



Advanced Fluid Handling Cart

Owner's Manual

IMPORTANT

- Please read this Owner's Manual carefully and thoroughly before installing and operating your Advanced Fluid Handling Cart.
- Please retain this owner's manual for future reference after reading it thoroughly.



OilSafe[®]

Advanced Fluid Handling Cart
Owner's Manual



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.

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.



IMPORTANT

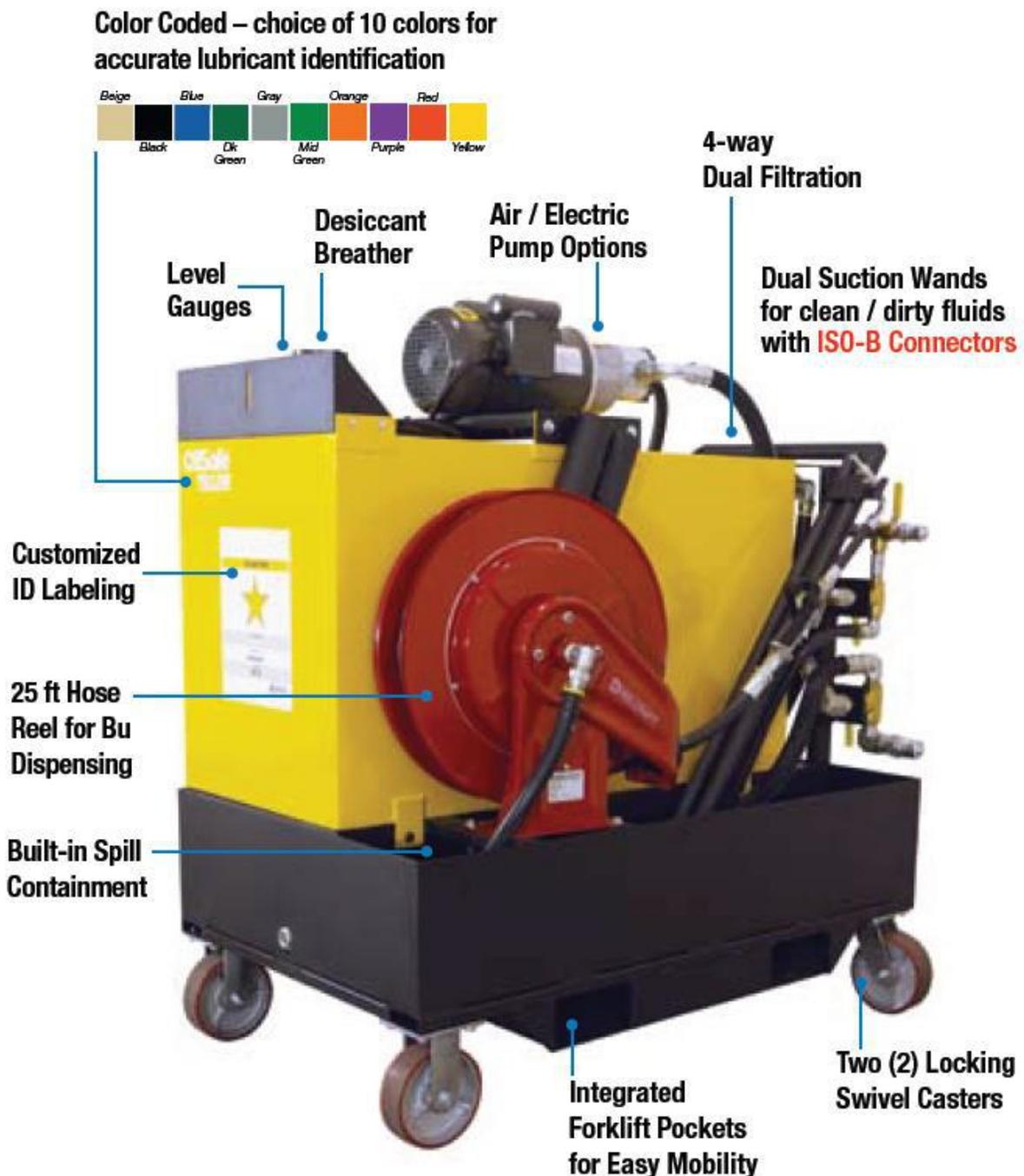
ALWAYS REFER TO THIS MANUAL OR CONSULT YOUR SUPPLIER FOR MORE INFORMATION.

