

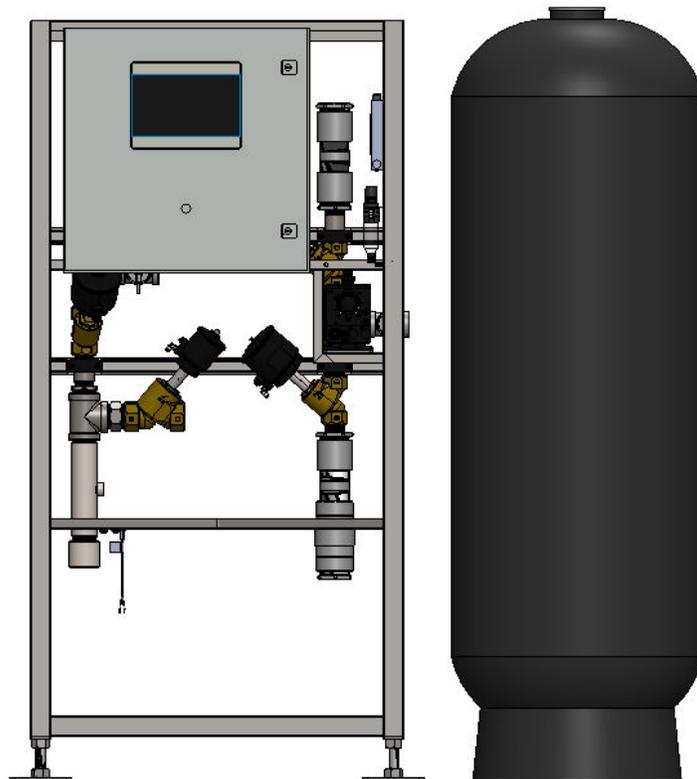


# RECLAIM

W A T E R T R E A T M E N T S Y S T E M

## Instruction Manual

V 2.0, 4-12-24



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# Introduction

## 1. Introduction

The manufacturer innovateIT Car Wash Equipment LLC is committed to the continuous improvement of its equipment construction quality and the safe operation of its equipment.

### 1.1 Warranty

This manual covers the installation, intended use, and maintenance of the Reclaim Water Treatment System. Misuse or improper operation of this device will void the manufacturer's warranty.

The Reclaim System is covered by a 1-year limited warranty from the date of shipment. This warranty shall be void and of no effect if:

1. Any installation defect that was apparent or ascertainable at the time of installation was completed but was not promptly reported to innovateIT Car Wash Equipment LLC.
2. Damage occurs due to the customer's failure to observe any instructions from innovateIT Car Wash Equipment or an authorized distributor and/or requirements of the manufacturer with respect to the product.
3. The breach results from misuse of the equipment as outlined in the instruction manual.

When purchasing through a distributor, please ask about their warranty coverage on the unit.

### 1.2 Safety Information

The instructions in this manual provide you with the information necessary to install and operate the Reclaim System. Before starting installation, the instruction manual should be carefully read and understood. This relates to all Reclaim System documents from innovateIT Car Wash Equipment.

The basic pre-requisite for safe working is compliance with all the safety and handling instructions stated in this manual. Furthermore, follow all local accident, hazard prevention regulations or general safety regulations when installing and operating the Reclaim System.

The equipment's operation, maintenance, and troubleshooting must only be carried out by trained personnel. Personnel be able to interpret a wiring diagram, use a multimeter to read AC and DC power, and apply Lock Out Tag Out (LOTO) safety procedures specific to the equipment.

Eye protection should be worn at all times when operating the Reclaim System, as the unit includes high pressure water lines and diluted hydrogen peroxide which is a strong oxidizer. Refer to the MSDS sheet specific to the oxidization chemical you are using.

Electrical installation must adhere to local codes and the National Electrical Code, ANSI/NFPA 70 for electrical wiring. To avoid electrical shock hazards, do not operate this device when controller enclosures are open and energized. Electrical power must be shut off and a lock-out procedure utilized to ensure all electrical power is disabled before performing maintenance to any portion of the system.

Plumbing installation must adhere to a local code and Uniform Plumbing Code (UPC), and plumbing connections and drains must adhere to local standards and facility codes.

Do not remove any Caution, Warning, or any other descriptive labels from the Reclaim System. Do not operate this device in an explosive environment or in the presence of flammable materials.

Movement or vibrations during shipment may cause connections to loosen. Check all connections before starting up a unit.

Do not operate this unit in an environment where water temperatures may be below 40°F.

This equipment is intended for installation in ordinary locations, by the National Electrical Code, ANSI/NFPA 70, where the ambient temperature does not exceed 104°F maximum.

innovateIT Car Wash Equipment LLC does not accept liability for accidents or damages due to negligence or disregard for the instructions in this manual. Also, the Company does not accept liability for damages due to improper use of the equipment.

This instruction manual should always be kept in a safe and easily accessible place near the equipment's site of installation and operation, and be available for the operator at the user site at any time.

If the manual is damaged, lost, or misplaced, you should immediately request a new copy from innovateIT Car Wash Equipment LLC.

## 1.2.1 Notifications & Symbols



**! DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.



**! WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.



**! CAUTION**

**CAUTION** indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



**NOTE**

**NOTE** is used to address practices not related to physical injury.

# System Overview

## 2. System Overview

Reclaim Water Treatment Systems are essential for significantly reducing municipal water consumption of a car wash. The systems use a submerged water pump to take waste water from a clarifying tank and perform a series of processes designed to reclaim water. The processes include:

1. Aeration of water
2. Chemical dosing
3. Mechanical filtering
4. Recirculation
5. Storage of treated reclaim water for reuse in the wash

These processes remove contaminants, oils, and chemicals from used water, making it safe for reuse in certain stages of the car wash process. This treatment is essential for maintaining high standards of wash quality and preventing damage to vehicles and wash equipment.

Reclaim water has a higher Total Dissolved Solids (TDS) than municipal water, so it is ideal for use early in the wash process and on areas of the car that are less sensitive to water spotting (underbody, wheel blasters and car sides below the windows).

By recycling water, the need for costly municipal water is minimized, leading to significant savings on water bills. Reclaim Systems automate the treatment process, reducing manual labor and simplifying the workflow. This efficiency is particularly relevant for high-volume operations where the cost of water can accumulate.

### 2.1 Features & Functions

innovateIT Car Wash Equipment LLC has developed a Reclaim System to provide high-quality reclaim water and reduce municipal water usage, minimizing operational costs.

The system features a Grundfos SEG Grinder Pump (located in the last sediment tank/clarifying tank), replacing the need for the daily cleaning of an inlet basket. The pump is mounted to a stand to reduce the possibility of ingesting non-floating materials (e.g. leaves and grass) that could damage the pump. It's used during both Reclaim and Recirculation modes, preventing any foreign objects from clogging the filters or lines. The pump is designed to handle "flushable materials", such as cloth, wood chips, paper, and plastic.

The pump's location in the tank protects it from dry running and eliminates pump cavitation from a long suction line. The single pump reduces energy consumption and doesn't require a foot valve to maintain its prime.

A micro bubbler aeration system (located in the second sediment tank) maintains water circulation, preventing stagnation when the wash is not running. The aeration system uses oxygen from compressed air to sanitize the water and remove odors, reducing chemical usage.

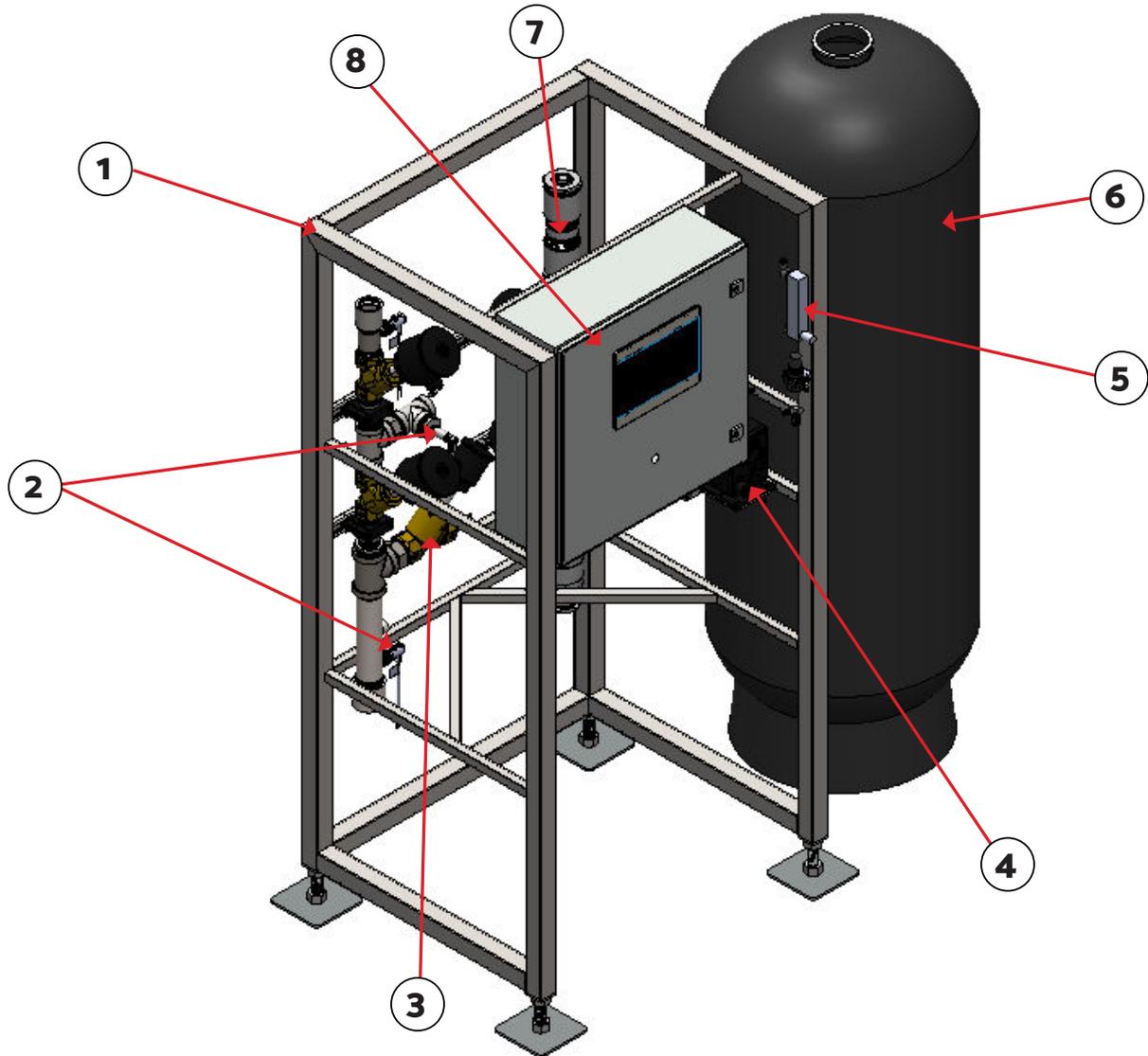
The system uses a high flow recirculation loop combined with the tank mounted micro-bubbler aeration system to maintain circulation of the water and prevent stagnation of the water when wash is not operating.

High-capacity multimedia filters remove over 99% of particles over 10 microns and neutrally buoyant particles that pass

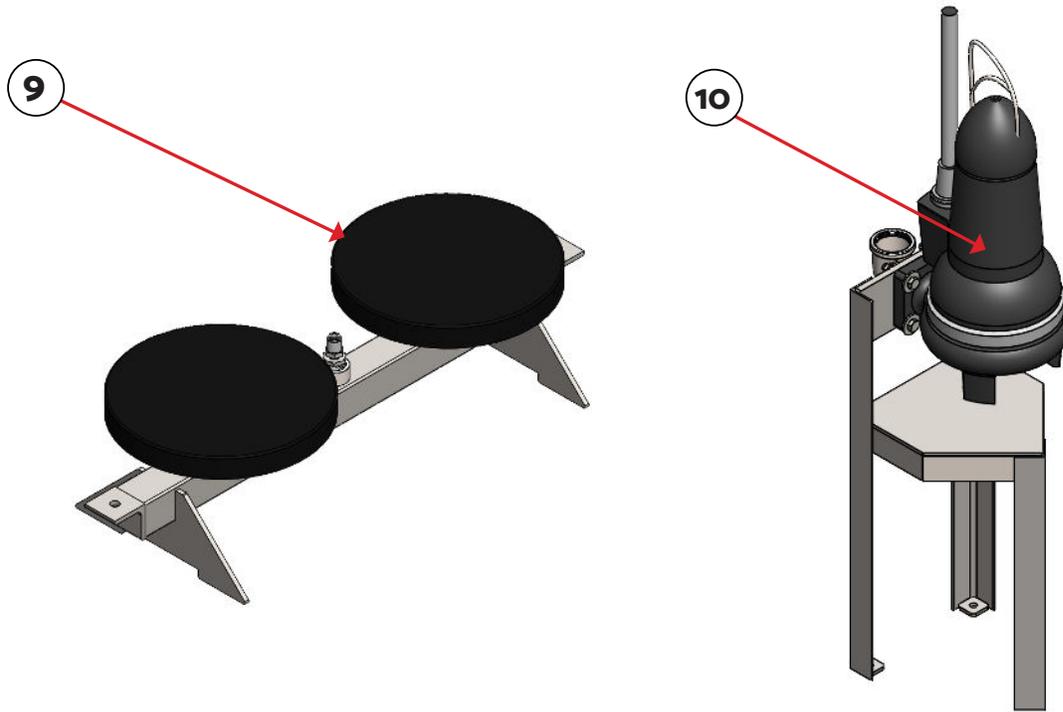
through centrifugal separators, reducing clogged nozzles. A proprietary media blend and automatic flushing of the system reduce water usage.

The system also allows for direct integration to the point of usage (High Pressure Pump Station) without additional pumps or storage tanks.

The PLC controller features a user-friendly touchscreen HMI that provides feedback on system operation, giving the operator flexibility to optimize the system based on the water quality and wash volume.



**Fig. 2.1 - 1 - Reclaim System identification**



**Fig. 2.1 - 1 - Reclaim System identification**

**Table 2.1 - 1 - RO System component features and functions**

#	Component	Features/Functions
1	Stainless Steel Frame	- Stainless steel construction maximizes durability and equipment longevity
2	Process Sensors	- A variety of sensors including flow switches and pressure transducers are used to provide seamless operation and maximum process feedback
3	Process Valves	- Reliable angle valves for process automation
4	Grundfos Dosing Pump	- Injects chemical oxidizer into reclaim flow, increasing dissolved oxygen in the water, reducing odors - Operator adjustable dial for dosing
5	Air Flow Regulator	- Regulates air flow to the micro bubbler - The default setting is 2 CFM. This can be raised or lowered depending on the desire for dissolved oxygen.
6	Multimedia Filter	- High-capacity filter that removes over 99% of particles over 10 microns and neutrally buoyant particles that pass through centrifugal separators, reducing clogged nozzles

#	Component	Features/Functions
7	Flow Regulators	<ul style="list-style-type: none"> <li>- The system features two flow regulators: one to regulate the flow of reclaim, and one to regulate the flow of municipal water during the Flush cycle</li> </ul>
8	Electrical Enclosure	<ul style="list-style-type: none"> <li>- Includes PLC, HMI, and mechanical disconnects from main power supply</li> <li>- Converts 480VAC 3PH power to 24 VDC power for the HMI, PLC, and air solenoids</li> <li>- Built-in HMI provides feedback on system operation</li> <li>- Allows for rapid troubleshooting and fine-tuning of system performance</li> <li>- PLC controller utilizes 'Flow on Demand' algorithm to match permeate production to the demand in the car wash</li> </ul>
9	Micro Bubbler	<ul style="list-style-type: none"> <li>- Increases dissolved oxygen levels in the water circulating in the underground tank system</li> <li>- Reduces chemical dosing required to treat reclaim water</li> </ul>
10	Grundfos SEG Pump	<ul style="list-style-type: none"> <li>- Prevents any foreign objects from clogging the filter or lines</li> <li>- Designed to handle "flushable materials" such as cloth, wood chips, paper, and plastic</li> <li>- Mounted to a stand to reduce the possibility of ingesting non-floating materials which could damage the pump</li> <li>- Replaces the need for a strainer basket, eliminating daily maintenance</li> </ul>

## 2.2 System Specifications

**Table 2.2 - 1 - Reclaim System specifications**

	Standard Flow	High Flow
Reclaim Production (GPM)	25 GPM	50 GPM
Particle Size	<10 Micron	
Pump Size	5HP	
Municipal Water Supply	1.5" FNPT	
SEG Grinder Pump Supply	2" FNPT	
Recirculation Outlet To Tunnel Pit	2" FNPT	
Sewer Outlet (as far to entrance as possible)	1.5" FNPT	
Reclaimed Supply to Applicators	1.5" FNPT	
Filter Inlet/Outlet	1.5" FNPT	

	Standard Flow	High Flow
Minimum Water Temperature	40°F	
Minimum Water Supply Flow	30GPM	60GPM
Maximum Municipal Water Pressure	100 psi	
Air Connection (Regulator)	1/4" Poly Tube Push Connect	
Air Connection (Flow Meter to Micro-Bubbler)	3/8" Air Line	
Air Supply (Clean, Dry Air)	4 SCFM @ 80-100 psi	
Voltage	480 VAC/3PH (Optional 208 VAC)	
Max Current	10 A (480) 15 A (208)	
Dimensions (Main Frame)	40" w x 73" h x 34" d	
Dimensions (Filter)	24" w x 72" h	30" w x 72" h

# Installation

## 3. Installation

Installation of the Reclaim System must conform to local plumbing, electrical, and sanitation codes. The customer is responsible for obtaining all permits and ensuring the following conform to all state and local codes before installing the Reclaim System.

### 3.1 Installation Preparation

1. Review **Appendix 1** for the typical backroom configuration and placement of the Reclaim System.
1. Locate where the equipment will be installed with your installer. The Reclaim System should be located 4-6 inches from the back wall.
2. Use 200 psi hose (Eaton BOSFLEX or equivalent) and heavy-duty stainless steel hose clamps on every connection to ensure reliable operation.
3. Use 100 psi pneumatic air lines for air connections and any maintenance related replacements.
4. Lines should be positioned to minimize bends, and lines from tanks should hang in a manner to minimize loading on the stainless fittings.
5. If needed, install additional clamps or hose supports to the Reclaim System frame to reduce movement of hoses during operation.
6. All water drains and overflow lines must drain to the floor drain.
7. The filter flush line must drain to the oil separator tank, and the plumbing must be able to flow up to 30 GPM for Standard Flow units and 60 GPM for High Flow units.
8. The recirculation line should be directed to flow into the pit before returning to the first waste water tank.
9. Ensure the wash supply tank is equipped with overflow to sewer in the event of excess reclaim production.

