**Maintenance – Tommy Reverse Osmosis (RO)**

**Carbon Filter**

Action: Check Free chlorine levels after the Carbon media tank, and prior to the 5-micron filter.

Frequency: Weekly

**Note:** This filter should have a long life (> 2 years) and requires minimal maintenance. Check the free chlorine level of the water coming from the carbon filter to verify it is at a 0.00 PPM level of free chlorine present in the feed water to the RO system. Failure to check and maintain the carbon filter will lead to failure of the RO membranes. The 10 cubic foot carbon filter should be able to remove 1.0 PPM of chlorine from approximately 10 million gallons of the feed water prior to replacement of the carbon. Some municipalities increase chlorine levels for a few months each year to sanitize the distribution system so checking to verify complete chlorine removal is critical to proper operation of the system.

**Sediment Filter**

Action: Replace the 5-micron filter

Frequency: 3-12 months, or a difference of 15 PSI at PRS1 and PRS2's pressure transducers, whichever comes first.

Part Number: P-WAT-2414

Note: This filter is designed to collapse at a difference of 30 PSI between prs1 and prs2, if the filter is not changed before then it can deteriorate and send debris through the system harming other major components.

**RO Membrane System**(Membranes and O-ring seals in housing)

Action: Clean first or replace the membranes.

Frequency: When the TDS levels exceed 40 or the RO generation flow rate reduces by 40% whichever comes first. The design flow rate is in the Table on page 6 of the operator manual.

Part Number: P-WAT-2402

**Pressure Switches**

Action: Replace Pressure transducers.

Frequency: Replace the pressure switchs (prs1 prs2 prs3, prs4) when the Solenoid Valve D reaches a million cycles (on maintenance counter) to avoid unplanned downtime.

Part numbers:

PRS1: P-WAT-2440
PRS2: P-WAT-2440
PRS3: P-WAT-2439
PRS4: P-WAT-2411

Note: The Dietz pressure switch has a design life of over 1 million cycles. Replace the PRS4 pressure switch when the Solenoid Valve D reaches a million cycles (on maintenance counter) to avoid unplanned downtime.

**ASCO 8290 Solenoid Valves** (Solenoids A-E)

Action: Replace Solenoid Valves.

Frequency: 5-10 years, or 4 million cycles on the valve whichever comes first.

Part numbers:
Solenoid A: P-WAT-2397
Solenoid B, C, D: P-WAT-2398
Solenoid E: P-WAT-2438

Note: These valves are designed for multi-million cycle design life which should provide 5–10-year lifespan in most car wash systems. Note that Solenoid C (RO to tunnel) sees 50 times the number of cycles of the other four solenoid valves and will wear accordingly.

**Pumps**

 Action: Replace seal or replace the pump

Frequency: 20,000 hours.

Part numbers:
RO Pump: E-SE-BP-7501
Re-Press Pump: E-SE-BP-7502

Note: Pump seals will typically fail first and having a seal kit available for each pump is recommended.

**RO Manual:**[**Operator Manual: Tommy Reverse Osmosis (RO)**](https://tommycarwash.zendesk.com/hc/en-us/articles/360055350253)

**Instructional Video : https://vimeo.com/539730594**