

OWNER'S MANUAL

**MODEL NO.
625.349225**

Caution:

Read and Follow
All Safety Rules and
Operating Instructions
Before First Use of
This Product.

If you have questions when
installing, operating or main-
taining your filter, and when
setting the timer, call this
toll-free number...

1-800-426-9345

(M - F, 7 am - 8 pm, CST)

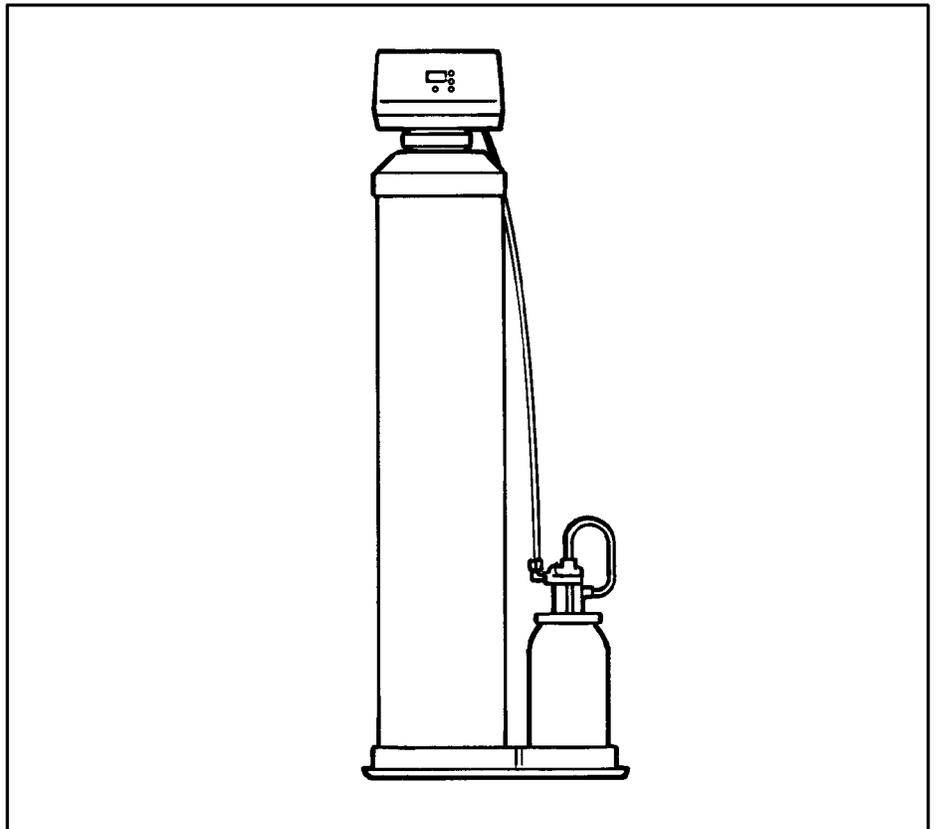
For repair or replacement
parts, call this toll-free num-
ber...

1-800-366-7278

See back cover for other
Sears service numbers.

www.KenmoreWater.com

SAVE THIS MANUAL



Automatic Iron Filter

- ◆ Warranty
- ◆ Start Up / Setting Timer
- ◆ How It Works
- ◆ Care Of
- ◆ Specifications
- ◆ Repair Parts



Printed on recycled paper

Sears, Roebuck and Co., 3333 Beverly Road, Hoffman Estates, IL 60179 USA

W
A
R
R
A
N
T
Y

SEARS RESIDENTIAL WATER FILTER

FULL ONE YEAR WARRANTY ON FILTER

For one year from the date of purchase, when this filter is installed and maintained in accordance with our instructions, Sears will repair, free of charge, defects in material or workmanship in this water softener.

FULL FIVE YEAR WARRANTY AGAINST LEAKS

For five years from the date of purchase, Sears will furnish and install a new current model water filter tank, free of charge, if the tank develops a leak.

TO OBTAIN WARRANTY SERVICE, SIMPLY CONTACT THE NEAREST SEARS SERVICE CENTER THROUGHOUT THE UNITED STATES. This warranty applies only while this product is in use in the United States.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Sears, Roebuck and Co., D/817 WA, Hoffman Estates, IL 60179

If you want your water filter professionally installed, talk to your Sears Salesman. He will arrange for a prompt, quality installation by Sears Authorized installers.

SEARS INSTALLATION POLICY

All installation labor arranged by Sears shall be performed in a neat, workmanlike manner in accordance with generally accepted trade practices. Further, all installations shall comply with all local laws, codes, regulations and ordinances. Customer shall also be protected, during installation, by insurance relating to Property Damage, Workman's Compensation and Public Liability.

SEARS INSTALLATION WARRANTY

In addition to any warranty extended to you on the Sears merchandise involved, which warranty becomes effective the date the merchandise is installed, should the workmanship of any Sears arranged installation prove faulty within one year, Sears will, upon notice from you, cause such faults to be corrected at no additional cost to you.

FACTS AND FIGURES TO KEEP

Fill in the blanks below and keep this book in a safe place so you always have these facts.

Water Filter Model No.† _____

Serial Number _____

Date Installed _____

Iron Content _____ Parts Per Million

pH _____ Taste And/Or Odor _____

Water Pressure _____ Pounds/Square Inch

Water Flow Rate _____ Gallons Per Minute

† The model number is on the rating decal, located on the rim, under the salt hole cover.

SECTION 1	WATER FILTER START UP	PAGE NO.
A.	Safety Guides	1-1
B.	Check List of All Step-By-Step Guides to Install	1-2
C.	Program the Timer	1-3 & 1-4
D.	Sanitizing the Water Filter	1-5
E.	Adjustment for Potassium Permanganate Use	1-6
SECTION 2	HOW YOUR WATER FILTER WORKS	
A.	Faceplate Timer Features	2-1 & 2-2
B.	Iron in Water / How Filter Removes It	2-3 & 2-4
SECTION 3	CARE OF YOUR FILTER	
A.	Changing the Potassium Permanganate Bottle	3-1
B.	Cleaning the Nozzle & Venturi	3-2
C.	Keep the Filter From Freezing	3-3
D.	Helpful Hints Checklist (Service)	3-4
SECTION 4	OTHER THINGS TO KNOW	
A.	Dimensions / Specifications	4-1
SECTION 5	SERVICER'S TECH INFORMATION	
A.	Wiring Schematic	5-1
B.	Manual Initiated Electronics Diagnostics	5-2
C.	Manual Advance Diagnostics	5-3
D.	"Quick-Check" Troubleshooting	5-4
E.	Rotary Valve Service	5-5
F.	Water Flow Through the Filter Valve	5-6 to 5-8
SECTION 6	REPAIR PARTS	6-1 to 6-4

A. SAFETY GUIDES

▲ Read all steps, guides and rules carefully before installing and using your new water filter. Follow all steps exactly to correctly install. Failure to follow them could cause personal injury or property damage. Reading this book will also help you to get all of the benefits from your water filter.

▲ Your automatic filter will remove iron from your water supply as described on page 2--3. Also see the specifications on page 4--1. It will not soften hard water, purify contaminated water, or make other unsafe water safe to drink. Sears advises you to install a water softener, along with the iron filter, to remove iron that may get through the filter.

▲ Protect the filter and piping from freezing. Damage from freezing voids the filter warranty. See page 3--3.

▲ Connect the filter to the house COLD water (120° max.) pipe only. **DO NOT CONNECT TO HOT WATER.** Hot water will damage inner parts and weaken or break the tank or bottle.

CAUTIONS

PLEASE READ AND COMPLY WITH THE FOLLOWING GUIDES TO PREVENT DAMAGE TO THE FILTER OR OTHER PROPERTY, PERSONAL INJURY, OR POSSIBLE FATAL SHOCK.

▲ THIS FILTER WORKS ON 24 VOLTS ONLY. BE SURE TO USE THE TRANSFORMER INCLUDED, AND PLUG IT INTO A GROUNDED 120V OUTLET.

▲ Unplug the transformer right away if the power cable should become damaged or frayed. Make repairs before plugging back into the power outlet.

▲ Always unplug the filter from electrical power before removing outer valve covers.



European Directive 2002/96/EC requires all electrical and electronic equipment to be disposed of according to Waste Electrical and Electronic Equipment (WEEE) requirements. This directive or similar laws are in place nationally and can vary from region to region. Please refer to your state and local laws for proper disposal of this equipment.

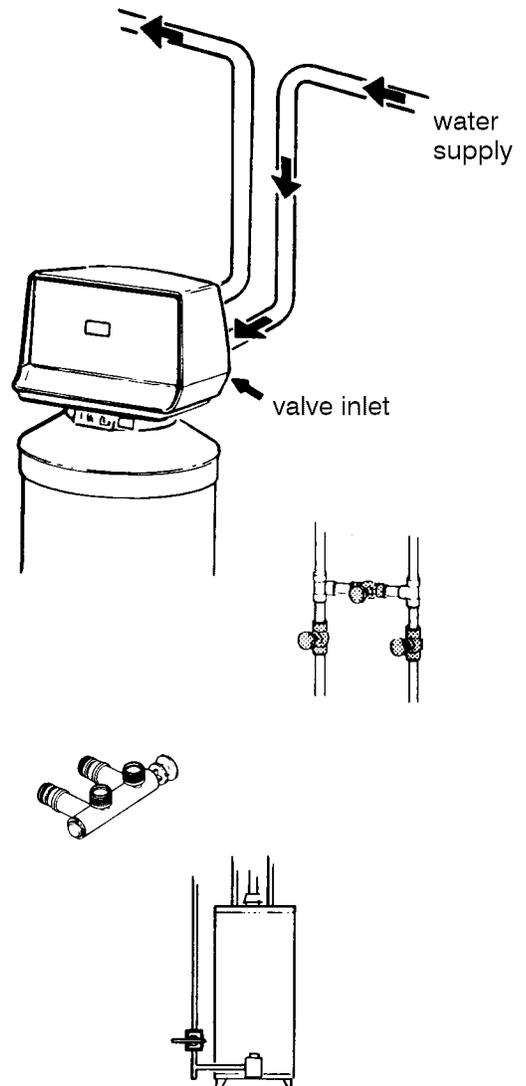
B. CHECK LIST OF ALL STEP-BY-STEP GUIDES TO INSTALL

Refer to the Installation Manual, part number 7146611, for step-by-step guides.

To be sure you have done all the steps to install the filter, read the following list. Page numbers referred to are in the Installation Manual.

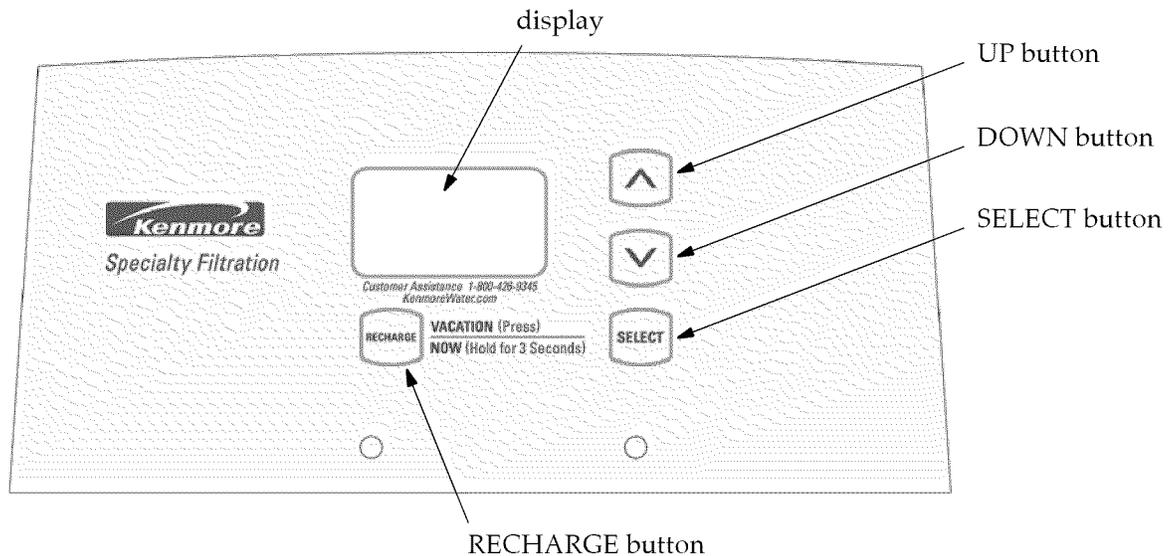
- ✓ Is the house water flow going INTO the filter valve INLET? Trace piping to be sure . . . page 9.
- ✓ Is the plumbing bypass valve (or three valves) set for SERVICE? . . . See Figure 11, page 4-1 of this manual.
- ✓ Is the valve drain hose connected the right way, and without sharp bends or kinks that could stop or reduce water flow? . . . page 14.
- ✓ Is the tubing connected between the feeder valve, on the potassium permanganate bottle, and the filter valve . . . page 10. Is the bottle drain hose connected and over the floor drain . . . page 15.
- ✓ Is the transformer plugged into an inside, continuously "live", grounded, 120V-60Hz electrical outlet . . . page 17.
- ✓ Be sure to restart the water heater . . . page 18.

