



OWNER'S MANUAL

MODEL SFS

UNDERSINK WATER FILTER HOUSING SYSTEM

Safety Guides Installation Operation

Cartridge Replacement Repair Parts

If you have questions when installing, operating or maintaining your undersink water filter housing system, call this toll-free number...

1-800-972-0135

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

or visit

www.northstar.conditioning.com

System tested and certified by NSF International to NSF/ANSI Standard 42 for the reduction of the claims specified on the performance data sheet.



North Star

NORTHSTAR WATER CONDITIONING; PO Box 64310; St. Paul, MN 55164-4310

7274846 (Rev. A 1/10/05)

SAFETY GUIDES / SPECIFICATIONS

▲ Please read this entire manual before installing and using your undersink water filter housing. Be sure to follow all guides and rules carefully. Failure to follow them could cause personal injury or property damage.

▲ Check with your local public works department for plumbing codes. You must follow their guides as you install the water filter housing. In Massachusetts, plumbing codes of Massachusetts shall be adhered to. Consult with your licensed plumber.

▲ Use the filter on a potable, safe-to-drink, home COLD water supply only. The filter

cartridge will not purify water, or make it safe to drink. DO NOT use on HOT water (100°F, max.). Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

▲ Protect the water filter housing and piping from freezing. Water freezing in the housing will break it.

▲ Your undersink water filter housing works on water pressures of 30 psi (minimum) to 100 psi (maximum). If your house pressure is over the maximum, install a pressure reducing valve in the water supply pipe to the water filter.

Min. - Max. Supply Water Pressure	30 - 100 psi
Min. - Max. Supply Water Temperature	40 - 100 °F
Inlet - Outlet Thread Size	1/4" Quick connect fittings and tubing included
Rated Service Flow	0.6 gpm at 60 psi

WARRANTY

FULL ONE YEAR WARRANTY ON UNDERSINK WATER FILTER HOUSING SYSTEM

For one year from the date of purchase, North Star Water Conditioning will replace this Undersink Water Filter Housing System, except filter cartridge, free of charge, if defective in material or workmanship.

If the Undersink Water Filter Housing System is defective, warranty service is provided by your local dealer where you purchased it, or return it postage or freight prepaid, to the address below.

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

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PLANNING YOUR INSTALLATION

When planning your installation, use the drawing below and on page 5 to guide you. There are many variables to consider as you plan. Some of these are:

✓ the water filter housing inlet and outlet connections are 1/4" QC.

✓ existing plumbing type (copper, threaded, etc.) and nominal size (1/4", 3/8" etc.)

✓ tools you have, and your plumbing skills

✓ cost of materials needed

✓ space available for installing the filter housing

Make a simple sketch of your proposed installation, and a list of plumbing materials you will need. Obtain every thing you need before starting the installation. Be sure you have the tools required.

