

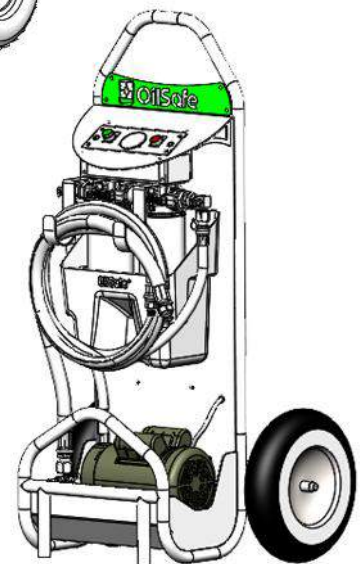
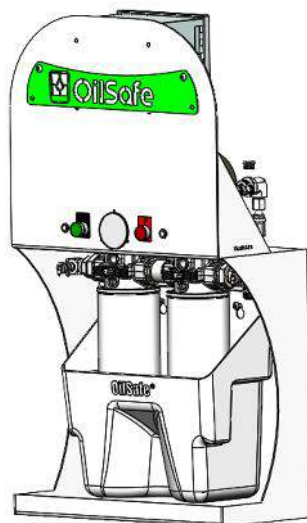
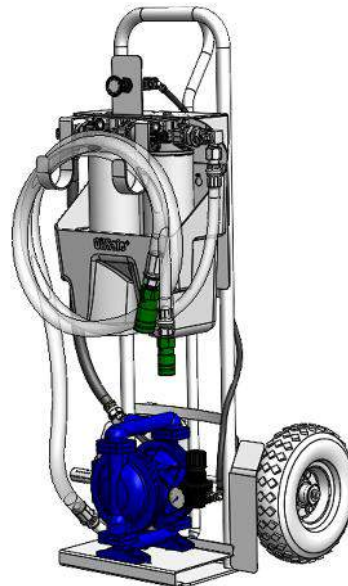
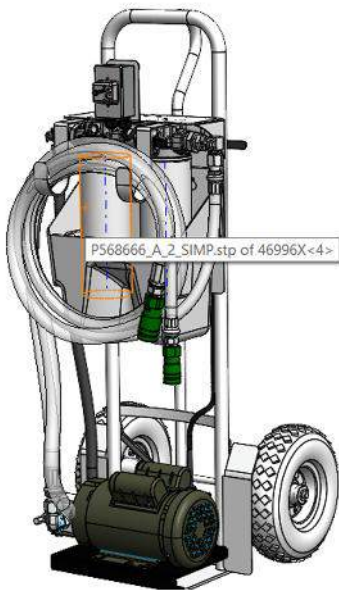


**OilSafe®**

# Filtration Units

## Owner's Manual

Document # OSOM-FU Rev2



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## FOR YOUR RECORDS

### Write the model and serial numbers

**here:** *(You can find them on the Serial/Model Number label mounted at the rear of your system by the motor/pump)*

Serial / Model #: \_\_\_\_\_

Supplier Name: \_\_\_\_\_

Date Purchased: \_\_\_\_\_

## READ THIS MANUAL

Inside you will find important information on how to use and maintain your Filtration Unit.

## INTELLECTUAL PROPERTY

OilSafe® is a brand and registered trademark of Whitmore Manufacturing, LLC.

Patents Pending.

Copyright ©2023 Whitmore Manufacturing LLC. All Rights Reserved.

## OilSafe Limited Warranty

OilSafe ("OS") warrants to the original product purchaser (hereinafter the "Customer") that the OS product for which the Customer received this warranty was designed, developed, and manufactured using all due reasonable commercial care and good manufacturing practices. OS' products shall be free from defects in material and workmanship for 365 days from the original date of purchase by Customer. OS' sole obligation under this warranty is to repair or replace the product, at OS' option. OS must be notified by Customer in writing of any claim under this warranty within 30-days of any claimed lack of conformity of the product. THIS WARRANTY IS INTENDED TO BE IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED. OS SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### Warranty Limitations:

In no event shall OS be liable for any loss, inconvenience, or damage, whether direct, incidental, consequential or otherwise, resulting from breach of any express or implied warranty or condition, of merchantability, fitness for a particular purpose or otherwise with respect to this product, except as set forth herein. Some states or countries do not allow limitation on how long an implied warranty lasts so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which may vary, from location to location. This warranty will be interpreted pursuant to the laws of the United States and the State of Illinois. The original English language version (meaning) of this warranty controls overall translations; OS is not responsible for any errors in translation of this warranty and/or any product instructions. This warranty is not intended to confer any additional legal, jurisdictional or warranty rights to you other than those set forth herein or required by law. If any portion of this warranty is held to be invalid or unenforceable for any reason, such finding will not invalidate any other provision. For products purchased in countries other than the United States, please contact OS' authorized representative (i.e., the 'company' or 'person' who represented OS or brokered the 'sale') in the country where the product was purchased.

### Warranty Service Options:

For service under this warranty, you must notify OS in writing. Such notification must specify in writing the product in question by model and serial number, applicable purchase order number and/or the original of date of your written notification.

*You may contact OS as follows:*



930 Whitmore Drive  
Rockwall, TX 75087  
[www.oilsafe.com](http://www.oilsafe.com)

(972) 771-1000

Any insurance and/or shipping costs incurred in returning your OS product for service pursuant hereto are your responsibility. OS will not be responsible for any products lost or damaged in shipment.