FIGURE 1

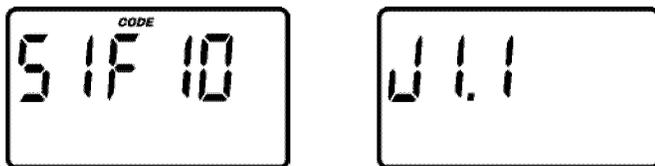


C. PROGRAM THE TIMER

FIGURE 2



When the transformer is plugged into the electrical outlet a model code is displayed for a few seconds followed by a test number (example: J1.1). Then, 12:00 PM and the words PRESENT TIME will begin to flash in the time display.



Notes:

If - - - - shows in the display, press the UP or DOWN button until SIF10 shows in the display. Then, press the SELECT button to set, and change to the flashing PRESENT TIME display.

To check the model code, unplug the transformer at the wall outlet and plug in again. **if other than this code shows, see page 5-3 to reset.**

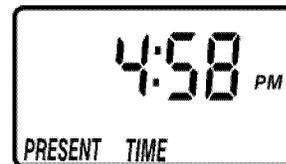
If the words PRESENT TIME do not show in the display, press the SELECT button (FIGURE 2) until they do.

SOUND "BEEPER": A "beeper" sounds while pressing buttons for set-up. One beep signals a change in the face plate display. Repeated beeps mean the timer will not accept a change from the button you have pressed, telling you to use another button.

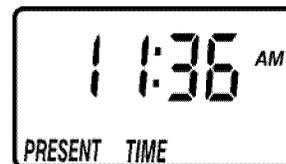
1. SET PRESENT TIME OF DAY

Press the UP or DOWN buttons to set the present time. Press UP to move the display ahead; press DOWN to move the time backward.

- a. If the present time is between noon and midnight, be sure *PM* shows.



- b. If the present time is between midnight and noon, be sure *AM* shows.



Each press of the UP or DOWN buttons changes the time by 1 minute. Holding the buttons in changes the time 32 minutes each second.

- c. Press the SELECT button once to set the present time of day and advance to the next set up screen.

C. PROGRAM THE TIMER

2. SET DAYS TO RECHARGE

This setting is the number of days the filter will go between recharges. The default setting is 3 days, with a maximum setting of 99.



- a. Press the UP or DOWN buttons until the correct number of days between recharges is shown in the display.
- b. Press the SELECT button once to set the days to recharge and advance to the next set up screen.

See the chart below to determine the frequency of recharges. Find the number of people living in the household, and then going across the chart, find the amount of iron (in parts per million) that is in the water supply. The number of days that shows is the number of days the filter should be set for recharges.

Number of People	Iron (parts per million)								
	2	4	6	8	10	12	14	16	20
1	7 days	6 days	5 days	4 days	3 days	3 days	3 days	2 days	2 days
2	6 days	5 days	3 days	3 days	2 days	1 day	1 day	1 day	1 day
3	5 days	3 days	2 days	2 days	1 day				
4	4 days	3 days	2 days	1 day					
5	4 days	2 days	1 day						
6	3 days	2 days	1 day						
7	3 days	1 day							
8	2 days	1 day							

NOTE: If there is an iron bleed or the water supply has high turbidity (sand, silt, sediments, etc.) set the filter to regenerate more often than the table above shows.

3. SET RECHARGE TIME

The filter is factory set to begin recharge at 12:00 AM. If a different recharge time is desired, or needed, do the following.

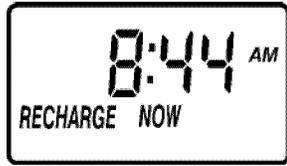


- a. Press the UP or DOWN buttons until the correct recharge time is shown in the display.
- b. Press the SELECT keypad once to set the recharge time and return the display to the normal operating screen with the present time of day shown.

D. SANITIZING THE WATER FILTER

Care is taken at the factory to keep your water filter as clean and sanitary as possible. However, it is suggested that the sanitizing procedure below is followed ^①.

4. Press and hold the RECHARGE button until "RECHARGE NOW" begins to flash in the display. The valve motor begins to run to advance the filter into the "fill" cycle. Water flows through the plastic tubing and you will see the potassium permanganate bottle begin to fill.



- a. As the bottle begins to fill with water, press the RECHARGE button again. In about one minute, you will see a slow flow of water begin out the valve drain hose.
- b. Wait about 30 seconds, then press the RECHARGE button once more. As the valve repositions again, a fast flow from the filter drain hose begins. This is the filter "backwash" cycle. Allow the filter to backwash for several minutes.
- c. Press the RECHARGE button to advance the filter from backwash to "fast rinse" cycle. (Water from the drain hose stops momentarily, then begins again).
5. After about two minutes of fast rinse, PUT THE BYPASS VALVE(S) IN BYPASS POSITION (SEE FIGURE 11, PAGE 4-1). Then press the RECHARGE button once again to return the filter to "service" position. DOING THIS RELEASES WATER PRESSURE IN THE FILTER.
6. Carefully remove the large plastic clip at the filter valve inlet (pages 6-3 and 6-4). Pull the valve adaptor from the valve inlet.

NOTE: If bypass valve, Sears part no. 7129871 is installed, or if plumbing is too rigid to move, also disconnect the outlet side and move the filter away from plumbing.

7. Put one teaspoon (0.1 ounce) of calcium hypochlorite into the valve inlet as far as possible.

NOTE: You can buy calcium hypochlorite in tablet or granular form under trade names such as Perchloron and HTH.

8. Be sure the valve inlet is clean, for a good sealing surface for the valve adaptor o-ring. Then, reconnect plumbing to the filter. AFTER INSTALLING THE LARGE PLASTIC CLIP, PULL OUTWARD ON THE VALVE ADAPTOR TO BE SURE IT'S PROPERLY HELD IN PLACE.
9. SLOWLY, reposition the bypass valve(s) to service, Figure 11, page 4-1. Open the nearest filtered water faucet until you can smell chlorine, then close.
10. Again, put the bypass valve(s) in bypass position. Allow the filter to stand idle for about 45 minutes, while the chlorine sanitizes.

NOTE: If needed, adjust the feeder valve tube for potassium permanganate use, page 1-6. Then, complete the following steps.

11. After 45 minutes, return the bypass valve(s) to service position.
12. Repeat steps 4, 4a, 4b and 4c to advance the filter to backwash. The timer will automatically advance the filter through the backwash and fast rinse cycles, during which the sanitizing bleach is flushed to the drain.

NOTE: The backwash and fast rinse cycles take about 25 minutes. When over, the timer automatically returns the filter to service (water flow from the drain hose stops).

13. Open house filtered water faucets and allow to run until the chlorine odor is gone.

^① Recommended by the Water Quality Association. On some water supplies, the water filter may need periodic disinfecting.

E. ADJUSTING FOR POTASSIUM PERMANGANATE USE

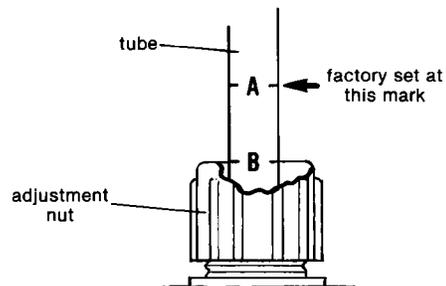
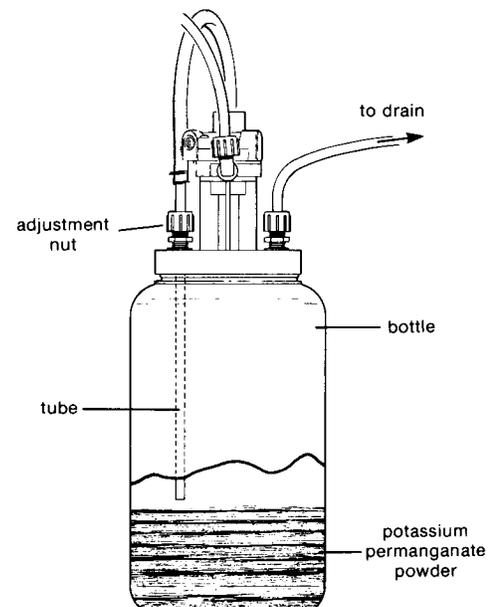
The filter is factory set to use about two ounces of potassium permanganate each recharge. That's how much is needed to keep the mineral bed working the way it should. However, if you recharge the filter more often than needed less potassium permanganate is needed each time.

The valve (Figure 3) has a tube that raises and lowers into the bottle. It has two settings marked on it. The "A" mark, or factory setting, is for two ounces of potassium permanganate. The "B" setting is for one ounce.

To change the setting, loosen the adjustment nut. Raise the tube until "B" lines up with the top of the nut, then tighten the nut.

IMPORTANT: For proper recharging of the mineral bed, use the "A" setting. Use the "B" setting ONLY if the filter is set to recharge more often than the table on page 1-4 shows. Improper recharging will shorten the useful life of the mineral bed.

FIGURE 3

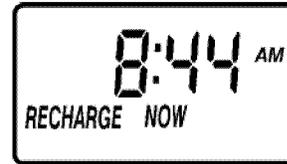


A. FACEPLATE TIMER FEATURES

RECHARGE NOW

For times you expect to use more water than usual, use the RECHARGE NOW feature. Press the RECHARGE button and hold in for three seconds. "RECHARGE NOW" begins to flash in the display and a recharge starts right away. You will have filtered water when the recharge is over in about two hours.

FIGURE 4



VACATION

The day you leave on vacation or other long absence, press and release (do not hold) the RECHARGE button. "VAC" begins to flash in the display. The timer will keep time, but the filter will not recharge and waste water and potassium permanganate solution.

FIGURE 5



When you return, press and release the RECHARGE button again to return the filter to service, and the correct time of day will show in the display. **Remember to do this** or the filter will not recharge and you will soon have iron in your water supply.

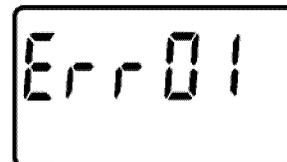
NOTE: While in VACATION, the filter will go through a recharge if the RECHARGE NOW feature is used.

To shut off the water supply to the filter, use the plumbing bypass valve(s) . . . Figure 11 on page 4-1.

ERROR CODE

FIGURE 6

An error code could appear in the faceplate display if a problem occurs in the filter electronics. If you see an error code instead of the present time of day, please call your local Sears Service Department for service.

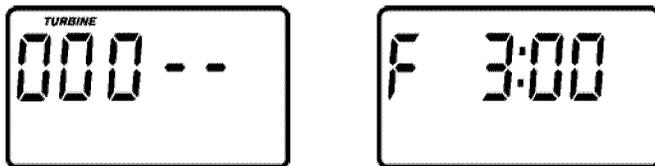


A. FACEPLATE TIMER FEATURES

The default settings for fill (3:00 minutes), brine draw (80 minutes), backwash (20 minutes) and fast rinse (5 minutes) cycles of regeneration are factory set for maximum performance of the filter. Use the following procedures to check for correct cycle times, or to change if desired. **However, only trained technicians should change the time settings.**

FILL

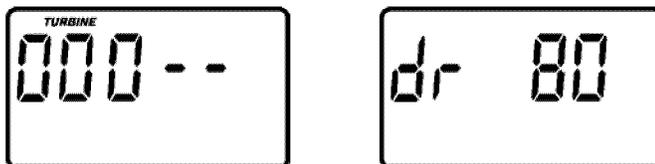
Press and hold the SELECT button until the display shows "000--", then press the SELECT button once to display the Fill time screen.



