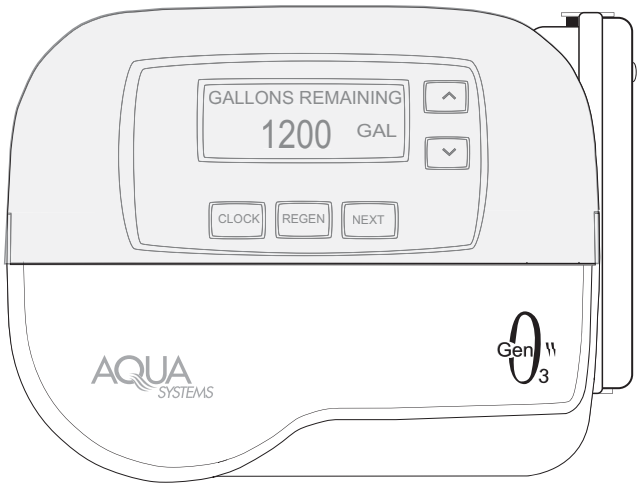
SmartChoice™ Gen II

Eradicator Gen II O_3 with EOG II
Owners Guide



Gen 3™

Owners Manual Supplement

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Introduction

This Owner's manual supplement is an information guide to the Eradicator with the External Ozone Generator (EOG II). The Eradicator line of chemical free iron and sulfur removal systems is enhanced with ozone during the aeration cycle. Ozone is effective as a Super Oxidant of the air, as well as a super source for added oxygen.

The unique low voltage ozone generator has been designed to fit externally on the SmartChoice Eradicator control valve in which both are operated by a single low voltage power supply. This approach provides an attractive ozone system that is very efficient and simple to maintain. The generator is power optimized to consistently deliver the highest quality of ozone to the system. The Eradicator with Ozone is an advanced technology water treatment system. It is recommended that the owner arrange for annual periodic maintenance by a qualified technician to achieve optimum long term performance.

Contact the Customer Service Group for additional information.

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Gen II O_3 with Ozone

Overview

The Eradicator Gen II O3, with ozone, is a breakthrough in chemical free filtration. The ozone is made from oxygen, then converts back to oxygen after its effective function. Ozone expedites the oxidation in the Eradicator's aeration process. The ozone is made from ambient air that is pulled into the control during the draw cycle. A 12 volt DC generator creates electrical arcing technology, inside of a sealed tube, known as Corona Discharge (CD). When the air is exposed to the arcing electrical current, the Oxygen in the air (O2) converts to Ozone (O3). Once the ozone has done its job inside the filtration system, it converts back to Oxygen (O2), leaving the effluent water from the filter refreshingly oxygenated.

The ozone is generated from the auxiliary circuit board that is mounted inside of the Gen II EOG II cover. This Eradicator O3 is operated by a single power supply in which the O3 generator is activated by the AQx relay function. The programming to activate the ozone generator is in the Eradicator electronics package. The programming for this function should only be accessed by a qualified technician.

Note:
The Gen II AQx control is programmed to activate the ozone generator. The ozone generator will not turn on if the control is fast-stepped through cycles by using the REGEN button. You must wait for the activation based on the number of minutes from the start of the cycle.

The Eradicator with Ozone should only be installed and serviced by qualified technicians.

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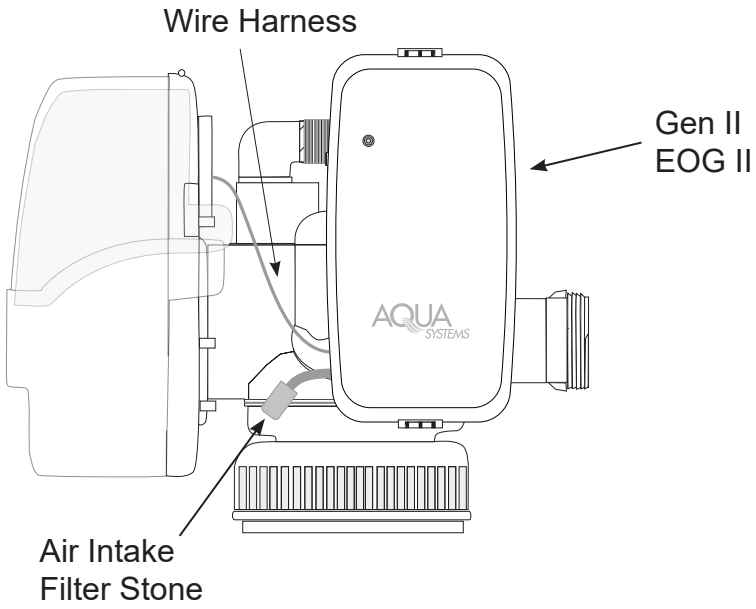
Gen II O_3 with Ozone

Overview

The EOG II Ozone system is mounted on the inlet side of the control valve with the wire harness going through the backplate to the circuit board. This allows the control valve and the O3 system to operate with a single power supply. An optional air dryer which increases O3 production and quality can be added to this control using the single power supply (see separate Air Dryer instruction sheet).

