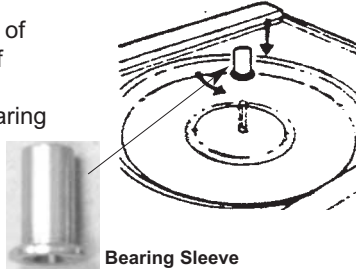


Assembly

1 PLACE BEARING SLEEVE ON GUIDE PIN

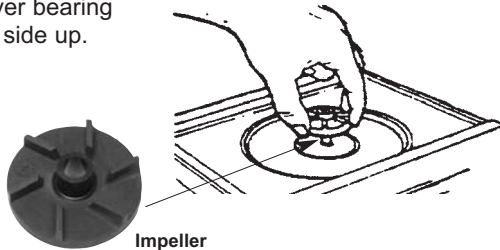
Note flat sides on outside of guide pin and on inside of bearing sleeve.
Line flat sides up until bearing sleeve slides down over guide pin and rests on the cooling plate.



Bearing Sleeve

2 PLACE IMPELLER OVER BEARING SLEEVE.

Put impeller over bearing sleeve with fin side up.

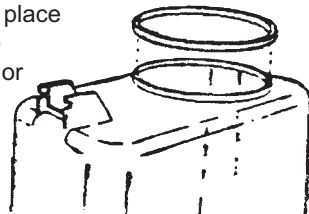


Impeller

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.

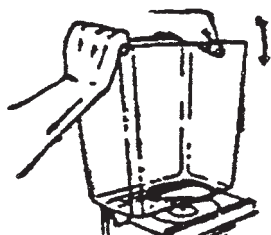
NOTE: On D112 units place bowl gasket around cooling dome.



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.

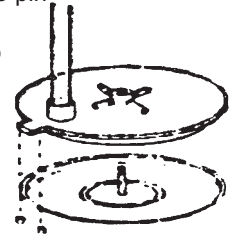
NOTE: On D112 units, place bowl over the gasket and cooling dome with the neck of the bowl centered on the cooling dome.



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.

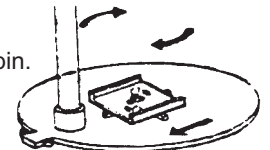
NOTE: Use agitator cover in place of pump cover and spray tube for fresh juice, drinks that foam (iced tea or dairy products), or heavy viscous drinks.



6 INSTALL LOCKDOWN WASHER OR CLAMPS

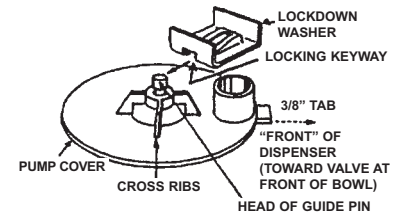
Standard Units:

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



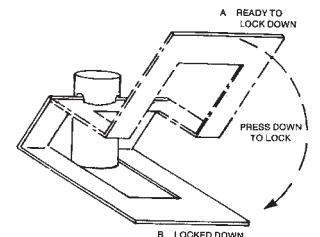
Mini Units:

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



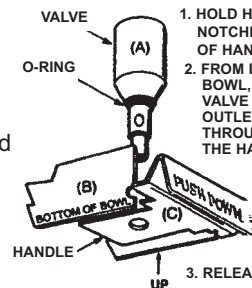
D112 Superbowl Units:

- 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.



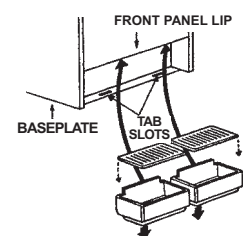
- HOLD HANDLE IN "V" NOTCHES & LIFT REAR OF HANDLE UP.
- FROM INSIDE THE BOWL, LOWER THE VALVE THROUGH THE OUTLET HOLE, AND THROUGH THE HOLE IN THE HANDLE.

3. RELEASE HANDLE

8 REPLACE DRIP PAN(S)

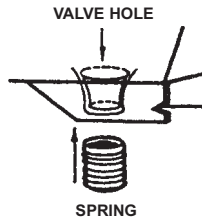
Place cover/grid on drip pan. Place top edge of drip pan up under lip on front panel. Lower each drip pan so that the tab goes down into the tab slot and locks pan in place.

