

Table of Contents

Product Information.....	2
Responsibilities of Owners/Users	3
Safety Instructions	4
Battery Charging	5
Load Capacity	6
Daily Operator Checks.....	7
Operator Instructions	8
Maintenance Instructions	10
Lubrication	11
Troubleshooting Guide.....	12
Warranty	13

Product Information

This Service and Replacement Parts Manual applies to the following Bushman AvonTec machinery:

Product Type:	Mold Cart
Model Number:	
Rated Load Capacity:	
Serial Number:	
Registered User:	
Date Shipped:	

For warranty information, service, and replacement parts information; please call your local dealer or Bushman AvonTec at (800) 558-7850. Please have the above Product Information available when calling.

This manual should be kept with the machine at all times. In the event the machine is re-sold, or transferred to another facility, please contact the factory so that we can update our service and warranty records.

Responsibilities of Owners/Users

The following are the Responsibilities of Owners and Users of this equipment:

1. **Intended Use**
It is the responsibility of the user/purchaser to advise the manufacturer of the weights and sizes or tooling used with this equipment, as well as the methods used to store and transfer tooling.
2. **Inspection and Maintenance**
The mold cart shall be inspected and maintained in proper working order in accordance with the manufacturer's operating/maintenance manual and safe operating practices.
3. **Removal from Service**
Any mold cart not in safe operating condition shall be removed from service until it is repaired to the original manufacturer's standards.
4. **Repairs**
All repairs shall be made by authorized personnel in conformance with the manufacturer's instructions.
5. **Operators**
Only trained and authorized personnel shall be permitted to operate the equipment. A copy of the service manual should be kept with the equipment at all times so that all operators may refer to it.
 - A. Before using the lift, the operator shall have:
 - (1) Read and/or have explained and understood, the manufacturer's operating instructions and safety rules, or be trained by a qualified person.
 - (2) Inspected the equipment for proper operation and condition. Any suspect item shall be carefully examined and a determination made by a qualified person as to whether it constitutes a safety hazard. All unsafe items shall be corrected before further use of the lift.
 - B. During operation the equipment shall be used only in accordance with its intended use and within the manufacturer's limitations and safety rules.
 - (1) Do not overload the equipment.
 - (2) Ensure that all safety devices are operational and in place.
6. **Safety Warning Labels**
It is the responsibility of the owner to maintain all safety warnings labels in a clear, readable condition in the same positions as originally applied by the manufacturer.
7. **Modifications and Alterations**
Modifications or alterations of this equipment shall be made only with the written permission of the original manufacturer. These changes shall be at least as safe as the equipment was before modification. These changes shall also satisfy all safety recommendations of the original equipment manufacturer for the particular application of the equipment.

Safety Instructions

1. Do not operate this equipment unless you have been trained and authorized to do so.
2. Understand and follow all of these warnings and instructions as well as those contained in the lift Owner's Manual.
3. Before using equipment, inspect it for proper operation and condition.
4. Before using equipment inspect all safety devices to be certain they are in place and functioning properly.
5. Do not exceed the machine's capacity as stated on the serial number plate.
6. Center loads on the mold platform.
7. Do not attempt to move cart without the mold stop pins in place.
8. Keep the entire load within the perimeter of the platform while lift is in motion.
9. Ensure that people and objects are clear of the areas beneath the platform and immediately surrounding the perimeter of the lift while lift is in motion.
10. When transferring molds do not stand between the cart and edge of press or storage racks, use the supplied pendant, and stand clear of the mold and cart.



Battery Charging

This equipment is supplied with an on-board battery and charger. Refer to the instructions supplied by the manufacturer(s) of these components for information regarding maintaining and operating the battery and charger.

The cart may not operate correctly if the battery is allowed to become discharged. Refer to the battery charge indicator on the powerhead to check that the battery is charged before operating.

For optimum battery life, only charge the battery when it is at 20% capacity or less.

Load Capacity**Load Capacity Rating for the MDC-500**

Machine capacity is a function of load weight and distance of load center of gravity from the lift mast. The maximum capacity for the machine is listed on page 2.

Bushman AvonTec units have the load capacity rating and serial number stamped on a metal plate attached to one end of the unit. Note that the serial number plate is only valid for the supplied unit in an unmodified condition. If you remove, replace or modify the unit, contact Bushman AvonTec to obtain a new serial number plate.

⚠ WARNING

To prevent damage to the lift and/or severe personal injury or death, **never exceed the rated capacity of the lift.**

Daily Operator Checks**Operator checks for straddle truck lift mechanism:**

1. Refer to manufacturer's manual for straddle-truck operator checks.
2. Allow only authorized and trained personnel to operate the lift platform.

Daily Operator Checks for mold transfer mechanism:

Before using the mold transfer mechanism to transfer molds, the operator should perform the following checks:

1. Check that the mold roller surfaces are free of damage, and that there is no debris or obstructions in the mold area.
2. Check the action of the pivoting mold hook. It should pivot freely on its pin.
3. Using the pendent control, move the mold transfer mechanism to each end of its limits of travel. Observe that the limit switches at each end of travel are operational.

Operator Instructions

Read and understand all safety precautions that should be observed when operating this machine. Only trained and authorized personnel should operate this machine.

Cart Travel

Make sure that the lifting platform is at its lowest position and that the mold stop pins or other mechanical means are in position on the mold platform. The truck will not travel unless the push/pull mechanism is fully retracted.

Refer to the Powerhead Owners Manual for instructions on driving the cart.

