



Stealth®

HORIZONTAL BALER

OPERATION, SERVICE, AND INSTALLATION
ISSUED JANUARY 2018

CUSTOMER NAME: _____

SERIAL NUMBER: _____

COMPACTION & RECYCLING SOLUTIONS

0041-STEALTH-0118



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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.

Stealth®

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Stealth®

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STEALTH® Horizontal Baler

OPERATION, SERVICE, AND INSTALLATION

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0041-STEALTH-0118

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SECTION 1

GENERAL INFORMATION

INTRODUCTION

Thank you for purchasing a Marathon® Stealth® Horizontal 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

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 FOR HORIZONTAL BALERS

DANGER



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

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 install 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

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

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.

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.

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.



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

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

WARNING DECALS ON THE UNIT

WARNING

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.

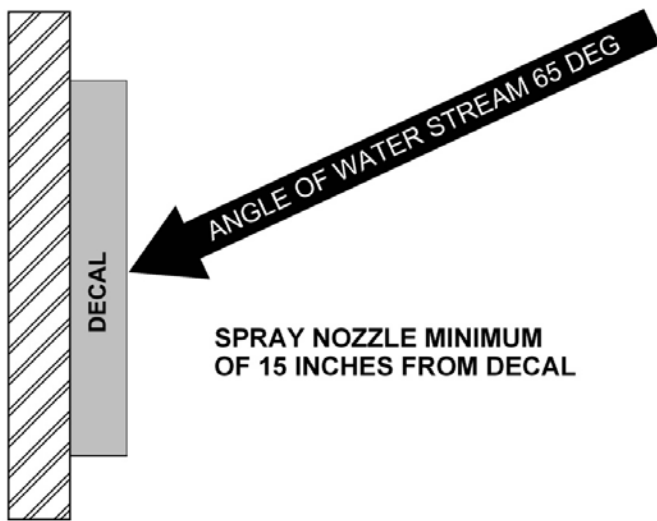
- Spray nozzle opening: 40° wide pattern
- Spray angle: 65° from unit's body
- Distance of nozzle to decal: 15" minimum
- Water pressure: less than or equal to 800 psi
- Length of time: not more than 30 sec.
- Do not use sharp angles to clean the decals – this can lift the decals from the unit.
- NEVER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

C. Remove Difficult Debris

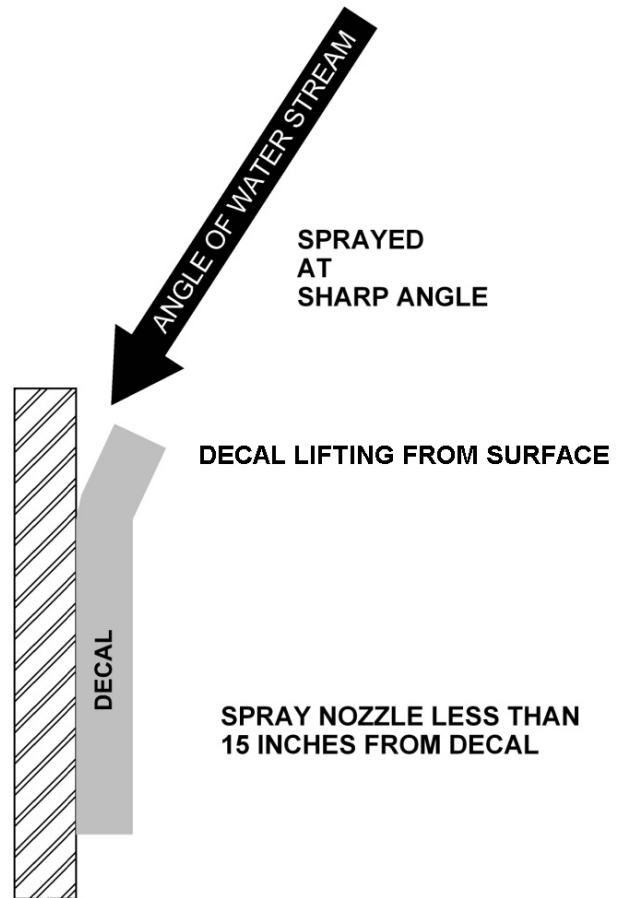
When normal cleaning procedures do not remove difficult debris from the decals, try the following:

- 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)