This setting should stay at the 3:00 minute fill time.

ADJUSTABLE BRINE DRAW

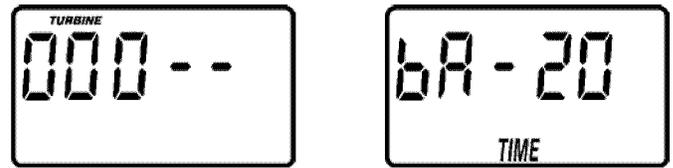
Press and hold the SELECT button until the display shows "000--", then press the SELECT button twice to advance to the Brine Draw time adjust screen.



Using the UP or DOWN buttons, adjust the brine draw time from 0 minutes to 255 minutes.

ADJUSTABLE BACKWASH

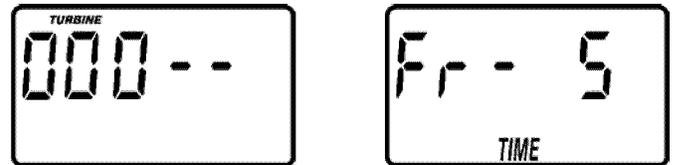
Press and hold the SELECT button until the display shows "000--", then press the SELECT button three times to advance to the Backwash time adjust screen.



Using the UP or DOWN buttons, adjust the backwash time from 0 minutes to 60 minutes.

ADJUSTABLE FAST RINSE

Press and hold the SELECT button until the display shows "000--", then press the SELECT button four times to advance to the Fast Rinse time adjust screen.



Using the UP or DOWN buttons, adjust the fast rinse time from 0 minutes to 60 minutes.

TIMER "POWER-OUTAGE MEMORY"

If electrical power to the timer is interrupted, the "memory" built into timer circuitry keeps time for 6 hours (minimum) or more. The display is blank and the filter will not regenerate. When electrical power comes on, one of two things will happen.

1. The present time of day will show steady, meaning the timer has not lost time.
2. The display will show a time, but it will be flashing. The timer memory did not keep the time setting and must be reset (page 1-3). If you do not reset the time, regenerations will most likely be at the wrong time of day.

NOTE: The flashing display is to remind you to reset the timer.

NOTE: If the filter was in a recharge when power was lost, it will now finish the cycle.

B. IRON IN WATER / HOW FILTER REMOVES IT

IMPORTANT: Sears water filters are sometimes installed alone in the water system, but most often other water treating equipment is needed. Always be sure to have your water tested by a qualified testing laboratory. If you need help, ask at your Sears store, or call the Kenmore Water Line, 1-800-426-9345.

Iron in water causes many problems, from making rust stains on clothing, plumbing fixtures, etc. to making food and beverages look and taste bad. Two common kinds of iron are -

- Clear Water (FERROUS) iron is the most common. Water with ferrous iron is clear when taken from a faucet. After standing for 15 to 30 minutes, the water turns to a yellow or brown color.

- Red Water (FERRIC) iron is rusty or brown as it comes out of a faucet.

Your Sears Automatic Iron Filter will remove up to 20 parts per million (ppm) of the ferrous and/or ferric kinds of iron. Sears advises you to install a water softener in the water system after the iron filter, to remove any iron that may get through the filter.

NOTE: Bacterial iron is another common kind. It forms stringy mud like clumps in the water. If you think you have bacterial iron, have a water sample tested by Sears Water Analysis Laboratory. They will tell you what is needed to treat the bacterial iron. THIS FILTER WILL NOT REMOVE BACTERIAL IRON FROM WATER.

The iron filter is filled with a special manganese coated mineral. The filtering mineral bed is made up of thousands of small, odd shaped, pebble like pieces. The mineral does two things; ① OXIDIZES iron and, ② FILTERS iron.

① OXIDIZE - Iron most often is dissolved (clear water iron) in water supplies. You can't see it and, in this form, it is not filterable. When clear water iron comes in contact with oxygen for a few minutes, the iron changes to a solid form (red water iron) that you

can see. The filtering mineral gives off the oxygen to make the iron change (oxidize) to red water iron.

② FILTER - Iron, in the oxidized or red water form, is filtered and held within the mineral bed during service. The iron is then cleaned from the mineral bed during recharge with a potassium permanganate solution, and backwashing.

SERVICE (Figure 7) - The water supply, with iron in it, flows into and downward through the filter. The mineral bed in the filter oxidizes, gathers and holds the iron. Clear, iron free water goes out the filter and to the house pipes.

RECHARGE - In time, the filtering mineral has given off all the oxygen it can, and the bed is filled with the iron it has gathered. Then the mineral needs a recharge (or regeneration) to give it a new oxygen supply and to clean iron out. FILL, SOLUTION DRAW/RINSE, BACKWASH and FAST RINSE are stages of the recharge (Figure 8).

FILL water flows to a bottle filled with potassium permanganate powder during the first stage of recharge. The bottle fills with water to a preset level, until stopped by a float shutoff. In the bottle, water dissolves some of the potassium permanganate powder so a solution is ready for the solution draw cycle. The fill cycle lasts for 1-1/2 minutes.

During the 80 minute SOLUTION DRAW/RINSE, potassium permanganate solution is passed through the filter mineral to replace the oxygen. A suction takes the solution from the bottle and puts it into the mineral tank. The potassium permanganate rinses slowly through the filtering mineral, then goes out of the filter to the drain.

B. IRON IN WATER / HOW FILTER REMOVES IT

FIGURE 7

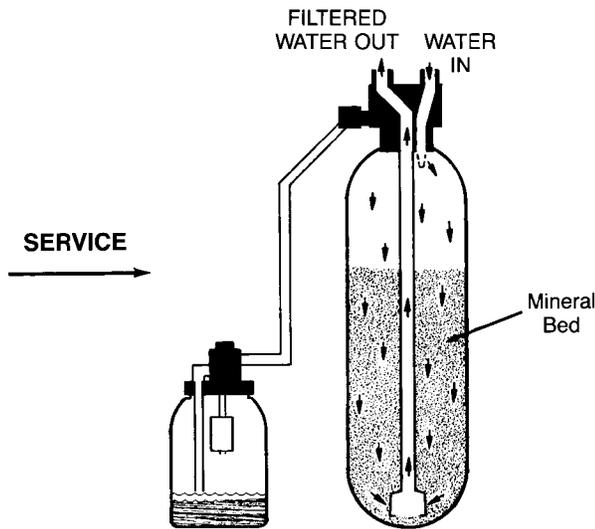
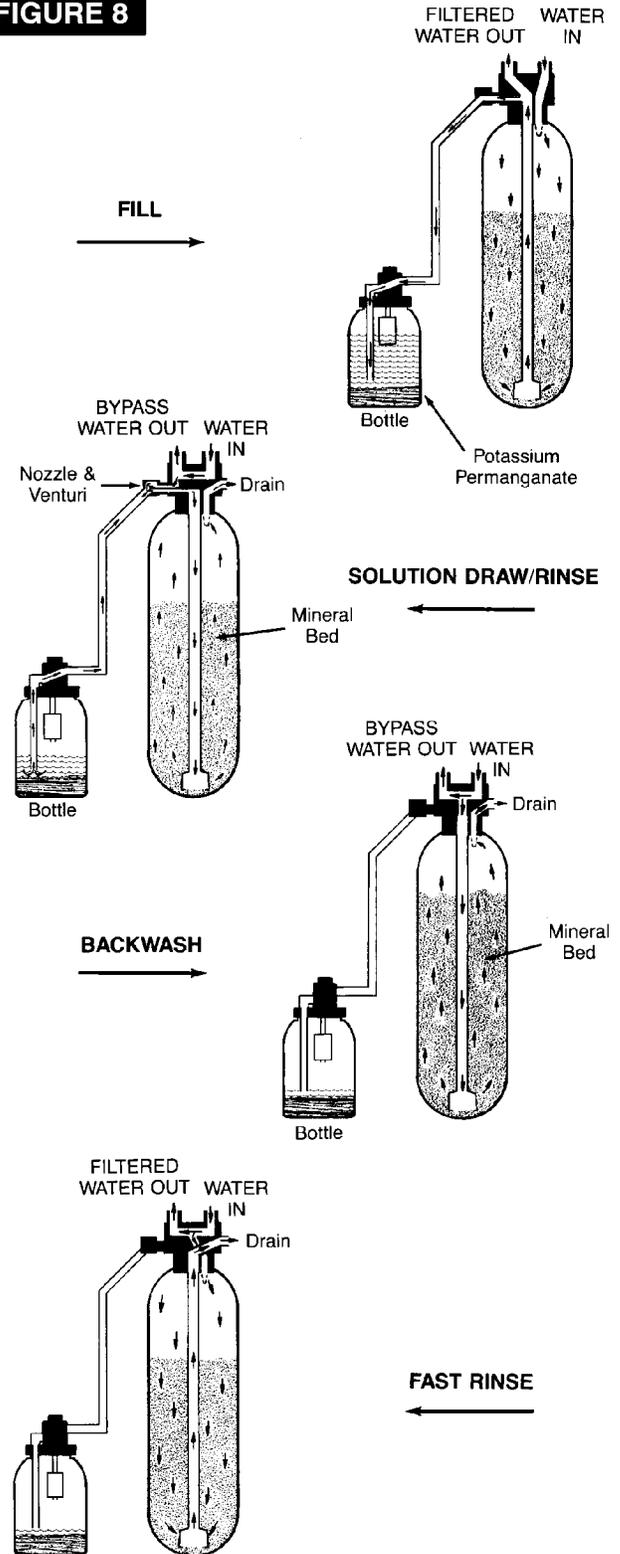


FIGURE 8



IMPORTANT: Avoid using water in the house while the filter is regenerating. Bypass iron water will go to house pipes and the water heater during the solution draw and backwash cycles if a faucet is opened.

When solution draw is over, the filter goes into BACKWASH. During backwash, water goes UP through the mineral at a fast flow. The fast flow loosens and flushes the gathered iron out of the bed. The iron goes with the flow of water to the drain. Any potassium permanganate still in the bed is also flushed out. The backwash is 20 minutes long.

After backwash, water goes DOWN through the filter (FAST RINSE) for 5 minutes. The mineral bed is packed and made ready for return to service. Rinse water goes to the drain.

IF YOUR WATER HAS A PINK COLOR AFTER THE FILTER HAS FINISHED RECHARGE, open a faucet nearby the filter and let the water run until the pink color gone. See page 3-4 if the pink color appears after every recharge.

A. CHANGING THE POTASSIUM PERMANGANATE BOTTLE

SECTION
NO-11-10-MS
3

IT IS IMPORTANT that you change the bottle before all the potassium permanganate is gone. If the filter goes too long without a regeneration with potassium permanganate, the filtering mineral will lose its manganese coating and you can't replace it. New mineral and the service call to change it are costly. You can buy replacement bottles from Sears, Stock No. 42-34417.

HOW LONG DOES A BOTTLE OF POTASSIUM PERMANGANATE LAST? How long a bottle lasts depends on how often the filter regenerates and how much potassium permanganate is used. You can use the chart as a guide to tell you about how long it will last.

HOW LONG THE POTASSIUM PERMANGANATE BOTTLE LASTS

No. of Recharges Each Week	Tube set at "A" Mark	Tube set at "B" Mark
1	9 months	18 months
2	4-1/2 months	9 months
3	3 months	6 months
4	9 weeks	4-1/2 months
5	7 weeks	3-1/2 months
6	6 weeks	3 months
7	5 weeks	2-1/2 months

BULK POTASSIUM PERMANGANATE POWDER: If purchased and used in bulk form, **DO NOT OVER FILL THE BOTTLE.** Fill with only 6 lbs. of powder (see note below). Too much powder will stop or restrict solution flow from the bottle. Before filling, be sure to thoroughly clean the bottle.

WARNING: Handle the bottle with care. Potassium Permanganate stains deeply. Do not get it on your clothes or your skin. You should wear old clothes when changing the bottle. Please read the warning printed on the bottle.

