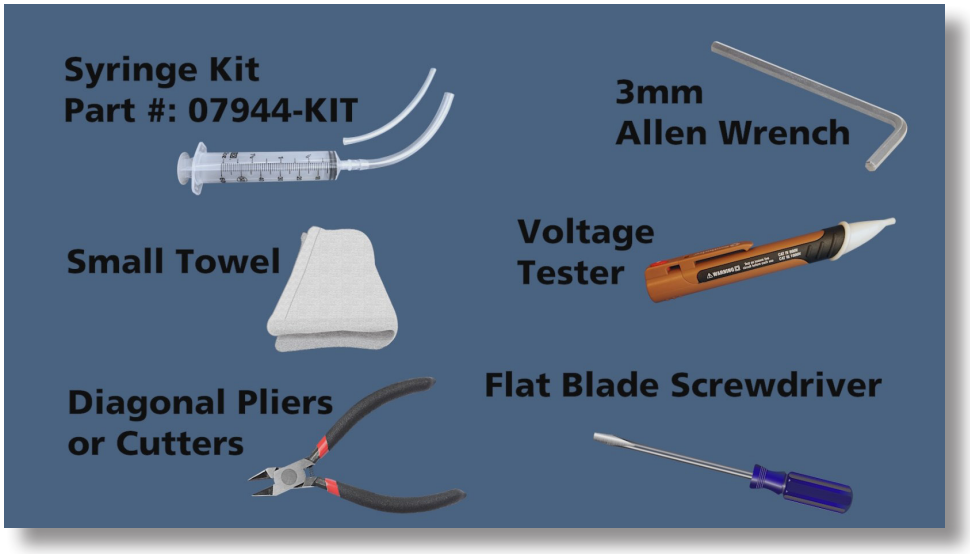
Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions

How to troubleshoot the **e128 Medicator**. It's best to perform troubleshooting in a clean area, but if your Etatron is installed, cover your chemical bucket so you don't lose any parts.

To start you will need:



- A syringe (Syringe Kit Part #: 07944-KIT)
- 3mm Allen wrench
- Diagonal pliers or cutters
- Voltage tester
- Small towel
- Flat blade screw driver

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions

The key areas in troubleshooting for the e128 Medicator are covered in this document in 3 different Sections:

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

PART 1 - All the e128 LEDs are off and the pump is not stroking.

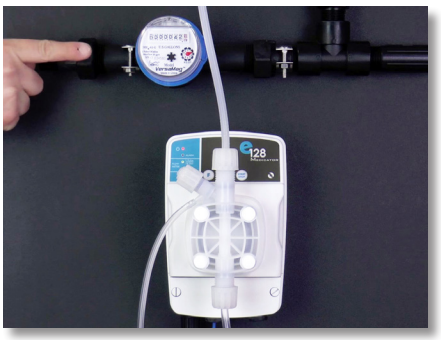
HOW TO CHECK THE POWER SUPPLY

Step 1: Check if the breaker is OFF. If it is ON, test the outlet with a voltage tester.

Step 2: If the voltage is good, plug the e128 Medicator into another outlet to confirm it works.

NOTE: If your outlet is activated by a light switch, check to make sure it is in the correct position.

PART 2 - The e128 has LEDs lit, but there is no function from the controls.



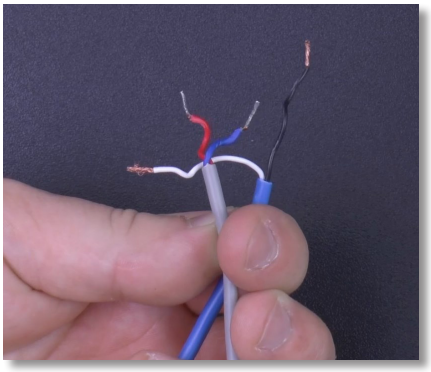
HOW TO RESET THE CONTROLS

Step 1: Run a few gallons of fresh water through the supply line. Due to the water meter connected to the e128 via dry contact, the water meter closes the contact to operate the e128.

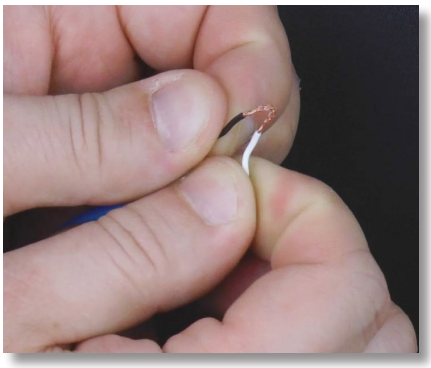
Running fresh water cycles the water meter, which opens the contact. This should release the e128 controls and allow the proper functioning.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting - Section A



Step 2: If the running of fresh water does not release the e128 controls, disconnect the water meter lead wires from the blue e128 lead wires.