### Warranty Exclusions:

Representatives and brokers of OS products are not authorized to modify this warranty in any way. It is the Customer's responsibility to regularly examine the product to determine the need for normal service or replacement. This warranty does not cover the following:

- Products that have been modified, neglected, or poorly maintained, misused, abused, or involved in accidents or natural disasters.
- Damage occurring during shipment of the product (such claims must be presented directly to the freight forwarder or shipping company).
- Damage to the product resulting from improper maintenance or repair, the use or installation of parts and/or accessories that are not compatible with the original intended use of the product, or the failure to follow the product warnings and usage instructions.
- Damage or deterioration to the surface finish, aesthetics, or appearance of the product.
- The labor costs required to remove and/or refit and readjust the product covered by this warranty.
- Normal wear and tear to the product, filter elements, air breather, level gauges and other consumable items.
- Service Trips to Customer's location to teach Customer how to use the product.

Defects that result from improper installation or damage not caused by OS.

# Introduction

OilSafe® Filtration Units are designed for use with non-aggressive type lubricating oils.

Do not use with fluids having flashpoints below 150°F.

- Electrically powered systems should never exceed 150psi/10.34bar and are limited to viscosities of ISO 10 to 680.
- Pneumatic powered systems should never exceed 120psi/8.27bar and are limited to viscosities up to ISO 680.

ISO Viscosity	32	46	68	100	220	320	460	680
<b>Pump Flow Rate (GPM)</b> <i>(3 GPM pump)</i>	3	3	3	2.5	2.5	2	2	1.5
<b>Pump Flow Rate (GPM)</b> <i>(5 GPM pump)</i>	5	4.5	4.5	4	4	3	3	2.5

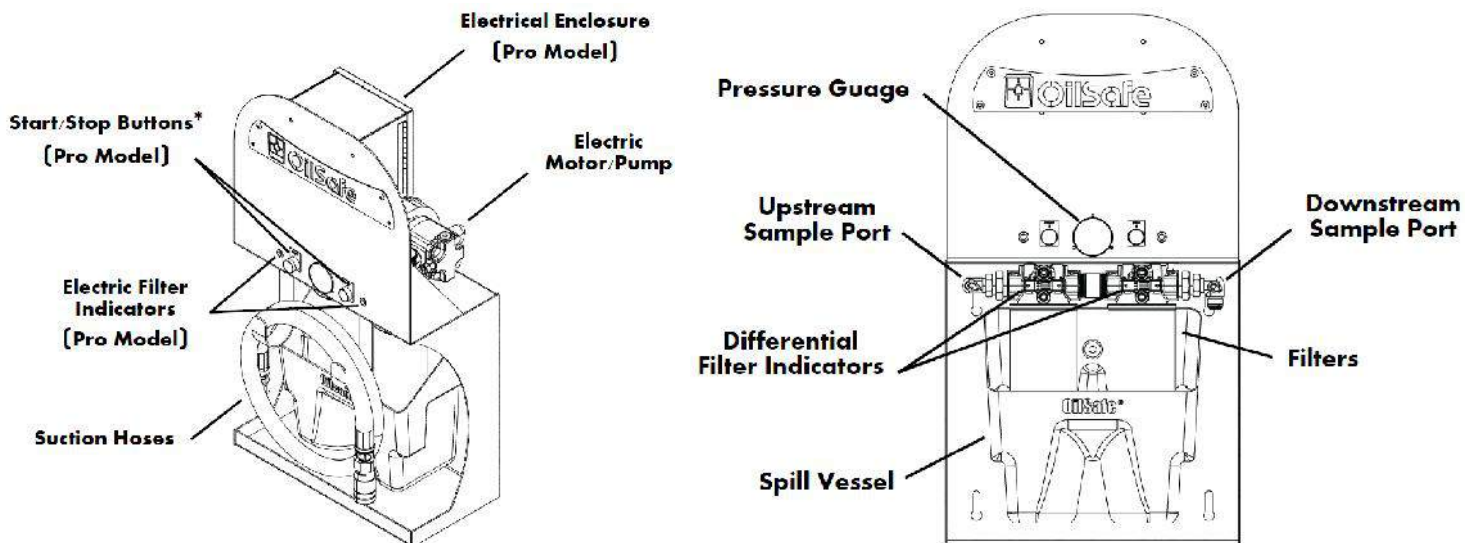
Components of the OilSafe filtration systems are itemized below. Consult your lubricant supplier or lubricant manufacturer to review & approve these materials for use with their oils.

