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# Operator's Manual

for Morse  
**Extra Heavy-Duty Forklift-Karrier**  
**with 3-Piece Drum Holder**  
**Model 285G-GR**

Serial Number 0108 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.

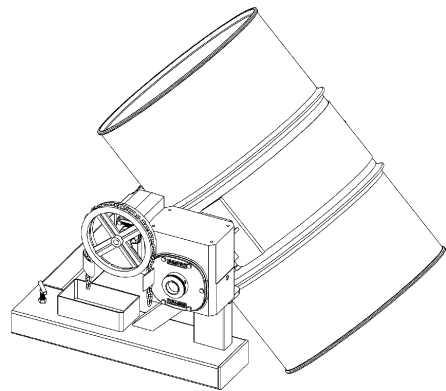
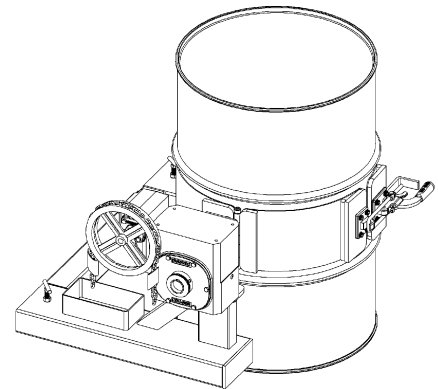
Delivery to non-business addresses without a loading dock result in additional freight charges. Residential delivery fees, inside delivery fees, re-delivery charges, and lift gate services will be added by the truck line, and are non-negotiable.

## 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.

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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 – Do Not Transport with Drum Raised**

*ALWAYS LOWER THE DRUM HOLDER TO LOWEST POSITION BEFORE TRANSPORTING.*



**WARNING**

The Forklift-Karrier is designed to handle one drum of the types listed at the top of page 3, under **2. Machine Description**. *DO NOT* attempt to handle any other type of drum or object. *DO NOT* exceed the weight capacity of 2000 Lb.



**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.



**CAUTION - Wear Safety Shoes**

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

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**Machine Description**

The Model 285G-GR Forklift-Karrier is designed to lift, transport, and dispense a ribbed 55-gallon steel drum 22.5" in diameter.

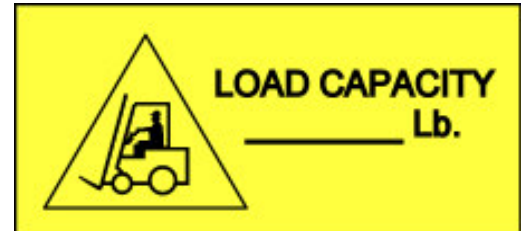
- A 19" diameter 30-gallon ribbed steel drum can be handled with model 55/30-19GR Diameter Adaptor installed (see Diameter Adaptor literature)

The maximum full-drum capacity is 2000 Lb. The capacity is derated to 1000 Lb. for a half-full drum. The half-full rating is based on the tilt mechanism's capacity for handling an unbalanced bottom-heavy 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 285G-GR has a maximum capacity rating of 2,000 Lb. full drum and 1,000 Lb. half-full drum and is designed to lift, move and pour a 55-gallon steel drum. **DO NOT** exceed these ratings. Exceeding these ratings 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 model 285G-GR 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 page 5 for center of gravity dimensions of model 285G-GR for calculating lost load on your equipment.



**Assembly Instructions**

1. Remove the following items from the small cardboard box packaged with the 285G-GR: chain wheel, chain guide w/ pull chain, bushing, 3/16 square key (items: 15, 17, 29, 18, 28 respectively).
2. Slide bushing (item 18) and chain guide w/ pull chain (items 17 and 29) onto speed reducer (item 19) input shaft with the chain guide facing outward as pictured in parts diagram.
3. Insert 3/16 square key (item 28) into the key way on the input shaft of the speed reducer. Slide the key up to the bushing.
4. While raising the pull chain up into a loop, slide the chain wheel (item 15) onto shaft with the keyway in the chain wheel lined up with the square key. Lay the loop of pull chain into the pockets in the chain wheel. Tighten the two set screws (item 16) on the hub of the chain wheel.
5. Install speed reducer oil vent plug and check oil level as shown in the speed reducer owners manual.
6. Prior to initial use, inspect all moving parts and test rotation of chain wheel and saddle assembly. Inspect saddle assembly for proper operation.
7. Perform necessary load test, inspections, operator training, etc.