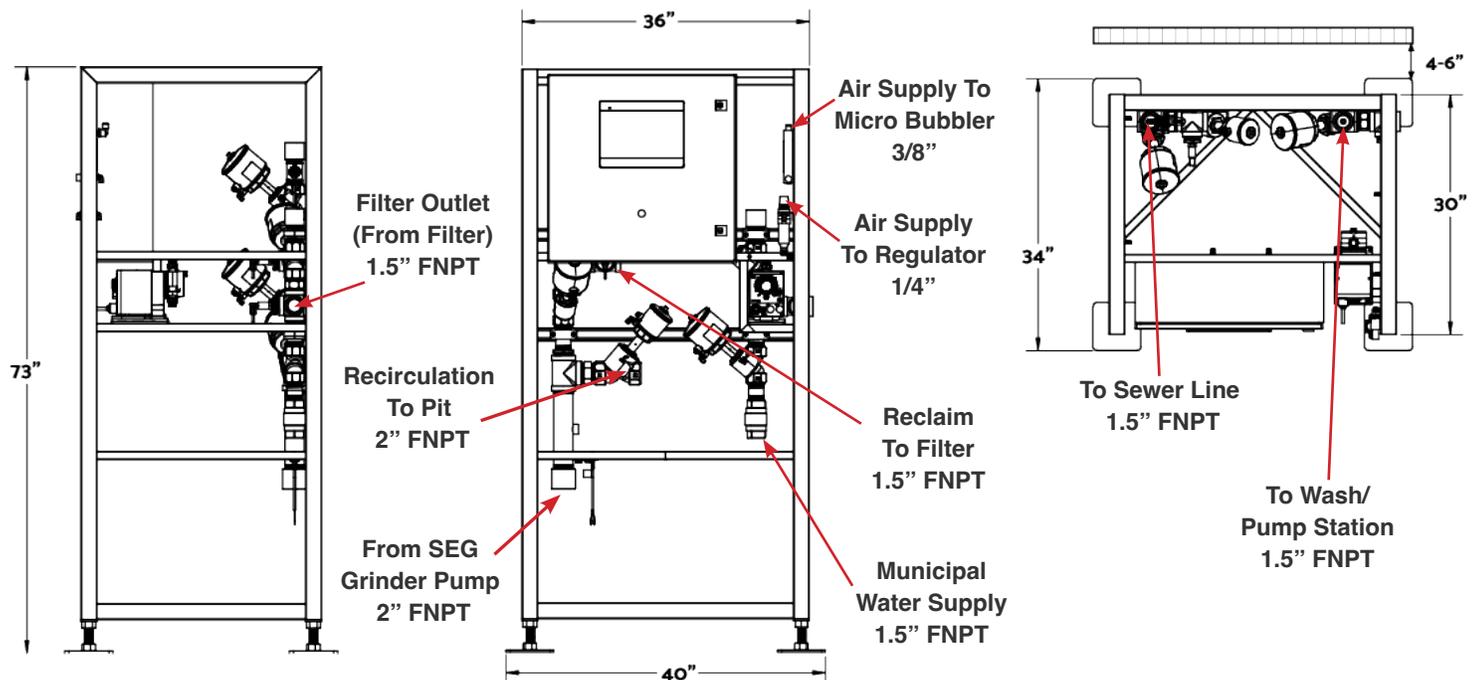
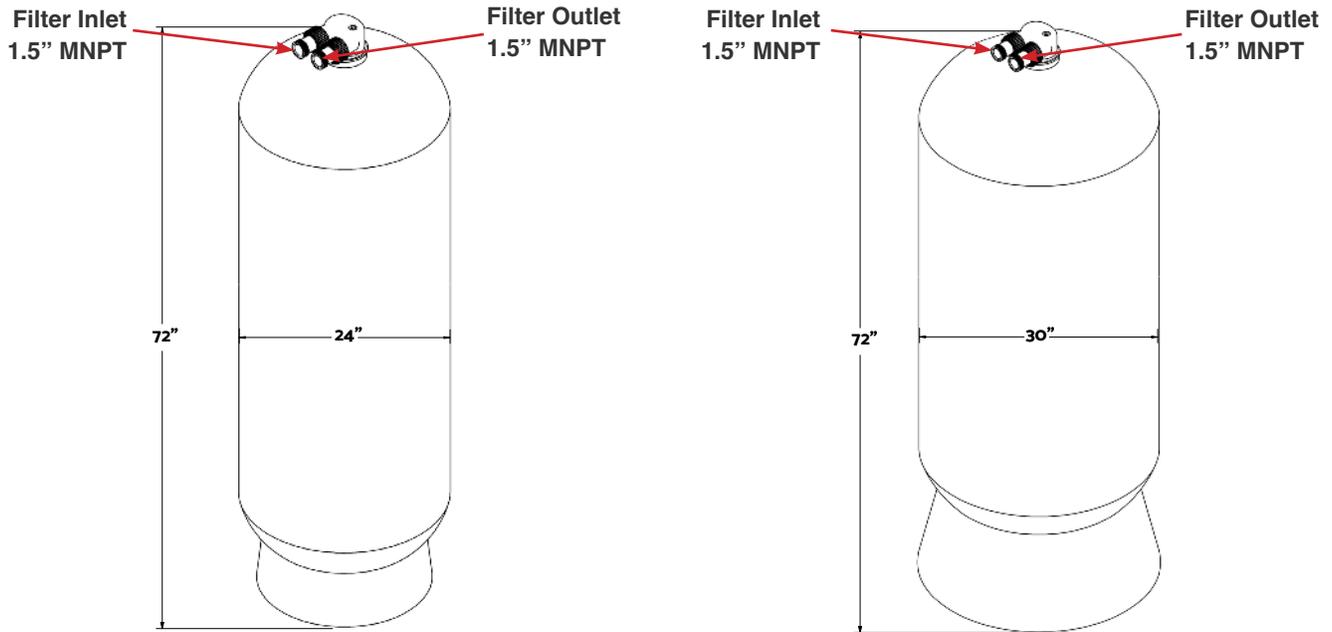
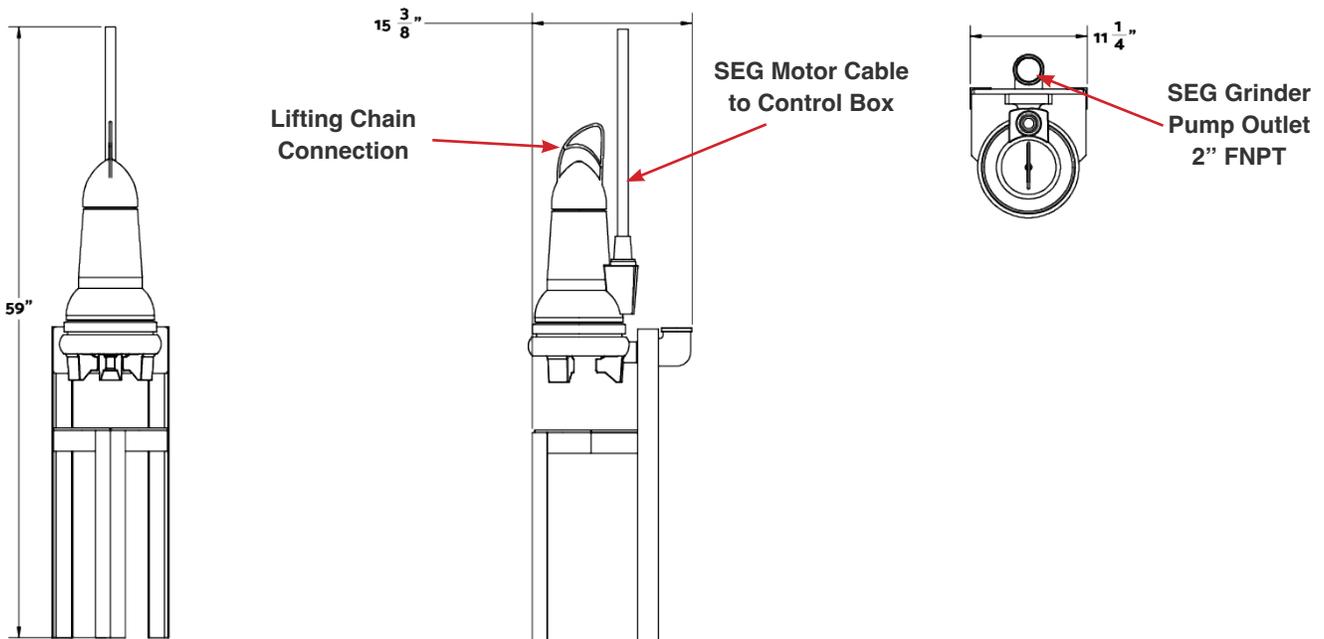


Fig. 3.1 - 1 - Reclaim System frame dimensions and connections



**Fig. 3.1 - 2 - Standard Flow (left) and High Flow (right) Reclaim System filter dimensions and connections**



**Fig. 3.1 - 3 - Grundfos SEG Pump dimensions and connections**

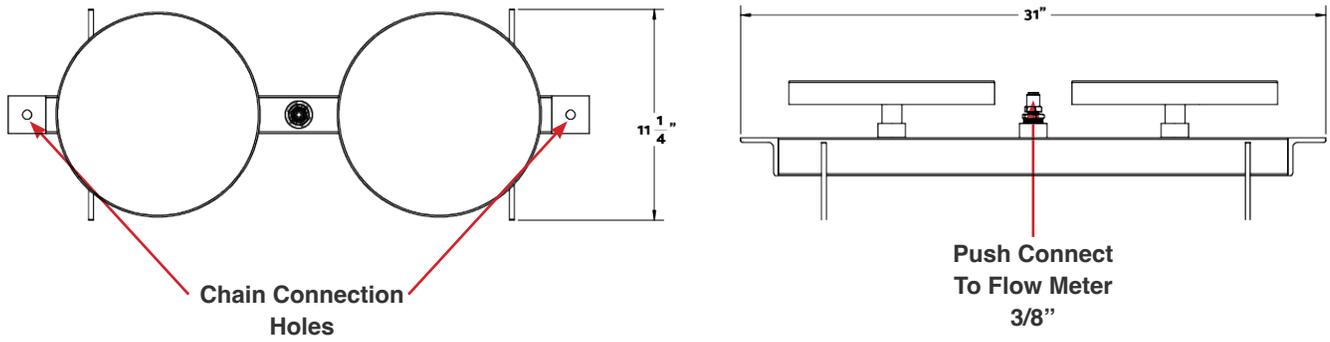


Fig. 3.1 - 4 - Micro bubbler dimensions and connections

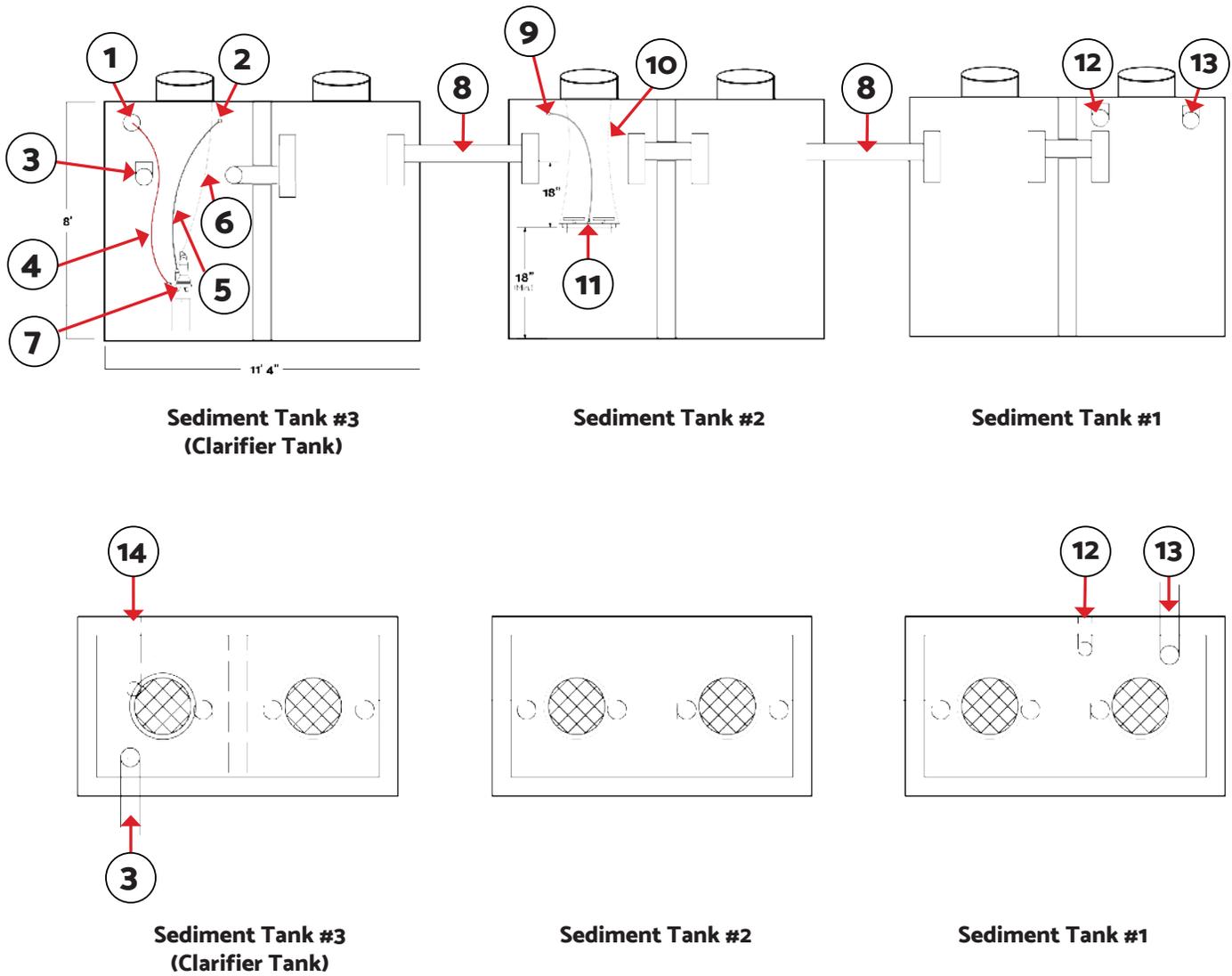


Fig. 3.1 - 5 - Three sediment tank configuration

**Table 3.1 - 1 - Three sediment tank components**

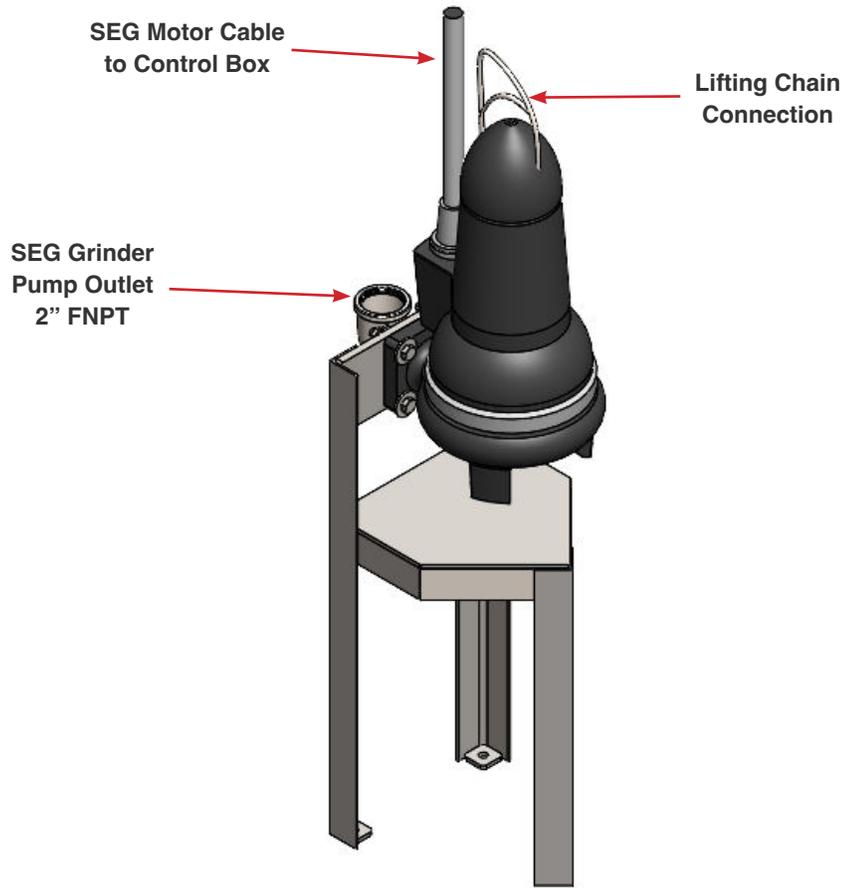
#	Component
1	6" Chase Pipe to Clarifier Tank for Pump Line
2	2" Electrical Chase to Clarifier Tank for Motor Cable
3	Pipe to Oil Water Separator
4	2" 200 psi Hose to Reclaim Skid Location
5	Grundfos Motor Cable
6	Chain/Cable Support
7	Grundfos SEG Grinder Pump
8	8" Pipe
9	2" Chase to Sediment Tank 2 for 3/8" Air Line to Micro Bubbler
10	Chain/Cable Support
11	Micro Bubbler (1-5 SCFM)
12	6" Drain Pipe to Sediment Tank 1 (optional)
13	8" Drain Pipe to Sediment Tank 1

## 3.2 Mechanical Installation

### 3.2.1 SEG Grinder Pump Installation

The SEG Grinder Pump should be installed in the clarifying tank (Fig. 3.1 - 5).

1. Attach 2" hose (#9 in Fig. 3.1 - 5) to the outlet of the SEG base using a 2" NPT hose barb (Fig. 3.2.1 - 1).
2. Lower SEG into last division of the settling tanks with the provided lifting chain.
3. Connect the top of the chain to a location that is convenient for movement/removal of the pump.
4. Connect the 2" hose to the '**From SEG Grinder Pump**' connection (Fig. 3.1 - 1).
5. Run the wire from the SEG pump to the control box as shown in Section 3.3 - Electrical Installation



**Fig. 3.2.1 - 1 - Grundfos SEG Grinder Pump connection locations**

## 3.2.2 Micro Bubbler Installation

The micro bubbler may also be suspended using the chain or rope if your settling tanks go long periods between cleanings. It is recommended to suspend the bubbler while the tank is empty to verify that it sits level while suspended.

1. Attach chain, or rope, to the holes on each end of the bubbler frame (Fig. 3.2.2 - 1).
2. Attach 3/8" polytube to the push connect between the two bubbler discs installed in the tank so it can be routed properly (Fig. 3.1 - 4).
3. Using the chain or rope attached to the bubbler frame, lower the bubbler into the second-to-last section of the settling tanks. The bubbler frame should be suspended approximately 18" below the surface level of the water line and at least 18" from the bottom of the tank.
4. Route the 3/8" polytube to the outlet of the airflow meter on the front of the Reclaim System's main frame (Fig. 3.1 - 1, 'Air Supply To Regulator'). The flow meter should be set to roughly 2 cfm.

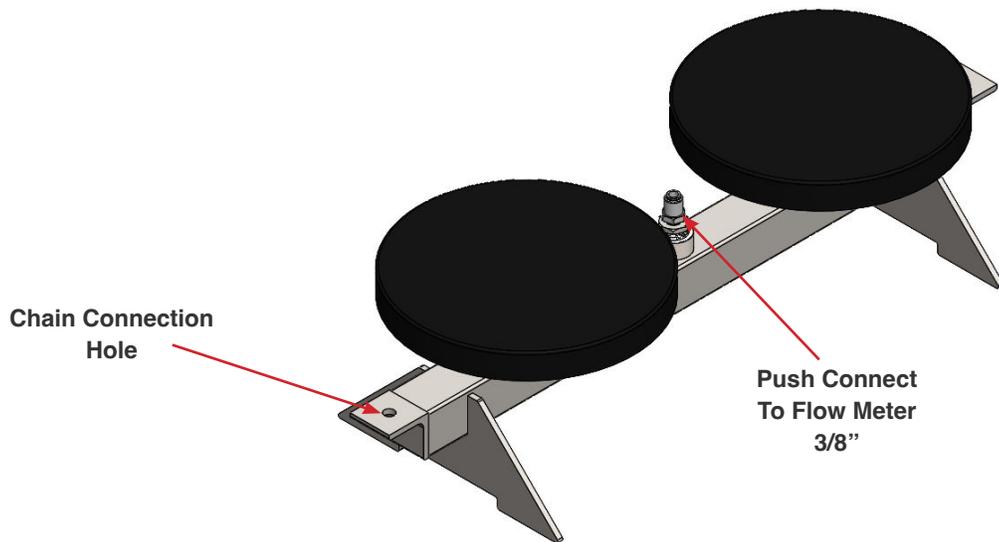


Fig. 3.2.2 - 1 - Micro bubbler connection locations

### 3.2.3 Installing Air Supply

1. Install an air supply to the  $\frac{1}{4}$ " push connector air regulator. Verify air supply can supply 3CFM at 80-100 psi, and adjust the air regulator to 80-100 psi (Fig. 3.2.3 - 1).

