

## Maintenance Guide for U5-Series





**BECKER PUMPS CORP.** • 100 East Ascot Lane • Cuyahoga Falls, Ohio 44223  
**TABLE OF CONTENTS**

PREVENTATIVE MAINTENANCE SCHEDULE ..... 1  
VACUUM PUMP OVERVIEW..... 2  
CHECKING OIL..... 3  
CHANGING OIL ..... 4  
SEPERATION ELEMENTS..... 5  
SEPERATION ELEMENTS CONT..... 6  
CHANGING OIL FILTER. .... 7  
CHANGING GAS BALLAST FILTER..... 8  
SPARE PARTS OVERVIEW ..... 9  
ACCESSORIES..... 10  
TROUBLESHOOTING ..... 11-14

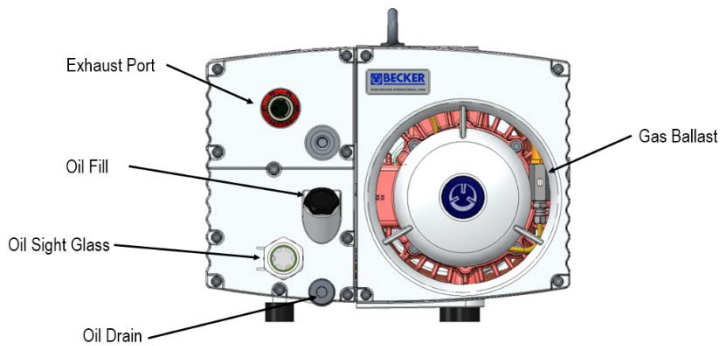
## Maintenance:

### Preventative Maintenance Schedule:

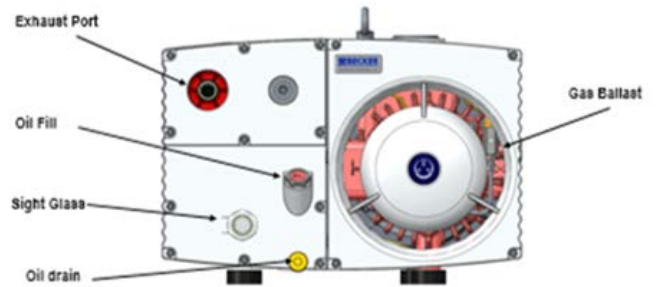
- Daily:
  - Check oil level and visually check for discoloration/contamination of the oil
    - Light Amber Color = **Okay**
    - Dark = **Not Okay** = Change oil
    - Milky white = **Water** – Run pump against gas ballast (See below)
  
- Every 40-200 Hours:
  - If installed Check and clean air intake filter
  - Max of 4 blast air filter cleanings
    - A new filter should be installed if clogged
    - A new filter should be installed annually
  
- Oil Change – Every 500-1000 Hours:
  - Check Color and oil thickness to determine if a change is needed
    - Oil part number
      - 3SVPO-100
  
- Every 2000 Hours or at least 2 times per year:
  - Replace oil separation element(s)
    - Replace oil filter
    - Replace gas ballast filter

## Vacuum Pump Overview

### U5.70/100



### U5.165/200/300



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## Checking Oil

- Daily
  - Check oil level and visually check for discoloration/contamination of the oil
    - Light Amber Color = **Okay**
    - Dark = **Not Okay** = Change oil
    - Milky white = **Water** – Run pump against gas ballast (See below)

No Oil



Fig. 1

Oil

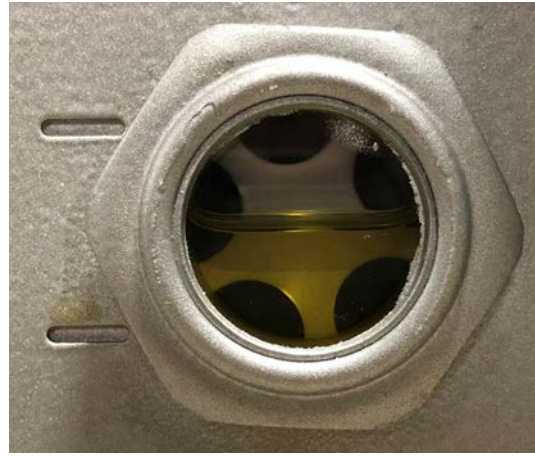
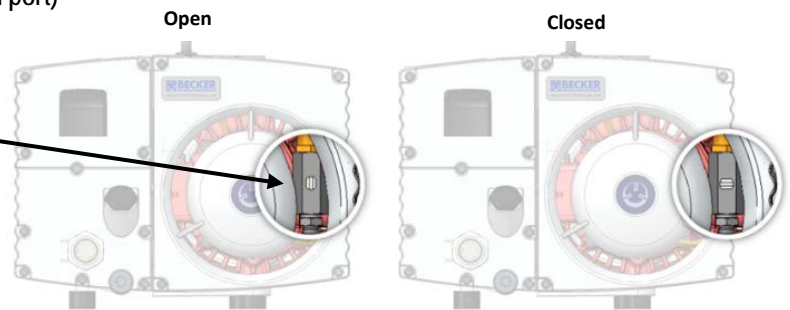


