Manitowoc

MFD-50 CUBE DISPENSER SERVICE MANUAL

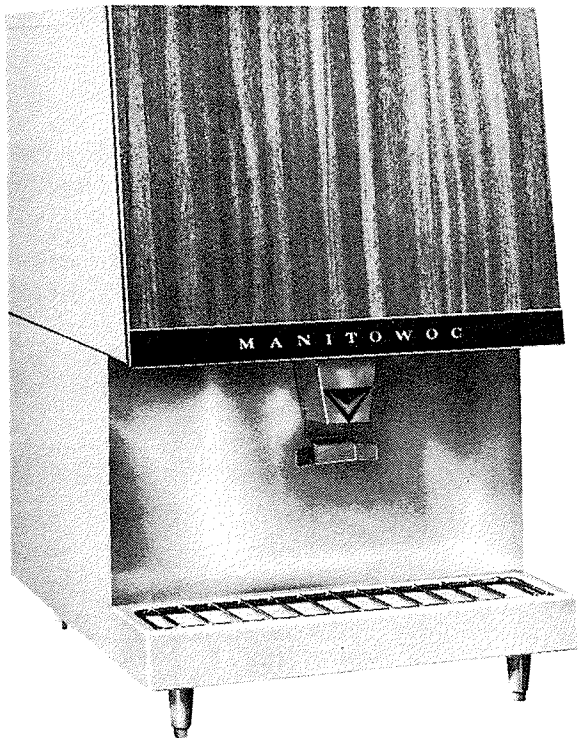


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Manitowoc equipment works MANITOWOC WISCONSIN 54220

Division of The Manitowoc Company, Inc.

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Rev. 12-1-82

CONGRATULATIONS!

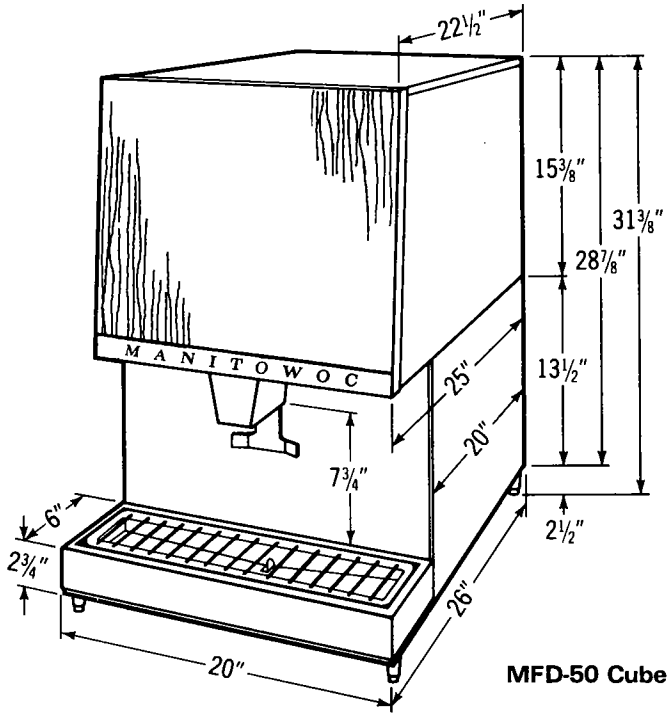
We are pleased that you have selected a Manitowoc ice cuber dispenser. Superior design along with quality materials and workmanship have made Manitowoc the dependability leader in ice producing and dispensing equipment.

PRINCIPLES OF OPERATION

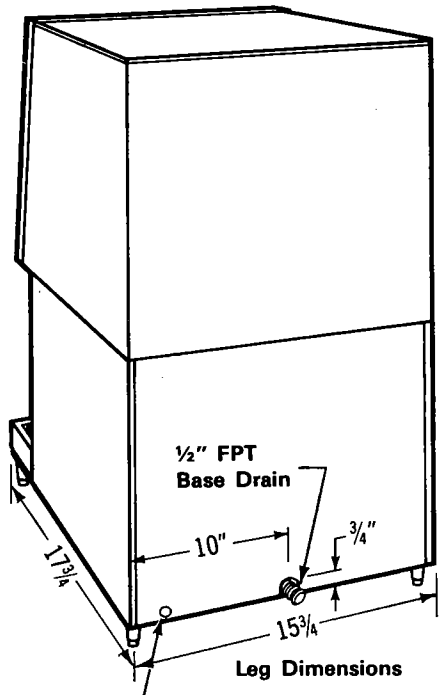
The MFD-50 ice cube dispenser will automatically dispense the Manitowoc 1/2 dice or dice cubes. The dispenser is filled through the top and will hold 50 pounds of dispensable ice. The ice is dispensed out by a 1/5 h.p. permanently lubricated motor and gear box driving the ice delivery arm.

