



RamJet® Stationary Compactor

RJ-225, RJ-225 ULTRA, RJ-225HD, RJ-275, RJ-275XHD, RJ-325, RJ-325HD, RJ-400 ULTRA, RJ-450, RJ-500, RJ-500HD, RJ-550
WITH SIDE-MOUNT AND REMOTE POWER UNIT CONFIGURATIONS
OPERATION, SERVICE, AND INSTALLATION

ISSUED MARCH 2022

CUSTOMER NAME: _____

SERIAL NUMBER: _____

COMPACTION & RECYCLING SOLUTIONS

0016-RJS-0322



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Environmental Solutions Group
2030 Hamilton Place Blvd., Suite 200
Chattanooga, TN 37421
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.

RamJet® Stationary Compactor

TABLE OF CONTENTS

General Information

Introduction	4
Preface	5
Hazard Symbols and Definitions	5
Lock-Out/Tag-Out Instructions	6
Specifications for Stationary Compactors	8
Service/Parts Assistance	9
Guards and Access Covers	9
Grease Lubrication Recommendation	9
Recommended Oils	9
Warning Decals on the Unit	10
Decal Care	11
Hydraulic Symbols	13
Electrical Symbols	15

Installation

Contact Information	18
Concrete Pad Requirements	19
Anchoring and Weldment of Skids to Anchor Plates	20
Steel Installation Procedures	21
Electrical & Hydraulic Installation	22
Through the Wall Power Unit Installation	23

Operation

Contact Information	26
Compactor Pre-Operation Instructions	27
Controls for Standard Units (Including Regen)	28
Operating Instructions for RJ325	29
Operating Instructions for Standard Units (Including Regen)	30
Operating Instructions - Photoelectric Cycle Controls	31
Optional Controls for All Units	32

Service

Contact Information	34
Compactor Lock-Out/Tag-Out Instructions	35
Periodic Maintenance	37
Maintenance Schedule Form	38
Compactor Clean-Out Procedure	39
Limit Switch Adjustment, Standard	40
Limit Switch Adjustment, Regen	41
Pressure Settings Instructions, Limit Switch-Shifted	42
Pressure Settings Chart, Limit Switch-Shifted	43
Pressure Settings Instructions, Regenerative	44
Pressure Settings Chart, Regenerative	45
Pressure Gauge Readings for Compactors	46
Cylinder Replacement, Motor Warranty	47
Principles of Operation	48

RamJet® Stationary Compactor

TABLE OF CONTENTS

Fuses, Circuit Breaker, & Wire Size Charts	49
PLC Maintenance - Layout & Description	51
PLC Maintenance - Multicycle Counter Selection	52
PLC Ram Stop Forward Option	52
PLC Maintenance - Auto Shutdown Timer Selection	53
PLC Maintenance - Forward/Reverse Timer Adjustment	53
Power Unit - Standard 10 HP	54
Power Unit - Standard 10 HP Parts List	55
Power Unit - Standard 15 HP	56
Power Unit - Standard 15 HP Parts List	57
Remote Power Unit - Standard	58
Remote Power Unit - Standard Parts List	59
Remote Power Unit - Regen	60
Remote Power Unit - Regen Parts List	61
Hydraulic Schematic - Direct Operated Control Valve	62
Hydraulic Schematic - Pilot Operated Control Valve	63
Hydraulic Schematic - Regen RJ-550	64
Hydraulic Schematic - Regen RJ-275XHD	65
Hydraulic Schematic - Regen RJ-500	66
Hydraulic Schematic - Regen RJ-500HD	67
Electrical Schematic	68
Troubleshooting Chart	69
Replacement Parts	
Contact Information	72
Parts List & Interchangeability	73
Typical Panel Box Configuration	76
Decal Parts List	77
Decal Placement for RJ-160	79
Decal Placement for RJ-225 & RJ-225HD	80
Decal Placement for RJ-225 Ultra	82
Decal Placement for RJ-275	84
Decal Placement for RJ-275XHD	86
Decal Placement for RJ-325 & RJ-325HD	88
Decal Placement for RJ-400 Ultra	90
Decal Placement for RJ-450	92
Decal Placement for RJ-550	94
Decal Placement for RJ-500 & RJ-500HD	96
Decal Placement for Remote Power Units	98
Decal Placement for Optional Loading Configurations	99
Decal Images	101
Index	105

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SECTION 1

GENERAL INFORMATION

RamJet® Stationary Compactor

General Information

4

INTRODUCTION

Thank you for purchasing a Marathon® RamJet Stationary Compactor!

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. Z245.2, "STATIONARY COMPACTORS SAFETY REQUIREMENTS"

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

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 compactor and that the compactor 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 compactor 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 compactor 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 compactor down.
5. De-activate the energy isolating device(s) so that compactor 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 compactor 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 compactor, ensure that the compactor 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 compactor (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.
9. Before entering compactor perform hazard assessment for confined space requirements (hazardous fumes, dust, toxic material, or other hazards) per the OSHA confined space standard.
10. The compactor is now locked out.

LOCK-OUT & TAG-OUT INSTRUCTIONS (CONTINUED)

RESTORING SERVICE

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

1. Check the compactor and the immediate area around the compactor to ensure that nonessential items have been removed and that the compactor 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 compactor.

NOTICE

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

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

RamJet® Stationary Compactor

General Information

8

SPECIFICATIONS FOR STATIONARY COMPACTORS

Model	Clear Top LxW (in)	Total Cycle Time (sec)	Extended Time Setting (sec)	Normal Force (lbs)	Max Force (lbs)	Ram Pen. (in)	Motor (HP)	Pump (GPM)	Cyl. Bore (in)	Cyl. Rod (in)	Pressure Norm/Max (PSI)
RJ-160	32.5 x 46	36	20	36,300	42,200	8	10	10	5	2.5	1850/2150
RJ-225	40.5 x 60	56	30	46,700	55,100	13.5	10	13	6	2.5	1650/1950
RJ-225 Ultra	40.5 x 60	56	30	43,800	52,300	13.5	10	13	6	2.5	1550/1850
RJ-225 HD	40.5 x 60	48	30	59,400	67,900	13.5	15	13	6	4	2100/2400
RJ-275	53.5 x 60	60	37	46,700	55,100	13	10	13	6	4	1650/1950
RJ-275 XHD	52 x 60	52	17	80,800	92,400	14.5	15	13	7	4	2100/2400
RJ-325	67 x 60	50	31	46,700	55,100	13	15	18.5	6	4	1650/1950
RJ-325 HD	67.5 x 59.5	50	31	46,700	55,100	13	15	18.5	6	4	1650/1950
RJ-400 Ultra	67.5 x 60	50	31	46,700	55,100	13	15	18.5	6	4	1650/1950
RJ-450	67.5 x 60	50	31	48,100	56,500	13	15	18.5	6	4	1700/2000
RJ-500	82.5 x 60	53	N/A	65,400	77,000	13.5	15	18.5	7	4	1700/2000
RJ-500 HD	82.5 x 59.5	53	N/A	84,700	96,200	13.5	20	18.5	7	4	2200/2500
RJ-550	97 x 60	60	N/A(18)	65,400	77,000	13.5	15	18.5	7	4	1700/2000
Note: Specifications are accurate at the date of revision on the cover of this manual, but are subject to change without notice at the manufacturer's discretion. Contact our Technical Service ¹⁸ department at 877-258-1105 if you have any questions.											

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.

WARNING

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.

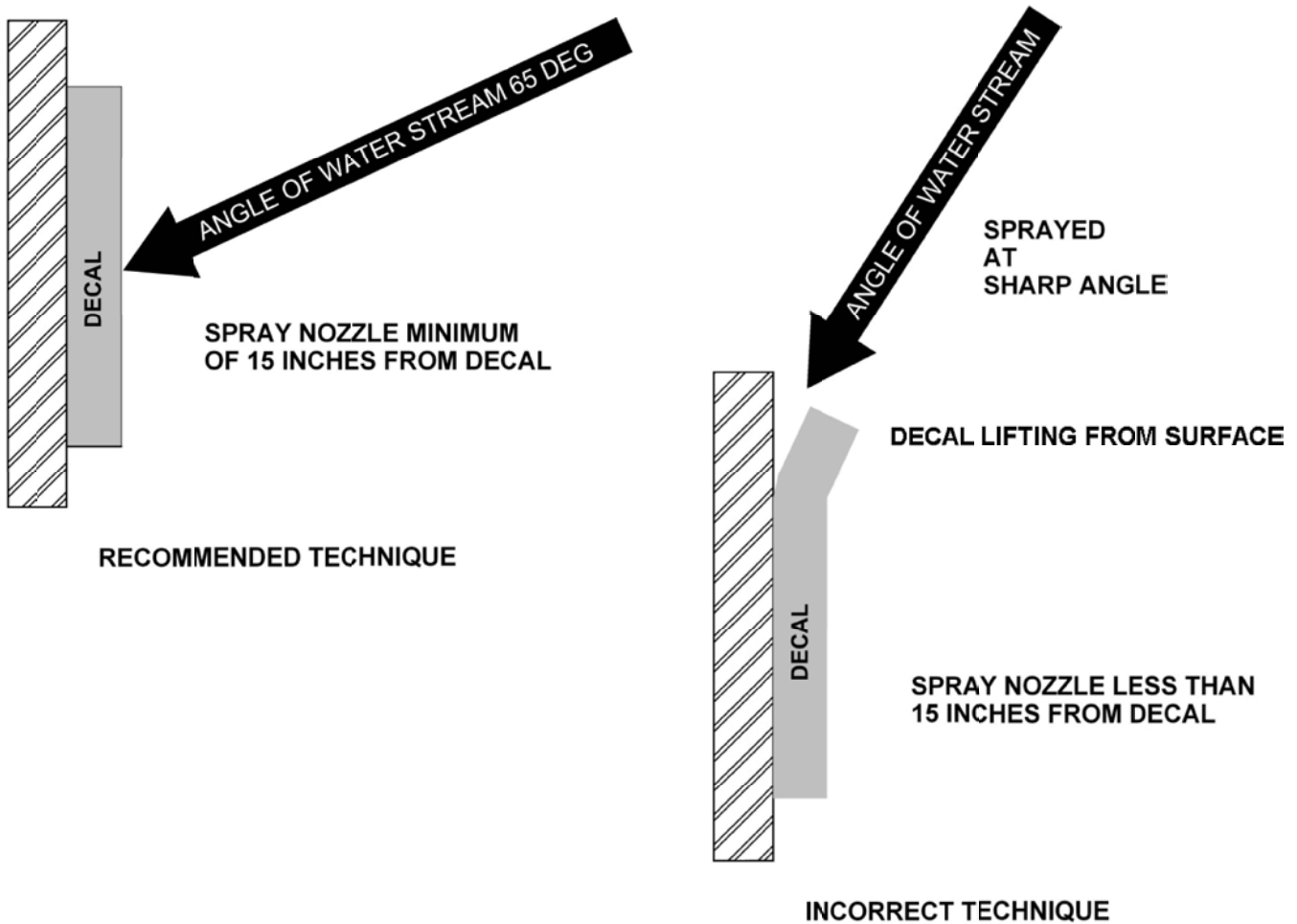
- Spray nozzle opening: 40° wide pattern
- Spray angle: 65° from unit's body
- Distance of nozzle to decal: 15" minimum
- Water pressure: less than or equal to 800 psi
- Length of time: not more than 30 sec.
- Do not use sharp angles to clean the decals – this can lift the decals from the unit.
- NEVER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

C. Remove Difficult Debris

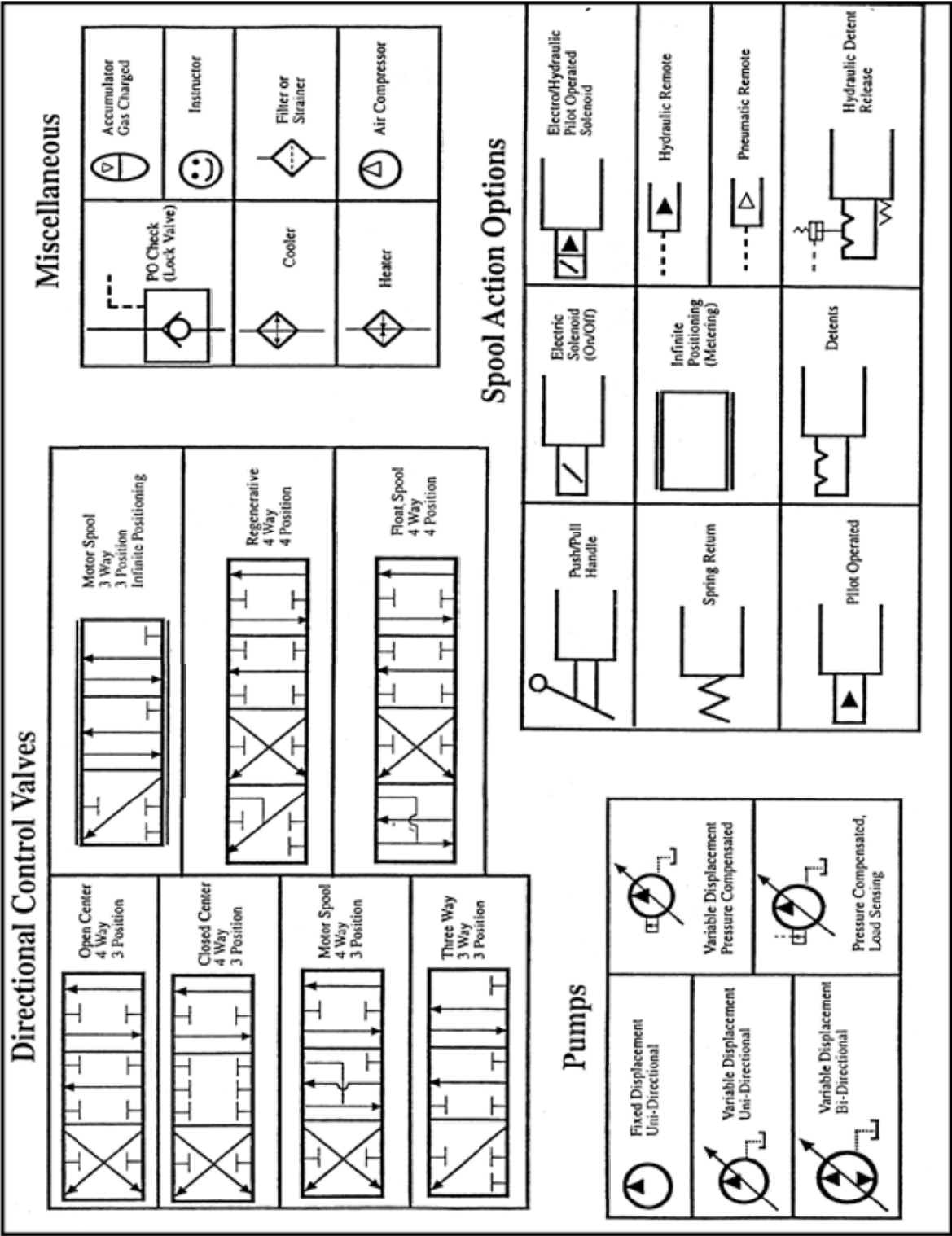
When normal cleaning procedures do not remove difficult debris from the decals, try the following:

- 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.

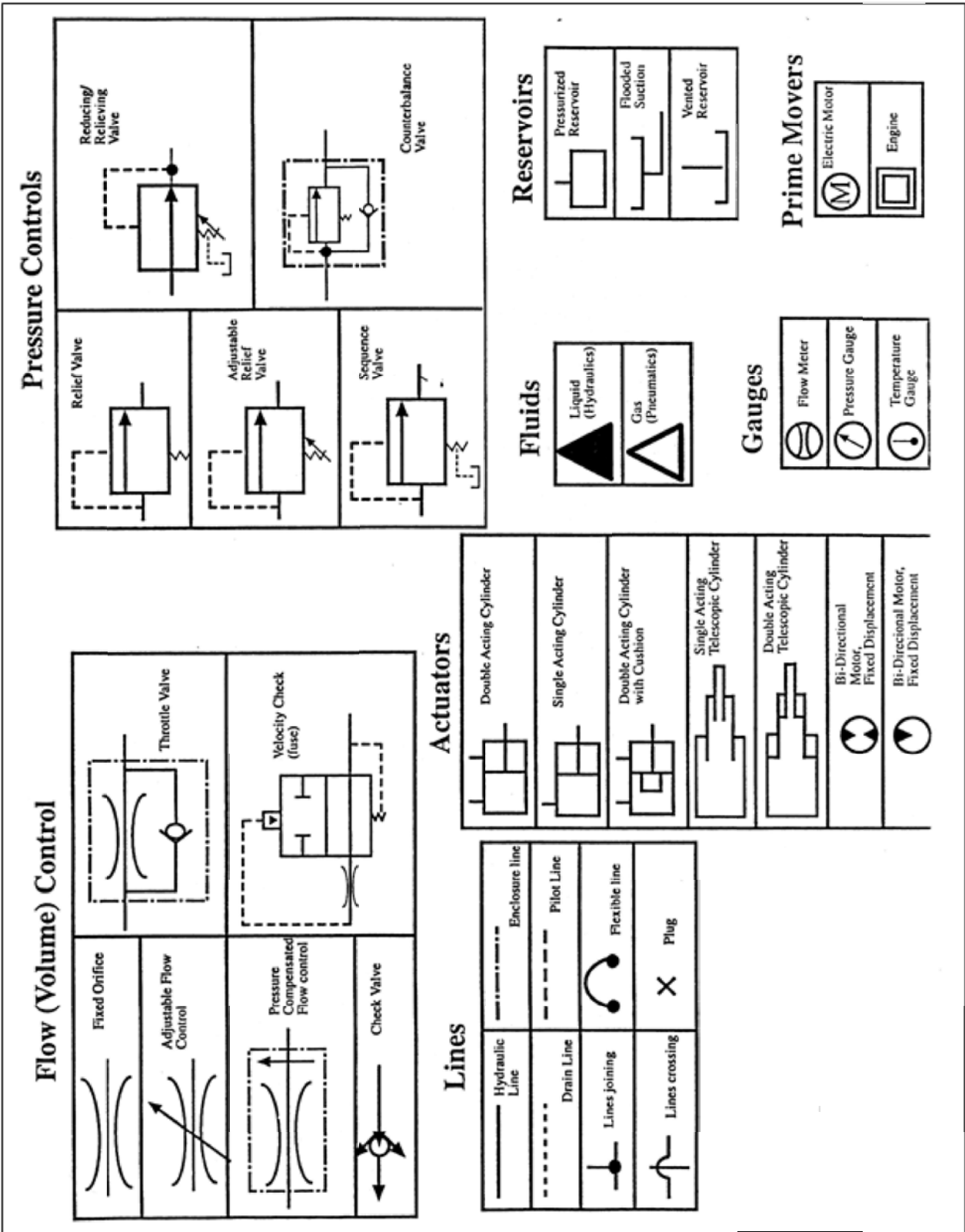
DECAL CARE (CONTINUED)



HYDRAULIC SYMBOLS

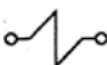
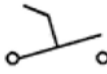


HYDRAULIC SYMBOLS (CONTINUED)



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)

CONCRETE PAD REQUIREMENTS

These installation 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.

CAUTION

Review this manual before making the installation. Study the jobsite and installation requirements carefully to be certain all necessary safeguards or safety devices are provided to protect all personnel and equipment during the installation and as a completed system. Special attention is directed to the most current ANSI Z245.2 standard.

Concrete Pad

1. Preferred dimensions of the concrete pad are 10'0" wide and a length of 5'0" greater than the length of the compactor/container. It should be level and of minimum 3000 PSI concrete steel reinforced, 6" thick. It is preferred that the concrete pad be flush with the surrounding ground level.
2. To provide accessibility, concrete pad should be positioned to allow 28" of clearance from outer most protrusion of the lock system of the compactor/container to a wall, building, structure, or container to allow adequate ingress/egress to equipment. Allow a minimum of 45' of clear space from end of pad for container handling vehicle.

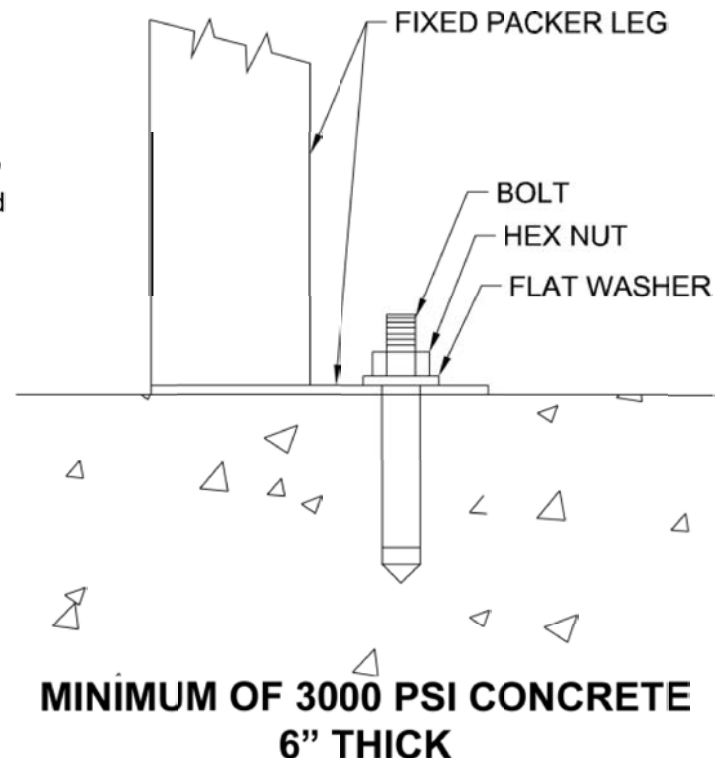
NOTICE

The clearances given are minimums. Your installation may require greater clearances depending on the site and the hauling equipment that will be used.

Anchoring

The compactor should be anchored to concrete pad using (4) minimum 3/4" x 6" long anchor bolts. These bolts can be secured to concrete pad using "Porok" or special concrete anchors. It is best if these holes are drilled in the concrete after prelocating the compactor in its desired location. Holes in the leg plates are 1-5/16" dia. to permit the use of a 1-1/8" dia. concrete bit. The 1-1/8" dia. holes in the concrete should be approximately 5" deep. When the compactor has been permanently located, shimmed to compensate for unevenness, and anchor bolts set, tighten all nuts securely.

Note: Ensure anchor bolts are not allowed to torque or twist the compactor body when tightened.



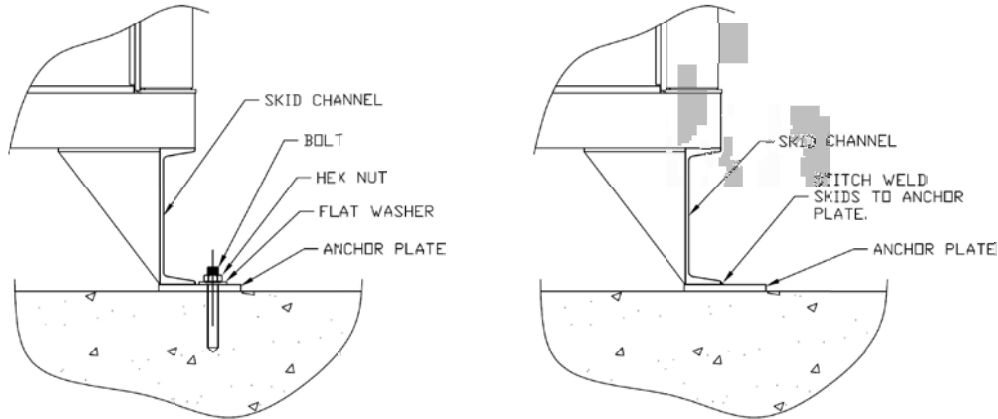
RamJet® Stationary Compactor

Installation

20

ANCHORING AND WELDMENT OF SKIDS TO ANCHOR PLATES

Anchor plates are shipped loose with compactor and should be pre-located on pad. Once anchor plates have been anchored to the pad, sit compactor in place on top of the anchor plates. Stitch weld skids to anchor plates with 6" stitch welds at 18" centers maximum on all skids. Skids will vary in length requiring spacing to vary but should not exceed 18" centers.



STEEL INSTALLATION PROCEDURES

Dock Installation

If the appropriate accessories are ordered from Marathon Equipment Co., the compactor will be furnished with either a four-sided hopper or a three-sided hopper with a hinged gate. THESE ACCESSORIES SHOULD NOT BE ALTERED AS THEY ARE MANUFACTURED IN ACCORDANCE WITH THOSE STANDARDS WHICH PREVAIL AT THE TIME OF MANUFACTURE.

If the compactor cannot be directly abutted to the dock or if there is any difference in height between the dock and the compactor/container, an appropriately sturdy transition section should be provided by the customer and securely affixed to the dock. Along with the transition section, a compactor/container guidance/stop mechanism should be installed to assure that the unit does not bottom out against the transition section or dock during dock placement (See ANSI Z245.2 Safety Standards). Optional container guides with stops are available from Marathon and are recommended for proper dock placement of the compactor/container.

Chute-Fed Installation

Compactors installed in this arrangement are normally fed "through-the-wall". The lower edge of the access hole in the wall should be a MINIMUM of 42" (and, if possible, not more than 58") from the inside floor level. Also, due to compactor height variations, the bottom of the access hole should be at least 2" above the compactor height. A security door (in accordance with local code) should be installed in the wall opening. In the absence of a local code, this door should be constructed of 3/16" thick steel or of steel hollow core design and be lockable from the inside of the building.

Decals

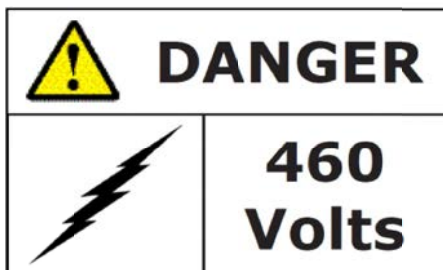
Be certain that the appropriate decals are in their proper locations at all times on the machine. For decals locations, see **Decals** and **Decal Placement for Standard Units** ⁸⁰ in the "Replacement Parts" section of this manual.

Note: Installation is not complete until all decals are in place.

Container Guides

If container guides (optional) are used with the compactor and container, each guide should be anchored to the concrete pad with 3/4" X 6" (minimum) anchor bolts. These bolts should be concrete anchors or expansion type anchor bolts. To allow for construction variations, it is best if these holes are drilled in the concrete after prelocating the container guides in their desired location. When the guides have been placed in position, and the anchor bolts have been set, tighten all nuts securely.

ELECTRICAL AND HYDRAULIC INSTALLATION



The Panel Box contains high voltage components. Only authorized service personnel should be allowed inside. See **Lock-Out & Tag-Out Instructions** ⁽⁶⁾ in the Service Section.



A lockable fused disconnect switch (customer furnished) must be installed and be within sight of the compactor's electrical panel box location, not to exceed 50'0" from the compactor. This fused disconnect switch should be sized in accordance with the compactor (see **Fuse and Circuit Breaker Charts** ⁽⁴⁹⁾).

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.

Remote Power Pack Installation

1. If the power unit is remote, it should be installed and anchored as required by the customer. If push buttons are mounted in the face of the panel box, be certain these controls are located as to be in a convenient, but not hazardous, location to the customer.

CAUTION

Controls must be located so that the Emergency Stop Button is readily accessible to the operator and within three (3) feet of the charging chamber access. If installation requires this pushbutton control station to be located in a more remote area, a second Emergency Stop Button should be added and installed in the manner described above.

2. For a through-the-wall power pack installation, see the diagram **Through-the-Wall Power Unit Installation** ⁽²³⁾ at the end of this section.
3. Connect the hydraulic hoses between the compactor body and the power unit. The rear port (base end) on the compactor is "A" port. The front port (rod end) on the compactor is "B" port.
4. The Limit Switch is connected to the power unit with Sealrite. To install, bolt the limit switch to the pre-drilled hole pattern outside the compactor body (right-hand side towards the rear for compactors with power unit connection on the right-hand side; left-hand side towards the rear for compactors with power unit connection on the left hand side). Other compactor mounted electrical options are color coded and referenced to the schematic shipped with the compactor. Make sure all wires are connected properly. Check local codes to assure that Sealrite is acceptable.

ELECTRICAL AND HYDRAULIC INSTALLATION (CONTINUED)

Pushbutton Control Panel

If a remote pushbutton station is furnished, it will be factory wired using Sealtite. If it is necessary to disconnect it from the wires (to install the pushbutton station inside a building), exercise care that these wires are reconnected as originally furnished. (Check local codes to be certain that Sealtite is acceptable.)

CAUTION

Controls must be located so that the Emergency Stop Button is readily accessible to the operator and within three (3) feet of the charging chamber access. If installation requires this pushbutton control station to be located in a more remote area, a second Emergency Stop Button should be added and installed in the manner described above.

Electrical Connections

1. Run power lines between fused disconnect switch (customer furnished) and compactor's electrical panel box, in accordance with local electrical codes, using knock-outs in bottom of panel box. See **Fuse & Circuit Breaker Charts** ^[49] for Motors and **Wire Size Chart** ^[49], in the Service section, to determine the proper service disconnect amperage rating and the proper wire size.

Note: High legs should be installed to L3 on motor starter.

2. Check voltage at fused disconnect switch to be certain it is the same as is shown on compactor or remote power pack.

Start-Up Instructions

With the ram fully retracted, check to be sure the oil reservoir is full to the 3/4 level on the sight gauge (Refer to the **Periodic Maintenance** ^[37] page for hydraulic oil recommendations). The hydraulic system pressure has been factory set and the entire unit has been operated prior to shipment.

CAUTION

Make sure persons and material are clear of charge box area.

Put fused disconnect switch in "ON" position when ready to start machine. Depress the start button and check the motor fan for proper 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. Follow all **Lock-Out & Tag-Out Instructions** ^[6] in the "Service" section.

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

THROUGH-THE-WALL POWER UNIT INSTALLATION

If your installation uses a remote power unit mounted through-the-wall, the following list of material and diagram is the suggested method of arranging the hydraulic plumbing.

LIST OF MATERIAL		
ITEM	QTY	DESCRIPTION
1	2	Hydraulic Hose, Hi-Pressure (sized to power unit*), 36" long
2	2	Pipe, Sch 80 (sized to power unit*), 36" long
3	2	Hydraulic Hose, Hi-Pressure (sized to power unit*), 48" long
4	2	Steel plate with holes for Item No. 2, 3/16" x 8" x 12"
5	4	Coupling, Female (sized to fit hose & pipe*)
6	3	Coupling, Male x Female Swivel
* 1/2" for runs of 20'-0" or less. Must be 3/4" for 18.5 gpm or greater. Consult factory for longer runs.		