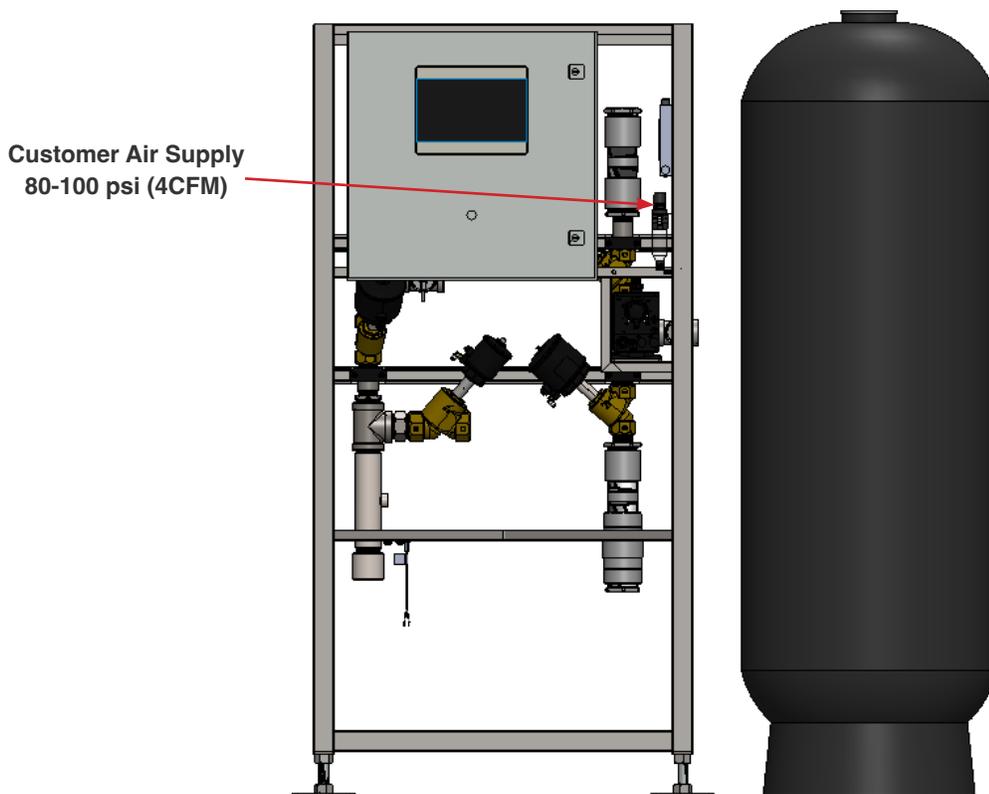


Fig. 3.2.3 - 1 - Air regulator supply line connection

## 3.2.4 Installing Water And Drain Lines

The main frame containing the control box and valve manifolds should be located as close to the settling tanks as possible to reduce the amount of plumbing needed.

1. Connect a 1.5" municipal water feed line to the **Municipal Water Supply** connection (Fig. 3.2.4 - 1). There is a check valve to ensure that no reclaim water can get into the municipal feed in the event of serious filter failure.
  - It is recommended to ensure your municipal supply line ball valve is accessible before installing the Reclaim System.
2. Connect a 1.5" line to the **To Wash/Pump Stand/Storage Tank** connection (Fig. 3.2.4 - 1) to feed your reclaim storage or pump stand.
3. Connect a 1.5" line to the **To Sewer Line** connection (Fig. 3.2.4 - 1).
  - It is important that this water is removed from your reclaim water loop because it contains everything the filters have pulled from your reclaim water. Introducing this water back into the loop concentrates the water with the removed particles and rapidly increases the pressure drop across the filters.
4. Connect a 2" line to the **Recirculation To Pit** connection.

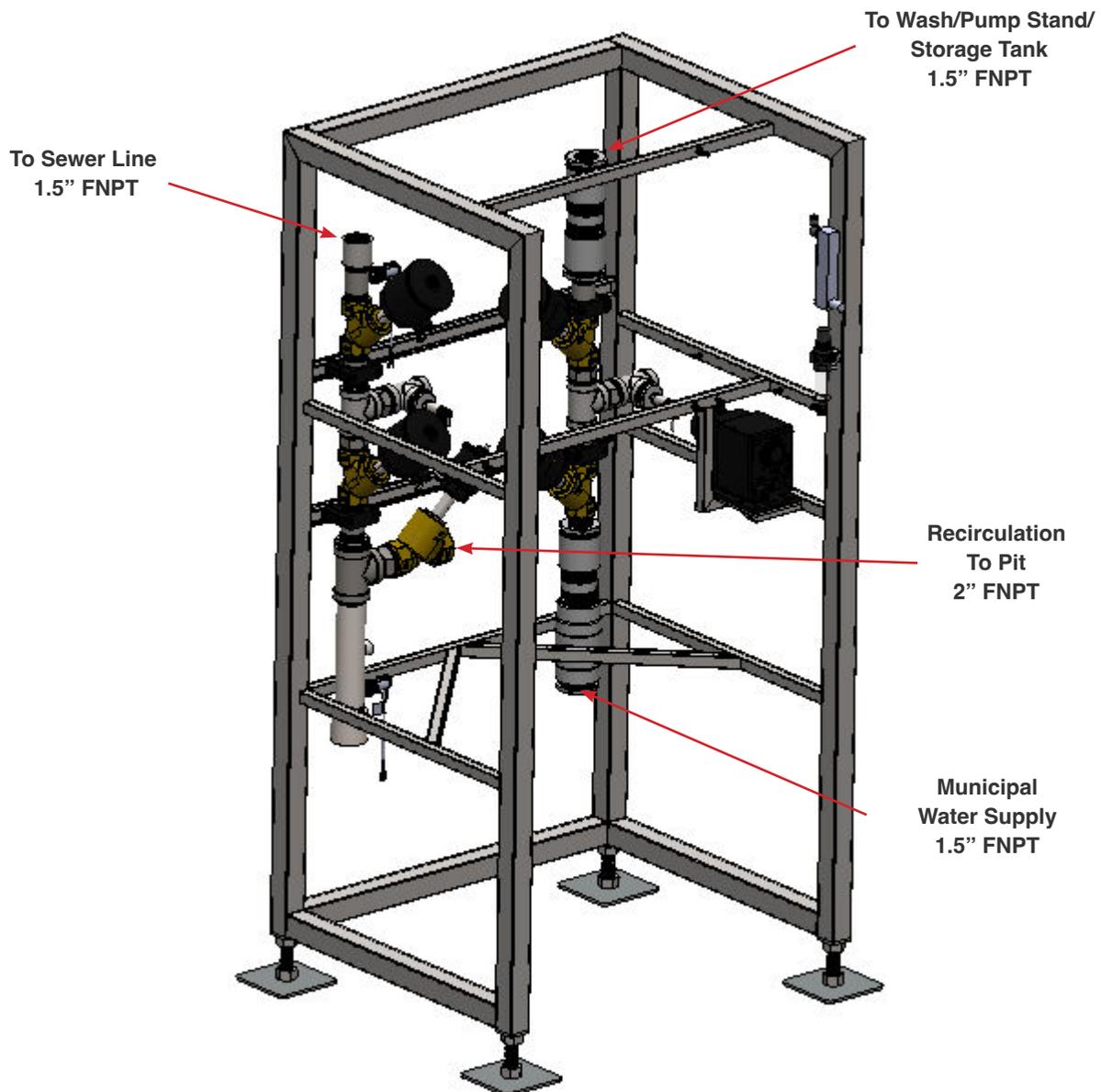


Fig. 3.2.4 - 1 - Reclaim System main frame connection locations

### 3.2.5 Filling Multimedia Filters

#### NOTE

Store media in a dry location prior to installation.  
Wet media poses a significant challenge in the filter filling process.

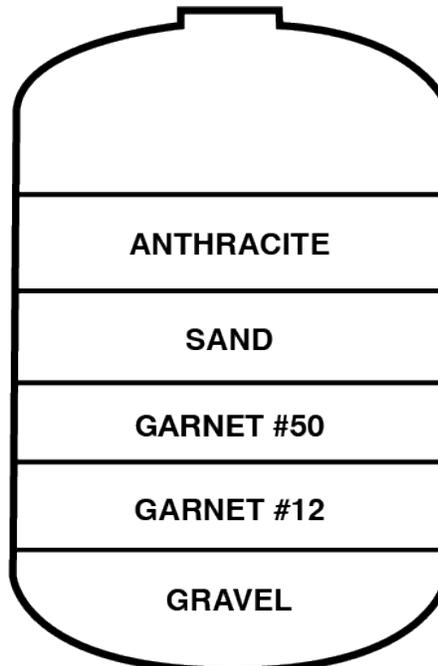
1. Place the filter in the desired location(s). It is recommended that the filter be placed to the right of the main frame when facing the system to simplify plumbing connections.
2. Filters should not be filled until the Reclaim System is to be used (within ~48 hours). Water will stagnate if left too long.
3. Remove filter head.
4. Place duct tape or similar over filter output tube.
5. Fill filter approximately 30% (18") with fresh water.
6. Using the supplied funnel, CAREFULLY fill the filter with media in the order listed in Table 3.2.5 - 1 below and as depicted in Fig. 3.2.5 - 1.

#### NOTE

Damage to the distributor will occur if filled too quickly

**Table 3.2.5 - 1 - Multimedia Filter filling order and quantities**

Filter Size	Gravel	Garnet #12	Garnet #50	Sand	Anthracite
24" x 72" (Standard Flow)	150 lbs	100 lbs	150 lbs	300 lbs	234 lbs
30" x 72" (High Flow)	250 lbs	150 lbs	250 lbs	500 lbs	364 lbs



**Figure 3.2.5 - 1 - Multimedia Filter filling order**

7. Remove tape from filter output tube.
8. Fill remaining filter volume with fresh water.
9. **\*\* FOR 30 FILTER ONLY\*\*** If the filter is supplied with an adapter flange, attach the adapter flange to the top of the filter housing using the supplied hardware.
10. Install Clack D1403 cross flow head (Fig. 3.2.5 - 2).
11. Install Clack V4430 quick connect adapters (Fig. 3.2.5 - 2)



**Fig. 3.2.5 - 2** - Clack D1403 cross flow head (left) and Clack V4430 quick connect adapters (right)

## 3.2.6 Plumbing Multimedia Filters

1. Plumb the unfiltered water from the **To Filter Inlet** connection to the **DOWNFLOW INLET** side of the filter (Fig. 3.2.6 - 1).
  - **DOWNFLOW INLET** is indicated on the top of the Clack head (Fig. 3.2.5 - 2)
2. Plumb the **From Filter Outlet** connection to the **UPFLOW INLET** side of the filter head (Fig 3.2.6 - 1).
  - **UPFLOW INLET** is indicated on the top of the Clack head (Fig. 3.2.5 - 2)

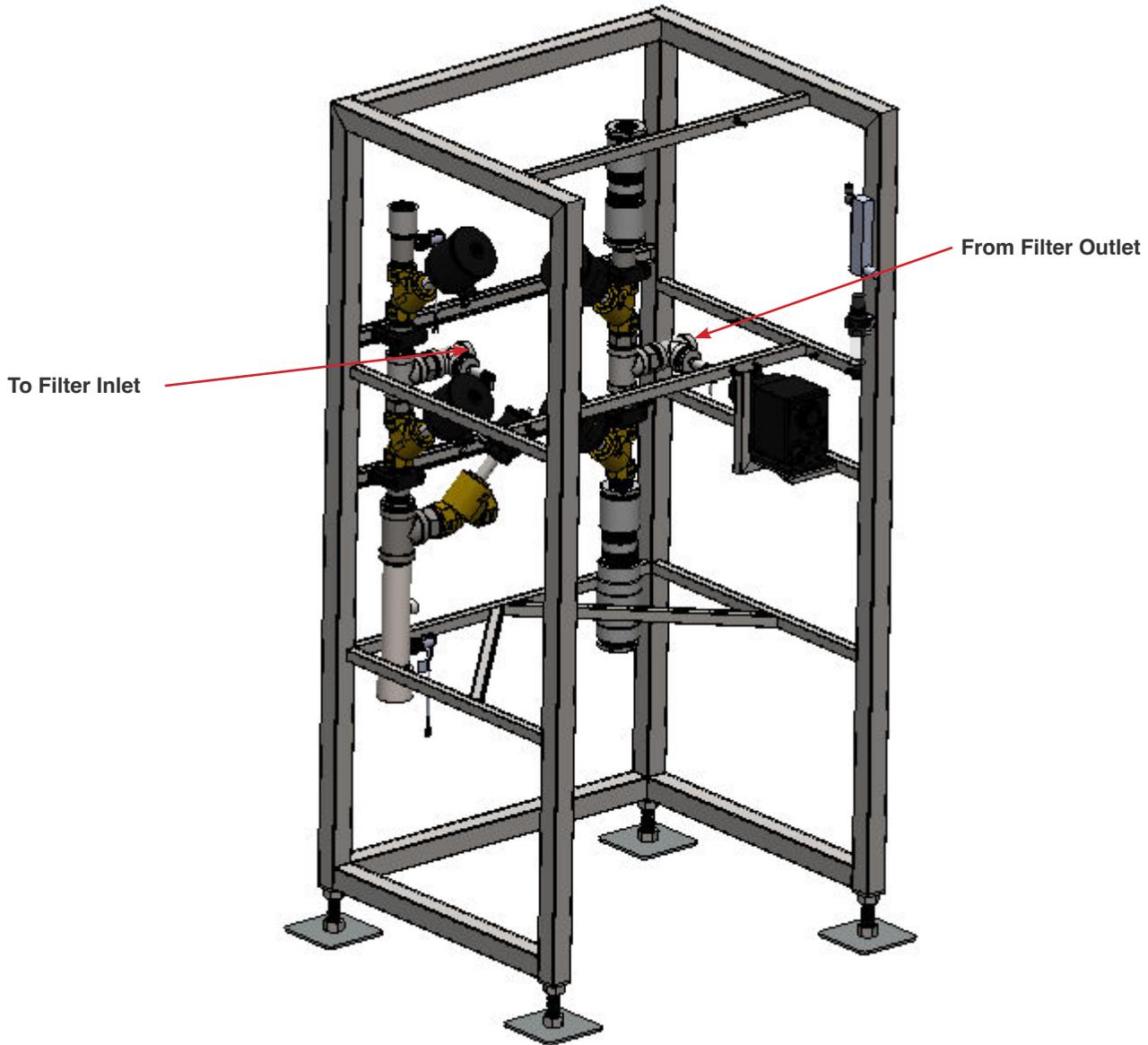


Fig. 3.2.6 - 1 - Main skid multimedia filter plumbing connections

### 3.3 Electrical Installation

#### **⚠ WARNING!**

Electrical installation to be performed by a qualified electrician.  
Follow all local codes.

The electrical schematics and connection points in the controller are designated in **Appendix 2**. The Main Control Disconnect (**DS1**) is used to disconnect all power to the unit. All penetrations should be made through the bottom of the enclosure.

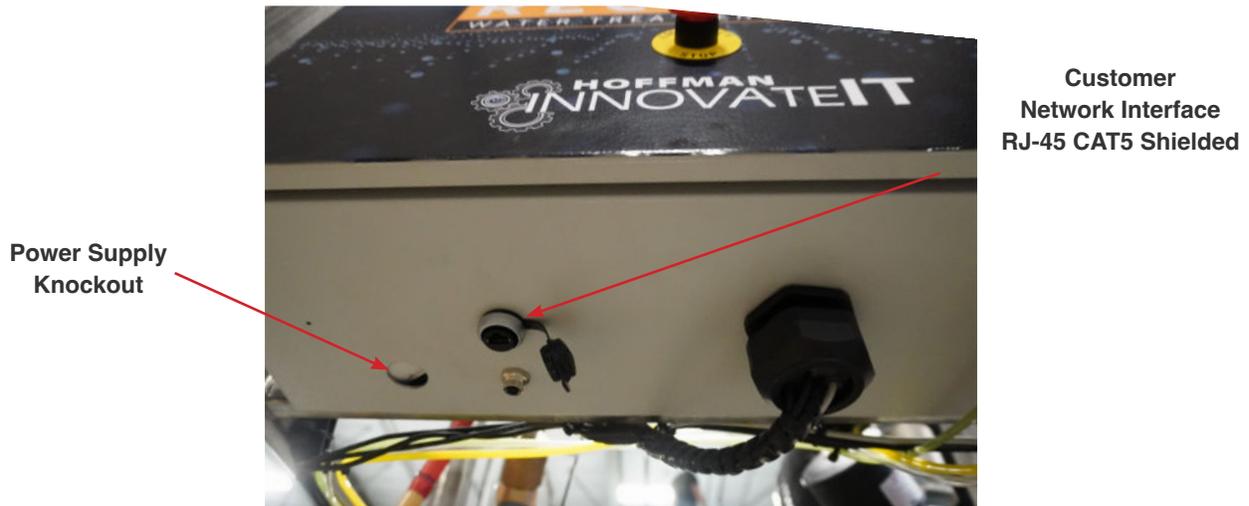
## NOTE

Each electrical box has a serial number located inside the controller on the lower left side of the enclosure door. This number should be referenced when requesting support on the Reclaim System, as this number links to both the controller software and hardware.

## ⚠ WARNING!

The Main Disconnect power must be turned off at the disconnect switch on the front of the enclosure before opening the Reclaim System controller for maintenance.

1. Locate customer network interface (Fig. 3.3 - 1) and connect RJ-45 network cable. This will provide innovatEIT Car Wash equipment with VPN remote access to the system.
2. Locate power supply knockout location (lower left). Drill and install a cable gland for 480VAC 3PH power supply.



