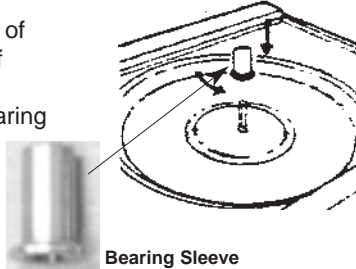


## Assembly

### 1 PLACE BEARING SLEEVE ON GUIDE PIN

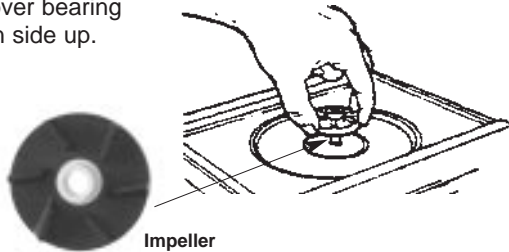
Note flat sides on outside of guide pin and on inside of bearing sleeve.  
Line flat sides up until bearing sleeve slides down over guide pin and rests on the cooling plate.



Bearing Sleeve

### 2 PLACE IMPELLER OVER BEARING SLEEVE.

Put impeller over bearing sleeve with fin side up.

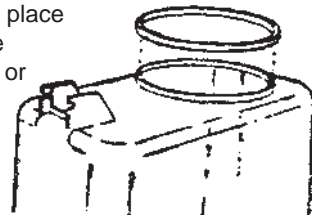


Impeller

### 3 PLACE BOWL GASKET ON BOWL

Turn bowl upside down and place bowl gasket over the neck of the bowl. Moisten gasket with water or thin film of lubricant.

NOTE: On D112 units place bowl gasket around cooling dome.



### 4 PUT BOWL ON BASE

Place the neck of the bowl over center of the cooling plate and with a back and forth downward motion, push bowl down into place.

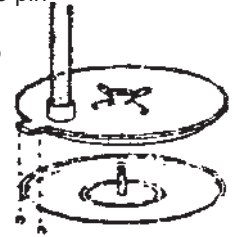
NOTE: On D112 units, place bowl over the gasket and cooling dome with the neck of the bowl centered on the cooling dome.



### 5 PLACE PUMP COVER OVER GUIDE PIN

Place the pump cover over the guide pin with the spray tube toward the front.

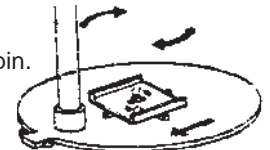
Note that the tab on the front of the pump cover fits between the 2 locator buttons or ridges on the bowl. Mini units - bent part of spray tube faces front of bowl.  
NOTE: Use agitator cover in place of pump cover and spray tube for fresh juice, drinks that foam (iced tea or dairy products), or heavy viscous drinks.



### 6 INSTALL LOCKDOWN WASHER OR CLAMPS

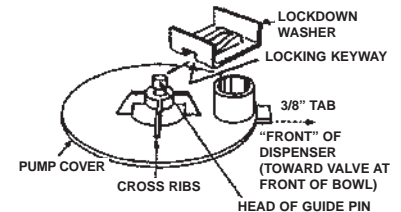
#### Standard Units:

- Place lockdown washer over guide pin.
- Push lockdown washer down and into locking keyway.
- Turn lockdown washer clockwise to lock into place.



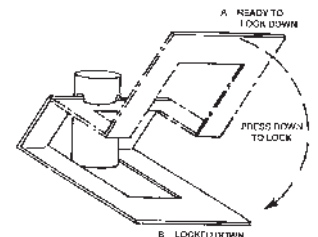
#### Mini Units:

- Place lockdown washer over guide pin.
- Push lockdown washer down and into locking keyway.
- Slide into locked position.



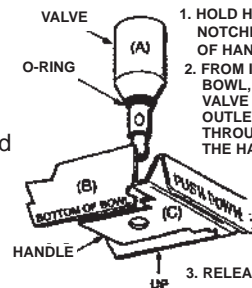
#### D112 Superbowl Units:

- Insert each lockdown clamp in a lockdown pin and snap down into place. (Lock down 2 clamps closest to the front of the bowl first.)



### 7 ASSEMBLE VALVE AND HANDLE

Place handle (C) in the two V-cuts in the front of the handle bracket (B) and push handle back. From inside bowl, lower the valve (A) through the outlet hole, and through the hole in the handle. Release handle.



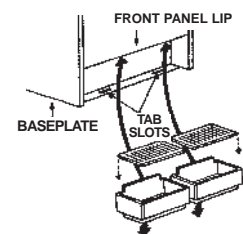
- HOLD HANDLE IN "V" NOTCHES & LIFT REAR OF HANDLE UP.
- FROM INSIDE THE BOWL, LOWER THE VALVE THROUGH OUTLET HOLE, AND THROUGH HOLE IN THE HANDLE.

3. RELEASE HANDLE

### 8 REPLACE DRIP PAN(S)

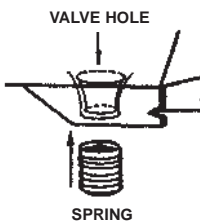
Place cover/grid on drip pan. Place top edge of drip pan up under lip on front panel. Lower each drip pan so that the tab goes down into the tab slot and locks pan in place.

Regular units proceed to step 15.  
Whipper units proceed to step 9.