TYPICAL UNDERSINK INSTALLATION

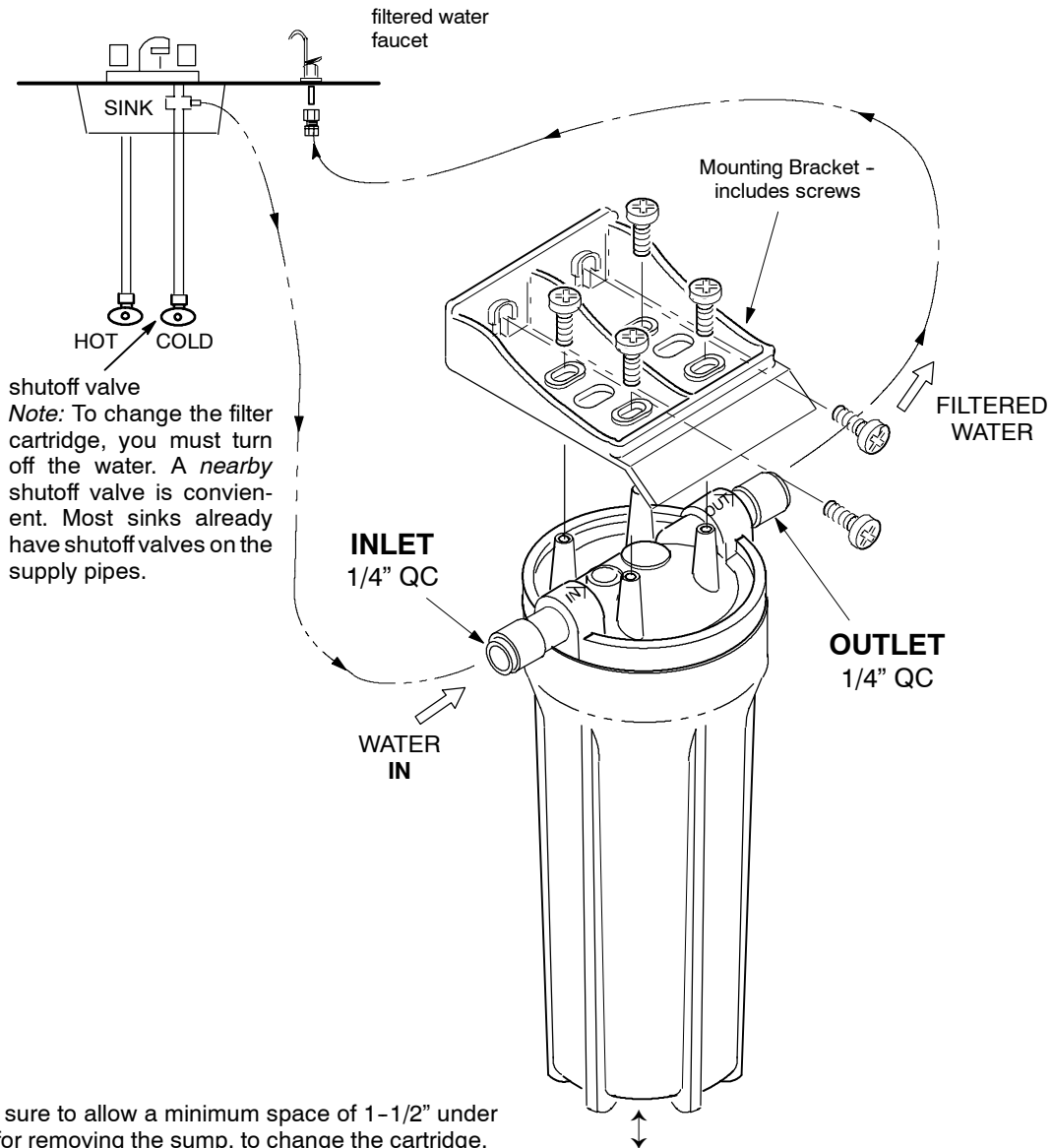


Figure 1

TOOLS AND MATERIALS NEEDED

- ▶ plumbers putty
- ▶ slotted and Phillips screwdrivers
- ▶ pliers and adjustable jaw wrench
- ▶ tubing cutter
- ▶ sandpaper or emery-cloth
- ▶ electric drill and 3/4" drill bit if mounting hole is needed for the faucet

INSTALLATION STEPS

Step 1. INSTALL COLD WATER SUPPLY FITTING

Check and comply with local plumbing codes as you plan, then install a cold feed (supply) water fitting. The fitting must provide a leak-tight connection to the water filter 1/4" tubing. A typical connection using the included water supply fitting is shown in **Figure 2 - A**. An optional connection using standard plumbing fittings (not included), is shown in **Figure 2 - B**.

A. WATER SUPPLY FITTING

1. Close the house main water shutoff valve and open faucets to drain water from the sink cold water pipe.
2. Remove nut that connects the cold water faucet to cold water plumbing.
3. Thread water supply fitting onto pipe and reconnect nut to bottom of fitting. Be sure to use a light coating of pipe joint compound or Teflon tape (included) on outside threads.

