

*Culligan*<sup>®</sup>

ESTATE<sup>®</sup>  
2 AND 2M  
Water Conditioners

Use and Care Guide

# Thank you . . .

## **AND WELCOME TO YOUR NEW WORLD OF BETTER LIVING WITH SOFTENED WATER.**

If this is your first experience having soft, conditioned water in your home, you'll be amazed at the marvelous difference it makes. We promise that you'll never want to be without it again.

We hope you will become familiar with this Guide so that you will better understand how your new appliance works, and how you can help it give you the many benefits of softened, filtered, conditioned water.

**SODIUM INFORMATION:** Water softeners using sodium chloride for regeneration add sodium to the water. Persons who are on sodium restricted diets should consider the added sodium as part of their overall sodium intake.

Some localities have corrosive water. A softener cannot correct this problem and so its printed warranty disclaims liability for corrosion of plumbing lines, fixtures or appliances. If you suspect corrosion, your Culligan Dealer has equipment to control the problem.

**NOTE:** Operational, maintenance and replacement requirements are essential for this product to perform as advertised.

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# How your water conditioner works

## WHY WATER GETS HARD AND HOW IT'S SOFTENED

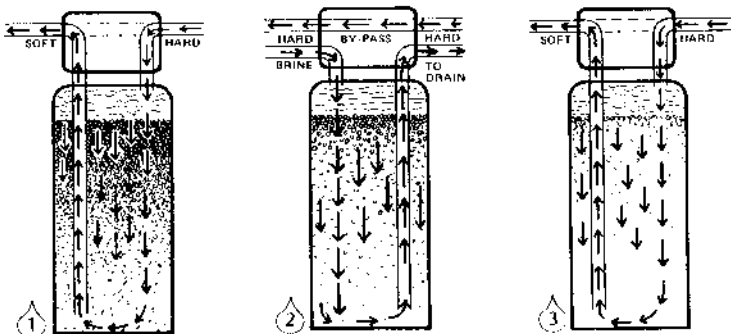
All of the fresh water in the world originally falls as rain, snow, or sleet. Surface water is drawn upward by the sun, forming clouds. Then nearly pure and soft as it starts to fall, it begins to collect impurities as it passes through smog and dust-laden atmosphere. And as it seeps through soil and rocks it gathers hardness, rust, acid, unpleasant tastes and odors.

Water hardness is caused primarily by limestone dissolved from the earth by rainwater. Because of this, in earlier times people who wanted soft water collected rainwater from roofs in rain barrels and cisterns before it picked up hardness from the earth.

## THE CULLIGAN PROCESS

Today, research and technology have combined to produce an appliance that removes hardness (dissolved rock) using ion exchange resins which have superior ability to attract and capture the dissolved hardness impurities in water. Culligan's Cullex<sup>®</sup> water conditioning resin is the happy result of such research. Here's how it works in your water conditioner. . . .

- 1 Your water conditioner directs the flow of your household water through a column of Cullex resin. The beads of resin remove the hardness impurities from the water and hold them. When they can hold no more, they must be recharged. First, the automatic recharge system supplies hard water to your household, bypassing your water conditioner.
- 2 Next, the filtered sediment is flushed to the drain. Then, the Cullex resin is automatically bathed by a salt solution (brine), removing hardness impurities. Then it is rinsed free of excess brine.
- 3 The water conditioner is again ready to soften more water for you. Under normal conditions, this cycle can be repeated indefinitely as the resin lasts for years and years.



# When and how to make adjustments to the electro-timer . . .

## **AN ADJUSTMENT IS NEEDED WHEN:**

- 1 you must reset the clocks around your home due to a power failure, time change, or other reason. Remember also to reset the time-of-day on your water conditioner.
- 2 you want recharge to occur at a different time than was set at installation. Note: recharge should be set for a time when water use is at a minimum. Usually this is in the wee hours of the morning, such as 2:00 a.m.
- 3 more softening capacity is needed on a continuous basis than was originally set, either because of increased use or change in water characteristics. (If a temporary increase in water use is anticipated or has occurred, an immediate recharge can be initiated without interfering with the automatic settings. Use the "Manual Recharge".)

## **ACCESS TO TIMER ADJUSTMENTS**

Grasp the front cover by the slots and carefully pull forward. Lay the cover aside in a safe place.

