

ESSENCE RO SYSTEM MAINTENANCE SCHEDULE

The system requires very little maintenance. Just change the filter cartridges regularly as suggested below. Keep the system indoors away from extreme hot or cold temperatures, and run the system within its reasonable output capacity (i.e. allow the system to rest at least a few hours a day).

To ensure the longevity and integrity of your drinking water system, please use genuine APEC Water replacement filter at **WWW.FreeDrinkingWater.com/parts.htm**

Stages 1, 2, 3 Pre-Filters: Replace every 6-12 months.

(FILTER-SET-ES)

(Private well water source: may need to replace pre-filters sooner than 12 months due to heavy sediments and other particles.)

Stage-4 Membrane:

(MEM-ES-50)

Use MEM-ES75 for ROES-PH75 & ROES-UV75 models.

City Water: Replace every **2-3 years** depending on input water quality, water usage, and pre-filter change maintenance

Private Well Water: Replace every **2 years** depending on well water quality, and pre-filter change maintenance.

Stage-5 Carbon Filter:

(FI-ES-TCR)

Replace every 2-3 years.

It's best to replace this filter when replacing the stage-4 membrane.

Filter Housing O-rings:

We recommend replacing the filter housing O-ring every year or when replacing the 3 pre-filters.

Important! It is important to change the 3 pre-filters timely, at least every 6-12 months. The pre-filters protect the stage-4 membrane. If they are not changed timely and become over-depleted, the membrane will be damaged and the RO system will be contaminated.

It's best to use APEC replacement filters. Using "non APEC" and lesser quality filters may clog up the RO system and damage the membrane.

We recommend that the plastic housings be replaced periodically: Every 5 years for the opaque housing.

FILTER CHANGE INSTRUCTIONS

How To Replace Stages 1, 2, 3 Pre-Filters:

- 1) **Turn OFF** cold water supply to RO system. Turn OFF tank ball-valve. Lift up RO faucet lever briefly to relief the built-up pressure inside the RO system. This will make opening the housings easier.
- 2) **Open housing:** Have the RO standing upright. Slip the plastic wrench onto the #1 housing. Looking down from a top view, you should open the housing turning **clockwise**. If necessary, lay RO down on the floor to get a better leverage. If the housing is too tight, use a hammer and tap on the wrench handle to help turn the wrench (See **Fig.14** on page 19).

- 3) Discard 3 used filters, wash housings with mild soap, rinse off. Put 3 new filters into their respective housings: sediment filter in stage-1, carbon block filters in stages 2 & 3.
- 4) Close up the housings. Make sure each housing has a **black O-ring** in the thread grooves. Use wrench to tighten each housing.
- 5) **Remember: Turn ON the cold water supply and OPEN the tank valve after finished changing filters!**
- 6) **Check for leaks!**

