



# Galaxy 2R<sup>®</sup> Baler

2R-150-48-W-D SERIES

OPERATION, SERVICE, AND INSTALLATION

ISSUED MAY 2023

CUSTOMER NAME: \_\_\_\_\_

SERIAL NUMBER: \_\_\_\_\_

**COMPACTION & RECYCLING SOLUTIONS**

**0083-2R-150-48-W-0523**



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Environmental Solutions Group  
201 W. Main Street, Ste 300  
Chattanooga, TN 37408

Marathon Customer Care: 1.800.633.8974



# WARNING

**IF INCORRECTLY USED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY. THOSE WHO USE AND MAINTAIN THE EQUIPMENT SHOULD BE TRAINED IN ITS PROPER USE, WARNED OF ITS DANGERS, AND SHOULD READ AND FULLY UNDERSTAND THIS ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE EQUIPMENT. KEEP THIS MANUAL FOR FUTURE REFERENCE**

## IMPORTANT SAFETY NOTICE

Proper service and repair are important to the safe, reliable operation of the Marathon Equipment Company products. Service procedures recommended by Marathon Equipment Company are described in this Operation, Service, and Installation Manual and are effective for performing service operations. Some of these service operations may require the use of tools or blocking devices specially designed for the purpose. Special tools should be used when and as recommended. It is important to note that some warnings against the use of specific methods that can damage the product or render it unsafe are stated in the service manual. It is also important to understand these warnings are not exhaustive. Marathon Equipment Company could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each method. Consequently, Marathon Equipment Company has not undertaken any such broad evaluations. Accordingly, anyone who uses service procedures or tools which are not recommended by Marathon Equipment Company must first satisfy himself thoroughly that neither his safety nor the product safety will be jeopardized by the method he selects.

# Galaxy 2R<sup>®</sup> Baler

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**2R-150-48-W-D SERIES**

**OPERATION, SERVICE, AND INSTALLATION**

**ISSUED MAY 2023**

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# **SECTION 1**

# **GENERAL INFORMATION**

# Galaxy 2R<sup>®</sup> Baler

## General Information

### INTRODUCTION

Thank you for purchasing a Marathon<sup>®</sup> Galaxy2R<sup>®</sup> Two-Ram Baler!

This product is designed to give you reliable service and superior performance for years to come. The purpose of this manual is to provide the owner and/or operators with the necessary information to properly install, operate, and maintain the machine. 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 of the machine should read and thoroughly understand the instructions in this manual and follow ALL warnings.

Employers involved in the operation, maintenance, and installation of the machine should also read and understand the most current version of the following 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 this standard may be obtained from:

**ENVIRONMENTAL INDUSTRIES ASSOCIATION  
4301 CONNECTICUT AVENUE, NW SUITE 300  
WASHINGTON, D.C. 20008**

### OSHA Standards - 29 CFR

Refer to:

- Part 1910.147: "The Control of Hazardous Energy (Lock-Out/Tag-Out)"
- Part 1910.212: "Machinery and Machine Guarding: General Requirements for all Machines"
- All other applicable OSHA Standards

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**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 equipment 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, AL 35592-1798  
Attn: Field Service Department  
877-258-1105**

### PREFACE

The following sections are a guide for maintenance and service of the Marathon Equipment Company unit. The sections cover preventive maintenance, adjustment, and troubleshooting hints. Before performing maintenance, check the work area carefully to find all the hazards present and make sure all necessary safeguards or safety devices are used to protect all persons and equipment involved. In order to diagnose a problem quickly and effectively, a service person must be thoroughly familiar with the machine. This Operation, Service, and Installation Manual explains the system and its major components. Diagrams and schematics of the electrical and hydraulic systems are in the Service Section.



### IMPORTANT!

- Before starting any maintenance, study this section of the manual.
- Read all hazard warnings and decals on the unit.
- Clear the area of other persons before performing any maintenance.
- Know and understand safe use of all controls.
- It is your responsibility to understand and follow manufacturer's instructions on equipment maintenance and care.

### HAZARD SYMBOLS AND DEFINITIONS

Listed below are the definitions for the various levels of hazards. It is important that the operators of this equipment and people who service units read and understand all warnings as they relate to this equipment operation.

- **DANGER** – indicates an imminently hazardous situation, which **WILL** result in **DEATH** or **SERIOUS INJURY** if you don't follow proper instructions.
- **WARNING** – indicates an imminently hazardous situation, which **COULD** result in **DEATH OR SERIOUS INJURY** if you don't follow proper instructions.
- **CAUTION** – indicates an imminently hazardous situation, which will result in **MINOR** to **MODERATE INJURY** if you don't follow proper instructions.
- **NOTICE** – means unit or other property may be damaged if these instructions are not followed.

You must read and obey all warnings in any manual produced by Marathon Equipment Company to support your unit.

### LOCK-OUT & TAG-OUT INSTRUCTIONS

#### **DANGER**



Before entering any part of the compactor, be sure that all sources of energy have been shut off, all potential hazards have been eliminated, and the compactor is locked-out and tagged-out in accordance with OSHA and ANSI requirements.

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. Notify all affected employees that servicing or maintenance is required on the baler and that the baler must be shut down and locked out to perform the servicing or maintenance.
2. Perform a hazard assessment;
  - a. The authorized employee shall refer to the company procedure to identify the type and magnitude of the energy that the baler utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.
3. Wear proper personal protective equipment.
4. If baler is operating, it must be shut down by the normal stopping procedure. If the ram is pressing against a load, move the ram rearward before shutting the baler down.
5. De-activate the energy isolating device(s) so that baler is isolated from the energy source(s).
  - a. Shut down all power sources.
  - b. Move the main disconnect lever to the OFF position.
6. Lockout the energy isolating device(s) with assigned individual lock(s).
  - a. Padlock the disconnect lever with a keyed padlock and take the key with you.
  - b. 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 \_\_\_\_\_.”
  - c. Place operating components in such a position so as not to be subject to possible free fall and/or installation of additional blocking devices to prevent this potential for any raised or elevated component.
7. 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 each coil end of the directional control valve.
8. After locking and tagging the baler, ensure that the baler is disconnected from the energy source by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate. 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.

### LOCK-OUT & TAG-OUT INSTRUCTIONS (CONTINUED)

9. Before entering baler perform hazard assessment for confined space requirements (hazardous fumes, dust or other toxic material).
10. The baler is now locked out.

### RESTORING SERVICE

When the servicing or maintenance is completed and the stationary baler is ready to return to normal operating condition, the following steps shall be taken:

1. Check the baler and the immediate area around the baler to ensure that nonessential items have been removed and that the baler components, guards and covers are operationally intact.
2. Check the work area to ensure that all employees have been safely positioned or removed from any hazardous area.
3. Verify that the controls are in neutral.
4. Remove the lockout devices and re-energize the baler.

### NOTICE

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The removal of some forms of blocking may require re-energizing of the baler before safe removal.

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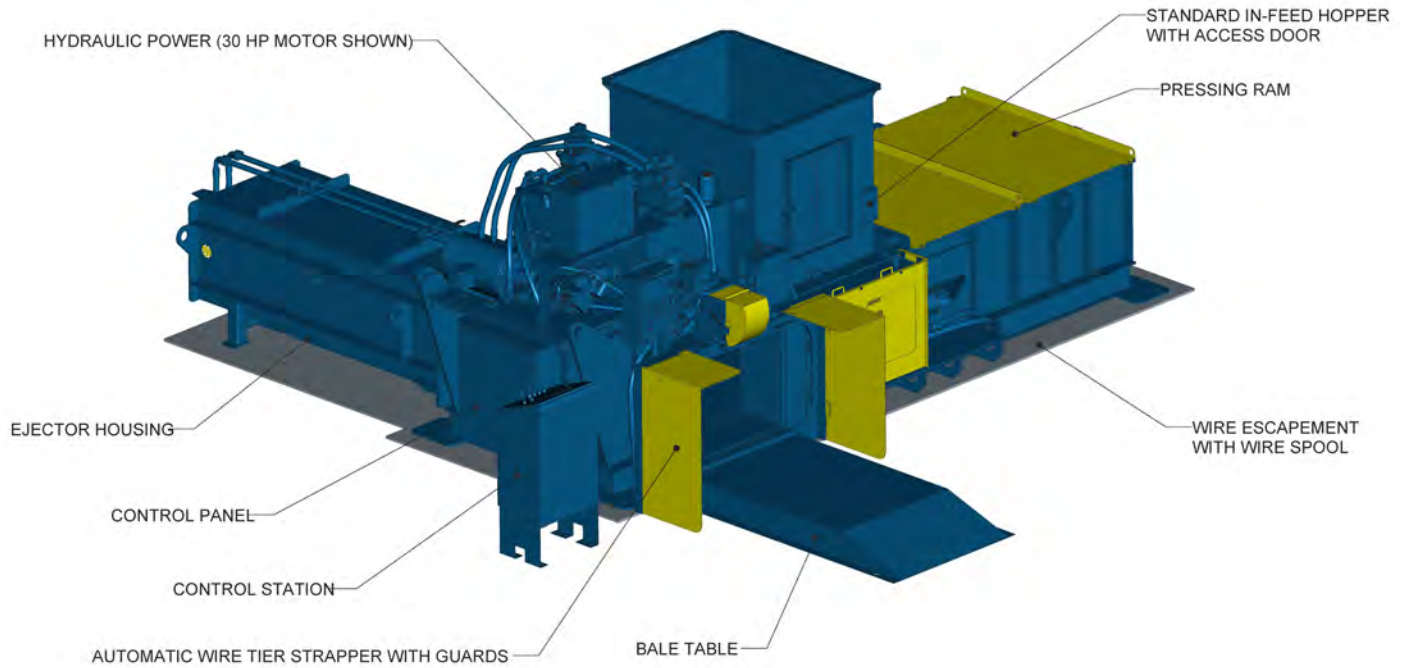
5. Notify affected employees that the servicing or maintenance is completed and the baler is ready for use.
6. Reassess area to determine all hazards are protected.

# Galaxy 2R<sup>®</sup> Baler

## General Information

### COMPONENTS

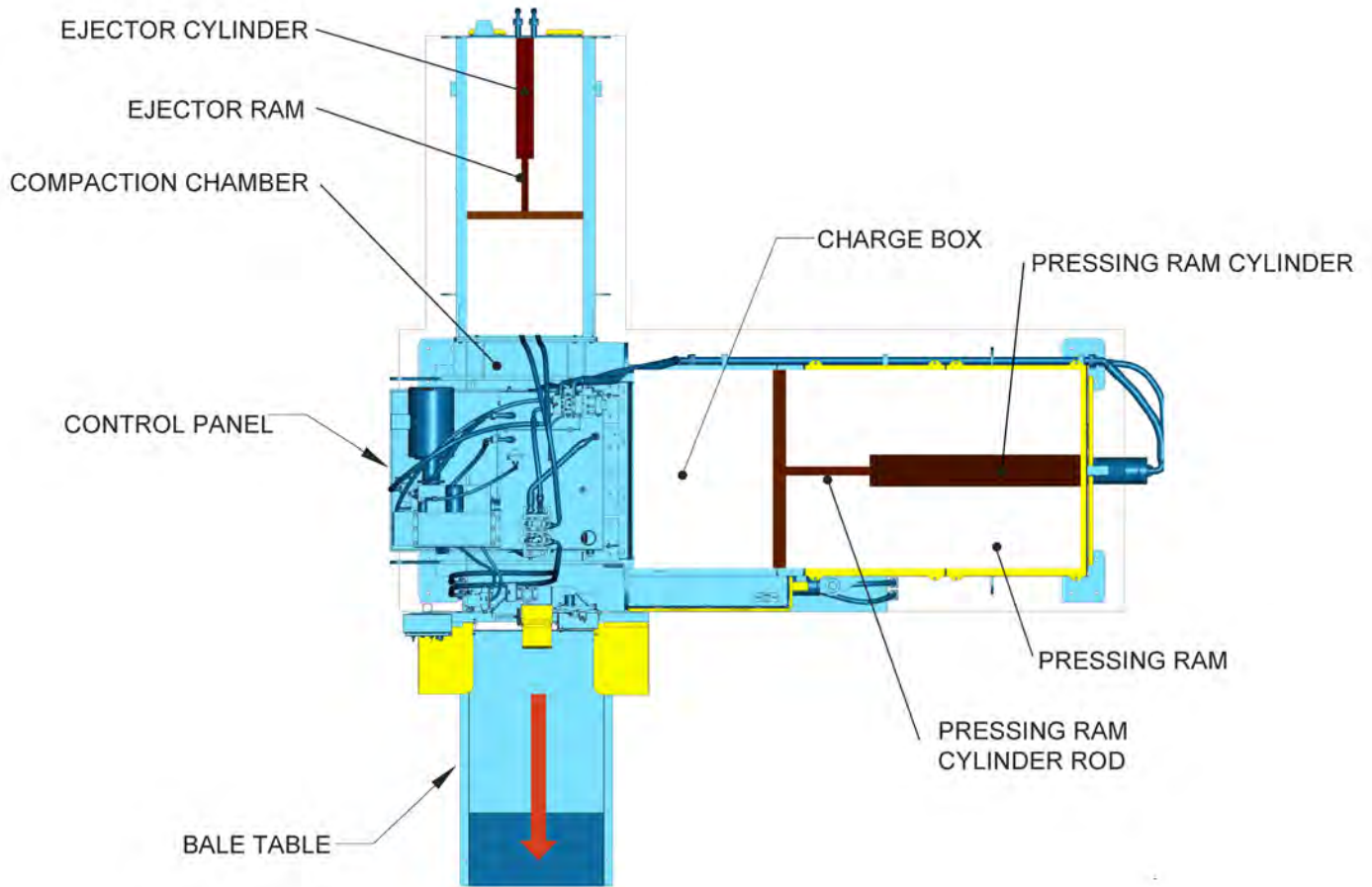
Marathon<sup>®</sup> Two Ram Balers are comprised of these major components. Become familiar with the locations of these components on your unit.



# Galaxy 2R<sup>®</sup> Baler

## General Information

### COMPONENTS (CONTINUED)



# Galaxy 2R<sup>®</sup> Baler

## General Information

### SERVICE/PARTS ASSISTANCE

Assistance in troubleshooting, repair and service is available by contacting the authorized Marathon Equipment Company Dealer in your area. Parts are available at your Marathon Equipment Company Dealer or through Marathon Equipment Company. Marathon Equipment Company personnel are trained to give prompt, professional assistance.

ALWAYS give the machine serial number in all correspondence relating to the equipment.

### GREASE LUBRICANT RECOMMENDATION

Use a grease gun. Before engaging grease gun, clean the fitting. Always pump enough grease to purge the joint of contaminated grease and wipe off the excess grease. Lubricate a unit as recommended on the lubrication decal on the unit and in the Operation, Service, and Installation Manual. Use NLGI 000 grease.

### RECOMMENDED OILS

The following oils by brand name are approved for use in the hydraulic system on this equipment and considered to be all temperature hydraulic fluids.

- Union-UNAX-46, UNAX-AW46
- Gulf-Harmony 47, Harmony 48-AW
- Exxon-Teresstic 46, NUTO 46
- Texaco-Rando 46
- Chevron-AW 46
- Shell-Turbo 46, Tellus 46
- Citgo-Pacemaker 46, Tellus-AW46
- Conoco-Super Hydraulic Oil 46

Automatic Transmission Fluid (for 15 HP and smaller units only)

- Quaker State-Dextron II (ATF)

Cold Weather Fluid

- Amoco-Rycon MV

### GUARDS AND ACCESS COVERS

Before operating or performing maintenance, check the work area carefully to find all the hazards present and make sure all guards and safety devices are in place to protect all persons and equipment involved.

#### **WARNING**

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DO NOT operate without all guards and access covers in place.

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### WARNING DECALS ON THE UNIT

#### **WARNING**

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DO NOT operate without all guards and access covers in place.

---

Make sure you can read all warning and instruction decals. Clean decals if you cannot read the words. See below for directions on cleaning decals. Replace any decal that is damaged, missing, or is not readable. When you replace a part that has a decal, make sure a new decal is installed on the new part. See the Operation, Service, and Installation Manual for replacement decals. Order replacement decals from Marathon Equipment Company or an authorized dealer.

### DECAL CARE

It is important that the decals are properly cleaned to make sure that they are readable and do not come off the unit. Use the following steps to clean the decals.

#### A. General Instructions

Following these instructions helps the decals adhere longer.

- Wash the decals with a blend of mild car wash detergent and clean water
- Rinse with clean water
- Let the unit air-dry or dry with a micro-fiber cloth
- Do not allow fuels to stay in contact with the decal for an extended period of time. Remove the fuel contamination as quickly as possible
- Do not use carnauba-based wax over the decals
- Do not use a mechanical brush while washing the decals.

#### B. Pressure Washer Precautions

Pressure washing can cause damage to decals. It can cause the edges of the decals to lift and peel the decal away from the unit. Over time, the decal can fade, crack or chip away.

Use pressure washing only when other cleaning methods are not effective. If you use a pressure washer, use the following precautions.

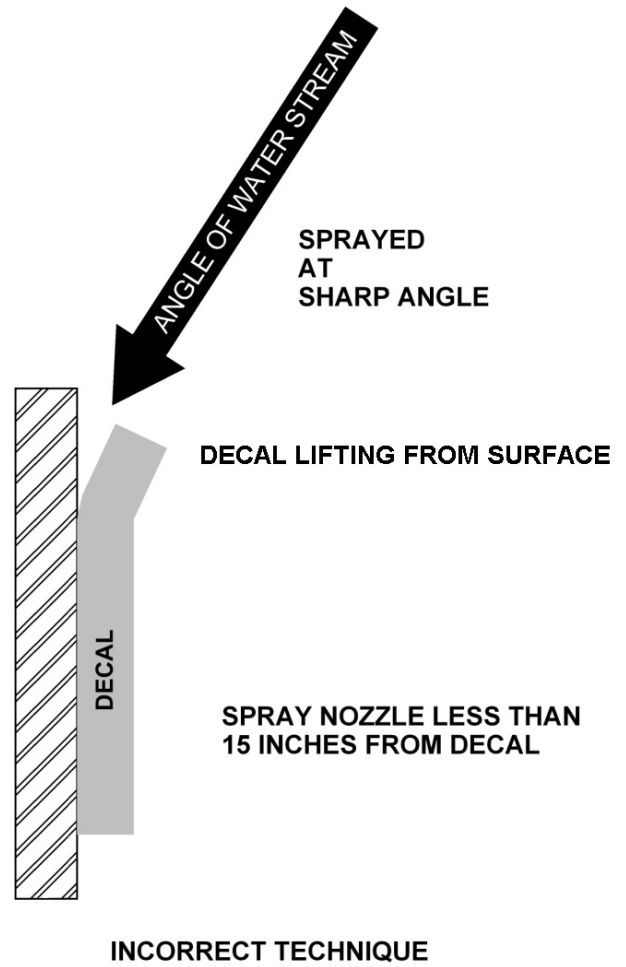
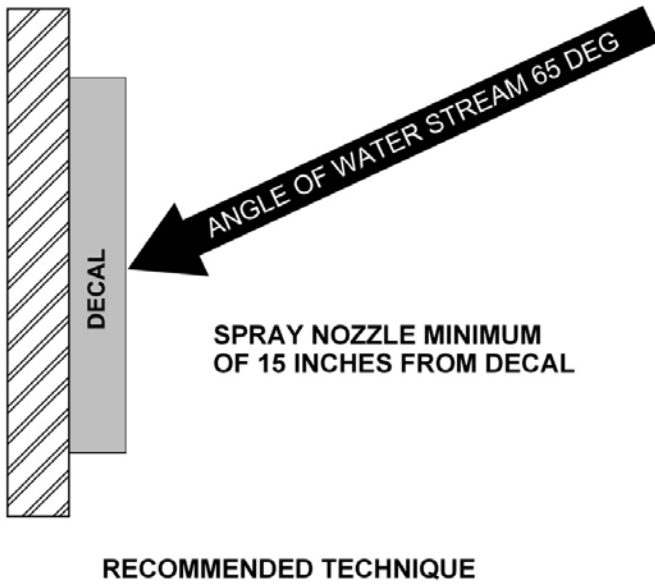
- Spray nozzle opening: 40° wide pattern
- Spray angle: 65° from unit's body
- Distance of nozzle to decal: 15" minimum
- Water pressure: less than or equal to 800 psi
- Length of time: not more than 30 sec.
- Do not use sharp angles to clean the decals – this can lift the decals from the unit.
- NEVER use a "turbo pressure nozzle".

#### C. Remove Difficult Debris

When normal cleaning procedures do not remove difficult debris from the decals, try the following:

- Spot clean the decal with Isopropyl Alcohol and a micro-fiber cloth (rag)
- If these methods do not work on a problem area, call a Marathon Equipment Company Dealer or Marathon Equipment Company Customer Support.

## DECAL CARE (CONTINUED)



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# **SECTION 2**

# **INSTALLATION**

**CONTACT INFORMATION**



Technical Service and Warranty:

**877-258-1105**

Parts:

**800-528-5308**

For parts visit our eCommerce Marketplace at [www.mecomerchant.com](http://www.mecomerchant.com).

If you do not have a user name and password, contact our Parts Department and they will assist with your registration.

Normal Business Hours:

Monday-Friday                      8:00am - 5:00pm

(Central Standard Time)

### GENERAL REQUIREMENTS

This section of the manual covers the assembly and installation of any two-ram baler. The following pages cover general installation, plumbing installation, and electrical installation.

#### CAUTION

Review this manual before beginning 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 installation and as a completed system. This baler should be installed in accordance with the most current version of ANSI standard Z245.5 at the time of manufacture.

#### NOTICE

Operating instructions in the first section of this manual are not intended as a substitute for training and experience in the proper use and safety procedures in operating this equipment.

#### NOTICE

This baler is designed for indoor use ONLY.

#### NOTICE

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

#### A. Concrete Pad or Floor

The baler foundation should be a minimum of 6" thick, 3000 psi steel reinforced concrete. It is recommended that the baler be positioned on a 3/4" steel foundation plate to prevent possible floor damage. Marathon is not responsible for floor damage if a foundation plate is not used. It is recommended that the pad or floor be flush with the surrounding area.

#### B. Anchoring

If using the steel foundation plate, it should be secured to your pad or floor.

1. Allow enough clearance for the panel box door to swing completely open and it must comply with state and local building codes.
2. Allow enough space in front of the bale exit for a bale-handling vehicle.
3. Allow enough space for installation and safe operation of the auto-tie mechanism.
4. Allow enough space around the baler for any maintenance or service (including cylinder removal and liner replacement).

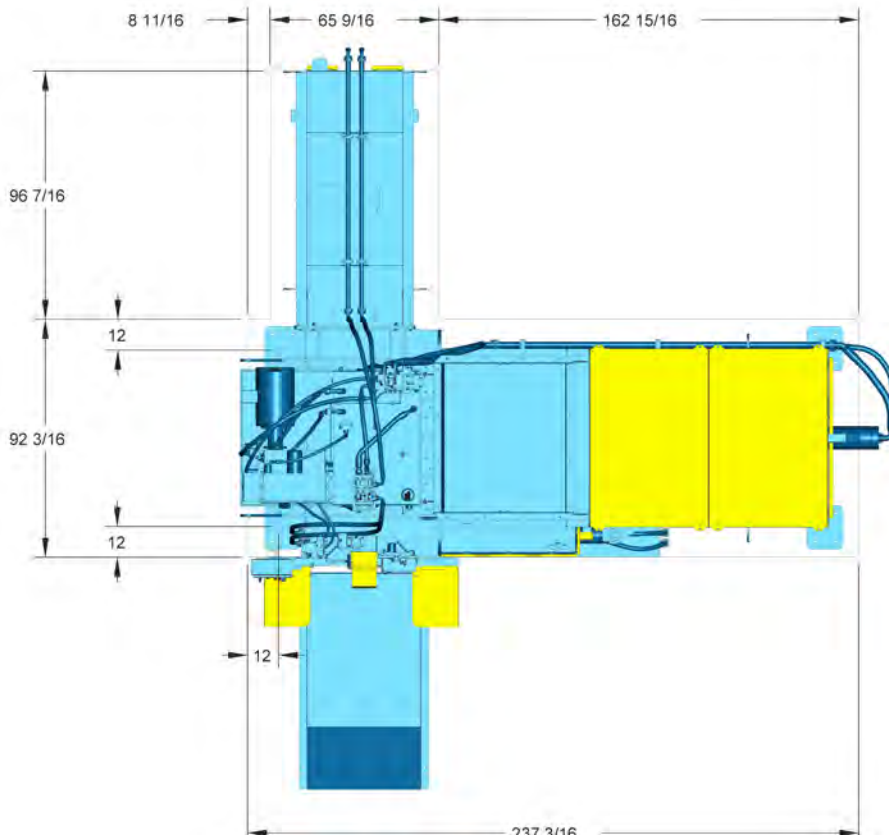
#### C. Decals

Installation of the baler is not complete until an inspection of warning decals has been made. All warning decals must be in place prior to operating the baler. Decals should be clearly visible, legible, securely applied, and in the proper location. Notify your distributor or Marathon Equipment Company if any warning decals are missing or become damaged and need replacing.

# Galaxy 2R<sup>®</sup> Baler Installation

## FOUNDATION PLATE DIMENSIONS

**Baler Foundation Requirements:** A minimum 6" steel reinforced 3000 psi concrete slab with a minimum 3/4" steel foundation plate per foundation detail. The 3/4" steel foundation plate is recommended to prevent possible floor damage to the concrete slab. Marathon Equipment Company is not responsible for any floor damage if the recommended 3/4" minimum steel foundation plate is not used.



