



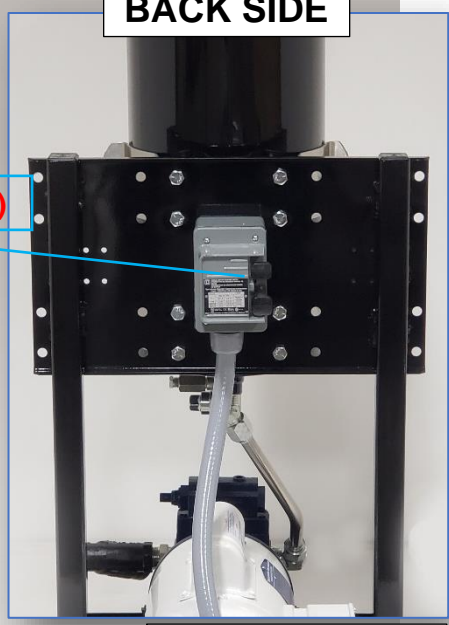
BACK SIDE

Pressure Gauge (c)

On/Off Switch (a)

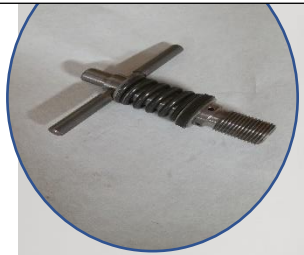
Vent
Draincock (d)

Cover
Clamp (e)



Harvard Element (q)
(Actual Element May Be Different)

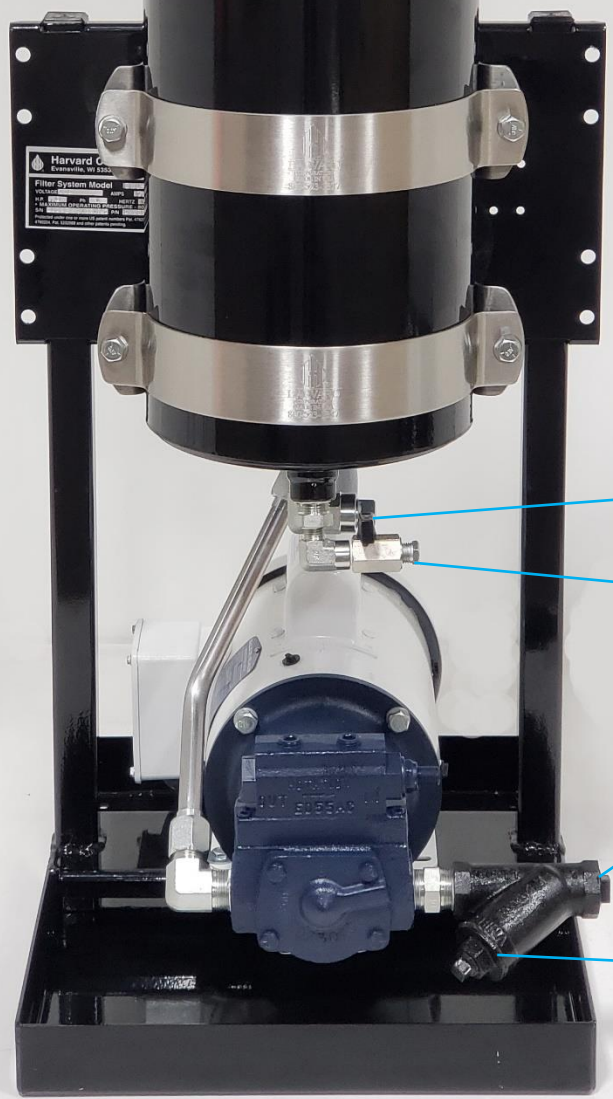
Turn-Down Bolt *TDB(o)*



TDB Components



TDB Seal (p)



Outlet (g)

Drain (f)

Inlet (j)

Wye Strainer (i)

900368 Manual

This system comes with a pre-installed 1004 Harvard element.

Pre-Operating Instructions

- 1). Plumb the inlet and outlet lines to the inlet(j) and outlet(g) fittings, respectively. (T-Stand & Wall mount systems do not come with hoses)
- 2). Plumb the inlet line to the low point of the fluid reservoir to be cleaned, and the outlet line to the opposite side of the reservoir (away from inlet) and below the fluid level (to reduce aeration of the fluid) creating a cross flow.
- 3). Wire the Harvard system into the available electrical system. Voltage and amperage are specified on the data plate, *located on the back of the system* (Standard electrical provided is 110/120-volt, 20-amp service).

