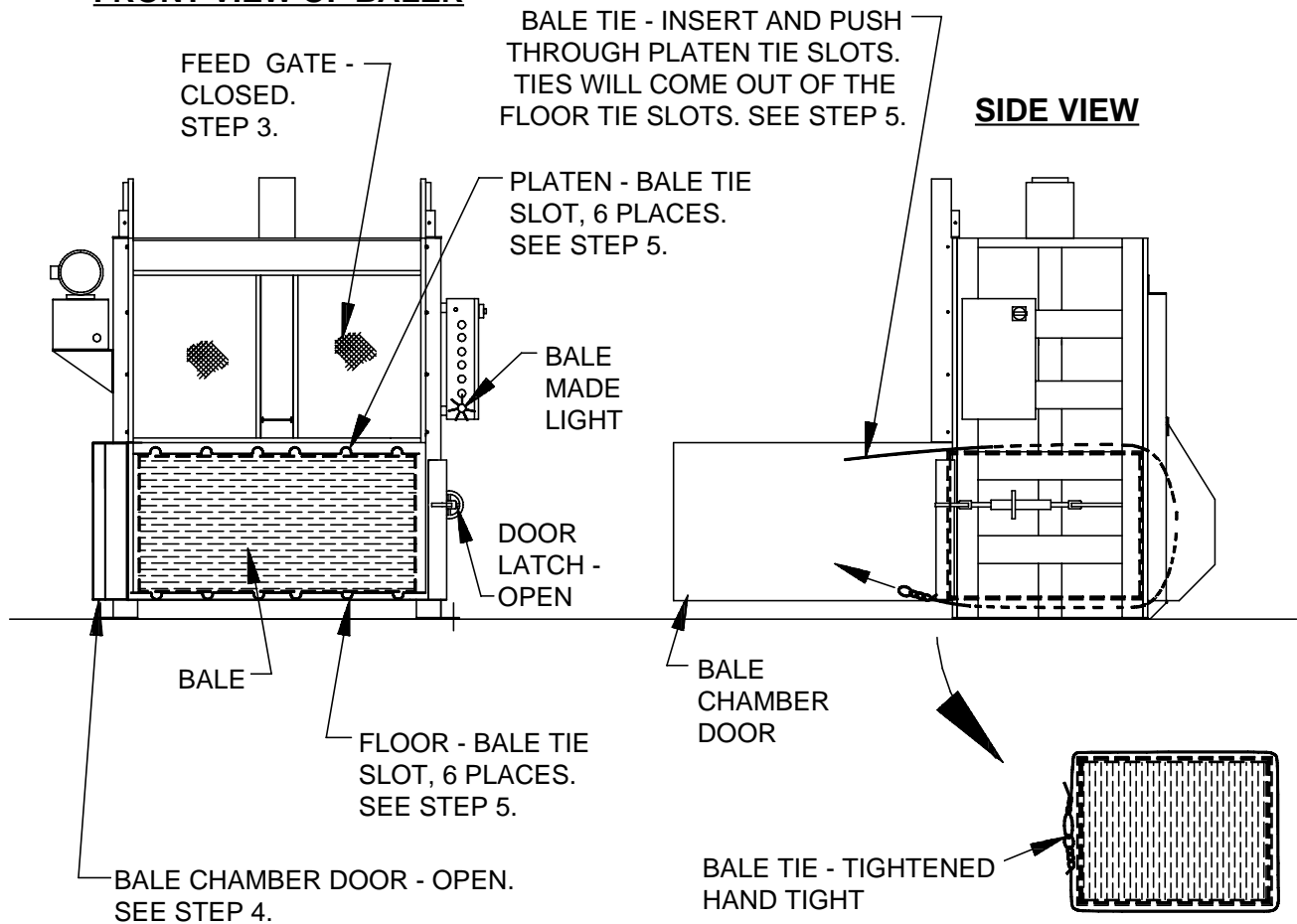
4. Release the bale chamber door latch on the side of baler and open the bale chamber door all the way. Feed gate is closed but will raise when chamber door is opened.
5. **CAUTION: Wear safety glasses and leather gloves during the following operation:** Tie off bale by inserting bale ties through the platen, "loop end" first. **Always insert bale ties through the tie slots in the platen, first.** Feed wire through until it comes out of the slot in the baler floor. Tie off each tie. Bale ties should be tightened only hand tight, allowing for bale expansion when platen is released.
6. Depress the MANUAL UP button until the platen reaches its up position.
7. Standing at the side, make sure all personnel are clear of the front of the baler. Depress and hold the MANUAL UP button and hold the RETRACT/EJECT switch to the right (EJECT) until the bale ejects. Depress and hold the MANUAL UP button and hold the RETRACT/EJECT switch to the left (RETRACT) until the ejector retracts all the way. Baler will not function if ejector is not fully retracted.
8. Remove bale from in front of baler.
9. Close and latch the bale chamber door. Bale sequence is ready to be repeated.

NOTE: You can close the feed gate at this time if added security is required. To open the gate you will have to run the baler through a complete AUTOCYCLE.

1 OPERATION

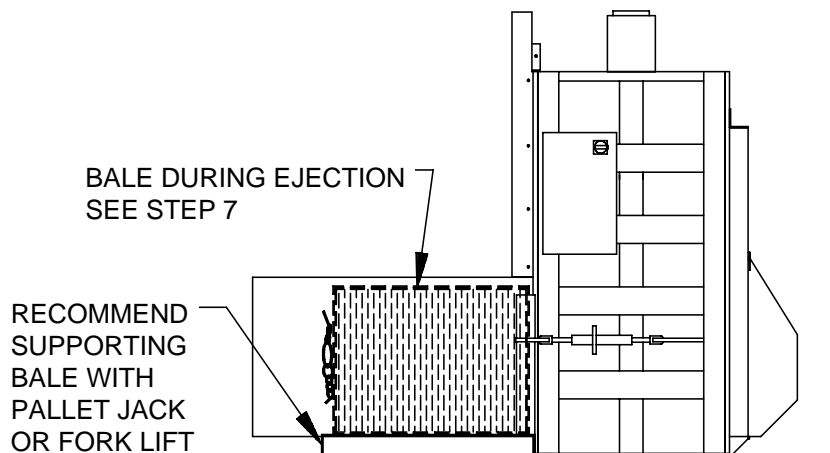
DIAGRAM - BALE TIE OFF/BALE EJECT FOR V-6042LP

FRONT VIEW OF BALER



SIDE VIEW

SIDE VIEW - BALE



SIDE VIEW

OPERATING INSTRUCTIONS - BALE TIE OFF/BALE EJECT FOR V-4830 & V-6030

When the arrow decal on the platen dwells in direct line with the notice decal arrow on the feed gate, it is time to tie off the bale and eject the bale from the baler. See page 1-4 for control panel layout and location. See the following page for a diagram of the following steps.

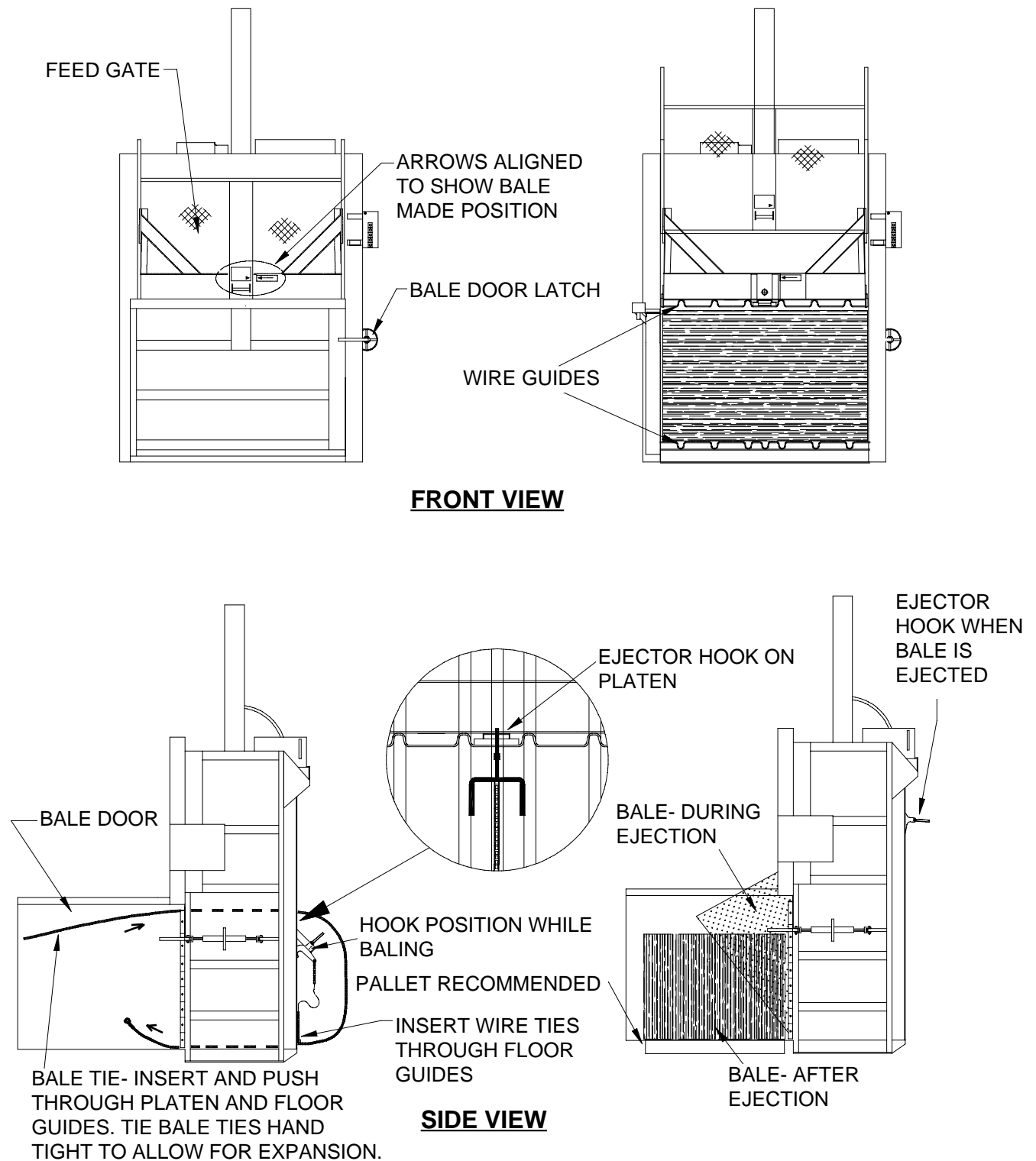
FOR BALE TIE OFF & BALE EJECT (V-4830 & V-6030):

1. Insert a large, flat piece of material across the top of the bale.
2. Close feed gate and depress the MANUAL DOWN button. The platen will dwell in the down position and the arrows on the platen and feed gate will be in direct line. Release the MANUAL DOWN button.
3. Place the ejector hook on the platen (located on the rear of machine).
CAUTION: CLEAR ALL PERSONNEL FROM FRONT OF BALER BEFORE PROCEEDING WITH STEPS 4 THROUGH 7.
4. Release the bale chamber door latch on the side of baler and open the bale chamber door all the way. Feed gate is closed but will raise when chamber door is opened.
5. **CAUTION: Wear safety glasses and leather gloves during the following operation:** Tie off bale by inserting bale ties through the platen, "loop end" first. **Always insert bale ties through the tie slots in the platen, first.** Feed wire through until it comes out of the slot in the back of baler. Go to the rear of the baler and feed the looped end of the bale ties down and through the aligned tie slots in the floor. Finally, go to the front of the baler and tie each of the ties. Bale ties should be tightened only hand tight, allowing for bale expansion when platen is released.
6. Standing at the side, make sure all personnel are clear of the front of the baler. Depress and hold the MANUAL UP button until the bale ejects.
7. Remove bale from in front of baler. Close and latch the bale door.
8. Close the feed gate, and press the MANUAL DOWN button until the ejector hook releases from the platen
10. Press and hold the MANUAL UP button until the platen is in the up position, and the feed gate raises. Bale sequence is ready to be repeated.

NOTE: You can close the feed gate at this time if added security is required. To open the gate you will have to run the baler through a complete AUTOCYCLE.

