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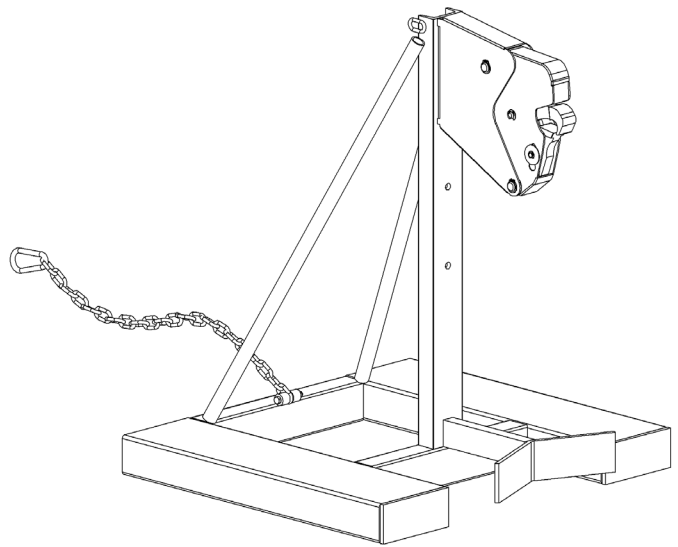
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**Operator’s Manual**  
**for Morse**



**Fork Mount Drum Handler**  
**Model 286M-1**

Serial Number 0816 to \_\_\_\_ (MMYY)



**Receiving Procedures**

Every Morse drum handler is inspected prior to shipping. However, damage may be incurred during transit.

- Check for visible damage. If you choose to accept damaged freight, always sign noting the damage on the **Bill of Lading**.
- Document the damage and have the truck driver sign. We recommend keeping a digital camera at your receiving dock for this purpose.
- Open packages expeditiously to check the condition of the goods. There is only a 24 hour window to notify the carrier of any concealed damage.
- Immediately **report all damage to the shipping company!** Then you may contact Morse for assistance with your freight claim.
- Morse Manufacturing will not be held responsible for any damaged freight that is not signed for as damaged.

**Limited 2 Year Warranty**

Morse drum handling equipment is guaranteed against defects in workmanship or materials for two years when used properly within its rated capacity. Warranty does not cover wear from normal use or damage from accident or abuse. Motors and other purchased parts carry the warranties of their manufacturers.

For warranty claims, contact your Morse Dealer to obtain a return authorization number, and for return freight advice. Return freight must be prepaid.

In all instances, liability is limited to the purchase price paid or to repairing or replacing the product. Customer assumes liability for any modifications, unauthorized repairs or parts substitution.

**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.

Review the Material Safety Data Sheet(s) for the material(s) in the drum(s) and take all necessary precautions. Safety shoes, work gloves, hard hat and other personal protective devices are recommended.

Prior to initial use, inspect all moving parts. Perform necessary load test, inspections, operator training, etc.



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#### Safety Information (continued)



**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** – Always transport with drum in lowest possible position.



**WARNING** - The **MORSPEED 1000™** is designed to handle one drum of the types listed at the top of page 3. Machine Description. **DO NOT** attempt to handle any other type of drum or object. **DO NOT** exceed the weight capacity of 1000 Lb. (454 kg) per drum.



**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.



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



**CAUTION:** **DO NOT** allow drum to impact on floor, ground, or dumping station, etc.



**WARNING:** This product can expose you to chemicals including barium sulfate, cobalt, titanium dioxide, and 2-methylimidazole, which are known to the State of California to cause cancer, and bisphenol-A, which is known to the State of California to cause birth defects or other reproductive harm.

For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**Operator's Manual for Morse *MORSPEED 1000*™ Fork Mount Drum Handler Model 286M-1  
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**Machine Description**

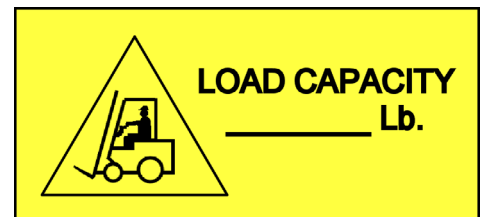
The model 286M-1 *MORSPEED 1000*™ Fork Mount Drum Handler is designed to lift and transport:

- Rimmed steel, fiber or plastic drum.
- Maximum capacity is 1000 Lb. (454 kg) per drum.
- Requires a minimum of 50 Lb. (23 kg) per drum to begin the gripping action.
- Drum height must be 18" (46 cm) or taller.
- Works with any diameter drum.
- Can be used with a straight walled or damaged drum.