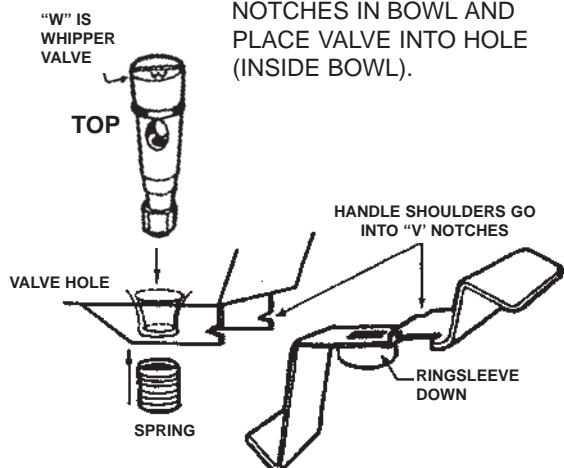


## Assembly (cont.)

**9 (WHIPPER UNITS ONLY)**  
 PRESS SPRING UP INTO VALVE HOLE  
 PLACE AGAINST THE BOTTOM  
 OF THE BOWL.

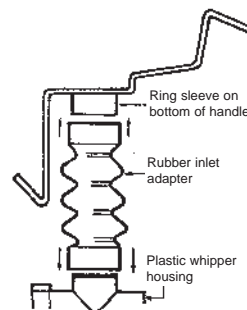


**10 (WHIPPER UNITS ONLY)**  
 INSERT HANDLE INTO "V"  
 NOTCHES IN BOWL AND  
 PLACE VALVE INTO HOLE  
 (INSIDE BOWL).

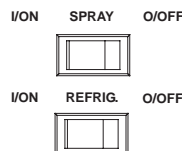


**14 (WHIPPER UNITS ONLY)**  
 ASSEMBLE THE  
 RUBBER INLET ADAPTER

Assemble white rubber inlet adapter by stretching one end over the large tubular inlet on top of the whipper housing. Attach the other end over the ring sleeve on the underside of the handle.

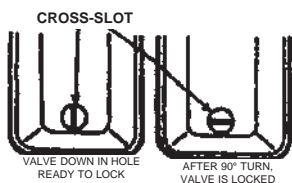


**15** FILL BOWL(S) WITH PRODUCT  
 and place lid(s) on bowl(s).  
 Turn spray switch on first then refrigeration.



**IMPORTANT: NEVER RUN REFRIGERATION UNLESS  
 SPRAY OR AGITATE IS ON.**

**11 (WHIPPER UNITS ONLY)**  
 TURN VALVE 90° TO  
 LOCK.  
 Cross slot (located on top  
 of valve) should run left to  
 right across the bowl when  
 locked.



**12 (WHIPPER UNITS ONLY)**  
 PUSH WHIPPER BLADE  
 INTO PLACE.  
 Replace the whipper blade by  
 lining up the flat inside the blade  
 with the flat side of the motor  
 shaft. Push blade firmly into  
 place.



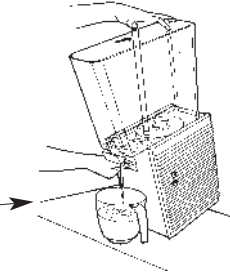
**13 (WHIPPER UNITS ONLY)**  
 REPLACE WHIPPER CHAMBER  
 Replace whipper chamber by  
 positioning the medium-sized  
 opening up and tilting 1/8 turn to the  
 right. Put whipper chamber over  
 whipper blade and turn to the left  
 until it locks into place.



## DISASSEMBLY

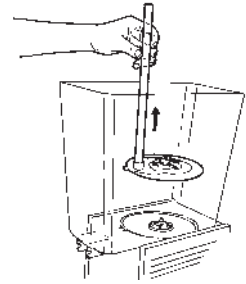
### 1 DRAIN ALL BEVERAGE FROM BOWLS

- A. Remove bowl lid(s) and drip tray(s)
- B. Drain through valve then
- C. Tip unit forward, gently press spray tube back a short distance to lift the edge of the pump cover to allow remaining beverage in well to be drained through valve.



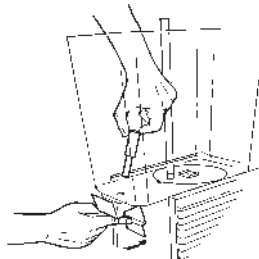
### 4 REMOVE PUMP COVER

Remove pump cover by lifting up on spray tube.



### 2a.

**STANDARD & MINI UNITS:**  
REMOVE VALVE AND HANDLE  
Lift valve. Handle drops into operator's other hand.

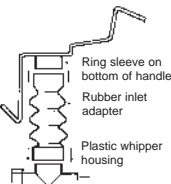


### 2b.

**WHIPPER UNITS:**

• **DISASSEMBLE THE RUBBER INLET ADAPTER**

Remove one end from the large tubular inlet on top of the whipper housing and the other end from the ring sleeve on the underside of the handle.



• **REMOVE WHIPPER CHAMBER**

Turn whipper chamber to the right until it releases and you can pull it off of the whipper blade.



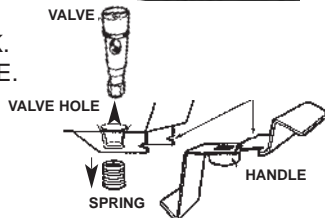
• **REMOVE WHIPPER BLADE**

Pull whipper blade off of the motor shaft.



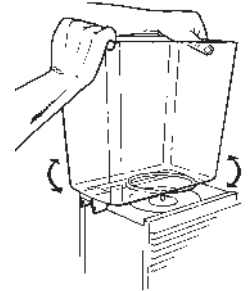
• **TURN VALVE 90° TO UNLOCK. REMOVE HANDLE AND VALVE.**

• **REMOVE SPRING FROM BOTTOM OF BOWL.**



### 5 REMOVE BOWL AND BOWL GASKET

Twist bowl back and forth while lifting up. Bowl gasket will be around bottom of bowl.

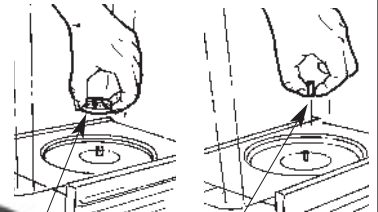


**NOTE:** On D112 units, bowl gasket will be around cooling dome.

### 6 REMOVE IMPELLER AND BEARING SLEEVE

Remove impeller and bearing sleeve by lifting them straight up.

**NOTE:** Check impeller and bearing sleeves for wear.  
See page 5.



Impeller



Bearing Sleeve

### 7 THOROUGHLY CLEAN ALL PARTS IN WARM WATER USING A MILD NON-ABRASIVE DETERGENT AND RINSE THOROUGHLY.

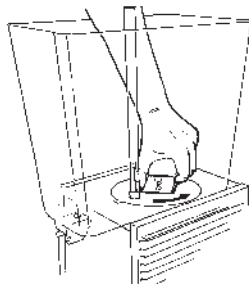
**CAUTION:** ABRASIVES WILL SCRATCH PLASTIC PARTS. WASH BOWL LIDS IN COOL OR LUKEWARM WATER TO AVOID LEAKS DUE TO SEALED SURFACE BEING DAMAGED.