1 OPERATION

DIAGRAM - BALE TIE OFF/BALE EJECT FOR V-4830 & V-6030

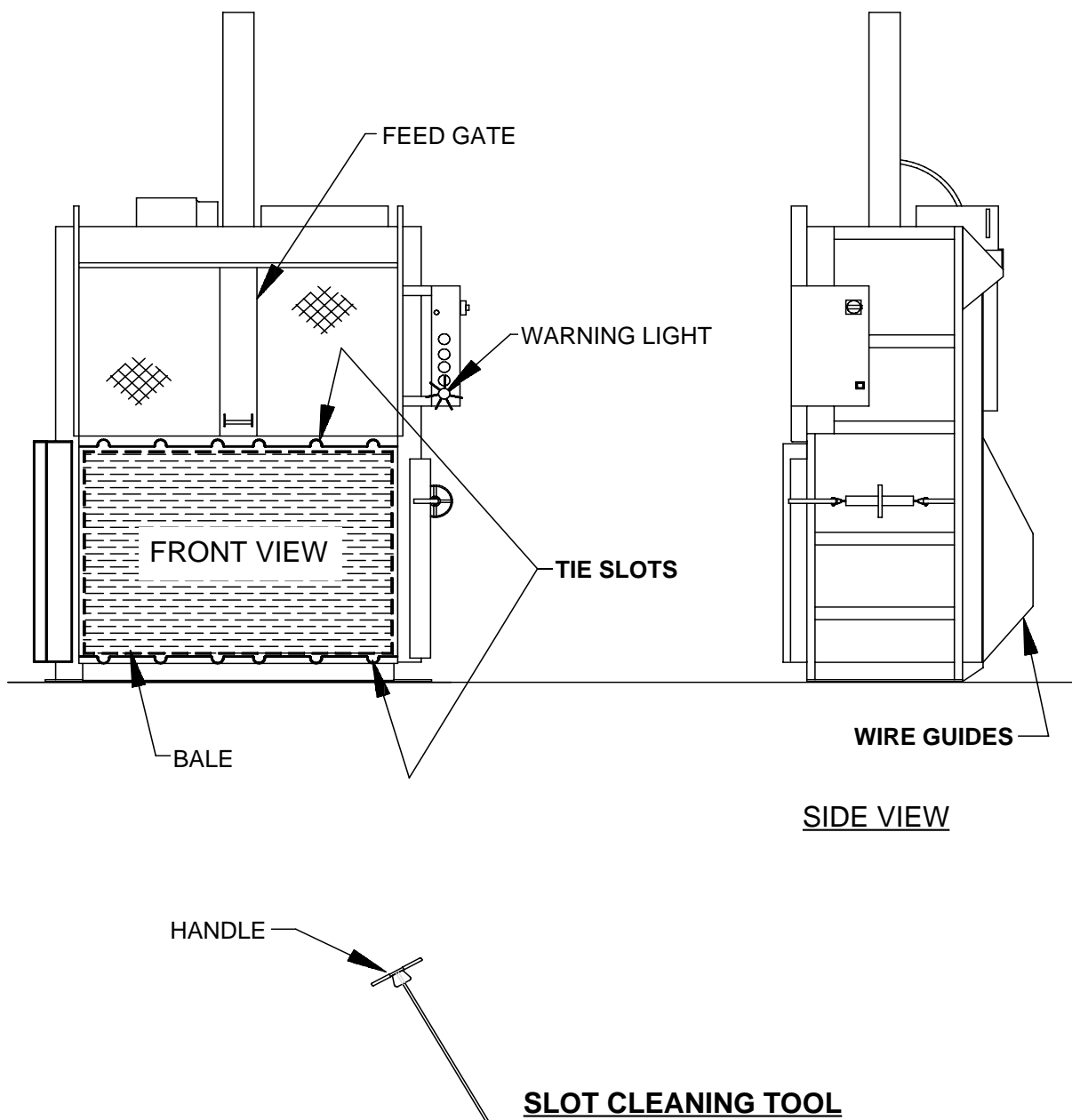


1 OPERATION

DIAGRAM - TIE SLOT CLEANING

AT TIMES THE TIE SLOTS MAY BECOME OBSTRUCTED WITH MATERIAL AND PREVENT THE WIRE TIES FROM PROPER INSERTION THROUGH THE SLOTS AND AROUND THE BALE. THE BALER IS SUPPLIED WITH A **SLOT CLEANING TOOL** FOR RODDING OUT THE TIE SLOTS. TO USE, INSERT THE TOOL INTO THE PROBLEM SLOT AND PUNCH OR DRAG THE MATERIAL OUT.

IF THE WIRE GUIDES BECOME OBSTRUCTED WITH MATERIAL , THE BALER SHOULD BE EMPTIED, **LOCKED OUT AND TAGGED OUT**, AND THE PLATEN SHOULD BE CHOCKED AS SHOWN IN THE MAINTENANCE SECTION OF THIS MANUAL BEFORE CLEANING THE WIRE GUIDES.



DECALS

WARNING DECAL REQUIREMENTS

When your baler leaves the factory, several WARNING DECALS are installed for protection. These labels are subject to wear and abuse due to the nature of the operation. **THESE DECALS MUST BE MAINTAINED.** Additional decals may be purchased through your distributor.

Decal Number 06-0039 - DANGER: DO NOT ENTER.

Decal Number 06-0043 - DANGER: 208 VOLTS. or

Decal Number 06-0044 - DANGER: 230 VOLTS. or

Decal Number 06-0045 - DANGER: 460 VOLTS.

Decal Number 06-0101 - DANGER: 208 VOLTS. or

Decal Number 06-0102 - DANGER: 230 VOLTS. or

Decal Number 06-0103 - DANGER: 460 VOLTS.

Decal Number 06-0115 - CAUTION: GATE MUST BE CLOSED BEFORE OPERATING
BALER.

Decal Number 06-0116 - DANGER: KEEP HANDS OUT.

Decal Number 06-0117 - CAUTION: STAND CLEAR WHEN BALE IS EJECTED.

Decal Number 06-0118 - CAUTION: STAND CLEAR WHILE OPERATING DOOR
LOCK.

Decal Number 06-0119 - NOTICE: PERIODIC MAINTENANCE IS REQUIRED AND IS
YOUR RESPONSIBILITY.

Decal Number 06-0120 - DANGER. DISCONNECT AND LOCK OUT POWER
BEFORE OPENING THIS PANEL.

Decal Number 06-0121 - WARNING: FEDERAL REGULATION PROHIBITS OPERA-
TION OF THIS EQUIPMENT BY PERSONS UNDER 18
YEARS OF AGE.

Decal Number 06-0126 - MARATHON EQUIPMENT COMPANY.

DECALS

WARNING DECAL REQUIREMENTS

When your baler leaves the factory, several WARNING DECALS are installed for protection. These labels are subject to wear and abuse due to the nature of the operation. **THESE DECALS MUST BE MAINTAINED.** Additional decals may be purchased through your distributor.

Decal Number 06-0130 - CAUTION: DO NOT OPERATE BALER UNTIL OPERATING INSTRUCTIONS ARE UNDERSTOOD. NEVER PLACE ANY PART OF BODY INSIDE BALE CHAMBER. STAND CLEAR WHILE BALER IS IN OPERATION. FEDERAL LAW PROHIBITS OPERATION OF THIS EQUIPMENT BY PERSONS UNDER 18 YEARS OF AGE. TURN OFF AND REMOVE KEY AFTER USE. STAND CLEAR WHILE EJECTING BALE. (Also, includes Operating Instructions).

Decal Number 06-0132 - WARNING: STAY CLEAR OF BALE CHAMBER WHEN LIGHT IS ILLUMINATED. IF LIGHT IS ILLUMINATED WHEN BALE DOOR OR FEED GATE IS OPEN, DISCONTINUE USE OF THIS EQUIPMENT AND CALL QUALIFIED SERVICE PERSONNEL.

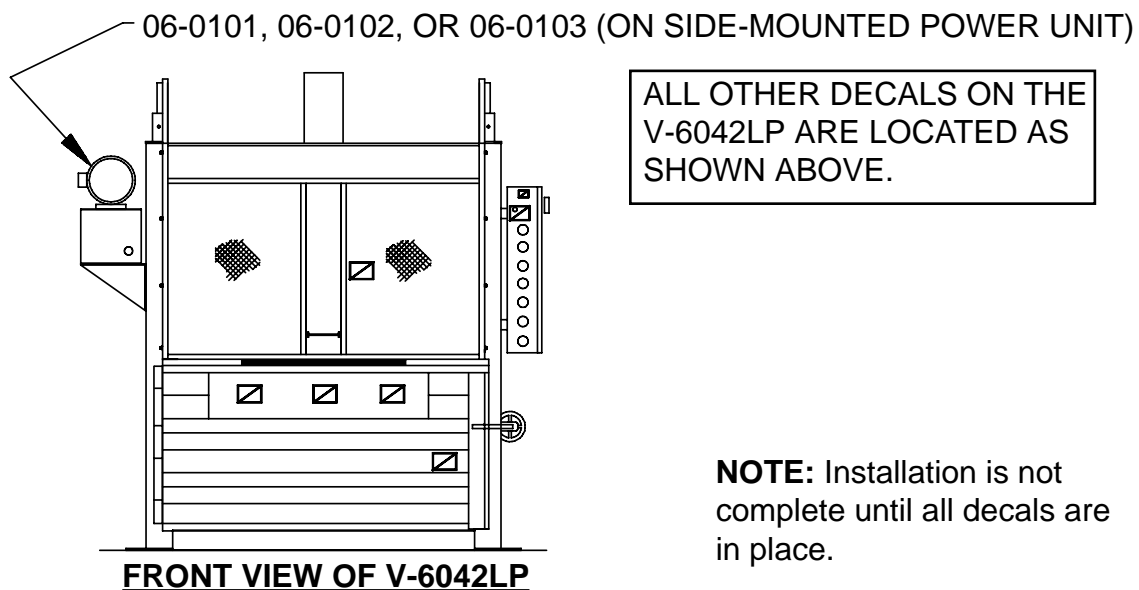
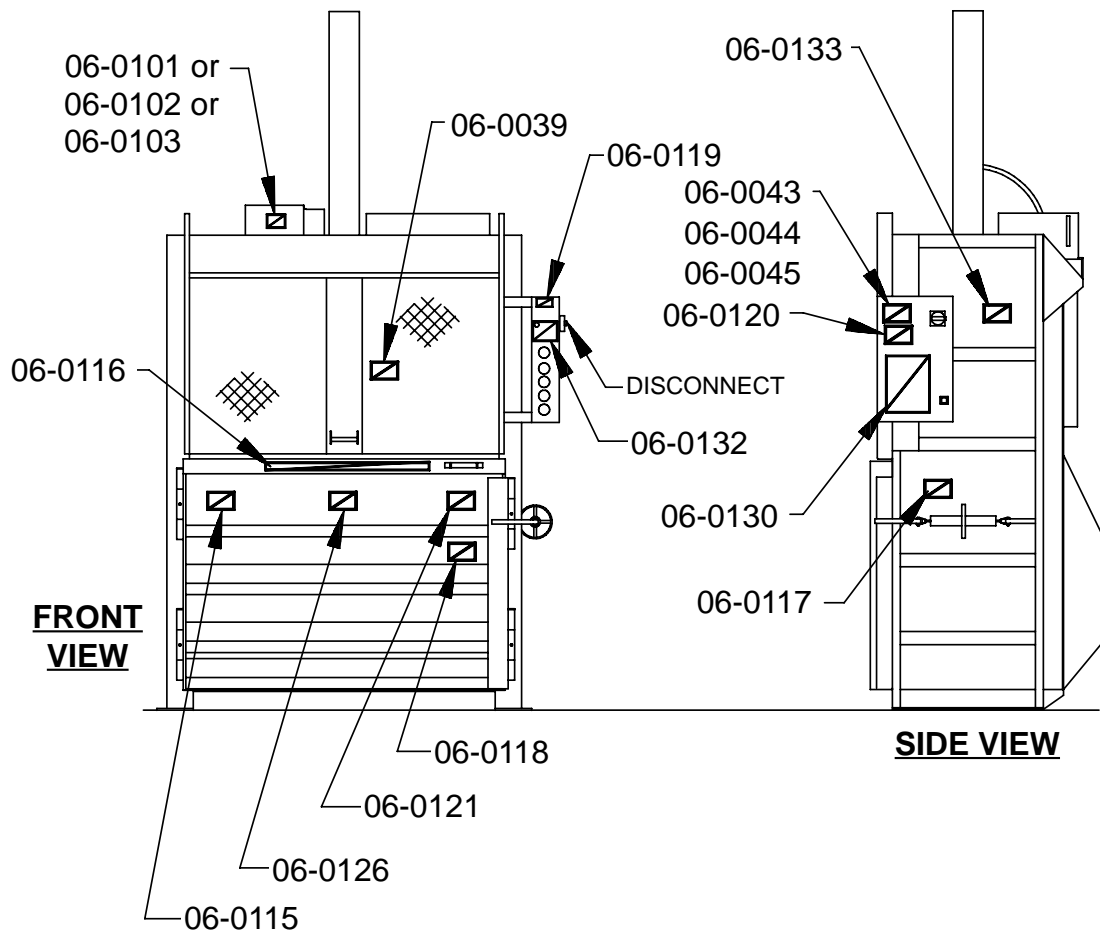
Decal Number 06-0133 - DANGER: STAY OFF TOP BALER. DO NOT CLIMB ON SIDES. USE WORK PLATFORM FOR SERVICING.