B. OPTIONAL PIPE FITTINGS

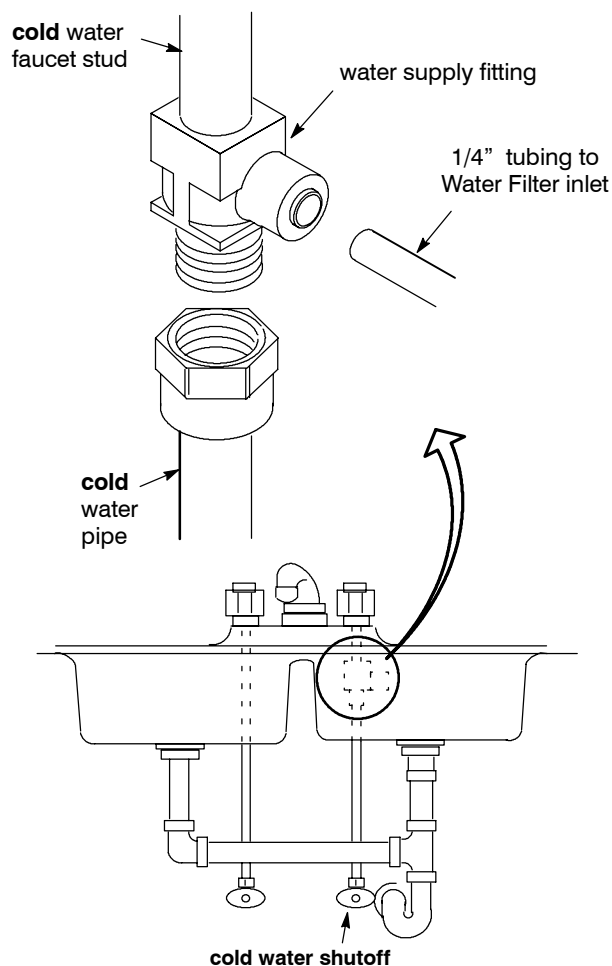
(compression type shown)

NOTE: Be sure to turn off the water supply and open a low faucet to drain the pipe.

Complying with plumbing codes, install a fitting on the cold water pipe to adapt 1/4" OD tubing. A typical connection is shown in Figure 2-B. If threaded fittings are used, be sure to use pipe joint compound or Teflon tape on outside threads.

In Massachusetts, plumbing codes of Massachusetts shall be adhered to. Consult with licensed plumber.

A. WATER SUPPLY CONNECTION (using included water supply fitting)



B. WATER SUPPLY TYPICAL CONNECTION (using compression fitting)

- parts not included -

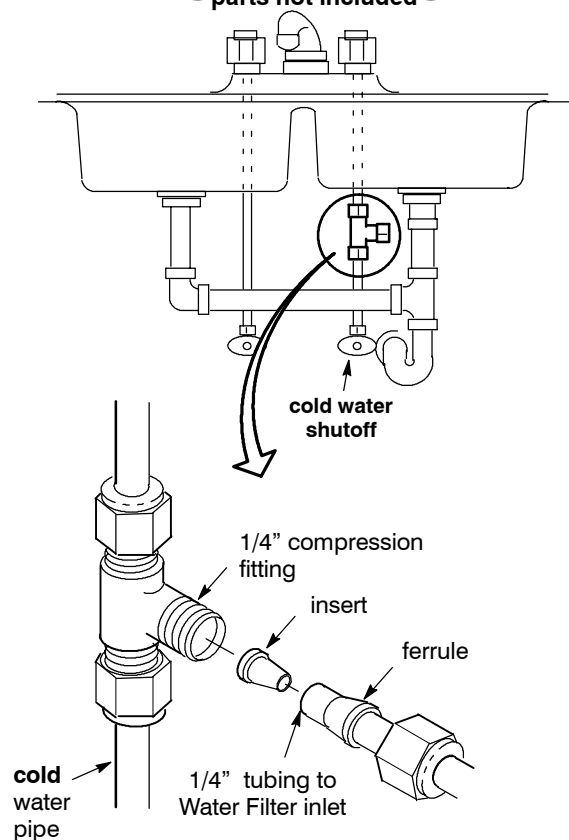


Figure 2

INSTALLATION STEPS

Step 2. MAKE HOLE FOR FILTERED WATER FAUCET

Select one of the following places to install the faucet. Be sure there's room underneath so you can make the needed connections.

- In an existing sink spray attachment hole.
- Drill a hole in the sink top.
- Drill a hole in the countertop next to the sink.

