

Container Dumper INCLUDES DOCK LEVEL TILT TRUCK, DOCK LEVEL FORK STYLE, GROUND LEVEL TILT TRUCK, AND GROUND LEVEL FORK STYLE MODELS

OPERATION, SERVICE, AND INSTALLATION ISSUED FEBUARY 2019

CUSTOMER NAME:	
SERIAL NUMBER:	

COMPACTION & RECYCLING SOLUTIONS

0026-CD-0219





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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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INCLUDING THESE MODELS:
DOCK LEVEL TILT TRUCK
DOCK LEVEL FORK STYLE
GROUND LEVEL TILT TRUCK
GROUND LEVEL FORK STYLE

OPERATION, SERVICE, AND INSTALLATION
ISSUED FEBUARY 2019
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SECTION 1 GENERAL INFORMATION

General Information

INTRODUCTION

Thank you for purchasing a Marathon® Container Dumper!

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:

P.O. Box 1798
Vernon, AL 35592-1798
Attn: Field Service Department
877-258-1105

General Information

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.

General Information

LOCK-OUT & TAG-OUT INSTRUCTIONS





Before servicing dumper, be sure that all sources of energy have been shut off, all potential hazards have been eliminated, and the dumper 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 dumper and that the dumper 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 dumper 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 dumper is operating, it must be shut down by the normal stopping procedure.
- 5. De-activate the energy isolating device(s) so that dumper 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 forks/tilt truck box in the fully down position as not to be subjected to possible free fall. Personnel should never occupy the space below an elevated load.
- 7. Stored hydraulic energy must be removed from the dumper 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 dumper, ensure that the dumper 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 dumper (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 servicing dumper perform hazard assessment for confined space requirements (hazardous fumes, dust, toxic material, or other hazards) per the OSHA confined space standard.
- 10. The dumper is now locked out.

General Information

LOCK-OUT & TAG-OUT INSTRUCTIONS (CONTINUED)

RESTORING SERVICE

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

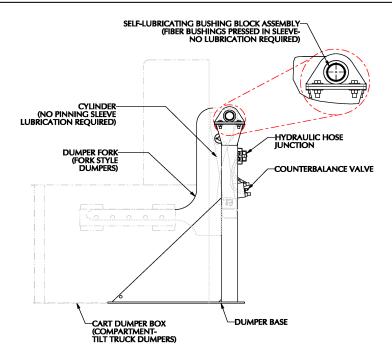
- 1. Check the dumper and the immediate area around the dumper to ensure that nonessential items have been removed and that the dumper components, guards and covers are operationally intact.
- 2. Check the work area to ensure that all employees have been safely positioned or removed from any hazardous area.
- 3. Verify that the controls are in neutral.
- 4. Remove the lockout devices and re-energize the dumper.
- 5. Notify affected employees that the servicing or maintenance is completed and the dumper is ready for use.
- 6. Reassess area to determine all hazards are protected.

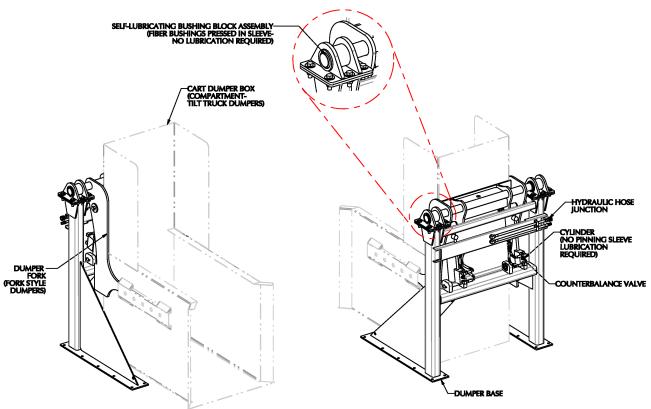
General Information

COMPONENTS

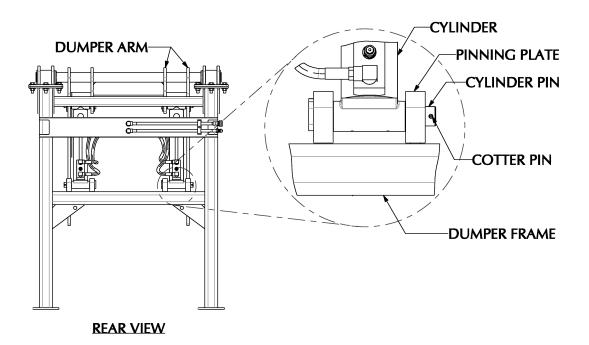


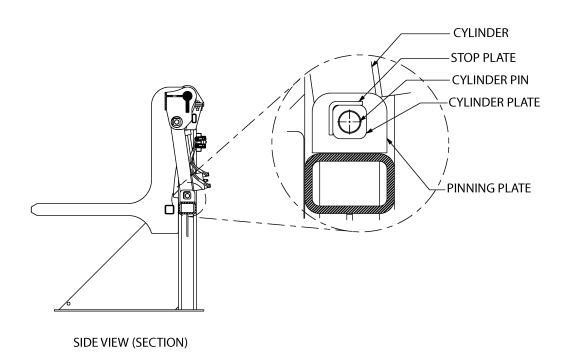
Never perform any maintenance on any part of the dumper until the dumper has been locked out and tagged out.



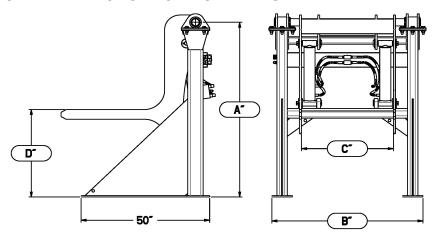


SPECIFICATIONS - PINNING CYLINDER DUMPER

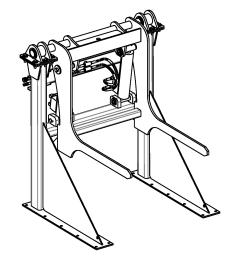


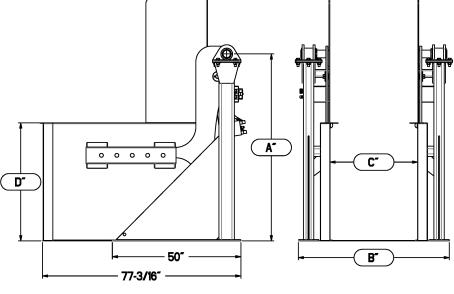


SPECIFICATIONS - FORK STYLE DUMPER

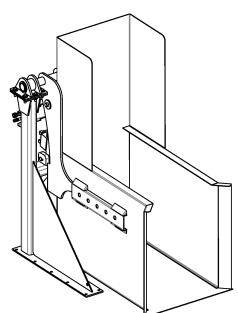


Other variants available upon request. See Marathon Representative for details.	
Standard Fork Height "D"	Standard Fork Height "D" is 36".
Fork Spacing "C"	Available in 35 %" to 50 %" in 1" increments.
Overall Width "B"	Available in 58 %" to 73 %".
Pivot Height "A"	Available in 36", 48", 60", and 72"



