OilSafe®

Lubrication Work Center

Owner's Manual

Document # OSOM–LWC Rev1

IMPORTANT

- Please read this Owner's Manual carefully and thoroughly before installing and operating your Lubrication Work Center.
- Please retain this Owner's Manual for future reference after reading it thoroughly.

TABLE OF CONTENTS

FOR YOUR RECORDS

Write the model and serial numbers here: *(You can find them on the Serial/Model No. Plate mounted at the rear of your system on a lower tank frame rail.)*

Serial / Model #: _____

Supplier Name: _____

Date Purchased: _____

READ THIS MANUAL

Inside you will find important information on how to use and maintain your OilSafe® Lubrication Work Center.

INTELLECTUAL PROPERTY

EXPLANATION OF SYMBOLS USED

This manual contains some common symbols and indications to alert you to specific areas of importance.

WARNING!

A situation that, if not avoided, could result in severe property damage, equipment damage, severe injury,or even death. FAILURE TO FOLLOW this warning will void your product warranty.

CAUTION!

A situation that, if not avoided, could result in property damage, equipment damage, or injury. FAILURE TO FOLLOW this caution will void your product warranty.

IMPORTANT:

This text will be used before text that has been designated as important to the proper installation, operation, or maintenance of your system. FAILURE TO READ and understand this text may result in improper installation, operation, or maintenance procedures and may void your warranty.

TIP:

This text will be used to highlight text that is helpful in the installation, operation, and maintenance of your system.

NOTE:

This text will be used to highlight text that is important to read to fully understand the terms and procedures used in this manual.

WARNINGS AND CAUTIONS

The OILSAFE® Lubrication Work Center is designed for the storage of machinery lubricating oils and other NON-VOLATILE fluids. STORAGE OF FLUIDS WITH A FLASHPOINT BELOW 150°F (65.5°C) IS STRICTLY PROHIBITED.

Components within this system consist of materials that may not be compatible with your fluid. ALWAYS consult your supplier and refer to the fluid manufacturer's Material Safety Data Sheet ("MSDS") before introducing a fluid to this system.

WARNING!

When replacing tanks, a Whitmore employee must be present to participate in, or supervise the removal of tanks on frames.

ALWAYS ensure the main power supply is first locked out and the system depressurized before any service is performed on this system. NEVER connect or disconnect lines or change filter elements or undertake any service work when this system is running or energized. SEVERE INJURY OR DEATH MAY OCCUR.

CAUTION!

System Operating Pressure should NEVER exceed 300 PSI. Operating pressures can be regulated by adjusting pump bypass relief valves located on pump heads to suit specific lubricant viscosities and temperatures.

IMPORTANT:

ALWAYS REFER TO THIS MANUAL OR CONSULT YOUR SUPPLIER FOR MORE INFORMATION.

- ALWAYS ensure that you wear appropriate Personal Protective Equipment ("PPE") when operating this system.
- ALWAYS ensure that all system hoses, filters, and fittings are securely fastened and in good working condition.
- THE FIRE SAFETY VALVES (LOCATED ON THE UNDERSIDE OF EACH TANK) MUST BE IN THE OPEN POSITION WHEN OPERATING THE SYSTEM AND IN THE CLOSED POSITION WHEN SERVICING THE SYSTEM.
- ALWAYS ensure that the System Pressure Return Hoses (discharging to the upper port on the rear face of each tank) are never restricted or damaged.
- THE BULK TANKS MUST ALWAYS BE VENTED TO ATMOSPHERE (preferably utilizing a Desiccant Air Breather).
- When filling Bulk Tanks from drums or barrels always ensure the grounding cable is connected to the drum or barrel before starting the pump.
- ALWAYS ensure the system is appropriately grounded to earth utilizing the grounding jacks provided at the rear base of the system, together with relevant grounding equipment as specified and installed by your authorized electrical personnel in accordance with your local and federal regulations and safety procedures.
- Ambient room temperature where the system is installed should be in the range of 60°F (15°C) TO 80°F (26°C) with optimum room temperature being 70°F (21°C). For ambient temperatures below 60°F (15°C) consult the manufacturer or your supplier for the supply of electric blanket heaters for oil barrels, pails, and bulk tanks to ensure stability of lubricant viscosity, condition, and system performance. Temperatures less than (<60°F / 15°C) can result in lubricant viscosity increasing above the rated ISO Code you specified at the time of order. Such adverse viscosity changes can cause higher system operating pressures than those set at the factory. System operating pressure should never exceed 300 PSI. Contact the manufacturer for more information prior to commissioning the system if the ambient room temperature will ever fall below 60°F (15°C).

WARNING!

FAILURE TO FOLLOW System installation, safety and operating instructions may result in SEVERE INJURY OR DEATH, damage to plant and equipment and void warranties.

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

Telephone: (972)771-1000
Fax: (972)722-3252
Email: sales@whitmores.com

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

Thank you for purchasing an **OilSafe® Lubrication Work Center**. This System was designed to store and dispense bulk lubricants in the workplace. The system was designed with quality in mind and is fully modular. The interchangeable series of tanks, frames, pumps, filters, and storage modules havebeen customized for your application. The installation, operation, and maintenance instructions in this document will provide you with all the information you will need for the lifetime of your system.

The system was specially configured per your specification. It features up to four standard tank sizes mixed and matched to your specifications, and color-coding to prevent cross-contamination and misapplication of fluids. Your system was designed to store and dispense lubricants up to ISO 680 (if specifiedat the time of order).

Throughout this document, we will be referring to each section of the system as a “Pod.” The section which includes the tanks and motors will be called the “Tank Pod” or “Pod-1” and the section which includes the Dispensing Taps, and the electrical power enclosure will be called the “Dispensing Pod”or “Pod-2.”

Each Tank Pod can contain many different varieties of tanks including:

- One - 240-gallon tank
- Two - 120-gallon tanks
- Four - 65-gallon tanks (shown in this manual)
- Six – 30-gallon tanks
- Combinations of these tanks can be configured for your system as desired, and number of Pods can be purchased to accommodate number of tanks required to meet your applications.

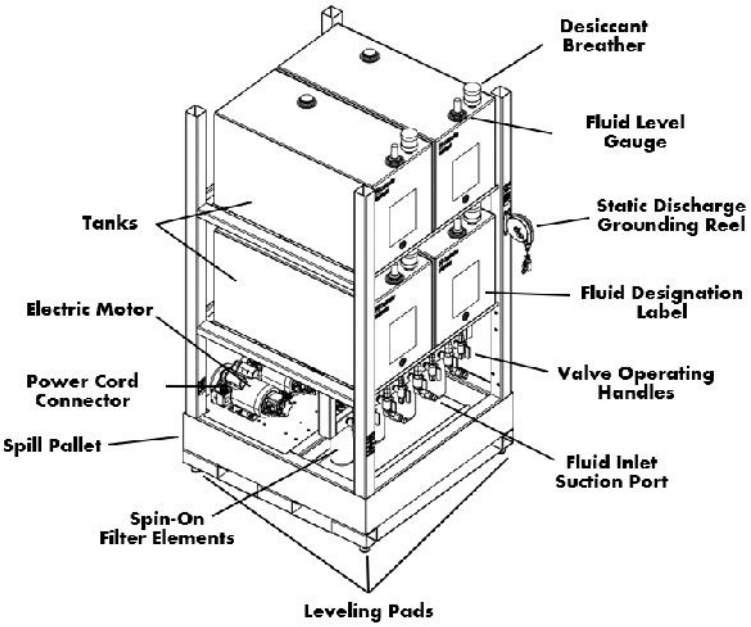
Each Dispensing Pod can contain up to six (6) Dispensing Faucets and four (4) Dispensing Reels. If a Tank Pod includes more than six (6) tanks, two (2) Dispensing Pods will be included with your system.

See Figure 1 and Figure 2 on page 6.

Please make sure operating valves are in “Recirculation” positions before start-up and at shutdown of units. This provides the lowest amp draw and system pressure, ensuring the safest conditions for operators during start-up and shutdown of the unit.

FIGURE 1: *Tank Pod (Pod-1)*

Electric



Pneumatic

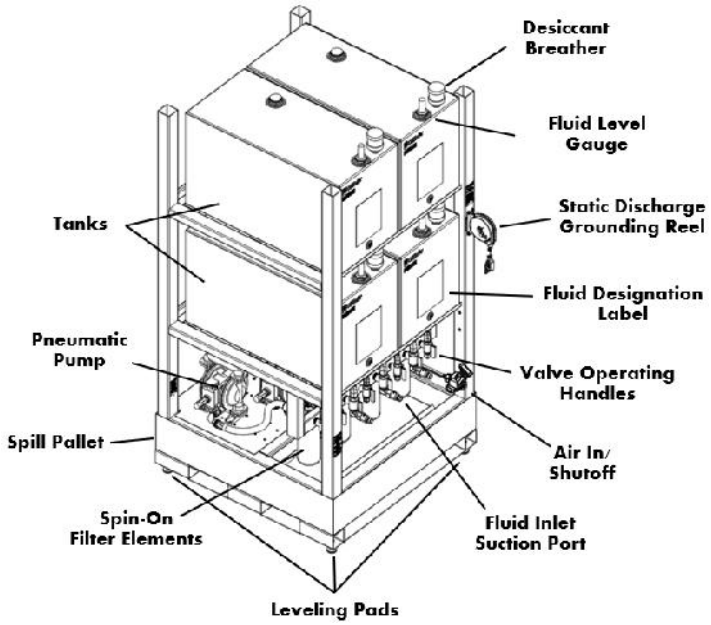
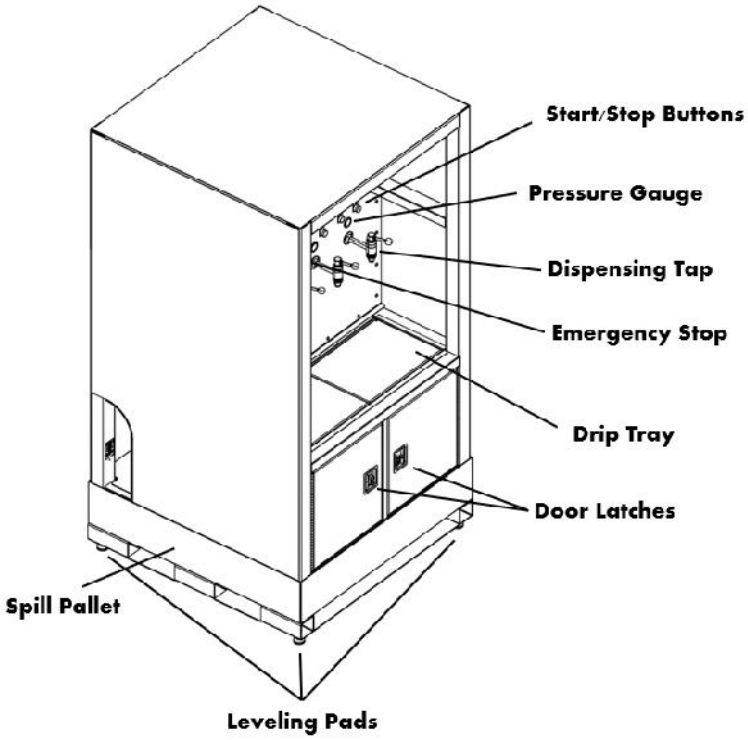
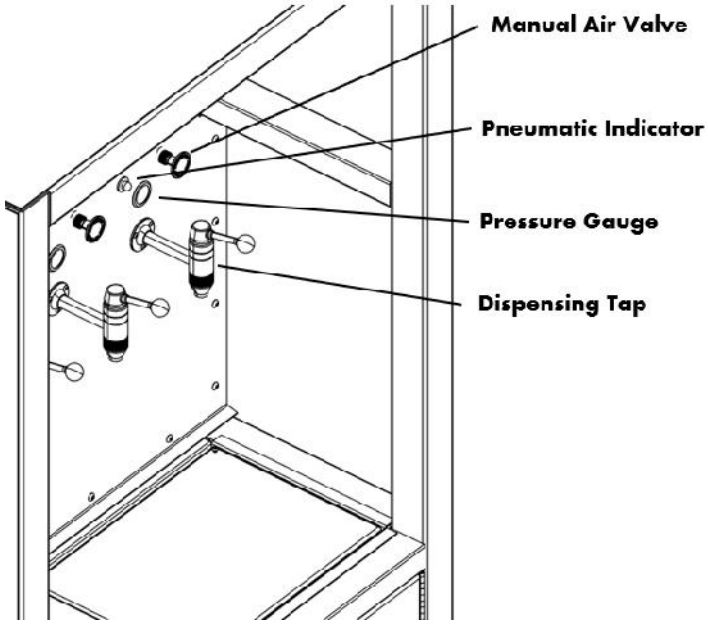


FIGURE 2: *Dispensing Pod (Pod-2)*

Electric



Pneumatic



PARTS AND PRE-INSTALLATION CHECK LIST

IMPORTANT:

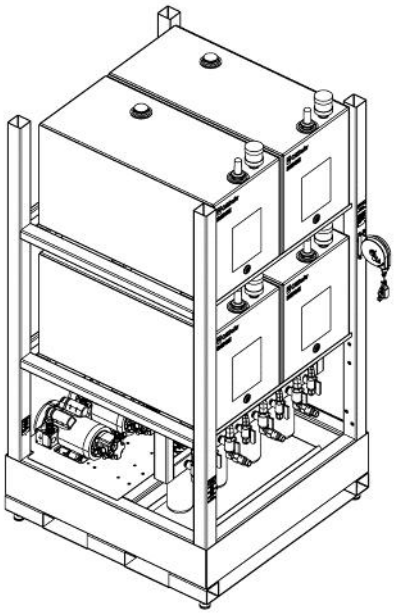
CHECK packaging list to ensure you have all applicable parts before continuing. CONTACT YOUR SUPPLIER if it appears any parts are missing or damaged. Refer to the specification sheet for your customized system for detailed system information including electrical requirements, and total weight of system.

Each system section is referred to as a “Pod” in this manual. Check that you have received the appropriate number of Pods for your order. Follow written instructions to assemble and install, prior to operating.