## **SERVICE (SOFT WATER) POSITION**

The timer is in the "service" position supplying conditioned water to the house lines when the toothless section of the cam gear is over the idled gear.

## **TIME-OF-DAY**

The stationery pointer **P** tells the time of day on the moving 24-hour dial **J**. If the pointer is not pointing to the correct time-of-day, according to your watch, you can reset this by pulling out the black gear, behind the time dial, and rotating it until the correct time-of-day is opposite the pointer. After releasing the black gear, be certain it meshes properly with the gear beneath it. Note: the dark half of the time dial represents nighttime hours.

## **TIME OF RECHARGE**

During recharge, hard water is automatically by-passed into the house lines. Recharge time is factory set to start at about 2:00 a.m. when water is not being used by most families. However, if you desire to have your unit charge at a time other than 2:00 a.m., this can be accomplished with a single adjustment:

The position of the tiny round dot or pin on the tab **H** is opposite the time on the 24-hour dial when the unit will begin to recharge. To change the time of

recharge, grasp the white outer 24-hour dial J and rotate until the desired recharge time on the dial is opposite the dot. Note: Whenever the time of recharge is changed, the time-of-day setting must also be changed following above instructions. (When you reset time-of-day, double check to be sure that the time of recharge is not accidentally changed in the process.)

**FREQUENCY OF RECHARGE**

The frequency of recharge was preset for your expected family needs when the water conditioner was installed.

There are six stainless steel tabs on a numbered wheel F which program recharge. When all six tabs are pushed in, the unit will recharge every day; if every other tab is in, recharge will occur every other day; if two opposite tabs are in, recharge will be every third day; and if only one tab is in, recharge occurs every sixth day.

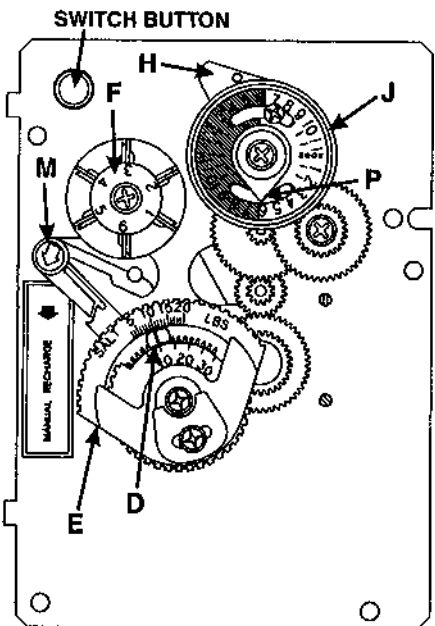
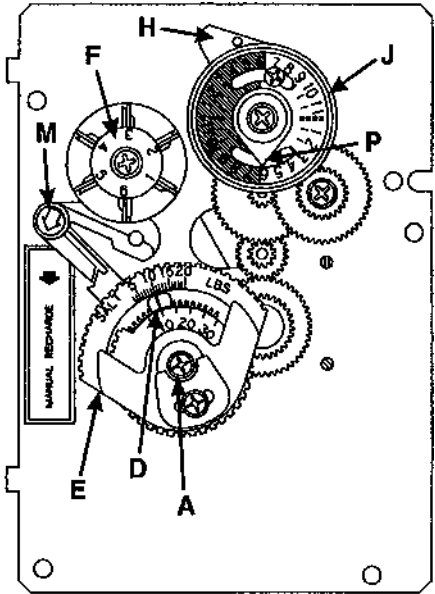
**REMEMBER**

Push IN to recharge, pull OUT to skip.

**SALT ECONOMIZER**

Has a dial E which controls the pounds of salt used per recharge. This was set at the time of installation. Before making any changes, consult your independently operated Culligan dealer for advice on proper setting, then make these adjustments:

Loosen screw A in the center of dial. While holding cam gear stationery, rotate the dial until desired salt dosage in pounds is aligned with mark D. Then tighten screw.



Used on SOFT-MINDER® initiated water conditioners. For information regarding resetting of the number of gallons between recharges, contact your Culligan dealer.

If salt dosage is changed, the float on the brine valve in the salt storage container must also be repositioned. See Installation Manual or call your dealer.