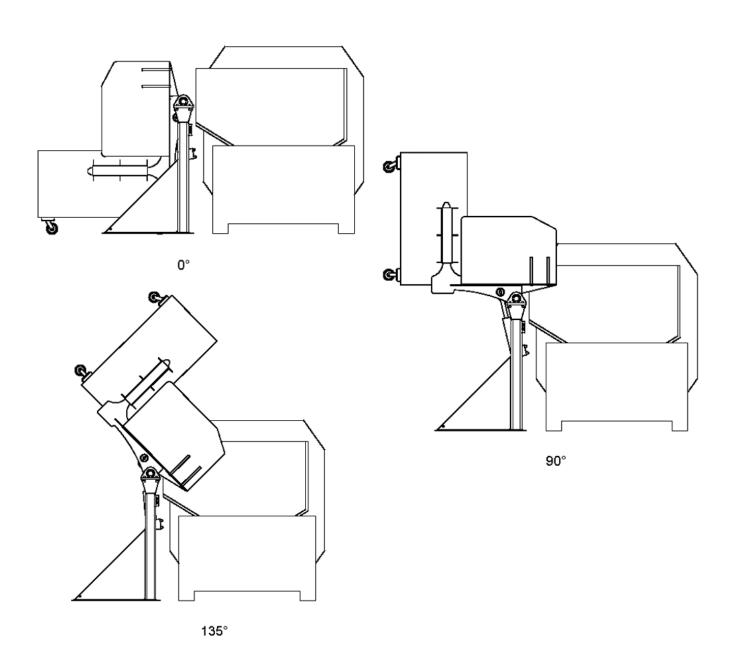


Pivot Height "A"	Available in 36", 48", 60", and 72"
Overall Width "B"	Available in 58 %" to 73 %".
Fork Spacing "C"	Available in 34 %" to 48 %" in 1" increments.
Standard Fork Height "D"	Standard Tilt truck box Height "D" is 45-7/ss".
Other variants available upon request. See Marathon Representative for details.	



CONTAINER DUMPER FORK STYLE

Degrees of Operation (Container Dumper Fork Style Only)



General Information

SERVICE/PARTS ASSISTANCE

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

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

GUARDS AND ACCESS COVERS

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



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

GREASE LUBRICANT RECOMMENDATION

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

RECOMMENDED OILS

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

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

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

Quaker State-Dextron II (ATF)

Cold Weather Fluid

Amoco-Rycon MV

General Information

WARNING DECALS ON THE UNIT

M 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.

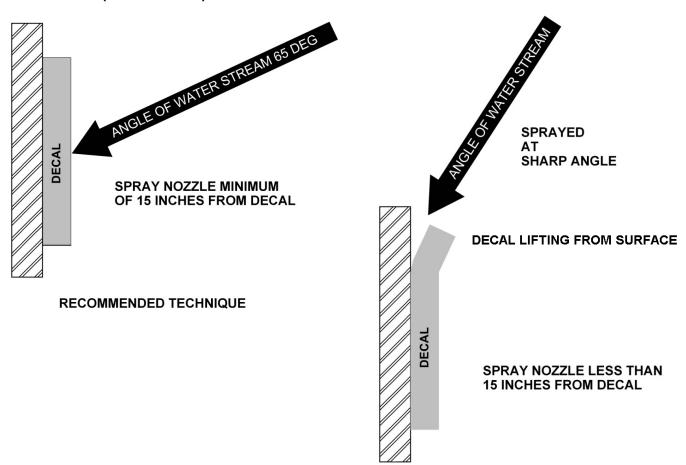
- Spray nozzle opening: 40° wide pattern
- Spray angle: 65° from unit's body
- Distance of nozzle to decal: 15" minimum
- Water pressure: less than or equal to 800 psi
- Length of time: not more than 30 sec.
- Do not use sharp angles to clean the decals this can lift the decals from the unit.
- NEVER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

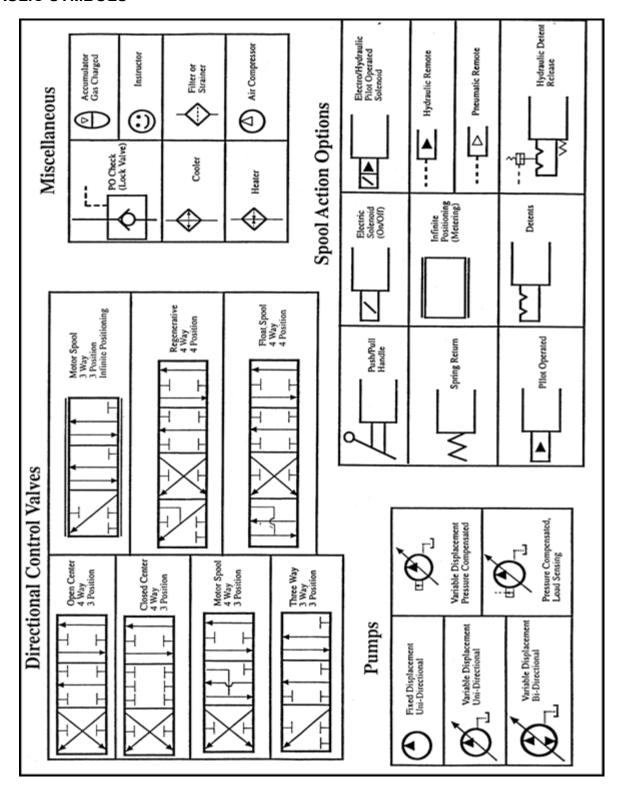
DECAL CARE (CONTINUED)



INCORRECT TECHNIQUE

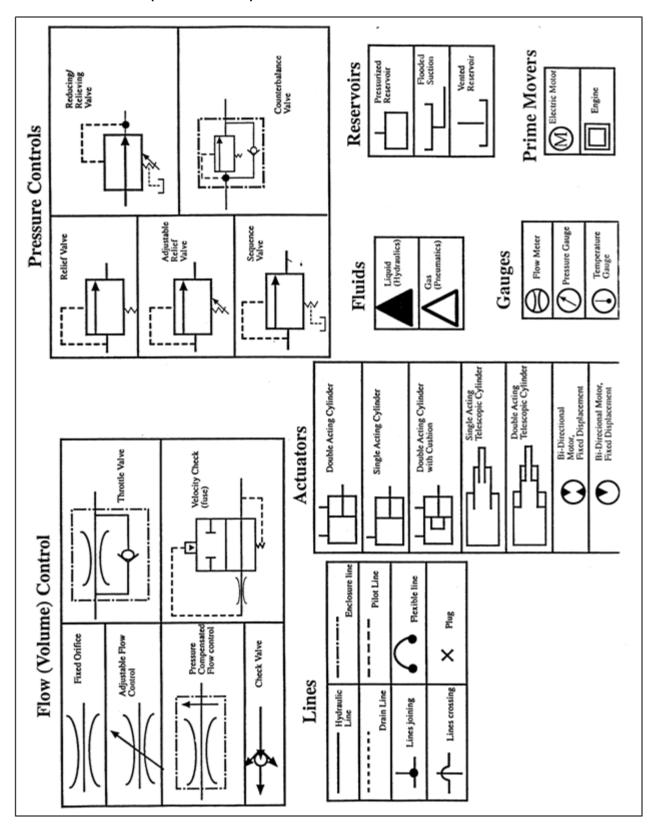
General Information

HYDRAULIC SYMBOLS



General Information

HYDRAULIC SYMBOLS (CONTINUED)



General Information

ELECTRICAL SYMBOLS

SYMBOL DEFINITIONS

III BATTERY

✓ FUSE

SOLENOID

(CRT) 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

 \dashv CAPACITOR

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Container Dumper Installation

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

A CAUTION

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

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.