Decal Number 06-0651- NOTICE BALE MADE IF ARROW DOES NOT PASS.
(V-4830 & V-6030 ONLY)

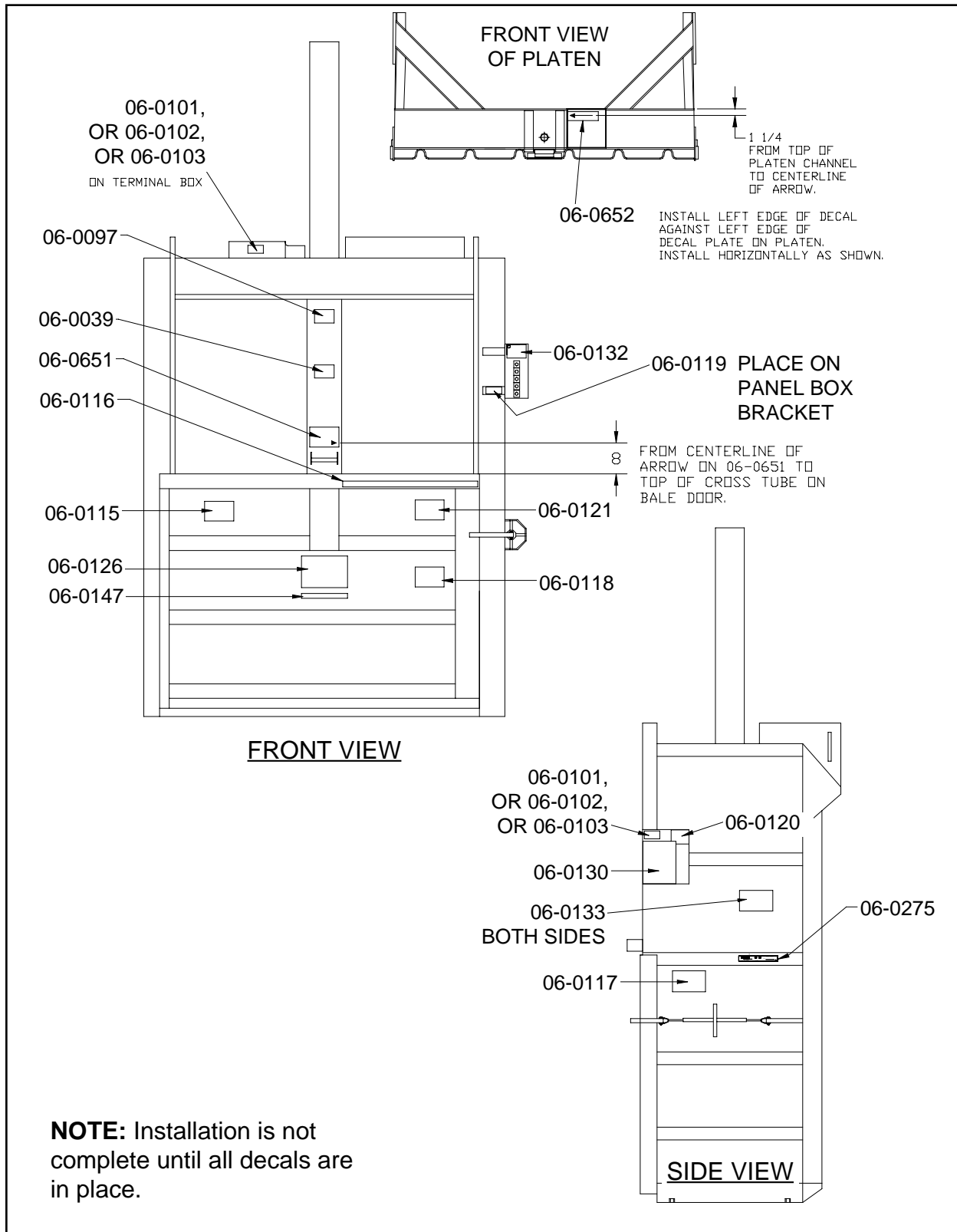
Decal Number 06-0652 - ORANGE ARROW.
(V-4830 & V-6030 ONLY)

1 OPERATION

DECAL PLACEMENT FOR HD & LP MODELS

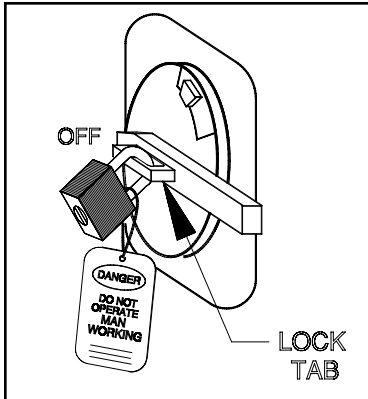


DECAL PLACEMENT FOR V-4830 & V-6030



2 MAINTENANCE

LOCK-OUT & TAG-OUT INSTRUCTIONS

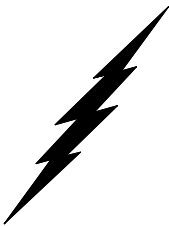


(Typical disconnect shown, other types may lock-out differently.)

FOREWORD: 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 main disconnect lever to the OFF position.** The disconnect switch on models V-4830 & V-6030 is located in the disconnect panel on the wall. The disconnect switch on all other models is located in the panel box of the machine.
- 2. Padlock the disconnect lever 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 keyswitch 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 depressing the solenoid valve pin located in the center of the coil end of each valve.

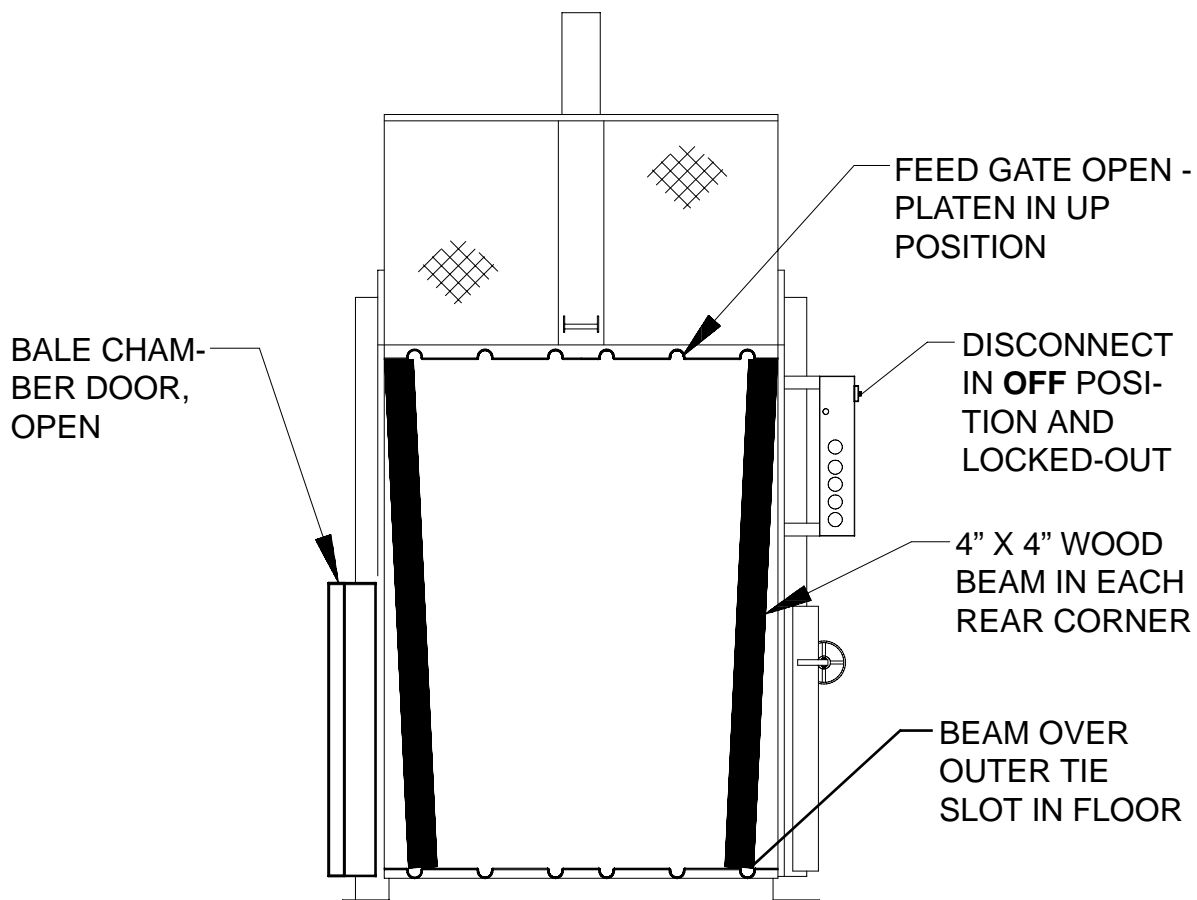
2 MAINTENANCE

SUPPORTING OF PLATEN

WARNING: 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), CUT TO FIT SNUG 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 WORK PLATFORM WHEN WORKING ON TOP OF THE BALER OR OTHER AREAS OF THE BALER THAT CAN NOT BE REACHED FROM GROUND LEVEL.

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



2 MAINTENANCE

PERIODIC MAINTENANCE

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 mechanical door lock with oil.
5. Check magnetic interlock on feed gate for proper operation.
6. Clean out wire guides on machines equipped with them. Follow platen chocking procedures and lock out and tag out procedures.
7. Check guide shoes for wear, and lubricate as needed with an all purpose grease.
8. Apply a light coating of all purpose grease in the feed gate tracks.
9. Apply a light application of all purpose oil to the feed gate latch moving parts.

THREE MONTHS

1. Check functional operation of controls and options (stop button, timers, lights, etc.).
2. Check hydraulic cylinder, and hoses, for leakage, chafing and wear.

ANNUALLY

1. Replace the hydraulic fluid. See Recommended Oil.
2. Electric motor bearings should be lubricated once a year.
3. Clean the top of the power unit to remove the dirt build up.

ANNUAL FILTER MAINTENANCE

1. The hydraulic filter should be cleaned at regular annual intervals.
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 insure that the element is not torn. Clean the element with a soft brush and standard industrial solvent.
4. Replace the 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.

PROCEDURES - PRESSURE SETTING, INTERLOCK TESTING

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

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

HYDRAULIC SYSTEM PRESSURE SETTING

1. With the key switch in the ON position, use the MANUAL DOWN button to move the platen to the full down position.
2. Turn off the power and perform the LOCK-OUT and TAG-OUT procedures described on page 2-1.
3. Manually shift the solenoid valve in each direction to relieve pressure.
4. Remove the 1/4" plug from the 3/4" 90 degree elbow in the valve subplate.
5. Install a pressure gauge in the 1/4" hole.
6. Remove the Lock-out and Tag-out provisions and turn on power to the baler.
7. Have an operator hold the MANUAL DOWN button. This will start the baler and the hydraulic system will build relief pressure. Turn the adjustment screw on the relief valve clockwise to increase the pressure, or counter clockwise to decrease the pressure. See CHARTS for proper setting for your model.
8. Tighten locknut on adjustment screw.
9. Have the operator release the MANUAL DOWN button and press the STOP button.
10. Turn off the power and perform the LOCK-OUT and TAG-OUT procedures described on page 2-1.
11. Remove the pressure gauge and reinstall the 1/4" plug.
12. This procedure is complete.

MAGNETIC INTERLOCK TESTING

1. This baler is equipped with a solid state output magnetic interlock switch. Because it is a semiconductor device, it can not be checked with a continuity light or OHM tester. The switch must be checked with the power ON. The RED WARNING LIGHT on the control panel has been provided to indicate if the switch is working properly.
2. To check the switch, turn the keyswitch to the ON position. When the feed gate or bale door is open, the light should be off. When the bale door and feed gate are closed, the light should be on.
3. If further verification is required, a volt meter (120V) may be connected to terminal #2A and terminal #7 in the panel box. The meter should read "0" volts with the gate open and 120 volts with the gate closed.
4. In no instance should the baler operate in either MANUAL DOWN or AUTOCYCLE with the feed gate up or bale door open.

WARNING: IF THE INTERLOCK IS NOT WORKING PROPERLY, DISCONNECT THE POWER AND LOCK-OUT AND TAG-OUT THE BALER UNTIL REPAIRS CAN BE MADE.

PROCEDURES - CYLINDER REMOVAL

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

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

CYLINDER REMOVAL (ALL UNITS EXCEPT LOW PROFILE, LP)

1. Raise platen up to the top position with the MANUAL UP button.
2. Disconnect and Lock-out and Tag-out power per instructions on page 2-1.
3. Remove guide shoes.
4. Turn on power and lower platen using the MANUAL DOWN button. Turn off power.
5. Support platen with fork lift to take pressure off of cylinder pin and to prevent platen from falling when pin is removed.
6. Remove bolts and cotter pins in cylinder pin.
7. Remove platen from front of baler.
8. Turn on power and retract cylinder rod.
9. Disconnect and Lock-out and Tag-out power.
10. Relieve hydraulic pressure by manually depressing solenoid valve (both sides).
11. Disconnect one hydraulic hose at a time. Plug the hose port before disconnecting the other hose.
NOTE: Remove hose fittings slowly.
12. **WARNING:** BE SURE HYDRAULIC CYLINDER IS SECURELY SUPPORTED BEFORE PROCEEDING.
13. With the hydraulic cylinder supported, loosen the 3/4" grade 5 cylinder bolts and grade 5 locknuts.
14. Remove cylinder.
15. Before reinstalling cylinder, check cylinder pin, bolts, and cylinder rod for signs of fatigue. Do not reuse parts if wear or cracks are present.
16. To reinstall the cylinder, reverse the above steps.
Be sure to use new bolts, nuts, and cotter pins in the cylinder pin.

MAIN CYLINDER REMOVAL - LOW PROFILE

1. Raise platen up to the top position with MANUAL UP button. Lock-out and Tag-out power per instructions on page 2-1. Remove guide shoes.
2. Turn on power and lower platen using MANUAL DOWN button. Turn off power.
3. Support platen with fork lift to take pressure off of cylinder pin and to prevent platen from falling when pin is removed. NOTE: Because of the long pin length, make sure the fork lift is no closer than 24" to the platen.
4. Remove the two bolts attaching the cylinder pin assembly to the front of the platen. The cylinder pin assembly consists of a 21 3/4" long pin (1 1/2" dia) with a "U" bracket welded to the end. This bracket fastens to the front of the platen with the two bolts. Slide the pin assembly out of the cylinder and platen.
5. Remove platen from front of baler. Turn on power and retract cylinder rod.
6. Disconnect and Lock-out and Tag-out power. Relieve hydraulic pressure per Lock-out and Tag-out.
7. Disconnect one hydraulic hose at a time. Plug the hose port before disconnecting the other hose.
NOTE: Remove hose fittings slowly.
8. **WARNING:** SUPPORT HYDRAULIC CYLINDER BEFORE PROCEEDING.
9. With the hydraulic cylinder supported, remove the 1" grade 5 cylinder bolts and grade 5 locknuts.
10. Remove cylinder.
11. Before reinstalling cylinder, check cylinder pin, bolts, and cylinder rod for signs of fatigue. Do not reuse parts if wear or cracks are present.
12. To reinstall the cylinder, reverse the above steps. Be sure to use new bolts, and cotter pins in the cylinder pin.