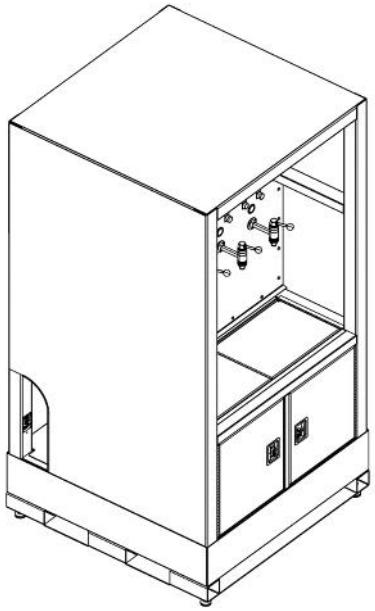
NOTE: For this manual, the Tank Pod/s will each be shown with four 65-gallon Bulk Tanks.

FIGURE 3: *Pod Designations*

POD-1:– *Tank Pod*



POD-2:
Dispensing Pod



Sample 4x65

- 4 Bulk Tanks 65-gallon size, color-coded per order specifications (pre-installed)
- 4 Motor/Pump (pre-installed)
- 4 Dispensing Taps (standard style comes with color-codedball knob, fire upgrade comes as a brass valve)
- 4 Spin-on Filter
- 4 Fluid Level Gauge
- 4 Desiccant Air Breather Air Filter
- 4 Suction Hose Assembly
- 4 System Pressure Gauge
- 4 Isolation Valve (pre-installed)

Optional Equipment

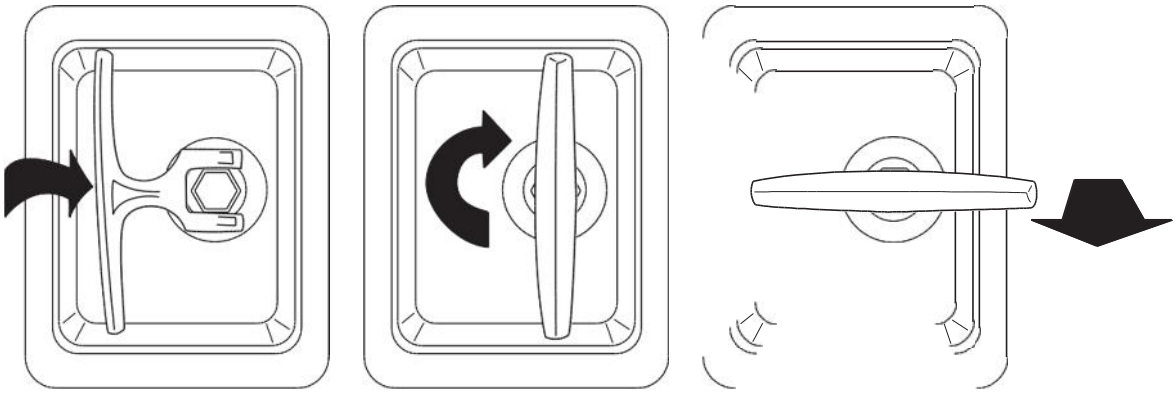
- 4 Fluid Level Gauge Overfill Alarm
- 4 Spill Pallet Connector Kit

Additional Features

Cabinet Handles

Your system includes additional features for the security and storage of your bulk fluids and other items. The cabinets are secured using a twist andpull type of handle which works as shown in **Figure 4.** The cabinet handles may or may not include a locking mechanism depending on your specific customization.

FIGURE 4: *Using the Cabinet Handles*



STATIC DISCHARGE GROUNDING REEL

Static Discharge Grounding Reels are used to ground static charges on service equipment during the transfer of combustible fuel and other flammable liquids. The Static Discharge Grounding Reels supplied with your OilSafe® System are spring operated automatic retrieve reels containing standard steel aircraft cable.

The reel is compact in design, for convenient mounting to your OilSafe® tank frame and provides a light, constant spring tension on the grounding cable, keeping the cable from becoming tangled.

The reels are constructed of steel and are equipped with a 100-ampere ground clamp and rubber covered bumper. An instant-acting lock and release provides operator convenience.

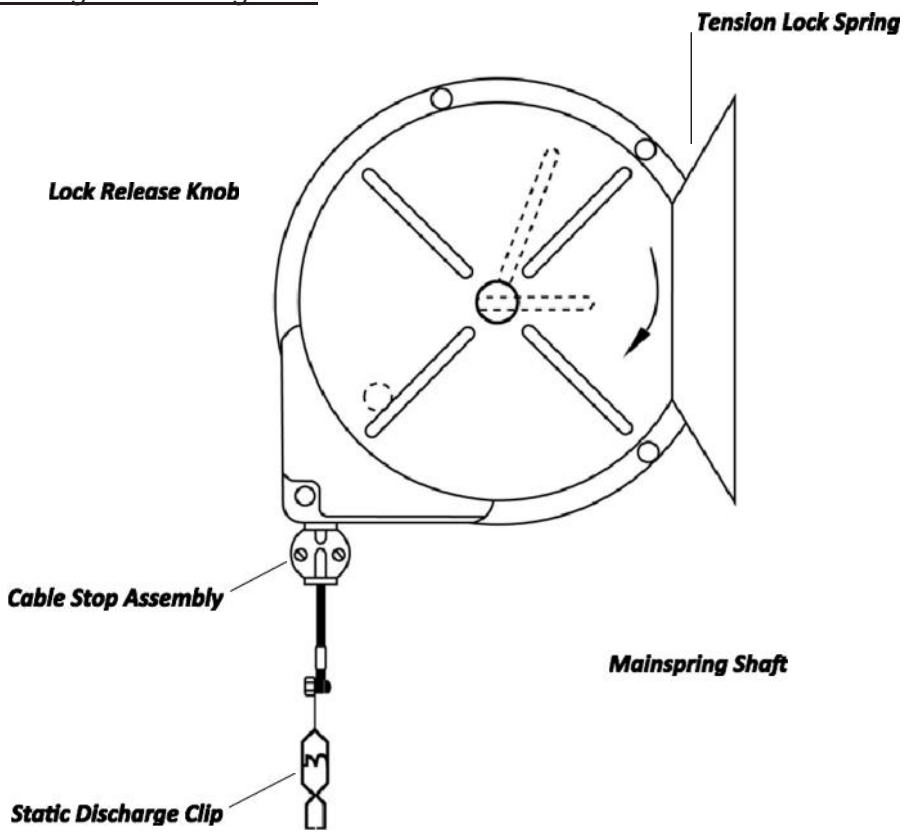
IMPORTANT:

CARE MUST BE TAKEN when reeling the cable back onto the reel. DO NOT let go of the cable – walk it back towards the reel, always keeping tension on the cable.

The cable stop assembly may be adjusted to any position. The mechanical locking device always works positively and, in all positions, regard-less of the cable retraction speed. The lock engages at the desired position by pulling the cable approximately ½". The lock release knob completely disengages the lock to constant tension. Care should be taken to mount the reel on the front face of the OilSafe® tank frame where threaded holes have been provided.

For instructions on use, see page 24.

FIGURE 5: *Static Discharge Grounding Reel*



Tools, Materials, and Personnel Requirements:

- A minimum of two people is recommended to complete installation and setup.
- Electrical hook-ups and installation should be completed by your authorized electrical personnel in accordance with all local and federal laws andregulations.
- A hand pallet truck is required to move each Pod into position.
- 1 - 1/2” wrench for connecting spill pallets.
- 3/4" wrench for system leveling/jacking bolts.
- 2 - 3/8" wrench to tighten Fluid Level Gauge.
- Personal Protective Equipment (“PPE”) should be worn when installing and operating this system.

Determine Placement:

1. The system should be installed indoors on a flat, level surface with sufficient load-bearing capacity to support the total system weight. **See Table 5on page 43.**
2. Each mains supply electrical enclosure, and each motor requires a separate power outlet. See your specification sheet (or system supply quotation)for electrical requirement details. Give consideration, to whether more than one pump could be running at the same time, in which case it is recommended that each power outlet be wired with independent circuits. CONSULT WITH AN AUTHORIZED AND TRAINED ELECTRICIAN.
3. BEFORE beginning installation, determine where your system will be installed and ensure sufficient power outlets have been installed at the rear ofthe system, positioned behind where the motors will be located. Each power outlet should be equally spaced along the wall and be placed approximately 12" up from floor level.
4. Pneumatically operated systems (in lieu of electrical) should be prepared with the same considerations, sizing pneumatic lines and circuitry following OSHA safety guidelines.

IMPORTANT:

- It is important to note the effect of the ambient temperature in which the system is placed for operation. System roomtemperature should be in the range of 60°F (15°C) TO 80°F (26°C) with optimum room temperature being 70°F (21°C).For ambient temperatures below 60°F (15°C) consult the manufacturer or your supplier for the supply of electric blanket heaters for oil barrels, pails, and bulk tanks to ensure stability of lubricant viscosity, condition, and system performance.
- Temperatures less than (<60°F / 15°C) can result in lubricant viscosity increasing above the rated ISO Code you specified at the time of order. Such adverse viscosity changes can cause higher system operating pressures than those setat the factory.
- System operating pressure should never exceed 300 PSI. Normal system operating pressure should be less than 240 PSI. Operating pressures above 240 PSI will necessitate adjustment of the pump pressure relief bypass valve located on the pump head.
- Contact the manufacturer for more information prior to commissioning the system if the ambient room temperature willever fall below 60°F (15°C).

INSTALLATION

DANGER

CAUTION!

Personal Protective Equipment (“PPE”) should be worn when installing and operating this system.

System Operating Pressure should NEVER exceed 300 PSI. System operating pressures can be regulated by adjusting pump bypass relief valves located on pump heads to suit specific lubricant viscosities and temperatures.

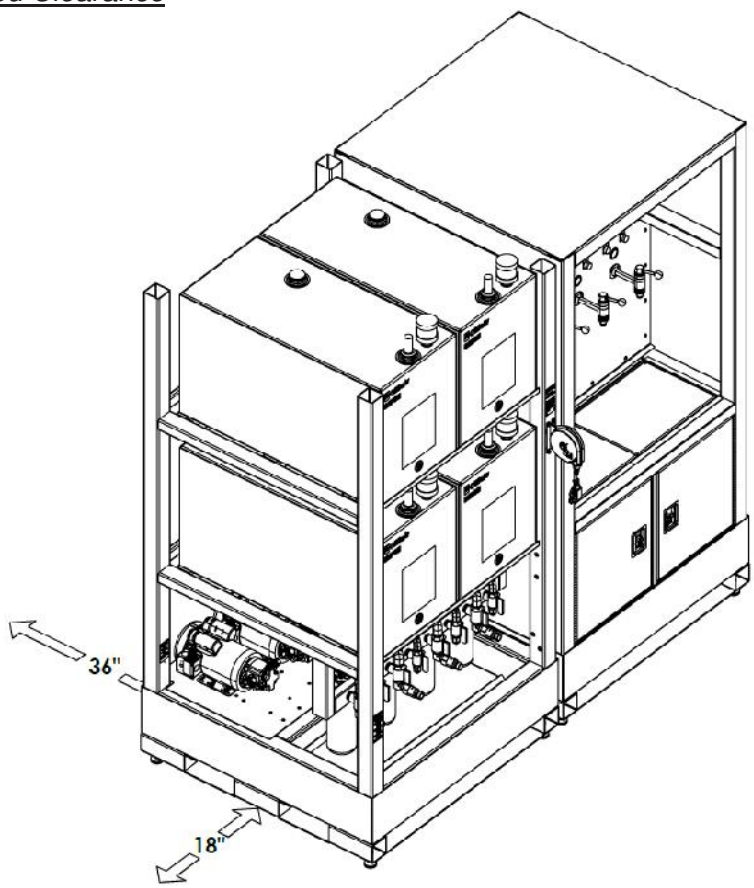
System SHOULD NOT be operated in a location with an ambient room temperature less than 60°F/15°C Contact the manufacturer for more information relating to service in cold environments.

STEP 1. The system is delivered pre-assembled, packaged, and serialized. Each frame is assigned a dash number, after the serial number. Serial numbers are all located on backside of each frame. These serial numbers also indicate the respective pod/frame position from left to right, when viewed from the front side of the frames.

STEP 2. Locate Pod-1 and remove and appropriately dispose of the freight packaging.

STEP 3. Using a suitable hand pallet truck, position Pod-1 into its service position, ensuring that there is at least 36" of free clear space at the rear and18"on side of the system. This will enable personnel to access the system for service work. **See Figure 6.**

FIGURE 6: *Recommended Clearance*



STEP 4. Using a level and the provided jacking bolts in the base frame, adjust Pod-1 until it is level from front to back, side to side, and top to bottom.

Check to ensure it is square to any adjacent rear or side walls.

STEP 5. Locate Pod-2 and remove and appropriately dispose of the freight packaging.

STEP 6. Using a suitable hand pallet truck, position Pod-2 to the right of Pod-1 so that the spill transport pallets are square and flush next to one another.

See Figure 7 and Figure 8.

STEP 7. Using a level and the provided jacking bolts in the base frame, adjust Pod-2 until it is level from front to back, side to side, and top to bottom,and square with the adjacent Pod.