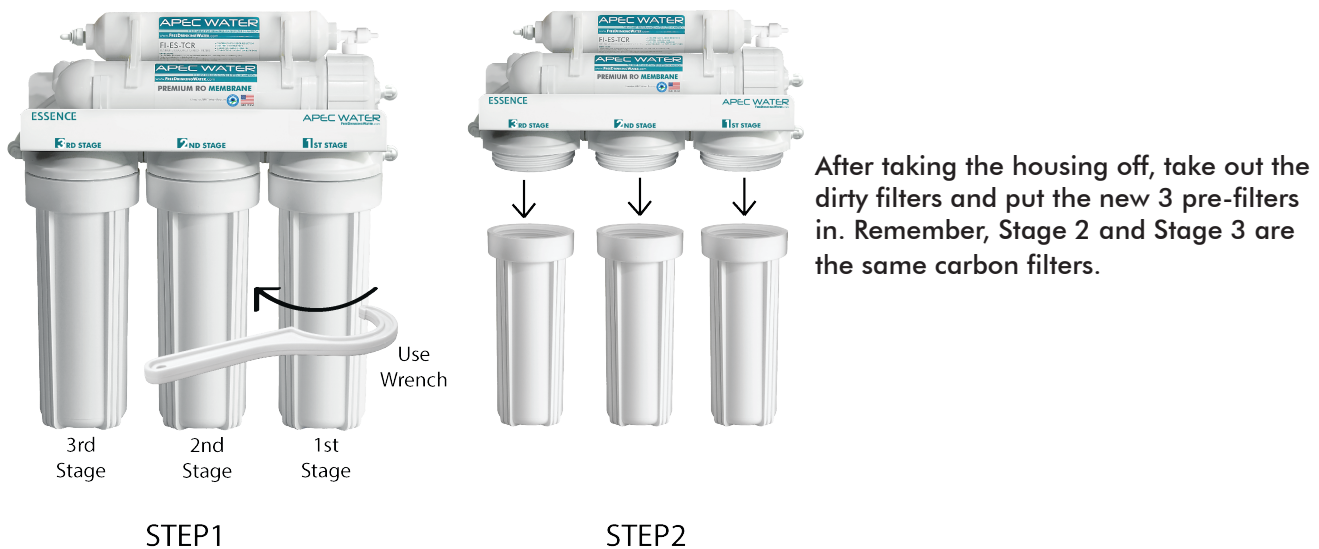


Fig. 14

How to Replace Stage-4 Membrane:

- 1) Turn OFF the cold water supply to RO system. Turn OFF tank ball-valve. Lift up RO faucet lever briefly to relief the built-up pressure inside the RO system. This will make opening the housings easier.
- 2) See **Fig. 14A**. Locate the Membrane housing on the system (labeled "Membrane"). Remove the WHITE tubing from the housing's cap at **point D**. To remove tubing, Push In and Hold Down on the collet ring square against the fitting. With the collet held in this position the tube can be removed. Open up the cap (turn counter-clockwise). Remove the used membrane and discard. Insert the new membrane using a pair of pliers. Push membrane into housing. Avoid touching the Membrane with your hands to prevent contamination!
- 3) **Important!** Make sure the "double-ring" end of the membrane goes into the housing first as shown in **Fig. 14B** below. The membrane cannot filter water if it's inserted in the **WRONG** direction!
- 4) Close the housing cap. Reconnect the WHITE tubing to the cap. **Turn on** the cold water supply and tank valve. Let the RO system run to re-fill the tank (takes about 2-3 hours).

5) Check for leaks!

6) *Drain the first tank of water (through faucet) to flush out the new membrane!* The 2nd tank of water is ready for use.

Fig. 14A

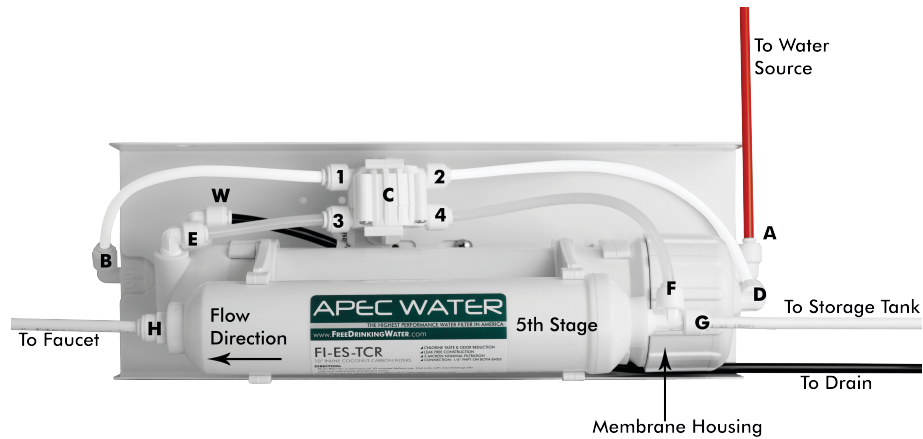


Fig. 14B



How to Replace Stage-5 Carbon Filter:

Replace this last filter at the same time you replace the stage-4 membrane.

- 1) Remove the OLD filter: **See Fig. 14A.** Disconnect the output tubing from **point H** and tubings at **point G & F**. Use a wrench to unscrew the fitting from the filter's Left hand port, then unscrew the T-fitting from filter's Right hand port. You will put these 2 fittings on the new filter. Discard the used filter. The new 5th stage filter will come with 2 plastic end caps. Please use a flat head screwdriver to remove the caps before proceeding.
- 2) Sanitize: Use some mild bleach solution to rinse the 2 plastic fittings, the 3 tubing ends, and the 2 ports of the new filter. This is to prevent contamination.
- 3) Connect the 2 fittings and tubing to the new filter as before. Make sure the "FLOW →" on the filter is pointing to the pure water **output direction**. **NOTE:** Only this filter change needs bleach sanitizing. **Do Not** apply chlorine/ bleach in any way to Membrane for it will damage the membrane!
- 4) **Check for leaks!**

*** End Filter Change Section ***