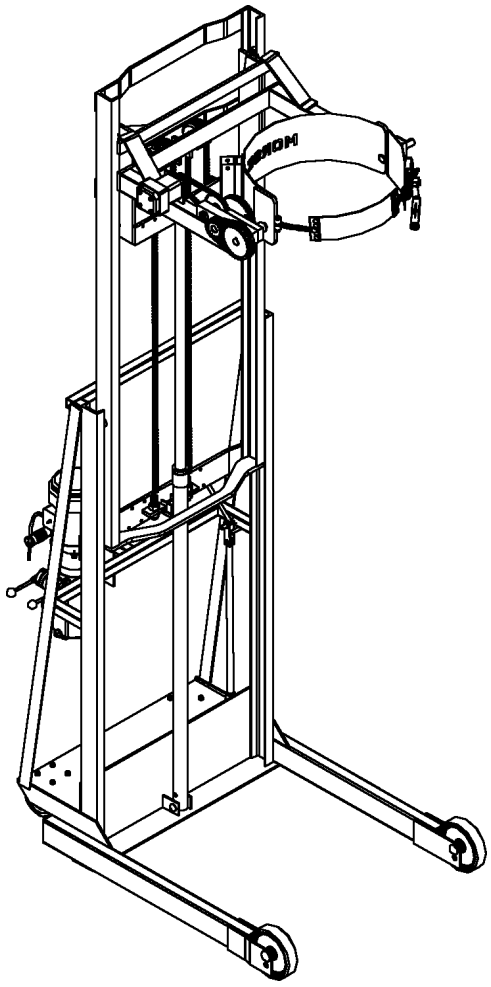
MORSE
The Specialist In Drum Handling Equipment

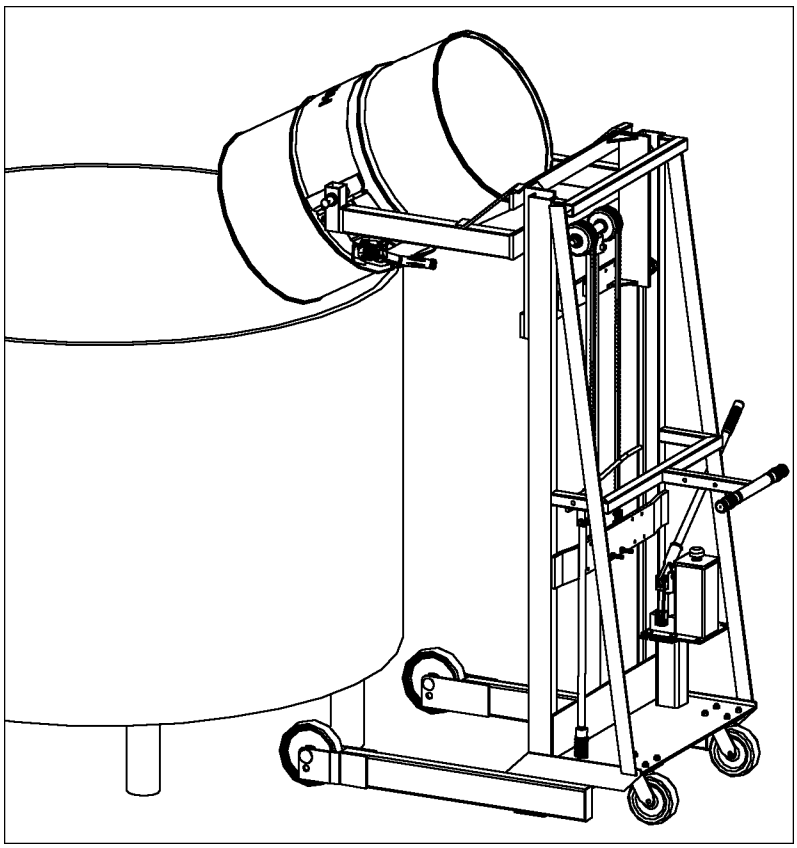
510 to 525 SERIES

VERTICAL-LIFT DRUM POURERS

OPERATOR'S MANUAL FOR
MORSE Vertical-Lift Drum Pourers
Serial # _____ - _____

510 Series Single Stage Vertical-Lift Drum Pourers
515 Series Scale-Equipped Single Stage Vertical-Lift Drum Pourers
520 Series Two Stage Vertical-Lift Drum Pourers
525 Series Scale-Equipped Two Stage Vertical-Lift Drum Pourers





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Serial # _____ - _____

1. Safety Information

While Morse Manufacturing Co. drum handling equipment is engineered for safety and efficiency, a high degree of responsibility must be placed upon the machine operator to follow safe practices, based primarily on common sense, upon which true safety depends.