- 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 OIL DRUM MUST ALWAYS BE VENTED TO ATMOSPHERE (preferably using a Desiccant Air Breather).
- 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 electric blanket heaters for oil barrels, pails and bulk tanks to ensure stability of lubricant viscosity, condition and system performance. Temperatures below (<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, as this can cause a gasket failure on the spin-on filter, resulting in a high-pressure oil leak. 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 before commissioning the system if the ambient room temperature will ever fall below 60°F (15°C).



INTRODUCTION

Thank you for purchasing an OilSafe Advanced Fluid Handling Cart. This system was designed to store, dispense and filter bulk lubricants in the workplace.





SYSTEM SETUP

Tools

- 2 $\frac{3}{8}$ " wrench to tighten fluid level gauge, UL pressure relief fitting and desiccant breather adapter
- Spin-on filter wrench
- Personal protective equipment ("PPE") should be worn when installing and operating this system

Equipment Power Supply

- Each electrical motor requires a separate power outlet (20 amp dedicated circuit)
- Air system (diagram pump) will require approx. 30-60 psi at 5 cfm depending on oil viscosity

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

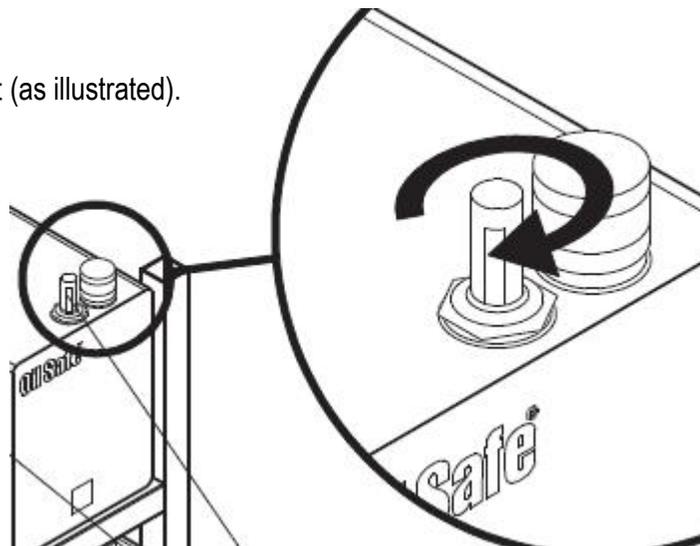


INSTALLATION

Tank Level Gauge and Desiccant Breather

Installing the fluid level gauges. See Figure below for details.

- a. Unscrew and remove the red locking nut.
- b. Remove the calibration.
- c. Gently pull up the red indicator.
- d. Carefully insert the float assembly into the tank.
- e. Screw the aluminum bushing into the tank port until tight, and ensure the arrow on the flat side of the hex bushing points toward the rear of the tank.
- f. Gently lower the red indicator to its resting position, and then gently raise and lower it to ensure the float mechanism is free and clear inside the tank.
- g. Reinstall the calibration.
- h. Fasten the red locking nut (as illustrated).