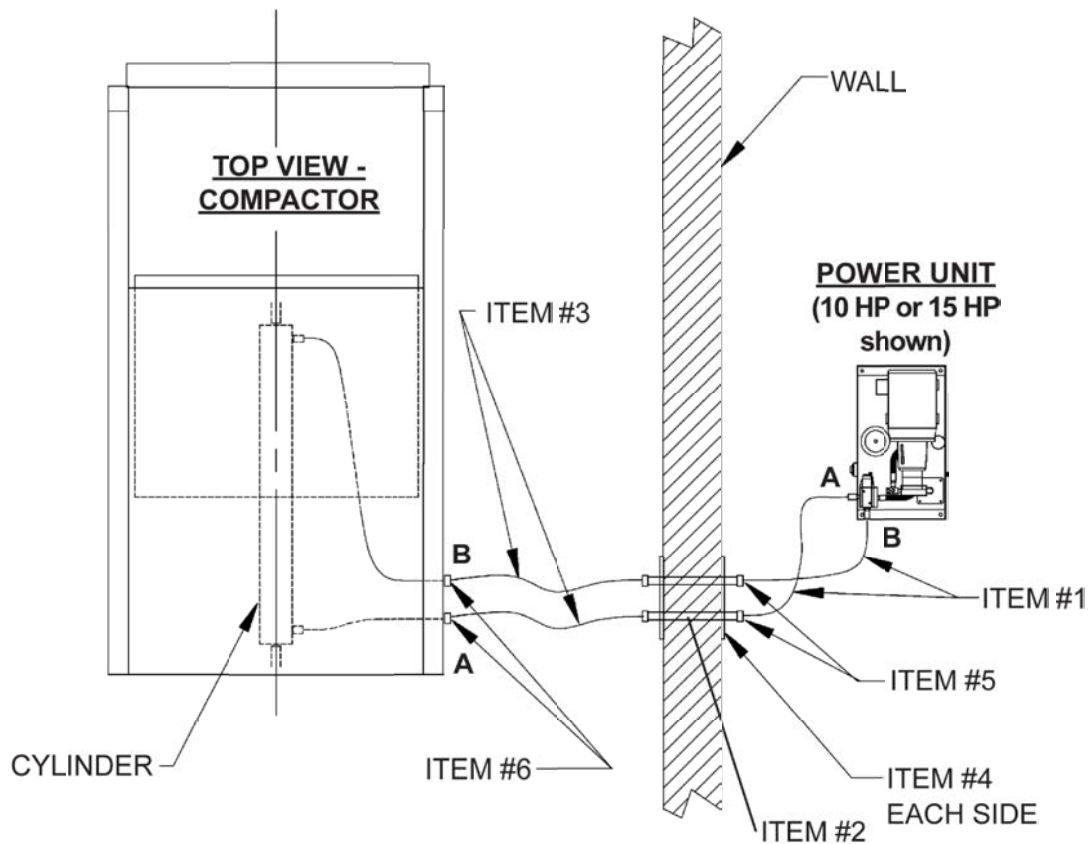
RamJet® Stationary Compactor

Installation

24

WARNING

An Emergency Stop Button must be mounted within 3'-0" of the compactor charge box access.



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 compactor.

This compactor 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.

DANGER

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

WARNING

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

WARNING

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

WARNING

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

WARNING

Do not remove access covers except for servicing. Only trained and authorized service personnel should be allowed to service this equipment. All access doors on the compactor body should always be secured in place when the unit is operating. See **Lock-Out/Tag-Out Instructions** .

WARNING

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

WARNING

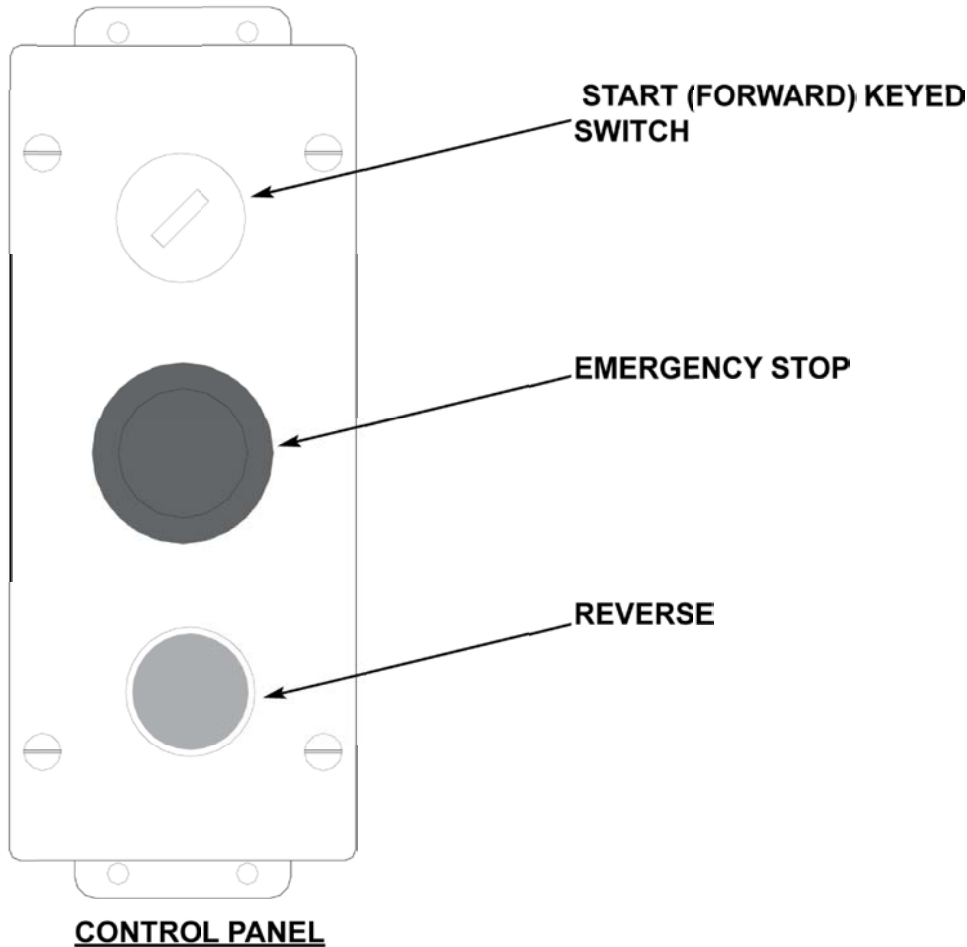
If the compactor is equipped with a security gate or doghouse with security door, be sure that the security gate or door is closed before the compactor is started.

NOTICE

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

CONTROLS FOR STANDARD UNITS (INCLUDING REGEN)

Use for the RJ-225, RJ-225HD, RJ-275, RJ-275XHD, RJ-325, RJ-325HD, RJ-450, RJ-500, RJ-500HD, RJ-550, ULTRA 225, and ULTRA 400



Control Description

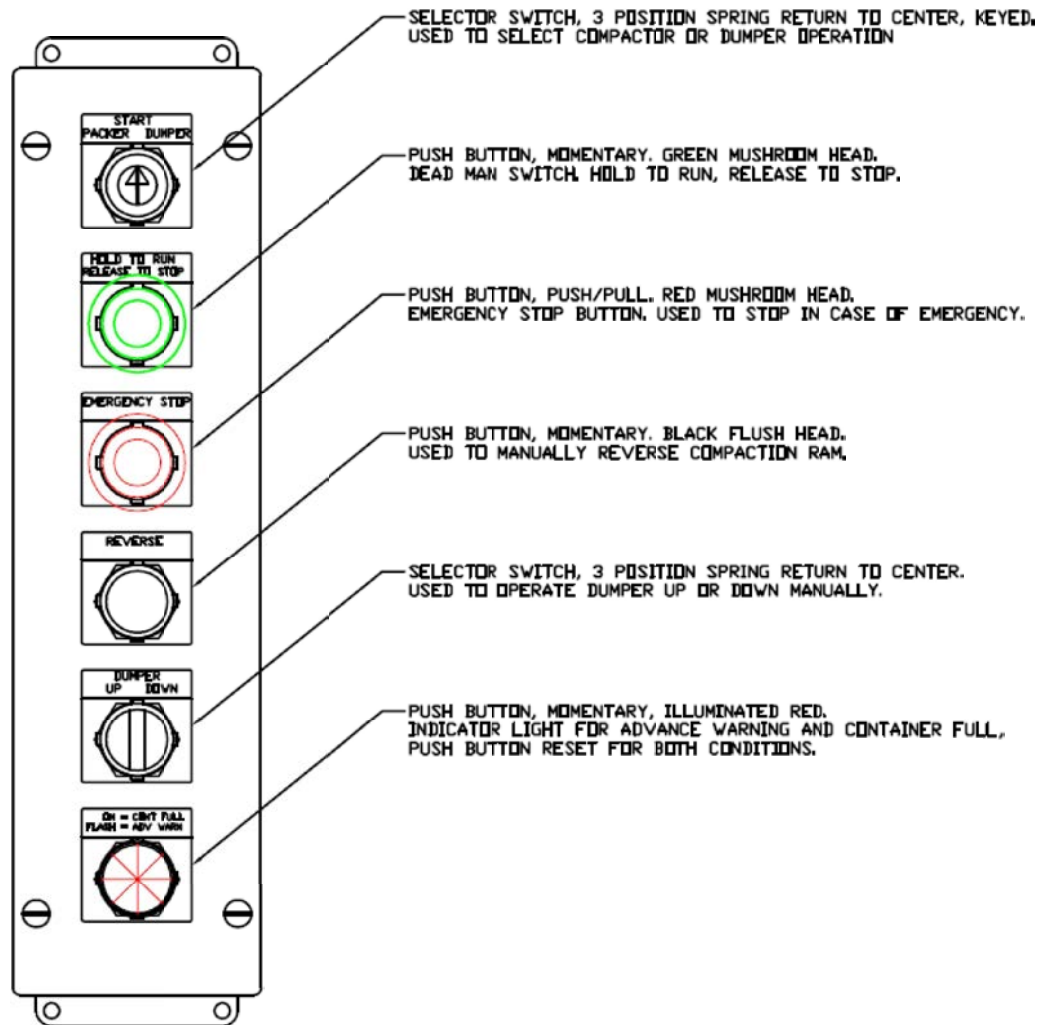
1. **KEYED START (FORWARD) SWITCH** - This switch requires a key for operation. Insert the key and turn clockwise to the START position. Depress and hold the key for one to two seconds and release. The compactor will cycle one time (complete extension and retraction of the ram) and stop. After use, turn the key to the counterclockwise position and remove the key.
2. **EMERGENCY STOP MUSHROOM HEAD PUSHBUTTON** - When depressed, this pushbutton will stop all powered operation of the compactor.
3. **REVERSE PUSHBUTTON** - This pushbutton will reverse the compaction ram when depressed. The Keyed Start Switch must be energized for the REVERSE button to operate. See the **Manual Override Instructions** [\[30\]](#) for details of the operation.

RamJet® Stationary Compactor

Operation

29

OPERATING INSTRUCTIONS FOR RJ 325 WITH A DUMPER HOLD TO RUN



1. **Selector Switch 3 Position** - This selector switch is a keyed three position spring return to center used to select the compactor or dumper operation
2. **Push Button Momentary Green** - When depressed this push button functions as a hold to run dead man switch. Releasing the push button will stop operation.
3. **EMERGENCY STOP MUSHROOM HEAD PUSH-BUTTON** - When depressed, this push button will stop all powered operation of the compactor and dumper
4. **Manual Reverse** - This push button can be used to manually retract the compaction Ram.
5. **Manual Dumper Controls** - This selector switch is a 3 position spring return to manually operate the dumper up or down
6. **Advanced Warning/Container Full** - This illuminated push button indicates advanced warning and container full. Also by depressing the push button you reset advanced warning and container full.

OPERATING INSTRUCTIONS FOR STANDARD UNITS (INCLUDING REGEN)

WARNING

Use ONLY Marathon reinforced receiver containers with Marathon RJ-500HD and RJ-275XHD Compactors. Use of a non-OEM receiver container with a Marathon RJ-500HD and RJ-275XHD Compactor could result in container damage, property damage, and/or personal injury – up to and including death.

1. Place the material to be discarded into the compactor.

NOTICE

If you are loading the compactor through a door or gate, close it before starting the compactor. Refer to **Decal Placement for Optional Loading Configurations**  to determine how your compactor is configured.

2. Insert the key into the key switch. Turn it clockwise and depress for 1 to 2 seconds, then release. The unit will make one complete cycle, then stop.
3. Repeat, if necessary, after the compactor has stopped.
4. When you have finished using the compactor, remove the key from the key switch.

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

Manual Override Instructions (Ram Stop Rear Only)

If the ram is stopped in any position, (ram stop rear or ram stop forward):

- To move the ram rearward, turn and depress the key switch, then press REVERSE button.

While the ram is moving:

- To reverse the ram while it is moving, depress the REVERSE button.

NOTICE

Refer to **Optional Controls**  for Manual Override on Ram Stop Forward Machines.

OPERATING INSTRUCTIONS - MODELS WITH PHOTOELECTRIC CYCLE CONTROL

WARNING

Use ONLY Marathon reinforced receiver containers with Marathon RJ-500HD and RJ-275XHD Compactors. Use of a non-OEM receiver container with a Marathon RJ-500HD and RJ-275XHD Compactor could result in container damage, property damage, and/or personal injury – up to and including death.

NOTICE

This compactor features an **ANSI Z245.21-5.12.1** compliant start-up alarm that is both audible and visible during the activation of the **AUTOMATIC** mode.

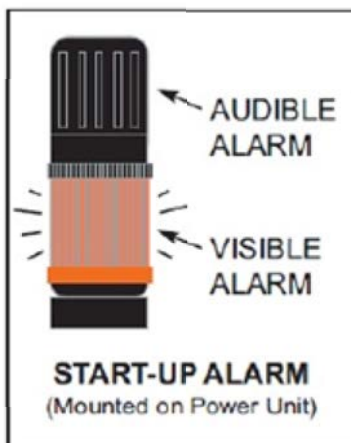
Operating Instructions (Automatic Mode)

1. First, place the material to be discarded into the compactor.

NOTICE

If you are loading the compactor through a door or gate, close it before starting the compactor. Refer to **Decal Placement for Optional Loading Configurations** ⁹⁹ to determine how your compactor is configured

2. Insert the first key into the "**MANUAL - OFF - AUTOMATIC**" key switch and turn to the "**AUTOMATIC**" position.
3. Insert the second key into the "**START**" switch and turn to the right.
4. Depress the key in the "**START**" switch and hold it continuously for 20 seconds.



5. Both the audible and visual start-up alarms will energize for 5 seconds.
6. After 5 seconds the audible alarm will stop, but the visual alarm will continue for an additional 15 seconds (for a total of 20 seconds).
7. After 20 seconds, the motor will start and the ram will extend, and then retract (one complete cycle).
8. The light will continue to flash until the unit is manually turned off, automatically shuts down, or is switched to manual mode.

WARNING

In **AUTOMATIC** mode, the power unit will ram automatically anytime photocells detect ANY OBJECT in the charge box.

OPTIONAL CONTROLS FOR ALL UNITS

WARNING

Use ONLY Marathon reinforced receiver containers with Marathon RJ-575-HD, RJ-575-HDPC and RJ-575-EHDPC Compactors. Use of a non-OEM receiver container with a Marathon RJ-575-HD, RJ-575-HDPC and RJ-575-EHDPC Compactor could result in container damage, property damage, and/or personal injury – up to and including death.

- **Sustained Manual Pressure Control Button** (Hold-To-Run, Release- To-Stop) - This option requires the compactor operator to remain at the pushbutton station while the compactor is in use. Actuation requires depressing the "Hold-To- Run" and "Start" buttons. After the unit has started, the "Start" button is released. If the "Hold-To-Run" button is released, the unit will stop instantly.
- **Container Full Light** - When the light is on, the container is full and is ready to be emptied before its next use. To deactivate, press the illuminated container full light. (The unit will not run while the light is on).
- **Advance Warning Light** - When the light is on, the container is nearing the full level and a pick-up call should be made. At this time 200 PSI is left before the pressure switch is activated to shut the unit off and container is full. (Unit will run with light on.)
- **Ram Stop Forward** - When a machine with this option has been stopped, the ram automatically begins to move rearward when restarted. To reverse the ram while it is stopped, depress the key switch. The ram will retract and then go forward.
- **Cycle Timer** - This option is used when more than one cycle is desired. The factory setting is for three strokes (adjustable).
- **Access Interlock** - This is optional with units equipped with doors, chutes, or access gates. It prevents the unit from operating while a door or gate is open.
- **Photoelectric Cycle Control** - Consists of a LED light source and a reflector. It can be mounted on a hopper or chute. Two holes, located so as to avoid any hazard, are located in opposite walls of the chute. When the light beam is blocked for 3-5 seconds, the compactor is activated and will continue to run until the obstruction has been cleared.
- **Automatic Shutdown** - Used with the photoelectric cycle control. This option has a timer that should not be set over 15 minutes. If a blockage in the charge chamber causes the compactor to continue cycling, the timer will shut the compactor down after the preset time has passed. To deactivate the timer, the illuminated auto shutdown pushbutton is pressed after clearing the blockage.
- **Thermostatically Controlled Oil Heater** - This option is installed in the oil reservoir. The thermostat can be adjusted so the heater will heat the oil when the oil temperature goes below the preset level.
- **ANSI Keyswitch** - Located at discharge end of compactor.

SECTION 4

SERVICE

CONTACT INFORMATION



Technical Service and Warranty:

877-258-1105

Parts:

800-528-5308

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Normal Business Hours:

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

(Central Standard Time)

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 compactor and that the compactor 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 compactor 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 compactor 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 compactor down.
5. De-activate the energy isolating device(s) so that compactor 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 compactor 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 compactor, ensure that the compactor 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 compactor (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.
9. Before entering compactor perform hazard assessment for confined space requirements (hazardous fumes, dust, toxic material, or other hazards) per the OSHA confined space standard.
10. The compactor is now locked out.

LOCK-OUT & TAG-OUT INSTRUCTIONS (CONTINUED)

RESTORING SERVICE

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

1. Check the compactor and the immediate area around the compactor to ensure that nonessential items have been removed and that the compactor 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 compactor.

NOTICE

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

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

PERIODIC MAINTENANCE



Never enter any part of the compactor until the unit has been locked-out and tagged-out.

Monthly

- On compactors with legs, remove access cover(s) and clean debris from behind the compactor ram. Replace cover(s) when clean-out is complete. On compactors with skids (RJ-450 and above), open the hinged access cover on each side at the bottom and clean out. Close hinged cover and fasten when clean-out is complete. See **Compactor Clean-Out Procedure** [39](#) on the next page.
- Check external hoses for chafing, rubbing, and other deterioration or damage.
- Check for any unsafe conditions in the compactor area.
- Check oil level in hydraulic reservoir. Level should be 3/4 of sight gauge.
- Clean out debris from behind compactor ram.
- Lubricate the ram guidance tracks using the grease fittings on the compactor side. (For guided ram machines only)

Quarterly

- Check functional operation of controls and options (stop button, timers, lights, etc.).
- Check hydraulic cylinder, internal hoses, and connections for leakage; check hoses for chafing and wear.

Annually

- Lubricate electric motor bearings annually per the manufacturer's instructions.
- Change the hydraulic fluid in the 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 the tank, it should be filtered through a minimum 6 micron filter. The hydraulic tank should be cleaned inside with a nonflammable solvent and thoroughly dried before replacing the oil.

Filter Maintenance

- The hydraulic suction line filter should be cleaned regularly at yearly intervals.
- The filter may be removed from the unit by disconnecting the union on the suction side of the pump, removing the four bolts retaining the suction flange, and lifting the filter from the reservoir.
- Care should be exercised in cleaning the filter to ensure that the element is not torn.
- Clean the element with a soft brush and standard industrial solvent.
- Replace the filter after cleaning and tighten the union securely. Pump noise and a "crackle" sound is most often caused by air entering the pump suction line. Tightening the suction fittings will usually eliminate the problem.

RamJet® Stationary Compactor

Service

38

MAINTENANCE SCHEDULE FORM

Make copies of below table to record your maintenance on equipment.

MAINTENANCE SCHEDULE						
Monthly						
	CHECK UNSAFE CONDITIONS	CHECK HOSES	CHECK OIL LEVEL	CLEAN/WASH OUT DEBRIS	LUBRICATE RAM GUIDE TRACKS	CHECK GUIDES SHOES
Jan						
Feb						
Mar						
Apr						
May						
June						
July						
Aug						
Sept						
Oct						
Nov						
Dec						

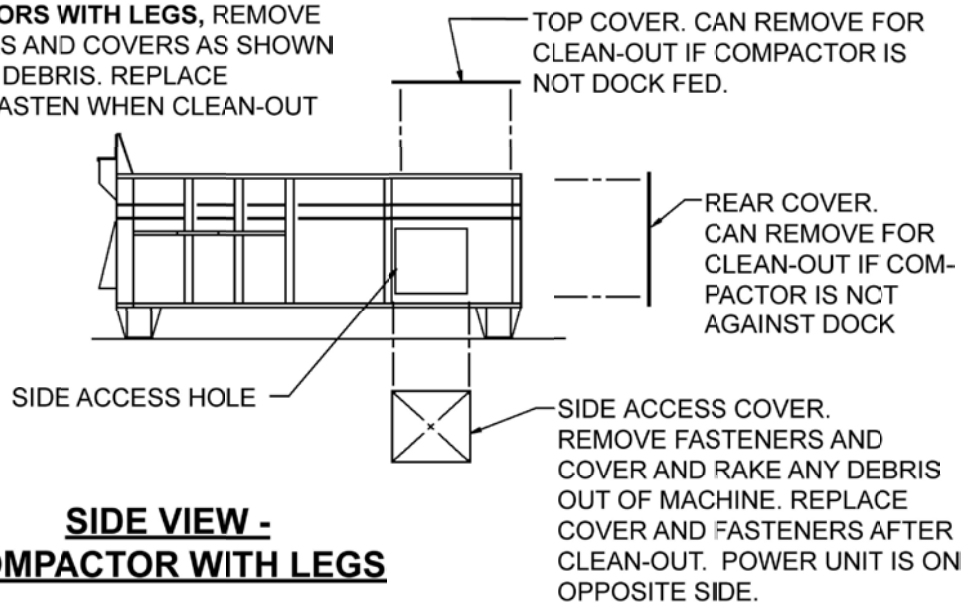
MAINTENANCE SCHEDULE							
	Every 3 Months					Annually	
	CHECK FUNCTIONAL OPERATION OF CONTROLS	CHECK HYDRAULIC CYLINDER	CHECK INTERNAL HOSES	CHECK HYDRAULIC CONNECTIONS FOR LEAKS AND WEAR	LUBRICATE CONTAINER DOOR/ TAILGATE HINGES	LUBRICATE MOTOR BEARINGS	CLEAN HYDRAULIC FILTER
Jan							
Feb							
Mar							
Apr							
May							
June							
July							
Aug							
Sept							
Oct							
Nov							
Dec							

COMPACTOR CLEAN-OUT PROCEDURE

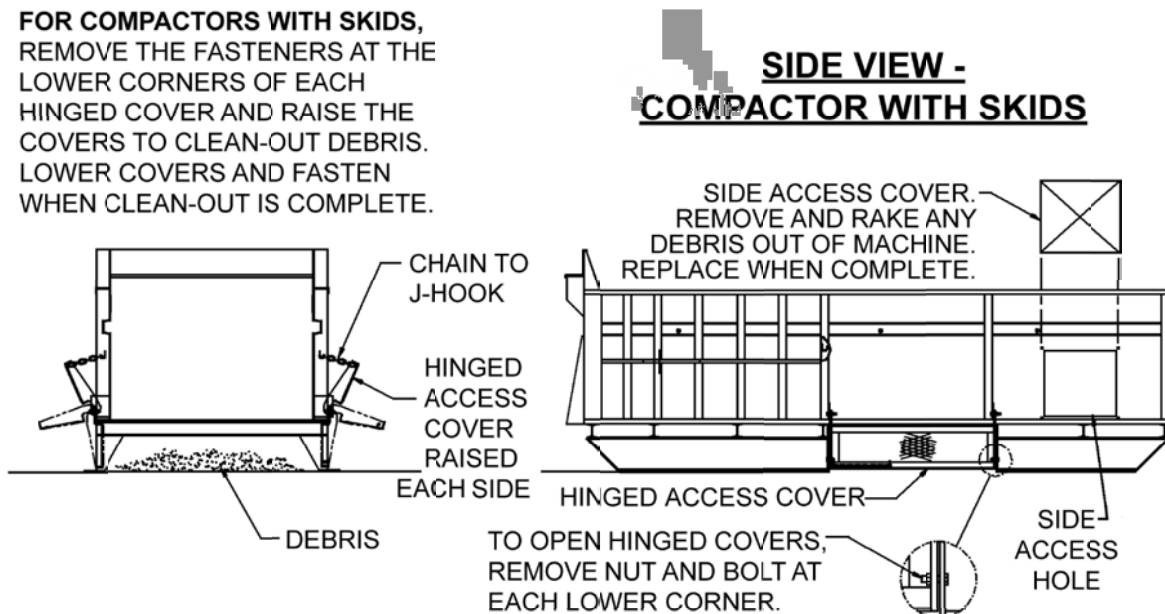
WARNING

Never enter any part of the compactor or perform any maintenance until the unit has been Locked-Out and Tagged-Out.

FOR COMPACTORS WITH LEGS, REMOVE THE FASTENERS AND COVERS AS SHOWN TO CLEAN OUT DEBRIS. REPLACE COVERS AND FASTEN WHEN CLEAN-OUT IS COMPLETE.



FOR COMPACTORS WITH SKIDS, REMOVE THE FASTENERS AT THE LOWER CORNERS OF EACH HINGED COVER AND RAISE THE COVERS TO CLEAN-OUT DEBRIS. LOWER COVERS AND FASTEN WHEN CLEAN-OUT IS COMPLETE.



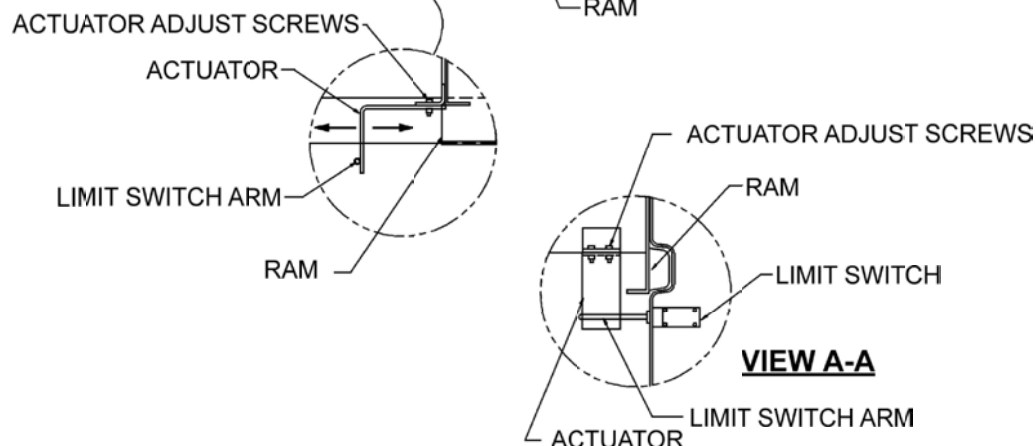
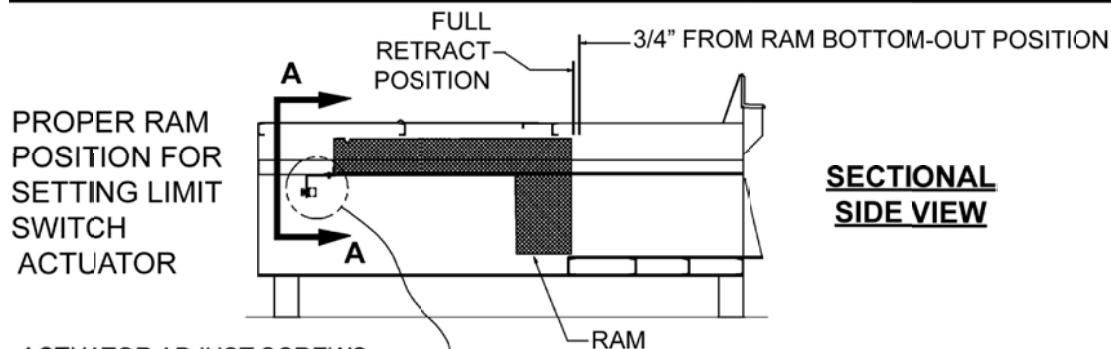
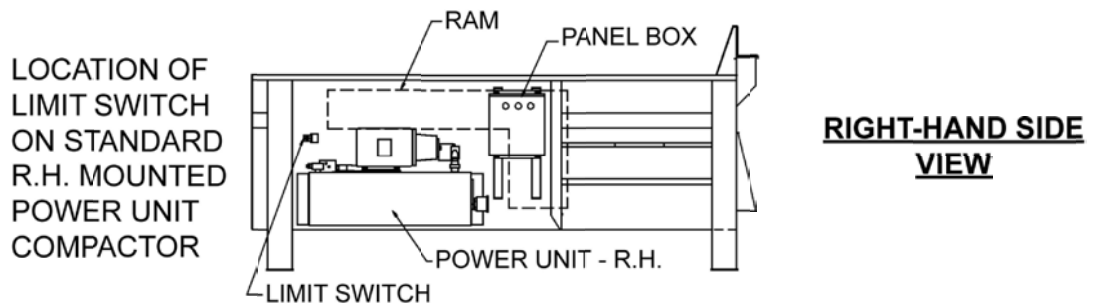
LIMIT SWITCH ADJUSTMENT

Standard - Use for all units **except** REGEN ⁴¹, RJ-275XHD, RJ-500, RJ-500HD, and RJ-550

WARNING

Lock-Out & Tag-Out compactor prior to any service or maintenance.

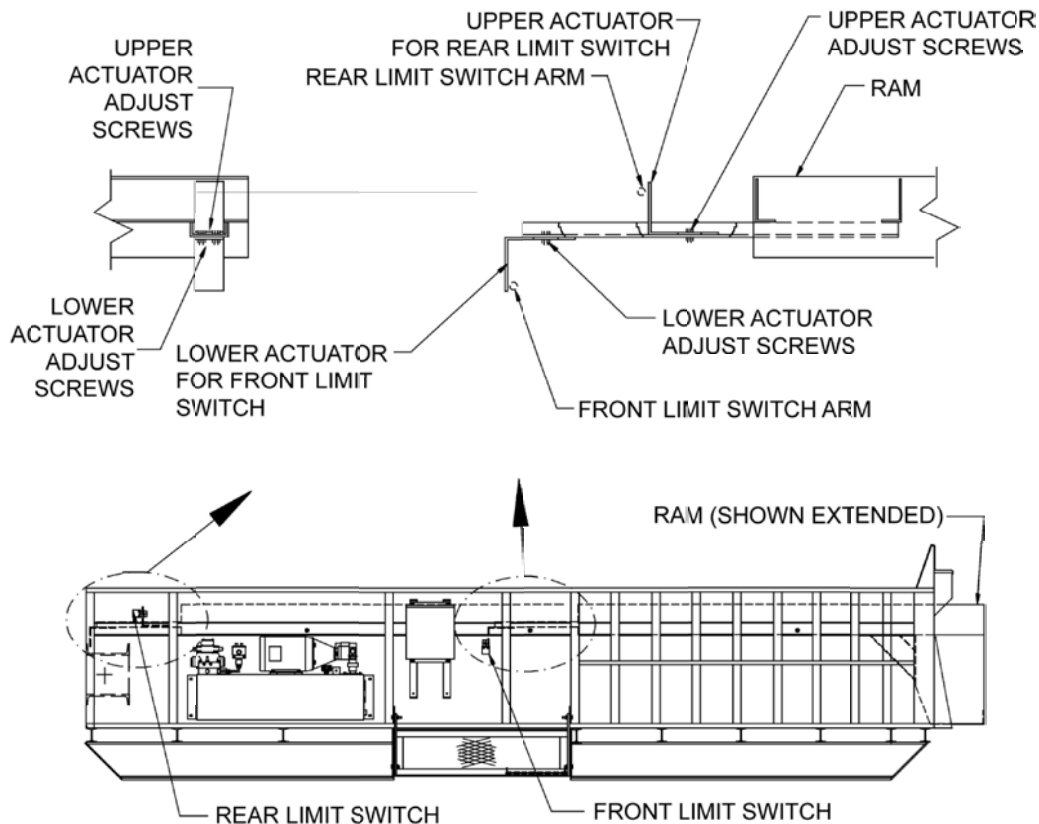
1. Retract the ram completely. Lock-out and tag-out compactor.
2. Mark the ram front position on the compactor side. Power up the compactor And run the ram forward 3/4"-1" and stop. Lock-out and tag-out the compactor.
3. Remove the top cover or side access cover to gain access to the actuator.
4. Loosen the actuator screws and slide the actuator back against the limit switch arm until the limit switch clicks. Re-tighten the screws.
5. Replace the access cover(s). Make sure that all personnel are clear of the Compactor.
6. Test run the compactor to make sure adjustment is correct.