**Important**

1. Review the Material Safety Data Sheet(s) for the material(s) in the drum(s) and take all necessary precautions. Safety shoes, work gloves, hard hat and other personal protective devices are recommended.
2. Please read all instructions thoroughly before attempting to operate your new Morse drum handler.
3. The model 286M-1 has a maximum capacity rating of 1000 Lb. (454 kg) per drum. Exceeding this rating or handling drums other than those mentioned above is unsafe and could result in equipment damage, excessive wear or awkward handling.
4. When loading, unloading, operating, or maintaining your MORSE drum handler, always use care and good judgment. Maintain secure footing and a firm hold. Keep hands and loose clothing away from all moving parts. Never allow anyone to be below any part of a raised drum handler or drum. Read operating instructions and review the pictures in the sales brochure before operation.
5. Because the Morse model 286M-1 is a front-end attachment for a forklift, OSHA recommends that "... the truck (forklift) be marked to identify the attachment(s) and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered." See center of gravity dimensions of model 286M-1 on page 8 for calculating lost load on your equipment.
6. Prior to initial use, inspect all moving parts. Inspect for proper operation. Perform necessary load test, inspections, operator training, etc.



**Operator's Manual for Morse *MORSPEED 1000*<sup>™</sup> Fork Mount Drum Handler Model 286M-1  
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**Operating Instructions**

1. Position forks to proper width to meet the fork pocket openings of the *MORSPEED 1000*<sup>™</sup> Fork Reach Mount. Drive forks into sleeves until they contact far endcaps. Loop the safety chain around carriage and secure with carabiner.
2. For 55-gallon steel drums, set *MORSPEED 1000*<sup>™</sup> Head in top two holes of upright channel. For shorter drums use suitable lower holes. It is always best to keep Vee Backrest as close to the bottom of the drum as possible.
3. Set rake of mast so that when lifted, the *MORSPEED 1000*<sup>™</sup> Carriage Mount is vertical or inclined slightly forward. This setting should be maintained.
4. Approaching the drums for lifting: Drive truck with unit low to the floor. Steer to make the *MORSPEED 1000*<sup>™</sup> head meet the drum straight-on at its center-line. The head should push into the side of the drum near the drum top. *MORSPEED 1000*<sup>™</sup> jaws must arrive below the rim of the drum. Operator can gauge the proper height by aligning the top of the head(s) to be about flush with the top of the drum. If necessary, lower the carriage before contacting the drum to assure jaws will be below the rim before lifting.
5. Raise the *MORSPEED 1000*<sup>™</sup> head while it is held against the drum. As the head rises, the lower jaw will come up under the lip of the drum, "catch" under it, and be held down. As the head rises with the lower jaw thus held by the drum rim, internal linkage will pull the upper jaw downward to meet the top of the drum rim. The drum's weight on the lower jaw creates the force that pulls the upper jaw down to tightly grip the drum rim. No manual contact is required.
6. Raise carriage in one steady movement until drum is seen to be properly suspended. Avoid any tendency to interrupt the lift while the *MORSPEED 1000*<sup>™</sup> Jaws operate to grab the drum. After very little practice, operations 5, 6, and 7 will be done easily in one flow of action.

**TIP:** It is not necessary to tilt the mast forward or back to effect gripping or releasing.

**TIP:** It is not necessary to have the jaws make first contact with the drum rim. Simply drive them in below the rim and raise. They will engage as the lower jaws catch under the rim as the *MORSPEED 1000*<sup>™</sup> rises.

**TIP:** It is not necessary to tilt the mast backward as you might when handling pallets. If, after the drums are properly lifted, you want to tilt them back to clear other drums, this is permissible. Reset the mast to the original position (with *MORSPEED 1000*<sup>™</sup> upright, drum will tilt forward slightly) before drums are put down and released.