Sanitary ice is automatically dispensed with only one hand operation by lightly pressing a glass or cup against the trigger arm. Releasing the arm will stop the dispenser.

INSTALLATION DIMENSIONS — FIG. 1



MFD-50 Cube Dispenser



Leg Dimensions

Electrical Entrance
(4 Ft. Cord Supplied 60 Cycle Models Only)

FREIGHT DAMAGE AND LOSS INFORMATION

The transportation company, dealer, or contractor who delivers this merchandise is responsible for loss and/or damage. If the transportation company made direct delivery, we suggest you follow the steps outlined below.

A. SHORTAGES
   1. Check number of cartons delivered with the quantity shown on your receipt.
   2. If quantities do not tally, have driver note shortage and file your claim accordingly.

B. VISIBLE DAMAGE
   1. If cartons appear damaged in any way, open the carton and inspect the contents in the driver's presence.
   2. To remove the cuber carton, cut the banding and slide the carton up and off the cuber.
   3. Have the driver note the nature and extent of the damage on the freight bill.
   4. Notify the transportation company's office to inspect the merchandise. Carrier claim rules require inspection within 15 days of delivery.

C. CONCEALED DAMAGE
   1. If damage is noticed later when the ice machine or storage bin is unpacked, notify the transportation company immediately and ask to have an inspection.
   2. Do not destroy packing materials until inspection is completed.
   3. Unless these conditions are met, it is very difficult to have your claim accepted by the transportation company.

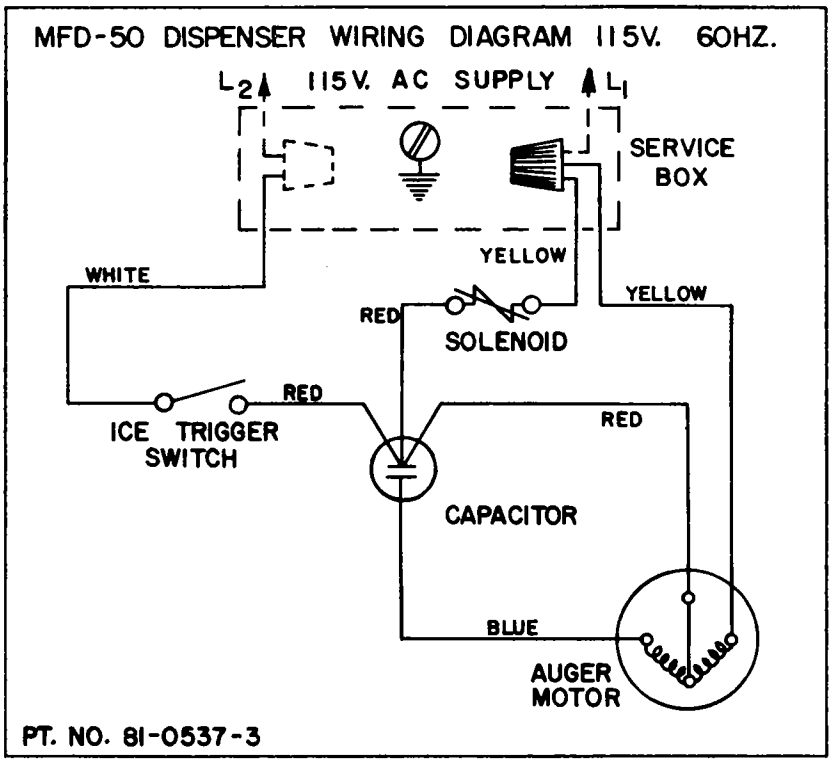
D. FILING CLAIMS

   File claim for loss or damage at once. In your claim with the transportation company, you may elect to:
   1. Make a cash adjustment.
   2. Arrange to have repairs made, or
   3. Replace the merchandise.

