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LIFTOMATIC OWNERS MANUAL

LIFTOMATIC "PARROT-BEAK®" DRUM HANDLING EQUIPMENT

FORKLIFT ATTACHMENT MODEL SERIES "DCM" FOR ALL ONE AND TWO DRUM HANDLING ATTACHMENTS

WARNING: Do not install, operate or service this product unless you have read and understand the safety practices, warnings, and operation and service instructions contained in this manual. Failure to follow these guidelines may result in less than efficient drum handling routines. Please consult Liftomatic if you require additional information or if you have questions. (PH: 800.837.6540 or FAX: 847.325.2959 or email: info@liftomatic.com). Thank you very much for your business.

OPERATING & MAINTENANCE INSTRUCTIONS FOR THE LIFTOMATIC MODEL DCM DRUM HANDLING ATTACHMENT

Operating Instructions

To operate the Liftomatic DCM unit, simply slide the forks of the lift-truck into the fork pockets of the DCM attachment. If the operator is using carriage mounted units, remove the forks of the lift-truck, and slide the CM-DCM units into place on the carriage. For all fork-mounted units, the safety chain should be attached to the lift-truck prior to using the attachment(s). If units are equipped with Liftomatic's exclusive Quick-Claw® safety restraint system, slide your forks into the fork pockets and pick the unit off the ground to secure the attachment to the lift-truck. See page #4 for "Quick-Claw®" Operations later in this document for all operations specific to the Quick-Claw.

To operate the DCM, raise the unit slightly off the floor (one or two inches). Center the gold zinc colored heads (or black heads if you are using an older model) on the drums to be picked up, tilt the carriage of the lift-truck slightly forward (approximately two to three degrees), and gently make contact between the clamping heads and the drums. While maintaining contact on the drums with the attachment, raise the carriage of the lift-truck straight up (DO NOT TILT THE FORKS/CARRIAGE BACK).

As the drums are lifted off the ground (or pallet), the operator (from his/her seat on the lift-truck) should verify that all clamping heads have securely engaged each drum (both clamping heads should be parallel with the tops of the drums). If one or both heads are sitting at a severe angle, the drums should be set back down, repositioned, and picked up again. This will provide the operator with a positive, secure clamp on each drum. The drums can then be tilted back for transport.

In order to release the drums, the operator should bring the attachment(s) back to parallel with the ground, and simply reverse the procedures stated above. Once the drums reach the ground, the jaws will automatically "release" and the driver can back away from the drums.

Maintenance Instructions

1. On a <u>daily</u> basis, each operator should check the Liftomatic DCM attachment to verify all fasteners (cotter pins, snap rings, hair pin clips, etc.) are in place. Also, a spot check should be performed to be sure the unit does not have any missing or broken parts (pins, springs, fasteners, etc.). This can be accomplished by spending a minute or two to rotate each head in all directions, as well as depressing the lower jaws to be sure that all parts move properly and spring back into resting position without difficulty.

- 2. Liftomatic attachments are completely mechanical, and require LUBRICATION ON A <u>WEEKLY BASIS</u>. Standard WD-40 or a "light grade oil" are recommended. Spray down the entire head assembly, <u>specifically the jaws, links, and connecting pins inside the inner housings (part number #2097)</u>. Clevises and connecting components (universal body, etc.) should also be lubricated.
 - To ensure that inner components do not collect large amounts of dirt, dust, or chemical particles, the clamping heads should be removed at least once a month (more often in heavy dust/dirt environments), and soaked/scrubbed in a non-acidic based cleaning solution. After cleaning, the unit should be thoroughly lubricated per above directions.
- 3. All DCM's (which come standard with belt cradles) should be inspected to ensure the belt (pad) is in place and properly tightened. Please note that belts loosen during daily use and should be checked prior to each shift. If belts are torn (or beginning to tear), they should be replaced immediately. A broken or badly torn belt provides little or no support to the drum sidewall.
- 4. On a <u>quarterly</u> rotating basis, Liftomatic drum handling attachments should be taken out of service for thorough analysis. This will entail removing the clamping head (Part Number 4006 on the DCM parts list) from the frame, and completely disassembling the head. Each part should be inspected for cracks, breaks, elongating holes (in the links, clevises, etc.), pin and spring wear, as well as missing parts. This process should be performed for each of the clamping heads in use. Any "questionable" parts (as it relates to their integrity) should be replaced as soon as possible. Liftomatic does also offer PM programs for clients that wish to have their drum handling equipment maintained and kept up per factory specification (by the factory). This PM program "Service-PlusTM" is available to all customers in the US.