FOUNDATION PLATE FOR MAIN BODY IS  
3/4" THICK X 92 3/16" WIDE X 237 3/16" LONG

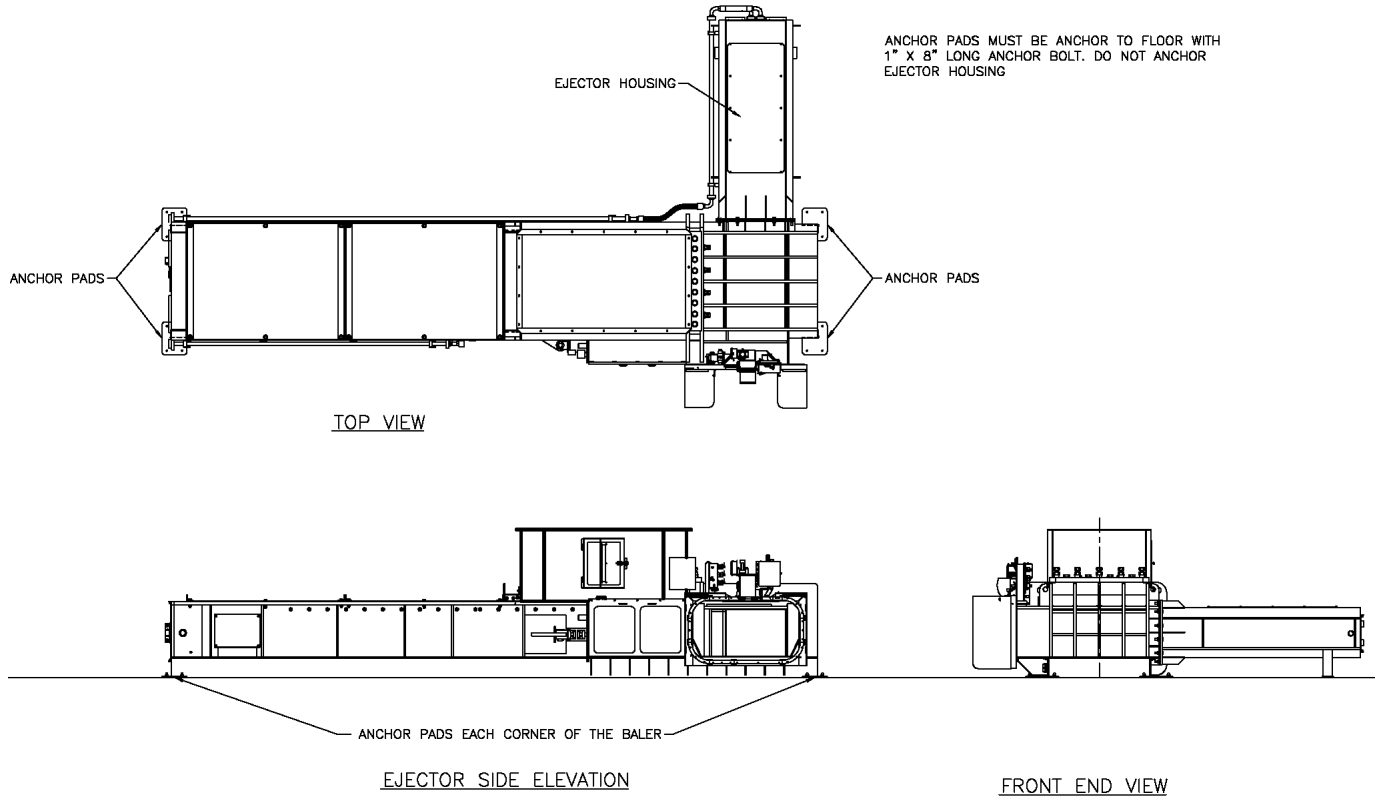
FOUNDATION PLATE FOR EJECTOR IS  
3/4" THICK X 65 9/16" WIDE X 96 7/16" LONG

THIS FOUNDATION PLATE WILL USE 16 ANCHORS.

# Galaxy 2R<sup>®</sup> Baler

## Installation

### ANCHOR LOCATION FOR STANDARD BALER



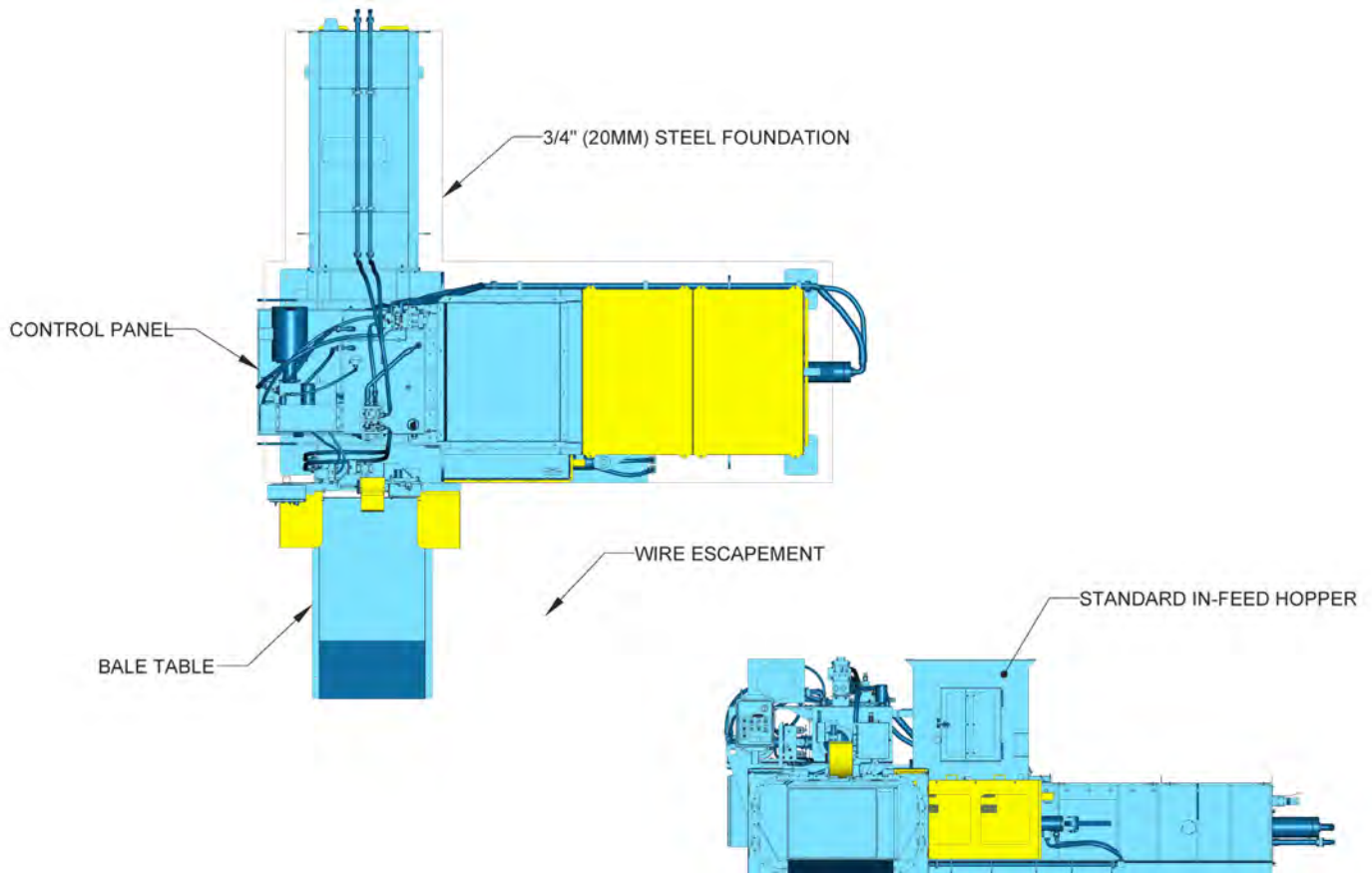
# Galaxy 2R<sup>®</sup> Baler Installation

## TYPICAL 2R LAYOUT

Typical Left Hand shown. Right Hand would be opposite.

### NOTICE

Shown with the 2x100 HP Power Unit. Refer to the Power Unit section for the actual dimensions of optional power units.



# Galaxy 2R<sup>®</sup> Baler

## Installation

### MACHINE ASSEMBLY

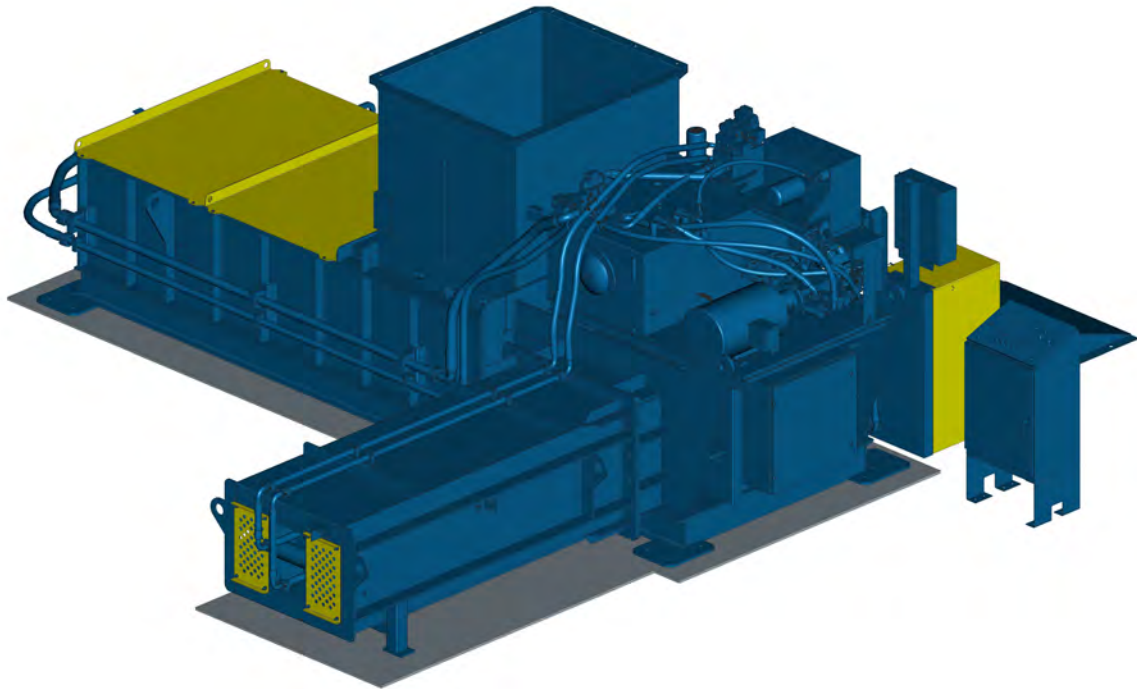
These are instructions for connecting ejector ram to main body:

1. Using a crane, fork lift, or machine roller, position the Main Ram body into the desired location (do not drag the body into place).
2. Assemble the Ejector Ram body to the Main Ram body. Slide the Ejector Ram into the Main Ram body until the facing surface of the Ejector Body contacts the Main Ram body facing surface. Bolt the Ejector Ram body to the Main Ram body with the provided bolts and nuts. A reference chart and diagram is shown below for bolt size and quantity according to the machine model.

MODEL	BOLT SIZE	QTY.	PART NO. (BOLT)	PART NO. (NUT)
150	3/4 x 2 3/4	12	052075	052170

### NOTICE

For Electrical and Hydraulic connections, see **Electrical and Hydraulic Installation** [23](#).



3. Level the machine. Use shims under the main ram body and the ejector ram body to compensate for any unevenness in the floor or pad.

# Galaxy 2R<sup>®</sup> Baler

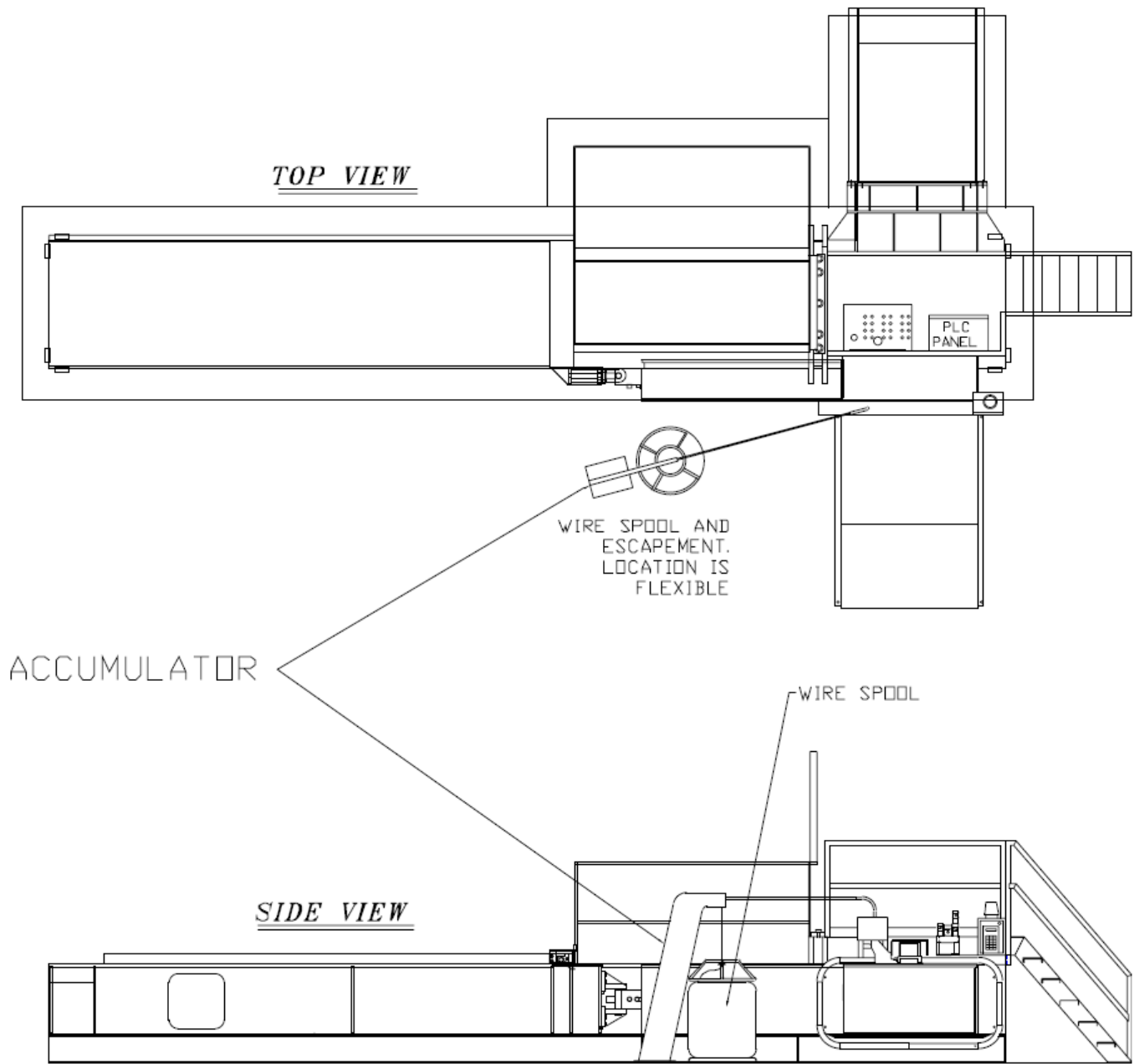
## Installation

### MACHINE ASSEMBLY (CONTINUED)

4. Set the accumulator for the wire tier in an out-of-way, but convenient location. Allow enough space for handling equipment for the purpose of changing wire spools. Anchor the accumulator to the floor or pad.

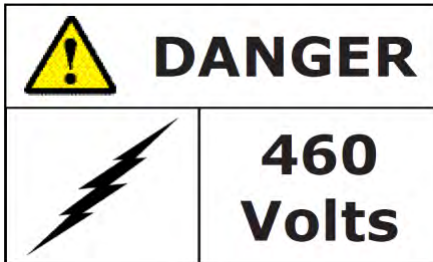
#### NOTICE

The typical layout is shown below. Your installation may differ. For more information on the wire tie system, see the Wire Tie manual.



### ELECTRICAL AND HYDRAULIC INSTALLATION

The motor control panel contains high voltage components. Only authorized service personnel should be allowed inside. See **Lock-Out/Tag-Out Instructions**.



#### **⚠ DANGER**

Before making any electrical connection, be sure that the disconnect switch has been locked-out and tagged-out.

#### **⚠ CAUTION**

All equipment should be grounded per National Electric Code.

1. 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 proper voltage, make necessary corrections before proceeding.
2. A lockable disconnect switch is provided in the baler motor control panel and is sized in accordance with the baler. Three-phase power should be connected to the top of this disconnect switch. Be careful not to let the incoming wires touch each other. A properly sized equipment ground should be connected to the enclosure ground lug.
3. Reconnect all sealrite connections on the baler and power unit. Also reconnect all electrical wires in sealrite to terminals indicated by the wire numbers on wires. If the wire numbers are missing, or are not readable, refer to the electrical schematic shipped with the baler.
4. If the baler is supplied with a conveyor, it can be supplied with a wiring disconnect in the baler panel box. When the conveyor is anchored into place, connect sealrite from the conveyor to the baler panel box. Next, connect the wires per the electrical schematic shipped with the baler.
5. Connect all hydraulic hoses. Refer to the **Hydraulic Schematic to ensure proper connections** <sup>86</sup>.
  - a. Install 2" Main Ram hoses as shown.
  - b. Install 1-1/4" Ejector Ram hoses. The "A" port hose (from the power unit) connects to the base end port of the Ejector cylinder. The "B" port hose (from the power unit) connects to the rod end port of the Ejector cylinder. Connect hoses between hard piping on the Ejector Ram body and the Main Ram body to complete the Ejector Ram plumbing. (Top to top, bottom to bottom.)
  - a. Install Wire Tier hoses. A 3/4" hose from the pressure port on the pump connects to tubing to the pressure port on the Wire Tier manifold. A 3/4" hose from the reservoir connects to tubing from the return port of the Wire Tier manifold. A 3/8" hose from the reservoir connects to 3/8" tubing from the drain on the Wire Tier.
6. Fill the reservoir with hydraulic oil. See **Recommended Oils** <sup>101</sup> in General Information. Fill until oil is 3/4 up in the sight gauge. After start-up, it may be necessary to add more oil to the reservoir. Maintain oil level to 3/4 in the sight gauge with the main ram retracted.

### INSTALLATION START-UP

#### NOTICE

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Make sure that operators are trained in proper use of this equipment.

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1. Check to ensure that all electrical and hydraulic connections have been made.
2. Turn the disconnect switch to the ON position.
3. Check the rotation of the motor. This will require 2 people.
  - a. Remove the cover on the pump.
  - b. Insert the CONTROLS key into the key switch and turn it to the ON position.
  - c. Press the POWER ON switch.
  - d. Press and hold the MAIN MOTOR START switch until the motor starts (20 seconds).
  - e. Allow the motor to run for 1 second and press the STOP button.
  - f. Looking at the HUB COUPLING from the motor end, the rotation should be clockwise. If the motor turns in the wrong direction, turn the main disconnect switch to the OFF position. Lock-Out/Tag-Out power and reverse any two incoming power wires in the motor control panel.
  - g. Replace the cover on the pump.
4. Restart the machine.
5. Manually operate the main ram and the ejector ram in the forward and reverse directions several times to fill the cylinders and hydraulic lines with oil.
6. Check the function of all interlock switches and stop switches. Check the reflectors and operation of photocells.

# **SECTION 3**

# **OPERATION**

**CONTACT INFORMATION**



Technical Service and Warranty:

**877-258-1105**

Parts:

**800-528-5308**

For parts visit our eCommerce Marketplace at [www.mecomerchant.com](http://www.mecomerchant.com).

If you do not have a user name and password, contact our Parts Department and they will assist with your registration.

Normal Business Hours:

Monday-Friday                      8:00am - 5:00pm

(Central Standard Time)

### PRE-OPERATION INSTRUCTIONS

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. Turn off and remove the key after use.

#### NOTICE

Federal regulation prohibits the use of this equipment by anyone under 18 years of age.

#### WARNING

Do not operate baler until operating instructions are thoroughly understood. Wear safety glasses and gloves when operating this equipment.

#### WARNING

Stay clear of all internal baler parts and all moving external baler parts when in operation. Failure to do so could result in serious personal injury or death!

#### WARNING

Never enter any part of baler unless the disconnect switch has been turned off, padlocked, and all stored energy sources have been removed. See **Lock-Out/Tag-Out Instructions**.

#### WARNING

Before starting baler, be sure no one is inside. Be certain that everyone is clear of all operation points and pinch point areas before starting.

#### WARNING

This baler is controlled by photocells and will start automatically when photocells detect ANY OBJECTS in the charge box.

#### WARNING

The compression ram in this baler travels at a very fast speed. Stand clear of the baler when in operation.

#### WARNING

ONLY AUTHORIZED PERSONNEL SHOULD BE ALLOWED INSIDE PANEL BOX. The panel box contains high voltage components. See **Lock-Out/Tag-Out Instructions**.

#### CAUTION

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.

# Galaxy 2R<sup>®</sup> Baler

## Operation

### **MATERIALS LIST - WHAT CAN THE GALAXY 2-RAM BALE**

The following is a representative guideline for materials that can be baled in the Galaxy 2-Ram baler. Other materials of comparable size and composition may also be baled. All materials should be fed in a manner consistent with the shearing capabilities of the baler.

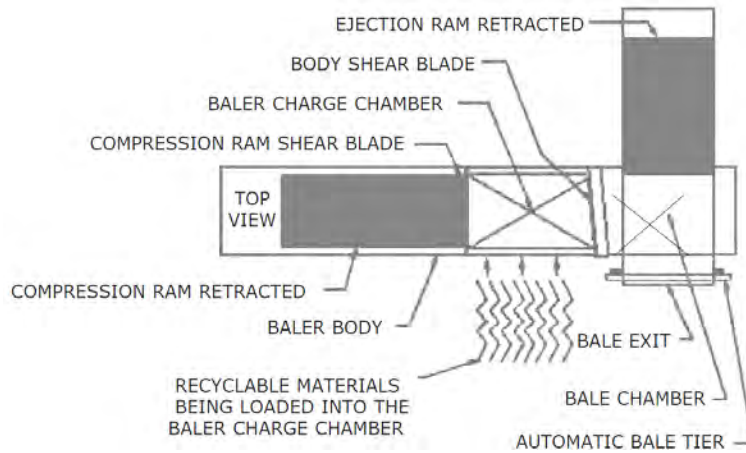
- OCC - Old Corrugated Cardboard
- ONP - Old Newspaper - disperse material evenly and not in stacks or clumps.
- High-Grade/Misc. Paper - disperse material evenly and not in stacks or clumps.
- UBC - Used Beverage Containers (aluminum cans)
- Steel Cans - Food cans and other light gauge containers, 5 gallons or less.
- PET Containers
- HDPE Containers
- Aluminum Extrusions - Aluminum shapes with 0.125" thickness or less, 1.3" maximum cross sectional area.
- Aluminum Pipe or Tubing - 0.125" maximum wall thickness, 3" maximum diameter.
- Radiators - Automotive radiators or equivalent size heat exchangers.
- Aluminum Siding
- Aluminum Sheet Scrap - 0.125" max. thickness for 6" wide or less - otherwise 0.063" max. thickness.
- Aluminum/Copper Cable - 1" diameter or less
- Copper Sheet Scrap - 0.125" max. thickness for 6" wide or less - otherwise 0.063" max. thickness.