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

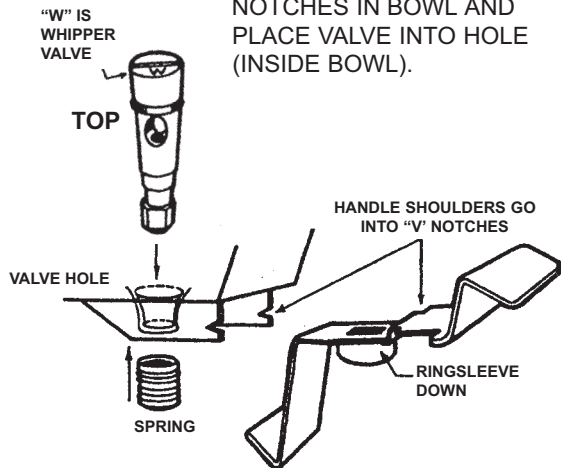


Assembly (cont.)

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

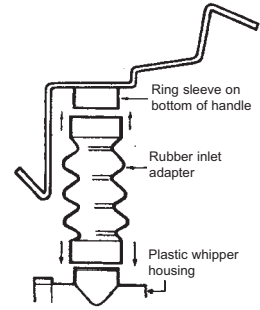


- 10 (WHIPPER UNITS ONLY)**
INSERT HANDLE INTO "V" NOTCHES IN BOWL AND PLACE VALVE INTO HOLE (INSIDE BOWL).

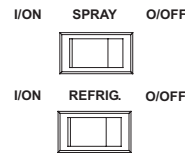


- 14 (WHIPPER UNITS ONLY)**
ASSEMBLE THE RUBBER INLET ADAPTER

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.

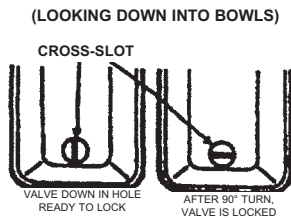


- 15** FILL BOWL(S) WITH PRODUCT and place lid(s) on bowl(s). Turn spray switch on first then refrigeration.



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.



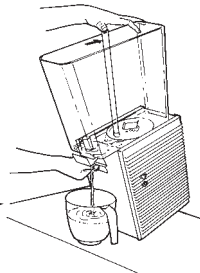
- 13 (WHIPPER UNITS ONLY)**
REPLACE WHIPPER CHAMBER
Replace whipper chamber by positioning the medium-sized opening up and tilting 1/8 turn to the right. Put whipper chamber over whipper blade and turn to the left until it locks into place.



DISASSEMBLY

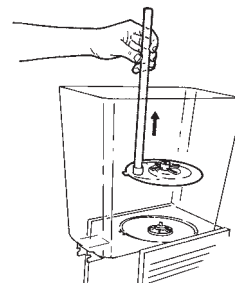
1 DRAIN ALL BEVERAGE FROM BOWLS

- 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

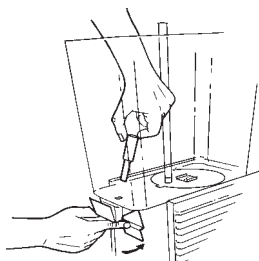
Remove pump cover by lifting up on spray tube.



2a.

STANDARD & MINI UNITS: REMOVE VALVE AND HANDLE

Lift valve. Handle drops into operator's other hand.

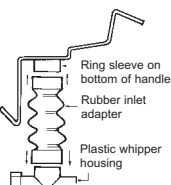


2b.

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.



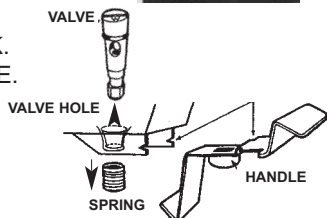
• REMOVE WHIPPER BLADE

Pull whipper blade off of the motor shaft.



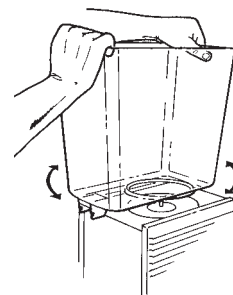
• TURN VALVE 90° TO UNLOCK. REMOVE HANDLE AND VALVE.

• 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.

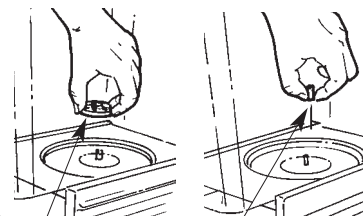


NOTE: On D112 units, bowl gasket will be around cooling dome.

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.