Fig. 2

### Gas Ballast Purging:

Isolate the pump from the vacuum system. (Close off the vacuum port)

Open the Gas ballast and run the pump for 1 – 2 Hours



## Changing Oil

1. Remove drain plug or open ball valve:
  - a. Completely drain oil
  - b. Drain plug = 10mm



Fig. 3

2. Fill with new oil:

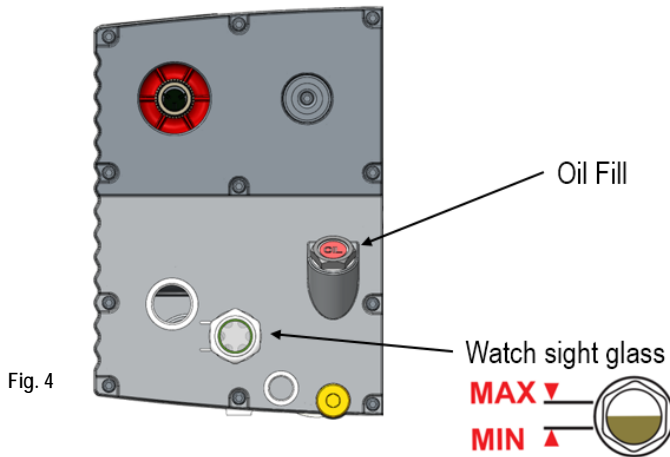


Fig. 4

- 2.a - Only Becker Vacuum Pump oil to be used:



Fig. 5

3SVPO-100

## Changing Separation Elements and Oil filter

Loosen the M6x70 screws at the maintenance cover



Fig. 6

## Changing Separation Elements and Oil filter

Remove the knobs by hand and pull out the elements

Install the new elements and tighten the knobs back down

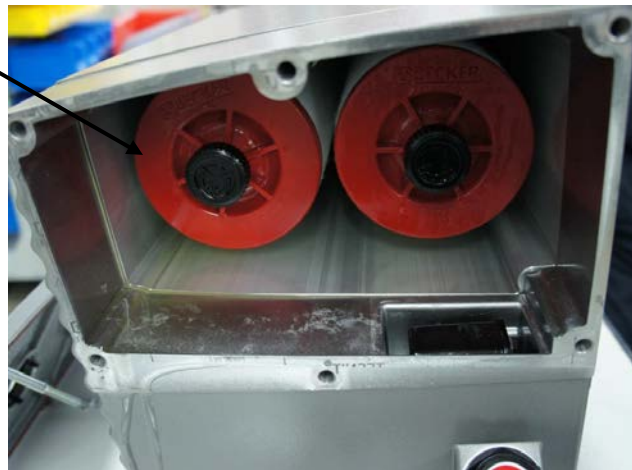


Fig. 7

Make sure the drip flap is pointed down



Fig. 8



## Changing the Oil filter

Loosen the oil filter from the tank using an oil filter strap

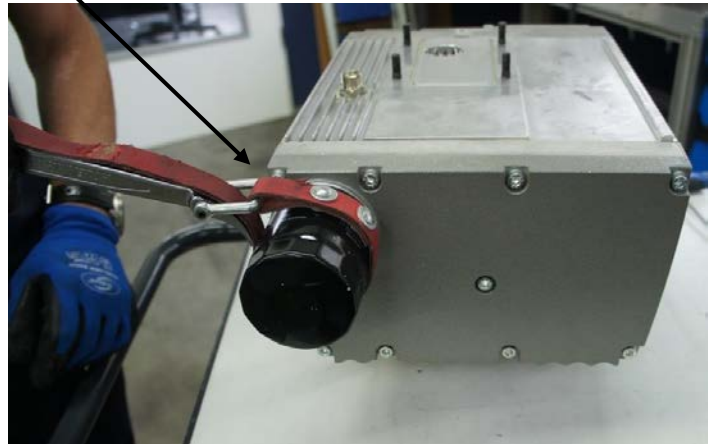


Fig. 9

## Changing Gas Ballast Filter



Fig. 10

Remove the air guide cover by taking out the M6x70 screws

Take out the Gas Ballast filter and replace with a new one

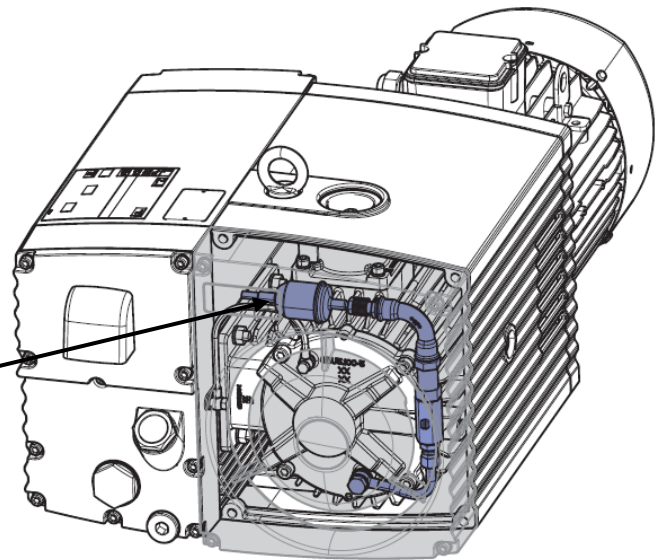


Fig. 11

## Spare Parts Overview

### Vacuum Pumps

Model	CFM	Max Vac.	HP	Oil Capacity
U 5.70	49.4	.075 Torr	3	2 Quarts
U 5.100	70.6	.075 Torr	5	2 Quarts
U 5.165	116	.075 Torr	5	6 Quarts
U 5.200	141	.075 Torr	7.5	6 Quarts
U 5.300	211	.075 Torr	12	1.6 Gallons

### Maintenance Kits

<b>U 5.70</b>	<b>338157M00</b>
<b>U 5.100</b>	<b>338151M00</b>
<b>U 5.165</b>	<b>33815165M</b>
<b>U 5.200</b>	<b>3381200M0</b>
<b>U 5.300</b>	<b>33813M000</b>

#### Included in Kit:

- **Pump oil**
- **Separation Elements**
- **External Air Filter Cartridge**
- **Gas Ballast Filter**
- **Oil Filter**

Click the Becker Logo for Operation instructions and Spare parts lists

Or

Visit [www.Beckerpumps.com](http://www.Beckerpumps.com)

## Accessory Options

1. Oil Temperature Monitor
  - a. Switch opens when the oil is too hot



2. Oil Level Switch
  - a. Opens when the oil level drops too low



3. Maintenance Indicator
  - a. Visual display of when the Separation elements need to be exchanged



4. 1-Phase to 3-Phase Converter
  - a. In = 230V 1-Phase
  - b. Out = 230V 3-Phase



# Troubleshooting

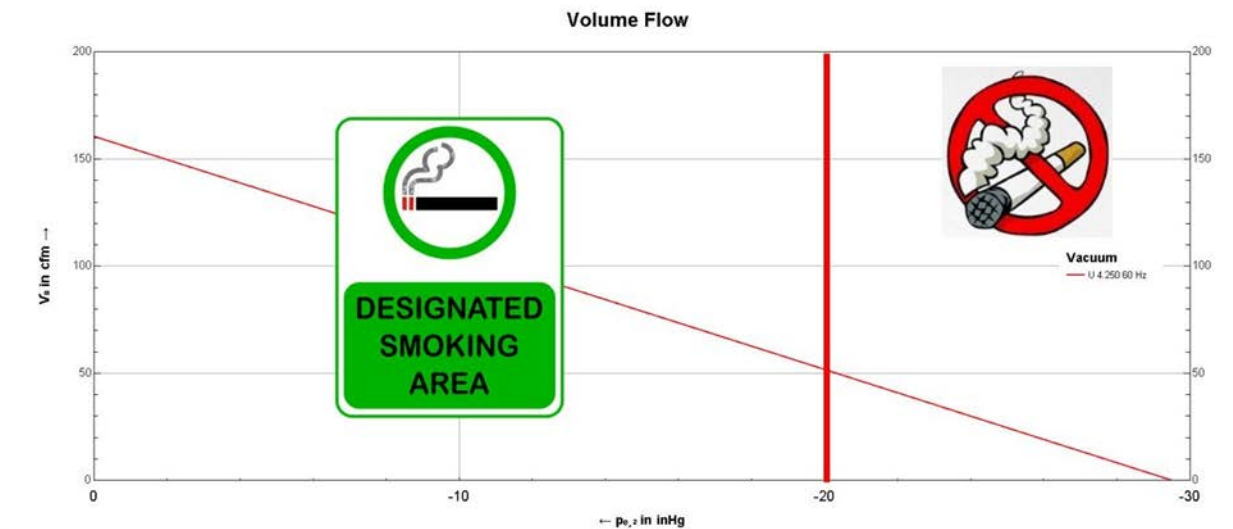
## Smoking oil:



- Vacuum Level:

Your operation point does matter. Lubricated units love to run deep. If you reduce the vacuum level above 20" Hg, the air flow through the pump will become too much for the separation elements to handle.