**Fig. 3.3 - 1 - Customer network interface and power supply knockout locations**

3. Make electrical connections as listed in the tables below.

**Table 3.3 - 1 - Wire to dry relay on tunnel controller**

Enclosure Terminal	Connection
1002A	Tunnel controller common relay
1002C	Tunnel controller normally open relay

**Table 3.3 - 2 - Dry relay for fault indication**

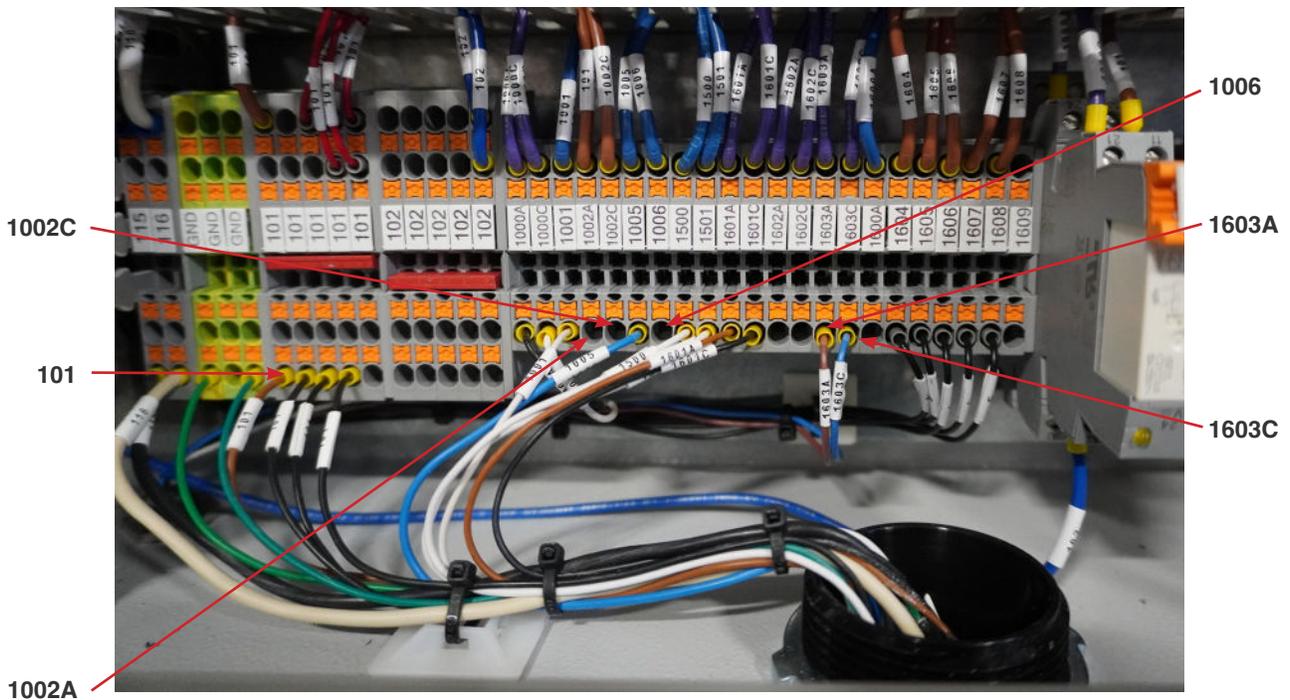
Enclosure Terminal	Connection
1603A	Fault
1603C	Fault Common

**Table 3.3 - 3 - Dry relay from tunnel controller**

Enclosure Terminal	Connection
101	Tunnel controller common relay
07PLC	Tunnel controller normally open relay

**Table 3.3 - 4 - SEG Motor Wiring Cable**

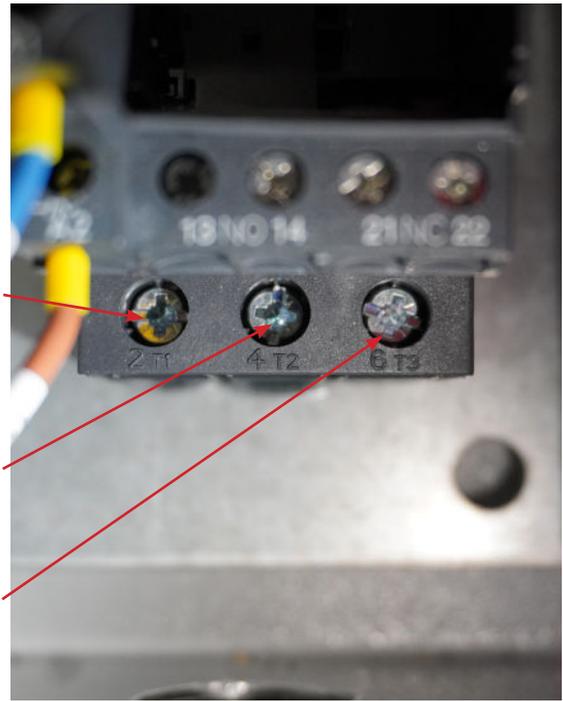
Enclosure Terminal	Connection
MS1 - T1	Grundfos CABLE WIRE #1
MS1 - T2	Grundfos CABLE WIRE #2
MS1 - T3	Grundfos CABLE WIRE #3
1600A	Grundfos CABLE WIRE #4
101	Grundfos CABLE WIRE #5
1006	Grundfos CABLE WIRE #6



**Fig. 3.3 - 2 - Electrical enclosure connections**



MS1 - T1, T2, T3



MS1 - T1

MS1 - T2

MS1 - T3

Fig. 3.3 - 3 - Additional SEG Pump connections

- Run customer supplied power (480VAC/3PH) to DS1 (Fig. 3.3 - 4) according to the system schematic in Appendix 2.

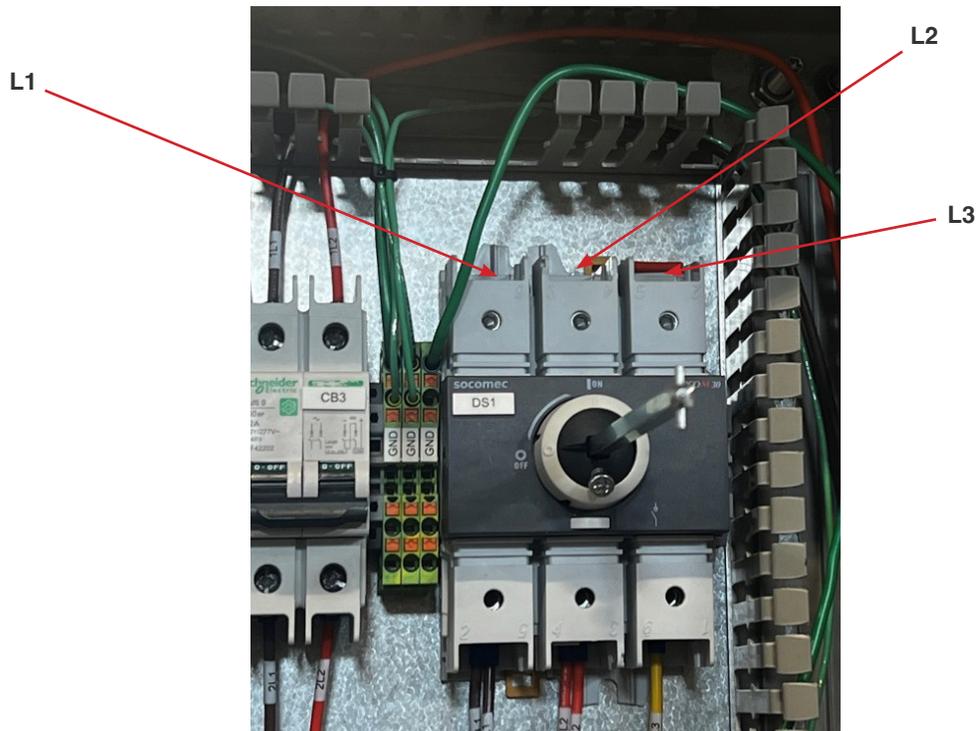


Fig. 3.3 - 4 - Customer 480VAC/3PH connection

# Startup & Operation

## 4. Startup & Operation

### ⚠ WARNING!

Check and verify the tightness of all power distribution lines (screw terminals) before the startup process.

### NOTE

Ensure all steps and precautions in Section 3 have been completed before starting up the Reclaim System.

## 4.1 Turning On Power Supply

1. Turn on the utility power from the wash to the Reclaim System.
2. Open electrical enclosure and turn on all breakers. Ensure all 4 thermal fuses are pressed in.
3. Close electrical enclosure.
4. Turn **480VAC Main Disconnect** switch on the front of the electrical enclosure to the **ON** position.
5. Wait for the HMI Overview Screen to appear. Verify the date and time displayed on the HMI are correct. If not, refer to Section 6.1 to reset the clock.

## 4.2 Verifying Air Valve Operation

1. Navigate to the **Maintenance** screen.
2. Press the **SYSTEM MANUAL** button (Fig. 4.2 - 1). From the drop-down menu, press the **MANUAL OVERRIDE** button.

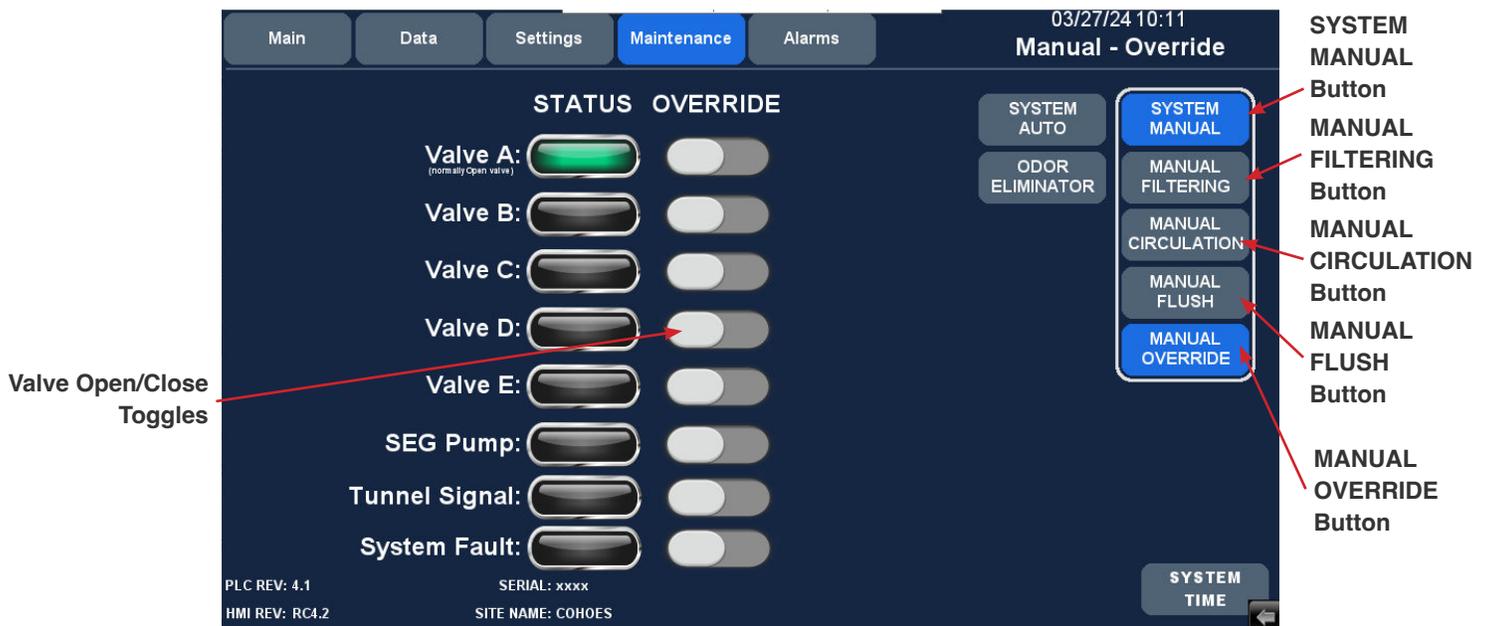
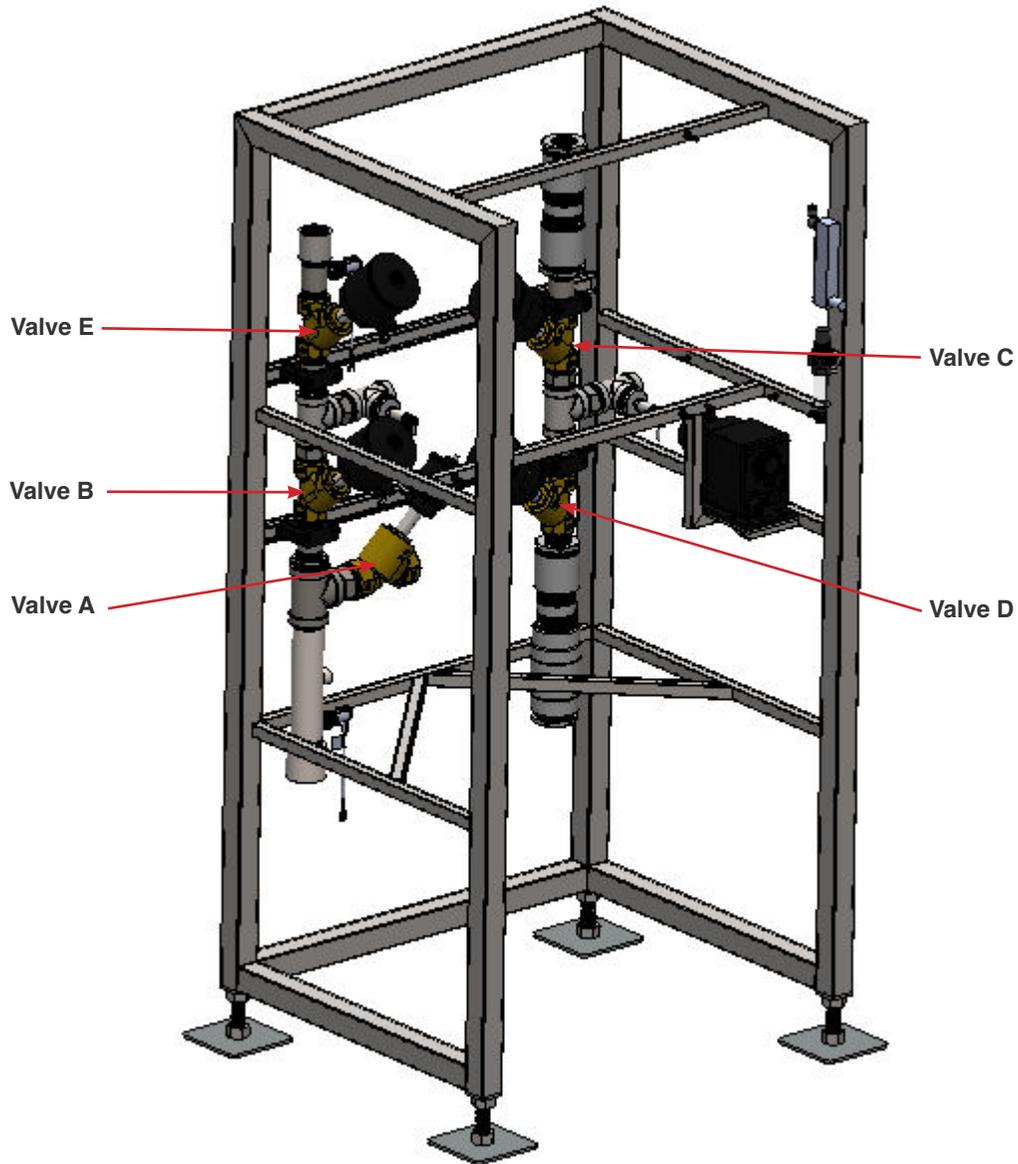


Fig 4.2 - 1 - HMI Maintenance screen and button locations

3. Manually turn **Valves A, B, C, D,** and **E** on and off by pressing the corresponding toggles to confirm the operation of each (Fig. 4.2 - 1). Valve locations are shown in Fig. 4.2 - 2.



**Fig 4.2 - 2 - Valve locations**

4. Verify that all valves are in their normal state (all closed except Valve A).
  - Open is shown by a red indicator present in the site glass.
5. Press the **SEG PUMP** button and ensure the pump turns on (Fig. 4.2 - 1) and that water is flowing to the designated recirculation location (e.g. tunnel pit).
6. Toggle tunnel signal from the controller and verify you have a tunnel signal via the status indicator on the HMI (Fig. 4.2 - 1).

## 4.3 Turning on Water Supply and Filling Tanks

### NOTE

Tanks must be filled under a low-pressure condition.

1. From the **Maintenance** screen, press the **SYSTEM MANUAL** button. From the drop-down menu, press the **MANUAL OVERRIDE** button.
2. Partially open your municipal water supply line ball valve to allow water to flow into the system.
3. From the **Maintenance** screen, open Valves D and E by pressing the toggles (Fig. 4.2 - 1).
4. Fill the tanks until you confirm the system has discharged into the sewer.
5. Close Valve D, followed by Valve E.
6. Wait 4 hours. This process holds pressure in the system. The captured pressure in the tanks will allow them to saturate more rapidly.
7. Fully open municipal water supply line ball valve.
8. Initiate a manual flush.
  - Navigate to the **Overview** screen and select **SYSTEM MANUAL** (Fig. 4.3 - 1).
  - Select **MANUAL FLUSH**
9. Allow the system to backflush for 45 minutes-1 hour, or until you have clear, clean, particulate free discharge.

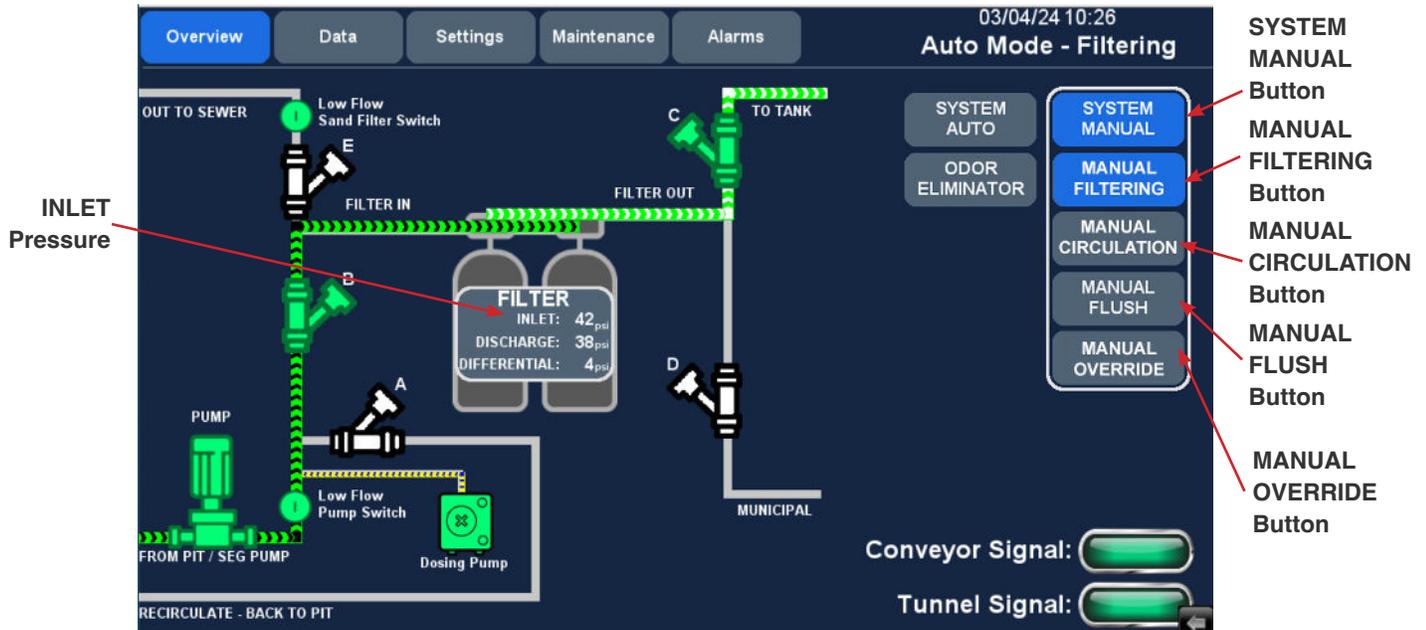


Fig 4.3 - 1 - HMI Overview screen

## 4.4 Verifying SEG Pump Operation

1. Navigate to the **Overview** screen and press the **SYSTEM MANUAL** button (Fig 4.3 - 1).
2. Press the **MANUAL CIRCULATION** button (Fig. 4.3 - 1). Manual circulation allows air to be purged from the line and ensure discharge.
3. Press the **MANUAL FILTERING** button (Fig. 4.3 -1).
4. Check the **INLET** pressure during this process (Fig 4.3 - 1). If the **INLET** pressure is low (10-15 psi), switch the phasing on the SEG Pump motor, then re-initiate manual filtering and check the **INLET** pressure again.