Side View with External Ozone



How Ozone is Produced

When the control stops in the Regeneration DN position, air is pulled into the control through the air intake. The air travels through a porous stone as a filter, then is pulled through the Corona Discharge (CD) Tube. When the tube is activated by the relay controlled power supply, it creates an electrical arc internally. The air passes through this arcing where it is converted from Oxygen (O_2) to Ozone (O_3). The ozone then travels through the special tubing, through the check valve, and the brine fitting,where it enters the filter system.

Note: The O_3 components should only be inspected and serviced by a qualified service technician.

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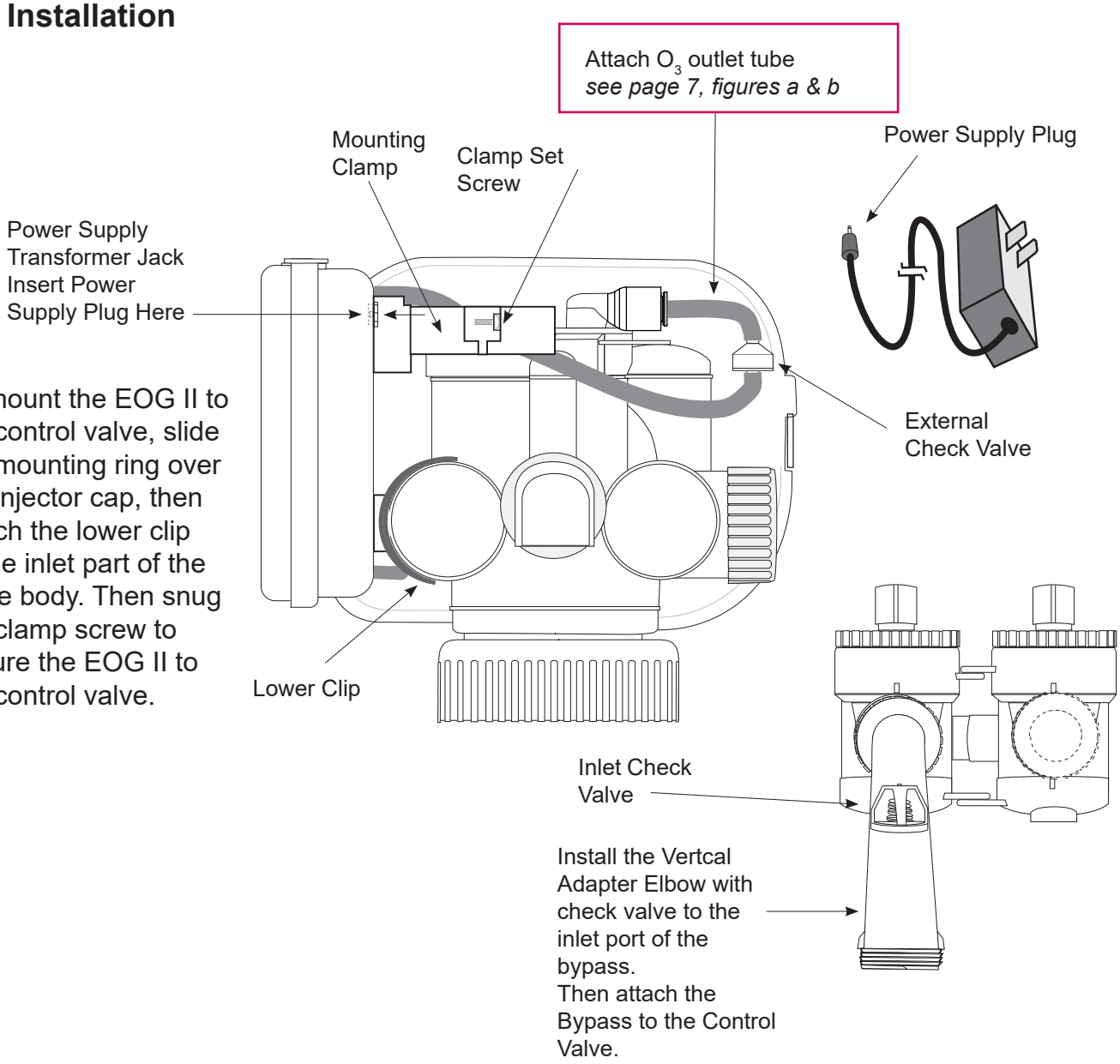
Gen II O_3 with Ozone

Installation



To mount the EOG II to the control valve, slide the mounting ring over the injector cap, then attach the lower clip to the inlet part of the valve body. Then snug the clamp screw to secure the EOG II to the control valve.