# Galaxy 2R<sup>®</sup> Baler

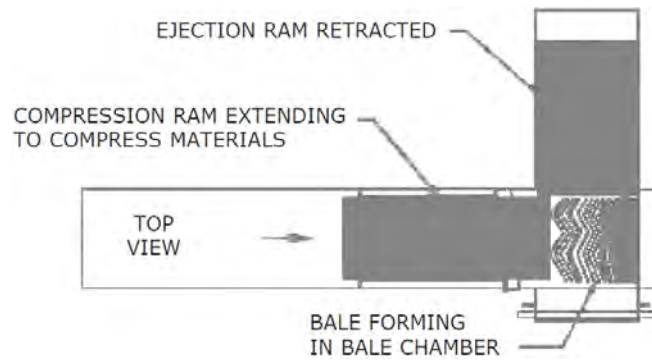
## Operation

### THE BALING PROCESS

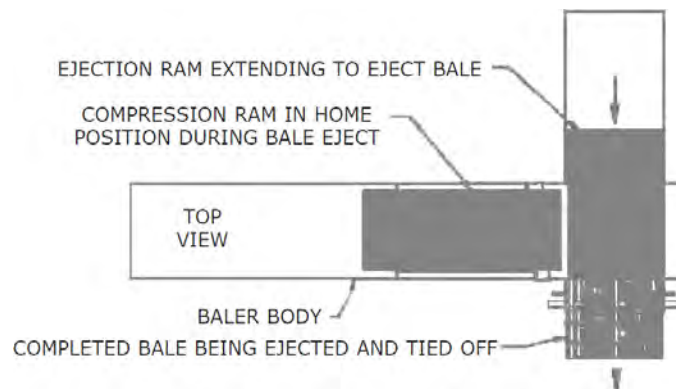
#### Loading



#### Compressing



#### Ejecting and Tying



### CONTROL PANEL DIAGRAM



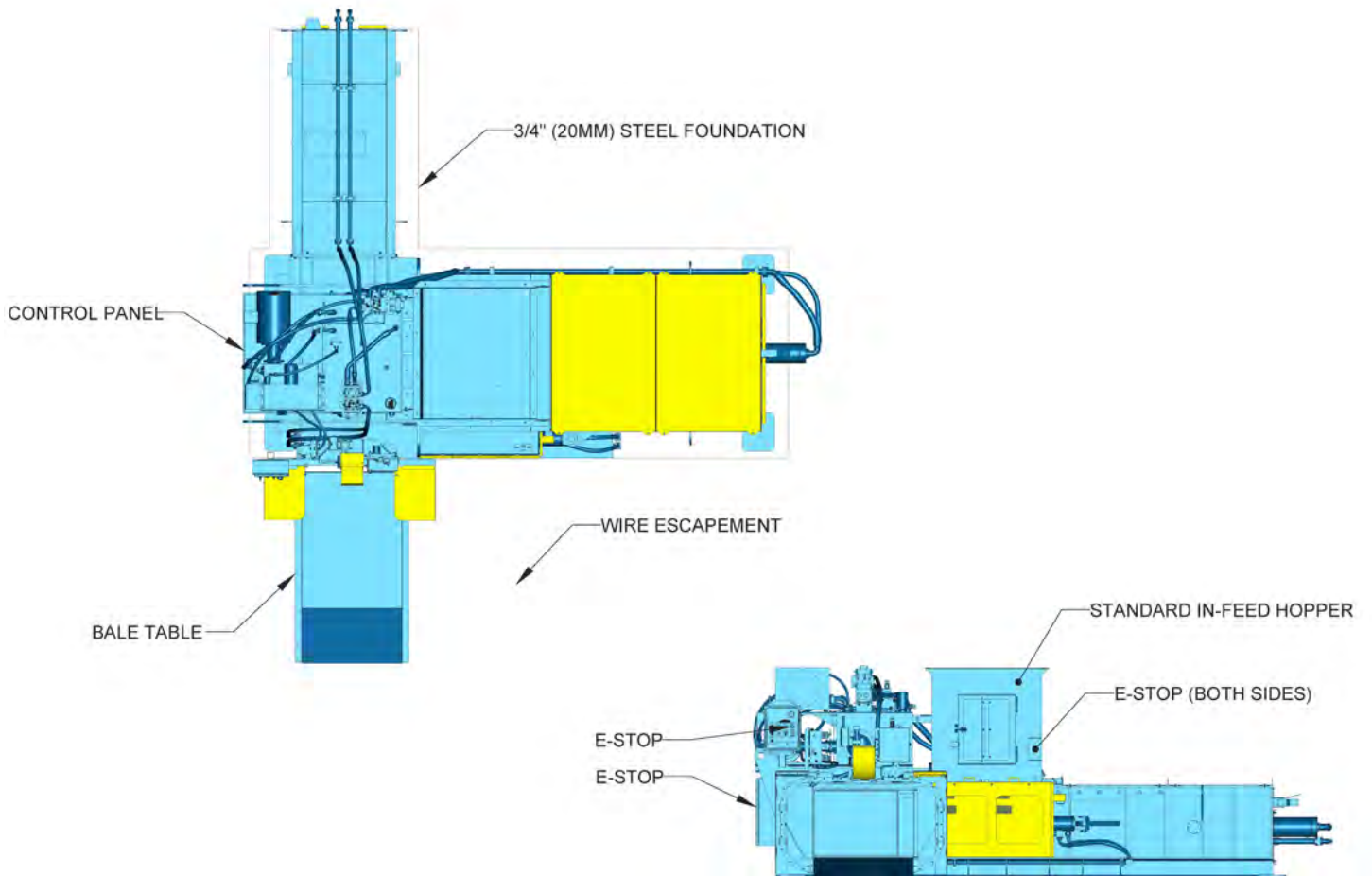
1. **Touch Screen** - You must sign in with a username and a password. Most of the baler's operations can be controlled from here. See **Touch Screen Controls - Security Screen** [35](#).
2. **Joysticks** - Used to manually control both the main ram and the ejection ram. The touch screen controls must be set to "Manual Mode" for these to function.
3. **Controls ON/OFF** - This key switch turns power to the programmable controller either ON or OFF. The switch must be in the "ON" position for all other controls to function.
4. **Power On** - Push and hold this button for 20 seconds to turn the power on to the operator controls.
5. **Strap** - Push this button to activate the tier and put the preset number of Straps on the bale as it is ejected onto the bale table.
6. **Emergency Stop** - Push this button to stop the machine in the event of an emergency or any time the machine needs to be stopped.

# Galaxy 2R<sup>®</sup> Baler

## Operation

### EMERGENCY STOP CONTROL LOCATION

Marathon<sup>®</sup> Two Ram Balers have four emergency stop buttons mounted at various locations on the machine. Be thoroughly familiar with the location of each button. If a conveyor system is used, the conveyor should have an e-stop button mounted on it.



### STANDARD OPERATION - BALER START UP

#### **WARNING**

Do not operate baler until operating instructions are thoroughly understood.



**IN CASE OF EMERGENCY: Push 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**.

Prior to start-up of the baler each day, check the items found in the “DAILY” list in **Periodic Maintenance**.

Standard operation includes baler start-up for Manual and Automatic Operation.

#### **Baler Start Up**

1. Check work area and make sure all personnel are clear of baler.
2. Turn the electrical disconnect to the “ON” position.
3. Insert the CONTROLS key and rotate switch to the “ON” position.
4. Make sure all “emergency stop buttons” are pulled out.
5. Touch the “SAFETY RELAY RESET” button. (Allow for a brief delay for the control processor to initialize).
6. Touch “Ack All” (Acknowledge All) and Reset on the touch screen to clear the Alarm screen. The screen will change to the Main Menu.
7. Touch the “MOTOR START” button and continue to touch for 20 seconds.
  - a. A start-up alarm sounds and the beacon flashes for 5 seconds.
  - b. The alarm silences in five seconds and the beacon continues to flash for 15 more seconds. The beacon continues to flash allowing the operator time to be sure no one is inside the baler or on the feed conveyor at any time.
  - c. The main motor starts after a 20-second delay. At that time, remove your finger from “Start” button.

This completes the Baler Start Up sequence.

See **Touch Screen Controls**  34.

## AUTOMATIC AND MANUAL OPERATION MODES

### A. Automatic Operation (Auto Mode)

1. Start the baler per start-up procedures on the previous page.
2. From the touch screen's Main Menu, press the MANUAL MODE button and the screen advances to the "Manual Menu".
3. Move the MAIN RAM joystick to RETRACT until the ram is fully retracted.
4. On the touch screen, press the MAIN MENU button.
5. Press the AUTO MENU button and the screen advances to the "Auto Menu" screen".
6. Press the AUTO MODE START button and the baler automatically cycles when the designated photocell is blocked by an incoming product.
7. Press the CONVEYOR AUTO button if you want the baler to control the flow of material. You may control the flow of material manually by toggling the CONVEYOR ON / CONVEYOR OFF" button as required. (Optional controls)
8. Press the MANUAL MODE, MAIN MENU, or CYCLE STOP button to end Auto Mode. To resume Auto Mode, start over at step 1 of this procedure.

### B. Manual Operation (Manual Mode)

1. Start the baler per the start-up procedures on the previous page.
2. From the touch screen's Main Menu, press the MANUAL MODE button and the screen advances to the "Manual Menu".
3. Move the MAIN RAM joystick to COMPRESS or RETRACT for manual ram operation.

## NOTICE

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The manual controls will lock if not moved in 60 seconds. If this happens, press the POWER ON button to reset the timer.

---

See **Touch Screen Controls**  34.

## **TOUCH SCREEN CONTROLS**

### TOUCH SCREEN CONTROLS - SECURITY SCREEN



**Login** - Press after entering the password to log in to the interface.

**Go To Main Menu** - Press to go to the Main Menu (**see the next page**)  

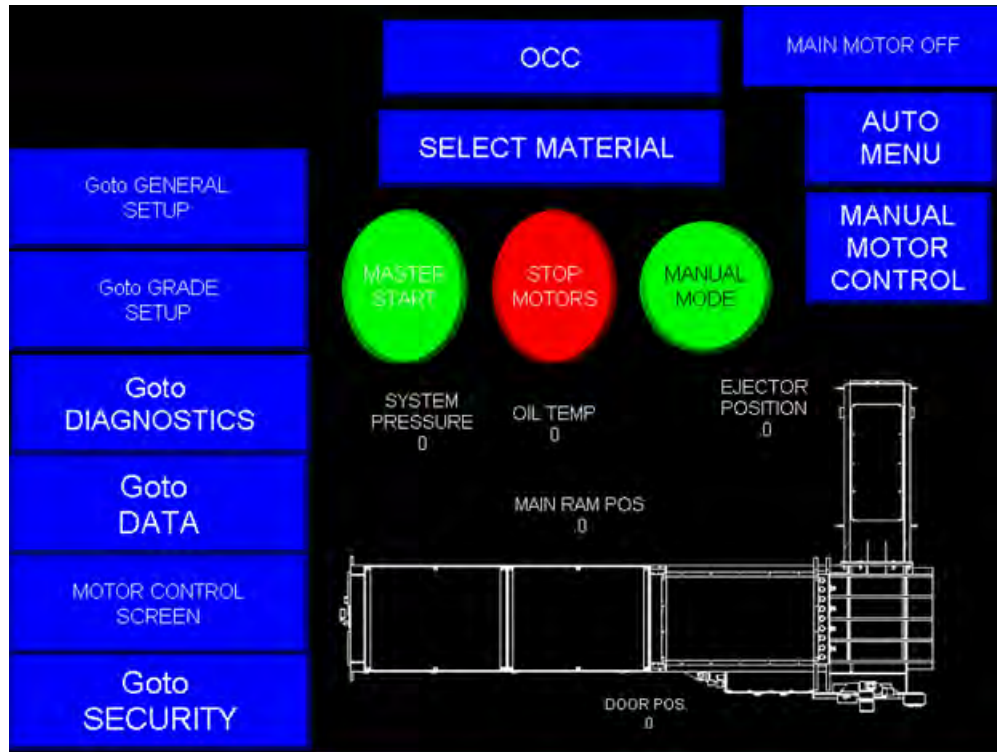
**Logout** - Press when the operator or supervisor is ready to log out of the interface.

**#####** - Press to select either “operator” or “supervisor” as user-names. Once selected, a numeric keypad is displayed for you to type in your password. Default passwords are “1234” for operators and “8710” for supervisors. These may be changed by selecting “New Password”.

**New Password** - Allows the operator or supervisor to choose a new password.

**Verify Password** - Re-enter the new password for verification. The system then saves it.

### MAIN MENU SCREEN



**(Yellow Info Box)** - This information/error window explains why the process was interrupted.

**Go To General Setup** - Login as “supervisor” to access the **General Setup Screens** [42](#).

**Go To Grade Setup** - Press to go to the **Grade Setup Screens** [44](#).

**Go To Diagnostics** - Press to go to the **Diagnostics Screens** [53](#).

**Go To Data** - Press to go to the **Data Screens** [58](#).

**Motor Control Screen** - Press to go the **Manual Motor Start Screen** [37](#).

**Go To Security** - Press to go back to the **Security or Login screen** [35](#).

**Main Motor Off** - The blue information window indicates the status of motors.

**Master Start** - Press and hold for 20 seconds to start the motors. The countdown displays in the blue information window.

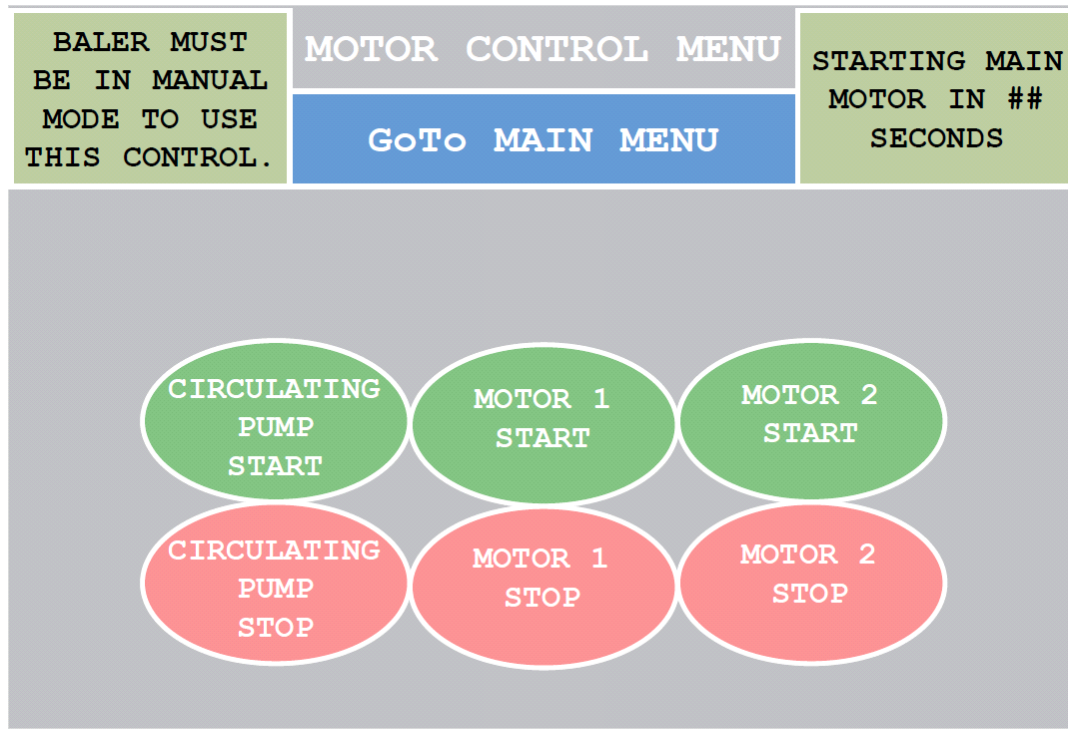
**Stop Motors** - Press to stop all motors in operation.

**Manual Mode** - Press to go to the **Main Menu Screen** [36](#).

**Auto Menu** - Press to go to the **Auto Menu Screen** [38](#).

**Manual Motor Control** - Press to go to **Manual Motor Start Screen** [37](#).

### MANUAL MOTOR START SCREEN



**(Information Boxes)** - The top left olive-colored window displays general information and the top right window displays the status of the motors.

**Go To Main Menu** - Press this button to go back to the Main Menu screen.

**Circulating Pump Start** - Press this button to start the circulating pump.

**Circulating Pump Stop** - Press this button to stop the circulating pump.

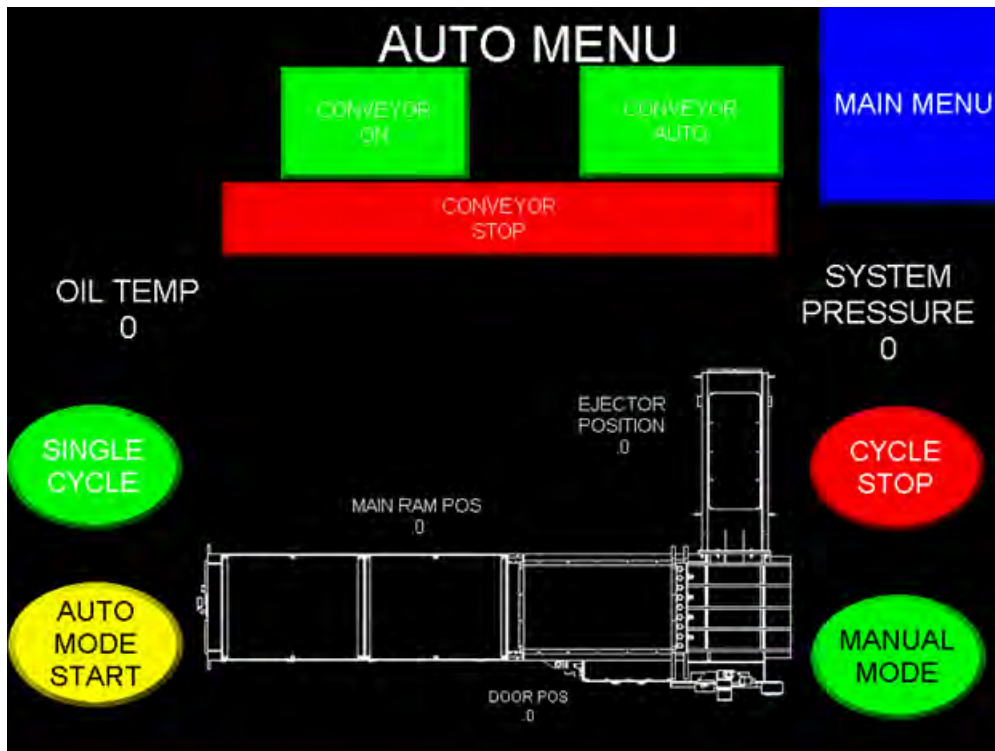
**Motor 1 Start** - Press this button to start Motor #1.

**Motor 1 Stop** - Press this button to stop Motor #1.

**Motor 2 Start** - Press this button to start Motor #2.

**Motor 2 Stop** - Press this button to stop Motor #2.

### AUTO MENU SCREEN



**Conveyor On** - Press to start the conveyor. The conveyor defaults to stop once the upper photocell is blocked.

**Conveyor Stop** - Press to stop the conveyor.

**Conveyor Auto** - Conveyor starts and will continue until the selected photocell is blocked. Refer to the 6th of the **Grade Setup Screens** <sup>[44]</sup>.

**(Yellow Info Box)** - Displays the step-by-step process of operations.

**Single Cycle** - Press to cycle the main ram once.

**Cycle Stop** - Press this button to stop the cycle.

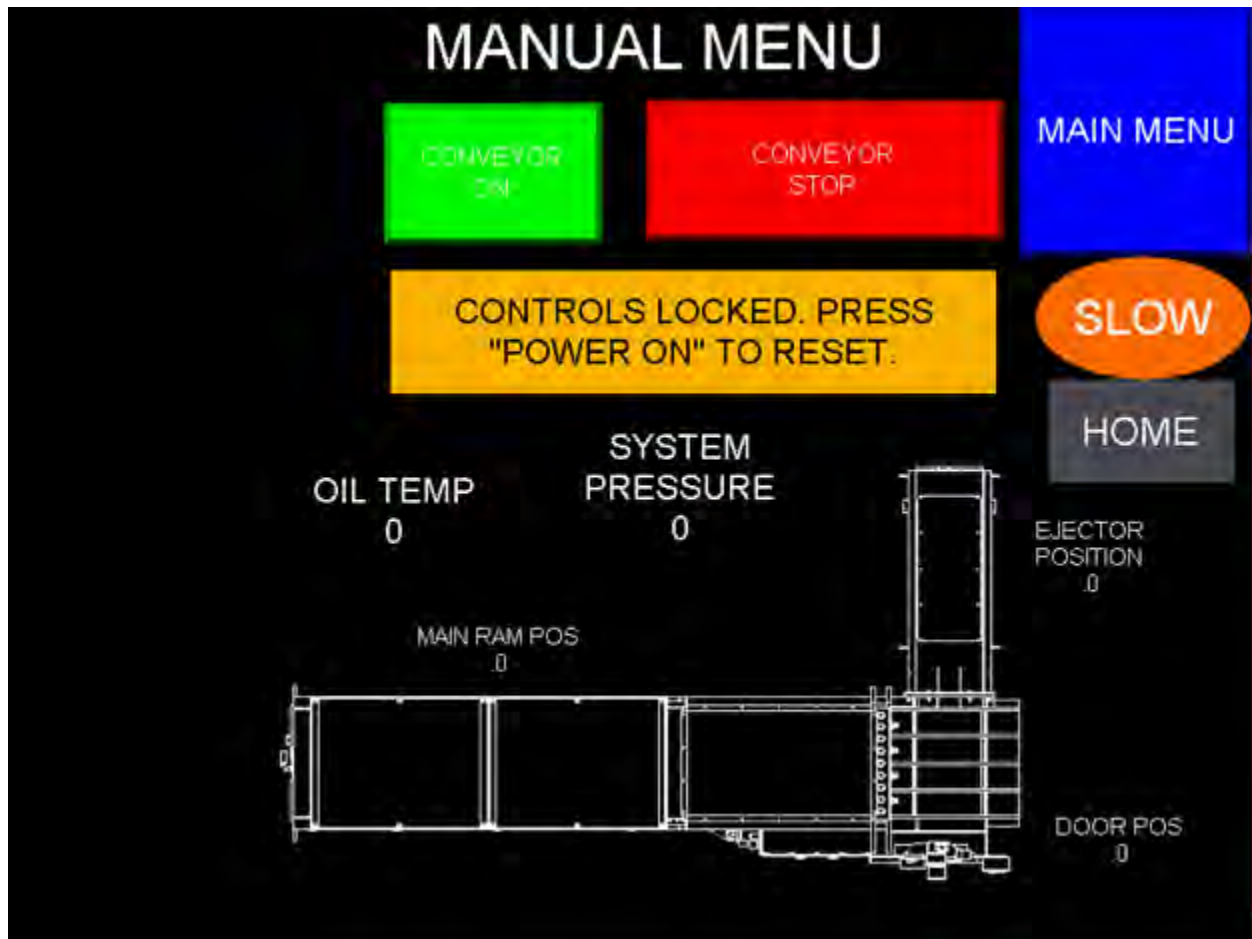
**Auto Mode Start** - Starts the automatic cycling of the machine once the selected photocell is blocked for the selected delay time. See the 4th of the **Grade Setup Screens** <sup>[44]</sup>. The amber "stack" light illuminates.

**Eject Position** - Shows the position of the ejector ram. As the ram extends, the number and size of the red indicator box increases proportionally. Both decrease as the ram retracts.

**Main Ram Position** - Shows the position of the main ram. As the ram extends, the number and size of the orange indicator box increases proportionally. Both decrease as the ram retracts.

**Manual Mode** - Press to switch to the **Manual Menu Screen** <sup>[39]</sup>.

### MANUAL MENU SCREEN



**Slow** - Press this button to slow down the movement of the ram. This allows for easier Home placement.

**Home** - This indicator illuminates green when the ram is in the home position (it is not a button).

**Door Close** - Press to manually close the NexDoor.

**Door Open** - Press to manually open the NexDoor.

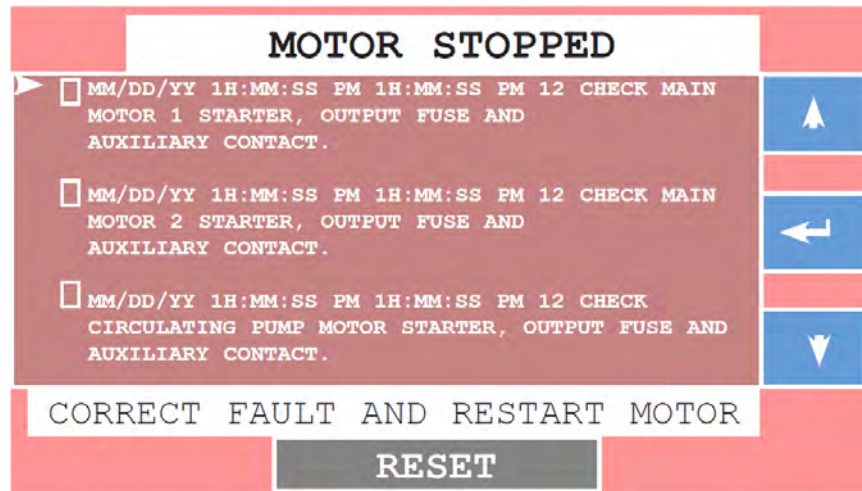
**Stamper Extend** - Press to manually extend the stamper.

**Stamper Retract** - Press to manually retract the stamper.

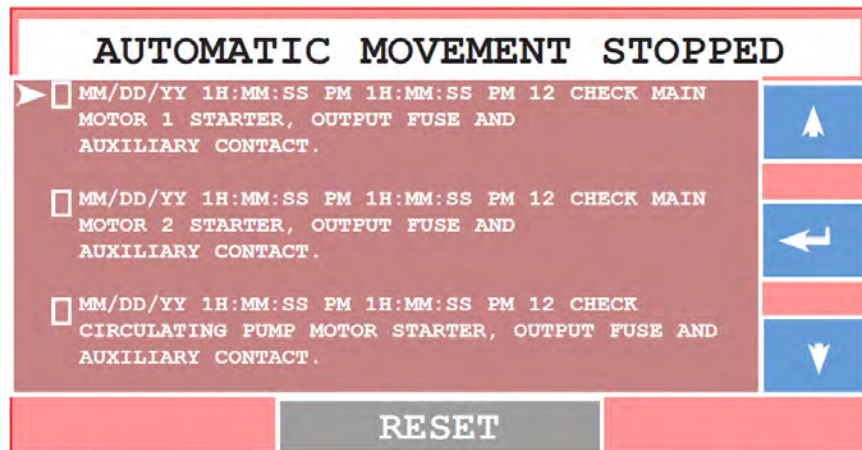
### NOTICE

If the manual controls are not moved in 60 seconds, the controls will lock. Press the **“Power On”** button to reset the timer.

### FAULT SCREEN



### MAJOR FAULT SCREEN



The two fault screens above indicate that the machine has encountered a problem and operation cannot continue until the fault is corrected. The date and time of the fault are also recorded here.

**Fault List** - Scroll through the faults using the up and down arrows on the right.

**Reset** - Press this button to clear all the listed faults.

Refer to the **Fault List** <sup>(4)</sup> for a complete listing of possible faults.