Failure to follow the safety precautions in this manual can result in personal injury or property damage. Observe the same precautions as with similar machinery where carelessness in operating or maintenance is hazardous to personnel. Carefully read the safety precautions below and throughout this manual.

DANGER - Indicates a situation which, if not avoided, will result in serious injury or death. This signal word is limited to the most extreme situations.

WARNING - Indicates a situation which, if not avoided, could result in serious injury or death.

CAUTION - Indicates a situation which, if not avoided, can result in damage to the machine.

CAUTION – Do Not Transport with Drum Raised
ALWAYS LOWER THE DRUM HOLDER / MAST TO LOWEST POSITION BEFORE TRANSPORTING. The unit can become unstable when transporting with a raised load.

DANGER - Stay Clear of Power Lines
KEEP WELL CLEAR OF POWER LINES. Never approach a power line. Current in a high voltage line may arc some distance from the wire to the steel framed, grounded machine.

WARNING
The Vertical-Lift Karrier is designed to handle one drum of the types listed at the top of page 4, under “2. Machine Description - General”. DO NOT attempt to handle any other type of drum or object. DO NOT exceed the weight capacity of 800 Lb.

WARNING - Level Floors Only
For operation only on clean, level floors of suitable bearing capacity. Do not use on sloped surfaces, ramps, irregular or debris strewn floors.

Serial # _____ - _____

WARNING - Do Not Modify the Unit
Under no circumstances should any modifications be made to the Morse machinery without factory authorization. Any modifications may void the warranty. This machine was designed to perform a specific job and alterations may result in injury to operator or machine.

WARNING - No Loose Fitting Clothing
Wear close-fitting clothing and safety equipment appropriate to the job. Loose fitting clothing may become caught on the machinery and cause severe personal injury.

WARNING - Hydraulic Fluid Under Pressure Can Be Hazardous
Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic lines. Keep hands and body away from pinholes and nozzles, which eject fluid under high pressure. Use a piece of cardboard to search for leaks. If an accident occurs, see a doctor immediately and inform them of the nature of the accident.

CAUTION - Wear Safety Shoes
Wear safety shoes with non-slip soles and hard toe protection.

CAUTION – Please read the documentation included with the scale equipment
There is important information included with the scale equipment from the scale equipment manufacturer.

2. General Machine Description

The Morse Vertical-Lift Karrier is designed to lift, transport, and dispense the following drums:

- 55 gallon steel drums with ribs – up to 800 Lb.
- Fiber drums between 22" and 23-1/2" diameter.
  (The total weight of the drum must not exceed the fibre drum's "packing limit".)

For handling 55 gallon plastic drums a Morse saddle accessory is required. If the plastic drum has a suitable top rim (see Figure 2.1), the Rim Clamp Assembly (p/n 3540-P) is used. For plastic drums without a top rim (see Figure 2.2), the Bracket Assembly, HDPS (p/n 1465-P) is used.

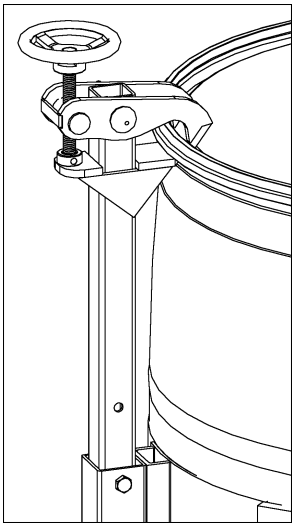


Figure 2.1

Plastic drum being lifted with part number 3540-P, Rim Clamp Assembly installed.