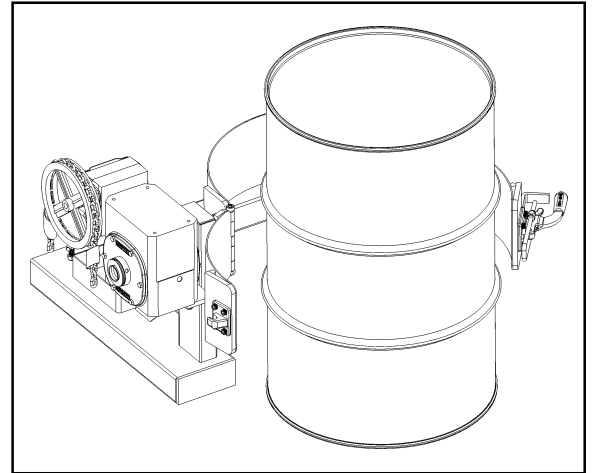
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**Drum Holder Assembly**

The drum holder assembly (or "saddle assembly") is the component on the Forklift-Karrier that is intended to hold the drum. The drum holder assembly is designed to secure a standard ribbed 55-gallon steel drum around its middle. The drum holder accepts Diameter Adaptor model 55/30-19GR for handling a ribbed 19" diameter 30-gallon steel drum.

**Operating Instructions**

1. Before sliding forklift forks into the fork tubes, adjust forks to an inside spread of 24.5" minimum. Lock forks into position on the forklift carriage.
2. Drive the forklift forward to slip the forks into the fork tubes (see item 24). Tighten tee screws (item 25) to secure the Forklift-Karrier to the forks. Transport Forklift-Karrier to drum to be handled.
3. Release the Toggle Clamp (item 7) on the drum holder and allow the saddle bands (items 5 and 12) to remain open.
4. Drive the forklift with the Forklift-Karrier near floor level to position the saddle band (item 2) around the middle of the drum between the ribs (figure 4.1).
5. Secure the drum into the drum holder by closing the saddle bands around the drum and latching the toggle clamp.
6. Remove pull chain (item 29) from chain box on base frame and place end of chain loop near operator's seat.
7. Raise forks to clear the floor and transport drum in **vertical** position to dispensing location.
8. To pour drum: pull on chain (item 29), rotating drum to angle required for dispensing. To control the pouring angle of the drum, pay out one side of chain and pull the other side to prevent the drum from free-wheeling.
9. When dispensing is completed, rotate the drum back to vertical and return drum. While transporting, ensure that the drum is raised away from the floor to prevent the drum bottom from interfering with a pallet or other obstacle.