### FAULT LIST

#### NOTICE

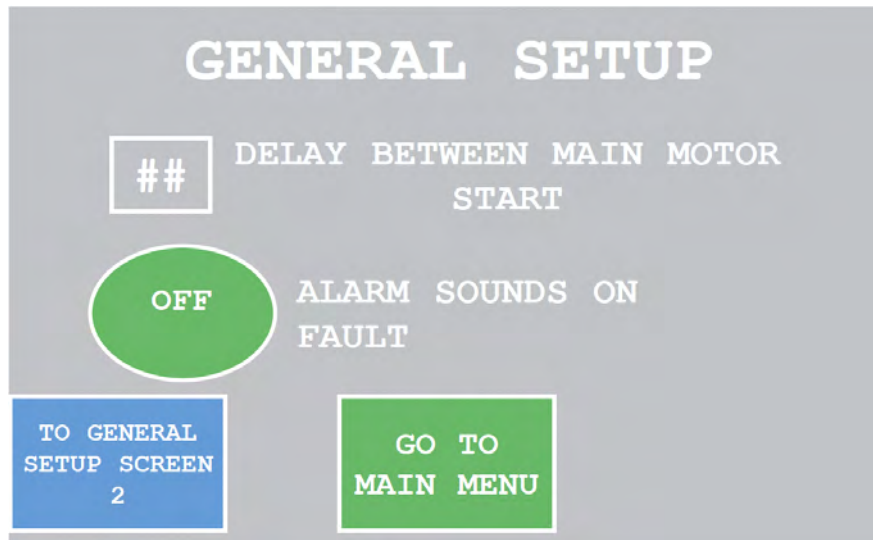
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The following faults must be cleared before the baler can continue operation.

---

- Check main Motor 1 starter, output fuse and auxiliary contact.
- Check main Motor 2 starter, output fuse and auxiliary contact.
- Check circulating pump motor starter, output fuse, and auxiliary contact.
- Check fan motor starter, output fuse, and auxiliary contact.
- Ram jammed. Ram could not reach home position.
- Ram could not retract or ram position sensor failure.
- Auto bale eject stopped,/\*R\*/Tier not ready!
- Change hydraulic filter.
- No change in bale size. No material detected. Check photoeye.
- Ejector cannot retract, possible jam.
- Warning!/\*R\*/More than one ejector limit switch/\*R\*/input is on!
- Check photoeyes. Upper eye is blocked. Lower eye is clear.
- Ejector ram jammed/\*R\*/or no signal from/\*R\*/bale length counter!
- Too cold to move the ram, let oil heat up.
- Cannot start auto bale eject,/\*R\*/Tier not ready!
- Cannot throw strap, tier not ready.
- Time-out waiting for ram movement.
- Bale made.
- Low oil level.
- High oil temperature.
- An E-Stop is pressed or interlocked cover or door is open.
- Time-out waiting for door to open.
- Time-out waiting for door to close.

### GENERAL SETUP SCREEN

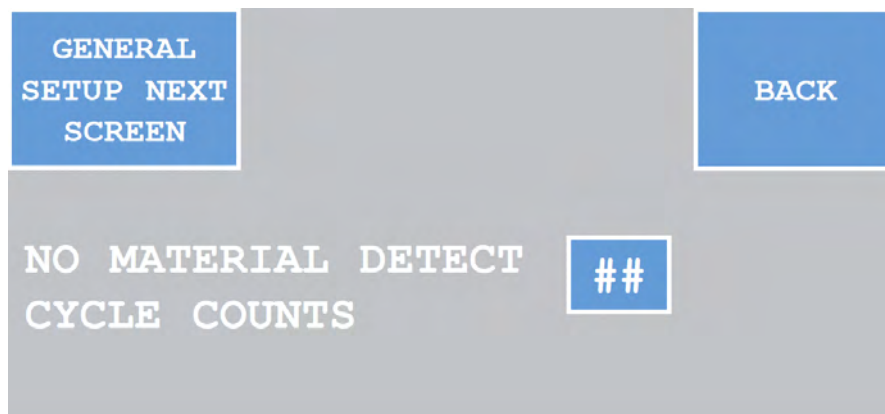


**Delay Between Main Motor Start** - Indicates the delayed time, in seconds, between each motor starting. The range can be set between 1-15 seconds and is recommended to be set at 4 to 5 seconds.

**Off** - Press this button to change to "ON", which activates an alarm to sound when a fault occurs.

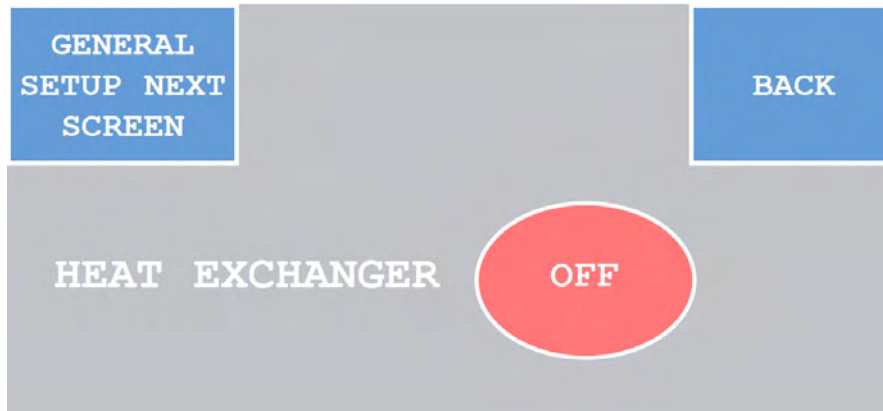
**To General Setup Screen 2** - Press this button to go to the next General Setup screen.

### GENERAL SETUP SCREEN 2



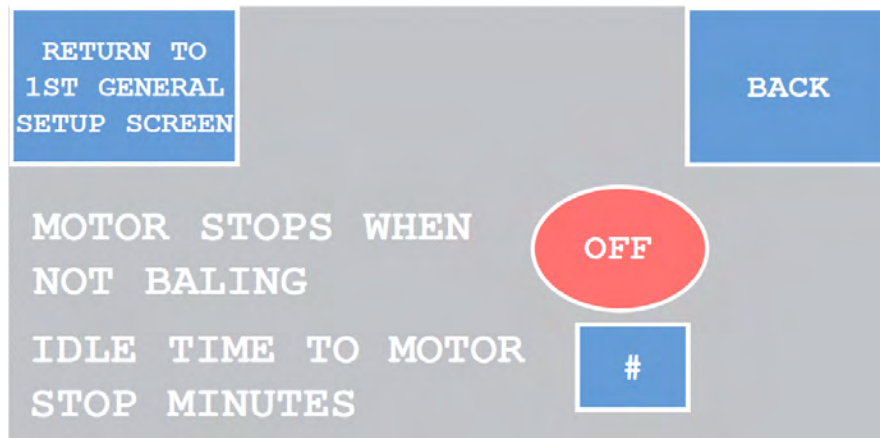
**No Material Detect Cycle Counts** - Press this button to display a numeric keypad to select the number of cycles for the ram to complete before it stops because no material is detected by the selected photocells. Displays the fault.

### GENERAL SETUP SCREEN 3



**Heat Exchanger** - Press this button to switch the heat exchanger (oil cooler) to the "Auto" mode. It is recommended to keep this on "Auto" during operation, not "Off".

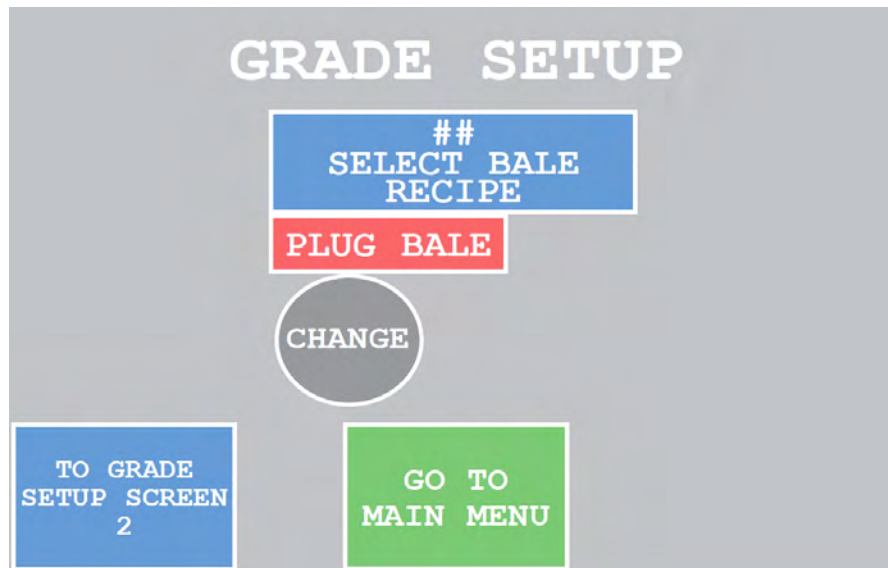
### GENERAL SETUP SCREEN 4



**Motor Stops When Not Baling** - Press this button to switch to the "ON" setting, which programs the baler to stop after a set length of idle time.

**Idle Time To Motor Stop Minutes** - Press this button to display a numeric keypad which allows you to choose the length of idle time (in minutes) before the motor(s) automatically shut down.

### GRADE SETUP SCREENS



**## Select Bale Recipe** - You must login as the "operator" to change the Bale Recipe.

**Plug Bale/ Full Eject** - When "Plug Bale" is displayed, the ejector ram does not eject the bale all the way out. Press the "Change" button to select "Full Eject". When "Full Eject" is shown, the ejector ram fully ejects the bale.

**To Grade Setup Screen** - You must login as a Supervisor to go to the next Grade Setup screen.

### GRADE SETUP SCREEN 2

NEXT	SETUP GRADE RECIPE ##	BACK
###.#	BALE MADE POSITION	
####	BALING PRESSURE	
##.#	INITIAL HOPPER OPENING	

**Bale Made Position** - When a set baling pressure is reached at this position or less than, the bale ejects. You can select increments up to one-tenth of an inch. The minimum position is "67.0" inches.

**Baling Pressure** - This is the maximum pressure limit while baling before the bale is ejected. There are two ranges for different model numbers:

1. 1000 - 3000 psi - Can set at a maximum of 2800 psi.
2. 1000 - 4000 psi - Can set at a maximum of 3800 psi.

**Initial Hopper Opening** - Position of the fully retracted main ram. The range starts at 2.0" and can be programmed within the range of the hopper length. You can increase the ram position when baling material that is difficult to shear, in order to minimize bite.

### GRADE SETUP SCREEN 3

SCREEN 3: SETUP GRADE RECIPE ##

MINIMUM HOPPER OPENING

START PROPORTIONAL

NUMBER OF STRAPS (MULTI-STRAP)

**Minimum Hopper Opening** - Press the number box to display a numeric keypad where the operator can select the starting position of the main ram within the hopper opening. The range is from 1.0" to 90.0". This setting can be increased to lessen the opening of the charge chamber in order to control the flow of material and prevent over-charging.

**Start Proportional** - Selects the position (greater than the Bale Made value) at which the ram will start a calculated stroke (not fully retracting) in order to control the flow of material into the charge chamber that will be compacted into a bale.

The "Minimum Hopper Opening" setting and the "Start Proportional" setting work together as a range in which the ram moves to control the flow of material into the charge chamber when getting close to creating a full bale.

**Number Of Straps** - Selects the number of straps to be put on the bale.

### GRADE SETUP SCREEN 4

NEXT	SETUP GRADE RECIPE ##	BACK
#.#	RAM PHOTOCCELL DELAY	
#.#	PLUG MODE DOOR EXTENDED POSITION	

**Ram Photocell Delay** - This is the time that the photocell is to be blocked before the ram activates, set within one-tenth of a second.

**Plug Mode Door Extended Position** - The bale door can be used as a “plug” to hold the bale in position. This setting is the scope of penetration by the bale door into the bale. The minimum range is 3.0” and can be set up to 46”.

# Galaxy 2R<sup>®</sup> Baler

## Operation

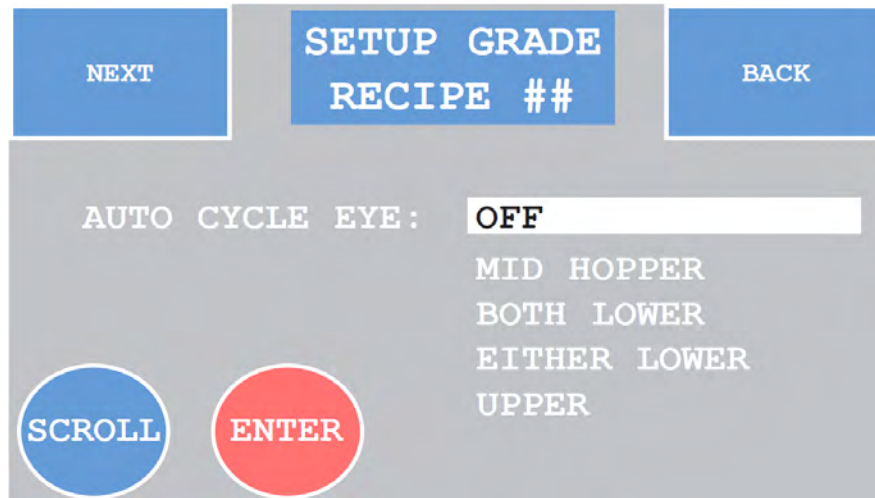
### GRADE SETUP SCREEN 5

NEXT	SETUP GRADE RECIPE ##	BACK
USE MULTI-GATHER :	CHANGE	OFF
MAIN RAM PENETRATION :	CHANGE	FULL

**Use Multi-Gather** - When "ON", the ram travels just past the shear blade before it retracts and does not fully extend. This is used to build initial bale density and to speed up bale production. When "OFF", the ram extends fully each cycle.

**Main Ram Penetration** - Choose either "Full" main ram penetration into the bale chamber or "1/2" penetration into the bale chamber.

### GRADE SETUP SCREEN 6

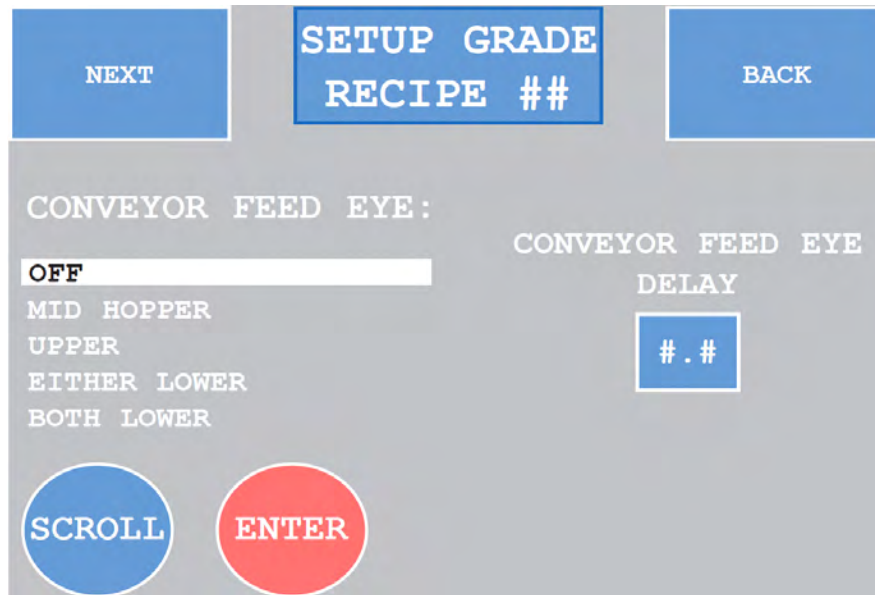


**Auto Cycle Eye** - This setting is changed according to the baling material size. For example, when baling larger material, such as corrugated cardboard, select the “Upper” photocell. When baling smaller material, such as office paper, select “Either Lower” or “Both Lower” photocells, depending on material density.

**Scroll** - Press this button to scroll through the photocells (from the Auto Cycle Eye list) and pick one to activate the main ram to begin auto-cycling.

**Enter** - Press this once the required photocell is highlighted.

### GRADE SETUP SCREEN 7



**Conveyor Feed Eye** - The selection in this list determines which photocell stops the conveyor for the duration of the ram cycle.

**Scroll** - Press this button to scroll to the photocell which will stop the conveyor.

**Enter** - Press this button once the selected photocell is highlighted under "Conveyor Feed Eye".

**Conveyor Feed Eye Delay** - Press the "#.#" button to display a numeric keypad to select the length of time (in seconds) the photocell is blocked before the conveyor stops.

### GRADE SETUP SCREEN 8

NEXT	SETUP GRADE RECIPE ##	BACK
ALARM WHEN BALE MADE :	CHANGE	OFF
USE NO MATERIAL DETECTED ALARM :	CHANGE	ON
USE CHECK PHOTOEYE ALARM :	CHANGE	ON

**Alarm When Bale Made** - Press the "Change" button on the right to activate an alarm to sound once a bale is made. Alarm status is indicated by either "OFF" or "ON" to the far right. This is used in the event of a material change once the bale is made.

**Use No Material Detected Alarm** - When "ON", an alarm sounds if no material is detected in the charge chamber once the ram completes the set number of cycles. If "OFF", no alarm sounds and no fault is given and this cancels the automatic number of cycles setting.

**Use Check Photoeye Alarm** - When "ON", an alarm sounds if the upper photo- cell is blocked, but the bottom photocell is clear. If "OFF", no alarm sounds and no fault is given.

### GRADE SETUP SCREEN 9

NEXT	SETUP GRADE RECIPE ##	BACK
PLUG BALE	STRAP POSITION	FULL EJECT
##.#	1	##.#
##.#	2	##.#
##.#	3	##.#
##.#	4	##.#
##.#	5	##.#

Press the number boxes to display a numeric keypad where you can select the bale positions at which you want straps to be placed around the bale. The range for both "Plug Bale" and "Full Eject" are 2.0 - 99.0 inches. Although "99" exceeds the maximum position, it can be selected for straps that will not be used. For example, if you only want to use two straps on the bale, then select "99" as the position for straps 3-20.

The position at which strap 1 is placed on the bale can be determined in Manual Mode by recording the ejector ram position shown from the first ejected bale. Input this number in the associated number box and the strap will be placed when the bale reaches that position.

#### NOTICE

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Grade Setup Screen 10 is the same as the one shown above, but with "Strap Positions" 6 through 10 shown instead.

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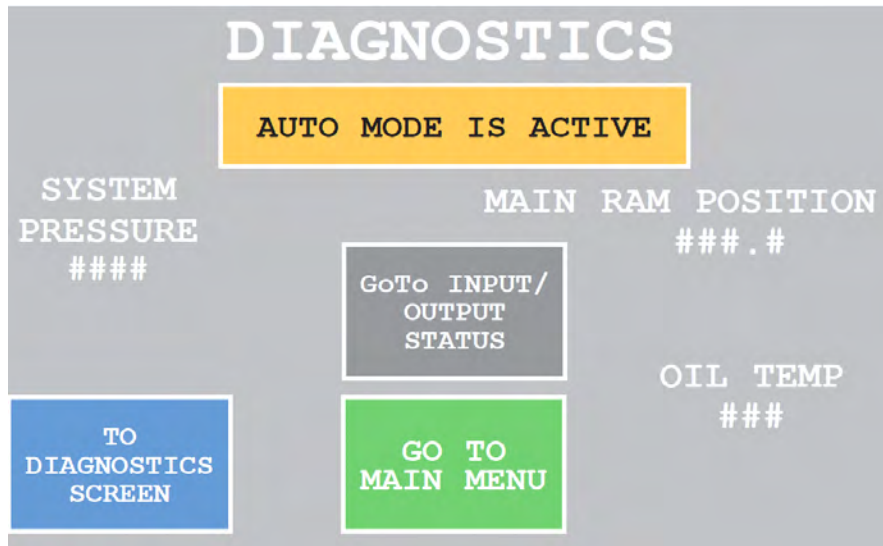
#### NOTICE

---

You can program 20 "Strap Positions".

---

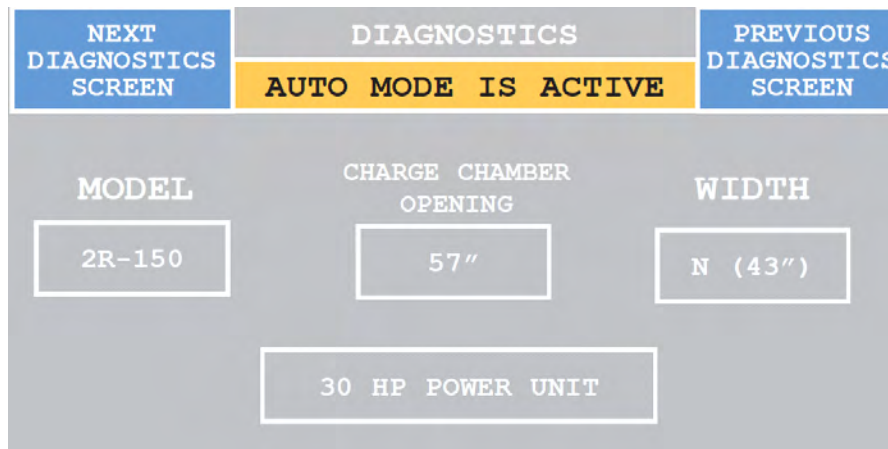
### DIAGNOSTICS SCREENS



### NOTICE

The Diagnostics screens are accessible only by Marathon<sup>®</sup> personnel. In the event that you need to access these screens, please call our service department at **877-258-1105** and proper instructions will be given accordingly.

### DIAGNOSTICS SCREEN 3



### NOTICE

The Diagnostics screens are accessible only by Marathon<sup>®</sup> personnel. In the event that you need to access these screens, please call our service department at **877-258-1105** and proper instructions will be given accordingly.

### DIAGNOSTICS SCREEN 4

NEXT DIAGNOSTICS SCREEN	DIAGNOSTICS AUTO MODE IS ACTIVE	PREVIOUS DIAGNOSTICS SCREEN
###.#	RAM POSITION @ LOWEST HOME POSITION	
#.#	DECOMPRESSION TIME	

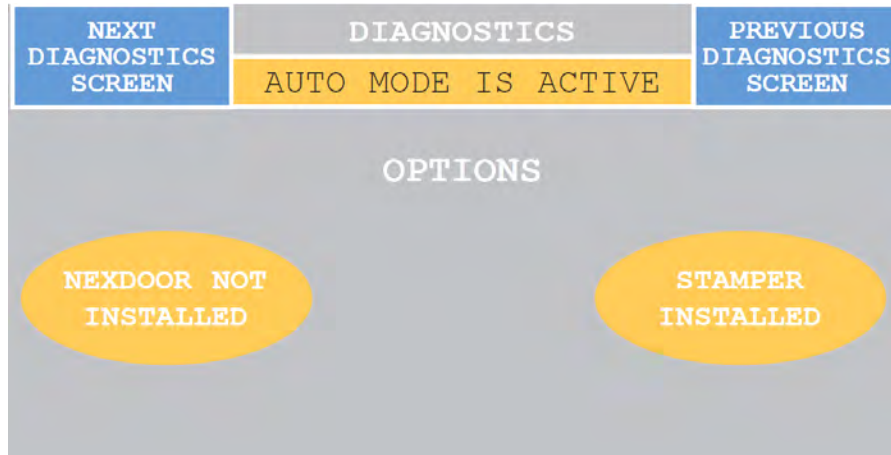
### DIAGNOSTICS SCREEN 5

NEXT DIAGNOSTICS SCREEN	DIAGNOSTICS AUTO MODE IS ACTIVE	PREVIOUS DIAGNOSTICS SCREEN
###.#	CYLINDER EXTEND SLOWDOWN POSITION CYLINDER STROKE = ###.#	
###.#	CYLINDER RETRACT SLOWDOWN POSITION	

#### NOTICE

The Diagnostics screens are accessible only by Marathon<sup>®</sup> personnel. In the event that you need to access these screens, please call our service department at **877-258-1105** and proper instructions will be given accordingly.

### DIAGNOSTICS SCREEN 6



### NOTICE

The Diagnostics screens are accessible only by Marathon<sup>®</sup> personnel. In the event that you need to access these screens, please call our service department at **877-258-1105** and proper instructions will be given accordingly.

### INPUT / OUTPUT STATUS SCREENS

GoTo INPUT/ OUTPUT SCREEN 2	INPUT OUTPUT STATUS		GoTo DIAGNOSTICS
AUTO MODE IS ACTIVE			
I:0/0 STOP		I:0/7	
I:0/1		I:0/8	
I:0/3		I:0/9	
I:0/4		I:0/10	
I:0/5		I:0/11	
I:0/6			

### NOTICE

The Input / Output screens coincide with the PLC and electrical schematic to show which components have power to them by illuminating green. If there is no power to the specific input / output, the box remains gray.