Concrete Pad

It is realized that in most installations the concrete pad is designed to accommodate a compactor and container. To accommodate the dumper system, the preferred dimensions of the concrete pad should be 5'0" greater than the width of the dumper and should extend out in front of the dumper to adequately accommodate the dumper cart, guard rails, and any towing vehicle. The pad should be of minimum 3,000 PSI concrete steel reinforced, 6" thick. It is preferred that the concrete pad be flush with the surrounding ground level.

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 dumper should be anchored to concrete pad using (16) min. 3/4" x 6" long anchor bolts. These holes should be drilled in the concrete after prelocating the dumper in its desired location. Holes in the leg plates are 13/16" Dia. to permit the use of a 3/4" dia. concrete bit. The 3/4" dia. holes in the concrete should be approximately 5" deep. When the dumper has been permanently located, shimmed to compensate for unevenness, and anchor bolts set, tighten all nuts securely.

Decals

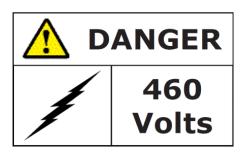
Be certain that the appropriate decals are in their proper locations at all times on the machine. For decal locations, see **Decals** and **Decal Placement** 15th in the Replacement Parts section of this manual.

Guarding for Automatically Operated Dumpers

The dumper should be enclosed by guards, cage, or other similar devices a minimum of 84" high with interlocked access that prevent entry or operation when not in place.

Installation

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** in the service section.



A lockable fused disconnect switch (customer furnished) must be installed and be within sight of the dumper's electrical panel box location, not to exceed 50'0" from the dumper. This fused disconnect switch should be sized in accordance with the dumper (see **Fuse and Circuit Breaker Chart** (40)).



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.

Electrical Connections

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

NOTICE

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 shown on the dumper or remote power pack.

Installation

ELECTRICAL AND HYDRAULIC INSTALLATION (CONTINUED)

Hydraulic Connections

Connect the hydraulic hoses between the power unit and the dumper. The hose from "A" port on the control valve (or subplate for the 10 HP power unit) connects to the piping connection on the dumper body that is routed to the base end of the cylinders. Tighten all the hose connections and check for leaks when the power unit has been started.

Start-Up Instructions

With the dumper cylinders fully retracted, check to be sure the oil reservoir is full to the 3/4 level on the sight gauge (Refer to the maintenance chart for **hydraulic oil recommendations** (12)). The hydraulic system pressure has been factory set and the entire unit has been operated prior to shipment.

A CAUTION

Make sure persons and material are clear of the dumper area.

Put fused disconnect switch in "ON" position. Depress the start button and check the pump shaft for proper rotation. Looking from the motor end, rotation should be clockwise.

A 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.

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

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SECTION 3 OPERATION

CONTACT INFORMATION



Technical Service and Warranty:

877-258-1105

Parts:

800-528-5308

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

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

Normal Business Hours:

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

(Central Standard Time)

PRE-OPERATION INSTRUCTIONS

Employers should allow only authorized and thoroughly trained personnel to operate this container dumper.

This cart dumper 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.



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

🛕 DANGER

Personnel should never occupy the space below an elevated load. Doing so could result in serious personal injury or death!

WARNING

Stay clear of all parts of the dumper during operation. Failure to do so could result in serious personal injury or death!

M WARNING

Never enter the area around the dumper unless the Lock-Out/Tag-Out instructions have been completed. See **Lock-Out/Tag-Out Instructions**.

M WARNING

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

WARNING

If the dumper is equipped with a security gate, be sure that the security gate is closed before the dumper is started.

NOTICE

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

WARNING

The employer should allow only authorized and trained personnel to operate this dumper. This dumper is equipped with a key operated locking system. The key(s) should only be in the possession of authorized personnel.

CONTROL PANEL FOR DUMPERS



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 to start the dumper power unit. Use the UP/DOWN switch described below to raise and lower the dumper. After use, turn the key counterclockwise and remove the key. The key should always be in the possession of authorized personnel.
- 2. **EMERGENCY STOP PUSHBUTTON** When depressed, this pushbutton will stop all powered operation of the dumper.
- 3. **UP/DOWN SPRING-CENTERED SWITCH** With the power unit started, turn and hold this switch to the left to raise the dumper. Turn and hold the switch to the right to lower the dumper.

NOTICE

The electrical circuit has a shutdown timer that will automatically shut the power unit down if the unit is not shut down by controls.

OPERATING INSTRUCTIONS FOR DUMPER

A CAUTION

Before operating the dumper, make sure that all persons and items other than the dumper cart and its contents are clear of the dumper and dumping area.

WARNING

Before operating the dumper, make sure that the dumper cart is compatible with the dumper. never attempt to dump a cart not specifically designed for the dumper.

WARNING

All personnel and equipment should maintain a safe working distance from dumper during operation. Never stand under raised dumper.

NOTICE

If the dumper is equipped with an access gate, make sure that the access gate is closed before operating the dumper.

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

Sustained-Manual-Pressure Control Operation Instructions

- 1. Push the cart to be dumped all the way onto the dumper. On the fork style dumpers, the cart should be pushed all the way until the cart contacts the crossbeam between the dumper arms. On the tilt truck type dumpers, the cart should be pushed all the way into the cart compartment until the dumper contacts the back wall of the compartment.
- 2. Pull out the emergency stop button.
- Insert the key into the keyswitch and turn clockwise to the START position. Depress the key to start the dumper power unit.
- 4. Turn the UP/DOWN switch to the UP position and hold to raise and empty the dumper/cart.
- 5. When the cart is empty, turn the UP/DOWN switch to the DOWN position and hold to lower the dumper/cart.
- 6. After use, depress the STOP button and turn the key counterclockwise and remove the key. The key should always be in the possession of authorized personnel.

Automatic Control Operation Instructions.

- Open gate, push the cart to be dumped all the way onto the dumper. On the fork style dumpers, the cart should be
 pushed all the way until the cart contacts the crossbeam between the dumper arms. On the tilt truck type dumpers,
 the cart should be pushed all the way into the cart compartment until the cart contacts the back wall of the
 compartment. Close gate.
- 2. Pull out the emergency stop button.
- 3. Insert the key into the key switch and turn to the "ON" position.
- 4. Depress the green "CYCLE START" button. Dumper will go up and back down automatically.
- 5. After the cycle has completed, depress the "EMERGENCY STOP" button.
- 6. Turn the key to the "OFF" position on the key switch and remove the key.
- 7. Open gate, remove cart, then close gate.

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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)

Service

LOCK-OUT & TAG-OUT INSTRUCTIONS





Before servicing dumper, be sure that all sources of energy have been shut off, all potential hazards have been eliminated, and the dumper 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 dumper and that the dumper 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 dumper 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 dumper is operating, it must be shut down by the normal stopping procedure.
- 5. De-activate the energy isolating device(s) so that dumper 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 forks/tilt truck box in the fully down position as not to be subjected to possible free fall. Personnel should never occupy the space below an elevated load.
- 7. Stored hydraulic energy must be removed from the dumper 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 dumper, ensure that the dumper 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 dumper (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 servicing dumper perform hazard assessment for confined space requirements (hazardous fumes, dust, toxic material, or other hazards) per the OSHA confined space standard.
- 10. The dumper is now locked out.

LOCK-OUT & TAG-OUT INSTRUCTIONS (CONTINUED)

RESTORING SERVICE

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

- 1. Check the dumper and the immediate area around the dumper to ensure that nonessential items have been removed and that the dumper 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 dumper.
- 5. Notify affected employees that the servicing or maintenance is completed and the dumper is ready for use.
- 6. Reassess area to determine all hazards are protected.

