

### OPERATOR'S MANUAL for 400AM SERIES SPARK RESISTANT HYDRA-LIFT DRUM KARRIERS Serial Number 0688 to 0702

Series	Dispensing Height	Capacity - Full Drum	Capacity - 1/2 Full Drum	Tilt Control
400AM-60	60" 152cm	800Lb. 363kg	500 Lb. 227kg	Hand Crank
400AM-72	72" 183cm	800Lb. 363kg	500 Lb. 227kg	Chain Wheel, Brass Chain
400AM-84	84" 213cm	800Lb. 363kg	500 Lb. 227kg	Chain Wheel, Brass Chain
400AM-96	96" 244cm	750 Lb. 340kg	375 Lb 170kg	Chain Wheel, Brass Chain

The letter A in the model number indicates that the unit is for 55 gallon standard steel drums ( 22-1/2" diameter).

The letter M in the model number indicates that the unit is made with monel spark resistant parts.

Dispensing height is distance from the floor to bottom of drum held horizontally. Tilting the drum below horizontal will reduce this distance.

#### A. 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. Model 400 series Hydra-Lift Karriers have a maximum capacity and size ratings as listed above. **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 make the unit awkward or dangerous to handle.
4. Hydra-Lift Karriers are intended for lifting, moving, and holding drums for tilting, pouring or dumping. Drums may be lifted upright to or from the floor or other suitable surface on dollies, scales, etc.
5. 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.

#### B. OPERATING INSTRUCTIONS:

1. Roll the assembled Hydra-Lift Karrier to the drum.
2. Position the drum holder (Saddle Assembly #49 ) to meet the middle of the drum between its ribs. The cinch chain (#47) can be kept from dragging on the floor by hanging it on the pin at the front of the gear block.
3. Roll forward to mate the drum holder squarely and tightly to the drum. If necessary, turn drum tilt control (#23 or 24) to adjust attitude of the drum holder band to fit flush to the drum.
4. Secure the drum: Drape the cinch chain across the face of the drum and engage a link into the slot on the ratchet (#56). Turn ratchet handle clockwise to tighten the chain. If ratchet turns to the extent that the pawl (#58) is beyond the last ratchet tooth and the chain is not tight, back up and try putting the next link in the slot. The chain should tighten as the ratchet turns and be held tight by the teeth of the ratchet and pawl. See page 4 (#52) for how it might look when it's tight.
5. Pump the lever handle (#5) (or operate the power lift) to raise the drum enough to clear the floor.
6. Move the Hydra-Lift with the drum to the dispensing area. NOTE: DO NOT TRANSPORT WITH A RAISED DRUM. TRANSPORT THE DRUM UPRIGHT AT A HEIGHT CLEAR OF THE FLOOR. DO NOT ALLOW THE DRUM TO IMPACT ON FLOOR, POURING STATION, ETC. OR A SPILL OR DAMAGE COULD OCCUR.
7. Raise the drum (hand pump or power lift) to the desired pouring height. Drum attitude may be adjusted during the lift. (Turn the crank, the chain wheel, or use the power tilt control). This is especially important when lifting an open drum.
8. Use the tilt control to tilt the drum as necessary for pouring or draining, etc.  
NOTE: Before releasing your grip on the two sides of the pull chain loop, "tie-off" the chain by engaging it into the pin at the corner of the overhead assembly (#18), or before releasing your grip on the hand crank (#23), pull out the crank stop pin (#36) to block the crank from spinning freely.
9. The screw-down floor lock may be used if there is a tendency for the unit to roll while in use.
10. To lower the drum, open release valve slowly, a part of a turn. Allow the drum to descend at a controlled rate. The valve may be reclosed to hold the drum at any height.
11. Lower the drum to the floor in an upright position before disconnecting cinch chain to release the drum.