## Materials List

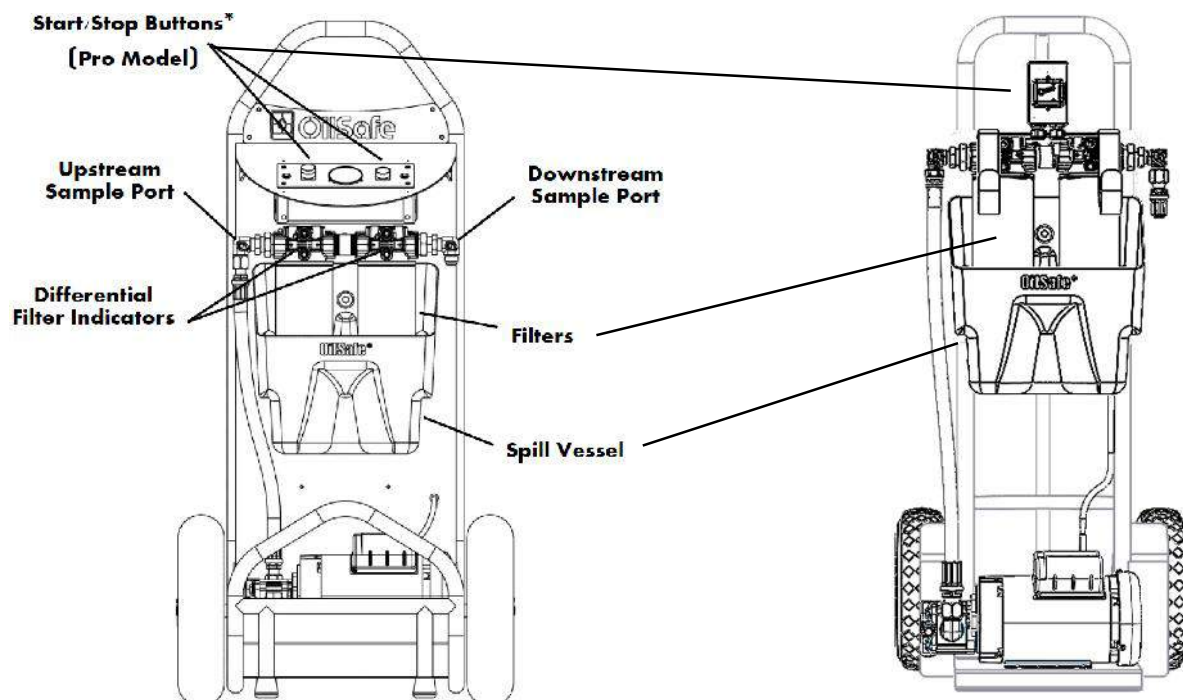
Frame (Portable)	Steel w/powdercoat finish
Frame (Stationary)	Aluminum w/powdercoat finish
Electric Motor TEFC	Steel with paint finish
Gear Pump for Electric Motor	Aluminum& Steel w/Buna Seals
Flat Face Quick Disconnects	Anodized Aluminum Body Buna/Teflon)
Gauge	Steel Case Brass connector
Hoses	Nitrile, rubber, pvc
Adapters	Steel w/zinc finish
Oil Sample Ports	Steel with zinc finish Buna seals
Spill Containment Vessel	HDPE
Pneumatic Oil Pump	Aluminum, Nuna, Hytrel, Neoprene

This manual was written to include descriptions, illustrations, and instructions for all OilSafe filtration systems; Portable & Stationary.

***FIGURE 1: Stationary Filtration Unit Components***



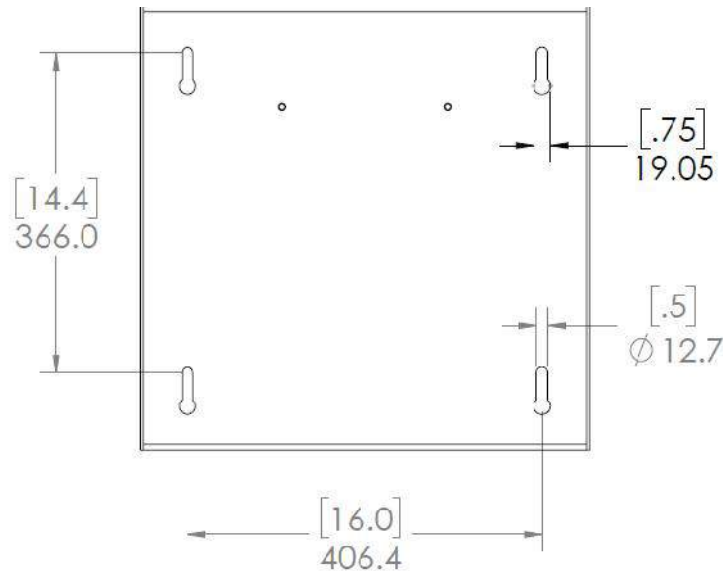
***FIGURE 2: Portable Filtration Unit Components***



## Tools, Materials, and Personnel

- All systems can be accessed, installed, and maintained with general hand tools.
- Electrical or compressed air (power hook-ups) and installation should be completed by authorized personnel in accordance with all local and federal laws and regulations.
- Personal Protective Equipment (“PPE”) should be worn when installing and operating these systems.
- When mounting a Stationary Filtration System with the holes on the backside, use the dimensions in Figure 3 below to locate the openings.

***FIGURE 3: Stationary Unit Mounting Dimensions***



## Power Installation



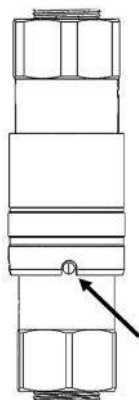
### **WARNING!**

Failure to follow system installation, safety and operating instructions may result in severe injury or death, damage to plant and equipment and void manufacturer warranties.

Connections to power sources (electricity or compressed air) should be carried out by trained and authorized personnel in accordance with local and federal regulations and safety protocols.

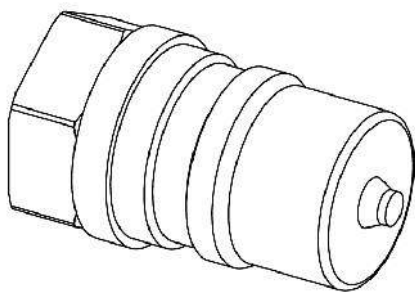
## Quick Disconnects

OilSafe Filtration Units incorporate ½” female quick disconnects on Discharge/outlet hoses and ¾” female quick disconnects on suction hoses. Below is a list of mating (male half) quick dsconnects for installing onto equipment, for direct, error-free and spill free access to oils. OilSafe’s colorized flat-faced quick disconnects provide 100% error proof connections (cannot connect to dissimilar colors) and control leakage when disconnecting them. Red will only connect with red, blue to blue, green to green and so on.