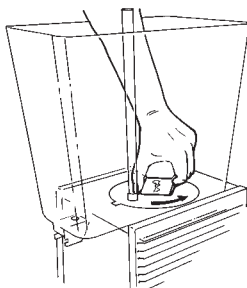
CAUTION: ABRASIVES WILL SCRATCH PLASTIC PARTS. WASH BOWL LIDS IN COOL OR LUKEWARM WATER TO AVOID LEAKS DUE TO SEALED SURFACE BEING DAMAGED.

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.

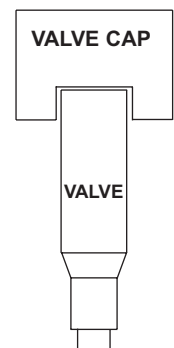
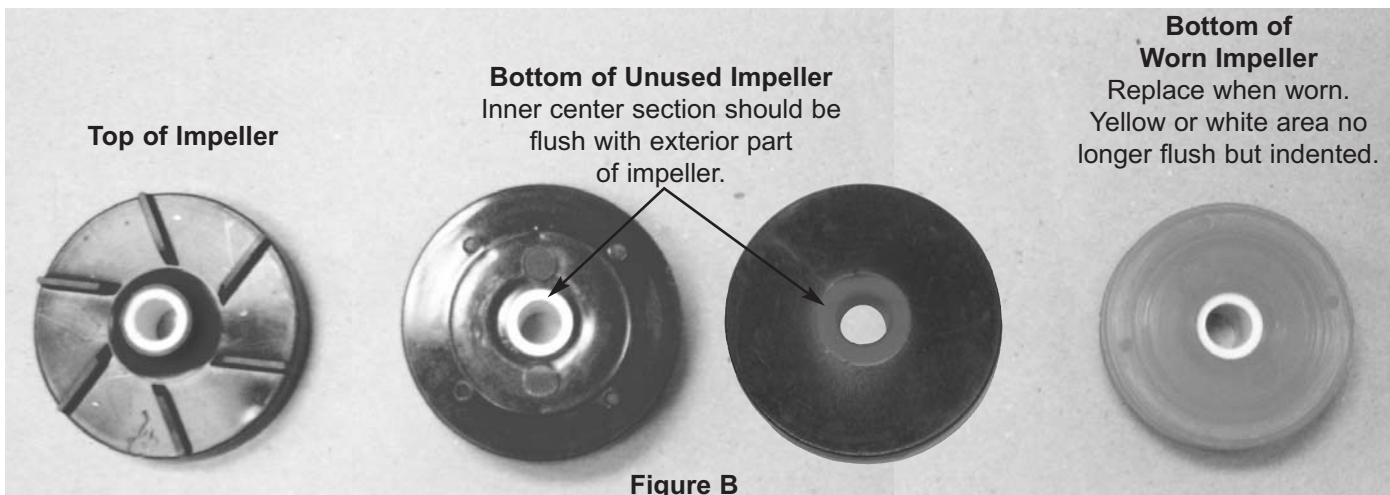


Figure A

PREVENTATIVE MAINTENANCE



- 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 or call (800) 695-4500.