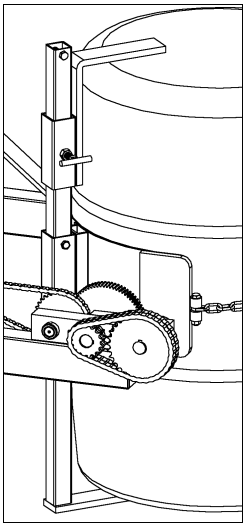


Figure 2.2

Plastic drum being lifted with part number 1465-P, Bracket Assembly installed.

The maximum capacity is 800 Lb. The two-stage unit (520 series) will pour drums up to 106" high and 60" for the single stage (510 series).

Controls

The Morse Vertical-Lift Karrier is manually propelled and steered.
There are two functions for the operator to control:

1. The "LIFT" function, or the vertical positioning of the drum holder
2. The "TILT" function, or the degree of rotation of the drum holder.

The controls for these functions vary depending on the model.

1. LIFT Function
   a. Models with manual hydraulic pump (no suffix in model #, e.g. 510): close release valve (see Figure 2.3) by turning clockwise, operate pump handle to raise drum. To lower drum, slowly turn release valve counter- clockwise.

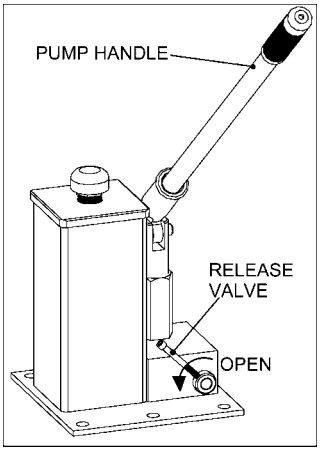
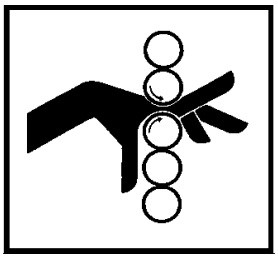


Figure 2.3

a. Models with powered hydraulic lift: push control valve (see Figure 2.4) up to raise drum; push down to lower drum. (Exception: DC powered lift, manual tilt, "-125" suffix in model #, push control valve to the left to raise drum; push to the right to lower drum.)

2. TILT Function
   a. Models with simple hand crank: push in the crank stop pin to allow crank to rotate. To prevent the drum from free-wheeling, hold the hand crank in position with one hand and slide the crank pin out to interfere with crank.
   b. Models with chain wheel tilt control: use pull chain to control the pouring angle of drum. To prevent drum free-wheeling, operator must hold the pull chain.
   c. Models with self-stopping hand crank: squeeze crank handle to disengage and rotate crank to position the drum. The self-stopping crank will automatically lock into position when released.
   d. Models with power hydraulic tilt: operate the tilt control valve (see Figure 2.4) to adjust the pouring angle of the drum.



WARNING - Watch Out for Pinch Points
Stay clear of moving parts. Operator should remain behind the push handle during the lift operation.