CAUTION: Drilling holes into countertops made of stone or solid surface materials such as granite, marble, Corian™ or other plastic resin products should only be performed by a fabricator installer who is certified for fabricating such materials. Drilling of these type surfaces by any other means may

cause permanent, irreparable damage to the countertop surface.

1. If drilling is needed make a 3/4" dia. (minimum) hole for the faucet.
2. Place plumbers putty around the drilled hole to prevent water leaks around the faucet.

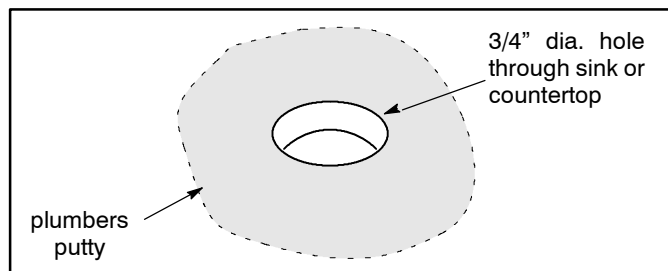


Figure 3

Step 3. ASSEMBLE AND INSTALL FAUCET

NOTE: If the faucet is not assembled, slide the lever over the cylindrical nut. Then push or turn the spout into the faucet body.

1. Faucet, Figure 4:

A. If not already assembled, install the rubber washer, spacer, flat (or lock) washer and hex nut onto the threaded faucet stud.

B. Apply Teflon tape to the end of the faucet stud. Turn the tubing adapter onto the stud and hand tighten, then wrench 1/4 turn only. Be careful not to cross thread.

3. Wet the o-ring seals on the faucet spout. Then, remove and discard the short piece of tubing from the faucet body and insert the spout in its place.

4. Connect tubing to faucet as follows.

5. Lower the faucet into the sink or countertop hole.

6. On the underside of the sink or countertop insert the large steel washer between the mounting hole and the spacer on the faucet stud (see assembled view). Then turn the hex nut up to the spacer and tighten. Tighten the hex nut so the faucet can not move, but do not overtighten and break the faucet.

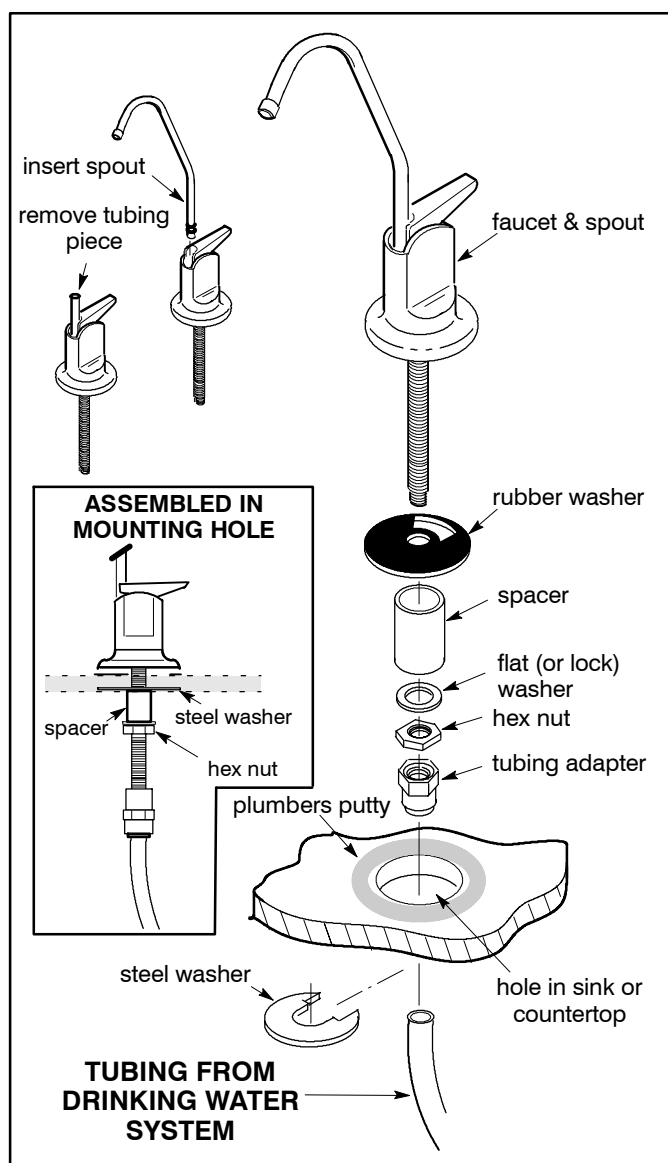


Figure 4

INSTALLATION STEPS

Step 4. MAKE TUBING CONNECTIONS

This system includes push-in fittings for quick tubing connection at most locations. If working with the fittings do the following:

1. Allowing some slack, measure and cut a length of 1/4" tubing to connect between the supply fitting and the filter system inlet, Figure 1. Use a sharp cutter or knife to cut the end of tubing square.
2. Inspect the end (about 1") of the tubing to be sure there are no nicks, scratches or other rough spots. If needed cut the tubing again.
3. Push tubing through the collet and all the way into fitting. Full engagement is 11/16" for 1/4" tubing, and 3/4" for 3/8" tubing. Pull on the tubing to be sure that it's held firmly in the fitting.

If tubing other than supplied with the system is used, be sure it is of high quality, exact size and roundness with a smooth surface.

To Disconnect Tubing: Push the collet inward and hold with a finger while pulling the tubing out.

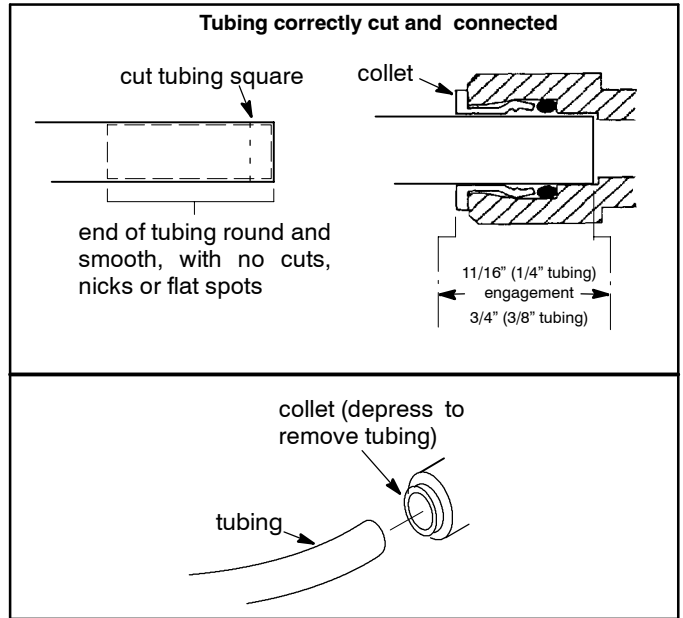


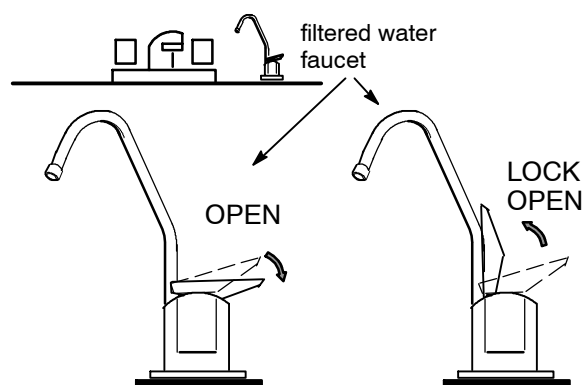
Figure 5

CAUTION

DO NOT USE VINEGAR, OR OTHER ACID BASED CLEANERS ON THIS SYSTEM. THEY WILL DEGRADE SOME SYSTEM PARTS. ALWAYS USE SOAP AND WATER.

USING THE SYSTEM

The sink or countertop faucet vends the filtered water when opened. It has a hand operated, spring loaded closed lever to prevent waste. You can also keep the faucet open by pushing upward on the lever and locking it against the faucet spout.



FILTER CARTRIDGE LIFE

Several variables determine how long a cartridge will last. These include:

1. How much water you use.
2. How much sediment, taste and/or odor, or other unwanted substance, is in the water.

Use the following information as a guide. However, no matter which type of cartridge you are using, you will know it is time to replace it when you *first* notice the return of the unwanted substance in your water.