- To phase the SEG Pump motor, switch two leads from the motor starter that supplies electrical power to the SEG Pump.
5. **INLET** pressure should be approximately 40-50 psi.

## 4.5 Starting And Deaerating The Dosing Pump

1. Open the deaeration valve by approximately half a turn (Fig. 4.1.5 -1).
2. Press the [100 %] key (Fig. 4.1.5 - 1) and hold it down until liquid flows out of the deaeration hose continuously and without any bubbles.
3. Close the deaeration valve. The pump is now deaerated.

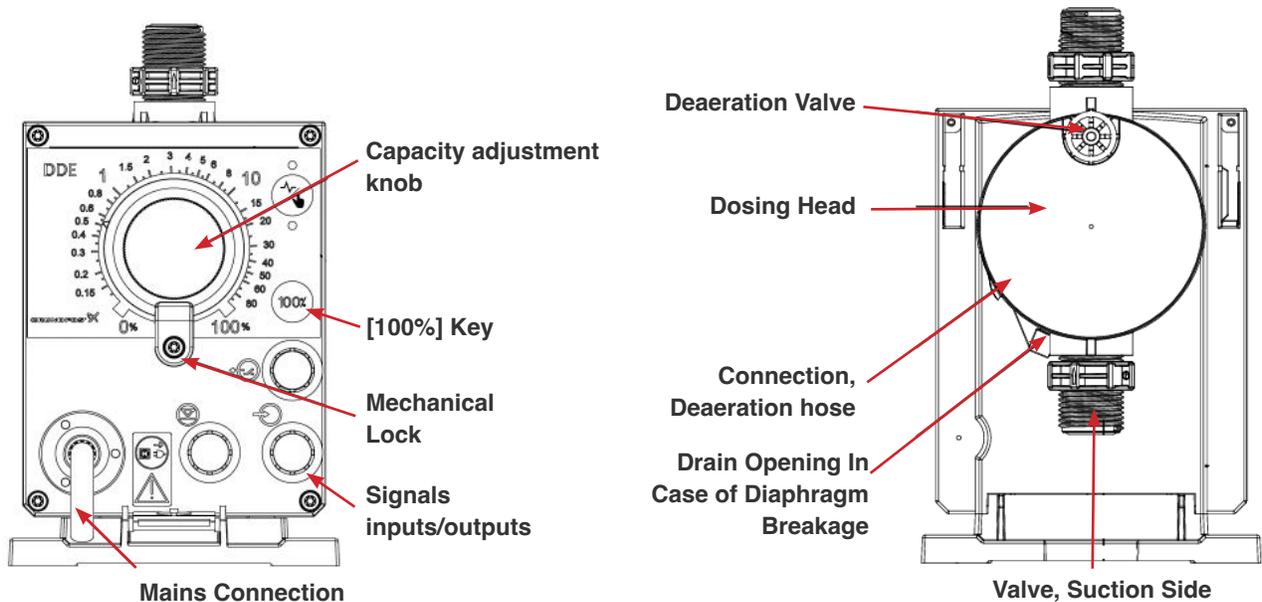


Fig. 4.5 - 1 - DDE Dosing pump components

## 4.6 Flush Settings

The Reclaim System comes preloaded with default settings values. There are a number of optional flush settings that can be set from the **FLUSH SETUP WIZARD**. The adjustable settings will vary based on whether your Reclaim System is filling a tank or direct feeding a high-pressure pump, and your preferred flush settings. The process for making your selections is outlined below.

### NOTE

When choosing time of day to flush, total available site water flow needs to be considered.

1. Navigate to **Settings** screen and press the **FLUSH SETUP WIZARD** button (Fig. 4.6 - 1).

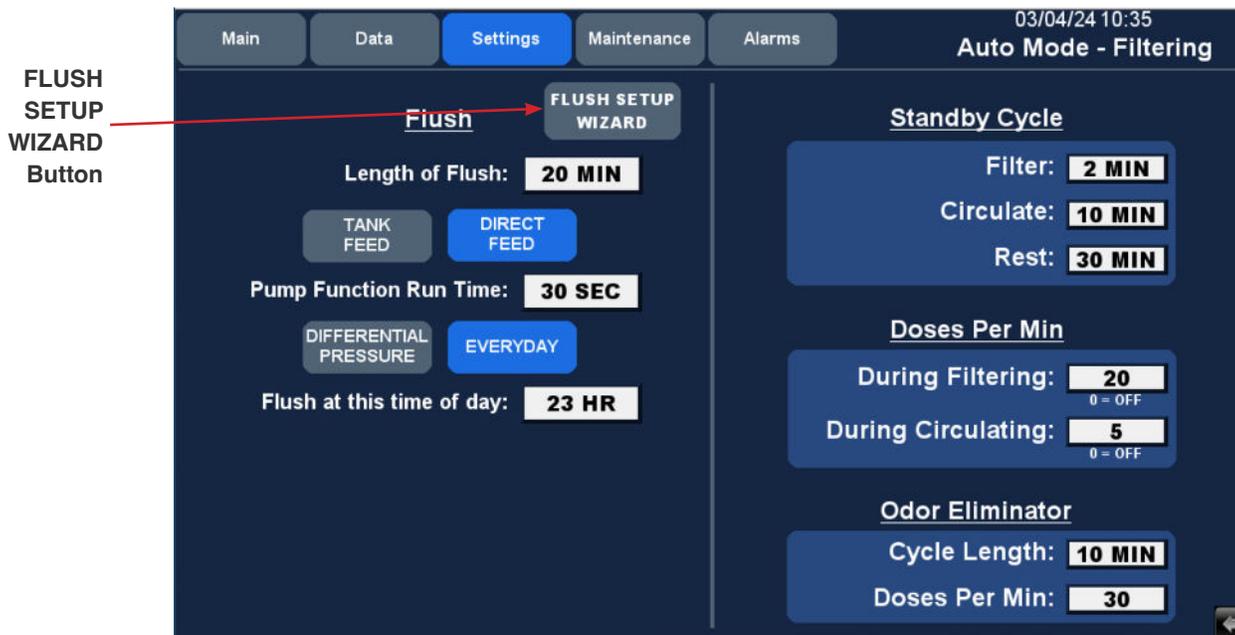


Fig. 4.6 - 1 - HMI Settings screen and FLUSH SETUP WIZARD button

2. Set your preferred duration of flush. Duration of the Flush cycle may need to be adjusted depending on season, water quality, and the amount of debris in the tank.
3. Select whether your system is **TANK FEED** or **DIRECT FEED**.
  - a. **TANK FEED** > Select when you want the system to run a flush cycle.
    - i. **DIFFERENTIAL PRESSURE** > Set the differential pressure of the filters at which you want the system to run a flush cycle.
      - Select whether you want the flush cycle to run **IMMEDIATELY** or at a **SPECIFIC TIME**.
        - **IMMEDIATELY** > The flush cycle will run as soon as the differential pressure of the filters is met.
        - **SPECIFIC TIME** > The flush cycle will run at the specified time of day after the differential pressure has been met.
      - ii. **EVERYDAY** > Set the time of day when you want the system to run a flush cycle based on a 24-hour clock.
  - b. **DIRECT FEED** > Enter how long your high-pressure pump runs per car.
    - Next, select when you want the system to run a flush cycle.
      - i. **DIFFERENTIAL PRESSURE** > Set the differential pressure of the filters at which you want the system to initiate a flush cycle.
        - Select whether you want the flush cycle to occur **IMMEDIATELY** or at a **SPECIFIC TIME**.
          - **IMMEDIATELY** > The flush cycle will run as soon as the differential pressure of the filters is met.
          - **SPECIFIC TIME** > The flush cycle will run at the specified time of day after the differential pressure has been met.
            - Set the time of day when you want the system to run a flush cycle based on a 24 hour clock
            - Set the maximum number of days to allow between flush cycles.
        - ii. **EVERYDAY** > Set the time of day at which you want the system to run a flush cycle based on a 24-hour clock.

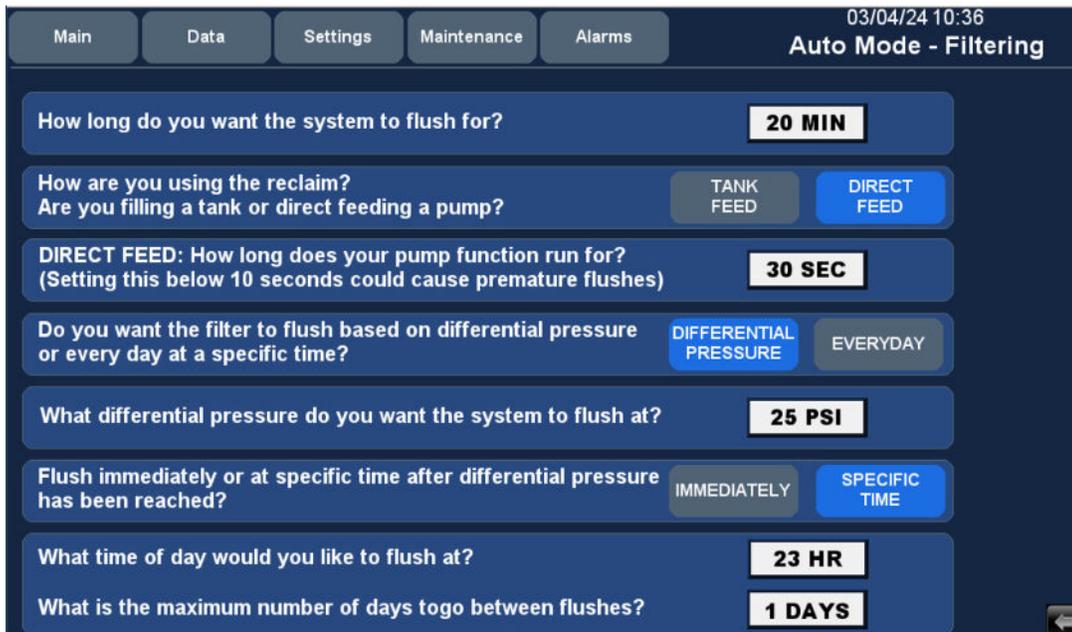


Fig. 4.6 - 2 - FLUSH SETUP WIZARD screen

## 4.7 System Settings

1. Navigate to the Settings screen and adjust the following settings as needed.
  - a. **Standby Cycle** – Occurs when there is no tunnel signal. The cycle is a loop of functions that will run when no tunnel signal is present (Fig 4.7 - 1). The cycle depends on the operating mode selected.

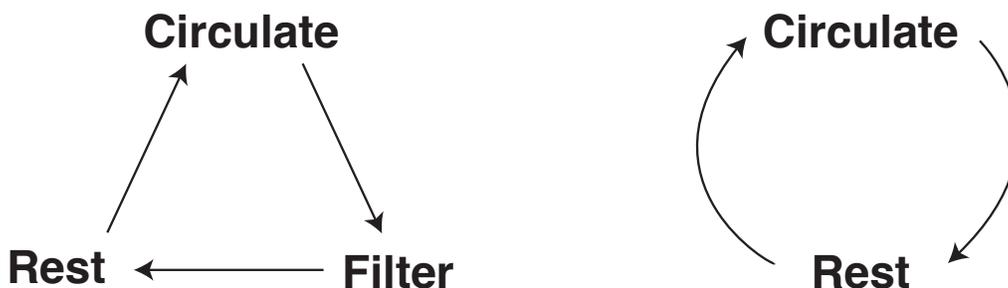


Fig. 4.7 - 1 - Standby Cycle function loop in Tank Feed (left) and Direct Feed (right) operating modes

- b. **Doses Per Minute** – Chemical doses per minute when the system is filtering or recirculating. Chemical will be injected in listed doses per minute when in designated operating state. The amount of chemical required is dependent on multiple factors, including water quality, water circulation, geographic location, and time of year.
- c. **Odor Eliminator** – Temporarily injects a controlled overdose of chemical in order to shock the system and neutralize issues commonly associated with reclaim water, such as odor.
  - **Cycle Length** - The length of time the chemical will be injected once the Odor Eliminator is selected.
  - **Doses Per Minute** - Number of additional chemical doses per minute of the Odor Eliminator cycle.

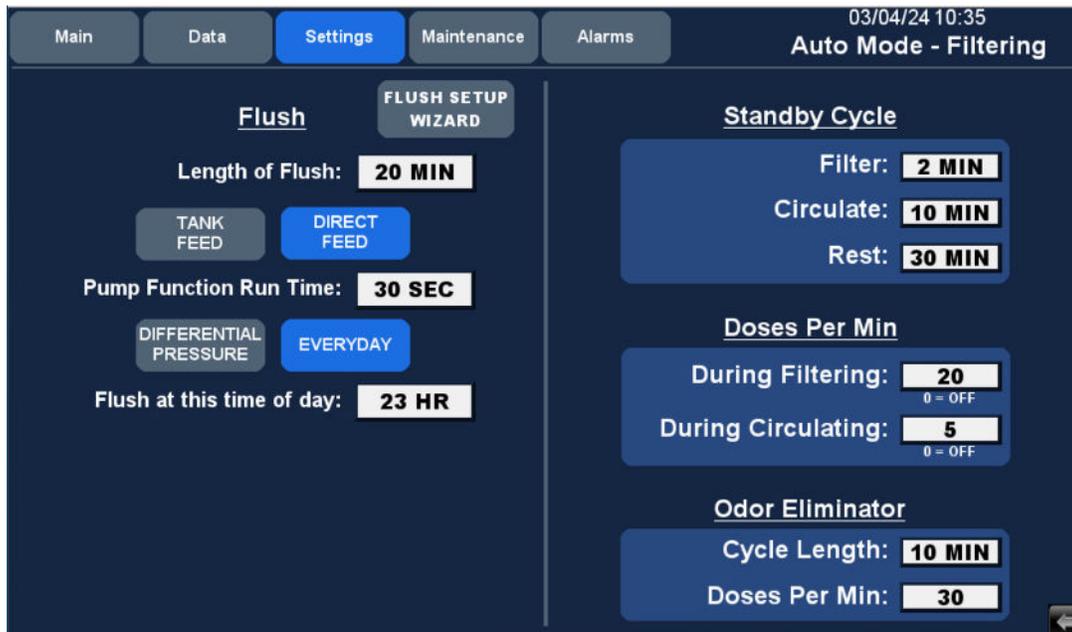


Fig. 4.7 - 2 - HMI Settings screen

## 4.8 Starting The System

1. Once you have entered your preferred settings, navigate to the Overview screen (Fig. 4.8 - 1).
2. Press the **SYSTEM AUTO** button to start the system.
3. Verify controller signals and operation.

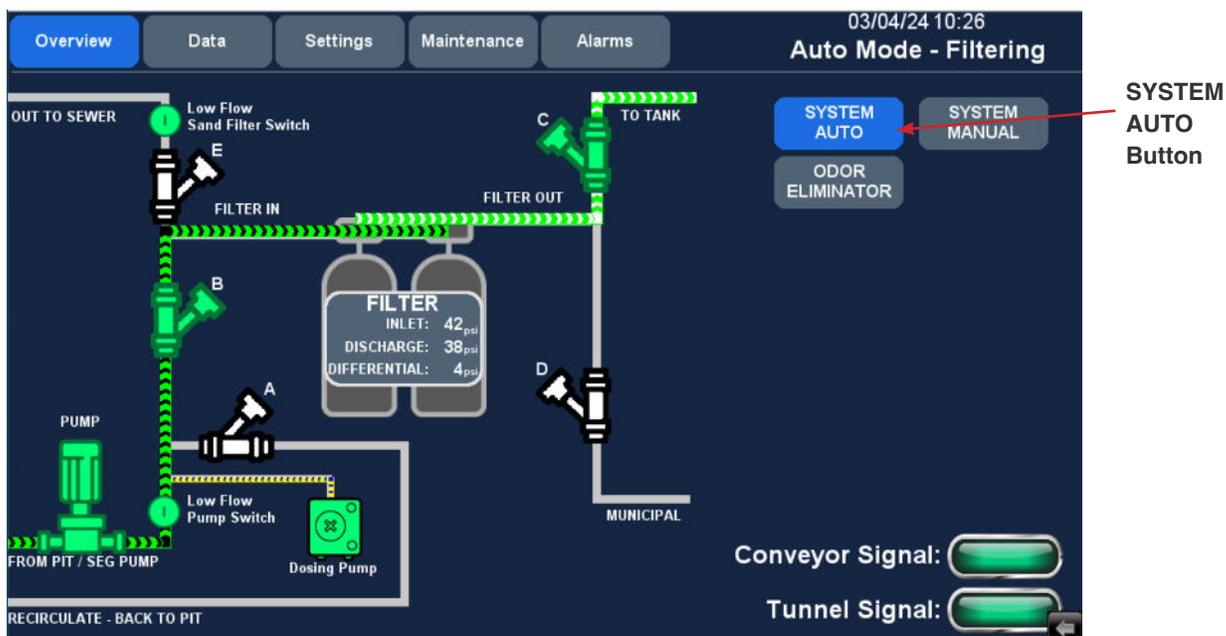


Fig. 4.8 - 1 - HMI Overview screen

# Service & Maintenance

## 5. Service & Maintenance

### NOTE

Turn off the Reclaim System completely before starting mud removal. It is recommended to keep the system off for at least 8 hours before re-starting to allow dirt to settle.  
Ensure the Clarifier Tank is filled after pumping the tank before re-starting the system.

The best method to maintain this system is to take a few minutes daily to review and record the operational data from the system and examine the unit for leaks or any indication of a mechanical or electrical fault.

If a change in performance or operation is observed, it is essential to take corrective action quickly to minimize the potential damage to the system.

There are elements of the system that will require normal maintenance actions. These items are listed in the following section.

### 5.1 Service Schedule

**Table 5.1 - 1 - Service schedule**

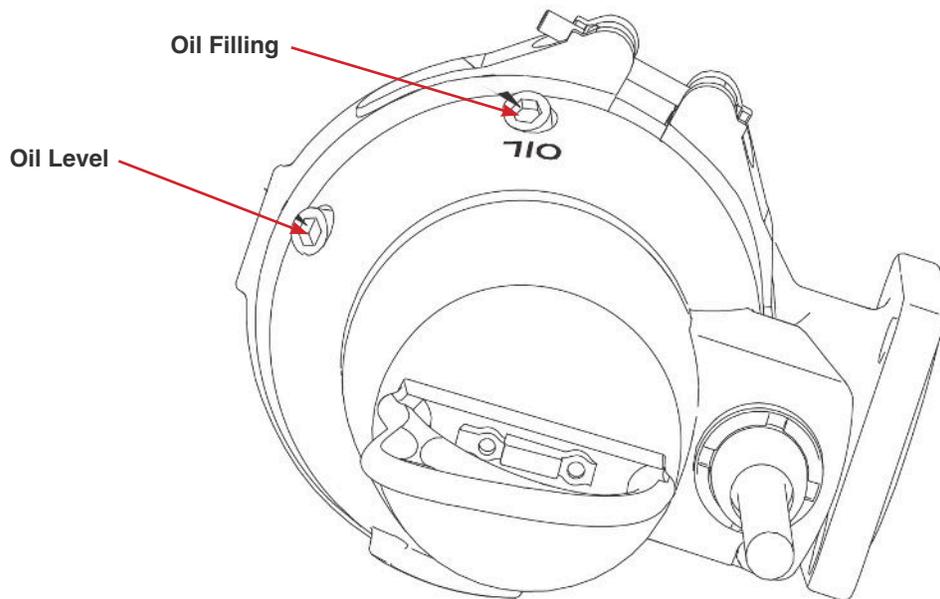
Check	Frequency	Process
Visual Inspection	Daily	<ul style="list-style-type: none"> <li>Check for leaks/dripping water from all system connections, manifolds, and pumps.</li> <li>Verify there are no bad hoses (bend, kink, bad connections, or rips).</li> </ul>
Grundfos SEG Pump Inspection	Every 3,000 hours of operation <b>or</b> at least once a year	<ul style="list-style-type: none"> <li>Make sure the cable entry is watertight and that the cables are not sharply bent and/or pinched.</li> <li>Check the impeller, pump housing, etc. for possible wear.</li> <li>Check the shaft for noisy or heavy operation (turn the shaft by hand).</li> <li>In case of frequent choke-ups, check the grinder system for wear. When worn, the edges of the grinding parts are round and worn.</li> </ul>
		<ul style="list-style-type: none"> <li>Change the oil in the chamber as listed in Section 5.1.1.</li> </ul>
DDE Dosing Pump Inspection	1 x Week	<ul style="list-style-type: none"> <li>Clean all pump surfaces with a dry and clean cloth.</li> </ul>
	Every 3 Months	<ul style="list-style-type: none"> <li>Check dosing head screws and tighten if necessary. Replace damaged screws immediately.</li> </ul>

## 5.1.1 SEG Pump Oil Change Procedure

### **⚠ WARNING!**

When loosening the screws of the oil chamber, note that pressure may have built up in the chamber.  
Do not remove the screws until pressure has been fully relieved.