Figure C

New bearing sleeve

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




Figure D

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

worn flange

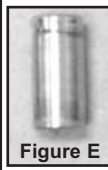


Figure E

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

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

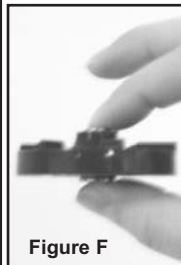


Figure F

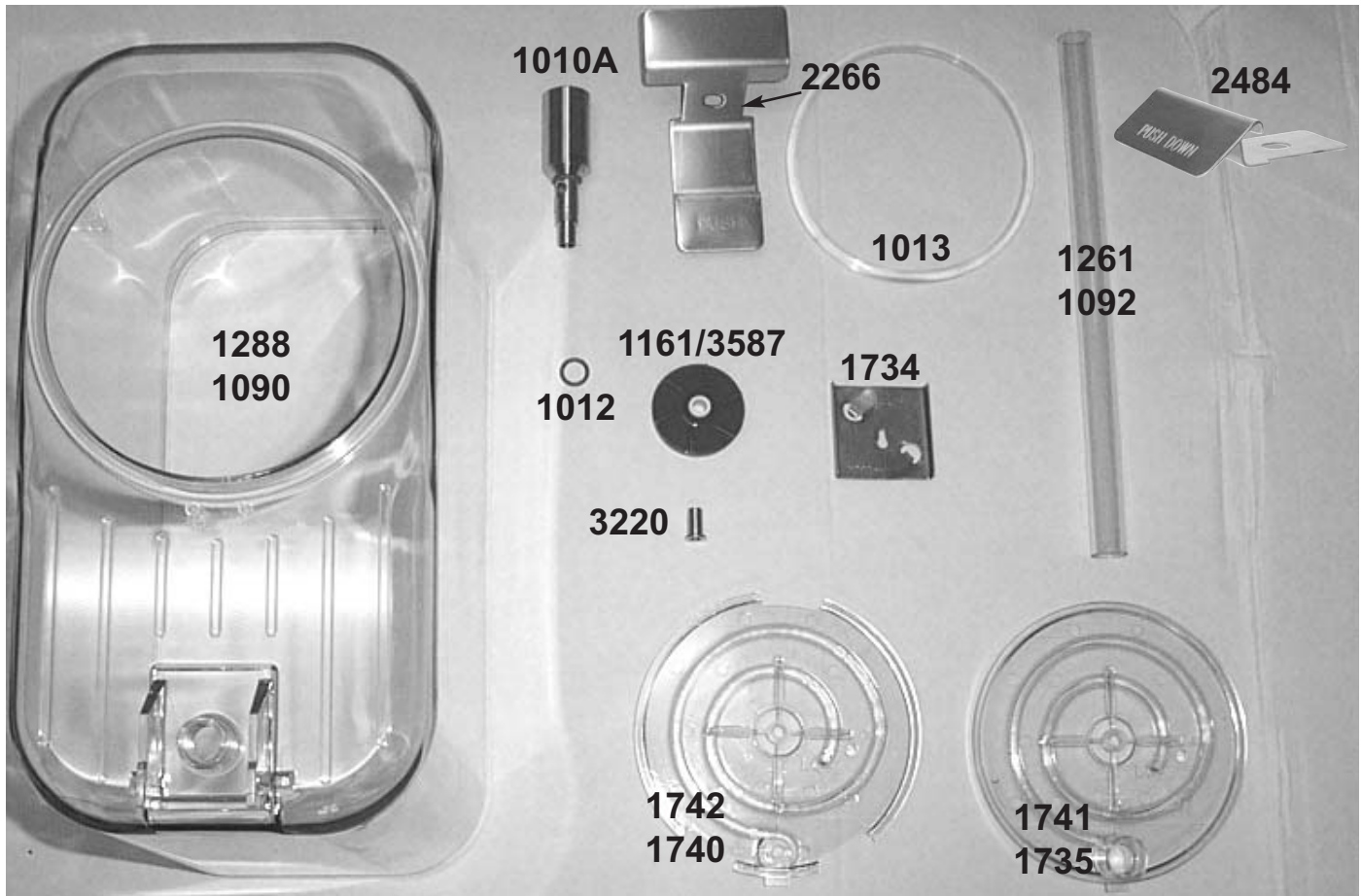
Bearing sleeve and impeller should spin freely when held like this. If parts do not spin freely or are worn, unit will not cool properly and worn parts may damage machine.