STEPS TO CHANGE THE BOTTLE

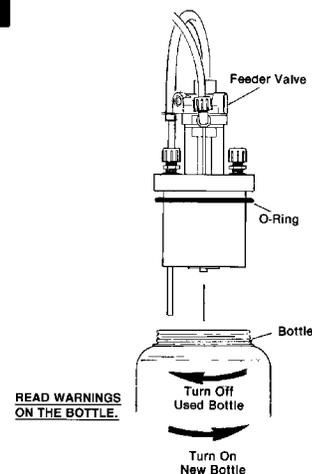
CHANGE THE BOTTLE WHILE THE FILTER IS IN SERVICE AND NOT WHILE IN REGENERATION (be sure "RECHARGE NOW" is not flashing in timer display).

1. Turn the used bottle out of the feeder valve. Do not lose the large o-ring on the bottom of the valve.
2. Place the used bottle in a leak proof plastic bag and discard it in a safe place and manner so children cannot get to it.
3. Remove the cover from the new bottle.

NOTE: The new bottle is only partly filled (about 6 lbs.) with potassium permanganate powder. The empty part of the bottle is needed so it can fill with water to dissolve the powder.

4. Put a light coat of Vaseline or silicone grease on the valve to bottle o-ring seal. If not already in place, put the o-ring in the groove on the bottom of the feeder valve.

5. Turn the new bottle into the feeder valve until you feel the o-ring touch the top lip of the bottle. Then tighten another 1/8 turn. **DO NOT OVER TIGHTEN SO THE O-RING WILL NOT SEAL.**
6. Shake the bottle to level the powder.
7. Place the bottle onto the base.

FIGURE 9

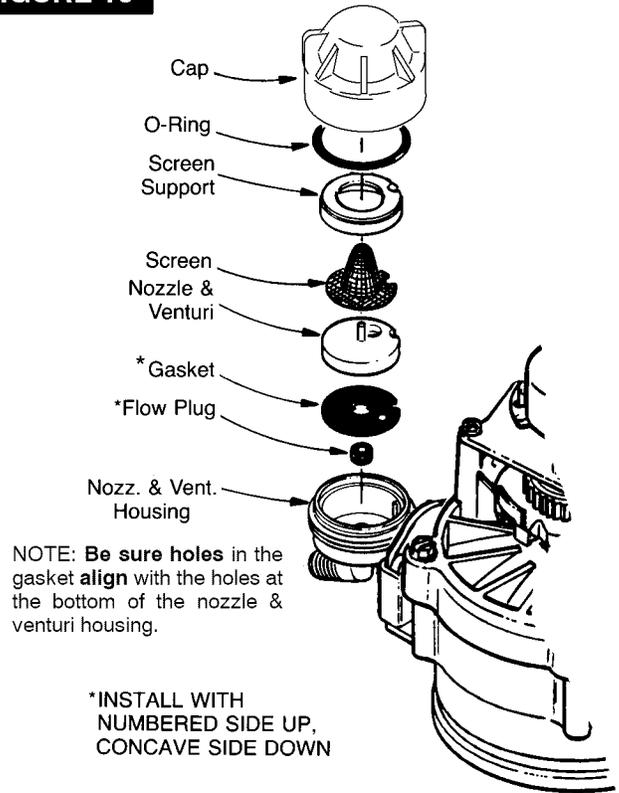
B. CLEANING THE NOZZLE AND VENTURI

A clean nozzle and venturi (Figure 10) is a must for the filter to work right. This small unit moves potassium permanganate solution from the bottle, into the mineral bed during solution draw (page 2-3). If the nozzle and venturi becomes plugged with iron, sand, silt, dirt, etc., it cannot make the suction to move the solution. Without this solution during regeneration, the mineral bed will not be cleaned as it should.

Clean the nozzle and venturi each time you change the bottle. If your water supply has high amounts of iron, sand, silt, etc., you may have to clean the nozzle and venturi more often.

To get to the nozzle and venturi, remove the filter top cover. Be sure the filter is in service cycle (no water pressure at nozzle and venturi), then twist off the cap from the nozzle and venturi housing. **DO NOT LOSE THE LARGE O-RING SEAL.** Lift out the screen support and screen, then the nozzle and venturi. Wash and rinse the parts in warm water until clean. If needed, use a small brush to remove iron or dirt. Also check and clean the gasket and flow plug if dirty.

FIGURE 10



C. KEEP THE FILTER FROM FREEZING

If the filter is installed where it could freeze (summer cabin, lake home, etc.) you must drain all water from it to stop possible damage caused by freezing. To drain the filter-

1. Close the shutoff valve on the house main water pipe, near the water meter or pressure tank.
2. Open a faucet in the filtered water pipes to vent pressure in the filter.
3. Looking at Figure 11 on page 4-1, move the stem in a single bypass valve to bypass. Close the inlet and outlet valves in a three valve bypass system, and open the bypass valve.
4. Unplug the transformer at the wall outlet.
5. Pull the holding clip to remove the drain fitting, with drain hose attached, from the valve. **DO NOT LOSE THE BLACK RUBBER FLOW PLUG AND RETAINER.**
6. Looking at page 11 in the installation manual, remove the plastic clips and pull the adaptors or bypass valve from the inlet and outlet.
7. Remove the bottle and feeder valve from the base. Store the bottle in a warm, safe place where it will not spill, and **AWAY FROM CHILDREN.**

If you do not have a place to SAFELY store the bottle, turn the feeder valve off and flush with fresh water. Dump the liquid contents of the bottle down the drain. Place the bottle in a plastic bag and discard in a safe place and manner so children cannot get to it.

8. Move the filter close to the floor drain. SLOWLY and CAREFULLY (the filter is heavy) tip the filter over so the valve inlet and outlet are over the drain. **DO NOT REST THE FILTER ON THE INLET AND OUTLET FITTINGS OR THEY WILL BREAK.**
9. Tip the bottom of the filter up a few inches and hold until all water has drained. Leave the filter laying like this until you are ready to use it. Plug the inlet and outlet with rags to keep dirt, bugs, etc. out.

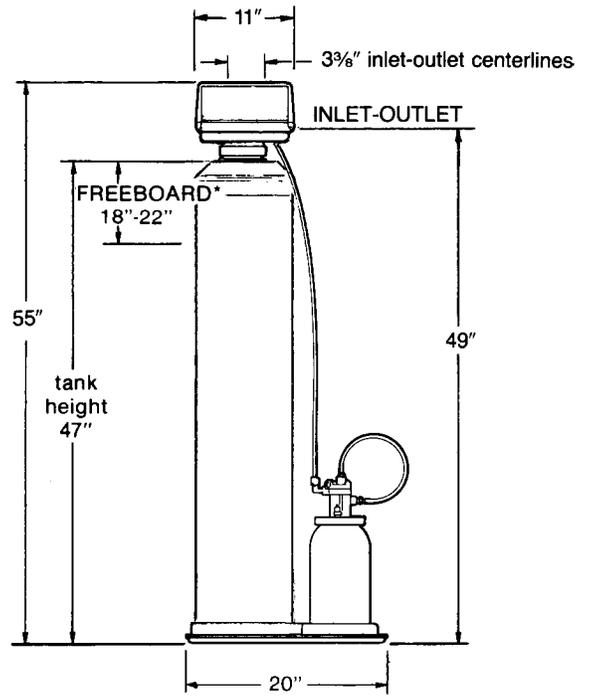
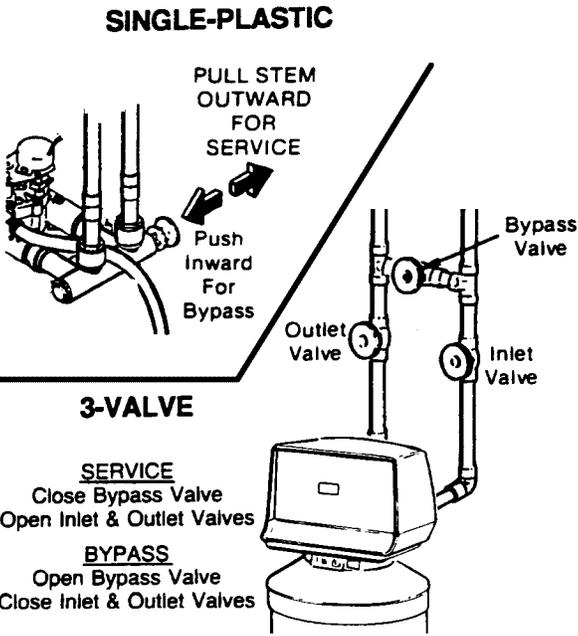
D. BEFORE YOU CALL FOR SERVICE . . . HELPFUL HINTS CHECKLIST

PROBLEM	CAUSE	CORRECTION
FILTER WILL NOT RECHARGE	<p>Manual bypass valve(s) in bypass position</p> <p>Transformer unplugged at wall outlet, power cable disconnected from electronic board, fuse blown/circuit breaker popped, or circuit switched off</p> <p>Timer in the vacation "VAC" position</p> <p>Timer not programmed for recharge</p> <p>An error code shows in the face plate display</p> <p>Backwash flow washer plugged</p> <p>Drain hose plugged, kinked or bent</p>	<p>See Figure 11 on page 4-1. Move stem in a single bypass valve to SERVICE. In a three valve bypass, open the inlet and outlet valves, close the bypass valve.</p> <p>Check for loss of power and correct. Reset the time and use the RECHARGE NOW feature, page 2-1. Also see "Electric Power Outlet For Your Filter", page 17 in the installation manual.</p> <p>Press the VACATION button once to return the filter to service, see page 2-1.</p> <p>See page 1-4 to program a recharge schedule.</p> <p>See page 2-1.</p> <p>Remove drain hose adaptor to clean, see pages 6-3 and 6-4.</p> <p>Straighten hose, or remove and clean.</p>
FILTER RECHARGES, BUT FILTERED WATER HAS IRON	<p>See causes above</p> <p>No more potassium permanganate in storage bottle</p> <p>Not using enough potassium permanganate</p> <p>Dirty, plugged or damaged nozzle and venturi</p> <p>More frequent recharges needed</p> <p>HOT water used while the filter is recharging</p> <p>Possible increase in iron content</p> <p>Leaking faucet or toilet valve</p>	<p>Replace bottle and use RECHARGE NOW.</p> <p>Reset the bottle adjusting tube, see page 2-1.</p> <p>Disassemble and inspect. Clean or repair as needed, page 3-2.</p> <p>Add more recharges, refer to page 1-4.</p> <p>The water heater will refill with bypass iron water. Avoid using water during recharges.</p> <p>Ask your Sears store for a new water analysis. Adjust recharges as needed.</p> <p>A small leak can waste hundreds of gallons of water in a few days. Fix plumbing leaks, and always fully close faucets.</p>
<p>LOW WATER PRESSURE AT HOUSE FAUCETS</p> <p>NOTE:</p> <p>Your water supply may have a PINK COLOR after recharges if water pressure is low. To correct, increase pressure, adjust for less potassium permanganate use and add more recharges, page 1-4, or increase the backwash cycle time, see Servicer's Tech Information.</p>	<p>Recharge and backwash needed more often to keep mineral bed clean</p> <p>Well pump pressure set too low</p>	<p>Adjust for more frequent recharges. See page 1-4.</p> <p>Adjust to a minimum of 20 psi.</p>

A. DIMENSIONS / SPECIFICATIONS

SECTION 4

FIGURE 11 BYPASS VALVES



* FREEBOARD is the distance (inches from top of the tank to top of the mineral bed (1 cu ft of mineral)