### **MANUAL RECHARGE FOR MORE SOFTENING CAPACITY**

When you expect guests or feel that your use of soft water will temporarily increase, you can get more softening capacity with a manual recharge. This can be initiated by moving the lever **M** in the direction of the arrow. After the level is released, the unit will resume its automatic, programmed cycle. To initiate an immediate regeneration on softeners equipped with the Soft-Minder<sup>®</sup>, press the red switch button first. Then push the manual regeneration lever. **M**.

\*NOTE: A manual recharge should not be initiated during the two hour period before a regularly scheduled recharge.

## Salt supply, usage and service . . .

### WHAT KIND OF SALT IS BEST

All Culligan Water Conditioners are designed to use any water conditioner salt of good quality, including "rock," "pellet," "solar," or "evaporated" types.

All rock salt, regardless of source, contains insoluble material which collects at the bottom of the salt storage tank and requires periodic clean-out.

If purified salt products are used, the salt storage compartment will require less frequent clean-out, but you must check more frequently for "bridging" (see pg. 11).


Regardless of what type of salt is used, we recommend Culligan Brand Salt as suggested by your Culligan Dealer. He is the expert and can provide you with the best product for your Culligan Water Conditioner.

### AUTOMATIC SALT DELIVERY SERVICE

Ask your Culligan Man for details about his salt delivery service. You can have your salt supply replenished on a regular basis. Whether you have automatic delivery service or pick up salt from your Culligan Man, you will be getting quality salt packaged according to rigid Culligan specifications. Using Culligan Brand Salt will help assure continued efficiency and trouble-free operation of your water conditioner.

## Care and cleaning of your water conditioner

Following these simple precautions will help assure continued trouble free service, and keep your Culligan Water Conditioner looking like new for years.

- 1 Do not place heavy objects on top of the salt storage tank or timer case.
- 2 Use only mild soap and warm water when cleaning the exterior of the conditioner. Never use harsh, abrasive cleaning compounds or those which contain acid, such as vinegar, bleach and similar products.
- 3  **WARNING: Protect your water conditioner and the entire drainline from freezing temperatures. DANGER: If your unit should freeze, do not attempt to disassemble it. Call your Culligan Dealer.**
- 4 The timer is very accurate. Keep time-of-day setting correct to assure recharging at the proper time.



- 5 Should service, adjustment or trouble-shooting information be needed which is not covered in this Use and Care Guide, refer to the appropriate Installation Manual for your model. If you do not have this material, it may be obtained from your independently operated Culligan dealer.

## To clean out the salt storage tank

A periodic clean-out of the Salt Storage Tank is necessary to keep your Culligan Water Conditioner at peak operating efficiency. Do it at least every 2 years when the salt supply is low. Follow these step-by-step procedures:  
Tools needed:

- Scoop
- Clean, bucket-size container
- Phillips-head screwdriver
- Garden hose
- Household scrub brush or sponge

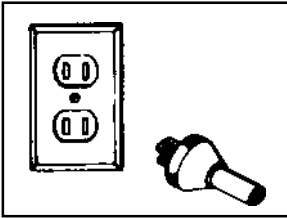
- 1 Remove the salt storage tank cover and the cap from the brine valve chamber.
- 2 Lift the brine valve out of the brine valve chamber and set aside in an upright position.
- 3 If you'd like to save any clean, dry salt remaining in the tank, remove it and place it in a clean container.
- 4 Using the scoop, dig out and discard as much remaining salt, water and debris as possible.
- 5 Remove the brine valve chamber by removing the screws on either side of the salt tank.
- 6 Lay the salt tank on its side and direct a brisk stream of water from your garden hose to its inside to rinse out all residue.
- 7 Using a household scrub brush and a mild soapy solution, clean the salt plate. This will complete the tank cleaning.
- 8 Stand salt tank upright. Place brine valve chamber in position and affix with screws.
- 9 Insert the brine valve into the chamber and replace brine valve chamber cap.
- 10 Fill the salt storage tank with 4 to 6 inches of water.
- 11 Fill the tank with salt to within a few inches from the top.
- 12 Replace salt storage tank cover.

# Before you call for service . . .

If you unexpectedly experience hard water, make these simple checks before calling your Culligan Man. One of the following conditions may be the reason for your interruption of service.

