

# Integrity Bath

Model MB-80

## Maintenance Manual

For All Maintenance Procedures  
Follow the Directions in this Manual

**MasterCare**  
*Patient Equipment, Inc*

# Integrity Bath – Model MB-80

## Maintenance Manual

### SAFETY

MasterCare products are designed and manufactured to help provide a more efficient and secure environment for the staff and patients. It is required that scheduled maintenance program be setup to insure that the efficiencies and security designed into the system are kept at peak levels. Instructions on how to setup a scheduled maintenance program are covered in this manual.



*Items in this manual, important from a safety standpoint, will be preceded by a special warning symbol in appropriate locations to warn of potential harm if the procedure after is not followed. Please insure that all maintenance personnel responsible for maintenance of the bathing system are familiar with and understand the important meaning of this symbol and carefully follow the instructions it proceeds.*

### MAINTENANCE INSTRUCTIONS

#### SCHEDULE MAINTENANCE INSTRUCTIONS

MasterCare bathing systems are purposely designed to minimize, as much as possible, the maintenance requirements associated with such products. They are manufactured using materials suited to their application and the durability requirements of the healthcare industry.

It is recommended that the bathing system be inspected and preventative maintenance performed using the following schedule:

#### MONTHLY INSPECTION

- Door System:
  - Roller cam assembly
  - Door seal compression
  - Tub door adjustment.
- Tub System:
  1. Tub pop-up drain stopper brake adjustment
  2. Mixing valve temperature adjustment
  3. Dema injector
  4. Pop-up drain stopper adjustment
  5. Gravity latch tub on rail
- Vacuum:
  1. Air screen on intake side of air motor to remove accumulated dust.

Instructions for inspection, adjustments and replacements for the above items are under the section "Problem Solving And Diagnosis."

If deficiencies are found during any of the above inspections, refer to the problem solving and diagnosis section of this manual for instructions on how to correct.



*Failures of materials can occur due to normal wear associated with use over time. Therefore, it is in the best interests of the patient, staff and provider that recommended safety inspections are scheduled on a periodic basis and preventative maintenance performed as needed.*



*Before performing any of the checks requiring inspections inside the tub shell, trip the circuit breaker on the electrical supply box to off or in the USA, unplug the tub.*



*If deficiencies are found during the inspections, the system must be taken out of service until they are corrected.*

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QUARTERLY INSPECTION: (In addition to the monthly checks the following should also be performed quarterly)

### Tub System:

- Dial thermometer
- Aerators
- Casual water drain
- All fittings and connections to make sure they are secure and no leaks have developed.

Instructions for inspection, adjustments and replacements for the above items are under the section "Problem Solving And Diagnosis."

If deficiencies are found during any of the above inspections, refer to the problem solving and diagnosis section of this manual for instructions on how to correct.

### SCHEDULE MAINTENANCE INSTRUCTIONS

#### DOOR SYSTEM

##### Door Roller and Cam Arm Adjustments & Maintenance

###### Maintenance Inspection:

- a) Inspect wear on ROLLER. If worn replace ROLLER then shim if need. If not worn follow the directions below.
- b) Reference drawing 803966 item #2 and item #8 (2 cap screws) tighten quarterly.

###### To Increase Tension On The Door Seal:

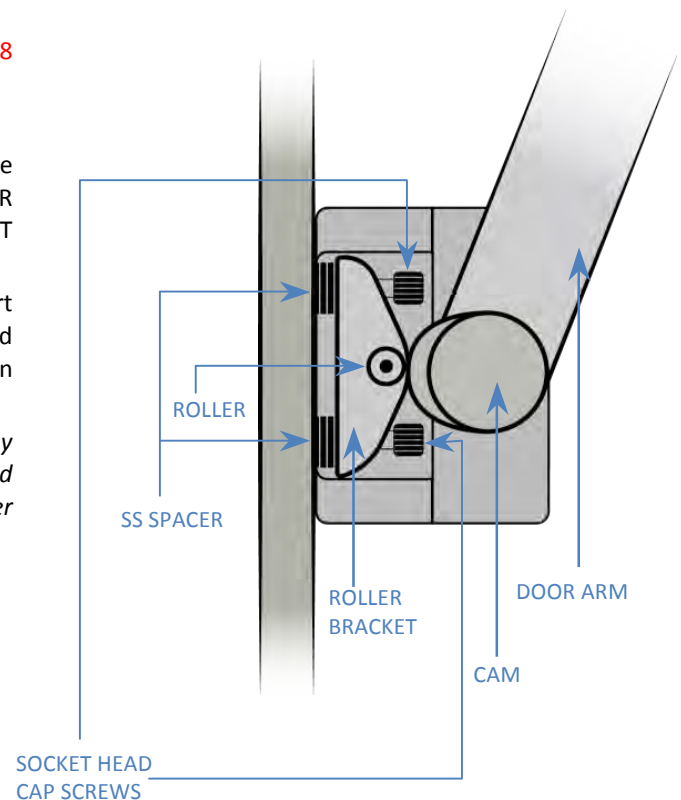
- a) Open door and swing out of way. Remove SOCKET HEAD CAP SCREWS from ROLLER BRACKET. Save SS SPACERS between BRACKET and DOOR HINGE MOUNTING BASE.
- b) Add SS SPACER to each spacer group. Reinsert SOCKET HEAD CAP SCREWS through bracket and spacers. Tighten securely with 3/16 Allen Wrench.