Note: This system comes with a pre-loaded 1004 Harvard filter element.

- 4). Install the new element(q) and seal(p) per “*Element Change Procedure*” instructions.

Operating Instructions

- 1). Press the start switch(a) to turn on the system

Factory preset! DO NOT change the setting!

- 2). Open the vent draincock valve(d) to bleed/release air; close when air released fully & oil bleeds.

Element Change Procedure

- 1). Turn the system off(a).
- 2). Use a suitable container to catch the fluid; position container under the drain port(f).

Housing can hold up to 5 gallons of fluid.

- 3). Remove the drain cap(f) and open the drain valve(f) at the bottom of the housing and open the vent draincock(d).
- 4). Remove the cover clamp(e) and cover.
- 5). Remove the turndown bolt, turning it counter clockwise(o).
- 6). Lift the element, using the handle or the element lifter, and allow it to drain out in a suitable container.

- 7). Close the drain valve(f), and reinstall the drain plug.

- 8). Install the new element(q), orienting them so that the end with the handle is up.

- 9). Replace the turndown bolt seal(p); replacement seal comes with each new element.

- 10). Reinstall the turndown bolt(o). Screw it clockwise until it comes to a definite stop.

- 11). Reinstall the cover and cover clamp(e), and then close the vent draincock(d).

- 12). Your elements have been changed. See the “**Wye Strainer Cleaning Instructions**” before operating system.

Wye Strainer Cleaning Instructions

- 1). Place a small container under the wye strainer port to catch the oil from the inlet line. The container should be able to hold the full volume of oil that is in the inlet line.
- 2). When the system is off, remove the wye strainer bolt(i) using a 15/16” wrench
- 3). Pull the screen out of the wye strainer port(i).
- 4). Clean all debris out of the screen.
- 5). Replace the cleaned screen in the wye strainer port(i).
- 6). Replace the wye strainer(i) drain bolt and tighten using a 15/16” wrench.
- 7). The wye strainer(i) has now been cleaned. See the “**Operating Instructions**” to run the system.

System Troubleshooting Guide

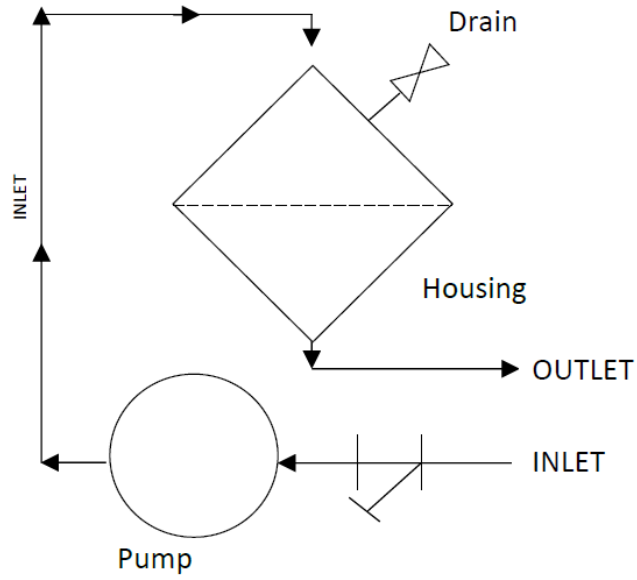
Common Problem Areas

Issue	Probable Cause	Probable Solution
Motor will not start?	<ol style="list-style-type: none"> 1. No power 2. Faulty power switch 3. Power switch not wired correctly 	<ol style="list-style-type: none"> 1. Connect to proper power source 2. Replace power switch 3. Check wiring diagram
Motor will not stay running?	<ol style="list-style-type: none"> 1. Using 12-gauge cord or lighter 2. Lever on pressure switch not in vertical position 3. Pressure not above 20 psi 4. Pressure over 70 psi 	<ol style="list-style-type: none"> 1. Use 10-gauge cord or heavier 2. Raise lever to vertical position 3. Increase volume control valve to adjust pressure to 20 psi 4. To high viscosity oil, filter clogged, blockage in outlet side of pump
Pump flow rate decreases noticeably?	<ol style="list-style-type: none"> 1. Suction lost or blocked 2. Wye strainer plugged 3. Element clogged/full 	<ol style="list-style-type: none"> 1. Check supply source 2. Clean wye strainer (see system specific operating manual) 3. Replace the element (see system specific operating manual)