FIGURE 7: *Pod-2 Placement*

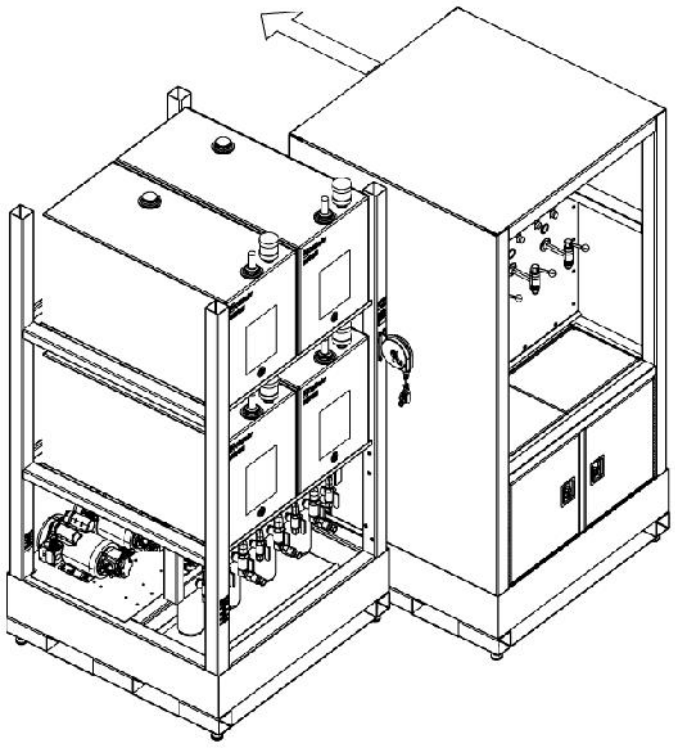
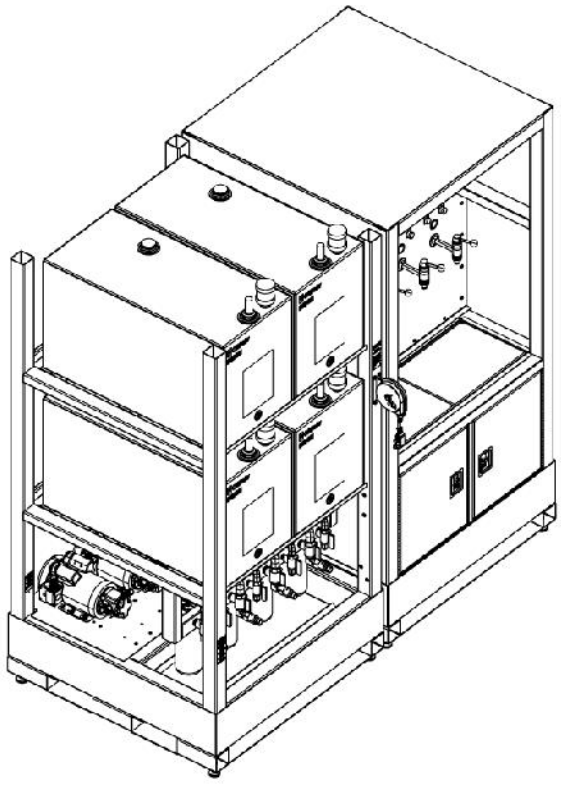


FIGURE 8: *Final Pod Positioning*



DANGER

CAUTION!

ALWAYS keep hands and feet clear of mating and moving parts when moving the Pods into position.

Optional Equipment - Spill Containment Connector Kit

OilSafe® Bulk Systems are configured to allow the containment pans to be joined together at the back of each frame simply by ordering an **optional Spill Containment Connector Kit.** The kit can be installed in a few minutes and is easily disconnected if it becomes necessary to move frames.**See Figure 9.**

FIGURE 9: *Spill Containment Connector Kit*

SPILL CONTAINMENT CONNECTOR KIT	PART # 'S
2 - Pod Connector Kit	821352
3 - Pod Connector Kit	821353
4 - Pod Connector Kit	821354
5 - Pod Connector Kit	821355
6 - Pod Connector Kit	821356

Hoses

STEP 8. Proceed to the rear of the Dispensing Pod and locate the ¼" hydraulic hoses that are connected to the system pressure gauges. There is one hosefor each gauge.

NOTE: Each hose will be labeled at the open end to correspond to its related Bulk Tank.

STEP 9. Carefully feed the open end of the pressure gauge hose through the lower side wall of the relevant adjoining Tank Pod. **See Figure 10** **STEP 10.** Connect the pressure gauge hose to the tee connection at the Spin-on Filter assembly for the corresponding Bulk Tank. **See Figure 11.**

FIGURE 10: *Pressure Gauge Hose (Rear View of System)*

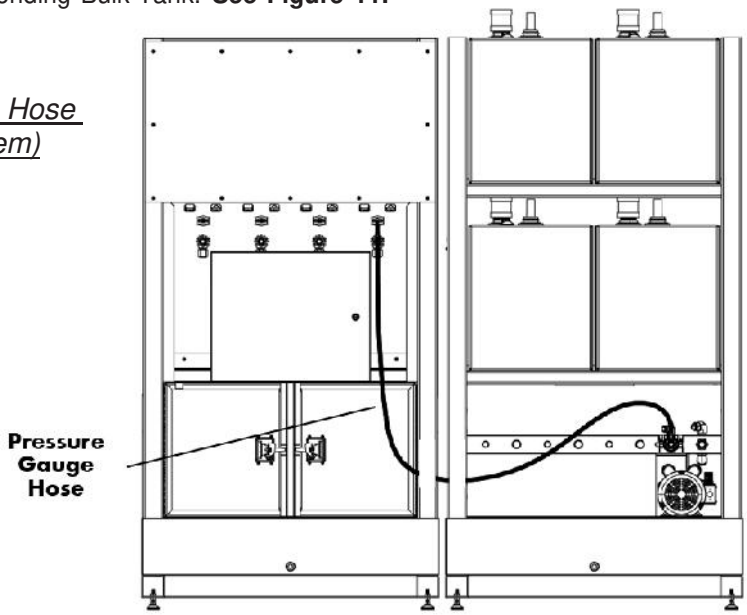
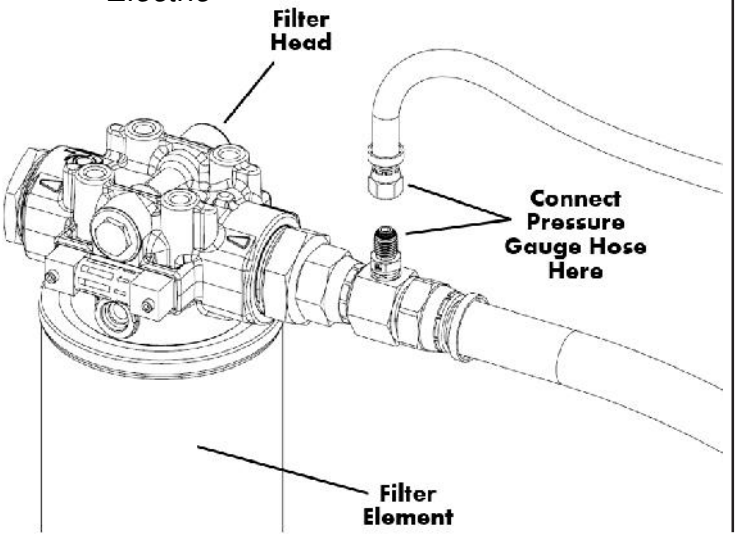
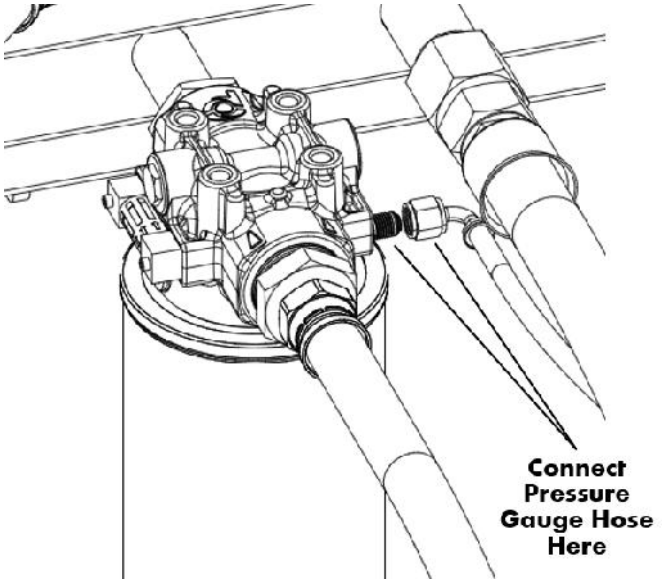


FIGURE 11: *Attach Pressure Gauge Hose (Rear View of System)*

Electric



Pneumatic



STEP 11. Tighten the hose connection fitting securely.

TIP: Start with the hose closest to the adjoining Tank Pod, and thread the hose through the shortest available path. Follow this process with all pressure gauge hoses.

STEP 12. Repeat **Steps 9 – 11** for each Pressure Hose.

STEP 13. At the rear of the Dispensing Pod, locate the ¾" dispensing hoses that are connected to the Dispensing Faucets. There is one (1) hose foreach faucet.

NOTE: Each hose will be labeled at the open end to correspond to its related Bulk Tank.

STEP 14. Carefully feed the open end of the dispensing hose through the lower open side wall of the relevant adjoining Tank Pod. **See Figure 12.**

STEP 15. Connect the Dispensing Hose coming from the faucet to the threaded discharge port of the corresponding 3-way diverter operating valveat the front of the Tank Pod for the relevant Bulk Tank. **See Figure 13.**

STEP 16. Tighten the hose connection fitting securely.

TIP: Start with the hose closest to the adjoining Tank Pod, and thread the hose through the shortest available path. Follow this process with all Dispensing Hoses.

STEP 17. Repeat **Steps 13 – 16** for each Dispensing Hose.

FIGURE 12: *Dispensing Hoses*

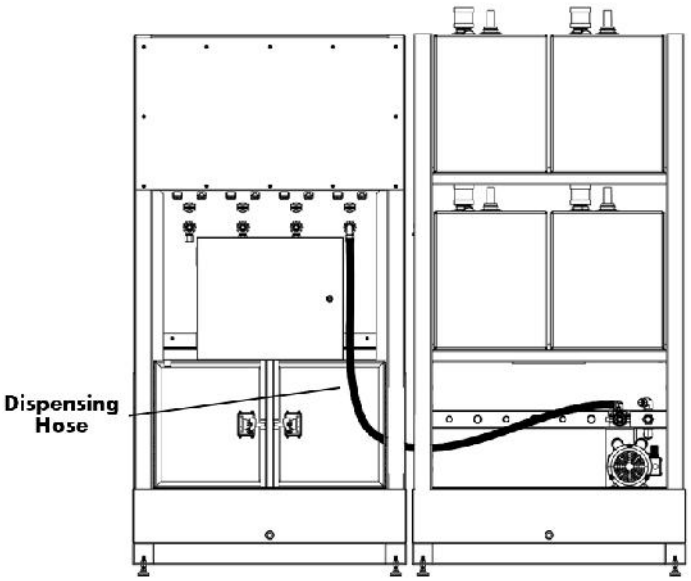
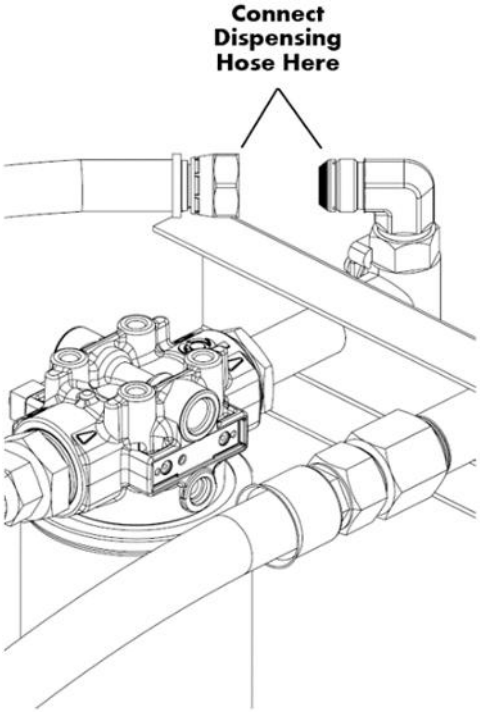


FIGURE 13: *Attach Dispensing Hose (Rear View of System)*



STEP 18. Installing the Fluid Level Gauges **See Figures 14a & 14b and Figure 15 for details.**

a. Unscrew and remove the red plastic locking nut from level gauge.

b. Remove the clear calibration tube.

c. Gently pull up the red indicator disc.

d. Carefully insert the float assembly into the tank.

e. Screw the aluminum bushing into the tank port until tight and ensure the arrows on the flat side of the hex bushing are pointing toward the back wall of the tank.

f. Gently raise & lower red indicator disc to ensure the float mechanism is free and clear inside the tank.

g. Reinstall the clear calibration tube.

h. Fasten the red locking nut (as illustrated).

FIGURE 14a: Install Fluid Level Gauges

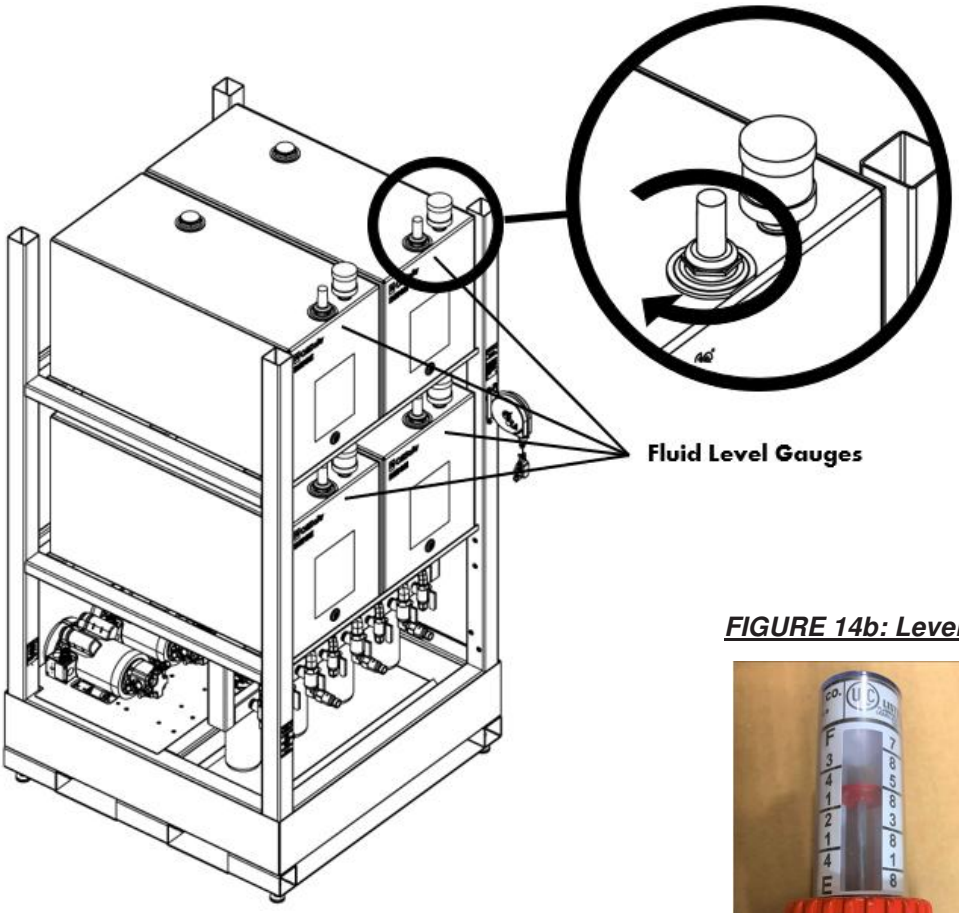


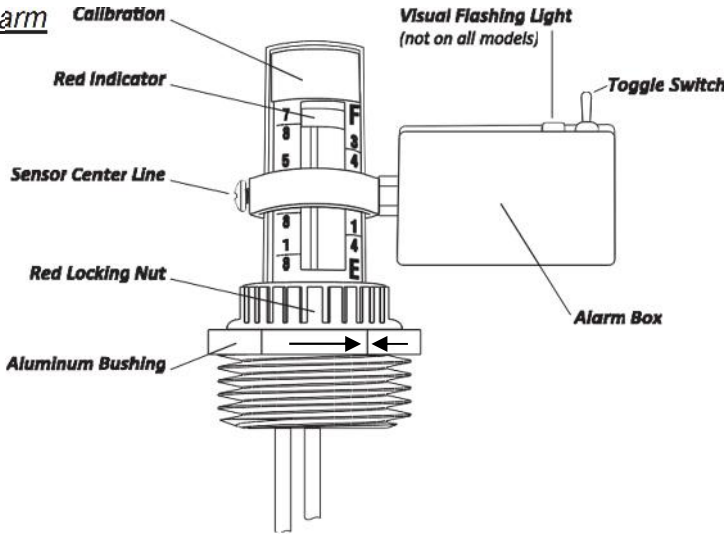
FIGURE 14b: Level gauge alignment arrows

NOTE: For tanks with overfill alarms, follow **STEPS 21 - 26** to install your overfill alarm.