*Note: Normal (adequate) compression is achieved by shimming cam roll bracket until door contacts seal and continues to seal approximately 1/4". If door roller is over shimmed accelerated wear on components will result.*

**!** Test the ground fault circuit interrupter protecting this appliance periodically in accordance with the manufacturer's instructions.

**!** All deficiencies discovered during monthly and quarterly inspections should be corrected and/or repaired as soon as possible. This will help prevent potential damage to your system that could occur if corrective action is not taken and in the process, extend the life of the system.

**!** Failures of materials can occur due to normal wear associated with use over time. Therefore, it is in the best interests of the patient, staff and provider that recommended safety inspections are scheduled on a periodic basis and preventative maintenance performed as needed.

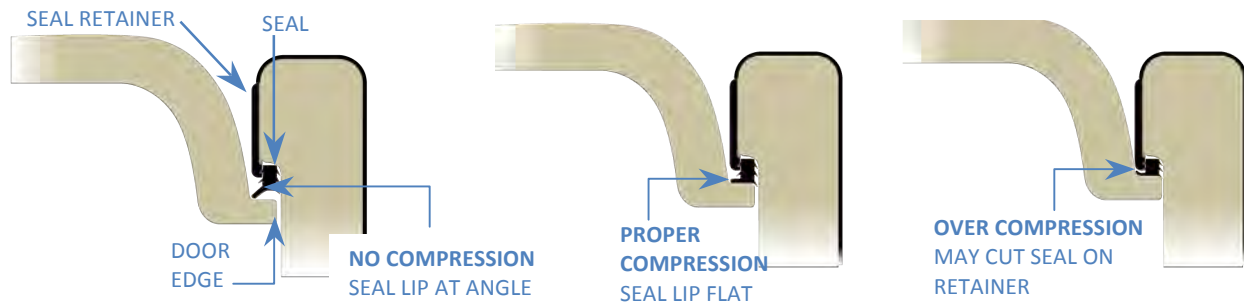


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### DOOR TO SEAL RELATIONSHIP