### 3 REMOVE LOCKDOWN WASHER(S)

Standard Unit: Twist lockdown washer counterclockwise, slide to release keyway. Then lift out.

Mini Unit: Slide to release keyway, then lift out.

D112 Unit: Release each clamp.



### SANITIZE

Immerse parts in sanitizing solution for 1-2 minutes. Remove parts from sanitizing solution and drain. **DO NOT RINSE.** Place parts on a clean surface to air dry. Wipe the machine, condensate tray and cooling plate depression with a cloth wetted with sanitizer solution.

**IMPORTANT:** Never pour dry powder, crystals, or concentrate into a dry bowl. Premixing beverage in separate container is recommended. If mixing in bowl, always add water first.

# ROUTINE MAINTENANCE: For all Models

## Cleaning Your Dispenser

To optimize performance or when using dairy products, clean unit daily.

Regular cleaning of bowl components will result in maximum pumping efficiency, proper seating and sealing, and prevention of leaks at the valve O-Ring and bowl gasket by removing dried-on beverage solids and pulp from moving sealed parts.

1. Wash all bowl components regularly. Follow all local health codes.

\* Refer to Disassembly, Cleaning, and Assembly instructions on pages 1-3.

## Sanitizing Your Dispenser

\* Refer to Disassembly and Assembly instructions on pages 1-3.

1. In the bowl, mix one gallon of Oxford Chemical's Disinfectant/Sanitizer Formula C or its equivalent.
2. Turn on spray motor(s) and allow sanitizer to spray around inside of bowl for a period of time as recommended by the sanitizer manufacturer. Formula C is satisfactory for this purpose when mixed in a solution of 1 liquid ounce of cleaner to 4 gallons of water. Run spray motor(s) for 60 seconds. In areas with extreme hard water, consult the local health authority.
3. Drain sanitizer **completely** and **thoroughly** during each step of the cleaning process (wash, rinse, and sanitize). Refer to tips on draining in Disassembly Guide on page 3.

# HELPFUL HINTS

1. **Noisy Impeller:** Do not run impeller dry. The impeller will make a chattering sound in an empty bowl. Remove the impeller and run a small amount of water in the bowl.
2. **Valve and O-Ring:** On the first installation, if there is an after-drip, place your hand on the valve and with a slight downward pressure turn it slightly. This will help seat the o-ring so that it is properly aligned with the valve seat. If an o-ring becomes cut or worn it should be replaced. If you are pumping a product which has excessive pulp, a separate valve weight may be purchased to add extra weight so the o-ring will press down against the pulp and guarantee a positive shut-off.
3. **Valve Cap Use:** The Valve Cap (Part # 2039) insures that a tight valve seal will occur with products containing heavy pulp. The Valve Cap can be installed by placing it on top of the Valve after the Valve has been assembled into the bowl. See Figure A.
4. **High Water Marks on Bowl:** When you agitate, you may get "high water marks" as the beverage level drops. Keep the bowl as full as possible. Frosted bowls are available which are helpful in reducing the appearance of water marks.
5. **To Spray or Not to Spray:** Most beverages can be sprayed. It is best not to spray iced tea, iced coffee, natural juices, or beverages that foam (whipped drinks). A special agitator plate is used in place of a pump cover and spray tube to promote circulation.
6. **Proper Cooling:** Always keep spray switch on when refrigeration switch is on. A unit must spray or agitate to cool. Failure to do this will cause impeller to lock-up. The dispenser is designed to run 24 hours a day. Keep both spray and agitate on when beverage is in the bowls.
7. **Condensation:** Condensation on the bowls and lids is natural, cool, and refreshing. The amount of condensation is affected by humidity. Condensation will run down the front panel into the drip tray. Remember to occasionally empty the drip trays.
8. **Single Bowl Operation:** If you find it necessary to run your dispenser with only one bowl containing beverage, put one half (1/2) cup of water in the unused cooling plate depression(s) for best one-bowl operation and efficiency.