PERIODIC MAINTENANCE



Never perform any maintenance on any part of the dumper until the dumper has been locked out and tagged out.

Monthly

- Check external hoses for chafing, rubbing, or other deterioration and damage.
- Check for any unsafe conditions in the dumper area.
- Check oil level in hydraulic reservoir. Level should be 3/4 of sight gauge (cylinder retracted).
- · Check torque on bushing housing bolts. Proper torque is 376 ft-lbs.

Three Months

- Check functional operation of controls and options (access gate, etc.).
- Check hydraulic cylinder, internal hoses, and connections for leakage; check hoses for chafing and wear.
- Check pivot rod bushings for wear or damage.

Annually

- Lubricate electric motor bearings annually per the manufacturer's instructions.
- Change hydraulic fluid in power unit. See Recommended Fluids 12.

Filter Maintenance

- The hydraulic filter should be cleaned at regular 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 cover plate, and lifting the filter from the reservoir.
- Care should be exercised in cleaning the filter to insure that the element is not torn. Clean the element with a soft brush and standard industrial solvent.
- 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.

Container Dumper Service

PERIODIC MAINTENANCE (CONTINUED)

	MAINTENANCE SCHEDULE							
		Monthly			Three Months			
	CHECK ALL HOSES	CHECK FOR UNSAFE CONDITIONS	CHECK OIL LEVEL	CHECK FUNCTIONAL OPERATION OF CONTROLS	CHECK CONNECTIONS AND SEALS FOR LEAKS	CHECK CYLINDER PINS	CHECK PIVOT ROD BUSHINGS	
Jan								
Feb								
Mar								
Apr								
May								
June								
July								
Aug								
Sept								
Oct								
Nov								
Dec								

	MAINTENANCE SCHEDULE							
		Annually						
	LUBRICATE ELECTRIC MOTOR	CHANGE HYDRAULIC FLUID	FILTER MAINTENANCE					
Jan								
Feb								
Mar								
Apr								
May								
June								
July								
Aug								
Sept								
Oct								
Nov								
Dec								

PRESSURE SETTINGS

A WARNING

Never perform any maintenance on any part of the dumper until the dumper has been locked out and tagged out.

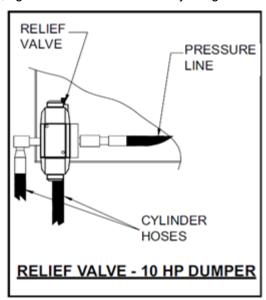
3 HP Hydraulic System Pressure Setting

- 1. Disconnect cylinder hoses at quick connects. Install pressure gauge on gauge port of manifold.
- 2. Start the power unit.
- 3. Turn the UP/DOWN switch to the UP position and hold. The gauge should read 1650 psi.
- 4. If the relief valve needs adjusting, loosen the lock nut around the adjusting screw on the relief valve (on the power unit). To increase the pressure, turn the screw clockwise. To decrease the pressure, turn the screw counterclockwise.
- 5. When the correct pressure is set, tighten the lock nut on the adjusting screw and reconnect the cylinder hoses.

The main relief valve is located inside the pump. The pressure for this valve is set at 2400 psi.

10 HP Hydraulic System Pressure Setting

- 1. Disconnect cylinder hoses at quick connects. Install pressure gauge on pump discharge port.
- 2. Start the power unit.
- 3. Turn the UP/DOWN switch to the UP position and hold. The gauge should read 1965 psi.
- 4. If the relief valve needs adjusting, loosen the lock nut around the adjusting screw on the relief valve (on the power unit). To increase the pressure, turn the screw clockwise. To decrease the pressure, turn the screw counterclockwise.
- 5. When the correct pressure is set, tighten the lock nut on the adjusting screw and reconnect the cylinder hoses.



Container Dumper Service

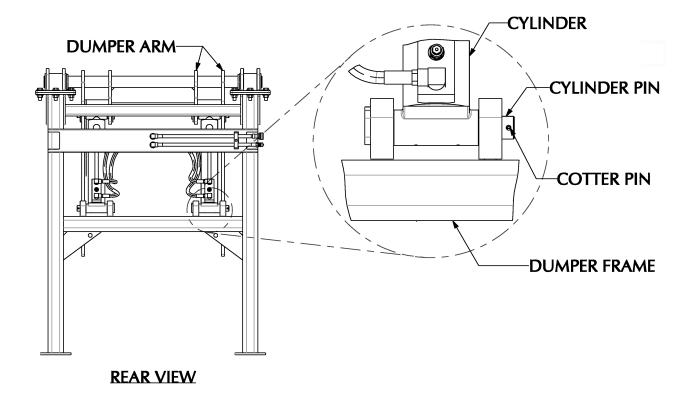
CYLINDER REPLACEMENT



Never perform any maintenance on any part of the dumper until the dumper has been locked out and tagged out.

To replace a dumper cylinder:

- 1. "Lock-out and Tag-out" the dumper per the instructions. Make sure that any stored energy has been relieved from the power unit and hydraulic circuit.
- 2. Disconnect the flow control valve and hoses from the cylinder.
- 3. Remove the cotter pin from each cylinder pin.
- 4. Support the cylinder.
- 5. Using a wooden dowel or another non-marring device, tap the pin out of each end of the cylinder.
- 6. Remove the cylinder.
- 7. To install the cylinder, reverse the previous steps.



PRINCIPLES OF OPERATION

Dumper with Sustained-Manual-Pressure Controls Operating Characteristics

When the key is inserted into the keyswitch, turned clockwise and depressed, a contact is made that energizes the motor starter, starting the electric motor which rotates the hydraulic pump. At the same time, the **UP/DOWN** switch is energized. This switch is spring-centered and is connected to the solenoid on each end of the control valve. Also, when the motor is energized, T1 timer begins counting for 5 minutes. If the dumper sits idle for 5 minutes, the timer will time out and T1 timer contact will open which will shut down the power unit.

When the **UP/DOWN** switch is turned to the **UP** position and held for a delay of 1.5 seconds, the valve solenoid shifts the valve spool so that the hydraulic oil is directed to extend the cylinders which raises the dumper forks (or box). When the **UP/DOWN** switch is turned to the **DOWN** position and held for a delay of 1.5 seconds, the valve solenoid shifts the valve spool so that the hydraulic oil is directed to retract the cylinders which lowers the dumper forks (or box).

The **EMERGENCY STOP** button will shut the dumper down when depressed by breaking the circuit to the motor starter.

Always remove the key from the keyswitch when the dumper is not in use.

Dumper with Automatic Control Operating Characteristics

When the key is in the "ON" position and "CYCLE START" button depressed, a contact is made that energizes the motor starter, starting the electric motor which rotates the hydraulic pump. At the same time, the Hydraulic Solenoid is energized. This allows the actuators to extend up to empty the dumper and stops when the cart actuates a limit switch. A one second delay at the end of its stroke, then the Hydraulic Solenoid is energized again for the actuators to retract until cart actuates the home position limit switch.

To run dumper manually, the UP/DOWN switch is turned to the UP position the motor starter is energized which starts the motor, and held for a delay of 1.5 seconds, the valve solenoid shifts the valve spool so that the hydraulic oil is directed to extend the cylinders which raises the dumper forks (or box). Dumper will stop moving if you release the selector switch, or if dumper actuates the top limit switch. When the UP/DOWN switch is turned to the DOWN position and held for a delay of 1.5 seconds, the valve solenoid shifts the valve spool so that the hydraulic oil is directed to retract the cylinders which lowers the dumper forks (or box). Dumper will stop moving if you release the selector switch, or if dumper has actuated the bottom limit switch.