7. Drive the truck to deliver the drums as necessary.



**WARNING:** Once drum is correctly picked-up, it should remain held safely by the *MORSPEED 1000*<sup>™</sup> unless the truck is driven fast over a bad ridge or wide crack in the ground. The sudden movement could momentarily make drum weightless, thus allowing the jaws to open. Therefore, good truck discipline should be followed by keeping the load low when moving from place to place and by avoiding unreasonable surfaces and speeds.

To release drum, simply lower drum to the floor. When drum comes to rest and head continues to lower, weight will no longer be on the lower jaw and jaws will open automatically. Do not stop lowering as soon as drum touches down, keep going down for a few more inches. Pull unit away from drum once upper jaw has retracted clear of drum rim.

**TIP: USE OF VEE BACKREST TO POSITION DRUMS:** Drums standing on the floor can be positioned for picking up by tilting the truck mast backward so the *MORSPEED 1000*<sup>™</sup> Head will clear the drums. The Vee Backrest can then be used to push the drums to locate them correctly. To lift drums, return mast to proper position as in Step 3 and Note in Step 7.

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**Possible Reasons for Failure to Pick Up Drum**

- Carriage mount not lifting vertically (paragraph 3 in Operating Instructions).
- Truck not being squared up (paragraph 4 in Operating Instructions).
- Truck being allowed to creep backwards after contact with drums has been made.
- Truck driver tilting mast backwards.

**Possible Reasons for Failure to Release Drum**

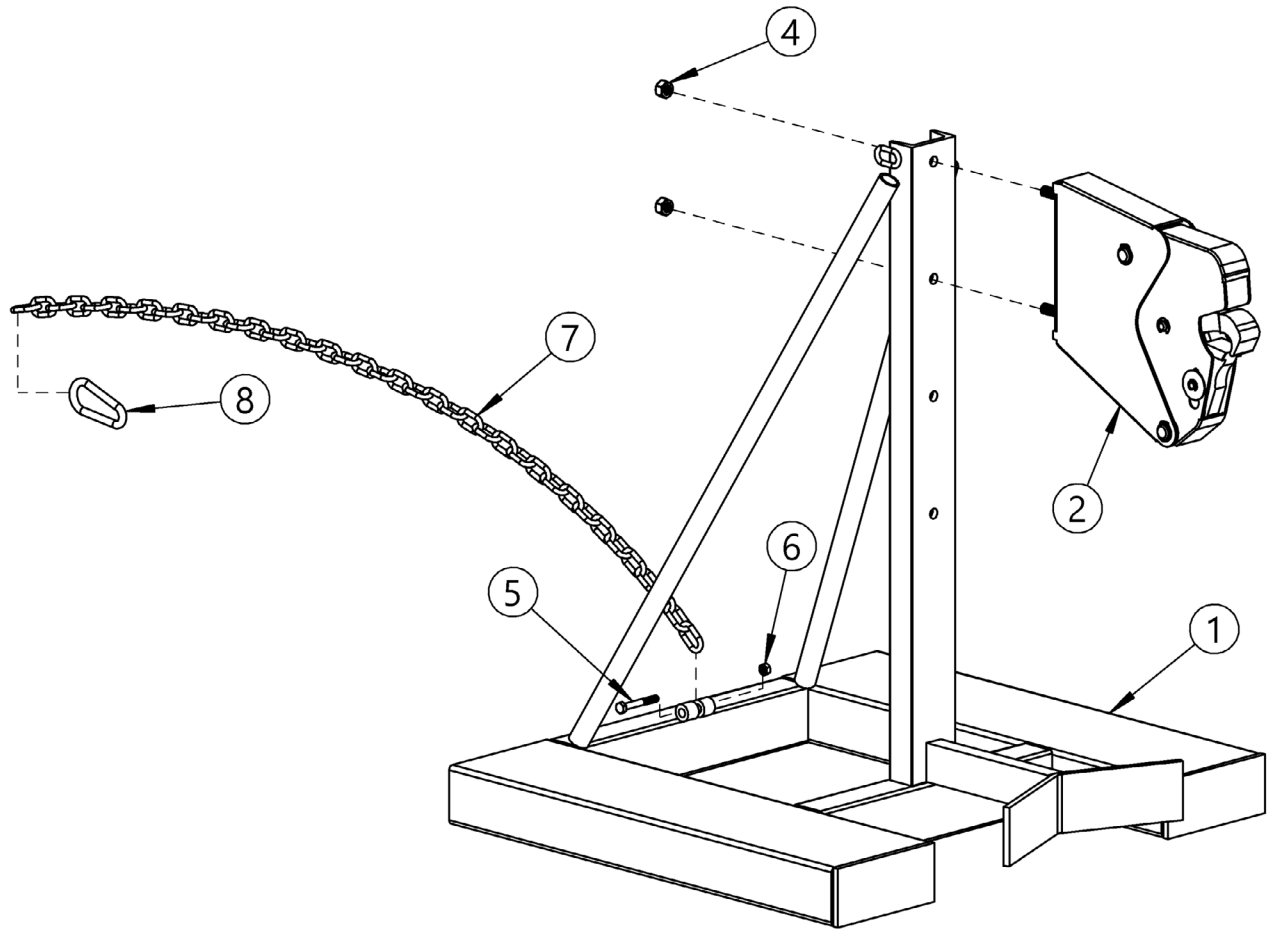
- Procedure in paragraph 8 of Operating Instructions not being followed.
- Carriage mount not vertical. If mast is tilted backward, the drum may meet the floor leaning backward. As drum settles and tries to return to upright it may pull against inside of the upper jaw "hook" preventing the upper jaw from moving cleanly upward and away to release the drum.

