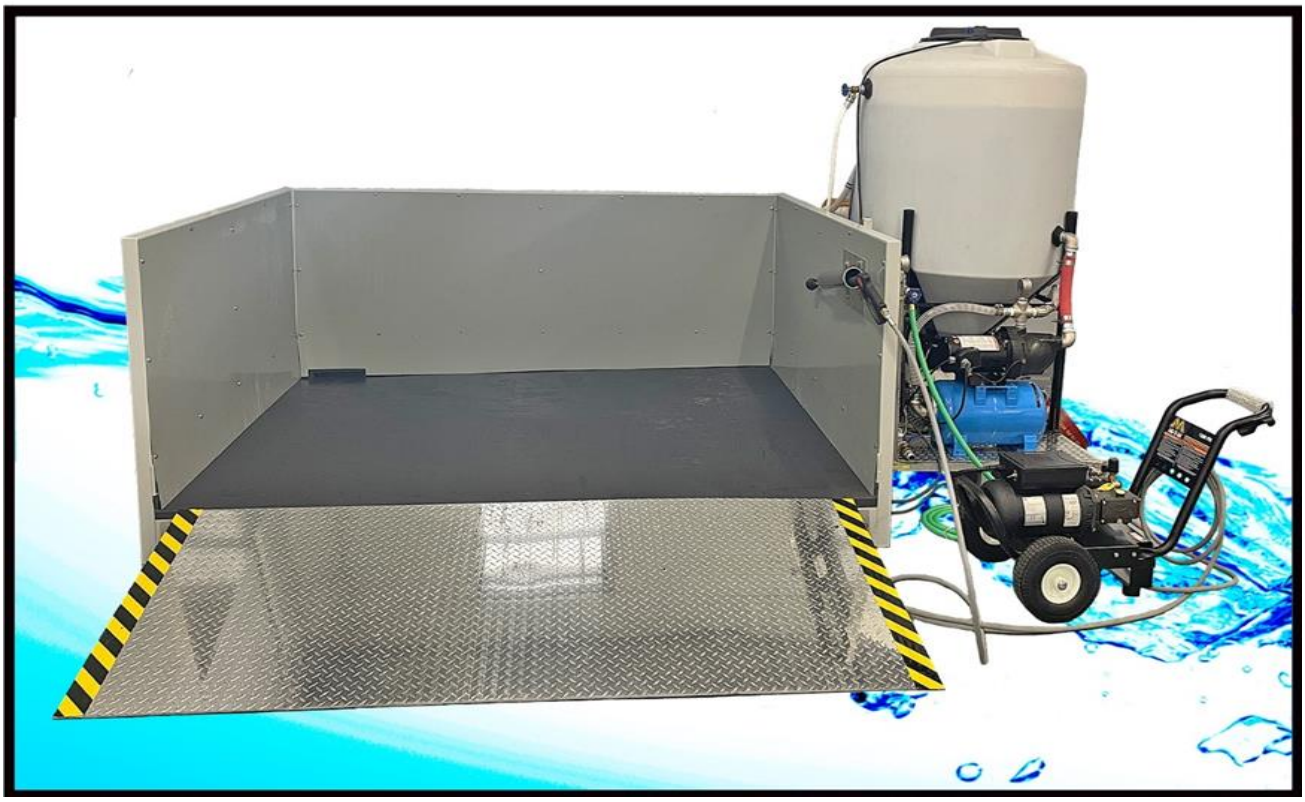
FREYLIT SYSTEM 7

Wash Pad & Equipment Platform
Operating & Maintenance Manual



Freylit USA Inc
3649 Centre Circle, Fort Mill, SC 29715
Web: www.freylitusa.com ~ Email:admin@freylitusa.com
Phone: 704-424-1006, 803-431-7029

TABLE OF CONTENTS:

Any consumables needed

for this Freylit System 7,

please call Freylit USA at 704-424-1006

1 DAILY CHECKS

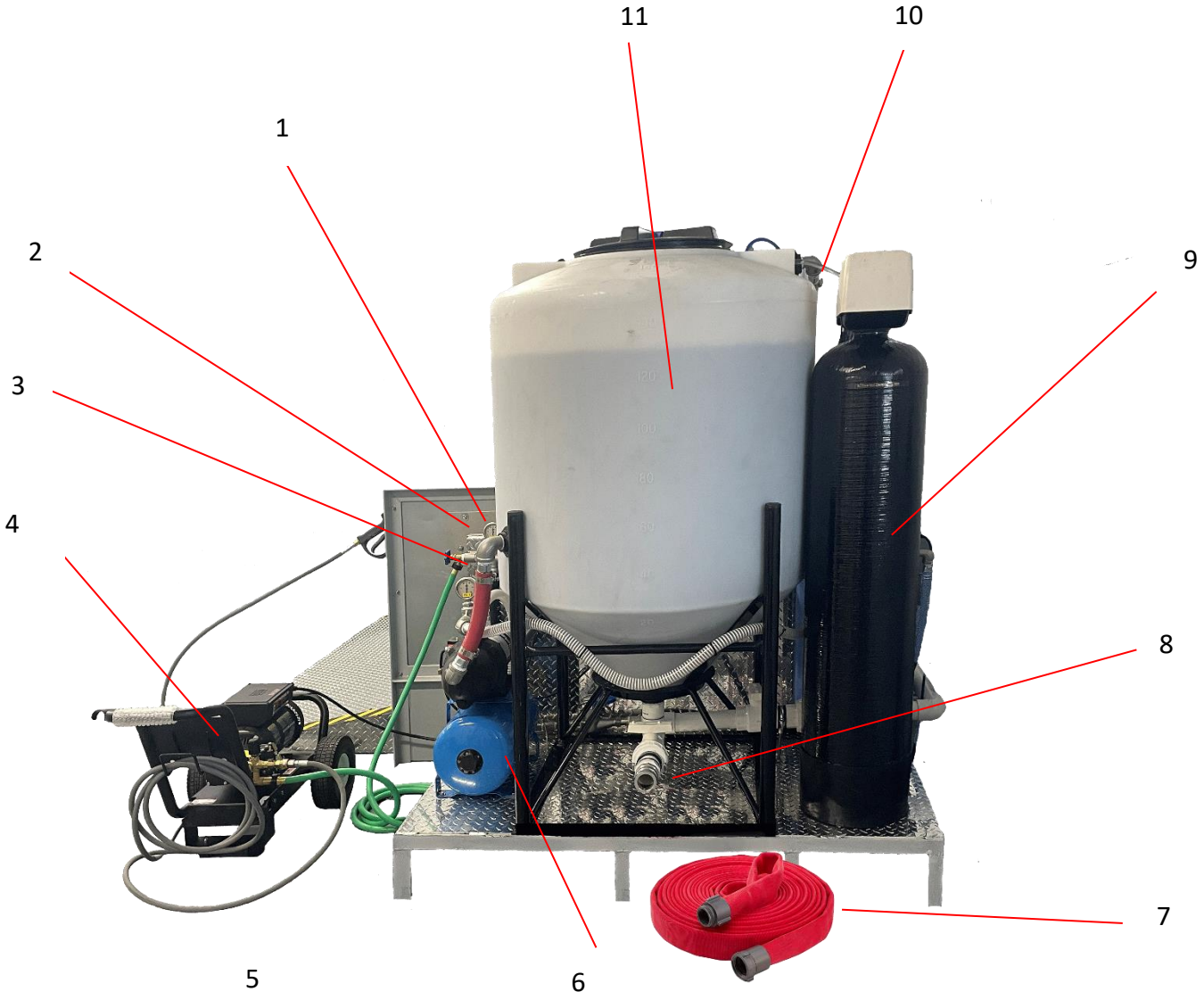
On a daily basis, or before operating the system, please check :

- That the pressure gauge reads between 35 – 60 psi, and
- There is sufficient water in the Holding Tank to operate the system

2 Description of the parts of Freylit's System 7 recycling unit

Front View

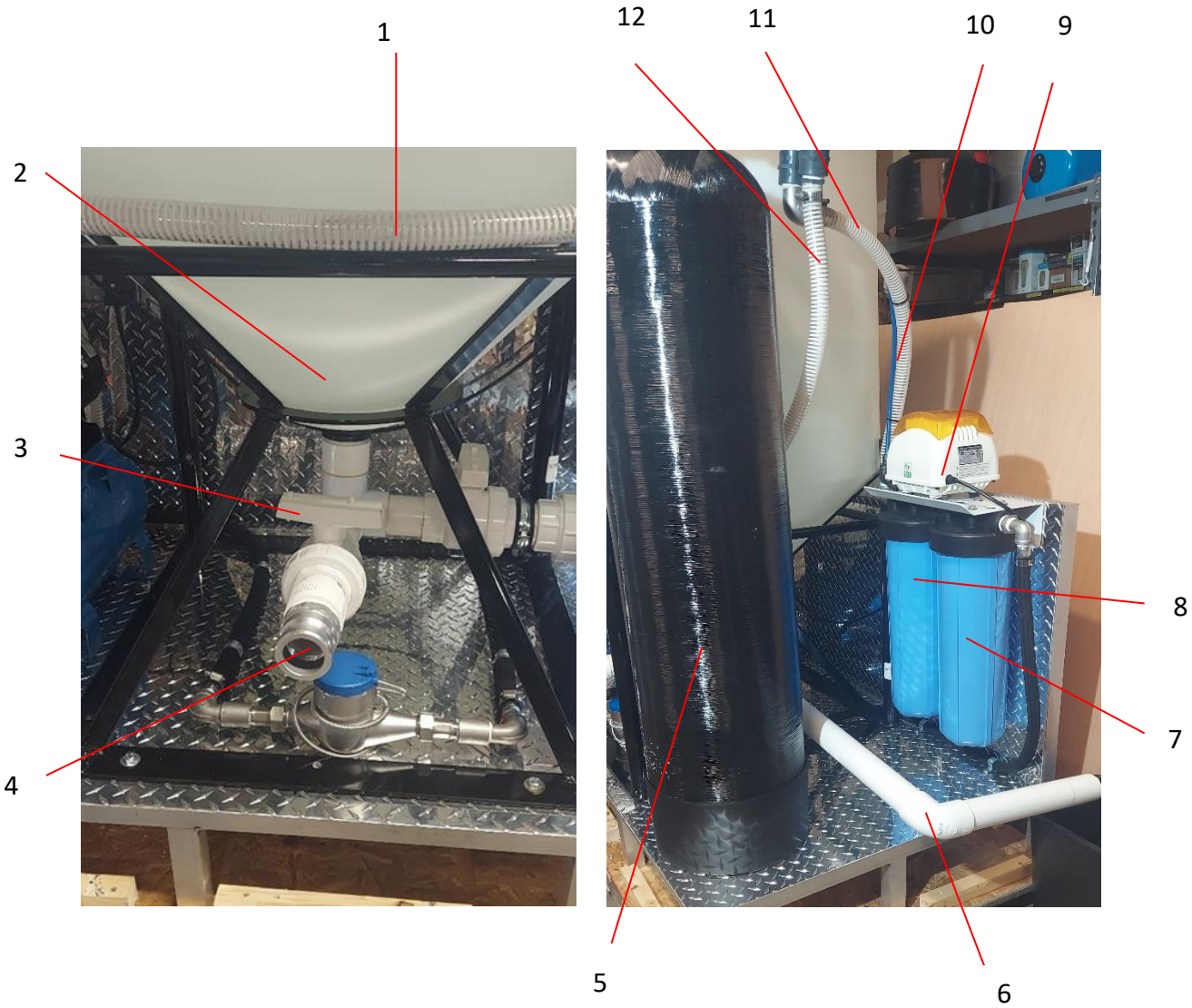
Front View			
1	Quad GFCI Receptacle	9	Activated Carbon Filter
2	Pressure Gauge	10	Supply line from Sump Box
3	ON / Off Gate valve for water to pressure washer	11	Water Holding Tank – 160
4	Pressure Washer		
5	Pressure Pump		
6	Expansion Tank		
7	100 ft Discharge Hose		
8	Holding Tank Drain		