PROCEDURES - CYLINDER REBUILDING, LIMIT SWITCH ADJUSTMENT

CYLINDER REBUILDING

1. Remove hydraulic cylinder from baler.
2. Remove bolts and retainer plate from gland.
3. Remove internal retaining ring.
4. Remove rod from cylinder barrel.
5. Remove piston locknut and piston from cylinder rod.
6. Replace all seals. Discard old seals and old piston locknut.
7. Replace gland on rod.
8. Install piston on cylinder rod using new locknut (included in seal kit).
NOTE: Do not reuse old locknut. Torque new locknut to 1000-1200 ft-lbs.
9. Install piston and rod assembly in cylinder barrel. Be careful not to damage seals.
10. Install gland in barrel. Install internal retaining ring.
11. Bolt retainer plate to gland. Reinstall cylinder in baler.

LIMIT SWITCH ADJUSTMENT (ALL HD UNITS)

The baler has only one limit switch. This switch controls the size of the bale and activates the BALE MADE light.

1. Make a mark on the inside of the bale chamber 39 3/4" from the baler floor (top of corrugations).
2. Close the bale chamber door and feed gate and lower the platen until the line just touches the top of the platen side panel.
3. Turn off and lock-out and tag-out the power. Adjust the BALE MADE limit switch arm to the highest point on the actuator.
4. Remove the Lock-out and Tag-out provisions and turn on power.

LIMIT SWITCH ADJUSTMENT (ALL LP UNITS)

The baler has only one limit switch. This switch controls the size of the bale and activates the BALE MADE light.

1. Make a mark on the inside of the bale chamber 29 3/4" from the baler floor (top of corrugations).
2. Close the bale chamber door and feed gate and lower the platen until the line just touches the top of the platen side panel.
3. Turn off and lock-out and tag-out the power. Adjust the BALE MADE limit switch arm to the highest point on the actuator.
4. Remove the Lock-out and Tag-out provisions and turn on power.

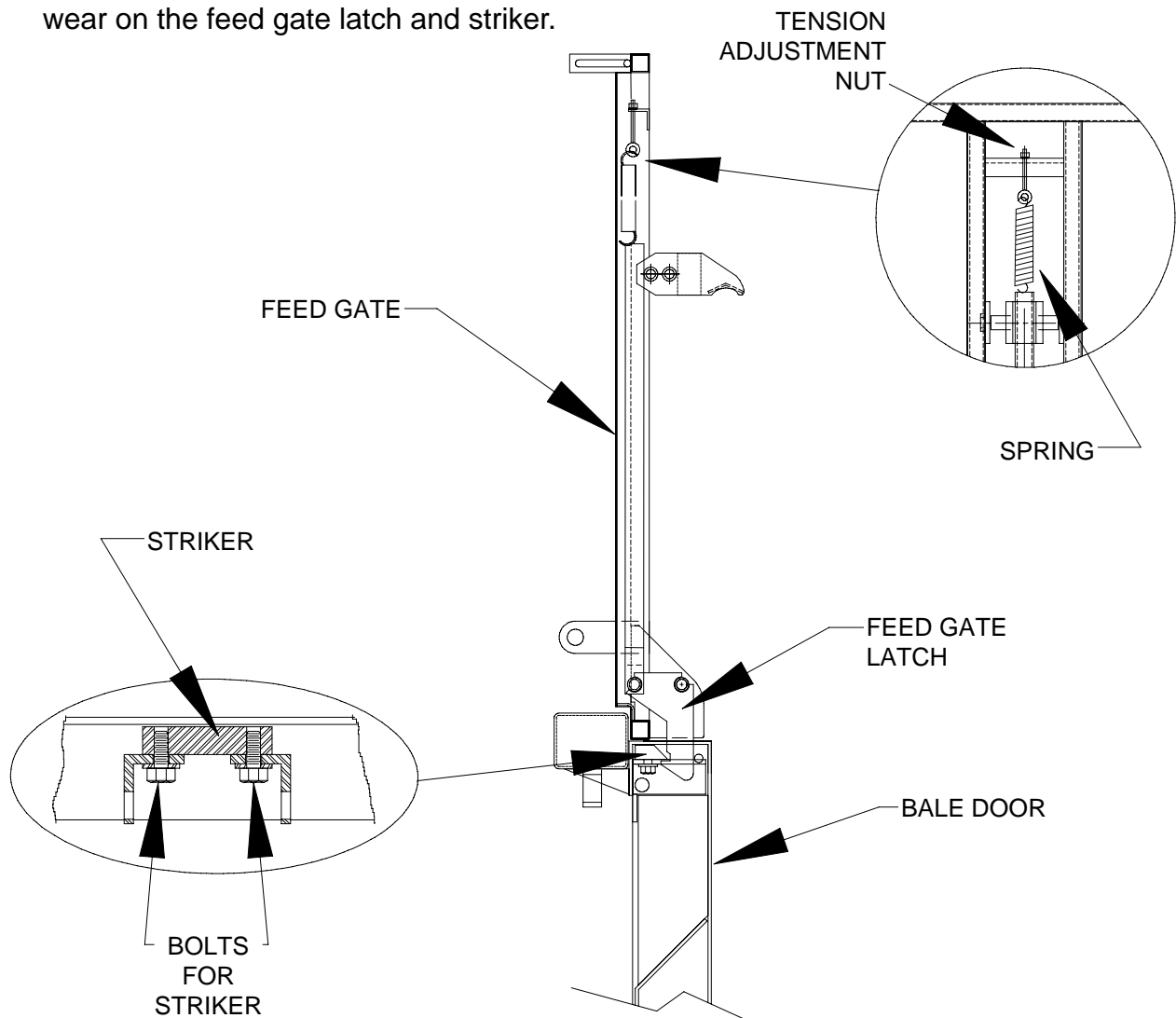
WARRANTY AND SERVICE ON MOTORS

If the baler motor fails under warranty, have it checked by a qualified electrician or service person. If there is no problem with fuses or wiring, the motor should be taken to the nearest authorized motor warranty shop. If you do not have a list of qualified shops, contact Marathon Equipment Co. The motor warranty shop will be able to inspect the motor and determine if it is factory defective. If the motor failed due to defects in material or workmanship, contact the factory to determine if the motor will be replaced or repaired. If motor failure was not due to defective material or workmanship, it will be repaired only if customer agrees to pay for expenses. Marathon Equipment Co. will not absorb cost for pickup and delivery to service centers. Removal and reinstallation are covered in the standard warranty policy.

2 MAINTENANCE

PROCEDURES - FEED GATE LATCH ADJUSTMENT

NOTE: Adjustment is made by tightening or loosening the TENSION ADJUSTMENT NUT with the feed gate in the up position. Spring tension should not exceed 5 lbs to prevent excessive wear on the feed gate latch and striker.



NOTE: In the event of excessive wear, the feed gate latch STRIKER is removable and replaceable. Striker may be replaced by removing the two (2) striker bolts. Access to the striker bolts can be achieved by removing the front cover from the bale door

PRINCIPLES OF OPERATION

OPERATING CHARACTERISTICS FOR: V-6030HD, V-4830HD, V-6030LP, AND V-7230HD

When the AUTOCYCLE button is depressed, a contact is made that energizes the motor starter coil, starting the electric motor and at the same time energizing T1 timer coil, T2 timer coil, and R1 relay coil. When R1 is energized, the hydraulic oil is directed by the directional control valve from a signal to the solenoid that shifts the valve. The oil is directed to extend the cylinder and lower the platen. When T2 times out, the contacts reverse. This de-energizes R1 which causes the down solenoid to de-energize, and the up solenoid to energize. Oil is directed to the rod end of the cylinder and the platen is raised. As the platen reaches the full up position, the baler feed gate opens. Opening the feed gate causes the magnetic interlock contact to open which stops power to the motor starter coil and shuts the baler down. If the feed gate fails to open, the T1 timer will time out and break power to the motor starter coil, shutting the baler down.

NOTE: The BALE MADE LIGHT will be illuminated if the T2 timer times out while the BALE MADE limit switch is activated. When this happens, the motor will stop with the platen in the down position.

OPERATING CHARACTERISTICS FOR: V-6030, AND V-4830HD

When the AUTOCYCLE button is depressed, a contact is made that energizes the motor starter coil, starting the electric motor and at the same time energizing T1 timer coil, T2 timer coil, and R1 relay coil. When R1 is energized, the hydraulic oil is directed by the directional control valve from a signal to the solenoid that shifts the valve. The oil is directed to extend the cylinder and lower the platen. When T2 times out, the contacts reverse. This de-energizes R1 which causes the down solenoid to de-energize, and the up solenoid to energize. Oil is directed to the rod end of the cylinder and the platen is raised. As the platen reaches the full up position, the baler feed gate opens. Opening the feed gate causes the magnetic interlock contact to open which stops power to the motor starter coil and shuts the baler down. If the feed gate fails to open, the T1 timer will time out and break power to the motor starter coil, shutting the baler down.

NOTE: When the platen dwells in the down position with the arrow on the platen in line with the arrow on the NOTICE decal on the feed gate, it is time to tie the bale. See Bale Tie Off instructions on page 1-15.

PRINCIPLES OF OPERATION

V-6042 XLP OPERATING CHARACTERISTICS

Feed Gate and Platen Operation

When the AUTOCYCLE button is depressed, a contact is made that energizes the motor starter coil, starting the electric motor and at the same time energizing T1 timer coil, T2 timer coil, and R1 relay coil. When R1 is energized, the hydraulic oil is directed by the directional control valve from a signal to the SV1A solenoid that shifts the valve. The oil is directed to the base end of the cylinder to extend the cylinder and lower the platen. When T2 times out, the contacts reverse. This de-energizes R1 which causes the down solenoid to de-energize, and the up solenoid (SV1B) to energize. Oil is directed to the rod end of the cylinder and the platen is raised. As the platen reaches the full up position, the baler feed gate opens. Opening the feed gate causes the magnetic interlock contact to open which stops power to the motor starter coil and shuts the baler down. If the feed gate fails to open, the T1 timer will time out and break power to the motor starter coil, shutting the baler down. NOTE: The BALE MADE LIGHT will be illuminated if the T2 timer times out while the BALE MADE limit switch is activated. When this happens, the motor will stop with the platen in the down position.

Ejector Operation

When the bale is ejected, the MANUAL UP button must be depressed and held which energizes the motor starter coil, starting the electric motor. At the same time, the RETRACT/EJECT switch must be turned and held to the right (EJECT). This energizes the coil on the SV2A solenoid valve causing it to shift and direct fluid to the base end of the cylinder which cause the ejector to eject the bale.

When the ejector is retracted, the MANUAL UP button must be depressed and held which energizes the motor starter coil, starting the electric motor. At the same time, the RETRACT/EJECT switch must be turned and held to the left (RETRACT). This energizes the coil on the SV2B solenoid valve causing it to shift and direct fluid to the rod end of the cylinder which cause the ejector to retract.

BALER SPECIFICATIONS

	V-4830	V-6030	V-4830HD	V-6030HD	V-7230HD	V-6030LP	V-6042LP
Performance:							
Cycle Time:(empty)	69 sec.	69 sec.	69 sec.	69 sec.	48 sec.	48 sec.	48 sec.
Total Force:	62,200 lbs.	62,200 lbs.	62,200 lbs.	62,200 lbs.	70,700 lbs.	80,800 lbs.	80,800 lbs.
Platen Face PSI:	47 PSI	37 PSI	47 PSI	37 PSI	35.3 PSI	48 PSI	34 PSI
Electrical:							
Control Voltage	120 VAC	120 VAC	120 VAC	120 VAC	120 VAC	120 VAC	120 VAC
Motor:	10 HP	10 HP	10 HP	10 HP	15 HP	10 HP	10 HP
RPM:	1760 RPM	1760 RPM	1760 RPM	1760 RPM	1725 RPM	1760 RPM	1760 RPM
Timer Settings-							
T1	75	75	75	75	51	55	55
T2	38	38	38	38	26	28	28
Hydraulic:							
Pump:	9 GPM	9 GPM	9 GPM	9 GPM	13 GPM	9 GPM	9 GPM
Pressure:(3 Phase)	2200 PSI	2200 PSI	2200 PSI	2200 PSI	2500 PSI	2100 PSI	2100 PSI
Pressure:(1 Phase)	1700 PSI	1700 PSI	1700 PSI	1700 PSI	N/A	1700 PSI	1700 PSI
Cylinder Bore:	6"	6"	6"	6"	6"	7"	7"
Cylinder Rod:	3"	3"	3"	3"	3"	4"	4"
Cylinder Stroke:	48"	48"	48"	48"	48"	26"	26"
Reservoir Capacity:	14 GAL.	14 GAL.	14 GAL.	14 GAL.	14 GAL.	17 GAL.	17 GAL.
Dimensional Data:							
Feed Opening-							
Height:	24"	24"	24"	24"	24"	19"	19"
Width:	48"	60"	48"	60"	72"	60"	60"
Feed Height:	50"	50"	50"	50"	52"	38"	38"
Bale Size-							
Width:	48"	60"	48"	60"	72"	60"	60"
Depth:	30"	30"	30"	30"	30"	30"	42"
Height:	48"	48"	48"	48"	48"	30"	30"
Bale Door Clearance	49"	61"	49"	61"	73"	61"	61"
Overall Height:	139"	139"	139"	139"	141"	95"	95"
Overall Width:	68"	80"	68"	80"	92"	93"	93"
Overall Depth:	48 1/4"	48 1/4"	51 1/2"	51 1/2"	51 1/2"	48"	64"
Total Weight:	3,600 lbs.	4,050 lbs.	4,150 lbs.	4,600 lbs.	6,000 lbs.	5,000 lbs.	6,200 lbs.
Bale Ties	14ga. X 14'	14ga. X 14'	14ga. X 14'	14ga. X 14'	14ga. X 14'	14ga. X 11'	14ga. X 11'

NOTE: The timer settings are determined by the cycle time of the machine which is based upon the cylinder bore, rod size, stroke, and pump size. T2 is set at the amount of time it takes the cylinder to fully extend, and T1 is set at the amount of time it takes to fully extend and fully retract.