Liftomatic drum handling attachments do require periodic preventative maintenance. The above schedule should be followed as indicated for the equipment to perform at its fullest potential. A preventative maintenance program will allow your Liftomatic drum handling attachment(s) to lead a long and productive life, ensuring high levels of safety and productivity in all daily drum handling routines. Should you wish, please consult your nearest Liftomatic office or representative to enroll in our "Service-PlusTM" preventative maintenance program today. We look forward to assisting you further. Liftomatic's main headquarters phone is: PH: 800-837-6540. You may visit us on the web as well at: www.liftomatic.com. Email to: sales@liftomatic.com. Thank you!

LIFTOMATIC'S NEW AUTOMATIC SAFETY FORK LOCKING SYSTEM – THE QUICK CLAWTM

This is Liftomatic's newest attachment option for allowing all of your operators to safely pick up and transport your drums – without leaving the seat of the lift truck.

The Quick-Claw[™] is a new fork locking system that engages and locks the forks of the lift-truck inside the fork pocket once it is lifted off the ground. A double "CAM" system rotates and makes contact on the underside of the fork once it is positioned into the fork pocket. Using the weight of the CAM itself, springs, and the force of gravity – your drum handling attachments are locked on the forks during the pick-up, transport, and release process. Operators must slide the forks ALL THE WAY into the fork pockets, and the Quick-Claw[™] system does the rest of the work.

Disengaging is also simple. Once the drums are set down and no longer on the "Parrot-Beak®" clamps, the operator can simply set the attachment down on the ground. We suggest keeping the forks of the forklift parallel to the ground—then drive forward approximately twelve inches. If the cams do not disengage when being set on the ground, the forward movement will fully disengage the cams. Then slide your forks out for the next load to be transported. If the attachment does not release properly, lift the drum handler up off the ground, back up a couple feet and repeat the instructions above. Driving FORWARD is the key to simple disengagement once the cams and unit are set down on the ground.

Using the Quick-Claw system will offer additional safety and efficiency to your drum transportation routines... even without the need to hook up a safety chain. Thank you for your interest in Liftomatic's Quick-Claw™ safety system. If we can assist further, please feel free to contact us at your convenience. Thank you, and happy drumming!

*** YOUR OPERATORS WILL SAVE TIME *** *** AND INCREASE SAFETY & PRODUCTIVITY ***

Change Attachments Quickly Ensures a Secure Load Every Time

Driver Never Leaves the Truck Reduces Possibility of Load Shift

Automatic Engagement Automatic Disengagement

Minimal Maintenance Reduces the Wear on All Forks

Liftomatic Material Handling, Inc. 700 Dartmouth Ln, Buffalo Grove, IL 60089 PH: 800-837-6540 FX: 847-325-2959 info@liftomatic.com www.liftomatic.com

DISASSEMBLY PROCEDURE -- LIFTOMATIC MODEL DCM-BC

I. To remove the clamping mechanism assembly (Part Number 4005, Figures 1-13) from the universal body (Figure 17):

- A. Unfasten two cap screws (Figure 14), and slide out the spacer (Figure 16).
- B. Unfasten the trunnion screw (Figure 18), and then lift out the clamping assembly from within the universal body (Figure 17).