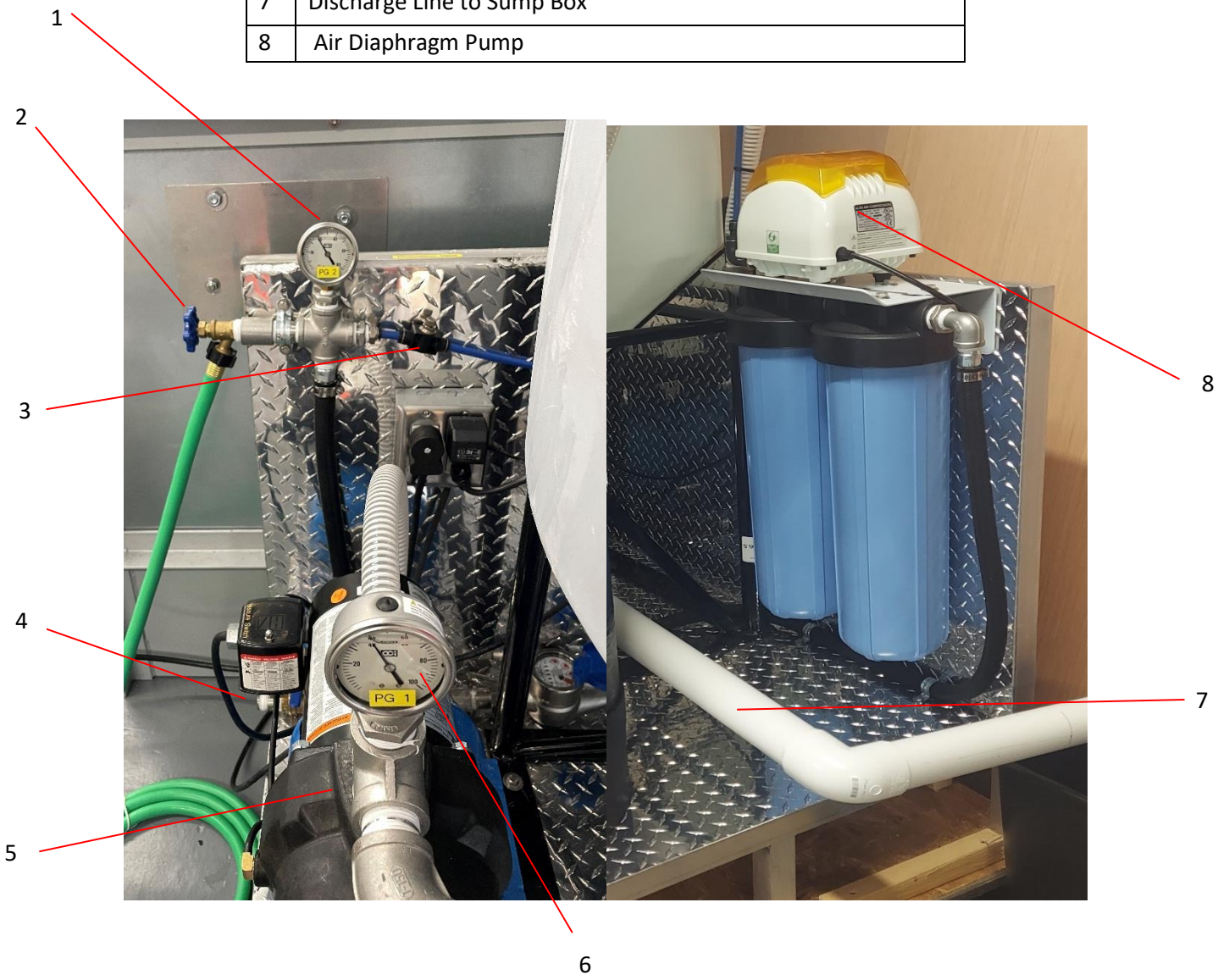
3 Description of the parts of Freylit's System 7 recycling unit