| 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 |



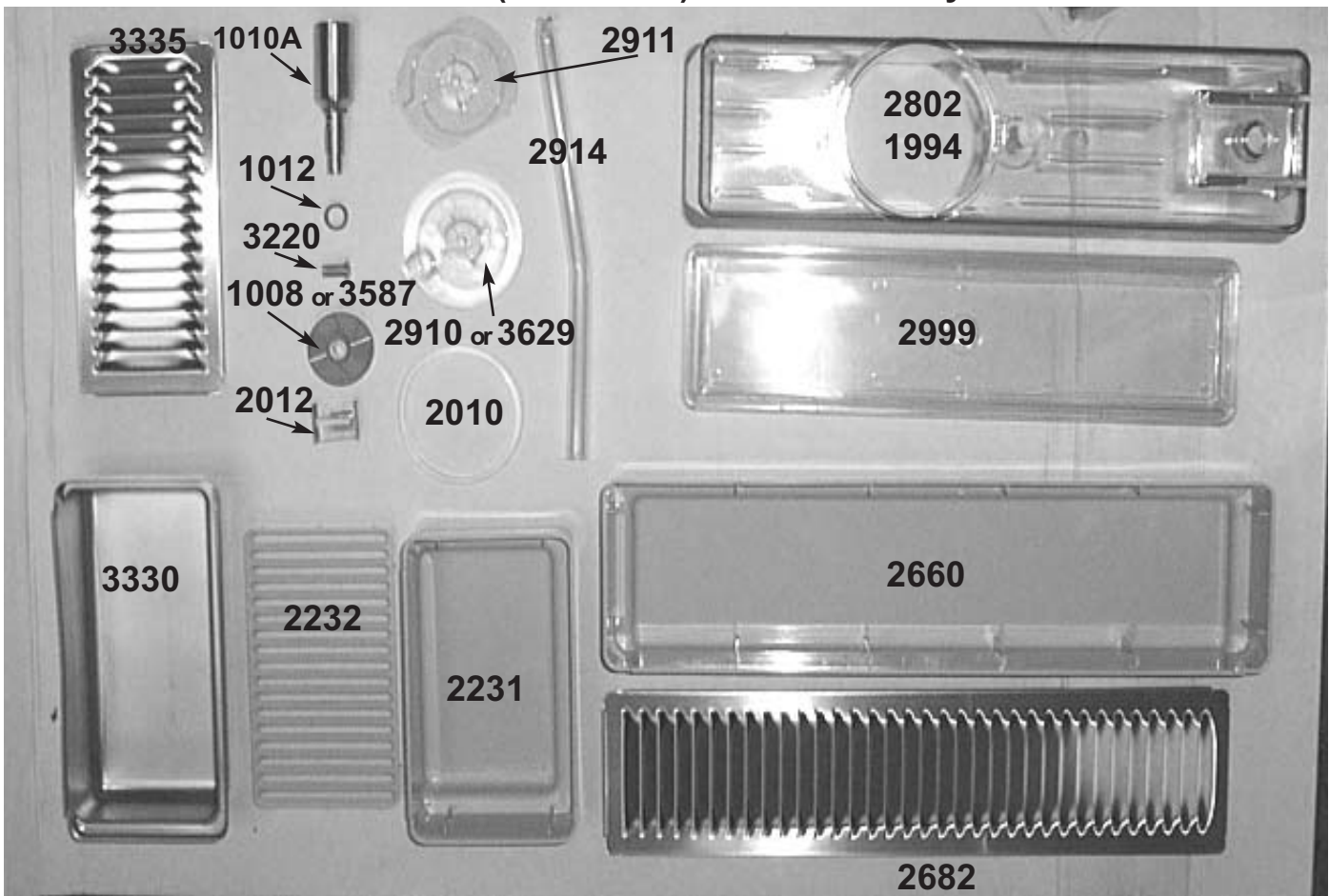
Universal Impeller (Part # 3587)