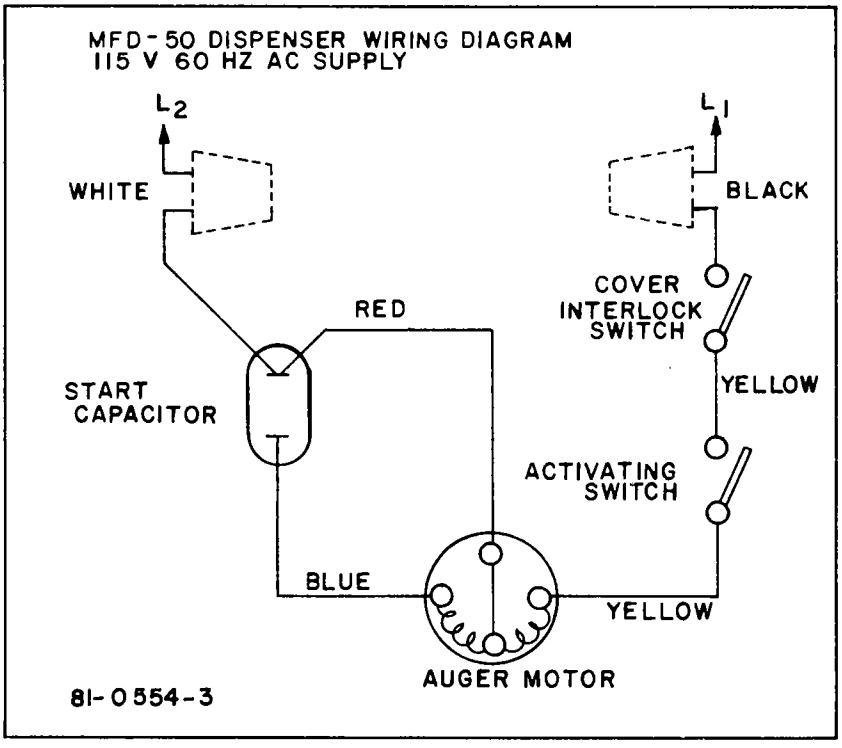
INSTALLATION

Install the four legs provided with the dispenser and set the dispenser in its location. The dispenser should be level to maintain proper drainage out the back side.

— Remove all internal packaging, motor shipping block and tape.
— The ½ inch FPT Drain Fitting is located at the rear, Fig. 1. Use minimum ½" O.D. tubing. The drain line must be pitched downward to an open drain, allowing no traps.
— Pour water into the melting pan to check for proper drainage. Fig. 3, Item 19.
— Electrical supply should be 115 volt, 60 cycle, single phase. Minimum ampacity is 3.0 amps; maximum fuse size is 15 amps. Connect 2 wire cord plus ground through the electrical opening at the back, Fig. 1 for 50 cycle units. 60 cycle units supplied with 4 ft. cord.
— Remove the rear panel to connect 2 wire cord plus ground to the dispenser Fig. 1.
— Before filling the dispenser with ice, check the operation.
   1. Remove the top cover and top front panel. The activating arm should be positioned between the switch lever and the dispenser, Fig. 2.
   2. While tripping the interlock switch with a pencil, depress the ice trigger arm to see that the ice delivery arm rotates and the door assembly open and close properly. Fig. 4, Item 11.
   3. Release interlock switch, dispenser should stop. Check operation with cover in place.
   4. See "Ice Delivery Regulator" setting instructions before replacing top front panel.
— NOTE: Fill out the warranty card and send in to the factory for Warranty Registration.



Early Models with Solenoid Operation



Current Models with Lever Action Dispense

GENERAL OPERATING INSTRUCTIONS

Fill storage bin with ice through the top. Prebagged ice must be completely broken into individual cubes before being placed in dispenser.

NOTE: The top cover must be in place to close interlock switch before dispenser will operate. Fig. 4, Items 11 & 28.

Set glass or container against trigger arm to dispense and release trigger arm to end dispense.

WARNING — USE ONLY MANITOWOC

DICE OR HALF DICE ICE CUBES

Ice Fill Cycle*	
Serving Size In Ounces	Number of People Served
2 oz.	400
4 oz.	200
6 oz.	134
8 oz.	100

*Based on 50 pound bin fill.