Step 3: Touch the e128 lead wires together to verify if the interface works.

NOTE: The e128 controls should now function properly. If not, please call Dilution Solutions for assistance at **1-800-451-6628**.

PART 3 - The e128 is stroking, but not drawing chemistry.

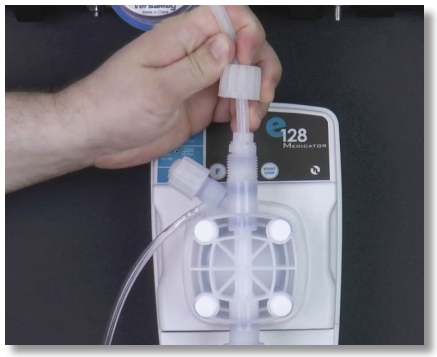
a. Check to see if you removed the transit washers and inspect your tubing connections and condition
b. Inspect the Foot Filter
c. Retighten the Pump Head
d. Release air lock from the Pump Head

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

a. If the e128 is stroking but not drawing chemistry, check to see if you removed the transit washers and inspect the tubing connections and condition

There are two (2) black shipping discs or transit washers in the pump head, one is located in the Discharge Valve and the other one is in the Suction Valve.



HOW TO INSPECT THE DISCHARGE VALVE

Step 1: To check the Discharge Valve, loosen the discharge valve tube nut and lift the discharge tube, tube nut, collar and nozzle attached.

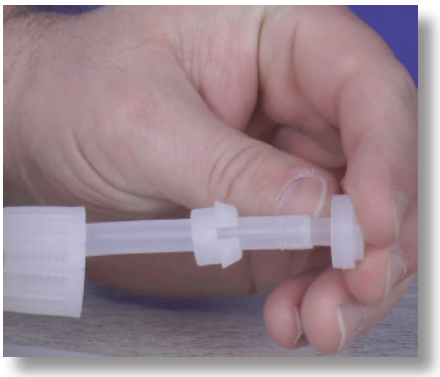
Step 2: If the transit washer is there beneath the nozzle, please remove and discard the transit washer now.

You may need to use a flat blade screw driver to remove.

Step 3: Make sure not to lose the o-ring directly below the transit washer.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A



Step 4: With the rigid discharge tube disconnected, please inspect the tubing connections. Remove the nozzle and collar from the tube. Set aside and make sure not to lose them.

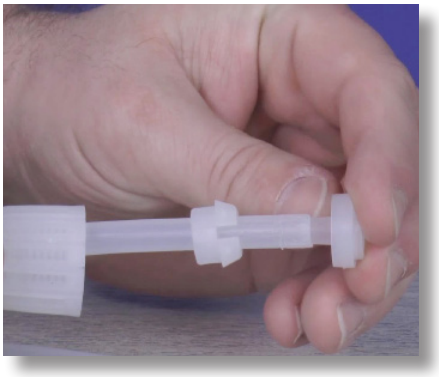
Step 5: Inspect the tube's condition. If the tube is cracked or looks really old, replace it now.

If the tube is not damaged, check to see if the end of the tube is flared. If the end is flared, use the diagonal pliers to cut the flared portion off.

Step 6: Slide the collar back onto the tube, and make sure the collar's crown is pointing away from the tube nut.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A



Step 7: Slide the nozzle back into the tube's opening. Push the collar and nozzle together as close as possible.

Step 8: Pull the tube nut toward the nozzle to compress the collar and nozzle tight together, forming a ferrule connection.

Always be mindful of the orientation for the tubing connections, first is the tube nut, followed by the collar, then the nozzle.

Make sure the collar's crown is pointing away from the tube nut. This is key because without the proper orientation, it can allow air into the system causing the **e128** to not operate correctly.

Step 9: Reattach the tube, and tube connections onto the discharge valve by hand tightening the tube nut. Do not cross thread nor overtighten.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

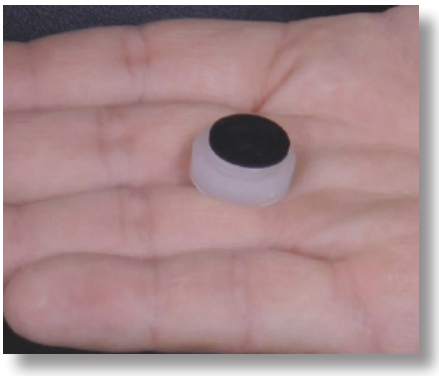
Step 10: If the tube nut is not securing recheck the ferrule connection.

Pull the tube nut toward the nozzle, once more, to compress the collar and nozzle together. Retighten the tube nut until secure.

HOW TO INSPECT THE SUCTION VALVE

Step 11: Locate the Suction Valve at the bottom of the Pump Head.

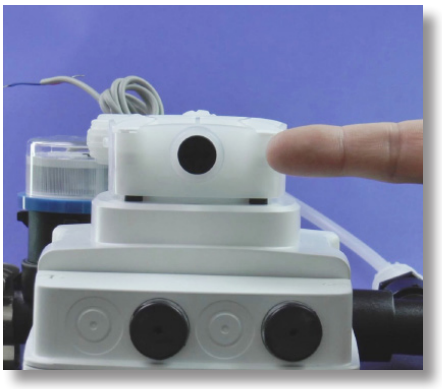
Loosen the Suction Valve tube nut and disconnect the PVC Suction tube, tube nut, collar, and nozzle attached.



Step 12: Check to see if the black transit washer is stuck to the nozzle and remove.

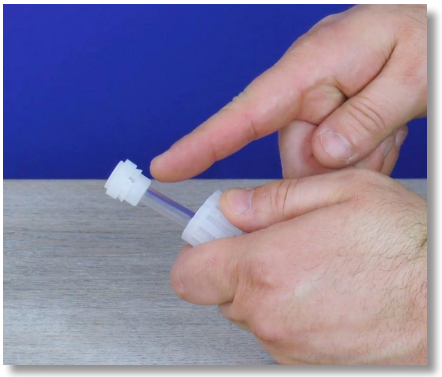
Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A



Step 13: If not, see if it is at the bottom of the suction valve.

You may need to use a flat blade screw driver to remove. Make sure not to lose the o-ring directly above the transit washer.



Step 14: With the PVC Suction Tube disconnected, inspect the tubing connections.

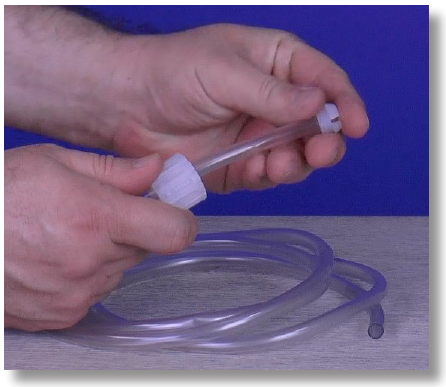
Remove the nozzle, and collar from the tube and set aside.
Do not lose them.

Step 15: Inspect the tube's condition. If the tube is cracked, rigid, or looks really old replace it now.

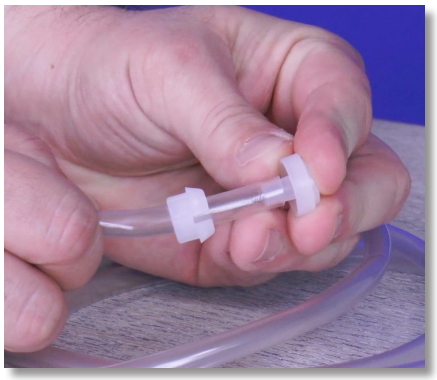
If the tube is not damaged, check to see if the end of the tube is flared. If the end is flared, use the diagonal pliers to cut the flared portion off.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A



Step 16: Slide the collar back onto the tube, and make sure the collar's crown is pointing away from the tube nut.



Step 17: Slide the nozzle back into the tube's opening. Push the collar and nozzle together as close as possible.

Step 18: Pull the tube nut toward the nozzle to compress the collar and nozzle tight together. This should form a ferrule connection.

Always be mindful of the orientation for the tubing connections. First is the tube nut, followed by the collar, then the nozzle.

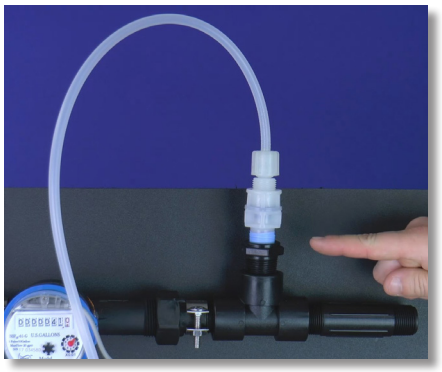
Make sure the collar's crown is pointing away from the tube nut. This is key because without the proper orientation, it can allow air into the system causing the **e128** to not operate correctly.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

Step 19: Reattach the tube, and tube connections onto the suction valve by hand tightening the tube nut. Do not cross thread nor overtighten.

Step 20: If the tube nut is not securing recheck the ferrule connection. Pull the tube nut toward the nozzle, once more, to compress the collar and nozzle together. Retighten the tube nut until secure.

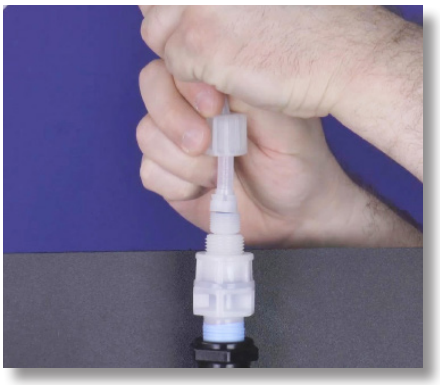


HOW TO INSPECT THE INJECTION VALVE

Step 21: Locate the Injection Valve on the supply line. The rigid discharge tubing should still be connected to the injection valve.

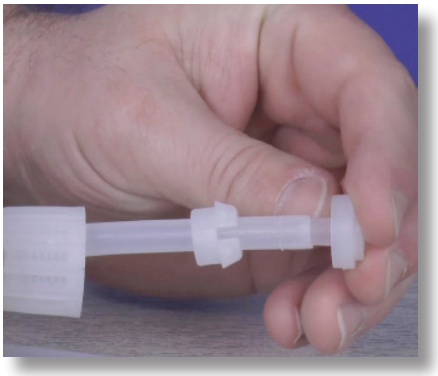
Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A



Step 22: Loosen the injection valve tube nut and disconnect the discharge tubing along with the tube nut, collar, and nozzle attached.

NOTE: Be careful of any chemical splash up.



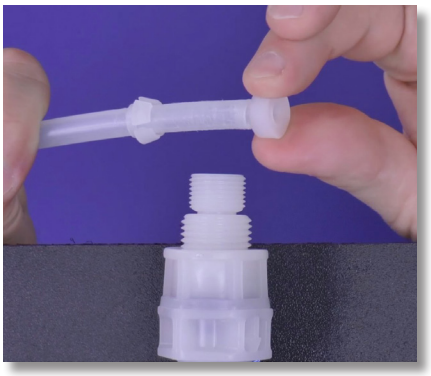
Step 23: Remove the nozzle and collar from the tube and set aside. Do not lose them.

Step 24: Look at the end of the tube. If the tube's end is flared, use the diagonal pliers to cut the flared portion off.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

Step 25: Slide the collar back onto the tube, and make sure the collar's crown is pointing away from the tube nut.



Step 26: Slide the nozzle back into the tube's opening. Push the collar and nozzle together as close as possible.

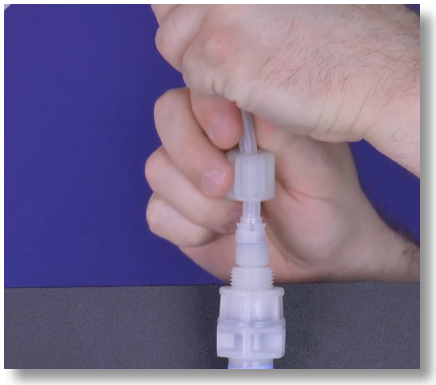
Step 27: Pull the tube nut toward the nozzle to compress the collar and nozzle tight together. This should form a ferrule connection.

Always be mindful of the orientation for the tubing connections. First is the tube nut, followed by the collar, then the nozzle.

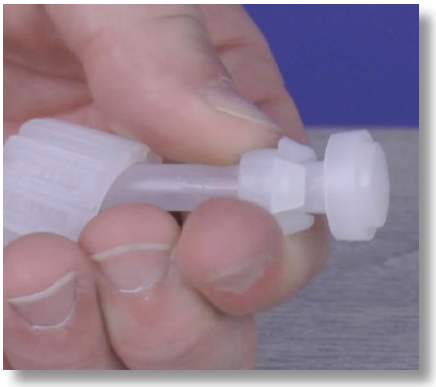
Make sure the collar's crown is pointing away from the tube nut. This is key because without the proper orientation, it can allow air into the system causing the **e128** to not operate correctly.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A



Step 28: Reattach the tube, and tube connections onto the injection valve by hand tightening the tube nut. Do not cross thread nor overtighten.



Step 29: If the tube nut is not securing, recheck the ferrule connection. Pull the tube nut toward the nozzle, once more, to compress the collar and nozzle together. Retighten the tube nut until secure.

b. If the e128 is stroking but not drawing chemistry, inspect the foot filter

HOW TO INSPECT THE FOOT FILTER

Step 1: Inspect the Foot Filter by taking it out of the chemical bucket or stock tank.

NOTE: Be careful of any chemical splash up.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

Step 2: Loosen the foot filter tube nut and disconnect the PVC suction tubing, tube nut, collar, and nozzle attached.

Let the tubing hang from the pump head while you inspect the foot filter.

Step 3: Shake the foot filter back and forth. You should hear a ceramic ball moving freely inside. If not, separate the foot filter into three (3) pieces by popping the filter basket from the filter body.

Step 4: The filter seat may stick to the filter body. Make sure it rests in the filter basket instead, to avoid losing the ceramic ball.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

Step 5: Set the filter body aside and locate the ceramic ball in the filter seat.

NOTE: If there is no ceramic ball, call **Dilution Solutions** @ **1-800-451-6628** for assistance.

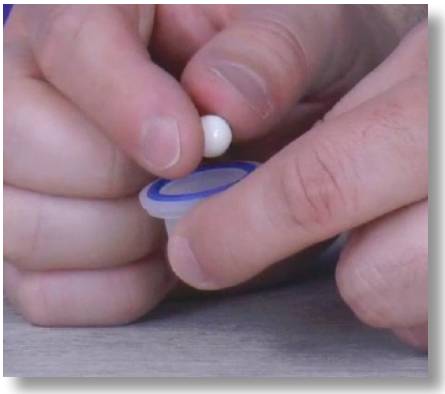
Step 6: Pull the filter seat out of the filter basket and set the filter basket aside.

Step 7: Pour the ceramic ball out of the filter seat and into your hand. Set the filter seat down and use the small towel to wipe the ceramic ball clean. Do not misplace it.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

Step 8: While holding onto the ceramic ball, inspect the two blue o-rings in the grooves of the filter seat and make sure they are not damaged.



Step 9: Put the ceramic ball back into the filter seat and set the filter seat aside.

Step 10: Grab the filter body and make sure the small blue o-ring on the top of the filter body is not damaged.

NOTE: If any o-ring is damaged, switch out the current foot filter with a new one or call **Dilution Solutions** at **1-800-451-6628** for assistance.

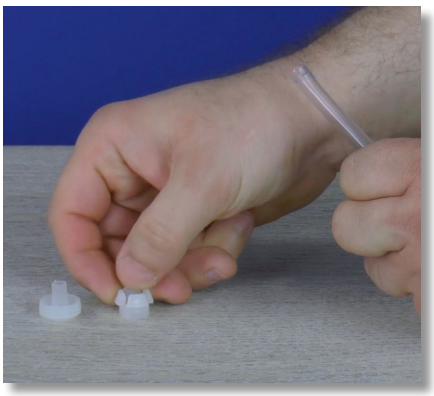
Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

Step 11: Set the filter body down, grab the filter basket and put the filter seat back into the filter basket.

Step 12: Insert the filter basket into the filter body and forcefully pop them together. This may take a couple of tries.

Pull on the two sections to make sure they are connected securely and shake the foot filter back and forth once more, verifying the ceramic ball is moving freely. Set the foot filter aside.



Step 13: Grab the PVC suction tubing hanging down from the suction valve. Remove the nozzle and collar from the tube and set aside. Do not lose them.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

Step 14: Inspect the tube's condition. If the tube is cracked, rigid, or looks really old replace it now.

If the tube is not damaged, check to see if the end of the tube is flared. If the end is flared, use the diagonal pliers to cut the flared portion off.

Step 15: Slide the collar back onto the tube, and make sure the collar's crown is pointing away from the tube nut.

Step 16: Slide the nozzle back into the tube's opening. Push the collar and nozzle together as close as possible. Pull the tube nut toward the nozzle to compress the collar and nozzle tight together. This should form a ferrule connection.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

Step 17: Always be mindful of the orientation for the tubing connections.

First is the tube nut, followed by the collar and nozzle. Make sure the collar's crown is pointing away from the tube nut.

This is key because without the proper orientation, it can allow air into the system causing the **e128** to not operate correctly.

Step 18: Grab the foot filter and reattach the tube, and tube connections onto the foot filter by hand tightening the tube nut. Do not cross thread nor overtighten.

If the tube nut is not securing, recheck the ferrule connection. Pull the tube nut toward the nozzle, once more, to compress the collar and nozzle together. Retighten the tube nut until secure.

Step 19: Place the foot filter back into the chemical bucket or stock tank, making sure it is sitting vertically.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

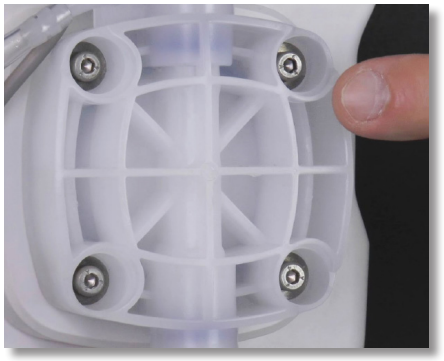
e128 Medicator Troubleshooting Instructions - Section A

c. If the e128 is stroking but not drawing chemistry, retighten the pump head

HOW TO TIGHTEN THE PUMP HEAD

Step 1: Over time the pump Head may work itself loose from the pump. To check this, remove the four white caps on the pump head.

This can be done with your finger or a flat blade screw driver. Set the white caps aside and do not lose them.



Step 2: Underneath the white caps are four screws. Using the Allen wrench, tighten the four (4) screws about 1/8 turn each. Reinsert the four white caps back over the screws.

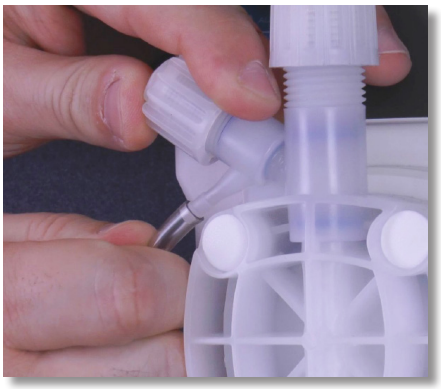
d. If the e128 is stroking but not drawing chemistry, release air lock from the pump head

HOW TO RELEASE THE AIR LOCK FROM THE PUMP HEAD

Step 1: Locate the air bleed valve on the upper left portion of the pump head and open it by turning the valve counter clockwise.

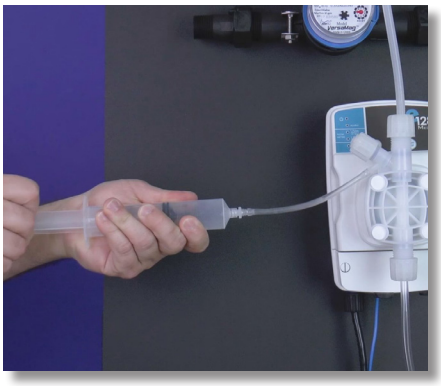
Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A



Step 2: Remove the bleed-off tubing from the air bleed barb and set aside.

NOTE: Be careful of any chemical splash up.



Step 3: Using the syringe kit, slide the syringe onto the air bleed barb and draw the plunger back. Chemistry should enter the syringe.

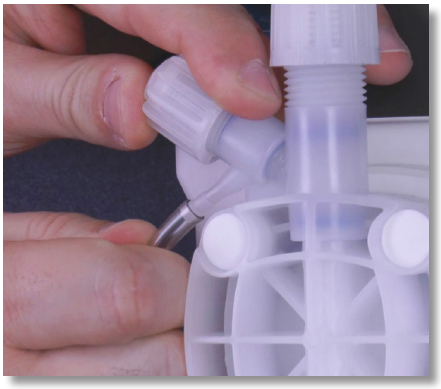
NOTE: If no chemistry enters the syringe, call **Dilution Solutions** at **1-800-451-6628** for assistance.

Step 4: Eject the chemistry from the syringe into the chemical bucket.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section A

Step 5: Now close the air bleed valve by turning it clockwise.



Step 6: Slide the bleed-off tubing back onto the air bleed barb, and place the open end of the tubing into the stock tank.

Start the **e128** and run a few gallons of water through. The **e128** should now be drawing the chemistry.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section B

PART 4 - The e128 draws chemistry, but does not inject

a. Check the Air Bleed Valve
b. Inspect the Foot Filter
c. Release the Air Lock from the Pump Head
d. Retighten the Pump Head
e. Inspect the Discharge and Injection Valves, and the Tubing Connections, and Condition

a. If the e128 draws chemistry but does not inject, check the air bleed valve

Step 1: The air bleed valve may have been left open after priming. If so, please close the air bleed valve now.

b. If the e128 draws chemistry but does not inject, inspect the foot filter

To inspect the Foot Filter, please follow the isntructions on **HOW TO INSPECT THE FOOT FILTER** pages 13 - 19 of this manual.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section B

c. If the e128 draws chemistry but does not inject, release air lock from the pump head

To release the Air Lock from the pump head, please follow the steps on **HOW TO RELEASE THE AIR LOCK FROM THE PUMP HEAD** pages 20 - 22 of this manual.

d. If the e128 draws chemistry but does not inject, retighten the pump head

Step 1: Over time the pump head may work itself loose from the pump. To check this, remove the four white caps on the pump head.

Underneath the white caps are four screws. Using the Allen wrench, tighten the four (4) screws about 1/8 turn each. Reinsert the four white caps back over the screws.

e. If the e128 draws chemistry but does not inject, inspect the condition of the discharge and injection valves, and the tubing connections and condition

To do this, please follow the steps on:

- **HOW TO INSPECT THE DISCHARGE VALVE** (pages 4 - 7) and
- **HOW TO INSPECT THE INJECTION VALVE** (pages 10 - 13)

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section C

PART 5 - The Alarm LED on the e128 is Green

If the alarm LED is green, this means the suction or underload alarm is triggered. The **e128** senses there is a problem with the suction, and strokes about ten (10) times. The LED turns green, and the pump stops.

If the alarm LED on the e128 is Green, you need to:

a. Replace or Refill your Chemical Bucket or Stock Tank
b. Inspect the Suction Valve, Foot Filter, and the Tubes Connections and Condition
c. Retighten the Pump Head

a. If the alarm LED on the e128 is Green, replace or fill your chemical bucket or stock tank

Step 1: If the chemical bucket or stock tank is empty, replace or refill your chemical bucket or stock tank now.

Once the chemical bucket or stock tank is replaced or refilled, go through the priming process from the initial installation again.

b. If the alarm LED on the e128 is Green, inspect the suction valve, foot filter, and the tubes connections and condition

To do this, please follow the steps on:

- **HOW TO INSPECT THE SUCTION VALVE** (pages 7 - 10)
- **HOW TO INSPECT THE FOOT FILTER** (pages 13 - 19)

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

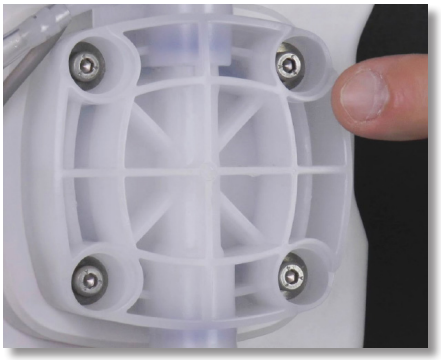
e128 Medicator Troubleshooting Instructions - Section C

c. If the alarm LED on the e128 is Green, retighten the pump head

Over time the pump head may work itself loose from the pump.

Step 1: To check this, remove the four white caps on the pump head. This can be done with your finger or a flat blade screw driver.

Set the white caps aside and do not lose them.



Step 2: Underneath the white caps are four screws. Using the Allen Wrench, tighten the four (4) screws about 1/8 turn each. Reinsert the four white caps back over the screws.

Step 3: The Green **e128** suction or underload **ALARM** should now turn off.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section C

PART 6 - Alarm LED on the e128 is Red

If the alarm LED is red, this means the discharge or overload alarm is triggered. The **e128** senses there is a problem with the discharge, and strokes about ten (10) times. The LED turns red, and the pump stops.

This cause is typically from when the pressure in the supply line exceeds the capacity of the **e128**, in this case 101 psi.

If the Alarm LED on the e128 is Red, you need to:

a. Assess the Pressure of the Installation
b. Inspect the Injection and Discharge Valves, and the Tubing Connections and Condition**.**

a. If the Alarm LED on the e128 is Red, assess the pressure of the installation - use a pressure gauge.

b. If the Alarm LED on the e128 is Red, inspect the discharge and injection valves, and the tubing connections and condition

To do this, please follow the steps on:

- **HOW TO INSPECT THE DISCHARGE VALVE** (pages 4 - 7) and
- **HOW TO INSPECT THE INJECTION VALVE** (pages 10 - 13)

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section C

PLEASE NOTE: If after these steps the underload alarm LED is still red, it may be disabled.

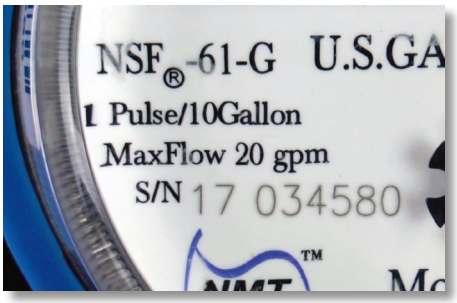
Step 1: To check this, try to run the pump in standby mode.
If it does run, the alarm is disabled. Please call **Dilution Solutions** at **1-800-451-6628** for assistance.

The Red e128 Overload Alarm should now turn off.

PART 7 - The e128 does not run in either program - 1 Pulse per Gallon or 1 Pulse per 10-Gallons

If the e128 does not run in either program check the water meter interface and inspect the connection to the **e128**.

*(Not all water meters are created equal. Sometimes they send too many signals, or send signals too rapidly. In both cases, the **e128** strokes too many times and sounds like a machine gun.)*



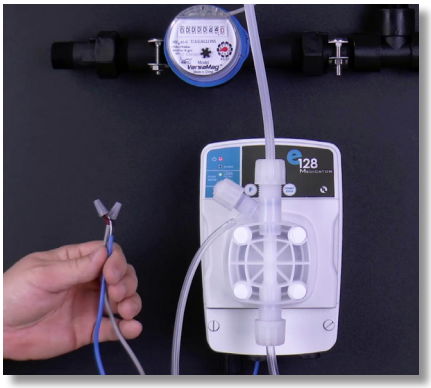
Step 1: First, check the water meter interface to see if the dial matches your desired program.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section C

Step 2: Confirm the same program is set on the **e128**.

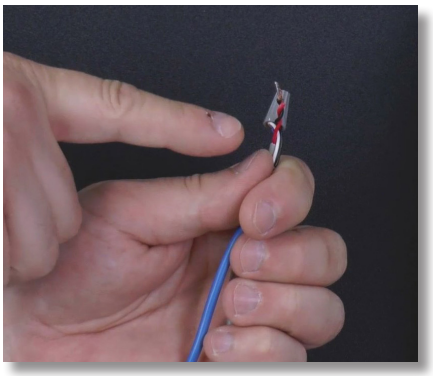
Step 3: If not, change the e128 program or replace the water meter, so the programs match.