#### DOOR SEAL INSPECTION/REPLACEMENT

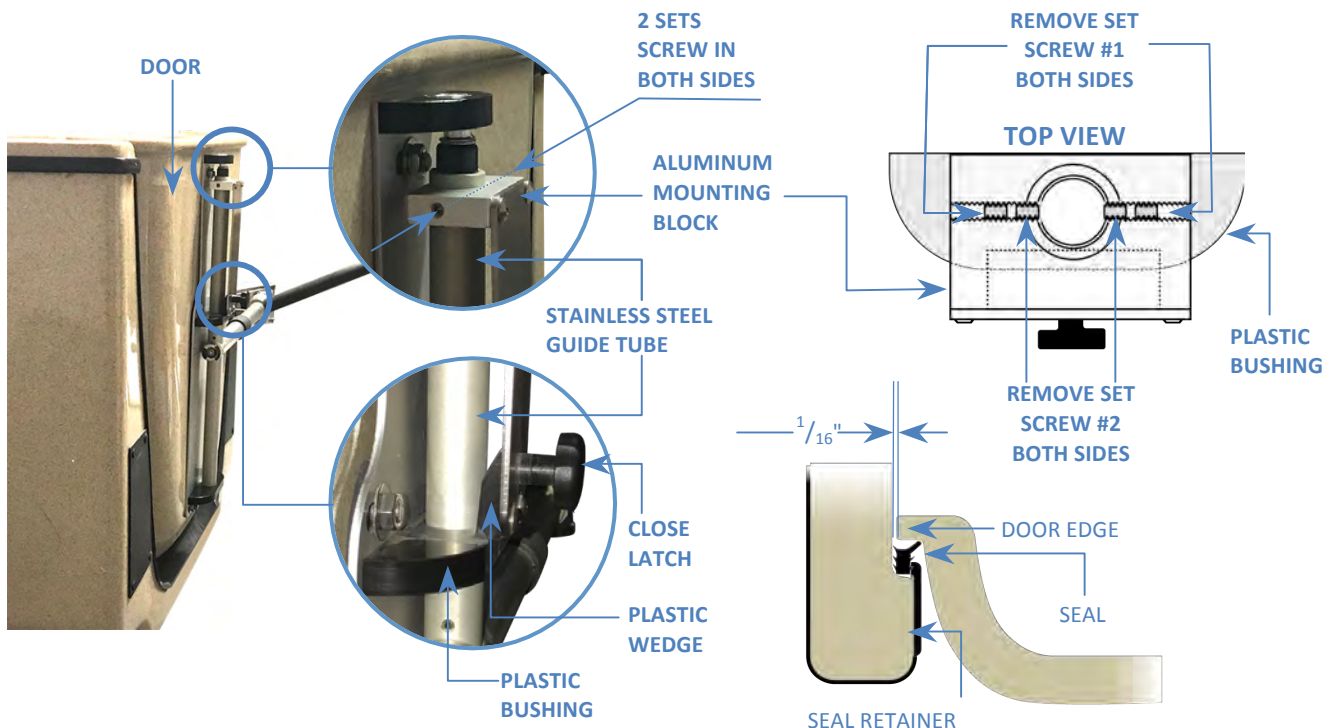


- If seal shows signs of wear or has lost its elasticity replace.
- To replace pull old seal out of space between retainer and tub wall. Lubricate new seal with soap and water and push into place.

#### DOOR CLOSE LATCH UP/DOWN ADJUSTMENT

Close Door and push down to lowest position. Remove SET SCREW #1 and loosen SET SCREW #2 both sides. Slide the ALUMINUM MOUNTING BLOCK on the STAINLESS STEEL GUIDE TUBE

- until the PLASTIC WEDGE index is on top of the PLASTIC BUSHING.
- Position ALUMINUM MOUNTING BLOCK to insure even engagement of PLASTIC WEDGE. Check the clearance of the bottom edge of the DOOR. See drawing below. You should have 1/16". If not adjust mount block up to raise door, mounting block down to lower door.
- Tighten #2 SET SCREWS and cycle door to verify proper locking. Readjust if necessary. After proper adjustment tighten #2 SET SCREWS and #1 SET SCREWS.



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### DOOR IN/OUT ADJUSTMENT

Properly adjusted the door will stop just short of the **inside tub rails**. To adjust, locate the **CAP HEAD SCREW** that acts as a stop for the door. See item #6 coupled with item #4 on drawing #804305. Loosen the **LOCK NUT** at the base of the screw. Adjust in and out as needed. Lock into place with **LOCK NUT**. See drawing to the right.

### DOOR SLIDE END CAP

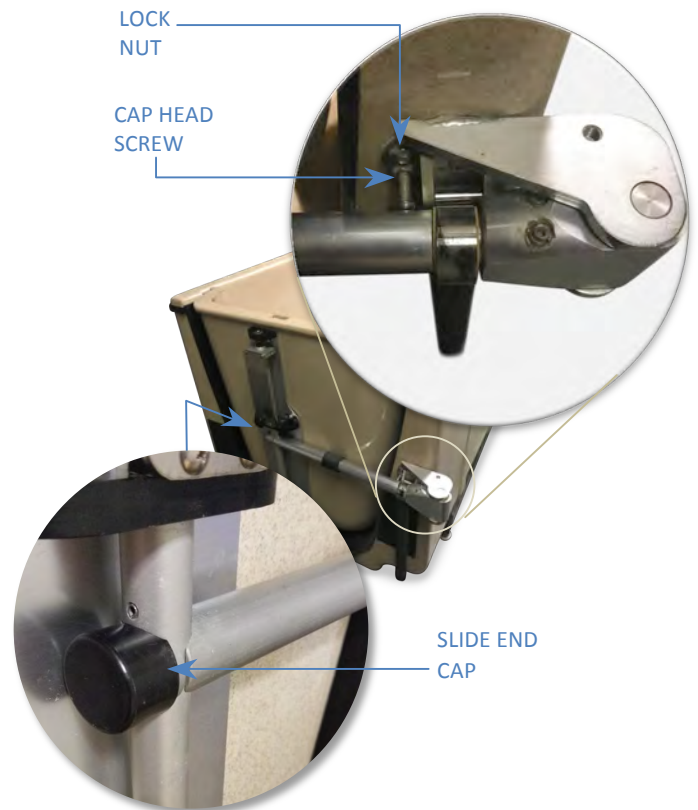
Inspect the **SLIDE END CAP** item# 3 in drawing# 803966. It should not be worn through on the side that contacts the outer surface of the door. To replace:

1. Remove old end cap.
2. Clean any residual adhesive.
3. Smear a small amount of clear silicone on inside of new cap.
4. Push on.