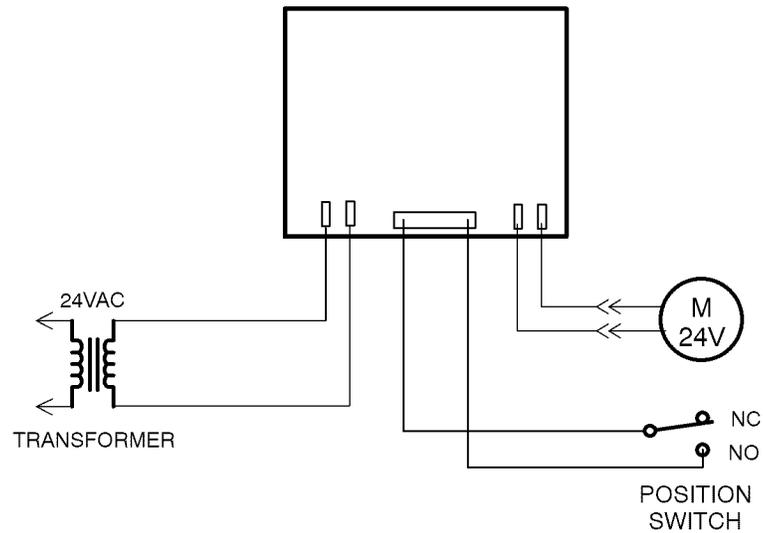
CLASSIFICATION OF FILTER:	Household
FILTER TYPE:	Oxidizing
TYPE OF MINERAL:	Manganese dioxide coated
AMOUNT OF MINERAL:	1.0 cu. ft.
AMOUNT OF GRAVEL BASE:	17 lbs.
AMOUNT OF FILTER SAND:	10 lbs.
INLET WATER PRESSURE LIMITS:	20-125 psi
RATED SERVICE FLOW:	8 gal/min
MAX. PRESSURE DROP AT RATED SERVICE FLOW:	10 psi
MAXIMUM INLET WATER TEMPERATURE:	120° F
MINIMUM INLET WATER FLOW:	7 gal/min.
MINIMUM INLET ANT OUTLET PIPE SIZE:	3/4 inch
BACKWASH FLOW RATE (at 35 psi inlet pressure):	7 gal/min
MINIMUM SUPPLY WATER pH:	7.0
CAPACITY RATING:	See Rating Decal on Filter
POTASSIUM PERMANGANATE USED AT EACH REGENERATION:	
at "A" setting on Tube:	2 ounces
at "B" setting on Tube:	1 ounce
ELECTRICAL RATING:	24V- 50/60 Hz, 0.3 A

B. NOTES

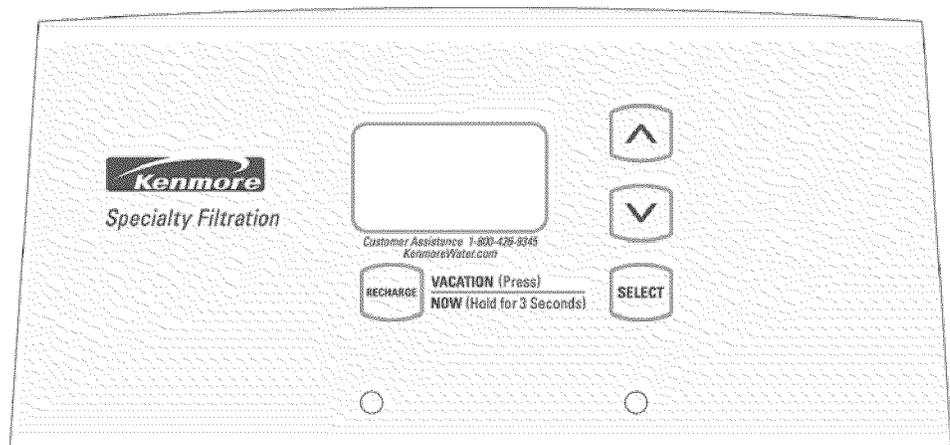
A. TROUBLESHOOTING

SECTION
5

WIRING SCHEMATIC



FACE PLATE TIMER



IMPORTANT: KEEP THIS MANUAL WITH YOUR WATER FILTER. IF REPAIRS ARE NEEDED, THE SERVICE TECHNICIAN MUST HAVE THE INFORMATION ON THE FOLLOWING PAGES.

A. TROUBLESHOOTING

ALWAYS MAKE THESE INITIAL CHECKS FIRST

1. Does the time display show the correct time of day?

...If display is blank, check power source to the filter.

...If time is flashing, power was off for over two days. The filter resumes normal operation but recharges occur at the wrong time.

2. Plumbing bypass valve(s) must be in SERVICE position (see Figure 11, page 4-1).

3. The inlet and outlet pipes must connect to the filter inlet and outlet respectively.

4. Is the transformer plugged into a "live" grounded wall outlet, and the power cable fastened securely?

5. The valve drain hose must be free of kinks and sharp bends.

If you do not find the problem after making the initial checks, do the MANUAL ADVANCE DIAGNOSTICS.

MANUAL INITIATED ELECTRONICS DIAGNOSTIC

1. To enter diagnostics, press and hold the SELECT button until (000- -) shows in the display.



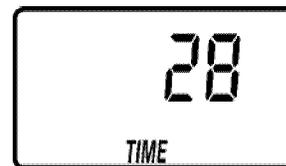
The letter (P) and dash or dashes indicate position switch operation. The letter shows if the switch is closed. A dash shows when the switch is open.

SWITCH DISPLAYS	VALVE CYCLE STATUS
--	valve in service, fill, draw, back-wash or fast rinse position
- P	valve rotating from one position to another

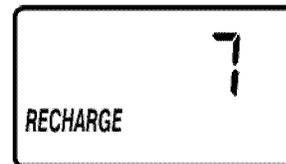
Use the RECHARGE button to manually advance the valve into each cycle and check correct switch operation.

While in this diagnostic screen, the following information is available and may be beneficial for various reasons. This information is retained by the computer from the first time electrical power is applied to the face plate.

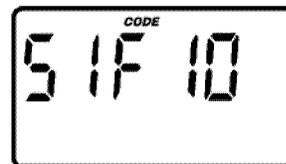
...Press the UP button to display the number of days this face plate has had electrical power applied.



...Press the DOWN button to display the number of regenerations initiated by this face plate since the model code number was entered.



2. Press the SELECT button and *hold* for 3 seconds until the model code appears in the display.



NOTE: For correct filter operation, the model code must be SIF10.

To reset the code, press the UP or DOWN buttons until the correct model code shows in the display.

3. Press the SELECT button to return the present time display. If the code was changed, make ALL the timer settings, page 1-3 and 1-4.

NOTE: If the face plate is left in a diagnostic display (or a flashing display when setting times or days to recharge), preset time automatically returns if a button is not pressed within 4 minutes.

A. TROUBLESHOOTING

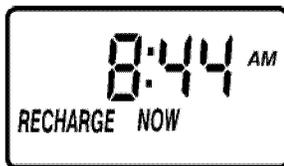
MANUAL ADVANCE DIAGNOSTICS

Use the following procedures to advance the filter valve through the regeneration cycles to check operation.

Remove the top cover to observe cam and switch operation during valve rotation.

DISPLAY MUST SHOW TIME AND DAY

1. Press and hold the RECHARGE button for 3 seconds until RECHARGE NOW flashes in the display and the filter moves into the fill cycle.



...If the motor does not run, check the motor and all wiring connections.

Check for fill water flow to the brine tank. If water does not enter the tank, look for an obstructed nozzle and venturi, fill flow plug or brine tubing.

2. After verifying fill, press the RECHARGE button to move the valve into solution draw. A slow flow of water to the drain will begin. Verify solution draw from the brine tank by shining the flashlight into the brinewell and observing a noticeable drop in the liquid level.

If the unit does not draw brine, check for...

...dirty or defective nozzle and venturi

...nozzle and venturi not seated on the gasket, or gasket defective

...restriction in valve drain, causing a back-pressure (bends, kinks, elevated too high, etc.),
 ...obstruction in brine valve or brine tubing
 ...inner valve failure (obstructed rotor disc, wave washer defective, etc.)

3. Again press the RECHARGE button to move the valve into backwash. Look for a fast flow of water from the drain hose (see specifications, page 4-1).

...An obstructed flow indicates a plugged top distributor, backwash flow plug, or drain hose.

Be sure household water pressure (well system) is maintained at a minimum of 20 psi. Adjust the pump switch upward, if needed.

4. Press the RECHARGE button to move the filter into fast rinse. Again, look for a drain flow rate about the same as backwash.

5. To return the filter to service, press the RECHARGE button once.

OTHER SERVICE

UNFILTERED WATER BYPASS (unfiltered water "bleeds" into filtered water supply.

1. Missing or defective o-ring(s) at resin tank to valve connection.
2. Defective rotor disc, seal or wave washer.

WATER LEAKS FROM DRAIN HOSE (during service)

1. Defective rotor disc, seal, or wave washer.
2. Defective o-ring on disc shaft.

AUTOMATIC ELECTRONIC DIAGNOSTICS

The face plate has a self diagnostic function for the electrical systems (except input power). The face

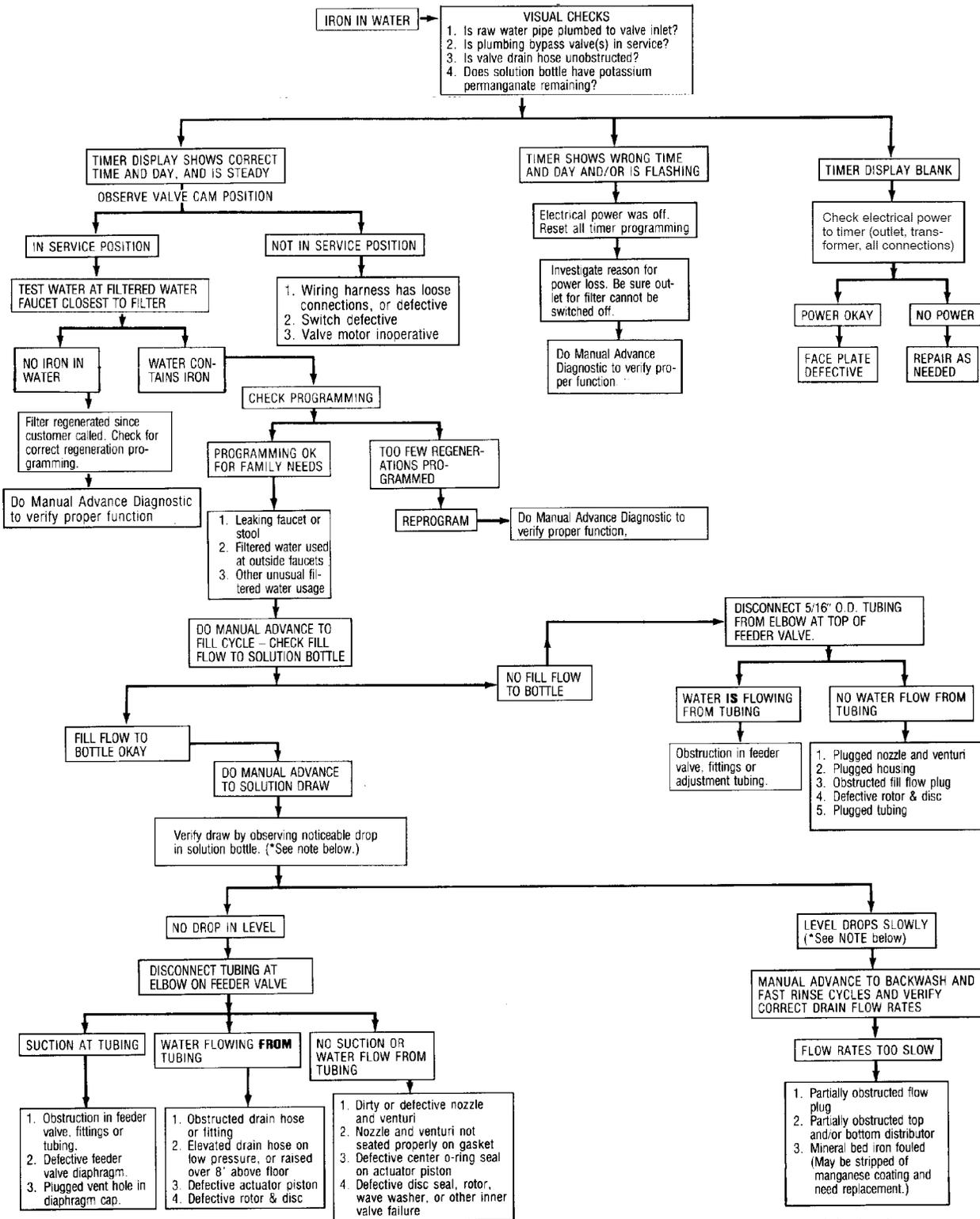
plate monitors the electronic components and circuits for correct operation. If a malfunction occurs, an error code appears in the face plate display.