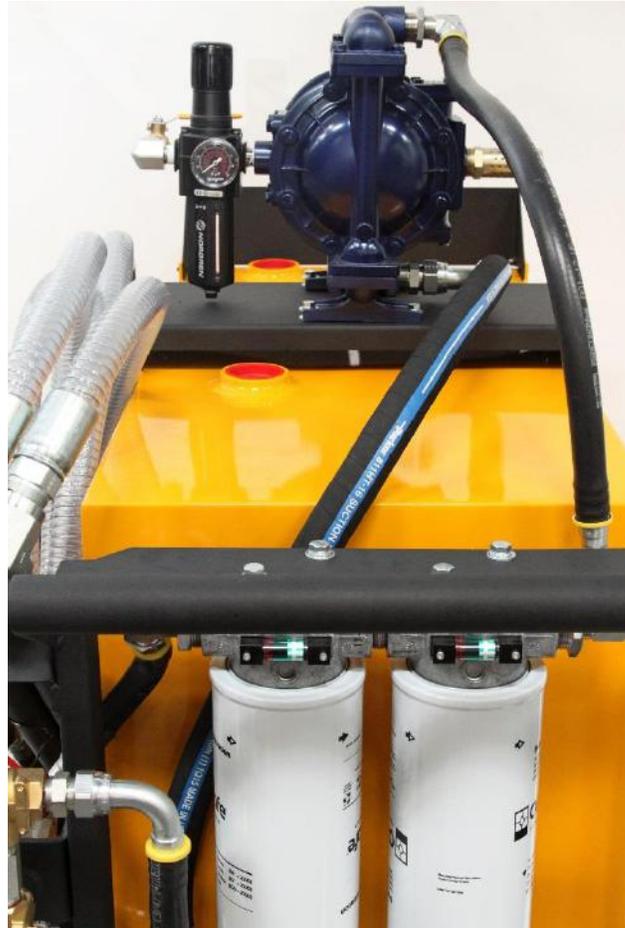


Install the desiccant air breather air filter to each tank by screwing it (clockwise) into the threaded opening on the top right of the bulk tank.

Remove the elastic white band on the top of the desiccant air breather to activate the breather.



INSTALLATION (Air Regulator)

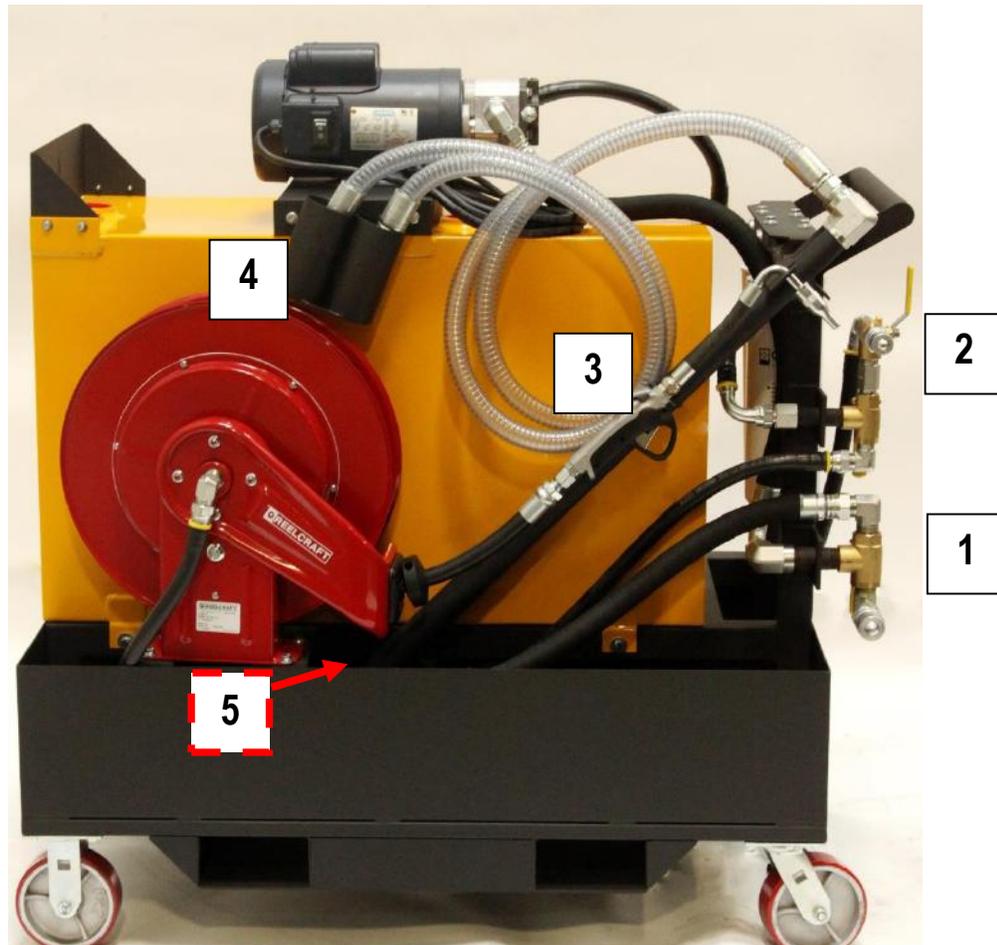


Air Supply

- Once the air supply has been connected and ball valve opened, adjust the regulator to approx. 40-60 psi.
- After regulator is set and locked in position, turn ball valve off until system is ready for operation.