**Maintenance**

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

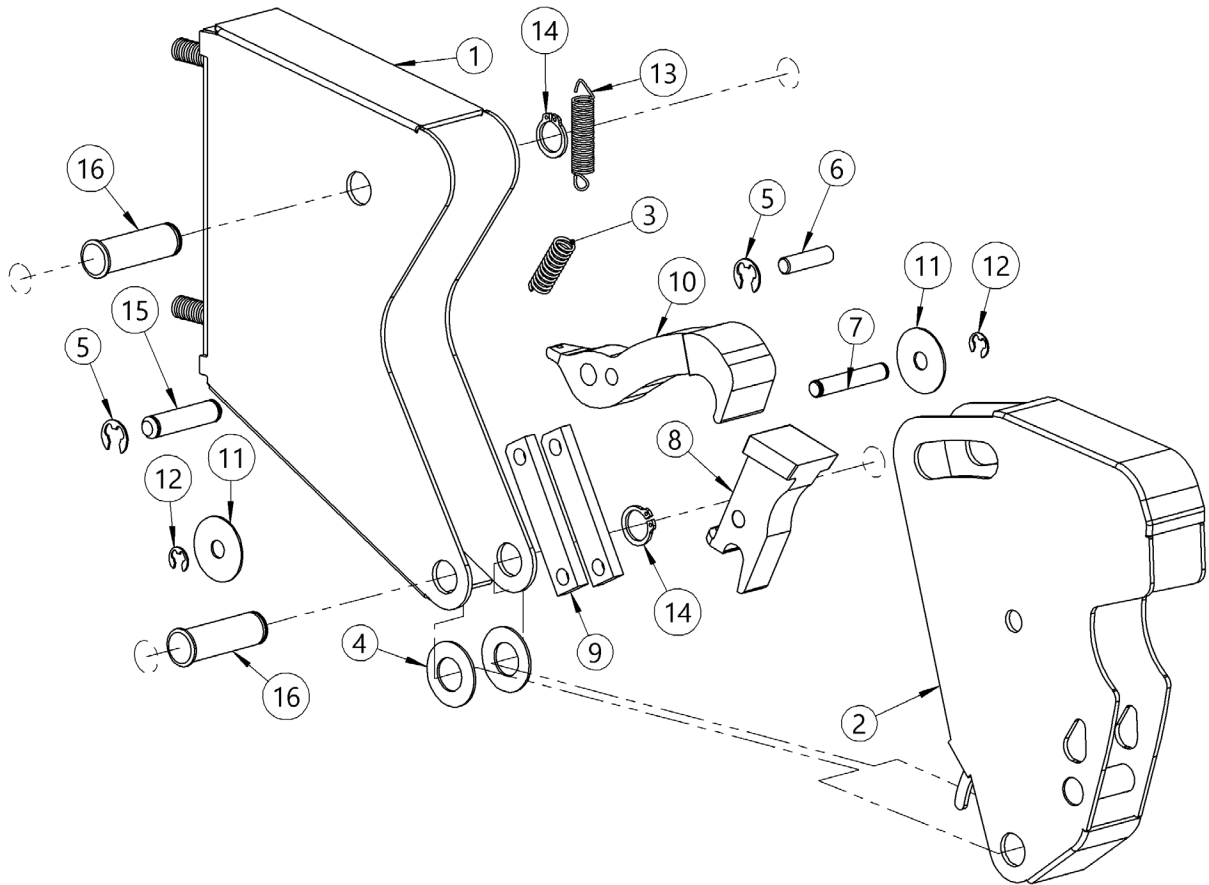
1. Periodically inspect all moving parts, framework and contact areas for signs of wear, fatigue or loosening. Tighten, adjust or replace parts as necessary to prevent failure and maintain proper function.
2. Clean and lubricate all moving parts. Apply 90W oil generously to all moving joints and spring-anchor points approximately every 500 drum lifting cycles.
3. Worn or damaged parts must be properly replaced with the correct, genuine Morse parts.