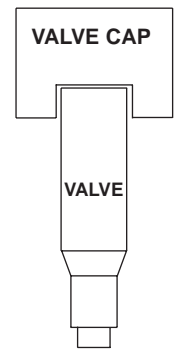


Figure A

# PREVENTATIVE MAINTENANCE

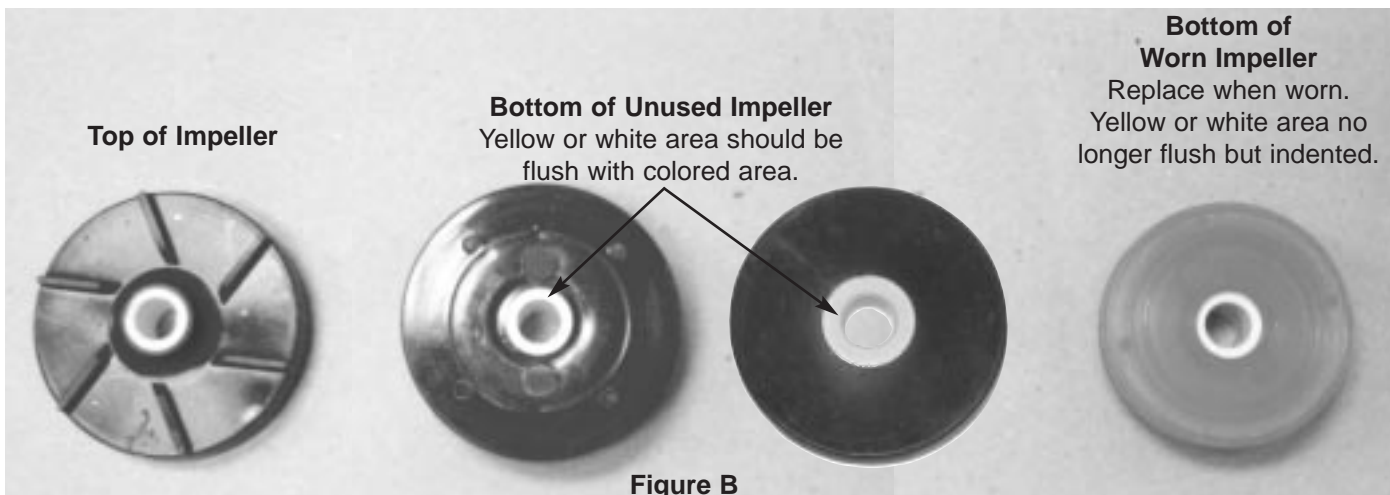




Figure B

- 1) Wash all bowl components regularly.
- 2) Wash impeller and bearing sleeve individually and check for wear.
  - a) Check for wear on bearing sleeve (flange should be 1.77mm thick - thickness of penny or quarter). (Figure C)
  - b) Check for wear on impeller (inner white center section should be flush with colored part of impeller). (Figure B)
  - c) If bearing sleeve or impeller do not spin freely or are worn - replace them. (Figure F)
  - d) Worn parts can cause personal injury, impair cooling and can damage machine. (Figure D & E)
- 3) Check valve o-rings and bowl gaskets for wear or damage - replace every 6 months or as needed.
- 4) Every 6 months or more often if needed: unplug unit, remove panels, clean condenser and interior. (Remove dust and lint from fins with a soft brush and vacuum.)
- 5) For further information, visit [www.grindmaster.com](http://www.grindmaster.com) or call (800) 695-4500.



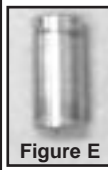
New bearing sleeve

flange (approx. 1.77mm - thickness of penny or quarter)



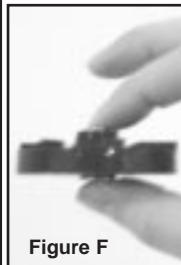
Worn bearing sleeve (replace when worn to approx. 1mm or 1/2 thickness of penny or quarter).

worn flange



Bearing sleeve with flange missing is extremely worn. Discard immediately.

**CAUTION:** Handle with care. Sharp edges may cause personal injury or damage to machine.



Bearing sleeve and impeller should spin freely when held like this. If parts do not spin freely or are worn, unit will not cool properly and worn parts may damage machine.

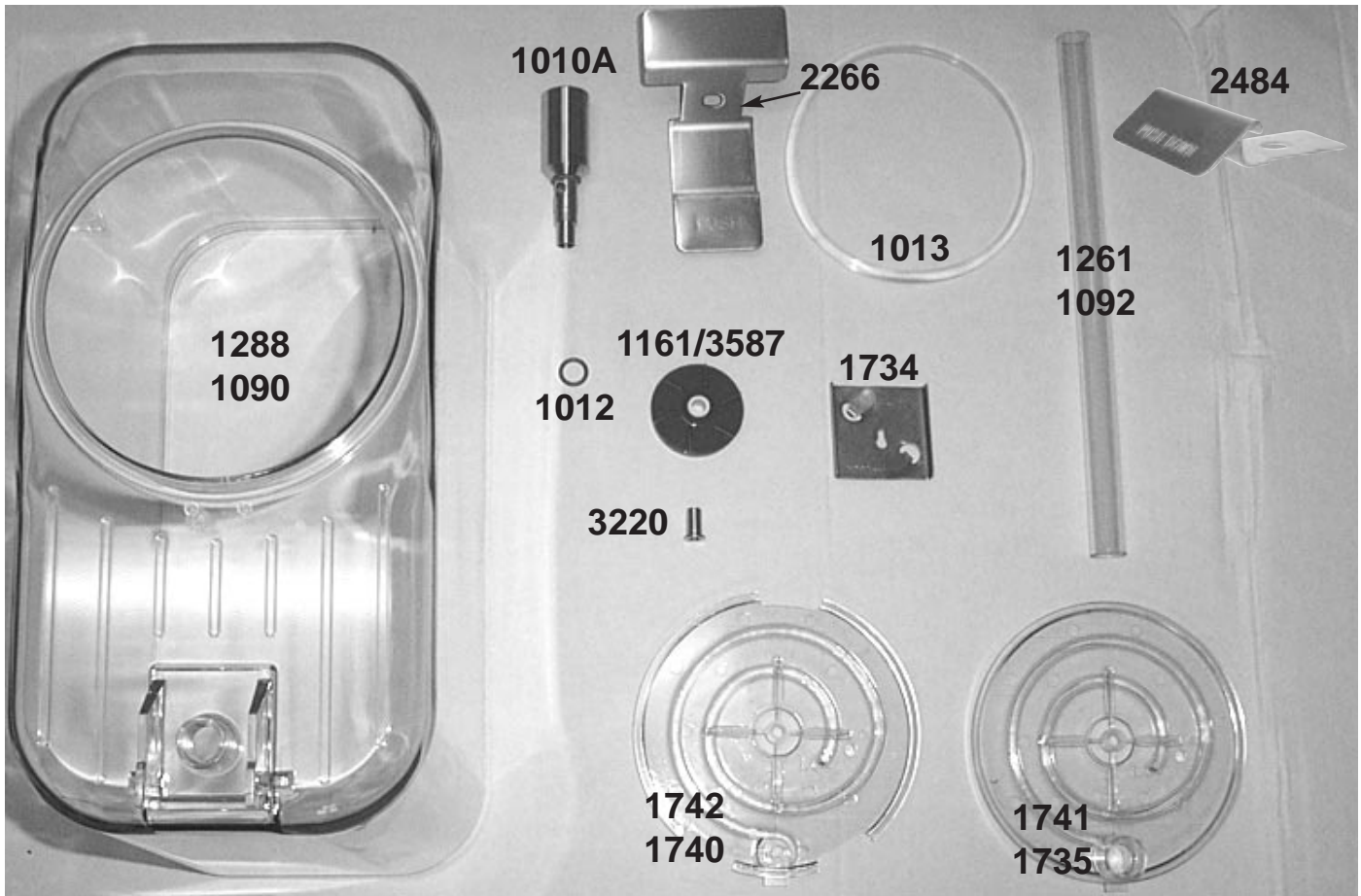
Part #s for Preventative Maintenance	
Description	Part #
Bearing Sleeve (all units except D112)	3220
Large Blue Impeller (D & WD model)	1161
Small Red Impeller (E model)	1008
Universal Impeller (all models)	3587
Valve O-ring	1012
Bowl Gasket - for D, WD models 5 gallon (or 3 gallon) bowl	1013
Bowl Gasket for E model and/or 9 liter bowl	2010
Bowl Gasket for 12 gallon SuperBowls (D112)	1150
Bearing Sleeve for 12 gallon Super Bowl (D112)	1983



Universal Impeller (Part # 3587)