STEP 19. If this is an initial installation, and you ordered your bulk system with an overfill alarm, proceed to **STEP 27.**

STEP 20. To install the alarm on an existing gauge, first install the magnet (provided) on your gauge.
See Figure 15 for Alarm details.

FIGURE 15: *Overfill Alarm*



STEP 21. Remove the red locking nut that holds the top of the gauge in place. After you remove the nut, you will be able to remove the calibration (the plastic tube that shows your tank level) and you should have access to the red indicator. Pull the indicator off by pulling gently upward.

STEP 22. Make a mark on the indicator rod ½" from the top. Take the small metal clip (provided) and push it onto the rod down to the mark. Then pushthe magnet onto the same rod until it is sitting flush on top of the small metal clip (you may have to file off any burrs on the end of the rod to fit the magnet onto the rod.)

STEP 23. Once the clip is installed with the magnet on top of it, you will then reinstall your red indicator. Be sure to use the new red indicator provided with the alarm and discard the old indicator.

STEP 24. Install the 9-volt lithium battery into the alarm box.

STEP 25. Loosen the set screw located on the aluminum ring of your alarm. Slide the ring over the calibration down to the center line level where you wish the alarm to activate and tighten the set screw to hold the alarm in place.

STEP 26. The switch located on the alarm can be used to silence the audible alarm (where fitted) after it goes off. It will automatically reset to re-alarm when the magnet moves back out of the alarm area. The switch can also be used to test the battery. Toggle it once to activate it and once moreto reset it.

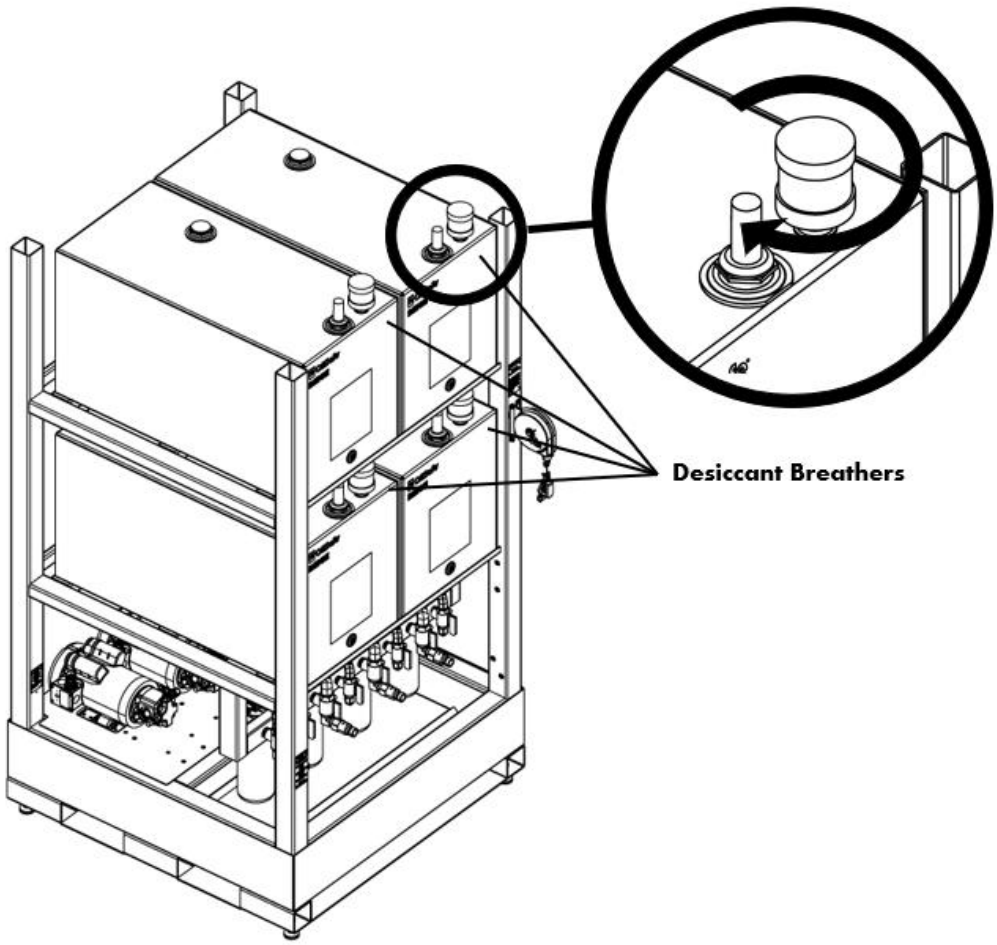
IMPORTANT:

- The Switch is a toggle switch. It is meant to be moved left and right. **DO NOT push down on the toggle switch**.

Installing the Desiccant Air Breather (See Figure 16 for details)

STEP 27. Remove desiccant air breather from sealed plastic packaging bag. Remove white elastic band from top of desiccant air breather. Remove red plastic cap plug from bottom side of desiccant air breather. Screw (clockwise) desiccant air breather onto ½" male pipe fitting atop oil tank.

FIGURE 16:



STEP 28. Ensure spin-on filters are proper selection for each tank/oil viscosity and ensure each is properly tightened before use.

IMPORTANT:

- Write the installation date on each spin-on filter element. The first filter should be replaced after the first 50 hours of system service. Subsequent filters should be replaced per the instructions in the **Maintenance Section of this manual, on page 30.**

STEP 29. Install the Static Discharge Grounding Reel securely to the front face of the Tank Pod (Pod-1) frame using the threaded holes provided in theframe and the mounting bolts supplied with the reel.

STEP 30. Pull the grounding cable out to determine if the tension is sufficient for the intended use.

a. If additional tension is needed, apply a wrench to flats on the mainspring shaft, rotating counterclockwise until the desired tensionis reached.

b. If mainspring tension is too high, it may be decreased by depressing the tension lock spring on the opposite side of reel. **DO NOT** removemore tension than desired. If too much tension is removed, increase tension as described above.

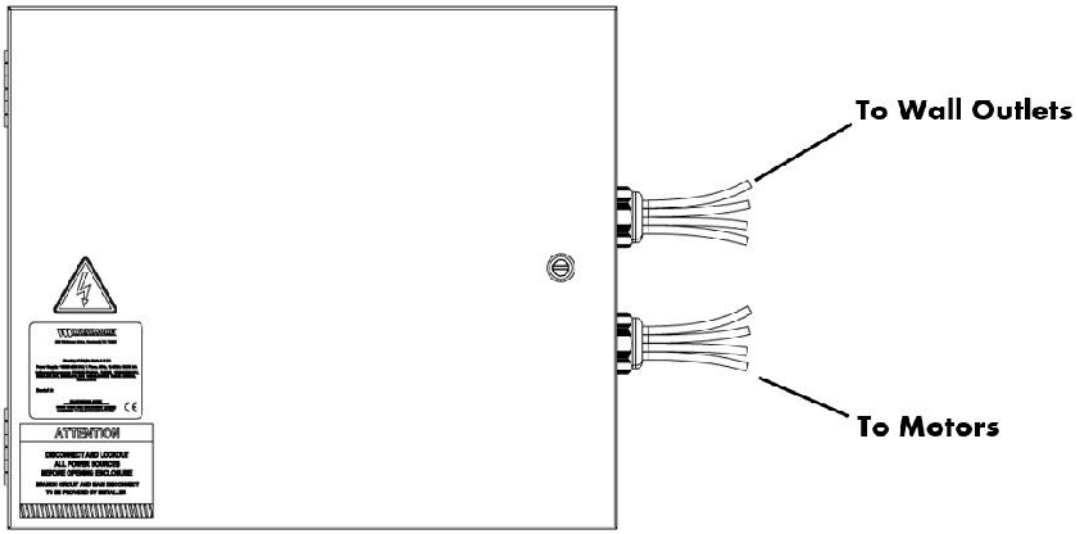
POWER INSTALLATION

ELECTRICAL INSTALLATION (For Pneumatic systems, proceed to page 22)

STEP 1. **THE SYSTEM SHOULD BE GROUNDED BEFORE USE.** Grounding Lugs are provided at the rear base of the system on the inner face of theframe uprights. At the rear of the system, locate the female power supply cord(s) coming from the electrical - enclosure. **See Figure 17.**

NOTE: Each cord will be labeled at the female end to corresponding electric motor.

FIGURE 17: *Electrical Enclosure (Rear View of System)*



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.

The following instructions should be carried out by trained and authorized electrician or electrical personnel in accordance with your local and federal regulations and safety procedures. **Always** ensure the system is appropriately grounded to earth utilizing the grounding lugs provided at the rear base of thesystem, together with relevant grounding equipment as specified and installed by your authorized electricalpersonnel.

STEP 2. Feed the power cord from electrical enclosure to the corresponding electric motor. **See Figure 18.**

STEP 3. Connect the power cord to the threaded power inlet of the corresponding motor. Line up the power cord connector to fit into the power inlet ofthe motor. **See Figure 19.**

STEP 4. Tighten electrical connector clockwise, hand tight.

TIP: Start with the power supply cord closest to the adjoining Tank Pod and feed the cord through the shortest availablepath. Follow this process with all power cords.

STEP 5. At the rear of the system, locate the male power supply cord coming from the electrical box. Repeat steps 2-4 for each electric motor.

NOTE: There is one power supply cord from electrical box, for each electric motor.

STEP 6. Plug the power cords into the individual wall outlets as designated in the specification sheet.

STEP 7. Ensure the Emergency System Stop Button on the Faucet Panel is in the on position (pulled outward).

FIGURE 18: *Feed Power Cord (Rear View of System)*

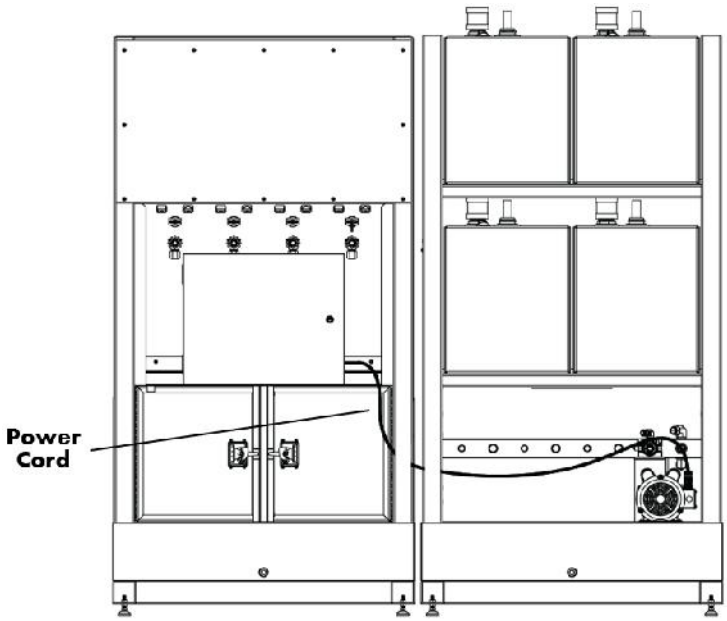
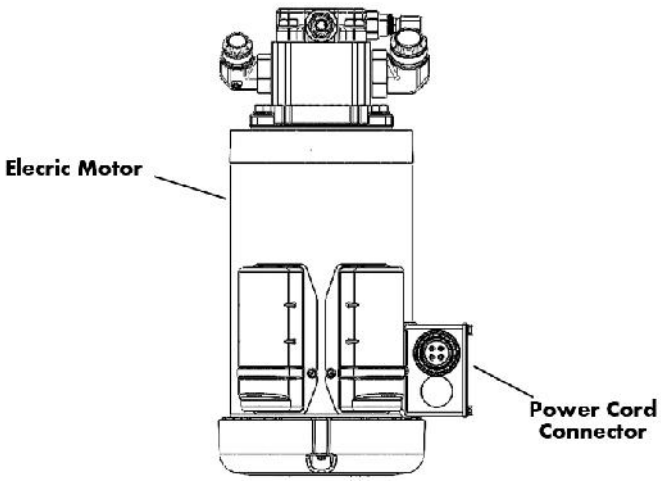


FIGURE 19: *Motor Top View*



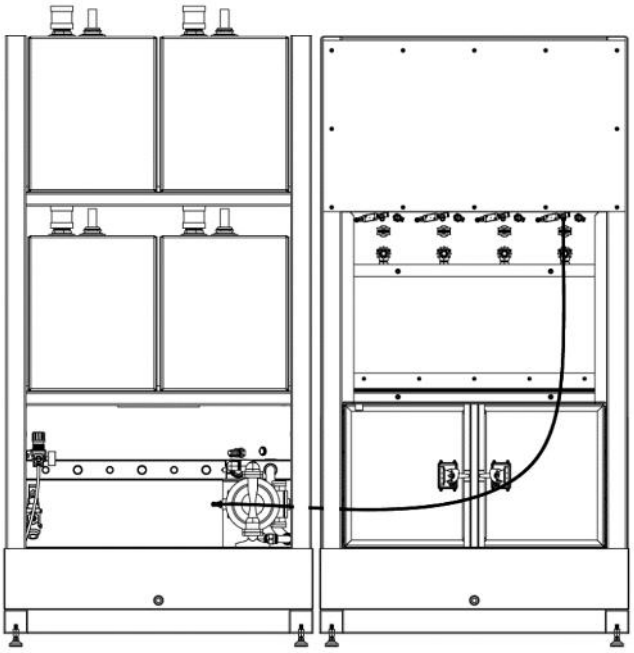
PNEUMATIC SYSTEMS

WARNING!

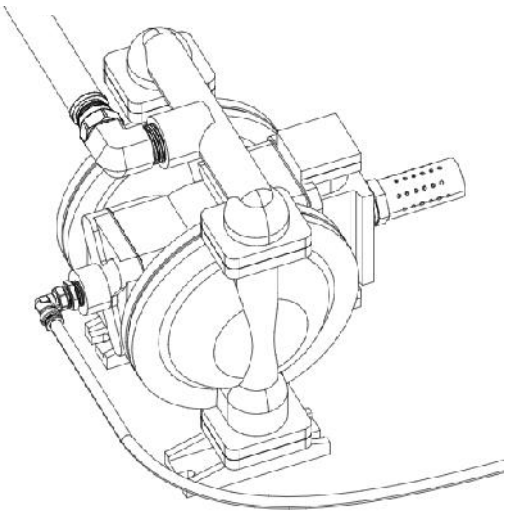
Always ensure compressed air is properly locked-out, according to OSHA regulations before proceeding.

STEP 1. Feed the air-line from the pneumatic pump to the outlet portion of the corresponding air valve fitting behind the control panel. (air lines are numbered for convenience.) **See Figure 20.**
STEP 2. Push the air-line into the fitting to ensure a proper connection.

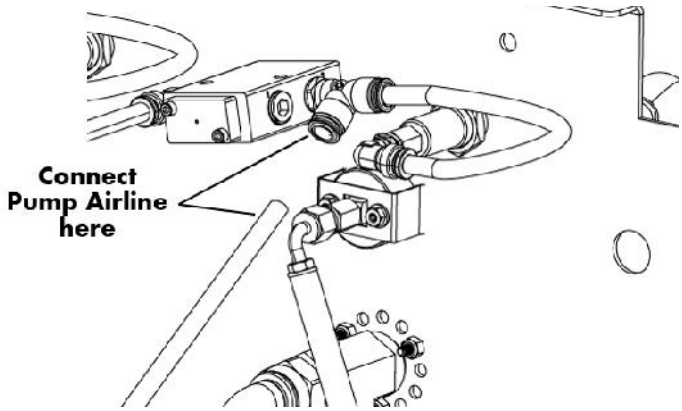
FIGURE 20: *Air-line from control panel to pump (Rear View of System)*



Connect air line from pump…

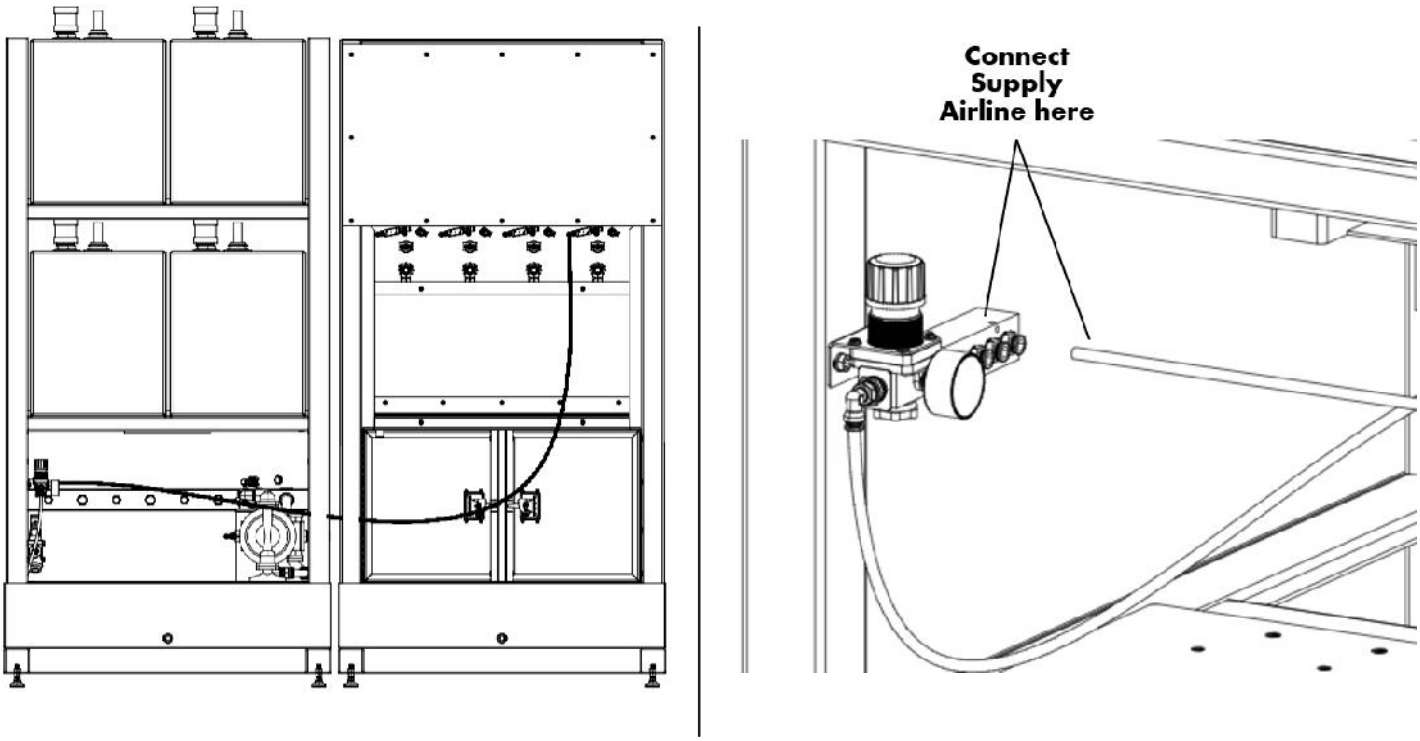


To outlet portion of valve behind control panel



STEP 3. Feed the air-line from the inlet portion of the corresponding air valve behind the control panel to the manifold by the air regulator. **See Figure 21.**

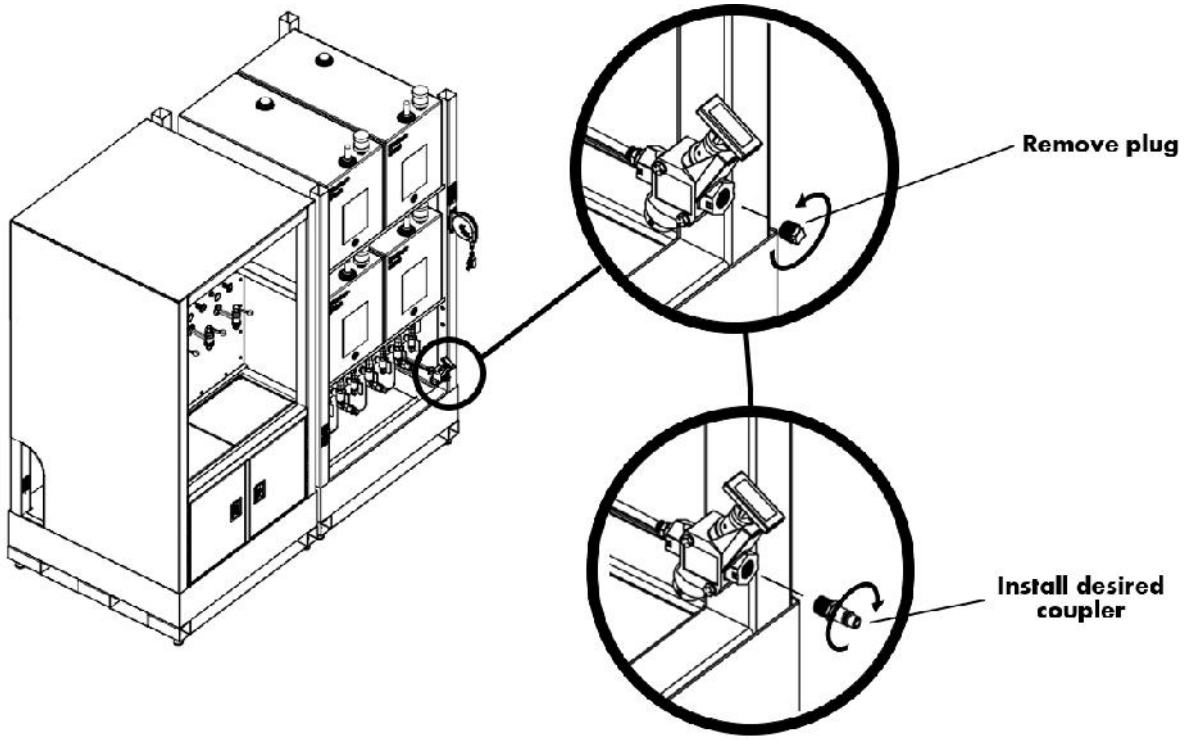
FIGURE 21: *Air-line from manifold to control panel (Rear View of System)*



STEP 4. At the front of the system, unscrew the plastic plug from the ½" female NPT port on the inlet air valve. **See Figure 22.**

STEP 5. Fasten the desired coupler into the front ½" female NPT port on the inlet air valve at the front of the system.

FIGURE 22: *1/2" Female NPT port for incoming air. (Front View of System)*



INITIAL OPERATION

IMPORTANT:

- **Follow these steps the very first time you use your system.**

WARNING!

The Tank Isolation Valves (located on the underside of each tank) must be in the open position whenoperating the system and in the closed position when servicing the system.

CAUTION!

Personal Protective Equipment (“PPE”) should be worn when installing and operating this system. ALWAYS monitor the system whenever the pump is running, or fluid is dispensing.

System Operating Pressure should NEVER exceed 300 PSI. System operating pressures can be regulated by adjusting pump bypass relief valves located on pump heads to suit specific lubricant viscosities and temperatures.

System SHOULD NOT be operated in a location with an ambient room temperature less than 60°F/15°C Contact the manufacturer for more information relating to service in cold environments.

The first time the system is used there will be some air that has been trapped in the hoses. This is normal and will not affect the system. Simply wait for theair to stop coming out of the lines and fluids to dispense normally before continuing. If air continues to come out of the hoses after the initial use, there maybe a problem with a seal or a hose. **See the Troubleshooting Section (page 33)** of this manual or contact your supplier for additional support. Ensure that the Tank Isolation Valves located on the underside of each tank are in the open position before continuing.

Using the Operating Valve Handles & Modes of Operation

Each tank assembly has two operating valve handles located on the front of the Tank Pod. The position of these handles will determine how your systemwill pump the fluid. There will be a placard on the front of the Tank Pod indicating which position the handles will need to be in for each setting.

To fill the tank(s) – place both valves in the “UP” position, so the handle is parallel to the ground. To re-circulate the fluid in the tank(s), turn the left-sidehandle (above the inlet valve) so it is perpendicular to the floor, and keep the right-side handle parallel to the floor. To dispense the fluid in the tank(s) (normal operation), turn both handles to be perpendicular to the floor.

OPERATING VALVE POSITIONS

FILL	RECIRCULATE	DISPENSE
Left – Up	Left – Down	Left – Down
Right – Up	Right – Up	Right – Down

Filling the Tank(s) (See Figure 20 and Figure 21 for details)

STEP 1. Locate the Suction Hose Assembly. Each tank will have its own individual Suction Hose Assembly. **See Figure 20.**

STEP 2. Place the tube-end of the Suction Hose Assembly into the oil drum or container (55-gallon drum). **See Figure 21.**