Color	½” Male Half Part Number	¾” Male Half Part Number
Red	M8RED	M12RED
Blue	M8BLUE	M12BLUE
Gray	M8GRAY	M12GRAY
Yellow	M8YELLOW	M12YELLOW
Beige	M8BEIGE	M12BEIGE
Dark Green	M8DRKGREEN	M12DRKGREEN
Mid Green	M8MIDGREEN	M12MIDGREEN
Purple	M8PURPLE	M12PURPLE
Orange	M8ORANGE	M12ORANGE
Black	M8BLACK	M12BLACK

An alternative to zero-leak error proofing quick disconnects above, are ISO B quick disconnects. They will leak more oils when mating and disconnecting, but are an economical alternative to the error-proofing connectors above.



### ISO B Poppet Style

This type of quick disconnect is inexpensive, simple, and widely available. They are not leak-free connection types and they will not prohibit improper use (cross-contamination).

½” Male Half # 55910373

¾” Male Half # FT-H6-63

1” male Half # FT-H8-63

½” Female Half # FT-H4-631/2BODY

¾” Female Half # FT-H6-63

1” Female Half # FT-H8-62

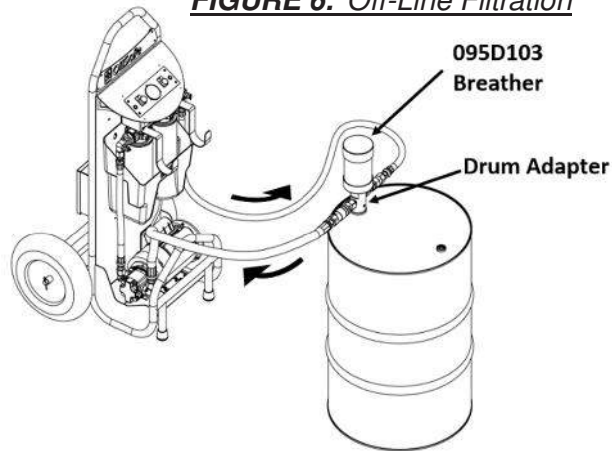


## Modes of Operation

### Portable Filtration Unit

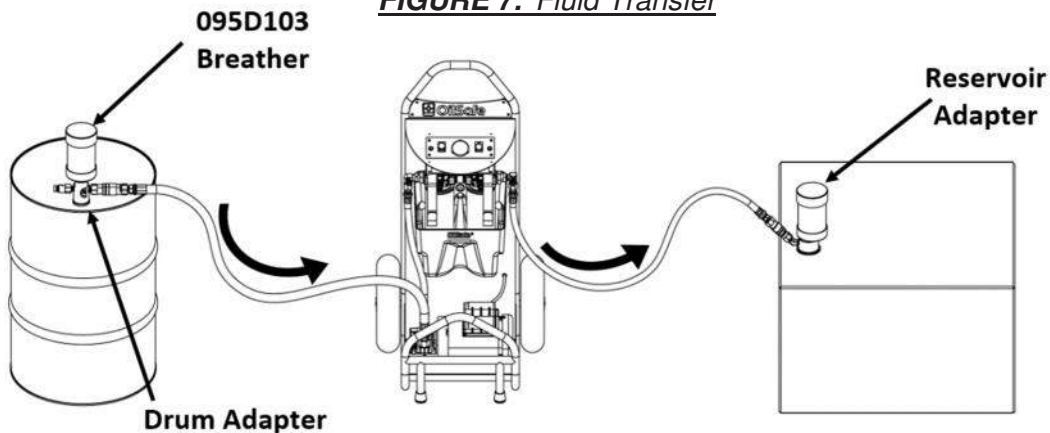
Off-Line Filtration: Oil is circulated while in a drum, tote, or container. (Breather and Drum Adapter sold separately)

**FIGURE 6: Off-Line Filtration**



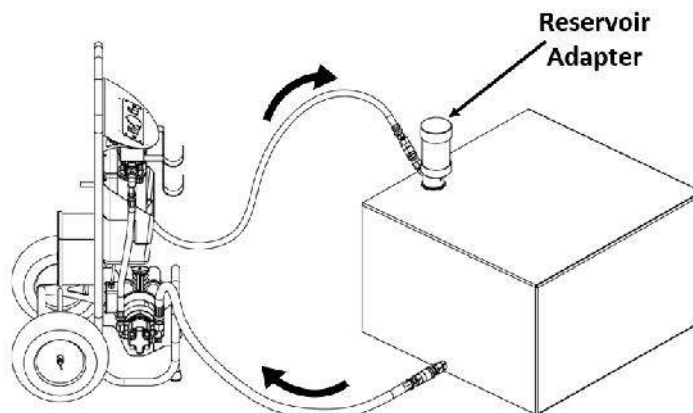
Fluid Transfer: Oil is transferred from drum or container into equipment. (Breather and Adapter sold separately)

**FIGURE 7: Fluid Transfer**



Off-Line Filtration: Oil can be recirculated in equipment; also known as kidney-loop filtration.