See chart for the correct timer settings for your machine.

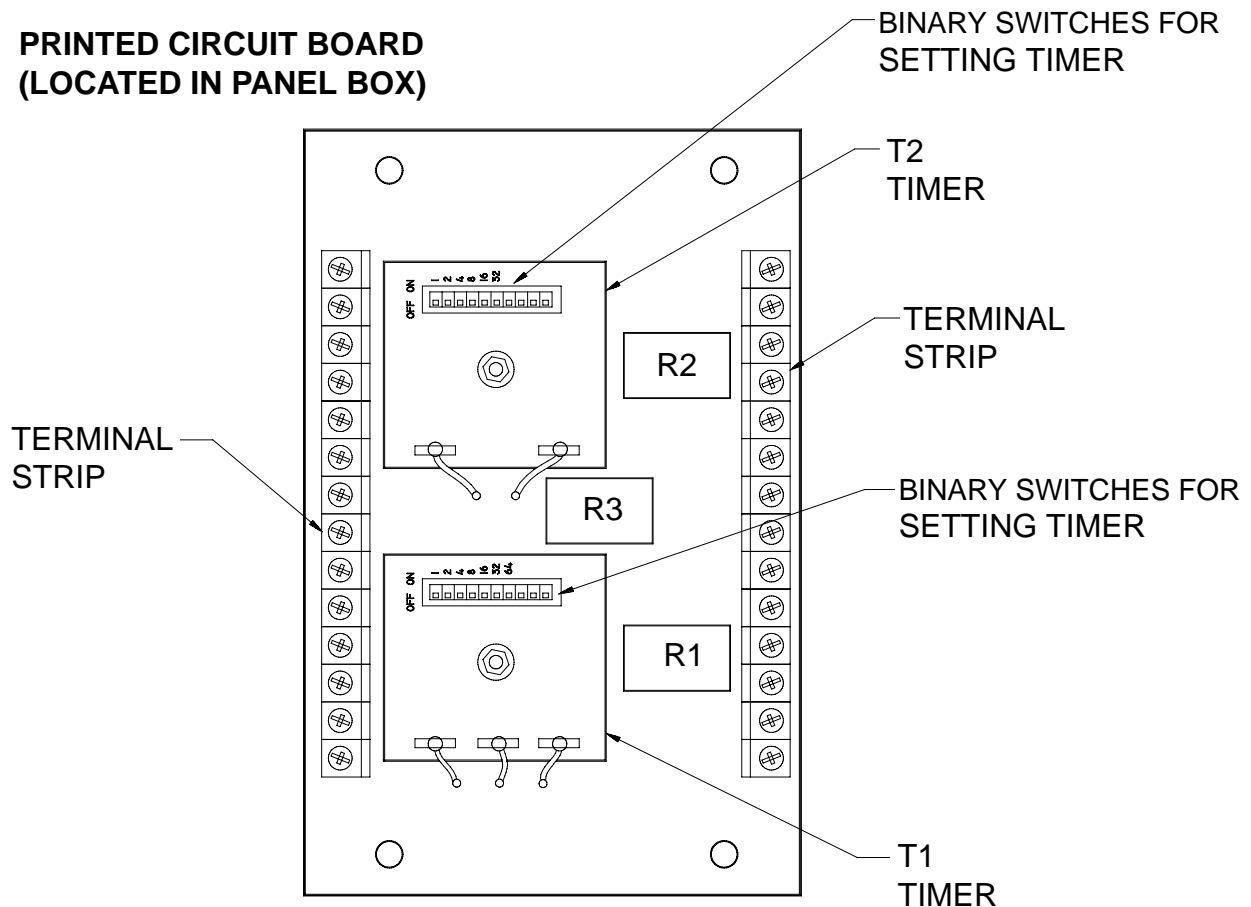
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PROCEDURES - TIMER ADJUSTMENT

Determine the cycle time of your machine from the CHARTS section in this manual under TIMER SETTINGS. To set a timer, move the appropriate binary switches to the ON position. The timer switch settings are cumulative (all switches in the ON position add up to the total number of seconds for the timer setting).

Ex. :	Switch 1 (1 sec)	= OFF	
	Switch 2 (2 sec)	= OFF	
	Switch 3 (4 sec)	= ON	4 sec
	Switch 4 (8 sec)	= ON	8 sec
	Switch 5 (16 sec)	= ON	16 sec
	Switch 6 (32 sec)	= OFF	
	Switch 7 (64 sec)	= OFF	
	Switch 8 (128 sec)	= OFF	
	Switch 9 (256 sec)	= OFF	
	Switch 10 (512 sec)	= OFF	
	Timer Setting	=	28 sec

**PRINTED CIRCUIT BOARD
(LOCATED IN PANEL BOX)**



2 MAINTENANCE

CHARTS

MOTOR STARTER & HEATER ELEMENTS

MOTOR SIZE	VOLTAGE	STARTER SIZE	HEATER ELEMENTS
10HP, 3PH	208	2(AB)	W-63
	230	2(AB)	W-63
	460	2(AB)	W-55
	575	2(AB)	W-53
15HP, 3PH	208	3(SIEMENS)	ADJUST PER FLA OF MOTOR
	230	2(AB)	W-69
	460	2(AB)	W-61
	575	2(AB)	W-58
10HP, 1PH	208	3(SIEMENS)	ADJUST PER FLA OF MOTOR
	230	3(SIEMENS)	ADJUST PER FLA OF MOTOR

Models V-4830 & V-6030 use an IEC contactor and has no NEMA size. Adjust per FLA of motor.

FUSES AND CIRCUIT BREAKERS

MOTOR SIZE	VAC	FULL LOAD AMP	DUAL ELEMENT FUSE MAX. SIZE	INVERSE TIME BREAKER MAX. SIZE	SERVICE DISCONNECT AMP
10 HP, 3 PH	208	30.8	50	80	60
	230	28.0	50	70	60
	460	14.0	25	35	30
	575	11.0	20	30	30
10 HP, 1 PH	208	55.0	100	125	100
	230	50.0	90	125	100
15 HP, 3 PH	208	46.2	60	90	60
	230	42.0	60	90	60
	460	21.0	30	40	30
	575	17.0	30	40	30

WIRE SIZES

MOTOR SIZE	THW Copper 75°C (165°F)			
	VOLTAGE	TO 100'	TO 200'	TO 300'
10 HP, 3 PH	208	6	4	2
	230	8	4	3
	460	12	10	8
	575	12	12	10
10 HP, 1 PH	208	4	1	1/0
	230	4	2	1/0
15 HP, 3 PH	208	4	2	1
	230	6	3	2
	460	10	8	6
	575	12	10	8

RECOMMENDED OILS

1. Union - Unax-46, Unax-AW46
2. Gulf - Harmony 47, Harmony 48-AW
3. Exxon - Teresstic 46, Nuto 46
4. Texaco - Rando 46
5. Chevron - AW 46
6. Shell -Turbo 46, Tellus 46
7. Quaker State - Dextron II (ATF)
8. Citgo - Pacemaker 46, Tellus - AW46
9. Amoco - (Rycon)

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PARTS LIST

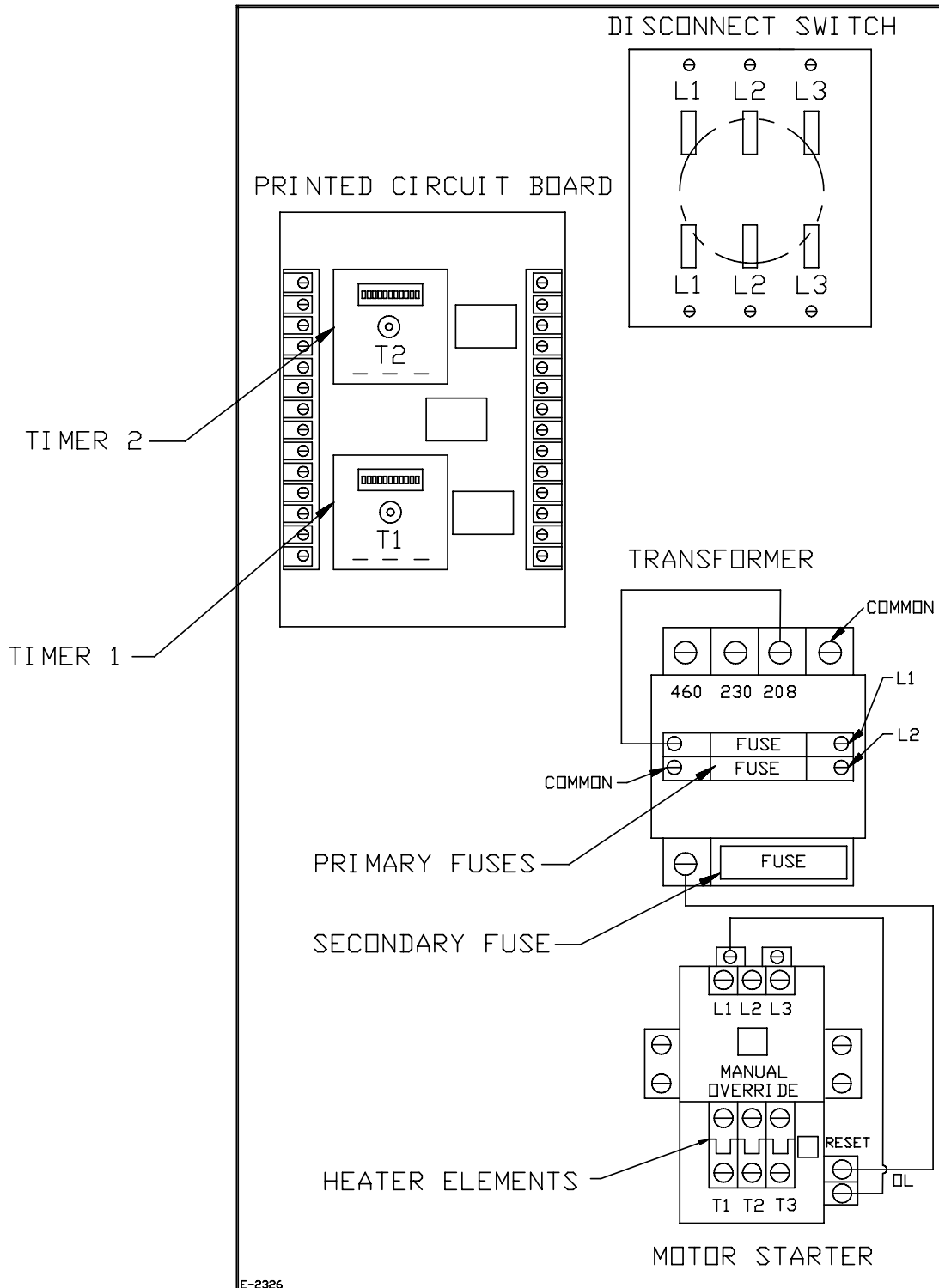
PART #	DESCRIPTION	4830	6030	4830HD	6030HD	7230HD	6030LP	6042LP	4830*	6030**
ELECTRICAL										
03-0004	MOTOR, 10 HP, 3 PH (208,230,460 V A C)	X	X	X	X		X	X	X	X
03-0010	LIMIT SWITCH ARM	X	X	X	X	X	X	X		
03-0012	LIMIT SWITCH, 5 DEG. FREE TRAVEL	X	X	X	X	X	X	X		
03-0288	TRANSFORMER (208,230,460 V A C)	X	X	X	X	X	X	X	X	X
03-0335	LIGHT, RED OMNI GLOW	X	X	X	X	X	X	X	X	X
03-0343	MOTOR, 15 HP, 3PH					X				
03-0398	LEGEND, BALE MADE	X	X	X	X	X	X	X		
03-0403	SOLENOID COIL FOR 02-0357	X	X	X	X	X	X	X	X	X
03-0148	MOTOR STARTER, SIZE 2 AB	X	X	X	X	X	X	X		
03-0486	MOTOR STARTER EXTERNAL RESET	X	X	X	X	X	X	X	X	X
03-0488	FUSE, 1.5 AMP	X	X	X	X	X	X	X	X	X
03-0498	SWITCH, MAGNETIC INTERLOCK	X	X	X	X	X	X	X	X	X
03-0509	LEGEND, AUTOCYCLE, 22mm	X	X	X	X	X	X	X	X	X
03-0510	LEGEND, MANUAL DOWN, 22mm	X	X	X	X	X	X	X	X	X
03-0511	LEGEND, MANUAL UP, 22mm	X	X	X	X	X	X	X	X	X
03-0512	LEGEND, STOP, 22mm	X	X	X	X	X	X	X	X	X
03-0513	LEGEND, OFF/ON, 22mm	X	X	X	X	X	X	X	X	X
03-0600	PRINTED CIRCUIT BOARD	X	X	X	X	X	X	X	X	X
03-0928	SWITCH, BLACK PUSHBUTTON, 22mm	X	X	X	X	X	X	X	X	X
03-0929	PUSHBUTTON, RED MUSHROOM HEAD	X	X	X	X	X	X	X	X	X
03-0934	SWITCH, 2 POS. KEYED SELECTOR	X	X	X	X	X	X	X	X	X
03-0935	KEY, FOR 03-0934	X	X	X	X	X	X	X	X	X
03-0936	CONTACT 1, N.O. FOR 22mm	X	X	X	X	X	X	X	X	X
03-0937	CONTACT 1, N.C. FOR 22mm	X	X	X	X	X	X	X	X	X
03-0987	SWITCH, GREEN PUSHBUTTON, 22mm	X	X	X	X	X	X	X	X	X
03-1367	ENCLOSURE (PANEL BOX)	X	X	X	X	X	X	X		
03-1676	MOTOR STARTER, IEC CONTACTOR								X	X
03-1678	MOTOR STARTER, SOLID STATE								X	X
03-1679	ENCLOSURE (PANEL BOX)								X	X
03-1681	MOTOR STARTER, AUX. CONTACT								X	X
99-6875	DISCONNECT CONVERSION KIT	X	X	X	X	X	X	X		
HYDRAULIC										
02-0050	SUCTION FILTER	X	X	X	X	X	X	X	X	X
02-0197	BREATHING CAP	X	X	X	X	X	X	X	X	X
02-0198	SIGHT GAUGE, 3 INCH	X	X	X	X	X	X	X	X	X
02-0214	RELIEF CARTRIDGE	X	X	X	X	X	X	X	X	X
02-0244	HUB COUPLING	X	X	X	X	X	X	X	X	X
02-0264	SUBPLATE	X	X	X	X	X	X	X	X	X
02-0357	VALVE, DIRECTIONAL CONTROL	X	X	X	X	X	X	X	X	X
02-3839	PUMP, 9 GPM, VANE			X	X		X	X	X	X
02-1013	PUMP, 13 GPM, VANE	X	X			X				
04-0260	CYL. 6 BORE, 3 ROD, 48 STROKE	X	X	X	X	X			X	X
04-0261	SEAL KIT, F/04-0260	X	X	X	X	X			X	X
04-0500	CYL. 2.5 BORE, 18.5 STROKE							X		
04-0520	CYL. 7 BORE, 26 STROKE						X	X		
04-0521	SEAL KIT, F/04-0520						X	X		
MISC. HARDWARE										
05-0256	WIRE, BALE TIE	X	X	X	X	X	X	X	X	X
05-0277	SPRING, 3/4 OD X 4 LONG			X	X	X		X	X	X
05-0278	TURNBUCKLE, W/8" HANDWHEEL	X	X	X	X	X	X	X		
05-0283	CHAIN, 2040 RIVET	X	X	X	X	X	X	X	X	X
05-0285	SPROCKET, F/2040 RIVET CHAIN	X	X	X	X	X	X	X	X	X
05-0664	MASTER LINK, F/2040 RIVET CHAIN	X	X	X	X	X	X	X	X	X
05-2382	CHAIN, F/EJECTOR								X	X
05-2383	LINK F/EJECTOR CHAIN								X	X
05-2384	TURNBUCKLE								X	X
22-4132	FEED GATE STRIKER (BOLT IN)	X	X	X	X	X	X	X	X	X