OPERATION (Air System)



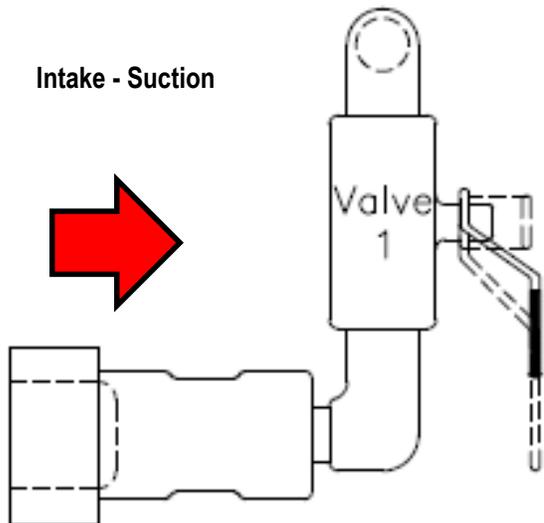
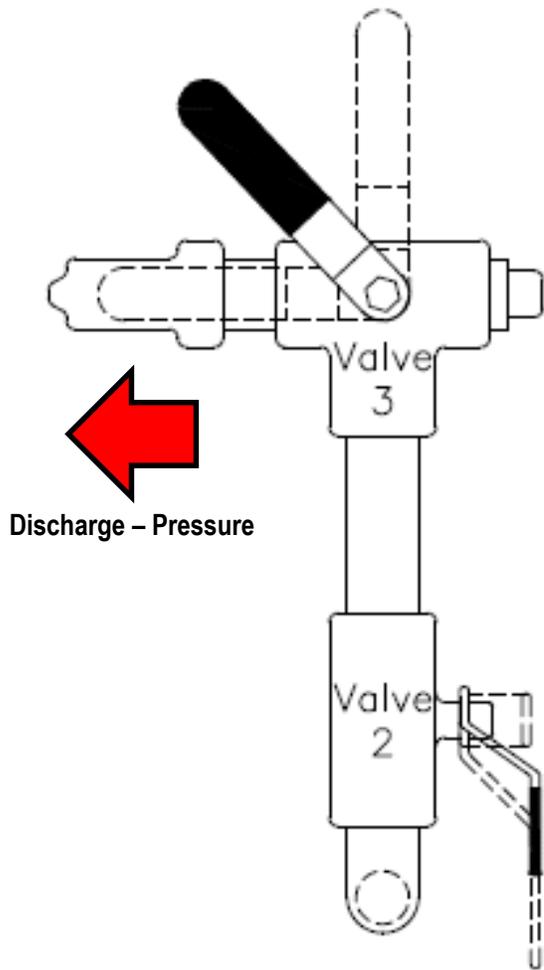
1. Fluid inlet (filling or offline filtration-suction)
2. Outlet (bulk dispensing or offline filtration fluid return)
3. Dispensing nozzle – top off application
4. Suction and fluid return wands
5. Tank shutoff ball valve (under tank inside spill pan)
 - a. Ball valve must be in open position for dispensing and recirculation





OPERATION

Valve Positioning



Function

Valve Positioning

	1	2	3
Filling 65 gal Tank	↑	↓	↓
Recirculate Fluid in Tank	↓	↓	↓
Hose Reel Dispensing & Bulk Dispense	↓	↑	↑
Offline Filtration	↑	↓	↑



OPERATION

Filling 65-gal Tank

1. Determine current tank fluid level
2. Connect suction wand to intake quick connect
3. Insert suction wand into 55-gal drum
4. Position valves 1, 2 and 3 on manifold to the filling operation
5. Turn pump/air to ON
6. If an air system, adjust regulator pressure accordingly based on fluid viscosity