Right & Underside

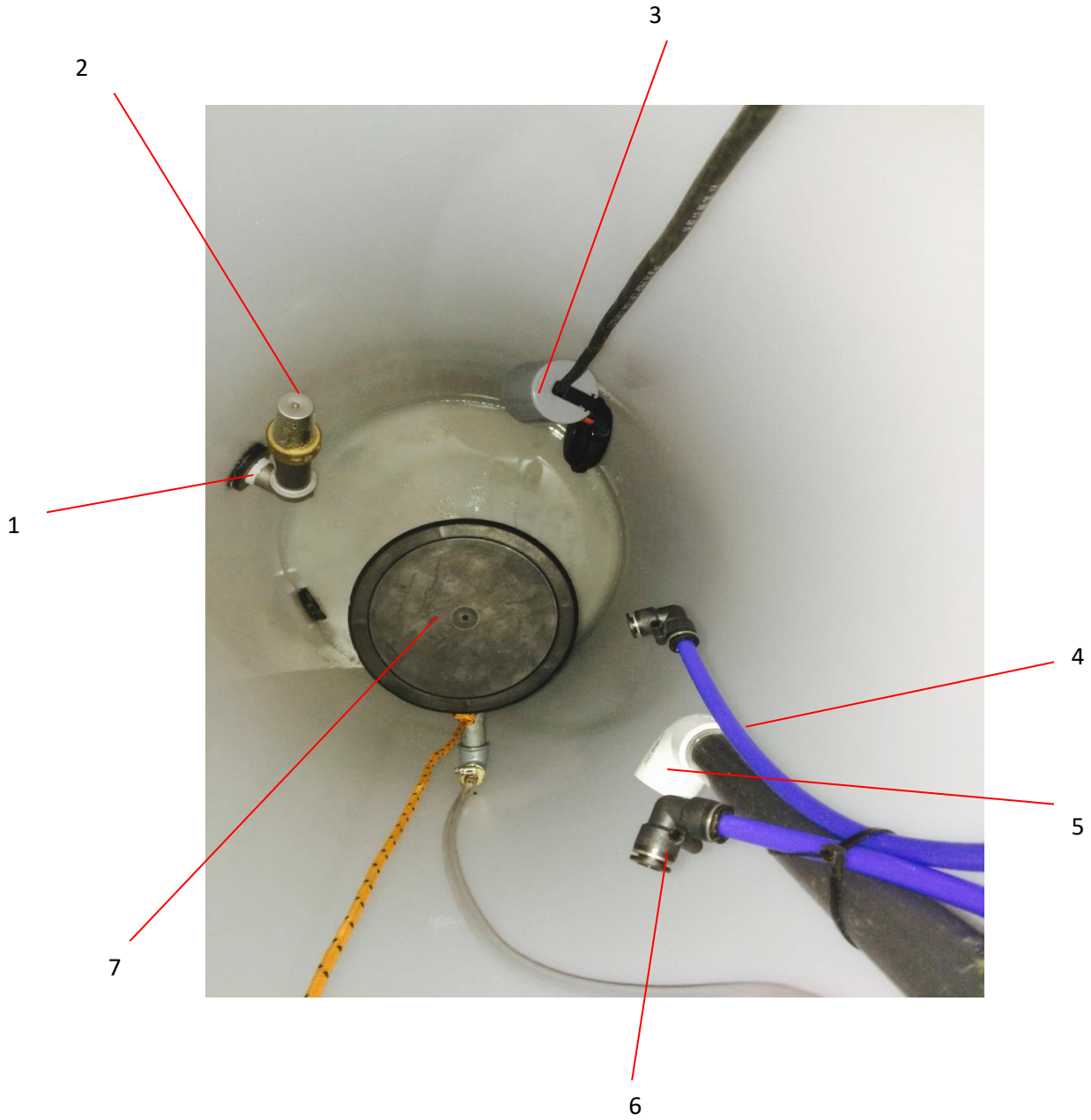
Right & Underside		Right & Underside	
1	Supply hose to inflow of Carbon Filter	10	¼" air line to Air Head inside the Tank
2	160 Gallon cone Holding Tank	11	1" hose from Carbon Filter to 5 Micron Filter
3	2" Ball Valve	12	1" hose to Carbon F. from Pressure Pump
4	Female Cam Lock for 100 ft red hose		
5	Activated Carbon Filter		
6	2" discharge line to Sump Pit		
7	1 Micron Filter		
8	5 Micron Filter		
9	Alita Air Pump		