II. To remove the universal body (Part Number 2029, Figure 17) from the clamping ass'y:

- A. Unfasten the cotter pin (Figure 25) from its retaining pin (Figure 24).
- B. Pull or drive the pin (Figure 24) out of the remaining assembly. This will free the universal body.

III. To remove the universal carrier (Part Number 2027, Figure 22):

- A. Unhook and remove the clevis spring (Figure 32) and hook (Figure 27).
- B. Detach cotter pins/snap rings (Figure 31) from one end of the two remaining pins (Figure 30), and pull/drive the pins out. The universal carrier can then be removed.

IV. To remove the slides (Part Number 7007-1, Figure 26), and the clevises (Part Number 2023, Figure 29) from the belt cradle frame:

- A. Unfasten the hairpin clip (Figure 28) off the adjustment pin (Figure 23).
- B. Pull the adjustment pin out and lift the slides/clevises up along the side channel framework until removed from the frame.

V. To take apart the clamping assembly (Part Number 4005, Figure 1-13):

- A. Remove the housing spring (Figure 11) off the inner and outer housings.
- B. Detach cotter pin/snap ring (Figure 13) off pin (figure 12), and pull/drive the pin out. The inner and outer housings (Figures 1 and 2) can now be separated.
- C. Drive out pins (Figures 6 & 9) to remove components inside the inner housing.

VI. To remove the belt cradle frame (Part Number 4019, Figure 35) from the fork adapter slide-on-mounting (on adjustable models only):

A. Pull up and hold the roll pin (figure 34), then slide the belt cradle frame to either side of the slide-on-mounting until removed.

To assemble the above components/assemblies, utilize the reverse procedure as mentioned above.

If additional assistance is needed, please contact Liftomatic Material Handling, Inc. PH: 800-837-6540 or FAX: 847-325-2959. Thank you!

LIFTOMATIC "Parrot-Beak ®" DRUM HANDLING FORKLIFT ATTACHMENT CHECKLIST & POINTERS GUIDE

Similar to any mechanical piece of equipment, Liftomatic drum handling attachments will require periodic review, analysis, and service. The following "checklist" should be followed as indicated in order for the equipment to perform at its fullest potential, as well as to elevate operator and technician(s) awareness per the status of the products.

PRIOR TO EQUIPMENT USE:

Each operator should review status of the "Parrot-Beak®" drum handlers prior to the start of each daily shift. Review of the DCM, DCMJ, FTA (or other fork or carriage mounted Liftomatic models) should include the following points.

- A. Verify that each fork pocket (or carriage/hoist mounting) is in tact with no signs of steel fatigue, broken or stressed welds, missing support struts, safety chain, or bolts, fasteners or cams on the Quick-Claw system.
- B. Check that the vertical belt-cradle frame(s) are positioned in the proper position on the framework carriage bar and locked into place with the carriage locking pin assembly. If pushed or pulled side to side, the vertical frame should remain in place.
- C. Verify that each one (or two) "Parrot-Beak®" drum handler has the protective belting on the belt cradle frame and bolted (tightened) properly into place.
- D. Belts should be properly adjusted for tension. When depressing a belt, the operator should be able to push the belt inward (toward the unit) approximately 3 inches. This allows for the operator to position the "Parrot-Beak®" clamp(s) snuggly against the drum. Note that belts do loosen slightly after usage, thus should be inspected periodically throughout each shift. Clean belts periodically to eliminate dirt transfer.
- E. The Parrot-Beak® clamps also require a visual inspection which should be done prior to each shift. Verify all fasteners (cotter pins, snap rings, hair pin clips, etc.) are in place. A spot-check should be done to ensure the unit is not missing any parts (springs, pins, etc.), as well as verifying that no components have broken. This can be accomplished by rotating each "Parrot-Beak®" clamp in all directions, as well as depressing the lower jaws downward to be sure that they move properly with the upper jaws and spring back into resting position without difficulty or obstruction (DCM/DCMJ/FTA models). If the jaws (or other components) "stick" or do not move smoothly, there may be a problem with the clamp and thus should be investigated further. Additional review of any visible jaw "under-bite" can be reviewed in the service and usage pointers sheet.
- F. A great assistance for all Liftomatic "Parrot-Beak®" clamping assemblies is regular lubrication once a week is an excellent frequency; however, the environment the equipment works within should dictate. In heavy usage, high humidity, caustic, or similar environments, lubricate the equipment more frequently than once a week. Daily lubrication will not harm the equipment.
- G. Each operator should take care to properly engage the safety chain fastening system once sliding the "Parrot-Beak®" drum handler onto the forks of the lift-truck. If the unit is equipped with the Liftomatic "Quick-Claw™" fork locking system, it should be lifted off the ground (without drums) and tested prior to daily use. See Quick-Claw operation on page four of this document.
- H. Wherever possible, all operators should engage and disengage the "Parrot-Beak®" units on test drums (filled with water or other non-hazardous material). Pick up and release the drums several times prior to using the equipment during each shift to verify proper working order.