POSSIBLE DEFECT

CODE	MOST LIKELY >-----> LEAST LIKELY
Err 01, Err 03 & Err 04	wiring harness or connection to position switch / switch / valve defect causing high torque / motor inoperative
Err 05	faceplate

PROCEDURE FOR REMOVING ERROR CODE FROM FACEPLATE: 1. Unplug transformer---- 2. Correct defect---- 3. Plug in transformer---- 4. Wait for 12 minutes. The error code will return if the defect was not corrected. Press and hold the RECHARGE button for 3 seconds as an alternate way to clear an error code.

A. TROUBLESHOOTING



*NOTE: Average solution draw time to bottom of adjustment tube is 3 to 5 minutes.

B. ROTARY VALVE SERVICE

BEFORE WORKING ON THE VALVE, TURN OFF THE WATER SUPPLY AND DISCONNECT FROM ELECTRICAL POWER. TO RELIEVE PRESSURE:

... THREE VALVE BYPASS: Close the inlet and open a filtered water faucet. Then close the outlet valve and open the bypass valve.

... SEARS SPECIAL BYPASS: Slide the bypass valve stem to bypass position. Loosen the three hex head screws (see A in drawing) toward the backside of the valve to allow pressure water to bleed out (catch water with a rag).

DISASSEMBLY

To remove a part or group of parts, refer to the valve drawing. A common screwdriver or nut driver, Phillips screwdriver and pliers are the only tools needed to completely disassemble.

SERVICING THE VALVE

Inspect all o-rings, seals and gaskets for wear or defects.

Inspect the bottom surface of the rotor and disc for scratches, chips or wear.

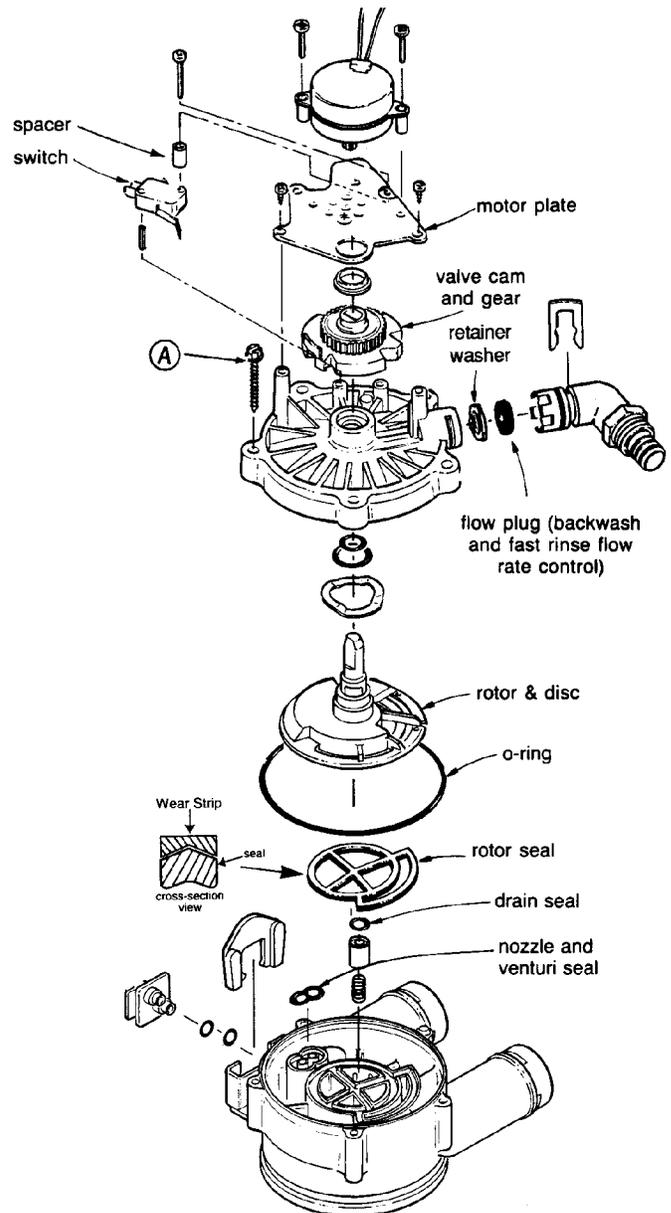
NOTE: If a replacement is needed, be sure to use the current replacement part.

ASSEMBLY

Be sure all parts are in place and in the proper position. Lubricate ALL o-rings, and seals with FDA approved silicone grease. To install the rotor seal, first place the seal into the valve groove, round side down (see cross section). Apply a light coating of silicone grease to the seal's crossing ribs. Then carefully center the wear strip on the seal, and push it downward onto the seal.

Install the nozzle and venturi seal and drain seal. Assemble two o-rings and the wave washer onto the rotor and disc. The center the rotor and disc, in the valve body, on the rotor seal.

Lower the cover onto the valve body and rotor shaft. Then install the cover holding screws. BEFORE TIGHTENING THE SCREWS, INSTALL THE VALVE CAM AND GEAR, THEN TURN THE ROTOR (CLOCKWISE ONLY) TO SERVICE POSITION.



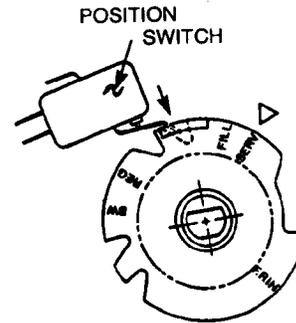
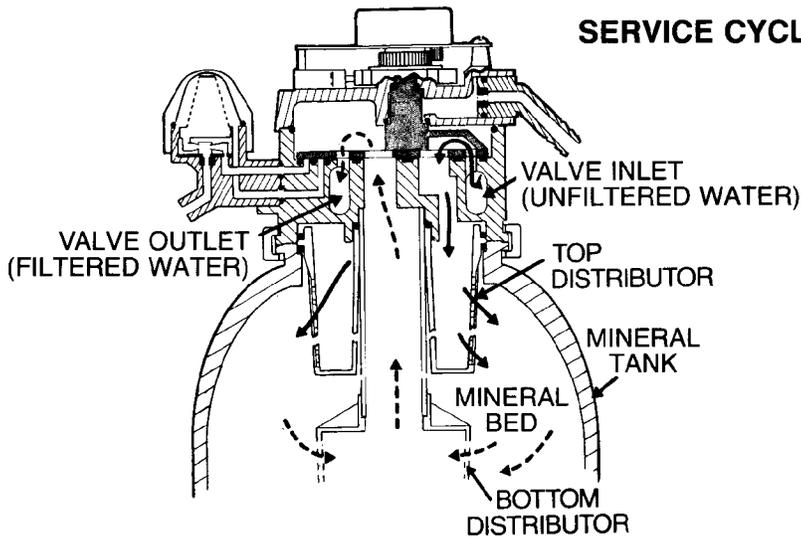
Tighten the screws using a criss-cross pattern. If a torque wrench is available, torque to 30-40 inch pounds.

Lubricate the gear on the motor, and the valve cam gear with Molykote grease, or other high quality gear lubricant.

Be sure to orient switch as shown, with lever toward the valve cam.

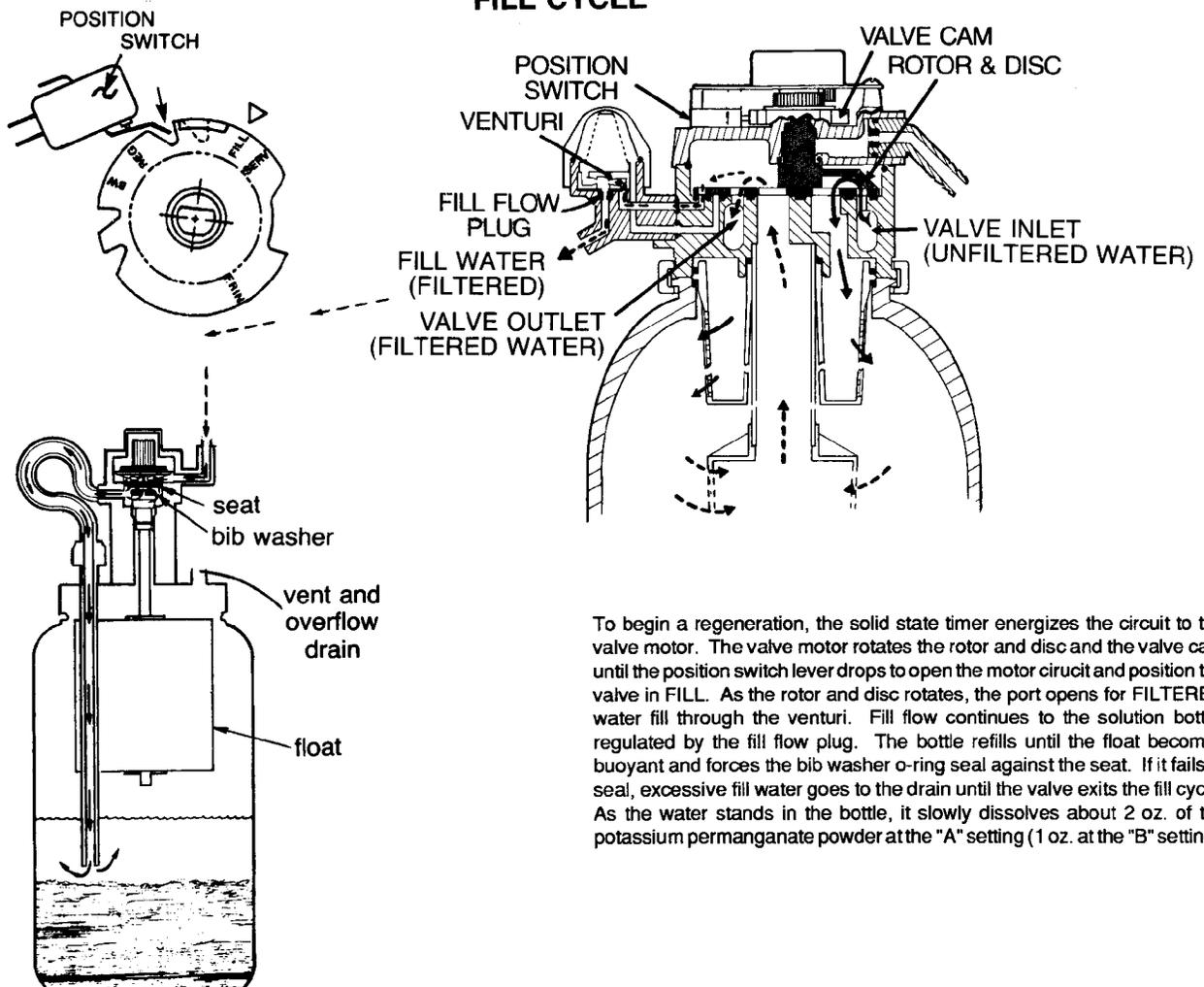
C. WATER FLOW THROUGH THE FILTER VALVE

SERVICE CYCLE



Hard, unfiltered water enters the valve inlet port. Internal valve porting routes the water down and out the top distributor, into the mineral tank. The water is filtered as it passes through the mineral bed, then enters the bottom distributor. Filtered water flows back into the valve and out the valve outlet, to the house filtered water pipes.