The EMERGENCY STOP button will shut the dumper down when depressed by breaking the circuit to the motor starter.

Always remove the key from the key switch when the dumper is not in use.

Container Dumper Service

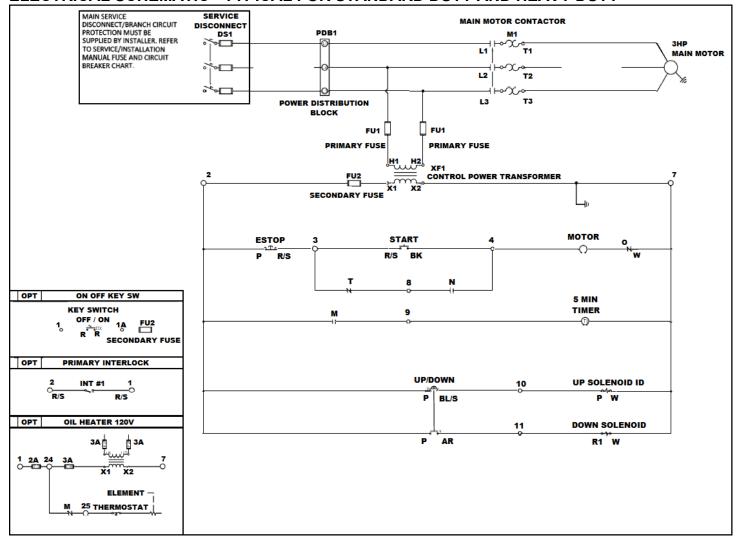
ELECTRICAL CHARTS

	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	9.0	15	20	30				
	230	8.6	15	20	30				
	460	4.3	10	15	30				
	575	3.6	10	15	30				
10 HP	208	30.8	50	80	60				
	230	28.0	50	70	60				
	460	14.0	25	35	30				
	575	11	20	30	30				
_			Single Phase		_				
3 HP	208	16.8	30	45	30				
	230	16.0	25	40	30				
10 HP	208	51.5	100	125	100				
	230	49.0	90	125	100				

		WIRE SIZES				
Three Phase	THW Copper 75°C (165°F)					
MOTOR SIZE	VOLTAGE		LENGTH			
WOTOR SIZE	VOLTAGE	TO 100'	TO 200'	TO 300'		
3 HP	208	10	8	6		
	230	12	10	8		
	460	12	12	12		
	575	12	12	12		
10 HP	208	6	4	2		
	230	8	4	3		
Γ	460	12	10	8		
	575	12	12	10		
•	-	Single Phase				
3 HP	208	8	6	4		
Г	230	8	6	4		
10 HP	208	4	1	1/0		
	230	4	2	1/0		

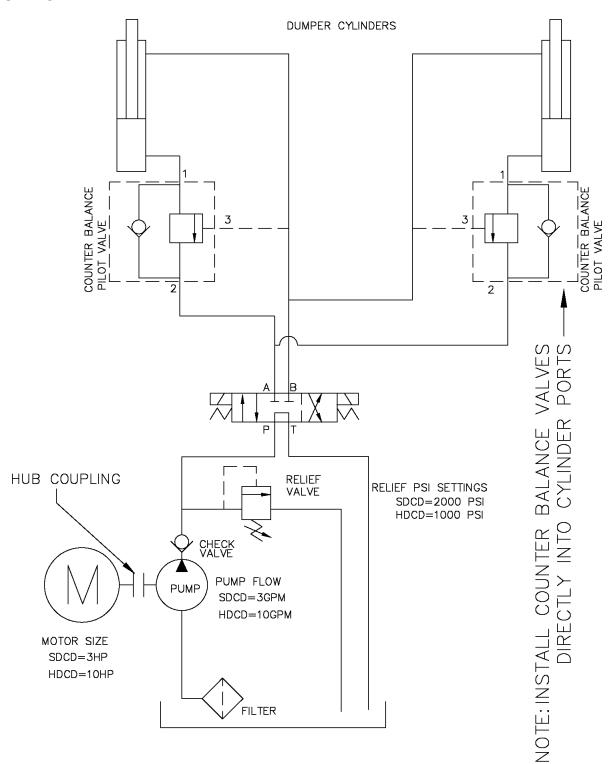
Service

ELECTRICAL SCHEMATIC - TYPICAL FOR STANDARD DUTY AND HEAVY DUTY



Container Dumper Service

HYDRAULIC SCHEMATIC



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.

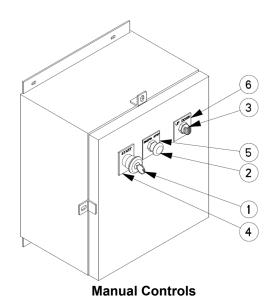
If you do not have a user name and password, contact our Parts Department and they will assist with your registration.

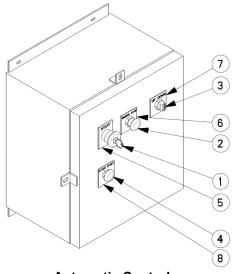
Normal Business Hours:

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

(Central Standard Time)

REPLACEMENT PARTS LIST





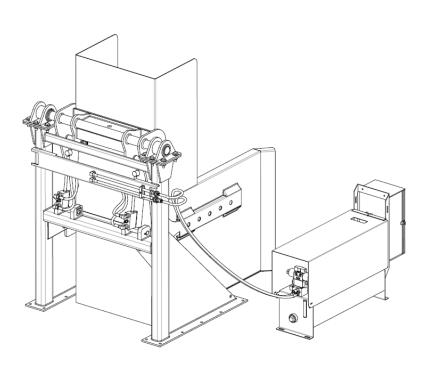
Automatic Controls

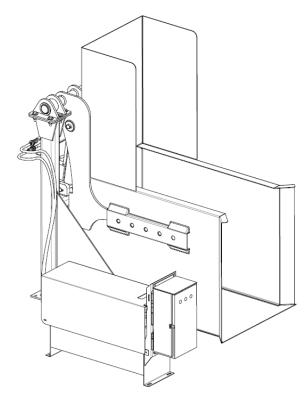
Controls-Manual

REF	PART NUMBER	MANUAL CONTROLS DESCRIPTION	QTY
1	03-0195	SWITCH, OPERATOR P.BUTTON, KEYED	1
2	03-0196	SWITCH, OPERATOR P.BUTTON, MUSHROOM HEAD. RED	1
3	03-0139	SWITCH, OPERATOR SELECTOR, SPRING CENTER	1
4	03-0152	LEGEND 30 "START"	1
5	03-0193	LEGEND 30 "EMERG STOP"	1
6	03-0255	LEGEND 30 "UP/DOWN"	1