### DOOR GAS SPRING REPLACEMENT

Release door by pulling out on door catch bracket knob. The bracket on the door mount assembly (item #5 drawing 804500) will be against the door lock mount bracket. (item# 10 drawing 804500). Clamp the two brackets together using a cushion between the clamp terminal. Remove the hex socket pipe plug (item #1 drawing 804500). Remove the old gas spring and replace with new spring, part #802235.

DRAWINGS 804500





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### TUB SYSTEM

#### Tub Pop-up Drain Stopper Adjustments & Maintenance

- **Drain Brake Adjustment:** Reference drawing 800966. Locate both  $\frac{1}{4}$  - 20 x 3/8 SS set screws (Item 18) in the bushing (Item 29) behind the handle flange. Adjust brake tension by slightly tightening both set screws with a 1/8" Allen wrench. Do not over tighten. Tighten just enough to prevent drain pop-up from closing while tub is draining.
- **Drain Pop-Up Stopper Replacement Directions:** Reference drawing 800996. Open drain. Back off the SS jam nut (Item 4) by turning it clockwise. Remove damaged or worn out drain stopper (item 2), by turning it counter clockwise. Close drain. Thread new stopper clockwise onto the drain stem (Item 8) as far as it will go. Open drain. Turn stopper again  $\frac{3}{4}$  turn clockwise.
- **Drain Pop-Up Stopper Base Position Adjustment:** Reference drawing 800996. If needed, the drain stem can be adjusted to extend or retract further by adjusting the cable casing (Item 32) anchor position on the handle control box (Item 25). Open the drain. Remove the two anchor screws in the inside ends of the control box ( or Items 19 & 38). Pull the control box away from the side of the tub. Mark the position of the cable in relation to the "P" clips (Item 15). Loosen the two 10-32 nuts (item 33) on the "P" clips. Reposition the cable away from the cable linkage arm (Item 31) to cause the drain stem to retract more. Adjust to desired position. Tighten nuts on "P" clips. Reinstall control box in tub with anchor screws ( or Items 19 & 38).
- **Drain Basket Replacement Directions:** Reference drawing 800996. Remove drain stopper following above directions. Insert special tool in drain basket (Item 12) slots. Clamp on center of special tool with a pair of Vice Grips. Remove by turning counter clockwise. Clean old seal material away from drain hole. Be careful not to break the adhesive sealant holding the drain shoe (Item 13) to the tub bottom. Apply plumbers putty around beveled lip of drain basket. Using the special tool, screw the drain basket back into the drain shoe until firm. Do not over tighten. Replace the drain stopper following the direction above.

#### Drain Cable Replacement

1. Pen drain. Remove front lower service access panel (Item 95, drawing 804325) on tub. Next, reference drawing 800996. Back off set screw (Item 18) from drain cable end (Item 21 ). Snip off end of wire extending from cable casing. Mark the position of the cable casing (Item 32) in relation to the "P" clip (item 15). Loosen the nut (Item 9) on the "P" clip.
2. Remove the anchor screws (or Items 19 & 38) inside the two ends of the handle control box (Item 25). Pull the box away from the side of the tub. Disconnect the cable linkage arm (Item 31 ), then remove the wire from the hole in the linkage arm. Mark the cable casing location in relation to the "P" clips (Item 15). Loosen the nuts (Item 33) on the "P" clips. Next, pull the wire from inside on the cable casing. Insert the new replacement wire inside the cable casing. Insert the wire in the hole in the cable linkage arm. Re-anchor the cable housing (in the same location) to the drain handle control box by tightening the nuts on the "P" clips. Reinstall the drain handle control box in the tub.
3. Re-insert the wire on the drain shoe (Item 13) end into the drain cable end (Item 21 ). Secure by tightening the set screw in the drain cable end. Re-anchor the cable casing by tightening the nut on the "P" clip in this location. Test to make sure the drain opens and closes correctly. Make adjustments as required. Reinstall the front service access cover.

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### Blower Motor On/Off Air Switch & Transmitter System Replacement

Air Switch Replacement Tub Without Reservoir (Reference drawing [804320](#)):

1. Remove service door on the side the electrical box is located.
2. Unplug tub from wall socket.
3. Remove electrical box cover.
4. Locate the air switch (Item [72](#)).
5. Disconnect the air tubing (Item [79](#)) from the switch nipple.
6. Remove spade connectors from switch terminals, noting which was connected to which terminal.
7. Remove nut holding the switch in place.
8. Install new switch.
9. Reconnect spade connectors and air tubing to switch.
10. Test new switch. Plug tub back into socket then replace the service door.
11. Replace electrical box cover.