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| ITEM | QTY. | PART #  | DESCRIPTION                     |
|------|------|---------|---------------------------------|
| 1    | 1    | 5716M-P | BASE WELD, 286M-1               |
| 2    | 1    | 3360M-P | LIGHT DUTY HEAD ASM, SR, 82HM   |
| 3    | 2    | 1644-P  | WASHER, 1/2 SPLIT LOCK          |
| 4    | 2    | 91-P    | NUT, 1/2-13 FIN HEX             |
| 5    | 1    | 4079-P  | HHCS, M8 X 60 MM CL8.8, 8MM     |
| 6    | 1    | 4081-P  | NUT, M8 ESNA, 8MM               |
| 7    | 1    | 2162-P  | CHAIN, 1/4" PROOF COIL, 4 FT    |
| 8    | 1    | 5713-P  | CARABINER, 7/16 OPENING, 286M-1 |

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| ITEM | QTY. | PART #    | DESCRIPTION                    |
|------|------|-----------|--------------------------------|
| 1    | 1    | 3861BSS-P | BACK HEAD WELD, LDH, SS        |
| 2    | 1    | 3861FSS-P | FRONT HEAD WELD, LDH, SS       |
| 3    | 1    | 1110-P    | SPRING, COMPRESSION, 155       |
| 4    | 2    | 62-P      | WASHER, 3/4 SPRING             |
| 5    | 2    | 3461SS-P  | E CLIP, SS, 1/2", 82HM         |
| 6    | 1    | 3460SS-P  | PIN, INNER LINK SS 3/8 X 1.437 |
| 7    | 1    | 3354SS-P  | PIN, JAW LINK, SS 3/8 X 2.264  |
| 8    | 1    | 2166M-P   | LOWER JAW WELD, LAMINATE, SR   |
| 9    | 2    | 3355-P    | LINK, JAW (2) SMALL            |
| 10   | 1    | 2165M-P   | UPPER JAW WELD, LAMINATE, SR   |
| 11   | 2    | 3362SS-P  | WASHER, 3/8" FENDER, SS        |
| 12   | 2    | 3361SS-P  | E CLIP, SS, 3/8" 82HM          |
| 13   | 1    | 3879-P    | SPRING, LDH, RED               |
| 14   | 2    | 5330SS-P  | SNAP RING, EXT, SS, 3/4"       |
| 15   | 1    | 3352SS-P  | PIN, HOOK PIVOT SS 1/2 X 2.052 |
| 16   | 2    | 5586LSS-P | PIN, GROOVE, 3/4 X 2.18 C SS   |

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### CENTER OF GRAVITY DIMENSIONS FOR CALCULATING LOST LOAD ON LIFTING EQUIPMENT

- LOST LOAD CENTER: 13.79"  
FROM FORK TIP TO DRUM CENTER OF GRAVITY
- VERTICAL CENTER OF GRAVITY: 8.9"  
FROM BOTTOM OF ATTACHMENT TO  
ATTACHMENT CENTER OF GRAVITY
- HORIZONTAL CENTER OF GRAVITY: 15.875"  
FROM FORK POCKET ENTRANCE TO  
ATTACHMENT CENTER OF GRAVITY

MODEL # 286M-1  
NET WEIGHT 118 Lb.

$W_d$  = WEIGHT OF DRUM  
MAX. = 1,000 Lb. (454 kg)