**FIGURE 8: Dedicated Off-line Filtration**





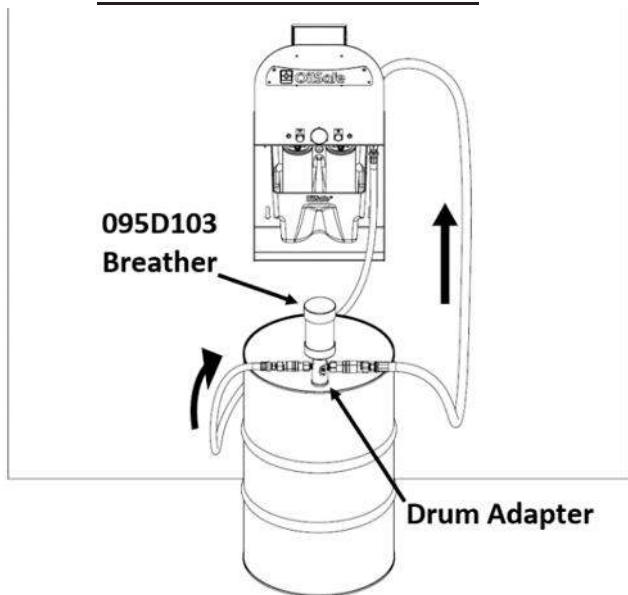
## Modes of Operation Continued

### Stationary Filtration Unit

Stationary Off-Line Filtration: Where oil is circulated.

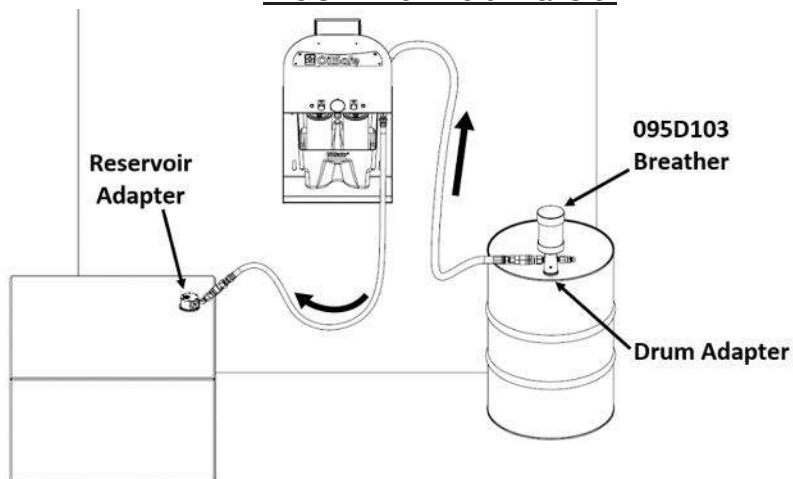
Inside a drum, tote, or container.

**FIGURE 9: Off-Line Filtration**



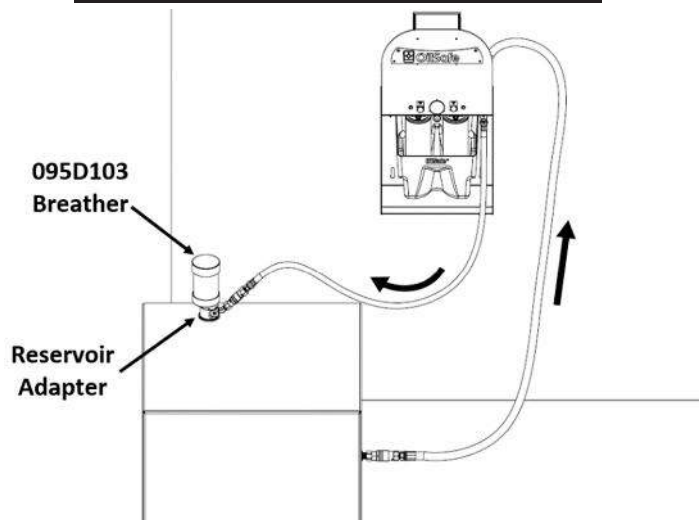
Fluid Transfer: Oil pumped from container into equipment.

**FIGURE 10: Fluid Transfer**



### Dedicated Off-Line Filtration

**FIGURE 11: Dedicated Off-line Filtration**

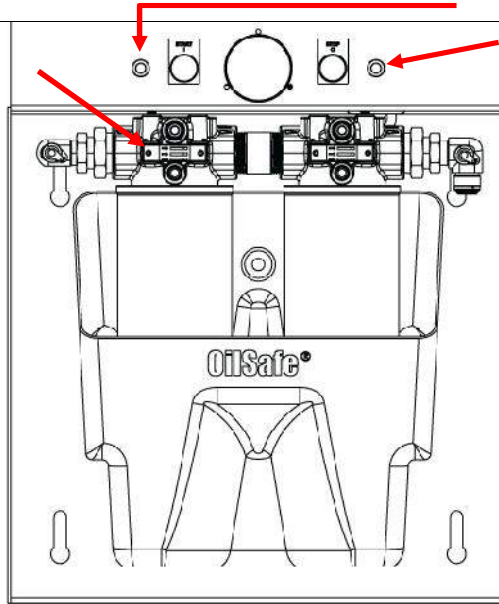


## Servicing Filter Elements

OilSafe Filtration Systems have removable spill containment vessels, which make servicing the filter elements a safer and cleaner process.

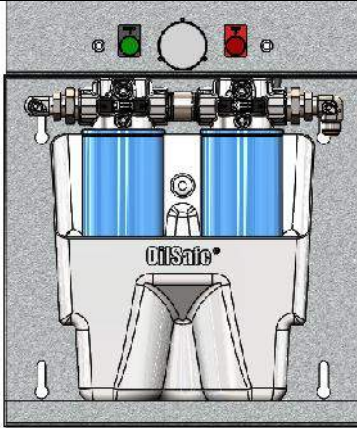
### BASIC UNITS

Differential Visual Indicators are provided on all Basic Units. These indicators measure upstream and downstream pressures providing incremental indication of actual pressure drop through each filter. Replace filter element(s) when indicator shows red. They will reset automatically when the filter element(s) are replaced.