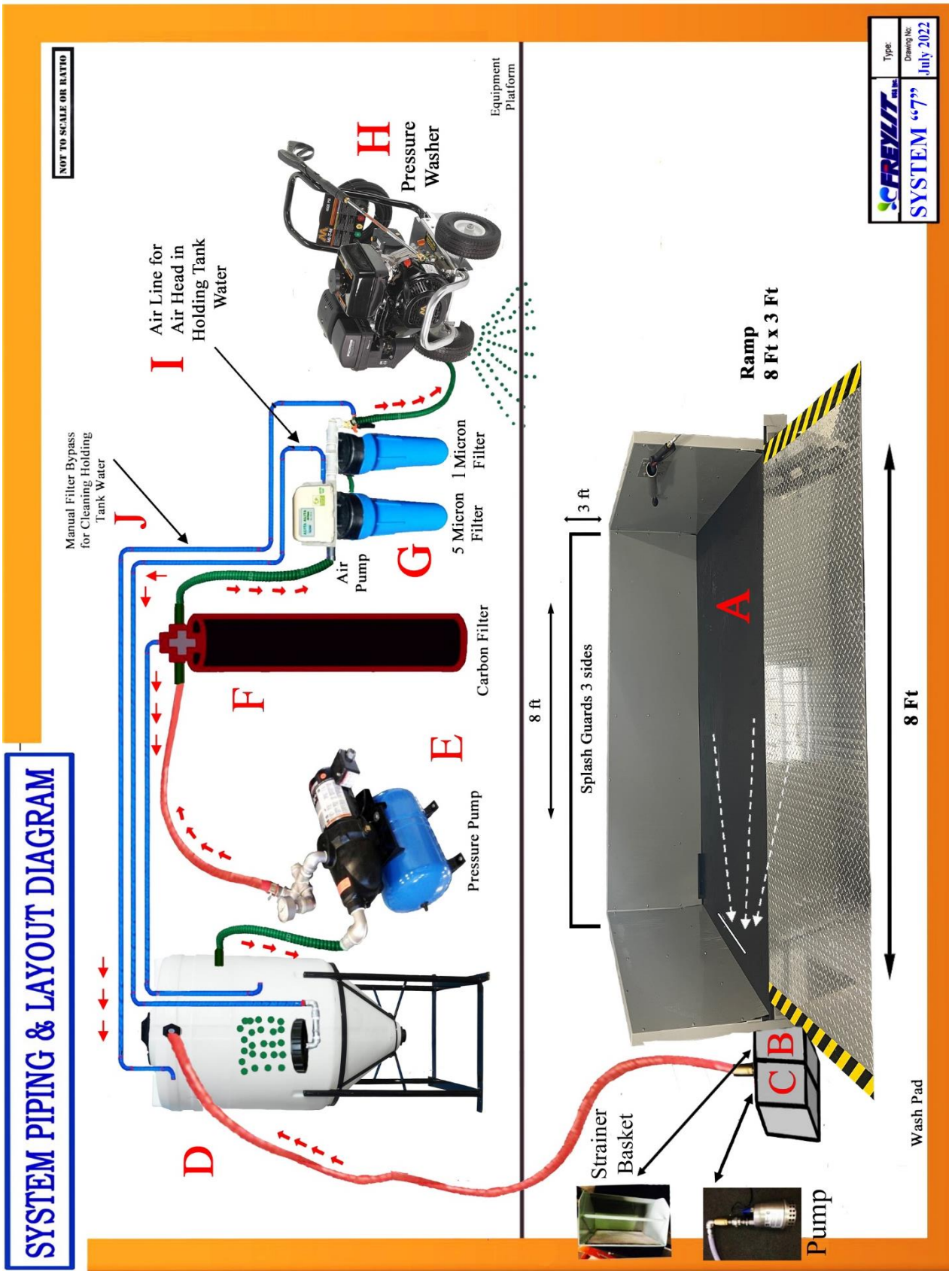
Air & Water Control Systems	
1	Pressure Gauge [PG 2]. After filters
2	On / Off Water Gate Valve to Pressure Washer.
3	Manual Air Valve for Control of Low Pressure Air to the Air Head in the Holding Tank
4	On/Off Water Hose Gate Valve to wet hose on Wash Pad
5	Pressure Pump
6	Pressure Gauge [PG 1]. Before filters
7	Discharge Line to Sump Box
8	Air Diaphragm Pump



Inside the Holding Tank	
1	Outflow Line to pressure Pump
2	Filter and Check Valve
3	Float Dry Run Protection for Pressure Pump
4	Carbon Backflushing Outlet
5	Inflow from Sump on Wash Pad
6	Cartridge Filter Bypass
7	Air Membrane Head



4 System Piping and Layout Diagram



5 Electrical

The “Freylit System 7’ has one 12 gauge 15 ft long cables that connect to individual 20 Amp circuits each with GFI standard 3 pin 115 volt sockets.

A 2nd wall mounted dual GFI receptical is for the Pressure Washer and hook up of the sump pump and sump float.

Quad Outlet	
1	Air Pump Supply
2	Pressure Pump
3	Spare Outlet
4	Activated Carbon Filter

6 Description & Function of the Freylit System 7 Recycling System

Letters below [A – J] are cross referenced on Section 3. System Piping & Line Diagram

The Freylit System 7 Reclaim System is comprised of TWO connecting pads.

The **Equipment Deck** is built on an aluminum diamond plate platform on raised feet for ease of mobility.

The **Wash Pad [A]** has a sloped 6ft x 8 ft sloped deck that directs water through a outlet slop into a three compartment Sump pit **[B + C1 + C2]**. The first compartment has a pull out 'strainer basket' **[B]** for collection and easy removed of solids, and the 2nd / 3rd compartments **[C1 + C2]** houses the sump lift pump. The wash deck has 3 ft high splash walls on three sides and a 3 ft ramp at the front for ease of access on and off the wash deck. A Wand holder is provided on the Wash Pad side wall.

Equipment is washed on the deck by first turning on the water and power supply to the Pressure Washer.

When completing Washing with the Pressure washer, and when not in use:

- Turn of the Pressure Washer AND
- Turn off the water supply to the Pressure Washer
- Blip the Wand to relieve the water pressure

Water and dirt will migrate to the corner and drop into the Sump Pit.

The strainer basket will collect the large debris and the water will overflow into the 2nd 3rd ompartment where, when the water level rises, will trigger the float to activate the Sump Pump.

The Sump Pump will lift the water via a non return valve up into the 160 gallon holding tank **[D]**.

When water is called for by the Pressure Washer **[H]**, the line pressure will start to drop and the Pressure Pump will activate and draw water from the holding tank.

The Pressure Pump pressure points are 40 – 60 psi.

Water from the Holding Tank is pressurized by the Pressure Pump and water is fed via the Activated Carbon Filter **[F]**, through the 20" Blue 5 and 1 Micron Cartridge Filters **[G]** back to the pressure washer **[H]**.

Recirculting Filter Bypass [J].

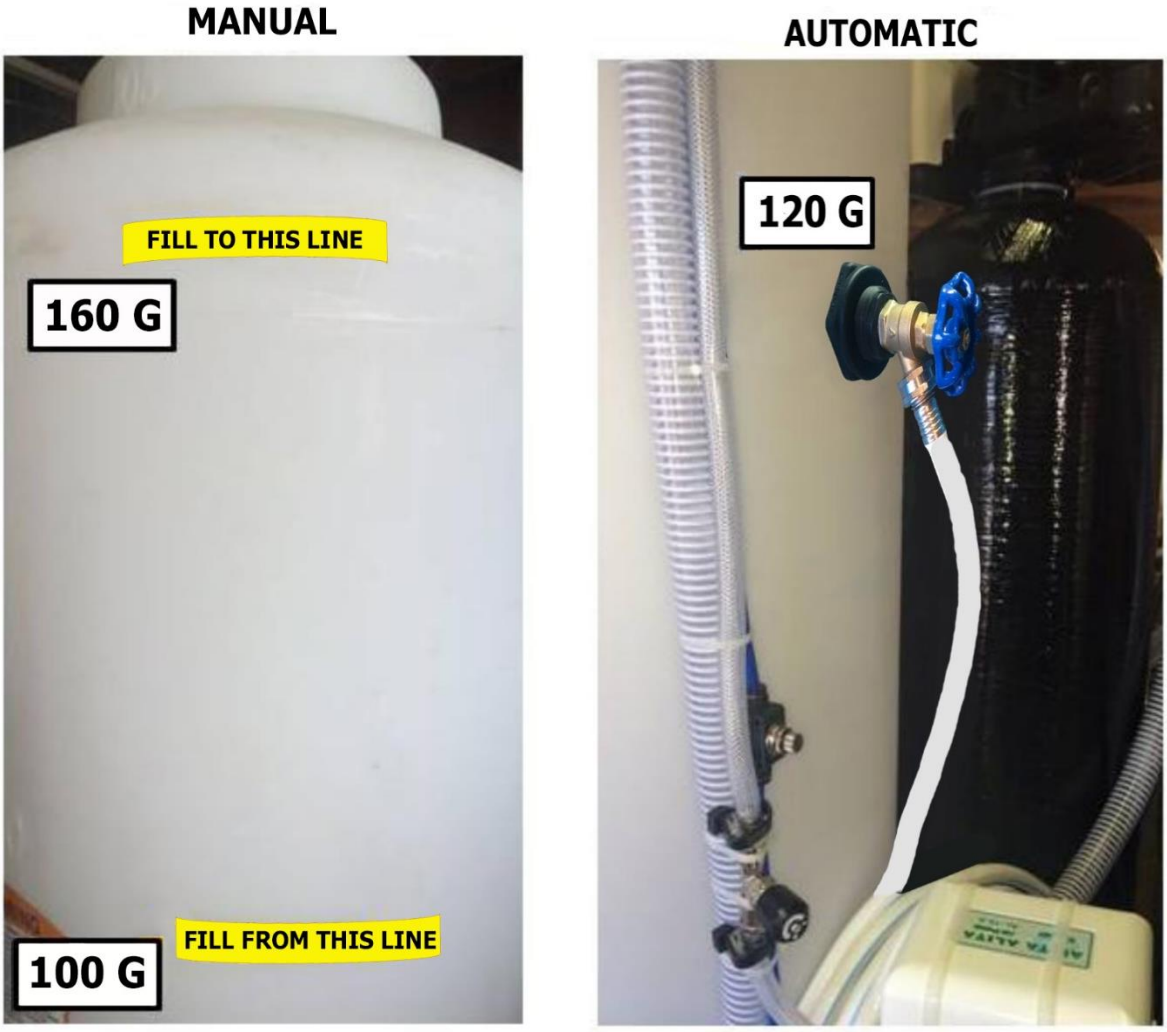
The system has the ability IF the Holding Tank water is exceptioanlly dirty to provoke the system to circulate by use of a small Stainless Steel Knob located next to the power outlets. By opening this valve, the system will process water on a continual basis through the Blue 5 and 1 Micron Cartridge filter. This will have the effect of overnight assiting to clarify the water in the Holding Tank.

An Air line from a small Air Diaphragm Pump **[I],** provides air to an Air Head inside the Holding Tank.

7 Freshwater Top Up

Due to mist overspray and carry of water on equipment being washer, the water in the holding tank will occasionally need “TOP UP”.

When the water level in the Holding Tank reaches down to about 70-80 gallons, as noted by the Yellow and Black Tape. see below- stating FILL FROM THIS LINE, fill back up with fresh water to the higher Yellow and Black Tape, see below - stating FILL TO THIS LINE.