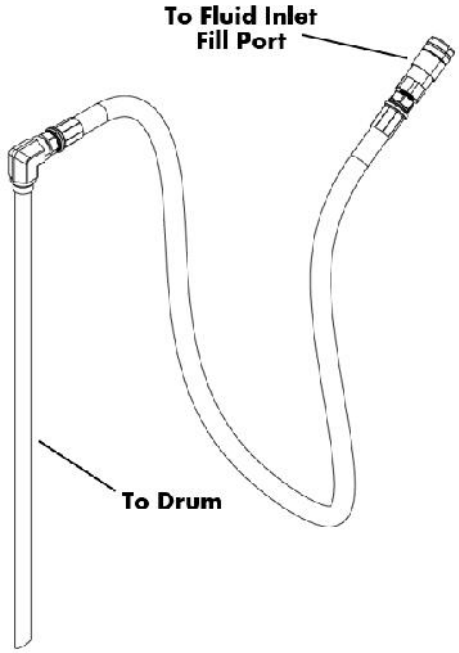


FIGURE 20: *Suction Hose Assembly(above)*

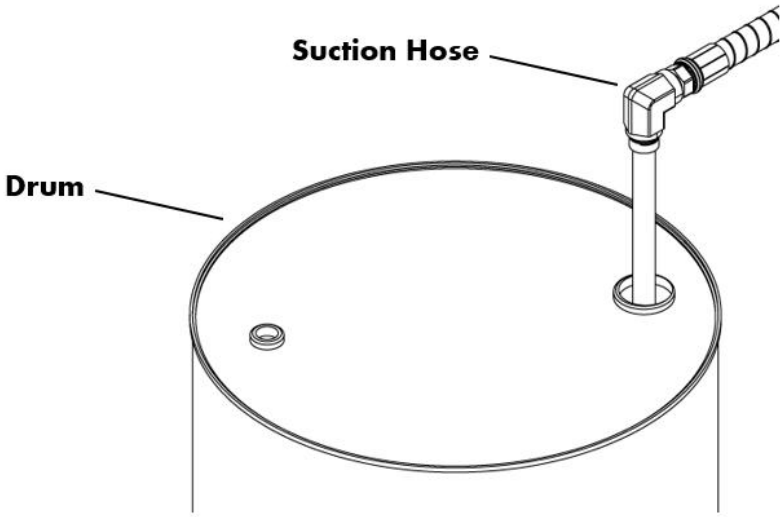
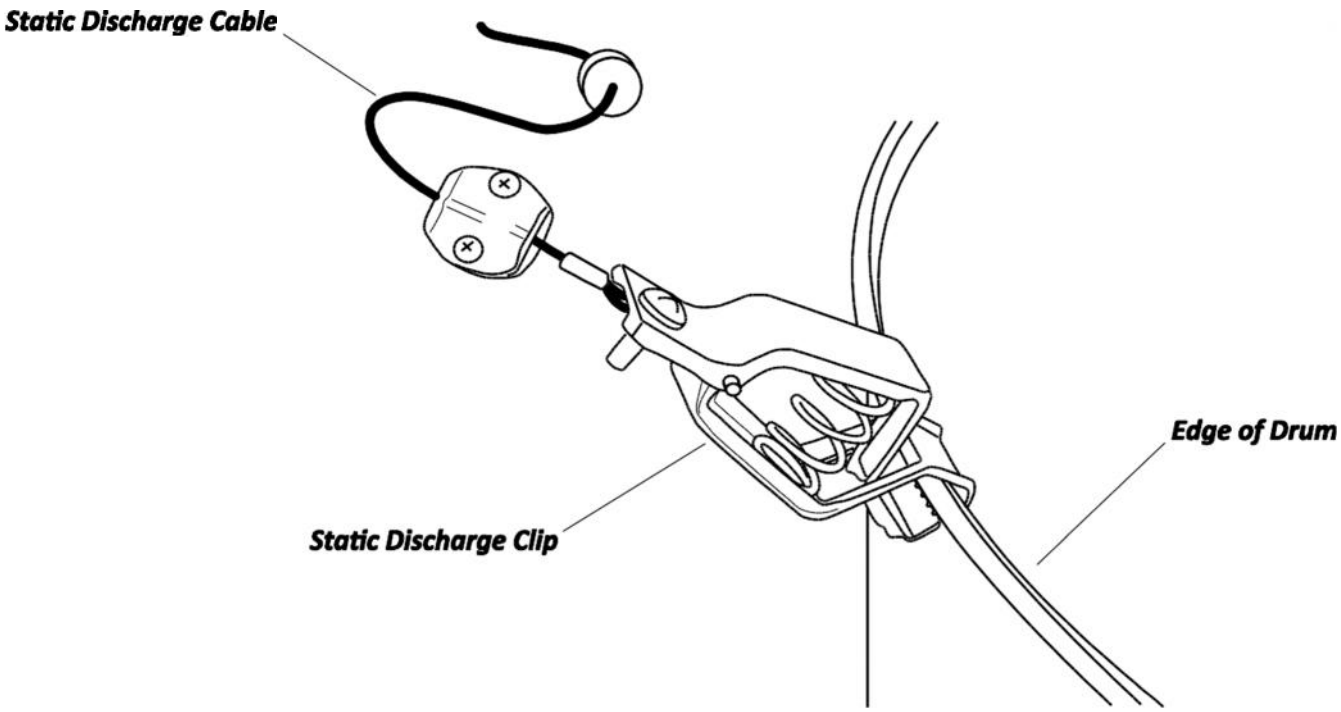


FIGURE 21: *Placement in drum(below)*

Filling the Tank(s) (See Figure 22 for details)

STEP 3. Attach the Static Discharge Cable to the drum. **See Figure 22.**

FIGURE 22: *Attach Static Discharge Cable*



DANGER

CAUTION!

When filling Bulk Tanks from drums or barrels always ensure the Static Discharge Clip is connected to thedrum or barrel before starting the pump.

Filling the Tank(s) (See Figure 23 and Figure 24 for details)

STEP 4. Remove dust cap from quick disconnect. **See Figure 23.**

STEP 5. Connect ¾" color-matching quick disconnects (Suction Hose & LWC frame). **See Figure 24.**

STEP 6. Put the operating valve handles for the tank in the "Fill" position (up and up).

STEP 7. Press the START button above the corresponding Dispensing Faucet to begin loading the Bulk Tank.

STEP 8. Monitor the Bulk Tank Fluid Level Gauge to avoid over filling of tank.

STEP 9. When the tank is full, raise the suction tube vertically out of the oil drum and allow the pump to pull through any residual oil remaining in thesuction hose assembly then press the STOP button above the Dispensing Faucet to turn off the pump.

STEP 10. Separate ¾" quick disconnects, replacing dust caps over each connector half. Then then store the suction hose assembly for future use.

STEP 11. Remove the Static Discharge Clip.

FIGURE 23: *Remove Fill Port Inlet End Cap*

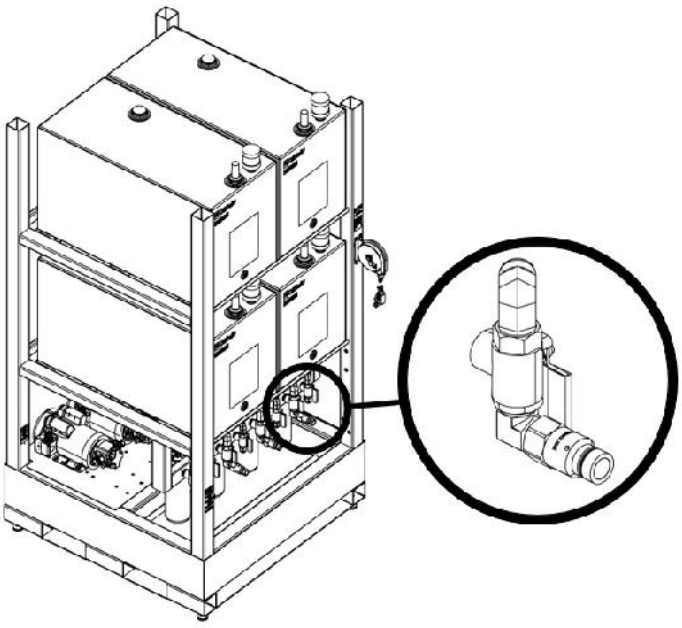
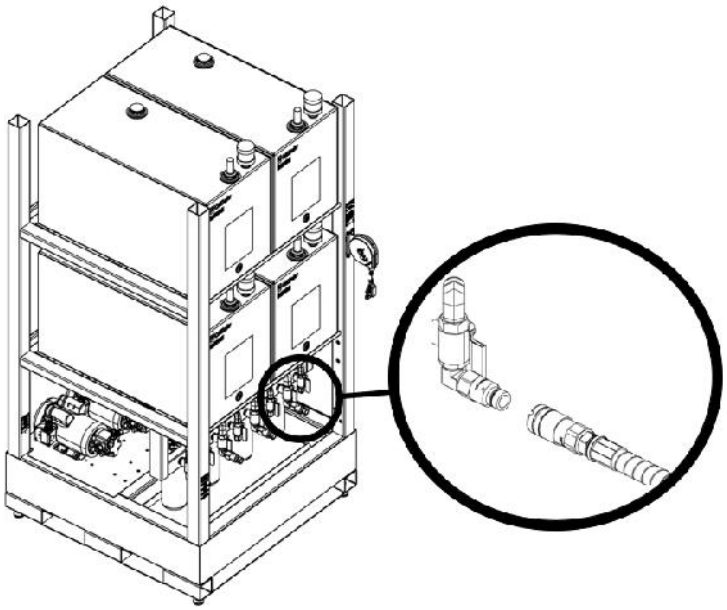


FIGURE 24: *Attach Suction Hose Assembly to Fill Port Inlet*



DANGER

CAUTION!

Care must be taken when reeling cable back onto the reel. **DO NOT** let go of the cable – walk it back towards the reel, always keeping tension on cable.

NOTE: OilSafe recommends an initial Re-Circulation ("Kidney-Loop") of the fluid at the first fill, to pre-filter oils before they are consumed or used. Refer to Re-Circulation ("Kidney-Loop") Cycle Time Guide in the **Data Tables section (page 43)** for approximate run timesto complete single pass filtration of each tank.

Re-Circulation ("Kidney-Loop") Mode

STEP 12. Put the operating valves in the "Re-Circulate" configuration – (left "DOWN", right "UP").

STEP 13. Press start button to run each filled Bulk Tank for the approximate times set out in the Re-Circulation ("Kidney-Loop") Cycle Time Guide table in the **Data Tablessection (page 43).**

Dispensing Mode

STEP 1. Place valve handles into Dispense Mode, then press START to start the pump.

STEP 2. Place a clean fluid transfer or storage container under the dispensing tap.

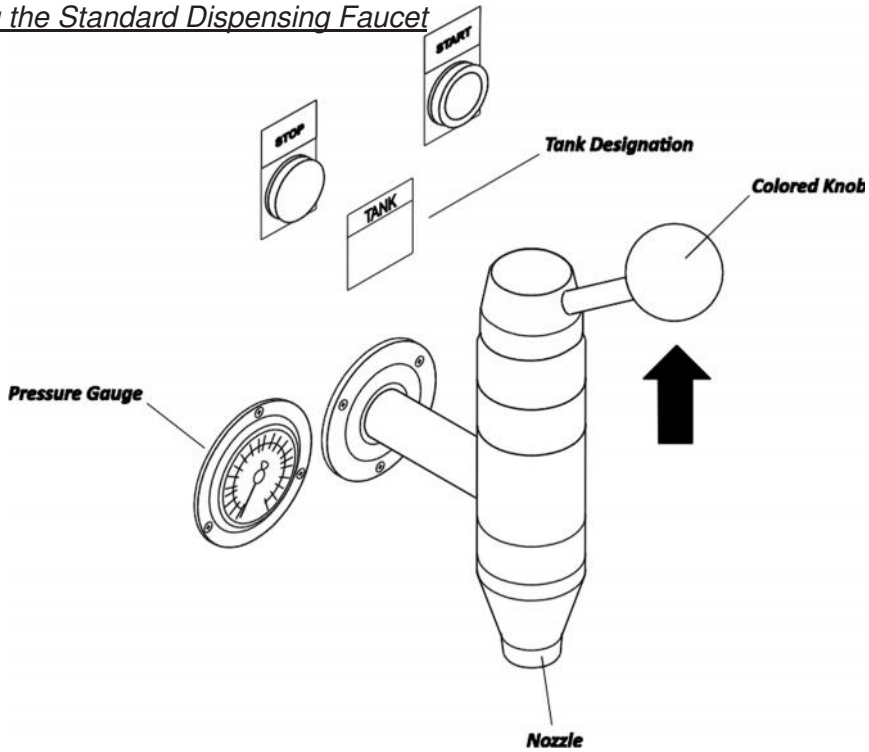
STEP 3. Lift up on the handle **See Figure 25 (standard faucet style illustrated)**.

STEP 4. Release the handle and the flow will stop.

STEP 5. Press STOP to stop the pump.

STEP 6. Return valve handles to Recirculation Mode.

FIGURE 25: *Operating the Standard Dispensing Faucet*



Dispensing Mode (continued)

NOTE: Due to air that has been trapped in the hoses during assembly, air will come out of the faucet initially.

Keep the faucet in the open position until fluid is flowing at a steady pace.

CAUTION!

Do not wedge anything under the handle to force it to stay open.

NOTE: Leaving the pump running against a closed Dispensing Faucet will not cause a pressure problem with theSystem, provided the pump pressure bypass relief valves on each pump have first been set to suit the oil viscosity and ambient room temperature, as the fluid will bypass back to the corresponding Bulk Tank via the pump bypass pressure return hose.

Normal System operating pressure should be less than 240 PSI when pumping against a closed faucet and should never exceed 300 PSI. Refer to the Trouble Shooting section at the rear of this manual for the bypass valve pressure setting procedure should your system operating pressure require adjustment. When the system is running, it should ALWAYS be monitored.

Using the Dispensing Reels

NOTE: Dispensing Reels are optional equipment. If you have ordered Dispensing Reels with your system,they will be located within the cabinet directly under the Dispensing Faucets. **See Figure 26.**

STEP 1. Place valve handles into Dispense Mode, then press START to start the pump.

STEP 2. Pull on the handle to extend the fluid hose to the desired location or place a container under the nozzle.

STEP 3. Put the nozzle in the required location, ensuring it is secure.

STEP 4. Pull on the red trigger to dispense the fluid.

NOTE: Due to the air that has been trapped in the pipes during assembly, air will come out of the faucet initially.

Keep the trigger pulled until the fluid starts to flow at a steady pace.

