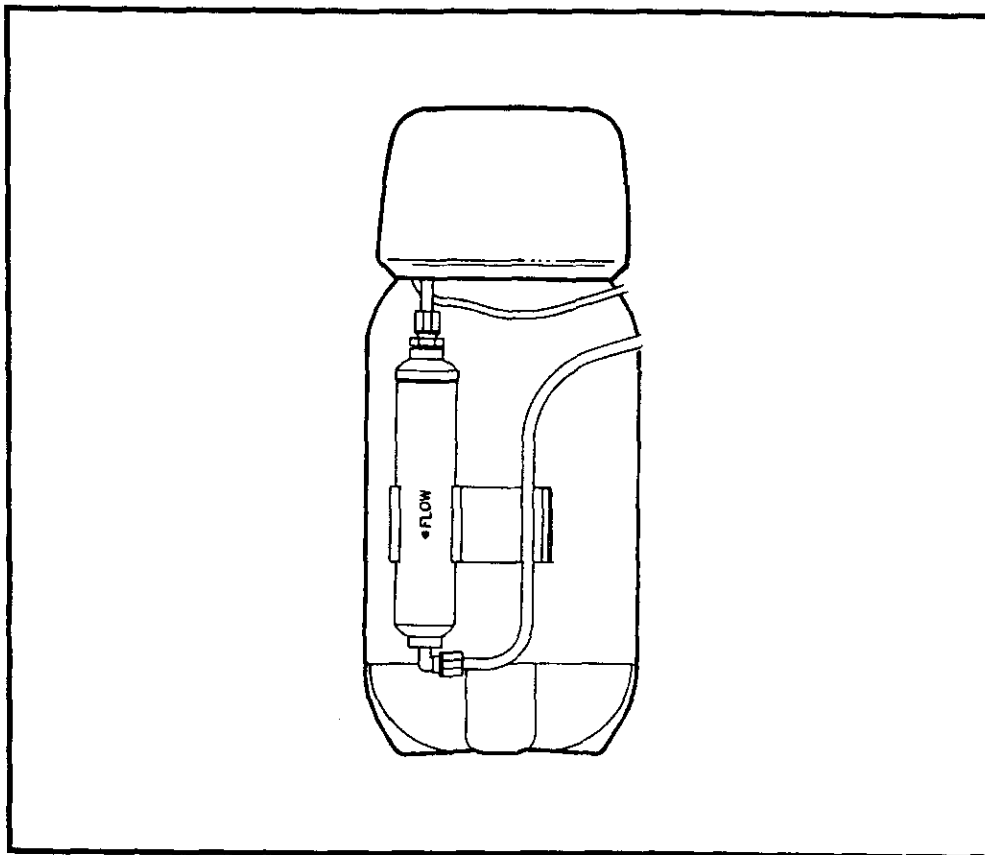


OWNERS MANUAL

MODEL NO.
625.347031

SAVE THIS MANUAL



UNIVERSAL Undersink Reverse Osmosis HOME DRINKING WATER SYSTEMS

Tested and certified by NSF International against ANSI/NSF
Standard 58 for the reduction of TDS.

HOW TO INSTALL

HOW IT WORKS

CARE OF

REPAIR PARTS

Sears, Roebuck and Co., Hoffman Estates, IL 60179 U. S. A.

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WARRANTY

FULL WARRANTY ON REVERSE OSMOSIS DRINKING WATER SYSTEM (except filter, filter cartridge or membrane)

For one year from the date of purchase, when this reverse osmosis drinking water system is installed and maintained in accordance with our instructions, Sears will repair, free of charge, defects in material and workmanship, except for disposable filters, cartridges and membranes.

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

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.

SAFETY GUIDES

◆ Read all steps, guides and rules carefully before installing and using your Home Drinking Water System. Follow all steps exactly to correctly install. Reading this book will also help you to get all the benefits from your Home

Drinking Water System.

◆ **DO NOT ATTEMPT TO USE THIS PRODUCT TO MAKE SAFE DRINKING WATER FROM**

SAFETY GUIDES

NON-POTABLE WATER SOURCES. DO NOT USE THE SYSTEM ON MICROBIOLOGICALLY UNSAFE WATER, OR WATER OF UNKNOWN QUALITY.

- ◆ CHECK WITH YOUR LOCAL PUBLIC WORKS DEPARTMENT FOR PLUMBING AND SANITATION CODES. YOU MUST FOLLOW THEIR GUIDES AS YOU INSTALL THE SYSTEM. FOLLOW YOUR LOCAL CODES IF THEY DIFFER WITH GUIDES IN THIS MANUAL.
- ◆ The Home Drinking Water System works on water pressure of 40 psi (minimum) to 125 psi (maximum). See the table on page 15. If your

house water pressure is over the maximum, install a pressure reducing valve in the water supply to the Home Drinking Water System.

- ◆ Do not install the Home Drinking Water System outside, or in extreme hot or cold temperatures. Temperature of the water supply to the Home Drinking Water System must be between 40°F (minimum) and 100°F (maximum). See the specification table on page 15. DO NOT INSTALL ON HOT WATER.
- ◆ Read the other limits (pH, hardness, etc.) on page 15 and be sure your water supply conforms. Please read WATER SUPPLY, page 4.

WHAT YOUR HOME DRINKING WATER SYSTEM WILL DO

Your Home Drinking Water System is a REVERSE OSMOSIS (RO) water treating unit. It uses household water pressure to **reverse** a natural physical process called **osmosis**. Water, under pressure, is forced through a semi-permeable membrane where minerals and impurities are screened out and sent down the drain with the waste water. These minerals and impurities are measured as total dissolved solids (TDS).

The system includes replaceable pre and postfilter sediment-carbon cartridges. The prefilter removes sand, dirt, rust particles and other sediments. It also takes chlorine out of the feed water. The postfilter removes any remaining tastes and/or odors just before water is taken from the system faucet. The storage area holds almost 1 gallon of RO product water for your needs.

The undersink system connects to a house COLD water pipe for a water supply. An automatic shutoff valve prevents water waste when the storage area is full and the faucet is closed.

The drinking water system gives you a continuous supply of sparkling clear, delicious water for drink-

ing and cooking. Foods will look better and taste better too. The system eliminates the need to buy bottled water. Instead, it puts high quality water right at your fingertips.

NOTE: A product data sheet is included, and also available from Sears. The data sheet lists what this RO system will remove (or reduce) from the water.

ELECTRONIC MONITOR (OPTIONAL*)

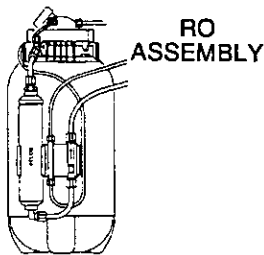
The electronic model has 2 water quality sensors, located in the electronic box. Indicator lights on the faucet base work with the sensors, or probes, to show you when water quality is good, and when the system needs servicing.

As you take water from the RO faucet, a flashing green light means the system is giving you high quality RO water. Over a period of time, the RO membrane, prefilter cartridge and postfilter begin to lose efficiency. Flashing amber lights (see pages 10, 11 and 12) tell you when to service the RO membrane and filters.

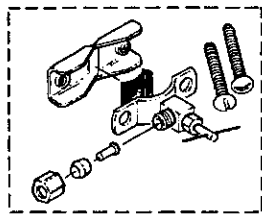
* An electronic monitor kit is available from Sears, Stock No. 42-34704.

THINGS TO CHECK BEFORE YOU START TO INSTALL

■ **PARTS IN THE SHIPPING CARTON** — Unpack the carton carefully so needed parts are not discarded by mistake. Included are:



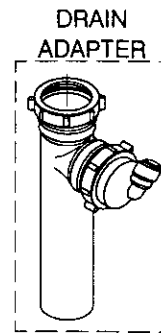
RO ASSEMBLY



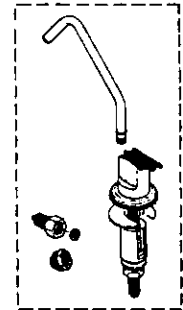
WATER SUPPLY SADDLE VALVE



TOP COVER



DRAIN ADAPTER



FAUCET ASSEMBLY

■ **WATER SUPPLY** — The cold water supply to your Home Drinking Water System must be within certain chemical limits (see page 15). If not, it will not make product water as it should, and life of the RO membrane is shortened. Trained salespeople at Sears can arrange for a free water analysis. This analysis will tell you if the water needs other treatment before it goes into the Home Drinking Water System.

filter carbon cartridge removes chlorine from the water before it enters the RO membrane.

IMPORTANT: TO KEEP CHLORINE FROM DESTROYING THE RO MEMBRANE, BE SURE TO REPLACE THIS CHLORINE REMOVAL CARTRIDGE AT LEAST EVERY 6 MONTHS, OR 900 GALLONS. (SEE RO CARE GUIDE, PAGE 14.)

