

PH₂OENIX™ MEMBRANE PURIFIER IMPACT STORIES

WASTE WATER TREATMENT PLANT CLARIFIER GEAR BOX CONDITIONING WITH COLD HIGH VISCOCITY 460 WEIGHT GEAR OIL

A Canadian city waste water utility was looking for a technology that could maintain water levels below saturation in their 20-gallon clarifier gear boxes.

This application was made additionally challenging due to the high 460 weight viscosity of the gearbox oil and the fact that there was very little heat generated in them.

Typical oil dehydration and water removal equipment is both cumbersome and has difficulty pumping oils of such high viscosity.

A PHoenix™ C1 1 gpm purifier cart was rented during the summer months to condition the oil of the gear boxes. During that time the PHoenix™ had no problems pumping the oil continuously and besides connection to the gear box required no operator attention. Water was reduced from 330 ppm to below 50 ppm on one gear box and from 430 ppm to below 60 ppm on the other.

PHX-HEATER

For faster water removal on stagnant cold and thick oils an optional portable single phase 110/220 V oil heater can be used in series to the inlet of the PHoenix™ to add heat. For every 20°F increase in oil temperature over 80°F water removal rate through the PHoenix™ doubles and so can speed up equipment recovery times

The portable heater allows for modularity when dealing with water removal and thus maintains portability of two skids rather than one heavy skid with heater and purifier attached.



Figure 1: PHoenix on Clarifier Gear

PH₂OENIX™
OPTIONAL ACCESSORY

PORTABLE INLINE OIL HEATER
Increases water dehydration and removal from cold oils!

Oil Tanks Hydraulic Systems Lube Oil Systems

SOMETIMES OIL DEHYDRATION NEEDS A LITTLE HELP!

The Phoenix Membrane Oil Dehydrator and Purifier exclusively built by MSC Filtration Technologies is designed to remove 100% free, 100% emulsified and dissolved water contamination below 50 ppm in oils with viscosities of as high as 3000 cSt. In most cases the heat generated by the gearbox, hydraulic or lube oil system while it is operating is enough to maximize water removal. However cold stagnant oils can use a little help to increase the water removal rate of the Phoenix and insure maximum efficiency.

The PHX-110/220HEATER is an optional accessory that can be connected in series with the Phoenix Purifier to almost double water dehydration for every 20° the oil temperature is increased above 80F. Since it is set and forget and modular it maintains the simpleness and portability of the PHoenix Technology.

This is especially helpful in applications such as

- Road Machinery Hydraulic Oil Reclaim
- Stagnant Oil Drum or Tote Reclaim and Purification
- Gear Boxes or Hydraulic Systems in Cold Climates
- Offline Gearboxes, Hydraulic or Lube Oil Systems
- Hydro Liftgate Gear Boxes



PHX-110/220HEATER



PHX-110/220HEATER and Phoenix Purifier Typical Hook UP

INCLUDES

- 110V or 220V 1KW Oil Heater
- Insulated Steel Sheeth
- Powdercoated Cart or Stand
- No Flat Tires
- Manual Thermostat: 50-250F
- Nema 4 Control Box w 15A Breaker
- Green Light Indicator Power On Button
- Electric Cord with 15A Plug
- Auto High Temp Cutoff - 285F
- Auto High Temp Alarm Light
- Visual Oil Thermometer
- Heater Drain Valve

MSC FILTRATION TECHNOLOGIES

Simple Safe Reliable Efficient

Figure 2: Portable Oil Heater