CLEANING INSTRUCTIONS

1. Use a mild non-toxic detergent and warm water solution to clean inside of bin and external surfaces of dispenser.
2. Remove front panel to gain access to dispensing parts secured by thumbscrews. Use ice machine cleaner if lime scale deposits cannot be removed with mild detergents. Use 3 oz. of ice machine cleaner to each gallon of water.*
3. Sanitize components by rinsing with a solution of 4 oz. of household bleach, per gallon of water.

*Use only Nickel-Safe or Lime-A-Way brand approved cleaners.

WARNING: Do not use metal scrapers or abrasives on the bin liner as they will destroy the smooth surface.

SETTING ICE DELIVERY REGULATOR

Manitowoc's exclusive Ice Delivery Regulator can be set to vary the dispensing rate to fill various types of glasses or cups. This will minimize ice spillage and make it easier to fill glasses or cups with small openings.

Set the regulator for the smallest glass or cup that will be used, by placing the regulator thumb screw in one of the five settings. Fig 2. Align the top edge of the ice delivery regulator with the letter setting for desired dispensing rate.

Setting	Dispensing Rate	Setting	Dispensing Rate
A	½ oz./sec.	D	1¾ oz./sec.
B	¾ oz./sec.	E	2½ oz./sec.
C	1¼ oz./sec.		

With Ice Delivery Regulator removed 4 oz./sec. half dice ice or 3 oz./sec. dice ice.

NOTES:

1. When dispenser is used in customer self-service application, the dispensing rate should be at position "A" to minimize ice spillage.
2. When desired flow rate is established mark position on the label so parts will be reassembled correctly.
3. If ice jams in the chute when using dice size cubes, reduce dispensing rate.