CAUTION: CHLORINE IN WATER SUPPLY. The RO membrane is destroyed by chlorine. A pre-

NOTE: Codes in the state of Massachusetts require installation by a licensed plumber, and do not permit the use of the saddle valve. For installation, use plumbing code 248-CMR of the Commonwealth of Massachusetts.

■ **WHERE TO MOUNT THE RO ASSEMBLY AND LOCATE THE STORAGE TANK** —

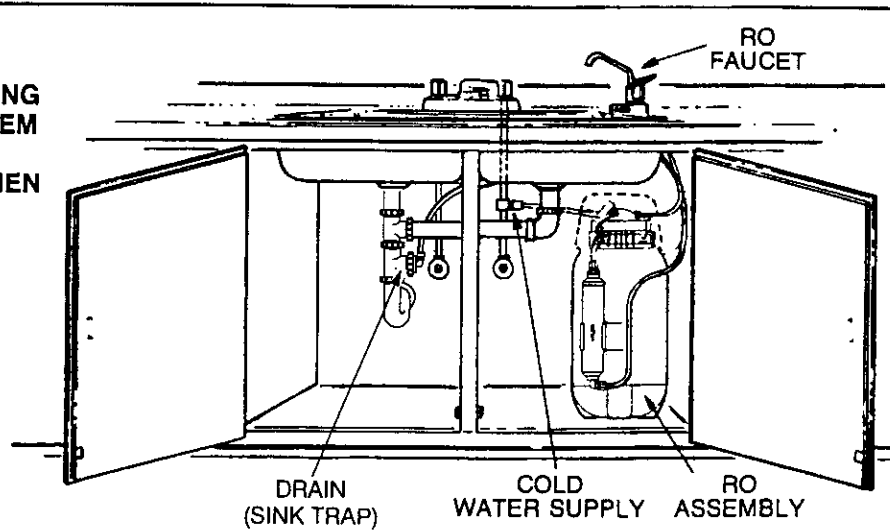
The Home Drinking Water System fits nicely under the kitchen or bathroom sink. However, you can install it where most handy for you. You do need a COLD water supply pipe and drain point within 6 feet. Where space is limited, you can lay it on a shelf

or floor. Locate the assembly so you can easily get to it to change filters.

The RO System weighs about 40 lbs. when full of water. Set it on the floor or other solid surface that will hold this weight.

FIG. 1

HOME DRINKING WATER SYSTEM INSTALLED UNDER KITCHEN SINK



DRAIN (SINK TRAP)

COLD WATER SUPPLY

RO ASSEMBLY

RO FAUCET

THINGS TO CHECK BEFORE YOU START TO INSTALL

REMOTE LOCATION — You can install the RO assembly or water supply saddle valve in another place away from the RO faucet (please see page 18)

■ **REPLACING ANOTHER RO SYSTEM** — We suggest you remove all parts of another RO system, and use everything included with your new RO system.

TOOLS AND MATERIALS YOU WILL NEED

- 9/16" open end, or adjustable wrench
- standard pliers, and larger adjustable jaw pliers or pipe wrench
- slotted and Phillips head screwdrivers
- plumbers putty
- pipe joint compound (thread seal) or Teflon tape, approved for use on potable water supplies
- hand or battery powered drill with 1/8" bit (if needed for the cold water supply valve, page 6)

- electric drill and bits, if hole is needed for the RO faucet, page 7

CAUTION: TO AVOID DAMAGING A SINK BEYOND REPAIR, CONSULT A QUALIFIED PLUMBER OR INSTALLER FOR GUIDES BEFORE DRILLING HOLES IN PORCELAIN OR STAINLESS STEEL.

HOW TO INSTALL YOUR HOME DRINKING WATER SYSTEM

STEP 1 — INSTALL THE COLD WATER SUPPLY SADDLE VALVE (FIG. 2)

■ Install this valve on the **COLD** water pipe to the kitchen sink (FIG. 2).

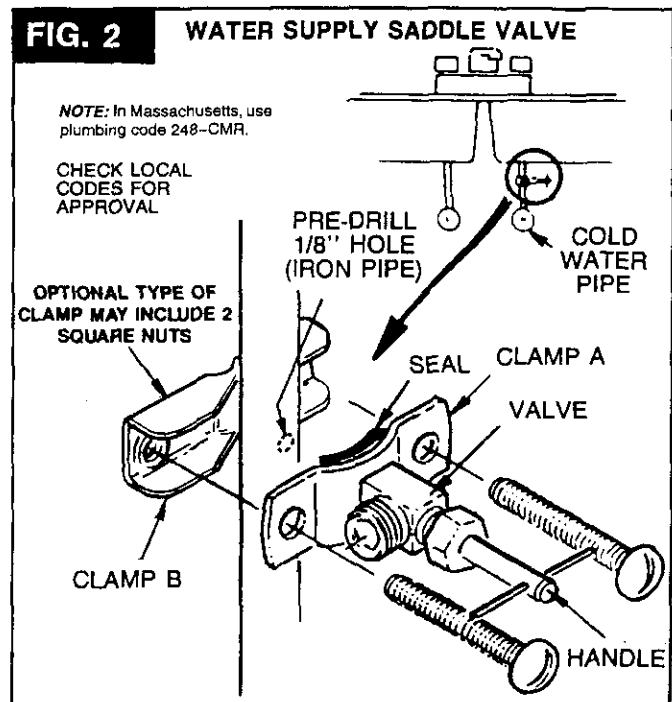
■ This valve has a cutting pin and will make its own hole in copper or plastic pipe. To install on iron pipe, you have to drill a 1/8" diameter hole for the cutting pin.

DANGER (IF DRILLING PIPE): TO PROTECT YOURSELF FROM SERIOUS INJURY OR FATAL SHOCK, USE A HAND OR BATTERY POWERED DRILL ONLY TO MAKE THE HOLE. DO NOT USE AN ELECTRIC DRILL.

■ USE THE FOLLOWING GUIDES TO INSTALL:

1. Close the house main water supply valve. Open a high and low faucet in the house to drain water from the pipes.

2. Looking at FIG. 2, if not already done, turn the valve into clamp A and tighten. Turn the valve handle all the way out.



HOW TO INSTALL YOUR HOME DRINKING WATER SYSTEM

continued from page 5

NOTE: If you have to drill a 1/8" diameter hole, hold the valve with clamp A up to the pipe and mark the spot to drill. **BEFORE DRILLING, READ THE DANGER NOTE ON PAGE 5.**

3. Place the seal on the inside of clamp A as shown. Locate clamp A (turn handle in to align pin if pre-drilled hole) and clamp B on the pipe. Fasten in place using 2 screws. Tighten each screw evenly, but do not overtighten and crush the pipe.

4. Turn the valve handle inward to make a hole in the copper or plastic pipe.

DO NOT TURN ON THE WATER SUPPLY AT THIS TIME.

NOTE: BE SURE THE VALVE HANDLE PACKING NUT IS TIGHT.

STEP 2 — INSTALL THE DRAIN ADAPTER

■ Note: Running the drain tubing directly to a floor drain, sump, standpipe, laundry tub, etc., as shown on page 18, is preferred. However, if that is not possible or practical, the included drain adapter installs in the sink drain pipe, always **above** or ahead of the p-trap. **Be sure to comply with your local plumbing codes.** Other drain pipe fittings, in addition to the adapter, may be needed.

■ The drain adapter fits 1-1/2" sink drain pipe.

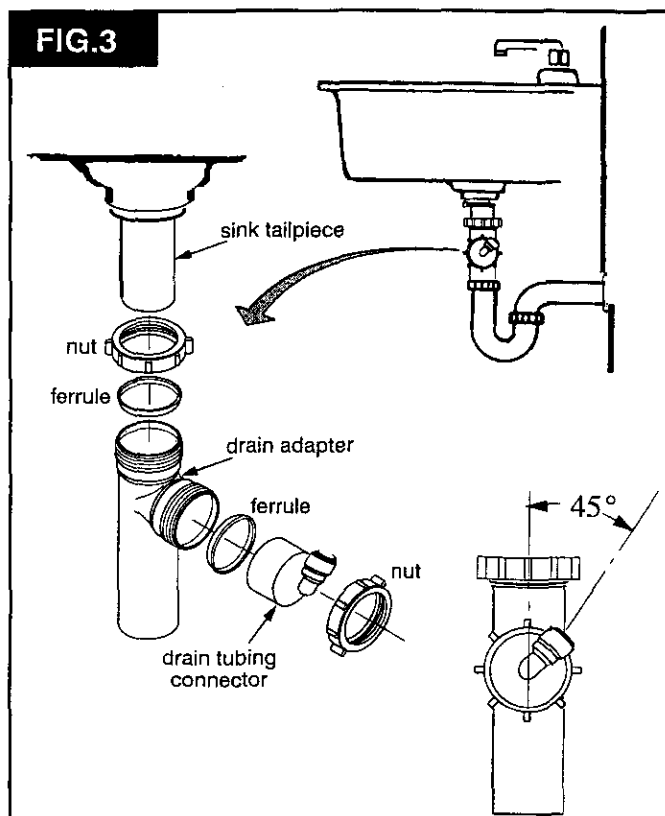
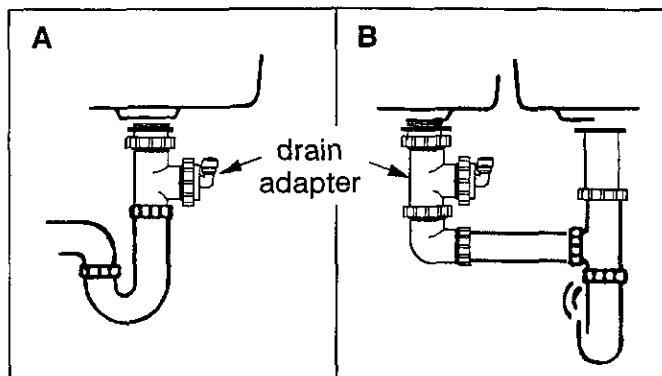
■ The adapter installs directly onto the sink tailpiece as typically shown in fig. A and B.