## IMPORTANT:

If any of the following conditions are found, the water conditioner should be manually recharged according to instructions on page 7 after you have corrected the condition.

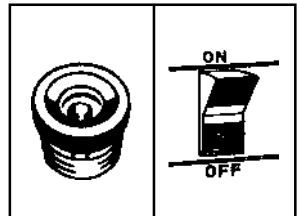


### POWER SUPPLY

Check your power supply cord. Is it plugged fully into the electric outlet? Be certain that the outlet does not have a wall switch which has been turned off. Reset conditioner to proper time of day and then plug in.

### BLOWN FUSE

Check the house fuse or circuit breaker panel. Replace a blown-out fuse or reset an open circuit breaker.



### POWER FAILURE

Any interruption in your power supply, or time changes — such as daylight savings — will disrupt your conditioner's recharge schedule by causing the timer to run off schedule. Reset timer to proper time of day.



### SALT SUPPLY

Check it. Refill if necessary and wait approximately four hours for the salt to dissolve before initiating a recharge cycle.

### BY-PASS VALVES

Check to see if they are in the proper position. Cul-Flo-Valv<sup>®</sup> by-pass, if used, should be in the "Push for Soft Water" position. If hand valves are used, see that inlet and outlet valves are opened and that the bypass valve is closed.

## **INCREASED USAGE**

Guests, family additions, new water-using appliances, etc. all will result in more water usage and will require more capacity from your conditioner. You can re-program your recharging schedule by following the directions on adjustments on pages 6 and 7. Call your Culligan Man for advice and save a service call.

## **NO WATER**

If you aren't getting any water flow at all, make sure your water supply is working. Open a tap ahead of the conditioner (outside tap) to see if you have any water pressure. Check the by-pass valve. If it is the Service (soft water) position, put it into by-pass and call your Culligan dealer for service.

## **CONTINUOUS FLOW TO DRAIN**

If water runs to drain continuously, check to make sure unit is not in recharge. If it is recharging, allow unit to finish cycle, then reset time of day if necessary. If the unit is not in recharge, unplug electrical cord, place the valve in bypass, and contact your Culligan dealer for service.

## **SALT BRIDGING**

Salt "bridging" occurs when a space is formed between the salt and the water preventing the salt from dissolving in the water to make brine. No brine — no soft conditioned water!

High humidity and/or use of some brands of purified salt products may cause a salt bridge to form.

The best way to check and eliminate a salt bridging problem is to take a broom handle or similar instrument and make a mark 32 inches from the end. Then carefully begin to probe down through the salt with the instrument. Should an obstruction be found before the mark on your instrument reaches the rim of the salt storage tank, a salt bridge is likely to have formed. Continue to probe and break up the bridge.

**⚠ CAUTION!** *Do not force the implement past the mark as damage to the horizontal salt plate may occur.*

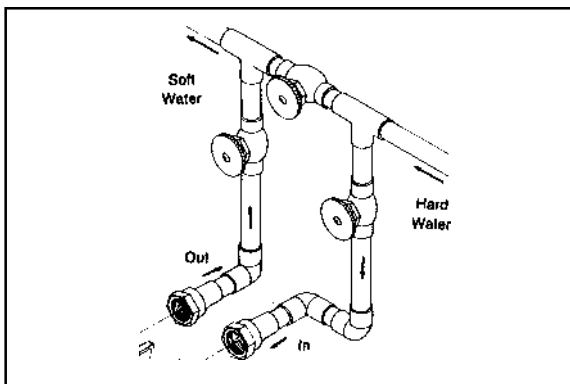
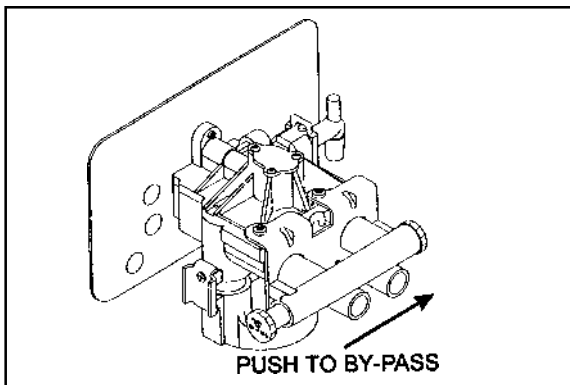
# When and how to bypass your Culligan water conditioner . . .