LIMIT SWITCH ADJUSTMENT

Regen Units - Use for RJ-275XHD, RJ-500, RJ-500HD, & RJ-550

1. Retract the ram completely. Lock-Out and Tag-Out compactor.
2. Mark the ram front position on the compactor side. Power up the Compactor and run the ram forward $\frac{3}{4}$ " - 1" and stop. Lock-Out and Tag-Out the compactor.
3. Remove the top cover or side access cover to access to the upper actuator.
4. Loosen the actuator screws and slide the actuator back against the rear limit switch arm until the limit switch clicks. Re-tighten the screws.
5. Extend the ram completely. Lock-out and tag-out compactor.
6. Mark the ram position on the compactor side. Power up the compactor and run the ram back $\frac{3}{4}$ " - 1" and stop. Lock-Out and Tag-Out the compactor.
7. Remove the top cover or side access cover to gain access to the lower actuator.
8. Loosen the actuator screws and slide the actuator forward against the front limit switch arm until the limit switch clicks. Retighten the screws.
9. Replace the access cover(s). Make sure that all personnel are clear of the compactor.
10. Test run the compactor to make sure adjustment is correct.



Side View RJ-550 W/Right Hand Side-Mounted Power Unit

PRESSURE SETTING INSTRUCTIONS, LIMIT SWITCH-SHIFTED

Use for RJ-160, RJ-225, RJ-225HD, RJ-325, RJ-325HD, and RJ-450

1. Lock-Out & Tag-Out the compactor.
2. Install a 3000 PSI liquid filled pressure gauge in the gauge port on the check valve located in the pump discharge. Install the leads of a voltmeter or an indicator light to the input terminal of the pressure switch and terminal #7 in the panel box.
3. Locate T1 (for RJ-225 and 225 Ultra) or T2 (for RJ-325, 400, or 450) through PLC interface. (See PLC Maintenance - Forward/Reverse Timer Adjustment ⁵³) and set applicable timer to 100 seconds.
4. Loosen the locknut on the relief valve and back off CCW (Counterclockwise) the adjustment screw several turns.
5. Turn the fused disconnect to the ON position.
6. Extend the ram until it bottoms out and slowly turn the relief valve adjustment screw CW until the pressure on the gauge reads the same as the setting listed in the chart below under "Pressure Switch Setting". If the voltmeter reads 120 volts or the indicator light illuminates the unit may shutdown after a few seconds delay, proceed to step 10.
7. If the pressure on the gauge does not agree with the chart, remove the silver cap on top of the pressure switch and turn the adjustment screw several turns CCW. Also, turn the relief valve adjustment screw several turns CCW.
8. Restart the compactor and extend the ram until it bottoms out. Turn the relief valve adjustment screw CW until the pressure reads the same as the setting listed in the chart below under "Pressure Switch Setting". ⁴³
9. Turn the adjustment screw on top of the pressure switch CW until 120 volts reads on the volt meter or the indicator light illuminates. The unit may shutdown after a few seconds delay.
10. Loosen the pressure switch top cover screws and lift the cover up so that the switch cannot be activated.
11. Extend the ram until it bottoms out and slowly turn the relief valve adjustment screw until the pressure reaches the value shown in the chart under "Relief Valve Setting".
12. Tighten the relief valve adjustment lock-nut and replace the pressure switch top cover. The unit should shutdown after a few seconds delay. Tighten the screws on the pressure switch top cover.
13. Reset T1 or T2 to the proper setting.
14. Cycle the unit and make sure it will shut down at the end of the cycle.

RamJet® Stationary Compactor

Service

43

PRESSURE SETTING CHART - LIMIT SWITCH-SHIFTED STATIONARY COMPACTORS

MODEL	MOTOR (HP)	PUMP (GPM)	PRESSURE SWITCH SETTING	RELIEF VALVE SETTING
RJ-160	10	10	1850	2150
RJ-225	10	13	1650	1950
RJ-225 HD	15	13	2100	2400
RJ-275	10	13	1650	1950
RJ-325	15	18.5	1650	1950
RJ-325 HD	15	18.5	1650	1950
RJ-450	15	18.5	1700	2000
RJ-225 ULTRA	10	13	1550	1850
RJ-400 ULTRA	15	18.5	1650	1950
*NOTE: FOR UNITS WITH ADVANCED WARNING LIGHT - SET PRESSURE 200 PSI BELOW PRESSURE SWITCH SHUTDOWN PRESSURE.				

PRESSURE SETTING INSTRUCTIONS, REGENERATIVE UNITS

Use for RJ-275XHD, RJ-500, RJ-500HD, and RJ-550

WARNING

Lock-Out & Tag-Out compactor prior to any service or maintenance.

1. Lock-Out & Tag-Out the compactor.
2. Install a 3000 PSI liquid filled pressure gauge in the gauge port on the check valve located on the pump discharge.
3. Remove the access cover Access Cover (top or side). Mark the position of the lower limit switch Limit Switch actuator in relation to the ram, for later reference, and then remove the lower limit switch actuator. See the Procedure - Limit Switch Adjustment- Regen Units [41](#) earlier in this section.
4. Loosen the locknut on the relief valve and back the adjustment screw off CCW (Counter clockwise) several turns.
5. Turn the fused disconnect to the ON position.
6. Extend the ram until it bottoms out and slowly turn the relief valve adjustment screw until the unit shuts down. If the pressure on the gauge is the same as shown on the chart (Pressure Switch Setting) below, proceed to step 10.
7. If the pressure on the gauge does not agree with the chart, remove the Circuit #1 silver cap on top of the pressure switch and turn the adjustment screw several turns CCW. Also, turn the relief valve adjustment screw several turns CCW.
8. Restart compactor, fully extending ram, and turn the relief valve adjustment screw CW (Clock wise) until the pressure reaches that shown on the "Pressure Settings Chart, Regenerative." [45](#)
9. Locate the input for pressure switch 1 circuit 1 on the schematic and observe it on the PLC while adjusting the pressure switch. When the input indicator for the pressure switch illuminates the switch is set.
10. Loosen the pressure switch top cover screws and lift the cover up so that the switch cannot be activated.
11. Extend the ram until it bottoms out and slowly turn the relief valve adjustment screw until the pressure reaches the value shown in the chart under "Relief Valve Setting".
12. Tighten the relief valve adjustment locknut and press the pressure switch top cover down. The unit should shut down. Tighten the pressure switch top cover screws and reseal the relief valve and pressure switch.
13. Retract the ram completely and lock-out and tag-out the compactor. Re-position the lower limit switch actuator and tighten all fasteners.
14. Cycle the unit and make sure it will shut down at the end of the cycle.
15. Replace all covers and fasteners.

RamJet® Stationary Compactor

Service

45

PRESSURE SETTINGS CHART, REGENERATIVE

Model No.	HP	GPM	Relief Valve	Circuit #1	Circuit #2	Cylinder	
				Pressure Switch	Regen Switch	Bore	Rod
RJ-275XHD	15	13	2400	2100	1300	7	4
RJ-500	15	18.5	2000	1700	N/A	7	4
RJ-500HD	20	18.5	2500	2200	N/A	7	4
RJ-550	15	18.5	2000	1700	1300	7	4
Note: On units with the Advance Warning Light, set the pressure 200 PSI below pressure switch circuit #1 setting.							

PRESSURE SETTINGS FOR SINGLE PHASE 10 HP UNITS

Model	HP	Pump (GPM)	Cycle Time	Pressure		Force	
				Switch	Relief	Normal	Max.
RJ-160	10	10	42	1850	2050	36,300	40,250
RJ-225	10	13	56	1300	1500	36,750	42,400
RJ-225 Ultra	10	13	56	1300	1500	36,750	42,400

RamJet® Stationary Compactor

Service

PRESSURE GAUGE READINGS FOR COMPACTORS

COMPACTOR MODEL	ADVANCE WARNING PRESSURE	CONTAINER FULL PRESSURE
RJ-30	1000 PSI	1200 PSI
RJ-1835M (B/H)	1450 PSI	1650 PSI
RJ-1835M (B/H)	1450 PSI	1650 PSI
RJ-160	1650 PSI	1850 PSI
RJ-225	1450 PSI	1650 PSI
RJ-225U	1450 PSI	1650 PSI
RJ-225HD	1900 PSI	2100 PSI
RJ-275HD	1450 PSI	1650 PSI
RJ-275HD	1900 PSI	2100 PSI
RJ-325	1450 PSI	1650 PSI
RJ-325HD	1450 PSI	1650 PSI
RJ-400U	1450 PSI	1650 PSI
RJ-450	1500 PSI	1700 PSI
RJ-500	1500 PSI	1700 PSI
RJ-500HD	2000 PSI	2200 PSI
RJ-550	1500 PSI	1700 PSI
RJ-575HD	2000 PSI	2200 PSI
RJ-450HDRC	1900 PSI	2100 PSI
RJ-575HDRC	2000 PSI	2200 PSI

COMPACTOR MODEL	ADVANCE WARNING PRESSURE	CONTAINER FULL PRESSURE
MFT	1550 PSI	1700 PSI
RJ-885C (ALL MODELS)	1550 PSI	1700 PSI
RJ-1002C (ALL MODELS)	1550 PSI	1850 PSI
RJ-2502C (ALL MODELS)	1550 PSI	1850 PSI
RJ-575	1450 PSI	1650 PSI
TC-HOFF (ALL MODELS)	1550 PSI	1850 PSI
TC-HOFF (ALL MODELS)	1550 PSI	2150 PSI

COMPACTOR MODEL	ADVANCE WARNING PRESSURE	CONTAINER FULL PRESSURE
M-100 (PJ)	1100 PSI	1500 PSI
M-450X 20-18	2100 PSI	2300 PSI
M-450X 20-50	2100 PSI	2300 PSI
M-600X 20-18	2000 PSI	2200 PSI
M-600X 20-50	2000 PSI	2200 PSI
M-600X 30-75	2300 PSI	2500 PSI
M-600X 20-18	2100 PSI	2300 PSI
M-600X 20-50	2100 PSI	2300 PSI
M-600X 30-75	2300 PSI	2500 PSI
M-800X 20-18	2000 PSI	2200 PSI
M-800X 20-50	2000 PSI	2200 PSI
M-800X 30-75	2300 PSI	2500 PSI
M-1050XW 30-75	2000 PSI	2200 PSI
M-1050XW 50-100	2000 PSI	2200 PSI
M-1050XW 50-125	2000 PSI	2200 PSI
M-1475XW 30-75	2000 PSI	2200 PSI
M-1475XW 50-100	2000 PSI	2200 PSI
M-1475XW 50-125	2000 PSI	2500 PSI

MATERIAL: _____

ROUTING: _____

Scale: Full

Tolerances: ±1/16"

Sheet: _____ of _____

Title: PRESSURE GAGE READINGS FOR ADVANCE WARNING AND CONTAINER FULL

Drawn: ES

Drawing Number: 74829

Date: 4/24/18

Equipment Company,
Vernon, AL
Yerlington, NV
Clearfield, Pa.

CYLINDER REPLACEMENT, MOTOR WARRANTY

WARNING

Lock-out & tag-out compactor prior to any service or maintenance.

Cylinder Replacement

1. Remove access covers.
2. Remove hoses.
3. Remove cylinder pins.
4. Remove cylinders.
5. To install the cylinders, reverse the above steps.

Warranty and Service on Motors

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

PRINCIPLES OF OPERATION

Standard Operation (Use for all units except Regen, RJ-275XHD, RJ-500, RJ-500HD, and RJ-550)

Upon startup, a contact is made that energizes an input on the PLC. This input is read by the PLC program and the output for the motor starter is energized, starting the electric motor. For ram stop rear machines the directional valve solenoid remains de-energized and the hydraulic fluid is directed to the base end of the cylinder which extends the ram. At the same time a timer in the PLC program begins timing the forward stroke of the ram. When the timer times out the output for the coil on the directional control valve is energized, shifting the spool in the valve and fluid is directed to the rod end of the cylinder causing it to retract. When the ram is fully retracted the rear limit switch is actuated by the actuator on the back of the ram. The rear limit switch actuation de-energizes the output for the motor starter and the directional control valve. The motor will shutdown and the ram will cease movement.

The standard compactors are equipped with a pressure switch. When the compactor has filled the container to a point where the preset pressure switch setting is reached, the pressure switch will shut the compactor down. The Emergency Stop button used in the standard compactors will shut the compactor down when depressed by breaking the circuit to the PLC controls.

Regenerative Operation (Use for RJ-275XHD, RJ-500, RJ-500HD, & RJ-550)

“REGENERATIVE” when applied to a hydraulic circuit means taking flow from the rod end of a cylinder and applying it to the base end to increase extend speed. The Marathon compactors use a three-position valve to accomplish regeneration. In the center position, both cylinder ports are ported internally within the valve to the pump pressure port. The tank port is blocked. When the pump is started, it supplies pressure to both ends of the cylinder. Because the piston base end is larger in area than the rod end, the cylinder extends. The oil coming out of the rod end joins the oil going into the base end. As the cylinder extends and meets the load, the pressure switch senses the load and the valve is shifted so that the rod end oil is directed to the tank and the base end slows to normal speed, but full force.

When the ram fully extends, the limit switch is actuated by the front actuator on the ram. This actuation causes the valve solenoid to energize and shifts the valve spool so that hydraulic oil is directed in the rod end of the cylinder. The cylinder then retracts causing the ram to retract. When the ram fully retracts, the limit switch is actuated by the rear actuator on the ram. This actuation causes the motor starter contact to open, removing power from the motor starter, therefore causing the motor/power unit to shut down. When the power is removed, the valve spool springs center in the regenerative position for the next cycle.

RamJet® Stationary Compactor

Service

49

FUSES AND CIRCUIT BREAKERS

Three Phase					
MOTOR SIZE	VAC	FULL LOAD AMP	DUAL ELEMENT FUSE MAX.SIZE	CIRCUIT BREAKER MAX.SIZE	SERVICE DISCONNECT AMP.
3 HP	208	8.5	15	20	30
	230	8.2	15	20	30
	460	4.1	10	15	30
	575	3.3	6	15	30
5 HP	208	13.1	30	40	30
	230	11.5	25	40	30
	460	5.7	15	20	30
	575	4.8	10	15	30
10 HP	208	27.5	50	80	60
	230	25.6	50	70	60
	460	12.8	25	35	30
	575	11.4	20	30	30
15 HP	208	47.3	60	90	60
	230	45.0	60	90	60
	460	22.5	30	40	30
	575	18.3	30	40	30
20 HP	208	51.0	100	125	100
	230	48.0	90	125	100
	460	24.0	45	60	60
	575	19.1	35	50	60
30 HP	208	81.0	150	225	200
	230	76.0	150	200	200
	460	38.0	70	100	100
	575	28.6	60	80	60
Single Phase					
3/4 HP	120	8.2	20	20	30
	230	4.1	10	15	30
3 HP	208	15.5	30	45	30
	230	14.0	25	40	30
5 HP	208	22.0	50	80	60
	230	20.8	45	70	60
10 HP	208	43.0	100	125	100
	230	39.0	90	125	100

RamJet® Stationary Compactor

Service

50

WIRE SIZES

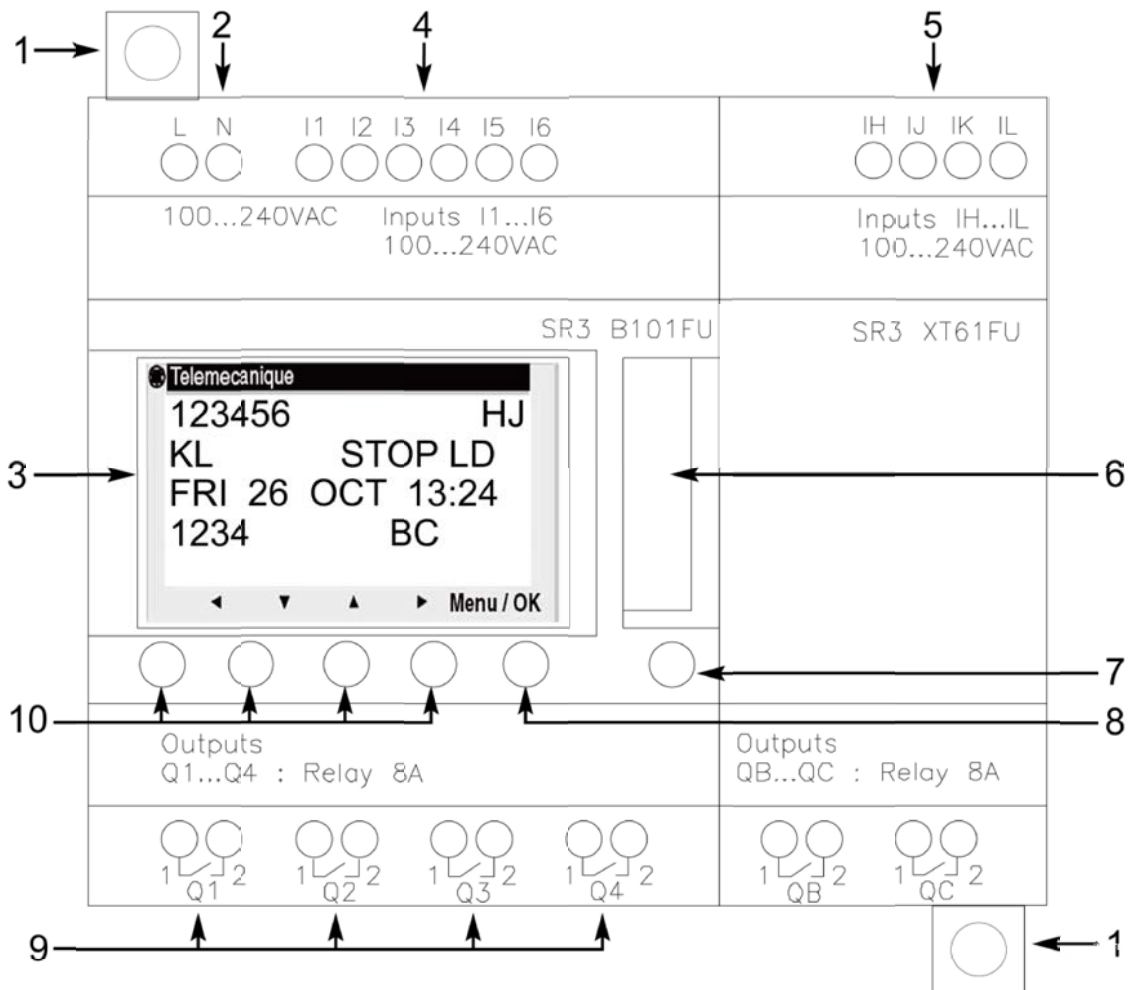
Three Phase		THW Copper 75°C (165°F)		
MOTOR SIZE	VOLTAGE	LENGTH		
		TO 100'	TO 200'	TO 300'
3 HP	208	10	8	6
	230	12	10	8
	460	12	12	12
	575	12	12	12
5 HP	208	10	6	4
	230	10	8	6
	460	12	12	10
	575	12	12	12
10 HP	208	6	4	2
	230	8	4	3
	460	12	10	8
	575	12	12	10
15 HP	208	4	2	1
	230	6	3	2
	460	10	8	6
	575	12	10	8
20 HP	208	4	1	1/0
	230	4	2	1
	460	10	8	6
	575	10	10	8
30 HP	208	2	0	3/0
	230	2	1	2/0
	460	6	6	4
	575	8	8	6
Single Phase				
3/4 HP	120	12	8	6
	230	12	12	10
3 HP	208	8	6	4
	230	8	6	4
5 HP	208	8	6	4
	230	8	6	4
10 HP	208	4	1	1/0
	230	4	2	1/0

RamJet® Stationary Compactor

Service

51

PLC MAINTENANCE - LAYOUT & DESCRIPTION



REFERENCE	DESCRIPTION
1	RETRACTABLE MOUNTING FEET.
2	SCREW TERMINAL BLOCK FOR THE POWER SUPPLY.
3	LCD, 4 LINES, 18 CHARACTERS
4	SCREW TERMINAL BLOCK FOR INPUTS
5	SCREW TERMINAL BLOCK FOR 0-10 VOLT ANALOG INPUTS USABLE IN DISCRETE MODE ON SOME MODELS
6	CONNECTOR FOR BACKUP MEMORY OR PC CONNECTION CABLE
7	SHIFT KEY
8	SELECTION AND VALIDATION KEY (MENU / OK)
9	RELAY OUTPUT SCREW TERMINAL BLOCK
10	ARROW KEYS OR AFTER FIRST CONFIGURING THEM, Z PUSHBUTTONS

PLC MAINTENANCE - MULTICYCLE COUNTER SELECTION

STEPS	DIRECTIONS
1	PRESS MENU/OK BUTTON
2	PRESS ARROW DOWN BUTTON TO SELECT PARAMETER (FLASHING)
3	PRESS MENU/OK BUTTON
4	PRESS ARROW UP BUTTON UNTIL CC1 (FLASHING)
5	PRESS ARROW LEFT BUTTON UNTIL P=0001 (FLASHING) *SEE NOTE
6	PRESS ARROW UP OR ARROW DOWN TO SELECT NUMBER OF CYCLES
6	PRESS MENU/OK BUTTON
7	PRESS MENU/OK WITH YES TO CONFIRM CHANGES
8	PRESS MENU/OK BUTTON TO RETURN TO NORMAL OPERATION
*NOTE: 4 IS THE MAXIMUM NUMBER OF CYCLES THAT CAN BE SELECTED.	

PLC RAM STOP FORWARD OPTION

STEPS	DIRECTIONS
1	PRESS THE ARROW LEFT BUTTON. TEXT WILL APPEAR ON THE SCREEN FOR RAM STOP REAR.
2	PRESS THE SECOND ARROW UP BUTTON. TEXT WILL APPEAR ON THE SCREEN FOR RAM STOP FORWARD.

PLC MAINTENANCE - AUTO SHUTDOWN TIMER

STEPS	DIRECTIONS
1	PRESS MENU/OK BUTTON
2	PRESS ARROW DOWN BUTTON TO SELECT PARAMETER (FLASHING)
3	PRESS MENU/OK BUTTON
4	PRESS ARROW UP BUTTON UNTIL TTA (FLASHING)
5	PRESS ARROW LEFT BUTTON UNTIL TIME SETTING (FLASHING)
6	PRESS ARROW UP OR ARROW DOWN TO ADJUST TIME*
7	PRESS MENU/OK BUTTON
8	PRESS ARROW RIGHT TO CONFIRM CHANGES
9	PRESS MENU/OK BUTTON TO RETURN TO NORMAL OPERATION
*NOTE: 30 MINUTES IS THE MAXIMUM AMOUNT OF TIME THAT CAN BE SELECTED.	

PLC MAINTENANCE - FORWARD/REVERSE TIMER

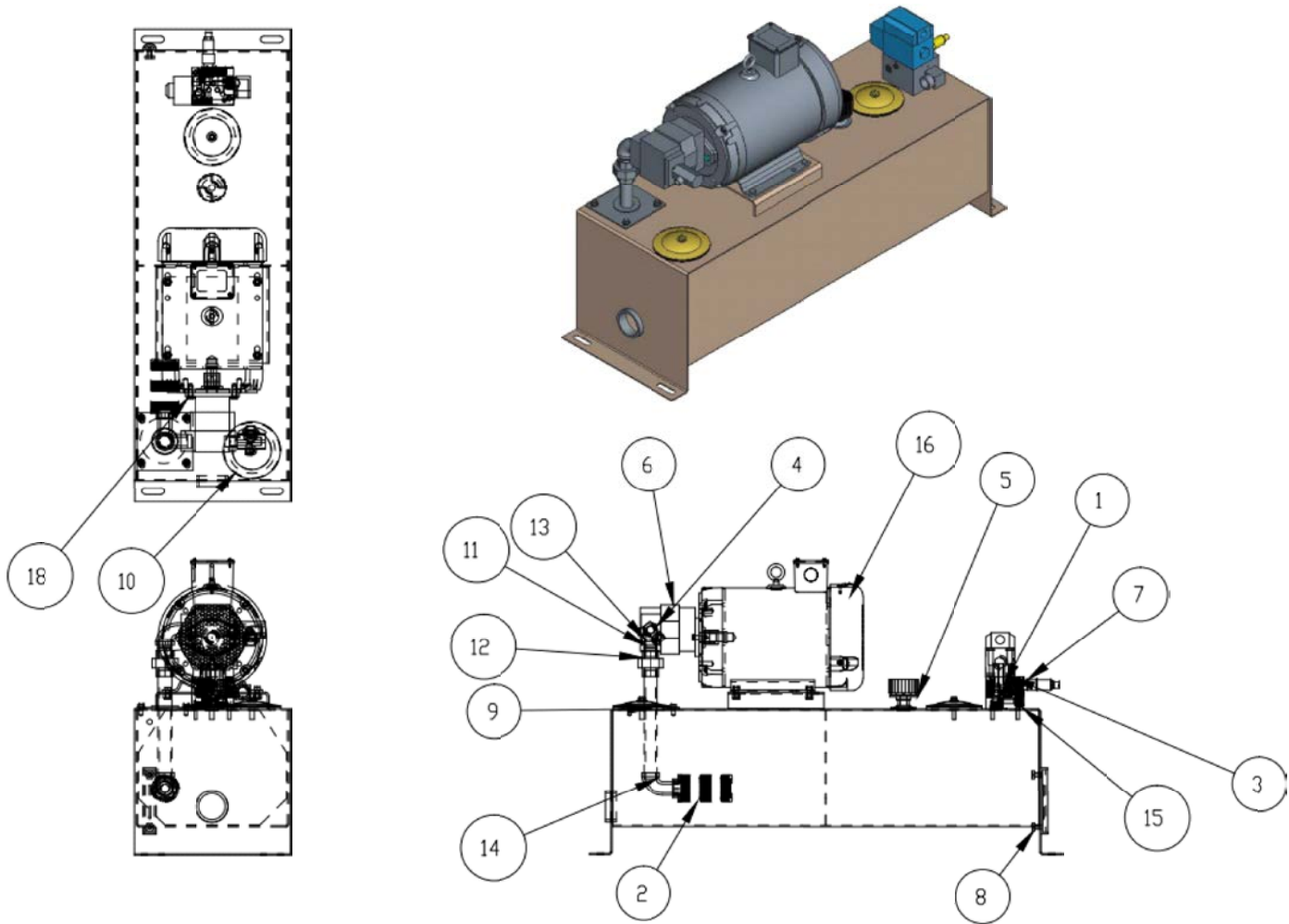
STEPS	DIRECTIONS
1	PRESS MENU/OK BUTTON
2	PRESS ARROW DOWN BUTTON TO SELECT PARAMETER (SHOULD BE FLASHING)
3	PRESS MENU/OK BUTTON
4	PRESS ARROW UP BUTTON UNTIL TT1 = FORWARD TIMER (FLASHING)
5	PRESS ARROW LEFT BUTTON UNTIL TIME SETTING (FLASHING)
6	PRESS ARROW UP OR ARROW DOWN TO ADJUST TIME*
7	PRESS MENU/OK BUTTON
8	PRESS MENU/OK BUTTON TO CONFIRM CHANGES
9	PRESS ARROW LEFT BUTTON TO RETURN TO TT1 = FORWARD TIMER (FLASHING)
10	PRESS MENU/OK BUTTON TO RETURN TO NORMAL OPERATION
*NOTE: THE TIMER FOR EACH OPERATION WILL BE LISTED ON THE SCHEMATIC.	