* After SERIAL NUMBER 127390

** After SERIAL NUMBER 97723

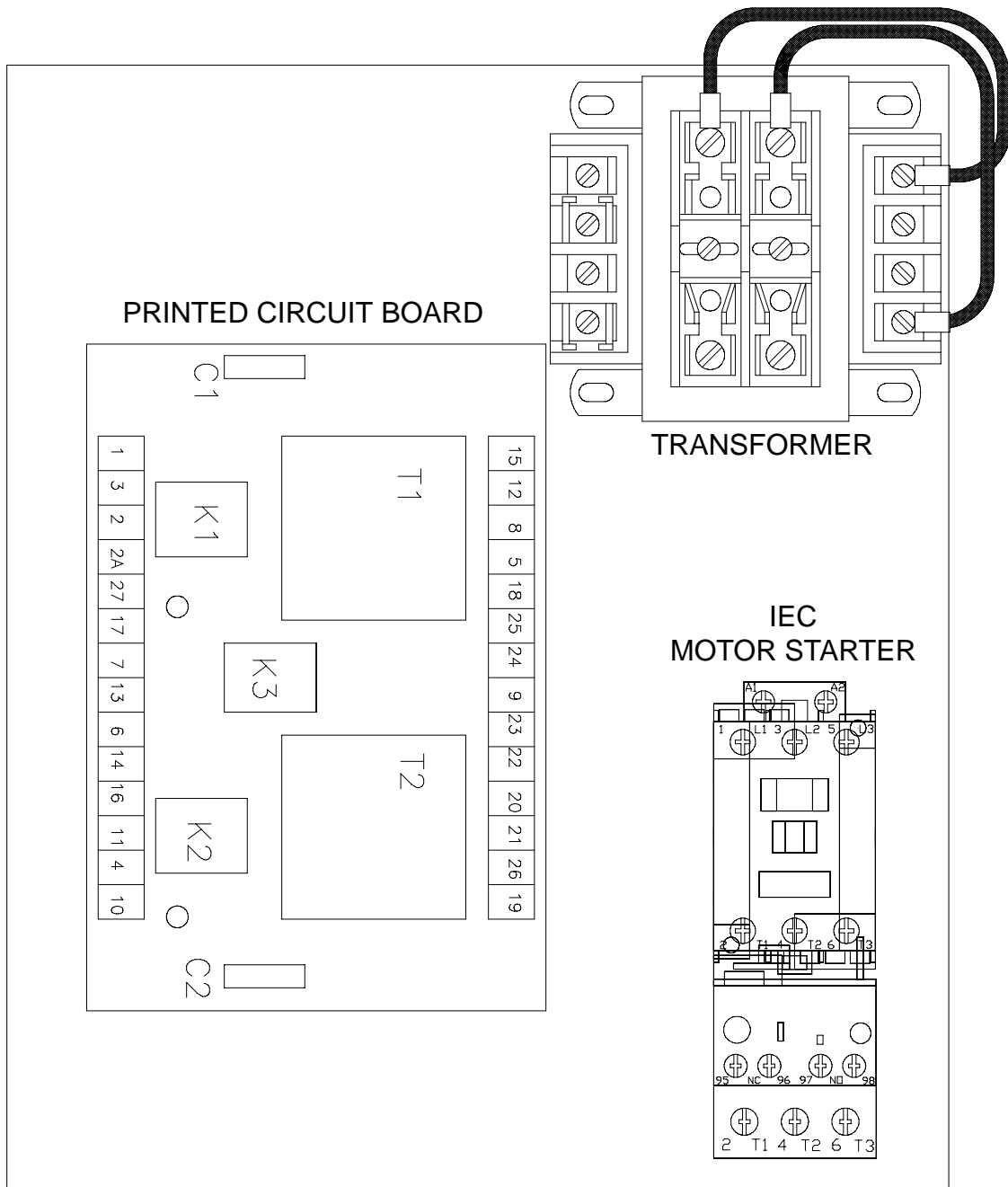
2 MAINTENANCE

PANEL BOX FOR HD AND LP BALERS



2 MAINTENANCE

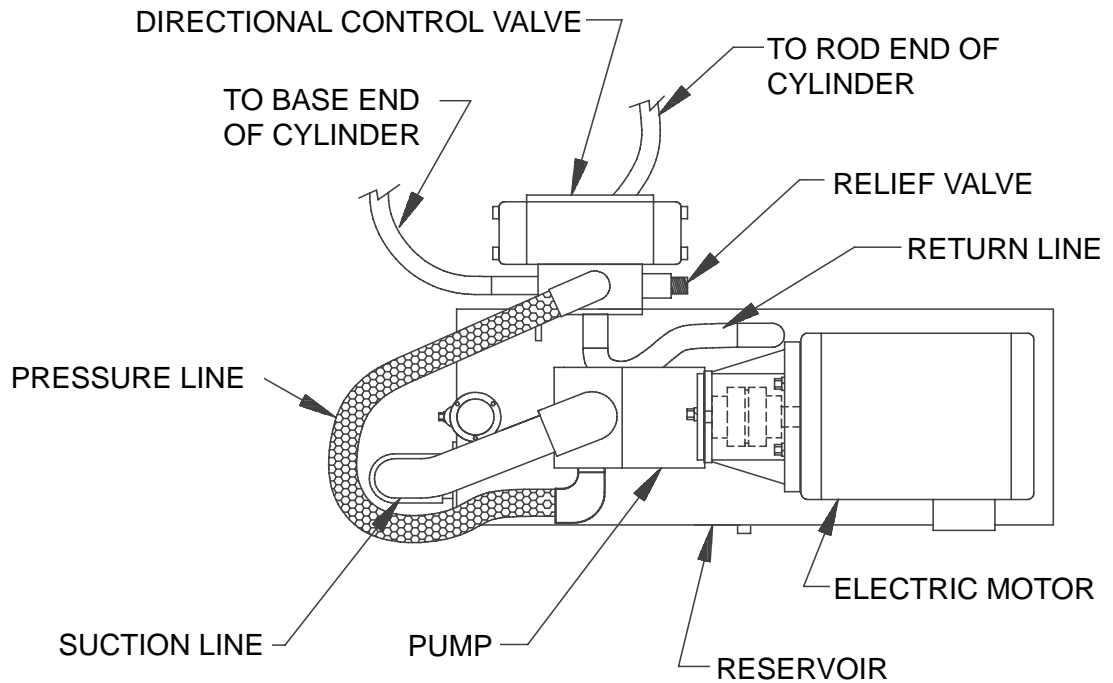
PANEL BOX FOR V-6030 & V-4830



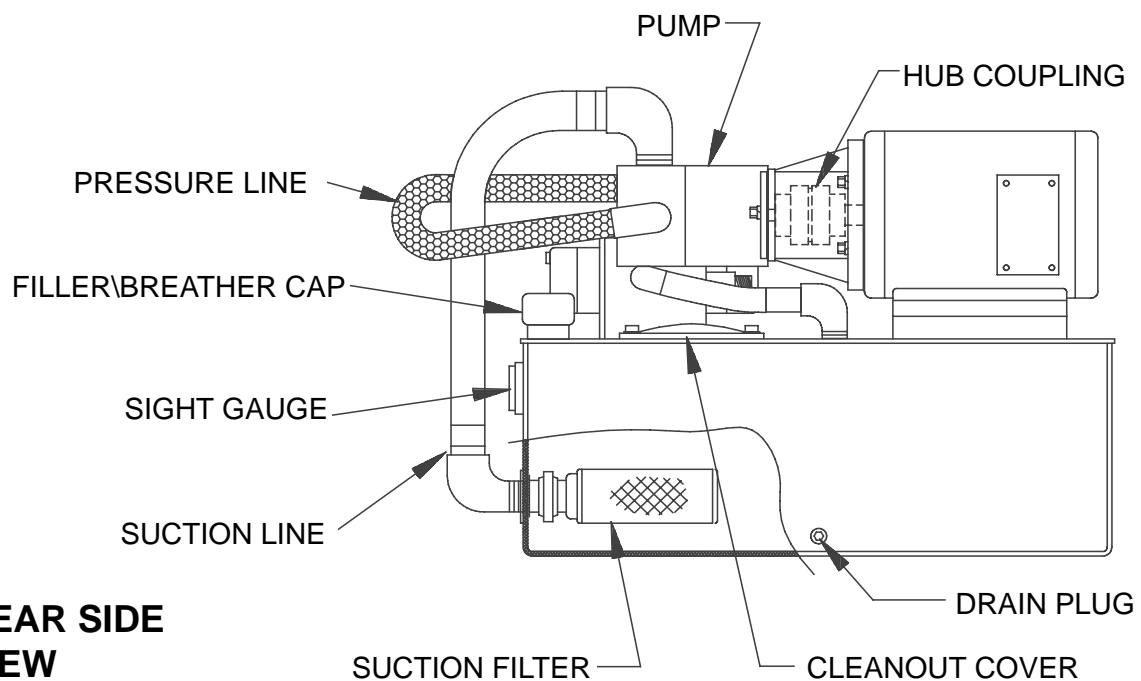
2 MAINTENANCE

POWER UNIT FOR 4830, 6030, 4830HD, 6030HD, & 7230HD

**TOP
VIEW**

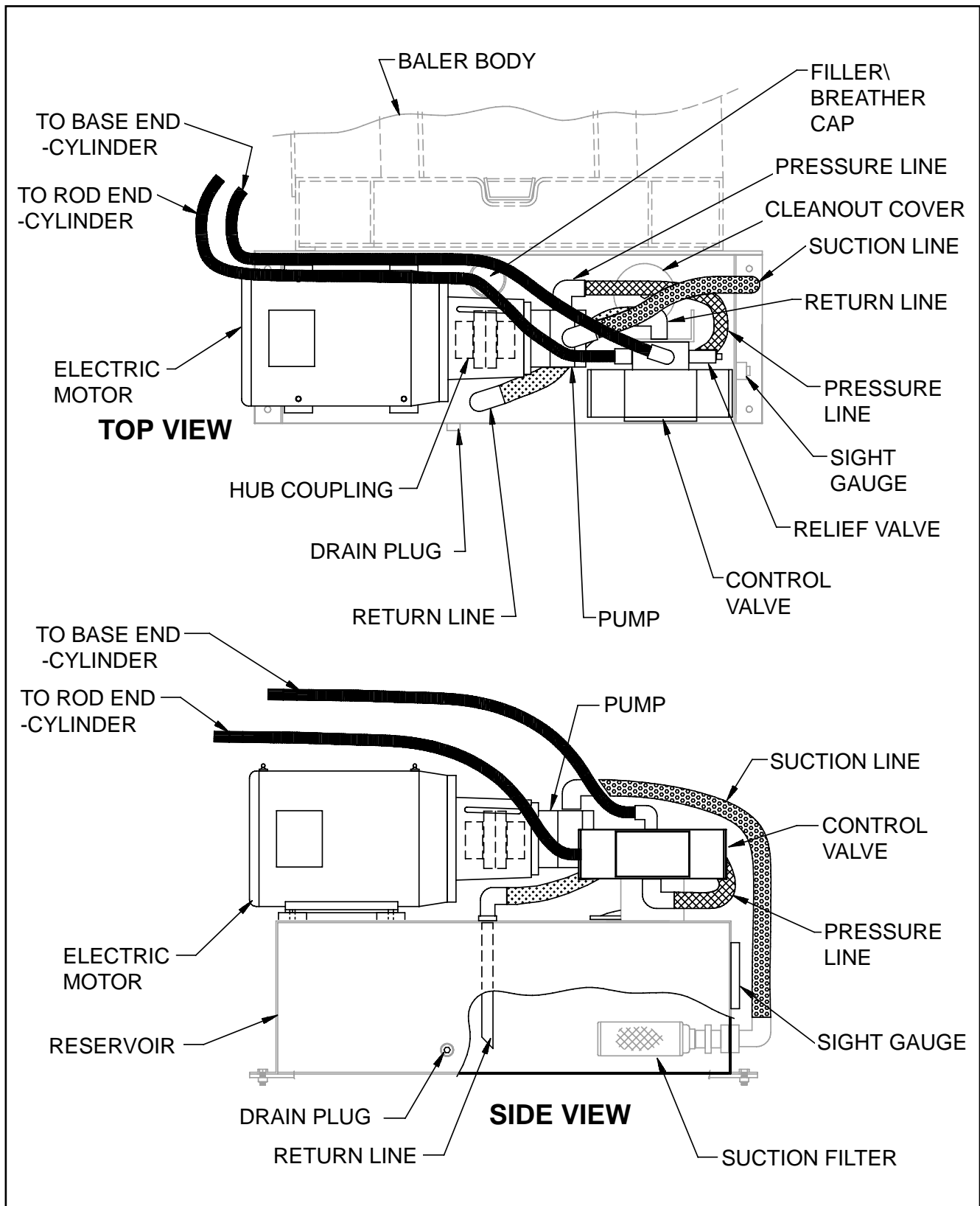


**REAR SIDE
VIEW**



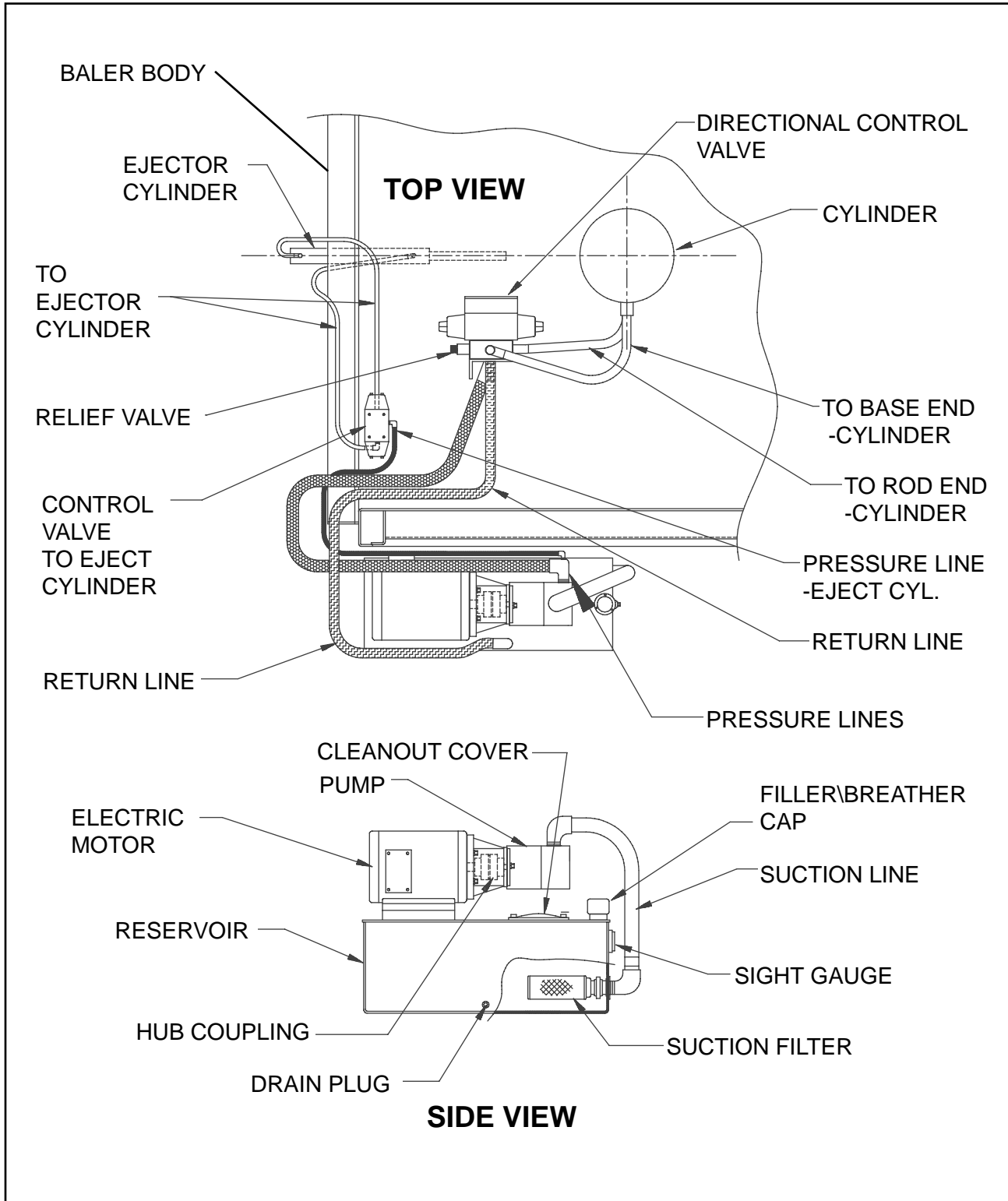
2 MAINTENANCE

POWER UNIT FOR 6030LP

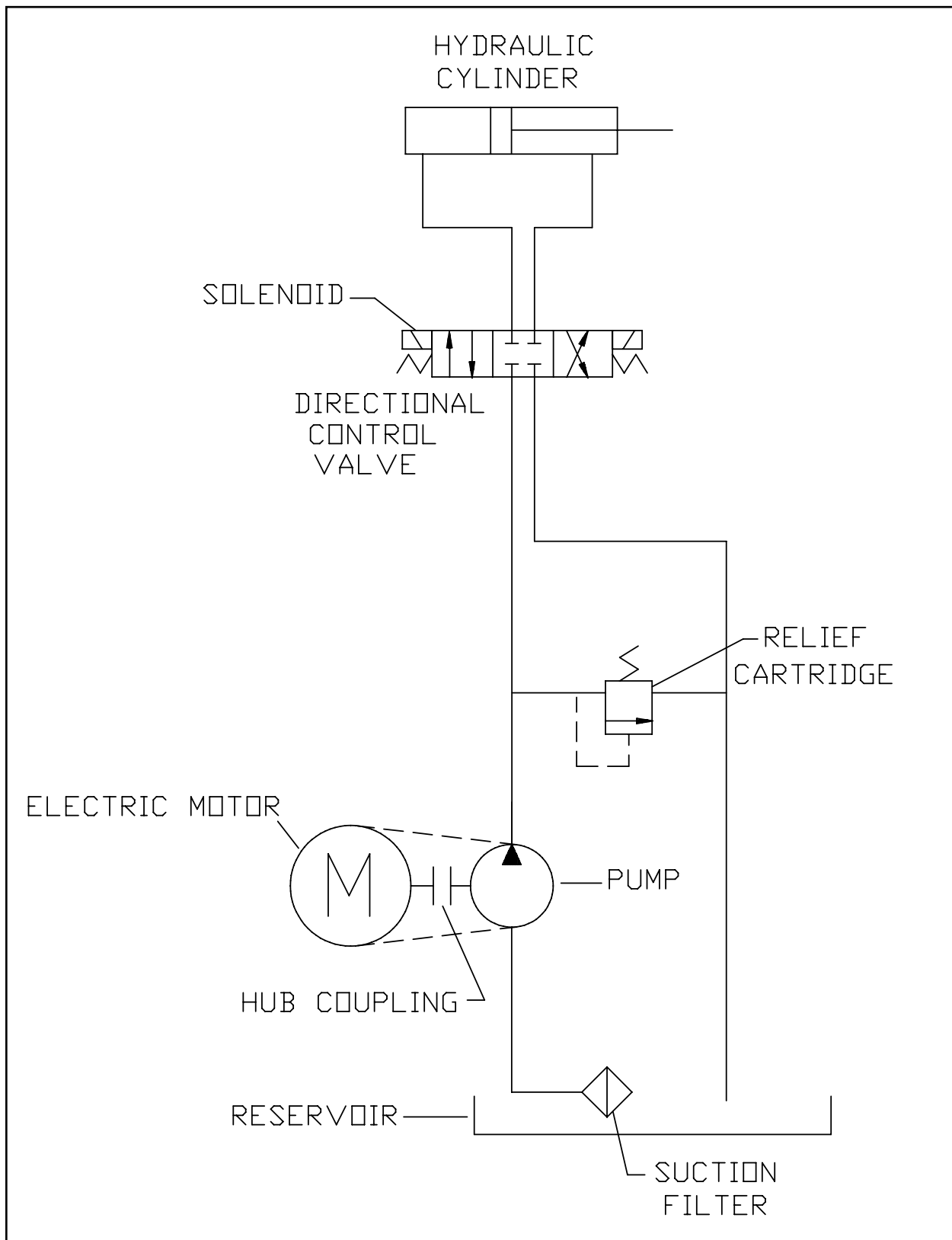


2 MAINTENANCE

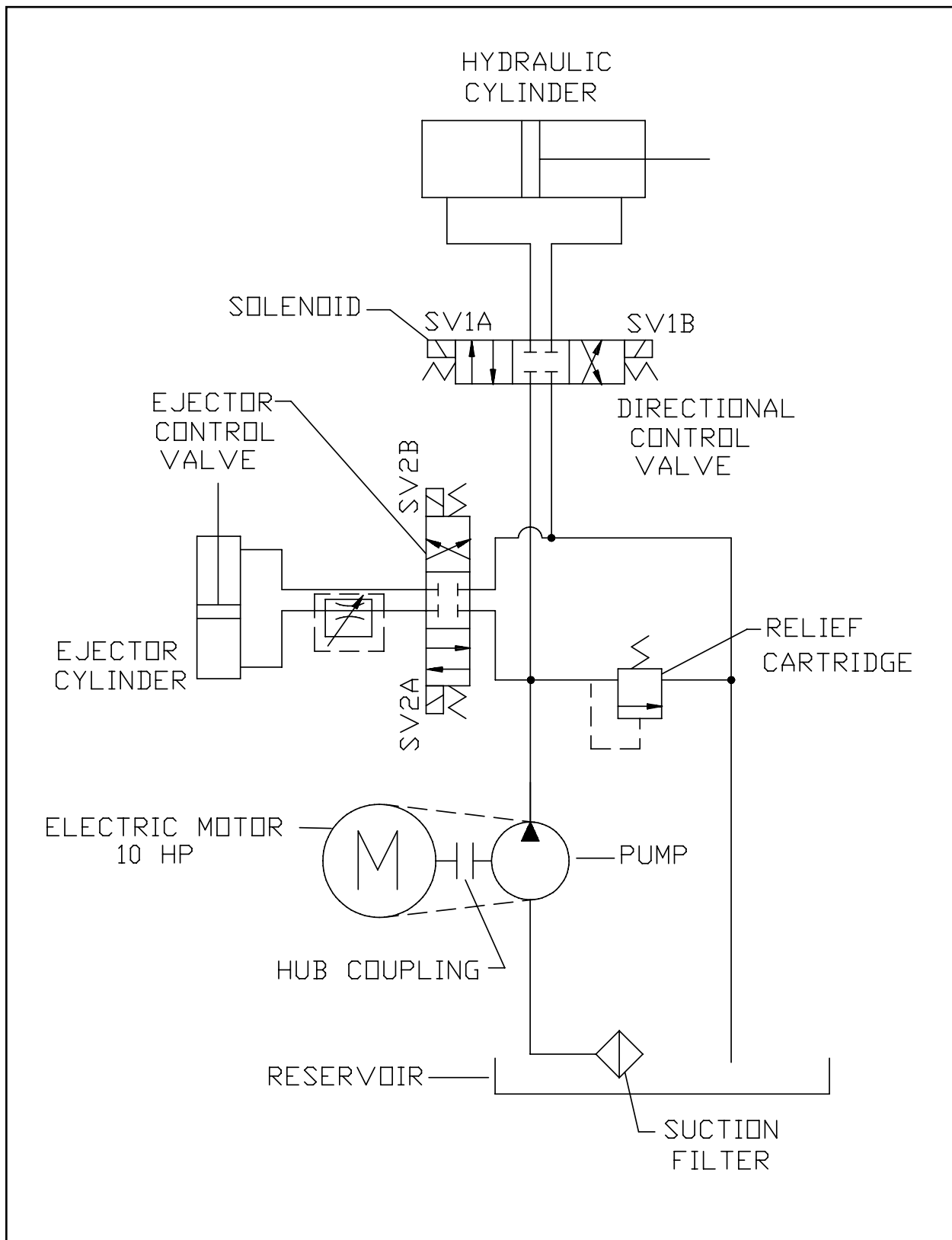
POWER UNIT FOR 6042LP



HYDRAULIC SCHEMATIC FOR VERTICAL BALERS - TYPICAL



HYDRAULIC SCHEMATIC FOR V-6042LP



TROUBLE-SHOOTING CHART

PROBLEM	CAUSE	SOLUTION
UNIT WILL NOT START	(1) No electrical power to unit (2) No electrical power to control circuit (3) No electrical power to motor	(1A) Turn on main disconnect (1B) Replace fuses or reset breakers (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 contact closes when depressed (2E) Check magnetic interlock. (3A) Check heater resets
UNIT WILL NOT CONTINUE RUNNING WHEN START BUTTON IS RELEASED	(1) Relay or contacts are inoperative (2) Motor Starter auxiliary contacts are inoperative (3) Secondary contact on start button is inoperative	(1A) Check relay coil, contacts, & wiring (2A) Check motor starter contacts and wiring (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 (2) Low relief pressure (3) Oil leakage in cylinder (4) Defective pump (5) Oil leakage from hose fittings (6) Low voltage (7) Pump may be driven in the wrong direction of rotation (8) Pump shaft broken, or shaft key sheared (9) Intake pipe from reservoir blocked, or oil viscosity too heavy to prime (10) Intake air leaks (foam in oil or sounds like gravel in pump) (11) Units shift slowly (12) Valve response sluggish (13) Loose hub coupling	(1A) Fill reservoir with oil (2A) Check relief pressure (2B) Clean orifice in relief valve & reset pressure (2C) Check o-rings on relief valve for damage or leakage (3A) Check cylinder for bypassing (3B) Replace seal kit, inspect rod and cylinder tube for scoring or nicks. (3C) Replace cylinder (4A) Replace pump (5A) Tighten hose fittings (6A) Check voltage (7A) Stop immediately to prevent seizure. Check direction of drive rotation (proper rotation direction is indicated by arrow on motor) (8A) Visually inspect motor and pump shaft and hub couplings for damage. Replace if necessary. (9A) Drain system. Add clean fluid of proper viscosity and specifications. Filter as recommended. Check system filter for cleanliness. (10A) Check intake connections. Tighten securely and flush system. (11A) Flow control valve (restrictor) clogged, remove and clean orifice. (12A) Contaminated oil needs replacing. (12B) Inadequate voltage, check voltage, check coil (12C) Disassemble valve and clean (13A) Tighten set screws on hub coupling halves
