Marathon® MPT Compactor

MARATHON MPT 3, 4, 5, 6 PAK'NTAINER® MODELS

OPERATION, SERVICE, AND INSTALLATION

ISSUED DECEMBER 2020

CUSTOMER NAME: _____

SERIAL NUMBER: _____

COMPACTION & RECYCLING SOLUTIONS

0019-MPT-1220

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.

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Marathon® MPT Compactor

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SECTION 1
GENERAL INFORMATION

INTRODUCTION

Thank you for purchasing a Marathon® MPT 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

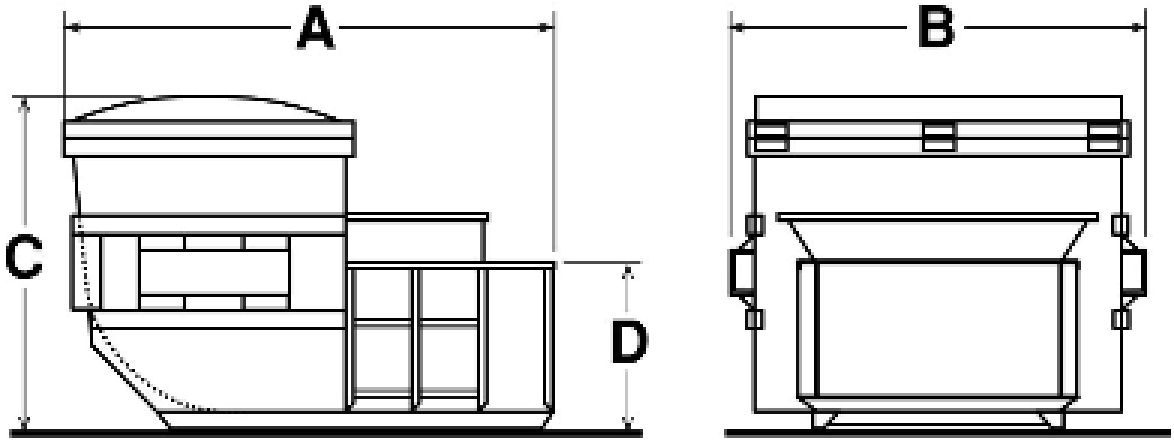
The removal of some forms of blocking may require re-energizing of the compactor before safe removal.

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.

Marathon® MPT Compactor

General Information

SPECIFICATIONS



	A	B	C	D	Weight
MPT-3 FL	78 7/8" (2003 mm)	81 3/4" (2076 mm)	59 1/4" (1505 mm)	32 7/8" (835 mm)	2,600 lbs (1179 kg)
MPT-4FL	84 7/8" (2156 mm)	81 3/4" (2076 mm)	65 1/4" (1657 mm)	32 7/8" (835 mm)	2,700 lbs (1225 kg)
MPT-5FL	90 7/8" (2308 mm)	81 3/4" (2076 mm)	71 1/4" (1810 mm)	32 7/8" (835 mm)	2,800 lbs (1293 kg)
MPT-6FL	96 7/8" (2461 mm)	81 3/4" (2076 mm)	77 1/4" (1962 mm)	32 7/8" (835 mm)	2,900 lbs (1338 kg)
MPT-6RL	148 1/2" (3772 mm)	78" (1981 mm)	84 1/4" (2140 mm)	32 7/8" (835 mm)	3,400 lbs (1542 kg)

SERVICE/PARTS ASSISTANCE

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

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

GREASE LUBRICANT RECOMMENDATION

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

RECOMMENDED OILS

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

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

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

- Quaker State-Dextron II (ATF)

Cold Weather Fluid

- Amoco-Rycon MV

GUARDS AND ACCESS COVERS

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

⚠ WARNING

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

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.

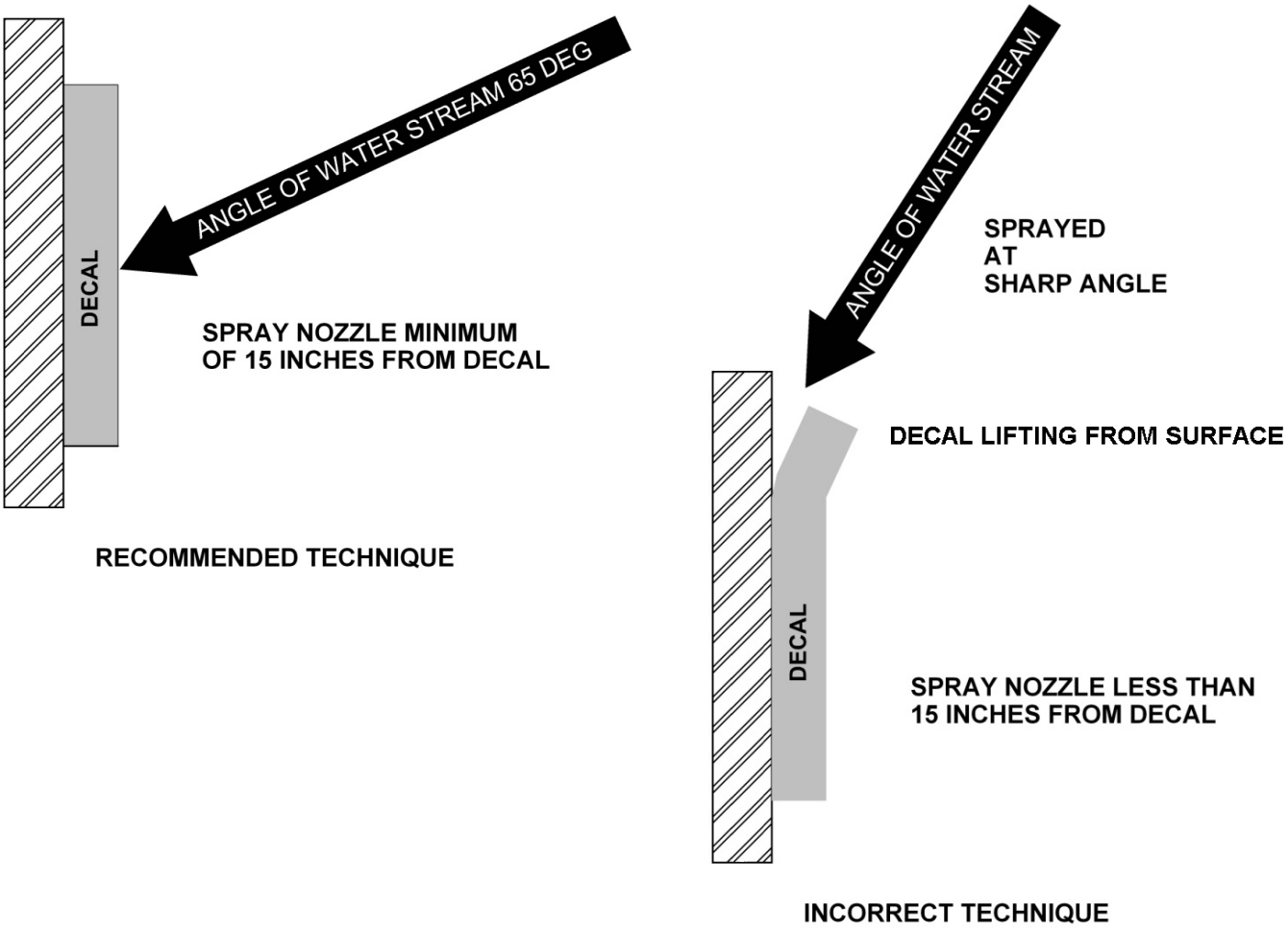
- Spray nozzle opening: 40° wide pattern
- Spray angle: 65° from unit's body
- Distance of nozzle to decal: 15" minimum
- Water pressure: less than or equal to 800 psi
- Length of time: not more than 30 sec.
- Do not use sharp angles to clean the decals – this can lift the decals from the unit.
- NEVER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

C. Remove Difficult Debris

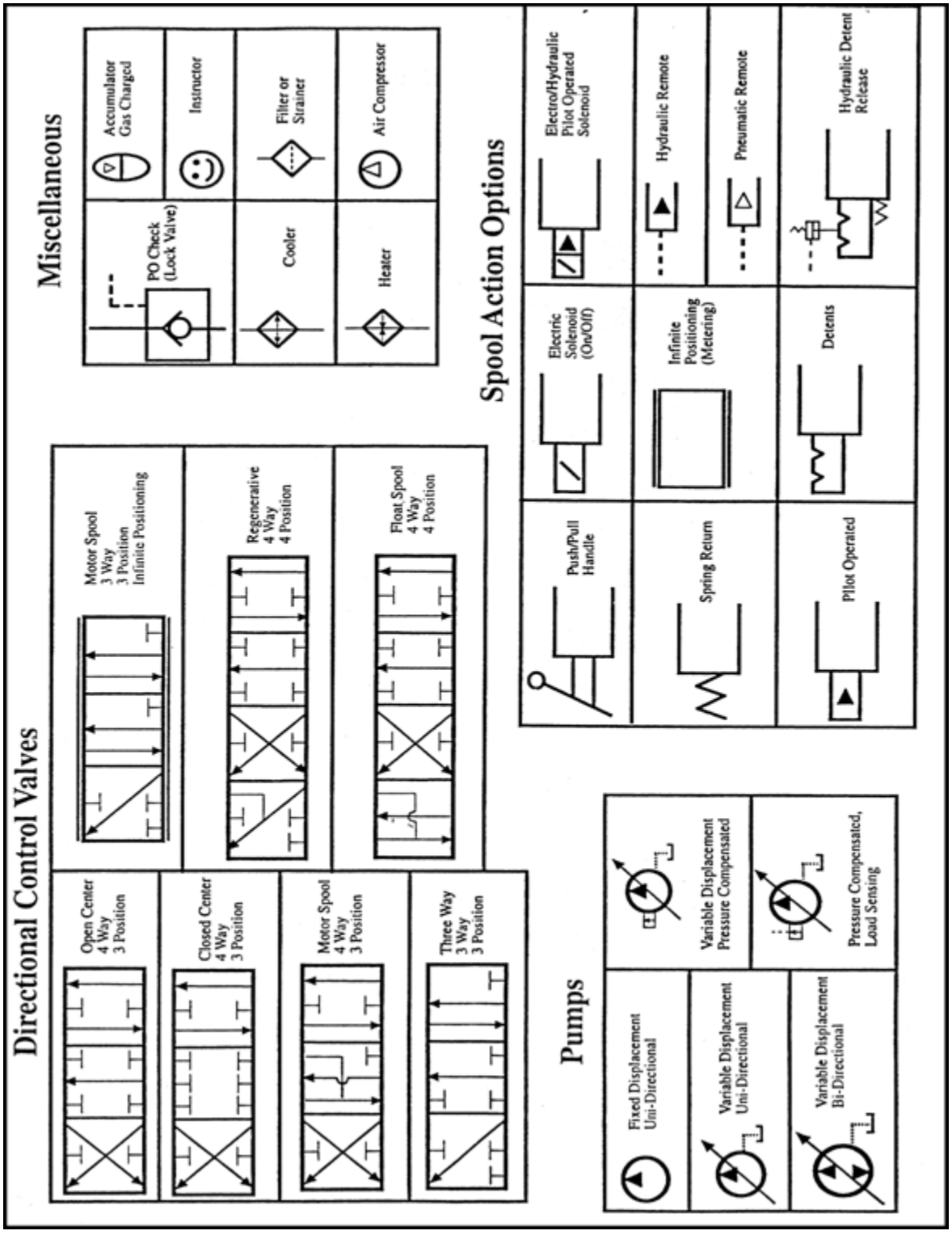
When normal cleaning procedures do not remove difficult debris from the decals, try the following:

- 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.