The **Automatic Fill** Up only fills up to approx. the 120 gallon mark. So if it is preferred to fill to the 150 – 160 gallon mark, you will need to either depress the 6” black ball in the tank, until the required water level is achieved, OR add manually with a water hose.

8 Maintenance

The Freylit System 7 Recycling System Mainenance is **highly dependant on usage and amount of dirt removed during the washing process.**

Most of the Maintenance needs are **"ON DEMAND",** and only will be truly be known when the system has been operational for a period of time.

Description	Interval	Action
Sump Pit strainer basket	On demand	Take out strainer basket, clean and replace
Sump Pit Pump Compartment	On demand	Use provided "Shop Vac" to empty the water compartment, including any resident slurry or dirt build up in the corners of the compartment. **See Section 8.4 below** to clean and replace fabric on sump screen.
Change Float protective fabric	Every 2 months	Take float out and replace protective fabric. **See Section 8.1 below.** SIX replacement protective fabrics have been provided at commissioning.
Blue 5 and 1 Micron Cartridge Filters	On demand	Change filter. **See Section 8.2 below.** Two extra 5 micron filters provided at Commissioning.
Holding Tank	On demand	Empty Holding Tank. **See Section 8.3 below.**
Adjusting the Air to the Air Membrane in the Holding Tank	Every 2 months	Check by looking inside the Holding tank and seeing if mini bubbles are rising to the surface and making a disruption of about 6-9 inches across to the surface.
Activated Carbon Filter	Every 12-18 months	To be advised

8.1 Replacement of the protective fabric around the float.

The protective porous fabric is used to prevent excessive dirt from building up on the float shaft or the actual float.

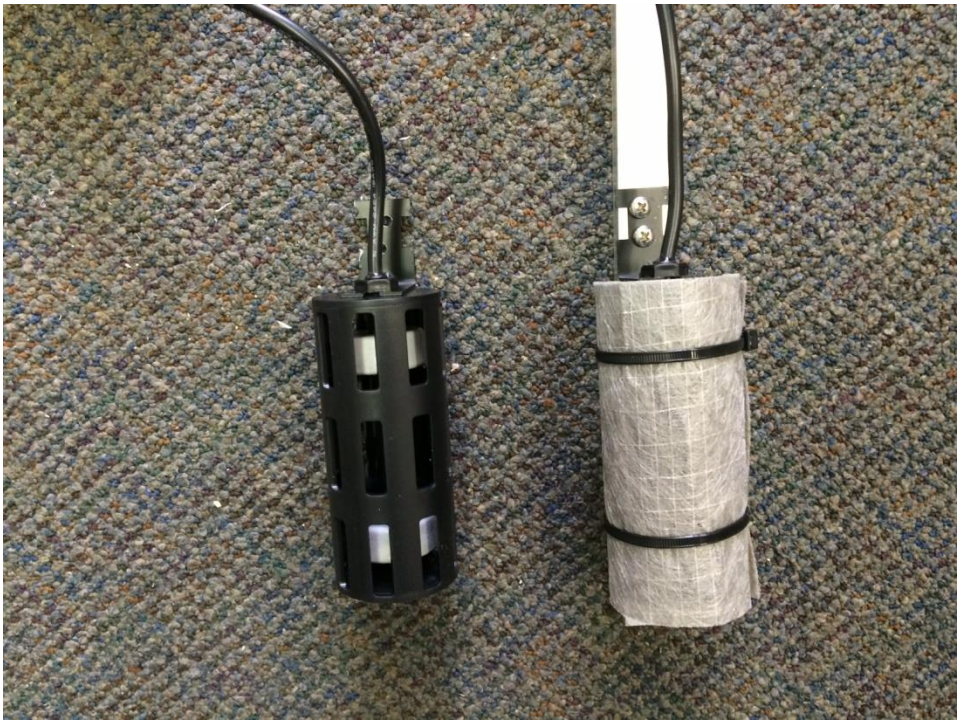
Periodically this porous fabric will need changing.

The before and after picture below shows the float with, and without, the fabric.

To aid the operation, as the float is in a rather tight environment, Freylit has mounted the float on an aluminum “C” channel, that is secured to the side of the sump by two ¼ inch wing nuts. By removal of these two wing nuts, the float then can be easily removed.

To change to fabric, just cut the existing “tie wraps” off, and then replace with new fabric, secure with two more “tie wraps” and remount the float onto the wing nuts.

SIX sets of fabric and tie wraps have been provided.



8.2 Replacing the 5 and 1 Micron filters in the Blue 20" Cartridge.

Periodically, the 5 and 1 Micron Filter will need replacing.

If the pressure difference between the Pressure Gauges on the Pressure Pump and the output to the Pressure Washer is more than 10 psi, it is time to change the filter.

The process to replace is:

a) Reduce the system pressure to zero. This is accomplished by removing the Pressure Pump power by taking out the Pressure Pump power cable from the quad GFCI outlet.
b) Then place a small bucket over the Hose Connection gate outlet, see 5 on the Air and Water Control System section.
c) Open the gate and relieve the pressure
d) Use the special plastic wrench to open the blue filter housing.
e) Remove the old filter and place directly into a strong poly bag to stop it leaking all over the floor.
f) Clean out the inside of the blue filter. Take care of the rubber "O" ring that sits around the top edge of the housing.
g) Replace a new filter into the Blue housing and screw back the blue housing into the black top housing, pinching down with the plastic wrench.
h) Re-plug the Pressure Pump power back in.
i) Check that the Pressure Pump turns on and rebuilds the pressure back to approx. 50-60 psi.