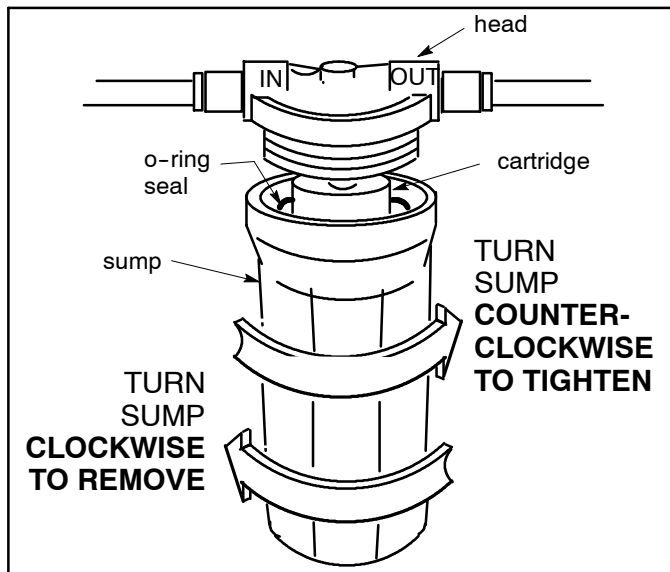
North Star Undersink Water Filter Housing System, model SFS with filter 7173838 has been tested and certified by NSF International for the reduction of chlorine, taste and odors. The rated capacity for this system is 4500 gallons.

This system conforms to NSF/ANSI 42 for the specific performance claims as verified and substantiated by test data.

FILTER CARTRIDGE REPLACEMENT

CAUTION: Never remove the sump with water pressure in the filter.

1. Close the nearest shutoff valve on the water supply pipe to the filter. To relieve pressure in the filter, open the filtered water faucet.
2. Turn the sump off of the filter head, to the left or clockwise. Be careful, the sump is full of water. Do not lose the large o-ring seal.



NOTE: A special wrench is included for removing the sump. See the parts list on page 10.

3. Be sure the inside of the sump is clean. Use hot, soapy water.
4. Remove the wrapper from the new filter cartridge and insert the filter cartridge in the sump. Some cartridges fit either way, while others fit only one way.

Observe markings on the cartridge, or on the wrapper.

5. Lightly lubricate the o-ring seal in the sump with silicone grease or Vaseline. Be sure it is fully seated in the groove.
6. Hold the sump up to the filter head aligning the center hole in the cartridge with the protrusion on the bottom of the head.

NOTE: If the sump will not tighten up to the head you may have the cartridge in upside down. Take the cartridge out and check for correct orientation.