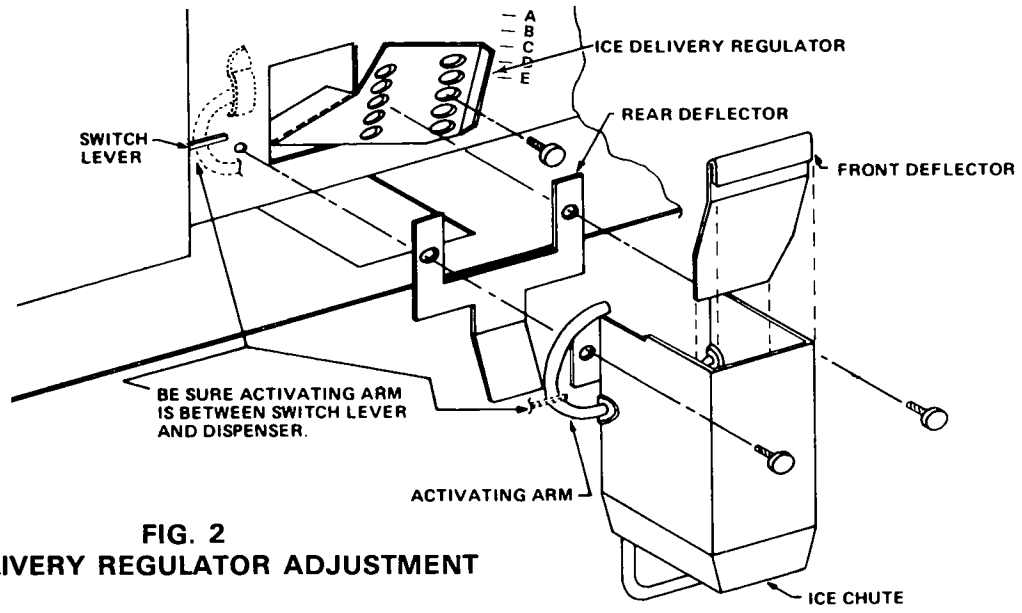


FIG. 2
ICE DELIVERY REGULATOR ADJUSTMENT

SERVICE DIAGNOSIS

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE MEASURE
Dispenser will not operate	Power off	Check fuse and wiring.
	Top Cover Removed	Replace cover so interlock switch is closed Fig. 4, Item 29.
	Defective ice trigger switch or interlock switch	Check switch and replace if necessary, see note.
	Drive motor run capacitor defective	Check capacitor and replace if necessary, see note.
	Drive motor defective	Check drive motor and replace if necessary, see note.
Dispenser running but will not deliver ice	Bin empty	Fill bin.
	Ice jamming in chute	Use Manitowoc ½ dice or dice cubes only. If using dice cubes, reduce flow rate
	Using prebagged ice	Break ice into individual cubes before placing in dispenser.
	Solenoid defective	Check solenoid and replace if necessary (remove upper front cover, Fig. 3).
	Linkage between solenoid and ice delivery door broken or out of adjustment	Check, repair or replace if necessary (see Fig. 2).
Ice dispensing continuously	Stuck dispensing micro switch behind trigger lever	Check and replace if necessary. Fig. 3 or 4.

NOTE: The run capacitor, drive unit and the micro switch can be serviced by removing the rear panel and/or the front panel. The lower ice chute, Fig. 3, Item 9, must be removed before the front panel is removed. On current models with Lever Action Dispense the activating micro switch can be serviced by removing the upper front panel and switch cover. Fig. 4.