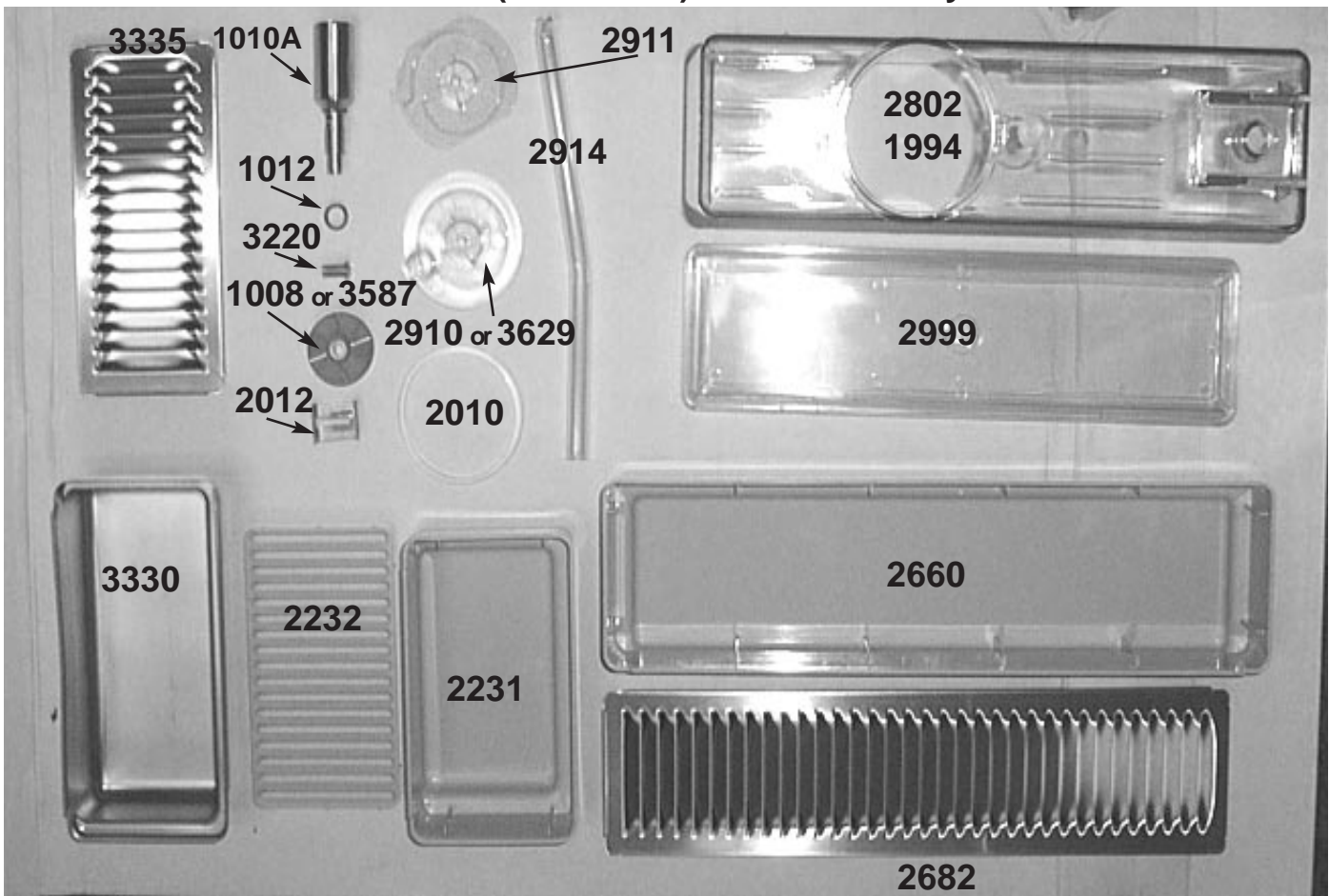


# STANDARD BOWL ASSEMBLY PARTS



Part #	Description	Models Used On
1010A	Dispense Valve w/ O-ring	All standard (non-whipper)
1012	O-ring for Dispense Valve	All
1013	Standard Bowl Gasket	All D15, D25, D35, HD and WD models (for 5 & 3 gallon bowls)
1090	3 Gal. Bowl	All D15, D25, D35, HD and WD models
1092	3 Gal. Bowl Spray Tube	All D15, D25, D35, HD and WD models w/ 3 gal. bowls
1161	Standard Bowl Impeller (blue)	All D, HD and WD models
3587	Universal Impeller (black)	All models
1261	5 Gal. Bowl Spray Tube	All D15, D25, D35, HD and WD models w/ 5 gal. bowls
1288	5 Gal. Bowl	All D15, D25, D35, HD and WD models
1734	Washer, Lockdown	All D15, D25, D35, HD and WD models
1735	Standard Bowl Pump Cover for Red (p/n 1008) or Black (p/n 3587) Impeller (use with spray tube)	All D15, D25, D35, HD and WD models
1740	Agitator for use with Red (p/n 1008) or Black (p/n 3587) Impeller	All D15, D25, D35, HD and WD models
1741	Standard Bowl Pump Cover for Blue Impeller (use with spray tube)	All D15, D25, D35, HD and WD models
1742	Standard Bowl Agitator for Blue Impeller (for iced tea, viscous products, or orange juice)	All D15, D25, D35, HD and WD models
2231	Plastic Drip Tray	D15-4, D25-4, D35-4, E27-4, D112-4, HD & WD models
2232	Plastic Drip Tray Grid	D15-4, D25-4, D35-4, E27-4, D112-4, HD & WD models
2240	Standard Bowl Lid	All D15, D25, D35, HD and WD models
2243	Stainless Steel Drip Tray	D15-3, D25-3, D35-3, D112-3 and HD-3 models
2266	Dispense Valve Handle	All standard (non-whipper)
2484	Non-Contact Handle	All standard (non-whipper)
2305	Stainless Steel Drip Tray Grid	D15-3, D25-3, D35-3, D112-3 and HD-3 models
3220	Bearing Sleeve	All