Recirculation – Kidney Loop

1. Position valves 1, 2 and 3 on manifold to the recirculate operation
2. Turn pump/air ON
3. If an air system, adjust regulator pressure accordingly based on fluid viscosity
4. See Table 3 for re-circulation times

TABLE 3: Tank Re-Circulation (“Kidney-Loop”) Cycle Time Guide

ISO Viscosity	32	46	68	100	220	320	460	680
Pump Flow Rate (GPM)	5	5	5	5	5	3	3	3
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
Single Pass Filtration Factor	7							

Dispensing- Hose Reel or Bulk

1. Position valves 1, 2 and 3 on manifold to the dispensing operation
2. Turn pump/air ON
3. If an air system, adjust regulator pressure accordingly based on fluid viscosity



Warning: Bulk dispense – make sure pump is turned OFF before connecting discharge hose.



Offline Filtration

1. Connect suction and discharge lines (suction wands) to asset reservoir

TIP: (suction wands can be modified with quick connects, if desired)

2. Position valves 1, 2 and 3 on manifold to the recirculate operation
3. Turn pump/air ON
4. If an air system, adjust regulator pressure accordingly based on fluid viscosity



MAINTENANCE

PERIODIC MAINTENANCE SHOULD BE SCHEDULED AND PERFORMED ON YOUR SYSTEM EVERY THREE MONTHS AFTER YOUR 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 Bulk Tanks should be isolated by using the Tank Isolation Valves located on the underside of the tank. **The Tank Isolation Valves should be closed in the following situations:**

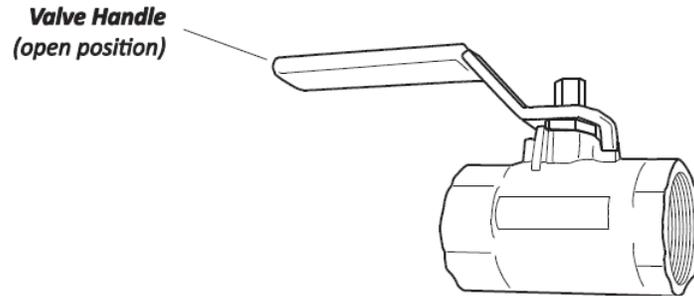
- ✓ Maintenance is to be performed on the system.
- ✓ The system needs to be moved.
- ✓ In the event of a fire, disaster, or other emergency situations.



Tank Isolation Valves

Your system will contain either a normal T-Ball Valve as the Tank Isolation Valve, or it may include a fusible link fire safe valve ("fire safe valve"). To isolate the system with the normal T-Ball Valve, simply move the handle of the valve such that it finishes perpendicular (90°) to the valve body. The valves are located on the underside of the tank. See **Figure 16** for a normal T-Ball Tank Isolation Valve that is in the open position.

FIGURE 16: *Normal T-Ball Tank Isolation Valve in the Open Position*



Replacement Parts

Spin-on Filter: Contact your Whitmore representative for recommendations or additional information