#### C. MAINTENANCE:

1. Grease wheel bearings periodically. Oil or grease all moving parts including: the three clevis pins (#9) and the surfaces of the boom which contact the inside of the mast cap, the hinge pin (#53), the pump handle-socket linkage, the gears and sprockets in the tilt drive, and the ratchet and pawl.
2. Information for hydraulic components is provided on other sheets.
3. Periodically inspect all framework and parts for signs of wear, fatigue or loose hardware, etc. Replace, tighten or adjust as necessary to maintain proper function and prevent failures.

#### D. PARTS INFORMATION

Worn or damaged parts must be properly replaced with correct, genuine Morse parts. See parts list and diagram on pages 2, 3 & 4.

#### PARTS LIST FOR MORSE 400AM SERIES SPARK-RESISTANT HYDRA-LIFT KARRIERS

#### Serial Number 0688 to 0702 (MMYY)

ITEM NUMBER	MODEL LETTER SUFFIX	QUANTITY PER UNIT	PART NUMBER	DESCRIPTION
1		4	1521-P	3/8 - 16 X 3" HHCS GR 5 STL
2		8	1166-P	WASHER, 3/8 USS 1" OD
3		9	1169-P	3/8 - 16 REV HEX LOC NUT
4	60, 72	2	134-P	LEG WELDMENT, 400A-60, 72
4	84	2	134-84-P	LEG WELDMENT, 400A-84
4	96	2	134-96-P	LEG, 400A-96 TYPE
5		1	96CP13-23	HANDLE, LEVER W/ GRIP, STAR
6		8	215-P	5/16 - 18 X 5/8 HHCS GR 2
7		11	491-P	5/16 - 18 REV HEX LOC NUT
8		1	96MK 1939-P	PUMP, HYD, HAND STAR
9		3	138-P	CLEVIS PIN 5/8 X 3"
10		4	1572-P	3/8 - 16 X 1" HHCS GR 2 STL
11		1	765-P	HYD FITTING ELBOW 2103-4-4
12		2	705-P	PUSH-ON HUB CAP, 3/4"
13		2	704-P	AXLE, 3/4", USE WITH PUSH-ON
14		2	87-P	WHEEL, MORTUF, 8", 3/4" BRG
15		2	86-P	CASTER, SWIVEL, 4"
16	60, 72	1	135-P	TOWER WELDMENT, 400A-60, 72
16	84	1	135-84-P	TOWER WELDMENT, 400A-84
16	96	1	135-96-P	TOWER WELDMENT, 400A-96
17	60	1	790-60-P	OVERHEAD WELDMENT, 400A-60
17	72	1	790-72-P	OVERHEAD WELDMENT, 400A-72
17	84	1	790-84-P	OVERHEAD WELDMENT, 400A-84
17	96	1	790-96-P	OVERHEAD WELDMENT, 400A-96
18	60	1	791M-60-P	OVERHEAD ASM CPT, 400AM-60, SR
18	72	1	791M-72-P	OVERHEAD ASM CPT, 400AM-72, SR
18	84	1	791M-84-P	OVERHEAD ASM CPT, 400AM-84, SR
18	96	1	791M-96-P	OVERHEAD ASM CPT, 400AM-96, SR
19		1	766-P	HYD HOSE ASM, 12"
20		7	17-P	WASHER, 5/8 SAE FL 1-5/16 OD
21		3	64-P	ROLL PIN, 3/16 X 1-1/4
22		1	780-P	CYLINDER, 1.5" 400 SERIES
23	60	1	5-P	HAND CRANK, 400, 405
24	72, 84, 96	1	1-P	CHAINWHEEL #1-1/2 W/GUIDE
25			2B-P	1/0 BRASS CHAIN, PER FOOT
26	72	1	2541-P	PULL CHAIN, BRASS 1/0, 7 FT
26	84	1	2542-P	PULL CHAIN, BRASS 1/0, 9 FT
26	96	1	2435-P	PULL CHAIN, BRASS 1/0, 12 FT
27		1	3-P	TRIANGLE & SHAFT W/ BOLTS
28		2	735-P	KEY, WOODRUFF, SIZE 9, ASA606
29		3	35-P	5/16 - 18 X 1 HHCS GR 2