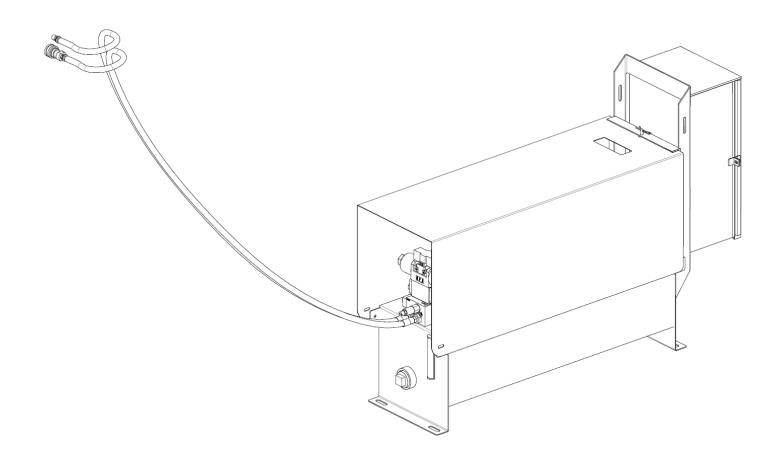
Controls-Automatic

REF	PART NUMBER	AUTOMATIC CONTROLS DESCRIPTION	QTY
1	03-0269	OPERATOR 30 SELECTOR 2 KEYED M	1
2	03-0196	SWITCH, OPERATOR P.BUTTON, MUSHROOM HEAD. RED	1
3	03-0139	SWITCH, OPERATOR SELECTOR, SPRING CENTER	1
4	03-0200	OPERATOR 30 PUSHBUTTON GREEN FLSH HD	1
5	03-0477	LEGEND 30 "ON OFF"	1
6	03-0193	LEGEND 30 "EMERG STOP"	1
7	03-0255	LEGEND 30 "UP/DOWN"	1
8	03-1116	LEGEND 30 CYCLE START SP	1

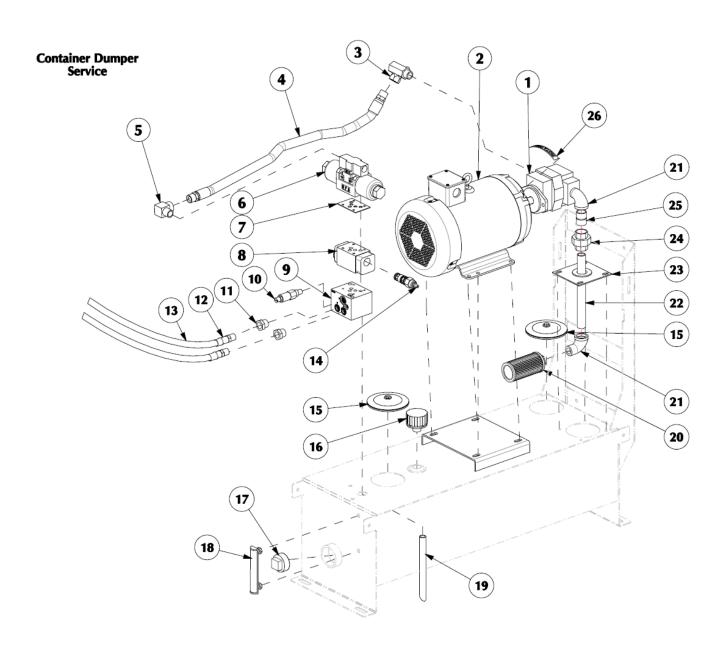




REPLACEMENT PARTS LIST (CONTINUED)



REPLACEMENT PARTS LIST (CONTINUED)

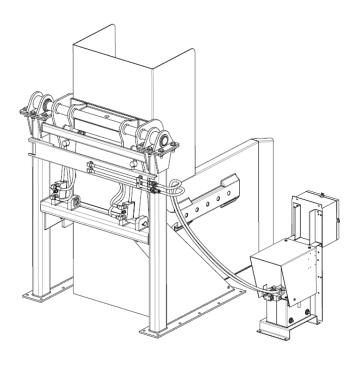


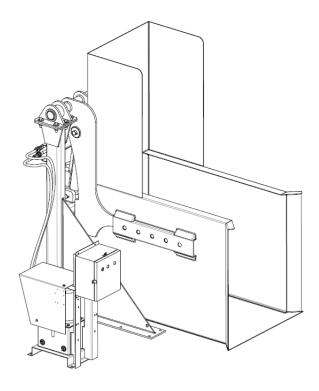
REPLACEMENT PARTS LIST (CONTINUED)

REF	PART NUMBER	DESCRIPTION	QTY
1	02-0267	PUMP GEAR 9 GPM	1
2	03-7030	MOTOR I0HP 208/230/460V 60HZ	1
	03-7032	MOTOR I 0HP 575V 60HZ 3PH I 750	1
3	02-0184	VALVE CHECK 3/4 NPTM X 3/4 NPT	1
4	460424	HOSE KIT PRESSURE LINE UNV PPK	1
5	02-0044	ELL 3/4 NPTM X 3/4 NPTF 90	1
6	02-0852	VALVE 4 WAY 05 T 3 SOFT SHIFT HI-FLOW NACH1	1
7	02-3057	VALVE O-RING PLATE F/02-3036	1
8	02-4732	VALVE DOS SANDWICH BODY F/FLOW CONTROL	1
9	02-6243	SUBPLATE 05 I STN 3/4 NPTF R	1
10	02-0214	VALVE RELIEF 20 GPM CART PI LOT OP	1
11	02-0132	ADAPTER I /2 NPTF X 3/4 NPTM	2
12	02-0329	HOSE END I /2 WB X I /2 NPTM	2
13	435675	HOSE I /2 W/OD 7' STD	1
14	02-6328	VALVE PRIORITY FLOW CONTROL	1
15	02-0219	CLEAN OUT COVER 6	2
16	02-0197	BREATHER 3/4 FILLER	1
17	02-0254	PLUG 2 NPT SO HD	1
18	02-0215	PLUG 2 NPT SO HD 5 INCH	1
19	34-2629	PIPE I /2 SCH 40 X 9 RETURN	1
20	02-0050	FILTER SUCTION I II	1
21	02-0238	ELL I NPTM X I NPTF SCH 40	2
22	02-0363	PIPE I SCH 40 X 10 1/4	1
23	02-0218	FLANGE SUCTION I PIPE	1
24	02-0239	UNION I NPT	1
25	02-0240	NIPPLE I NPT CLOSE	1
26	06-0011	DECAL MOTOR ROTATION 3/4 X 4	1

REPLACEMENT PARTS LIST (CONTINUED)

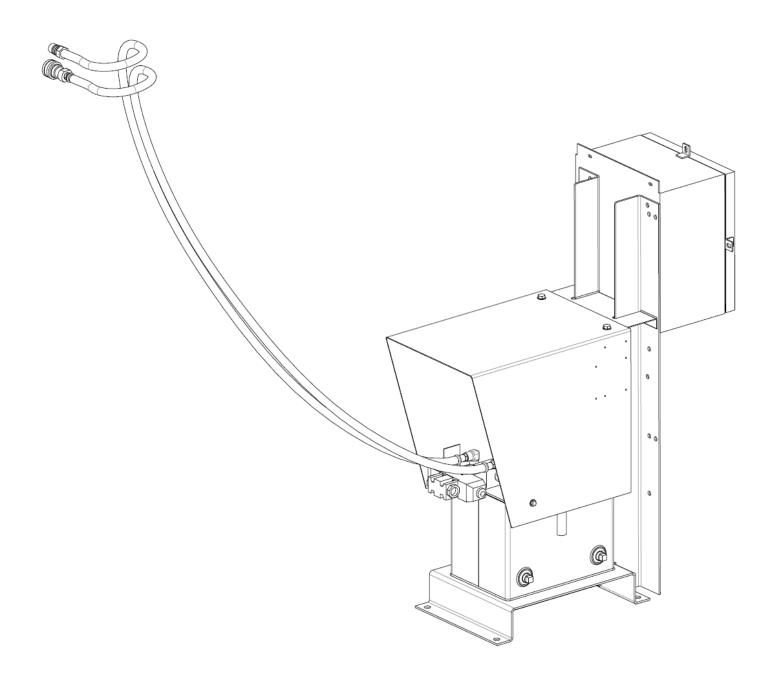
Cart Dumper with Elbow Change (Standard Duty)