1. Remove both oil screws to allow the oil to drain from the chamber.
2. Check the oil for water or impurities. If the shaft seal has been removed, the oil will give a good indication of the condition of the shaft seal.
  - If the oil is grayish white like milk or contains a large quantity of water, the shaft seal should be replaced as the primary part of the seal is worn. If the seal is still used, the motor will be damaged within a short time.
3. Place the pump in such a position that it is lying on the stator housing and the discharge flange and that the oil screws are pointing upwards and the Oil Filling screw is in the 12 o'clock position. (Fig. 5.1.1 - 1).
4. Fill oil into the oil chamber through the upper hole until it starts running out of the lower hole. The oil level is now correct.
5. Fit both oil screws using the packing material included in the kit.



# Troubleshooting

## 6. Troubleshooting

For product support, contact support@innovateITcarwash.com, or call (518) 741-4200 (option 2).

Symptom/HMI Alarm	Potential Causes	Solution
STOP CONTACTOR DISENGAGED	<ul style="list-style-type: none"> <li>ESTOP button depressed.</li> </ul>	<ul style="list-style-type: none"> <li>Release ESTOP</li> </ul>
FILTER OVER PRESSURE	<ul style="list-style-type: none"> <li>Inlet pressure transducer is over 75 psi.</li> <li>Can be caused by high municipal water pressure or deadheading SEG Pump.</li> </ul>	<ul style="list-style-type: none"> <li>Confirm air pressure.</li> <li>Confirm all ASCO valves are operating correctly, as indicated by red nipple visible on the head of the valve when in the open position.</li> <li>Follow the instructions in section 4.2 to verify operation of all valves.</li> </ul>
LOW FLOW SAND FILTER	<ul style="list-style-type: none"> <li>Low water flow during Flush cycle.</li> </ul>	<ul style="list-style-type: none"> <li>Confirm air pressure.</li> <li>Confirm all ASCO valves are operating correctly, as indicated by red nipple visible on the head of the valve when in the open position.</li> <li>Follow the instructions in section 4.2 to verify operation of all valves.</li> <li>Ensure that your municipal water supply is open.</li> <li>Verify that you have adequate flow through your municipal supply line, as specified in Section 2.2 - Table 2.2.1.</li> </ul>
LOW FLOW SEG PUMP	<ul style="list-style-type: none"> <li>Broken or misreading flow switch</li> <li>Low water level in tank.</li> <li>Improper power supply to SEG Pump.</li> <li>Pump malfunction.</li> <li>Obstruction in plumbing.</li> </ul>	<ul style="list-style-type: none"> <li>Confirm air pressure</li> <li>Confirm all ASCO valves are operating correctly, as indicated by red nipple visible on the head of the valve when in the open position.</li> <li>Follow the instructions in section 4.2 to verify operation of all valves.</li> <li>Remove flow switch and check operation.</li> <li>Confirm there are no restrictions down the line between the SEG Pump and the Reclaim System.</li> <li>Navigate to the Maintenance screen on the HMI and press SYSTEM MANUAL &gt; MANUAL OVERRIDE. Next, navigate to the Settings screen and open Valve B and force start the SEG Pump.</li> <li>Navigate to the Overview screen and check the INLET pressure. Next, switch two leads from the motor starter that supplies electrical power to the SEG Pump. Check the INLET pressure again.</li> </ul>

Symptom/HMI Alarm	Potential Causes	Solution
PRESSURE TRANSDUCER ONE HIGH	<ul style="list-style-type: none"> <li>• Sensor may be disconnected or broken.</li> <li>• Pressure too high in the system.</li> </ul>	<ul style="list-style-type: none"> <li>• Look for damage in the wiring on the Pressure Transducer.</li> <li>• Swap cable with another known working transducer.</li> <li>• Replace sensor as per the instructions in section 7.2.</li> <li>• Lower municipal water supply pressure.</li> </ul>
PRESSURE TRANSDUCER ONE LOW	<ul style="list-style-type: none"> <li>• Sensor may be disconnected or broken.</li> <li>• Pressure too low in the system.</li> </ul>	<ul style="list-style-type: none"> <li>• Look for damage in the wiring on the Pressure Transducer.</li> <li>• Swap cable with another known working transducer.</li> <li>• Replace sensor as per the instructions in section 7.2.</li> <li>• Increase municipal water supply pressure.</li> </ul>
PRESSURE TRANSDUCER TWO HIGH	<ul style="list-style-type: none"> <li>• Sensor may be disconnected or broken.</li> <li>• Pressure too high in the system.</li> </ul>	<ul style="list-style-type: none"> <li>• Look for damage in the wiring on the Pressure Transducer.</li> <li>• Swap cable with another known working transducer.</li> <li>• Replace sensor as per the instructions in section 7.2.</li> <li>• Lower municipal water supply pressure.</li> </ul>
PRESSURE TRANSDUCER TWO LOW	<ul style="list-style-type: none"> <li>• Sensor may be disconnected or broken.</li> <li>• Pressure too low in the system.</li> </ul>	<ul style="list-style-type: none"> <li>• Look for damage in the wiring on the Pressure Transducer.</li> <li>• Swap cable with another known working transducer.</li> <li>• Replace sensor as per the instructions in section 7.2.</li> <li>• Increase municipal water supply pressure.</li> </ul>
SEG PUMP TRIPPED SIGNAL	<ul style="list-style-type: none"> <li>• MS1 is in a tripped state.</li> </ul>	<ul style="list-style-type: none"> <li>• Reset breaker.</li> <li>• If the alarm continues, confirm amperage dial is set correctly (9.6A).</li> </ul>
LOW CHEMICAL SIGNAL	<ul style="list-style-type: none"> <li>• Chemical is low.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace barrel.</li> </ul>
SEG PUMP THERMAL OL	<ul style="list-style-type: none"> <li>• SEG Pump thermal overload reached and pump is overheating.</li> </ul>	<ul style="list-style-type: none"> <li>• Verify there is water in the ground tank.</li> <li>• Verify wiring and ensure there is no damage to cables.</li> </ul>
SEG PUMP CONTACTOR OFF	<ul style="list-style-type: none"> <li>• SEG Pump contact is off (MS1).</li> </ul>	<ul style="list-style-type: none"> <li>• Turn MS1 contactor ON</li> </ul>

Symptom/HMI Alarm	Potential Causes	Solution
FORCED AUTO SYSTEM FLUSH	<ul style="list-style-type: none"> <li>System has not achieved differential pressure in the number of days specified on the Settings page, causing the system to force a Flush cycle.</li> </ul>	<ul style="list-style-type: none"> <li>This is an informational alarm. No action is needed.</li> </ul>

## 6.1 Resetting HMI Clock

1. Navigate to the **Maintenance** screen.
2. Press the **SYSTEM TIME** button in the bottom right corner of the screen (Fig. 6.1 - 1)
3. Adjust the year, month, day, and time. **HOURL** is based on a 24-hour clock.



Fig. 6.1 - 1 - Resetting HMI clock

# Spare Parts

## 7.1 Recommended Spare Parts

Below is a list of recommended spare parts that may require replacement during the course of system operation.

innovateIT Product Number	Description
RC-TRAN-AV300	Pressure Transducer
RC-FS-VK309	Flow Switch

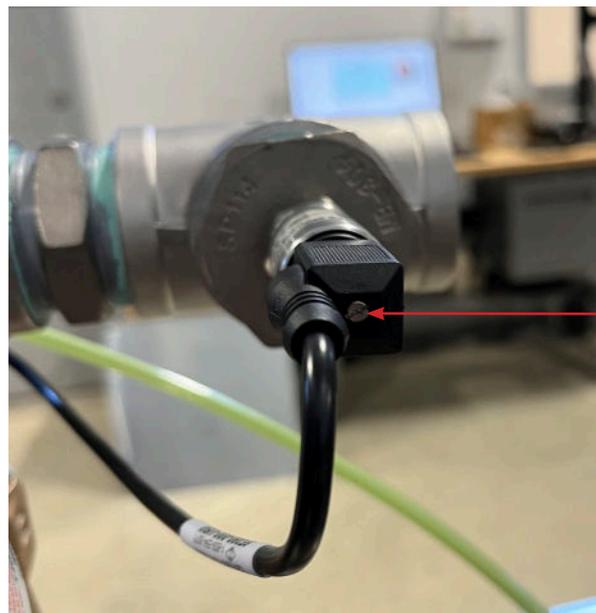
## 7.2 Spare Part Replacement

### NOTE

Running the Reclaim System in **SYSTEM MANUAL** mode immediately after repair can introduce a large amount of air into the filter system. The system should be run in **SYSTEM AUTO** mode after repairs.

### 7.2.1 Replacing Pressure Transducer

1. Turn **480VAC Main Disconnect** switch on the front of the electrical enclosure to the **OFF** position.
2. Ensure supply water is turned off.
3. Remove the flathead screw from the back of the DIN cable connection on the sensor (Fig. 7.2.1 -1).

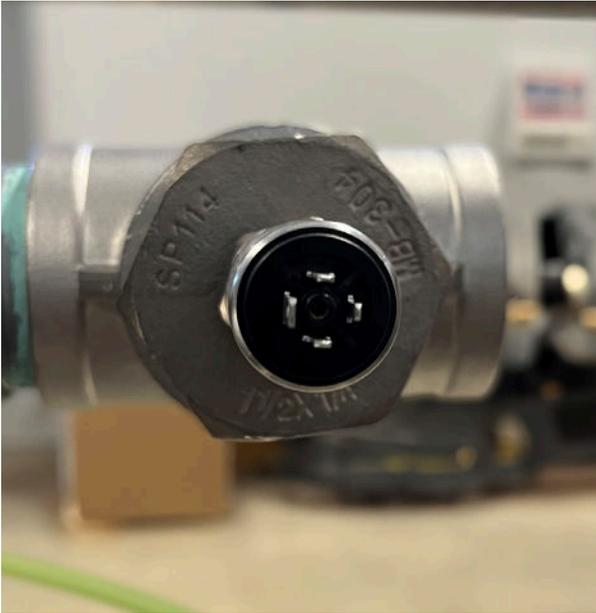


DIN Cable Connection  
Flathead Screw

Fig. 7.2.1 - 1 - DIN cable connection screw

4. Unscrew the existing pressure transducer.

5. Apply stainless-rated Teflon thread tape to the new pressure transducer.
6. Install the new sensor.
7. Reconnect the DIN cable. The longest sensor pin on the pressure transducer lines up with the ground terminal on the DIN cable connection (Fig. 7.2.1 - 2).



**Fig. 7.2.1 - 2** - Pressure transducer (left) and DIN cable connection (right)

8. Turn **480VAC Main Disconnect** switch on the front of the electrical enclosure to the **ON** position.
9. Slowly open your water supply line to allow water to flow back into the system.
10. Navigate to the **Overview** screen on the HMI and press the SYSTEM AUTO button.
11. Ensure the pressure is reading correctly on the HMI once the system is in **Reclaim** mode.

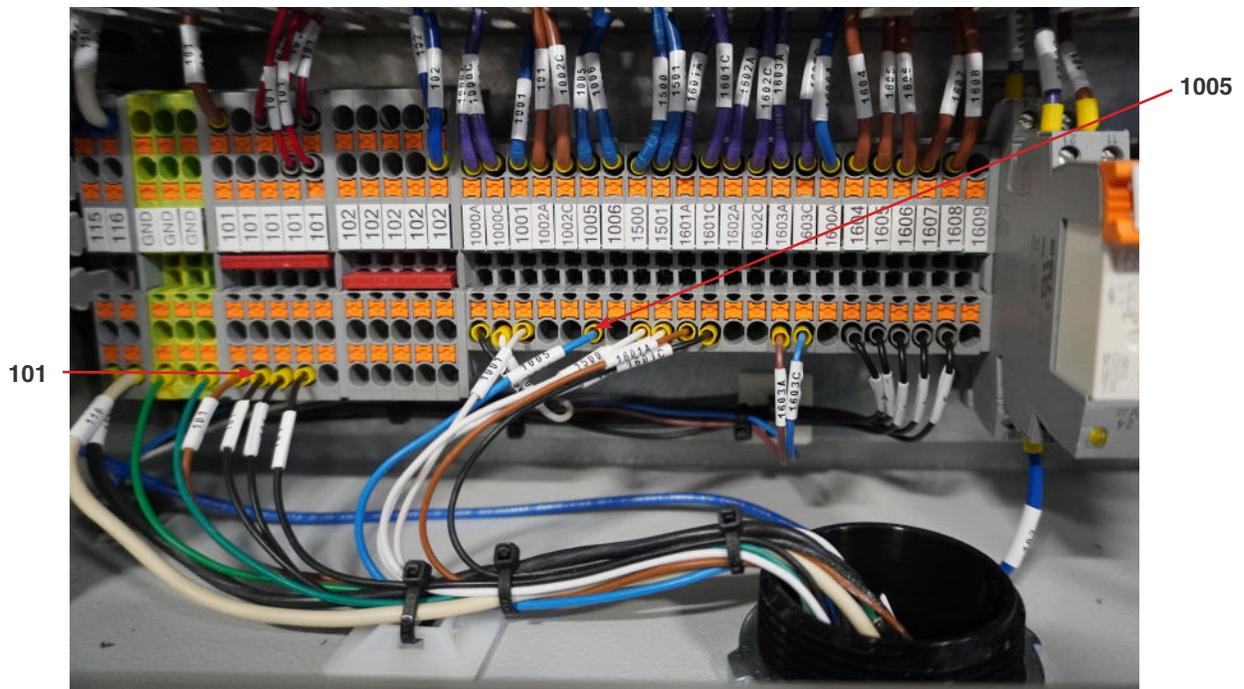
## 7.2.2 Replacing Flow Switch

### **NOTE**

Flow orientation is critical. Note the arrow on the back of the sensor for the direction of flow before installing the new sensor.

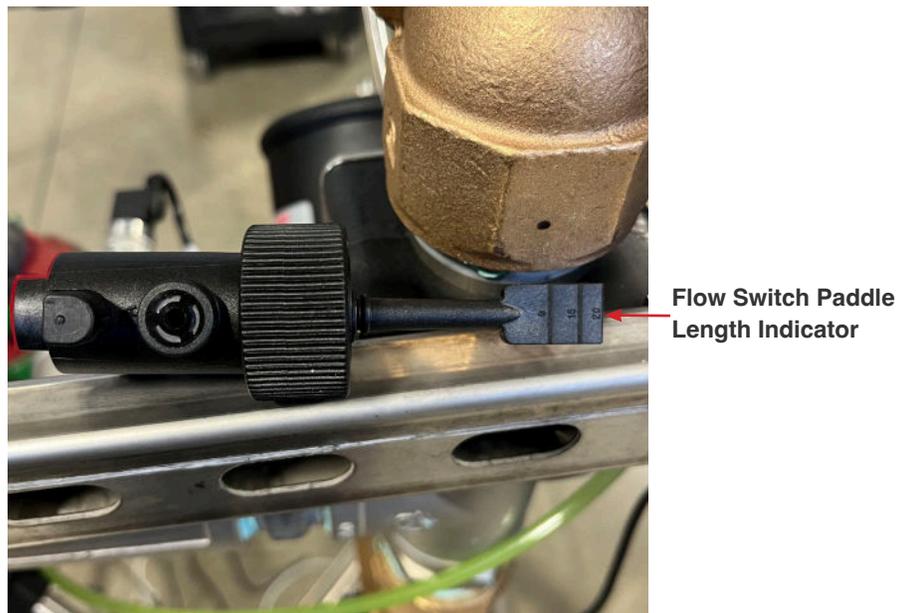
1. Turn **480VAC Main Disconnect** switch on the front of the electrical enclosure to the **OFF** position.
2. Ensure supply water is turned off.
3. Open the electrical enclosure.

- Remove the existing flow switch wire connections on terminals 101 and 1005 (Fig. 7.2.2 - 1).



**Fig. 7.2.2 - 1 - Flow switch wire connections**

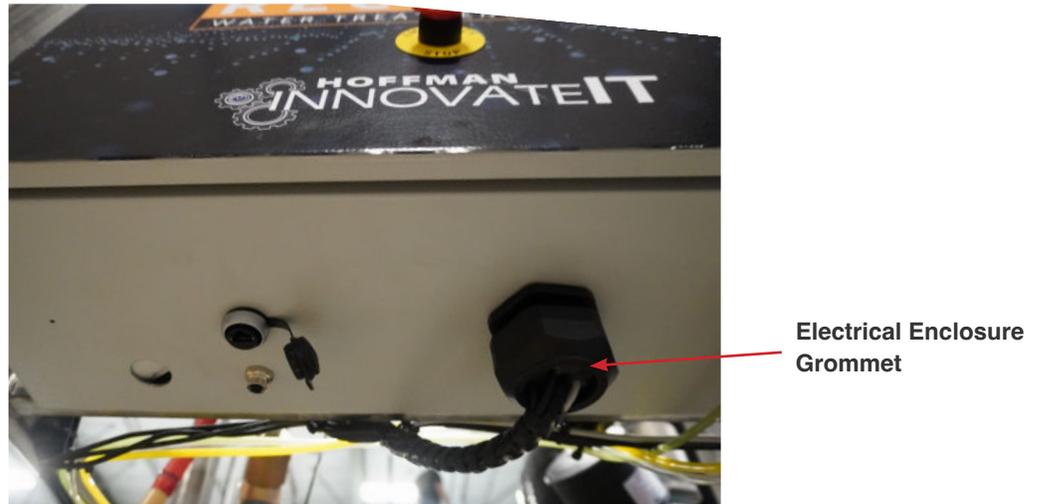
- Remove the sensor from the pipe on the Reclaim System
- Remove the sensor.
- Cut the paddle of the new sensor to the length of the existing sensor (Fig. 7.2.2 - 2).
  - 30mm cut length for 2" diameter pipe at **SEG** discharge.
  - 20mm cut length for 1.5" diameter pipe at **To Sewer** discharge.