■ Locate so drain tubing from the faucet (FIG. 5, page 8) makes a straight run to the adapter, **without dips, loops, low spots or kinks.**

■ Use FIG. 3 and the following guides.

Note: Consult a plumber if you are not familiar with plumbing procedures.

1. Use a ferrule and nut to assemble the drain tubing connector to the drain adapter. Turn the connector to about 45° from the 12:00 position, as shown (to 10:00 or 2:00 position). Tighten the nut securely.
2. Carefully disassemble the sink drain pipe and clean the tailpiece to assure a leak-tight fit.
3. Install the drain adapter onto the sink tailpiece, using a ferrule and nut. Snug the nut, but do not tighten.
4. Assemble the p-trap to the drain adapter, and other drain pipe fittings as required (check codes) to complete the drain run.
5. Tighten all connections.



HOW TO INSTALL YOUR HOME DRINKING WATER SYSTEM

STEP 3 — PREPARE MOUNTING HOLE, ASSEMBLE FAUCET AND INSTALL

A. PREPARE MOUNTING HOLE.

1. Pick 1 of the following places for the faucet where it will fit flat against the surface. Be sure you have room underneath for the tubing connections (FIG. 5, page 8).

...in a hole already in the sink (enlarge to 1-1/4" diameter if needed) to use for an extra faucet or spray.

...drill a hole (1-1/4" diameter) in the sink top.

CAUTION: TO AVOID DAMAGING A SINK

B. ASSEMBLE FAUCET (FIG. 4)

NOTE: IF INSTALLING OPTIONAL ELECTRONIC MONITOR, SEARS ITEM NO. 42-34704, SEE INSTRUCTIONS IN THE MONITOR SYSTEM PACKAGE.

1. Place the compression washer in the tubing adaptor. Turn the adaptor onto the faucet stud and tighten.

2. Loosen the hex nut and back-off down the faucet stud to the adaptor. Slide the plastic bushing down and remove the large steel washer.

3. Wet the o-rings (2) on the faucet spout. Push the spout into the faucet body until it bottoms in the cavity.

C. CONNECT TUBING AND INSTALL FAUCET

1. Move the RO assembly into installation position under the sink, or other desired location.

2. Route the 1/4" tubing marked "1/4" BARB ON FAUCET," and the 3/8" tubing marked "FAUCET," from the bottom, upward through the faucet mounting hole.

3. Using the tubing nut, fasten the 3/8" FAUCET tubing to the tubing adaptor, on the faucet stud. Tighten the nut with a wrench. **NOTE: Cut the tubing as needed for neat appearance, but keep long enough for servicing the RO.**

4. If needed, cut the 1/4" BARB ON FAUCET tubing. Then push the end all the way onto the 1/4" barb fitting on the faucet.

5. Take the 27" long separate piece of 3/8" tubing and pass 1 end down through the sink or countertop hole. Push the other end of the tubing all the way onto the 3/8" barb fitting on the faucet.

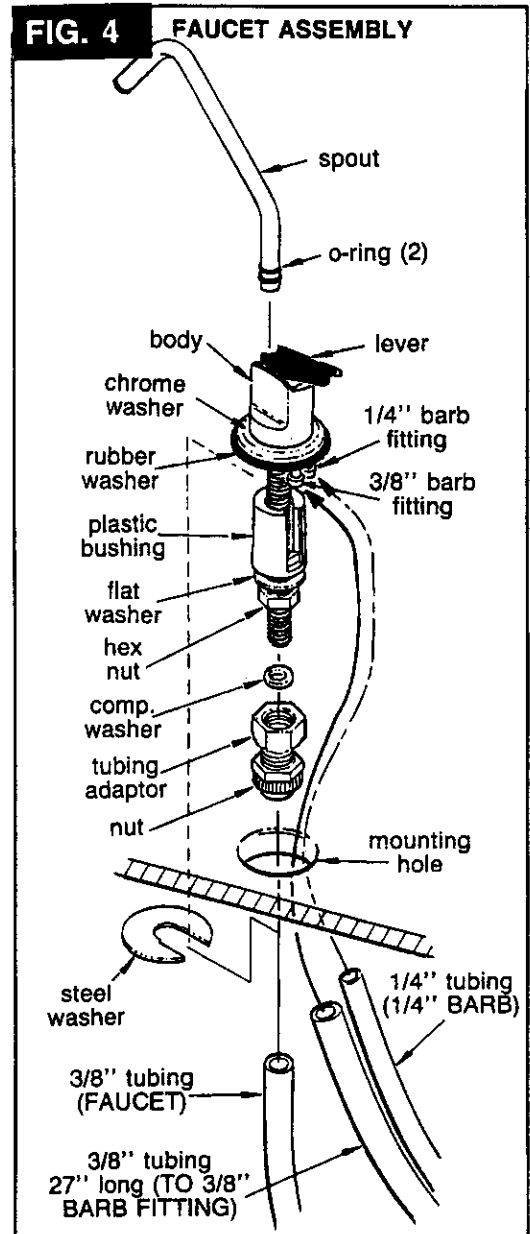
6. Lower the faucet into the mounting hole. On the underside of the sink or countertop, locate the large steel washer between the plastic bushing and the mounting hole. Tighten the hex nut until the faucet is held firmly in the desired position.

BEYOND REPAIR, CONSULT A QUALIFIED PLUMBER OR INSTALLER FOR GUIDES BEFORE DRILLING HOLES IN PORCELAIN OR STAINLESS STEEL.

...drill a hole (1-1/4" diameter) in the countertop next to the sink.

2. Drill the mounting hole.

3. Place plumbers putty around the edge of the hole to prevent water leakage around the faucet base.



HOW TO INSTALL YOUR HOME DRINKING WATER SYSTEM

STEP 4 — MAKE REMAINING TUBING CONNECTIONS

A. CONNECT TUBING, FAUCET TO DRAIN TUBING CONNECTOR

Looking at FIG. 5 and page 14, run the 3/8" x 27" tubing from the RO faucet, to the connector at the adapter you installed in the sink drain pipe. Cut this tubing as needed to route in as **straight of a run as possible without dips, loops, low spots or kinks**. Be sure the end of the tubing is cut square, then push the end into the connector until it stops (about 1 1/16"). Pull on the tubing to be sure it is held securely.

B. CONNECT TUBING TO WATER SUPPLY (FIG. 5 and 7)

Use the tubing insert, ferrule and nut, at the water supply saddle valve, to fasten the remaining 1/4" tubing (marked "WATER SUPPLY"). Tighten the nut with a wrench.