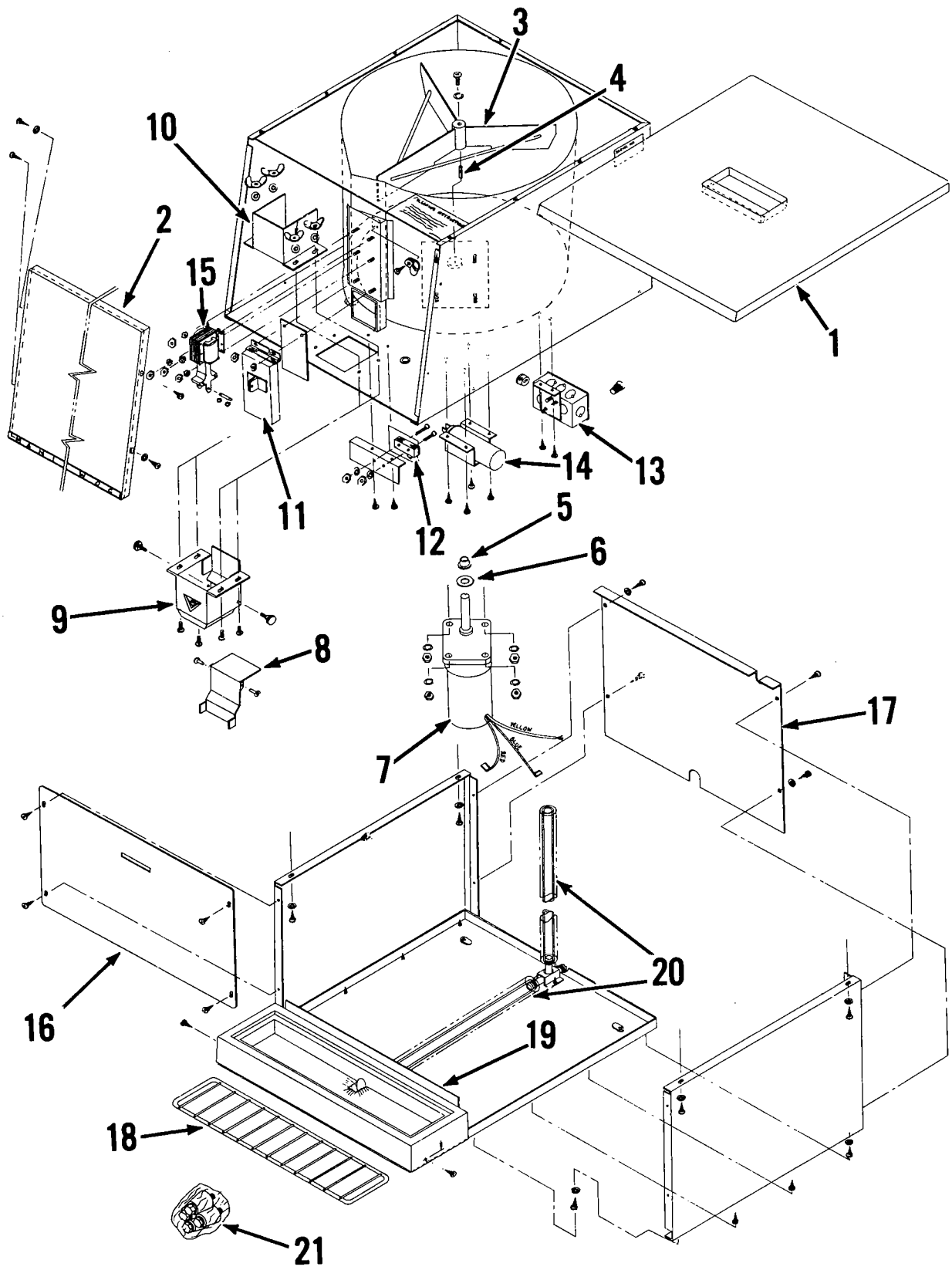
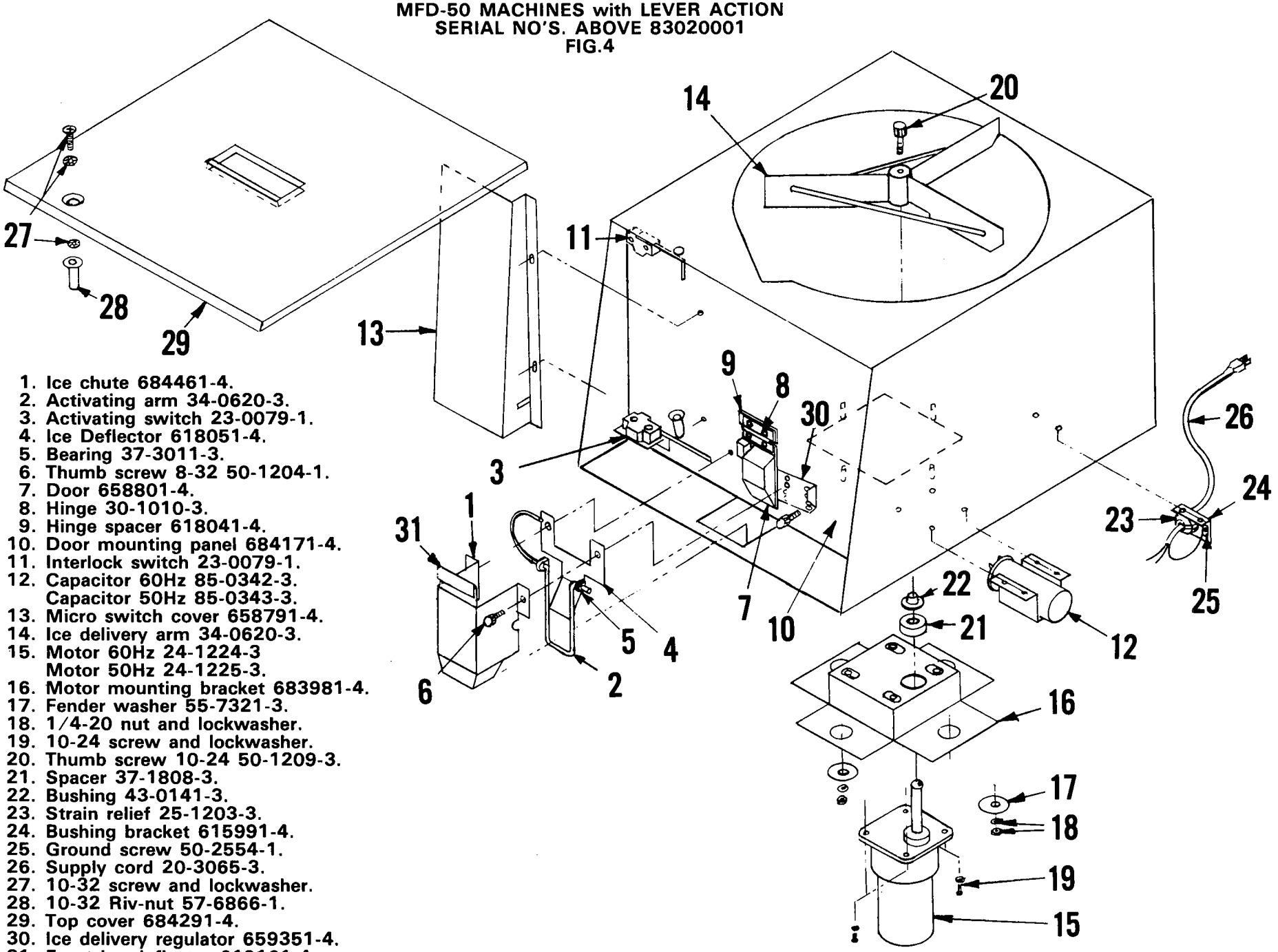