LIFTOMATIC "Parrot-Beak ®" DRUM HANDLING FORKLIFT ATTACHMENT POINTERS CHECKLIST (continued)

Equipment Service & Usage Pointers:

- ** All model DCM, DCMJ, and FTA units (which do come standard with protective belt cradles) should be inspected to ensure the belt cushion is in place and properly tightened. Please note that belts will loosen with each use and should be checked periodically throughout each daily shift. Further inspection should be made to each side of the belt where it wraps around the belt cradle frame. As belts begin to wear at the edges, they should be replaced to avoid any contact between the frame and the drum(s). A badly worn, or tearing belt, will not provide adequate support for the drum. For sensitive product belts should also be cleaned daily to eliminate dirt or foreign material transfer.
- ** Liftomatic attachments are completely mechanical, and require LUBRICATION ON A WEEKLY BASIS. Standard WD-40 or light grade oil is recommended. Simply spray down the entire head assembly, specifically the jaws, links, connecting pins, linkages, etc. within the inner housing clamping systems. Lubricate the Parrot-Beak heads more often than once a week in heavy usage, high humidity, outdoor environments, caustic rooms, etc. Lubrication should also be an active part of all service and or disassembly routines.
- ** To ensure that inner components do not collect large amounts of dirt, dust, chemical particles, etc., the clamping heads should be removed a minimum of once a quarter (more often in heavy dust/dirt environments), and soaked/scrubbed in a non-acidic (and non-hazardous) based cleaning solution. After cleaning, the unit should be thoroughly lubricated as mentioned in the previous paragraph.
- ** On a quarterly rotating basis, Liftomatic drum handling attachments should be taken out of service and thoroughly inspected for part wear/breakage. This will entail removing the "Parrot-Beak®" clamp from the frame, and complete disassembly of the clamp. Each individual part should be inspected for welding cracks or breaks, missing or broken parts, elongating holes (in the links, inner housings, clevises, etc) as well as pin and spring wear.

Feel free to contact Liftomatic for additional assistance, or if your facility is interested in Liftomatic's "Service-Plus™" designed service program. We would be happy to discuss additional options for your equipment service needs.

Should these items be followed on a regular basis, your Liftomatic drum handling attachments should lead a long and productive lifetime. It is strongly suggested to use only Liftomatic factory certified components. Please consult your nearest Liftomatic office and representative for further assistance (In the USA, *PH: 800.837.6540 or email:* sales@liftomatic.com or on the web: www.liftomatic.com). Thank you very much for your continued patronage to our "Parrot-Beak®" drum handling products.

Sincerely,

LIFTOMATIC MATERIAL HANDLING, INC.

PREVENTATIVE MAINTENANCE PROGRAM BULLETPOINTS FOR LIFTOMATIC "PARROT-BEAK®" DRUM HANDLING EQUIPMENT

"SERVICE-PLUS™"

Liftomatic would like to take a moment and outline our cost saving preventative maintenance program for you. This program (*Service-Plus*TM) has been established to maintain the safety, longevity, and productive characteristics of our "*Parrot-Beak*®" drum handling products while directly reducing your overhead expenditures. Establishing a continuous program with Liftomatic is simple--just give us a call! We will outline the number of products in use, determine the highest usage areas within your plant, and tailor a plan specific to your needs on an annual or semi-annual basis.