For tubs with variable speed blower motors, the switch is incorporated inside the panel and can be removed and replaced in the same as the air transmitter after unplugging the power cable from the back.

[DRAWING of the Blower Motor if available](#)

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### MIXING VALVE CARTRIDGE (ITEM #600578):

**Note:** Read and follow all instructions thoroughly. Refer to the GEN II Mixing Valve Diagram to reference details. Supplies needed: Silicone lubricant if replacing the cartridge (readily available at local hardware stores).

#### Adjustment Instructions:

1. Using a utility knife, gently pry off the cap (6) that is located on top of the thermostatic control valve handle (7).
2. Using a Philips head screwdriver, remove the screw (8) and thermostatic control valve handle (7).
3. Orientation of the setting ring (5). **Note:** When the two red lines on the side of the cartridge (2) line up the water temperature is approximately 100°F. Rotate the setting ring (5) counter clockwise a notch or two to increase the temperature. Doing so will increase the water temperature to approximately 110°F.
4. Replace the thermostatic control valve handle (7). Line up the stop on the handle (7) with the top right corner of the thermometer (refer to drawing).
5. Replace the screw (8) into the thermostatic control valve handle (7) and tighten. Place the cap (6) into the thermostatic control valve handle (7).

#### Replacement Instructions:

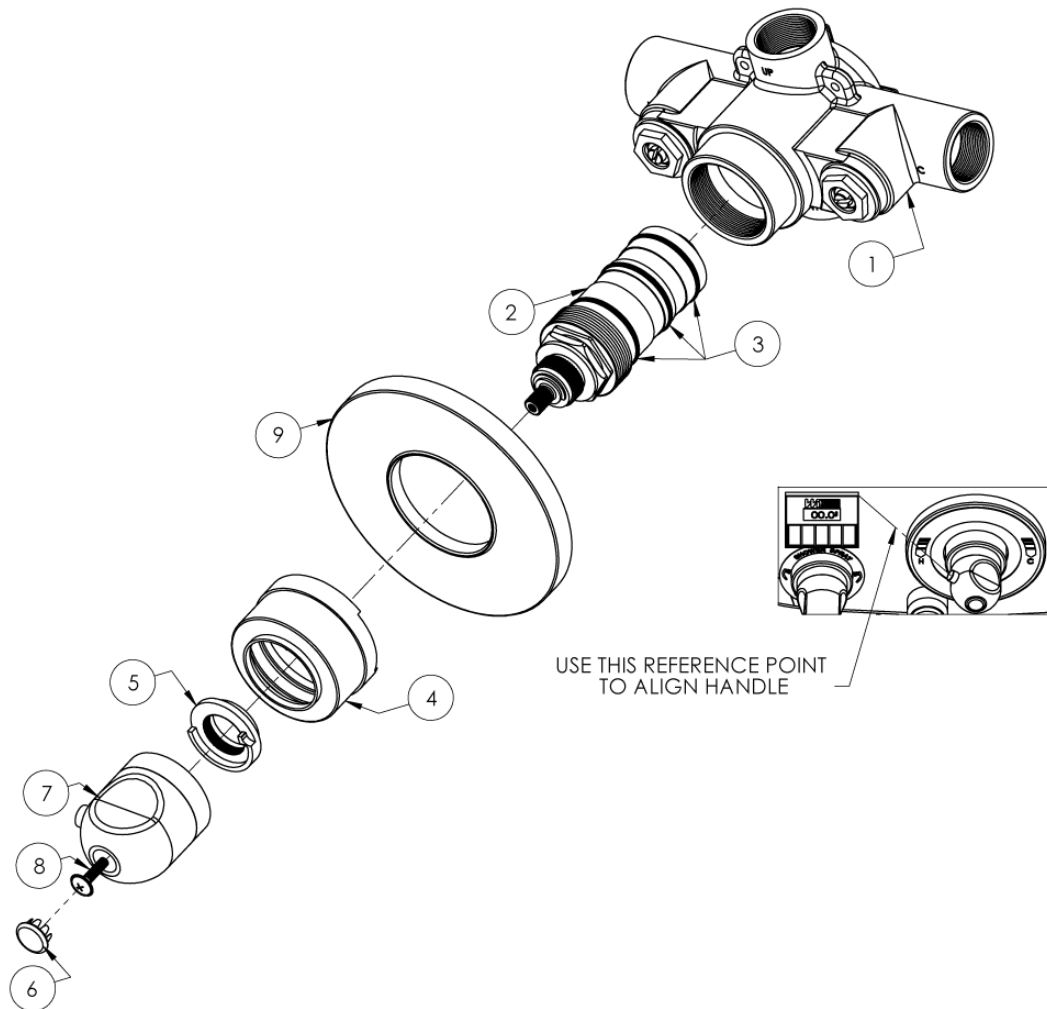
1. Turn off the hot and cold water supply before the replacing the cartridge.
2. Using a utility knife, gently pry off the cap (6) that is located on top of the thermostatic control valve handle (7).
3. Using a Philips screwdriver, remove the screw (8) and thermostatic control valve handle (7).
4. Remove the escutcheon (9). Gently remove the hub (4) by carefully pulling off.
5. Remove the setting ring (5).
6. Using an adjustable wrench, loosen and remove the cartridge (2) from the thermostatic valve (1).
7. Apply a small amount of silicone lubricant to the three “O” rings (3) on the NEW cartridge (2).
8. Place the NEW cartridge (2) into the thermostatic valve (1) and hand tighten. Using an adjustable wrench, tighten the cartridge (2) accordingly (Note: DO NOT over tighten).
9. Install the setting ring (5) so it is horizontally positioned (3 and 9 o'clock position). **Note:** When the two red lines on the side of the cartridge (2) line up the water temperature is approximately 100°F. To increase the temperature, rotate the setting ring (5) counter clockwise a notch or two. The water temperature will be increased to approximately 110°F.
10. Replace the escutcheon (9) and hub (4) by gently pushing both into place.
11. Replace the thermostatic control valve handle (7). Line up the stop on the handle (7) with the top right corner of the thermometer (refer to drawing).
12. Turn on the water supply. Check the water temperature. If adjustment is needed, refer to step 9 accordingly.
13. Replace the screw (8) into the thermostatic control valve handle (7) and tighten. Place the cap (6) into the thermostatic control valve handle (7).