**Fig. 7.2.2 - 2 - Flow switch and paddle length indicator**

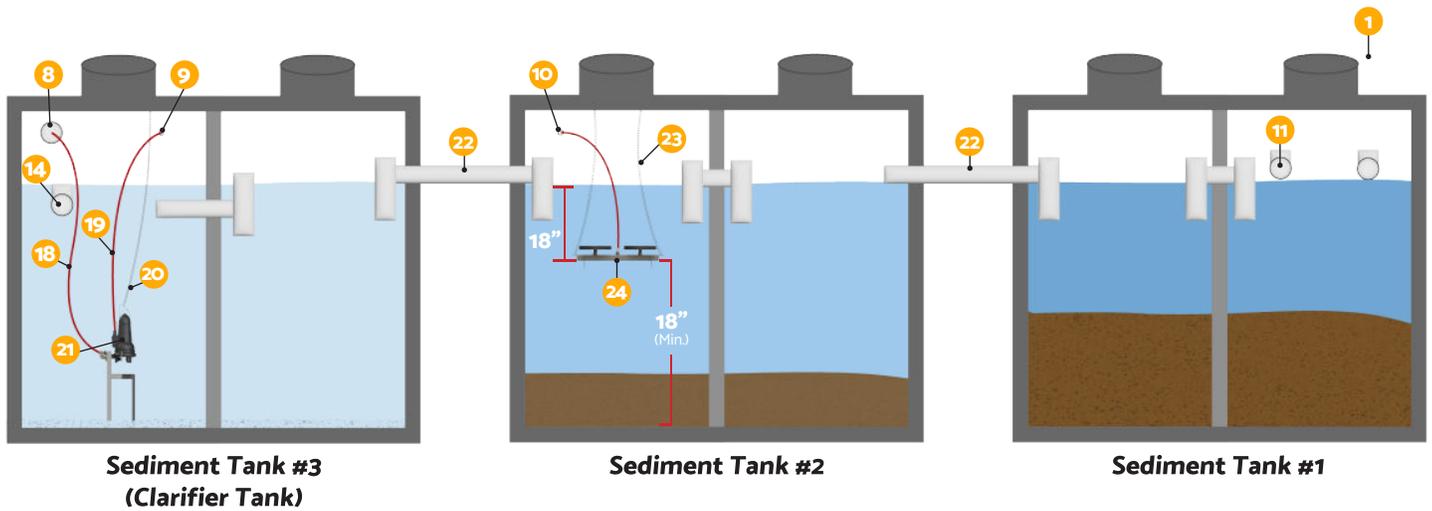
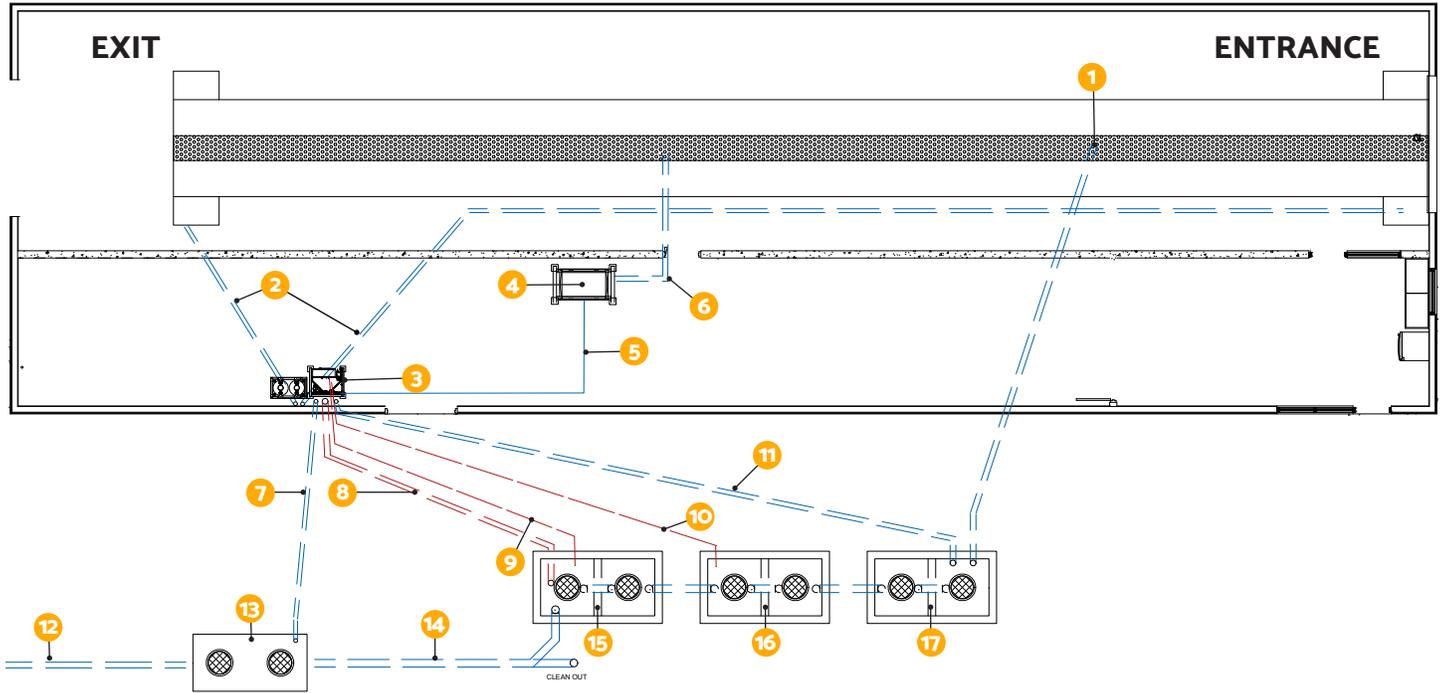
- Ensure the provided o-ring is in place and install the new sensor by hand tightening.
- Run wires into the electrical enclosure through the grommet on the bottom of the enclosure (Fig. 7.2.2 - 3).
- Connect the wires to terminals 101 and 1005 (Fig. 7.2.2 - 1).

11. Turn **480VAC Main Disconnect** switch on the front of the electrical enclosure to the **ON** position.
12. Slowly open your water supply line to allow water to flow back into the system.
13. Navigate to the **Overview** screen on the HMI and press the **SYSTEM AUTO** button.
14. Ensure the pressure is reading correctly on the HMI once the system is in **Reclaim** mode.



**Fig. 7.2.2 - 3** - Electrical enclosure grommet location

# Appendix 1 - Reclaim Integration

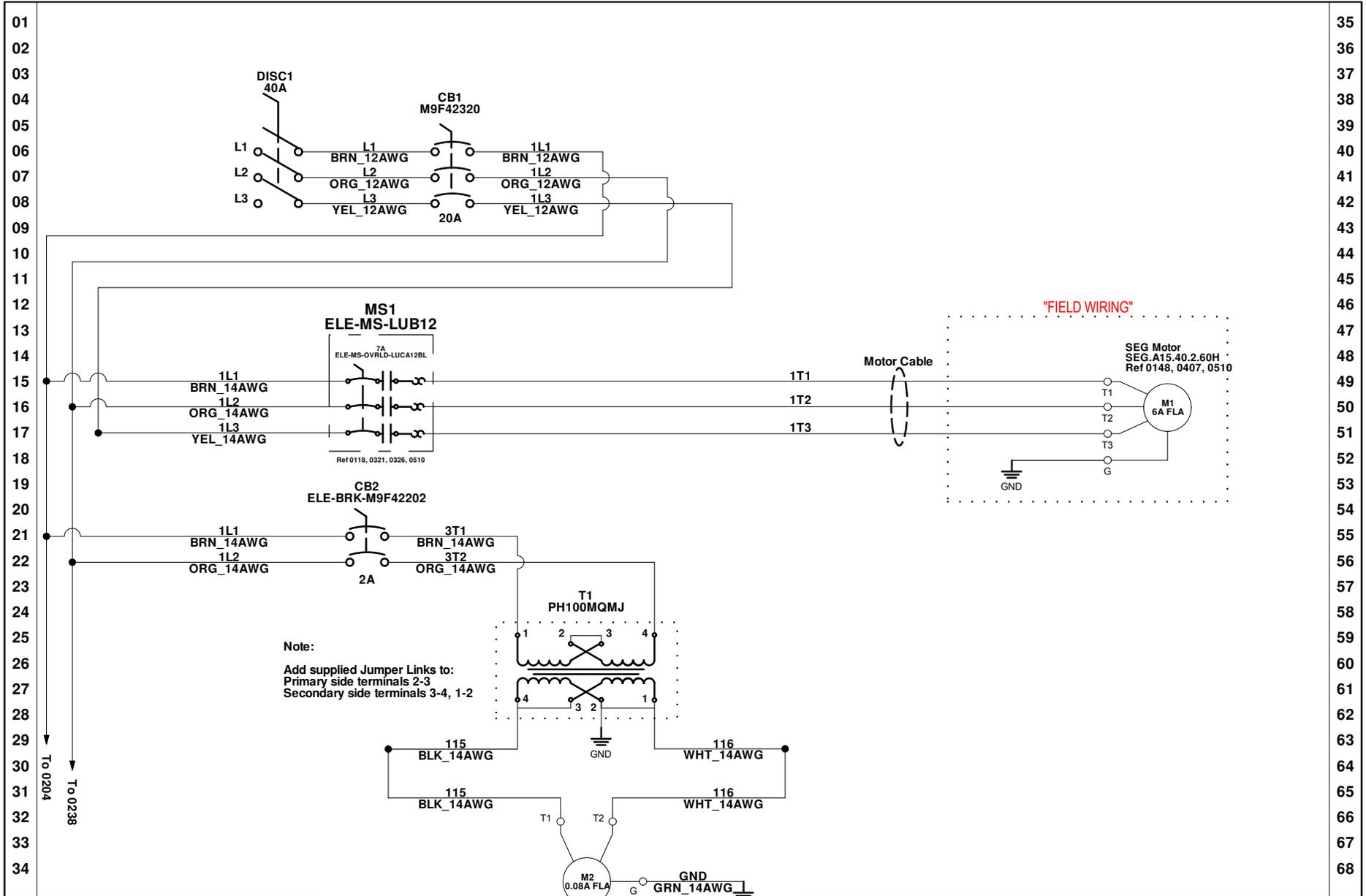


#	Component
1	8" Drain Pipe to Sediment Tank 1
2	4" Drain Pipe to Conveyor Trench for Reclaim Recirculation
3	Reclaim System
4	High-Pressure Pump Stand
5	1.5" Reclaim Line to High Pressure Pump Stand
6	6" Overflow Drain Line to Conveyor Trench
7	4" Drain Pipe to Oil/Water Separator Tank for Backflush
8	6" Chase Pipe to Clarifier Tank for Pump Line
9	2" Electrical Chase to Clarifier Tank for Motor Cable
10	2" Chase to Sediment Tank 2 for 3/8" Air Line to Micro Bubbler
11	6" Drain Pipe to Sediment Tank 1 (optional)
12	Drain Pipe to Sanitary Sewer
13	Oil water Separator Tank
14	Pipe to Oil/Water Separator
15	Sediment Tank 3 (Clarifier Tank)
16	Sediment Tank 2
17	Sediment Tank 1
18	2" 200 psi Hose to Reclaim Skid Location
19	Grundfos Motor Cable
20	Chain/Cable Support
21	Grundfos SEG Grinder Pump
22	8" Pipe
23	Chain/Cable Support
24	Micro Bubbler (1-5 SCFM)



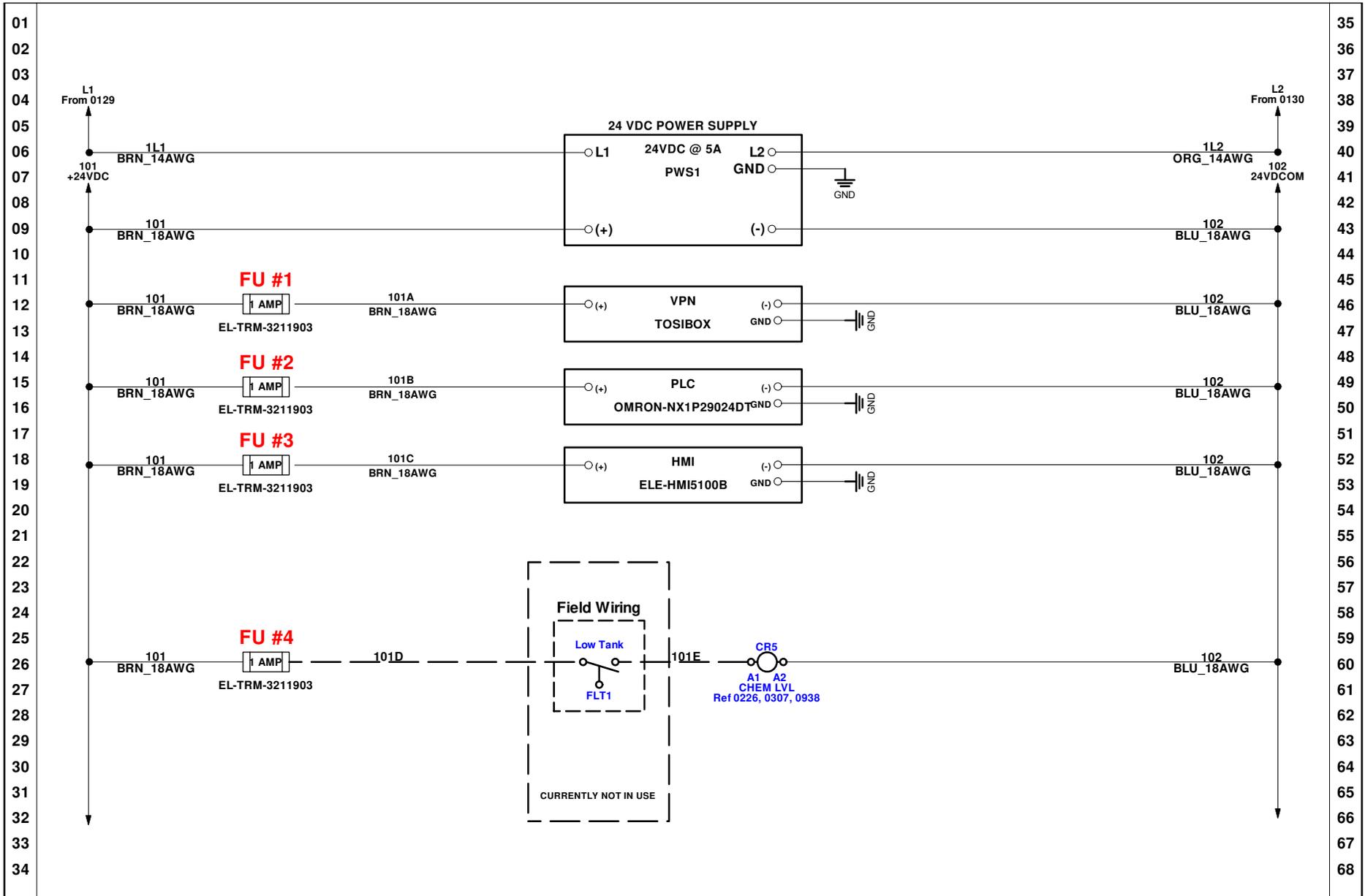
# **Appendix 2**

# **Electrical Schematics**



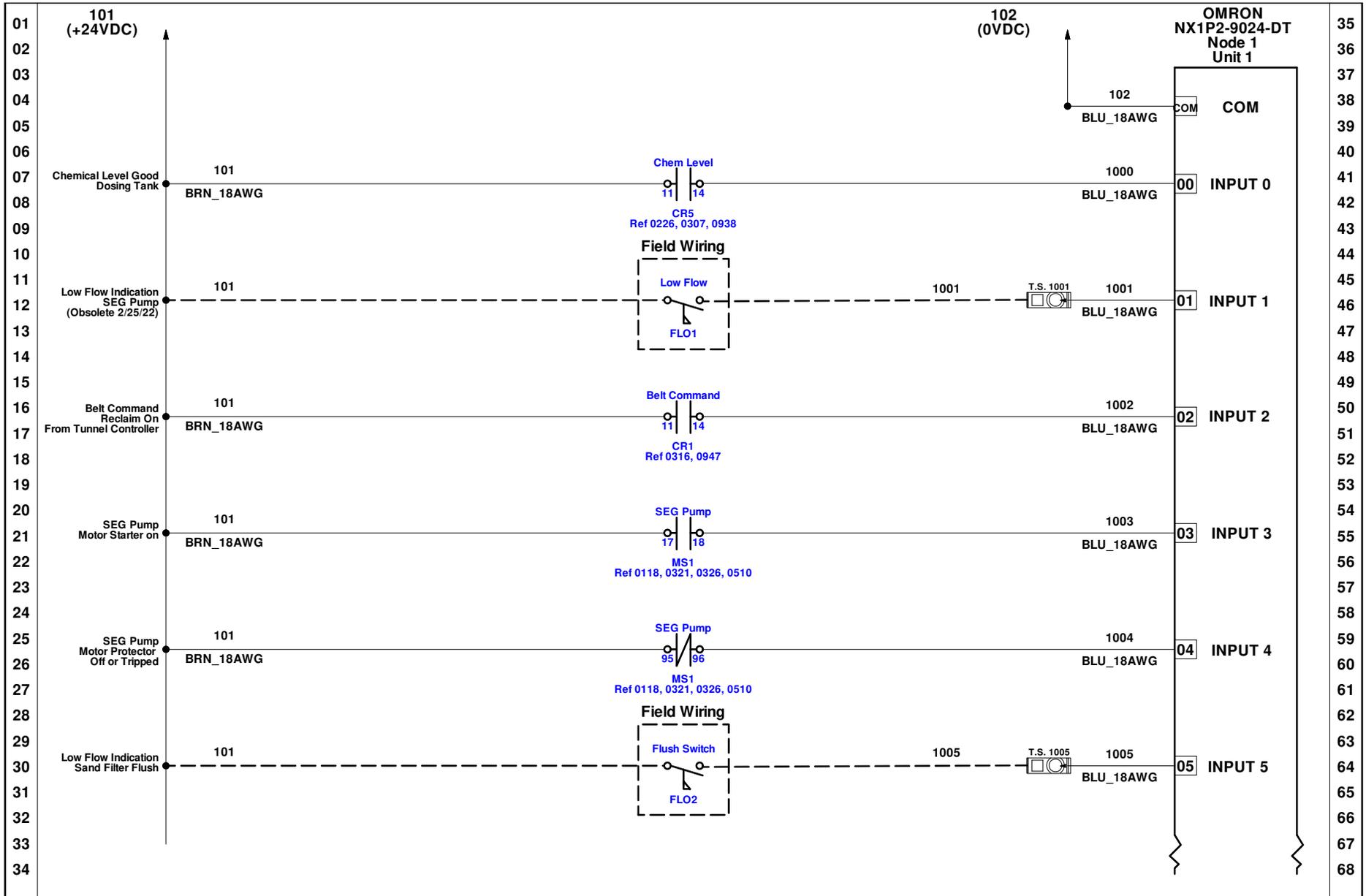
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01	CJH	Drawing released	7/21/22
REV	BY	DESCRIPTION	DATE