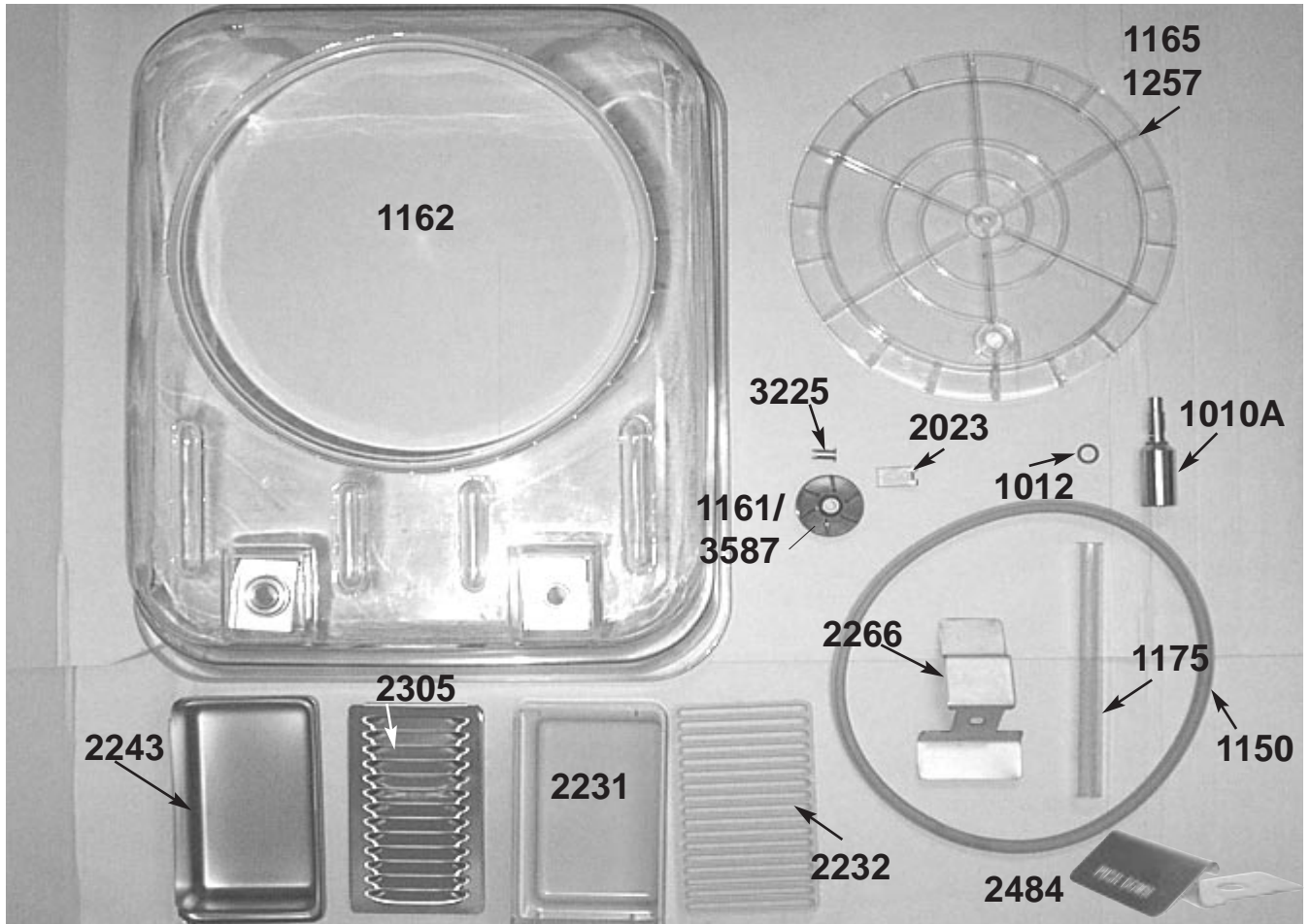
## Mini Bowl (E27 & E47) Bowl Assembly Parts



Part #	Description
1008	Mini Bowl Impeller (red)
1010A	Dispense Valve w/ O-ring
1012	Dispense Valve O-ring
1994	7 Liter Bowl
2010	Mini Bowl Gasket
2012	Mini Bowl Lock Washer
2231	Mini Twin Plastic Drip Tray
2232	Mini Twin Plastic Drip Tray Grid
2266	Dispense Valve Handle (pictured w/ std bowl assembly photo)
2484	Non-Contact Handle (pictured w/ std bowl assembly photo)
2660	Mini Quad Drip Tray (Plastic)
2682	Mini Quad Drip Tray Grid
2802	Standard 9 Liter Bowl
2910	Mini Bowl Pump Cover (use w/ spray tube) use w/ red impeller (p/n 1008)
2911	Mini Bowl Agitator (use with iced tea, orange juice, and viscous products)
2914	9 Ltr. Mini Bowl Spray Tube
2999	Cover for 9L Bowl
3220	Bearing Sleeve
3330	Stainless Steel Drip Tray, E27, E47
3335	Stainless Steel Drip Tray Grid, E27, E47
3587	Universal Impeller (black)