RamJet® Stationary Compactor

Service

54

POWER UNIT - STANDARD 10 HP



RamJet® Stationary Compactor

Service

55

POWER UNIT REFERENCE CHART - STANDARD RH/SM 10 HP

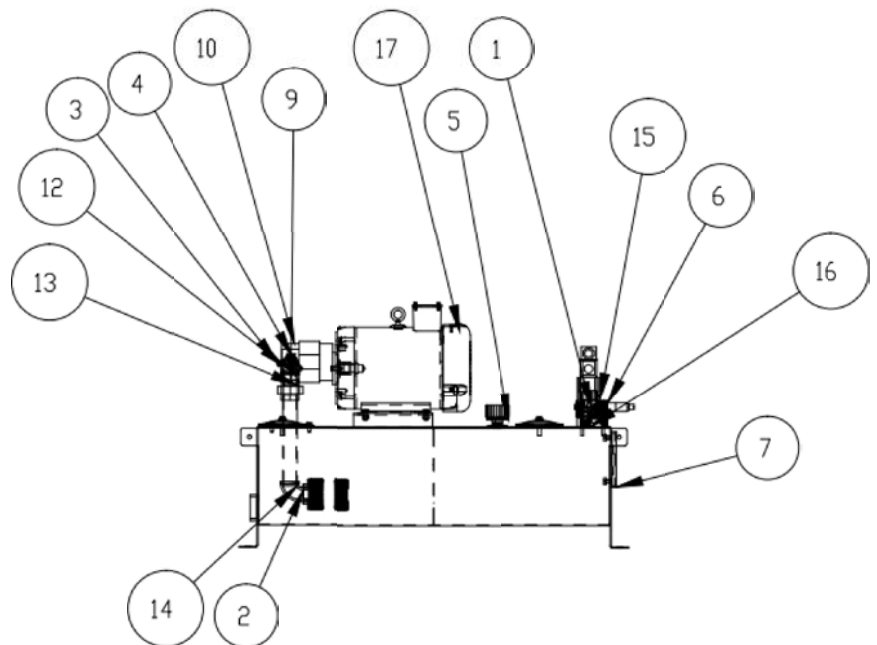
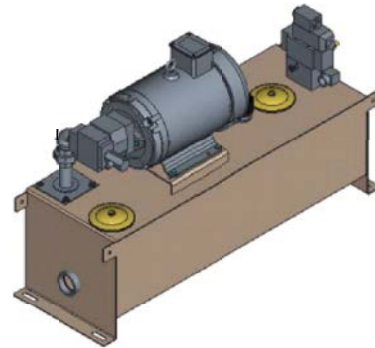
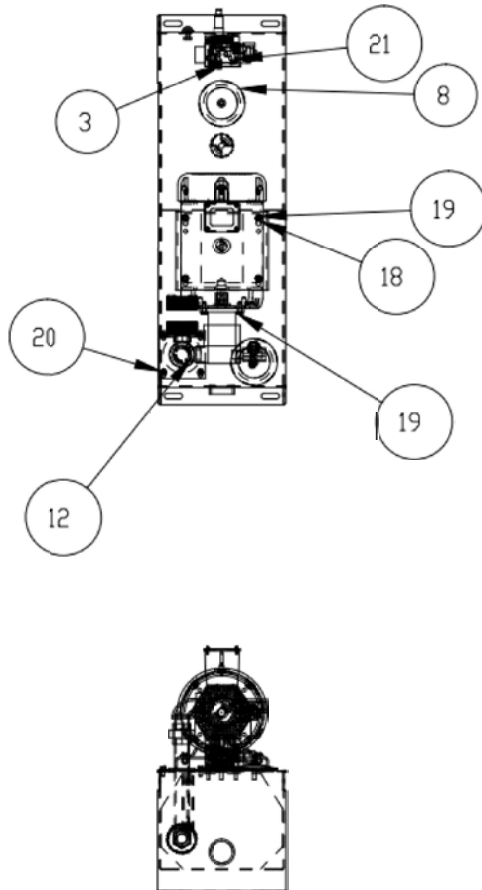
REF	QTY	PART #	DESCRIPTION
1	1	02-0044	ELL 3/4 NPTM X 3/4 NPTF 90
2	1	02-0050	FILTER SUCTION 1"
3	1	02-0157	VALVE 4-WAY 05 O 2-POS
4	1	02-0184	VALVE CHECK 3/4 NPTM X 3/4 NPTF W/ 1/4 NPTF
5	1	02-0197	FILLER BREATHER 3/4
6	1	02-0211	PUMP GEAR 13 GPM
7	1	02-0214	VALVE RELIEF 20 GPM PILOT OP
8	1	02-0215	GAUGE SIGHT LEVEL 5"
9	1	02-0218	FLANGE SUCTION I PIPE
10	2	02-0219	CLEAN OUT COVER 6
11	2	02-0238	ELL I NPTM X I NPTF SCH 40
12	1	02-0239	UNION I NPT
13	1	02-0240	NIPPLE I NPT CLOSE
14	1	02-0363	PIPR 3/4 SCH 40 X 16
15	1	02-6243	SUBPLATE 05 1 STN 3/4 NPTF R ON P F/UV
16	1	03-7030	MOTOR 10HP 208/230/460V 60HZ 3PH 1750 CCM TEFC EPA
17	4	05-0015	NUT 3/8-16 UNC HEX SELF-LOCKING
18	2	05-0096	BOLT 3/8-16 X I HHCS
19	4	05-0155	BOLT, 3/8-16 X 3/4, HEX HD
20	4	05-0225	SCREW 5/16-18 X 3/4 ST TYPE 23
21	2	05-0662	BOLT 5/16-18 X 3 1/2 ALLEN HD
22	1	460915	RSVR UNIV PPK 20GAL

RamJet® Stationary Compactor

Service

56

POWER UNIT - STANDARD 15 HP



RamJet® Stationary Compactor

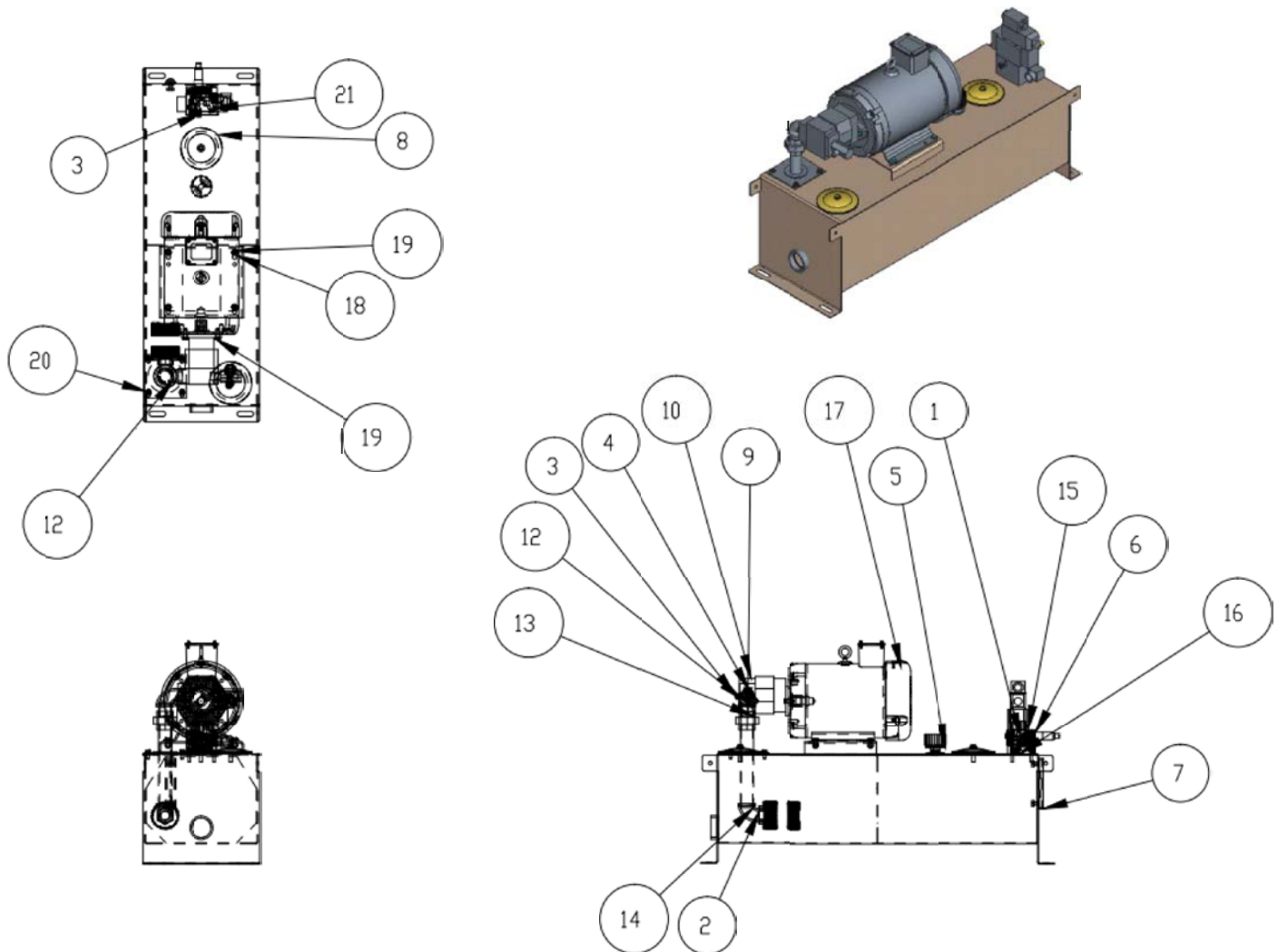
Service

57

POWER UNIT REFERENCE CHART - STANDARD RH/SM 15 HP

REF	QTY	PART #	DESCRIPTION
1	1	02-0044	ELL 3/4 NPTM X 3/4 NPTF 90
2	1	02-0050	SUCTION STRAINER 1"
3	2	02-0065	PLUG 1/4 NPT SOCKET HEAD
4	1	02-0184	VALVE CHECK 3/4 NPTM X 3/4 NPTF W/ 1/4 NPTF
5	1	02-0197	FILLER BREATHER 3/4
6	1	02-0214	VALVE RELIEF 20 GPM CART PILOT OP
7	1	02-0215	GUAGE SIGHT LEVEL 5"
8	2	02-0219	CLEAN OUT COVER 6
9	1	02-0221	UNION 1 1/4 NPT
10	1	02-0211	PUMP GEAR 13 GPM
11	1	02-0219	FLANGE SUCTION 1 PIPE
12	2	02-0261	ELL 1 1/4 PIPE NPTM X 1 1/4 NPTF SCH 40
13	1	02-0262	NIPPLE 1 1/4 NPT CLOSE
14	1	02-0365	1 1/4 SCH 40 PIPE X 10 1/2
15	1	02-0157	VALVE 4-WAY 05 O 2-POS
16	1	02-6243	SUBPLATE 05 1 STN 3/4 NPTF R ON P F/UV PPK
17	1	03-4351	MOTOR 15HP 208/230/460V 60HZ 3 PH CLOSE COUPLE
18	4	05-0015	NUT 3/8-16 UNC HEX SELF-LOCKING
19	6	05-0096	BOLT 3/8-16 X 1 HHCS
20	4	05-0225	SCREW 5/16-18 X 3/4 ST TYPE 23
21	2	05-0662	BOLT 5/16-18 X 3 1/2 ALLEN HD
22	1	460915	RSVR RH SDMNT UNIV 20GAL

REMOTE POWER UNIT - STANDARD



RamJet® Stationary Compactor

Service

59

REMOTE POWER UNIT REFERENCE CHART - STANDARD

REF	QTY	PART #	DESCRIPTION
1	1	02-0044	ELL 3/4 NPTM X 3/4 NPTF 90
2	1	02-0051	SUCTION STRAINER 1 1/4
3	2	02-0065	PLUG 1/4 NPT SOCKET HEAD
4	1	02-0184	VALVE CHECK 3/4 NPTM X 3/4 NPTF W/ 1/4 NPTF
5	1	02-0197	FILLER BREATHER 3/4
6	1	02-0214	VALVE RELIEF 20 GPM CART PILOT OP
7	1	02-0215	GUAGE SIGHT LEVEL 5"
8	2	02-0219	CLEAN OUT COVER 6
9	1	02-0221	UNION 1 1/4 NPT
10	1	02-0259	PUMP GEAR 18.5 GPM
11	1	02-0260	FLANGE SUCTION 1 1/4 PIPE
12	2	02-0261	ELL 1 1/4 PIPE NPTM X 1 1/4 NPTF SCH 40
13	1	02-0262	NIPPLE 1 1/4 NPT CLOSE
14	1	02-0365	1 1/4 SCH 40 PIPE X 10 1/2
15	1	02-3106	VALVE 4-WAY 05 O 2-POS INTERNAL P&D
16	1	02-6243	SUBPLATE 05 1 STN 3/4 NPTF R ON P F/UV PPK
17	1	03-4351	MOTOR 15HP 208/230/460V 60HZ 3 PH CLOSE COUPLE
18	4	05-0015	NUT 3/8-16 UNC HEX SELF-LOCKING
19	6	05-0096	BOLT 3/8-16 X 1 HHCS
20	4	05-0225	SCREW 5/16-18 X 3/4 ST TYPE 23
21	2	05-0662	BOLT 5/16-18 X 3 1/2 ALLEN HD
22	1	460915	RSVR RH SDMNT UNIV 20GAL

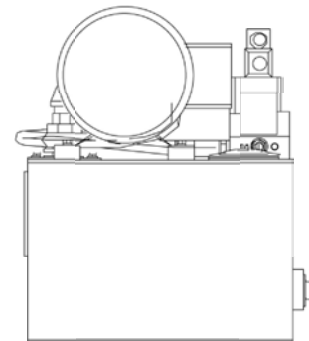
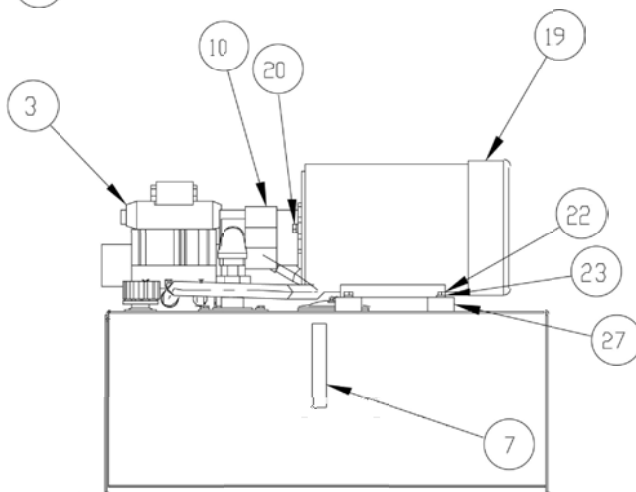
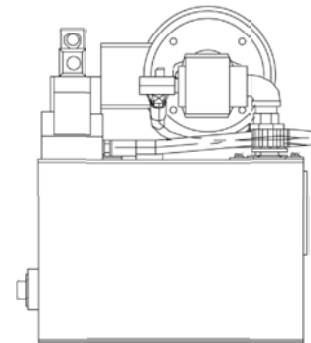
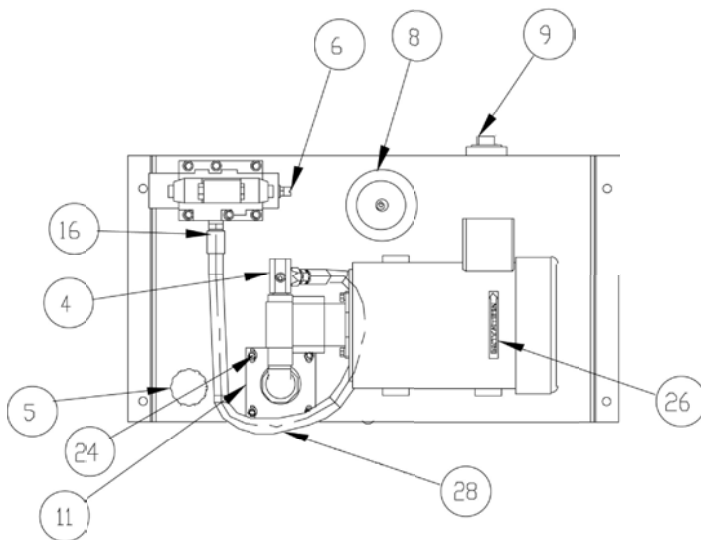
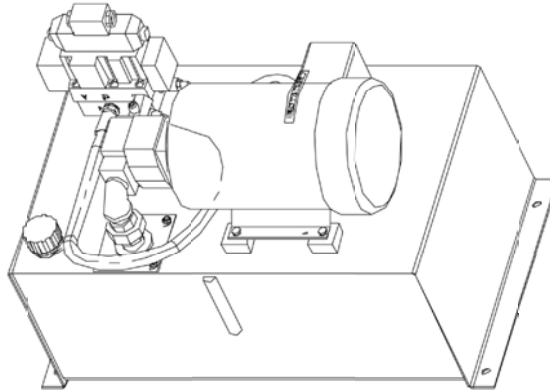
RamJet® Stationary Compactor

Service

60

REMOTE POWER UNIT - REGEN

Match the reference numbers below with the chart on the following page for parts identification.



RamJet® Stationary Compactor

Service

61

REMOTE POWER UNIT REFERENCE CHART - REGEN

Match reference numbers with the chart on the previous page to identify components. For replacement part ordering, call our parts department at 800-528-5308.

PART #	REF #	DESCRIPTION	QTY
02-0051*	1	FILTER SUCTION 1 1/4 18 GPM 10*	1
02-0050**	1	FILTER SUCTION 13 GPM**	1
02-0065	2	PLUG 1/4 NPT SOCKET HEAD	1
02-0081	3	VALVE 4-WAY 08 R 3-POS	1
02-0184	4	VALVE CHECK 3/4 NPTM X 3/4 NPT	1
02-0197	5	BREATHER 3/4 FILLER	1
02-0214	6	VALVE RELIEF 20 GPM CART PILOT	1
02-0215	7	GAUGE SIGHT LEVEL 5"	1
02-0219	8	CLEAN OUT COVER 6	1
02-0259*	10	PUMP 18.5 GPM GEAR*	1
02-0211**	10	PUMP 13 GPM**	1
02-0260	11	FLANGE SUCTION 1 1/4 PIPE	1
02-0261	12	ELL 1 1/4 NPTM X 1 1/4 NPTF 90	2
02-0262	13	NIPPLE 1 1/4 NPT CLOSE	1
02-0271	14	SUBPLATE 08 1 STN 3/4 NPTF POR	1
02-0221	15	UNION 1 1/4 NPT	1
02-0326	16	HOSE END 3/4 WB X 3/4 NPTM	2
02-0364	17	PIPE 1 SCH 40 X 11	1
02-0365	18	PIPE 1 1/4 SCH 40 X 10 1/2	1
03-4351	19	MOTOR 15HP 208/230/460V 60HZ 3	1
05-0012	20	BOLT 3/8-16 X 1 1/4 HHCS PLT	2
05-0015	21	NUT 3/8-16 HEX SELF LOCKING	2
05-0155	22	BOLT 3/8-16 X 3/4 HHCS	4
05-0159	23	WASHER 3/8 LOCK	6
05-0225	24	SCREW 5/16-18 X 3/4 ST TYPE 23	4
05-2145	25	BOLT 3/8-16 X 2 1/4 SHCS	2
06-0011	26	DECAL MOTOR ROTATION 3/4 x 4	1
09-1239	27	1 X 2 X 2 BAR	4
02-0327	28	HOSE 3/4 2 WB 3100 PSI	3.01 FT
*Used for the RJ-550			
**Used for the RJ-275 XHD			