### INPUT / OUTPUT STATUS SCREEN 2

GoTo INPUT/ OUTPUT SCREEN 3	INPUT OUTPUT STATUS		GoTo INPUT/ OUTPUT SCREEN 1
AUTO MODE IS ACTIVE			
I:1/0		I:1/6	I:1/12
I:1/1		I:1/7	I:1/13
I:2/2		I:1/8	I:1/14
I:1/3		I:1/9	I:1/15
I:1/4		I:1/10	
I:1/5		I:1/11	

# Galaxy 2R<sup>®</sup> Baler

## Operation

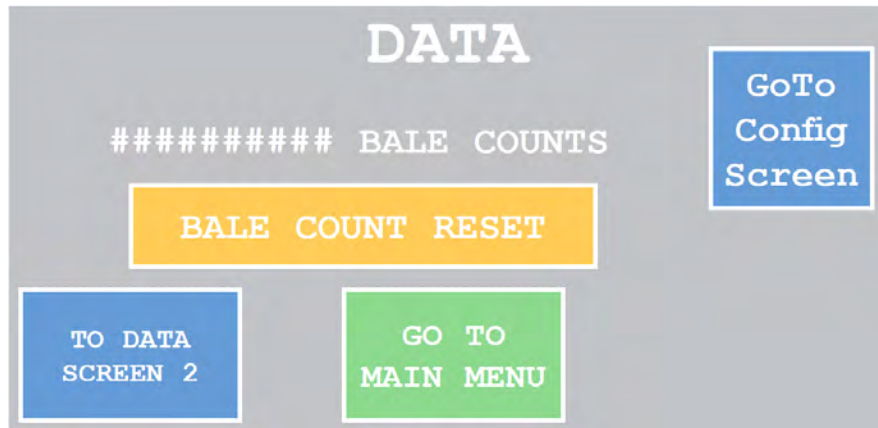
### INPUT / OUTPUT STATUS SCREEN 3

GoTo INPUT/ OUTPUT SCREEN 4	INPUT OUTPUT STATUS		GoTo INPUT/ OUTPUT SCREEN 2
AUTO MODE IS ACTIVE			
	0:0/0		0:0/6
	0:0/1		0:0/7
	0:0/2		0:0/8
	0:0/3		0:0/9
	0:0/4		0:0/10
	0:0/5		0:0/11

### INPUT / OUTPUT STATUS SCREEN 4

GoTo INPUT/ OUTPUT SCREEN 1	INPUT OUTPUT STATUS		GoTo INPUT/ OUTPUT SCREEN 3
AUTO MODE IS ACTIVE			
0:2/0		0:2/6	0:2/12
0:2/1		0:2/7	0:2/13
0:2/2		0:2/8	0:2/14
0:2/3		0:2/9	
0:2/4		0:2/10	0:3/0
0:2/5		0:2/11	0:3/1

### DATA SCREEN 1



### NOTICE

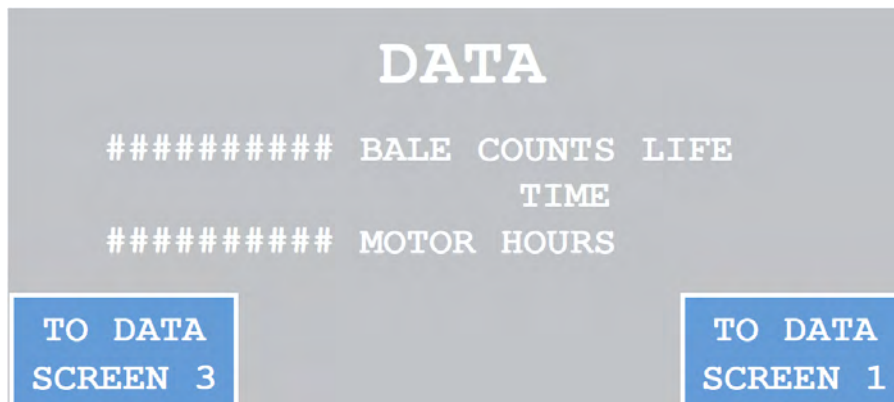
You must be logged in as “supervisor” to access this screen.

**Go To Config Screen** - Press this button to take you to the Configuration screen, which should only be used to change the time and date for date stamping and fault analysis. Other functions in this mode are to be used by trained Marathon<sup>®</sup> personnel only.

**Bale Counts** - Indicates the number of bales made since the last reset.

**Bale Count Reset** - Press to reset the bale counter.

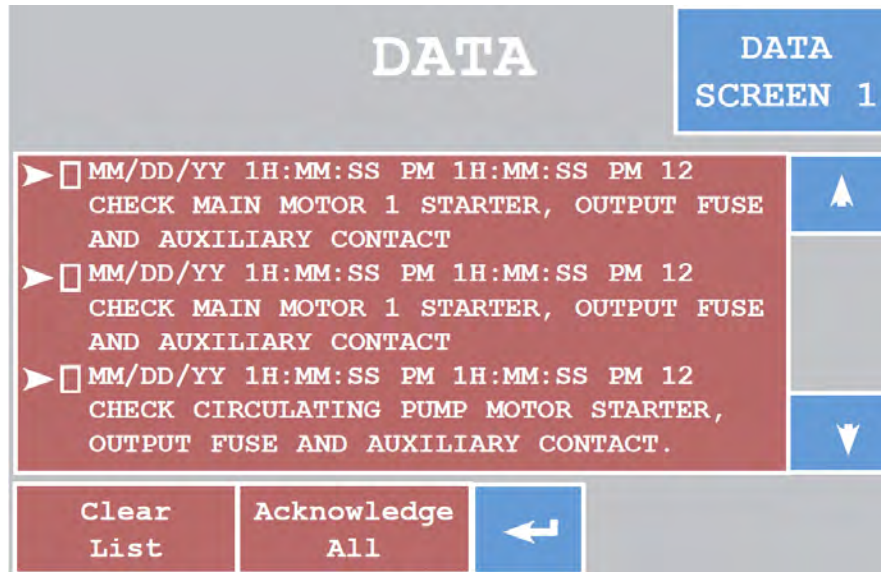
### DATA SCREEN 2



**Bale Counts Life Time** - Indicates the number of total bales made during the life of the baler.

**Motor Hours** - Indicates the total number of hours the motor(s) have been in operation.

### DATA SCREEN 3



This is a Data screen listing the last 10 faults the baler has encountered. The date and time of the fault are also recorded here.

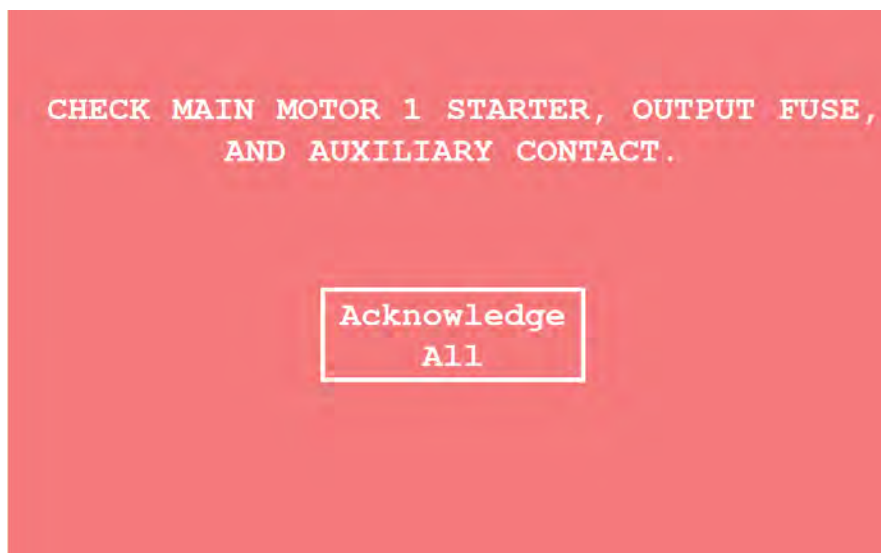
(Arrows) - Scroll through the faults using the up and down arrows.

Clear List - Press this button to clear all listed faults.

Refer to the **Fault List** [\[4\]](#) on for a complete listing of possible faults.

### ALARM SCREEN

This screen displays when the PLC detects a problem in the baler operation. Follow the instructions on the screen.

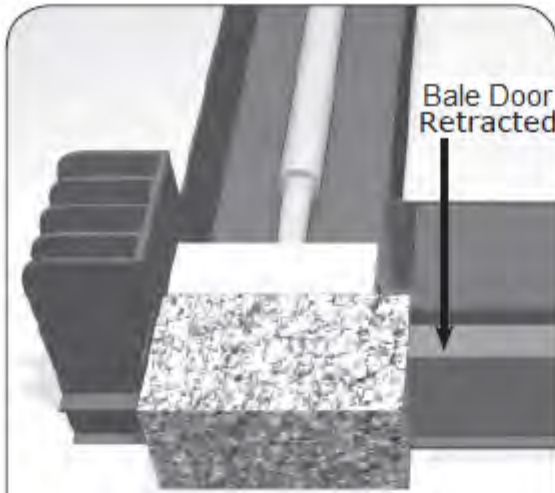


When finished following the instructions on the Alarm Screen, press the **Acknowledge All** button.

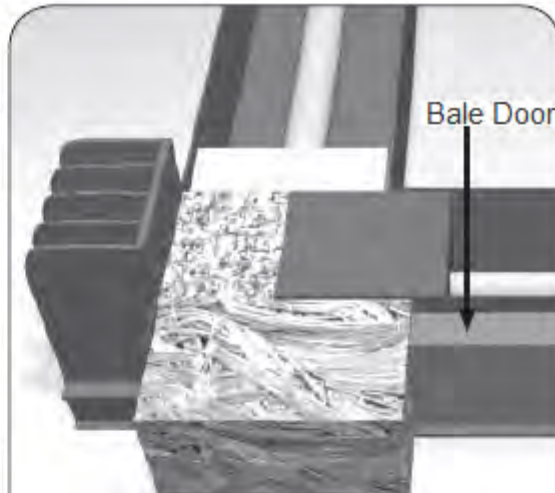
# Galaxy 2R<sup>®</sup> Baler

## Operation

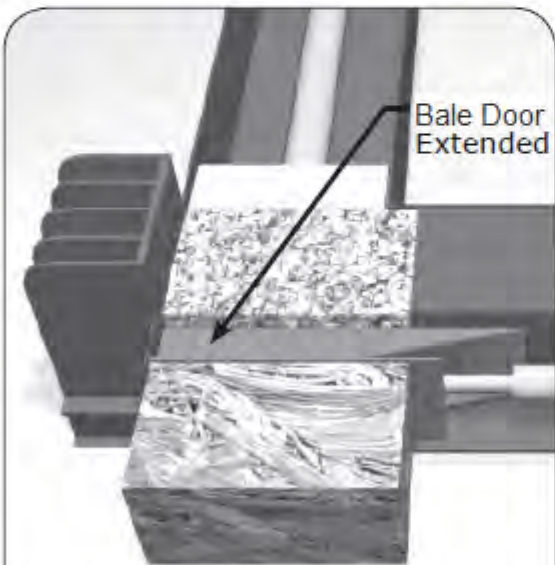
### BALE DOOR DIAGRAM



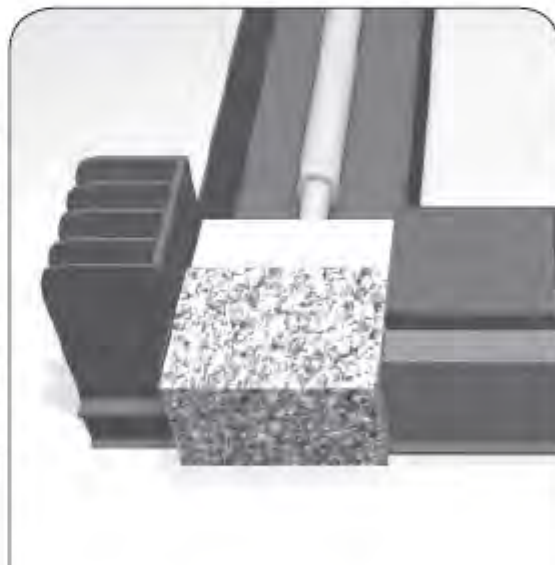
**Oversized Bale Release** - Device allows you to eject an oversized bale (up to 9") from standard size.



**Bale Clamp** - Holds on to ejected bale to help form a square end on the next bale.



**Bale Wall** - Closes off the ejector nozzle of compression chamber to allow for making a square bale.  
**Separation Door** - Separates commodities to avoid contamination.



**Baler Sizer** - Allows you to program a bale width of 37" to 46" on a narrow model or 51" to 60" on a wide model.

## JAM PREVENTION

### **WARNING**

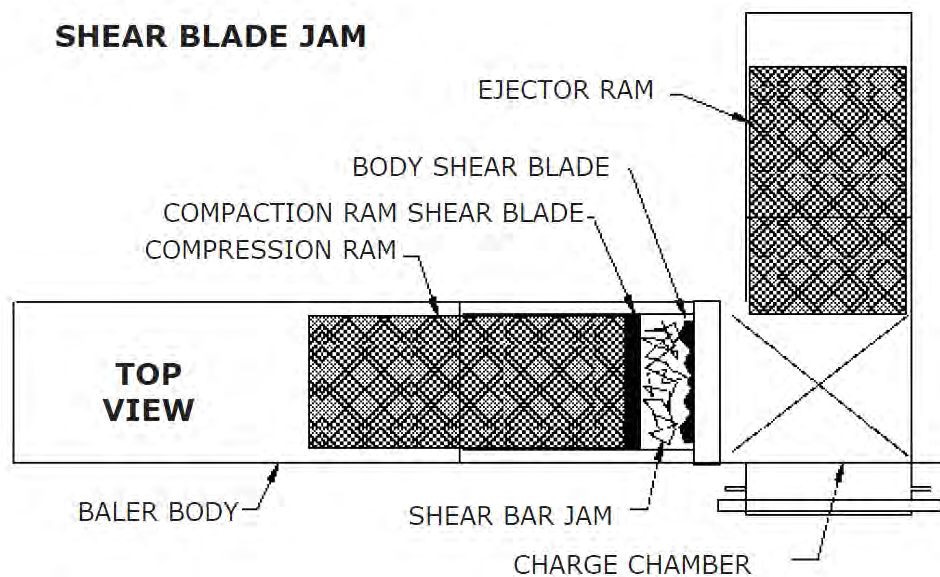
Do not enter the baler for any reason until the baler has been locked-out and tagged-out per **Lock-Out/Tag-Out Instructions**.

There are two types of jams which could occur with a two-ram baler - a jam at the shear blades and an oversize bale which is difficult to eject. The following steps may be taken to prevent the likelihood of a jam:

1. Presort the material. Remove any questionable objects or material. Make sure the material is all the same general type and composition.
2. Regulate the material flow into the baler feed hopper. Keep the flow even. Do not overfill the feed hopper.
3. Properly maintain the shear bar and compression ram hold down bars. A good cutting edge on the shear bar reduces the possibility of jamming.

The best prevention of baler jams is good judgment. An operator's familiarity with the material variances, baler limitations, and close attention to material flow reduces the possibility of a jam. It is much easier to make a couple of extra strokes with the compression ram than it is to clear out a jam.

## REMOVING SHEAR BLADE JAM



If the shear blade fails to cut the material in the automatic mode, turn off the feed conveyors and switch the baler to Manual Mode. Retract the compression ram a short distance to allow material to fall away from the shear bar on the baler body. Use the MAIN RAM - COMPRESS/RETRACT control lever to cycle the ram forward. Watch the ram to see if it moves forward and shears the jam. This procedure may have to be repeated a couple of times to clear the jam. If the jam fails to clear:

1. Retract the compression ram to the full retract position.
2. Shut down the machine and follow the **Lock-Out/Tag-Out Instructions**. Never enter the baler for any reason until the baler has been locked-out and tagged-out.

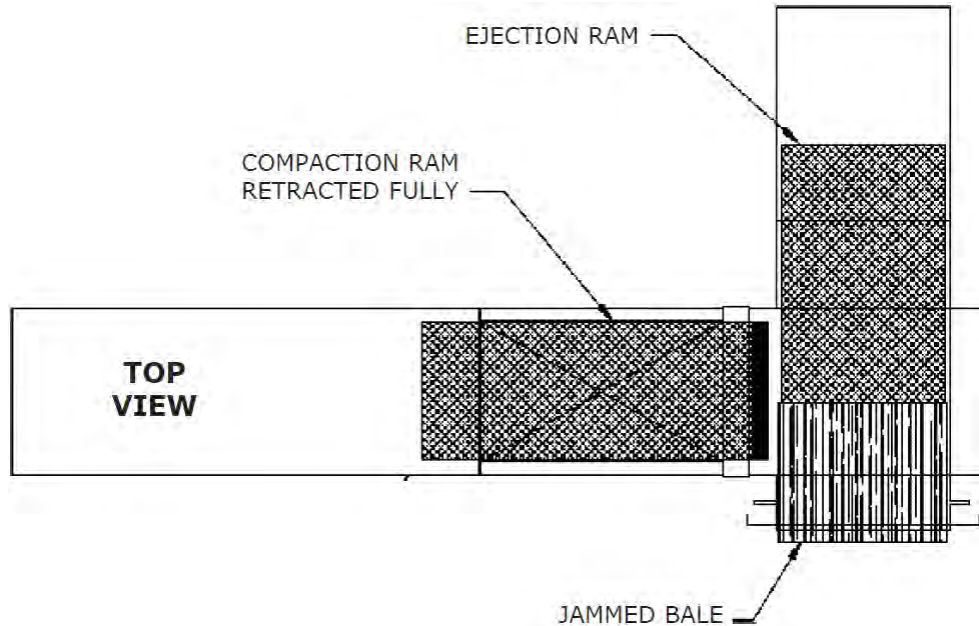
Remove material from the feed hopper and clear the obstruction.

### REMOVING OVER-SIZED BALE JAM

#### **WARNING**

Do not enter the baler for any reason until the baler has been locked-out and tagged-out per **Lock-Out/Tag-Out Instructions**.

The following instructions explain how to remove a jammed bale.



1. If the bale fails to eject in Automatic Mode, set the baler to Manual Mode.
2. Retract the compression ram to the full retract position to relieve pressure on the bale.
3. Use the EJECTOR EXTEND button to eject the bale, and use the STRAP BUTTON to apply wire tie straps manually as the bale is ejected.
4. In the unlikely event that the bale does not eject using the EJECTOR EXTEND button, shut the baler down.
5. Lock-Out/Tag-Out the baler. See **Lock-Out/Tag-Out Instructions**. Never enter the baler for any reason until the baler has been locked-out and tagged-out.
6. Remove the excess material.

### CHANGING MATERIALS AND BALER SHUTDOWN

#### A. Changing Materials

- To prevent contamination between bales, stop the supply of the present material to the feed conveyor. Run the conveyor empty into the baler feed hopper. Make sure the conveyor is cleared of all material. Turn the conveyor off.

#### NOTICE

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If enough material remains to complete one bale, finish that bale.

---

- Make sure the feed hopper is cleared of all material by manually cycling the compression ram. Place the compression ram in the HOME position and then eject and tie off the bale.
- Change the material. Restart the feed conveyor and resume baling with the next material.

#### B. Baler Shutdown

1. Eject the bale.
2. Stop the conveyors feeding the baler.
3. Position the ejector ram in the retract position.
4. Position the compression ram in the full extend position.
5. Rotate the CONTROLS key switch to the OFF position and remove the key.
6. Turn the main disconnect switch to the OFF position and lock as shown in the **Lock-Out/Tag-Out Instructions**.

#### WARNING

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If any maintenance or service is to be performed on the baler, complete Lock-Out/Tag-Out is required.

---

7. Clean up around the bale exit and automatic wire tier. Perform any other necessary clean up, such as behind the main ram (requires complete Lock-Out/Tag-Out), around the baler, and the feed conveyor.
8. Turn the main disconnect switch back ON so that the oil heaters may function, if required.

**INTENTIONALLY LEFT BLANK**

# **SECTION 4**

# **SERVICE**

**CONTACT INFORMATION**



Technical Service and Warranty:

**877-258-1105**

Parts:

**800-528-5308**

For parts visit our eCommerce Marketplace at [www.mecomerchant.com](http://www.mecomerchant.com).

If you do not have a user name and password, contact our Parts Department and they will assist with your registration.

Normal Business Hours:

Monday-Friday            8:00am - 5:00pm

(Central Standard Time)

## MAINTENANCE SCHEDULE

### DANGER

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Only authorized and trained personnel should perform the following procedures. Lock-Out/Tag-Out the baler per as specified in **Lock-Out/Tag-Out Instructions**.

---

### Every 10 Hours of Operation

1. Verify ALL guards are in place and secured.
2. Check for oil leaks.
3. Check oil level and temperature in hydraulic reservoir. Note: Maintain oil level above 3/4 full (in sight gauge). Oil level should be checked with main ram and ejector ram in retracted position. Oil temperature should be below 160°F.
4. Check all remote Emergency Stop locations. Note: Emergency Stops should not be obstructed, damaged, or depressed.
5. Make sure operator's platform and access steps (if so equipped) are free from hazards that could cause an accident.
6. Make sure there is an adequate supply of wire in wire tie strapper, and wire is correct gauge for tyer.
7. Clean lenses of photocells, sonic sensors, lasers and reflectors. Note: In a dusty application, it may be necessary to clean these devices and reflectors several times a day.
8. Clean radiator on oil cooler.
9. Oil wire tyer. Note: Under certain conditions it may be necessary to oil the wire tyer more often.

**Time to complete:** The 10 hour maintenance procedure will take approximately one hour to complete.

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### Additionally Every 50 Hours of Operation

1. Clean around power pack and baler to remove operator hazards.
2. Check function of all emergency stop buttons and interlock switches.
3. Check start-up alarm and flashing beacon. Clean light if required.

**Time to complete:** The 50 hour maintenance procedure will take approximately two to three hours to complete.

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### MAINTENANCE SCHEDULE (CONTINUED)

#### Additionally Every 200 Hours of Operation

1. Check function of all controls (i.e. lights, switches, joysticks etc.).
2. Check all hoses for chaffing, rubbing, leaking or other deterioration and damage.
3. Inspect air filter on hydraulic reservoir. Clean or replace if necessary.
4. Check cylinder pins and make sure they are secure.
5. Check shear blade on compression ram and baler body for sharpness, clearance (not to exceed .015"), and overall wear. Shim, rotate, or replace if necessary. The gap between the ram and body shear blades should be .015". The tolerance is +.005" and -.000"
6. Check hold-down bars for wear. Adjust if necessary. Tighten bolts. Rotate or replace hold-down bars if necessary. The bottom of the hold-down bars should be flush with the top of the ram.
7. Apply a light coating of all-purpose grease on hold down bars to prevent excessive wear.
8. Check seals on all cylinders for leaks.
9. After first 200 hours of operation replace return line/circulating pump filter. Thereafter, this filter maintenance interval will be extended to 500 hours.
10. Clean any debris, dust or grime from wire tyer gears and tracks. Note: In dusty conditions, it may be necessary to clean wire tyer more often.

**Time to complete:** The 200 hour maintenance procedure will take approximately two to three hours to complete. If hold down or shear beam adjustments need to be made, it could take longer. Please note the section on shear beam and hold down maintenance below.

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#### Additionally Every 500 Hours of Operation

1. Change return line/circulating pump oil filter element in oil filter housing.
2. Inspect cylinder rods of compression and ejection ram cylinders for nicks and abrasions.
3. Check cylinder rod seals for damage.
4. Inspect cylinder pins for movement or missing cotter pins. Lubricate cylinder pinning sleeves and pins.
5. Grease wire tyer drive wheels (follow manufacturer's recommendations in Equipment Operation Manual).

**Time to complete:** The 600 hour maintenance procedure will take approximately one hour to complete.

---

#### Additionally Every 1000 Hours of Operation

1. Send oil sample for evaluation.
2. Check baler structure for any signs of problems (i.e., cracked welds, bending, etc.).
3. Rotate main ram cylinder rod 180°.

**Time to complete:** The 1000 hour maintenance procedure will take approximately two to three hours to complete.

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### MAINTENANCE SCHEDULE (CONTINUED)

#### Additionally Every 2000 Hours of Operation

- a. Change hydraulic fluid in entire system. If existing oil is reused, it should be tested by a laboratory to ensure it meets necessary specifications. Additives can be added to bring oil back to standards. Before returning oil to tank, it should be filtered through a minimum 5 micron filter. Hydraulic tank should be cleaned inside with a non-flammable solvent and thoroughly dried before replacing oil.
- b. Lubricate electric motor bearings as recommended by manufacturer.
- c. Filter maintenance
  - a. Hydraulic suction filters should be cleaned or replaced at yearly intervals.
  - b. Care should be exercised in cleaning filter to ensure that element is not torn. Clean filter with a soft brush and standard industrial solvent.

**Time to complete:** The 2000 hour maintenance procedure will take approximately six to eight hours to complete.

### SHEAR BLADE AND HOLD DOWN MAINTENANCE

The body and ram shear blades and hold downs work together to provide smooth operation of the ram and to assist in cutting material so as to bale more easily. These need to be adjusted, shimmed, rotated, or replaced per the following instructions as necessary. These items should be adjusted along with each other so as to provide the best operation of your baler.

#### DANGER

Only authorized and trained personnel should perform the following procedures. Lock-Out/Tag-Out the baler per as specified in **Lock-Out/Tag-Out Instructions**.

#### A. Adjust the Hold Down Bars

The hold down bars are adjusted by loosening the lock nuts associated with hold down bars on the exterior of the baler.

1. Begin by running the ram out even with the rear of the charge chamber or slightly forward so that you can view the ram top.
2. Loosen the lock nuts, and this will allow the hold down bars to slide down to the necessary position. It might be necessary to tap them with a hammer to move them.
3. The hold down bar should be as close to the top of the ram as possible without binding it; approximately 1/32"-1/16".
4. A thin layer of grease should be applied to the bottom of the hold down bars to aid in travel.
5. The hold down bars are designed so that once one side wears, the bar can be flipped over and the other side used. To do this, the bolts must be completely removed, the bar pulled out, flipped, and reinstalled.

**Time to complete:** The hold down maintenance will take approximately one to two hours to complete. If the bars need to be flipped, it will take approximately four hours.

#### B. Adjust the Body Shear Blades

The shear beam on this baler consists of a ram shear blade and a body shear blade. The body shear blades are the ones that you will be adjusting.