FIG. 3 EARLY MODELS with SOLENOID OPERATION

1. Top cover.
2. Upper front cover.
3. Ice delivery arm (Agitator).
4. Key stock.
5. Bushing.
6. Rubber washer.
7. Drive motor.
8. Trigger arm.
9. Lower ice chute.
10. Upper ice chute.
11. Door, ice delivery.
12. Micro switch.
13. Electrical supply box.
14. Run capacity.
15. Solenoid.
16. Lower front panel.
17. Lower back panel.
18. Wire grill.
19. Melting tray.
20. Drain tubing.
21. 4" legs.

MFD-50 MACHINES with LEVER ACTION
SERIAL NO'S. ABOVE 83020001
FIG.4



1. Ice chute 684461-4.
2. Activating arm 34-0620-3.
3. Activating switch 23-0079-1.
4. Ice Deflector 618051-4.
5. Bearing 37-3011-3.
6. Thumb screw 8-32 50-1204-1.
7. Door 658801-4.
8. Hinge 30-1010-3.
9. Hinge spacer 618041-4.
10. Door mounting panel 684171-4.
11. Interlock switch 23-0079-1.
12. Capacitor 60Hz 85-0342-3.
    Capacitor 50Hz 85-0343-3.
13. Micro switch cover 658791-4.
14. Ice delivery arm 34-0620-3.
15. Motor 60Hz 24-1224-3
    Motor 50Hz 24-1225-3.
16. Motor mounting bracket 683981-4.
17. Fender washer 55-7321-3.
18. 1/4-20 nut and lockwasher.
19. 10-24 screw and lockwasher.
20. Thumb screw 10-24 50-1209-3.
21. Spacer 37-1808-3.
22. Bushing 43-0141-3.
23. Strain relief 25-1203-3.
24. Bushing bracket 615991-4.
25. Ground screw 50-2554-1.
26. Supply cord 20-3065-3.
27. 10-32 screw and lockwasher.
28. 10-32 Riv-nut 57-6866-1.
29. Top cover 684291-4.
30. Ice delivery regulator 659351-4.
31. Front ice deflector 619161-4.

Ice Machine and Bin Warranty

From the date of original installation, we do hereby warrant each new Ice Machine and Bin to be free from defects in material and workmanship, under normal use and service, for a period of one year, and four additional years on the hermetic motor compressor in the Ice Machine.

Our obligation under this warranty is limited solely to correcting or replacing without charge at the factory in Manitowoc, Wisconsin any part or parts of this equipment which shall have been returned, transportation prepaid, and which our examination discloses to our satisfaction to be defective.

This warranty does not apply to any equipment that has been damaged by flood, fire, or suffered abuse, misuse, neglect or accident, or to any Ice Machine which has been altered so as to affect performance or reliability, except where such alteration has been accomplished with our prior written consent.

We further limit this warranty in that we shall not be held liable under this contract for any special, indirect, or consequential damages whatsoever resulting from any defect in material and workmanship which interferes with the normal use and service of such Ice Machine and Bin.

This warranty is a complete and exclusive statement of all terms of the agreement between the Manitowoc Equipment Works and the owner of the equipment, and all representations of the parties. This agreement shall not be varied, supplemented, qualified or interpreted by any prior course of dealing between the parties or by any usage of the trade.

Sales are made on the express understanding that there are no express or implied warranties other than the express warranty herein contained and that there are no implied warranties that the goods shall be merchantable or fit for a particular purpose other than the expressed one year and five year warranty set forth above.

To validate this warranty, the registration card must be signed on the date of installation and mailed promptly to the Manitowoc Equipment Works, Manitowoc, Wisconsin.

DEALER _____

_____

_____

INSTALLATION DATE _____

MANITOWOC EQUIPMENT WORKS
(A division of The Manitowoc Co., Inc.)
2110 South 26th St., Ph: 414-682-0161
Manitowoc, Wisconsin 54220

Form 80-0055-3
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