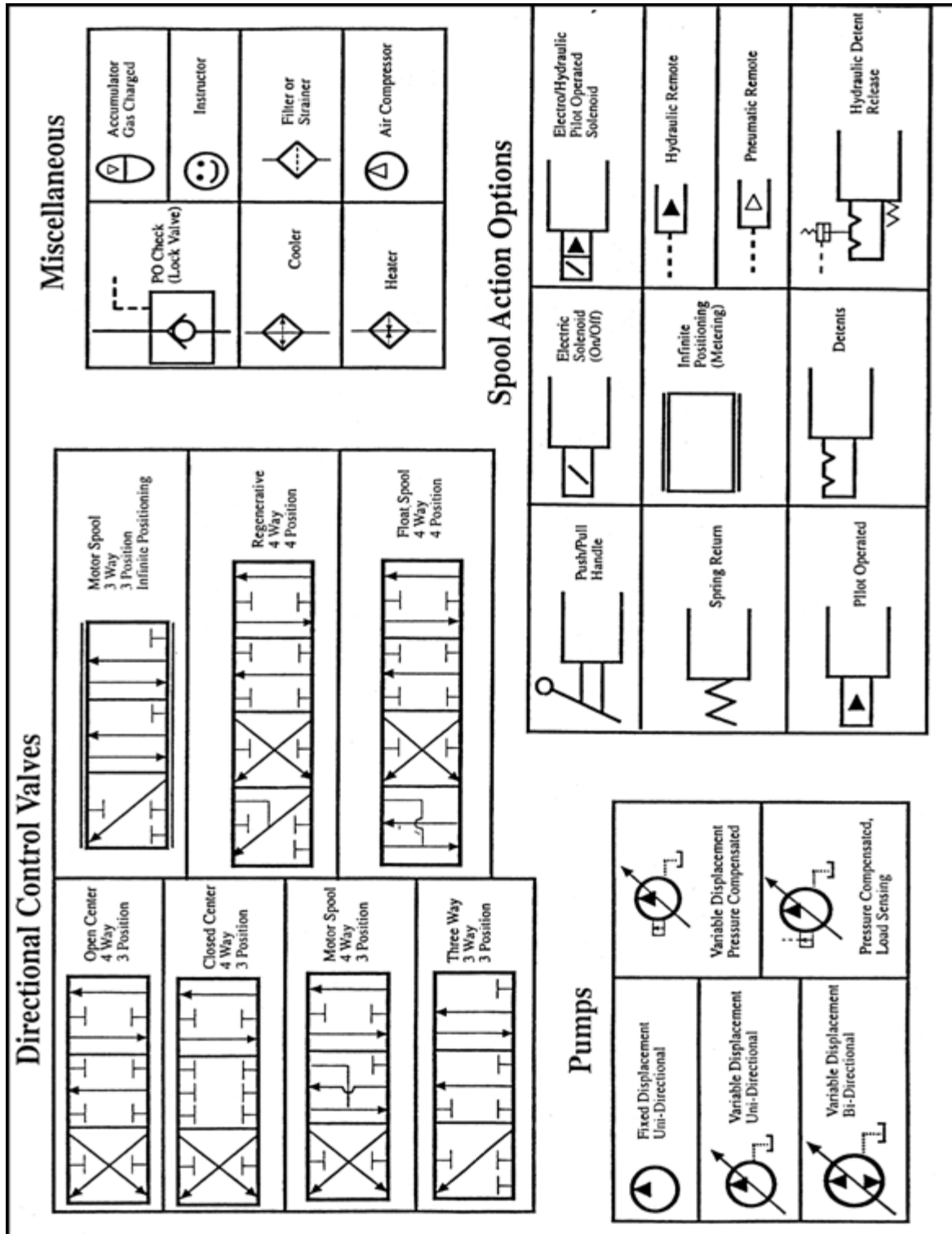


RECOMMENDED TECHNIQUE

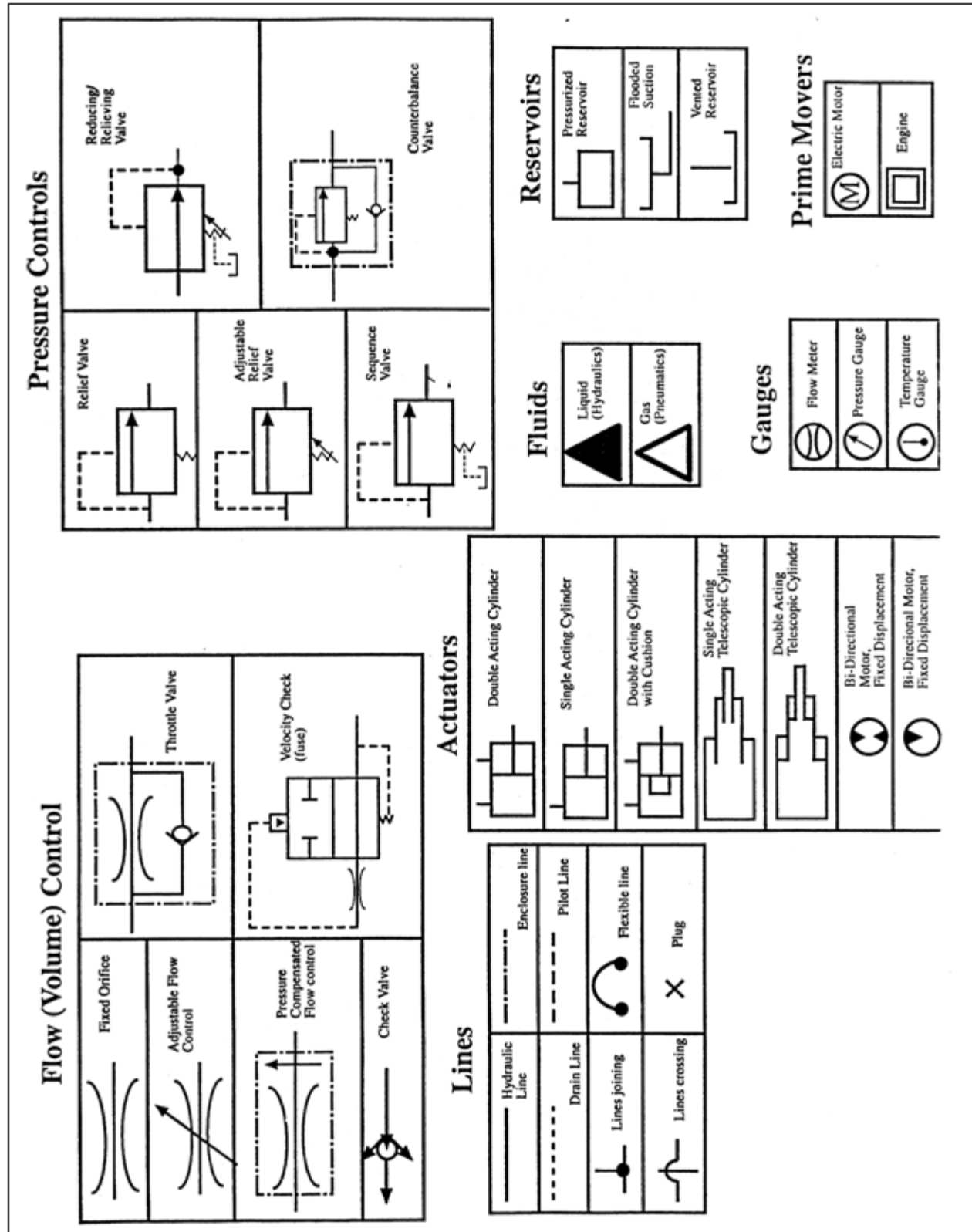


INCORRECT TECHNIQUE

HYDRAULIC SYMBOLS








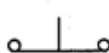



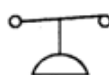





HYDRAULIC SYMBOLS (CONTINUED)



ELECTRICAL SYMBOLS

SYMBOL DEFINITIONS

	BATTERY
	FUSE
	SOLENOID
	CONTACT RELAY
	NORMALLY OPEN CONTACT OF CR1
	NORMALLY CLOSED CONTACT OF CR1
	INDICATOR LIGHT (GREEN)
	PUSH BUTTON SWITCH NORMALLY CLOSED
	PUSH BUTTON SWITCH NORMALLY OPEN
	TOGGLE SWITCH
	DIODE
	PRESSURE SWITCH
	LIMIT SWITCH NORMALLY OPEN
	LIMIT SWITCH NORMALLY CLOSED
	CAPACITOR

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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**.

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 INSTALLATION

These operating instructions are not intended as a substitute for training and experience in proper use and safety procedures in operating this equipment. Marathon Equipment Co. does not assume responsibility for the installation procedures of this equipment. Conformance to applicable local, state, and federal laws concerning installation rests with the customer.

The operating instructions in this manual are not intended as a substitute for training and experience in proper use and safety procedures in operating this equipment.

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

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. Special attention is directed to the current American National Standards Institute Z245.5 standard at the time of installation.

Concrete Pad or Floor

- The pad or floor should be a minimum 3000 psi concrete, steel reinforced, 4" thick. It is recommended that the pad or floor be flush with the surrounding area.
- Working clearance for the panel box must comply with state and local building codes. Allow enough space in front of bale chamber for bale handling vehicle.

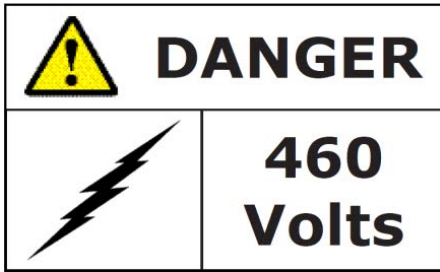
Anchoring

- Anchor the STEALTH baler to the pad or floor using anchor plates at the corners of baler base. Four 1" diameter anchor bolts 3 3/4" long are required, Red Head type recommended. Anchor bolts are not provided by Marathon.

Decals

- Installation of the baler is not complete until an inspection of the warning decals has been made. Decals should be clearly visible, legible, securely applied and in the proper location. For decal description and location, see **Replacement Parts** of this manual.

ELECTRICAL INSTALLATION



The panel box contains high voltage components. Only authorized service personnel should be allowed inside. See **Lock-Out & Tag-Out Instructions** in the Service section.



DANGER

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



WARNING

All equipment should be grounded per National Electric Code.

Grounding Instructions

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

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

1. Use the **FUSE AND CIRCUIT BREAKER**  chart and the **Wire Size**  75 deg. C. chart in the **Service** section of this manual for reference during the electrical installation.
2. Before connecting power to the baler, check the incoming line voltage with a voltmeter. Also, check voltage wiring in the baler panel box. If the baler is not wired to the proper voltage, make necessary corrections before proceeding.
3. A lockable disconnect switch is provided on the baler and is sized in accordance with the baler. Three phase power should be connected to the top of this switch. Be careful not to let incoming wires touch each other. A properly sized equipment ground should be connected to the enclosure ground lug.

START-UP INSTRUCTIONS

CAUTION

Make sure all persons and installation materials are clear of charge box area.

1. After the electrical connections are complete, check motor rotation by the following:
 - a. Turn disconnect switch to the ON position.
 - b. Have someone turn ON the key switch and depress the MOTOR START button. When the motor starts, immediately depress the EMERGENCY STOP button. Check motor rotation by watching the hub coupling through the slot in the pump-to-motor adapter. A rotation decal on the power unit shows correct rotation. In the event that this decal is missing, look at the hub coupling from the motor end. Rotation should be clockwise.

CAUTION

If the pump rotates backward, stop immediately! The pump will be damaged if it is operated in reverse even for short periods. Reversing any two incoming power lines will change the motor/pump rotation.

2. With the ram in the full retract position, check to be sure the oil reservoir is filled to the 3/4 level on the sight gauge (refer to the **Periodic Maintenance** ⁽³³⁾ for hydraulic **oil recommendations** ⁽⁸⁾). The hydraulic system pressure has been factory set.
3. The STEALTH baler is equipped with a whisker type limit switch, and a door position proximity switch. These items have been factory adjusted. Check the proper function of each of these prior to operation start-up. See the procedures in the **Service** section of this manual.
4. MAKE SURE ALL OPERATORS ARE THOROUGHLY TRAINED IN THE PROPER USE OF THIS EQUIPMENT.

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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**.

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.

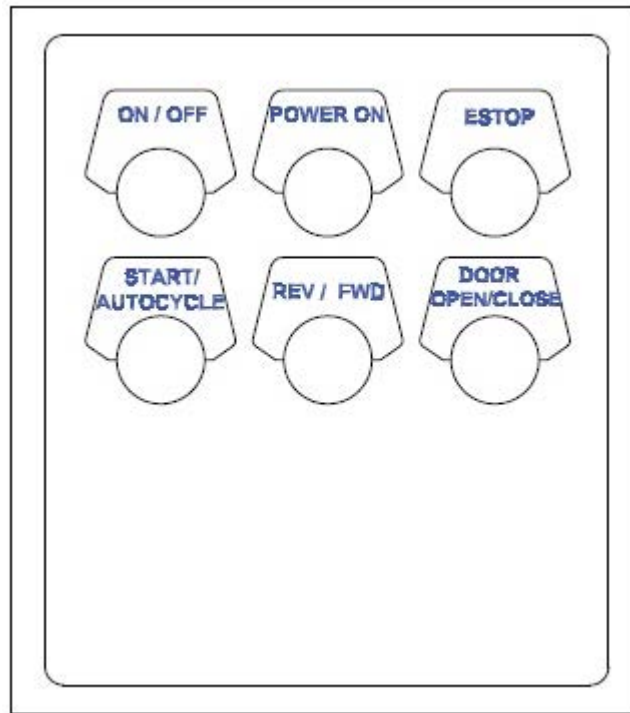
WARNING

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.

CONTROLS AND DESCRIPTIONS



The diagram shown above depicts a typical control panel for the Stealth Baler. The DOOR OPEN/CLOSE switch is an optional control. Other optional controls will be located here if the baler is equipped with photocells, conveyor, and/or bale made alarm.


Controls Description

1. **ON/OFF SWITCH** (Keyed) – Turns the control power for the machine on or off.
 2. **POWER ON PUSH BUTTON** – Press this button to energize the master control relay and turn power on to the control circuits for the baler. The key switch must first be placed in the ON position.
 3. **EMERGENCY STOP SWITCH** - This switch can be pressed to stop the baler at anytime. It must be pulled back out prior to restarting the baler.
 4. **START / AUTO CYCLE PUSH BUTTON** - This push button can be used to start the baler or cycle the baler one complete cycle. To start the baler, hold the START/AUTO CYCLE switch for 20 seconds. The warning horn will sound for 5 seconds and the beacon light will flash for the full 20 seconds. After 20 seconds the motor will start and the baler will cycle one complete cycle. After the baler has been started, use the START/AUTO CYCLE switch to cycle the baler one complete cycle.
 5. **FORWARD / REVERSE SWITCH** - After the compactor has been started, turning this hold-to-run switch will make the ram move in the forward or reverse direction. REVERSE is also used in the procedure to open and close the bale door.
 6. **DOOR OPEN / CLOSE SWITCH** (Optional Control)- This switch is used to open or close the door latch.
- See **Operating Instructions** ⁽²⁵⁾ on the following page for more details.

OPERATING INSTRUCTIONS

OPERATING INSTRUCTIONS - MAKING A BALE

DANGER

Never enter any part of the baler until the disconnect switch has been locked out and tagged out per the **Lock-Out/Tag-Out Instructions**  6.

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

Do not operate baler until operating instructions are thoroughly understood.

NOTICE

IMPORTANT! Before beginning operation, check the oil level in the reservoir, it should be at least 3/4 full on the sight gauge. Check for any hazards around the machine, it should be clear of any material that could cause harm to the machine or the operator. Check to make sure that no one is inside the machine. Make sure the bale door and latch are completely closed.

IN CASE OF EMERGENCY: Push the large RED button to STOP!

Baling Instructions

1. Insert the key into the key switch and turn to the ON position.
2. Depress the POWER ON push button. Pressing this button energizes the master control relay and applies power to the control circuits. The green light should remain illuminated after pressing the POWER ON button.
3. Feed material into the baler until the charge box is filled.
4. Depress the START/AUTO CYCLE push button. The baler will start after a 20 second delay. Once the baler has started the main ram will extend and retract, completing one cycle.
5. Repeat steps 3 and 4 until the bale made warning horn sounds and the machine shuts down. This will indicate that the bale is complete and ready for tie off.

Note: After the baler is started, if the REVERSE/FORWARD or AUTO CYCLE controls are not used the baler will shutdown after 5 minutes. The baler will need to be restarted using the START/AUTO CYCLE button.

Shut down

In case of an EMERGENCY, depress the large red “mushroom head” button to stop. To end the baling operation, turn the key switch to the OFF position, and remove the key. Removal of the key will prevent any unauthorized use of the machine.

OPERATING INSTRUCTIONS - BALE TIE OFF/BALE EJECT

When bale made alarm sounds and the baler shuts down, it is time to tie the bale off and start the bale ejection.

CAUTION

Wear all required personal protective equipment during the following operations.

It will be up to you to decide whether you want to tie the bale off through the door or through the sides. Whichever way is decided, the tie wires must be inserted through their appropriate tie slots.

1. When the ram stops in the forward position, and bale tie off is needed, insert one bale tie, looped end first, through the slots at the appropriate tie position. There are 4 tie positions on this baler.
2. Tie each bale tie (hand-tight only to allow for expansion during ejection).
3. Restart the baler using the START/AUTO CYCLE button. Once the baler is started, turn the REVERSE/FORWARD switch to the REVERSE position and fully retract the ram.

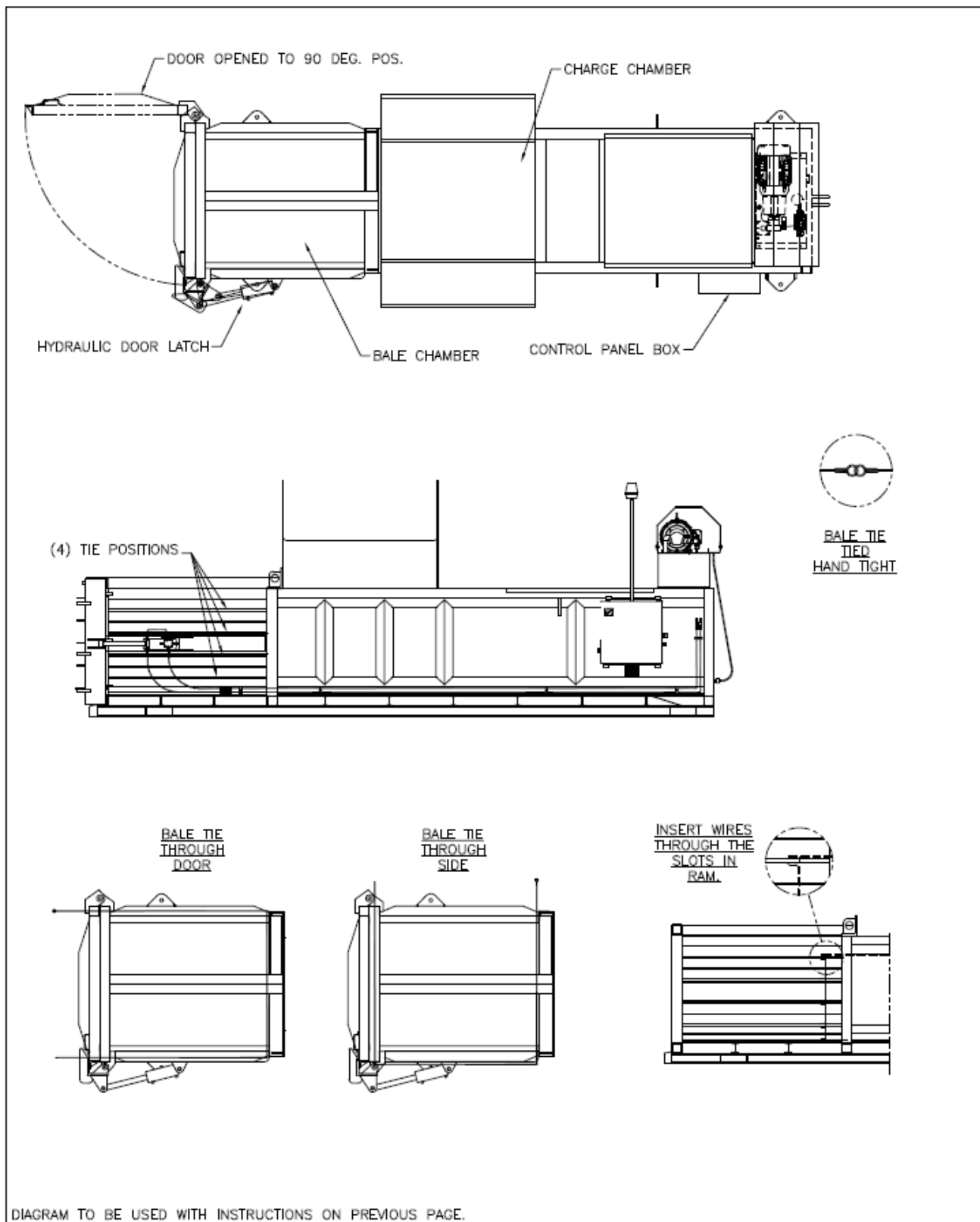
CAUTION

Ram must be retracted to the rear position before opening door. Make sure all personnel are clear of the bale chamber door and door latch areas. Before standing in front of the bale chamber door, make sure that the latch is fully open and there is no pressure exerted on the bale chamber door by the compacted material.

4. Release the bale door by turning the DOOR OPEN/CLOSED switch to the OPEN position. Turn the REVERSE/FORWARD switch to the REVERSE position and hold it until the door latch opens completely.
5. Open the bale door to at least a 90 degree position. Restart motor if necessary.
6. Turn the REVERSE/FORWARD switch to FORWARD and run the ram to the fully forward position to start the bale ejecting out of the bale chamber. The bale will eject approximately 10 inches.
7. Turn the switch to REVERSE and run the ram to the fully reverse position and resume feeding material into the charge chamber (steps 3 & 4 of Baling Instructions).
8. When the previous bale is extruded out of the bale chamber, remove the completed bale.
9. Close the bale door and turn the bale door OPEN/CLOSE switch to the CLOSE position. Turn the REVERSE/FORWARD switch to the REVERSE position and retract the ram completely and hold the REVERSE switch until the door latch is completely closed. Resume feeding material into the charge chamber.

Diagram for these procedures on the next page.

DIAGRAM - BALE TIE OFF/BALE EJECT



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**.

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)

LOCK-OUT & TAG-OUT INSTRUCTIONS FOR HORIZONTAL BALERS

DANGER



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

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 install 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

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

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.

PERIODIC MAINTENANCE

WARNING

Only authorized and trained personnel should perform the following procedures. **Lock-Out & Tag-Out**  the baler per the instructions before performing any maintenance on baler.

Daily

1. Check for any oil leaks. Keep all hydraulic fittings tight.
2. Check oil level in hydraulic reservoir. Maintain oil level to at least 3/4 full in sight gauge. Do not overfill hydraulic reservoir. Leave room for thermal expansion of hydraulic fluid.

Weekly

1. Clean around power pack and machine to remove operator hazards.
2. Check all interlock switches to ensure proper operation.
3. Grease door hinge.
4. Grease door latch hinge.

Monthly

1. Check all hoses for chaffing, rubbing, or other deterioration and damage.
2. Check for any obvious unsafe conditions in baler area.
3. Check operation of standard controls and options.
4. Check cylinder pins and make sure they are secure.
5. Check hold down bars above ram. Grease if needed.

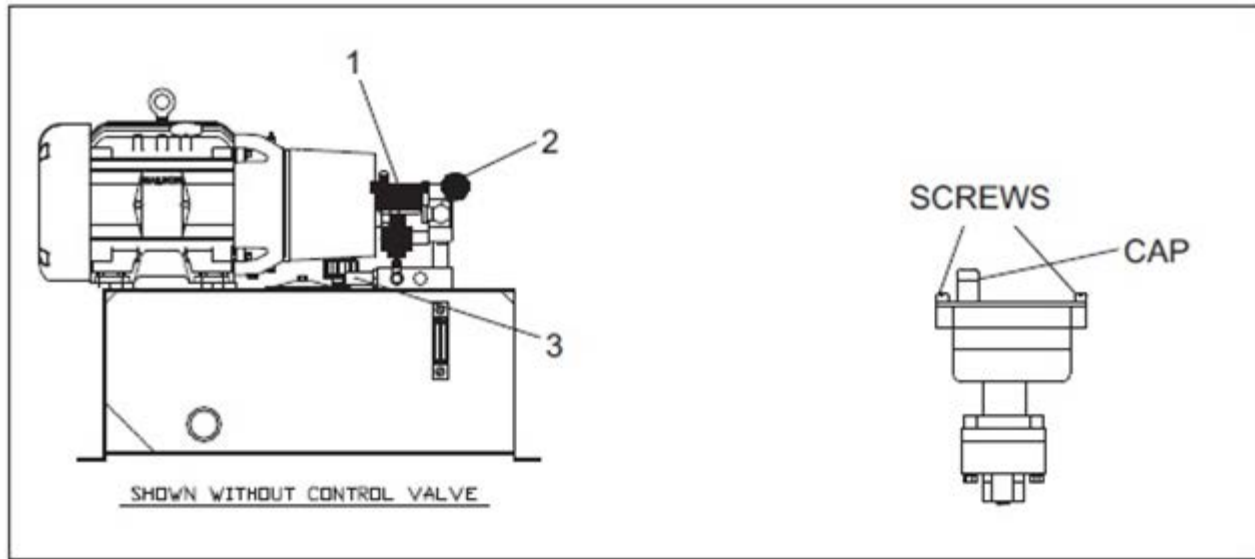
Semi-Annually

1. Send oil sample out for evaluation.
2. Check baler structure for any signs of problems (i.e., cracked welds, bending, etc.).
3. Check all electrical connections.

Annually

1. Change the hydraulic fluid.
2. Rotate the cylinder rod 180 degrees.
3. Grease electric motor bearings.
4. Clean suction filter.
5. Check Decals.

PRESSURE ADJUSTMENTS AND SETTINGS



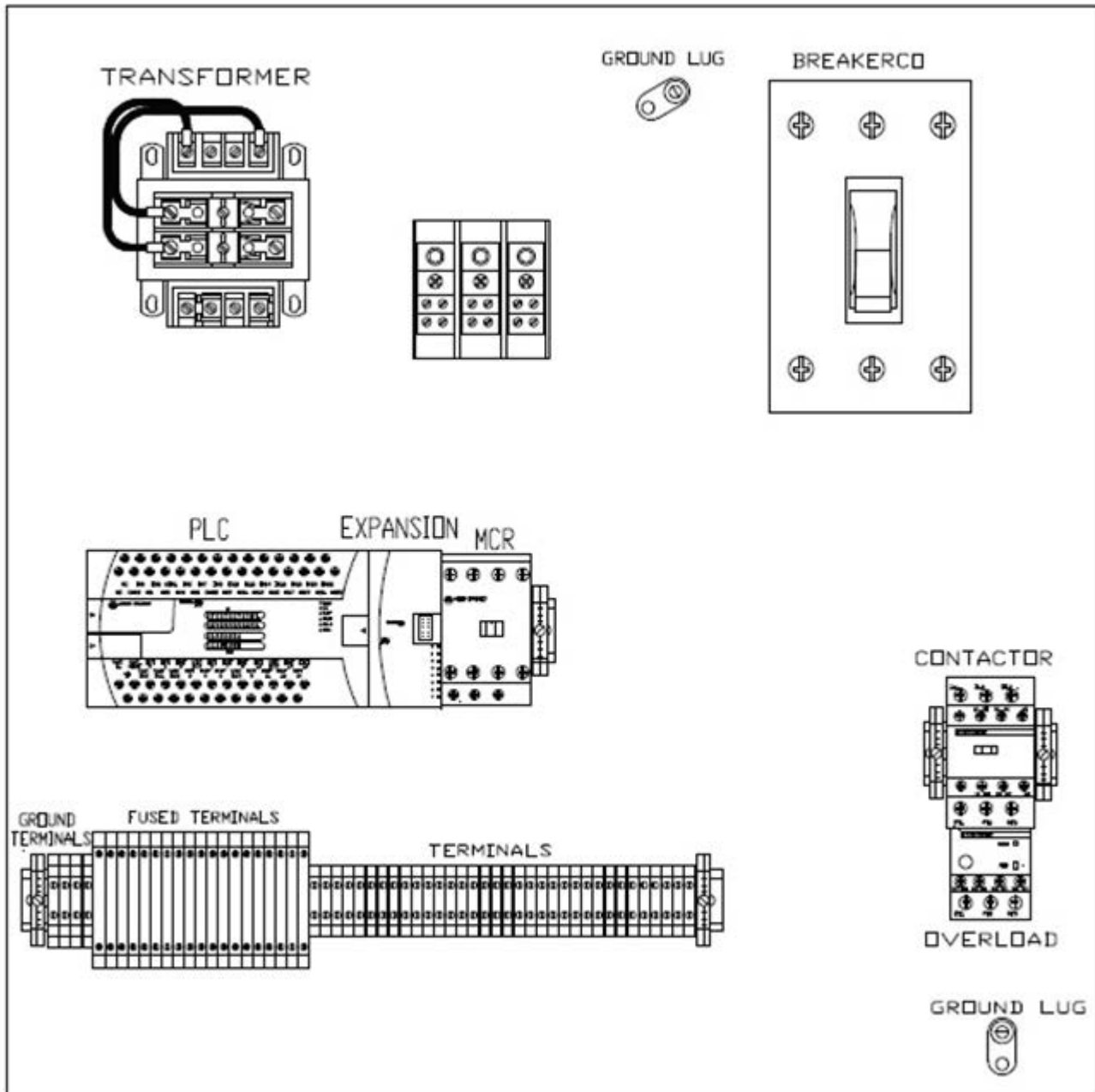
1. Loosen the lock nut on the adjustment screw of the relief valve (3).
2. Remove the cap off the top of the pressure switch (1).
3. Depress the FORWARD push button switch, and run the ram to the fully forward position and hold the switch.
4. Turn the adjustment screw on the relief valve (3) until the pressure on the pressure gauge (2) reads 2100 psi. Clockwise rotation increases the pressure. Counter clockwise decreases the pressure.
5. While continuing to hold the REVERSE/FORWARD switch in the FORWARD position, turn the adjustment screw on the pressure switch (1) until the input light for the pressure switch on the PLC is illuminated. Refer to the schematic provided with the baler for the correct input for the pressure switch. Release the FORWARD switch.
6. Loosen the 2 screws that hold the top of the pressure switch on. Raise the top of the pressure switch about 1/4".
7. Depress the FORWARD push button again.
8. Turn the adjustment screw on the relief valve (3) until the pressure on the pressure gauge (2) reads 2400 psi.
9. Tighten lock nut on relief valve (3), replace cap and tighten screws on pressure switch (1).

PANEL BOX

Below is a typical layout for the panel box on a Stealth Baler. Depending on optional controls/equipment, the panel box components of your baler may vary. Please call our Marathon Equipment Co. Service Department at 800-633-8974 if you need assistance regarding the panel box.

CAUTION

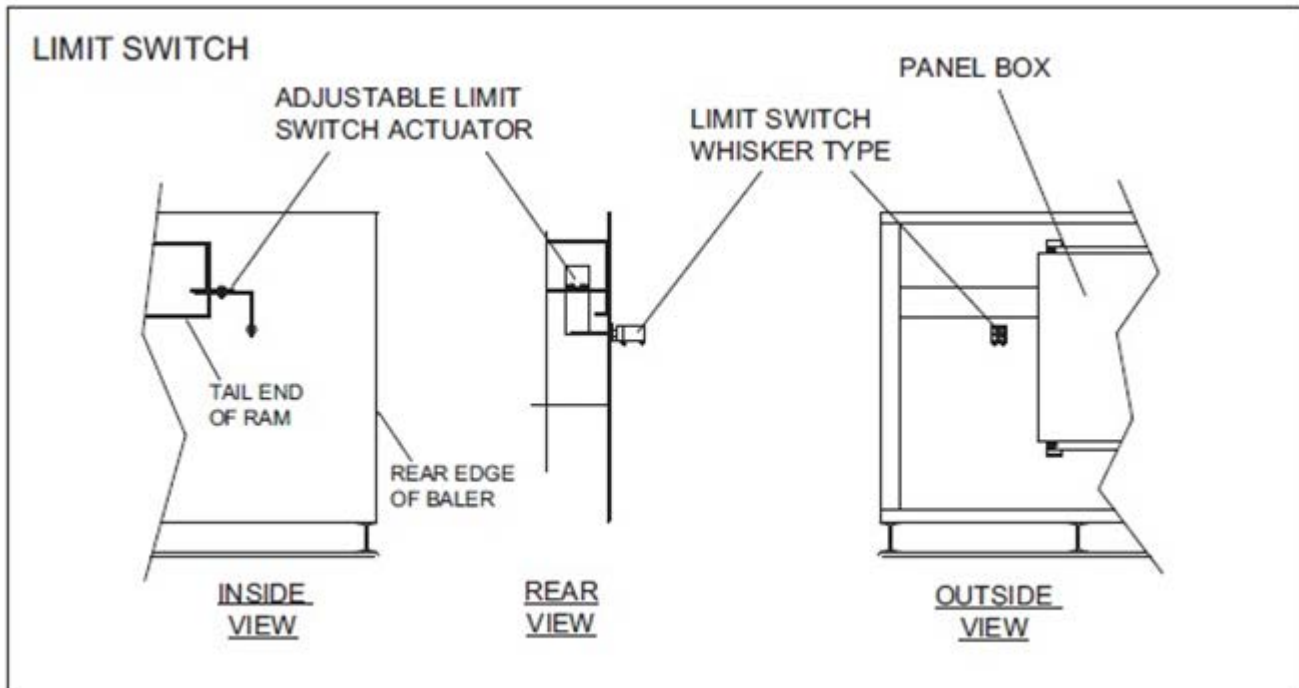
Only authorized, factory trained personnel should access the panel box. **Lock-Out and Tag-Out** the baler per the instructions before proceeding with any inspection, maintenance, and/or repairs.



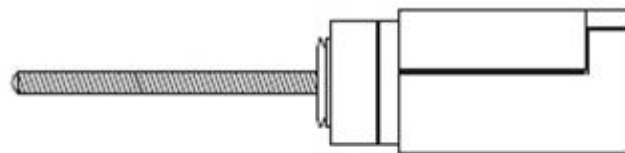
LIMIT SWITCH AND ADJUSTMENT

WARNING

Do not make any adjustments to the limit switch until the disconnect switch has been turned off and padlocked per the **Lock-Out/Tag-Out** instructions.

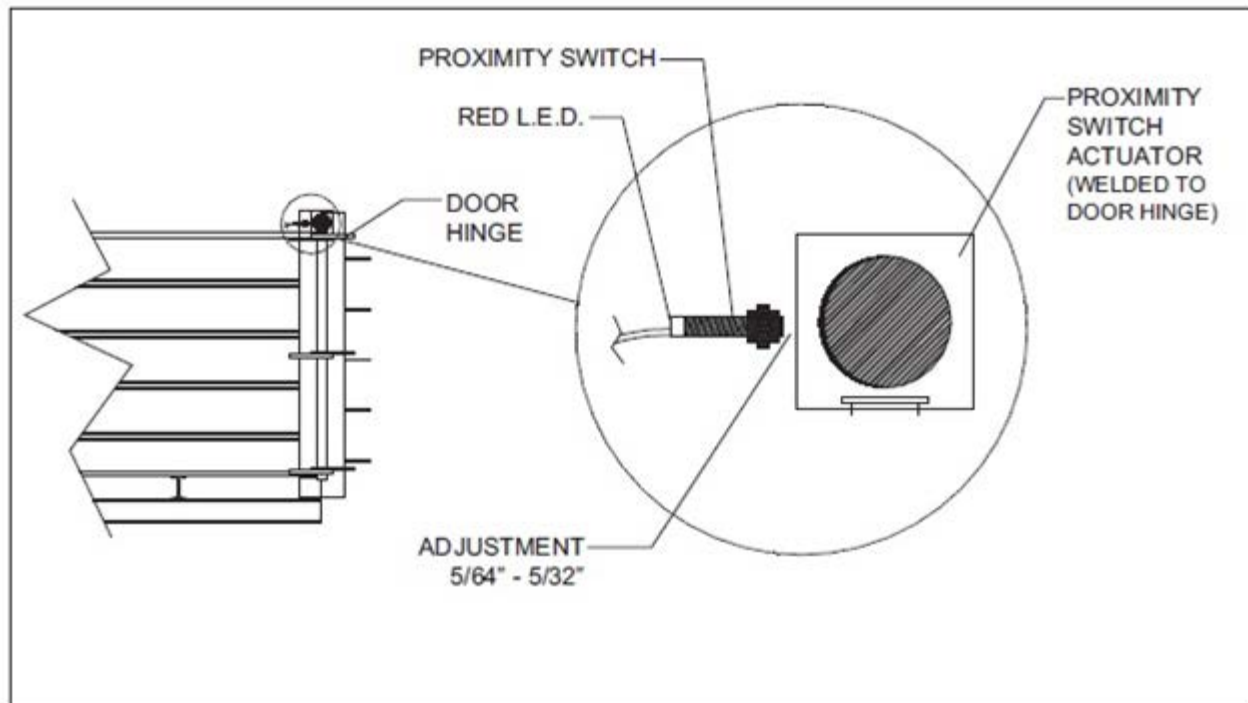


- The limit switch is mounted on the outside of the machine, generally next to the panel box, so that the “whisker” extends inside the machine body. The purpose for the limit switch is to stop the ram in the rearward direction, and prevent the cylinder from being able to bottom out. This switch is preset per factory specifications.
- Should this limit switch ever require adjustment the limit switch actuator is adjustable and accessible by running the ram forward and removing the access cover on the top of the baler. Adjust the limit switch actuator so that the ram stops 1" from the fully retracted position.

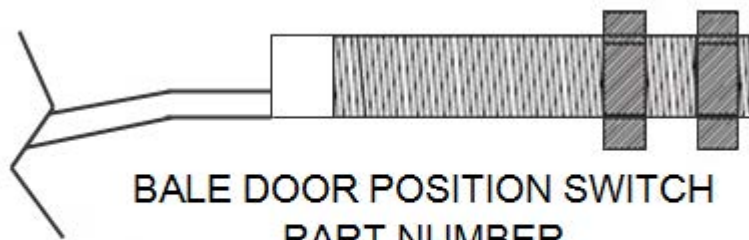


LIMIT SWITCH
PART NUMBER
03-0903

BALE DOOR POSITION SWITCH AND ADJUSTMENT

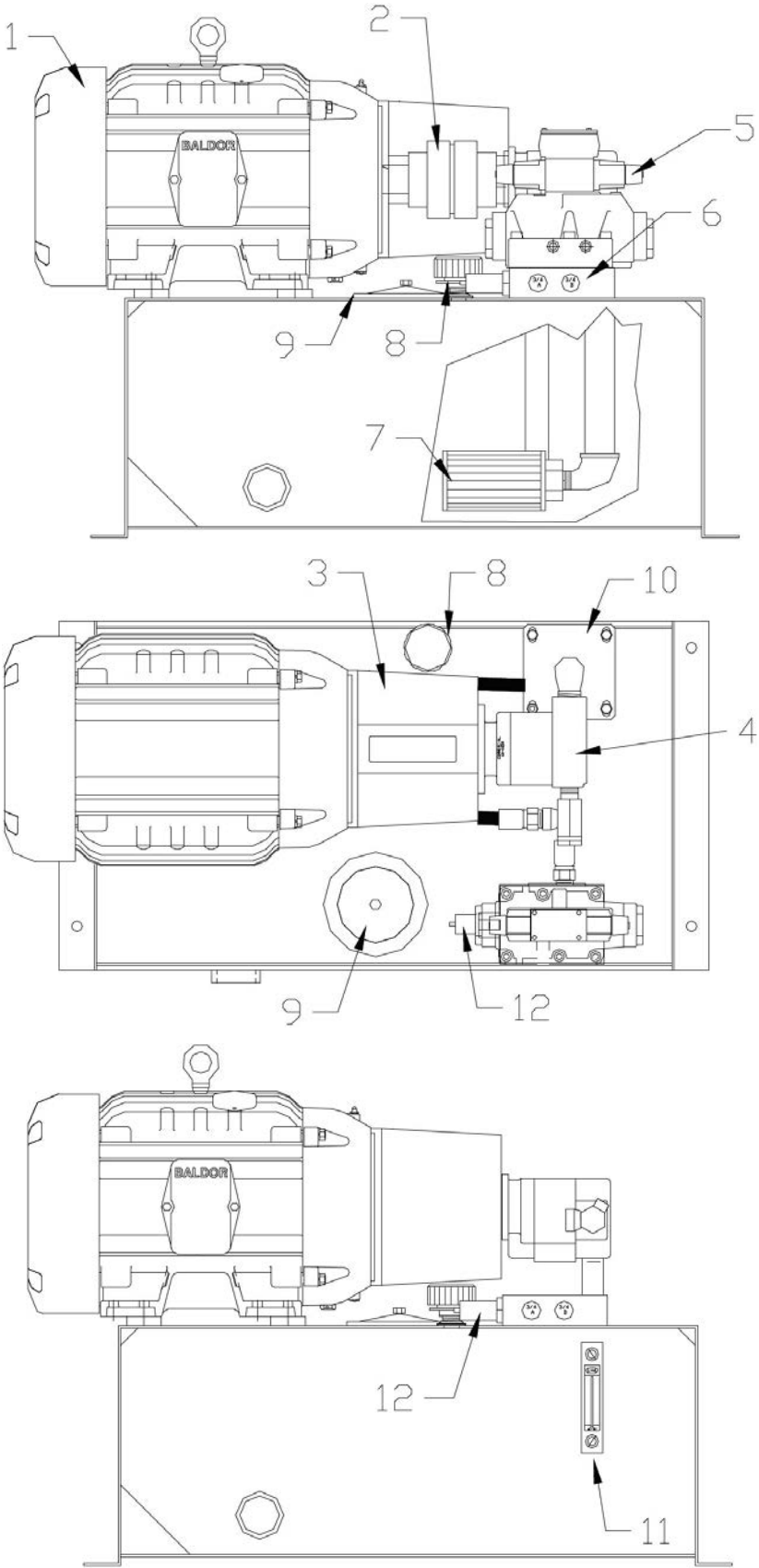


- The Bale Door Position Switch allows the baler to operate with the bale door in the fully closed position, and the fully open position.
- With the door in the fully closed position, full compression of the materials may be accomplished, and bale tie off can be achieved.
- With the door in the fully open position, the tied off bale can be extruded out of the machine.
- The adjustment for the bale door position switch can be achieved by loosening and tightening the lock nuts on the switch. The red LED on the end of the switch indicates when the switch is actuated. The adjustment for this switch is 1-10mm from the actuator.



BALE DOOR POSITION SWITCH
PART NUMBER
99-7362

POWER UNIT




POWER UNIT (CONTINUED)

NOTICE

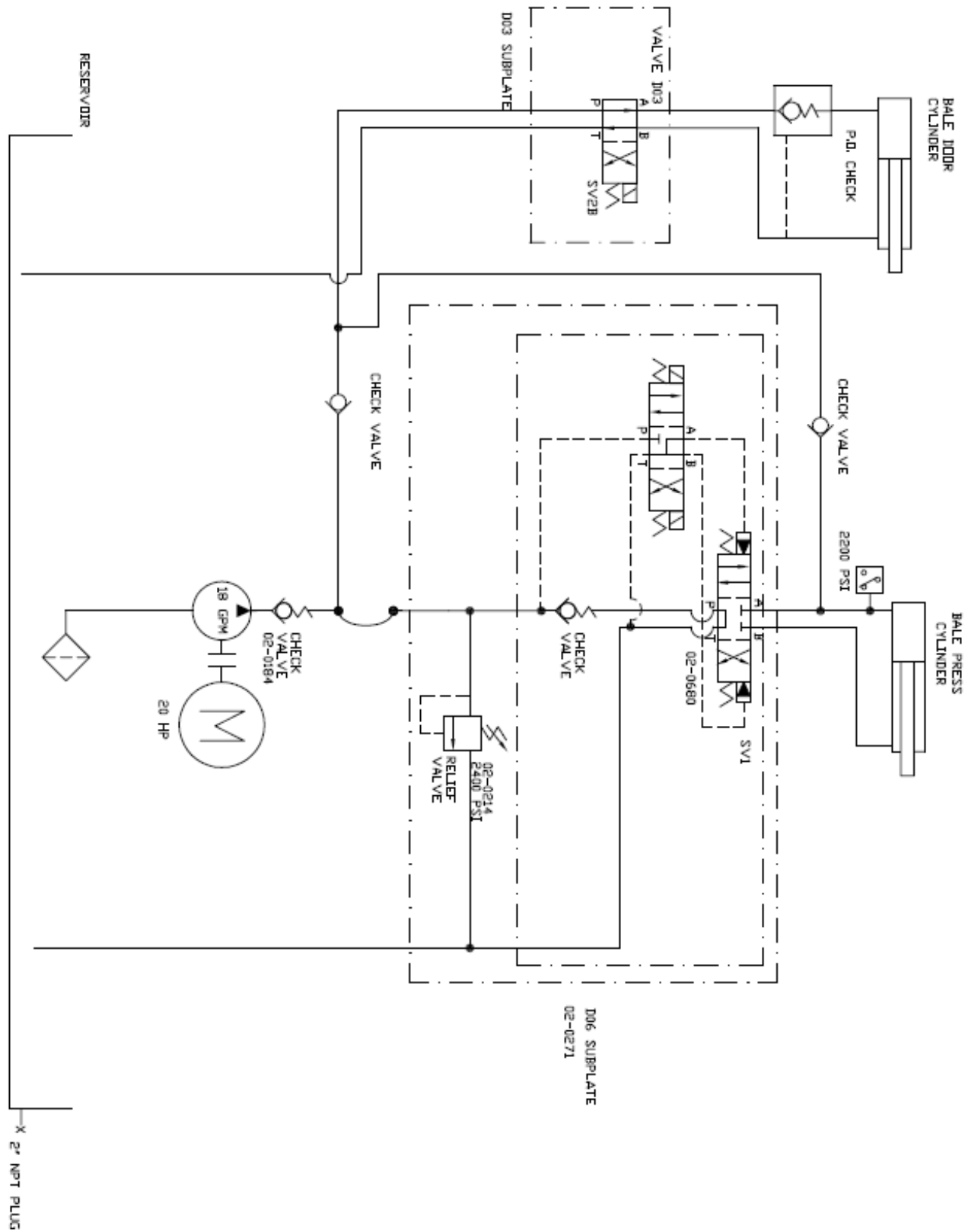
Check for proper rotation on motor before beginning. Rotation should be clockwise (observed from the motor end).

REF. #	DESCRIPTION	PART #
1	Motor 20 hp	03-1071
2	Hub Coupling	02-0398
3	Pump/Motor Adapter	02-0397
4	Pump	02-0259
5	Directional Valve	02-0680
6	Subplate	02-0271
7	Suction Filter	02-0051
8	Breather Cap	02-0197
9	Cleanout Cover	02-0219
10	Suction Flange	02-0260
11	Sight Gauge	02-0215
12	Relief Cartridge	02-0214

NOTICE

Check oil level before beginning. Oil level should be 3/4 up the sight gauge with the ram in the rearward position. Check the chart for the **recommended oil**  type.

HYDRAULIC SCHEMATIC



DESCRIPTION	PART NO.
Bale Press Cylinder	04-0190
Pressure Switch	03-0013
SV1, Control Valve	02-0680
DO6 Subplate	02-0271
Relief Valve	02-0214
Check Valve	02-0184
Pump, 18 GPM	02-0259
Motor, 20 HP	03-1071
Suction Strainer	02-0051

ELECTRICAL SPECIFICATIONS

20 HP MOTOR	FULL LOAD AMPERAGE	DUAL ELEMENT FUSE (MAX. SIZE)	CIRCUIT BREAKER (MAX. SIZE)	SERVICE DISCONNECT AMPERAGE
208 VOLTS	59.4	100	125	100
230 VOLTS	54	90	125	100
460 VOLTS	27	45	60	60
575 VOLTS	22	35	50	60
Wire Size 75 deg. C.				
20 HP MOTOR	LENGTH			
	100'	200'	300'	
208 VOLTS	#4	#1	1/O	
230 VOLTS	#4	#2	#1	
460 VOLTS	#10	#8	#6	
575 VOLTS	#10	#10	#8	

NOTE: The fuse, circuit breaker, and disconnect sizes may change if a conveyor is used. Please consult the MARATHON EQUIPMENT COMPANY Technical Service Department, at 800-633-8974, for the correct sizes.

ELECTRICAL SCHEMATIC

Refer to the electrical schematic shipped with your STEALTH baler, or contact Marathon Equipment Co. Service Department at 800-633-8974.

TROUBLESHOOTING CHART

PROBLEM	CAUSE	SOLUTION
Main Motor Will Not Start	1. No incoming power.	1a. Check main disconnect switch or fuses.
	2. No control circuit power.	2a. Check primary and secondary fuses on transformer.
	3. Safety interlock switch.	3a. Check interlock switch on top cover.
	4. EMERGENCY STOP button depressed.	4a. Check all EMERGENCY STOP buttons
	5. Electrical circuit malfunction.	5a. Perform system check. Refer to schematic 43.
	6. Motor overload tripped.	6a. Reset overload on motor starter. 6b. Check current loads (amps.).
Pump Noise	1. Oil level low.	1a. Check tank fluid level.
	2. Air leakage in suction line.	2a. Check suction line for leaks. 2b. Check pump shaft seal.
	3. Worn pump.	3a. Repair or replace pump.
Maximum Hydraulic Pressure Not Obtained	1. Pressure relief set too low.	1a. Check relief valve pressure setting.
	2. Worn pump.	2a. Repair or replace pump.
	3. Worn valve.	3a. Replace valve.
	4. Cylinder bypass.	4a. Check cylinder for internal bypass.
Machine Shuts Down	1. Emergency stop switch or interlock switch.	1a. Check all Emergency stop switches and interlock switch.
	2. (5) Five minute shutdown.	2a. Restart by depressing the START MOTOR push button.
Ram Will Not Go Forward	1. Door Position switch.	1a. Door not fully open or not fully closed.
	2. Electrical circuit malfunction.	2a. Perform system check. Refer to schematic 43.
	3. Solenoid coil bad.	3a. Replace solenoid coil.
Ram Continues To Try To Go Back At Rear Position	1. Limit switch.	1a. Repair or replace limit switch.
	2. Electrical circuit malfunction.	2a. Perform system check. Refer to schematic 43.
Ram Continues To Try To Go Forward At the End of Stroke	1. Electrical circuit malfunction.	1a. Perform system check. Refer to schematic 43.

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**.

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)

DECALS

Warning Decal Requirements

When your baler leaves the factory, several WARNING DECALS are installed for everyone's 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 by calling our Parts Department at 800-633-8974.

BODY			
REF. #	DESCRIPTION	PART #	QTY
2	DECAL DANGER KEEP HANDS OUT	06-0116	2
3	DECAL DANGER HAZARDOUS VOLTAGE	06-0249	4
4	DECAL MARATHON COMPACTION & RECYCLING SOLUTIONS	06-2751	2
5	DECAL CAUTION STAND CLEAR WHILE OPERATING	06-0118	2
6	DECAL RED/WHITE STRIPED 3X15.5	06-0254	4
7	DECAL DANGER DISCONNECT AND LOCKOUT POWER	06-0120	1
8	DECAL DANGER STAY OFF... DO NOT CLIMB	06-0133	4
11	DECAL LOCK OUT POINT DANGER LOCK OUT...	06-0250	1
13	DECAL NOTICE FEDERAL REGULATION PROHIBITS...UNDER	06-0121	2
15	DECAL STEALTH WHITE ON BLACK BACKGROUND	06-0590	1
19	DECAL DANGER VOLTS _____	06-3044	1
20	DECAL AMERICAN FLAG	06-1839	2
21	DECAL SERIAL NUMBER PLATE NON UL	06-0097	1
30	DECAL WARNING DO NOT REMOVE ACCESS	06-0038	1
31	DECAL WARNING SHOCK ARC FLASH	06-3976	1
32	DECAL WARNING DO NOT OPERATE	06-3977	2
33	DECAL DANGER DO NOT OVERRIDE OR	06-3978	2
34	DECAL WARNING "FLASH HAZARD" B	06-3274	1

STANDARD HOPPER			
REF. #	DESCRIPTION	PART #	QTY
1	DECAL DANGER DO NOT ENTER	06-0039	7
2	DECAL DANGER THIS MACHINE STAR	06-0041	2
3	DECAL DANGER KEEP HANDS OUT	06-0116	2
4	DECAL DANGER HAZARDOUS VOLTAGE	06-0249	2
5	DECAL DANGER CONFINED SPACE	06-3123	4
6	DECAL WARNING STAND CLEAR WHEN	06-0117	1