STANDARD BOWL ASSEMBLY PARTS



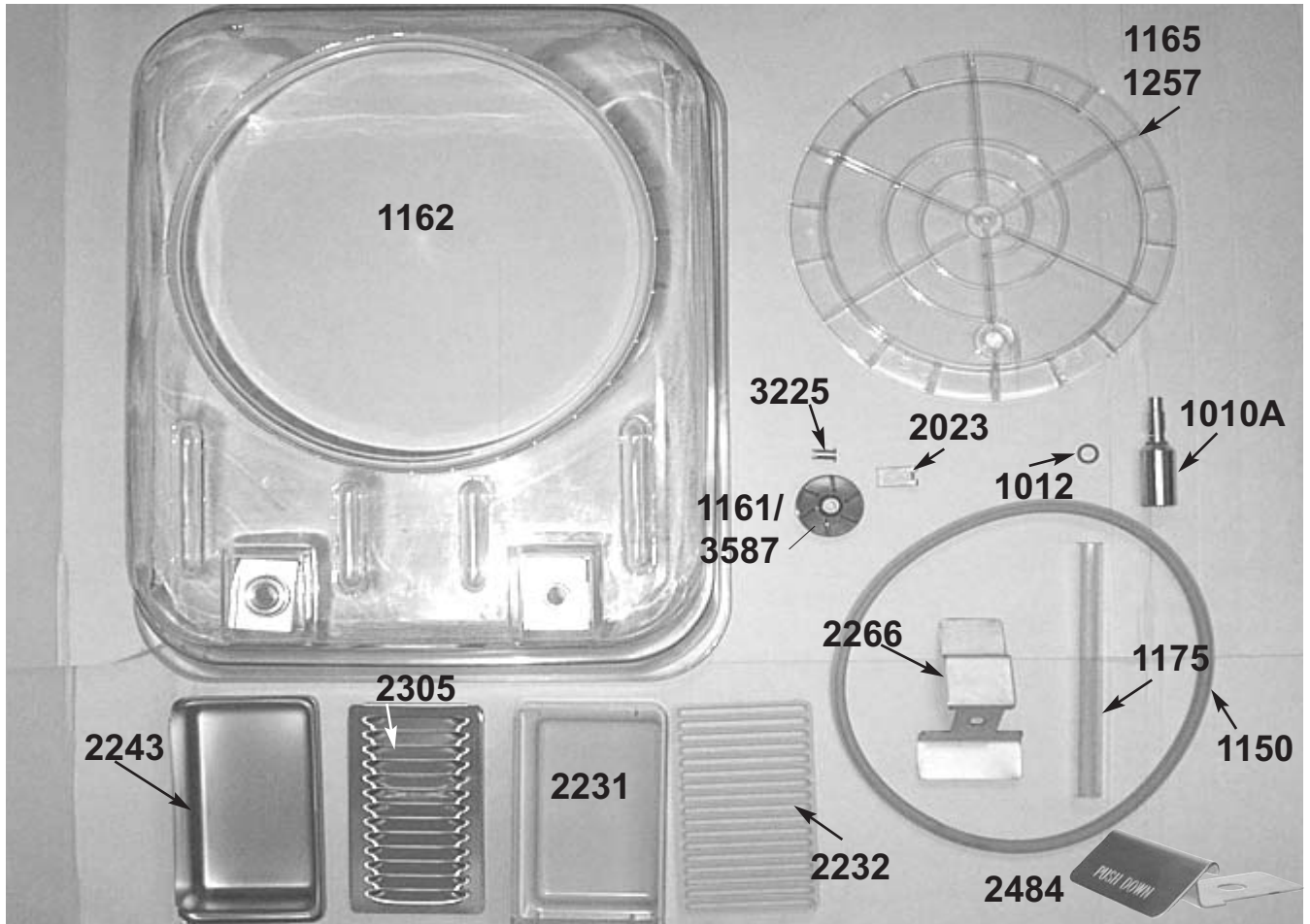
| Part # | Description | Models Used On |
|--------|--|--|
| 1010A | Dispense Valve w/ O-ring | All standard (non-whipper) |
| 1012 | O-ring for Dispense Valve | All |
| 1013 | Standard Bowl Gasket | All D15, D25, D35, HD and WD models (for 5 & 3 gallon bowls) |
| 1090 | 3 Gal. Bowl | All D15, D25, D35, 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 and WD models (Do not use on HD models) |
| 1116 | Bowl Lid for Heated Units | HD (heated 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