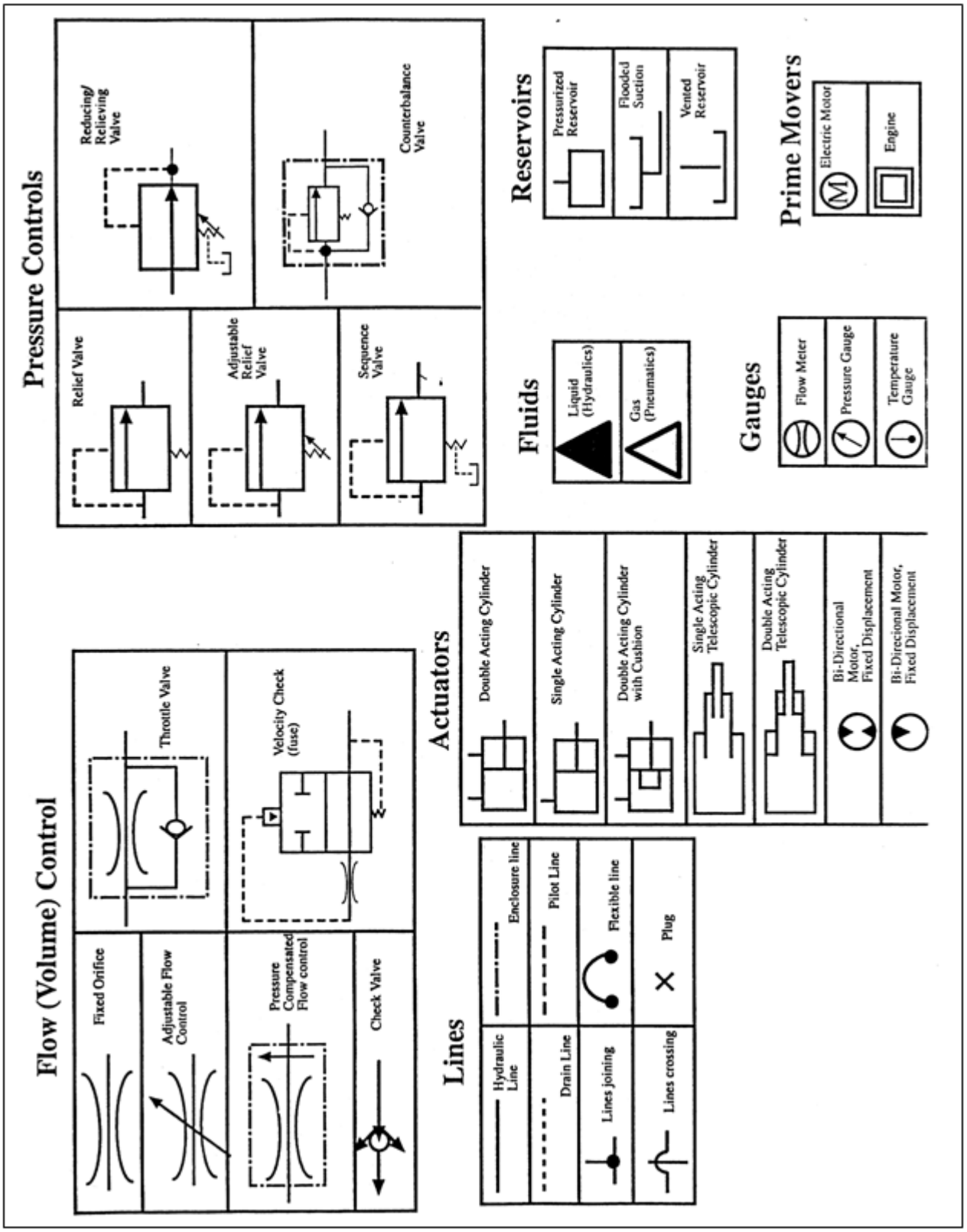
DECAL CARE (CONTINUED)



HYDRAULIC SYMBOLS

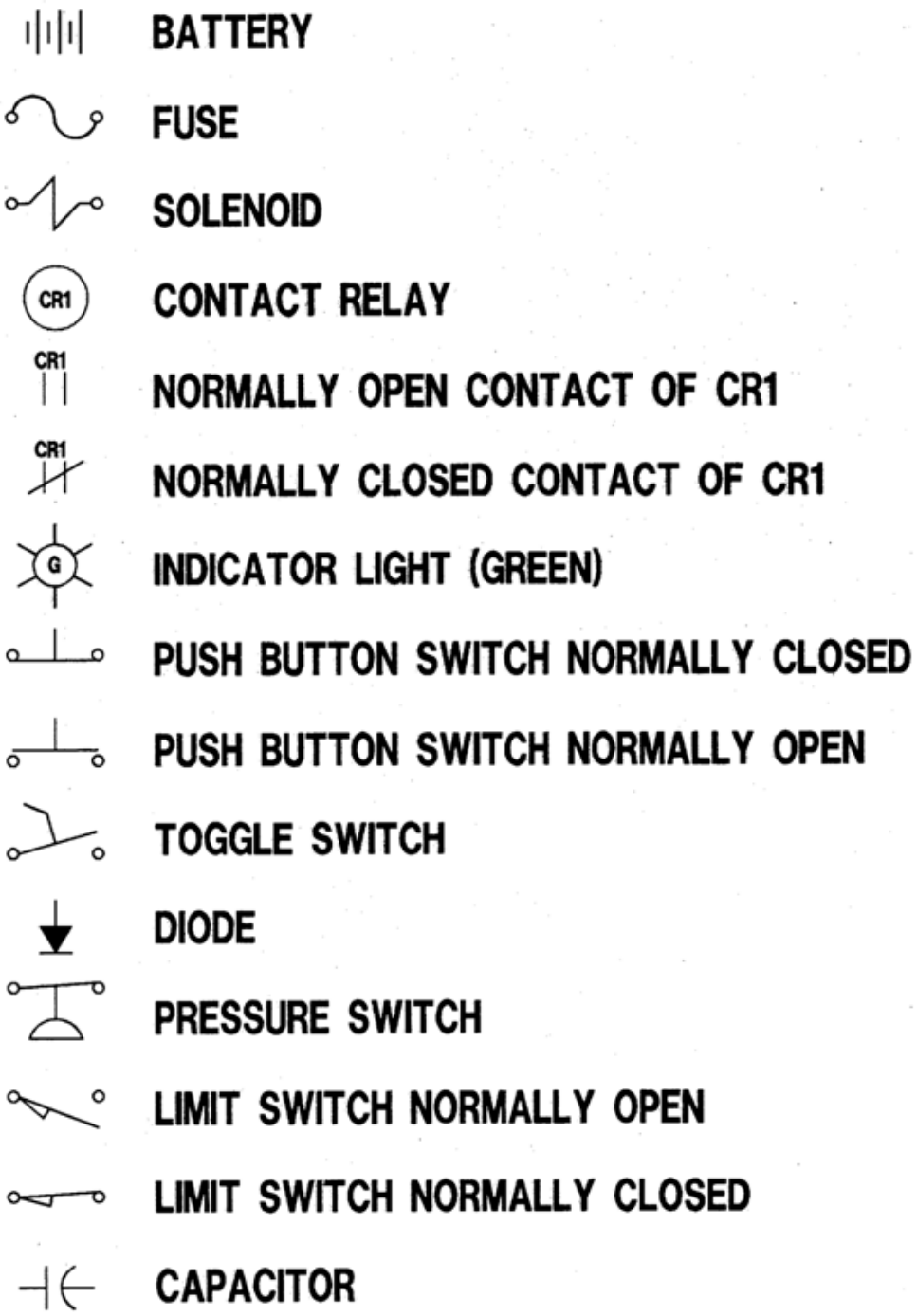


HYDRAULIC SYMBOLS (CONTINUED)



ELECTRICAL SYMBOLS

SYMBOL DEFINITIONS



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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. Concrete should be minimum 3,000 psi (20,700 KPa), steel reinforced, 6” (150 mm) thick. Preferred dimensions of the concrete pad are 8'0" (243.8 cm) wide and a length of 2'0" (61 cm) greater than the total length of the compactor/ container. For good housekeeping practices, it is recommended that a drain beneath the area of the charge box be incorporated into the pad connecting to a sanitary sewer. It is preferred that the concrete pad be flush with the surrounding ground level. If it must be raised above the surrounding ground level, the end of the pad facing the approach of the vehicle should be tapered to ground level.
2. To provide accessibility, concrete pad should be positioned to allow 2'0" (61 cm) minimum between the container and the building wall if it is installed parallel with a building. Allow a minimum of 45' (13.7 m) of clear space in front of the container for access by a container-handling vehicle.
3. If applicable, allow adequate clearances for a through-the-wall chute.

NOTICE

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

Decals

Installation of the compactor is not complete until an inspection of warning decals has been made. All warning decals must be in place prior to operating the compactor. Decals should be clearly visible, legible, securely applied, and in the proper location. Refer to **Decal Placement** 63.

It is also recommended that a decal - "Danger-Do Not Enter" - be applied to any access door, such as security chute doors.

Notify your distributor or Marathon Equipment Company if any warning decals are missing or become damaged and need replacing.

CHUTE INSTALLATION

Use the appropriate kit available from Marathon Equipment Company. Refer to **Contact Information** 18 for details. Example installation shown below.

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.