UNIT WILL NOT REVERSE	(1) Solenoid valve is inoperative (2) Reverse button inoperative (3) Timer T2 inoperative	(1A) Check coil in solenoid valve (2A) Check reverse button contacts (3A) Check T2 contact to see if it is opening
PUMP MAKES NOISE, SOUNDS LIKE GRAVEL INSIDE	(1) Partly clogged intake strainer or restricted intake pipe (2) Defective bearing (3) Air leak at pump intake pipe joints	(1A) Pump must receive intake fluid freely or cavitation results. Drain system, clean intake pipe and clean or replace strainer (2A) Replace pump (3A) Tighten joints as required.

TROUBLE-SHOOTING CHART

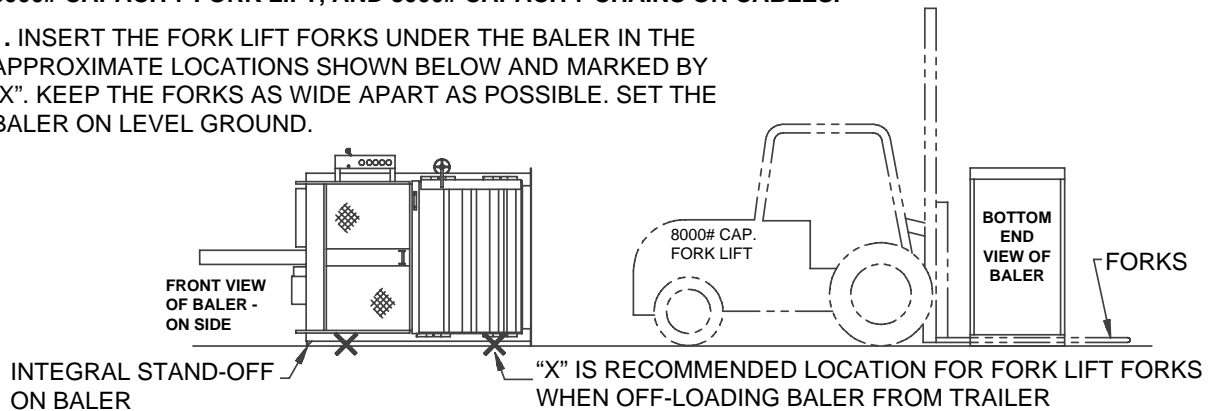
PROBLEM	CAUSE	SOLUTION
EXCESSIVE HEAT	(1) Continuous running	(1A) When over 140 degrees F or hot in comparison with circuit lines, pump should be shut down immediately. Before restarting, insure that fluid cooling capacity is adequate to remove system generated heat. (1B) Install oil cooler (air or water type) (1C) Install oil temperature shut down switch
	(2) Excessive system leakage	(2A) Check system for bypassing or leaks
RAPID WEAR	(1) Abrasive matter in the hydraulic oil being circulated through pump (2) Viscosity of oil too low at working conditions (3) Pressure too high (4) Air recirculation	(1A) Install adequate filter or clean. (1B) Replace oil more often and clean tank (2A) Replace oil with factory recommended viscosity (3A) Reduce pump pressures to factory specifications. (4A) Tighten all suction fittings.
ERRATIC OPERATION	(1) Valve sticking or binding (2) Viscosity of oil too high (3) Air in system (4) Low oil (5) Low voltage	(1A) Disassemble & clean as necessary (2A) Replace oil with factory recommended viscosity (3A) Check for leaks, tighten fittings (4A) Fill reservoir with oil (5A) Check primary & secondary sides of transformer for correct voltage.
UNIT DOES NOT SHUT DOWN AT END OF CYCLE	(1) Magnetic interlock malfunction	(1A) Check interlock per PROCEDURES
OVERLOADS TRIP FREQUENTLY		(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 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

3 INSTALLATION

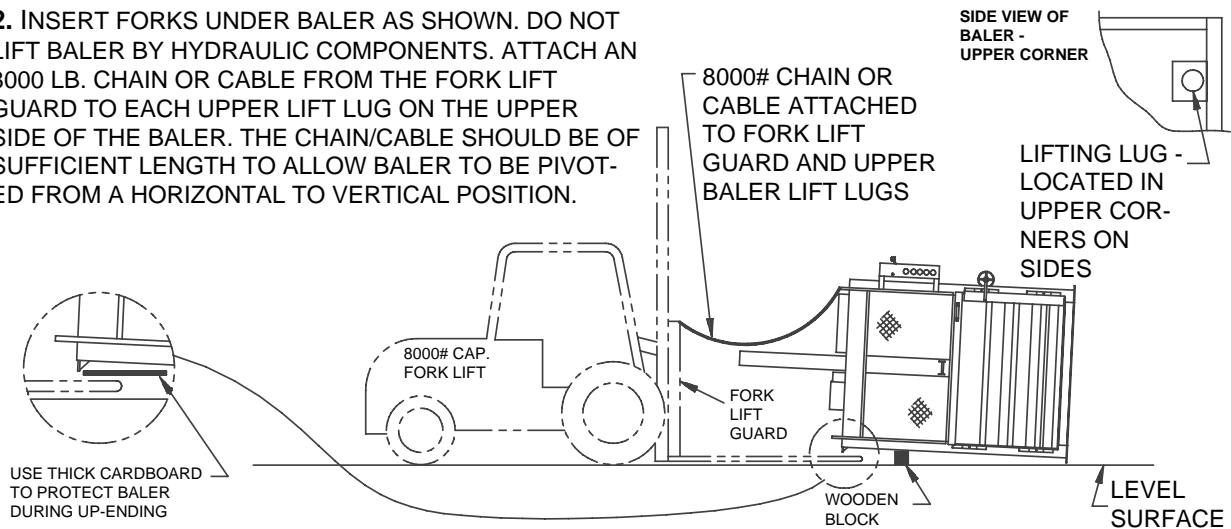
OFF-LOADING AND UP-ENDING OF BALER

THE FOLLOWING REQUIRES AN EXPERIENCED FORK LIFT DRIVER, 8000# CAPACITY FORK LIFT, AND 8000# CAPACITY CHAINS OR CABLES.

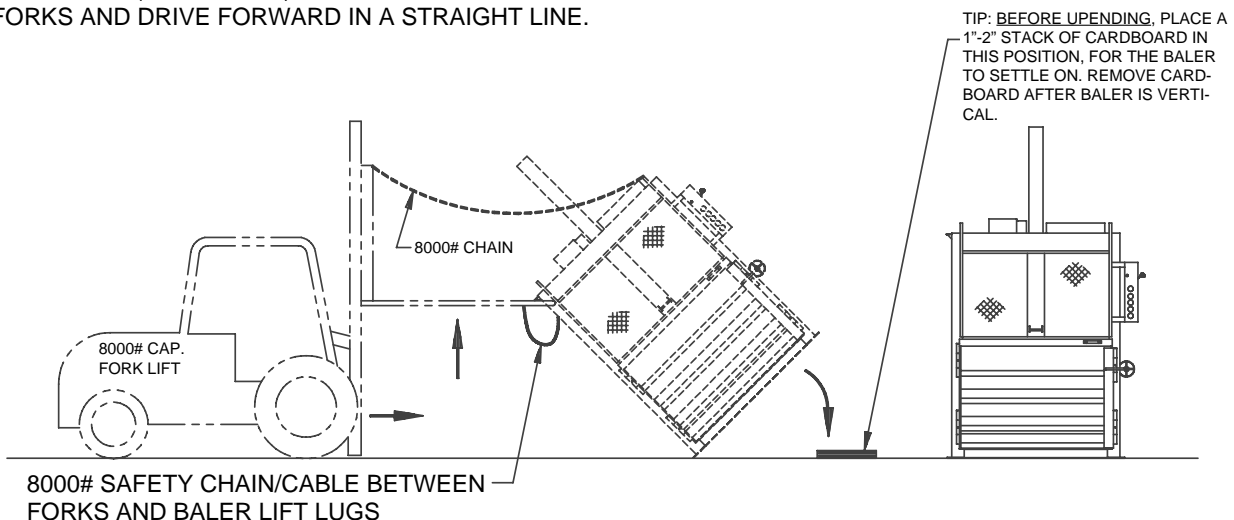
1. INSERT THE FORK LIFT FORKS UNDER THE BALER IN THE APPROXIMATE LOCATIONS SHOWN BELOW AND MARKED BY "X". KEEP THE FORKS AS WIDE APART AS POSSIBLE. SET THE BALER ON LEVEL GROUND.



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 LUG ON THE UPPER SIDE OF THE BALER. THE CHAIN/CABLE SHOULD BE OF SUFFICIENT LENGTH TO ALLOW BALER TO BE PIVOTED FROM A HORIZONTAL TO VERTICAL POSITION.



3. BEFORE UP-ENDING BALER, ATTACH A SAFETY CHAIN FROM EACH FORK TO THE UPPER LIFT LUGS 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.



3 INSTALLATION

GENERAL INSTALLATION

CAUTION:

Review this manual before beginning the installation. Study the job-site 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