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### GEN II MIXING VALVE DIAGRAM



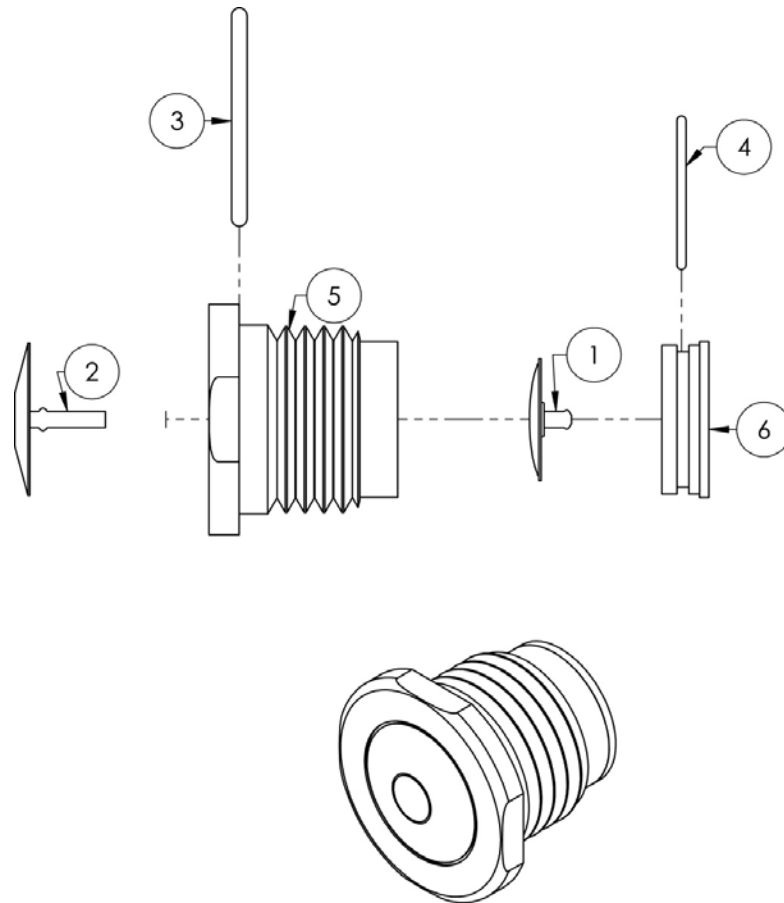
ITEM NO.	DESCRIPTION	QTY
1	THERMOSTATIC VALVE	1
2	CARTRIDGE, REPLACE THERMOSTATIC	1
3	O-RING	3
4	HUB	1
5	SETTING RING	1
6	CAP	1
7	HANDLE, ROUND ZINC FOR THERMOSTATIC CONTROL VALVE USE	1
8	SCREW	1
9	ESCUTCHEON, BRASS FOR VOLUME	1