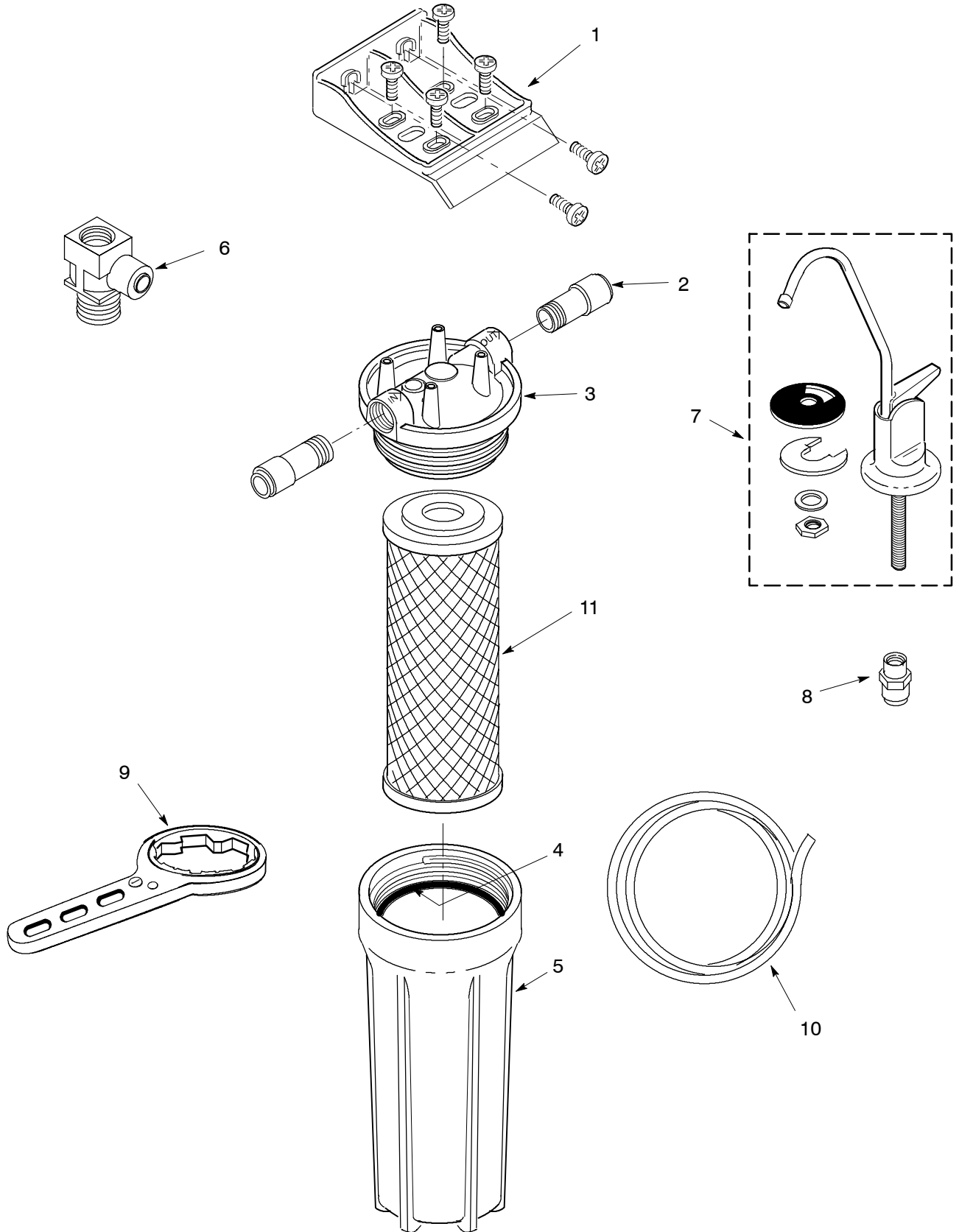
7. Being careful not to cross-thread, turn (counter-clockwise) the sump onto the filter head and tighten securely.
8. Open the sink cold faucet. Then slowly open the water supply shutoff valve and allow the filter housing to fill.
9. Close the sink faucet. Then check for leaks between the sump and the head.

NOTE: If leaking, turn off the water supply and open the sink cold faucet to depressurize the filter. Then disassemble the filter and check the o-ring for cuts, flat spots, etc., and sealing surfaces for foreign material. Clean the o-ring and lubricate with silicone grease or Vaseline. Carefully press into the groove in the sump.

10. **Taste and Odor Cartridges:** A taste and odor cartridge contains activated carbon, a black powder. After the new cartridge is installed open the filtered water faucet and allow fine, harmless carbon particles to purge from the cartridge. Close the faucet when you no longer see the "fines" in the filtered water, or approximately 2 - 3 minutes.

REPAIR PARTS

North Star Undersink Water Filter Housing System, Model SFS



REPAIR PARTS

North Star Undersink Water Filter Housing System, Model SFS

KEY NO.	PART NUMBER	DESCRIPTION
1	7231296	Mounting Bracket (includes screws)
2	7266699	Connector, 3/8" NPT x 1/4" Quick Connect (2 req'd)
3	7156535	Head
4	7170246	O-ring, 3-3/8" I.D. x 3-5/8" O.D.
5	7156577	Sump
6	7227310	Tee, Feed Adaptor
7	7228510	Faucet
8	7267174	Faucet Adaptor
9	7193066	Sump Removal Wrench
10	7253866	Tubing, 1/4" x 72"
11	7173838	Filter Cartridge

For replacement parts call 1-800-972-0135.