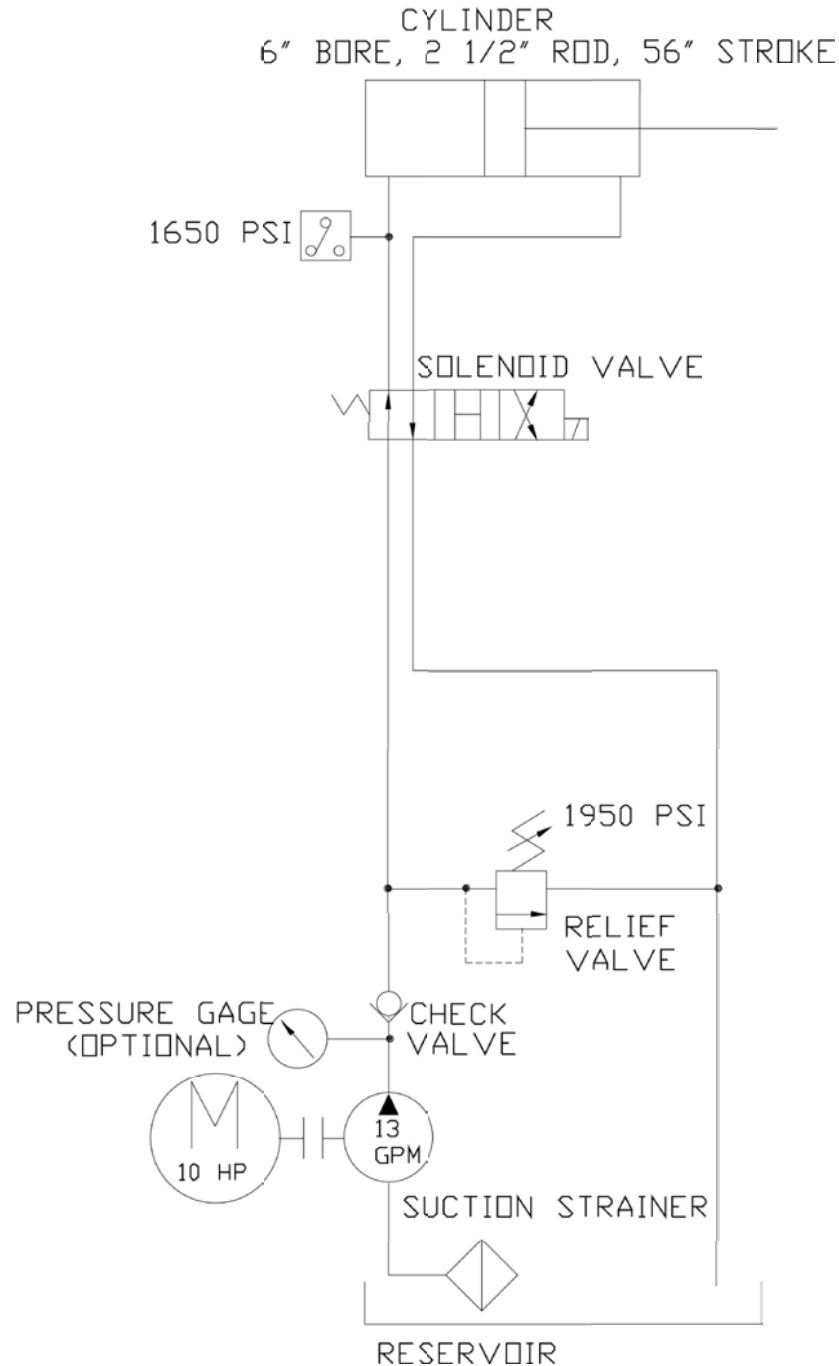
RamJet® Stationary Compactor

Service

62

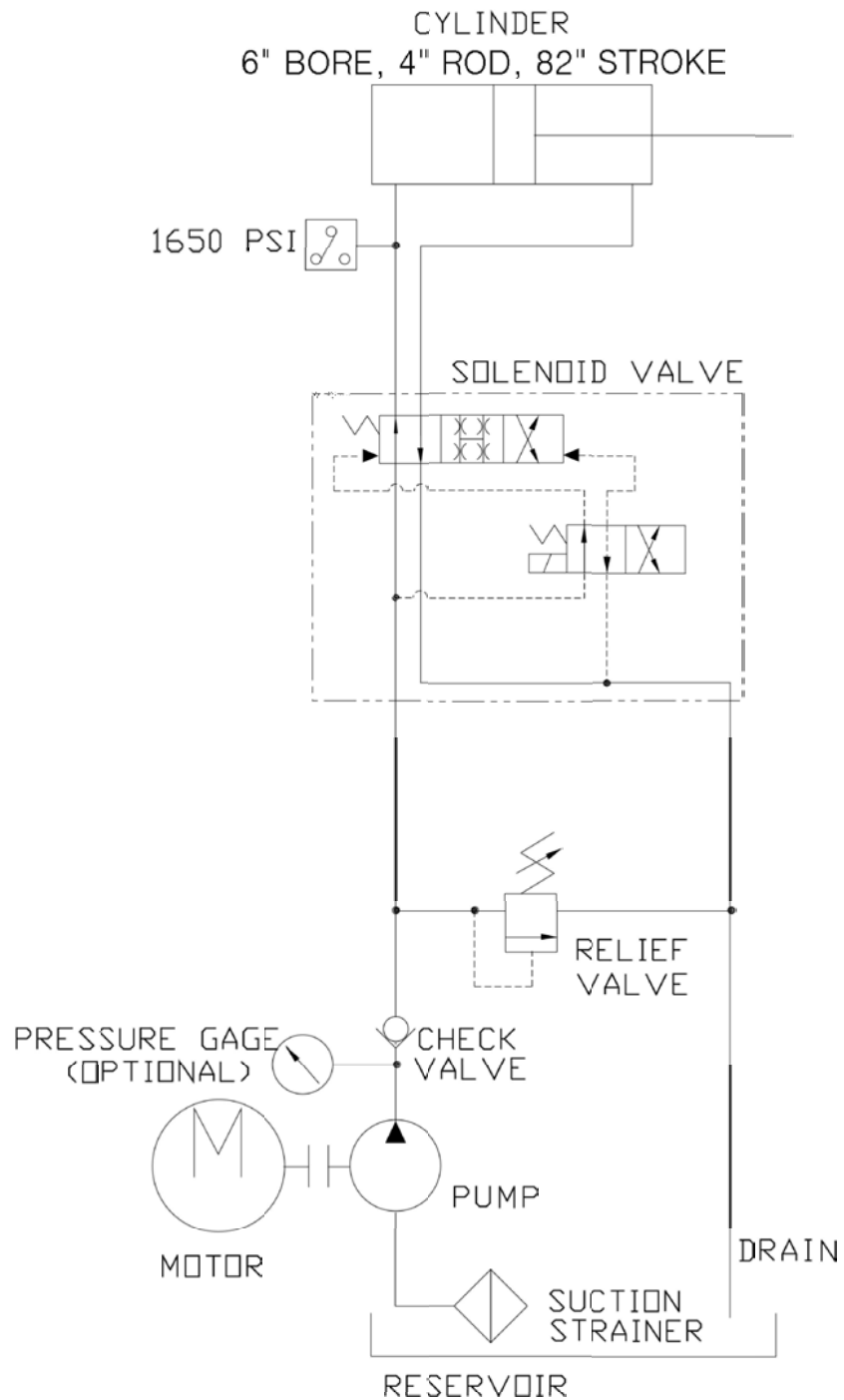
HYDRAULIC SCHEMATIC - DIRECT OPERATED CONTROL VALVE

Use for RJ-160, RJ-225, and RJ-225 Ultra



HYDRAULIC SCHEMATIC - PILOT OPERATED CONTROL VALVE

Use for RJ-225HD, RJ-325, RJ-400 Ultra, and RJ-450



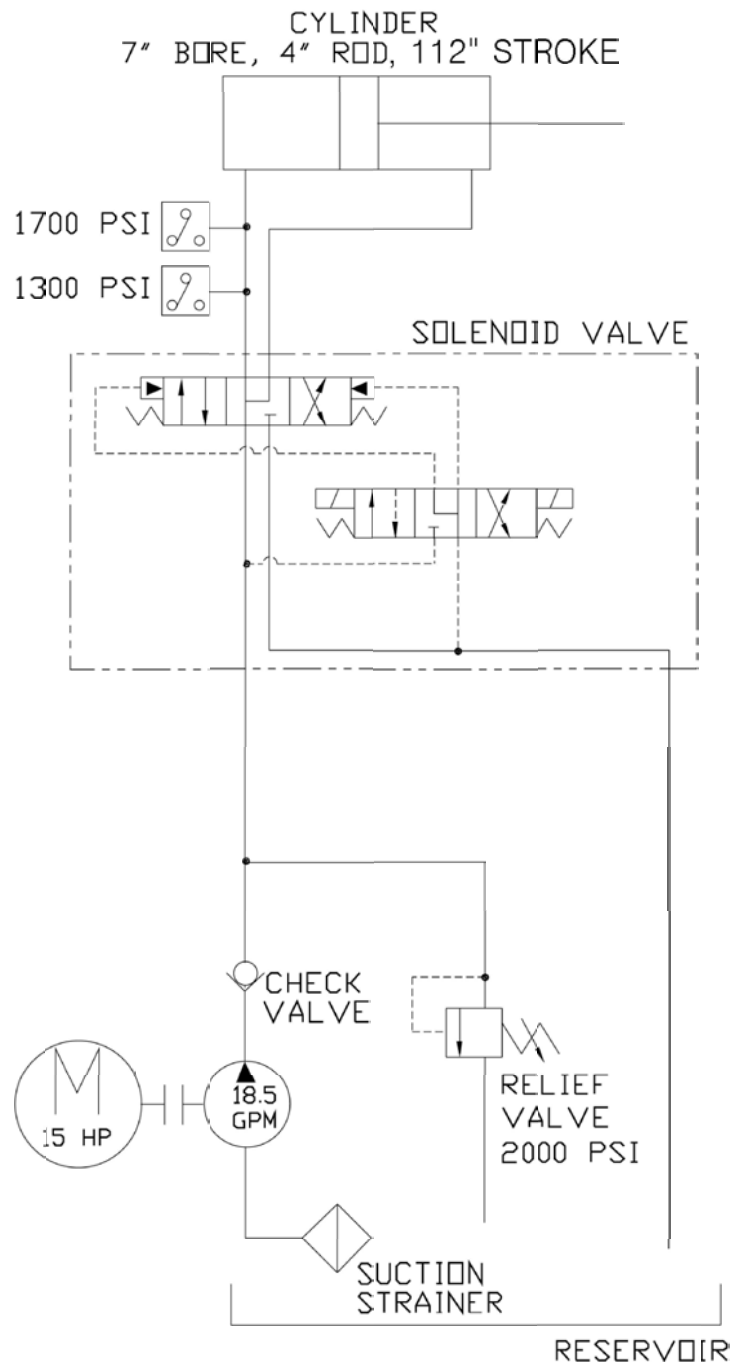
RamJet® Stationary Compactor

Service

64

HYDRAULIC SCHEMATIC - REGEN

Use for RJ-550

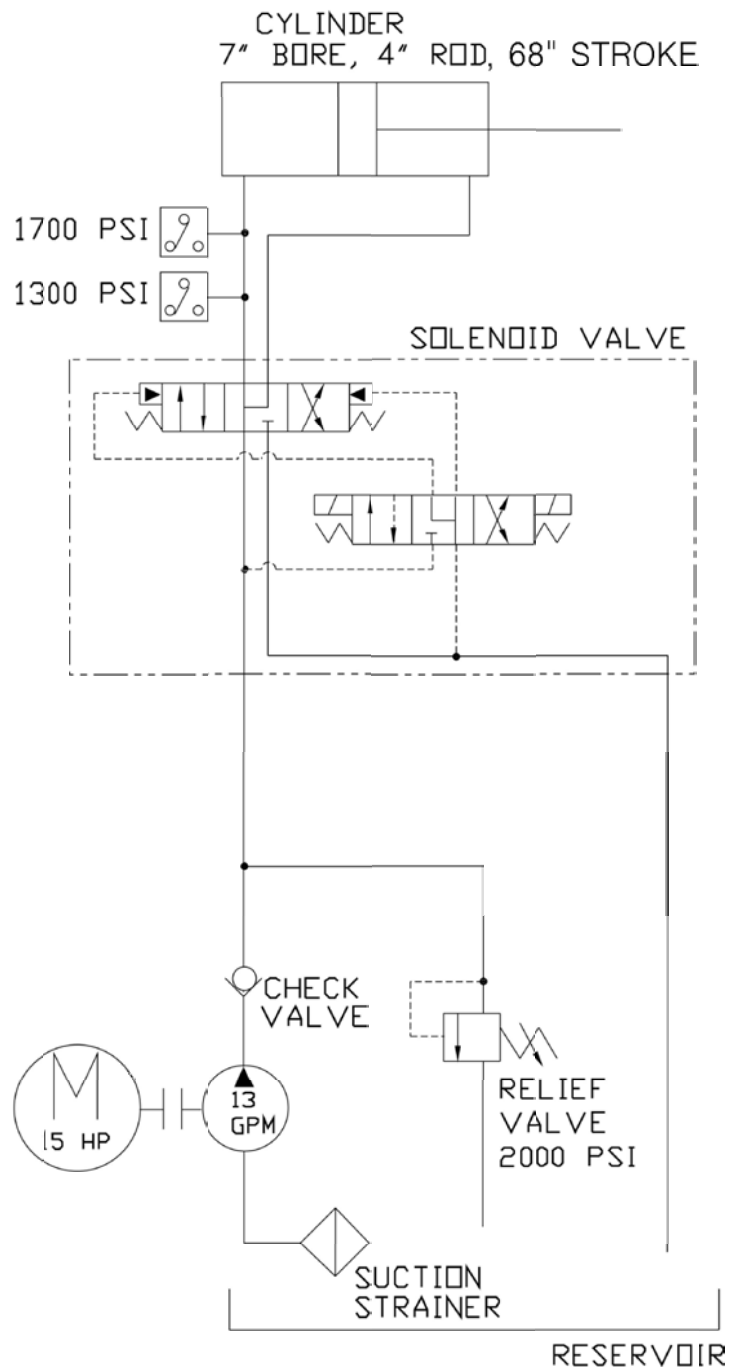


RamJet® Stationary Compactor Service

65

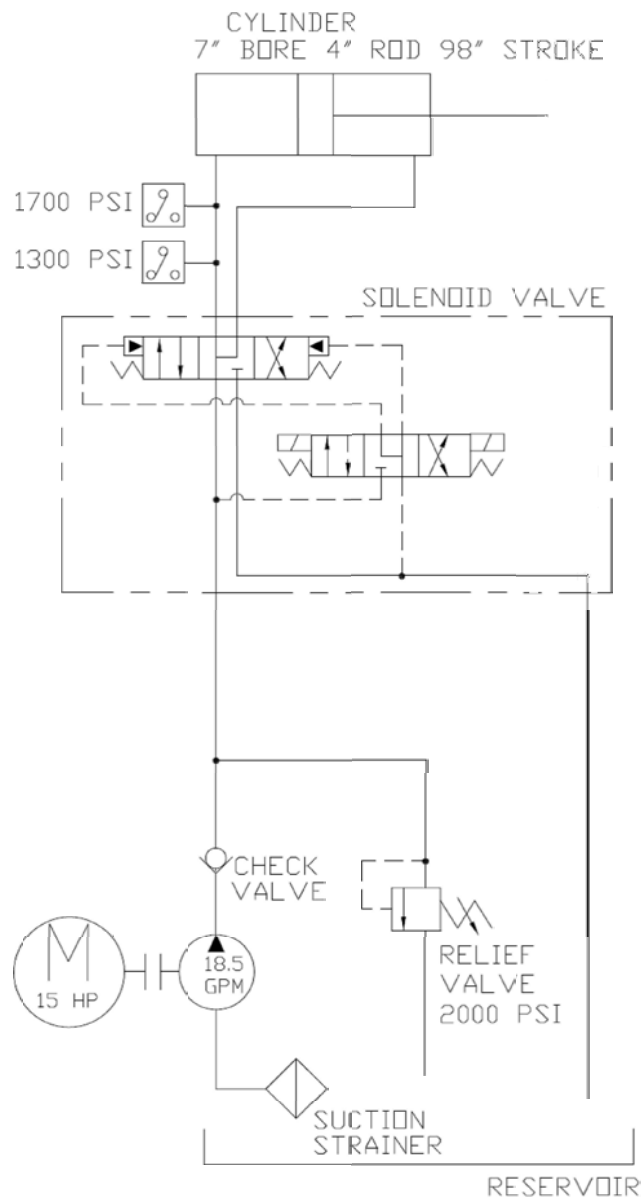
HYDRAULIC SCHEMATIC - REGEN

Use for RJ-275XHD



HYDRAULIC SCHEMATIC - REGEN

Use for RJ-500

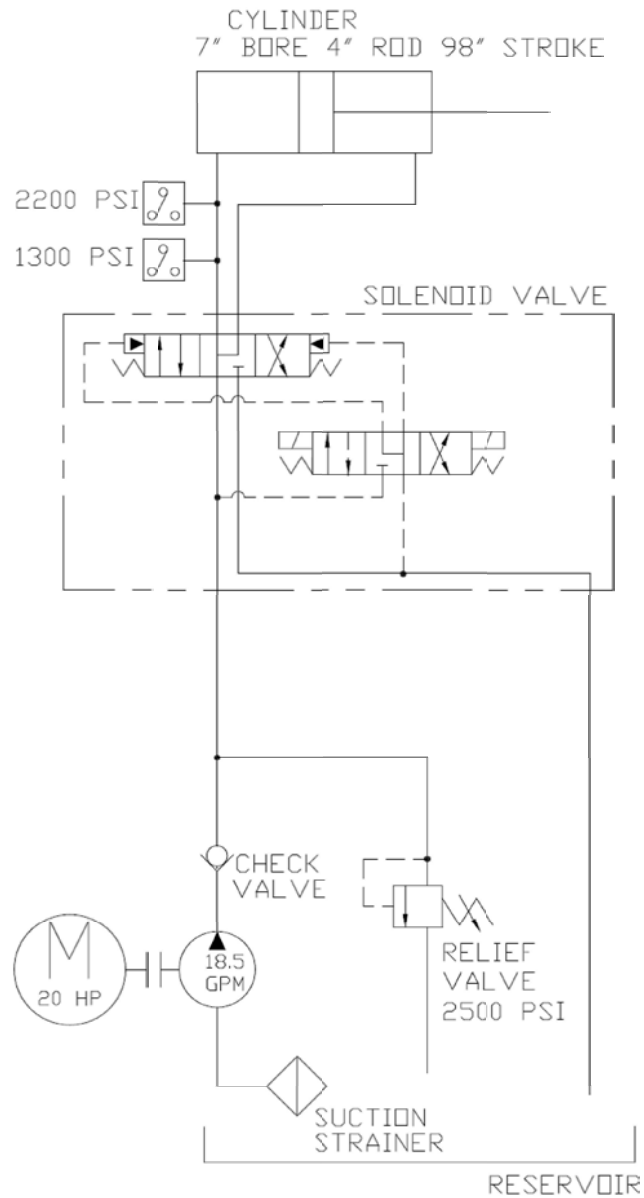


RamJet® Stationary Compactor Service

67

HYDRAULIC SCHEMATIC - REGEN

Use for RJ-500HD



RamJet® Stationary Compactor

Service

68

ELECTRICAL SCHEMATIC

Refer to the electrical schematic shipped with your compactor or contact Marathon Equipment Company's Technical Service Department at 877-258-1105. Be sure to have compactor serial number ready when contacting service.

RamJet® Stationary Compactor

Service

69

TROUBLESHOOTING CHART

PROBLEM	CAUSE	SOLUTION
UNIT WILL NOT START	1. No electrical power to unit	1a. Turn on main disconnect. 1b. Replace fuse or reset breakers.
	2. No electrical power to control circuit	2a. Check primary and secondary sides of transformer. 2b. Check for correct voltage. Check control fuses. 2c. Check stop button. 2d. Check start button to be sure contact closes when depressed.
	3. No electrical power to motor	3a. Check heater resets
UNIT WILL NOT CONTINUE RUNNING WHEN START BUTTON IS RELEASED	1. Motor starter is inoperative.	1a. Check motor starter coil & wiring.
	2. Motor starter auxiliary contacts are inoperative	2a. Check motor starter contacts and wiring
	3. Secondary contact on start button is inoperative	3a. Check contact, wired black and orange, to be sure it is operating properly 3b. Check wiring
MOTOR RUNS BUT RAM DOES NOT MOVE NORMALLY	1. Insufficient oil in reservoir	1a. Fill reservoir with oil
	2. Low relief pressure	2a. Check relief pressure (refer to PROCEDURES-HYDRAULIC PRESSURE 2b. CHECK and PRESSURE SETTINGS for correct pressure. 2c. Clean orifice in relief valve and reset pressure 2d. Check "O" rings on relief valve for damage or leakage
	3. Oil leakage in cylinder	3a. Check cylinder for bypassing 3b. Replace seal kit, inspect rod and cylinder tube for scoring/nicks 3c. Replace cylinder
	4. Defective pump	4a. Replace pump
	5. Oil leakage from hose fittings	5a. Tighten hose fittings
	6. Low voltage	6a. Check voltage
	7. Pump may be driven in the wrong direction of rotation	7a. Stop immediately to prevent seizure. Check direction of drive rotation (proper rotation direction is indicated by arrow on motor)
	8. Shaft broken, or shaft key sheared	8a. Visually inspect motor and pump shaft and hub couplings for damage. Replace if necessary.
	9. Intake pipe from reservoir blocked, or oil viscosity too heavy to prime	9a. Drain system. Add clean fluid of proper viscosity and specifications. Filter as recommended. Check system filter for cleanliness.
	10. Intake air leaks (foam in oil or sounds like gravel in pump)	10. Check intake connections. Tighten securely
	11. Units shift slowly	11a. Flow control valve (restrictor) clogged, remove and clean orifice 11b. For units equipped with pilot valve, remove pilot section, remove and clean orifices.
	12. Valve response sluggish	12a. Contaminated oil, drain and flush system 12b. Inadequate voltage, check voltage, check coil 12c. Disassemble valve & clean
	13. Loose hub coupling	13. Tighten set screws on hub coupling halves
UNIT WILL NOT REVERSE	1. Solenoid valve is inoperative	1a. Check coil in solenoid valve
PUMP MAKES NOISE-SOUNDS LIKE GRAVEL	1. Partly clogged intake strainer or restricted intake pipe	1a. Pump must receive intake fluid freely or cavitation results. Drain system, clean intake pipe and clean or replace strainer

RamJet® Stationary Compactor

Service

70

TROUBLESHOOTING CHART

PROBLEM	CAUSE	SOLUTION
	2. Defective bearing	2a. Replace pump
	3. Air leak at pump intake pipe joints	3a. Tighten joints as required.
PUMP SHAFT SEAL LEAKING	1. Seal worn or damaged	1a. Replace seals or pump.
EXCESSIVE HEAT	1. Continuous running	1a. When over 140 degrees F or hot in comparison with circuit lines, pump should be shut down immediately. Before restarting, ensure that fluid cooling capacity is adequate to remove system generated heat. 1b. Install oil cooler (air or water type) 1c. Install oil temperature shut down switch
	2. Undersized hydraulic lines	2a. Replace with larger hydraulic lines
	3. High ambient temp in relation to oil temp.	3a. Use lower viscosity oil
	4. Excessive system leakage	4a. Check system for bypassing or leaks
RAPID WEAR	1. Abrasive matter in the hydraulic oil being circulated through pump	1a. Install adequate filter or clean. 1b. Replace oil more often and clean tank
	2. Viscosity of oil too low at working conditions	2a. Replace oil with factory recommended oil.
	3. Pressure too high	3a. Reduce pump pressures to factory specifications.
	4. Air recirculation causing pump noise	4a. Tighten all fittings.
ERRATIC OPERATION	1. Valve sticking or binding	1a. Disassemble & clean as necessary
	2. Viscosity of oil too high	2a. Change oil to factory recommended viscosity
	3. Air in system	3a. Check for leaks, tighten fittings
	4. Low oil	4a. Fill reservoir with oil
	5. Low voltage	5a. Check primary & secondary sides of transformer for correct voltage.
OVERLOADS TRIP FREQUENTLY	1. Incorrect voltage	1a. Check for correct voltage
	2. Excessive load on motor	2a. Check relief valve setting and pressure switch settings 2b. Check pump and motor alignment
	3. Possible problem with motor	3a. Check motor windings for shorted or open windings 3b. Check motor bearings and lubrication
	4. Improper overload setting	4a. Check overload section for correct setting. Adjust as needed 4b. Check overload for correct size
	5. Loose connections	5a. Check all connections on motor starter, overload section, and in motor junction box for loose connections. Tighten as needed
	Note: Excessive overload tripping and/or motor or coil failures may occur if voltage surges or voltage drops are frequent in your area. This circumstance can be remedied by the installation of phase protectors which drop power to the motor if surges are present.	

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)

RamJet® Stationary Compactor

Replacement Parts

73

HYDRAULIC PARTS LIST & INTERCHANGEABILITY

PART #	DESCRIPTION	MODEL													
		160	225	225 ULTRA	225 HD	275	275 XHD	325	325 HD	400 ULTRA	450	500	500 HD	550	
02-0184	CHECK VALVE, LH ****	X	X	X	X	X	X	X	X	X	X	X	X	X	
02-1042	CHECK VALVE, RH ****		X	X	X	X	X	X	X	X	X	X	X	X	
02-3106	CONTROL VALVE *				X	X		X		X	X				
02-0157	CONTROL VALVE *	X	X	X											
02-0278	CONTROL VALVE *								X						
02-0081	CONTROL VALVE *						X					X	X	X	
02-0267	PUMP 10 GPM	X													
02-0211	PUMP 13 GPM		X	X	X	X	X								
02-0259	PUMP 18 GPM							X	X	X	X	X	X	X	
02-0214	RELIEF CARTRIDGE *	X	X	X	X	X	X	X	X	X	X	X	X	X	
02-0145	SOLENOID COIL *								X						
02-0295	SOLENOID COIL *	X	X	X			X					X	X	X	
02-1218	SOLENOID COIL *				X	X		X		X	X				
02-0050	SUCTION FILTER *	X	X	X	X										
02-0051	SUCTION FILTER *						X	X	X	X	X	X	X	X	
* RECOMMENDED SPARE PARTS															
**** L.H. USED ON LEFT HAND POWER UNITS, R.H. USED ON RIGHT HAND POWER UNITS															

RamJet® Stationary Compactor

Replacement Parts

74

ELECTRICAL PARTS LIST & INTERCHANGEABILITY

PART #	DESCRIPTION	MODEL												
		160	225	225 ULTRA	225 HD	275	275 XHD	325	325 HD	400 ULTRA	450	500	500 HD	550
03-0488	FUSE 1.5 AMP *	X	X	X	X	X	X	X	X	X	X	X	X	X
03-0191	FUSE 2 AMP *	X	X	X	X	X	X	X	X	X	X	X	X	X
03-0253	KEY F/03-0195 AB *		X		X	X	X	X	X		X	X	X	X
03-0903	LIMIT SWITCHLimit Switch	X	X	X	X		X	X	X	X	X	X	X	X
03-3665	MOTOR 10 HP, 3 HP	X	X	X		X								
03-4351	MOTOR 15 HP, 3 HP				X		X	X	X	X	X	X	X	X
03-0129	PHOTOSWITCH	X	X	X	X	X	X	X	X	X	X	X	X	X
03-0014	PRESS. SWITCH (D) *						X					X	X	X
03-0013	PRESS. SWITCH (S) *	X	X		X	X		X	X		X			
03-0131	REFLECTOR F/03-0129	X	X	X	X	X	X	X	X	X	X	X	X	X
03-0195	SWITCH KEY START *	X	X		X	X	X	X	X		X	X	X	X
03-0201	SWITCH MUSHR. STOP *	X	X		X	X	X	X	X		X	X	X	X
03-0197	SWITCH REV. BUTTON *	X	X	X	X	X	X	X	X	X	X	X	X	X
03-0288	TRANSFORMER *	X	X	X	X	X	X	X	X	X	X	X	X	X
* RECOMMENDED SPARE PARTS														

RamJet® Stationary Compactor

Replacement Parts

75

CYLINDERS PARTS LIST & INTERCHANGEABILITY

PART #	DESCRIPTION	MODEL												
		160	225	225 ULTRA	225 HD	275	275 XHD	325	325 HD	400 ULTRA	450	500	500 HD	550
04-0005	CYLINDER		X	X										
04-0006	CYLINDER				X									
04-0009	CYLINDER													X
04-0130	CYLINDER				X									
04-0160	CYLINDER	X												
04-0190	CYLINDER							X***	X***	X	X			
04-0196	CYLINDER					X								
04-3341	CYLINDER						X							
04-3490	CYLINDER											X	X	

MISCELLANEOUS HARDWARE PARTS LIST & INTERCHANGEABILITY

PART #	DESCRIPTION	MODEL												
		160	225	225 ULTRA	225 HD	275	275 XHD	325	325 HD	400 ULTRA	450	500	500 HD	550
447967	RATCHET BINDER	X	X	X	X	X	X	X	X	X	X			
05-5031	RATCHET BINDER													X
05-0017	BOLTS F/SHOES		X	X	X	X	X	X	X	X	X			X
05-0018	LOCKNUT F/SHOES		X	X	X	X	X	X	X	X	X			X
06-0005	SHOE (LONG)		2		2	2		2	2	2	2	4	4	4
06-0006	SHOE (SHORT)		2	4	2	2		2	2	2	2	2	2	2
06-3597	SHOE ASTM A487 (LONG)						4							
05-0273	BOLTS F/06-0620						X							

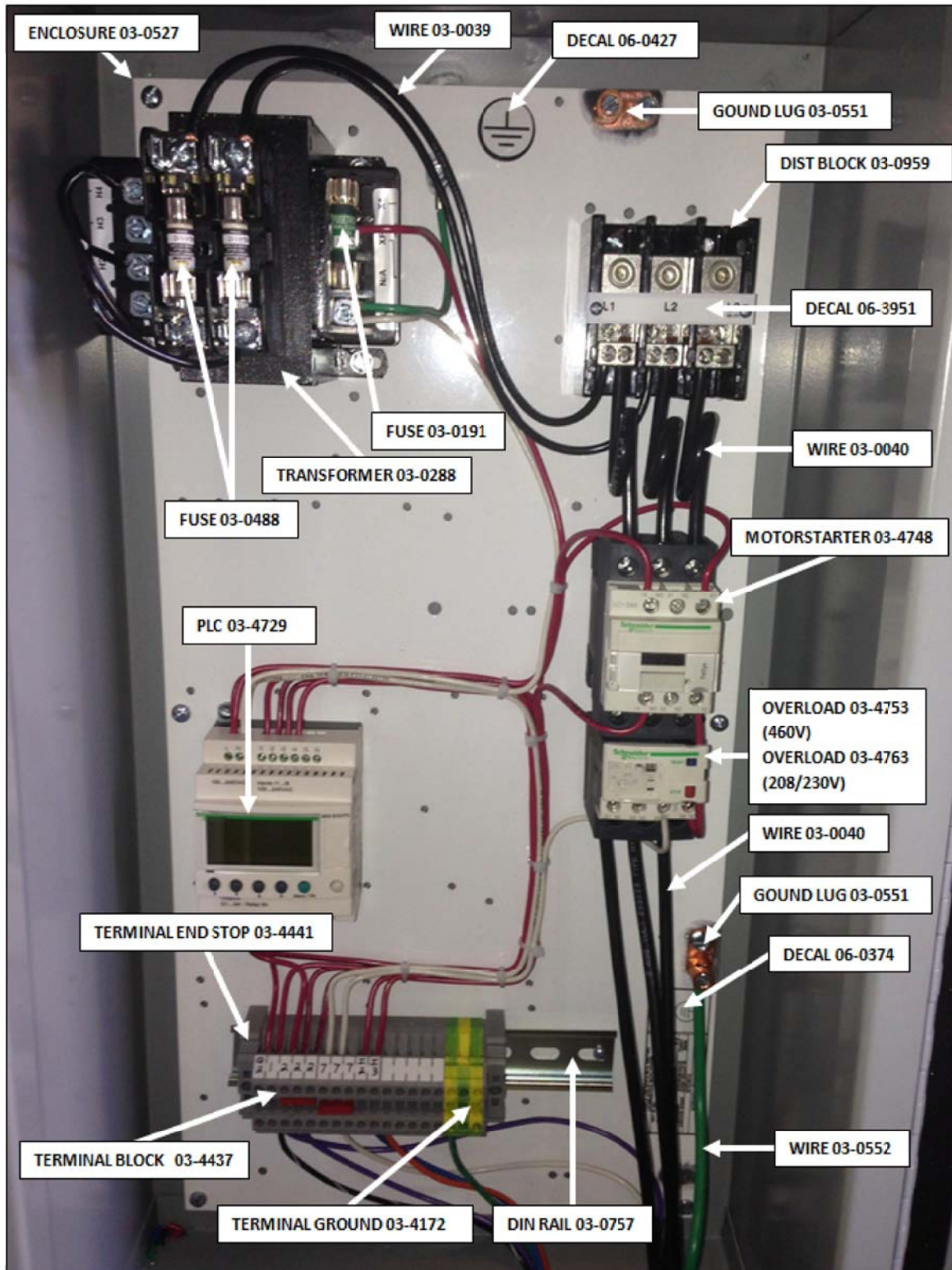
RamJet® Stationary Compactor

Replacement Parts

76

TYPICAL PANEL BOX CONFIGURATION

The diagram below represents a typical panel box configuration for the self-contained compactors. The panel box on your compactor may differ depending on the model and/or optional equipment/controls. Refer to the chart below to identify components. To order replacement parts, please call our Parts Department at 800-528-5308.



RamJet® Stationary Compactor

Replacement Parts

77

DECAL PARTS LIST

WARNING

When your compactor leaves the factory, several WARNING DECALS are installed for your protection. These labels are subject to wear and abuse due to the nature of operation. The FOLLOWING DECALS MUST BE MAINTAINED. Additional decals may be purchased through your distributor or from Marathon Equipment Company by calling the parts department at 800-528-5308.

Note: When ordering replacement decals, use the chart below with the drawing on the next page or look for the part number in the lower right hand corner of the decal.

PART#	DESCRIPTION	160	225	225 ULTRA	225 HD	275	275 XHD
06-0002	RAM-JET	2	2	2	2	2	2
06-0038	WARNING: DO NOT REMOVE ACCESS COVER	3	4	4	4	5	5
06-0039	DANGER: DO NOT ENTER	3	3	3	3	3	3
06-0121	NOTICE: FEDERAL REGULATION	2	2	2	2	2	2
06-0249	DANGER: HAZARDOUS VOLTAGE	1	1	1	1	2	1
06-1839	AMERICAN FLAG	2	2	2	2	2	2
06-3123	DANGER: CONFINED SPACE	3	3	3	3	3	3
06-0364	COMPACTOR SERIAL PLATE	1	1	1	1	1	1
06-3976	WARNING: ARC FLASH HAZARD		1***	1***	1***	1***	1
06-3977	WARNING: DO NOT OPERATE	2	2	2	2	2	2
06-3978	DANGER: DO NOT OVERRIDE	2	2	2	2	2	2
06-0133	WARNING: KEEP OFF	2	2	2	2	2	2
06-3231	"ULTRA" DECAL			2			
06-2751	"MARATHON COMP & RECYCLING" DECAL	2	2	2	2	2	2
06-0058	A PORT **		1**	1**	1**	1**	1**
06-0059	B PORT **		1**	1**	1**	1**	1**
06-3044	DANGER VOLTS		1***	1***	1***	1***	1***
06-3546	GREEN BUILT SOLAR POWER*		3*	3*	3*	3*	
06-3448	GREEN BUILT MARATHON*		3*	3*	3*	3*	
06-0040	DANGER: CRUSHING HAZARD ... KEEP OUT ****						
06-3333	NOTICE: IN THE EVENT OF FIRE ****						
06-0052	DANGER: GATE MUST BE CLOSED ****						
* ONLY ON GREENBUILT UNITS ** ONLY ON UNITS WITH REMOTE POWER UNIT *** ONLY ON UNITS WITH SIDE MOUNT PPK **** ONLY ON OPTIONAL LOADING CONFIGURATIONS. SEE DECAL PLACEMENT FOR OPTIONAL LOADING CONFIGURATIONS 99 FOR PLACEMENT.							

RamJet® Stationary Compactor

Replacement Parts

78

DECALS PARTS LIST (CONTINUED)

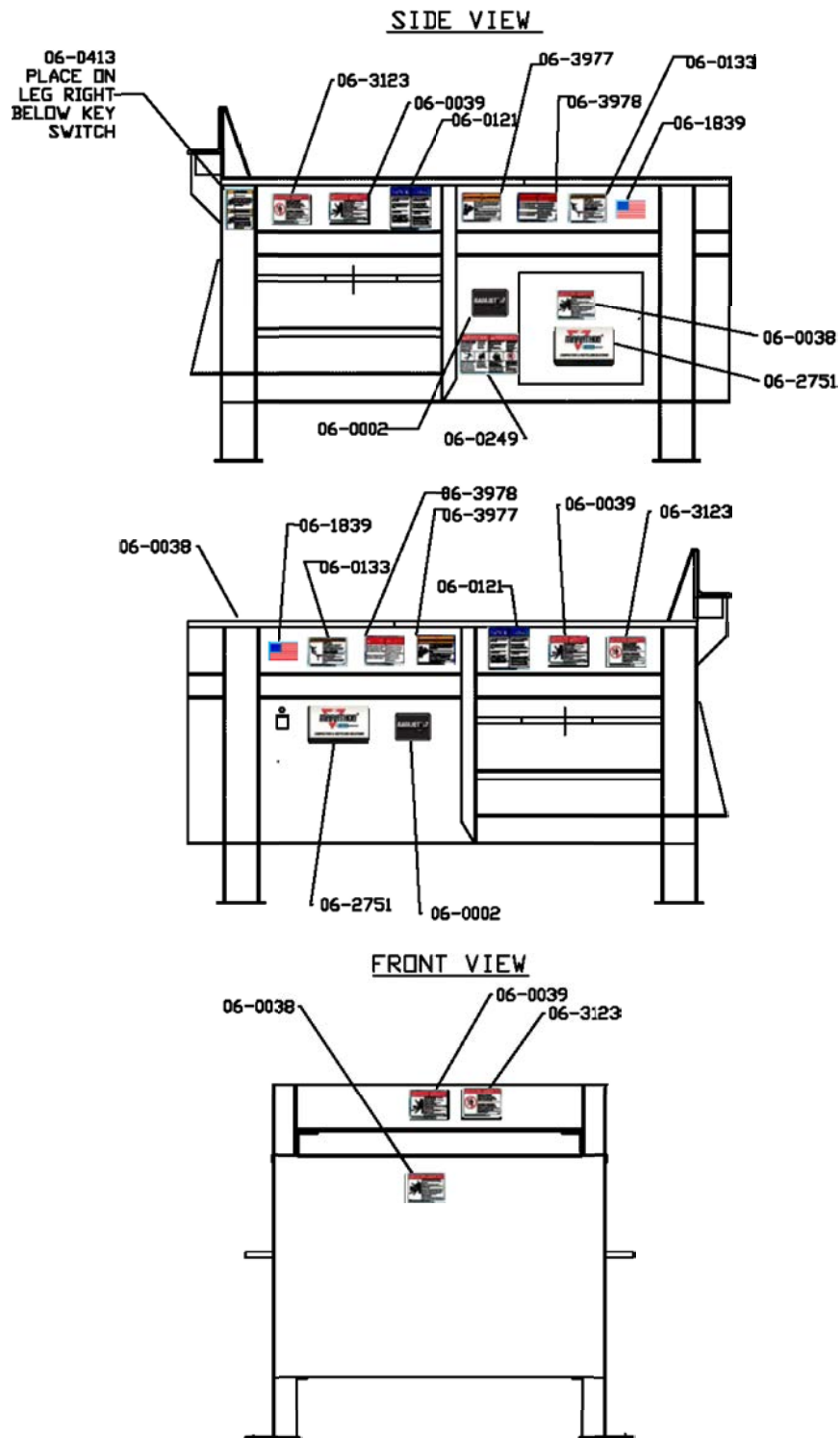
PART#	DESCRIPTION	325	325 HD	400 ULTRA	450	500	500 HD	550
06-0002	RAM-JET	2	2	2	2	2	2	2
06-0038	WARNING: DO NOT REMOVE ACCESS COVER	6	6	6	6	6	6	7
06-0039	DANGER: DO NOT ENTER	3	3	3	3	3	3	3
06-0121	NOTICE: FEDERAL REGULATION	2	2	2	2	2	2	2
06-0249	DANGER: HAZARDOUS VOLTAGE	2	2	1	1	1	1	1
06-1839	AMERICAN FLAG	2	2	2	2	2	2	2
06-3123	DANGER: CONFINED SPACE	3	3	3	3	3	3	3
06-0364	COMPACTOR SERIAL PLATE	1	1	1	1	1	1	1
06-3976	WARNING: ARC FLASH HAZARD	1***	1***	1***	1***	1***	1***	1***
06-3977	WARNING: DO NOT OPERATE	2	2	2	2	2	2	2
06-3978	DANGER: DO NOT OVERRIDE	2	2	2	2	2	2	2
06-0133	WARNING: KEEP OFF	2	2	2	2	2	2	2
06-3231	"ULTRA" DECAL			2				
06-2751	"MARATHON COMP & RECYCLING" DECAL	2	2	2	2	2	2	2
06-0058	A PORT **	1**	1**	1**	1**	1**	1**	1**
06-0059	B PORT **	1**	1**	1**	1**	1**	1**	1**
06-3044	DANGER VOLTS	1***	1***	1***	1***	1***	1***	1***
06-3546	GREEN BUILT SOLAR POWER*							
06-3448	GREEN BUILT MARATHON*							
06-0040	DANGER: CRUSHING HAZARD ... KEEP OUT ****							
06-3333	NOTICE: IN THE EVENT OF FIRE							
06-0052	DANGER: GATE MUST BE CLOSED ****							
06-0413	WARNING: CRUSH HAZARD	1	1	1	1	1	1	1
* ONLY ON GREENBUILT UNITS ** ONLY ON UNITS WITH REMOTE POWER UNIT *** ONLY ON UNITS WITH SIDE MOUNT PPK **** ONLY ON OPTIONAL LOADING CONFIGURATIONS. SEE DECAL PLACEMENT FOR OPTIONAL LOADING CONFIGURATIONS  FOR PLACEMENT.								