1. To begin, run the ram out until the shear blades meet. Make sure the baler is then locked out.
2. In front of the hopper, there is the shear beam header. On the 2R450 balers it consists of seven bolts; four are for adjustments, three are for support and pressure. The three bolts that hold the beam up have a lock nut on them. Loosen the three lock nuts. Loosen the three bolts evenly in a counterclockwise motion to release the pressure off of the shear beam. You will be able to tell by the bolts when the pressure is released. Be careful not to totally release the bolts.
3. Once you have relieved the pressure, begin lowering the shear beam by backing out on the four adjustment bolts evenly in a counterclockwise motion. As you back out on the bolts, the shear beam will lower. Lower the blade until there is a .015" gap between the shear blades. Then you will need to tighten the three pressure bolts down until you feel them tighten up with pressure against the shear beam. Ensure that they are tightened, and then tighten down on the lock nuts to complete the process.

**Time to complete:** The shear beam maintenance will take approximately two hours to complete.

#### C. Remove and Sharpen the Ram Shear Blade

The shear blades must retain sharpness. The ram shear blade has four edges that can be used before sharpening.

1. To swap, remove the bolts, pull the shear blade off, and flip or turn 180°.

### **SHEAR BLADE AND HOLD DOWN MAINTENANCE (CONTINUED)**

2. The body shear blades must be sharpened on site by a grinder or taken to a machine shop to sharpen.
3. Make sure that the same angle of the blade is kept during sharpening.

**Time to complete:** Swapping around of the ram shear blade will take approximately two hours to complete. Sharpening of the body blades on site will take approximately two hours. The complete removal of blades will take approximately two to three hours. The factory should be notified of this to provide technical support.

# Galaxy 2R<sup>®</sup> Baler

## Service

<b>10 HOUR MAINTENANCE SCHEDULE</b>			
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# Galaxy 2R<sup>®</sup> Baler

## Service

<b>50 HOUR MAINTENANCE SCHEDULE</b>			
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# Galaxy 2R<sup>®</sup> Baler

## Service

<b>200 HOUR MAINTENANCE SCHEDULE</b>			
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# Galaxy 2R<sup>®</sup> Baler

## Service

<b>500 HOUR MAINTENANCE SCHEDULE</b>			
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# Galaxy 2R<sup>®</sup> Baler

## Service

<b>1000 HOUR MAINTENANCE SCHEDULE</b>			
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# Galaxy 2R<sup>®</sup> Baler

## Service

<b>2000 HOUR MAINTENANCE SCHEDULE</b>			
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### HOLDDOWN BAR MAINTENANCE

#### DANGER

Only authorized and trained personnel should perform the following procedures. Lock-Out/Tag-Out the baler per as specified in **Lock-Out/Tag-Out Instructions**.

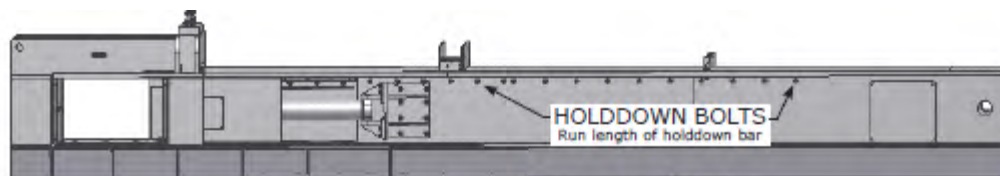
Holddown bars prevent the ram from “Riding Up” over material in the charge chamber. They also prevent the ram shear blade from coming in contact with the body shear blade. Maintenance on holddown bars should be performed when doing maintenance on shear blades.

Holddown bars can be adjusted by loosening the Holddown Bolts (which run the length of the holddown bar) on the outside walls of the baler and allowing the holddown bar to rest on top of the ram. The slot for the holddown bolts allows for 7/16” total adjustment.

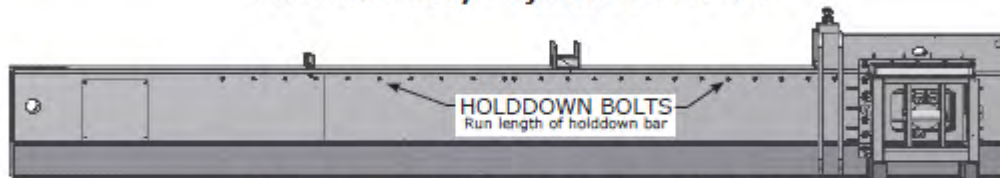
Adjust each holddown bar down so that it contacts the top of the ram through the complete ram travel path. From that position, the body shear blade should be adjusted (per the procedure described in **Body Shear Blade Adjustment**) so that it is 0.015” above the ram shear blade (0.015” above the bottom of the holddown bar). This prevents the ram shear blade from coming in contact with the body shear blade. After adjusting the holddown bars to the proper contact position on top of the ram, torque all holddown bolts to 250 ft/lb, lubricated\*.

Holddown bars are considered a wear item for this machine. They are manufactured so that when wear does occur, the holddown bar can be turned over and the other side used.

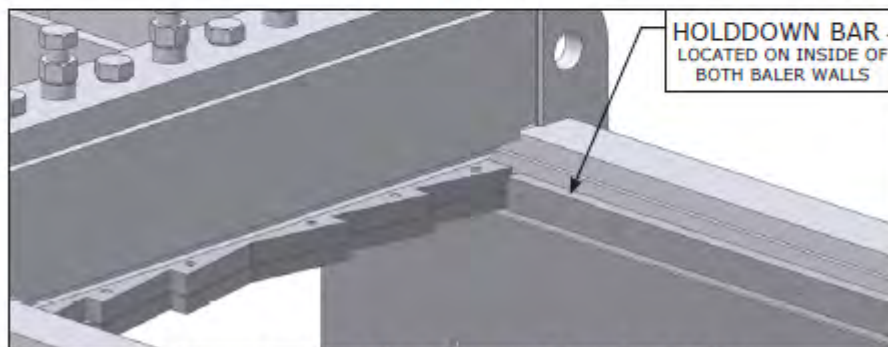
\*Torque values differ between dry and lubricated hardware. Lubricated implies that bolts are delivered with a light coat of oil. No further lubrication is required during adjustment.



**Main Ram Body - Ejector Side View**



**Main Ram Body - Opposite Side View**



**Close Up (Inside Charge Chamber) View**

### SHEAR BLADE MAINTENANCE

#### **⚠ DANGER**

Do not perform any maintenance to the ram shear blade or body shear blade until the disconnect switch has been locked-out and tagged-out per **Lock-Out/Tag-Out Instructions**.

#### **⚠ CAUTION**

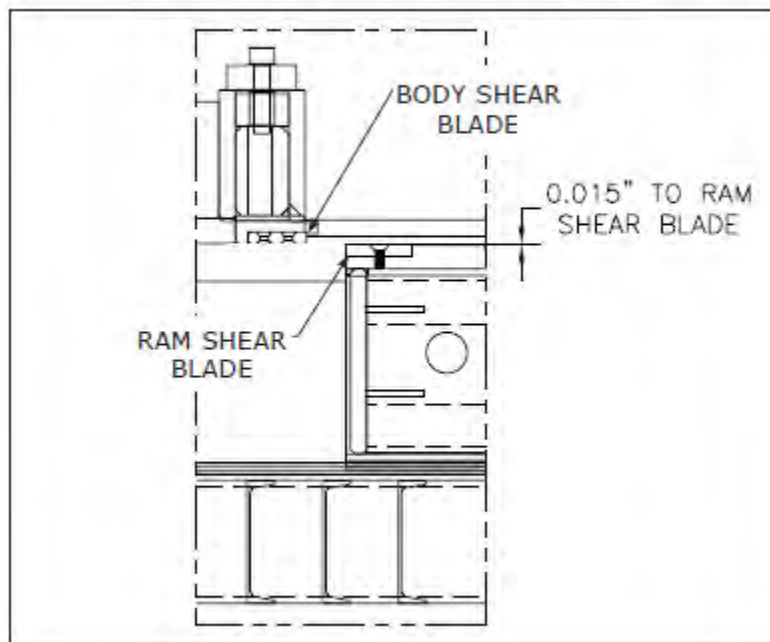
Do not perform any maintenance to the ram shear blade or body shear blade until the disconnect switch has been locked-out and tagged-out per **Lock-Out/Tag-Out Instructions**.

**Body Shear Blade** - As time passes, it is normal for the body shear blades and ram shear blades to need sharpening. Due to the hardness of the blades, it may be necessary to have them sharpened at a machine shop. During sharpening, remove only the least amount of material required to sharpen the cutting edges. All cutting edge faces should be flat and perpendicular to the top or bottom surface of the blades. For body shear blades, it is very important to maintain the original rake angle of the blades. When installing blades, all bolts should be coated with "Never-Seize" and torqued to 250 ft. lb.

#### **NOTICE**

For shear blade adjustment on all 2R-150, 190, and 250 models, contact the factory for a shim kit to shim the body shear blade down to the specified tolerance when the shear gap exceeds 0.015".

Maintain 0.015" clearance between ram shear blade and body shear blade.



Side View

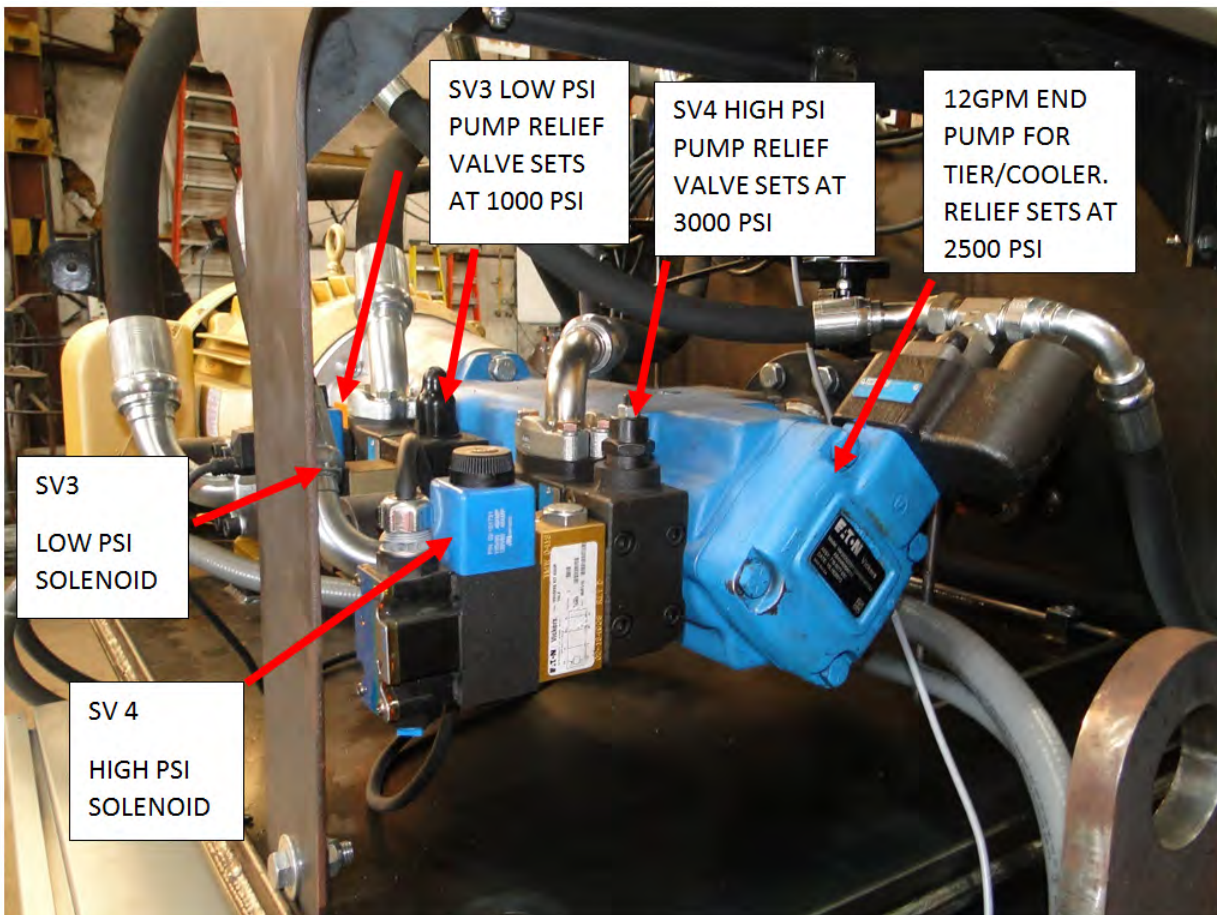
For procedure instruction see the **Body Shear Blade Adjustment**.

## **PRESSURE SETTING PROCEDURES**

### PRESSURE SETTINGS FOR 1 X 30 POWER UNITS

#### A. Pump Relief Valve Settings

1. Install 5000 psi pressure gauge in port GP.
2. Lower the pressure to the minimum setting on all relief valves SV3 and SV4 by turning the adjustment screws counter-clockwise.
3. Start the motor.
4. With the motor running, press in the manual actuator on low pressure pump solenoid SV3. Turn the relief valve adjustment screw on low pressure pump SV3 clockwise until the pressure reads 1000 psi on the gauge in port TPP. Tighten the locknut on the adjustment screw.
5. Press in the manual actuator on medium pressure pump, solenoid SV4. Turn the relief valve adjustment screw on medium pressure pump SV4 clockwise until the pressure reads 3000 psi on gauge in port TPP. Tighten the locknut on the adjustment screw.



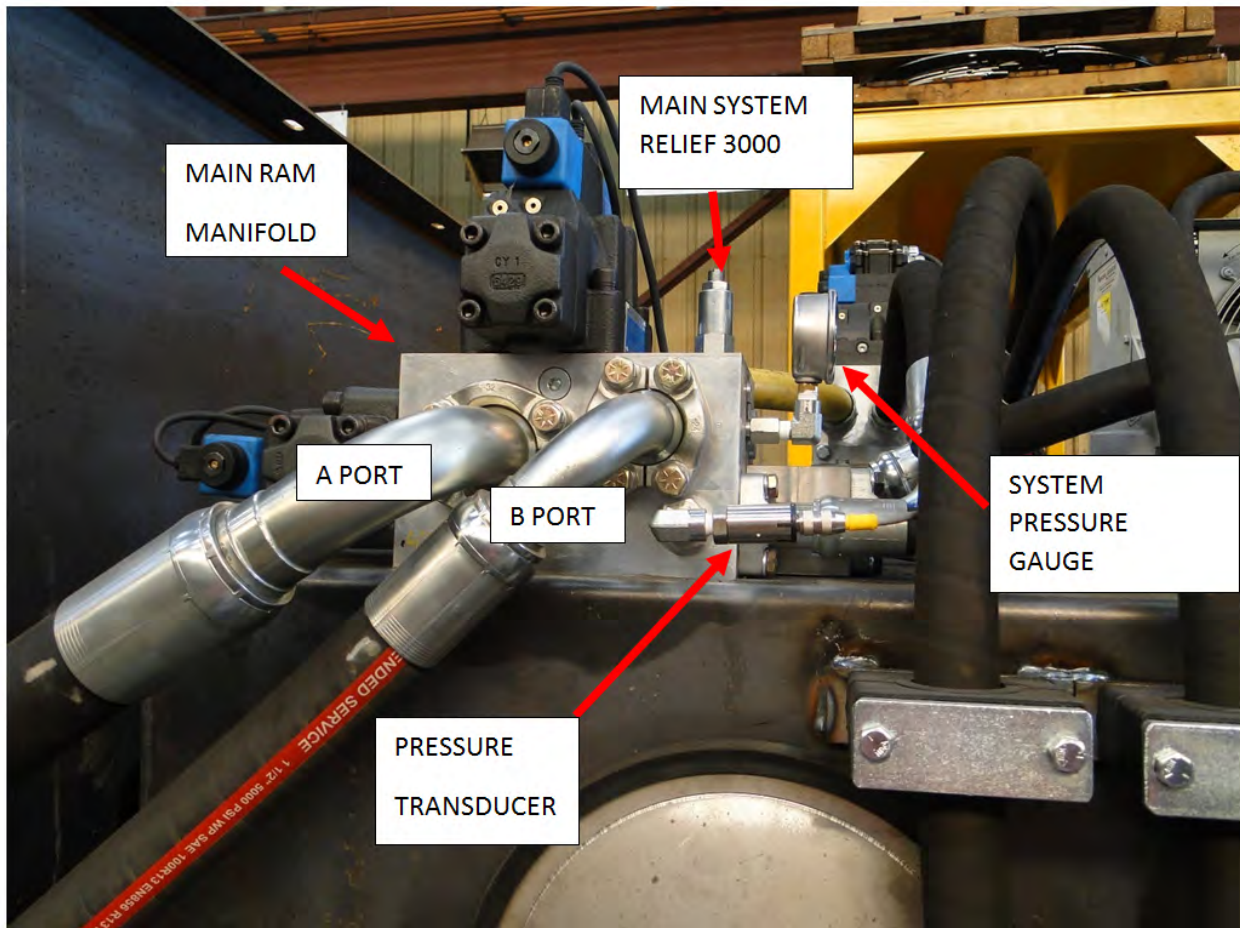
### PRESSURE SETTINGS FOR 1 X 30 POWER UNITS (CONTINUED)

#### B. Main Manifold Pressure Setting

#### NOTICE

This procedure requires two people.

1. Start the motor.
2. Retract the main ram fully.
3. Screw counter-clockwise on the System Relief. This cartridge valve is located on the main ram manifold.
4. Press and hold the manual actuator on high pressure pump SV4, at the same time press and hold the manual actuator on the Retract solenoid SV1B. The ram should be fully retracted.
5. Screw clockwise on the System Relief valve until Gauge reads 3000. Tighten all locknuts on relief valves once pressure is set.



### LASER SETTING PROCEDURE

1. With the ram retracted in Manual Mode, hold the red analog button until the Teach light illuminates.
2. Press the red analog button again and the Teach light should start blinking.
3. Fully extend the ram, then press the red analog button once or until the Teach light goes off.
4. The full stroke measurement should then register on the touch screen.
5. The yellow speed button (touch screen) should be set to "Fast".
6. Fully retract the ram. The measurement should be "0.6" or less.

### NOTICE

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Be sure the laser beam hits the reflector all the way out and back.

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### TROUBLESHOOTING CHART

#### **WARNING**

Only thoroughly trained and experienced service personnel should perform troubleshooting and maintenance on this baler. Do NOT enter the baler for any reason until it has been locked-out and tagged-out per the **Lock-Out & Tag-Out Instructions**.

#### **NOTICE**

In all events, check output fuses.

PROBLEM	CAUSE	SOLUTION
<b>MAIN MOTOR WILL NOT START/ RUN</b>	1. No incoming power.	1. Check main disconnect switch.
	2. No control circuit power.	2. Check primary and secondary fuses in motor control panel.
	3. Safety interlock switch.	3. Check for open hopper door.
	4. Emergency stop button depressed.	4. Check E-Stop buttons.
	5. Motor overload tripped.	5. Reset overload on motor starter. Check current load amps.
	6. Electrical system malfunction	6. Check electrical system.
	7. Programmable controller fault	7. Check fault lights on P.C. Make` sure PLC is in RUN mode.
<b>PUMP NOISE</b>	1. Oil level low.	1. Check oil level in tank. Add if necessary
	2. Air leakage in suction line.	2. Check suction line for leaks. Check pump shaft seal.
	3. Worn pump.	3. Repair or replace hydraulic pump.
<b>MAXIMUM HYDRAULIC PRESSURE NOT OBTAINABLE</b>	1. Pressure relief set too low.	1. Check relief valve pressure setting.
	2. Cylinder bypass.	2. Check for internal cylinder leak.
	3. Worn pump.	3. Repair or replace hydraulic pump.
	4. Check valve on unloading valve.	4. Repair or replace.
	5. Machine not shifting out of regen.	5. Cylinder rod relief set too low. Pressure switch or transducer malfunction.
<b>COMPRESSION RAM WILL NOT MOVE FORWARD</b>	1. Photocell malfunction.	1. Replace photocell.
	2. Compression cylinder rod puppet malfunction.	2. Retract ejector.
<b>COMPRESSION RAM WILL NOT RETRACT (AUTO/MANUAL)</b>	1. Foreign material jamming ram.	1. Check for foreign material wedging between ram and shear bar.
	2. Compression cylinder rod puppet malfunction.	2. Check solenoid valve. Check for plugged orifice.
	3. Compression cylinder rod end pressure puppet not opening.	3. Check solenoid valve. Make sure valve spool is shifting.
	4. Compression cylinder rod relief pressure set too	4. Reset pressure to correct setting.

# Galaxy 2R® Baler

## Service

### TROUBLESHOOTING CHART (CONTINUED)

PROBLEM	CAUSE	SOLUTION
	low.	
<b>EJECTOR WILL NOT MOVE FORWARD</b>	1. Compression ram not in HOME position.	1. Move to HOME position.
	2. Compression ram HOME position photocell malfunction.	2. Check for false signal. Replace photocell.
	3. Bale length counter malfunction.	3. Check for wheel rotation. Adjust proximity switch. Replace switch.
	4. Wire tie selector set on MANUAL.	4. Check controls.
	5. Ejector out limit switch malfunction.	5. Check limit switch arm adjustment. Replace limit switch.
	6. Ejector valve malfunction.	6. Check solenoid valve.
<b>EJECTOR WILL NOT MOVE FORWARD (MANUAL)</b>	1. Compression ram out of position.	1. Move ram to home or retracted position.
	2. Wire tie mechanism out of sequence.	2. Feed wire to Home position.
	3. Ejector valve malfunction.	3. Check solenoid valve. Make sure valve spool is shifting.
	4. Control lever malfunction.	4. Repair or replace control lever.
<b>EJECTOR WILL NOT RETRACT (AUTO/MANUAL)</b>	1. Ejector retracted limit switch malfunction.	1. Check limit switch arm adjustment. Replace limit switch.
	2. Ejector valve malfunction.	2. Check solenoid valve. Make sure valve spool is shifting.
	3. Control lever malfunction.	3. Repair or replace control lever.
<b>BALE FULLY EJECTS IN AUTOMATIC CYCLE</b>	1. Ejector out limit switch malfunction.	1. Check limit switch arm adjustment. Replace limit switch.
<b>COOLER/FILTER PUMP WILL NOT START/RUN</b>	1. Motor overload tripped.	1. Reset overload on motor starter. Check current load amps.
	2. Cooler/filter pump fuses.	2. Replace blown fuses.
	3. Electrical circuit malfunction	3. Perform electrical system check.

## **SCHEMATICS**



**INTENTIONALLY LEFT BLANK**

# **SECTION 5**

# **REPLACEMENT PARTS**

**CONTACT INFORMATION**



Technical Service and Warranty:

**877-258-1105**

Parts:

**800-528-5308**

For parts visit our eCommerce Marketplace at [www.mecomerchant.com](http://www.mecomerchant.com).

If you do not have a user name and password, contact our Parts Department and they will assist with your registration.