Lifting and Lowering Platform

Make sure that the cart has come to a complete stop.

1. If there is a mold on the platform make sure it is centered and that the mechanical means to hold the mold are in place.
2. The platform can be raised or lowered by pushing the appropriate button on the powerhead handle or on the pendant

Mold Transfer

1. Make sure the cart is aligned with a rack or press. The edge of the cart should be parallel with the edge of the bolster or storage rack. If supplied, make sure the platform-docking bar is securely set in the docking fixture.
2. Raise or lower the table top so that the mold rollers are level with the top surface of the press or storage rack.
3. Disengage the mold stop mechanism, if one exists.
- 4a. If supplied, lower the leveling jack so that it firmly contacts the floor.
- 4b. If supplied, loosen the mold centering device.
5. Press the pushbutton on the pendant to move the mold hook to the leading edge of the cart. Ensure that the pivoting mold hook is lowered. When the pivoting mold hook is fully engaged on the bracket mounted to the mold, press the "Out" button on the pendant to begin retracting the mold from the press or storage rack.
6. It may be necessary to press the "Up" button on the pendant to raise the table carefully as the mold transfers onto the cart. Some slight settling of the table surface may occur as the weight of the mold moves onto the table.

7. Once the mold has started transferring onto the table, close the centering device on to the sides of the mold.
8. Once the mold is all the way on the table, secure the mold stop, lift off/back away from the press or rack.
9. Lower the table to the low position for cart travel.
10. Insertion of molds to press or racks: Follow reverse of above procedure. It may be necessary to carefully lower table top as mold transfers off the cart. Be sure to unlatch the pivoting mold hook when mold is in press or storage rack.

Maintenance of Mold Transfer Mechanism

1. Visually inspect all mold roller surfaces for damage or wear. Damaged rollers should be replaced.
2. Once a month lubricate the bearings, mold rollers, as well as the Acme mold-transfer screw, the shaft on the pivoting mold hook, and the pillow-block bearings on the transfer mechanisms.
3. Check that the electrical limit switches, located at the each end of mold transfer screw are operational. Ensure that each limit switch stop mold transfer mechanism travel. If a limit switch fails to stop screw rotation, severe damage to screw and other components may result.

Lubrication

Lubricating mold cart

1. All lubrication points are equipped with zerk fittings, and capped with a red plastic cap for ease of identification of each lubricating point.
2. Under normal conditions of use, all lubricating points should be flushed with grease every six months. In addition to providing lubrication to the bearing surfaces, flushing with grease assists in removing dirt and other foreign matter from the bearings.
3. **Recommended grease** is Sonoco Multi-Purpose 2 E P industrial grease or equivalent.

Hydraulic Fluid

Hydraulic fluid recommendations

1. Replace the hydraulic oil filter (if provided) at least annually.
2. If the oil level in the reservoir should become low, as evidenced by a noisy pump or the lift not reaching its full limit of travel, oil must be added to the reservoir.
3. For recommended hydraulic oil, refer to operation and maintenance manual of power-head manufacturer. Example (Big Joe ®, Yale ® etc.)
4. Have your hydraulic oil analyzed on a regular basis to ensure chemical properties have not degraded.

Troubleshooting Guide

Troubleshooting guide for hydraulic lifts:

1. Lift will not rise:
 - A. Check electrical circuit. See electrical section, found in the power-head manufacturer's manual.
 - B. Check oil level in hydraulic power unit reservoir. When the lift is fully raised, oil level should be about 1-1/2" above bottom of reservoir.
2. Lift will not lower:
 - A. Test solenoid valve coil. If voltage correct, replace coil
 - B. Check for mechanical restrictions blocking lift from lowering.
3. Lift rises slowly or only lifts a partial load:
 - A. Check voltage to pump motor under load. Low voltage affects capacity.
 - B. Check for foam in hydraulic reservoir. Foam is usually caused by air. Check for loose connections in suction line.
4. Lift settles slowly when down valve is not energized:
 - A. Operate lift up and down without load several times to flush down Solenoid valve.
 - B. If lift continues to settle, replace down solenoid valve.
5. Lift does not reach fully raised height:
 - A. Check for low hydraulic oil level. Add oil if necessary.
 - B. Check limit switch adjustment - see next section.
6. Lift does not operate smoothly:

Run lift up and down under load to purge air from hydraulic system.

Warranty

The Bushman AvonTec will replace, F.O.B. the factory, any goods that are defective in materials and workmanship within 12 months of date of shipment, provided the buyer returns the defective materials, freight and delivery prepaid, to the manufacturer, which shall be the buyer's sole remedy for defective materials.

Manufacturer shall not be liable to purchaser or any other person or entity for consequential or incidental damages. The end user is responsible for the integrity of any structure, crane or fixture to which Bushman products have been attached. This warranty does not apply to equipment and/or components, which have been altered in any way or subjected to abusive or abnormal use, inadequate maintenance or lubrication, or use beyond seller recommended capacities and specifications.

Manufacturer shall not be liable under any circumstances, for labor costs expended on such goods or consequential damages. Manufacturer shall not be liable to purchaser or any other person or entity for loss or damage directly or indirectly arising from the use of goods or from any other cause.

No employee, agent, officer or seller is authorized to make further oral or written representations or warranty of fitness or to waive any of the foregoing terms of sale, and none shall be binding on the manufacturer.

If there are any problems or questions regarding this equipment or its application, contact your local sales representative or Bushman AvonTec directly at 262-790-4207 or 800-338-7810.

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