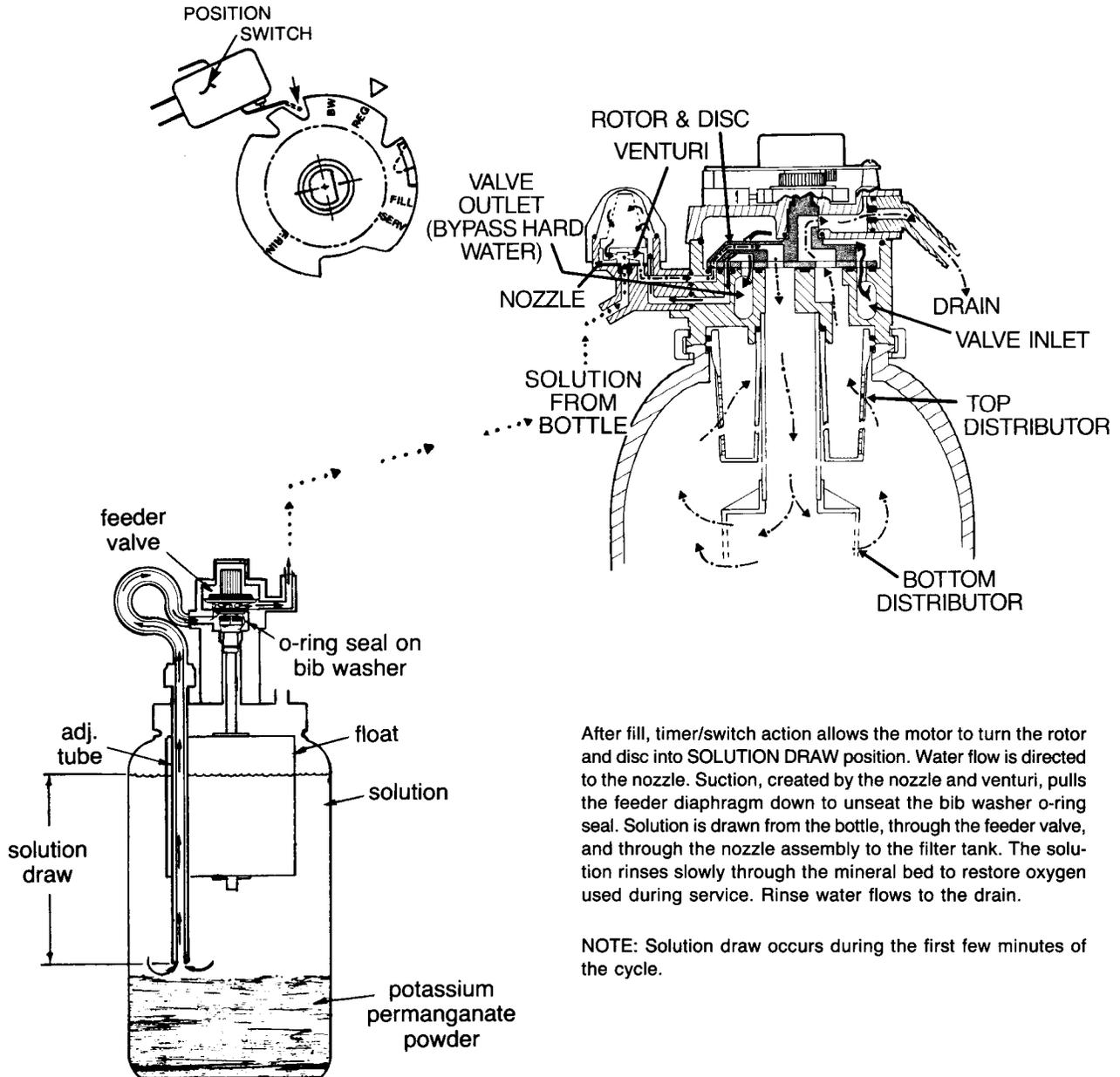
FILL CYCLE



To begin a regeneration, the solid state timer energizes the circuit to the valve motor. The valve motor rotates the rotor and disc and the valve cam until the position switch lever drops to open the motor circuit and position the valve in FILL. As the rotor and disc rotates, the port opens for FILTERED water fill through the venturi. Fill flow continues to the solution bottle, regulated by the fill flow plug. The bottle refills until the float becomes buoyant and forces the bib washer o-ring seal against the seat. If it fails to seal, excessive fill water goes to the drain until the valve exits the fill cycle. As the water stands in the bottle, it slowly dissolves about 2 oz. of the potassium permanganate powder at the "A" setting (1 oz. at the "B" setting).

C. WATER FLOW THROUGH THE FILTER VALVE

SOLUTION DRAW AND RINSE

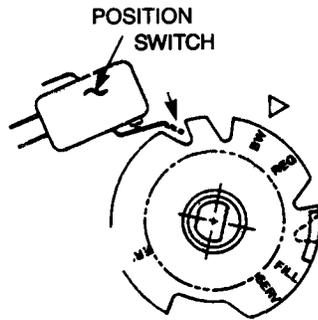


After fill, timer/switch action allows the motor to turn the rotor and disc into SOLUTION DRAW position. Water flow is directed to the nozzle. Suction, created by the nozzle and venturi, pulls the feeder diaphragm down to unseat the bib washer o-ring seal. Solution is drawn from the bottle, through the feeder valve, and through the nozzle assembly to the filter tank. The solution rinses slowly through the mineral bed to restore oxygen used during service. Rinse water flows to the drain.

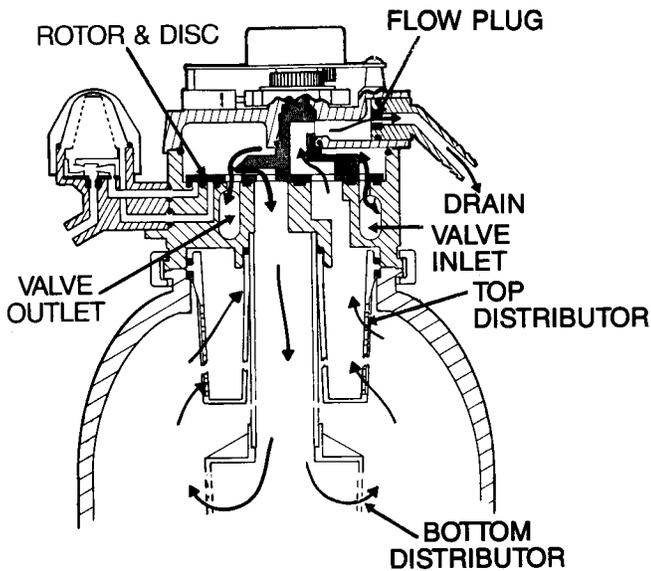
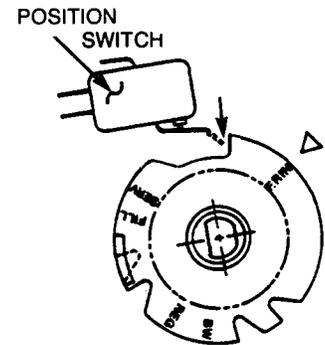
NOTE: Solution draw occurs during the first few minutes of the cycle.

C. WATER FLOW THROUGH THE FILTER VALVE

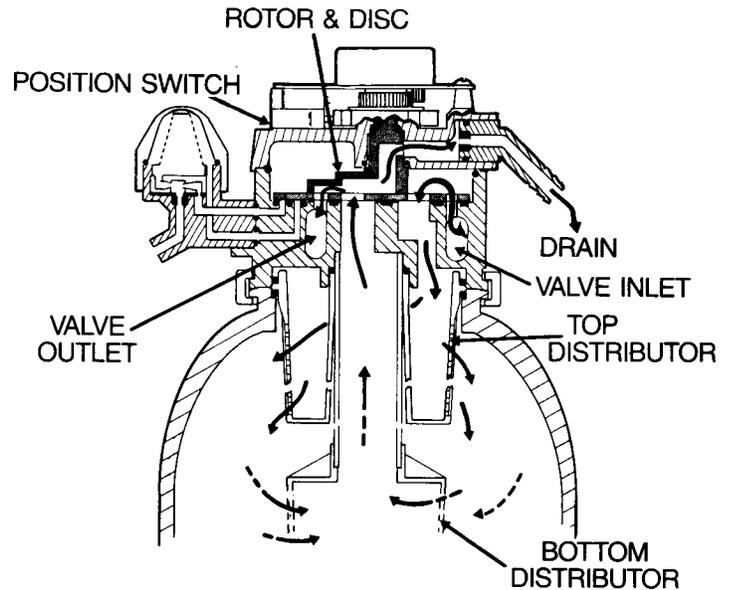
BACKWASH CYCLE



FAST RINSE CYCLE



Switching action again allows the motor to turn the rotor & disc to place the valve in BACKWASH, stopping water flow to the nozzle. Water is routed down and out the bottom distributor, up through the bed, and out the top distributor to the drain. The fast flow (controlled by a flow plug in the drain fitting) flushes dirt, sediments, iron deposits, and remaining solution to the drain.

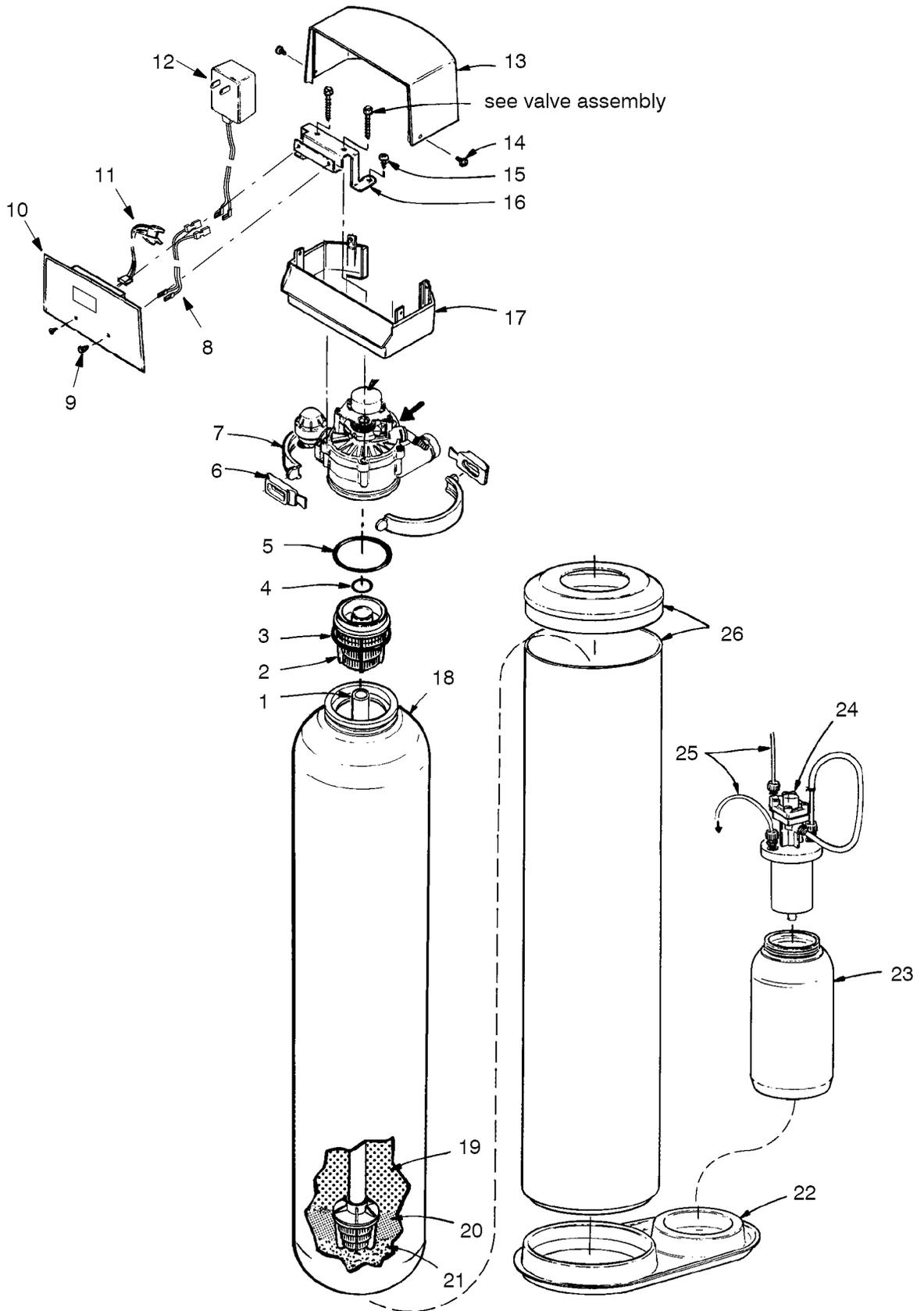


During FAST RINSE, the rotor & disc is positioned so water flow enters the mineral tank through the top distributor, and exits through the bottom distributor, to the drain. The fast flow of water downward through the mineral bed flushes any remaining solution to the drain. The mineral bed is packed and prepared for return to service.