### PRO UNITS

Have both Differential Visual Indicators and Electrical Indicators for each filter. This provides effective filter element monitoring. Each filter has a yellow indicator light on the control panel which will illuminate when the filter element requires servicing. All indicators automatically reset when filter element(s) are replaced.



### REMOVING FILTER ELEMENTS

**MAKE SURE SYSTEM IS SHUT-OFF, UNPLUGGED AND SAFE FOR SERVICING.**



Loosen filter elements by turning them counterclockwise. When they detach from the threads on the filter heads, let them rest in the OilSafe containment vessel as residual oil is encapsulated and contained. This provides safer and cleaner filter element servicing. It also provides a safer way to convey used filter elements to the used oil collection area.



### REPLACING FILTER ELEMENTS

After disposing of used filter elements, replace them with new ones. Place the new filter(s) in the spill containment vessel, then hang the vessel onto the filtration system. Next lubricate the 2 O-rings already installed on the filter element. Lastly, reinstall the filter(s) onto the threads of the filter head by rotating the elements clockwise until it bottoms out and stops turning.

## Maintenance Checklist:

### EVERY USE:

- Perform a visual inspection of filtration system to ensure operational integrity and safety.
- Check Filter Indicators. The filter head has a differential pressure indicator that will show when a filter is plugged and needs changing.
- If there are any oil drips or spills, stop and clean them immediately.

### EVERY 6 MONTHS:

- Replace Filter elements.
- Check pneumatic tire pressure on portable filtration carts.
- Inspect hoses for cracks, abrasions, kinks, or leaks. Repair or replace as necessary.
- Check all mounting hardware, ensure all fasteners and connectors are tight.
- Clean surfaces to keep it safe and free from excess oil films.

## Troubleshooting

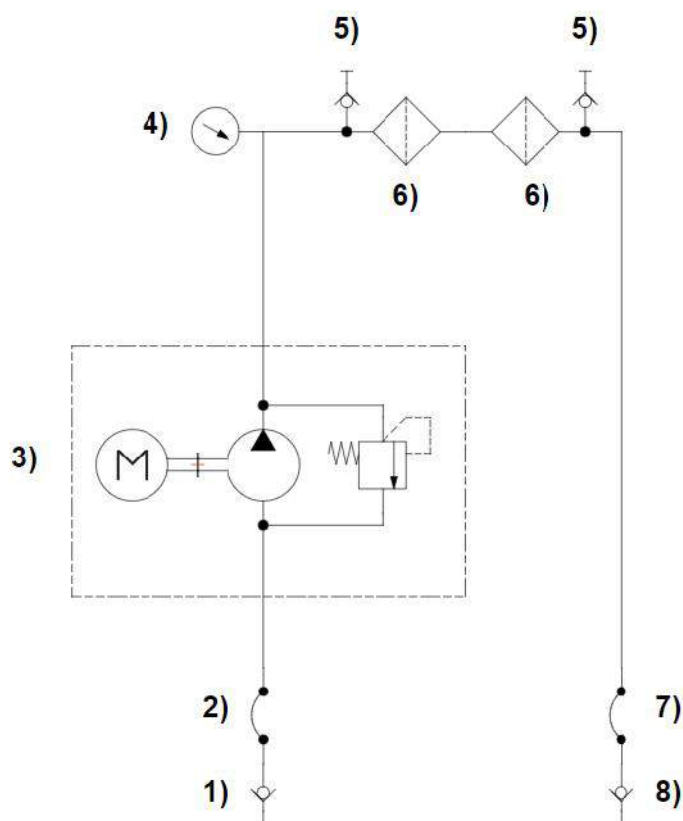
If any of these troubleshooting procedures do not solve the issue, contact your supplier with the serial number located on each system, for additional support.

Issue	Steps to Resolve
Filtration Unit is not pumping oil.	<ol style="list-style-type: none"> <li>1. Check power supply (electricity or air supply), breakers and fuses.</li> <li>2. Check Electric motor for correct rotation (CW when viewing fan on back of motor).</li> <li>3. Ensure hoses are properly connected, there are no kinks or restrictions in the hoses.</li> <li>4. If using a hose wand or suction tube, ensure it's not stuck on the bottom of drum, and is allowing oil to enter the hose wand.</li> <li>5. Check the oil filters and ensure the indicators are not in the red. Oil flow will slow when oil filters are full, and the visual indicators will be red.</li> </ol>
There are oil leaks	<ol style="list-style-type: none"> <li>1. Immediately shut off unit and disconnect all power sources (electric or air).</li> <li>2. Locate leak and repair it, before it causes slips, trips, falls or workplace hazards.</li> <li>3. Ensure the leak is resolved properly and will not reoccur.</li> </ol>