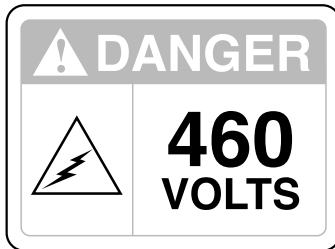
Installation of the baler is not complete until an inspection of the warning decals has been made. Decals should be clearly visible, legible, securely applied, and in the proper location. For decal description and location, see DECALS and DECAL PLACEMENT in Section 1.

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

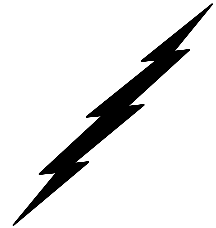
WARNING: PARTS OF THE PLATEN WILL EXTEND ABOVE THE TOP OF THE BALER WHEN THE PLATEN IS FULLY RAISED.

3 INSTALLATION

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 LOCK-OUT AND TAG-OUT INSTRUCTIONS ON PAGE 2-1.

1. **BRANCH CIRCUIT PROTECTION IS NOT PROVIDED WITH THIS UNIT, AND MUST BE PROVIDED BY THE INSTALLER.** Use the FUSE AND CIRCUIT BREAKER chart and the WIRE SIZE chart in the MAINTENANCE section 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, on models V-4830HD, V-6030HD, V-7230HD, V-6030LP, and, V-6042LP, and is sized in accordance with the baler. 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.
4. A lockable disconnect switch **IS NOT PROVIDED** on models V-4830 & V-6030, and must be provided by the installer at the time of installation. This disconnect switch must be fused, lockable, and within sight of, and not to exceed 50 feet from the baler, per the National Electrical Code. Additional local codes may apply.

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

3 INSTALLATION

START-UP INSTRUCTIONS

WARNING: BEFORE START-UP, REPLACE THE 3/4" PLUG ON THE TOP OF 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 WHILE PERFORMING THE FOLLOWING PROCEDURES.

WARNING: PARTS OF THE PLATEN WILL EXTEND ABOVE THE TOP OF THE BALER WHEN THE 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 the following:
 - a. Close bale chamber door and feed gate.
 - b. Turn disconnect switch to the ON position.
 - c. Have someone turn ON the keyswitch and depress the AUTO-CYCLE button for one second and then immediately depress the EMERGENCY STOP button. Check motor rotation by watching the hub coupling through the slot in the pump-to-motor adapter. There is a rotation decal on the power unit showing correct rotation. In the event that this decal is missing, look at the hub coupling from the motor end. Rotation should be clockwise.

CAUTION: If the pump rotates backward, stop immediately!
The pump will be damaged if it is operated in reverse even for short periods. Reversing any two incoming power lines will change the motor/pump rotation.
2. 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 maintenance chart for hydraulic oil recommendations). The hydraulic system pressure has been factory set.
3. The baler is equipped with an electrical interlock which prevents the use of the AUTOCYCLE and MANUAL DOWN functions 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.
4. **MAKE SURE THAT THE OPERATORS ARE TRAINED IN THE PROPER USE OF THIS EQUIPMENT.**