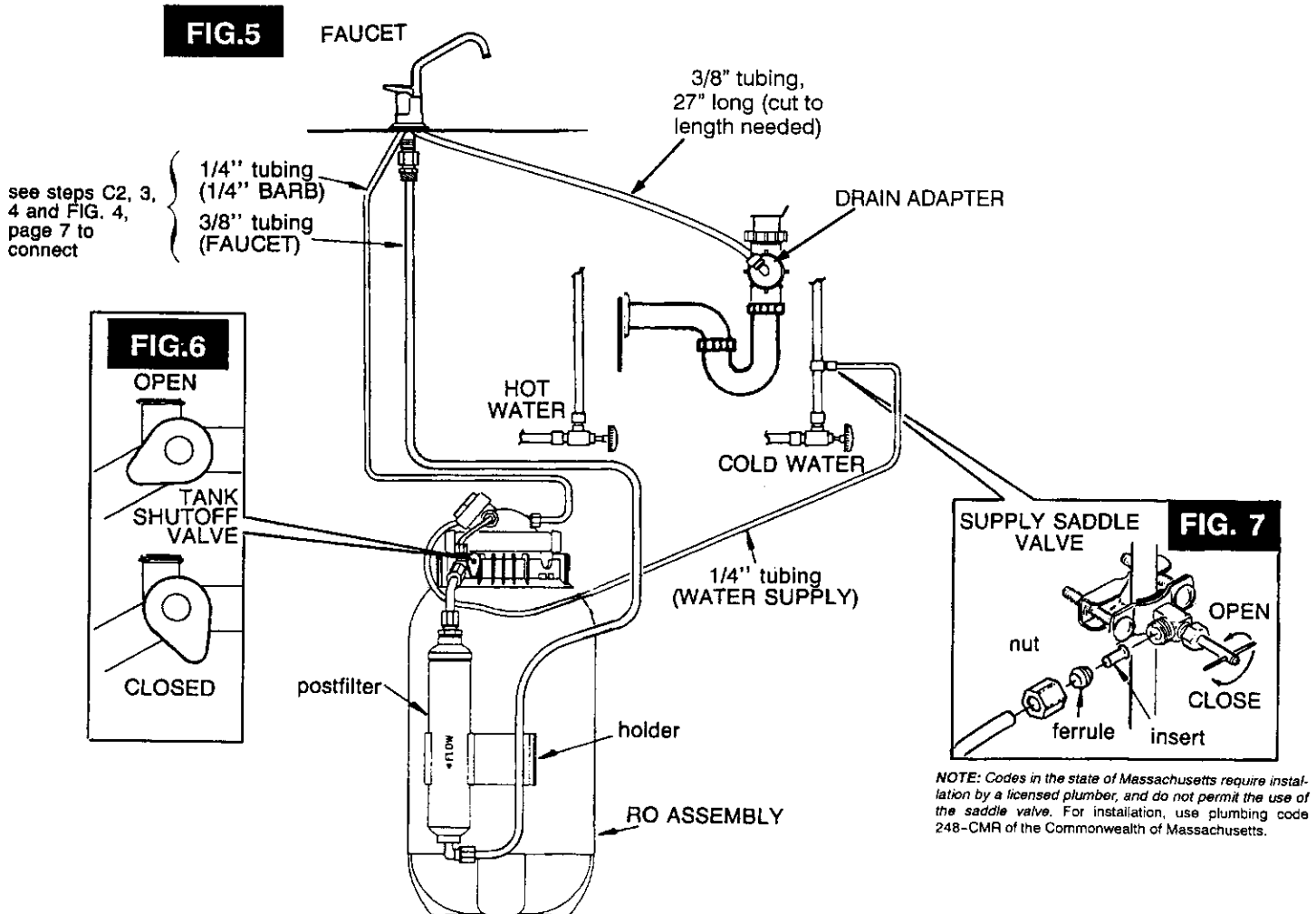
STEP 5 — SANITIZING, PRESSURE TESTING, PLACING IN "SERVICE"

A. DO THE SANITIZING PROCEDURES, PAGE 13. THEN, CONTINUE WITH STEP B.

B. Double-check all tubing connections to be sure they are tightened.

C. Open the house main water supply valve and the supply saddle valve (turn handle fully out). Open the tank shutoff valve, FIG. 6 below.

D. In about 4 hours, pressure will start to build



HOW TO INSTALL YOUR HOME DRINKING WATER SYSTEM

in the RO system. At that time, carefully check all fittings and tubing connections for any water leaks. Correct leaks if any are found.

E. IMPORTANT PURGING INSTRUCTIONS:

The RO cartridge contains a food grade preservative that you should clean from it before using the system. The preservative will give product water an unpleasant taste and odor.

1. After the storage bladder has filled (takes about 4 hours), open the system faucet until the bladder is empty.

2. Allow the bladder to fill again for about 4 hours, then open the faucet and empty. After 4 purgings, the system is ready to make product water for your use.

HOW YOUR HOME DRINKING WATER SYSTEM WORKS

Water from the cold supply pipe saddle valve is directed through 1/4" tubing, to the RO prefilter. NOTE: If the optional electronic monitor, Sears Item No. 42-34704, is installed, supply water goes to the electronic box first, where the total dissolved solids (TDS) content is measured.

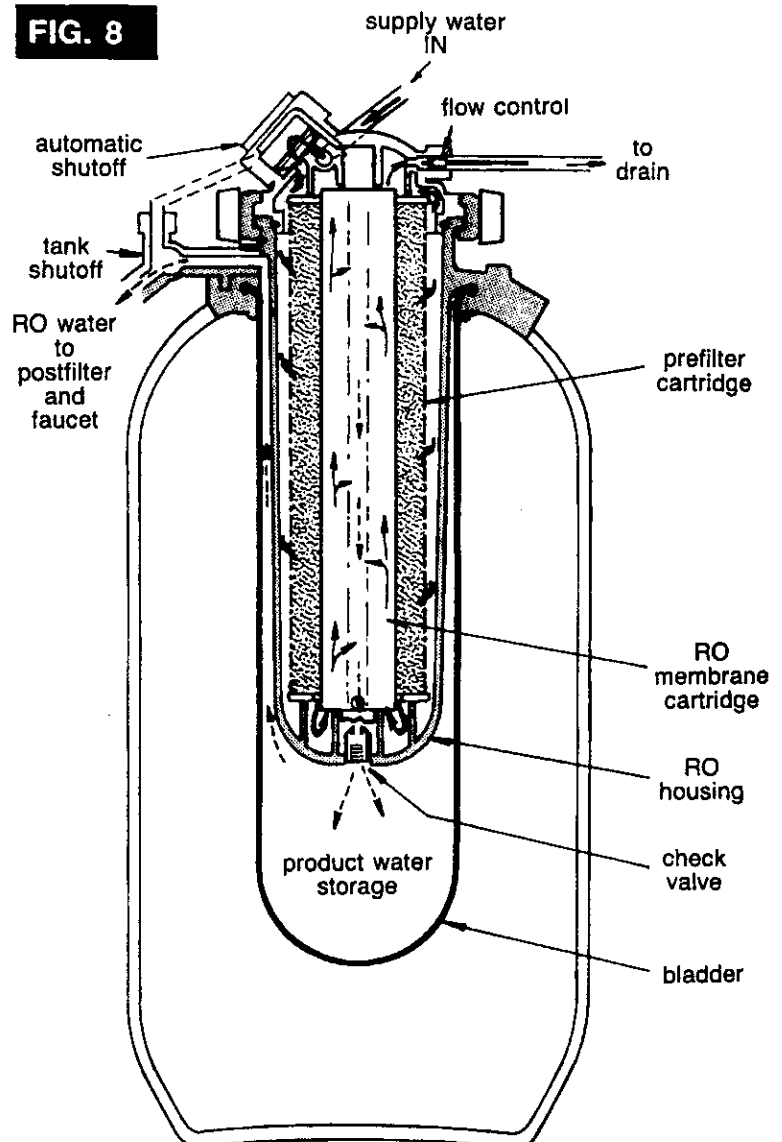
PREFILTER - The prefilter is a replaceable sediment-activated carbon cartridge. It removes sand, silt, dirt, other sediments, and up to 2 parts per million (ppm) chlorine from the supply water. CHLORINE WILL DESTROY THE RO MEMBRANE. . . SEE PAGES 4 AND 11. Filtered, clean, chlorine-free water flows from the prefilter and to the RO membrane.

RO MEMBRANE CARTRIDGE - The RO cartridge, located inside of the prefilter, is a tightly-wound, semi-permeable membrane. Semi-permeable means water will work through the membrane, but first, dissolved solids and organic matter are screened out and flushed to the drain. The screened, high quality product water goes to the storage area, or to the postfilter if the RO faucet is open.

POSTFILTER - After leaving the storage area, but before going to the faucet, product water goes through the postfilter. The postfilter is also a sediment-carbon type filter. It removes any remaining tastes, odors or sediments from the product

continued on next page

FIG. 8



HOW YOUR HOME DRINKING WATER SYSTEM WORKS

POSTFILTER - continued

water. High quality drinking water flows from the postfilter and to the faucet.

NOTE: If the optional electronic monitor, Sears Item No. 42-34704, is installed, before going to the faucet, product water passes through the electronic box where a sensor measures remaining TDS.

FAUCET - The sinktop or countertop faucet dispenses the drinking water. It has a hand operated, spring loaded lever to keep the faucet closed and to prevent waste. You can keep the faucet open by pushing upward on the lever and locking it against the spout. To meet plumbing codes, an air-gap is built into the faucet drain water tubes. The air-gap prevents a back siphon of drain water.

OPTIONAL ELECTRONIC MONITOR - When the faucet is opened, lights on the faucet base show how the RO system is working.