### PARTS LIST FOR MORSE 400AM SERIES SPARK-RESISTANT HYDRA-LIFT KARRIERS

Serial Number 0688 to 0702 (MMYY)

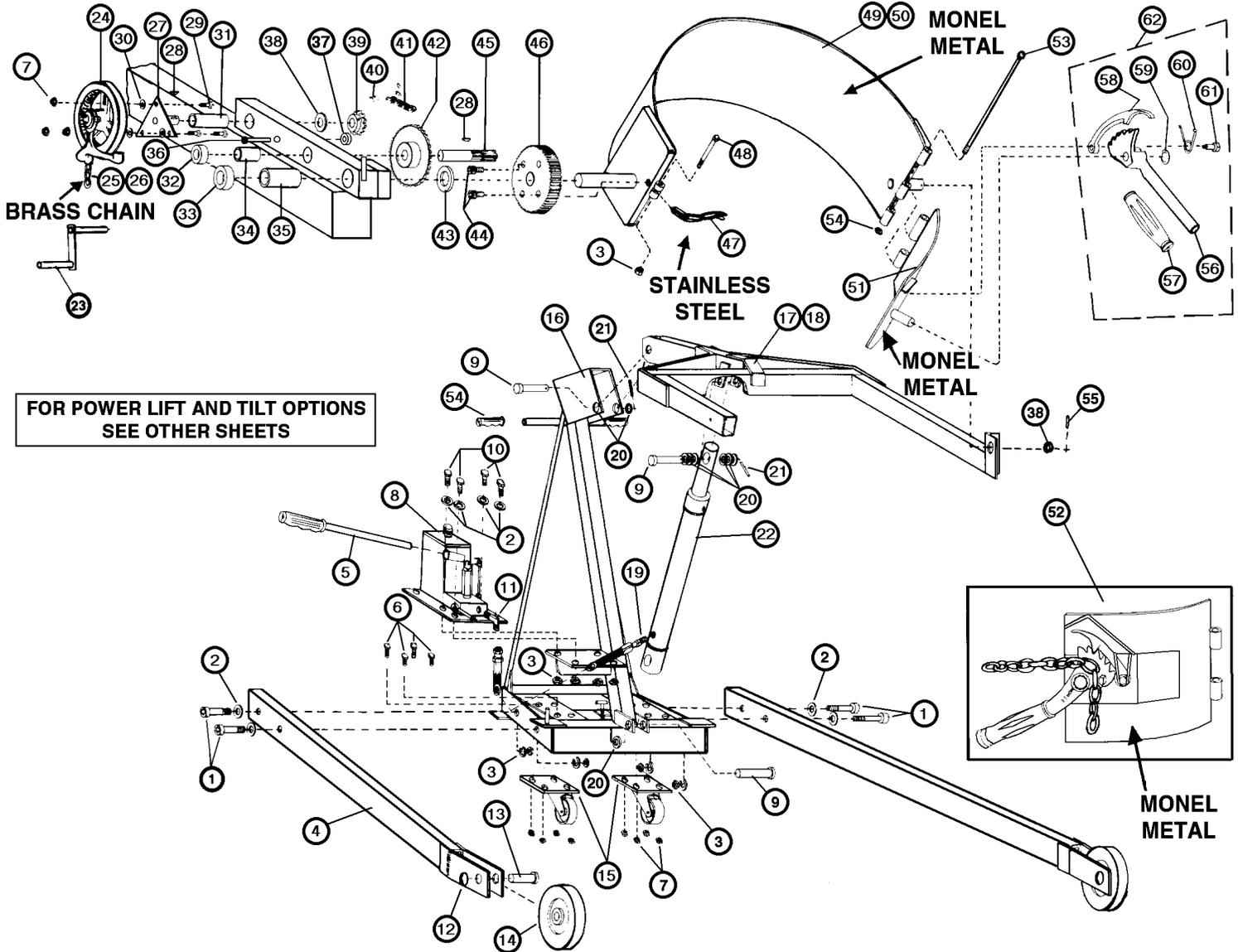
ITEM NUMBER	MODEL LETTER SUFFIX	QUANTITY PER UNIT	PART NUMBER	DESCRIPTION
30		9	1570-P	WASHER, 5/16 USS 7/8 OD
31		1	19-P	BEARING, 3/4" ID X 2-1/2"
32		1	15-P	COLLAR, 3/4" ID
33		1	16-P	COLLAR, 1" ID
34		1	7-P	BEARING, 3/4" ID X 1-1/2"
35		1	18-P	BEARING, 1" ID X 2-1/2"
36	60	1	100-P	STOP PIN, HAND CRANK, 1/2"
37	60	1	718-P	PUSH NUT, 1/2"
38		3	55-P	WASHER, 3/4 SAE FL 1-1/2 OD
39		1	11-P	SPROCKET, #35 12T, 3/4" BORE
40		1	795-P	LINK, MASTER, #35 CHAIN
41		1	12-P	CHAIN, ROLLER, #35 W/ M LINK
42		1	13-P	SPROCKET #35 36T, 3/4" BORE
43		1	29-P	SPACER, SPUR GEAR .15"