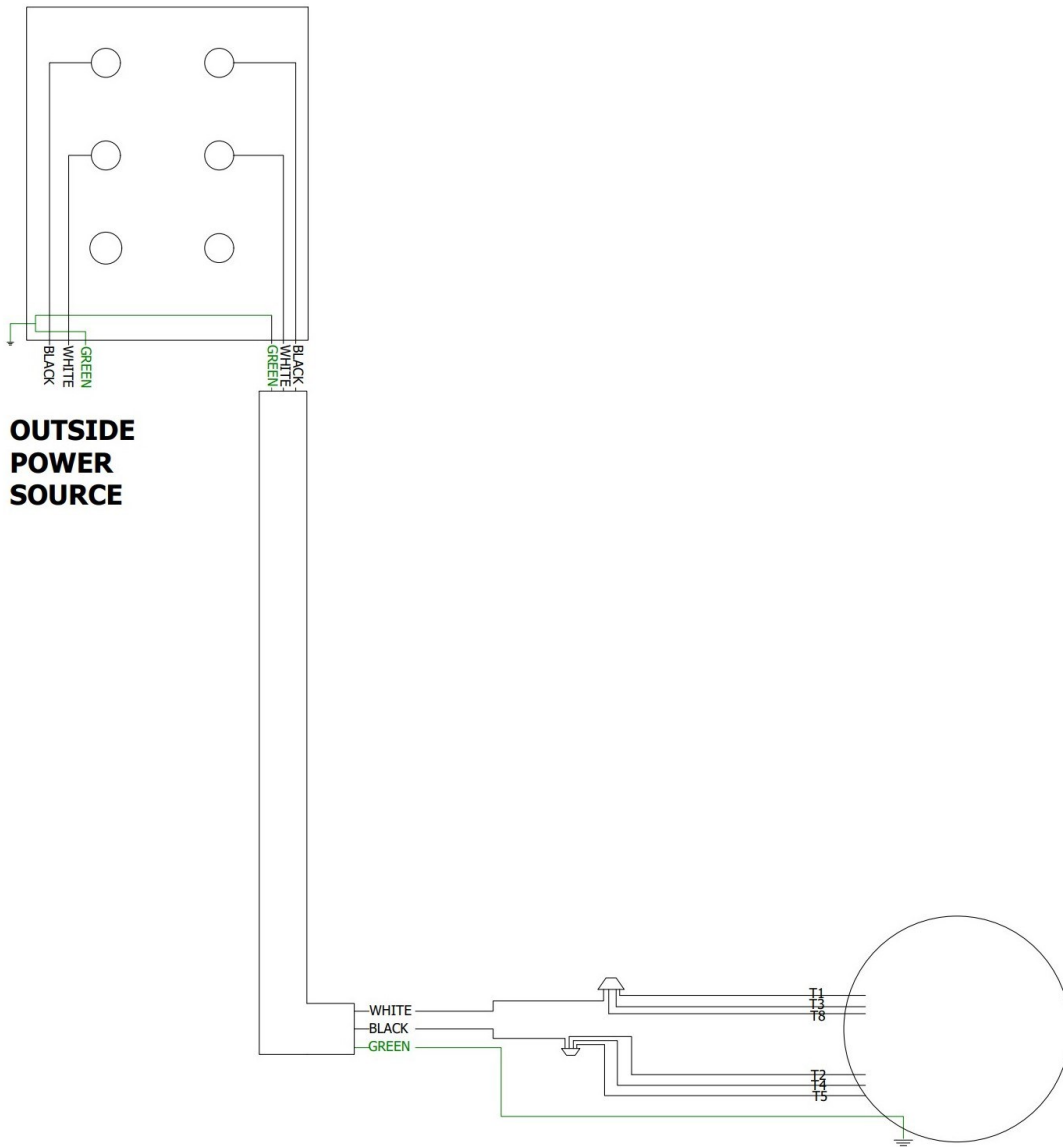
Replacement Parts Guide

See Diagram Above for Part Location	Part Description	Factory Part Number
	Pump 3 GPM (not flow rate) Viton Mech Seal	4747
	Motor 1/2 HP Single Phase (120 v) Wash-Down	4746
	Pump & Motor Combo Ships assembled	
c.	Pressure Gauge 0-100 PSI Gauge	841
p.	Turn-Down-Bolt Seal Buna-N	448
o.	Turn-Down-Bolt Carbon Steel	593
a.	Toggle Switch	3213
	Cover Gasket O-Ring Buna-N	433
	Element Lifter Stainless-Steel	2109
q.	1002 Filter Element Viscosity Iso 10-32	1002
q.	1004 Filter Element Viscosity Iso 46-150	1004

Flow Diagram for 900368



Wiring Diagram for 900368



110/120 Volt, 1 Phase