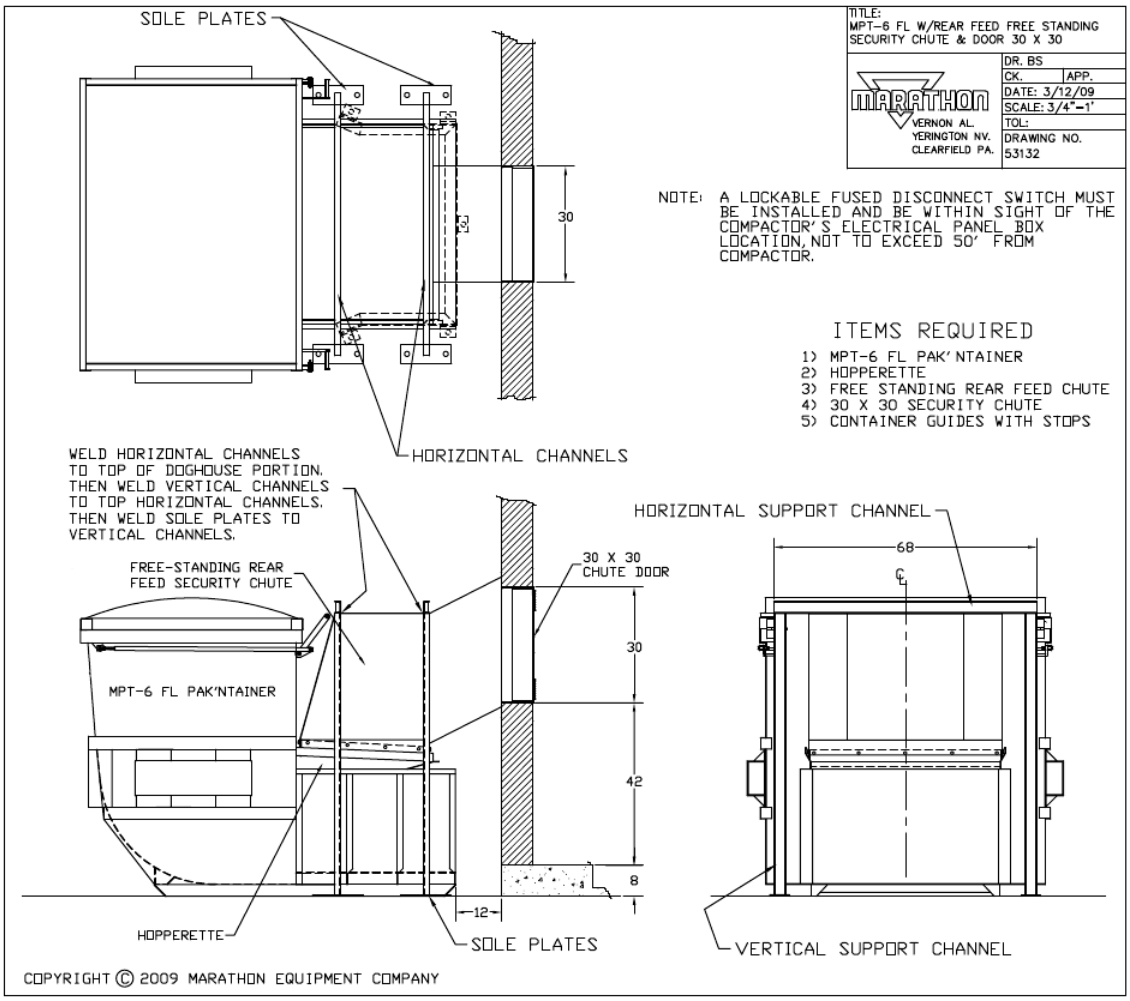
The dimensions for the opening should be:

- 32" wide by 27-1/2" high for rear feed chutes (applicable to 5 & 6 cubic yard machines only).
- 26" wide by 32" high for side feed chutes.

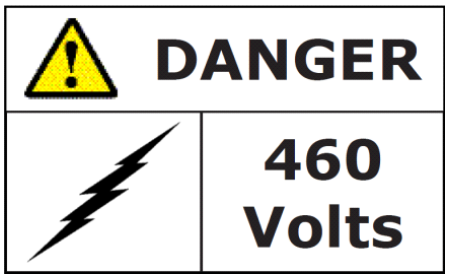
NOTE: Consult with factory for proper location of wall opening.

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.

NOTE: When the compactor is equipped with a photoelectric cycle control or any automatic cycling device, (see ANSI Z245.1, 8.2), an interlock must be installed on the security door which prevents the compactor from cycling whenever the door is open.



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 General Information 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**).

⚠ WARNING

All equipment should be grounded per the 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.

Power Pack Connections

1. The power pack should be installed and anchored as required by the customer. Be certain that the controls are located as to be in a convenient, but not hazardous, location to the customer.
2. For a through-the-wall power pack installation, refer to drawing SK-41230, located inside the electrical control panel.

NOTICE

SPECIAL CARE SHOULD BE EXERCISED TO PROTECT THE HOSES FROM RIDING SHARP CORNERS AND FROM ABRADING DUE TO FLEXING DURING OPERATIONS.

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.)

Emergency Stop Buttons

⚠ 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 AND HYDRAULIC INSTALLATION (CONTINUED)

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** for Motors and **Wire Size Chart**, 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.

Hydraulic Installation

1. Connect the hydraulic hoses to the power pack, exercising care to follow the port decals (A or B) on the packer and the power pack. Refer to **Power Unit Configuration** 52 to determine port locations.
   - Connect hose leading from the rear of the cylinders to the A Port side of the block to which the solenoid valve is bolted.
   - Connect hose leading from rod end of the cylinders to the B Port side of the block to which the solenoid valve is bolted.
2. Fill the reservoir with hydraulic oil. See **Recommended Oils** 9. Fill until oil is 3/4 up in the sight gauge.

NOTICE

After start-up, it may be necessary to add more oil to the reservoir. Maintain oil level to 3/4 in the sight gauge with the cylinder fully retracted

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** 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 General Information section.

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

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** 6.

⚠ 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** 6.

⚠ 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** 6.

⚠ 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.

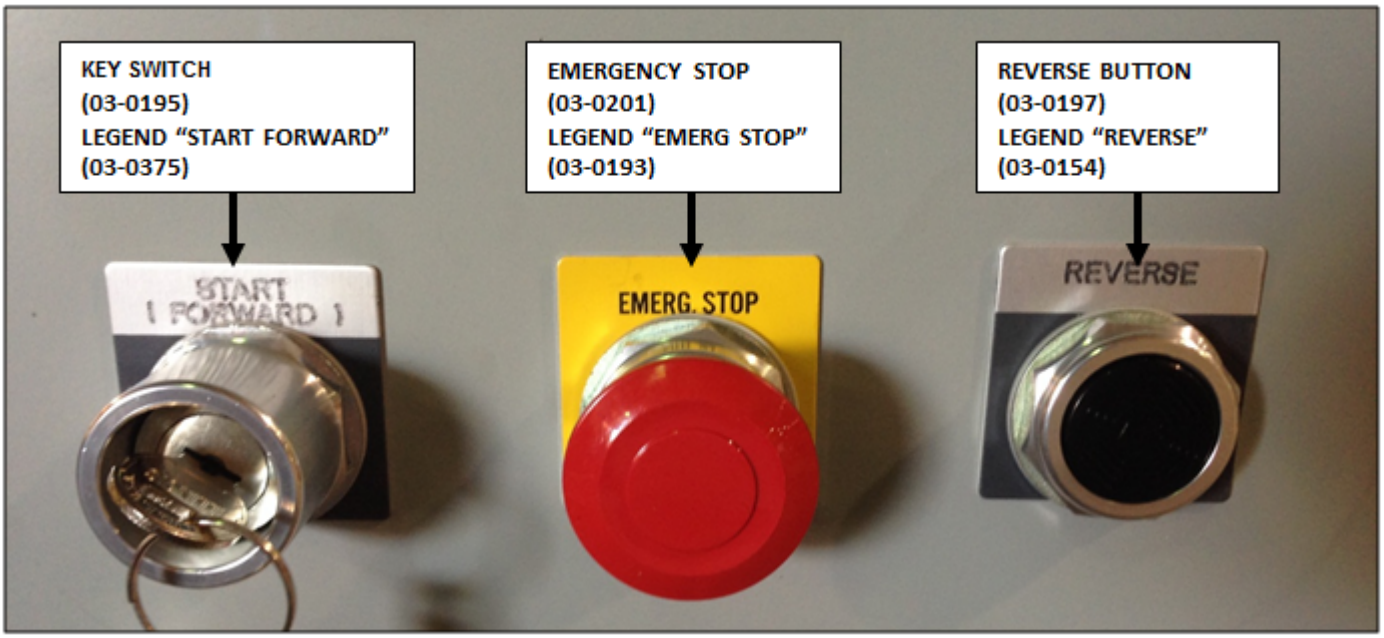
⚠ WARNING

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.

STANDARD CONTROL PANEL



CONTROL DESCRIPTION

1. **KEYED START SWITCH** - This switch requires a key for operation. Insert the key and turn clockwise to the START position. Depress the key for one to two seconds and release. The compactor will cycle one time (complete extension and retraction of the ram) then stop. After use, turn the key to the counterclockwise position and remove the key.
2. **EMERGENCY STOP 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 motor must be running for the REVERSE button to operate. See the **Manual Override Instructions** 27 for details of the operation.

Operating Instructions - Standard Models7500-

1. First, place the material to be discarded into the compactor.
2. Insert the key into the key switch. Turn it clockwise and depress for 1 to 2 seconds and release. The unit will cycle the preset number of times determined by the Multi-Cycle Counter*, 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.

*For more information on the Multi-Cycle Counter see **PLC Maintenance** 50.

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:

- To move the ram forward, turn the key switch clockwise and depress.
- To move the ram rearward, hold the reverse button down, turn and depress the key switch, release the key switch, then release the reverse button.

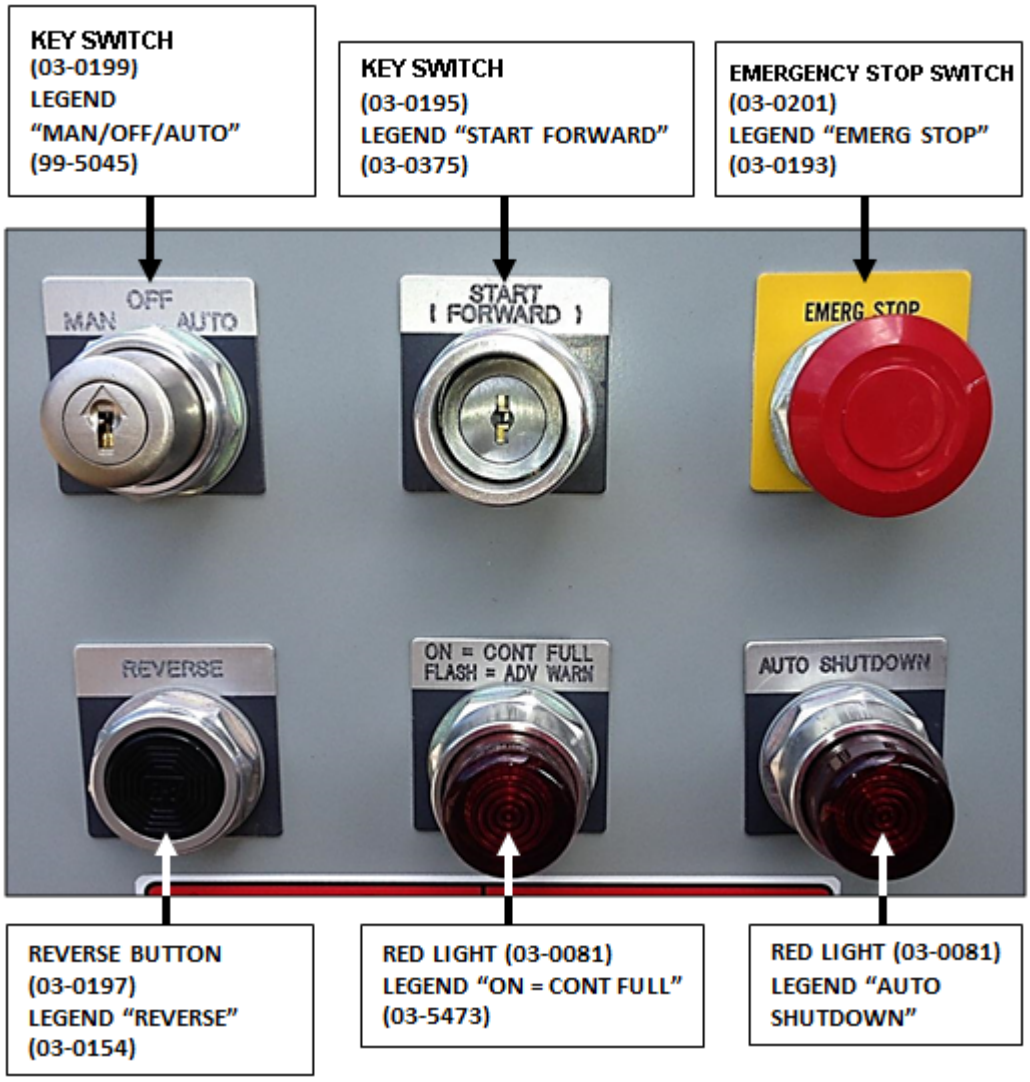
While the ram is moving:

- To reverse the ram while it is moving forward, press the reverse button.
- To cause the ram to move forward while it is moving rearward, depress the key switch.