Normal Business Hours:

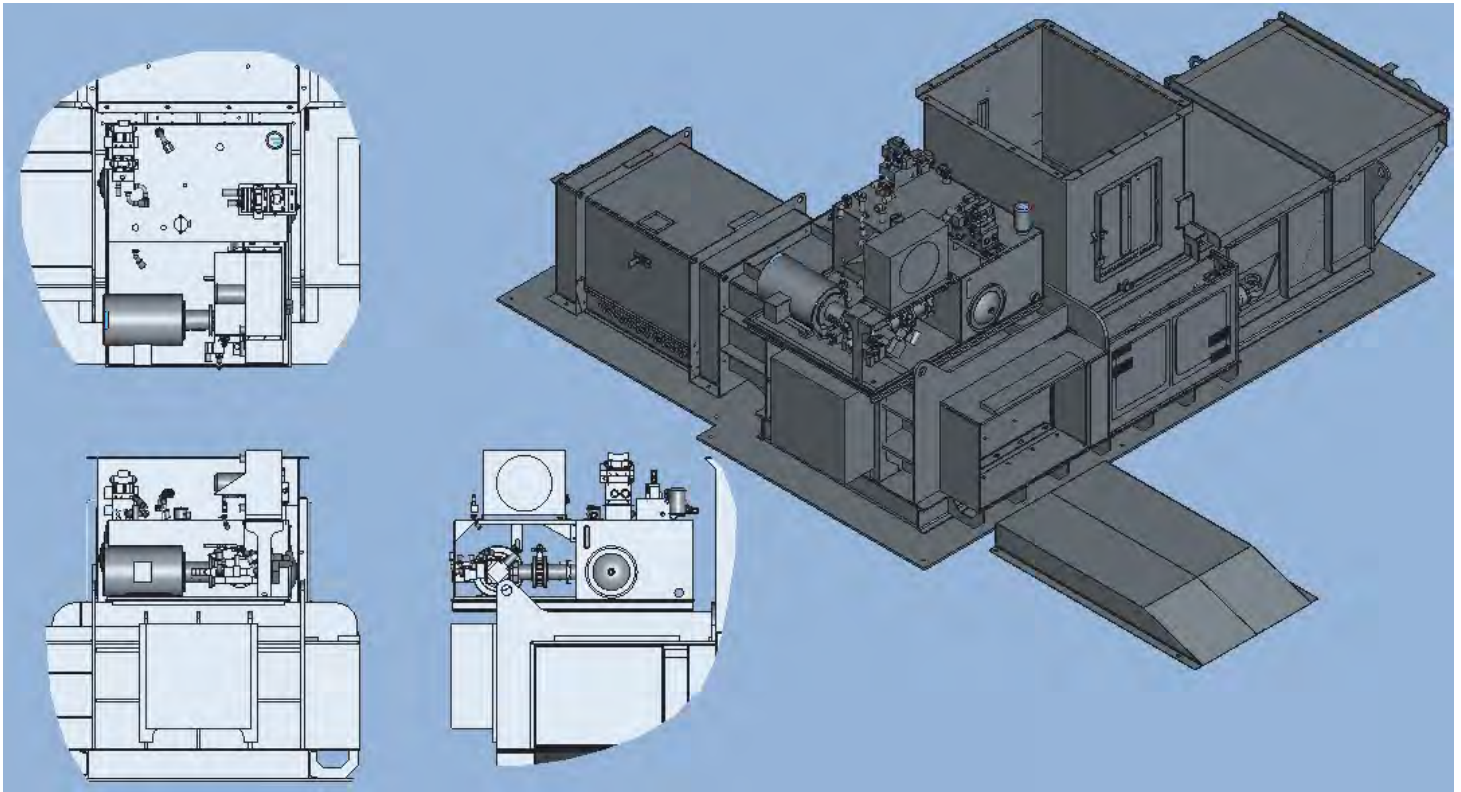
Monday-Friday            8:00am - 5:00pm

(Central Standard Time)

# Galaxy 2R<sup>®</sup> Baler

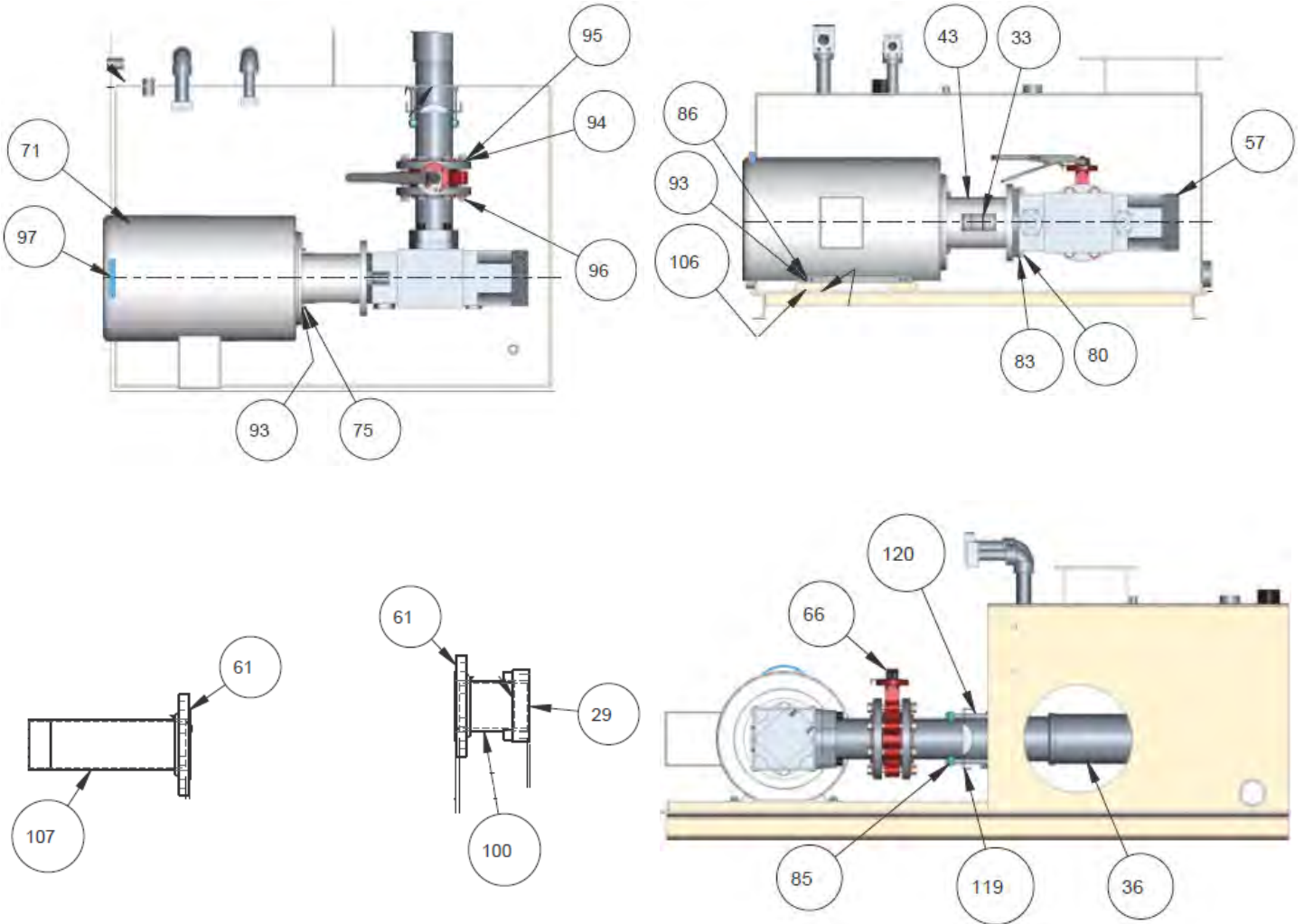
## Replacement Parts

### POWER UNIT DRAWING



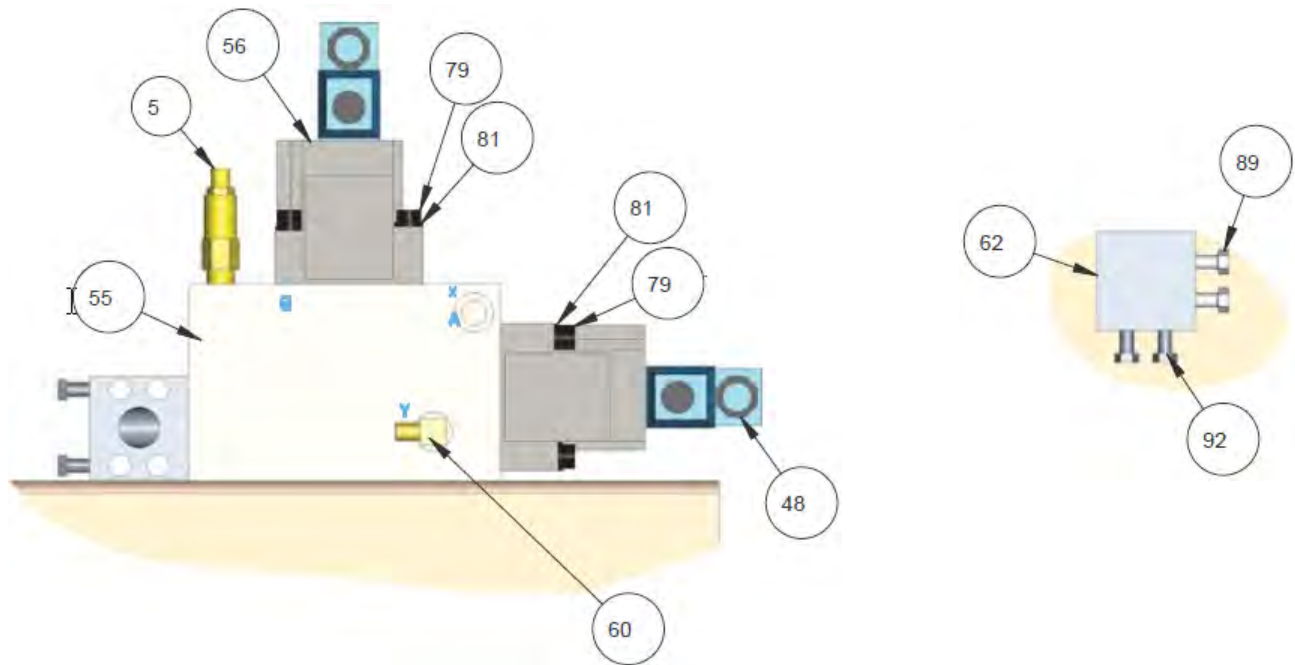
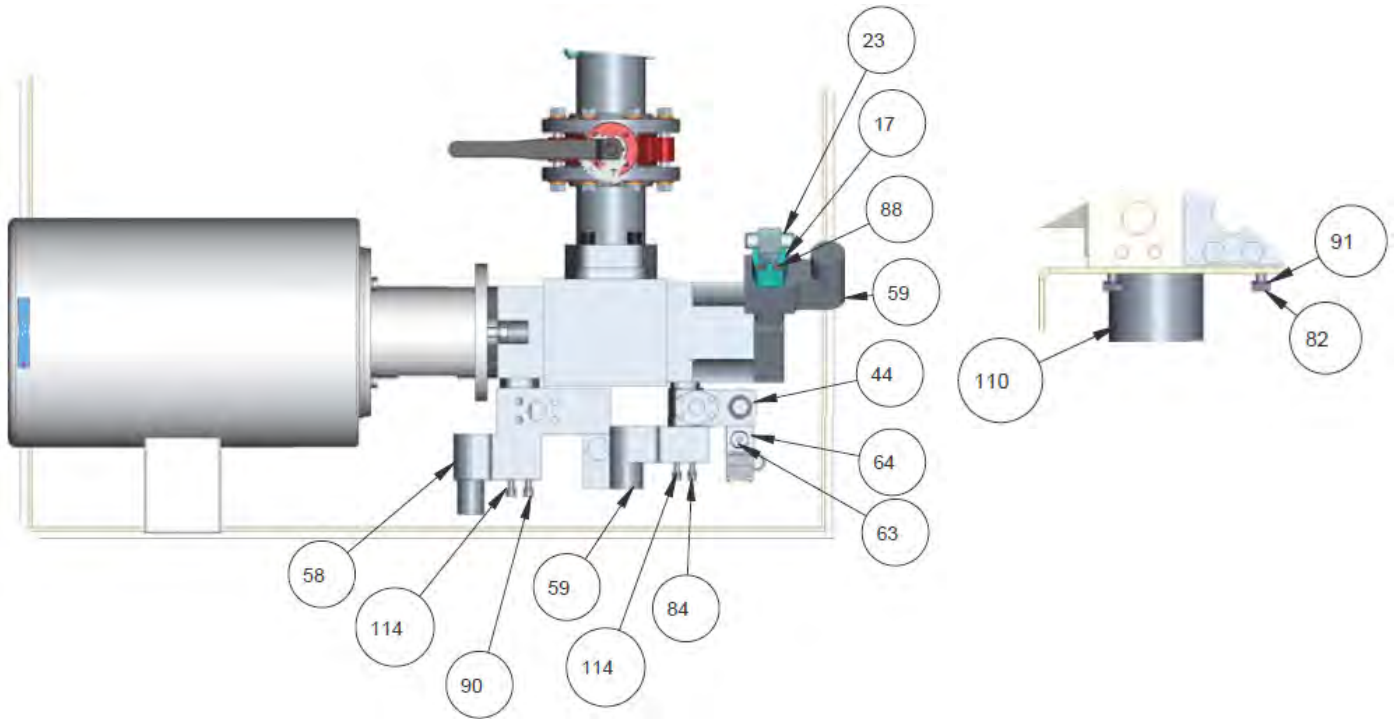
# Galaxy 2R<sup>®</sup> Baler

## Replacement Parts



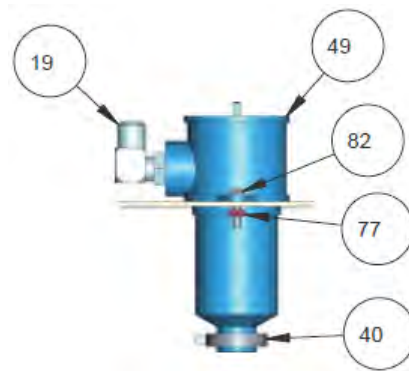
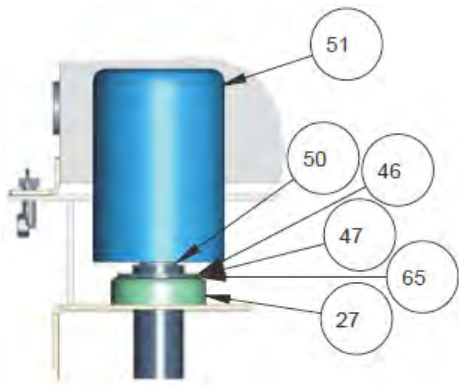
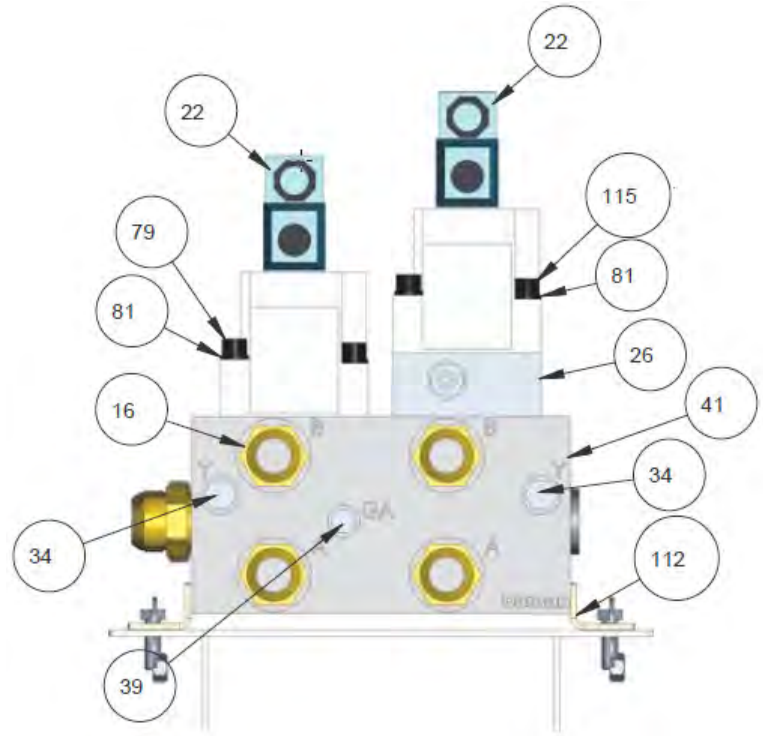
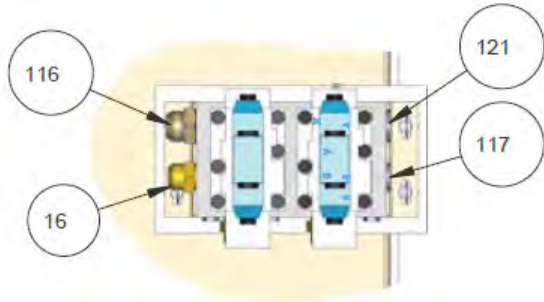
# Galaxy 2R<sup>®</sup> Baler

## Replacement Parts



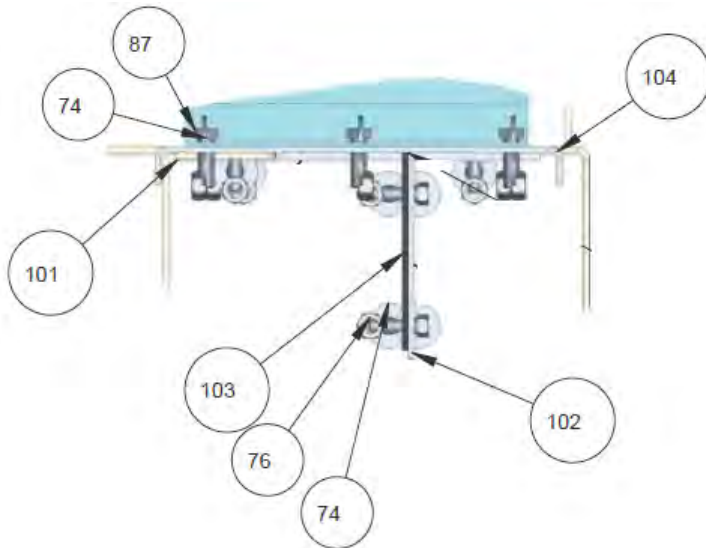
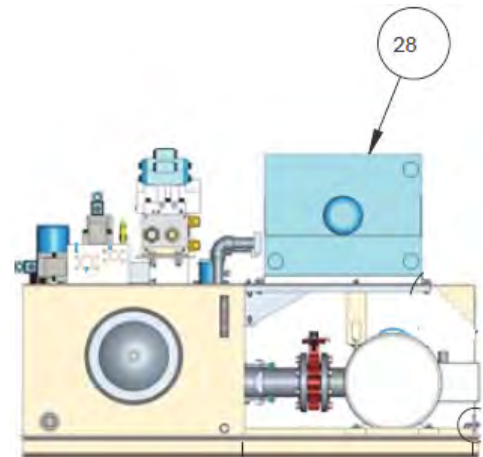
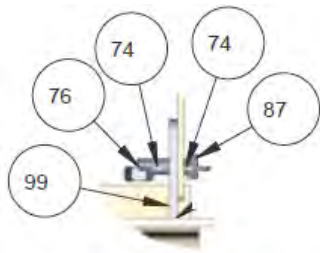
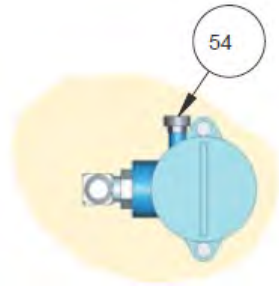
# Galaxy 2R<sup>®</sup> Baler

## Replacement Parts



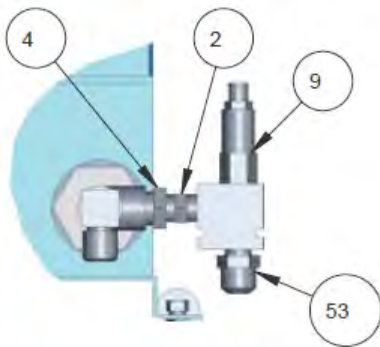
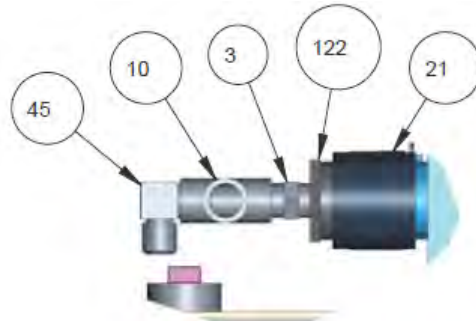
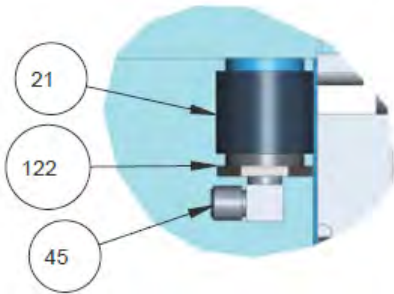
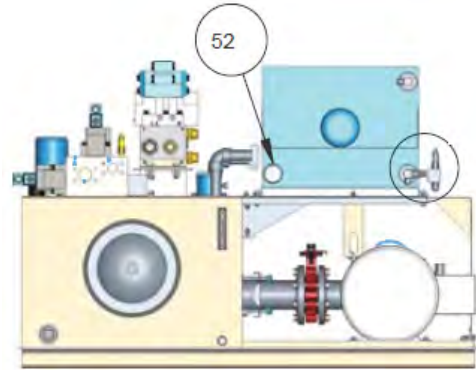
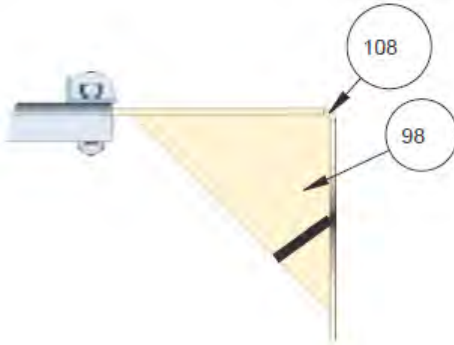
# Galaxy 2R® Baler

## Replacement Parts



# Galaxy 2R<sup>®</sup> Baler

## Replacement Parts



# Galaxy 2R® Baler

## Replacement Parts

<b>BODY LINER REPLACEMENT PARTS LIST</b>		
Item Number	DESCRIPTION	QTY
35-6100	3/8 500F PL X 59 1/2 X 142	1
35-5487	3/8 500F PL X 12 1/16 X 35 1/2	1
35-6101	3/8 X 3 X 43 1/8 400F BAR	1
35-6103	3/8 500F PL X 12 3/16 X 102	1
35-5489	3/8 500F PL X 36 1/16 X 70	1
35-6116	3/8 X 3 X 36 1/16 400F BAR	1
35-6118	3/8 500F PL X 12 3/16 X 51	1
35-6107	1/4 500F PL X 25 1/2 X 143 1/8	1
35-6108	1/4 500F PL X 25 1/2 X 149 3/4	1

<b>RAM LINER REPLACEMENT PARTS LIST</b>		
35-6175	3/8 500F PL X 43 1/4 X 59 1/8	1
35-6188	3/8 X 2 X 38 400F BAR SQ CUT	2
35-6193	3/8 X 2 X 44 5/8 400F BAR SQ CUT	2
466569	HOLD DOWN BAR	2
459229	BODY SHEAR BLADE	1
459184	RAM SHEAR BLADE	1
459742	WIPER BLADE	1

<b>EJECTOR LINER REPLACEMENT PARTS LIST</b>		
35-6554	1/2 500F PL X 6 X 74 SQ CUT	2
35-6543	1/4 X 4 X 35 7/8 400F BAR SQ CUT	1
35-6544	1/4 X 4 X 91 1/4 400F BAR SQ CUT	1
35-6117	1/4 X 4 X 49 3/4 400F BAR SQ CUT	1

<b>BALEDOOR LINER REPLACEMENT PARTS LIST</b>		
35-6133	3/8 X 2 X 58 1/8 400F BAR	1
35-6136	3/8 X 2 X 10 1/8 400F BAR	2
35-6129	1/4 500F PL X 28 9/16 X 56 5/8	1
35-6293	1/4 X 2 X 50 1/2 400F BAR SQ CUT	2
39-1067	3/8 X 2 X 52 400F BAR	1
39-1068	3/8 500F PL X 2 X 3 3/8	1

# Galaxy 2R<sup>®</sup> Baler

## Replacement Parts

<b>POWER UNIT REFERENCE NUMBERS</b>			
<b>Item Number</b>	<b>Description</b>	<b>Quantity</b>	<b>Bubble Seq No</b>
020031	ELL 3/8 NPTM X 3/8 NPTF 90	1	1
020036	NIPPLE 1/2 NPT	1	2
020048	NIPPLE 3/4 NPT	1	3
020132	ADAPTER 1/2 NPTF X 3/4 NPTM	1	4
020214	VALVE RELIEF 20 GPM CART PILOT	1	5
020215	GAUGE SIGHT LEVEL 5 INCH	2	6
020254	PLUG 2 NPT SQ HD	2	7
020281	COUPLING 1/4 NPTF 3/8 NPTF	1	8
020300	VALVE RELIEF 1/2 NPTF 20 GPM P	1	9
020310	TEE 3/4 NPTF	1	10
020316	PLUG 3/4 NPT	1	11
020331	HOSE END 3/8 WB X 3/8 NPTM SWV	1	12
020606	TUBING END 3/8 X 6 ORM 90	1	13
020607	TUBING END 3/8 X 6 ORM	1	14
020612	CLAMP TUBE 3/8 WELD	4	15
020614	ADAPTER 20 ORM X 20 JICM	5	16
020634	FLANGE C61 1 X #12 O-RING	1	17
020663	FLANGE C61 1 1/4 SPLIT W/ BOLT	5	18
020697	ELL 12 ORM X 12 JICM	1	19
020698	HOSE END 3/4 WB X 12 JICF	2	20
020805	COUPLING 2 SCH 40	2	21
020817	VALVE 4-WAY 08 C 3-POS IN P & D	2	22
020822	TEE 12 JICM X 12 ORM BRANCH	1	23
020823	CLEAN OUT COVER 14	2	24
020824	CLEAN OUT COVER MNTG BRKT REMO	2	25
020850	VALVE RELIEF SANDWICH 08 WORKI	1	26
020856	BREATHER WELD RISER F/02-0647	1	27
020863	OIL COOLER AIR 208-230/460 AOC	1	28
020872	FLANGE C61 4 WELD 500 PSI	1	29
020878	FLANGE C61 1 SPLIT W/BOLTS	4	30
020879	HOSE END 1 WB X 1 C61 SPT 90	3	31
020908	HOSE END 1 WB X 1 C61 SPT	1	32
020932	HUB COUPLING 1 1/4-5/16 X 1 7/	1	33

# Galaxy 2R® Baler

## Replacement Parts

<b>POWER UNIT REFERENCE NUMBERS</b>			
<b>Item Number</b>	<b>Description</b>	<b>Quantity</b>	<b>Bubble Seq No</b>
020946	PLUG 8 ORM	2	34
021046	HOSE END 1 1/4 WB X 20 JICF 30	1	35
021053	FILTER SUCTION 4 200GPM	1	36
021090	HOSE END 1 1/2 WB X 24 JICF	1	37
021098	HOSE END 1 1/4 WB X 1 1/4 C61	3	38
022010	PLUG 6 ORM	1	39
022258	CLAMP F/1 1/2 ID HOSE BARB FIT	1	40
023050	SUBPLATE 08 2 STN P 20 ORF	1	41
023780	HOSE END 3/8 2WB X 6 JICF SWV	1	42
024043	ADAPTER PUMP/MTR SAE C 2B X 28	1	43
024047	VALVE RELIEF 1 F61 3000 PSI W/	1	44
024155	ELL 3/4 NPTM X 12 JICM 90	2	45
024253	FILTER BREATHER BAYONET FLANGE	1	46
024254	FILTER BREATHER BASKET 2 INCH	1	47
024322	VALVE 4-WAY 08 C 3-POS EXT P &	1	48
024324	FILTER RETURN 12 ORM 6 MICRON	1	49
024328	FILTER BREATHER BAYONET ADAPTE	1	50
024330	FILTER BREATHER SPIN ON VICKER	1	51
024331	CAP 2 NPT SCH 40	1	52
024340	ADAPTER 1/2 NPTM X 12 JICM	1	53
024343	FILTER INDICATOR GAUGE 1/8 NPT	1	54
024404	SUBPLATE 08 2 STN REGEN 75 GPM	1	55
024406	VALVE 4-WAY 08 A TO T 3-POS EX	1	56
024407	PUMP 12 18 53 GPM VANE VICKERS	1	57
024409	VALVE UNLOADING 1 1/4 W/ SOLEN	1	58
024410	VALVE CHECK 1 1/4 CODE 61 FLAN	2	59
024411	ELL 6 ORM X 6 JICM	1	60
024427	FLANGE RING 4" ANSI 150	2	61
024619	TEE 1 1/4 F61 O-RING RUN INSER	1	62
024670	VALVE CHECK 16 GPM CART 65 PSI	1	63
024671	VALVE CHECK 03 SANDWICH BODY F	1	64
024785	FILTER BREATHER 2 INCH GASKET	1	65
024943	VALVE BUTTERFLY 4 LUG TYPE SUC	1	66