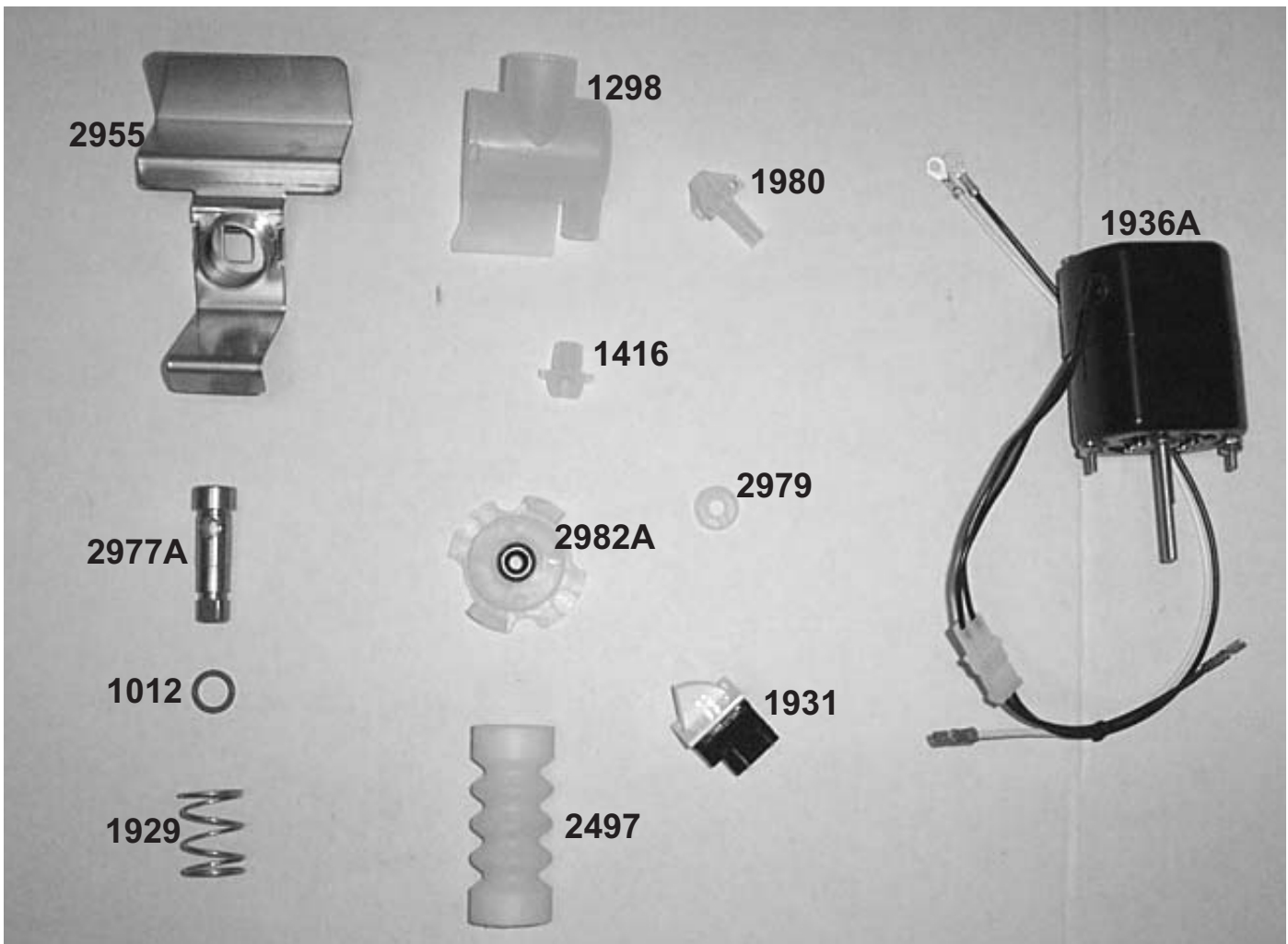
| Part # | Description |
|--------|--|
| 1008 | Mini Bowl Impeller (red) |
| 1010A | Dispense Valve w/ O-ring |
| 1012 | Dispense Valve O-ring |
| 1994 | 7 Liter Bowl |
| 2010 | Mini Bowl Gasket |
| 2012 | Mini Bowl Lock Washer |
| 2231 | Mini Twin Plastic Drip Tray |
| 2232 | Mini Twin Plastic Drip 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) |
| 3629 | Mini Bowl Pump Cover - use with black impeller (p/n 3587) |