RamJet® Stationary Compactor

Replacement Parts

79

DECAL PLACEMENT FOR RJ-160

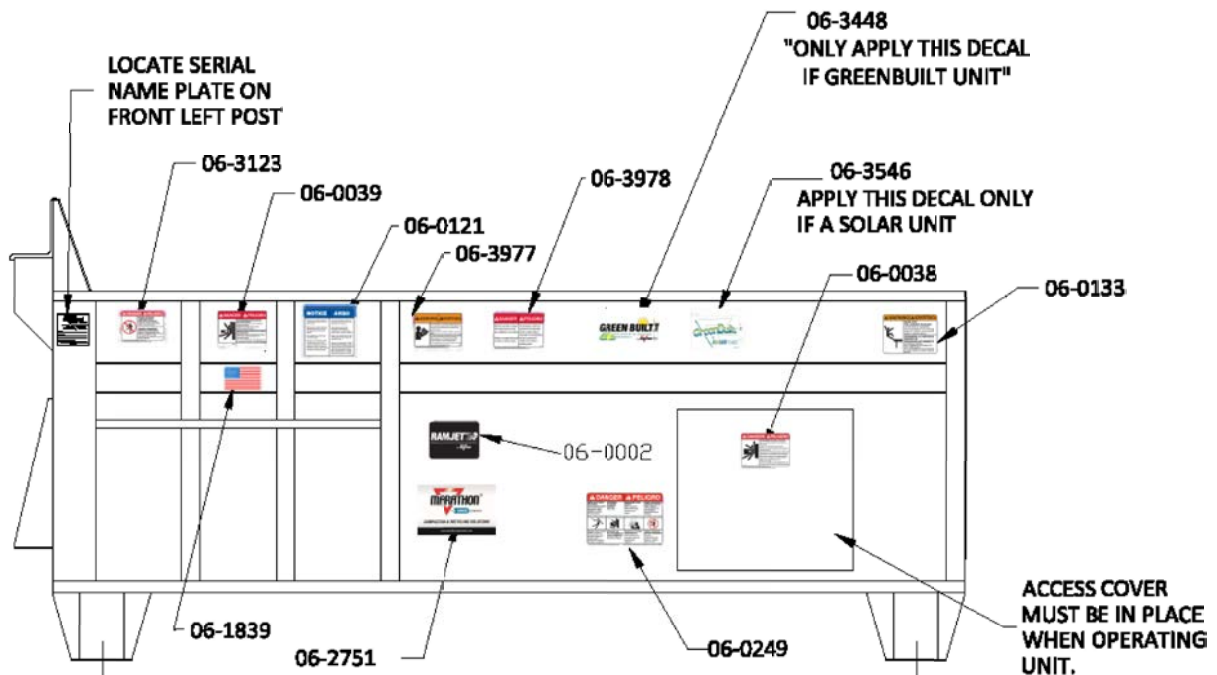


RamJet® Stationary Compactor

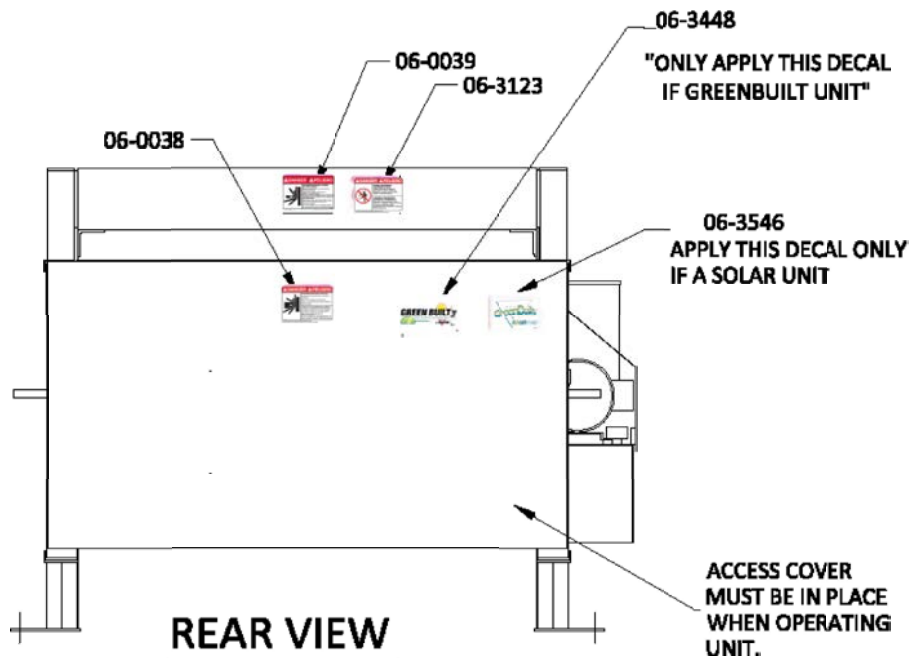
Replacement Parts

80

DECAL PLACEMENT FOR RJ-225 & RJ-225HD



LEFT SIDE VIEW



REAR VIEW

RIGHT HAND SIDE MOUNT SHOWN
LEFT HAND OPP

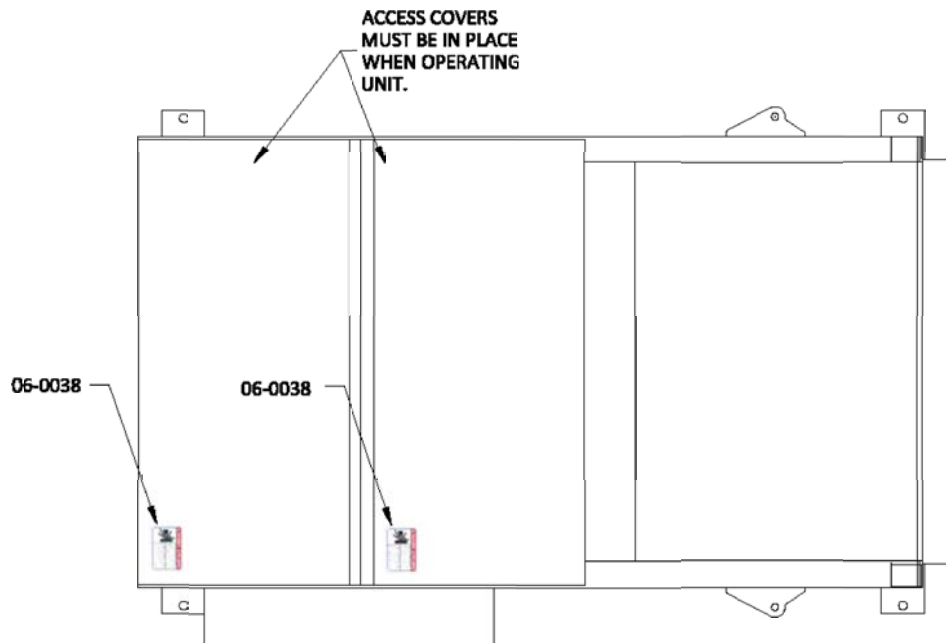
Illustration Page 1 of 2

RamJet® Stationary Compactor

Replacement Parts

81

DECAL PLACEMENT FOR RJ-225 AND RJ-225HD (CONTINUED)



TOP VIEW

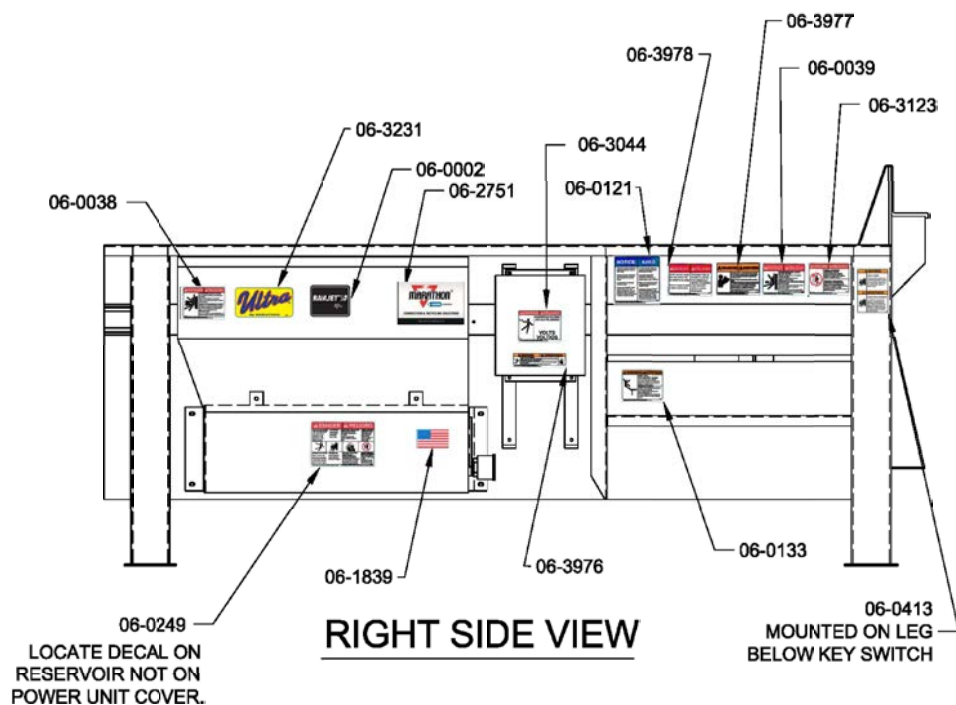


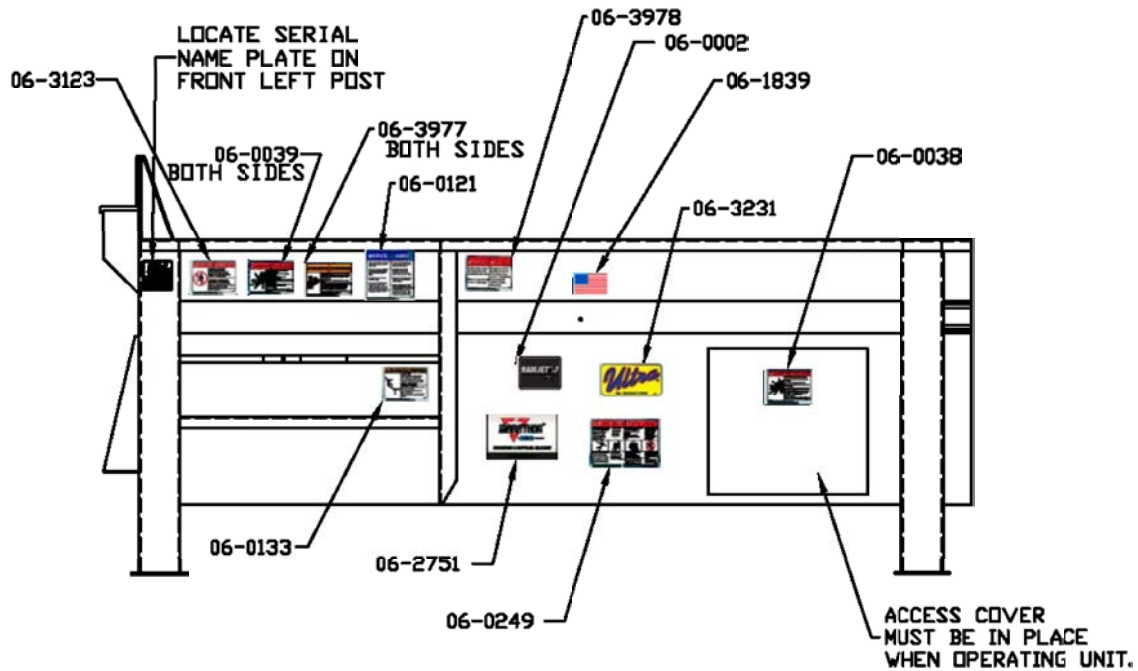
Illustration Page 2 of 2

RamJet® Stationary Compactor

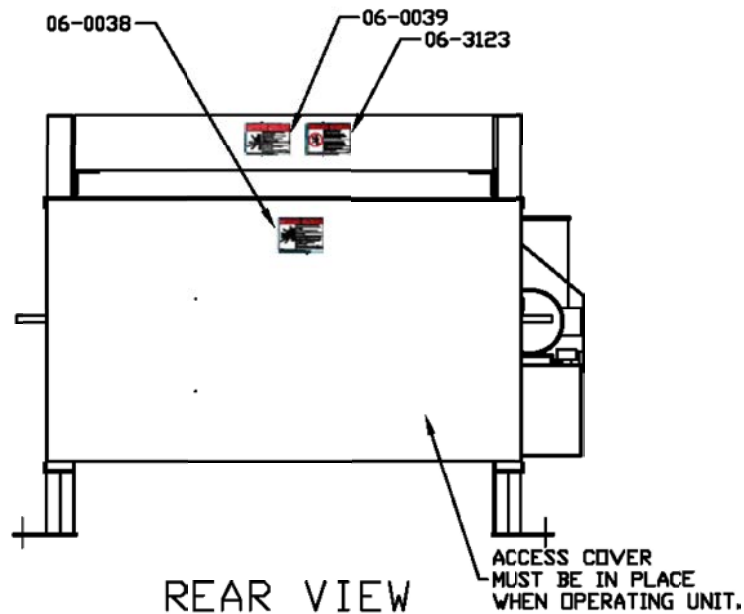
Replacement Parts

82

DECAL PLACEMENT FOR RJ-225 ULTRA



LEFT SIDE VIEW



REAR VIEW

RIGHT HAND SIDE MOUNT SHOWN
LEFT HAND OPP

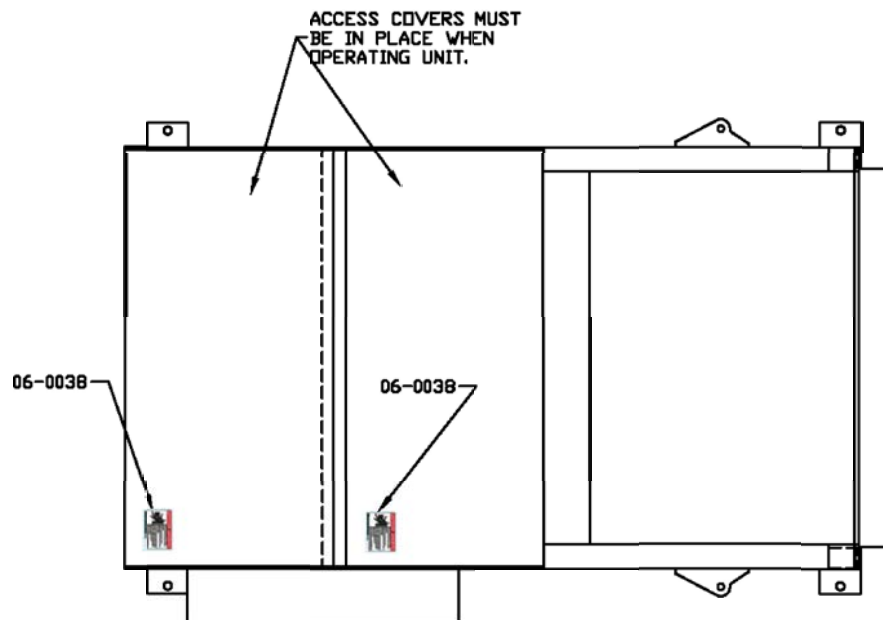
Illustration Page 1 of 2

RamJet® Stationary Compactor

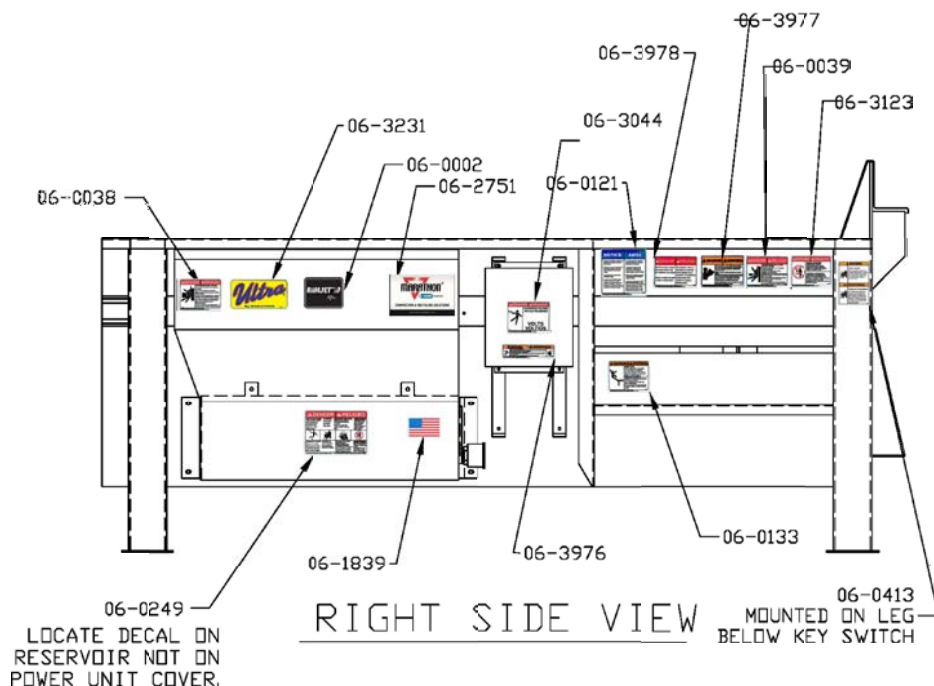
Replacement Parts

83

DECAL PLACEMENT FOR RJ-225 ULTRA (CONTINUED)



TOP VIEW



RIGHT SIDE VIEW

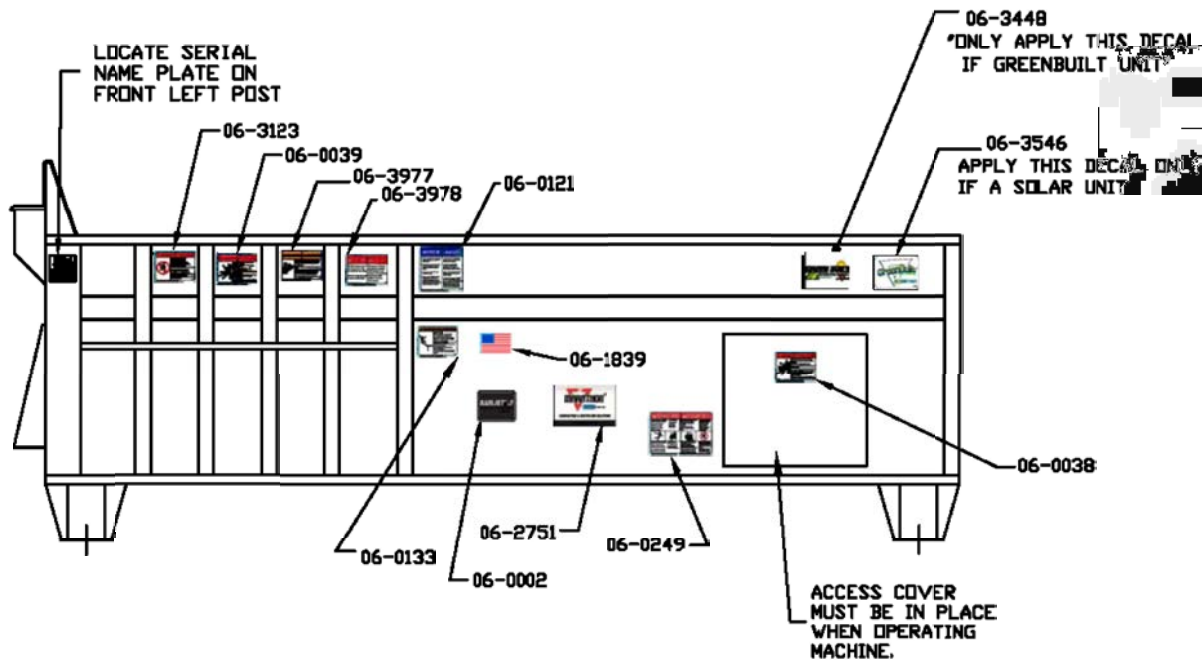
Illustration Page 2 of 2

RamJet® Stationary Compactor

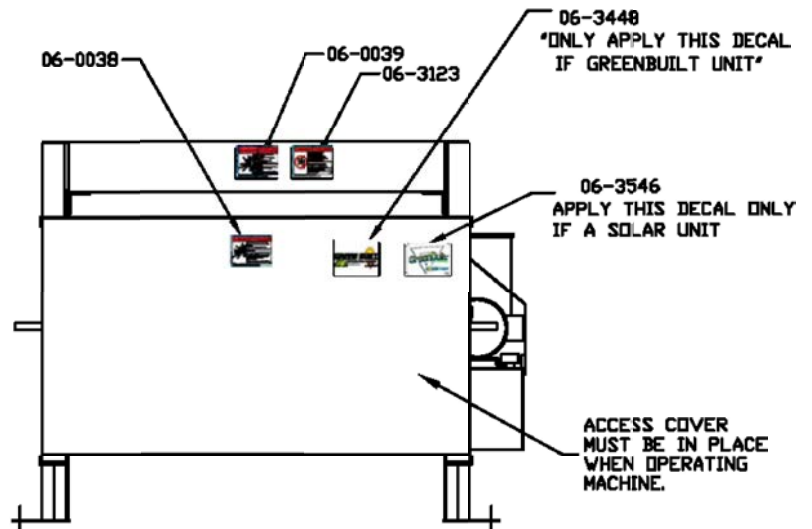
Replacement Parts

84

DECAL PLACEMENT FOR RJ-275



LEFT SIDE VIEW



REAR VIEW

RIGHT HAND SIDE MOUNT SHOWN
LEFT HAND OPP

Illustration Page 1 of 2

RamJet® Stationary Compactor

Replacement Parts

85

DECAL PLACEMENT FOR RJ-275 (CONTINUED)

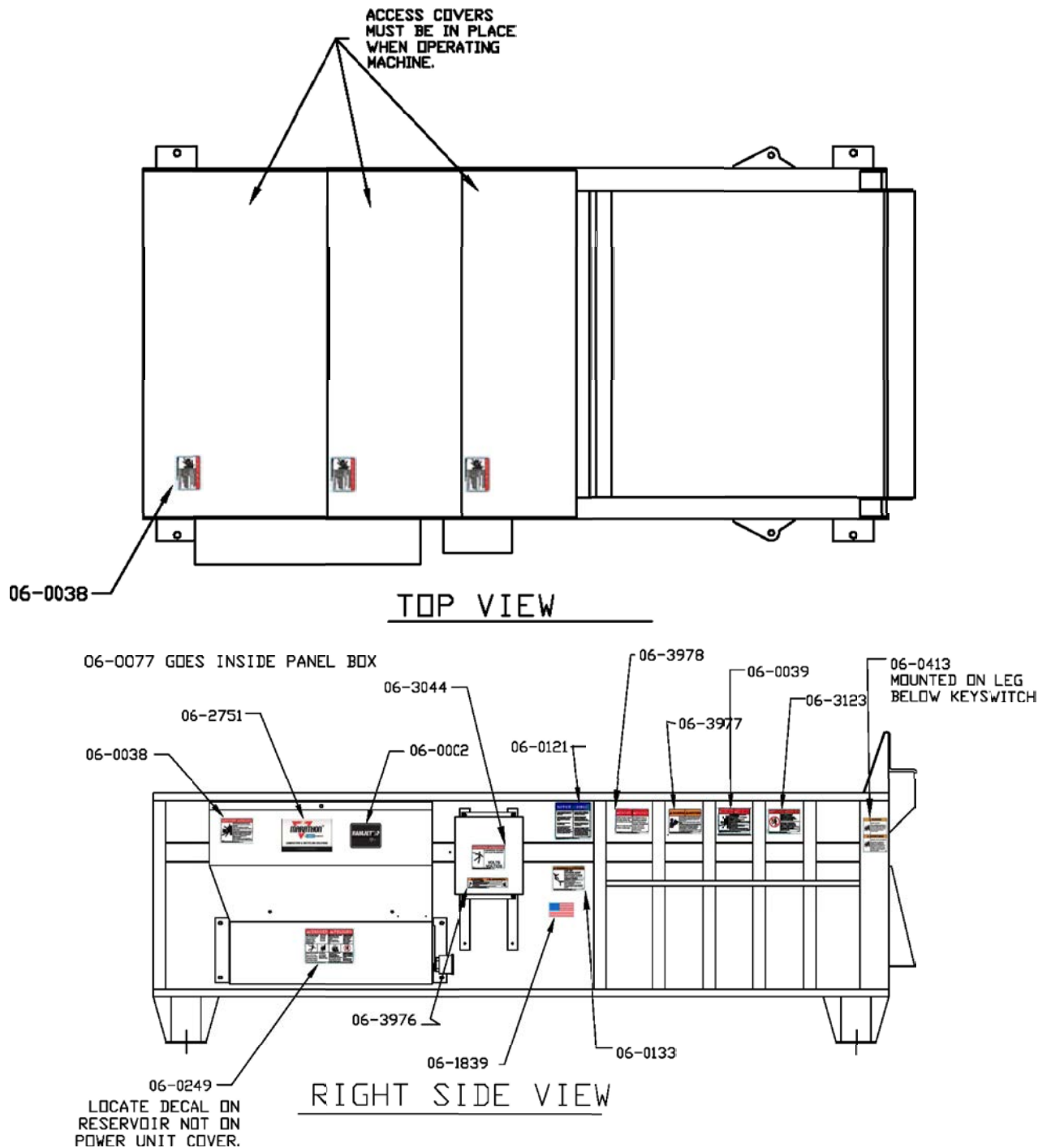


Illustration Page 2 of 2

RamJet® Stationary Compactor

Replacement Parts

86

DECAL PLACEMENT FOR RJ-275XHD

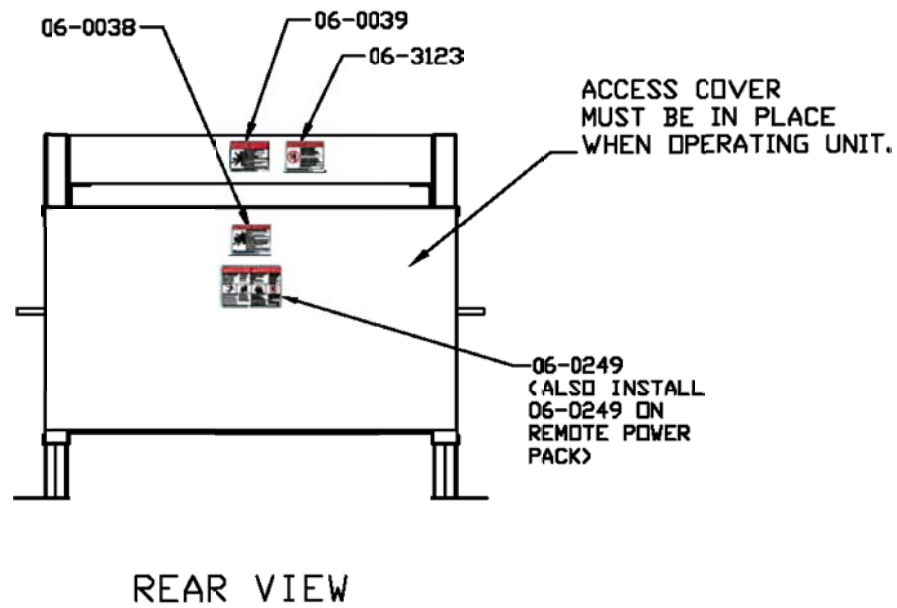
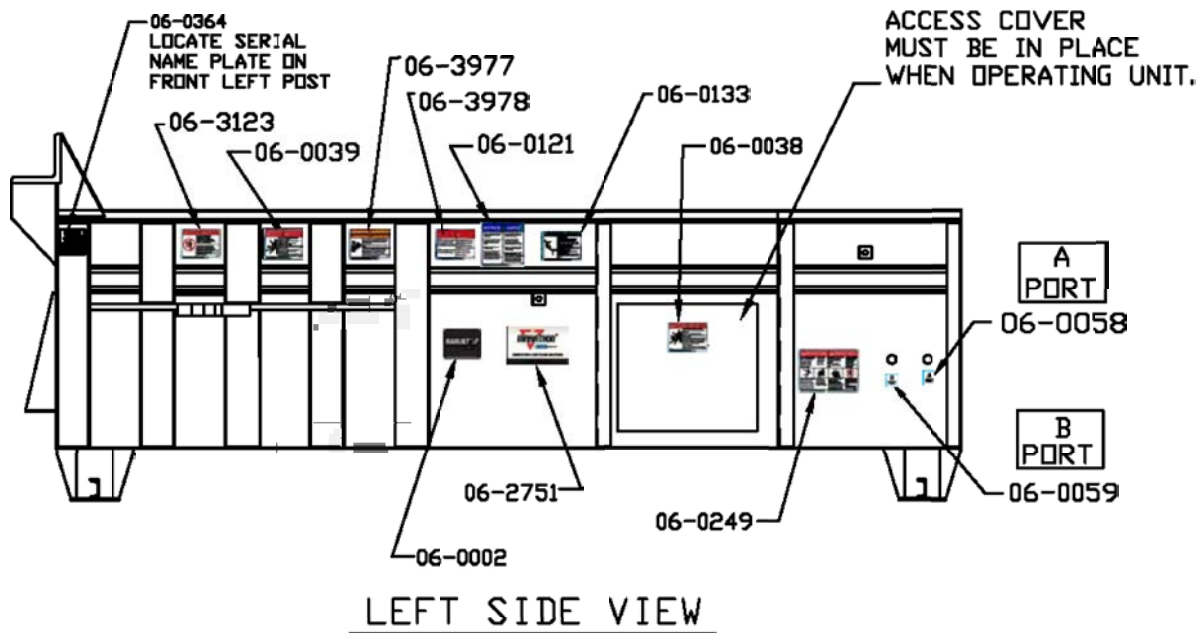


Illustration Page 1 of 2

RamJet® Stationary Compactor

Replacement Parts

87

DECAL PLACEMENT FOR RJ-275XHD (CONTINUED)

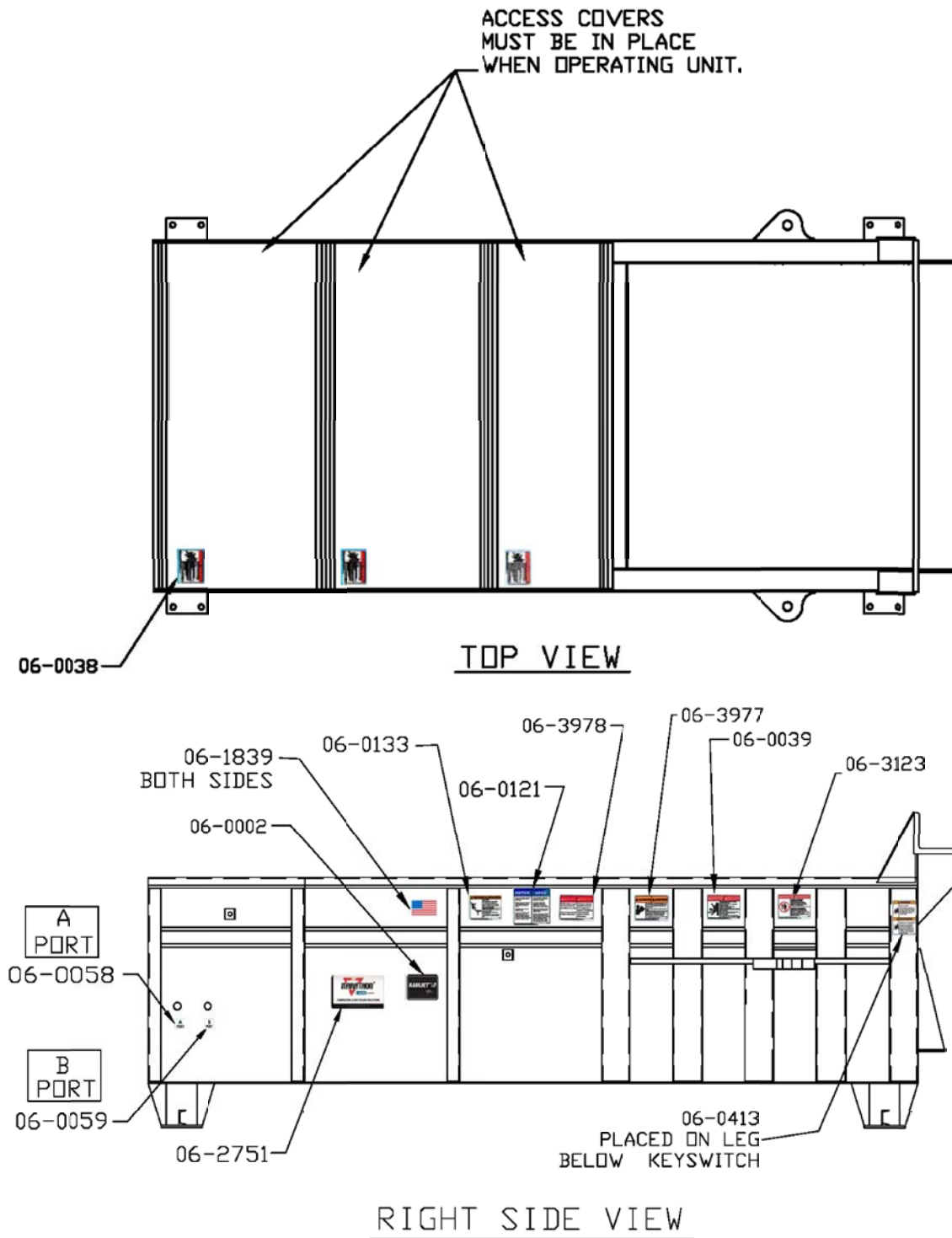


Illustration Page 2 of 2

RamJet® Stationary Compactor

Replacement Parts

88

DECAL PLACEMENT FOR RJ-325 & RJ-325HD

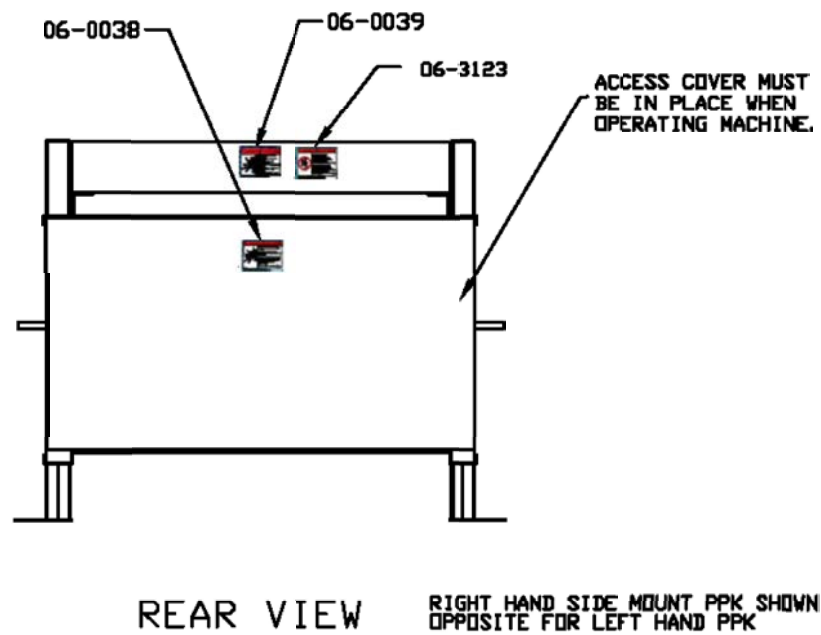
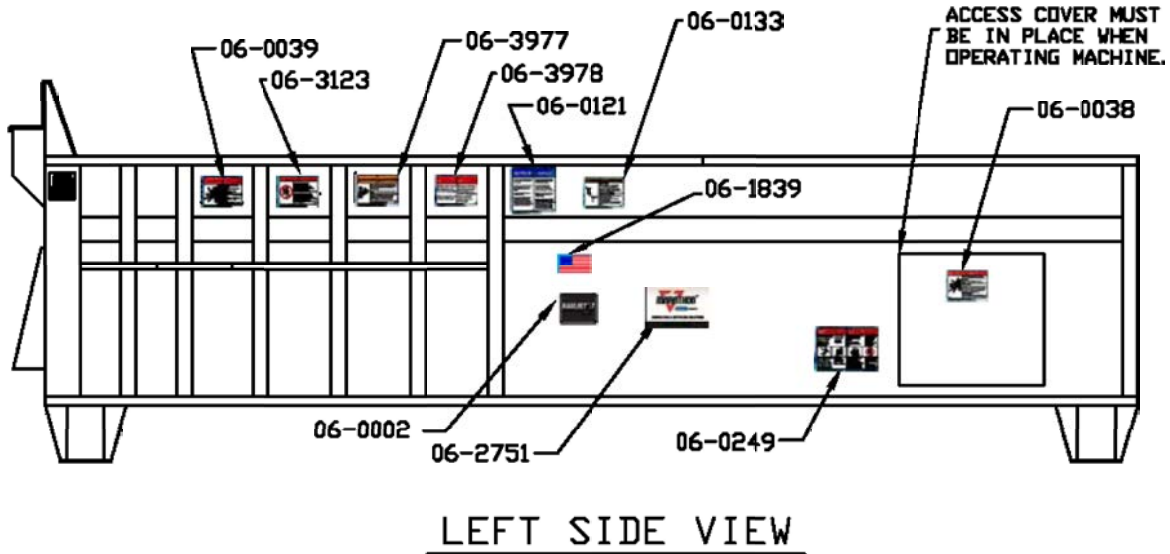