STEP 5. To lock the trigger in open position, squeeze trigger and press the red button on the side of the gun. Squeeze trigger again to disengage the lock. **See Figure 27.**

FIGURE 26: *Location of Dispensing Reels*

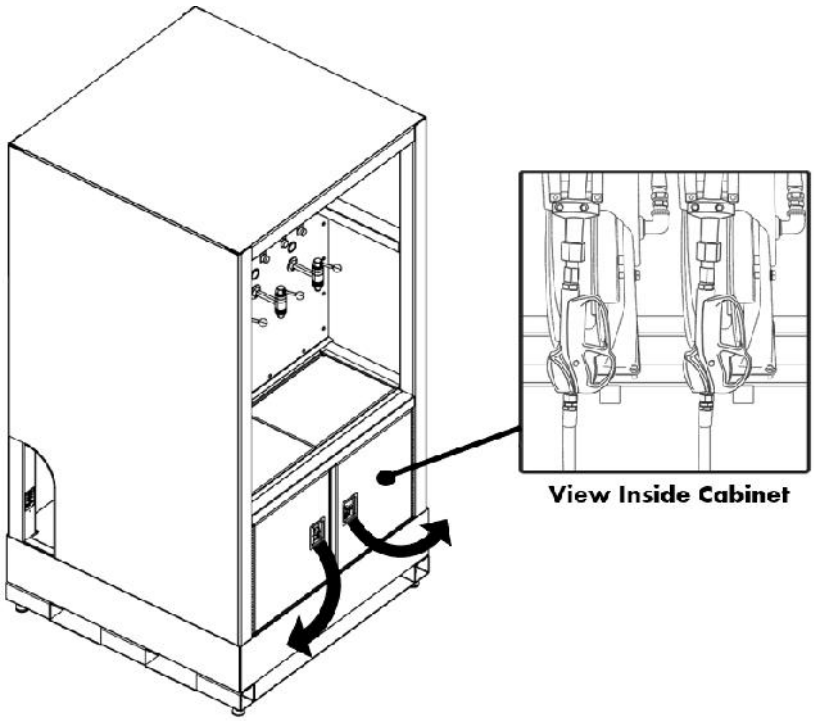
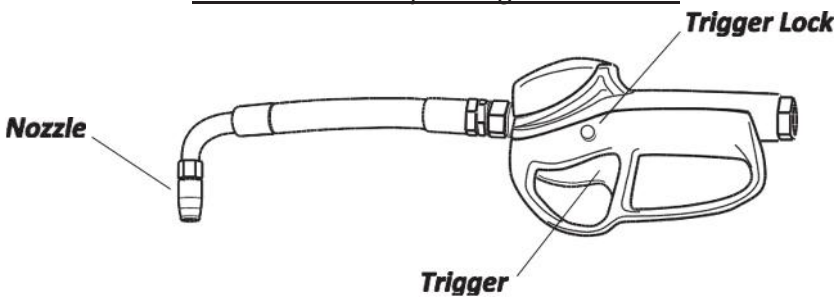


FIGURE 27: *Dispensing Reel Faucet*



MAINTENANCE

PERIODIC MAINTENANCE SHOULD BE SCHEDULED AND PERFORMED ON YOUR SYSTEM EVERY THREE MONTHS AFTERYOUR INITIAL INSTALLATION.

Requirements Prior to Maintenance:

WARNING!

ALWAYS ensure the main power supply is first locked out and the system depressurized before any service is performed on this system. NEVER connect or disconnect lines, change filter elements, or undertake any service work when this system is running or energized. SEVERE injury or death may occur.

The Tank Isolation Valves (located on the underside of each tank) must be in the open position when operating the system and in the closed position when servicing the system.

CAUTION!

Personal Protective Equipment (“PPE”) should be worn when installing and operating this system.

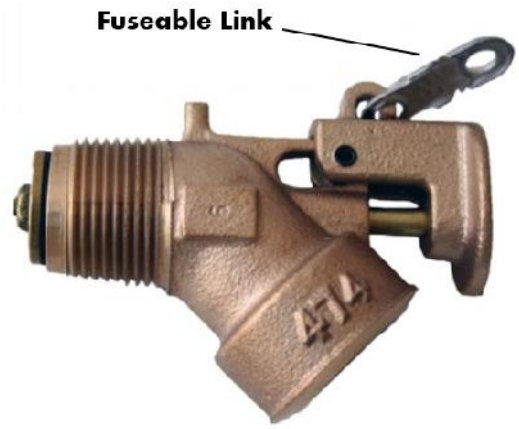
Before performing any maintenance on the system, the Fire Safety Valves (located on bottom of each tank) should be placed into closed positions. **Fire Safety Valves should be closed in the following situations:**

- Maintenance is to be performed on the system.
- The system needs to be moved.
- In the event of a fire, disaster, or emergency.

Fire Safety Valves

On bottom of each tank are two Fire Safety Valves for suction and return plumbing. These valves have a fusible link which is designed to melt at 165°F in the event of a fire, closing and stopping oil flow from each tank. These links can be manually set to open or closed positions, by setting or releasing the fusible links.

FIGURE 29: *Fire Safe Isolation Valve in the Open Position*



Maintenance Checklist:

EVERY 3 MONTHS:

- Check Spin-on Filters.
- Check Desiccant Air Breathers.
- Confirm with your fluid supplier how frequently your fluid should be re-circulated to maximize fluid life. Should a Re-Circulation ("Kidney-Loop")cycle be recommended, run a recirculation cycle for the suggested times set out in the Tank Re-Circulation ("Kidney-Loop") Cycle Time Guide in the **Data Tables Section (page 43).**
  - Put the valves in the "Re-Circulate" configuration (left "DOWN", right "UP").
  - Run each filled Bulk Tank for suggested time.

EVERY 6 MONTHS:

- Replace Spin-on Filter Elements as required.
- Replace Desiccant Air Breathers as required (orange beads will turn dark green indicating the filter is used).
- Check the batteries on any installed over-fill alarms. Batteries should be changed once per year.
- Inspections:
  - Inspect all hoses for cracks or kinks.
  - Inspect all hose fittings for cracks or leaks.
  - Inspect and tighten all bolts.
- Clean external surfaces: (Use an environmentally friendly cleaning/degreasing fluid and warm water. Rinse completely before replacing.)
  - Remove drip-pans from beneath the faucets, clean the entire grate and flush the pan. **See Figure 30.**
  - Remove faucet nozzles by unscrewing, clean nozzle and O-rings. **See Figure 31 (for Standard Faucets).**

EVERY 6 MONTHS:

- Flush out the spill transport pallet (bottom of the pods) with hot water and cleaner/degreasing fluid.
- Use a clean rag and wipe down electric motors and all painted surface areas.
- Polish all stainless-steel areas with stainless steel cleaner.
- Dust the electric motor fan(s).
- Check tension on Static Discharge Reel.
  - If additional tension is needed, apply a wrench to the flats on the mainspring shaft, rotating counterclockwise until the desired tension isreached.
  - If mainspring tension is too high, it may be decreased by depressing tension lock spring on the opposite side of the reel. **DO NOT** remove moretension than desired. If too much tension is removed, increase tension as described above.
- Inspect the Static Discharge Cable for fraying. Lubrication is not required for the reel.

FIGURE 30: *Removing Drip Trays*

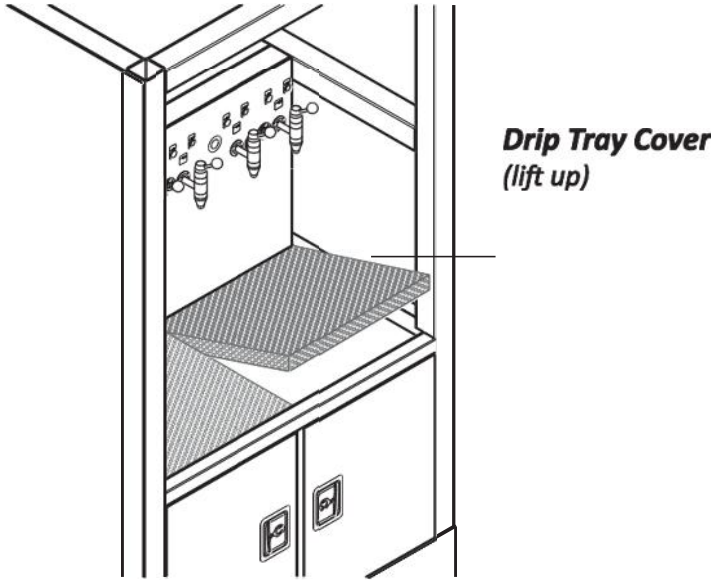
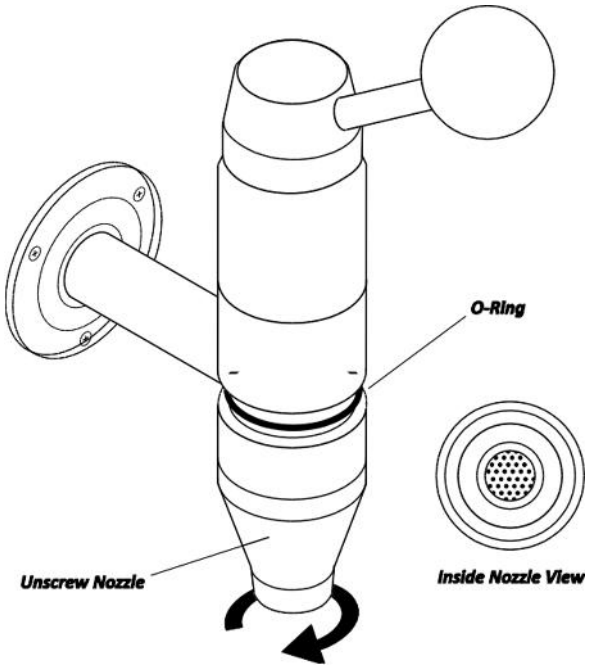


FIGURE 31: *Removing Dispensing Tap Nozzle*



MOVING YOUR SYSTEM

IF YOUR SYSTEM NEEDS TO BE MOVED FROM ITS PREVIOUSLY INSTALLED LOCATION FOR ANY REASON, USE THE FOLLOW-ING PROCEDURE TO SECURE YOUR SYSTEM PRIOR TO MOVING.

STEP 1. Pump all Bulk Tanks empty.

STEP 2. Depressurize the system by opening each faucet without the pumps running.

STEP 3. Lock out the main power supply (Electric or Air supplies).

STEP 4. Close the Fire Safety Valves on the bottom of all tanks**. Illustrated on Page #30.**

STEP 5. Flush out the spill transport pallet (bottom of the pods) with hot water and cleaner/degreasing fluid.

STEP 6. Disconnect the following for each tank assembly:

a. Power cord from wall outlet.

b. Power cord from motor.

c. Discharge Hose at the discharge port of the operating valve.

d. Pressure gauge hose at the filter head.

STEP 7. Place the hoses and cords in the bottom of the Dispensing Pod.

STEP 8. Disconnect hoses on Spill Containment if Connector Kit is used (Page #13)

STEP 9. Repeat all steps until each pod is isolated.

STEP 10. Using a hand pallet truck, position the Tank Pods to new service position, ensuring that there is at least 18" of free clear space at therear and each end of the system.

STEP 11. Continue to follow the installation steps for recommissioning of system.

WARNING!

OilSafe DOES NOT recommend changing the type of fluid dispensed by a pump. Each system is custom-built to customer specifications including the type of fluid stored. Contact your supplier if your fluid storage needs change to remove the possibility of cross-contamination and incompatibility of system materials or components with a new fluid.

Also be aware of any change in ambient room temperature in the new location. Ambient room temperature should not be less than 60°F (15°C).

TROUBLESHOOTING

WARNING!

ALWAYS ensure the main power supply is first locked out and the system depressurized before any service is performed on this system. NEVER connect or disconnect lines, change filter elements, or undertake any service work when this system is running or energized. SEVERE injury or death may occur.

The Fire Safety Valves (located on the underside of each tank) must be in the open position when operating the system and in the closed position when servicing the system.

The following troubleshooting procedures will help you identify and correct problems with your system. Every part of the system has been designed per your specifications and should not require maintenance, repair, or calibration beyond what was described in the maintenance section of this document.

If any of these troubleshooting procedures do not solve the issue, contact your supplier for additional support.

Issue	Steps to Resolve
Fluid Level Gauge is not reading correctly.	1. Remove the gauge. 2. Wipe the gauge and float assembly with a lint free cloth to remove any excess fluid. 3. Ensure all hinged joints and fittings are in good condition and moving freely and reinstall. 4. If the gauge is still not working correctly, remove it and contact your supplier for a replacement. **NOTE:** Overfilling the tanks may cause damage to the Fluid Level Gauge and cause it to read incorrectly.
The tank is not filling correctly.	1. Check to ensure the valves on the front of the unit are in the correct position. 2. Check all fittings for cracks or leaks. 3. Check all hydraulic hoses for cracks or leaks. 4. Check the motor to ensure it is rotating in the correct direction. If not, contact your authorized Electrician. 5. Check the Fire Safety Valves and ensure they are in the OPEN position. 6. Check the Pressure Gauge to make sure that the pressure level is registering when the motor is running 7. If the Pressure Gauge is running above its normal range, it is time to replace your oil filter element. Replace and check your Pressure Gauge again 8. Check the seals on the Suction Hose Assembly coupling to ensure they are not cracked or damaged. Replace if necessary. 9. Ensure the Desiccant Air Breather has had the white rubber band removed (if factory supplied breather).

Issue	Steps to Resolve
The tank is not dispensing liquid correctly.	1. Check to ensure the valve handles on the front of the unit are in the correct positions. 2. Check all fittings for cracks or leaks. 3. Check all hydraulic hoses for cracks or leaks. 4. Check the motor to ensure it is rotating in the correct direction. 5. Check the Fire Safety Valves and ensure they are in the OPEN position. 6. Check the Pressure Gauge to make sure that the pressure level is registering when themotor is running. 7. If the Pressure Gauge is running above its normal range, it is time to replace yourSpin-on Filter. Replace and check your Pressure Gauge again. 8. Check and clean the Dispensing Faucet to remove dirt, debris, or clogs. 9. Check the O-ring on the Dispensing Faucet. Replace if necessary.
The motor stops working.	1. Have electrician check electrical enclosure to ensure power is applied to the pump. 2. Check all circuit breakers to ensure power is on. Ensure power cord is plugged. 3. Check the power cord connector at the motor to ensure all the pins are seated correctlyand that the connector is clean of dirt and debris. 4. Check that the Emergency System Stop Button is not set to the off position. 5. Have an electrician consult the electrical system specification to troubleshootthe system.
The Stop or Start Buttons do not light up correctly.	1. Check that the Emergency System Stop Button is not set to the off position. 2. Ensure the power supply to the motor set is on. 3. Have an electrician consult the electrical system specification to troubleshootthe system.

Issue	Steps to Resolve
The pump system pressure needs adjustment.	1. Locate relief valve on rear cover of oil pump. 2. Using a wrench, loosen the lock nut on adjustment screw, turn Allen screw clockwise to increase pressure, or counterclockwise to decrease pressure. Valves are adjustable 25psi to 300psi. 3. Retighten lock nut.
The pump system pressure is above 240 PSI, and the system is operating in a cold environment (less than 60°F / 15°C).	1. Ambient room temperature where the system is installed should be in the range of 60°F(15°C) TO 80°F (26°C). For ambient temperatures below 60°F (15°C) consult the manufacturer or your supplier for the supply of electric blanket heaters for oil barrels, pails, and bulk tanks. 2. Temperatures less than (<60°F / 15°C) may result in lubricant viscosity increasing above the rated ISO Code you specified at the time of order. Such adverse viscosity changes can cause higher system operating pressures than those set at the factory.
Oil drips or leaks.	1. Turn system off and see if tightening connection resolves issue. 2. Contact manufacturer or supplier, to discuss best way to resolve.