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

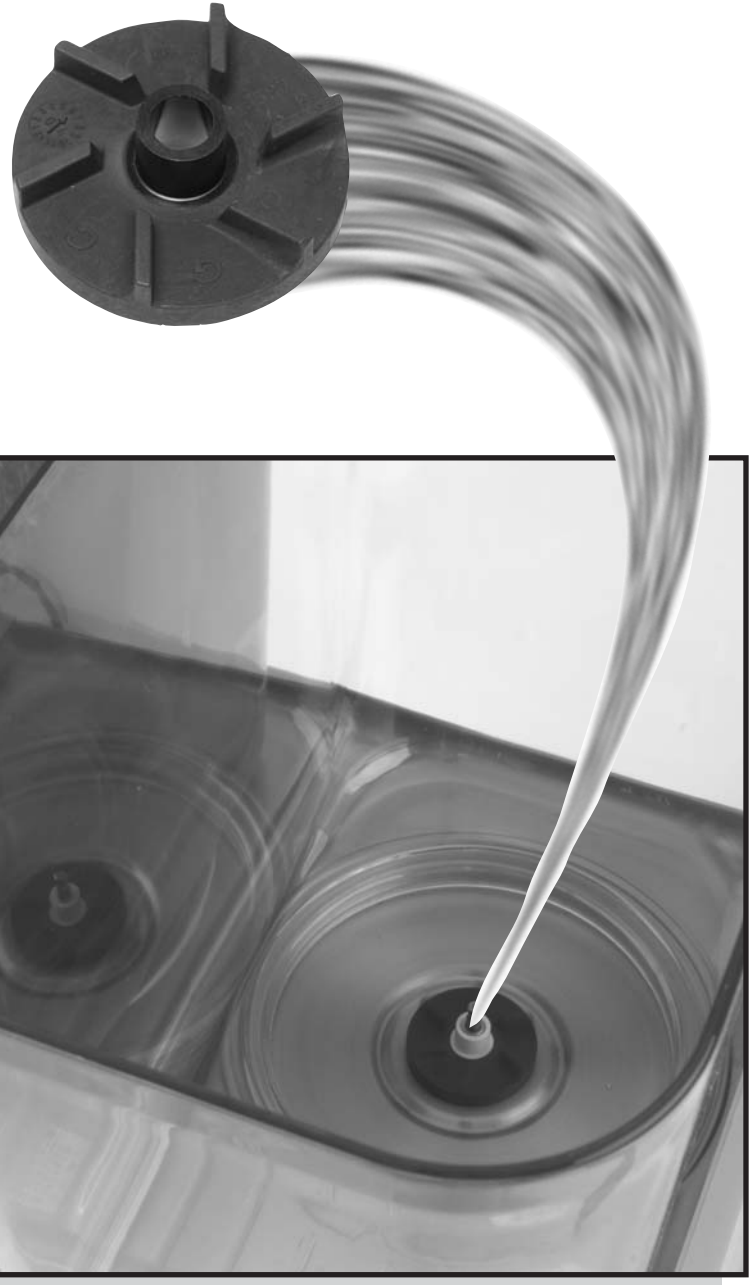
by Crathco®

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™ -
 - * 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 # 2910 | 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.

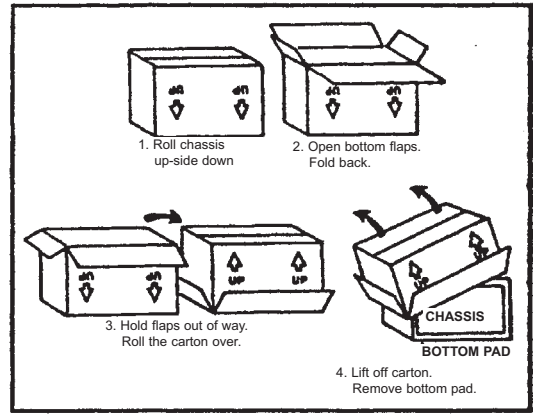


Figure G

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.

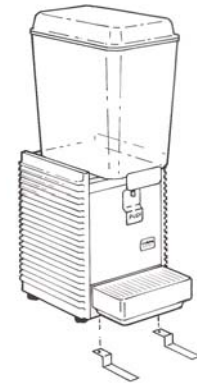


Figure H

- 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.

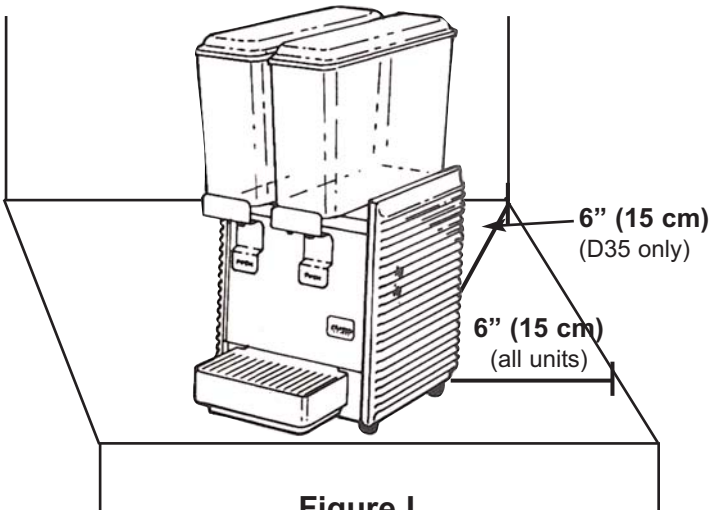


Figure I

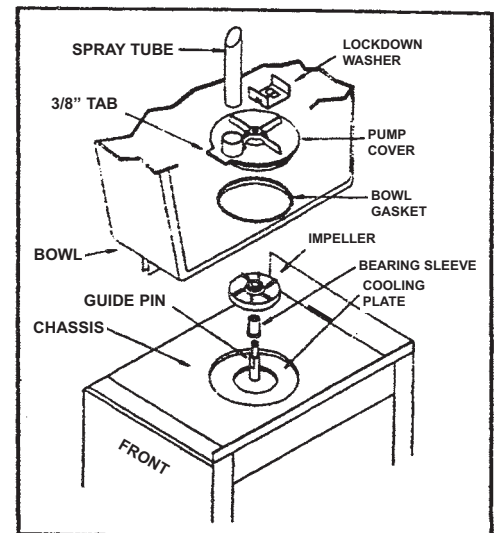


Figure J



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