Illustration Page 1 of 2

RamJet® Stationary Compactor

Replacement Parts

89

DECAL PLACEMENT FOR RJ-325 & RJ325HD (CONTINUED)

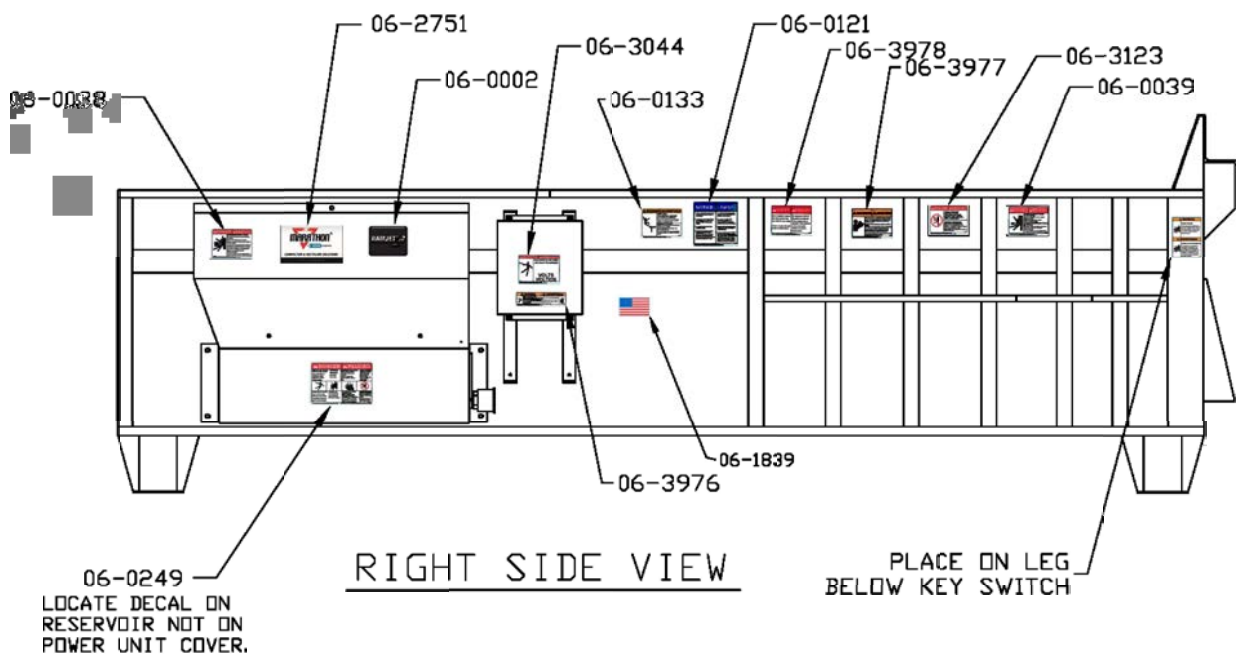
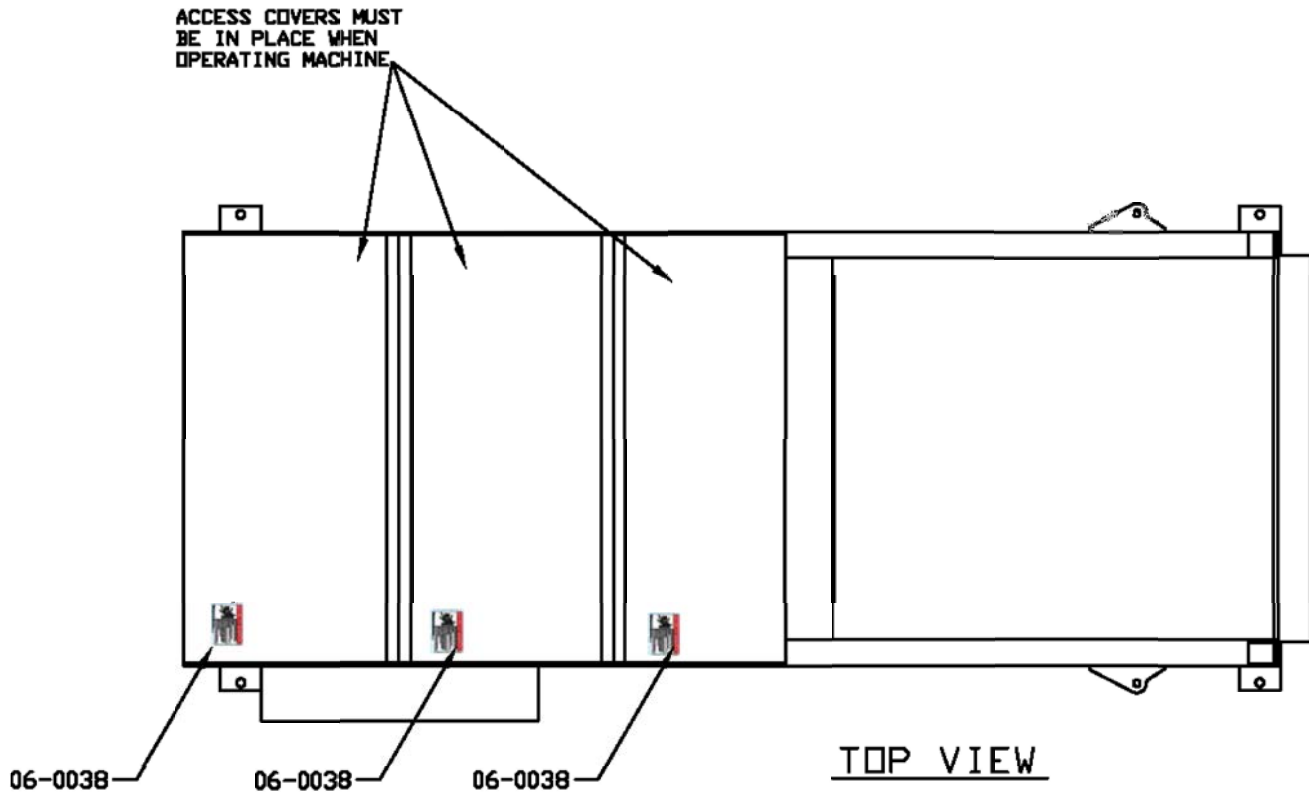


Illustration Page 2 of 2

RamJet® Stationary Compactor

Replacement Parts

90

DECAL PLACEMENT FOR RJ-400 ULTRA

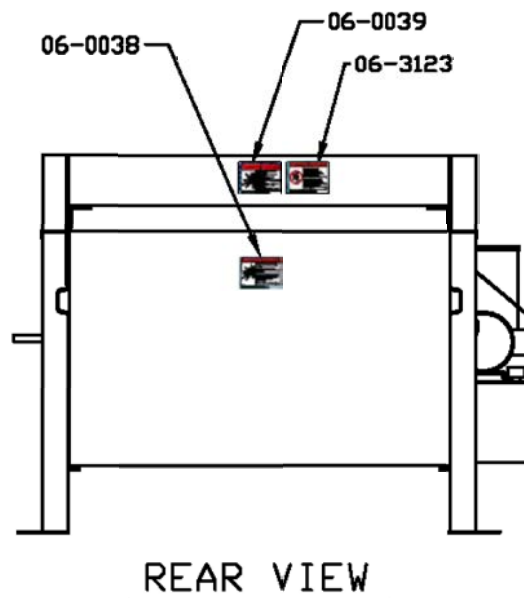
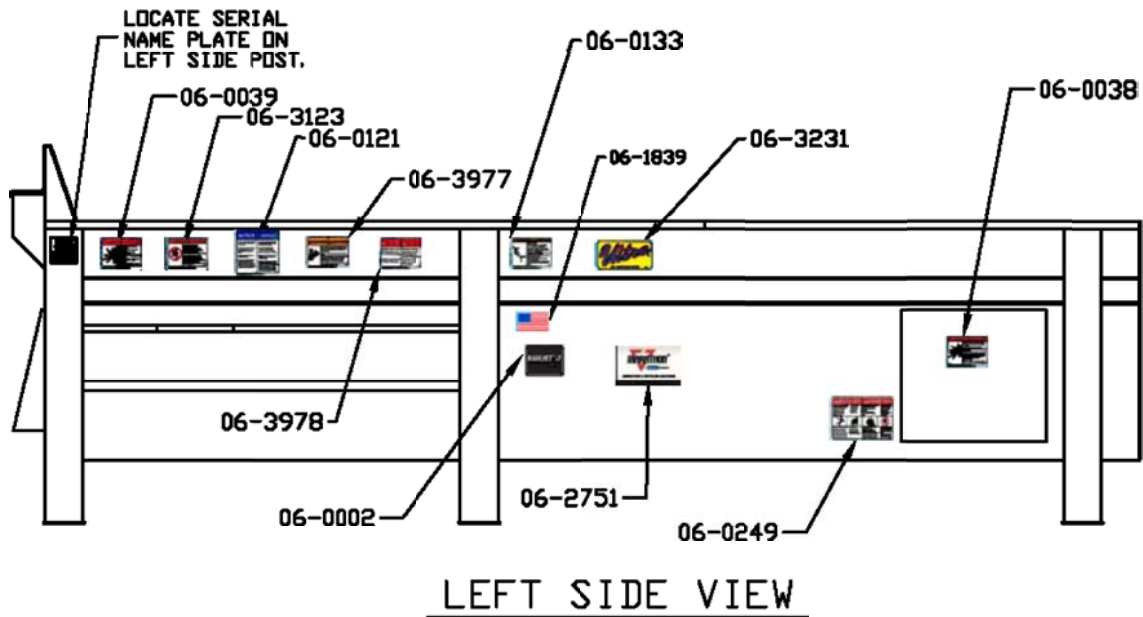


Illustration Page 1 of 2

RamJet® Stationary Compactor

Replacement Parts

91

DECAL PLACEMENT FOR RJ-400 ULTRA (CONTINUED)

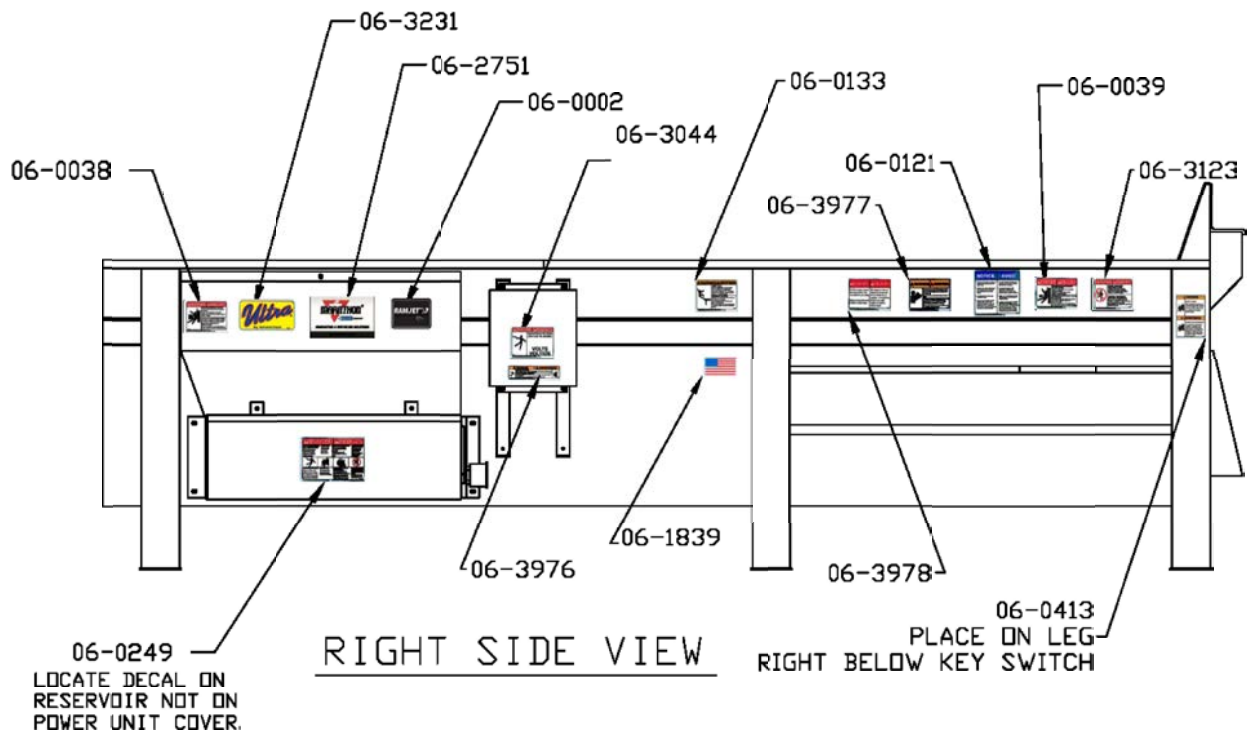
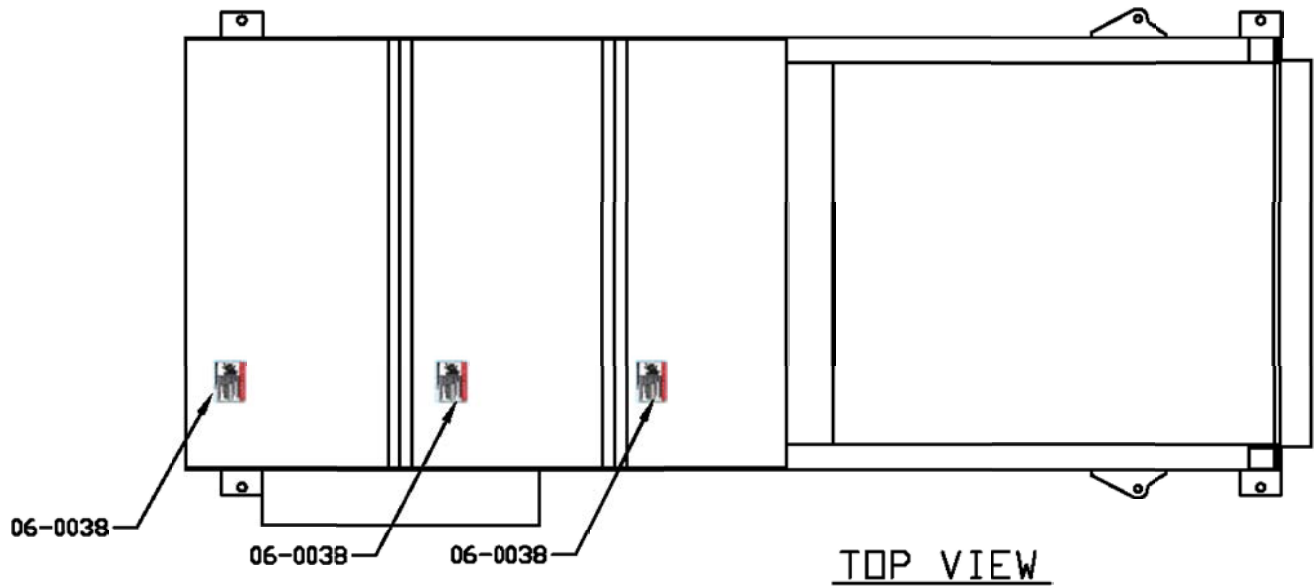


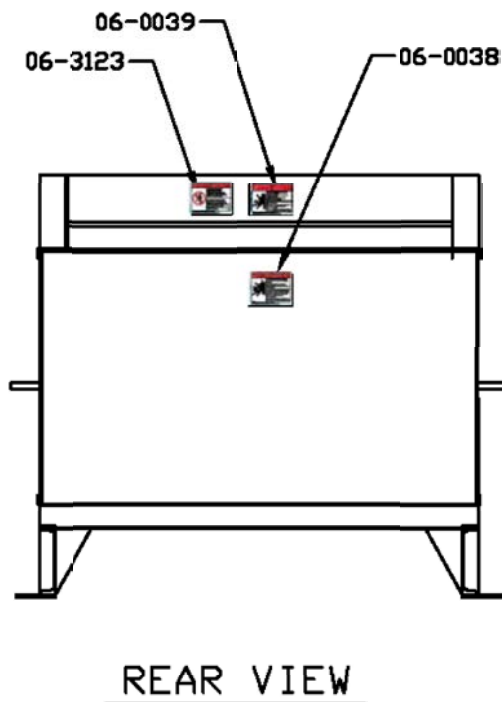
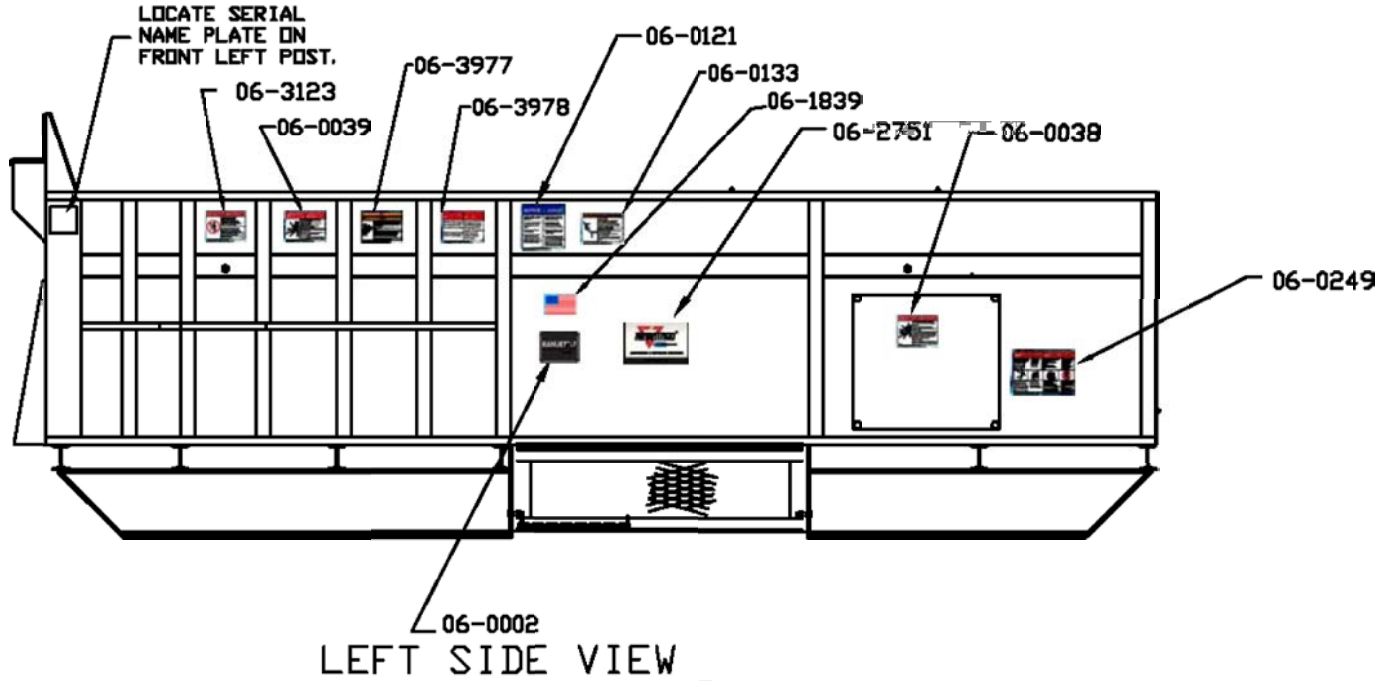
Illustration Page 2 of 2

RamJet® Stationary Compactor

Replacement Parts

92

DECAL PLACEMENT FOR RJ-450



RIGHT HAND POWER UNIT SHOWN
OPPOSITE FOR LEFT HAND PPK

Illustration Page 1 of 2

RamJet® Stationary Compactor

Replacement Parts

93

DECAL PLACEMENT FOR RJ-450 (CONTINUED)

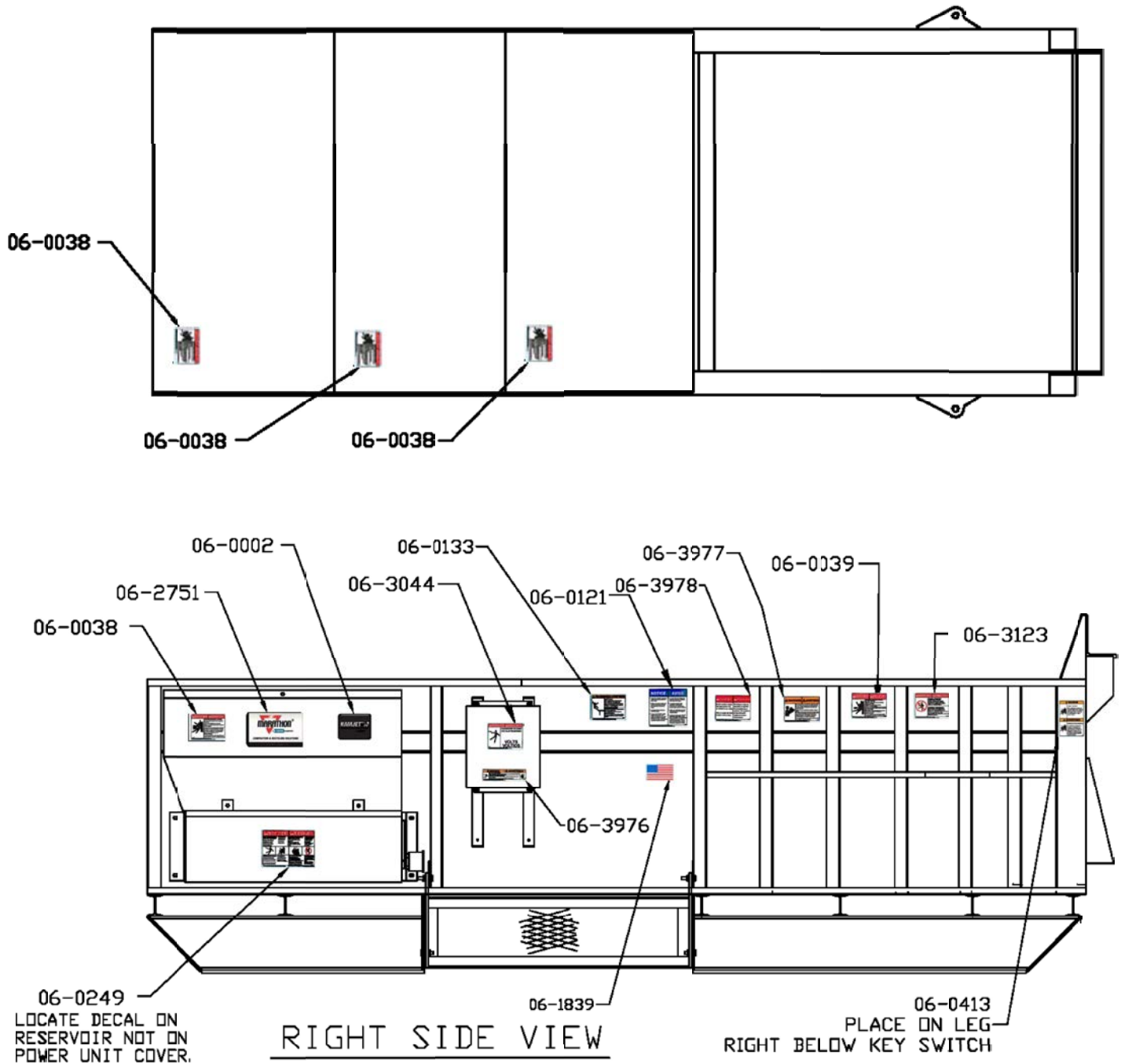


Illustration Page 2 of 2

RamJet® Stationary Compactor

Replacement Parts

94

DECAL PLACEMENT FOR RJ-550

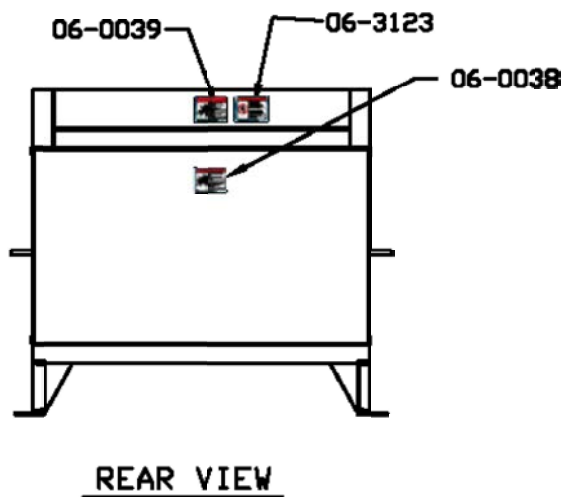
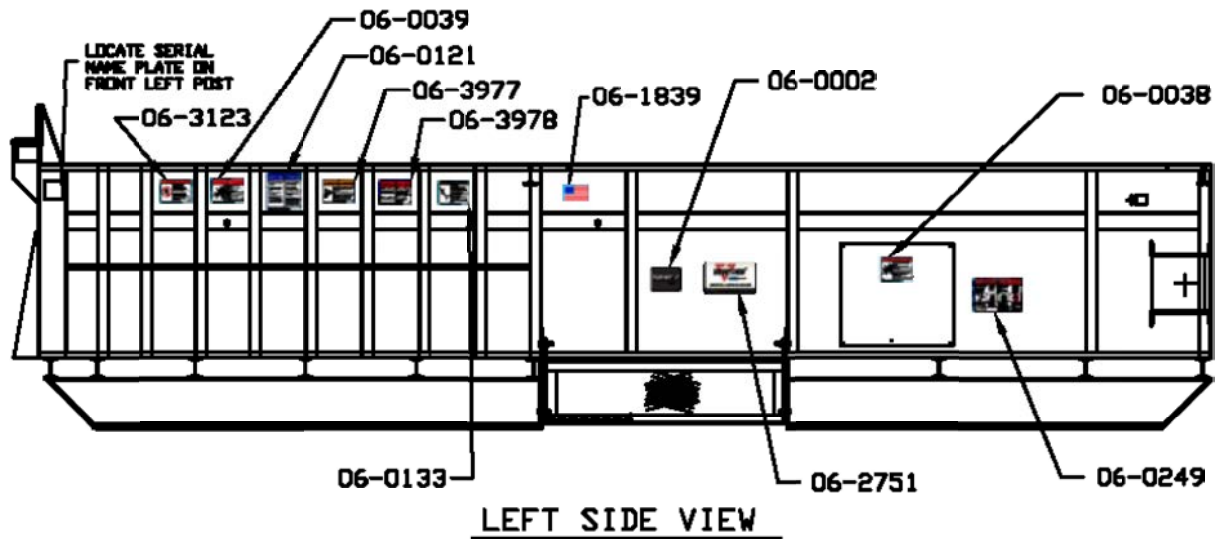


Illustration Page 1 of 2

RamJet® Stationary Compactor

Replacement Parts

95

DECAL PLACEMENT FOR RJ-550 (CONTINUED)