- **FLASHING GREEN** - The RO system is giving you high quality product water.
- **FLASHING AMBER "FILT"** - The prefilter cartridge and postfilter need replacing. Also replace the control box batteries... see page 12. This light comes on after 6 months, or after 900 gallons of product water use.
- **FLASHING AMBER "RO"** - The RO membrane cartridge needs replacing. (BE SURE TO REPLACE BATTERIES... SEE ABOVE, TO ASSURE PROPER "RO" LIGHT OPERATION.) The RO light comes on when the RO membrane no longer removes at least 75% of the TDS from the water supply.

NOTE: Disregard the "RO" light when it flashes for a few seconds at a time.

AUTOMATIC SHUTOFF - When the storage area has filled with product water, and the RO faucet is closed, the automatic shutoff is forced closed. Water flow through the system is stopped before it can enter the RO module, preventing continued flow to the drain. The shutoff remains closed, and water is saved, until the faucet is opened again.

CHECK VALVE - A check valve (FIG. 8) is built into the product water outlet of the RO housing. The check valve prevents a backward flow of product water, from the storage area, to the membrane. A backward flow could rupture the RO membrane.

FLOW CONTROL - The flow control (FIG. 9) keeps flow through the RO cartridge at the needed rate for high quality product water. A cone shaped screen fits over the flow control to help prevent plugging with drain water sediments.

CARE OF YOUR HOME DRINKING WATER SYSTEM

To keep your Home Drinking Water System working and making high quality water, you must make sure supply water is always within the limits shown on page 15. This gives you the longest life from the PREFILTER CARTRIDGE, RO MEMBRANE CARTRIDGE, and POSTFILTER. Each of these will wear out in time and need replacing.

CAUTION: BEFORE WORKING ON THE SYSTEM, DO THE FOLLOWING TO RELIEVE WATER PRESSURE IN THE RO TANK.

- 1a. Turn off the water supply to the RO (turn the supply saddle valve all the way inward...FIG. 7).
- b. Open the product water faucet and keep open until water flow stops.

- c. Using a 2 gallon (minimum) container to catch the water, disconnect the postfilter and empty the storage bladder.
2. Looking at FIG. 9, or page 16, remove the protective cap and depress the relief valve stem, allowing air to ENTER the tank (do not block valve passage). Release the valve stem AFTER flow from the shutoff valve slows to a slight drip. Replace the protective cap.

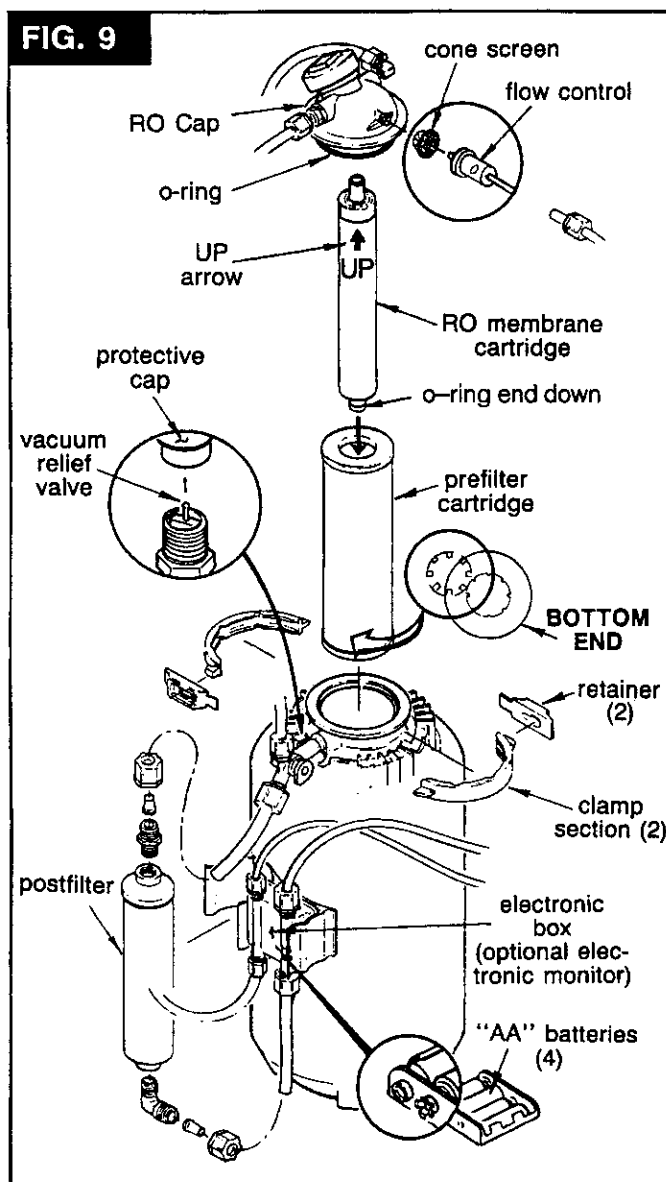
CAUTION: This valve is for vacuum relief only. DO NOT attempt to pressurize the tank.

3. Reconnect the postfilter.

CARE OF YOUR HOME DRINKING WATER SYSTEM

PREFILTER CARTRIDGE - You must replace the prefilter cartridge often to protect the RO membrane from being destroyed by chlorine, and/or from plugging with sediments from the water supply. If you have chlorine in the water, replace the cartridge at least every 6 months. If the prefilter cartridge plugs with sediments, water flow into the RO system drops, slowing the making of quality RO water. The RO membrane may also begin to plug with sediments. If this happens, you may not get enough RO water for your needs.

NOTE: If you have the optional Electronic Monitor, the amber "FILT" light on the faucet base will begin to flash after 6 months or 900 gallons of product water use to tell you the filter cartridge needs replacing.



POSTFILTER - Always replace the postfilter at the same time you replace the prefilter cartridge. The postfilter gives the product water a final filtering of any tastes and/or odors that may remain.

TO REPLACE THE POSTFILTER

CAUTION: BE SURE TO RELIEVE PRESSURE, STEPS 1, 2 AND 3, BOTTOM OF PAGE 10.

1. Disconnect tubing at both ends (Fig. 9).
2. Pull the filter from the holder and remove fittings from both ends.
3. Observing the flow arrow, on new filter, turn the fittings (use Teflon tape) into both ends. The elbow fitting installs at the bottom end, or outlet.
4. Replace filter into the holder and reconnect the tubing at both ends.

TO REPLACE THE PREFILTER CARTRIDGE

CAUTION: BE SURE TO RELIEVE PRESSURE, STEPS 1, 2 AND 3, BOTTOM OF PAGE 10.

IMPORTANT: BE SURE YOUR HANDS ARE CLEAN BEFORE WORKING ON RO SYSTEM INTERNAL PARTS.

1. Remove the clamp retainers and clamp sections (Fig. 9).
2. Separate the cap from the RO housing (no need to disconnect tubing) and set aside.

NOTE: If the cap o-ring seal remained in the RO housing, replace it on the cap.

3. Lift the RO cartridge and prefilter cartridge from the housing, then separate and dispose of the prefilter cartridge.
4. Dump water remaining in the RO housing.
5. Slide the RO cartridge **INTO THE TOP END** of the new prefilter cartridge, as shown in FIG. 9, then place into the RO housing.

NOTE: Be sure the bottom end of the prefilter is at the bottom, and the up arrow (▲) on the RO cartridge points upward (o-ring seal end downward).

6. Be sure the cap o-ring has lubrication (silicone grease). Then, push into position and install clamp sections and retainers.
7. If you have the optional Electronic Monitor, replace the electronic box batteries. . . see page 12.

CARE OF YOUR HOME DRINKING WATER SYSTEM

RO MEMBRANE CARTRIDGE - The useful life of the membrane cartridge depends mostly on the pH (see page 15) of your supply water. The lower the pH, the longer the membrane will last. For example, if the feed water has a pH of about 7.0, the cartridge may last for over 1 year; but if the pH is high, cartridge life may be shortened. The high pH weakens the membrane and makes pin hole leaks.

NOTE: If you have the optional Electronic Monitor, the amber "RO" light on the faucet base will begin to flash when RO water quality drops so less than 75% of the TDS are removed from the supply water.

This reverse osmosis system contains a replaceable treatment component critical for effective removal of total dissolved solids. The water should be tested periodically to verify that the system is performing satisfactorily.

TO REPLACE THE RO CARTRIDGE

1. Refer to page 11 and follow instructions under "To Replace the Prefilter Cartridge".
2. Remove and replace the flow control and screen (see steps on this page).
3. Turn on the water supply and **PURGE THE RO CARTRIDGE . . . SEE PAGE 9.**

OPTIONAL ELECTRONIC MONITOR, BATTERIES IN ELECTRONIC BOX - Always replace the batteries (4, "AA" alkaline) in the electronic control box after installing a new prefilter cartridge and postfilter. Good batteries assure proper operation of the indicator lights. Removing the batteries also resets the 6 month or 900 gallon period for monitoring the filter cartridges. See FIG. 9 on page 11.