**Figure 4.1**

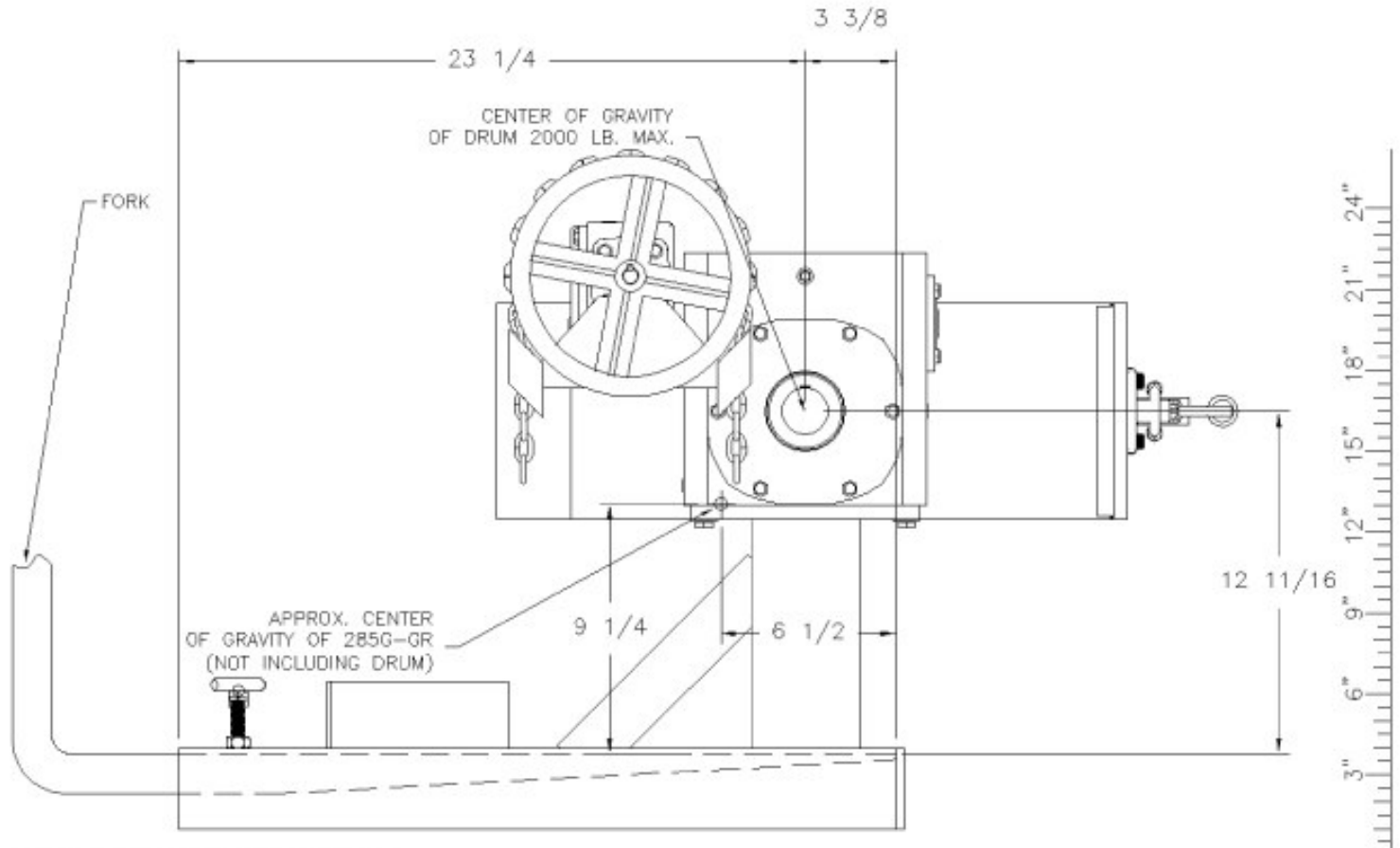
**Maintenance**

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

1. Inspect oil level in speed reducer.
2. Periodically inspect all moving parts, framework, drum holder and contact areas for signs of wear, fatigue, or loosening. Tighten, adjust, or replace parts as necessary to prevent failure and maintain proper function.
3. Oil or grease all moving parts.
4. Worn or damaged parts must be properly replaced with the correct, genuine Morse parts.

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



DIMENSIONS ARE MEASURED FROM INSIDE OF FORK TUBE END. THIS WILL GIVE A FIXED POINT TO WHICH LOST LOAD DATA CAN BE DETERMINED. (FORKS MUST BE TOUCHING THIS FORK TUBE END.)

MODEL  
285G-GR

NET WEIGHT  
268

| OPTION | SUBTRACT FROM MODEL |
|--------|---------------------|
| X02    | -11 LB.             |
| X03    | -9 LB.              |

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| ITEM | QTY. | PART #    | DESCRIPTION  |
|------|------|-----------|--|
| 1    | 1    | 4509CPT-P | SADDLE ASM, G-GR, 195G, 3PC                        |
| 2    | 1    | 4509-P    | SADDLE WELD, G-GR, 195G, 3PC (NOT SOLD SEPERATELY) |
| 3    | 2    | 3592-P    | SHCS, 1/2-13 X 7-1/2                               |
| 4    | 2    | 540-P     | WASHER, 1-1/2 SAE FL 3" OD                         |
| 5    | 1    | 4508-P    | FRONT BAND WELD, CLAMP 3PC GR                      |
| 6    | 2    | 810-P     | NUT, 1/2-13 REV HEX LOCK                           |
| 7 *  | 1    | 4187-P    | TOGGLE CLAMP, W/ U BOLT                            |
| 8    | 1    | 3601-P    | RELEASE LEVER, 2984-P                              |
| 9    | 8    | 22-P      | SHCS, 3/8-24 X 5/8                                 |
| 10   | 1    | 4190-P    | U-BOLT, 7", 375-R CLAMP                            |
| 11   | 1    | 3067-P    | CATCH, 375-R TOGGLE, CAMLOCK                       |
| 12   | 1    | 4510-P    | FRONT BAND WELD, CATCH 3PC GR                      |
| 13   | 1    | 525-P     | KEY, WOODRUFF, SIZE F, ASA1211                     |
| 14 * | 2    | 560-P     | BEARING, 1-1/2" ID X 2", GR                        |
| 15   | 1    | 1322-P    | POCKET CHAIN WHEEL, 5/8 BORE                       |
| 16   | 2    | 1000-P    | SET SCREW, 1/4-20 X 1/4                            |
| 17   | 1    | 1304-P    | GUIDE, POCKET CHAIN WHEEL                          |
| 18   | 1    | 1324-P    | BUSHING, 5/8 ID X 1" OD                            |
| 19   | 1    | 603-P     | SPEED REDUCER, 2 STAGE, 285GR                      |
| 20   | 2    | 1474-P    | WASHER, 3/8 SPLIT LOCK                             |
| 21   | 2    | 535-P     | HHCS, 3/8-16 X 1-1/4 GR5                           |
| 22   | 1    | 570-P     | COLLAR, 1-1/2" ID                                  |
| 23   | 1    | 595-P     | IDLER BEARING ASM, 285GR                           |
| 24   | 1    | 590-P     | BASE FRAME 285GR W/ BRG                            |
| 25   | 2    | 58-P      | SET SCREW, LOCK TEE, 285                           |
| 26   | 2    | 1502-P    | HHCS, 7/16-14 X 1-1/4 GR5                          |
| 27   | 2    | 1166-P    | WASHER, 3/8 USS 1" OD                              |
| 28   | 1    | 1326-P    | KEY, SQUARE, 3/16 X 1"                             |
| 29   | 1    | 3-285-P   | CHAIN, PULL, POCKET 20' LENGTH                     |

\* Recommended spare parts

**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 Fork Lift Karrier.**

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