Note: The O_3 components should only be inspected and serviced by a qualified service technician.

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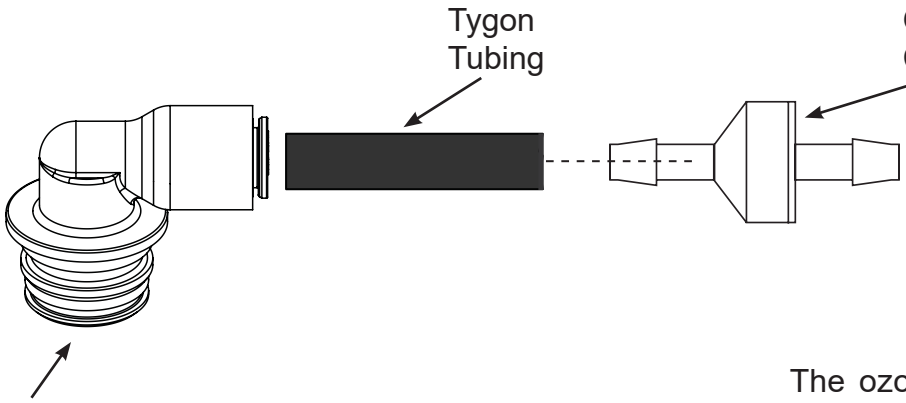
Gen II O_3 with Ozone

Installation

Ozone Resistant Air Draw Check Valve Assembly

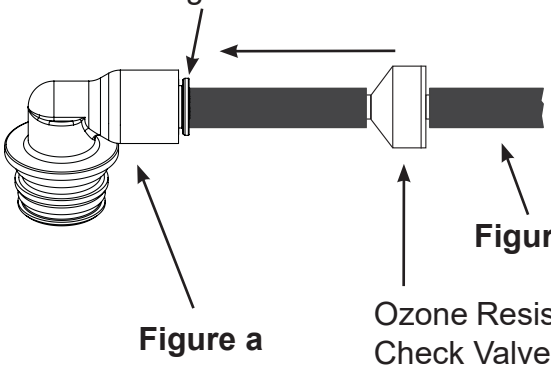


Note:
There is no check valve in the bottom of the brine fitting like is found in standard Eradicator. Brine flow control is also removed for operating with ozone.

The ozone resistant check valve is pre-inserted into the 3/8" Tygon tubing.

Tygon tubing is inserted and seated in the push connect fitting.

Figure c
Locking Collar



Note:
These components should only be serviced by qualified technicians.

Tubing to Elbow Installation

Firmly insert the black tubing (*figure b*) from the EOG II into the push connect elbow (*figure a*). Be sure the tubing has fully seated.

If the tubing needs to be removed from the elbow, press the locking collar (*figure c*) flush with the fitting and pull out the tubing.

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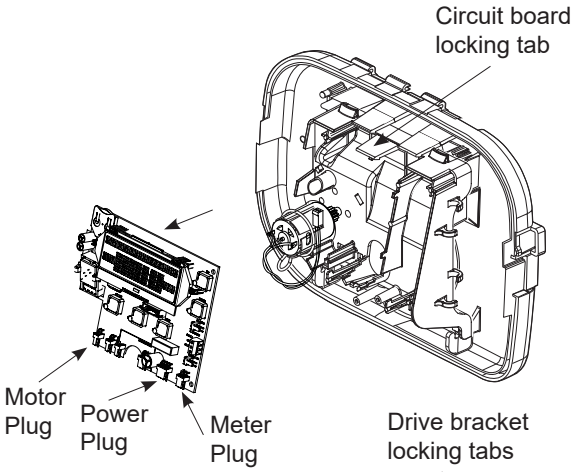
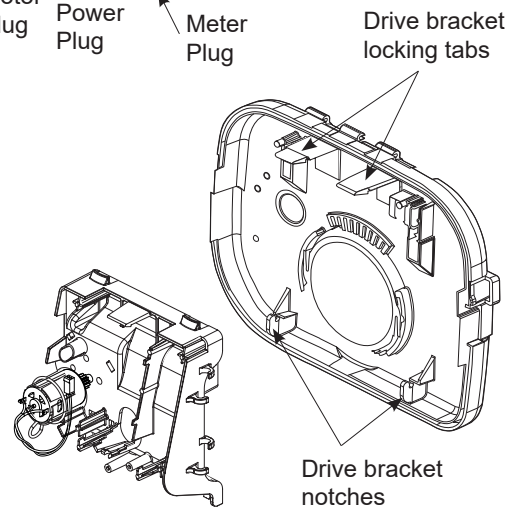
Gen II O_3 with Ozone