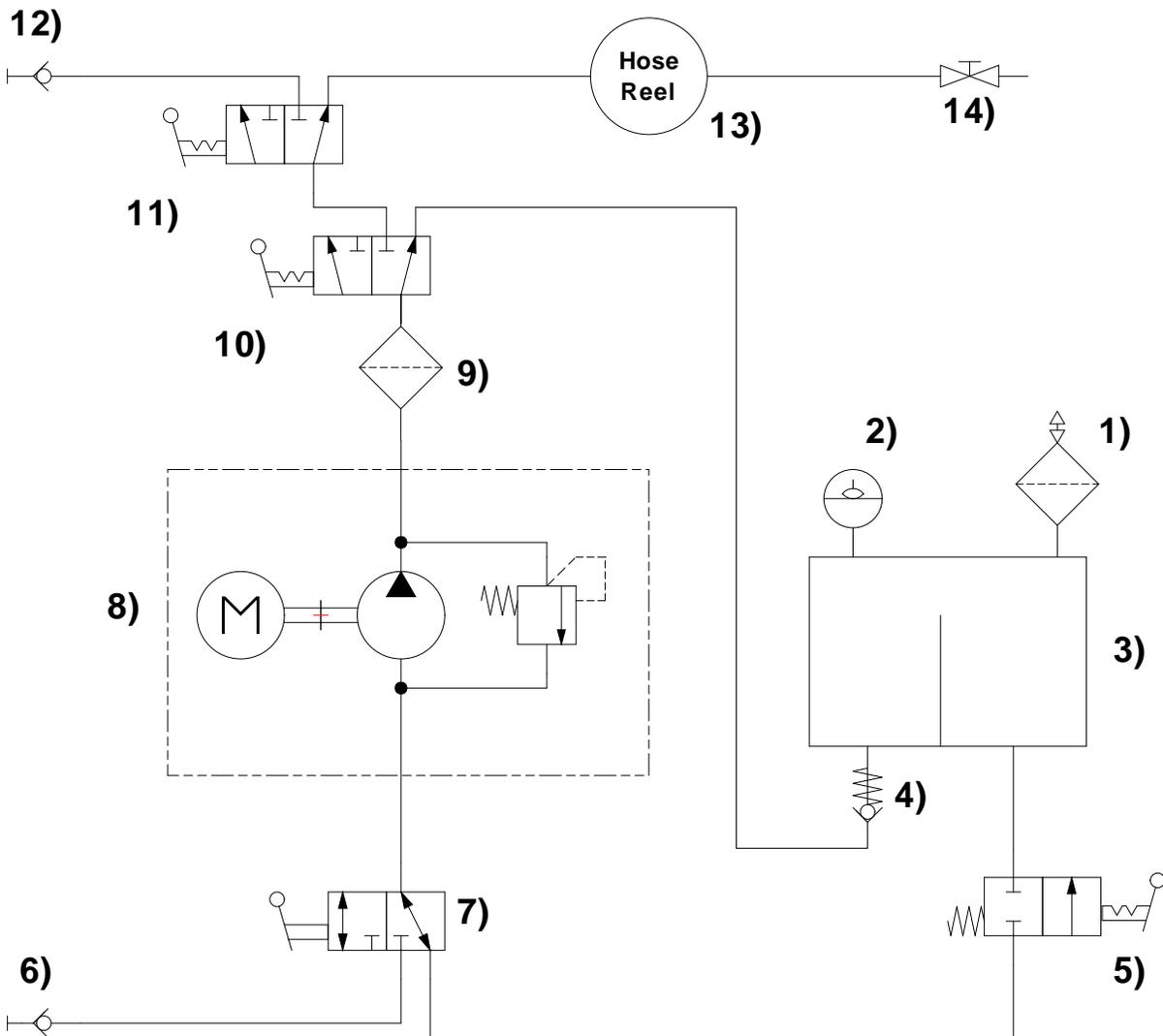
469962 OSF-4 Filter Element -β2000 Spin on - 4 Micron - 14.2" L - OilSafe

469964 OSF-7 Filter Element -β2000 Spin on - 7 Micron - 14.2" L - OilSafe

469966 OSF-25 Filter Element -β2000 Spin on - 25 Micron - 14.2" L – OilSafe

46Z134 Desiccant Breather - Limited Space, 3.25" x 3.25" (Case of 12) item #095Z134

OilSafe Advanced 65 Gallon Cart Plumbing Schematic - Rev2



- 1) Desiccant breather #Z134
- 2) Level indicator
- 3) 65 Gallon reservoir with integral baffle
- 4) Return check valve
- 5) Suction 3-way ball valve
- 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) Oil filter with filter condition indicator
- 10) Dispense or recirculate 3-way ball valve
- 11) Dispense hose or hose reel 3-way ball valve
- 12) 1/2" Female quick disconnect
- 13) Hose reel
- 14) Hose reel dispensing gun



CUSTOMER SERVICE AND WARRANTY ISSUES

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

You may contact Whitmore as follows:

Whitmore 800-699-6318
930 Whitmore Drive 972-771-1000
Rockwall, Texas 75087 Fax: 972-722-2108

General/Sales Information: sales@whitmores.com

Customer Support: techservice@whitmores.com



NOTES: