

ZECO®

Oil Management Solutions

ECO SERIES



English Version

U.S. Patent Pending
Serial No. 13/864,770

V-09-01-13

TO THE PURCHASER, OWNER AND STORE MANAGER
Please be sure to have all operators read these warnings prior to use.

WARNING

Improper installation, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing the Zeco® Eco.

WARNING

Maintenance and repairs should be performed by a Zachary Company representative or other qualified personnel. Maintenance or repairs by unauthorized and unqualified personnel will void the warranty.

WARNING

During the warranty period, if a customer elects to use a non-original part or modifies an original part purchased from Zachary Company and/or its Authorized Service and Parts companies, this warranty will be void. In addition, Zachary Company and its affiliates will not be liable for any claims, damages, or expenses incurred by the customer which arises directly or indirectly, in whole or in part, due to the installation of any modified part and/or received from an unauthorized service center.

WARNING

The Zeco® Eco is intended for professional use only and should be operated by fully trained and qualified personnel.

WARNING

DO NOT use the electrical cord as a leash to move the Zeco® Eco. Serious injury and machine damage can occur.

WARNING

If any of the supplied components are damaged, they must be replaced by a Zachary Company representative, or a similarly qualified person in order to avoid a hazard.

WARNING

The power supply must be disconnected before servicing, maintaining or cleaning the Zeco® Eco.

WARNING

The Zeco® Eco is NOT jet stream approved. DO NOT clean the Zeco® Eco with a water jet.

WARNING

DO NOT attempt to move the Zeco® Eco or transfer hot liquids from one container to another without the tank lid securely closed and locked. Serious personal injury could result if skin comes in contact with the indicated hot surfaces or liquids.

WARNING

DO NOT sit or stand on the Zeco® Eco. The Zeco® Eco's top, filter pan, filter carriage, and pan cover is not a step. Serious injury could result from slipping, falling or contact with hot liquids.

WARNING

The filter pan should be dry and free of water droplets prior to use. Serious injury could result from hot steam vapors when hot oil/shortening mixes with water.

WARNING

DO NOT overfill the filter pan with hot oil/shortening. Do not leave the Zeco® Eco unattended while draining or refilling with oil/shortening. Overfilling the Zeco® Eco can cause serious injuries and damage the appliance.

WARNING

The contents of the micron filter basket and/or filter pan must be emptied into a fireproof container at the end of each filtering. Some food particles can spontaneously combust if left soaking in certain types of oil or shortening.

WARNING

Use the wand in a safe manner at all times or serious injury may occur.

WARNING

Lock both wheel brakes when filtering or dumping the waste oil. Serious injury could result if the Zeco® Eco is not locked in place.

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ECO SERIES

Manufactured By Worcester Industrial Products Corp, Worcester, MA - 92-EB-H026-Z3



Primary Metal Material

Aluminum type 3003 (70% Recycled Content)

Stainless Steel – Type 304

Machine Operating Temperatures

Max. Operating Temperature: Unit will withstand 300+ F

Suggested Safe Operating Temperature: 120 F

Machine Dimensions (Fully Assembled)

Height	40.0 Inches
Width	21.0 Inches
Depth	25.0 Inches

Power Supply

AC Only	110V AC input
No Battery / No AC/DC	1/3-HP Electric Motor 7-Amps

NSF Approved Gear Pump

Pump Flow Rate	5 Gallons Per Minute (unobstructed)
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Tank Capacity

69.2 pounds to bottom of 300 Micron Screen

88.0 pounds Maximum level to safe level of 300 Micron Screen

Filtration

Stainless Steel 300 Micron Pre-Screen

Pad Filtration Optional – 20 to 5 micron sizes available

Base Frame Cart Wheels

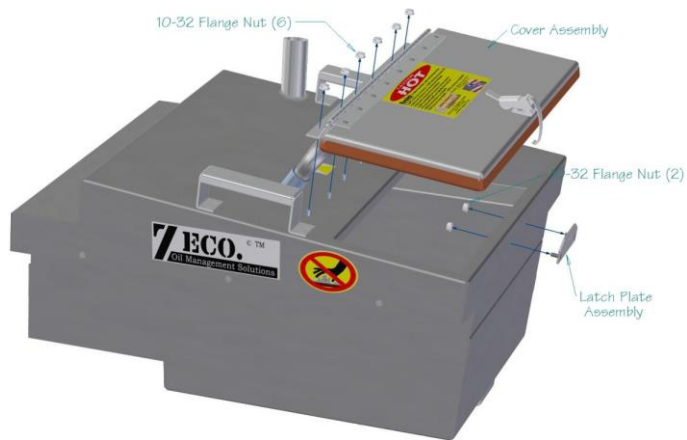
2 - 8"x1.75" ball bearing wheels rear & 2 - 2" caster wheels front

Shipping Weights

Box #1	Tank & Cart	81 LBS.
Box #2	Handle Assembly	53 LBS.

Oil Out & Back flush Feature Standard Option

ASSEMBLY GUIDE



Removing Zeco® Eco from the Boxes

Upon receiving the Zeco® Eco unit there will be two boxes. One rectangular box containing the pump and handle, and one square box containing the tank and carriage.



Zeco® Eco Top Unit



Zeco® Eco Bottom Unit

After removing the packaging from the pump and handle, tilt the box upright and carefully shimmy them out. Make sure you do not drop the units when removing them from the boxes.

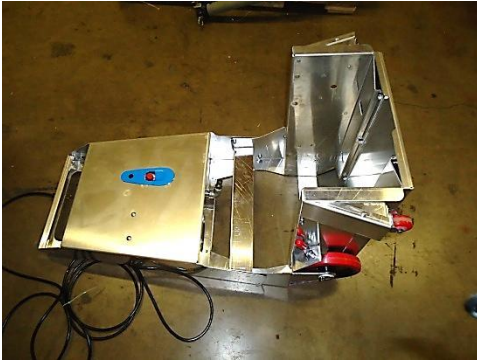
Remove the tank from the carriage and open the tank. Take the Pad Filter Pan out and remove the hoses and plastic bag.

The assembly pieces include:



Assembly of the Pump and Handle to the Carriage

Tilt the carriage up and place it between the space in the top unit. Put washers and bolts together and set aside.



Top & Bottom unit before Assembly



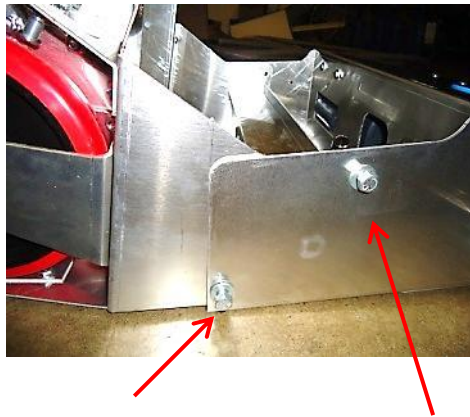
Use the Zeco® wrench provided to tighten the bolts.



6 - 9/16 Bolts & Washers

To begin assembly, align the holes of the top unit with the holes of the carriage.

Put one bolt in the hole on the side of the unit. If the bolt does not thread in the hole, realign the holes on the side of the unit. After the bolts are in one side, finish the other side without completely tightening them.

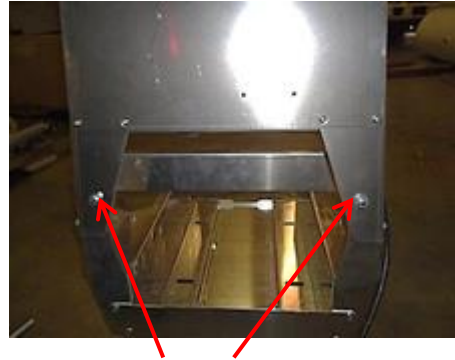


Bolts on the side of the unit

Pick the Zeco® Eco unit up and align the back holes. You may need to push back on the pump and handle to align the back.
Place 2 bolts in the back of the unit. Securely tighten bolts when all 6 are completely installed.



Use the Zeco® wrench provided to tighten the bolts

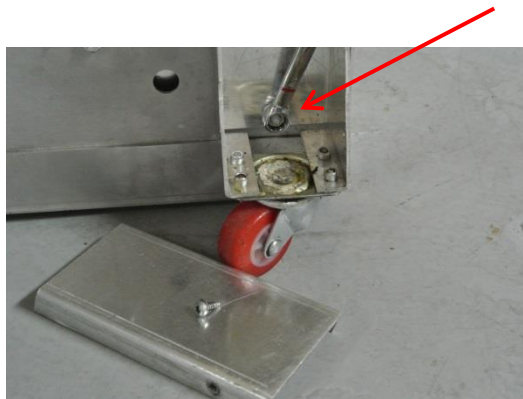


Back of Zeco® Eco unit with bolts in place

Checking the Wheel Base for Loose Screws

Check to make sure the wheels didn't loosen in transit. Remove the wheel covers using a regular screwdriver.

Tighten the four bolts found on the inside of the wheel base using a 7/16 wrench.



Tank Assembly

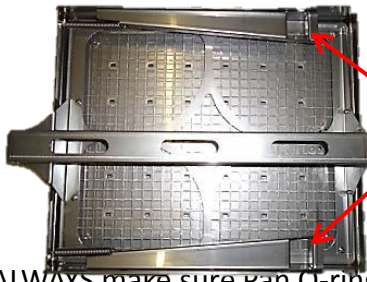
Remove the pad filter pan from the tank.

Remove the piece of cardboard on the underside of the pad filter pan.



Cardboard acts as a shock absorber during transportation so that the suction valve or the Pan O-ring does not get damaged

Pull out on both latches to remove the screen. Insert the filter, smooth side down and replace the screen. Pull out on latches to lower and hold screen and filter in place.



Latches to remove pad filter frame

ALWAYS make sure Pan O-ring is in place before filtering.

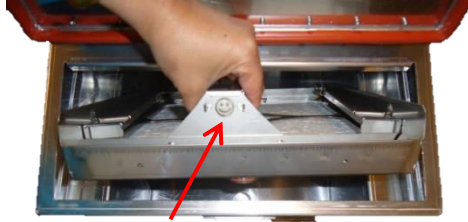


Pan O-ring on underside of filter pan

Place the pad filter pan back into the tank.



The wrong way to put the pad filter pan in. The long part of the handle always goes to the back and the Pan O-ring always goes to the front.



The correct way of putting the pad filter pan in. The Pan O-ring with the smiley face showing is positioned in the front of the tank.



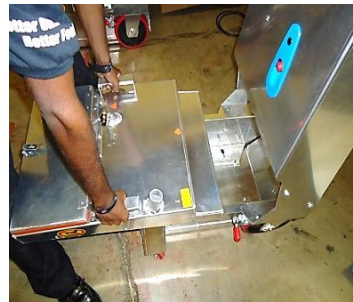
Before the pad filter is placed inside the tank. View of inside of the tank, focusing on where the seal fits into the tank.



Pad filter pan is placed inside the tank.



The 300 micro pre screen filter fits on top of the pad filter inside the tank.



The tank easily slides inside the carriage.

Hose Receptacle and Wand Assembly



This is how your Zeco® unit should look at this point. Next, take the yellow and blue hose provided and connect the pump and handle to the tank.



Connect the smaller yellow hose to the valve on the tank and underside of the top unit of the Zeco® Eco indicated by the yellow triangles.



Connect the longer blue hose to the valve marked by the blue plastic piece on the front of the top unit of the Zeco® Eco.

WARNING: FAILURE TO PROPERLY CONNECT HOSE TO THE ZECO® ECO WILL CAUSE SERIOUS INJURY.



Take the other end of the blue hose and connect it to the blue wand.

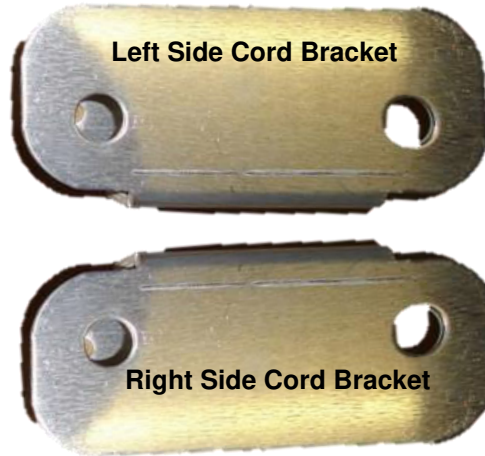
Assembly of the Cord Brackets and Glove Clip

To start assembly of the cord bracket, you will need the following:

4 T-25 Screws - T-25 Screwdriver - 2 Cord Brackets

Take 2 T-25 screws and place them in the little holes of the top bracket. Be sure to match them with the back holes on the pump and handle, screw them in.

Repeat this process with the both cord brackets.



T-25 being screwed into the smaller holes to connect the cord bracket to the back of the Zeco® Eco.



To attach the glove clip, take off the corner T-25 screw and place it inside the clip, then screw it in place.



Wheel Locking Mechanism

The wheel locking mechanism in the ON position. To put the wheel brakes on, pull the red lever to the on position as shown.



The wheel locking mechanism in the OFF position. To turn the wheel brakes off, push the red lever as shown.



ALWAYS LOCK BOTH WHEEL BRAKES WHEN FILTERING OR DUMPING WASTE OIL. SERIOUS INJURY COULD RESULT IF THE ZECO® ECO IS NOT LOCKED IN PLACE.



Warning: You **MUST** wear proper clothing when operating the Zeco® Eco. We recommend using heat resistant Safety Gloves. See OSHA guidelines for handling hot oil.



Caution: Skin burns at 120° F. For maximum safety use when hot oil is below 120° F.

BEING SAFE IS NO ACCIDENT!

ZECO® ECO OPERATIONS GUIDE

Better Oil...Better Food®

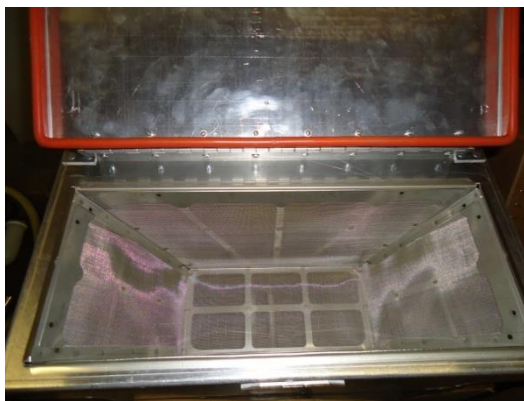


Think Safe... Be Safe...



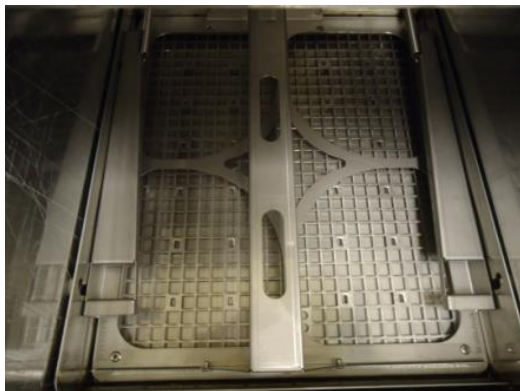
Steps before Filtering

Open the tank and take out the pre screen filter.



300 micron pre screen filter that collects all the large particulates and traps them so the rest of the oil can flow inside the tank to be filtered.

Take the pad filter pan out of the inside of the tank.



Pad filter pan inside the tank without the filter in the pan.



Remove the baskets from the fryer as well as the screens inside the fryer.

Pull the latches on the pad filter pan to pull out the pad filter frame.



To take out the screen pull on these two latches until they lock into place so the screen can slide out.

Pad filter frame that holds the filter in place.



The pad filter paper goes into the pad filter pan. ALWAYS make sure the rough side faces up and the smooth side faces down.

Slide the pad filter frame back into the pan and pull the latches to lock it into place.



The pad filter goes in with the rough side up and smooth side down. The pad filter frame is on top of it with the latches securely in place.

Place the pad filter pan back into the tank.



The correct way of how to put the pad filter pan inside the tank. The smiley face should always be facing toward to you.

Smiley Face

Place the 300 micron pre-screen filter into the tank.



Filtering the Oil

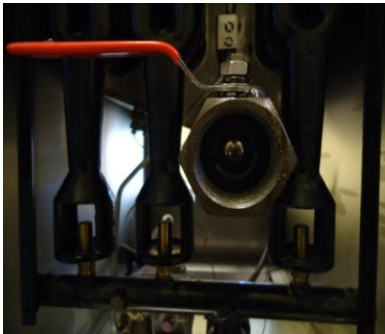
Turn your fryer to pilot mode.



Temperature gauge inside the fryer.
When filtering make sure this is turned to either off or pilot mode.

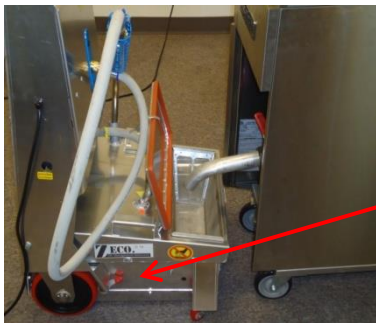
WARNING: Filter Oil at a safe temperature to prevent skin burns.

Screw the drain pipe onto the fryer valve to drain the oil into the Zeco® Eco tank.



This the valve on the fryer to drain the oil into the tank of the Zeco® Eco.

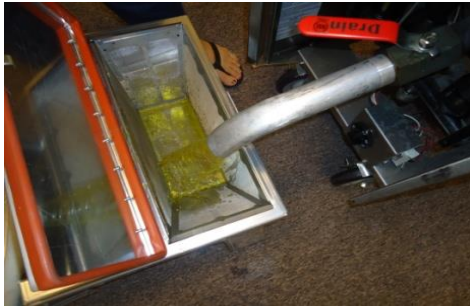
Roll the Zeco® Eco up to the fryer so the tank is directly under the drain pipe.



To ensure safety, use the wheel brakes, which prevents the Zeco® Eco from moving during filtering.

Open the fryer valve to let the oil drain out of the fryer. If the oil is splattering, partially close the lid on the tank.

If the micron basket gets too full with debris, you may have to scrape the sides with a spatula or turn the Zeco® Eco off and empty the basket to continue the flow of oil through the filter.



CAUTION: DO NOT OPEN THE VALVE ALL THE WAY OR YOU RISK SPILLING OIL ON YOURSELF OR ON THE FLOOR.

After the fryer oil has been drained into the tank, plug the Zeco® Eco into a power outlet.

Take the blue wand and place it into the tank. Turn the “Oil Out” switch to the ON position. Hold the wand while the oil is being pumped out.



As the Zeco® Eco is filtering the oil, use the wand to wash down the entire fryer, including the sides. After the desired time of filtering, turn the Zeco® Eco off by turning the “Oil Out” switch to off. Close the valve on the fryer. Turn the “Oil Out” switch ON to pump the oil back into the fryer.



“Oil Out” switch is used to turn the Zeco® Eco on and off.



“Back Flush” button is used to purge the contaminates off the filter in the tank.



Inside of the fryer as it is being drained. Notice the sides of the fryer are dirty. You can use the wand to wash the entire fryer.

After the oil has been pumped out of the tank and into the fryer, wait 10 seconds and press the “Back Flush” button to purge oil out of the pump. To ensure your Zeco® Eco runs smoothly ALWAYS back flush after filtering.

With the heat resistant gloves, pull the pad filter pan out of the tank and release the latches that hold the pad filter frame in place.



The protective gloves that come with the Zeco® Eco are to be used before, during and after filtration. Using the gloves will decrease your risk of being burned by hot oil and/or hot metal.



It is recommended that the contents of the micron filter basket and/or filter pan must be emptied into a fireproof container at the end of each filtering. Some food particles can spontaneously combust if left soaking in certain types of oil or shortening.

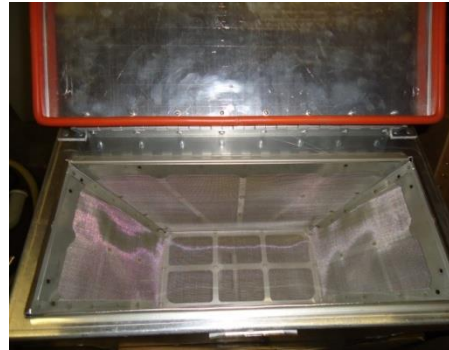


After pulling the latches on the pad filter, remove the pad filter frame and gently tap the pad over a fireproof container to get the filter pad out.

After Filtering Clean Up and Maintenance

After filtering the oil in the fryer, your unit may require washing.

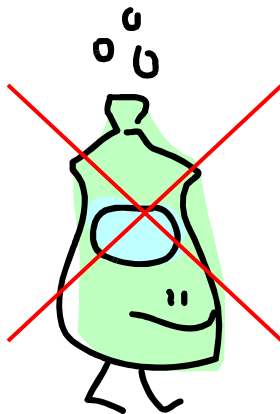
Some of the components of the Zeco® Eco may be put in the dishwasher. They are the tank, pad filter pan, pad filter frame and the 300 micron pre-screen filter.



After washing these pieces, make sure they are completely dried before placing back into the Zeco® Eco.

If water remains on any of the components and gets into the pump it will rust the gears and hinder the performance of the Zeco® Eco.

Make sure there is no soap residue in tank as it will affect the performance of the Zeco® Eco and ruin your oil.



Transporting Waste Oil

After filling the Zeco® Eco, close the tank cover and lock the cover with the latch clasp.

Be sure that the hose is coiled and that the wand is inserted and secured in the wand holder on tank.

Wheel the Zeco® Eco in a safe manner to the disposal site. Plug in Zeco® Eco. Using Safety Gloves, un-stow the wand and put and hold it in the disposal container. While holding the wand, turn the “Oil Out” switch to the ON position.

Run the Zeco® Eco until all oil is out of the tank. Turn the “Oil Out” switch to the OFF position and unplug the Zeco® Eco.

After transporting waste oil, refer to After Filter Clean Up and Maintenance instructions.



Tank Cover Clasp

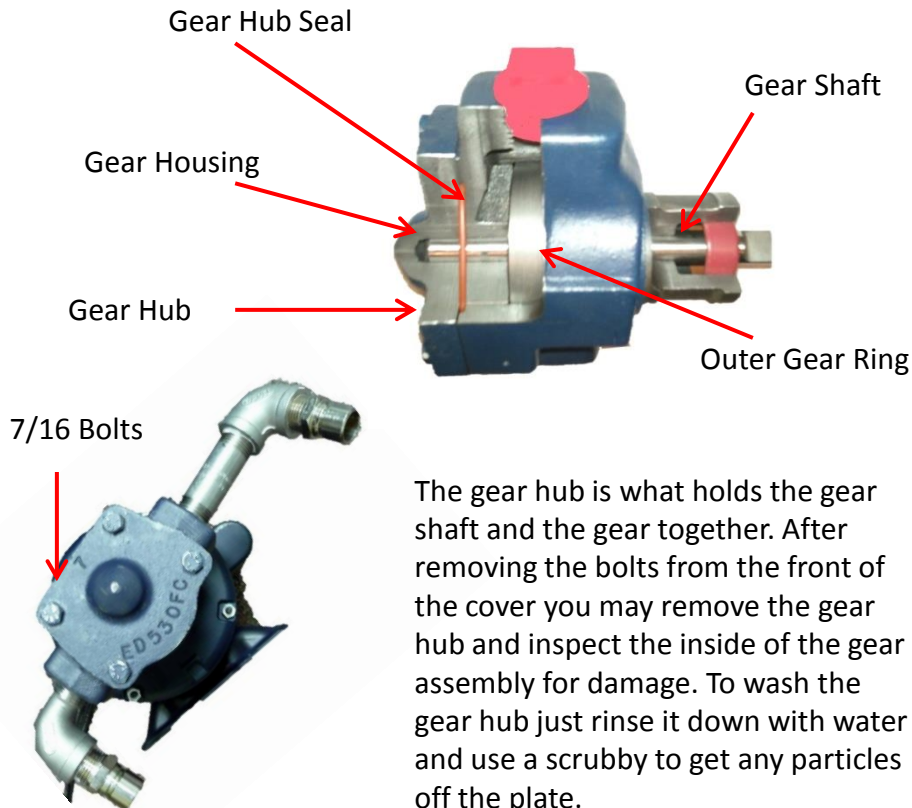
TROUBLESHOOTING GUIDE



Gear Pump Disassembly / Inspection



To begin disassembly of the pump, unscrew the T-25 screws found on the back panel of the unit. After taking off the panel, you will notice 4 bolts screwed into the gear hub. Take either a 7/16 wrench, a 3/8 torque wrench with a 7/16 adapter on it, or a T-wrench to unscrew the bolts. When all 4 bolts are off the gear hub, remove it. You may need to shimmy the gear hub off the motor. If it still doesn't come apart, gently tap on the lip of the gear hub with a flat head screwdriver.



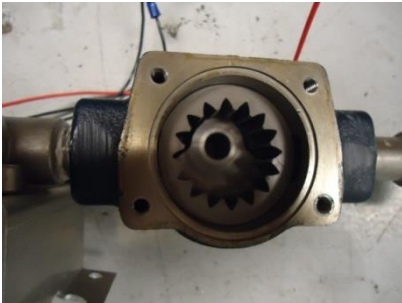
The gear hub is what holds the gear shaft and the gear together. After removing the bolts from the front of the cover you may remove the gear hub and inspect the inside of the gear assembly for damage. To wash the gear hub just rinse it down with water and use a scrubby to get any particles off the plate.



When the gear hub is removed place it aside and inspect the inside of the pump and check for any rust damage or large particles that might have gotten trapped inside.



Remove the gear shaft as well as the larger outer gear ring behind the gear shaft. The gear shaft is located inside the outer gear ring. Once removed, you may check it for rust damage. If any particles accumulated on the outside (inside the grooves of the gear), wash the inside grooves of the gear and take a steel wool scrubby to scrub the inside of the gear teeth.



After taking the gear hub off, this is what the inside of the pump would look like. Remove the gear shaft and you'll be left with the outer gear ring.



The outer gear ring inside the pump is where you can check if the particles damaged the gear. Check inside of the gear at the teeth to see if they're rusted. If they are rusted, take a scrubby and scrub the inside of the gear carefully.

After Washing the Gears & Reassembly

After washing the gears thoroughly and checking them for damage or build up, you may now reassemble the gears into the motor.

To start reassembly of the gears in the pump, fit the outer gear ring inside the pump.

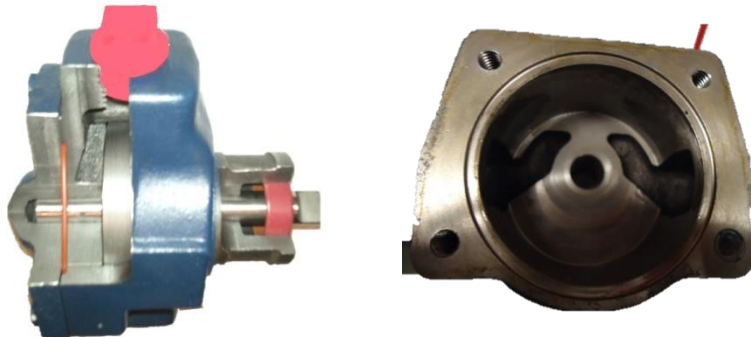
Then place the gear shaft inside the outer gear ring until they fit snugly into each other and you can move the gears inside the pump freely.

After the 2 gear pieces have been placed inside the gear housing, put the gear hub back on where the gear assembly is located. Be sure to check the gear hub seal around the inside of the gear hub.

Take the 4 bolts and screw them in place on the gear hub.

Preventative Measures

There are preventative measures that can be taken to be sure the pump doesn't rust or jam up. To prevent the pump from rusting, ALWAYS thoroughly dry out the tank after washing the Zeco® Eco. To prevent the pump from jamming, ALWAYS have the 300 micron pre-screen in place.



If by accident water is left in the bottom of the tank after washing and is pumped through the pump, run a small amount of oil to coat the pump gears and prevent rusting.

Clogged or Leaking Hose

If the hose is leaking on the Zeco® Eco, it could be that the Washer O-ring is either missing or weakened.

If the Washer O-ring is missing, replace with Hose Washer O-ring Part #Z-QCWA.

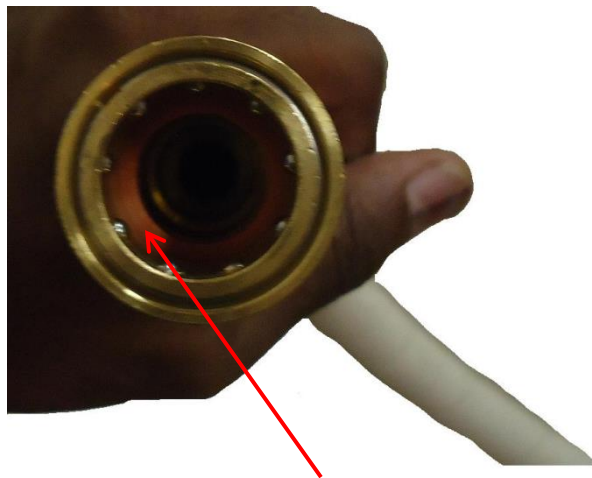
If the Washer O-ring is dirty or weakened remove it with a flat head screwdriver and clean or replace with Hose Washer O-ring Part #Z-QCWA.

Oil left in the hose after filtering will weaken the Washer O-ring. To prevent this, ALWAYS back flush after filtering.

If the hose is clogged, place the hose in natural heat to get the coagulated oil back into a liquid form and back flush to remove from the hose.

DO NOT submerge hose in hot oil.

DO NOT submerge and boil hose in oil and/or water.



Washer O-ring inside hose

Back Flush

If the wand starts to sputter, it is an indicator that the filter has too many contaminants in it. Turn the Zeco® Eco off and wait 5 seconds to prevent damage to the motor. Press the back flush button to purge all the contaminants out of the filter.

ALWAYS back flush after filtering to get all the oil out of the hose and prevent it from leaking.