REPAIR AND REPLACEMENT PROCEDURES

WARNING!

ALWAYS ensure the main power supply is first locked out and the system depressurized before any service is performed on this system. NEVER connect or disconnect lines, change filter elements, or undertake any service work when this system is running or energized. SEVERE injury or death may occur.

The Tank Isolation Valves (located on the underside of each tank) must be in the open position when operating the system and in the closed position when servicing the system.

The major components of the system were designed to be replaceable. Before attempting any repairs or replacement, contact OilSafe in the eventyour part is covered by warranty.

You may contact OS as follows:

930 Whitmore Drive
Rockwall, TX 75087

(972)771-1000
sales@whitmores.com
www.oilsafe.com

Do not disassemble any part of the system without authorization from OilSafe. Failure to receive this authorization will void your product warranty.

The following parts of your system are replaceable. Contact your supplier for ordering information.

REPLACEMENT PARTS

Tank Desiccant Air Breather *(Part # 095Z134)*

This is the air filter on the top of the tanks. When the colored beads on the inside of the breather turn from orange to dark green, it is time to replace thefilter. The filter can be screwed on and off.

Tank Level Gauge *(30G / 65G / 120G / 240G)* – Top Mount, Mechanical Float

The Tank Level Gauge is located at the top center of each tank. It can be removed and replaced by screwing it on or off.

Direct Mount Overfill Alarm

This is optional equipment signals if your tank is overfilling. This is an alarm which combines audible alarm and a flashing light. These alarms are fitted to the Tank Level Gauge located on the top of every tank.

The alarm has a 9-Volt lithium battery in the Alarm Box. It should be replaced at least once per year. Battery life is shortened if the unit is left in alarm mode for extended periods of time. **See Figure 33.**

FIGURE 33: *Overfill Alarm*

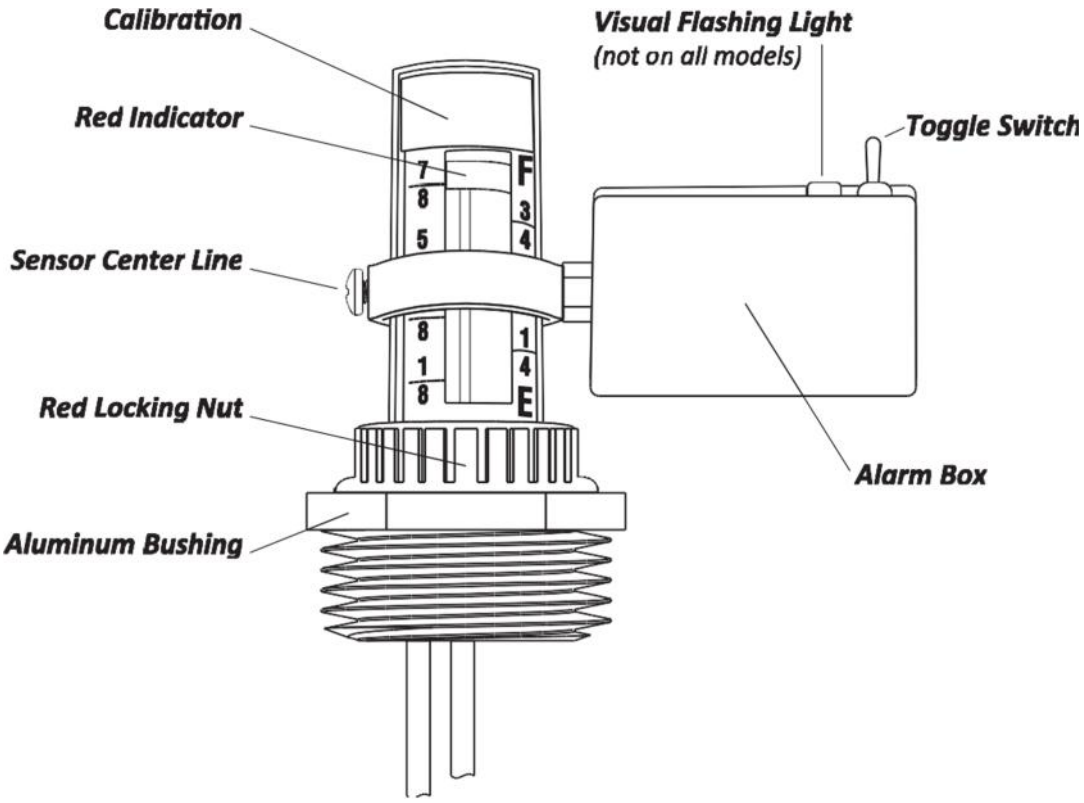


TABLE 1: *Spare and Replacement Parts List*

Item Description	Type	Part #
Direct Mount Overfill Alarm (Audible & Flashing Light)- fits to Tank Level Gauge	Alarm	897102
Colored Ball Knob for Steel Faucet Shut Off Valve - Beige	Ball Knob	821000
Colored Ball Knob for Steel Faucet Shut Off Valve - Black	Ball Knob	821001
Colored Ball Knob for Steel Faucet Shut Off Valve - Blue	Ball Knob	821002
Colored Ball Knob for Steel Faucet Shut Off Valve - Dark Green	Ball Knob	821003
Colored Ball Knob for Steel Faucet Shut Off Valve - Gray	Ball Knob	821004
Colored Ball Knob for Steel Faucet Shut Off Valve - Mid Green	Ball Knob	821005
Colored Ball Knob for Steel Faucet Shut Off Valve - Orange	Ball Knob	821006
Colored Ball Knob for Steel Faucet Shut Off Valve - Purple	Ball Knob	821007
Colored Ball Knob for Steel Faucet Shut Off Valve - Red	Ball Knob	821008
Colored Ball Knob for Steel Faucet Shut Off Valve - Yellow	Ball Knob	821009
Tank Desiccant Air Breather	Breather	095Z134
Steel Auto-Shut Off Faucet (with Black Ball Knob)	Faucet	821020
Oil Spin-on Filter - 4um - β2000 (99.5% efficient)	Filter	469962
Oil Spin-on Filter - 7um - β2000 (99.5% efficient)	Filter	469964
Oil Spin-on Filter - 25um - β2000 (99.5% efficient)	Filter	469966
Oil Spin-on Filter - 20um&water removal - β2000 (99.5% efficient)	Filter	469968
Tank Level Gauge (30G / 65G / 120G) - Top Mount, Mechanical Float	Gauge	821105
Tank Level Gauge (240G) - Top Mount, Mechanical Float	Gauge	821106
Hose Reel Dispensing Gun with digital meter	Hardware	821251
Dispensing Hose Reel (25ft)	Reel	8Z0225
Static Discharge Grounding Reel (Retractable 25ft)	Reel	821275

TANK OR MOTOR REPLACEMENT

For repair or replacement of a tank or motor, contact your supplier for ordering information. Prior to servicing, the tank should be drained and then isolated using the Tank Isolation Valves on the underside of the tank. Electrical or compressed air power should be shut off & locked out, and all hoses and cords removed from the tank assembly. There are two bolts on the underside of the tank that must be removed prior to uninstalling the tank.

The motor/pump assembly is bolted to the pod. For motor removal and replacement, disconnect electrical supply and oil hoses from the motor/pump and remove the bolts. The motor/pump can then be pulled out and the new motor/pump can be set into place and connected.

When servicing, removing, or replacing parts there may be specific tools required. **Table 2** below lists tool specifications for servicing, removing, or replacing equipment.

TABLE 2: *Tools and Wrench List*

Item Description	Fastener	Tool	Size
Dispensing Console - Faucet Mounting Screws	No. 10/24 Cap Screws	Hex Key	1/8"
Dispensing Console - Pressure Gauge Face Mounting Screws	No. 6 Cap Screws	Hex Key	5/64"
Dispensing Console - Stainless Splash Plate - Mounting Screws	5/16" UNC Cap Screws	Hex Key	3/16"
Dispensing Console - Steel Mounting Plate Screws	5/16" UNC Cap Screws	Hex Key	3/16"
Hose Connections - all discharge hydraulic hose connections	3/4" JIC Hose Coupler	Wrench	1-1/4"
Hose Connections - all pump by-pass return hose connections	1/2" JIC Hose Coupler	Wrench	7/8"
Hose Connections - all suction hydraulic hose connections	1" JIC Hose Coupler	Wrench	1-1/2"
Hose Connections - all system pressure gauge hose connections	1/4" JIC Hose Coupler	Wrench	9/16"
Hose Connections - Dixon Cam & Groove Coupling (Male Adaptor)	1" NPT Male Adaptor	Wrench	1-1/2"
Motor/Pump Skid - Holding Down Bolts	3/8" UNC Bolt	Wrench	9/16"
Static Discharge Grounding Reel - Mounting Bolts	1/4" UNC Bolt	Wrench	7/16"
System Leveling/Jacking Bolts	1/2" UNC Bolt	Wrench	3/4"
Tank - Mechanical Float Level Gauge - Steel Bung Adaptor	2" NPT Bung Adaptor	Wrench	2-3/8"
Tank - Sealing Plug (Rear Face - Bottom Auxiliary Port)	1" NPT Hex Socket Plug	Hex Key	5/8"

DATA TABLES

TABLE 3: *Tank Re-Circulation ("Offline") Cycle Time Guide*

ISO Viscosity	32	46	68	100	220	320	460	680
Pump Flow Rate *(GPM)*	3	3	3	2.5	2.5	2	2	1.5
Rated Tank Size *(Gallons)*	**APPROXIMATE CIRCULATION TIME** *(Minutes)*							
30	42	42	42	42	42	70	70	70
65	91	91	91	91	91	152	152	152
120	168	168	168	168	168	280	280	280
240	336	336	336	336	336	560	560	560

Reservoir capacity x (4 to 6 turns) / Pump Flow Rate = Time in minutes

*Times will be a function of initial oil cleanliness, oil grades, oil temperature and other factors.

* Flow rate values are approximate.

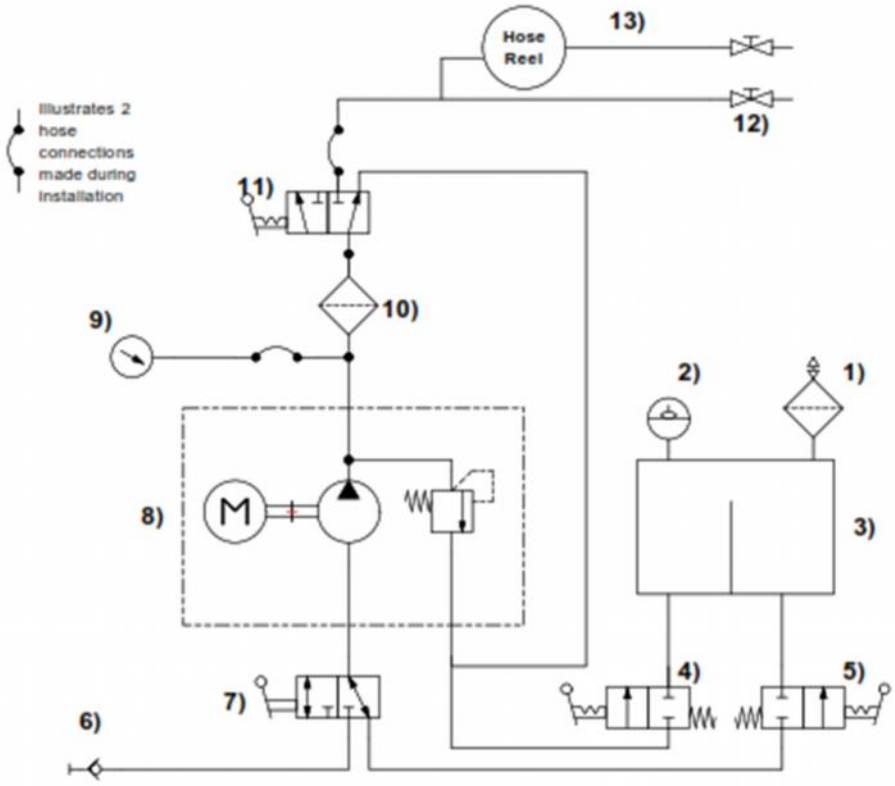
TABLE 4: *OILSAFE® Bulk Oil Tank Capacities (in Gallons)*

STANDARD TANK SIZE	APPROX. BRIM-FULL CAPACITY
30 Gallons	36 Gallons
65 Gallons	73 Gallons
120 Gallons	150 Gallons
240 Gallons	300 Gallons

TABLE 5: *System Weights and Dimensions*

ITEM	APPROX. DIMENSIONS	APPROX. WEIGHT *(empty)*
Tank Pod (incl. Tanks)	45-1/2" (w) x 45-1/2" (d) x 88" (h)	1,650 lbs.
30 Gallon Tank	9-3/8" (w) x 39-1/2" (d) x 23" (h)	107 lbs.
65 Gallon Tank	19" (w) x 39-1/2" (d) x 23" (h)	144 lbs.
120 Gallon Tank	38-1/2" (w) x 39-1/2" (d) x 23" (h)	232 lbs.
240 Gallon Tank	38-1/2" (w) x 39-1/2" (d) x 46" (h)	360 lbs.

OilSafe Lubrication Work Center
Plumbing Schematic - Rev3



1) Desiccant breather #Z134
2) Level Indicator
3) Reservoir with integral baffle
4) Fire safety valve with fusible link
5) Fire safety valve with fusible link
6) 3/4" Female quick disconnect
7) Suction 3-way ball valve
8) 1HP-1200rpm motor & 3gpm(11.4lpm) 150psi(10.3bar) pump or Pneumatic diaphragm pump
9) Pressure gauge
10) Oil filter with condition indicator
11) Dispense or recirculate 3-way ball valve
12) Dispensing tap for container filling
13) Optional hose reel and dispensing gun

CUSTOMER SERVICE AND WARRANTY ISSUES

For any customer service, ordering requests, or warranty issues, please contact your authorized supplier or OilSafe.

You may contact OS as follows: OilSafe

930 Whitmore Drive
Rockwall, TX 75087

(972)771-1000
sales@whitmores.com
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NOTES:

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