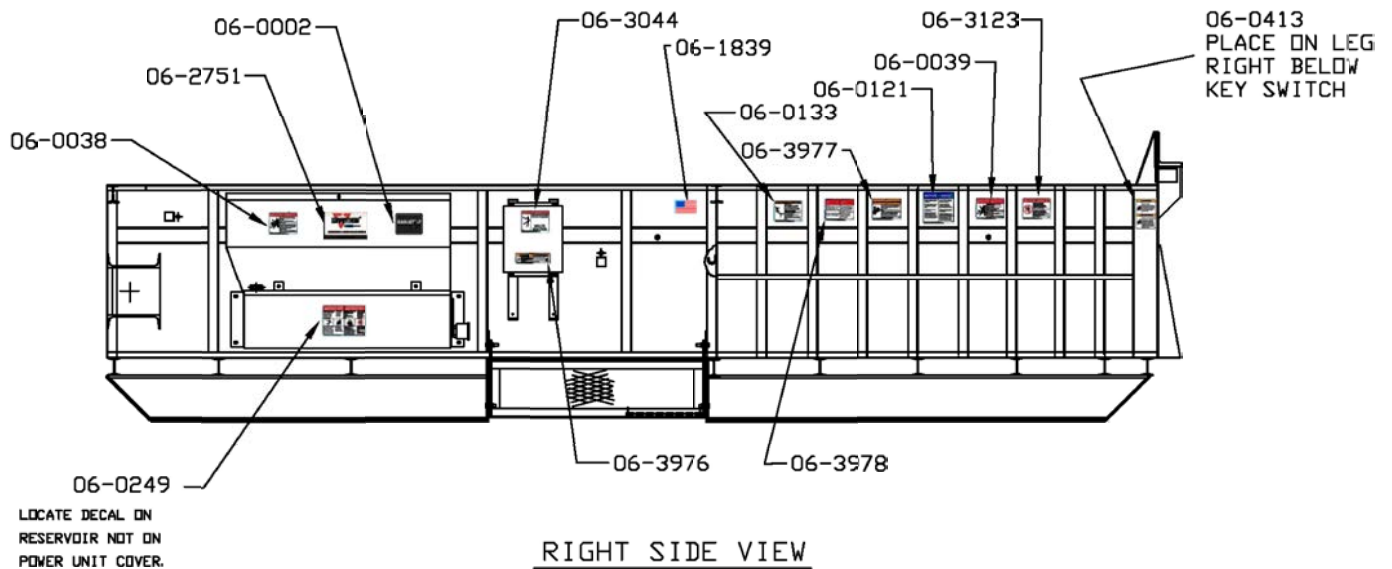
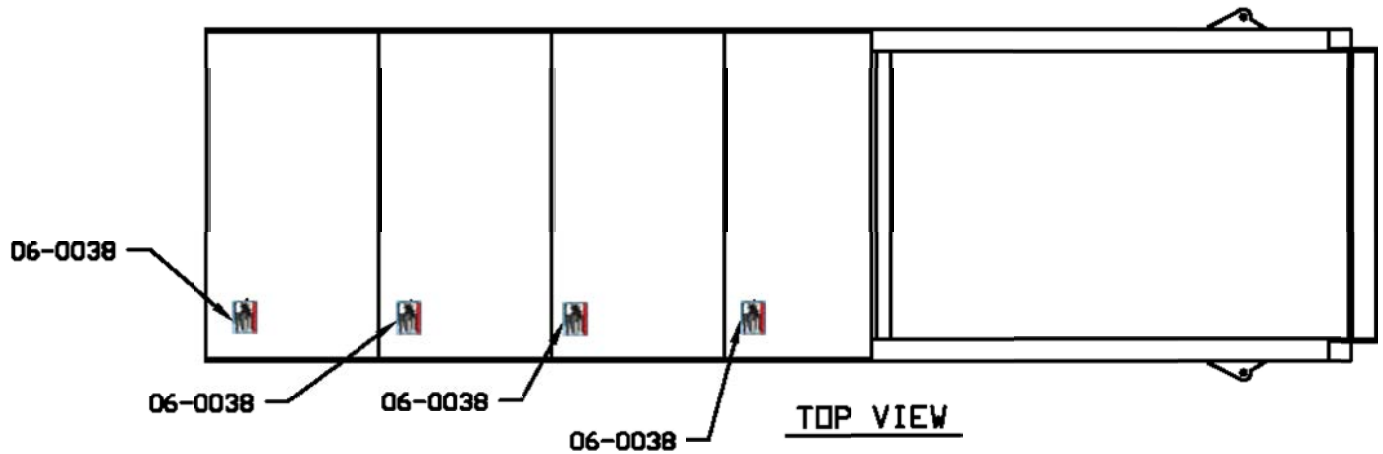


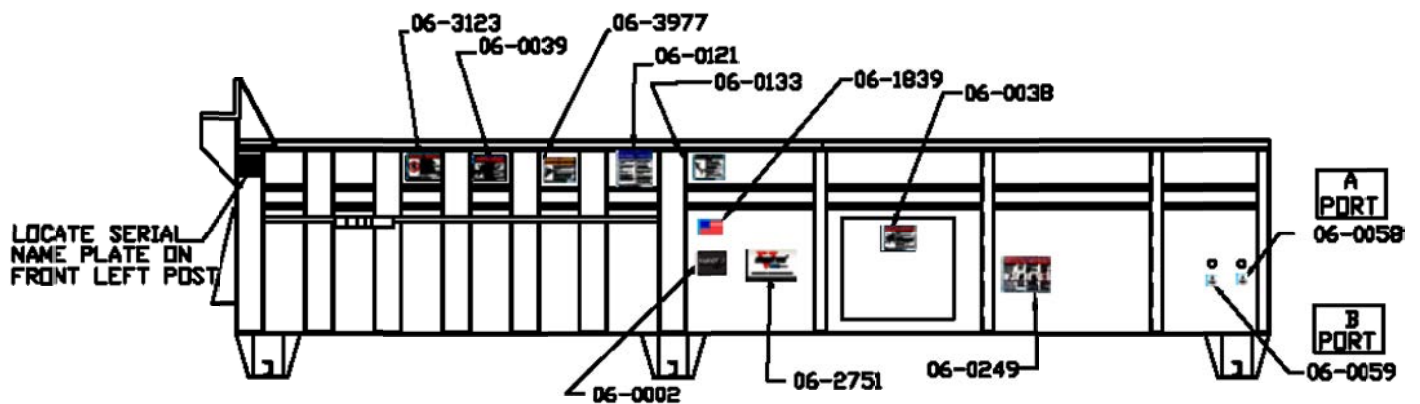
Illustration Page 2 of 2

RamJet® Stationary Compactor

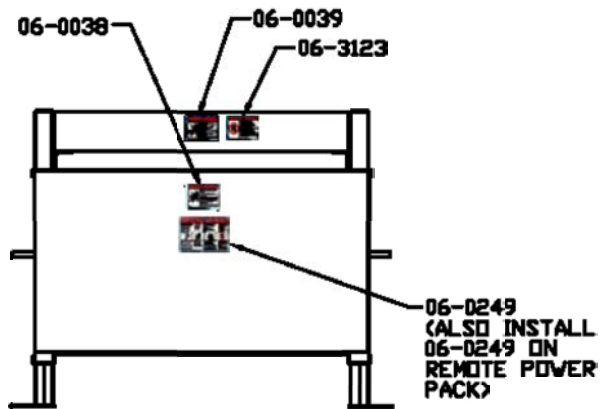
Replacement Parts

96

DECAL PLACEMENT FOR RJ-500 & RJ-500HD



LEFT SIDE VIEW



REAR VIEW

Illustration Page 1 of 2

RamJet® Stationary Compactor

Replacement Parts

97

DECAL PLACEMENT FOR RJ-500 & RJ-500HD (CONTINUED)

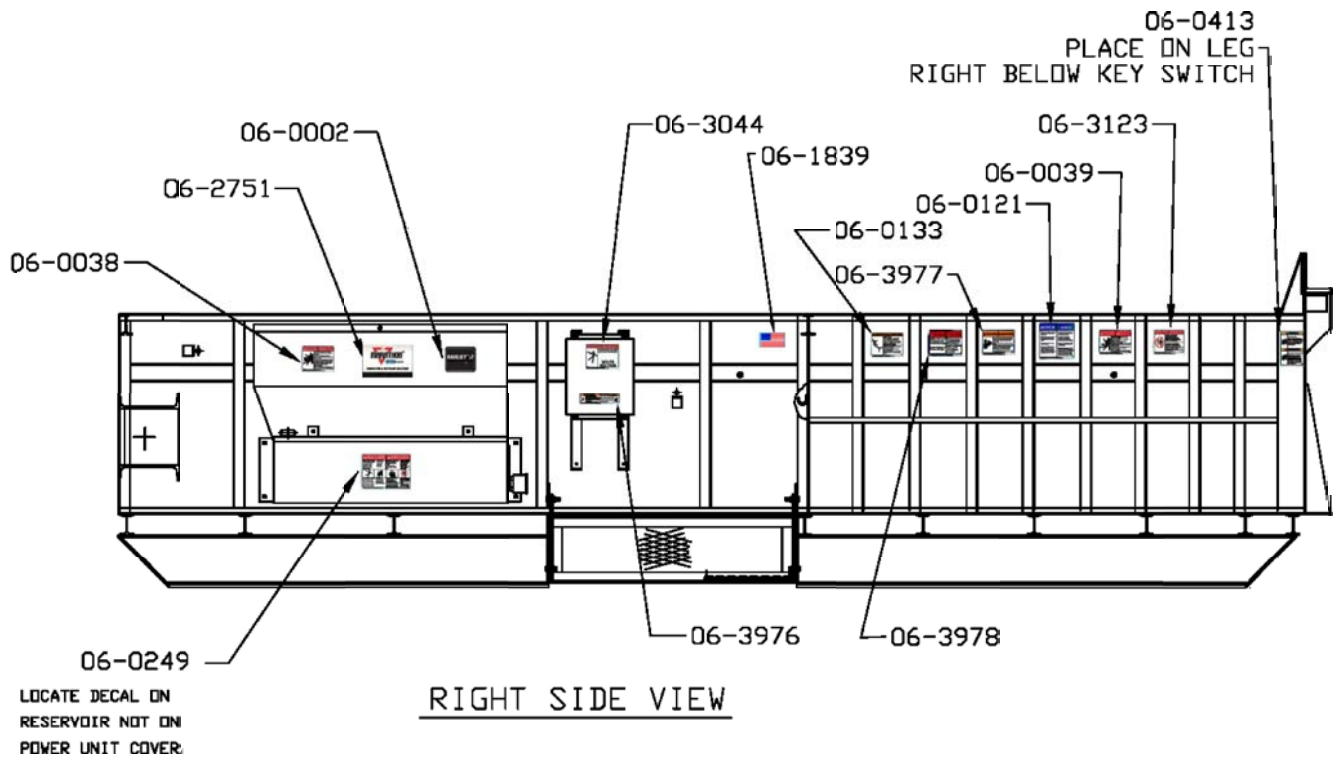
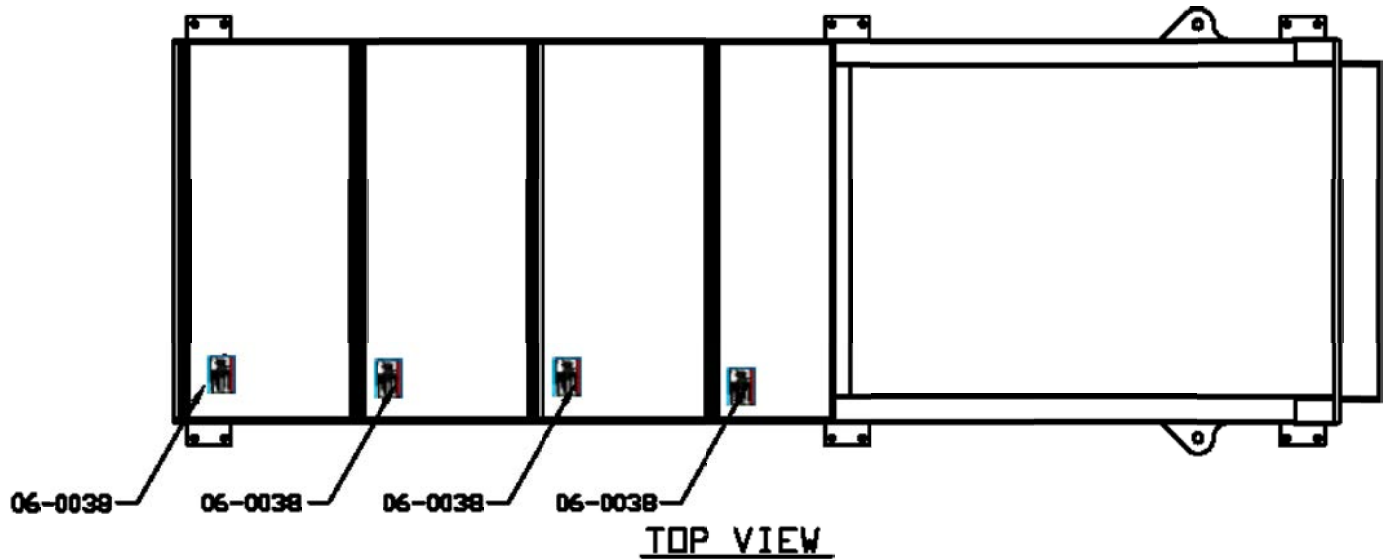
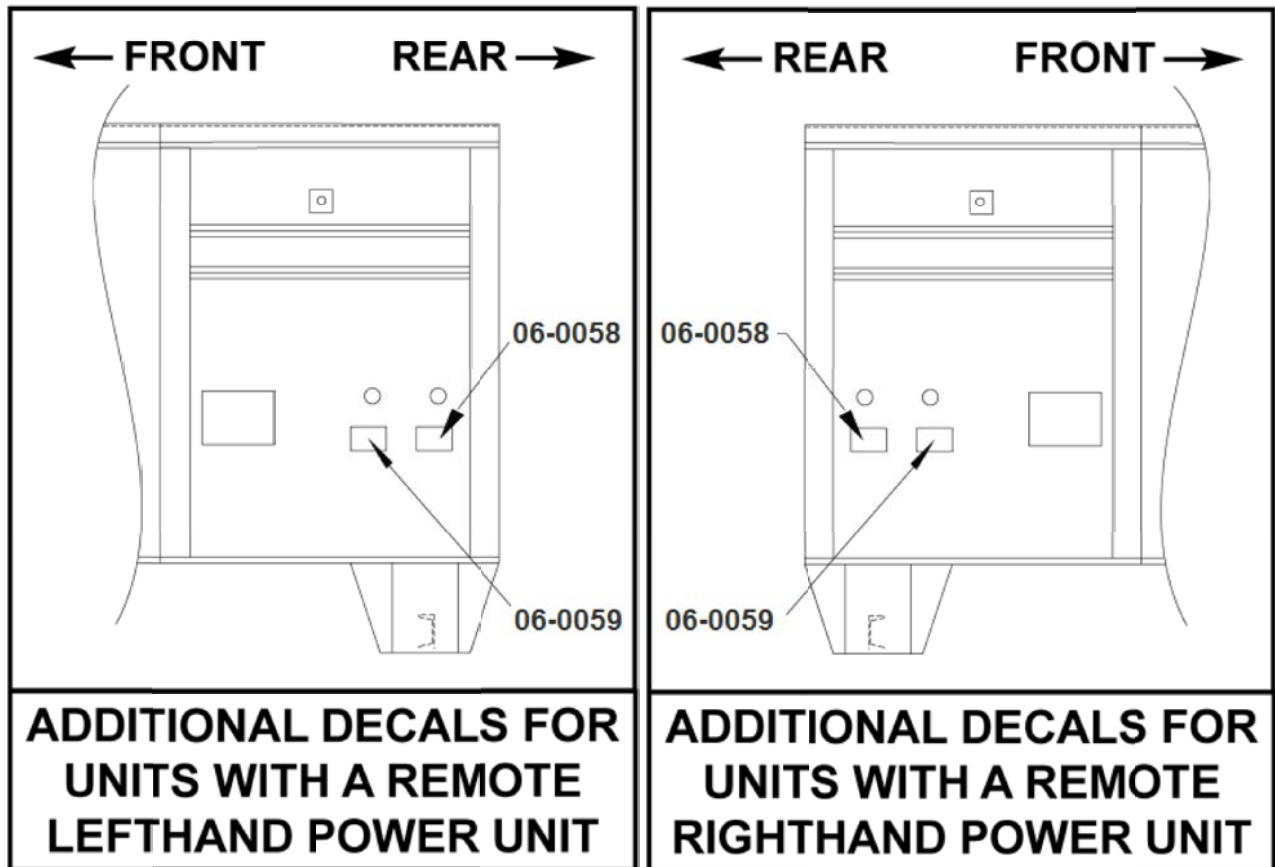


Illustration Page 2 of 2

DECAL PLACEMENT FOR REMOTE POWER UNITS



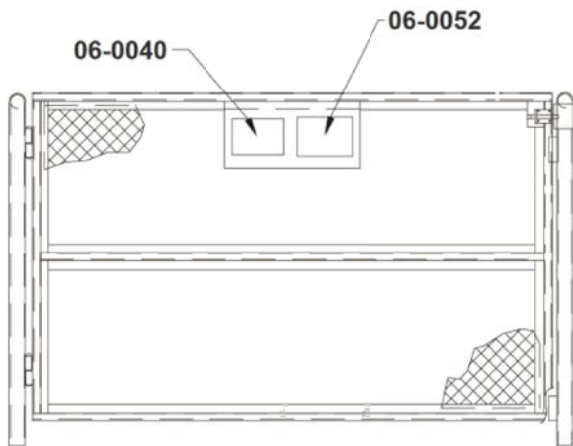
RamJet® Stationary Compactor

Replacement Parts

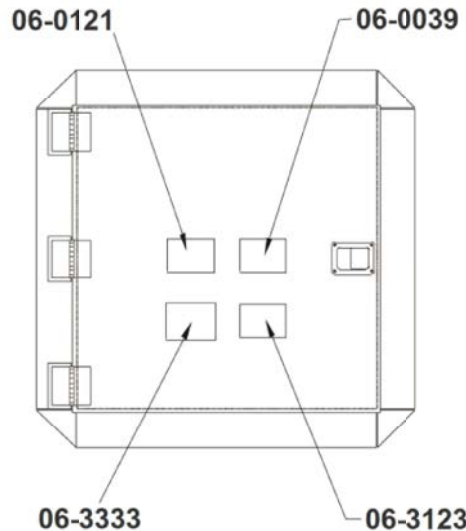
99

DECAL PLACEMENT FOR OPTIONAL LOADING CONFIGURATIONS

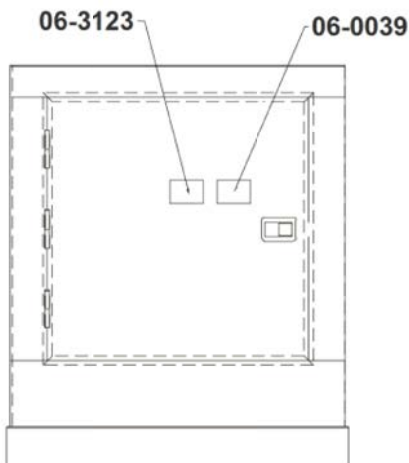
In addition to the standard decal placement, the following decals shown below need to be maintained on any optional loading configurations installed with your horizontal compactor. Match the reference numbers with the decals listed on the **Decals** chart. Since quantities vary by installation, it is best to record the quantity of each of these decals at the time of installation for future reference.



ACCESS GATE



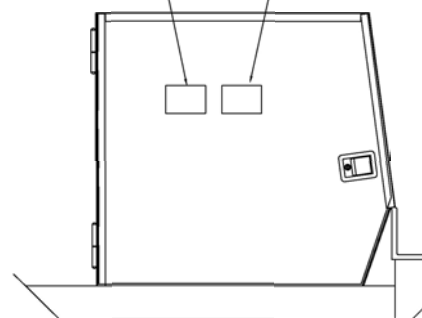
**SECURITY
DOOR**



REAR FEED DOGHOUSE

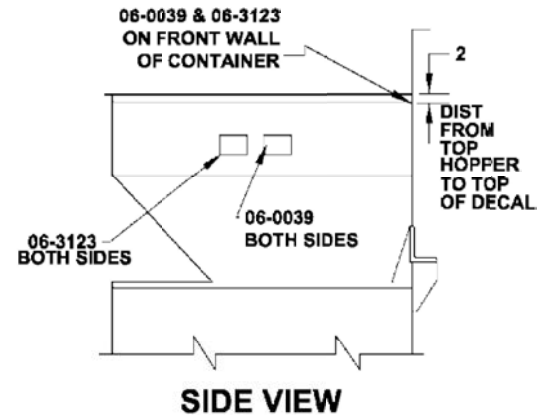
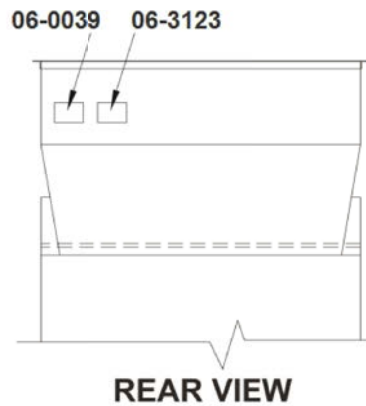
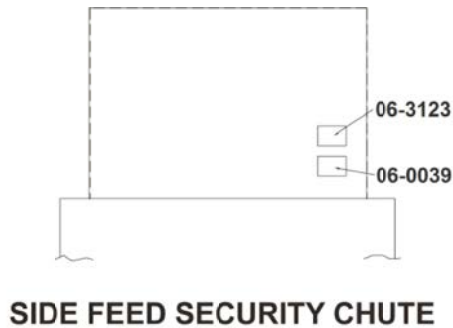
06-3123
PLACE ONE ON INSIDE
WALL OF DOGHOUSE ALSO

06-0039
PLACE ONE ON INSIDE
WALL OF DOGHOUSE ALSO

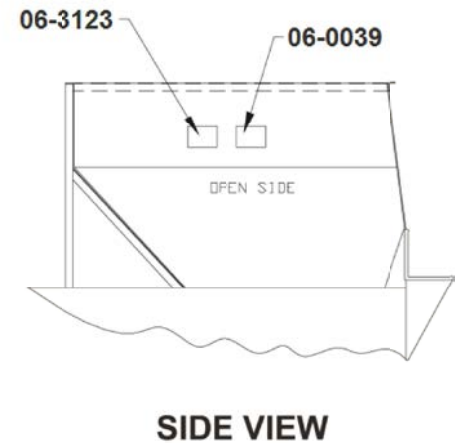
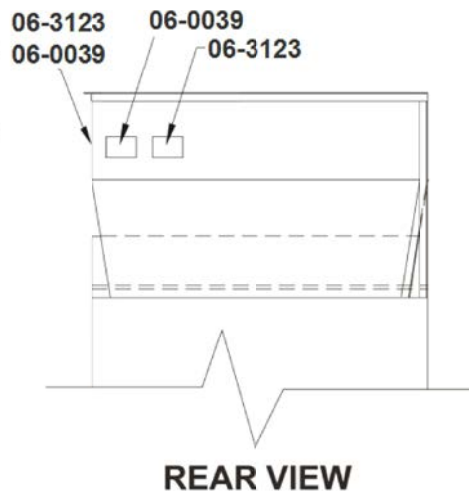
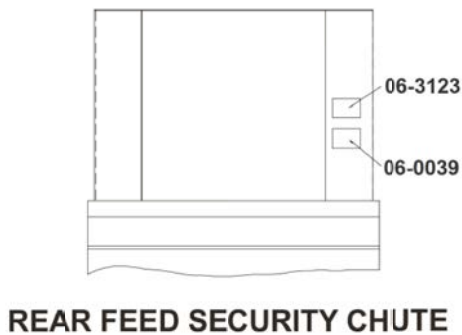


SIDE FEED DOGHOUSE

DECAL PLACEMENT FOR OPTIONAL LOADING CONFIGURATIONS (CONTINUED)



4 SIED HOPPER



3 SIED HOPPER

RamJet® Stationary Compactor Replacement Parts

101

DECAL IMAGES

06-0038



DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST.
NO PINTAR ENCIMA DE ESTA ETIQUETA. REEMPLAZAR SI SE DAÑA O SE PIERDE.

06-0039

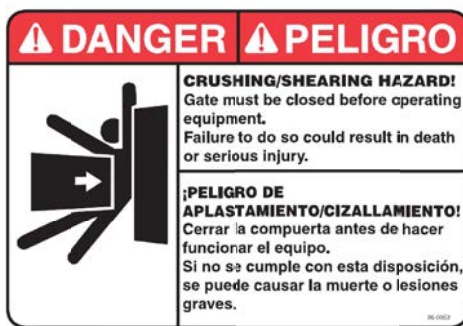


DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST.
NO PINTAR ENCIMA DE ESTA ETIQUETA. REEMPLAZAR SI SE DAÑA O SE PIERDE.

06-3044

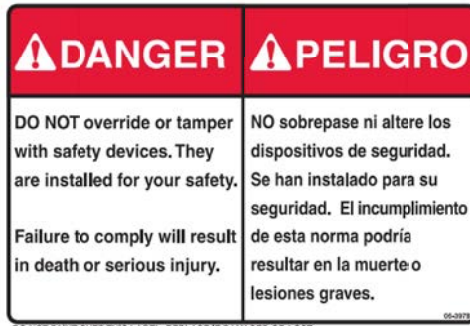


06-0052



DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST.
NO PINTAR ENCIMA DE ESTA ETIQUETA. REEMPLAZAR SI SE DAÑA O SE PIERDE.

06-3978



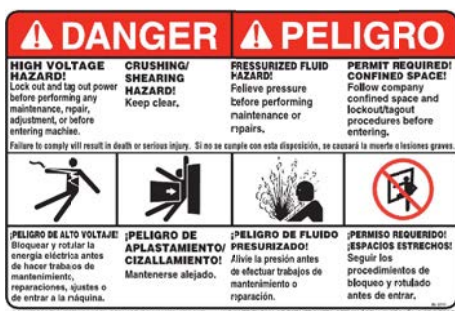
DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST.
NO PINTAR ENCIMA DE ESTA ETIQUETA. REEMPLAZAR SI SE DAÑA O SE PIERDE.

06-0040



DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST.
NO PINTAR ENCIMA DE ESTA ETIQUETA. REEMPLAZAR SI SE DAÑA O SE PIERDE.

06-0249



DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST.
NO PINTAR ENCIMA DE ESTA ETIQUETA. REEMPLAZAR SI SE DAÑA O SE PIERDE.

06-3123



DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST.
NO PINTAR ENCIMA DE ESTA ETIQUETA. REEMPLAZAR SI SE DAÑA O SE PIERDE.

06-0133



DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST.
NO PINTAR ENCIMA DE ESTA ETIQUETA. REEMPLAZAR SI SE DAÑA O SE PIERDE.

06-3977



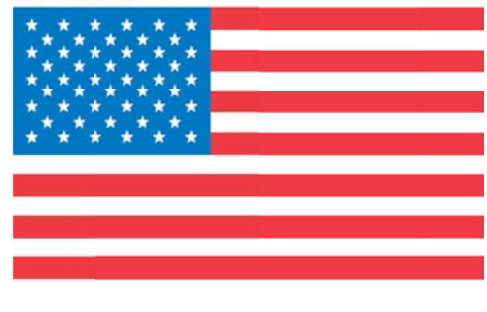
DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST.
NO PINTAR ENCIMA DE ESTA ETIQUETA. REEMPLAZAR SI SE DAÑA O SE PIERDE.

06-3333



DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST.
NO PINTAR ENCIMA DE ESTA ETIQUETA. REEMPLAZAR SI SE DAÑA O SE PIERDE.

06-1839



RamJet® Stationary Compactor Replacement Parts

102

DECAL IMAGES

06-0002



06-2751



06-3546



06-3448



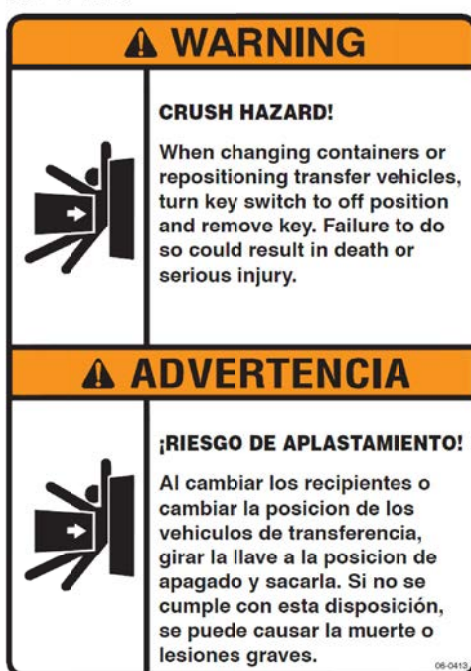
06-3231



06-0121

NOTICE	AVISO
- Federal law prohibits operation of equipment by persons under 18 years of age. - Machine may only be loaded and operated by persons who have been authorized and properly trained. - U.S. Department of Labor age restrictions apply. - 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.	- Las leyes federales prohíben que personas menores de 18 años de edad operen los equipos. - Las personas que han sido autorizadas y debidamente entrenadas son las únicas que pueden cargar y operar la máquina. - Sujeta a las restricciones de edad del Departamento del Trabajo de Estados Unidos. - 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.

06-0413



06-0364

06-0058



06-0059



RamJet® Stationary Compactor

Replacement Parts

103

DECAL IMAGES

	
VERNON, AL - PHOENIX, AZ 1-800-633-8974	
COMPACTORS	
MODEL NO. _____	
SERIAL NO. _____	
DATE OF MFG. _____	PLANT # _____
FORCE RATING (MAX., LBS.) _____	
MANUFACTURED IN ACCORDANCE WITH ANSI STANDARDS IN EFFECT AT DATE OF MANUFACTURE	
MADE IN USA	06-0364

06-3976

 WARNING		 ADVERTENCIA
	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.	 06-3976
	DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST. NO PINTÉ ENCIMA DE ESTA ETIQUETA. REEMPLÁCELA SI SE DAÑA O SE PIERDE.	

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RamJet® Stationary Compactor

INDEX

105

A

anchoring 19
auto shutdown timer 53

C

chute-fed installation 21
circuit breakers 49
compactor clean-out procedure 39
concrete pad requirements 19
contact information 18, 26, 34, 72
container guides 21
controls for standard units (including regen) 28
cylinder replacement 47
cylinders parts list 73

D

decal care 11
decal images 101
decal placement for optional loading configuration 99
decal placement for RJ-160 79
decal placement for RJ-225 80
decal placement for RJ-225 Ultra 82
decal placement for RJ-225HD 80
decal placement for RJ-275 84
decal placement for RJ-275XHD 86
decal placement for RJ-325 88
decal placement for RJ-325HD 88
decal placement for RJ-400 Ultra 90
decal placement for RJ-450 92
decal placement for RJ-500 96
decal placement for RJ-500HD 96
decal placement for RJ-550 94
decals parts list 77
dock installation 21

E

electrical and hydraulic installation 22
electrical parts list 73
electrical schematic 68
electrical symbols 15

F

forward/reverse timer 53

fuses 49

G

grease lubrication recommendation 9
grounding instructions 22
guards and access covers 9

H

hardware parts list 73
hydraulic parts list 73
hydraulic schematic - direct operated control valve 62, 63
hydraulic schematic - regen RJ-275XHD 65
hydraulic schematic - regen RJ-550 64
hydraulic symbols 13

I

introduction 4

L

limit switch adjustment, regen 41
limit switch adjustment, standard units 40
lock-out/tag-out instructions 6, 35

M

maintenance schedule form 38
motor warranty 47
multicycle counter selection 52

O

operating instructions for models with photoelectric cycle controls 31
operating instructions for RJ325 29
operating instructions for standard units (including regen) 30
optional controls for all units 32

P

periodic maintenance 37
plc maintenance layout & description 51
plc ram stop forward option 52
power unit illustration 10 HP 54
power unit illustration 15 HP 56
power unit parts list 10 HP 55
power unit parts list 15 HP 57
preface 5

RamJet® Stationary Compactor

INDEX

106

pre-operation instructions 27
pressure gauge reading for compactor 46
pressure setting chart 43
pressure setting instructions 42
pressure setting instructions, regenerative 44
pressure setting, single phase 10 HP 45
pressure settings chart, regenerative 45
principles of operation 48

R

recommended oils 9
regen remote power unit illustration 60
regenerative operation 48
remote power pack installation 22
remote power unit parts list 59
remote power unit reference chart - regen 61
replacement parts 71

S

safety symbols and definitions 5
service/parts assistance 9
single phase 49
specifications 8
standard operation 48
standard remote power unit illustration 58
steel installation procedures 21

T

three phase 49
through-the-wall power unit installation 23
troubleshooting chart 69
typical panel box configuration 76

W

warning decals on the unit 10



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P.O. Box 1798
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