NOTICE

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

CONTROL PANEL - MODELS WITH PHOTOELECTRIC CYCLE CONTROL



CONTROL DESCRIPTION

1. MANUAL-OFF / AUTOMATIC SHUTDOWN - This switch controls the compactor operation mode, manual or automatic (automatic is photocell mode).
2. KEYED START SWITCH - This switch requires a key for operation. Insert the key and turn clockwise to the START position. Depress the key for one to two seconds and release. The compactor will cycle the preset number of times determined by the Multi-Cycle Counter, then stop. After use, turn the key to the counterclockwise position and remove the key.
3. EMERGENCY STOP PUSHBUTTON - When depressed, this pushbutton will stop all powered operation of the compactor.
4. REVERSE PUSHBUTTON - This pushbutton will reverse the compaction ram when depressed. The motor must be running for the REVERSE button to operate. See the **Manual Override Instructions** 27 for details of the operation.

CONTROL DESCRIPTION (CONTINUED)

5. ADVANCE WARNING / CONTAINER FULL LIGHT - When the light starts flashing (ADVANCE WARNING), then 200 PSI is left before the pressure switch is activated to shut the unit off and container is full (unit will run when light flashes). When the light stays on continuously (CONTAINER FULL), the container is full and is ready to be emptied before its next use. To deactivate the light, depress the illuminated light (the unit will not run while the light is continuously on).
6. AUTOMATIC SHUTDOWN LIGHT - Used with the photoelectric cycle control. 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 pushbutton is pressed after clearing the blockage.

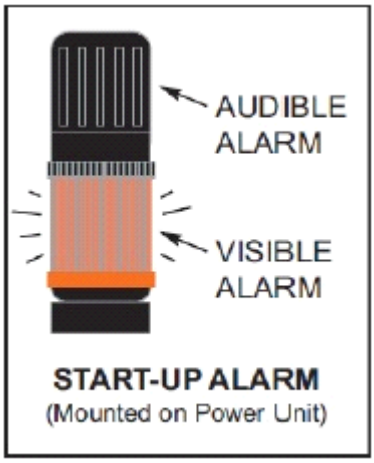
*For more information on the Multi-Cycle Counter, see **PLC Maintenance**.

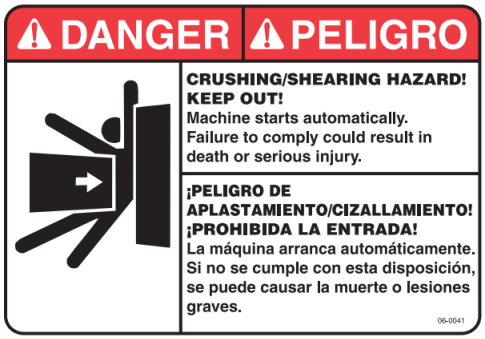
OPERATING INSTRUCTIONS - MODELS WITH PHOTOELECTRIC CYCLE CONTROL

NOTICE

This compactor features an ANSI Z245.21 (2013) SECTION 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. 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.

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.
   - Both the audible and visual start-up alarms will energize for 5 seconds.
   - 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).
   - After 20 seconds, the motor will start and the ram will extend, then retract (one complete cycle).
   - 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 restart the ram automatically anytime the photocell detects ANY OBJECT in the charge box.

OPTIONAL CONTROLS

1. SUSTAINED MANUAL PRESSURE CONTROL BUTTON (Hold-To-Run, Release-To-Stop) This option requires the compactor operator to remain at the push button 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.
2. ADVANCE WARNING / CONTAINER FULL LIGHT - When the light starts flashing (ADVANCE WARNING), then 200 PSI is left before the pressure switch is activated to shut the unit off and container is full (unit will run when light flashes). When the light stays on continuously (CONTAINER FULL), the container is full and is ready to be emptied before its next use. To deactivate the light, depress the illuminated light (The unit will not run while the light is continuously on).
3. RAM STOP FORWARD - When a machine with this option has been stopped, the ram automatically begins to move rearward when restarted. To move the ram forward (when it is stopped), hold the FORWARD button down, turn the key switch clockwise, depress and release the key switch, then release the FORWARD button. To reverse the ram while it is moving forward, depress the key switch. To cause the ram to move forward while it is moving rearward, press the FORWARD button.
4. ACCESS INTERLOCK - This is optional with units equipped with doors, security doors, or access gates. It prevents the unit from operating while a door or gate is open.
5. PHOTOELECTRIC CYCLE CONTROL - (Photocell) - 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 5 seconds, the audible alarm will sound for 5 more seconds, then the compactor is activated and will continue to run until the obstruction has been cleared or the watchdog timer times out.
6. AUTOMATIC SHUTDOWN - Used with the photoelectric cycle control. 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.
7. THERMOSTATICALLY CONTROLLED OIL HEATER - This option is installed in the oil reservoir. The thermostat is adjustable so the heater will heat the oil when the oil temperature goes below a specified level. It is recommended to set the thermostat between 70° F - 100° F.
8. START ON DOOR CLOSURE - When switch is in auto the PLC counts door closures. The machine will start on predetermined count that is within the PLC.

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SECTION 4
SERVICE

CONTACT INFORMATION

Technical Service and Warranty:

877-258-1105

Parts:

800-528-5308

For parts visit our eCommerce Marketplace at **www.mecomerchant.com**.

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

Normal Business Hours:

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

(Central Standard Time)

LOCK-OUT & TAG-OUT INSTRUCTIONS

⚠ 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

⚠ DANGER

Only authorized and trained personnel should perform the following procedures. Lock-Out and Tag-Out the compactor as specified in the **Lock-Out/Tag-Out Instructions** 6.

After Start-Up

1. Replace the return line filter after the start-up technician has completed the initial start-up of the machine.

Daily (or every 8 hours of operation)

1. Check for any oil leaks. Keep all hydraulic fittings tight. Check the oil level and temperature in the hydraulic reservoir. Maintain oil level at 3/4 full in the sight gauge. Oil level should be checked with ram in the retracted position. The temperature should be below 160° F.
2. Check remote emergency stop locations. Make sure that each emergency stop button is not obstructed, damaged, or depressed.
3. If fitted, clean the lenses of photocells. In a dusty application, it may be necessary to clean the photocells and reflector several times a day.
4. If fitted, clean the radiator of the oil cooler.

Weekly (or every 40 hours of operation)

1. Clean around the machine to remove any operator hazards.
2. Check the function of all emergency stop buttons and interlock switches.
3. Make sure all lights, decals, and operator instructions are clear and visible. Clean as required.
4. If fitted, check the start-up alarm and flashing beacon. Clean the light as required.

Monthly (or every 160 hours of operation)

1. Check the function of all controls and options (emergency stop buttons, timer, lights, switches, etc.).
2. Check all hoses for chaffing, rubbing, or other deterioration and damage.
3. Check for any obvious unsafe conditions in the compactor area.
4. Check oil level in hydraulic reservoir. Level should be 3/4 of sight gauge.
5. Clean out debris from above compactor ram.
6. If fitted, check access interlock for correct operation. Adjust if required; contact Technical Service, refer to **Contact Information** 18 on page 2-3.

Quarterly (or every 500 hours of operation)

1. Check the connections and seals on the cylinder for leaks.
2. Check the cylinder pins and make sure they are secure.

Semi-Annually (or every 1000 hours of operation)

1. Send an oil sample for evaluation.
2. Check the compactor structure for any signs of any problems, such as cracked welds, bending, etc.

PERIODIC MAINTENANCE (CONTINUED)

Annually (or every 2000 hours of operation)

1. Lubricate electric motor bearings annually per the manufacturer's instructions.

2. 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.

3. Filter maintenance:

    a. Hydraulic suction filters should be cleaned at yearly intervals.
    b. The filter may be removed from the unit by removing the four bolts retaining the cover plate to the reservoir, and lifting the filter from the reservoir. Check the wiring attached to the motor, it may have to be removed.
    c. Care should be exercised in cleaning the filter to ensure that the element is not torn. Clean the filter with a soft brush and standard industrial solvent.
    d. Replace the filter after cleaning. Securely tighten the bolts. Pump noise and a "crackle" sound are most often caused by air entering the pump suction line. Tightening the suction fittings will usually eliminate problem.

DAILY MAINTENANCE SCHEDULE

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

MAINTENANCE SCHEDULE				
	DAILY			
Day	CHECK FOR OIL LEAKS	CHECK REMOTE EMERGENCY STOP LOCATIONS	CLEAN PHOTOCELL IF NECESSARY	CLEAN RADIATOR OF OIL COOLER IF NECESSARY
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

WEEKLY MAINTENANCE SCHEDULE

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

MAINTENANCE SCHEDULE				
	WEEKLY			
Week	CHECK UNSAFE CONDITIONS AND CLEAN AROUND MACHINE	CHECK FUNCTION OF ALL BUTTONS AND SWITCHES	MAKE SURE ALL LIGHTS AND INSTRUCTIONS ARE VISIBLE	CHECK THE START-UP ALARM AND BEACON
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				

MAINTENANCE SCHEDULE				
	WEEKLY			
Week	CHECK UNSAFE CONDITIONS AND CLEAN AROUND MACHINE	CHECK FUNCTION OF ALL BUTTONS AND SWITCHES	MAKE SURE ALL LIGHTS AND INSTRUCTIONS ARE VISIBLE	CHECK THE START-UP ALARM AND BEACON
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				

MONTHLY MAINTENANCE SCHEDULE

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

MAINTENANCE SCHEDULE						
	Monthly					
Month	CHECK FUNCTION OF ALL CONTROLS	CHECK ALL HOSES	CHECK FOR UNSAFE CONDITIONS	CHECK OIL LEVEL IN RESERVOIR	CLEAN OUT DEBRIS FROM ABOVE RAM	CHECK ACCESS INTERLOCK FOR CORRECT OPERATION
January						
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						

QUARTERLY, SEMI-ANNUAL, & ANNUAL MAINTENANCE SCHEDULE

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

MAINTENANCE SCHEDULE							
	Every 3 months		Every 6 months		Annually		
Month	CHECK CONNECTIONS AND SEALS ON CYLINDERS FOR LEAKS	CHECK CYLINDER PINS FOR SECURENESS	SEND OIL SAMPLE FOR EVALUATION	CHECK STRUCTURE FOR SIGNS OF ANY PROBLEMS	LUBRICATE MOTOR BEARINGS	CHANGE HYDRAULIC FLUID	FILTER MAINTENANCE
January							
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							