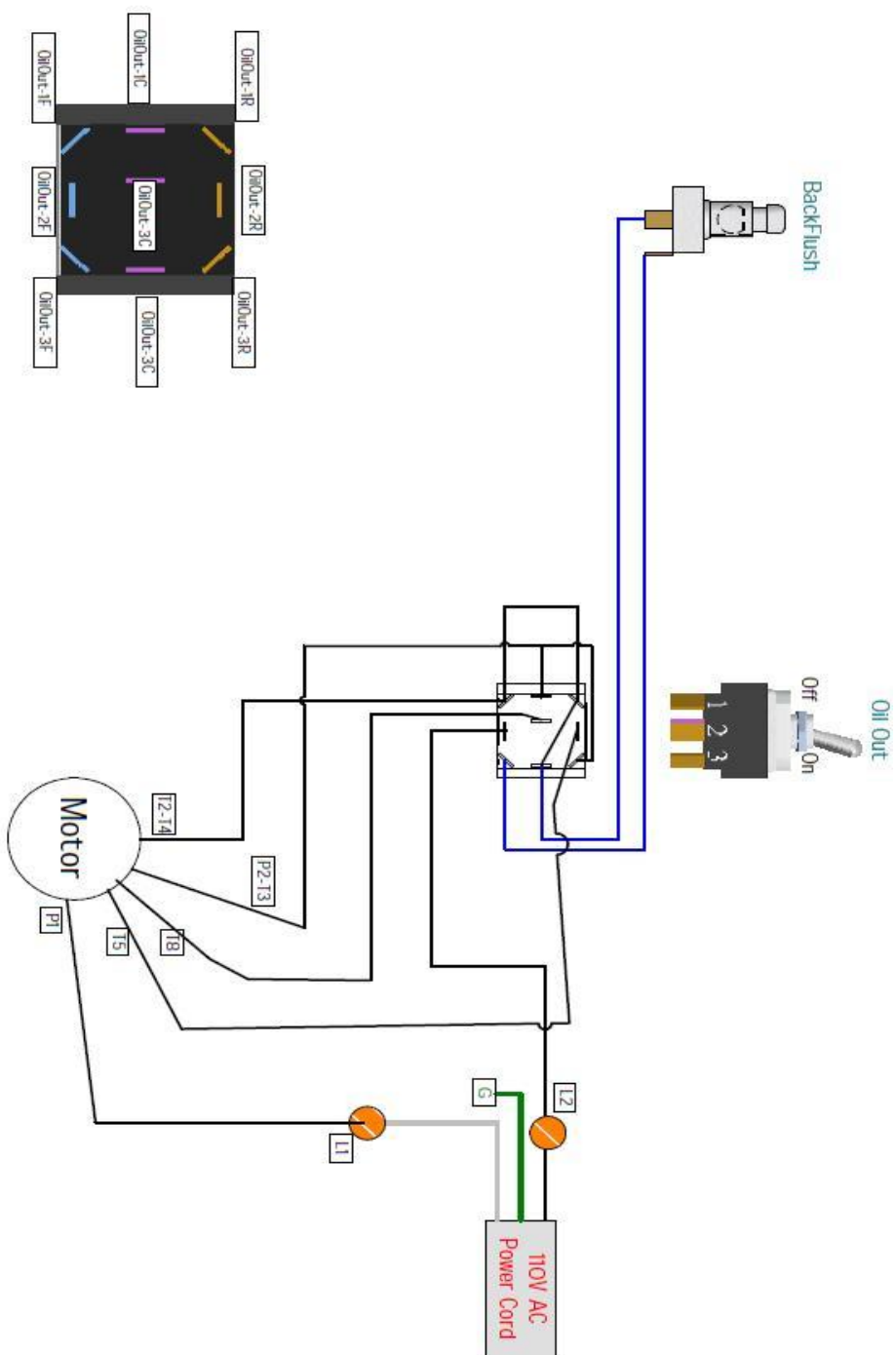
Reset

The reset button is on the side of the Zeco® Eco. If your Zeco® Eco does not work when you press Oil Out or Back Flush, press this button to reset.



PARTS LIST

Replacement Parts	Part No.
Pad Filter Pan	Z-PFP
Deep Well Screen	Z-DWS
Short Hose (Yellow)	Z-H3-Y
Long Hose (Blue)	Z-H2
Pan O-Ring	Z-MFU
Hose Washer O-Ring	Z-QCWA
8" Double Wheel Kit	Z-DWK-8R
Caster Double Wheel Kit	Z-DWK-CW
Brake Assembly	Z-BRKA
T-25 Screw Driver	Z-T25
Glove Clip	Z-GC
Safety Gloves	Z-SG



5 Year Limited Liability Warranty

Our Zeco Pro series products are designed and built to withstand the rigors of normal daily restaurant use. If within the first 12 months from date of purchase the Zeco Pro fails due to a defect in materials or workmanship simply call us and we will repair or replace it free of charge.

From month 13 through month 60 we will repair or replace each unit for a total cost not to exceed \$500.00 per occurrence plus shipping and handling. Battery, wheels and seals are not covered due to normal wear and tear.

To be eligible for warranty repair or replacement the unit must not have been tampered with by non-certified personnel. Failure to adhere with this policy will void the warranty.

Any damage sustained due to willful neglect, misuse, inappropriate use, setup or installation, and/or non-adhered to operating procedures is not covered under this warranty.

We assume no responsibility for damage to property, product or personnel resulting from willful neglect, misuse, inappropriate, untrained or careless use of any Zeco Pro products.

For Warranty Service, Please **contact your dealer** or



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Serial # _____



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NOTES

NOTES

ZECO® Rack System

The only space saving rack tank system on the market today. Three sizes available – ranging from 350 to 900 pounds of new oil and waste oil contained in a safe indoor environment. Now introducing the Zeco® Solar Charging Station. This is the first 100% “OFF THE GRID” Go Green Industrial Oil Filtration System.



P.O. Box 1248 – Litchfield Park, AZ 85340 – 1-877-743-6500 – www.zacharycompanyllc.com