<u>Liftomatic's "Service-Plus™" Program Will Include:</u>

- Designating which units and plant areas offer the highest use and drum handling volume.
- Providing (if needed) one complimentary loaner "Parrot-Beak®" attachment (or "Beaks") for the client. This eliminates equipment down time during the repair process. No "rental" fees apply—the customer is responsible for freight only.
- Upgrading each unit to current quality standards including padded belt cradles, heavy-duty belts, and "Weather-Beak™" (heavy-duty coated) components where ever possible.
- Repainting framework for high visibility and protection from chemical corrosion.
 Unit "numbering" also available if desired (see below).
- Establishing new I.D. tags (or a numbering system) for simple product identification in the field.
- A detailed breakdown and analysis of the entire "Parrot-Beak®" clamping system, as well as any other pertinent components (belts, framework, etc.). This will be put in writing and sent to your company's designated employee for review.
- Suggestions will be made to repair or replace parts/assemblies where needed.
- Equipment trade-in allowances are also available in the majority of cases.

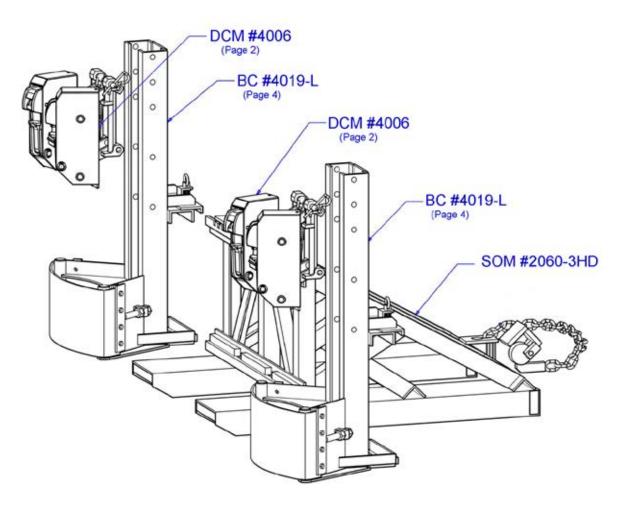
Additional information will be exchanged between your company and Liftomatic before, during, and after the PM program. Many of the important "highlights" are simply outlined above.

Liftomatic looks forward to working with you and increasing your levels of safety and productivity. Feel free to contact us at (PH): **800-837-6540** or **info@liftomatic.com**.

CHOOSE LIFTOMATIC..."TOUGH JOBS DEMAND TOUGH EQUIPMENT!"



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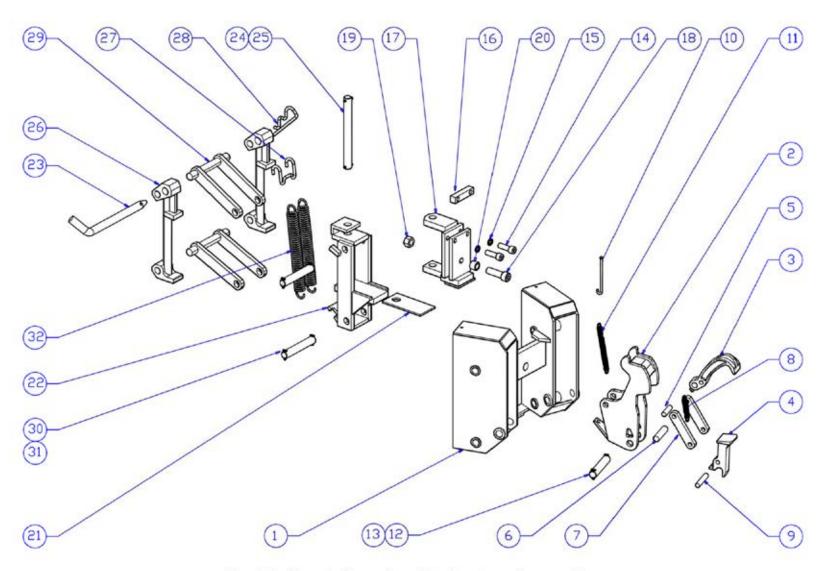