PRESSURE GAUGE READINGS FOR COMPACTORS

COMPACTOR MODEL	ADVANCE WARNING PRESSURE	CONTAINER FULL PRESSURE
RJ-30	1000 PSI	1200 PSI
RJ-1835M (SHP)	1450 PSI	1650 PSI
RJ-1835M (SHP)	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-275XHD	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-450HDPC	1900 PSI	2100 PSI
RJ-575HDPC	2000 PSI	2200 PSI

COMPACTOR MODEL	ADVANCE WARNING PRESSURE	CONTAINER FULL PRESSURE
MPT	1500 PSI	1700 PSI
RJ-888C (ALL MODELS)	1500 PSI	1700 PSI
RJ-1005C (ALL MODELS)	1550 PSI	1850 PSI
RJ-2505C (ALL MODELS)	1550 PSI	1850 PSI
RJ-SC²	1450 PSI	1650 PSI
TC-HD (ALL MODELS)	1550 PSI	1850 PSI
TC-HDHF (ALL MODELS)	1950 PSI	2150 PSI

COMPACTOR MODEL	ADVANCE WARNING PRESSURE	CONTAINER FULL PRESSURE
M-100 (PC)	1300 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-600XW 20-18	2100 PSI	2300 PSI
M-600XW 20-50	2100 PSI	2300 PSI
M-600XW 30-75	2300 PSI	2500 PSI
M-800XW 20-18	2000 PSI	2200 PSI
M-800XW 20-50	2000 PSI	2200 PSI
M-800XW 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	2300 PSI	2500 PSI
M-1475XW 30-75	2000 PSI	2200 PSI
M-1475XW 50-100	2000 PSI	2200PSI
M-1475XW 50-125	2300 PSI	2500 PSI

MATERIAL:

MARATHON

Equipment Company,
Vernon, Al.
Yerington, Nv.
Clearfield, Pa.

Title:
PRESSURE GAGE READINGS FOR ADVANCE WARNING AND CONTAINER FULL

Drawn: ES

Date: 4/24/18

Drawing Number:
74829

Routing:

Scale:
FULL

Tolerances:
±1/16"

SHEET:
__ of __

HYDRAULIC SYSTEM PRESSURE CHECKING AND SETTING

⚠ WARNING

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

Tools required: Pressure-setting tool (kit no. 429222)

Refer to **Hydraulic Pressure Settings**.

3 HP, 460V, 230V, & 208V Cycon System

1. Disconnect the hydraulic lines from the packer.
2. Using 3/8" pipe plugs, block the pipe thread connections on a spare set of 3/8" quick disconnects. Connect the plugged quick disconnects to the power unit hydraulic hoses (an alternate method is to remove the hoses and plug the ports in the valve sub plate).
3. Remove the plug from the top of the sub plate and install a 0-3000 PSI liquid filled hydraulic gauge.
4. Press the start button and check the pressure.
5. Reconnect the hydraulic hoses.

3/4 HP, 110V Hi-Lo System

1. Lock-Out and Tag-Out the compactor as specified in **Lock-Out & Tag-Out Instructions** 6.
2. Relieve the system pressure by manually depressing the solenoid valve pin located in the center of the coil end of the valve.
3. Remove the ¼” (6.35 mm) pipe plug from the tee below the pressure switch and install the pressure-setting tool in the tee (threaded pipe section of the tool screws into the tee).
4. Remove the filler/breather cap from the power unit tank and insert the hose from the tool.

NOTICE

Make sure hose is inserted completely.

1. Remove the cover caps on top of both pressure switches and turn the adjustment screws counter-clockwise 3 or 4 turns to deactivate the pressure switch.
2. Start the compactor. The ram will move forward and bottom at the end of the stroke. The machine will continue to run.
3. Adjust the pressure setting, using the adjustment knob on the tool, to 2100 psi.
4. Turn the adjustment screw on pressure switch #2 clockwise until the ram reverses. The ram will retract and bottom at the end of the stroke. The machine will continue to run.
5. Turn the adjusting screw on pressure switch #1 in until the unit shuts down.
6. Remove the top of pressure switch #1.
7. Restart the unit and press the reverse button. The ram will retract and bottom at the end of the stroke. The machine will continue to run.
8. Adjust the pressure setting kit to the fully closed position. The pressure should read 2400 psi.
9. Tighten the end screws on the pressure switches and replace the top cover caps.
10. Remove the pressure-setting tool and replace the ¼” (6.35 mm) pipe plug. The pressure is now set to the factory standard.

NOTICE

The relief valve is located internal to the pump and should not be adjusted.

HYDRAULIC SYSTEM PRESSURE CHECKING AND SETTING (CONTINUED)

Hydraulic Pressure Settings

HP	GPM	Pressure Switch Setting	Relief Valve Setting
3	3	2100	2400
3/4	3	2100	2400

PRINCIPLES OF OPERATION

3 HP, 460V, 230V, & 208V Cycon System

This system uses special cylinders to move the ram and two timers to control the operation of the ram.

The sequence of operation for this system is as follows:

Upon start-up of the unit, timer one (T1, in the PLC) starts and the ram extends until T1 times out. Once T1 times out, timer five (T5, in the PLC) starts and the ram begins to move in reverse. The ram stops and the unit shuts down when T5 times out.

When a Cycon cylinder is fully extended or retracted, it bypasses internally. This prevents the hydraulic system to reach relief pressure at either end of the stroke.

3/4 HP, 110V Hi-Lo System

This system utilizes a double pump to obtain maximum speed and maximum force while minimizing horsepower requirements.

The front section of the pump is the high pressure section. The rear section supplies low pressure oil (high flow) during advance and retract to minimize the cycle time.

A four-way valve directs oil to the cylinder to extend or retract the main ram.

There are two check valves in the main pressure line. The first check valve acts as a load holding check to eliminate reverse rotation of the pump & motor. The second check valve isolates the two pumps during the high pressure compaction part of the cycle, when the low pressure pump is unloaded.

The sequence of operation for this system is as follows:

The motor is started and the directional valve is shifted to the extend position. The ram extends at high speed until resistance is met (pressure increase). Unloading of the low pressure pump is accomplished hydraulically, and is set on the unloading valve in the low pressure pump. The ram now advances on the high pressure pump only to accomplish the high force portion of the compaction cycle. Pressure is limited by the pressure switch which shuts the unit off when maximum pressure is reached.

In a normal cycle when the pressure limit is reached, the directional valve reverses and both pumps return the ram.

FUSES AND CIRCUIT BREAKERS

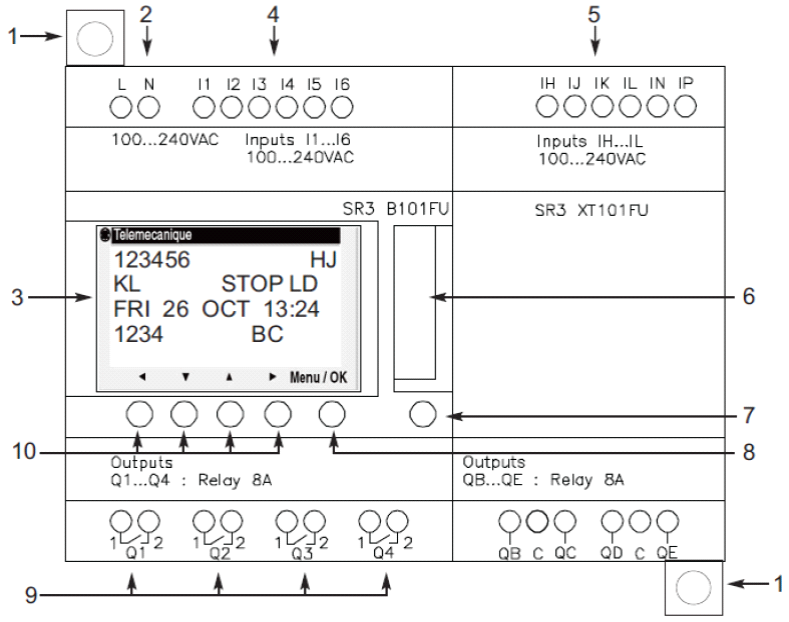
Three Phase					
MOTOR SIZE	**VAC**	**FULL LOAD AMP**	**DUAL ELEMENT FUSE MAX.SIZE AMP**	**CIRCUIT BREAKER MAX.SIZE AMP**	**SERVICE DISCONNECT AMP**
3 HP	208	10.6	15	20	30
	230	9.6	15	20	30
	460	4.8	10	15	30
	575	3.9	10	15	30
Single Phase					
3/4 HP	120	13.8	20	20	20
3 HP	208	18.7	30	45	30
	230	17.0	25	40	30

WIRE SIZES

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

PLC MAINTENANCE - LAYOUT & DESCRIPTION

PLC Layout



Reference numbers given below refer to PLC Layout above.

REF #	DESCRIPTION
1	RETRACTABLE MOUNTING FEET
2	SCREW TERMINAL BLOCK FOR POWER SUPPLY
3	LCD, 4 LINES, 18 CHARACTERS
4	SCREW TERMINAL BLOCK FOR INPUTS
5	SCREW TERMINAL BLOCK FOR DISCRETE INPUT
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

PLC MAINTENANCE - LAYOUT & DESCRIPTION (CONTINUED)

Multicycle Counter Selection

STEPS	DIRECTIONS
1	Press the Menu Button
2	Press Arrow Down Button to select PARAMETER (flashing)
3	Press Menu/Ok Button
4	Press Arrow Up Button until CC2 is flashing
5	Press Arrow Left Button until P=0001 is flashing
6	Press Arrow Down or Arrow Up to select cycle count
7	Press Menu/Ok Button
8	Press Menu/Ok Button with YES to Confirm Changes
9	Press the Menu Button

Ram Stop Rear or Ram Stop Forward Selection

STEPS	DIRECTIONS
1	Press & Hold the Arrow Left Button to Change and display the current ram stop position

NOTICE

Repeating this process switches the current position to ram stop forward or ram stop reverse.

PLC Maintenance - Extend/Retract Timer Adjustment

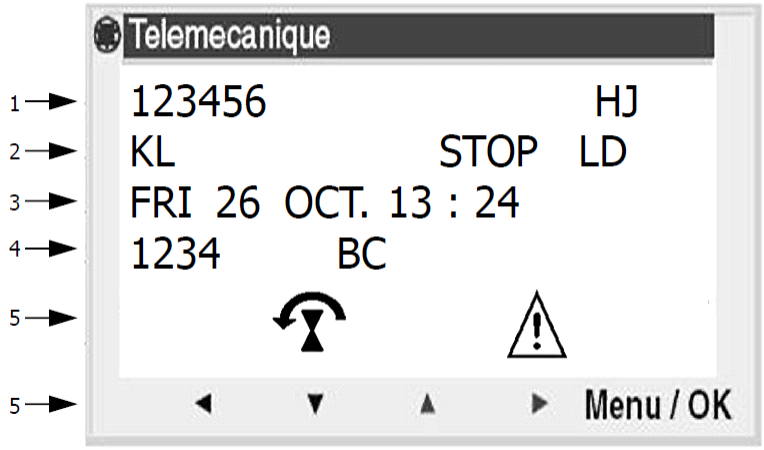
STEPS	DIRECTIONS
1	Press the Menu Button
2	Press the Up or Down Arrow Button until you get to PARAMETER
3	Press the Menu Button
4	Press the Up or Down Arrow Button until TT1 is flashing (Extend Timer)
5	Press the < Arrow Button
6	Press the Up or Down Arrow Button until the desired time is flashing
7	Press Menu
8	Press Menu with YES blinking
9	Repeat Steps 4-8 with TT5 (Retract Timer)
10	Press the Menu Button to return to normal operation.