Installation

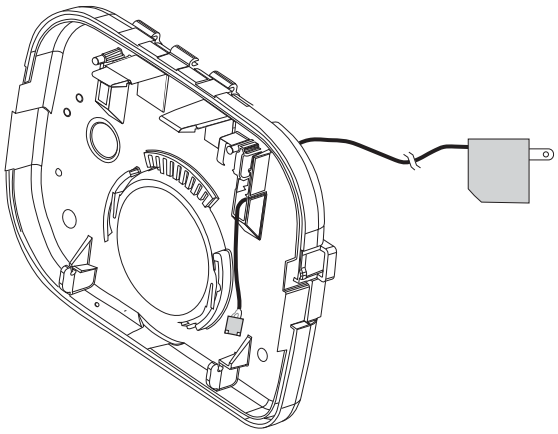
EOG II Wire Harness Assembly



1. On the circuit board, unplug the power plug (4-wire), and the meter plug (3-wire) on the lower right side of the board, then the motor plug on the lower left side of the board. Carefully lift up slightly the tab holding the circuit board in place, then gently pull the board forward, then lift the board out.



2. Next, remove the drive bracket by gently lifting the two tabs securing the the bracket and tilt it forward from the tabs. The lower edge of the drive bracket has two notches that rest on the drive back plate. Lift up and outward on the drive bracket to disengage the notches.



3. Then, remove the power supply wire and transformer by pushing/pulling it through the slot in the backplate.

   Set the power supply and cord aside as it will not be used in this application.

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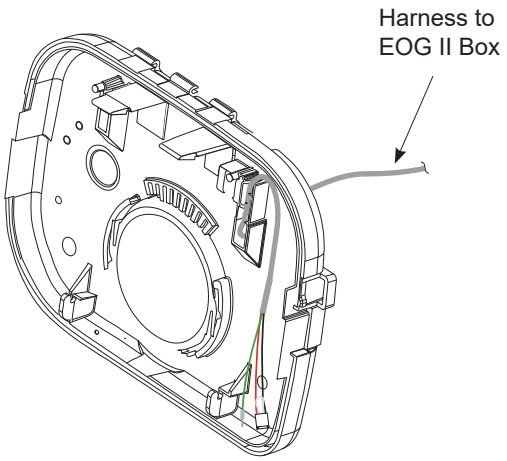
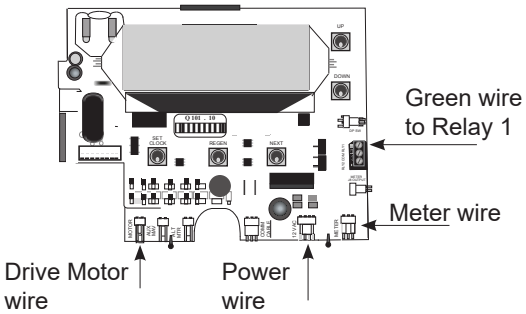
Gen II O_3 with Ozone

Installation



Push the EOG II harness through the strain relief slot that the power cord went through. Pull through about 10” of the harness. Then make sure the wire is fully seated in the strain relief slot. Reinstall the drive bracket (step 2) and the circuit board (step 1) in the reverse order of removal.



Connect the power, meter, and drive motor harnesses to the circuit board as illustrated. Then connect the relay wire (green wire) to the relay block in the Relay 1 port and tighten the set screw until secure.

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Gen II O_3 with Ozone

Start Up

Plug the power supply into the receptacle. Refer to the main Eradicator manual for the instructions for the start up procedure.
The programming for the O_3 is already done for Eradicator O_3 systems, so no further action is needed beyond the normal start up procedure.

Once set up is complete, start the Eradicator in a manual regeneration and let it complete the regeneration.

The Eradicator with Ozone should only be installed, serviced, and programming accessed by qualified technicians.

It is highly recommended to have an annual inspection and maintenance on the Eradicator system to keep it operating at optimum performance.

If any service or maintenance is required, contact your authorized dealer for this service.

Note:

If the Eradicator O_3 is installed in any damp or humid area, it is highly recommended to to install the optional Air Dryer kit to the system to dry the air entering the O_3 generator. This allows the generator to produce the optimum quantity and quality of ozone to enhance the Eradicator's performance and reduces required maintenance on the ozone producing components. The optional dryer mounts on the left backside of the valve controller.

Simply contact your authorized Eradicator dealer to obtain and install the dryer kit.

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Gen II O_3 with Ozone

Periodic Maintenance Log

Date	Service Performed	Technician

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