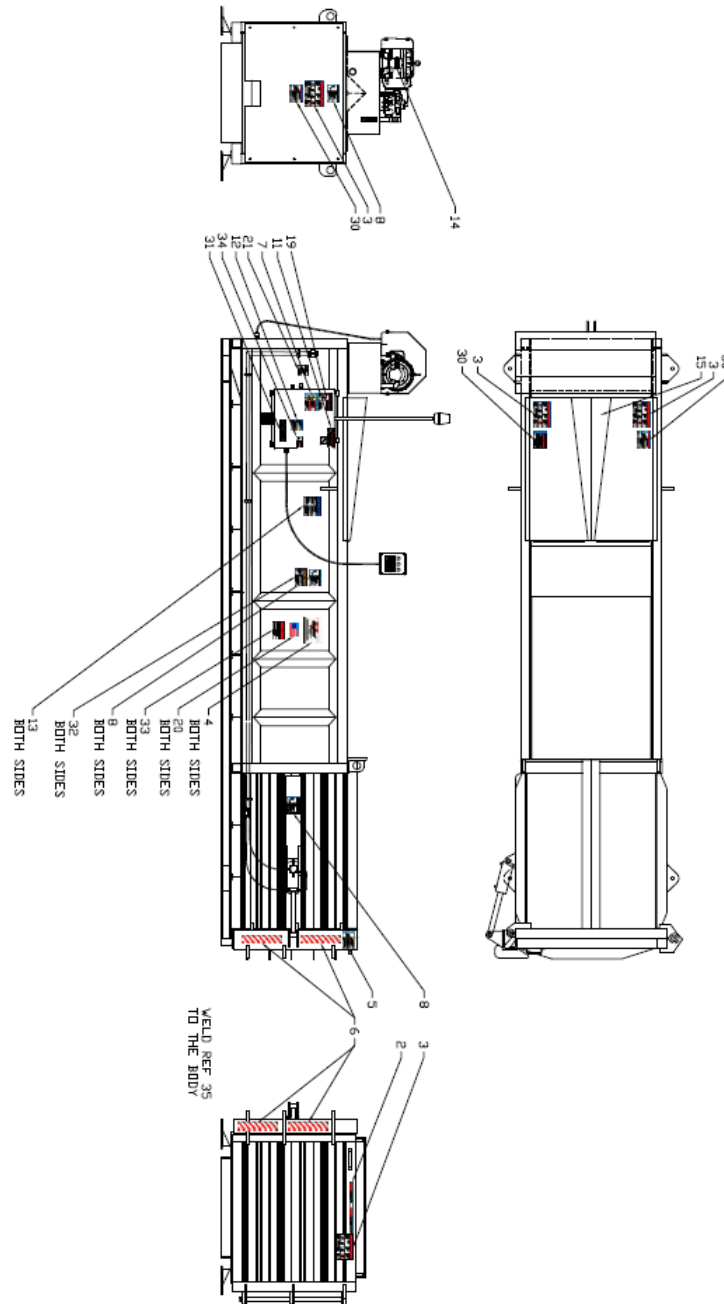
Stealth®

Replacement Parts

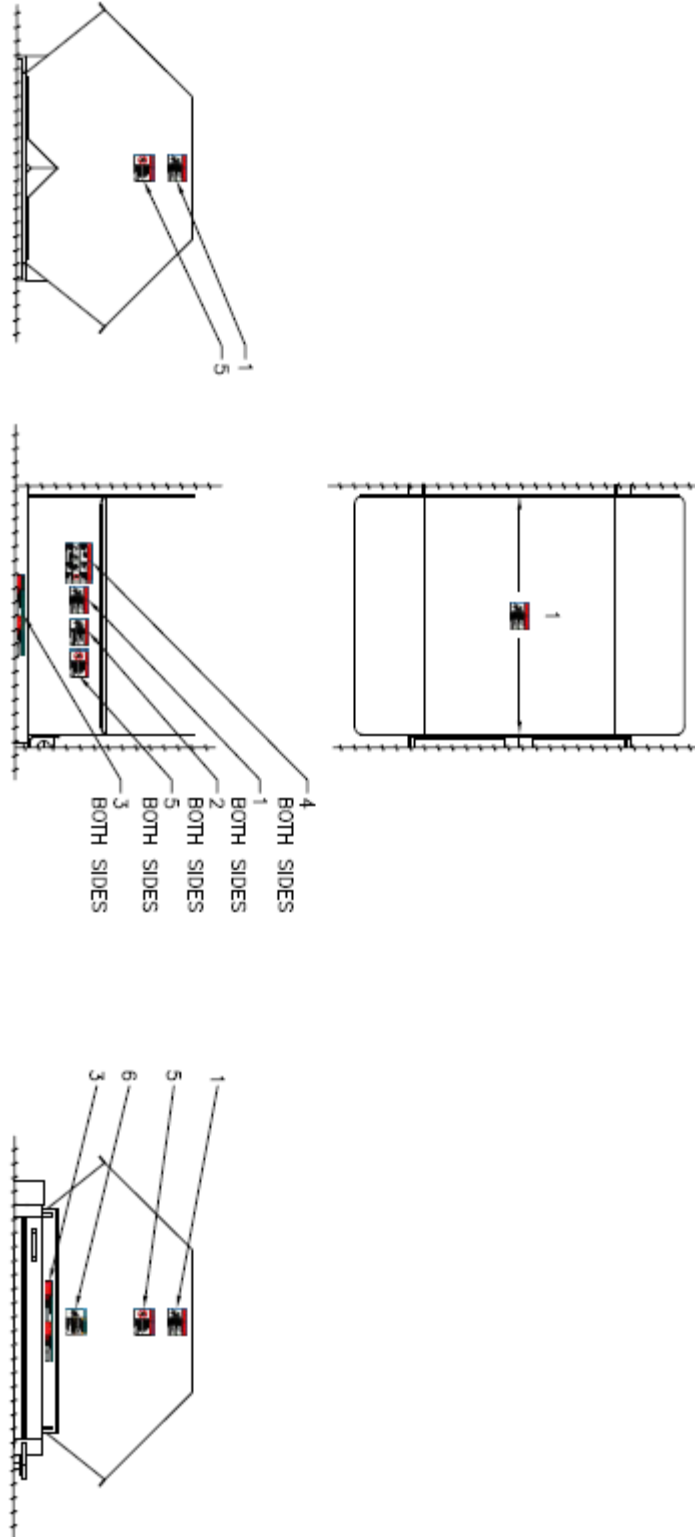
48

CHUTE HOPPER			
REF. #	DESCRIPTION	PART #	QTY
1	DECAL DANGER DO NOT ENTER	06-0039	6
2	DECAL DANGER THIS MACHINE STAR	06-0041	2
3	DECAL DANGER KEEP HANDS OUT	06-0116	2
4	DECAL DANGER HAZARDOUS VOLTAGE	06-0249	2
5	DECAL DANGER CONFINED SPACE	06-3123	4
6	DECAL WARNING STAND CLEAR WHEN	06-0117	1

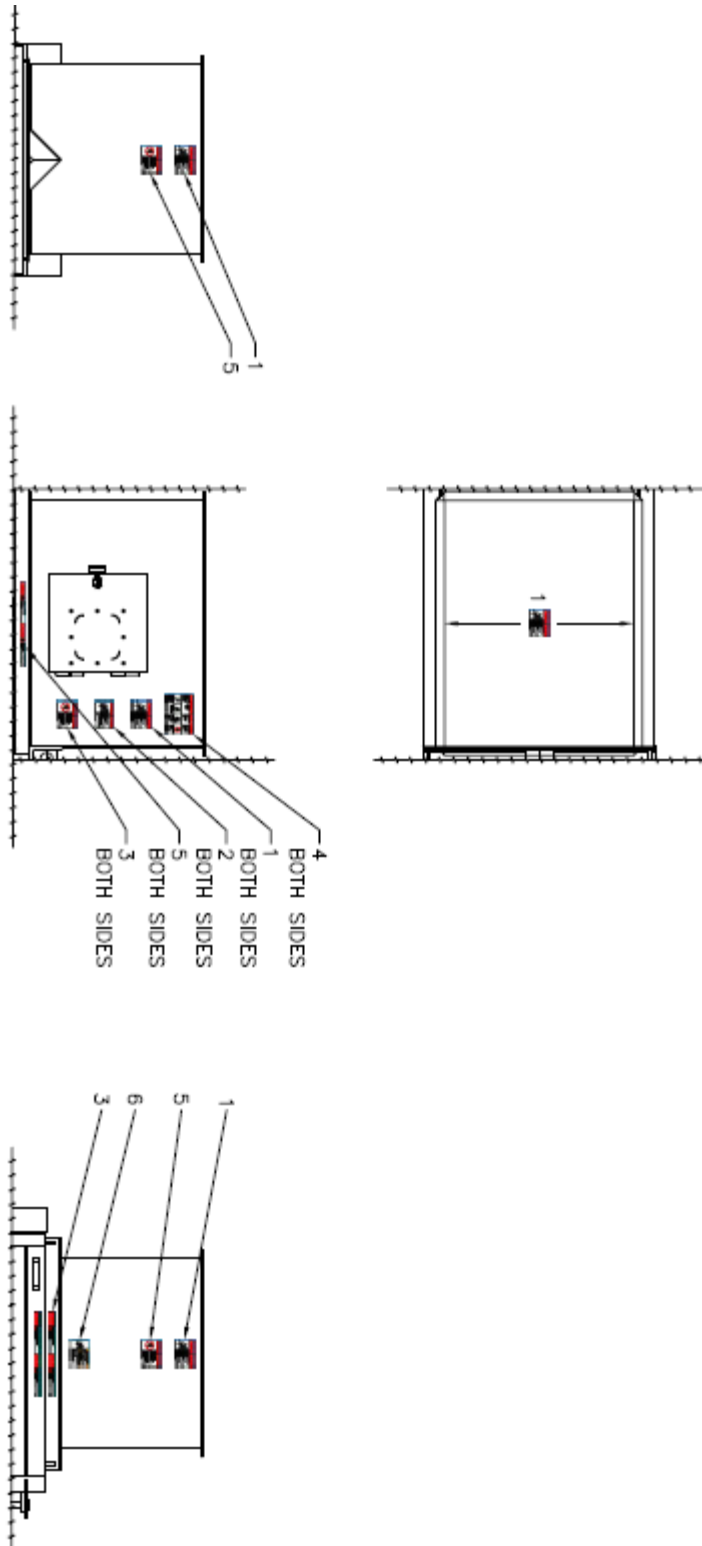
Note: Installation is not complete until all decals are in place. Match reference numbers with the chart on the previous page.



DECAL PLACEMENT STANDARD HOPPER



DECAL PLACEMENT CHUTE HOPPER



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www.marathonequipment.com

Customer Care:

800-633-8974

Parts Central:

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www.mecomerchant.com

Technical Service and Warranty:

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