Normally, all water except to outside lines passes through the water conditioner. There are times when the water conditioner should be by-passed, using the push-button Cul-Flo-Valv<sup>®</sup> by-pass, or a 3-way by-pass valve. You should by-pass:

- 1 If lines to outside faucets do not by-pass the water conditioner, and you do not want to waste soft water on lawn sprinkling or other outside uses.
- 2 If you are going away on vacation and want to save salt by not having the unit recharge while you're away.
- 3 If you wish to inspect and clean the valves or salt storage container.
- 4 If a water leak from the conditioner is evident.

## PUSH-BUTTON BY-PASS

To by-pass unit, simply push the Red knob (marked "Push to By-Pass") all the way to your left. To return to soft water service, reverse the procedure — push the Blue knob (marked "Soft Water") all the way to your right.



## **HAND VALVE BY-PASS**

If hand valves are closed, close the inlet and outlet valves and open the center by-pass valve. To get soft water, reverse the process by closing the center by-pass valve and opening the inlet and outlet valves. **NOTE:** If the media tank is to remain connected while the conditioner is in by-pass, close the inlet valve **ONLY**, and open the by-pass valve. This will prevent a possible pressure build-up in the media tank.

## **NOTE:**

When the conditioner is by-passed, all water is hard. For example, your water heater may fill with hard water, and the conditioner cannot recharge. Remember to place the push-button Cul-Flo-Valv<sup>®</sup> or hand valves back to the "Soft Water" position as soon as possible.

# Records and warranty

## IMPORTANT DATA ON YOUR WATER CONDITIONER

It is advisable to have the salesman or installer fill in the information below for your future reference. If this has not been done, please ask for it, as it is necessary if you contact the factory.

### IDENTIFICATION

Model Name \_\_\_\_\_ Catalog No. \_\_\_\_\_

Control Model No. \_\_\_\_\_ Control Serial No. \_\_\_\_\_

Date of Installation \_\_\_\_\_ Tank Serial No. \_\_\_\_\_

### SETTINGS

Frequency of recharge

Every Day                       Every other Day                      Salt Setting \_\_\_\_\_ lbs.

Every 3rd Day                       Every 6th Day                      Time of Recharge:

Gallons Capacity \_\_\_\_\_                      \_\_\_\_\_ a.m. \_\_\_\_\_ p.m.

Number of people in household \_\_\_\_\_

### WATER ANALYSIS

Total hardness \_\_\_\_\_ (gpg)    Total Iron \_\_\_\_\_ (ppm)    pH (acidity) \_\_\_\_\_

Other \_\_\_\_\_

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## ABOUT YOUR WARRANTY

(Be sure you receive and read your Warranty Policy)

### SHOULD YOU NOTICE ANY NEW PROBLEMS WITH YOUR WATER, CULLIGAN HAS THE CAPABILITIES TO SOLVE THEM.

Today we have the technology to substantially reduce many of the contaminants listed as undesirable by the U.S. EPA in its Drinking Water Standards. Culligan products and systems reduce both natural and man-made water pollutants — provide the best water for each specific use and application.

Your new Culligan Water Conditioner can be adjusted to handle to wide range of water problems, but it does have limitations. It has been specified ont the basis of your water conditions at the time of sale. It is possible for the chemical makeup of your water to change in time, and such changes cannot be predicted. Your needs and uses may also change. Your Culligan Man is ready to help you if any problem should arise.

With Culligan, you get more than a quality product . . .

**YOU GET LOCAL CULLIGAN CARE AND SERVICE**

Our reputation is based on prompt, courteous, efficient attention to your needs. Selling and servicing water conditioners is our full-time business, and satisfied customers are our guests assets.

**AND YOU GET THE SECURITY OF DEALING WITH AN ORGANIZATION THAT'S TRUSTED IN 91 COUNTRIES**

The Culligan System sells and services more water conditioners than does any other brand in the world. This position of leadership is not awarded, it is earned. It means that a Culligan product will never be an "orphan" because we will always stand behind our warranties. It means that we will always strive to deserve your confidence.

Simply call and say . . . . .

**"HEY CULLIGAN MAN!"<sup>®</sup>**