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### AERATION INJECTOR ROUTINE MAINTENANCE CHECK LIST

- Check area between top of aerator injector body and underside rubber aeration valve. If dirty clean with a "Q" tip. If heavy build-up of lime on top of injector body, remove aeration valve then sand off with 400 grit wet/dry sand paper. Replace aeration valve.
- Check rubber on aeration valve. If hard or cracked replace.
- Check aeration body tightness against tub floor. If loose tighten until ;'O" ring part# 36000 under the shoulder seals.
- With tub full of water and air on, Check area around aeration gasket. If leaking in this area replace the "O" ring part# 36000 and the gasket part# 35805.
- Check clear braided hose for signs of moisture. If noticed the check valve part # 35830 has failed. Pull hose off and replace with new check valve.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	35831	UMBRELLA SMALL	1
2	35833	UMBRELLA LARGE (FLURO SILICONE)	1
3	36000	O-RING 3/32 x 1-1/4 x 1-7/16	1
4	42212	"O" RING, #18, BUNA 50, 3/4 I.D.X7/8 O.D. 568-018	1
5	804840	UMBRELLA CHECK VALVE BODY	1
6	804841	UMBRELLA CHECK VALVE INSERT	1

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VARIABLE SPEED BLOWER

(ENTREE 500105 ??)



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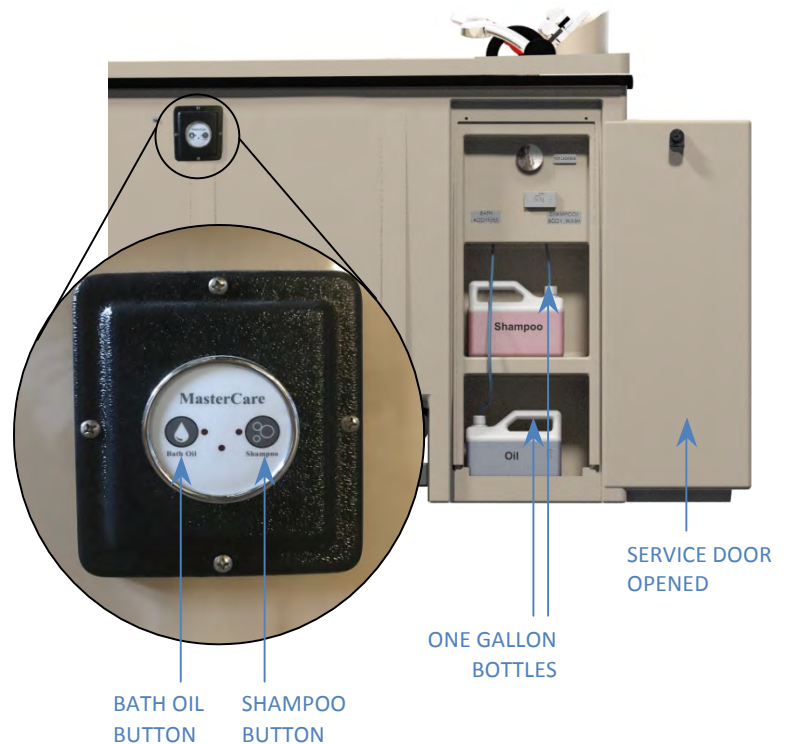
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### DISPENSING SYSTEM

If no solution is dispensed from the dispensing head, open the SERVICE DOOR to access the solutions storage. Check the fluid level in the one gallon BOTTLE. If it is below the intake hose, replace with MasterCare's Bath Oil or Shampoo per priming instructions below.

#### Note:

- If you press Bath Oil or Shampoo button for more than five seconds, it will initiate a pump prime cycle. The normal pump cycle can finish and turn off before the five seconds occurs, but it will still enter Prime and turn back on.
- Holding a Button for a longer time will not cause any problems other than initiating Prime.
- Pressing any button while a pump is running will shut off the pump. This is predominately a safety feature for .the Prime operation.
- Pressing multiple buttons at the same time will turn off any pumps and be otherwise ignored.
- A Red LED associated with the pump operation will turn on when the pump operation is activated. The middle Red LED is for Bath Oil. The bottom Red LED is for Shampoo.



### Priming Operation:

Remove the empty one gallon container of solutions and replace with MasterCare's Bath Oil or Shampoo.

To prime, push appropriate button for the solution you are priming for seven seconds.

### SYSTEM DIAGNOSTICS:

#### Pump does not dispense solution:

- Check fluid level in one gallon containers. If below bottom of intake hose, replace with MasterCare's Bath Oil or Shampoo.
- Check circuit breaker. If tripped, re-set. If pump still does not operate, check all wiring connections. Call 1-800-798-5867 for service tech support.

**Caution:** Other brand bath oils and shampoos may be used with the MasterCare System although re-calibration may be required. However, some products may not be compatible with the system and may damage components in the system, thereby voiding the warranty MasterCare offers an extended warranty with your use of MasterCare bathing and cleaning/disinfection products. Please contact MasterCare customer service@ 800-798-5867 before using non-MasterCare products in your system

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### THE DEMA INJECTOR

#### How To Adjust The Rate Of Disinfectant

Locate the metering screw on the DEMA VALVE. Turn the metering screw to the left to increase the amount of disinfectant in the solution. To the right to decrease the amount.