FLOW CONTROL - A clean flow control is a must for the RO membrane to make high quality product water. The flow control keeps water flow through the membrane at the right rate to get the best quality product water. If the control becomes plugged, so water can't get through, it will only take a short time

for the RO membrane to become useless. A small, cone-shaped screen is positioned over the flow control (FIG. 9) to help keep the flow control clean.

Every time you work on the RO system, check the flow control and screen to make sure they are clean.

TO REPLACE FLOW CONTROL AND SCREEN

CAUTIONS: To install the screen, place the cone end into the RO cap. Then carefully push it in using 1/4" tubing as a tool. Do not force in farther after you feel resistance. Visually check to be sure it is properly positioned.

When installing the flow control, tighten the nut by hand, then another 1/4 to 1/2 turn with a pliers. **DO NOT OVERTIGHTEN AND DISTORT OR CRUSH THE TUBING AND FLOW CONTROL.**

SERVICING THE BLADDER

If the bladder should require inspection and replacement, use the following guides. Refer to the parts illustration on page 16.

CAUTION: BE SURE TO RELIEVE PRESSURE, STEPS 1, 2 AND 3, BOTTOM OF PAGE 10.

1. Remove the vacuum relief valve (use 7/16" socket).
2. Rotate the tank shutoff valve 90° and pull from the RO housing.
3. Apply downward pressure on the RO cap while rotating counterclockwise 90°.

NOTE: If the cap turns in the RO housing, first do steps 1 and 2 under "To Replace the Prefilter Cartridge", page 11.

4. Lift the RO housing out of the liner assembly and **PLACE WHERE CLEAN AND SANITARY.**
5. Remove the bladder.

NOTE: BE SURE THE INNER SURFACE OF THE REPLACEMENT BLADDER, AND THE OUTER SURFACE OF THE RO HOUSING ARE CLEAN. USE DISH SOAP AND HOT WATER TO CLEAN AND RINSE.

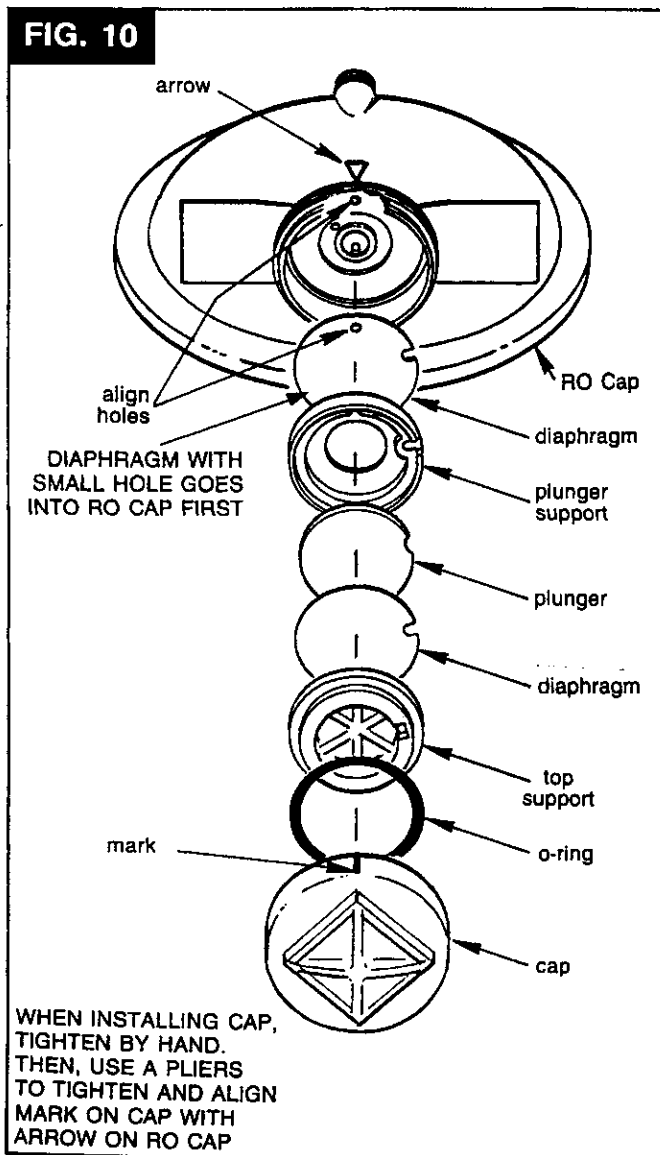
6. Install the bladder into the liner assembly. Wet the top bead of the bladder with water, or apply a light coating of silicone grease.

CARE OF YOUR HOME DRINKING WATER SYSTEM

7. Install the RO housing, push downward and rotate 90° clockwise to lock in place.
8. Replace the tank shutoff valve and rotate 90° to lock.
9. Using pipe joint compound, replace the vacuum relief valve.
10. **DO THE SANITIZING AND PURGING PROCEDURES, PAGE 8.**

AUTOMATIC SHUTOFF SERVICE

If the shutoff assembly, on the RO cap, requires service, reassemble parts exactly as shown in FIG. 10. Be sure to align indicated marks to properly torque cap to RO cap.



— SANITIZING THE RO SYSTEM —

Sanitizing is recommended upon installation of the RO system, and after servicing inner parts of the RO housing, and cap. **IT IS IMPORTANT FOR THE SERVICE PERSON TO HAVE CLEAN HANDS WHILE HANDLING INNER PARTS OF THE SYSTEM.**

1. BE SURE WATER SUPPLY TO THE RO IS TURNED OFF, AND THE RO FAUCET IS OPEN.
2. Remove the clamp retainers and clamp sections, Fig. 9, page 11.

3. Lift the cap from the RO housing (no need to disconnect tubing) and move aside.

NOTE: IF THE CAP O-RING SEAL REMAINED IN THE RO HOUSING, REPLACE IT ON THE CAP.

4. Remove the RO cartridge and prefilter cartridge from the RO housing. If needed, flush housing with fresh, clean water.

5. Fill the RO housing, with fresh water, to about 1 inch from the top. Add 1.0 oz. of chlorine (ordinary 5.25% household bleach ... Hilex, Clorox, etc.) and mix in the water. **DO NOT ADD CHLORINE FIRST.** Concentrated, it will attack plastics.

6. Replace the cap, with o-ring, and install the retaining clamps.

7. Connect the RO faucet product water tubing directly to the tank shutoff valve, isolating the carbon postfilter.

8. Open the tank shutoff valve, and the water supply to the RO. Open the RO faucet, locking the lever upward, against the spout.

9. Allow water to circulate through the system until the bleach odor is gone.

10. Turn off the water supply to the RO. Close the RO faucet after water flow stops.

11. Reconnect the postfilter (replace used filter) to the RO system, Fig. 9, page 11.

12a. Do steps 2 and 3.

b. Replace the RO cartridge and prefilter cartridge (BE SURE YOUR HANDS ARE CLEAN).

c. Do step 6.

d. Turn to page 8 and do the pressure testing and purging steps B through E.

CARE OF YOUR HOME DRINKING WATER SYSTEM

RO CARE GUIDE

IMPORTANT: BEFORE DOING THE FOLLOWING MAINTENANCE, BE SURE TO RELIEVE PRESSURE AND ALLOW AIR TO ENTER THE TANK, STEPS 1, 2 AND 3, PAGE 10.

MODEL NO. 625.347031

1. AT LEAST every 6 months, or 900 gallons of product water used, replace the prefilter cartridge and postfilter. Clean or replace the flow control and screen.

2. Replace the RO membrane when the percent rejection of total dissolved solids (TDS) is less than shown in the specifications (see item B, below).

IF ANY OF THE FOLLOWING HAPPEN BEFORE THE 6 MONTHS OR 900 GALLONS, REPLACE AS SHOWN.

A. SLOW MAKING OF PRODUCT WATER – Replace the prefilter cartridge. If the production rate does not improve, then replace the postfilter and RO membrane.

B. HIGH TOTAL DISSOLVED SOLIDS (TDS) IN PRODUCT WATER – You can get a free TDS test through Sears retail stores or service departments. If the store or service department does not have a TDS meter, you can send treated and untreated water samples to the Water Analysis Lab for a free test. It is important to test both the treated and untreated water to determine system performance. If the TDS is not within the system's performance guidelines, replace the prefilter cartridge, postfilter, and RO membrane.

C. CHLORINE TASTE AND/OR ODOR – Replace prefilter cartridge, postfilter, and RO membrane.

D. SLOW FLOW FROM RO FAUCET – Relieve pressure and allow air to enter the tank, steps 1, 2 and 3 on page 10.

WITH OPTIONAL MONITOR, SEARS ITEM NO. 42-34704

1. Replace the prefilter cartridge and postfilter when the amber "FILT" light begins to flash while taking product water from the RO faucet. Clean or replace the flow control and screen, and replace the batteries in the electronic control box.