44		2	22-P	3/8 - 24 X 5/8" SHCS STL
45		1	14-P	GEAR, PINION, 7 TOOTH
46		1	23-P	GEAR, SPUR, 72T, 1" HOLE
47		1	1287-P	CHAIN, CINCH, 3/16" SS 33 LINK
48		1	82-P	3/8 - 16 X 2-1/4 HHCS GR 2 STL
49		1	725AM-P	SADDLE ASM CPT, 285A-M, SR
50		1	730AM-P	SADDLE WELDMENT, 285A-M, SR
51		1	731M-P	HINGE PLATE ONLY, 1/4" SR
52		1	726M-P	HINGE PLATE CPT, 1/4" SR
53		1	1296-P	1/4 - 20 X 7-1/2 HHCS GR 5 STL
54		1	1297-P	1/4 - 20 REV HEX LOC NUT
55		1	64-P	ROLL PIN, 3/16 X 1-1/4
56		1	165-P	RATCHET, MALLEABLE, FOR SADDLE
57		3	136-P	HANDLE GRIP, 7/8" X 4-3/4"
58		1	168-P	PAWL, WITH DRILLED HOLE
59		1	710-P	RETAINER, RATCHET PUSH ON 3/4"
60		1	169-P	PAWL SPRING
61		1	170-P	3/8" DIA X 5/8" SHOULDER SCREW
62		1	165KIT-P	KIT, RATCHET CHAIN TIGHTENER