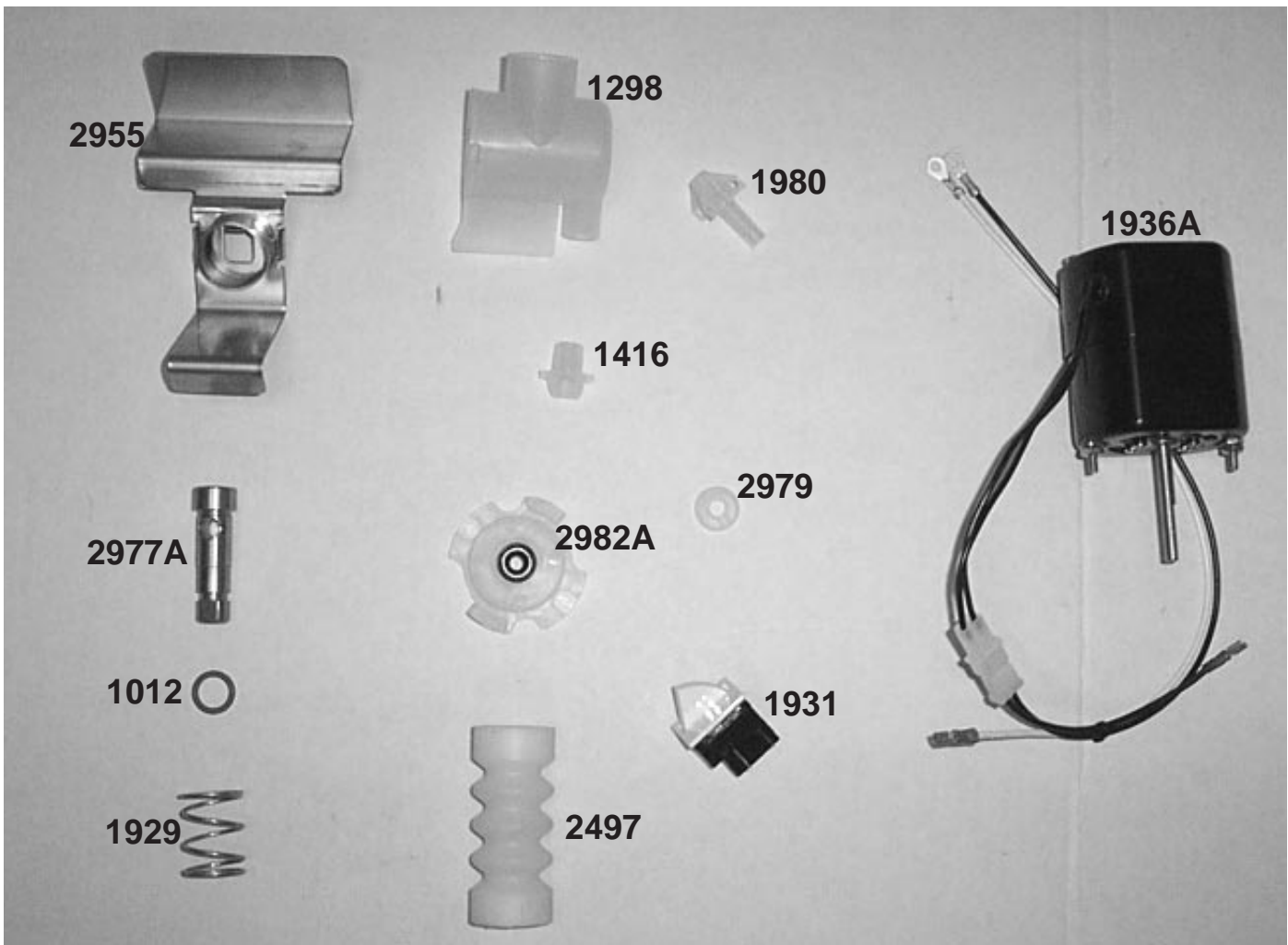


## Super Bowl (D112) Bowl Assembly Parts



Part #	Description	Models Used On
1010A	Dispense Valve w/ O-ring	All Standard (non- whip)
1012	O-ring for Dispense Valve	All
1150	Bowl Gasket	D112
1155	Super Bowl Lid	D112
1161	Impeller (blue)	All D, HD, and WD models
1162	Super Bowl (12 gal) w/ hardware	D112
1165	Super Bowl Pump Cover (use with spray tube)	D112
1175	Super Bowl Spray Tube	D112
1257	Agitator (use in place of pump cover and spray tube for iced tea, orange juice, and viscous products)	D112
2023	Lockdown Cam	D112
2231	Plastic Drip Tray	D15, D25, D35, E27, D112, HD15, and all WD models
2232	Plastic Drip Tray Grid	"
2243	Stainless Steel Drip Tray	All D, HD, and WD models
2266	Dispense Valve Handle	All Standard (non- whipper)
2484	Non-Contact Handle	All Standard (non- whipper)
2305	Stainless Steel Drip Tray Grid	D15, D25, D35, D112, HD15, and all WD models
3225	Bearing Sleeve	D112
3587	Universal Impeller (black)	All models

## Whipper Unit Parts (Different from Standard)



Part #	Description
1012	Dispense Valve O-ring
1298	Whipper Housing Chamber
1416	Whipper Assy Restrictor Valve
1929	Whipper Assembly Spring
1931	Whipper Activation Switch
1936A	Whipper Motor w/ Harness
1980	Whipper Blade
2497	Inlet Whipper Adapter
2955	Whipper Dispense Valve Handle
2977A	Whipper Dispense Valve w/ O-ring
2979	Slinger Washer
2982A	Whipper Base