2. Replace the RO membrane cartridge when the amber "RO" light begins to flash while taking product water from the RO faucet. Clean or replace the flow control and screen.

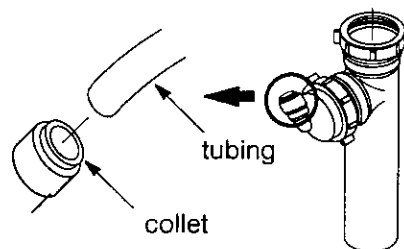
NOTES: a. If slow making of product water occurs before an amber light begins to flash, see A in the lefthand column. b. If product water flow from the RO faucet is slow, see D above.

OTHER TROUBLESHOOTING

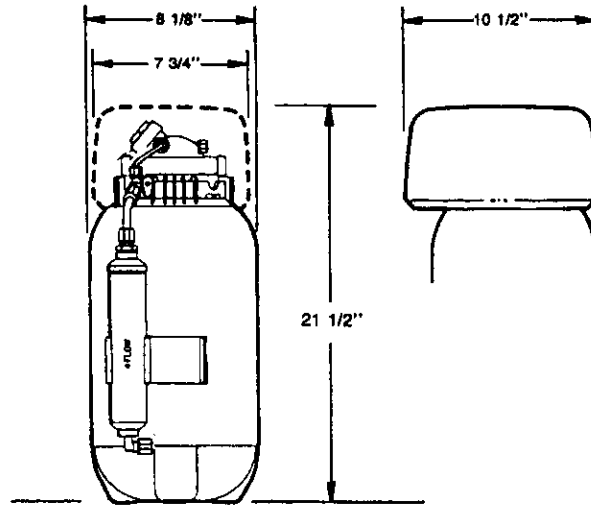
| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| <i>Chlorine taste and/or odor</i> in the RO product water | The ppm of chlorine in your water supply exceeds maximum limits, and has destroyed the RO membrane. | If the water supply contains more than 2.0 ppm of chlorine, additional filtering of the water supply to the RO is needed. Correct this condition before doing maintenance on the RO system. |
| | The prefilter is no longer removing chlorine from the water supply. | Replace the RO membrane cartridge, flow control, screen, prefilter, postfilter, and batteries in the electronic box. |
| <i>Other taste and/or odor</i> | Postfilter expended. | Replace the postfilter. If taste and odor persists, replace the prefilter, RO membrane cartridge, flow control, screen, and batteries in the electronic box. |
| | RO membrane cartridge expended. | |
| | Contamination in product water storage. | Use sanitizing procedures. Then replace the postfilter. |
| <i>System makes product water too slowly</i> | Water supply to the RO system not within specifications. | Increase water pressure, precondition the water, etc., as needed to conform before doing maintenance on the RO system. |
| | Prefilter cartridge or RO membrane plugged with sediments. | Replace the prefilter. If rate does not increase, replace the postfilter, RO membrane cartridge, flow control, and screen. |
| <i>High total dissolved solids (TDS) in product water</i> | Water supply to the RO system not within specifications. | Increase water pressure, precondition the water, etc., as needed to conform before doing maintenance on the RO system. |
| | RO membrane cartridge expended. | Replace the RO membrane cartridge, flow control, screen, prefilter, and postfilter. |
| <i>Water leaking from faucet airgap hole</i> | Drain side of faucet airgap (3/8" tubing) plugged, restricted, or incorrectly connected to drain point. | Inspect and eliminate restriction or plug. Refer to installation instructions for proper drain connection. |

Tubing Connection at Drain Adapter: Cut the end of the tubing square and push into the fitting as far as possible (11/16"). Pull on the tubing to be sure it is held firmly in place.

To Disconnect Tubing: Push the tubing inward to depress the fitting collet. Hold the collet in while pulling the tubing out.



DIMENSIONS — SPECIFICATIONS



| | | |
|---|---------------------------|-----------------|
| Supply water pressure limits | 40-125 PSI | METRIC |
| Supply water temperature limits | 40-100°F | 280-860 kPa |
| Maximum total dissolved solids (TDS) | 2000 PPM | 5-40°C |
| Maximum water hardness @6.9 pH | 10 GPG | |
| Maximum iron, manganese, hyd. sulfide | 0 | |
| Chlorine in supply water | | |
| (SEE PAGE 4) | | |
| Supply water pH limits | Max. 2.0 PPM [Ⓢ] | |
| Product (quality) water, 24 hrs.* | 4-10 pH | |
| Waste water per gal. product water, 24 hrs.* | 12 Gal. | 45.4 liters |
| Percent rejection of TDS, minimum (new membrane)* | 3 Gal. | 11.4 liters |
| Storage capacity | 90% | |
| Product water vending flow | 1 Gal. | 3.8 liters |
| | 1/2 GPM | 1.9 liters/min. |

*Supply water at 55 psi and 77°F with 750 parts per million sodium chloride. Quality water production, amount of waste water and percent rejection all vary with changes in pressure, temperature and total dissolved solids. See the charts below for additional production and rejection rates.

Ⓢ Up to 2.0 ppm removed by the RO prefilter cartridge.

NOTE: This product is tested and complies with Water Quality Association Standards.

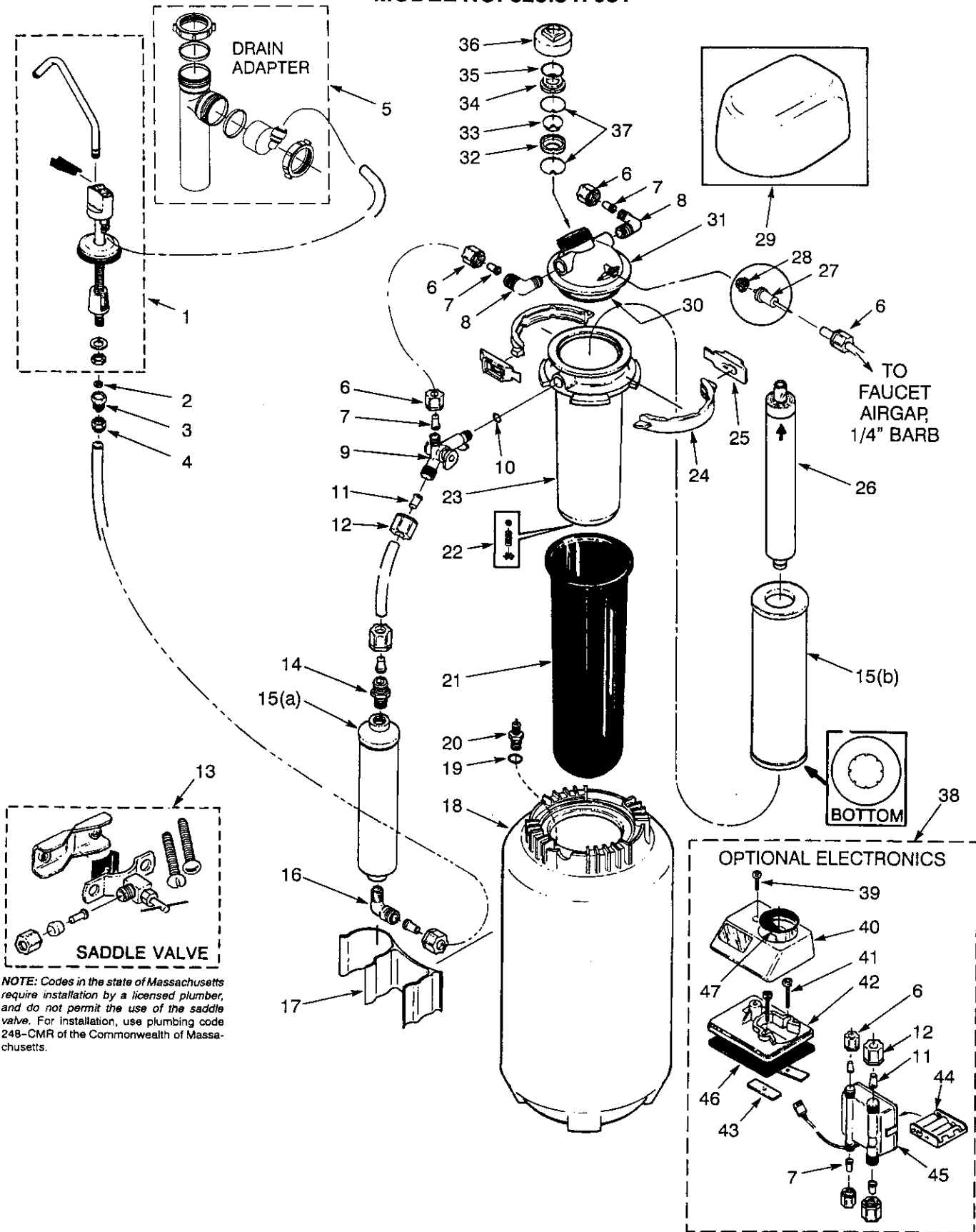
You can use the following charts to determine RO performance for your specific water pressure and total dissolved solids content. The results are from tests conducted on the RO membrane using a 9" long flow control at a 25% product water recovery rate.