**NOTE #1:** "Overhead Assembly Complete" includes the overhead weldment #17, and complete saddle assembly #50, and the tilt gear assembly #23 or #24 with related parts and #31 through 46, etc., all factory assembled.

**NOTE#2:** "Saddle Assembly Complete" includes drum band and appropriate attached moving parts, such as #47, 48 & 52.

**NOTE #3:** Basic models 400AM-60, 72, etc. include hand pump hydraulic lift and manually driven geared tilt as pictured. Motor powered hydraulic lift and powered tilt are available options. Power lift is available for retrofit to replace hand pump lift. Contact your dealer for info.

**PARTS DIAGRAM FOR 400AM SERIES SPARK RESISTANT HYDRA-LIFT KARRIERS**  
 Serial Number 0688 to 0702



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 frame.

#### ASSEMBLY INSTRUCTIONS FOR 400AM SERIES SPARK RESISTANT HYDRA-LIFT KARRIERS Serial Number 0688 to 0702

Please unpack and identify the following parts:

- 1 each Tower with hydraulic pump and cylinder, etc.
- 2 each Legs with wheels
- 1 each Overhead assembly with drum holder, etc.
- 1 each Package with hardware

NOTE: The clevis pins and mating surfaces at their joints should be coated with grease during assembly.

**Step #1:** Place tower on floor, push-handle down. See figure 1.

**Step #2:** Attach each leg using two 3/8-16x3" grade 5 bolts, flat washers, and lock nuts as shown. Wheels should be parallel when assembled properly. See figures 1 & 2.

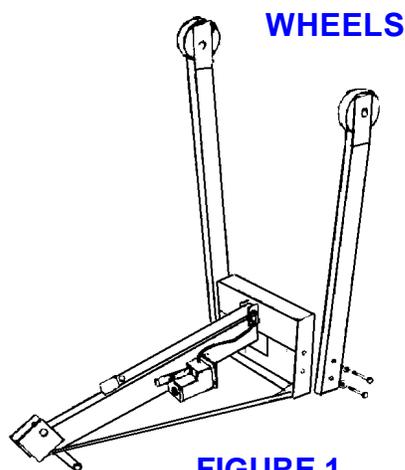


FIGURE 1.

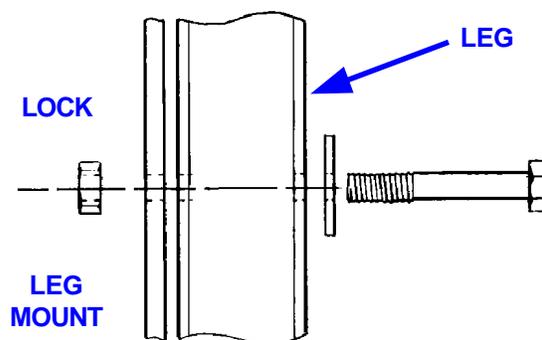


FIGURE 2.

**Step #3:** Tip the tower up so it stands on the casters and wheels.

**Step #4:** Lift overhead assembly into position. A drift pin can help align the holes. Insert a greased clevis pin (Part 138-P) through mast cap and boom. Install a 5/8" washer and 3/16" Sel-Lok pin in the end of the clevis pin. See figure 3.

**Step #5:** Next, connect the jack to the overhead assembly: Align ram eye with holes in boom clevis plates and insert a greased clevis pin with four 5/8" washers. Place another washer on outer end of clevis pin and drive a 3/16" roll pin into the hole at the end of clevis pin. See figure 4.

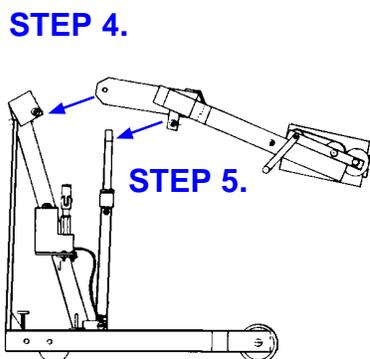


FIGURE 3.

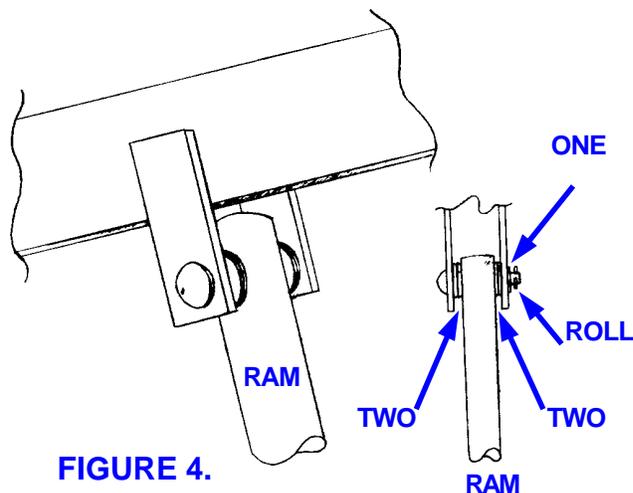


FIGURE 4.

**Step #6:** Remove sealing plug from top of hydraulic reservoir and replace it with the breather plug.

Your Hydra-Lift Karrier is now ready for service. Please refer to the operating and maintenance instructions provided.