Timer Settings (in Seconds)

MODEL NO.	RAM STOP REAR		RAM STOP FORWARD	
	TT1	TT5	TT1	TT5
MPT	16	12	16	12

PLC MAINTENANCE - LCD LAYOUT & DESCRIPTION

LCD Layout

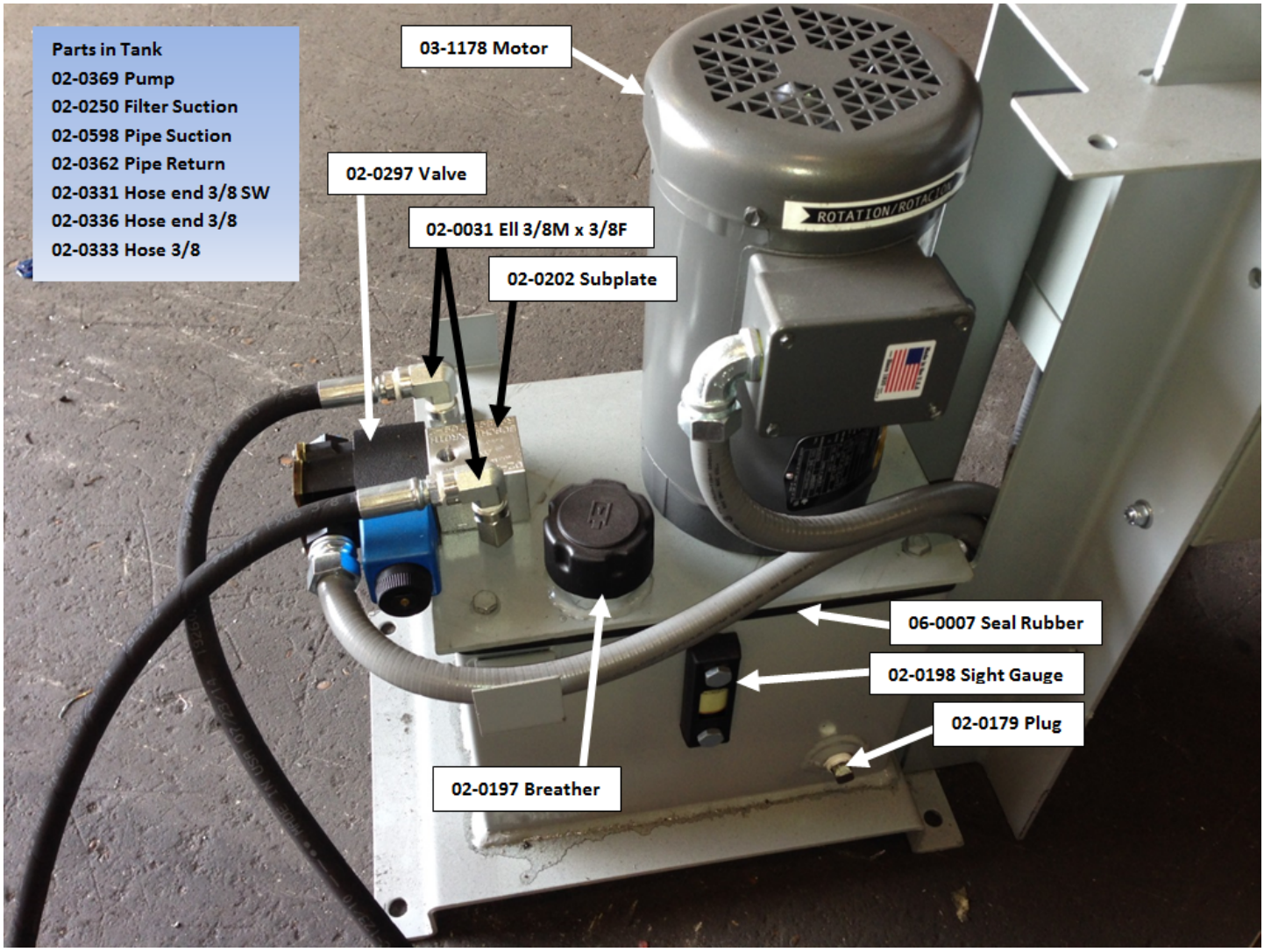


Reference numbers given below refer to LCD Description above.

REF #	DESCRIPTION
1	INPUT STATUS
2	OPERATING MODE (RUN/STOP); PROGRAMMING MODE (LD/FBD)
3	DATE (DAY AND TIME FOR PRODUCTS WITH CLOCK)
4	OUTPUT STATUS
5	CONTEXTUAL MENUS / PUSHBUTTONS / ICONS INDICATING THE OPERATING MODE

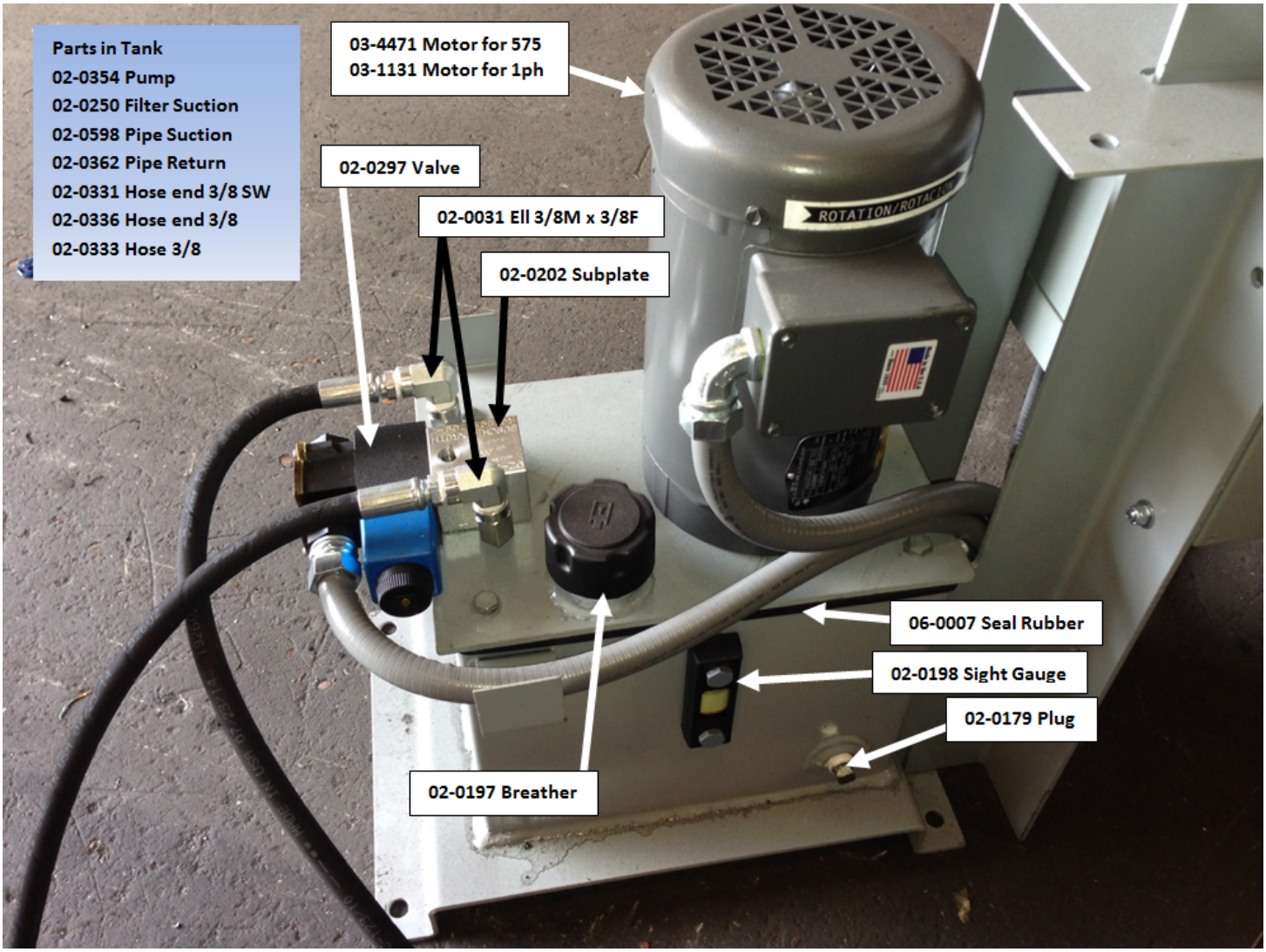
POWER UNIT CONFIGURATION

3 HP 1PH and 3/4 HP 1PH



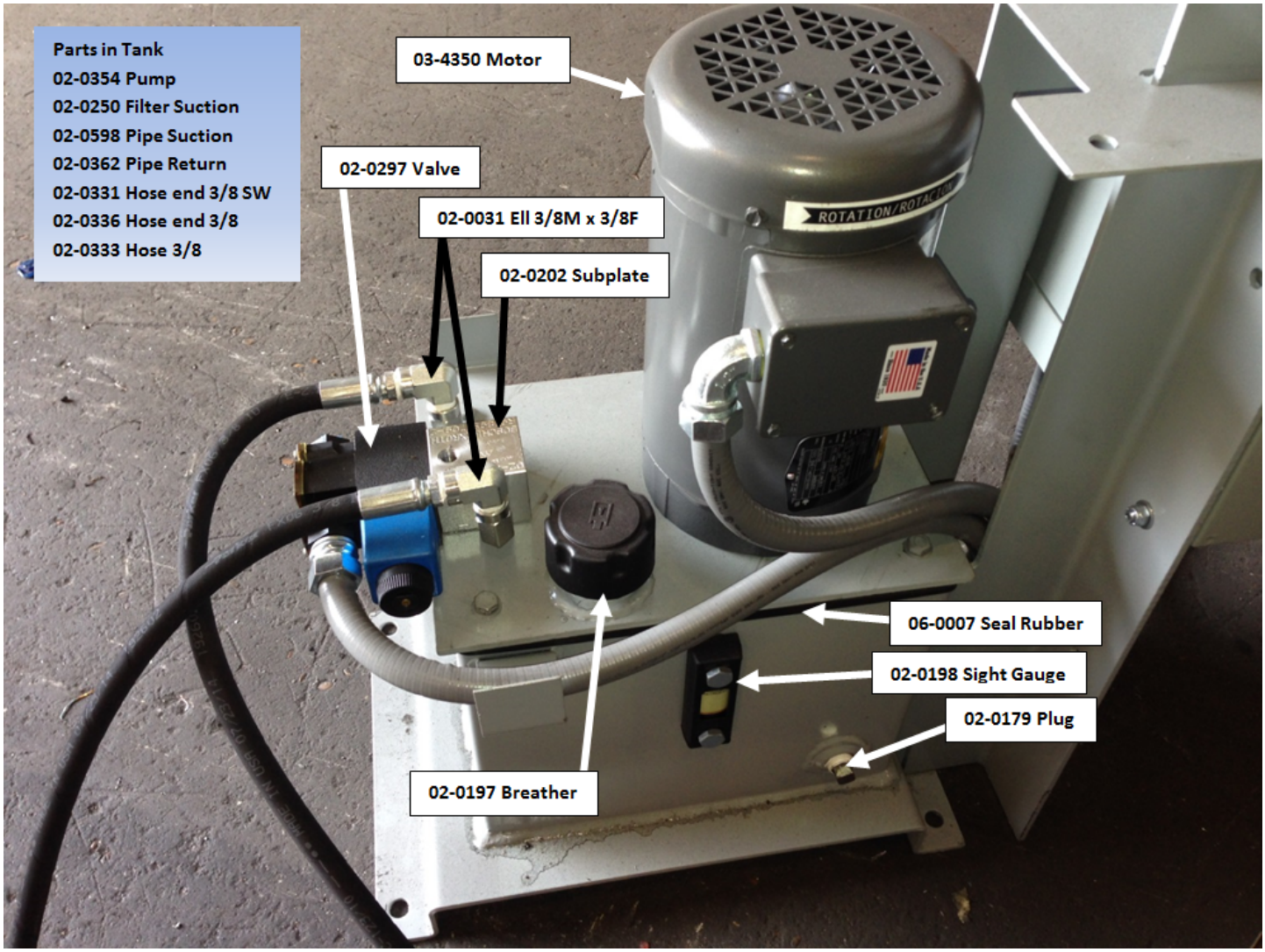
POWER UNIT CONFIGURATION (CONTINUED)