# Galaxy 2R® Baler

## Replacement Parts

<b>POWER UNIT REFERENCE NUMBERS</b>			
<b>Item Number</b>	<b>Description</b>	<b>Quantity</b>	<b>Bubble Seq No</b>
025333	ADAPTER 1 1/2 NPTM X 24 JICM	1	67
026237	HOSE END 1 1/2 WB X 24 JICF 90	1	68
026265	HOSE END 3/4 WB X 12 JICF 45	2	69
030437	SWITCH OIL LEVEL & TEMP CLOSED	1	70
031179	MOTOR 30 HP 1760 208-230/460V2	1	71
033689	SWITCH LEVEL PLUG ADAPTER 1 1/	1	72
050015	NUT 3/8-16 HEX SELF LOCKING	4	73
050052	WASHER 1/2 FLAT ZNC	30	74
050061	BOLT 1/2- 13 X 1 1/4 HHCS GR 2	4	75
050075	NUT 1/2-13 HEX SELF-LOCKING	15	76
050105	NUT 5/16-18 HEX SELF-LOCKING	2	77
050155	BOLT 3/8-16 X 3/4 HHCS ZINC	4	78
050199	BOLT 1/2- 13 X 2 1/2 SHCS	18	79
050338	BOLT 5/8 X 1 1/2 HHCS ZINC GR	2	80
050521	WASHER 1/2 LOCK GRADE 8 HI-COL	24	81
050549	BOLT 5/16-18 X 1 1/4 HHCS GR 5	6	82
050561	WASHER 5/8 LOCK	2	83
052185	BOLT 3/8-16 X 6 SHCS GR 8	4	84
052301	NUT 5/8-11 SELF LOCKING	4	85
052566	BOLT 1/2-13 X 1 HHCS GR2 ZC	4	86
052609	BOLT 1/2-13 X 1 1/2 HHCS GR 5	15	87
053193	BOLT 3/8-16 X 3 3/4 SHCS GR 8	4	88
053436	BOLT 7/16-14 X 1 1/4 HHCS GR	4	89
053644	BOLT 7/16-14 X 7 1/2 SHCS GR 8	4	90
052001	WASHER 5/16 LOCK	4	91
054570	BOLT 7/16-14 X 4 1/2 HEX HD GR	4	92
055156	WASHER 1/2 LOCK ZINC PLT FSTNL	8	93
055176	WASHER 5/8 FLAT GR 5 ZINC	16	94
055177	WASHER 5/8 LOCK GR 5 ZINC	16	95
055182	BOLT 5/8-11 X 2 X HEX HD GRD 5	16	96
060011	DECAL MOTOR ROTATION 3/4 X 4	1	97
221270	7 GA X 6 X 6 (1=2)	1	98
286694	1/4 PL X 3 X 3	1	99

# Galaxy 2R® Baler

## Replacement Parts

<b>POWER UNIT REFERENCE NUMBERS</b>			
<b>Item Number</b>	<b>Description</b>	<b>Quantity</b>	<b>Bubble Seq No</b>
288762	PIPE 4 SCH 40 X 6	1	100
288951	1/4 PL X 1 3/4 X 11	1	101
288952	7 GA X 2 X 6	1	102
288953	7 GA X 6 3/4 X 12 (1=2)	1	103
288963	7 GA X 14 X 28 1/4	1	104
354337	PIPE 3/8 SCH 40 X 6 THRD BOTH	1	105
356663	1 x 3 x 3 BAR	4	106
356681	PIPE 4 SCH 40 X 14	1	107
356857	7 GA X 11 X 30 1/8	1	108
356902	PIPE 3/8 SCH 40 A500 X 18	1	109
356903	PIPE 2 1/2 SCH 40 X 19	1	110
356904	PIPE 1 1/2 SCH 40 X 18	1	111
356929	7 GA X 3 X 7	2	112
357441	7 GA A36 X 3 X 12 1/8	1	113
990676	WASHER 7/16 HI-COLLAR LOCKING	8	114
996220	BOLT 1/2 -13 X 4 1/2 SHCS	6	115
996538	ADAPTER 24 ORM X 24 JICM	1	116
996576	PLUG 20 ORM SOCKET HD	1	117
996929	HOSE END 1 1/4 WB X 1 1/4 F61S	2	118
997152	COUPLING 4 DRESSER 4 BOLT X 5	1	119
997235	BOLT 5/8-11 X 4 1/2 HHCS GR 5	4	120
997244	PLUG 24 ORM SOCKET HD	1	121
997783	ADAPTER 3/4 NPTF X 2 NPTM SCH8	2	122
023725	TUBING STEEL 3/8 x .083 x 240t	1	
020335	HOSE 1 1/4 WIRE BRAID 5000	11	
020880	HOSE 1 WB 4000PSI	9	
023606	HOSE 1 1/2 WB 1000 PSI YELLOW	2	
020333	HOSE 3/8 WB (TWO) 2500 PSI	1.25	
020327	HOSE 3/4 2 WB 3100 PSI	4.5	


# Galaxy 2R<sup>®</sup> Baler

## Replacement Parts


### DECAL PARTS LISTS

#### Warning Decal Requirements

When your baler leaves the factory, several WARNING DECALS are installed for your protection. These labels are subject to wear and abuse due to the nature of the baling operation. The following decals must be maintained. Additional decals may be purchased through your distributor or from Marathon Equipment Company by calling the service department at 877-258-1105.

Refer to the following **Body Decal Placement**  for locations of decals (match the reference numbers).

<b>Body Decal Parts List</b>			
REF NO.	PART NO.	DESCRIPTION	QTY
1	06-2751	MARATHON COMPACTION & RECYCLING SOLUTIONS	4
2	06-1839	AMERICAN FLAG	4
3	06-0097	CONTAINER SERIAL NUMBER PLT N	4
4	06-0120	DANGER DISCONNECT & LOCK	1
5	06-0249	DANGER HAZARDOUS VOLTAGE	17
6	06-0121	NOTICE FEDERAL REGULATIONS	2
7	06-0117	WARNING STAND CLEAR WHEN BALE	1
9	06-0133	WARNING STAY OFF. DO NOT CLIMB	2
12	06-0116	DANGER KEEP HANDS OUT	2
16	06-0038	DANGER DO NOT REMOVE ACCESS	16
18	06-3051	GALAXY 2R	2
26	06-3977	WARNING DO NOT OPERATE	2
27	06-3978	DANGER DO NOT OVERRIDE	2
28	06-4011	MAINTENANCE SCHEDULE 7.3	1

Refer to the following **Standard Hopper Decal Placement**  for locations of decals (match the reference numbers).

<b>Standard Hopper Decal Parts List</b>			
REF NO.	PART NO.	DESCRIPTION	QTY
1	06-0039	DANGER DO NOT ENTER	6
2	06-0041	DANGER THIS MACHINE START	2
3	06-0116	DANGER KEEP HAND OUT	1
4	06-0249	DANGER HAZARDOUS VOLTAGE	2
5	06-3123	DANGER CONFINED SPACE	4

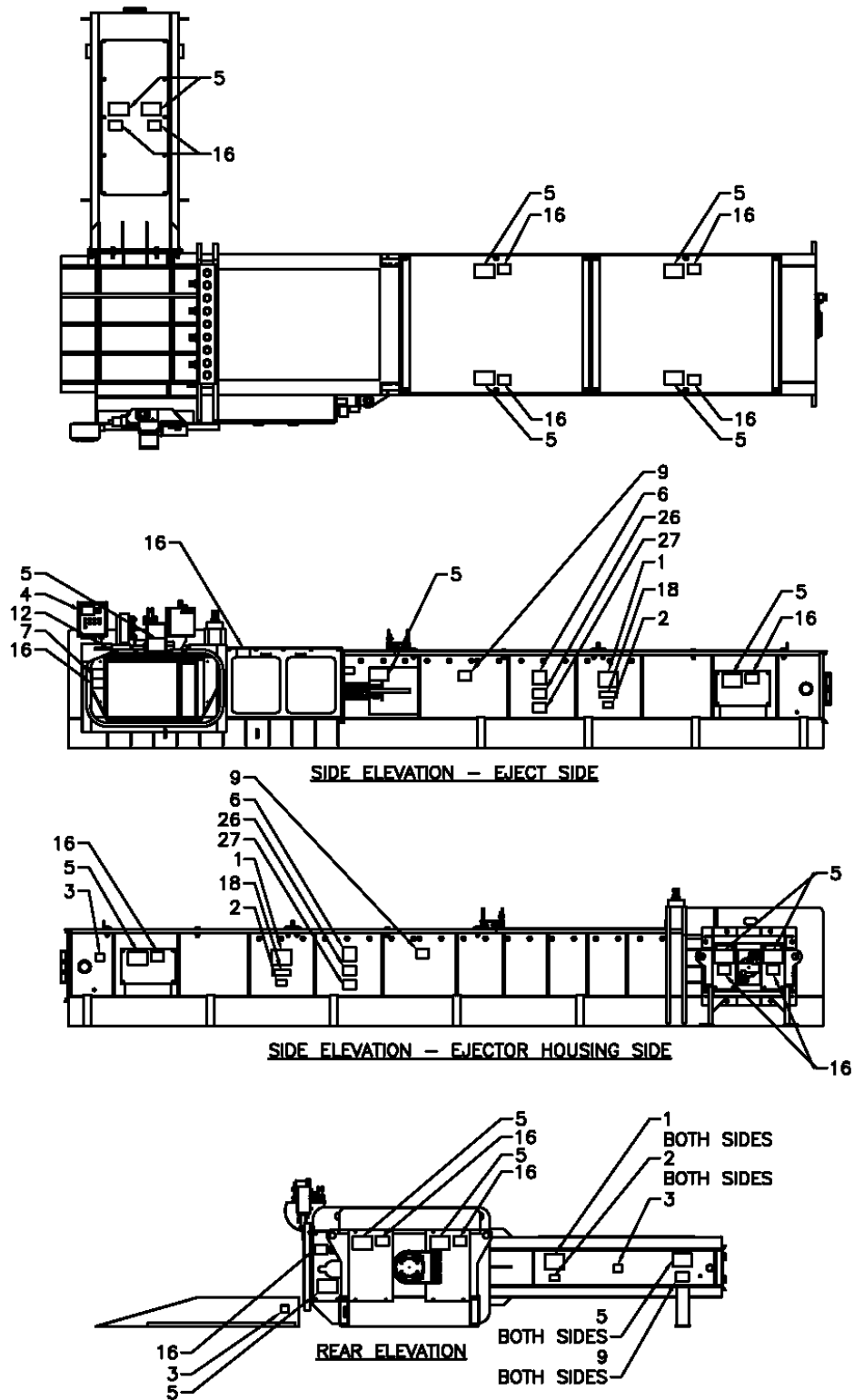
Refer to the following **Hand Feed Hopper Decal Placement** for locations of decals (match the reference numbers).

<b>Hand Feed Hopper Decal Parts List</b>			
REF NO.	PART NO.	DESCRIPTION	QTY
1	06-0039	DANGER DO NOT ENTER	2

# Galaxy 2R<sup>®</sup> Baler

## Replacement Parts

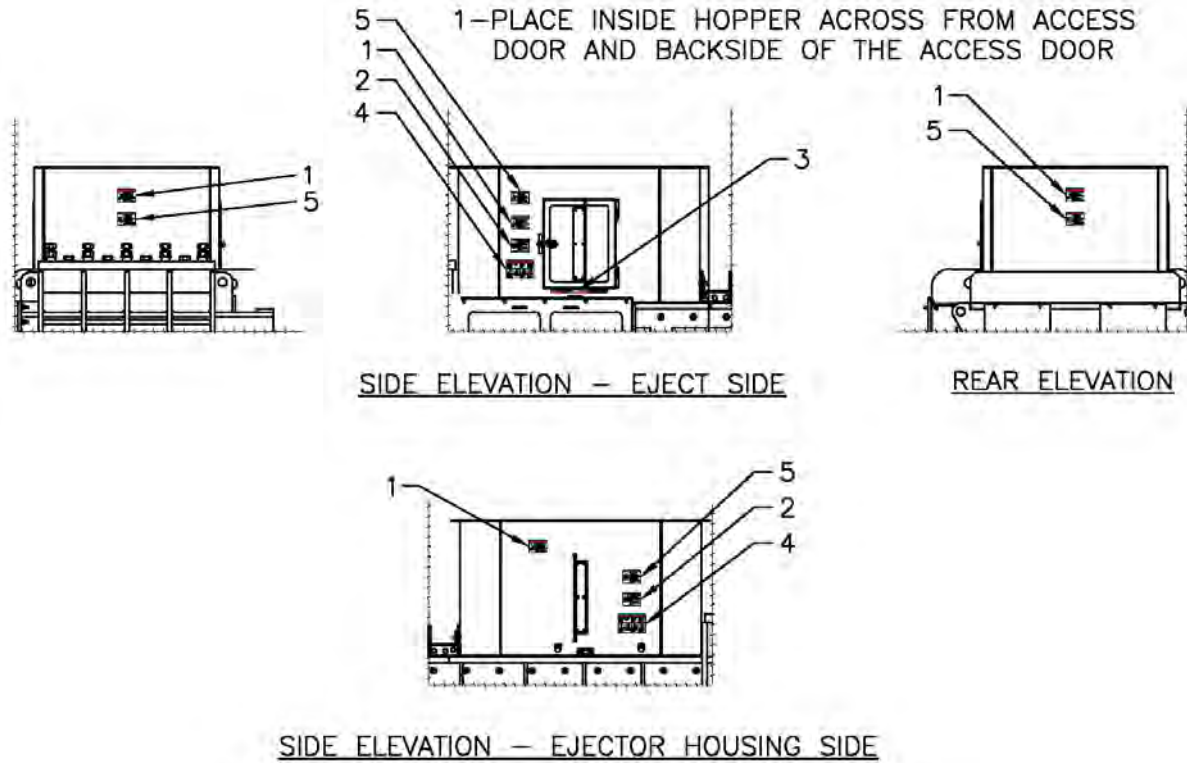
### BODY DECAL PLACEMENT



# Galaxy 2R<sup>®</sup> Baler

## Replacement Parts

### STANDARD HOPPER DECAL PLACEMENT



# Galaxy 2R<sup>®</sup> Baler Replacement Parts

## DECAL IMAGES

06-0116



06-0038



06-0039



06-0041



06-3123



06-0117



06-0120



06-0133



06-0249



06-3044



# Galaxy 2R® Baler Replacement Parts

## DECAL IMAGES (CONTINUED)

06-0121

NOTICE	AVISO
<ul style="list-style-type: none"> <li>Federal law prohibits operation of equipment by persons under 18 years of age.</li> <li>Machine may only be loaded and operated by persons who have been authorized and properly trained.</li> <li>U.S. Department of Labor age restrictions apply.</li> <li>The key in the "ON-OFF" switch must be turned to the "OFF" position and removed when this equipment is NOT in operation. The key is to remain in the custody of persons 18 years and older.</li> </ul>	<ul style="list-style-type: none"> <li>Las leyes federales prohíben que personas menores de 18 años de edad operen los equipos.</li> <li>Las personas que han sido autorizadas y debidamente entrenadas son las únicas que pueden cargar y operar la máquina.</li> <li>Sujeta a las restricciones de edad del Departamento del Trabajo de Estados Unidos.</li> <li>La llave en el interruptor "ON-OFF" (ENCENDIDO/APAGADO) se debe girar a la posición "OFF" (APAGADO) y retirarla cuando este equipo no está en funcionamiento. La llave debe permanecer bajo el cuidado de personas mayores de 18 años.</li> </ul>

06-0129

**CAUTION**

Periodic maintenance is required and is your responsibility.  
For operating instructions call: 1-800-633-8974  
For service call: \_\_\_\_\_

**ATTENTION**

Se requiere mantenimiento periódico y es responsabilidad del usuario.  
Para las instrucciones de uso llamar al: 1-800-633-8974  
Para servicio llamar al: \_\_\_\_\_

06-0097



**MARATHON**

VERNON, AL - PHOENIX, AZ  
1-800-633-8974

MODEL \_\_\_\_\_

SERIAL # \_\_\_\_\_

DATE OF MFG \_\_\_\_\_

MANUFACTURED IN ACCORDANCE WITH ANSI STANDARDS  
IN EFFECT AT DATE OF MANUFACTURE

MADE IN USA 06-0097

06-2751

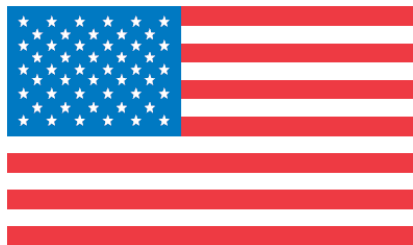


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06-1839




06-3051

**GALAXY2R**

TWO RAM BALERS

06-3051

06-0250

	<b>⚠ DANGER</b>	<b>⚠ PELIGRO</b>
Lock out and tag out power before entering or servicing. Follow established lock-out and tag-out procedures. Failure to comply will result in death or serious injury.	Bloquear y rotular la energía eléctrica antes de hacer reparaciones o de entrar a la máquina. Seguir los procedimientos establecidos de bloqueo y rotulado. Si no se cumple con esta disposición, se causará la muerte o lesiones graves.	

06-3274



	<b>⚠ WARNING</b>
<b>ARC FLASH HAZARD!</b> Follow requirements in NFPA 70E for safe work practices and appropriate PPE. Failure to comply could result in death or serious injury.	
<b>⚠ ADVERTENCIA</b>	
<b>RIESGO DE FORMACION DE ARCOS ELECTRICOS!</b> Seguir los requisitos de la norma NFPA 70E en cuanto a prácticas seguras de trabajo y equipos de protección personal adecuados. Si no se cumple con esta disposición, se puede causar la muerte o lesiones graves.	

06-3977

<b>⚠ WARNING</b>	<b>⚠ ADVERTENCIA</b>
	Do not operate or service this equipment until you have been properly trained and qualified in its use, per the manufacturers operation and service manual. Failure to do so could lead to death or serious injury. No utilice este equipo ni le preste servicio hasta que no haya sido debidamente entrenado y calificado para su uso, según el manual de funcionamiento y servicio del fabricante. El incumplimiento de esta norma podría resultar en la muerte o lesiones graves.

DO NOT PRINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST. NO PINTE ENCIMA DE ESTA ETIQUETA. REEMPLÁCELA SI SE DAÑA O SE PIERDE.

06-3976

<b>⚠ WARNING</b>	<b>⚠ ADVERTENCIA</b>
	Potential shock and arc flash hazards Follow all requirements in NFPA 70 E for safe work practices and for personal protective equipment. Failure to comply could result in death or serious injury. Posibles riesgos de descargas y destellos de arco. Acate todos los requisitos de la norma NFPA 70 E para prácticas de trabajos seguras y equipo de protección individual. El incumplimiento de esta norma podría resultar en la muerte o lesiones graves.
	

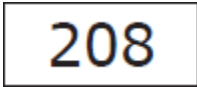
06-3978

<b>⚠ DANGER</b>	<b>⚠ PELIGRO</b>
DO NOT override or tamper with safety devices. They are installed for your safety. Failure to comply will result in death or serious injury.	NO sobrepase ni altere los dispositivos de seguridad. Se han instalado para su seguridad. El incumplimiento de esta norma podría resultar en la muerte o lesiones graves.

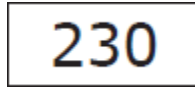
DO NOT PRINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST. NO PINTE ENCIMA DE ESTA ETIQUETA. REEMPLÁCELA SI SE DAÑA O SE PIERDE.

### DECAL IMAGES (CONTINUED)

06-2684



06-2686



06-2690



06-4011

# MARATHON 2RAM BALERS MAINTENANCE SCHEDULE

## NOTICE

- ALWAYS LOCK-OUT AND TAG-OUT BALER BEFORE ATTEMPTING ANY MAINTENANCE OR REPAIR
- NEVER OPERATE BALER WITH ANY GUARD OR INTERLOCK MISSING OR INOPERABLE
- ONLY AUTHORIZED PERSONNEL SHOULD PERFORM THESE PROCEDURES
- USE PROPER SAFETY EQUIPMENT WHILE SERVICING BALER

### EVERY 10 HOURS OF OPERATION:

1. Verify ALL guards are in place and secured.
2. Check for oil leaks.
3. Check oil level and temperature in hydraulic reservoir. Note: Maintain oil level above 3/4 full (in sight gauge). Oil level should be checked with main ram and ejector ram in retracted position. Oil temperature should be below 160°F.
4. Check all remote Emergency Stop locations. Note: Emergency Stops should not be obstructed, damaged, or depressed.
5. Make sure operator's platform and access steps (if so equipped) are free from hazards that could cause an accident.
6. Make sure there is an adequate supply of wire in wire tie strapper, and wire is correct gauge for tyer.
7. Clean lenses of photocells, sonic sensors, lasers and reflectors. Note: In a dusty application, it may be necessary to clean these devices and reflectors several times a day.
8. Clean radiator on oil cooler.
9. Oil wire tyer. Note: Under certain conditions it may be necessary to oil the wire tyer more often.

### ADDITIONALLY EVERY 50 HOURS OF OPERATION:

1. Clean around power pack and baler to remove operator hazards.
2. Check function of all emergency stop buttons and interlock switches.
3. Check start-up alarm and flashing beacon. Clean light if required.

### ADDITIONALLY EVERY 200 HOURS OF OPERATION:

1. Check function of all controls (i.e. lights, switches, joysticks etc.).
2. Check all hoses for chaffing, rubbing, leaking or other deterioration and damage.
3. Inspect air filter on hydraulic reservoir. Clean or replace if necessary.
4. Check cylinder pins and make sure they are secure.
5. Check shear blade on compression ram and baler body for sharpness, clearance (not to exceed .015"), and overall wear. Shim, rotate, or replace if necessary. The gap between the ram and body shear blades should be .015". The tolerance is +.005" and -.000".
6. Check hold-down bars for wear. Adjust if necessary. Tighten bolts. Rotate or replace hold-down bars if necessary. The bottom of the hold-down bars should be flush with the top of the ram.
7. Apply a light coating of all-purpose grease on hold down bars to prevent excessive wear.
8. Check seals on all cylinders for leaks.
9. After first 200 hours of operation replace return line/circulating pump filter. Thereafter, this filter maintenance interval will be extended to 500 hours.
10. Clean any debris, dust or grime from wire tyer gears and tracks. Note: In dusty conditions, it may be necessary to clean wire tyer more often.

### ADDITIONALLY EVERY 500 HOURS OF OPERATION:

1. Change return line/circulating pump oil filter element in oil filter housing.
2. Inspect cylinder rods of compression and ejection ram cylinders for nicks and abrasions.
3. Check cylinder rod seals for damage.
4. Inspect cylinder pins for movement or missing cotter pins. Lubricate cylinder pinning sleeves and pins.
5. Grease wire tyer drive wheels (follow manufacturer's recommendations in Equipment Operation Manual).

### ADDITIONALLY EVERY 1000 HOURS OF OPERATION:

1. Send oil sample for evaluation.
2. Check baler structure for any signs of problems (i.e., cracked welds, bending, etc.).
3. Rotate main ram cylinder rod 180°.

### ADDITIONALLY EVERY 2000 HOURS OF OPERATION:

1. Change hydraulic fluid in entire system. If existing oil is reused, it should be tested by a laboratory to ensure it meets necessary specifications. Additives can be added to bring oil back to standards. Before returning oil to tank, it should be filtered through a minimum 5 micron filter. Hydraulic tank should be cleaned inside with a non-flammable solvent and thoroughly dried before replacing oil.
2. Lubricate electric motor bearings as recommended by manufacturer.
3. Filter maintenance:
  - a. Hydraulic suction filters should be cleaned or replaced at yearly intervals.
  - b. Care should be exercised in cleaning filter to ensure that element is not torn. Clean filter with a soft brush and standard industrial solvent.

**FAILURE TO FOLLOW THE MAINTENANCE SCHEDULE ABOVE WILL RESULT IN LOWER OUTPUT PRODUCTION, REDUCED BALER LIFE and, MAY CAUSE UNSAFE CONDITIONS!**

**Technical Service & Warranty:**  
877-258-1105

**Parts:**  
800-528-5308



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Parts Central:  
800-528-5308  
[www.mecomerchant.com](http://www.mecomerchant.com)

Technical Service and Warranty:  
877-258-1105

Customer Support:

Marathon Equipment Company  
P.O. Box 1798  
Vernon, AL 35592-1798