8.3 Holding Tank clean out- See Pictures Page 16

Periodically the Holding Tank will need empting. There is no and hard rule as to how much dirt will require the Holding Tank to be cleaned out, but if placing a long pole inside the tank shows more than 6 inches of build up at the bottom, we would suggest to have the tank cleaned out.

There are THREE ways of cleaning out the Holding Tank.

1. **To employ a septic service company to come and pump out.**
2. **To circulate the Holding Tank water back onto the Wash Pad.**
3. **To use the provided 100 ft 2" red fire hose to discharge to an appropriate location on the property.**

1. Employ a septic service company to come and pump out

You will need to decide who will be responsible for removing and taking away the 160 gallons of dirty water. This might be actioned on site, or a professional sewer or septic service company employed.

To empty turn off the Pressure Pump by removing the power plug.

The sceptic service company will hook up their hose to the male cam lock on the equipment, see below, to empty the whole tank. They may need to use a fresh water hose to wash some of the residue dirt out of the tank depending on the amount of dirt in the bottom of the tank.

Refill the tank with fresh water and Rr-plug back in the power cable for the Pressure Pump

2. To circulate the Holding Tank water back onto the Wash Pad. See picture on next page

The system already has built in a re-circulating system. All that is needed is to turn the ball valve "OPEN", but first making sure that the end of the line is exiting into the 1st chamber of the sump pit/box.

ONLY open the valve ¼ - ½ open until you can gauge the volume of water into the sump box is NOT to excessive to flood the whole sump box.

3. Use 100 ft Red Hose to discharge to an appropriate location on the property. See picture on next page

Connect the provide 100 ft hose with the cam lock provided

Unwrap the hose to end destination. Open Ball Valve to drain tank, **BUT CLOSE GATE VALVE TO STOP FRESH WATER** coming into the tank. It may need to use this fresh water to wash some of the residue dirt out of the tank depending on the amount of dirt in the bottom of the tank

When complete, close the Drain Valve, remove the red hose and open the Fresh Water gate valve to refill the tank.

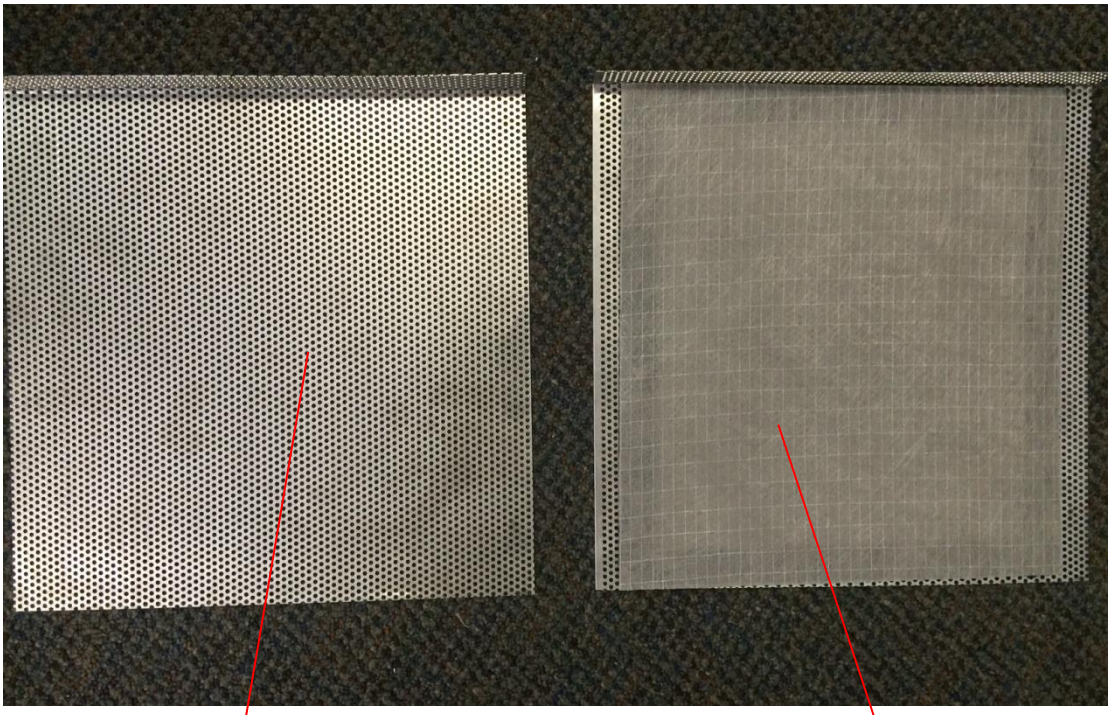
Use 100 ft Red Hose to discharge to an appropriate location on the property.

To circulate the Holding Tank water back onto the Wash Pad

7.4 Replacement of the fabric screen on the stainless steel screen

Take the Standard Stainless Steel Screen and clean periodically with a wire brush.

IF the screen with fabric shows heavy contamination, hose the fabric till clean OR replace whole screen.



Standard Stainless Steel Screen

Standard Stainless Steel Screen with screen fabric attached