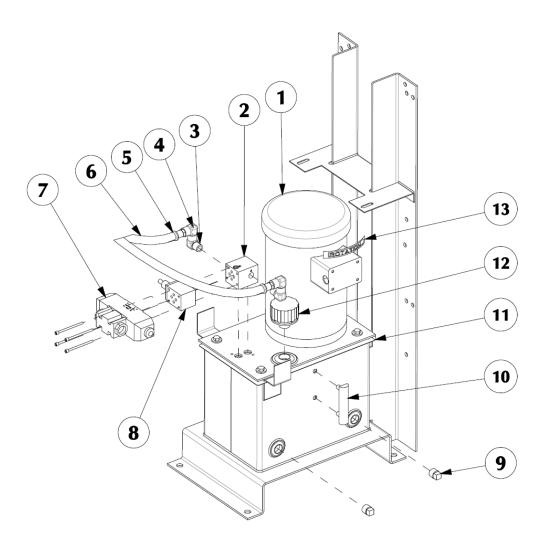
REPLACEMENT PARTS LIST (CONTINUED)

Cart Dumper with Elbow Change (Standard Duty)



REPLACEMENT PARTS LIST (CONTINUED)

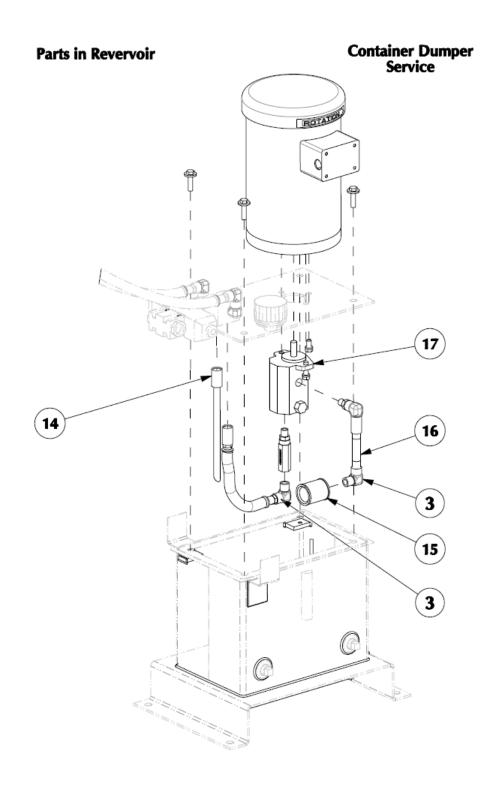
Cart Dumper with Elbow Change (Standard Duty)



Container Dumper Service

REPLACEMENT PARTS LIST (CONTINUED)

Cart Dumper with Elbow Change (Standard Duty)

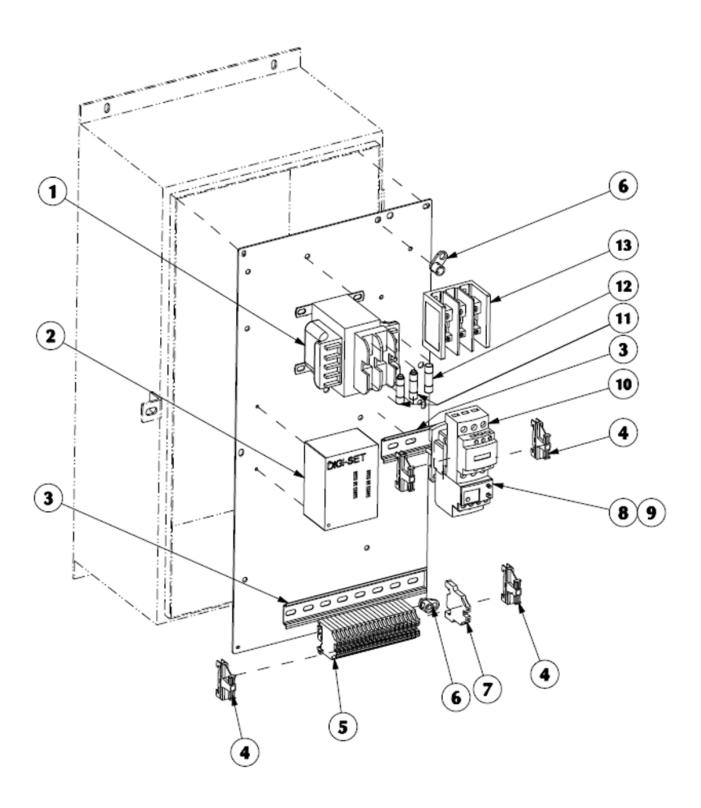


REPLACEMENT PARTS LIST (CONTINUED)

Cart Dumper with Elbow Change (Standard Duty)

REF	PART NUMBER	DESCRIPTION	QTY
1	03-4350	MOTOR 3HP 1750 208/230/460 CLOSE COUPLED 3PH TEFC	1
	03-1131	MOTOR 3HP I 15/208/230 184T IPH	1
2	02-0202	SUBPLATE 03 I STN 3/8 NPTF F/VIP	1
3	02-0031	ELL 3/8 NPTM X 3/8 NPTF 90	7
4	02-3964	ELL I /2 NPTF X 3/8 NPTM 90	2
5	02-0329	HOSE END I /2 WB X I /2 NPTM	2
6	435675	HOSE I /2 W/OD 7, STD	2
7	02-0628	VALVE 4-WAY 03 T 3-POS	1
8	02-0315	VALVE RELIEF 03 25 GPM SANDWICH	1
9	02-0179	PLUG I /2 NPT	2
10	02-0198	GAUGE SIGHT LEVEL 3 INCH	1
11	06-0007	SEAL RUBBER TANK	1
12	02-0197	BREATHER 3/4 FILLER	1
13	06-0011	DECAL MOTOR ROTATION 3/4 X 4	1
14	02-0362	PIPE I /4 SCH 40 X 9 RETURN	1
15	02-0250	FILTER SUCTION 3/8 3 GPM 100 MESH	1
16	02-0598	PIPE 3/8 SCH 80 X 4	1
17	02-0354	PUMP 3 GPM W/CHECK VALVE	1

PANEL BOX CONFIGURATION AND PARTS LIST

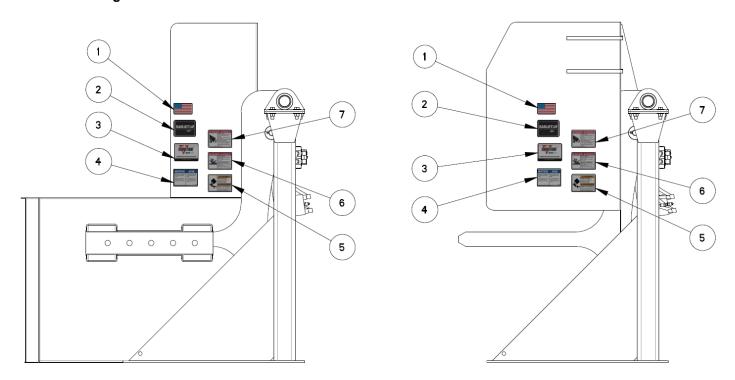


PANEL BOX CONFIGURATION AND PARTS LIST (CONTINUED)