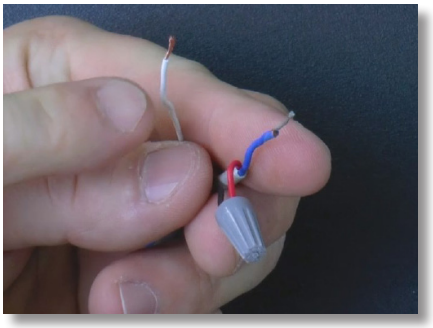
Step 4: If the issue continues, inspect the connection to the water meter to see if it is loose or disconnected.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

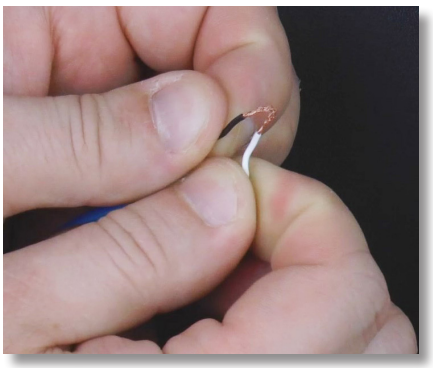
e128 Medicator Troubleshooting Instructions - Section C



Step 5: The water meter makes the pump run and if a connection is loose or disconnected by mistake between the pump and water meter, the **e128** will not operate.



Step 6: If the connection is fine, disconnect the water meter and **e128** lead wires from each other.



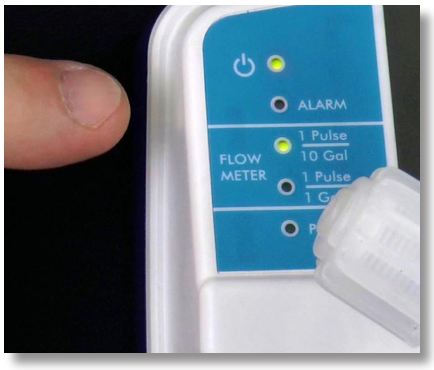
Step 7: Now test the **e128** individually.

To do this, touch the lead wires of the **e128** together. This simulates the signal from the water meter, closes the contact, and tells the pump to stroke.

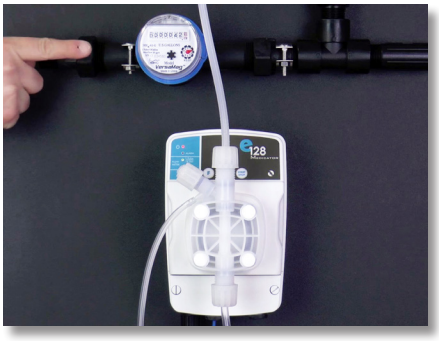
Do this in both the 1 Pulse Per Gallon and 1 Pulse Per 10-Gallons programs.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section C

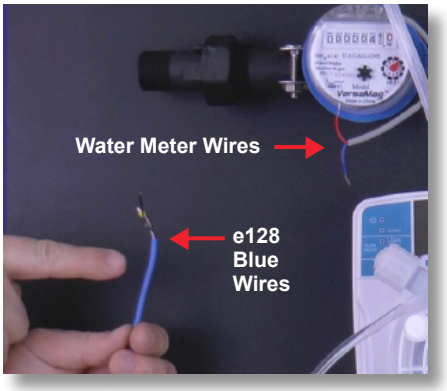


Step 8: Switch programs by putting the pump in standby mode and press the '**F**' or **Function** button.



Step 9: If the **e128** works individually, it is time to test the water meter.

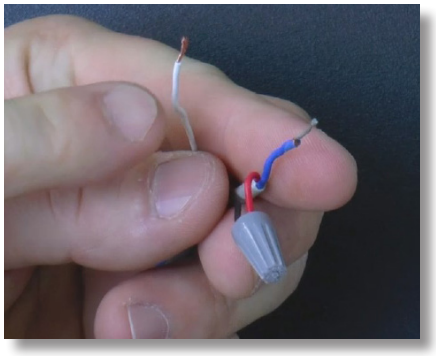
Do this by running fresh water through the supply line and look to see if the dial moves.



Step 10: If so, reconnect the **e128** lead wires back to the water meter lead wires.

Proper protection, such as gloves, eyewear, and aprons, are recommended when handling a pump.

e128 Medicator Troubleshooting Instructions - Section C



NOTE: Polarity typically does not matter, but if it does, the **e128** white wire is positive. Use wire nuts if necessary.

Step 11: To finish up, run the **e128 Medicator** through both programs or at least through your desired setting to make sure it is working correctly.

The **e128 Medicator** should now run correctly through the 1 Pulse Per 1 Gallon or 1 Pulse Per 10-Gallons programs.

We hope this document has been helpful with troubleshooting your **e128 Medicator** pump.

For more information, please call us at **1-800-451-6628**
or visit us online at **www.dilutionsolutions.com**.