The solid state timer again energizes the motor to return the valve to service. As the valve rotates, the position switch lever drops to open the circuit. The valve remains positioned in service until the timer initiates the next regeneration.

Kenmore MODEL NO. 625.349225

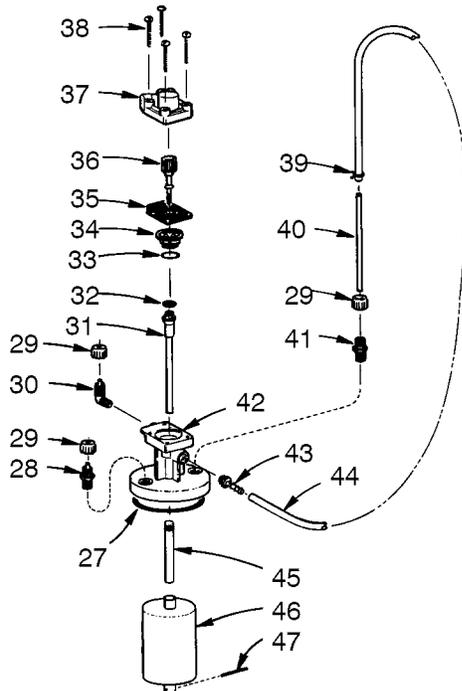
SECTION
6



Kenmore MODEL NO. 625.349225

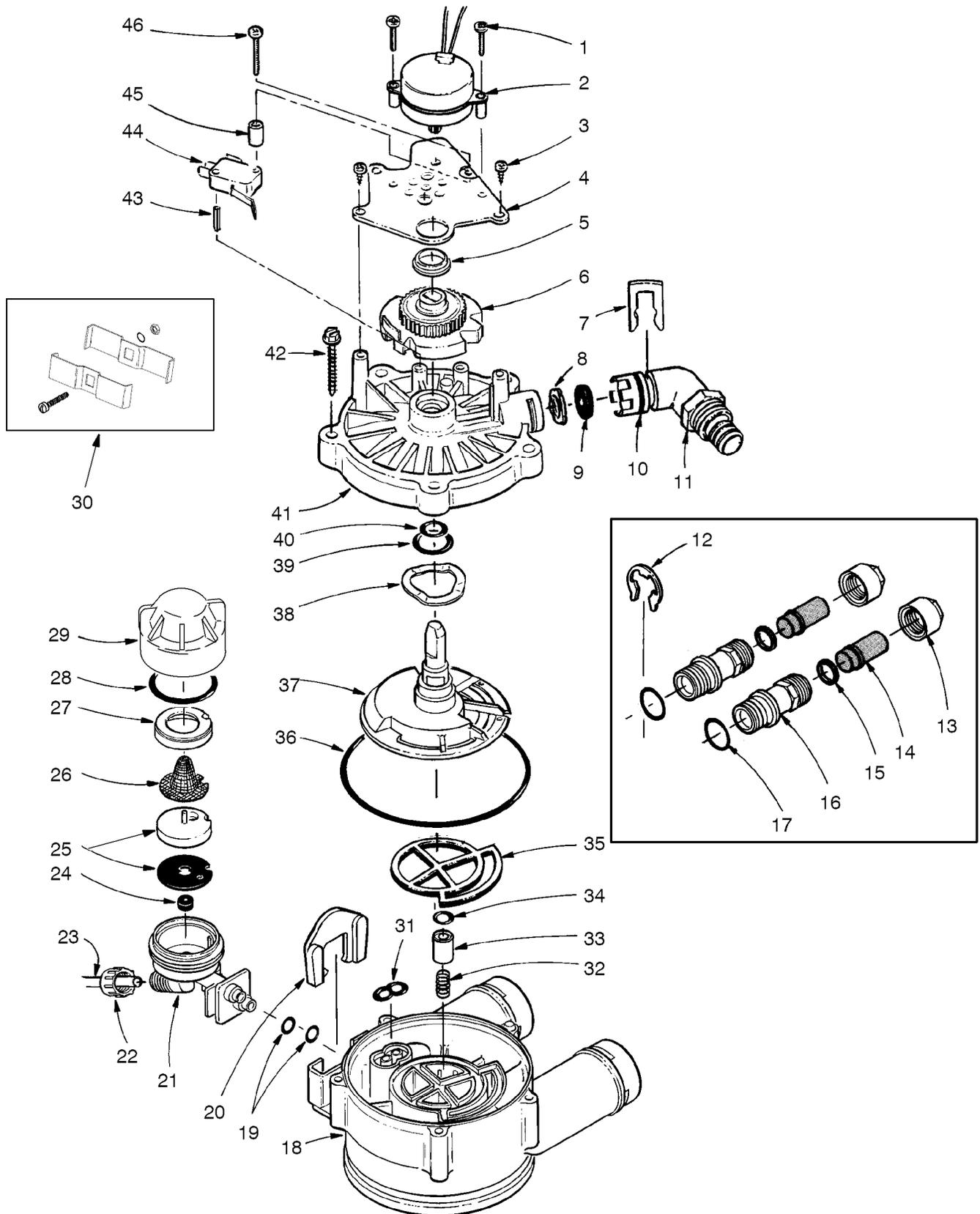
KEY NO.	PART NO.	DESCRIPTION
1	7105047	Rep'l Distributor
2	7088855	Top Distributor
3	7170270	O-Ring, 2-3/4 x 3
4	7170254	O-Ring, 13/16 x 1-1/16
5	7170296	O-Ring, 2-7/8 x 3-1/4
6	7088033	Clamp Retainer (2 req'd)
7	7176292	Clamp Section (2 req'd)
8	7128566	Power Cable Wire Harness
9	0900300	Screw, #4-40 x 1/4 (2 req'd)
10	7285677	Faceplate Timer
11	7259927	Wire Harness
12	7275907	Transformer, 24V-10VA
13	7144449	Top Cover
14	7103972	Screw, #8-18 x 7/16 (4 req'd)
15	0900291	Screw, #8-32 x 3/8 (2 req'd)
16	7288120	Cover Bracket
17	7146734	Bottom Cover
18	7092202	Mineral Tank
19	4015000	Mineral, 1 cu. ft.
20	0501783	Filter Sand, 10 lbs.

KEY NO.	PART NO.	DESCRIPTION
21	7124415	Gravel, 17 lbs.
22	7010739	Tank Base
23	42-34417	Rep'l Bottle (Incl. 6 lbs. Pot. Permanganate)
24	7046968	Valve Asm (Incl. Key Nos. 27 - 47)
25	1124200	Tubing, 5/16 O.D. x 12 ft.
26	7092210	Shroud
◆	7026196	Base (styrofoam)
27	9001001	O-Ring, 3-7/8 x 4-1/8
28	7011816	Hose Adaptor (Includes Key No. 29)
29	1202600	Nut Ferrule (3 req'd)
30	7011785	Elbow (Includes Key No. 29)
31	7046942	Tube and Adaptor
32	7111519	O-Ring, 13/32 x 27/32
33	9000804	O-Ring, 7/8 x 1
34	0516403	Insert Seat
35	0504413	Diaphragm
36	7112735	Main Valve Stem
37	0507597	Diaphragm Cap
38	9006042	Screw, #10-14 x 1-1/4 Tapping (4 req'd)
39	7070666	Hose Clamp
40	7046633	Tubing (Adjustment)
41	1140800	Hose Adaptor (Machined)
42	7046641	Valve Body
43	9000601	Hose Adaptor (2 req'd)
44	1136300	Tubing
45	7046625	Tubing
46	7046683	Float
47	7047126	Pin
◆	7046950	Diaphragm Asm. (Incl. Key Nos. 31 - 36)
◆	7146611	Installation Manual
◆	7282679	Owner's Manual



◆ Not illustrated

Kenmore MODEL NO. 625.349225



Kenmore MODEL NO. 625.349225

KEY NO.	PART NO.	DESCRIPTION
1	7131755	Screw, #6–20 x 7/8 (2 req'd)
2	7281306	Motor
3	0900857	Screw, #6–20 x 3/8 (2 req'd)
4	7288112	Motor Plate
5	0503288	Bearing
6	7284964	Cam and Gear
7	7142942	Clip (Drain)
8	7030585	Retainer Washer
9	0509537	Flow Plug
10	7170327	O–Ring, 5/8 x 13/16
11	7141239	Drain Hose Adaptor
12	7116713	Clip (2 req'd) ●
13	0507369	Installation Nut (2 req'd) ☐
14	0507615	Installation Tube (2 req'd) ☐
15	7170335	Washer (2 req'd) ☐
16	2207800	Installation Adaptor (2 req'd) ●
17	7170288	O–Ring, 15/16 x 1–3/16 (2 req'd) ●
18	7082053	Valve Body
19	7170319	O–Ring, 1/4 x 3/8 (2 req'd)
20	7081201	Retainer (Nozzle & Venturi)
21	7081104	Nozzle & Venturi Housing
22	1202600	Nut Ferrule
23	7089267	Tubing
24	1148800	Flow Plug, .3 gpm
25	7114533	Nozzle & Venturi Gasket Kit
–	7204362	Gasket only

KEY NO.	PART NO.	DESCRIPTION
26	7146043	Screen
27	7167659	Screen Support
28	7170262	O–Ring, 1–3/16 x 1–3/8
29	7199729	Cap
30	7248706	Ground Clamp ●
31	7081764	Seal (Nozzle & Venturi)
32	7129889	Spring
33	7092642	Plug (Drain Seal)
34	7170204	O–Ring, 3/8 x 9/16
35	7134224	Rotor Seal
36	7170246	O–Ring, 3–3/8 x 3–5/8
37	7199232	Rotor & Disc
38	7082087	Wave Washer
39	7170212	O–Ring, 3/4 x 15/16
40	7170238	O–Ring, 7/16 x 5/8
41	7085263	Valve Cover
42	7074123	Screw, #10–14 x 2 (5 req'd)
43	7077472	Expansion Pin
44	7030713	Switch
45	7117816	Spacer
46	7070412	Screw, #4–24 x 1–1/8
◆	7085247	Nozzle & Venturi Asm. (Incl. Key Nos. 21 & 24 through 29)
◆	7111941	Small Parts Bag (Incl. all items marked with ●)
◆	7129716	Seal Kit (Incl. Key Nos. 31, 34, 35, 36, 39 & 40)

◆ Not illustrated.

☐ Not included with filter – available from Sears Stock No. 42–3441.

Get it fixed, at your home or ours!

Your Home

For repair – **in your home** – of **all** major brand appliances, lawn and garden equipment, or heating and cooling systems, **no matter who made it, no matter who sold it!**

For the replacement parts, accessories and owner's manuals that you need to do-it-yourself.

For Sears professional installation of home appliances and items like garage door openers and water heaters.

1-800-4-MY-HOME® (1-800-469-4663)

Call anytime, day or night (U.S.A. and Canada)

www.sears.com www.sears.ca

Our Home

For repair of carry-in items like vacuums, lawn equipment, and electronics, call or go on-line for the location of your nearest **Sears Parts & Repair Center.**

1-800-488-1222

Call anytime, day or night (U.S.A. only)

www.sears.com

To purchase a protection agreement (U.S.A.) or maintenance agreement (Canada) on a product serviced by Sears:

1-800-827-6655 (U.S.A.)

1-800-361-6665 (Canada)

Para pedir servicio de reparación a domicilio, y para ordenar piezas:

1-888-SU-HOGARSM

(1-888-784-6427)

Au Canada pour service en français:

1-800-LE-FOYER^{MC}

(1-800-533-6937)

www.sears.ca

The Sears logo is centered at the bottom of the page. It features the word "Sears" in a bold, serif font. A horizontal line is positioned below the letters "e" and "a", and a curved line arches under the letters "s" and "r".

® Registered Trademark / ™ Trademark / SM Service Mark of Sears, Roebuck and Co.

® Marca Registrada / ™ Marca de Fábrica / SM Marca de Servicio de Sears, Roebuck and Co.

^{MC} Marque de commerce / ^{MD} Marque déposée de Sears, Roebuck and Co.

© Sears, Roebuck and Co.