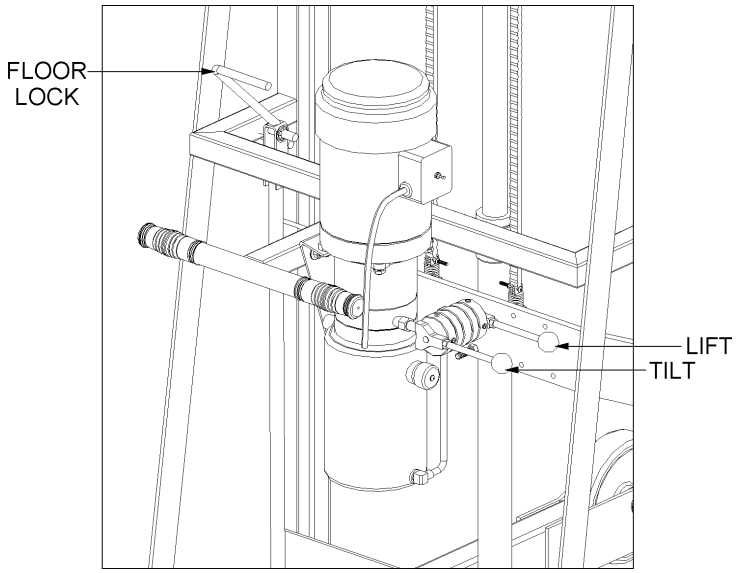


Figure 2.4

Model 510-110

Floor Lock
The floor lock handle is located on the left side of the push handle (see Figure 2.4). Pulling the handle toward the operator until it locks in the down position activates the floor lock. When the floor lock is activated it prevents unwanted free wheeling of the unit. Floor conditions determine the effectiveness of the floor lock. The operator should verify its holding action before depending on it to hold.

Drum Holder Assembly
The drum holder assembly (or "saddle assembly") is the component on the Vertical-Lift Karrier that is intended to hold the drum. The drum holder assembly moves vertically along the mast and is designed to secure the drum around it's middle using a strap and ratchet tightening system. (For plastic drums, an accessory is required.)

3. Operation

1.) Push the Vertical-Lift Karrier to the drum.

2.) Using the "LIFT" control as described in "2. Machine Description - Controls", position the drum holder assembly with the back band at the middle of the drum. (see Figure 3.1). With the ratchet plate swung open and the E14 strap hanging from the chain hook, push the unit until the back band rests firmly against the drum. Some adjustment to the tilt angle of the saddle may be necessary to ensure band fits flush on the drum. Engage the hand floor lock.

3.) Attaching the drum:

a. Standard Saddle Assembly: Drape the E14 strap across the front of the drum and engage a link into the slot in the ratchet (see Figure 3.2). Turn the ratchet clockwise to tighten strap. If ratchet turns until the pawl is beyond the last ratchet tooth, turn the ratchet back and slide the next link into the ratchet slot and try tightening again. The strap must be held tightly against the drum with the pawl engaged securely in the ratchet teeth.