The oil/air mist, will blow past the collection points and right out the exhaust port. Rule of Thumb - stay between 20 - 29" Hg.



## Troubleshooting

- Wrong oil:

Using the wrong viscosity oil will either cause damage, or the oil will blow directly out of the exhaust port. [Take a look here before moving on.](#) You can order directly online!

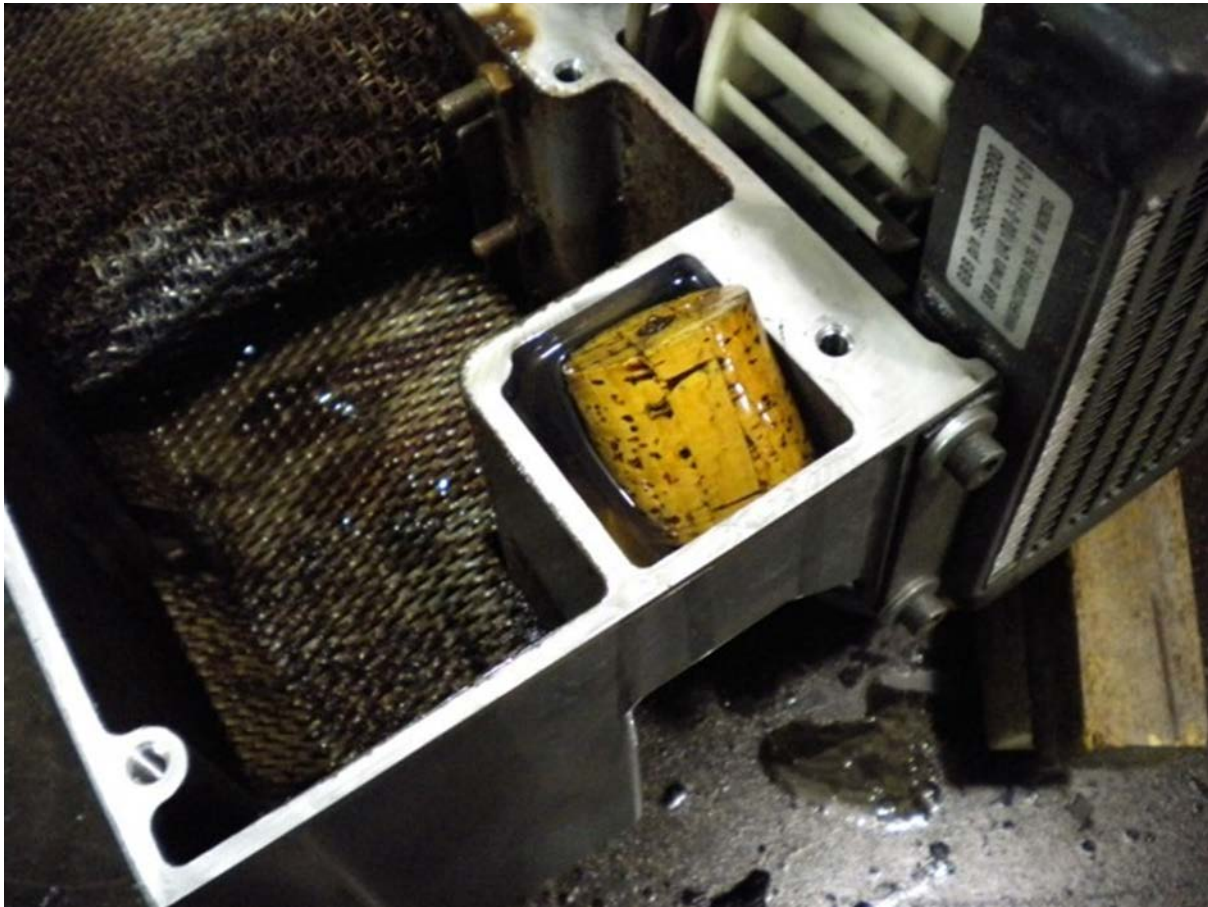


## Troubleshooting

- Float chamber:

When debris is sucked into your pump, it will find its way to the float chamber. Inside, there is a cork float with a pin on the bottom. Debris can plug up the small hole that allows the oil to re-enter the working chamber. Once plugged, the chamber will fill with oil, and end up blowing out of the exhaust port. A quick check and cleaning will solve your issue. (Below you will see a clogged float)

The float in the U5-Series looks different and is plastic.



## Troubleshooting

- Separation Elements:

The elements are a maintenance point that should be checked and replaced at 2,000 hours. Refer to the operation and spare parts manuals for more information.

The elements below are overloaded and can no longer do their job!

Change with Becker Genuine elements and be on your way!



Replace your elements with  
**Becker Genuine parts.**

Look for the Logo!