#### General Maintenance on The Dema Injector

If the injector stops operating after having worked properly make the following checks:

- Check the incoming water line for any obstructions. Remove as appropriate.
- Make sure the foot strainer is not clogged. Clean as appropriate.
- Is the check valve inside the metering knob clogged. To fix remove four screws to disassemble. Inspect and clean ball, spring and "O" ring. Lubricate with liquid soap and reassemble.
- Check the orifice to make sure it's not clogged or blown back out. Clean or push orifice back into place.
- If water is sandy use a line strainer ahead of the injector. Call your MasterCare representative to order a line strainer.
- Are there lime deposits in the throat of the injector? Certain chemicals can cause precipitation in the throat of the injector. Let the injector draw a deliming agent through it to remove the deposit. [f deposits are so heavy that injection has ceased it may necessary to remove the injector body from the line and soak it in delimer.

If this doesn't work, a new valve will have to be ordered. If liming is a problem, periodic deliming is required.

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### CHAIR TRANSFER SYSTEM

#### CHAIR TILT BACK GAS SPRING ADJUSTMENT

(SAME DRAWING AS CURRENT MANUAL??)

**Adjustment:** Reference drawing to right.

1. Support chair back with bungee cord to seat bottom or have someone hold in upright position.
2. Remove 3/8-16 lock nut pivot bolt on top gas spring to allow rotation of clevis mount. 3) With clevis slid off mounting boss and chair back with jam nut loosened note the following:
  - If chair back will not recline: Rotate clevis mount clockwise one turn and reinstall to test. Rotate one more if chair still doesn't recline.
  - If chair back reclines but doesn't stay positioned when releasing lever: Rotate clevis mount counter clockwise one turn and reinstall. Rotate another turn if chair still doesn't lock in place.

**Replacement:**

1. Support chair back same as above. Remove 3/7-16 lock nut and top pivot bolt on top of gas spring. Grasp the gas spring on SS body turn counterclockwise to unscrew from gas spring extension.
2. Loosen jam nut on top of gas spring and note position of release lever to gas spring plunger. Unthread gas spring from white clevis lever mount assembly by rotating gas spring counter clockwise. 3) Install gas spring in reverse order. as follows:
3. Rotate gas spring clockwise into clevis mount until spring plunger contacts release lever with lever approximately horizontal. Screw gas spring lower threads into spring extension.
4. Reinstall pivot bolt and lock nut. Test function. Refer to gas spring adjustment procedures above if adjustment is needed.



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### SCALE CALIBRATION

*Memo: Before calibrating acquire a calibrated 25 lb. weight. Note: The weight must be calibrated or scale will display inaccurate weights. Chair must be on carder with scale in order to calibrate.*

1. Turn the scale on by pushing the ON/ZERO BUTTON. With scale on ensure the lbs display is showing. If not push the LBS/KG BUTTON until lbs. shows on the display. After the lbs. display is activated allow it to shut off on its own
2. Turn the scale back on again by pushing the ON/ZERO BUTTON. After the scale turns back on push the ON/ZERO BUTTON and continue to hold down while also pushing the LBS/KG BUTTON down CAL will be displayed. Hold both buttons down for about 3 to 4 seconds until the display reaches C - 0 (zero) then release both buttons.
3. Push ON/ZERO BUTTON down one more time then release. The display will start counting down from 16 to 0 (zero). After the display reaches 0 (zero) a new display will read C-25. Place the 25 lb. weight centered on the chair. Again, push the ON/ZERO DOWN then release and the display will start counting down from 16 to 0. After the display reaches 0 a new display will read 25. Remove the 25lb weight. Your Scale is now calibrated.



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### DRAWINGS/PICTURES

- 800656 - Integrity Consol Assembly
- New drain drawings. Old has 800996
- 803965 - Gas Spring Assembly
- Door Handle Assembly (301176 ?)
- 804220 - Console Plumbing Assembly
- 804221 - Console Plumbing Pre-assembly
- 804225 - Reservoir Assembly
- 804245 - Drain Shoe Assembly Integrity Reservoir
- 804255 - Plumbing Assembly integrity / Do I need the 600941 instead?
- 804256 - Plumbing Pre-assembly Non-console
- 804305 Door Hinge Assembly
- 804320 - Integrity Assembly w/ Console (5 pages)
- 804325 - Integrity Assembly Non Console (5 pages)
- 803966 - Door Assembly
- 804500 - Door Mounting Assembly