| FEED WATER PRESSURE TO RO (PSI) | PRODUCT WATER GALLONS PER DAY (PRODUCT WATER OUTLET OPEN) | | | | | | PERCENT REJECTION OF TDS (PRODUCT WATER OUTLET CLOSED) | | | | | | |
|---------------------------------|--|------|------|------|-------------------------------------|------|---|------|------|------|------|-------------------------------------|------|
| | 300 | 500 | 750 | 1000 | 2000 | 3000 | 300 | 500 | 750 | 1000 | 2000 | 3000 | |
| 120 | 39.5 | 36 | 33 | 29 | 24 | 19 | 120 | 98.3 | 97.8 | 97.2 | 96.4 | 94.8 | 93.5 |
| 110 | 36.5 | 33 | 30 | 26 | 21.5 | 17 | 110 | 98.3 | 97.7 | 97.1 | 96.3 | 94.5 | 92.8 |
| 100 | 33.5 | 30 | 27 | 23 | 19 | 14.5 | 100 | 98.2 | 97.6 | 97 | 96.1 | 94.2 | 92.1 |
| 90 | 30 | 27 | 24 | 20 | 16 | 12 | 90 | 98.2 | 97.5 | 96.8 | 95.8 | 93.8 | 91.2 |
| 80 | 27 | 24 | 21 | 17 | 13.5 | 9.5 | 80 | 98.1 | 97.4 | 96.6 | 95.5 | 93.1 | 90 |
| 70 | 23.5 | 21 | 18 | 14 | 10.5 | 7 | 70 | 98 | 97.3 | 96.4 | 95 | 92.1 | 87.9 |
| 60 | 20.5 | 17.5 | 15 | 11 | WATER PRESSURES TOO LOW AT THIS TDS | | 60 | 97.8 | 97 | 96 | 94.3 | WATER PRESSURES TOO LOW AT THIS TDS | |
| 50 | 16.5 | 14.5 | 11.5 | 8.5 | | | 50 | 97.5 | 97 | 95.2 | 93 | | |
| 40 | 13 | 11 | 8.5 | 5.5 | | | 40 | 96.7 | 95.5 | 93.9 | 90.5 | | |
| | 300 | 500 | 750 | 1000 | 2000 | 3000 | | 300 | 500 | 750 | 1000 | 2000 | 3000 |
| | TOTAL DISSOLVED SOLIDS (TDS) | | | | | | TOTAL DISSOLVED SOLIDS (TDS) | | | | | | |

REPAIR PARTS

Kenmore HOME DRINKING WATER SYSTEM
MODEL NO. 625.347031

Undersink Reverse Osmosis



NOTE: Codes in the state of Massachusetts require installation by a licensed plumber, and do not permit the use of the saddle valve. For installation, use plumbing code 248-CMR of the Commonwealth of Massachusetts.

REMOTE INSTALLATION LOCATION

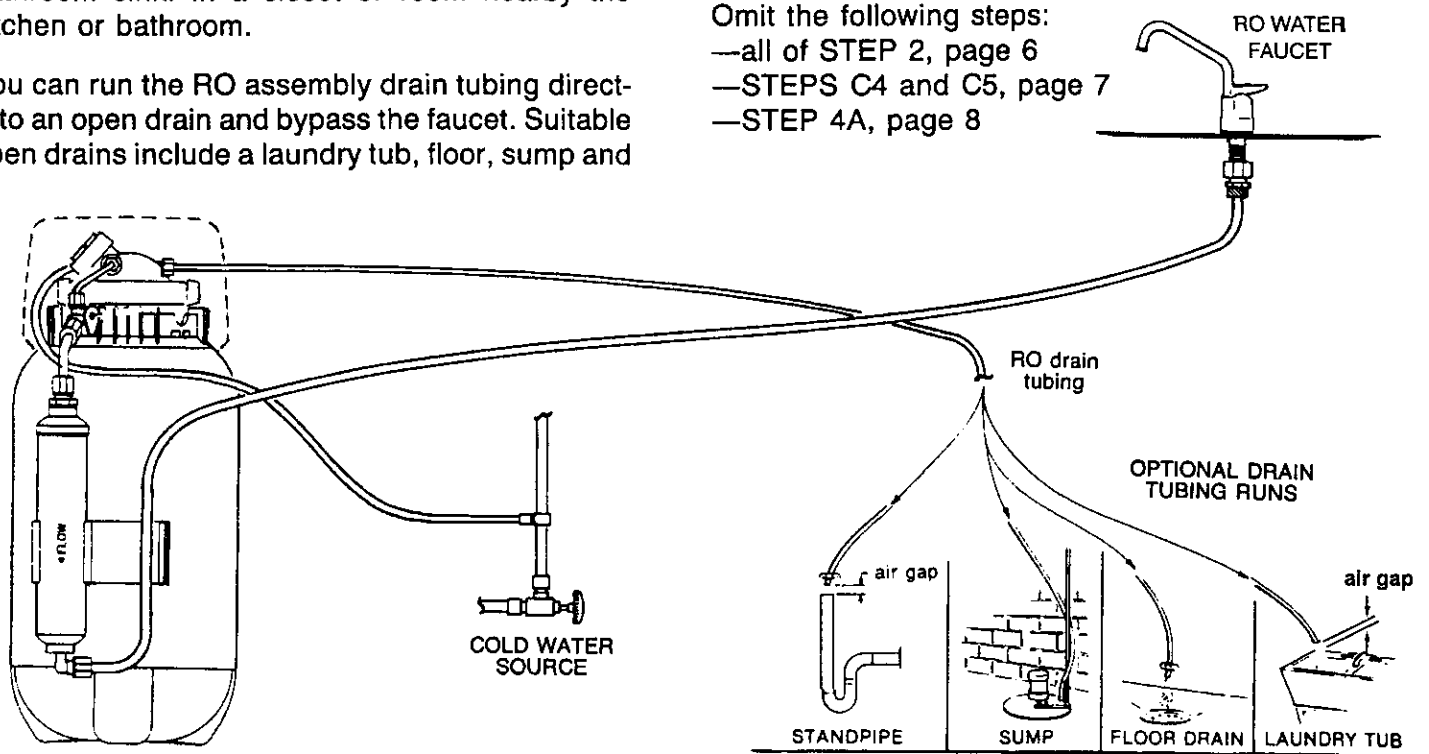
INSTALLING RO ASSEMBLY, AND/OR SUPPLY SADDLE VALVE IN REMOTE LOCATION

Longer lengths of tubing are available from Sears (see page 17) for installing the RO assembly, and/or water supply saddle valve away from the RO faucet. Examples: In the basement, under the kitchen or bathroom sink. In a closet or room nearby the kitchen or bathroom.

You can run the RO assembly drain tubing directly to an open drain and bypass the faucet. Suitable open drains include a laundry tub, floor, sump and

stand pipe drains. It is very important to keep the end of the RO drain tubing at least 1-1/2" above the drain point. This provides an air gap to prevent a back-siphon of sewer water.

- Omit the following steps:
- all of STEP 2, page 6
 - STEPS C4 and C5, page 7
 - STEP 4A, page 8





UNIVERSAL
Undersink Reverse Osmosis
HOME DRINKING
WATER SYSTEMS

OWNERS
MANUAL

SERVICE

MODEL NO.
625.347031

HOW TO ORDER
REPAIR PARTS

FOR REPAIR SERVICE,
CALL THIS TOLL FREE
NUMBER:
1-800-4-REPAIR
(1-800-473-7247)

FOR REPLACEMENT
PARTS INFORMATION
AND ORDERING, CALL
THIS TOLL FREE
NUMBER:
1-800-FON-PART
(1-800-366-7278)

TELL SEARS YOU
WANT IT INSTALLED
THEN RELAX

Now that you have purchased your Kenmore Home Drinking Water System, should a need ever exist for repair parts or service, simply contact any Sears Service Center. Be sure to provide all pertinent facts when you call or visit.

The model number of your drinking water system is found on the rating decal. This decal is on the side of the RO Liner Assembly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

- | | |
|----------------|--------------------|
| — PART NUMBER | — PART DESCRIPTION |
| — MODEL NUMBER | — NAME OF ITEM |

When Sears arranges the installation, you can be sure the job is done right. We will arrange for professional workmanship...and we'll take care of the entire project. What's more, during installation you get insured protection...against property damage and also against accidents to workmen. All you have to do is talk to your Sears salesperson or call your nearest Sears store today for detailed information.

Sears, Roebuck and Co., Hoffman Estates, IL 60179 U. S. A.