3 HP 575 Volt



POWER UNIT CONFIGURATION (CONTINUED)

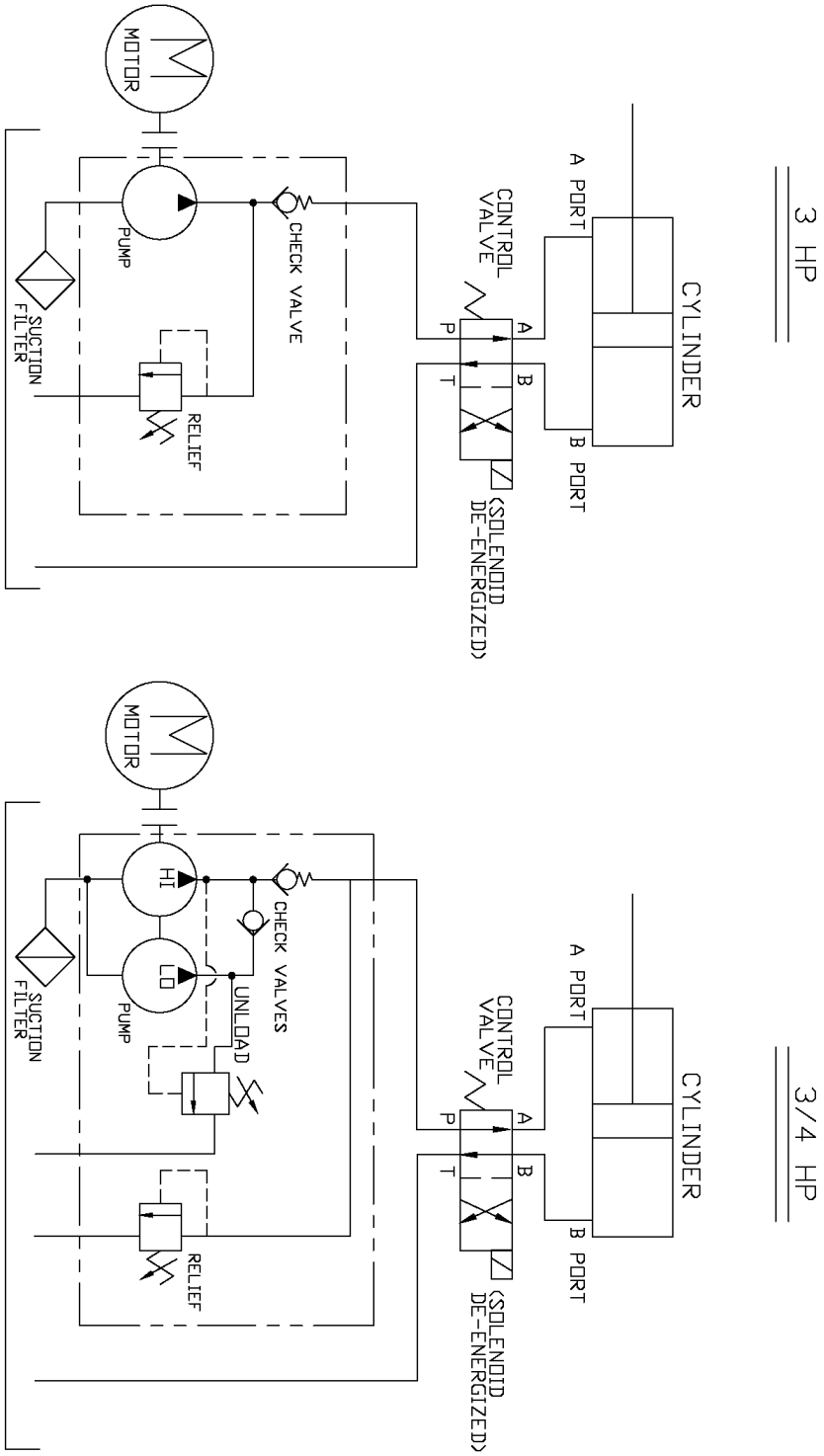
3 HP 3 PH



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.

HYDRAULIC SCHEMATIC



TROUBLESHOOTING CHART

PROBLEM	CAUSE	SOLUTION
UNIT WILL NOT START	1. No electrical power to unit	1a. Turn on main disconnect. 1b. Replace fuses/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 in-operative.	1a. Check motor starter coil & wiring.
	2. Motor starter auxiliary contacts are inoperative	2a. Check motor starter contacts and wiring
	3. Reverse Button is inoperative	3a. Check wiring
	4. Secondary contact on start button is inoperative	4a. Check contact, wired black and orange, to be sure it is operating properly 4b. 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 CHECK and PRESSURE SETTINGS for correct pressure. 2b. Clean orifice in relief valve and reset pressure 2c. Check "O" rings on relief valve for damage or leakage
	3. Oil leakage in cylinder	3a. Check cylinder for bypassing 3b. Replace seal kit, inspect rod and cylinder tube for scoring/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)	10a. Check intake connections. Tighten securely
	11. Units shift slowly	11a. Flow control valve (restrictor) clogged, remove\clean orifice.
	12. Valve response sluggish	12a. Contaminated oil-drain and flush system. 12b. Inadequate voltage, check voltage. 12c. Disassemble valve & clean

TROUBLESHOOTING CHART

PROBLEM	CAUSE	SOLUTION
UNIT WILL NOT REVERSE	1. Solenoid valve is in-operative	1a. Check coil in solenoid valve
	2. Reverse button in-operative	2a. Check reverse button contacts
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
	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° F or hot in comparison with circuit lines, pump should be shut down immediately. Before restarting, insure that fluid cooling capacity is adequate to remove system generated heat. 1b. Install oil cooler (air or water type) 1c. Install oil temperature shut down switch 1d. Check to be sure CYCON Power Pack has not been exchanged for Pressure Shifting Power Pack.
	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 filter. 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		1a. Check for correct voltage (incoming power.) 1b. Check fuses or breakers at disconnect 1c. Check heater elements to be sure they are tight 1d. Check wiring from starter to motor-make sure all connections are tight 1e. Check motor leads to be sure all connections are tight surges or voltage
	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)

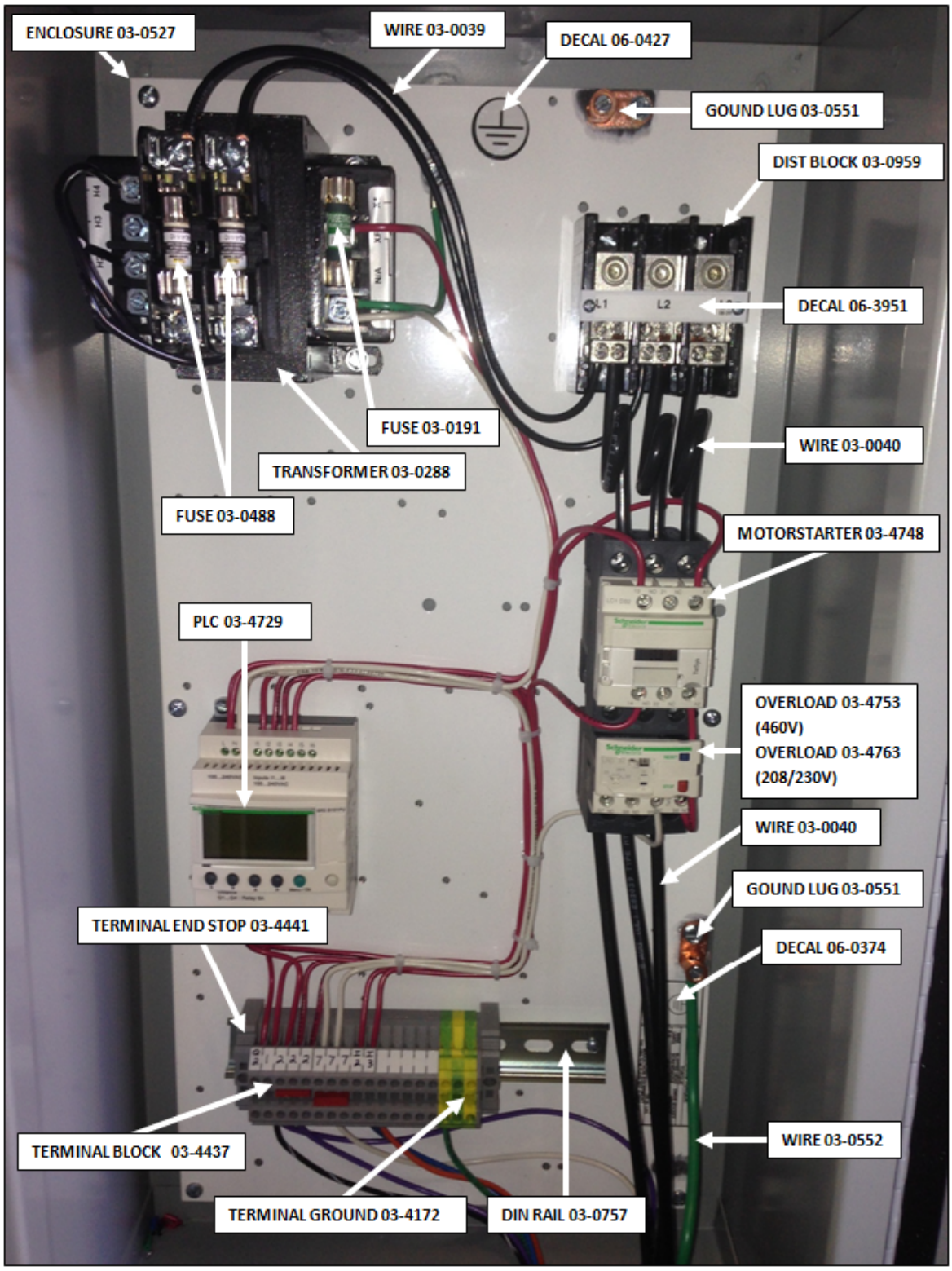
Marathon® MPT Compactor
Replacement Parts