PART LIST FOR 1-DCM-BC-ADJ-SOM

No.	Part Number	Qty	Description
1	4006	1	Double Clamping Mechanism Assembly
2	4019-L	1	Belt Cradle Assembly
3	2060-3HD	1	Slide-On Mounting Frame

PART LIST FOR 2-DCM-BC-ADJ-SOM

No.	Part Number	Qty	Description
1	4006	2	Double Clamping Mechanism Assembly
2	4019-L	2	Belt Cradle Assembly
3	2060-3HD	1	Slide-On Mounting Frame



Double-Head Clamping Mechanism Assembly

DCM Assembly #4006





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PART LIST for DOUBLE CLAMPING MECHANISM DCM #4006

No.	Part Number	Quantity	Description
1	2026	1	OUTER HOUSING (DOUBLE)
2	2097	2	INNER HOUSING `
3	7001	2	UPPER JAW, CLAMP
	7001-SRJ		SPARK-RESISTANT UPPER JAW, CLAMP
4	7015	2	LOWER JAW, CLAMP
	7015-SRJ		SPARK-RESISTANT LOWER JAW, CLAMP
5	14027	2	PIN, LINK TO UPPER JAW
6	16001	2	PIN, UPPER JAW TO HOUSING
7	19007	4	LINK, JAW TO JAW
8	6034	2	SPRING, JAW TO JAW
9	14026	2	PIN, LINK TO LOWER JAW
10	6999	2	HOOK, HOUSING SPRING
11	6022	2	SPRING, HOUSING TO HOUSING
12	16008-1	2	PIN, HOUSING TO HOUSING
13	6006-CP	4	COTTER PIN
14	6101	2	CAP SCREW
15	6077	2	LOCK WASHER
16	43020-1	1	SPACER, UNIVERSAL BODY
17	2029	1	UNIVERSAL BODY
18	6102	1	TRUNNION BOLT
19	6091	1	LOCK NUT (or NUT & WASHER)
20	10001	1	BUSHING, HOUSING YOKE
21	19006-1	1	WEAR PLATE, UNIVERSAL CARRIER
22	2027	1	UNIVERSAL CARRIER
23	16019-1	1	ADJUSTMENT PIN
24	16015-1	1	PIN, UNIVERSAL BODY TO CARRIER
25	6006-CP	1	COTTER PIN
26	7007-1	2	ADJUSTMENT SLIDE
27	6998	1	HOOK, CLEVIS SPRING
28	6107	1	HAIR PIN CLIP, ADJUSTMENT PIN
29	2023	2	CLEVIS
30	16007-1	2	PIN, CLEVIS TO UNIVERSAL CARRIER
31	6006-CP	4	COTTER PIN
32	6024	2	SPRING, CLEVIS



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PART LIST FOR BELT CRADLE ASSEMBLY #4019-L

No.	Part Number	Quantity	Description
1	2094	1	BELT CRADLE FRAME
2	6152	1	ALL PURPOSE COTTON NYLON BELT
	6153		RUBBER BELT
	6158		HEAVY DUTY PVC BELT
	6159-SRJ		SPARK RESISTANT BELT
3	2096	1	CLAMP-ADJUSTING ROD
4	40022-1	2	BELT CLAMP
5	6106	8	HEX HEAD SCREW
6	6092	8	HEX NUT, 5/16-18
7	6093	2	HEX NUT, 5/8-11
8	4081	1	CARRIER LOCK PIN ASSEMBLY