## Replacement Parts List

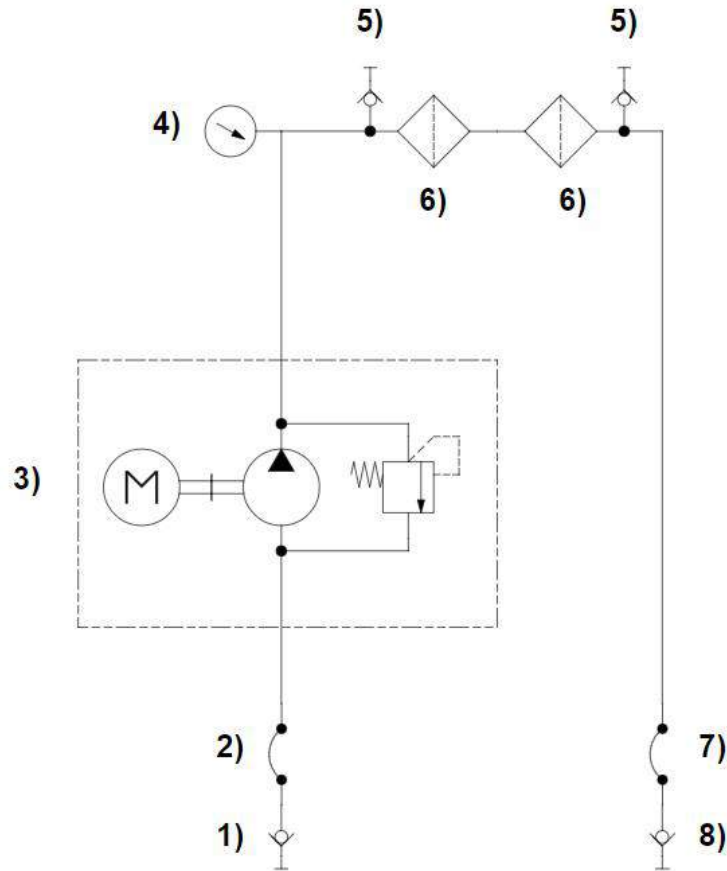
Item Description	Type	Part #
Oil Spin-on Filter - 4um - $\beta$ 2000 (99.5% efficient)	Filter	469962
Oil Spin-on Filter - 7um - $\beta$ 2000 (99.5% efficient)	Filter	469964
Oil Spin-on Filter - 25um - $\beta$ 2000 (99.5% efficient)	Filter	469966
Oil Spin-on Filter - 20um&water removal - $\beta$ 2000 (99.5% efficient)	Filter	469968
Differential Pressure Indicator	Gauge	469969
Suction/Discharge Hose Kit	Hardware	H-K17160-KIT
Spill Containment Vessel	Hardware	101011

## Plumbing Schematic – Stationary Unit



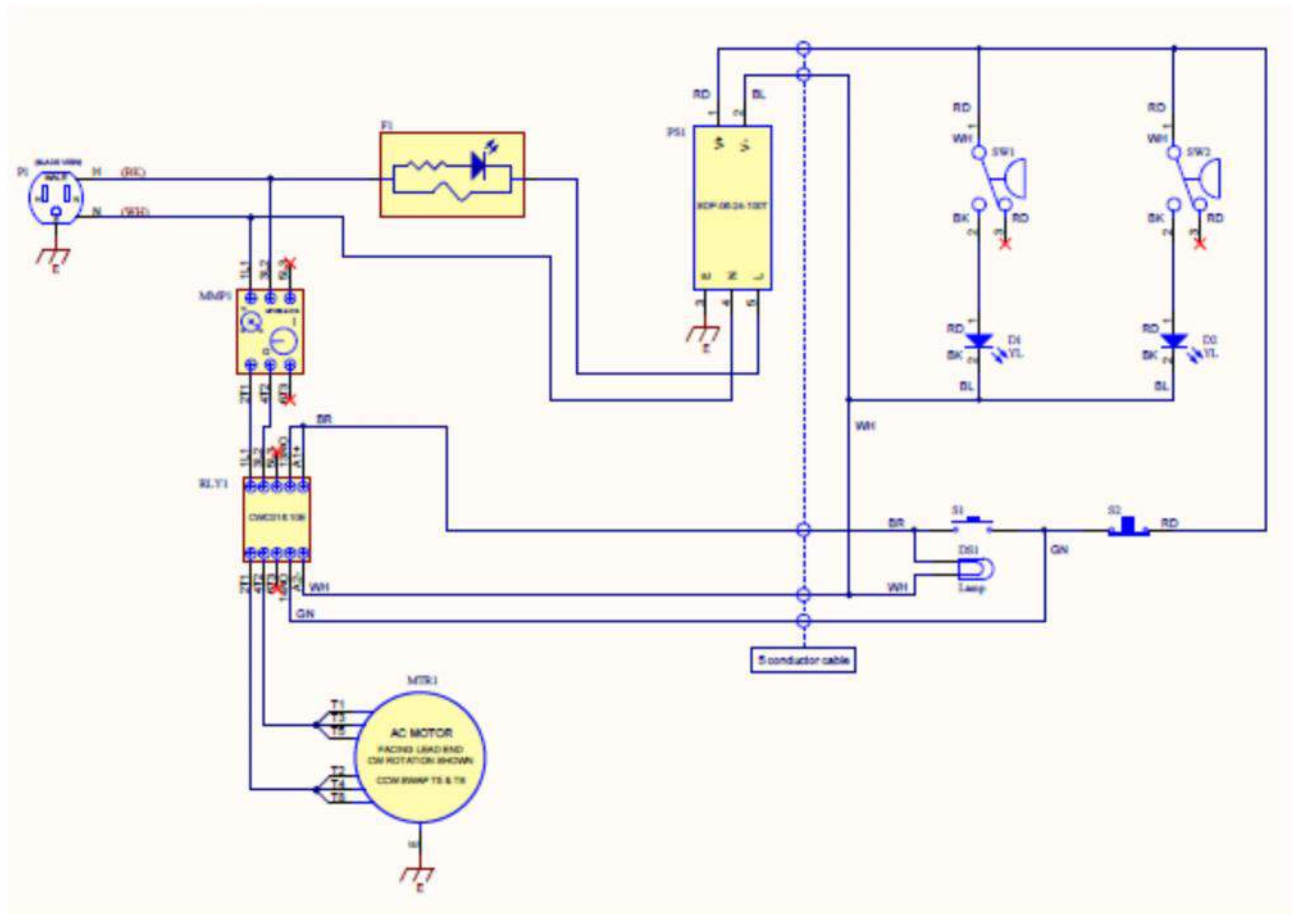
- 1) Optional 3/4" Female quick disconnect
- 2) 8Ft (2.4m) Suction hose 3/4" diameter
- 3) 1HP-1200rpm motor & 3gpm (11.4lpm) 150psi (10.2bar) or pneumatic oil pump
- 4) Pressure gauge
- 5) Upstream & downstream oil sample ports
- 6) Oil filters with filter condition indicator
- 7) 8Ft (2.4m) Discharge hose 1/2" diameter
- 8) Optional 1/2" female quick disconnect

## Plumbing Schematic – Portable Unit



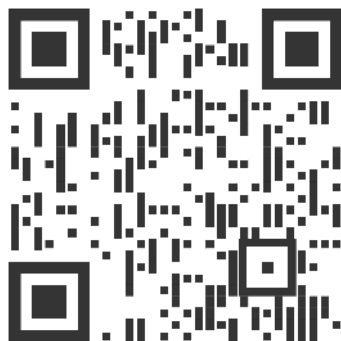
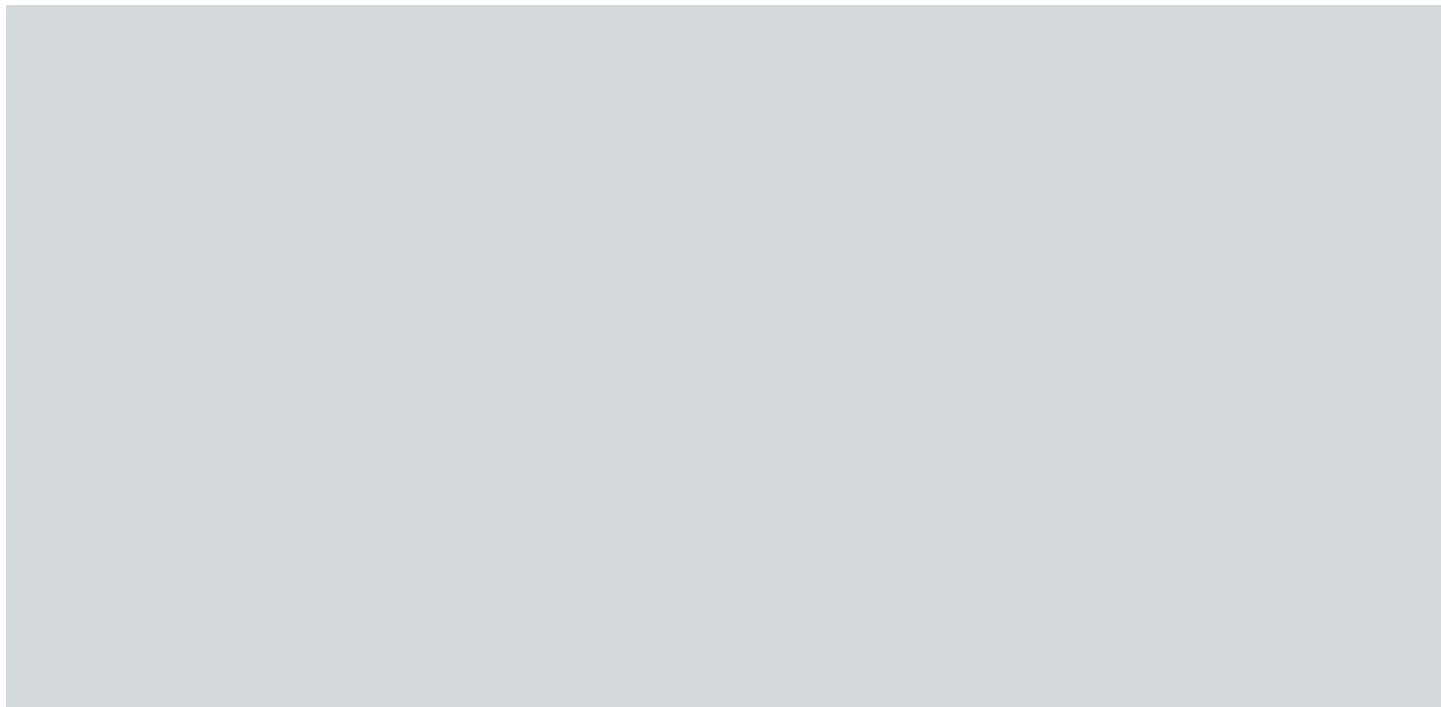
- 1) 3/4" Female quick disconnect
- 2) 8Ft (2.4m) Suction hose 3/4" diameter
- 3) 1HP-1200rpm motor & 3gpm (11.4lpm) 150psi (10.3bar) or pneumatic oil pump
- 4) Pressure gauge (Pro version only)
- 5) Upstream & downstream oil sample ports
- 6) Oil filters with visual filter condition indicator (Pro version has both visual & electrical)
- 7) 8Ft (2.4m) Discharge hose 1/2" diameter
- 8) 1/2" Female quick disconnect

## Electrical Schematic (“Pro” Portable & Stationary Units)



- Basic filtration systems consist of an on/off switch, 3-prong plug and SOW cord.





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