REF	PART NUMBER	DESCRIPTION
1	03-0288	TRANSFORMER 150VA 208/230/460
2	03-0293	TIMER I -1023 SEC ON DELAY
3	03-0757	DIN RAIL 35 X 7
4	03-4441	TERMINAL BLOCK END STOP 35MM DIN
5	03-4437	TERMINAL BLOCK #22-10 35MM DIN
6	03-0551	TERMINAL GROUND # 14-#4 WI RE SI
7	03-4172	TERMINAL BLOCK #24-10 35MM DIN
8	03-4839	MOTOR STARTER IEC OVERLOAD 7-I
9	03-4848	MOTOR STARTER IEC OVERLOAD 4-6
10	03-4748	MOTOR STARTER IEC 32A 3P CONTACTOR TELE
11	03-0488	FUSE 1.5 AMP 500 V
12	03-0191	FUSE 2 AMP CONTROL
13	03-0959	DIST BLK I - #2/0-14 LD 4- #4-I

DECAL PLACEMENT

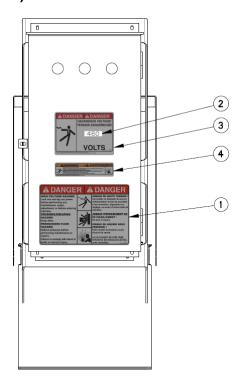
Refer to **Decal Images** 6 for illustrations of individual decals.



DECALS CD ENGLISH / FRENCH

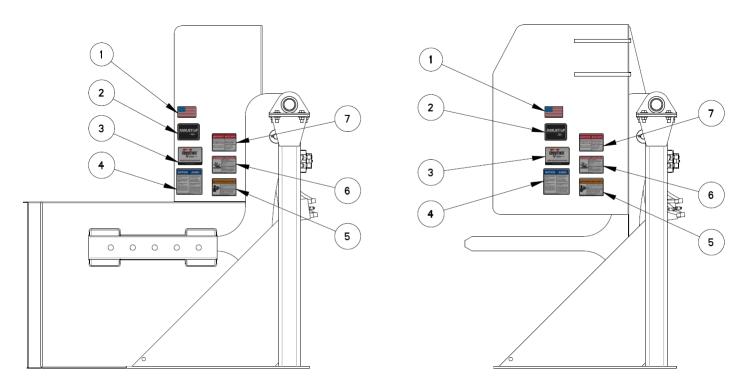
REF	QTY	PART NUMBER	DESCRIPTION
1	2	06-1839	DECAL AMERICAN FLAG
2	2	06-0002	DECAL RAM-JET
3	2	06-2751	DECAL MARATHON COMP & RECYCSOLUTIONS 6X10
4	2	06-0696	DECAL NOTICE FEDERAL REGULATION PROHIBITUNDER 18 F(06-121)
5	2	06-0685	DECAL WARNING OPERATOR DECAL 5X7 FRENCH
6	2	06-0707	DECAL DANGER STAY CLEAR OF DUMPER FRENCH
7	2	06-0521	DECAL WARNING STAND CLEAR OF CONT (FRENCH 06-0057)

DECAL PLACEMENT (CONTINUED)



REF	QTY	PART NUMBER	DESCRIPTION
1	1	06-0508	DECAL DANGER HAZARDOUS VOLTAGE E/F
		06-2690	DECAL-460
2	1	06-2686	DECAL-230
2	1	06-2684	DECAL-208
		06-2691	DECAL-575
6	1	06-3414	DECAL DANGER VOLTS W/BLANK SPACE E/F
7	1	06-3987	DECAL WARNING SHOCK ARC FLASH HAZARD E/F

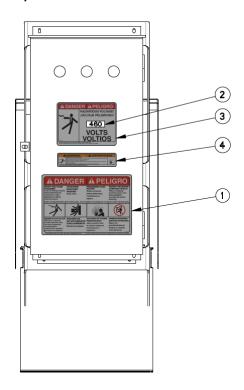
DECAL PLACEMENT (CONTINUED)



DECALS CD ENGLISH / SPANISH

REF	QTY	PART NUMBER	DESCRIPTION
1	2	06-1839	DECAL AMERICAN FLAG
2	2	06-0002	DECAL RAM-JET
3	2	06-2751	DECAL MARATHON COMP & RECYCSOLUTIONS 6X10
4	2	06-0121	DECAL NOTICE FEDERAL REGULATION PROHIBITUNDER 18 E/S
5	2	06-3977	DECAL WARNING DO NOT OPERATOR SERVICE E/S
6	2	06-0411	DECAL DANGER STAY CLEAR OF DUMPER E/S
7	2	06-0521	DECAL DANGER DO NOT OVERIDE OR TAMPER E/S

DECAL PLACEMENT (CONTINUED)



REF	QTY	PART NUMBER	DESCRIPTION
1	1	06-0249	DECAL DANGER HAZARDOUS VOLTAGE E/S
2	1	06-2690	DECAL-460
		06-2686	DECAL-230
		06-2684	DECAL-208
		06-2691	DECAL-575
6	1	06-3044	DECAL DANGER VOLTS W/BLANK SPACE E/S
7	1	06-3976	DECAL WARNING SHOCK ARC FLASH HAZARD E/S

DECAL IMAGES

Warning Decal Requirements

When your dumper 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. The following decals must be maintained. Additional decals may be purchased through your distributor or from Marathon Equipment Company by calling the service department at 877-258-1105.

06-0249



06-0696

Machine may only be loaded and La machine doit uniquement être chargée et exploitée par des personnes autorisées et dûment operated by persons who have een authorized and properly The key in the "ON-OFF" switch La clé sur l'interrupteur << Marche/ must be turned to the "OFF" position and removed when this Arrêt>> doit être tournée sur la position << Arrêt >> et retirée lorsque cet équipement n'est PAS equipment is NOT in operation.

06-0411



DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST. NE PAS PEINDRE SUR CETTE ETIQUETTE. REMPLACER SI ENDOMMAGÉ OU PERDU.

06-1839

06 - 3977



DO NOT PAINT OVER THIS LABEL. REPLACE IF DAMAGED OR LOST. NO PINTE ENCIMA DE ESTA ETIQUETA, REEMPLACELA SI SE DANA O SE PIERDE.

06-3978



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

06-2751

06-0002





06-0508



DECAL IMAGE (Continued)

06-0521

CRUSH HAZARD! Stand clear when tailgate or container is in motion and during loading and unloading. Failure to do so could result in death or serious injury.

RISQUE D'ÉCRASEMENT!

Ne pas s'approcher quand le hayon arrière ou le conteneur est en mouvement, ni durant le chargement et le déchargement. Le non-respect de cette règle risque d'entraîner des blessures graves, voire mortelles.

-

06-0707

CRUSH HAZARD! Stay clear of dumper and dumping area. Ensure area is clear of bystanders before operating dumper. Failure to comply will result in death or serious injury. IRISQUE D'ÉCRASEMENT! Éloignez-vous du tombereau et de la zone de déchargement. Veillez à ce que la zone soit évacuée avant d'utiliser le tombereau. Ne pas suivre ces consignes pourrait

entraîner la mort ou de graves blessures

06-0685



06-2684

208

06-2691



06-2686

230

06-3414



06-2690

460

06-3987



06-0121



06-3044



06-3976



Container Dumper INDEX

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