REPLACEMENT PARTS LISTS

PART #	DESCRIPTION	3/4 HP	3 HP 1PH	3 HP TRI-V	3 HP 575V
02-0354	PUMP, 3GPM		x	x	x
02-0369	PUMP, GEAR, HI-LO, 3 GPM	x			
02-0250	STRAINER SUCTION 100 MESH	x	x	x	x
02-0355	HUB COUPLING F/02-0354		x		
02-0368	HUB COUPLING FOR 3/4HP, 1PH MOTOR	x			
02-0297	VALVE SOLENOID OP, HYDRAULIC D01	x	x	x	x
03-1178	MOTOR, 3/4 HP 120 V	x			
03-1131	MOTOR 3HP 208/230V 1PH		x		
03-4350	MOTOR 3HP 208/230/460V			x	
03-4471	MOTOR 3HP 575V				x
03-0013	PRESSURE SWITCH, SINGLE	x	x	x	x
03-0195	SWITCH, KEYED START	x	x	x	x
03-0201	PUSHBUTTON, MUSHROOM STOP	x	x	x	x
03-0197	PUSHBUTTON, BLACK REVERSE	x	x	x	x
03-0191	FUSE, 2 AMP CONTROL	x	x	x	x
03-0488	FUSE, 1.5 AMP PRIMARY		x	x	x
03-0288	TRANSFORMER 150VA		x	x	
03-0237	TRANSFORMER 200VA 575V				x
03-4748	MOTOR STARTER 32AMP	x	x	x	x
03-5054	OVERLOAD 7-10 AMP 120V 1PH	x			
03-4904	OVERLOAD 12-18 AMP 208/230V 1PH		x		
03-4839	OVERLOAD 7-10 AMP			x	
03-4848	OVERLOAD 4-6 AMP			x	
03-4850	OVERLOAD 2.5-4 AMP				x
03-4729	PLC TELEMECANIQUE	x	x	x	x
03-0527	ENCLOSURE	x	x	x	x
02-0202	SUBPLATE	x	x	x	x
02-0197	FILLER/BREATHER CAP	x	x	x	x
04-0460	CYLINDER	x	x	x	x
29222*	PRESSURE SETTING TOOL	x	x	x	x
* Tool is mandatory for setting pressures on any MPT.					

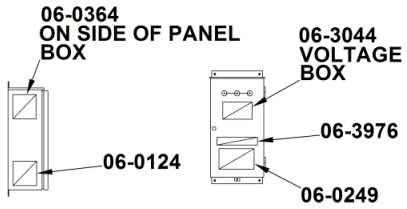
TYPICAL PANEL BOX CONFIGURATION

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.

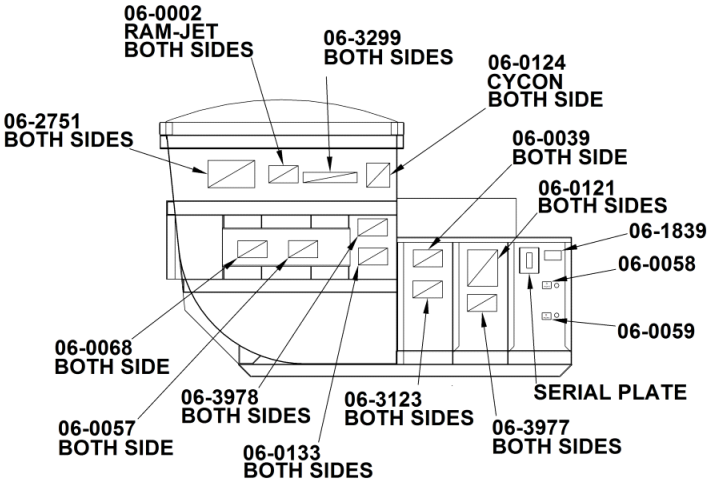


DECAL PLACEMENT

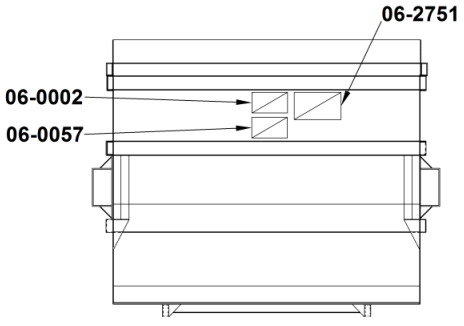
MPT Front Load



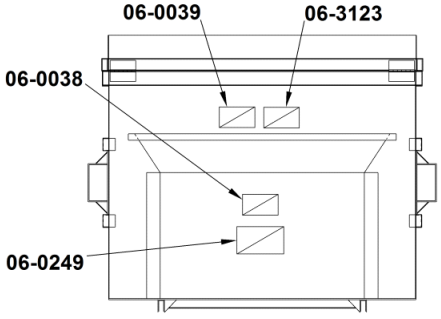
REMOTE PANEL
BOX FACE SHOWING
DECAL LOCATION



SIDE VIEW



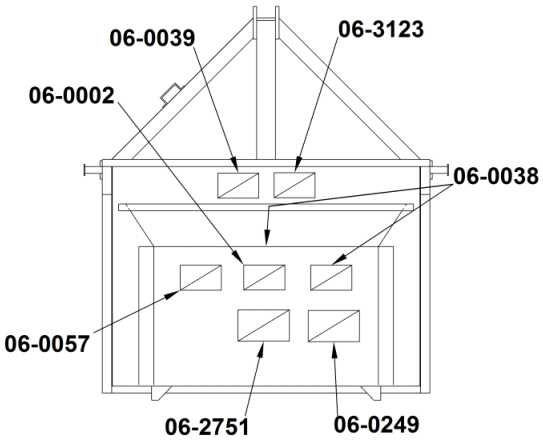
FRONT VIEW



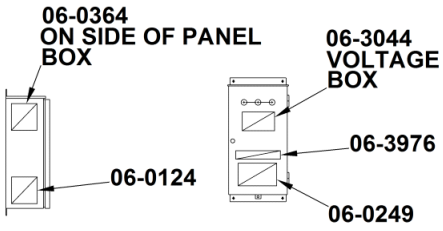
REAR VIEW

DECAL PLACEMENT (CONTINUED)

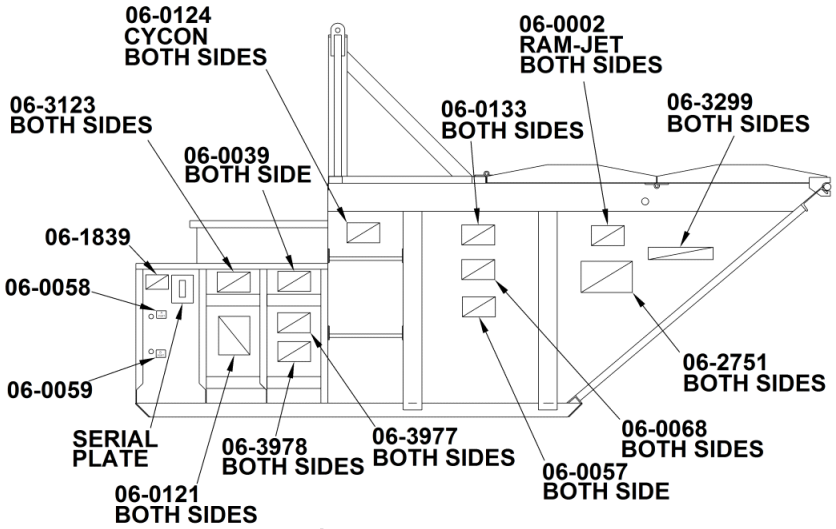
MPT Rear Load



REAR VIEW



REMOTE PANEL
BOX FACE SHOWING
DECAL LOCATION



SIDE VIEW

DECALS PART NUMBERS

Warning Decal Requirements

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 the refuse handling operation. THESE DECALS MUST BE MAINTAINED. Additional decals may be purchased from your distributor or from Marathon Equipment Company.

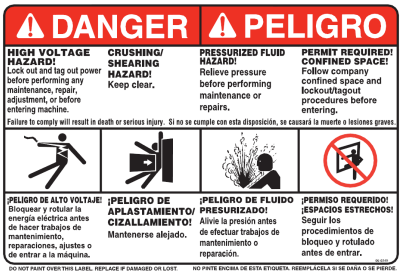
PART #	DESCRIPTION	QTY
06-0038	WARNING, DO NOT REMOVE ACCESS COVER	2
06-0039	DANGER, DO NOT ENTER	3
06-0057	CAUTION, STAND CLEAR WHEN CONTAINER	3
06-0068	DO NOT PLAY IN, OR AROUND	2
06-0249	LOCK-OUT/TAG-OUT POWER BEFORE	1
06-3123	CONFINED SPACE	3
06-0121	NOTICE, FEDERAL REGULATIONS	2
06-0124	CYCON	2
06-1839	AMERICAN FLAG	3
06-0002	RAM-JET	3
06-3299	PAK'NTAINER LOGO	2
06-2751	MARATHON LOGO	3
06-0058	A PORT	1
06-0059	B PORT	1
06-3977	WARNING, DO NOT OPERATE OR SERVICE	2
06-3978	DANGER, SAFETY DEVICES	2
06-0133	WARNING, KEEP OFF, DO NOT CLIMB	2

DECAL IMAGES

06-0038

06-0039

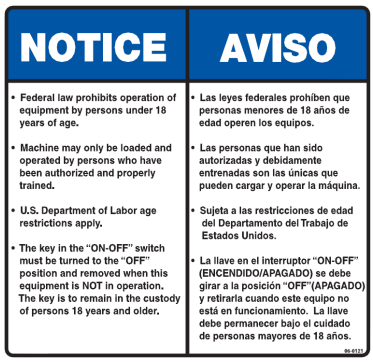
06-0249



06-2751

06-0002

06-0121



06-3977

06-0133

06-3299

06-3123

06-3978

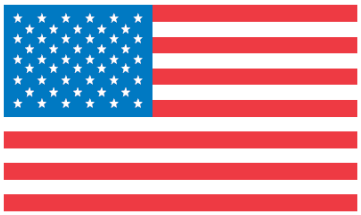
06-0124

06-0058

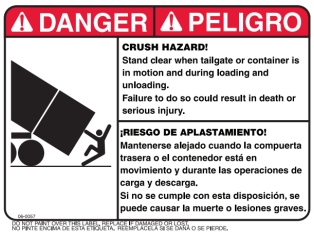
06-0059

06-0068

06-1839



06-0057



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www.marathonequipment.com

Customer Care:
800-633-8974

Parts Central:
800-528-5308
www.mecomerchant.com

Technical Service and Warranty:
877-258-1105

Customer Support:

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