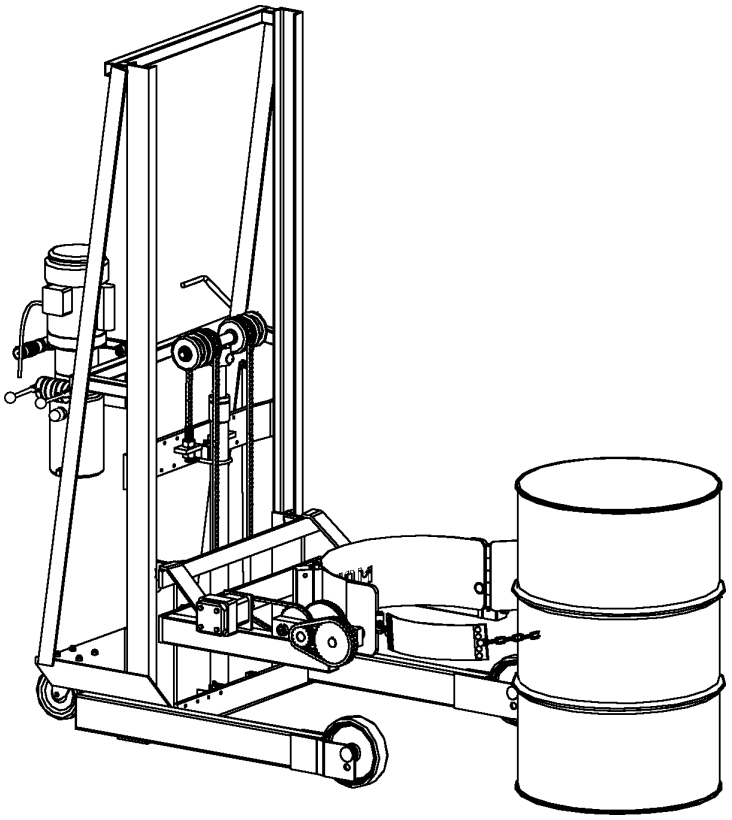


Figure 3.1

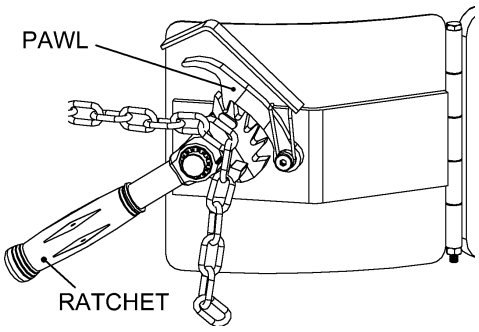


Figure 3.2

b. Rim Clamp Assembly (p/n 3540-P): Turn the hand wheel on the Rim Clamp counter clockwise to open the jaw. Position the drum holder assembly with the bottom jaw of the Rim Clamp directly under the top rim of the drum (see Figure 2.1). Turn the hand wheel clockwise to tighten rim clamp securely onto to top rim. Follow same procedure as 3.a. to tighten E14 strap onto drum.

c. Bracket Assembly, HDPS (p/n 1465-P): Loosen the tee screw on the hold-down and slide it up to highest position. Position the drum holder assembly with the foot of the Bracket Assembly on the floor. Load the drum onto the foot and into the saddle band with a hand truck (see Figure 2.2). Loosen the tee screw on the hold-down and slide it down to meet the top of the drum. Tighten the tee screw. Follow same procedure as 3.a. to tighten E14 strap onto drum.

4.) Operate the lift function according to procedure in 2.1 to lift drum clear of floor. Disengage floor lock. Roll to dispensing location.

CAUTION – Do Not Transport with Drum Raised
ALWAYS LOWER THE DRUM HOLDER / MAST TO LOWEST POSITION BEFORE TRANSPORTING. The unit can become unstable when transporting with a raised load.

5.) Lift drum to desired pouring height. Operate the tilt control as described in procedure 2.2. The floor lock should be engaged while dispensing / draining.

6.) When dispensing is complete, tilt drum back to upright position. Disengage the floor lock and lower the drum to transporting height; about 6" off the floor.

WARNING - Stay Clear of Raised Drum
NEVER allow anyone to be below any part of a raised drum handler or drum. Remain behind the push handle while handling a drum.

WARNING – Do NOT Disengage the E14 Strap or the Rim Clamp When Drum is off the Ground
When the drum is in the upright position, lower the drum to the floor before releasing the E14 strap or the Rim Clamp.

7.) Push the unit to the drum storage area and lower to the floor. Engage the floor lock.
Standard Saddle Assembly: Release the E14 strap from the ratchet by applying pressure to the ratchet handle in a clockwise direction with one hand and opening the pawl to free the ratchet with the other hand. Remove the E14 chain link from the ratchet.
Rim Clamp: After removing E14 strap, open the Rim Clamp by turning the hand wheel counter clockwise.
Bracket Assembly: After removing E14 strap, loosen tee screw and slide hold-down to top position and tighten tee screw. Remove drum with hand truck.

Roll Vertical-Lift away from drum.

For models 515 and 525, see scale equipment documentation for proper operating and maintenance procedures.

4. Maintenance

Periodic inspection for the general condition of structural and mechanical components is imperative for safe and efficient operation.

Periodically inspect all moving parts, framework, and contact areas for signs of wear, fatigue, or loosening. Tighten, adjust, or replace parts as necessary to prevent failure and maintain proper function.

Inspect the hydraulic system for oil drips, hose damage, or other signs of wear. Inspect the level and condition of the hydraulic fluid. (See hydraulic pump specification sheet.) Replace any parts that show signs of wear.

LIMITED WARRANTY

MORSE DRUM HANDLING EQUIPMENT is guaranteed against defects in workmanship or materials, when used properly within its rated capacity, for one year. Motors and other purchased parts carry the warranty of their manufacturers.

For Warranty claims, call or write for authorization to return the product prepaid, stating defect. (No return will be accepted without proper authorization.) In all instances, liability is limited to the purchase price paid and liability under the above stated warranty is limited to repairing or replacing any product which upon our examination is found to be defective.

For replacement parts, please contact your Morse dealer.
When ordering parts, please specify:
- Part number and description,
- Model number
- Serial number

Find model number and serial number on metal name plate attached to Kontrol Karrier.