# MCX Mag-Drive™ Impeller

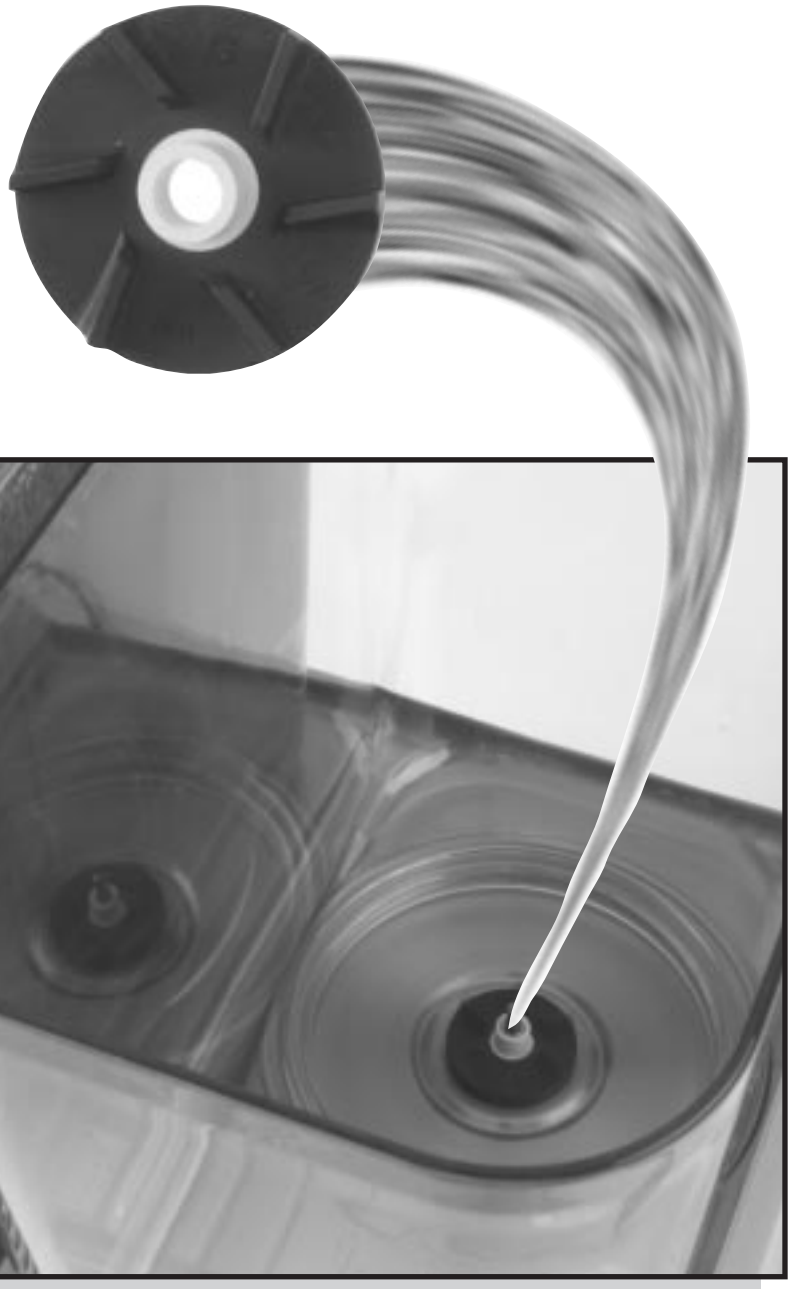
by Crathco®

## *Purely the Best*

### Features:

Proprietary one-piece design using advanced, magnetic compound material...

- Smooth surfaces assure complete sanitizing
- High performance nylon bearing - harder material for longer life
- More powerful and efficient action
- One size fits all - use in all types of beverages and all models
- Common parts for lower inventory
- Crathco Bubblers™ Beverage Dispensers:
  - \* Built simple
  - \* Built stronger
  - \* Built to last



### Specifications and Use:

- Part #: 3587
- Recommended for use in all models (standard, mini, and super)

Bowl size	Recommended Pump Cover (when spraying)	Recommended Agitator (when not spraying)
9L - 2.4 gal. (or 7L)	part # 3629	part # 2911
18L - 5 gal. (or 3 gal.)	part # 1735 (1741 may also be used on 60 Hz units)	part # 1740 (1742 may also be used on 60 Hz units)

# SET-UP

## UNPACKING

Your dispenser is packed in 2 cartons: base pack and bowl pack. Unpack base by opening bottom flaps. See Figure G.

### IMPORTANT NOTES:

1. Do not leave base upside down as this can damage refrigeration system.
2. Check that all 4 rubber feet are attached to legs after removing from base pad. Check base pad or carton for missing feet and replace on legs.
3. Never lift from louvres/ventilation slots. Instead, place fingers under base plate.

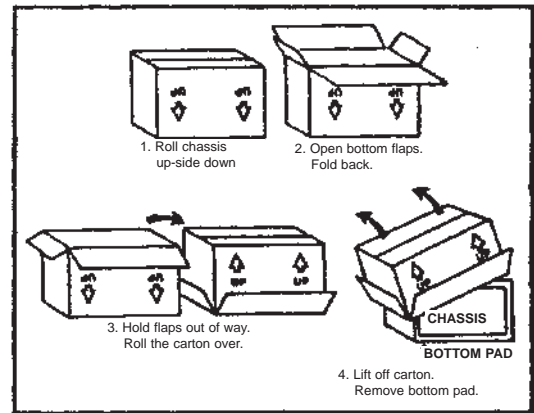


Figure G

## INSTALLATION

1. Place base on counter.
2. For heated units (HD15/WHD15) units only:  
Install Safety Arms  
Tools required: Phillips Head Screwdriver
  - a) Place unit on its side so you have access to the bottom of the unit.
  - b) Line up arm holes so they line up to the holes on the bottom of the unit; arms will extend forward as shown in illustration. See Figure H.
  - c) Attach arms with screws provided.
3. Leave sufficient air space (6" (15cm)) on sides (also rear of D35 triple) for proper airflow and efficient operation. See Figure I.



Figure H

- IMPORTANT: Failure to provide required airspace can damage unit.
4. Plug into properly grounded, 3 prong outlet.
  5. Assemble bowl parts and drain trays. See Assembly instructions (pgs 1-2). See Figure J.

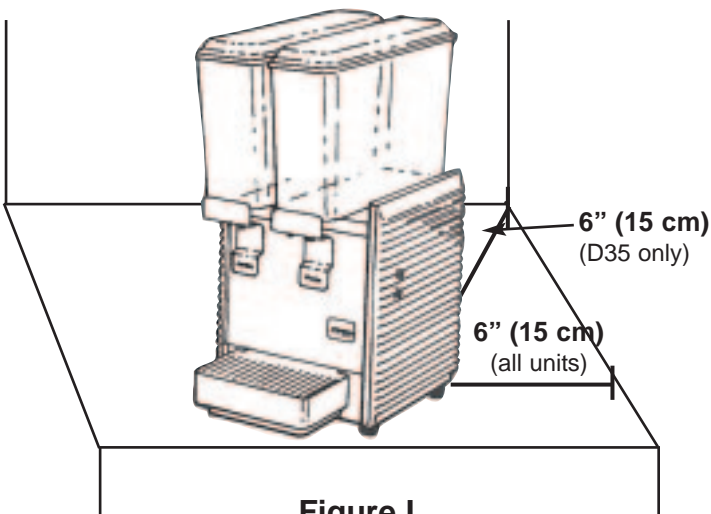


Figure I

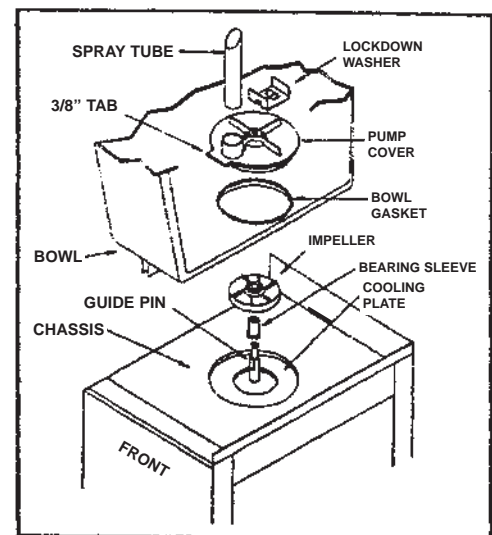


Figure J



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