THIS DRAWING IS THE PROPERTY OF <b>INNOVATE IT</b>		APPROVALS	DATE	INNOVATE IT CAR WASH EQUIPMENT	
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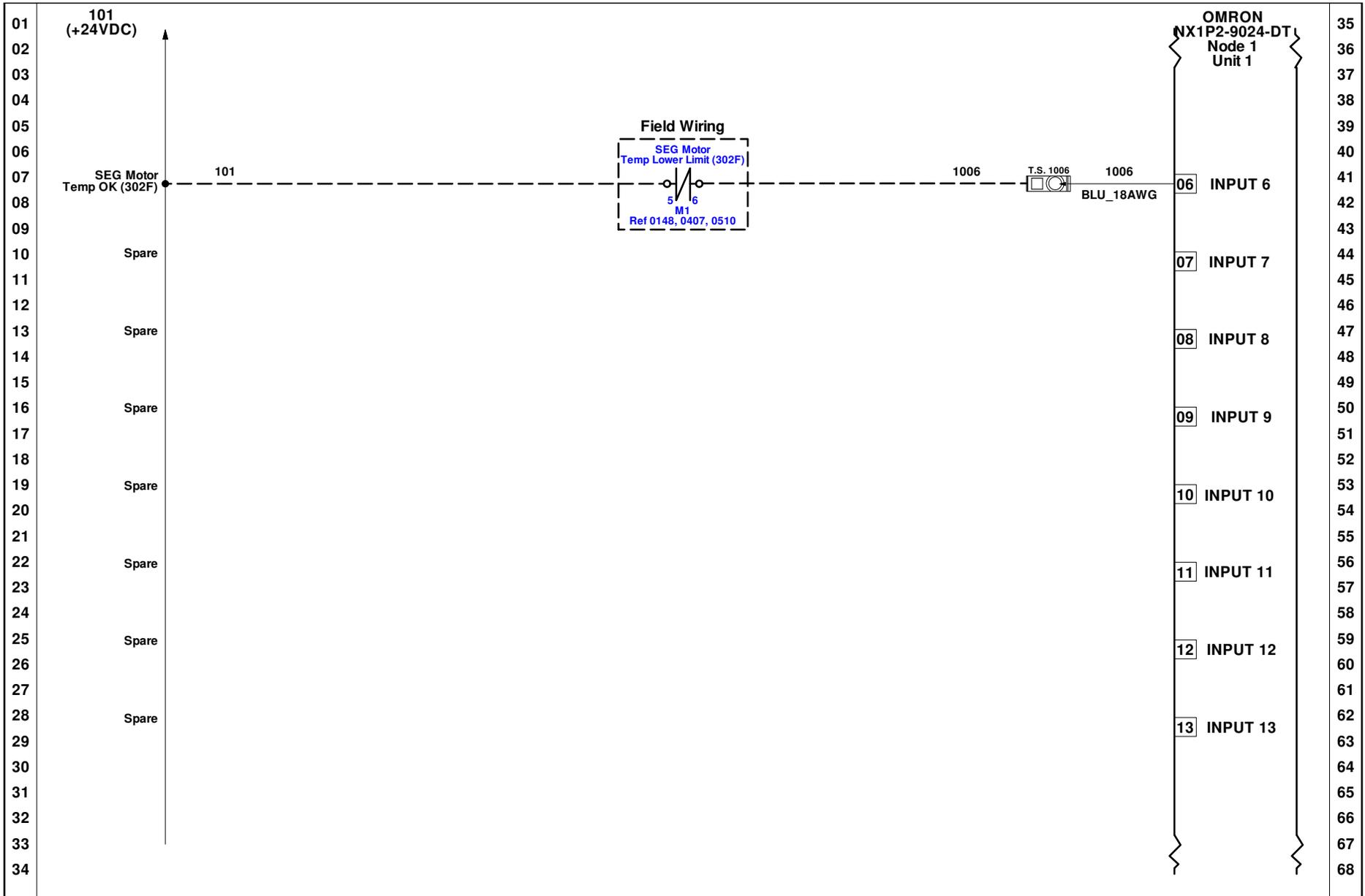
02	GT	Drawing released	10/21/22
01	CJH	Drawing released	7/21/22
REV	BY	DESCRIPTION	DATE

THIS DRAWING IS THE PROPERTY OF 		APPROVALS DRAWN CJH CHKD APPRVD ENG. INFO XXXX	DATE 7/21/22	INNOVATE IT CAR WASH EQUIPMENT PROJECT: Reclaim System TITLE: AC / DC Power Distribution DRAWING NO: Reclaim System R2 SIZE: SCALE: NONE SHEET: PAGE 2 OF 9 REV: 02
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DO NOT SCALE DWG.				



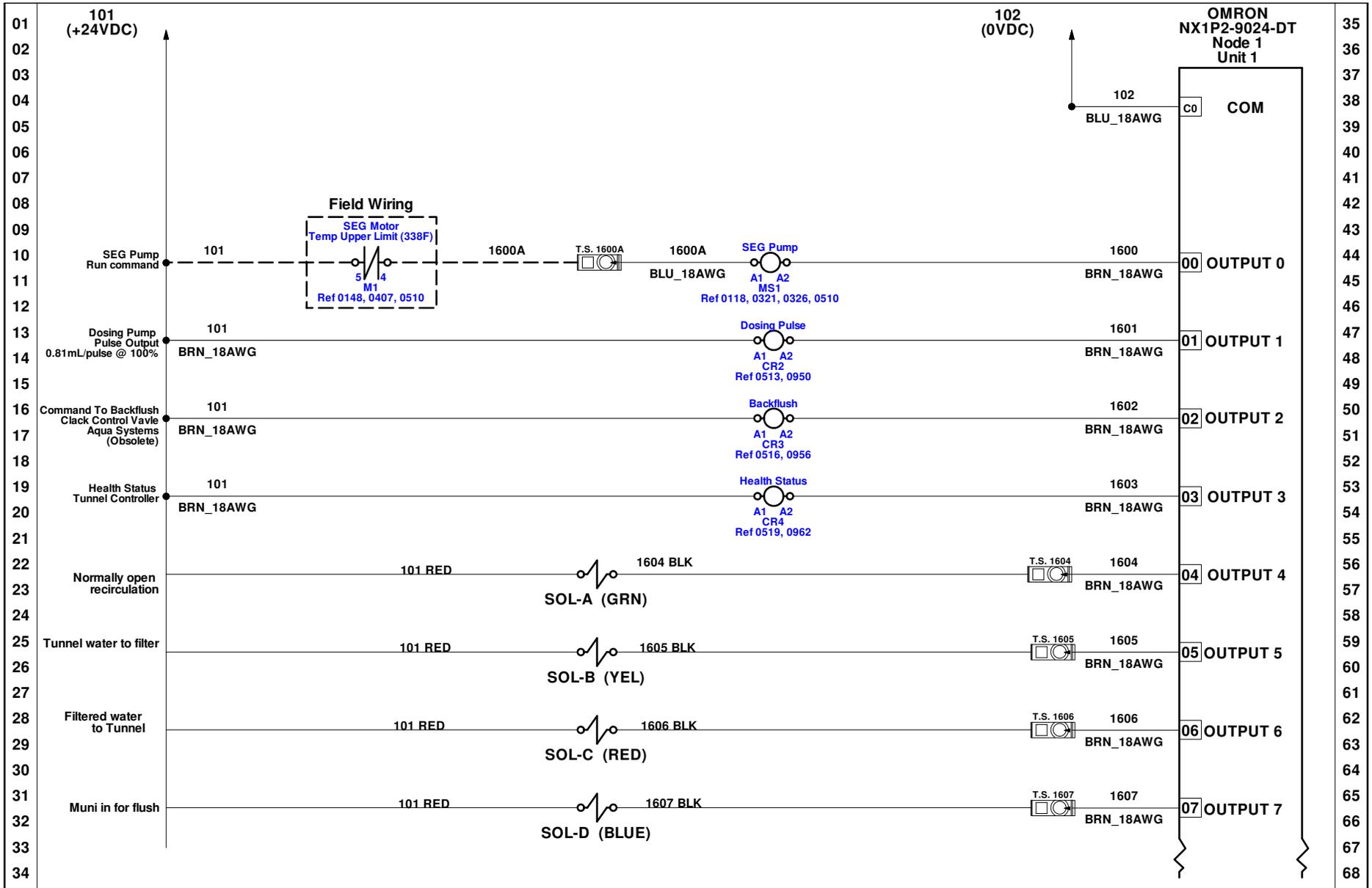
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01	CJH	Drawing released	7/21/22
REV	BY	DESCRIPTION	DATE

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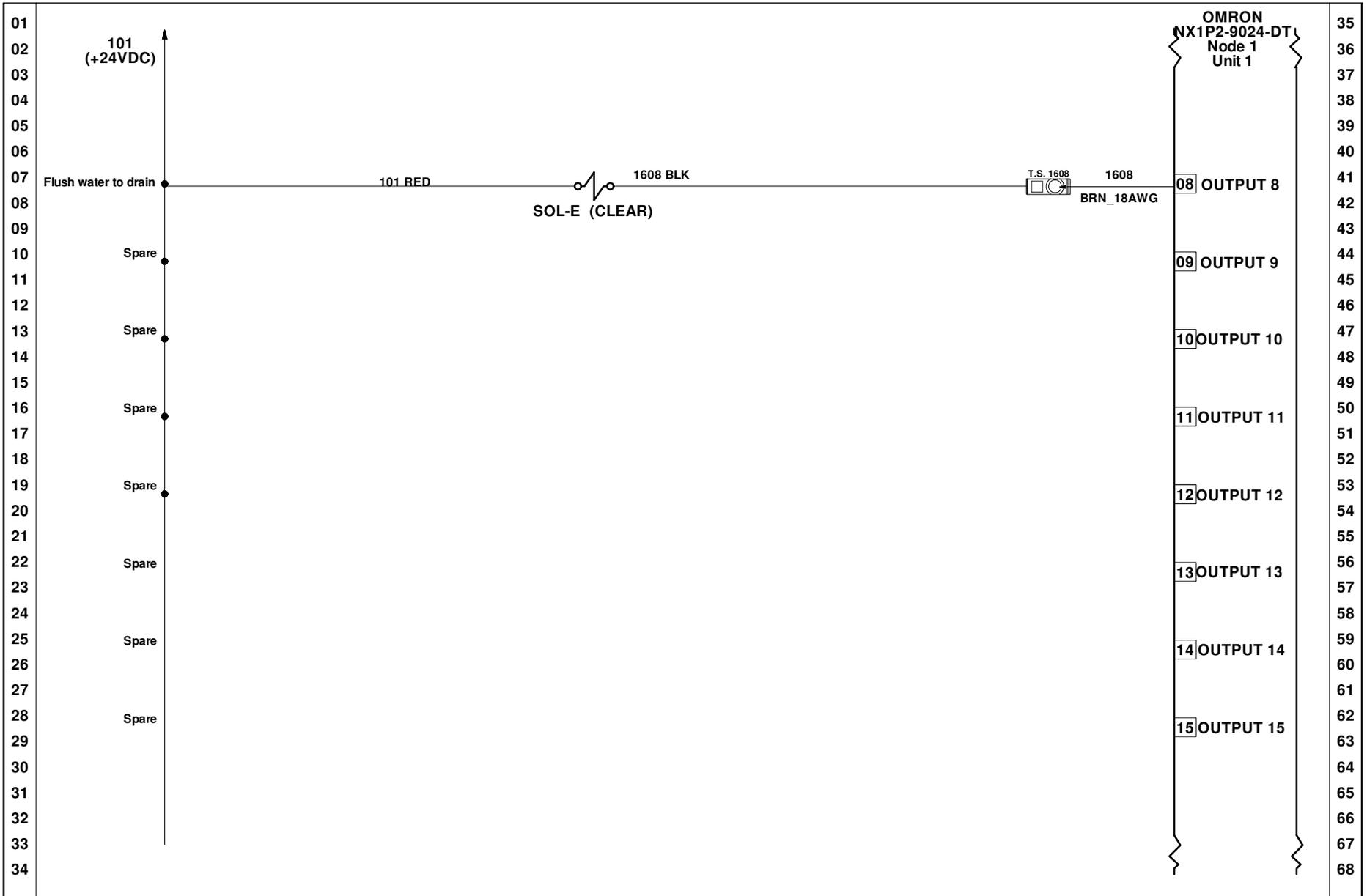
02	GT	Drawing released	10/21/22
01	CJH	Drawing released	7/21/22
REV	BY	DESCRIPTION	DATE

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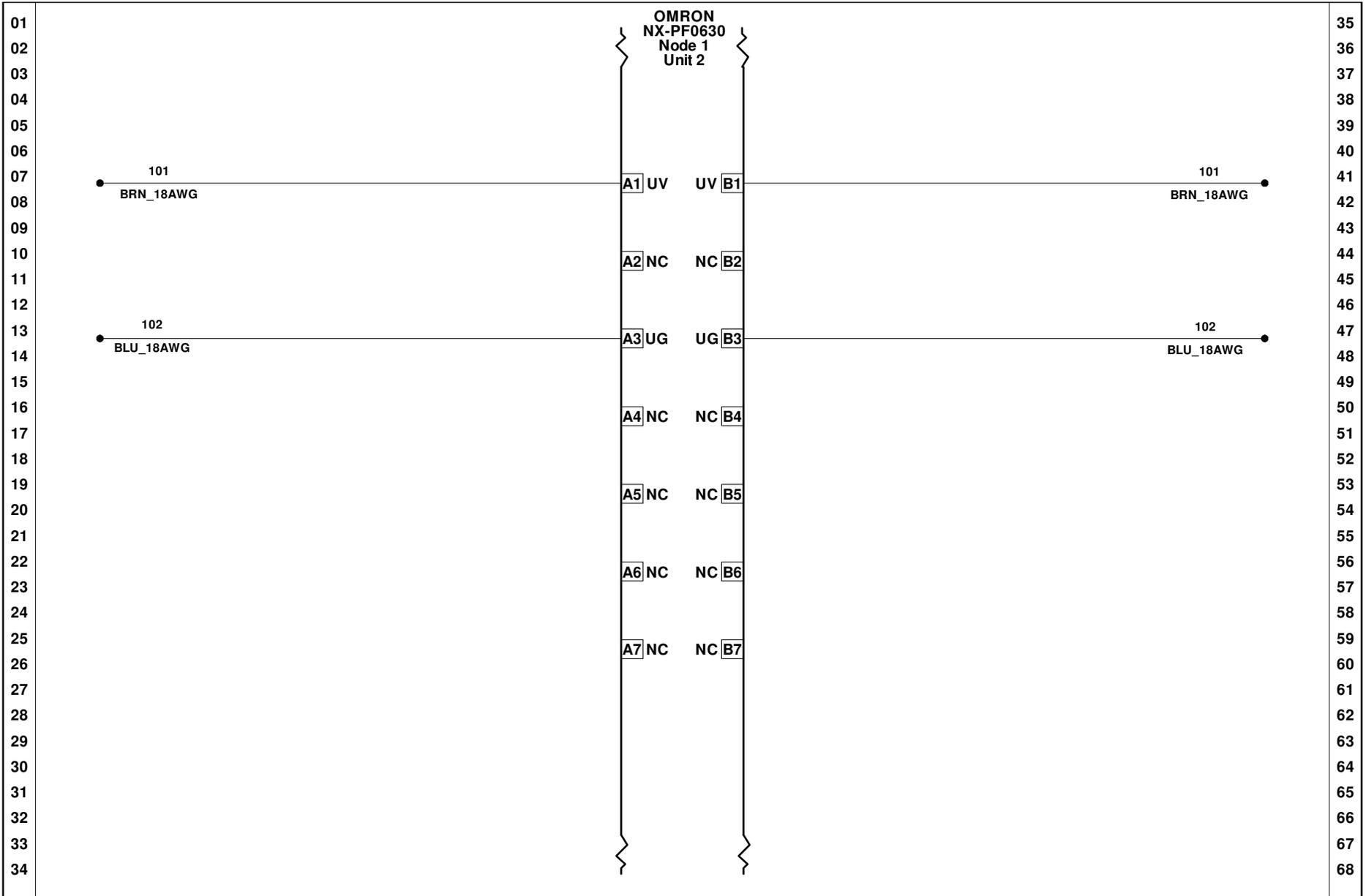
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REV	BY	DESCRIPTION	DATE

THIS DRAWING IS THE PROPERTY OF 		APPROVALS DRAWN CJH 7/21/22 CHKD BT 11/11/2022 APPRVD ENG. INFO XXXX	DATE 7/21/22 11/11/2022  DO NOT SCALE DWG.	INNOVATE IT CAR WASH EQUIPMENT PROJECT: Reclaim System TITLE: PLC Node 1, Unit 0, Outputs 0-7 DRAWING NO: Reclaim System R2 SIZE: SCALE: NONE SHEET: PAGE 5 OF 9 REV: 03
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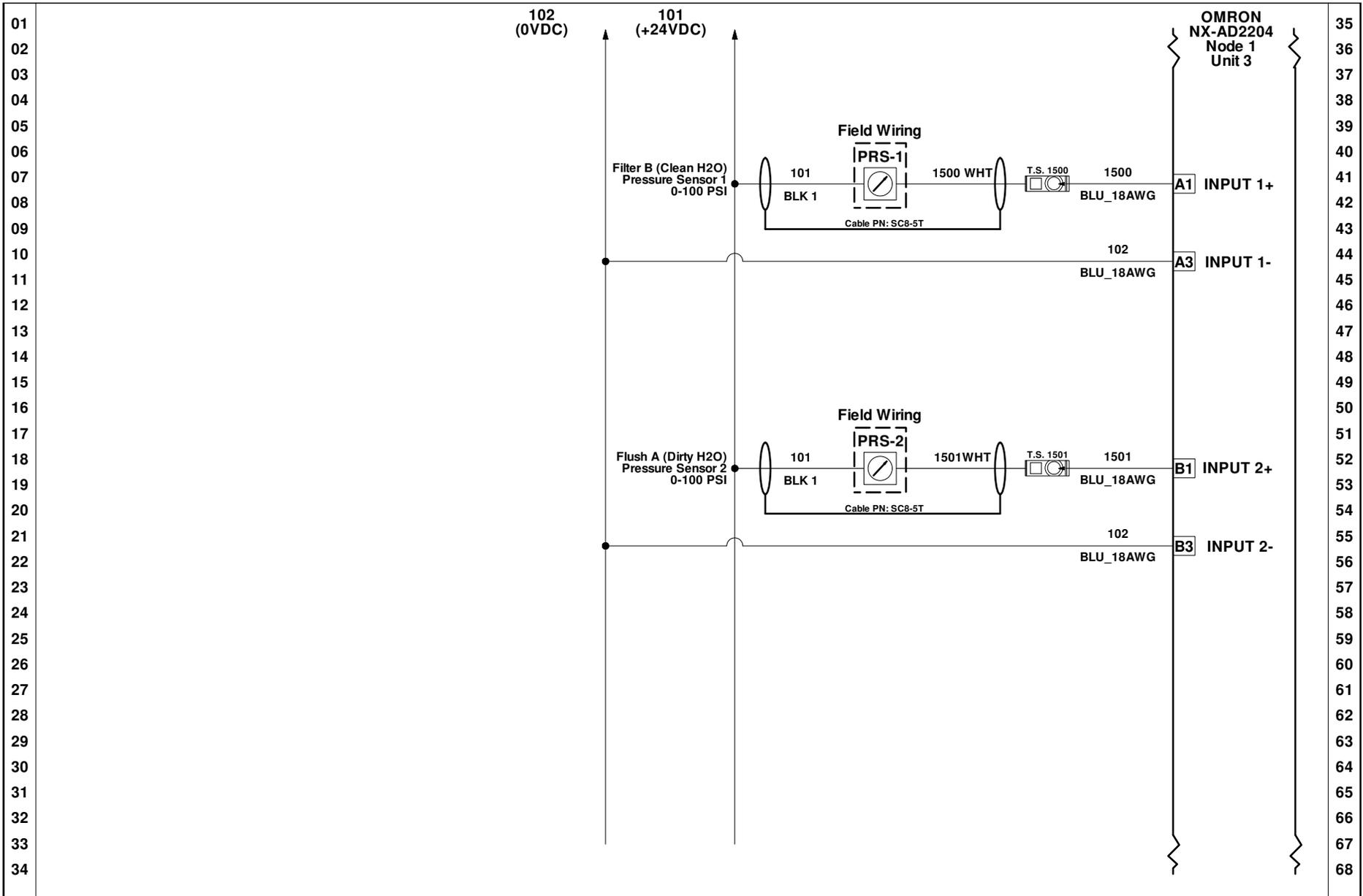
REV	BY	DESCRIPTION	DATE
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01	CJH	Drawing released	7/21/22

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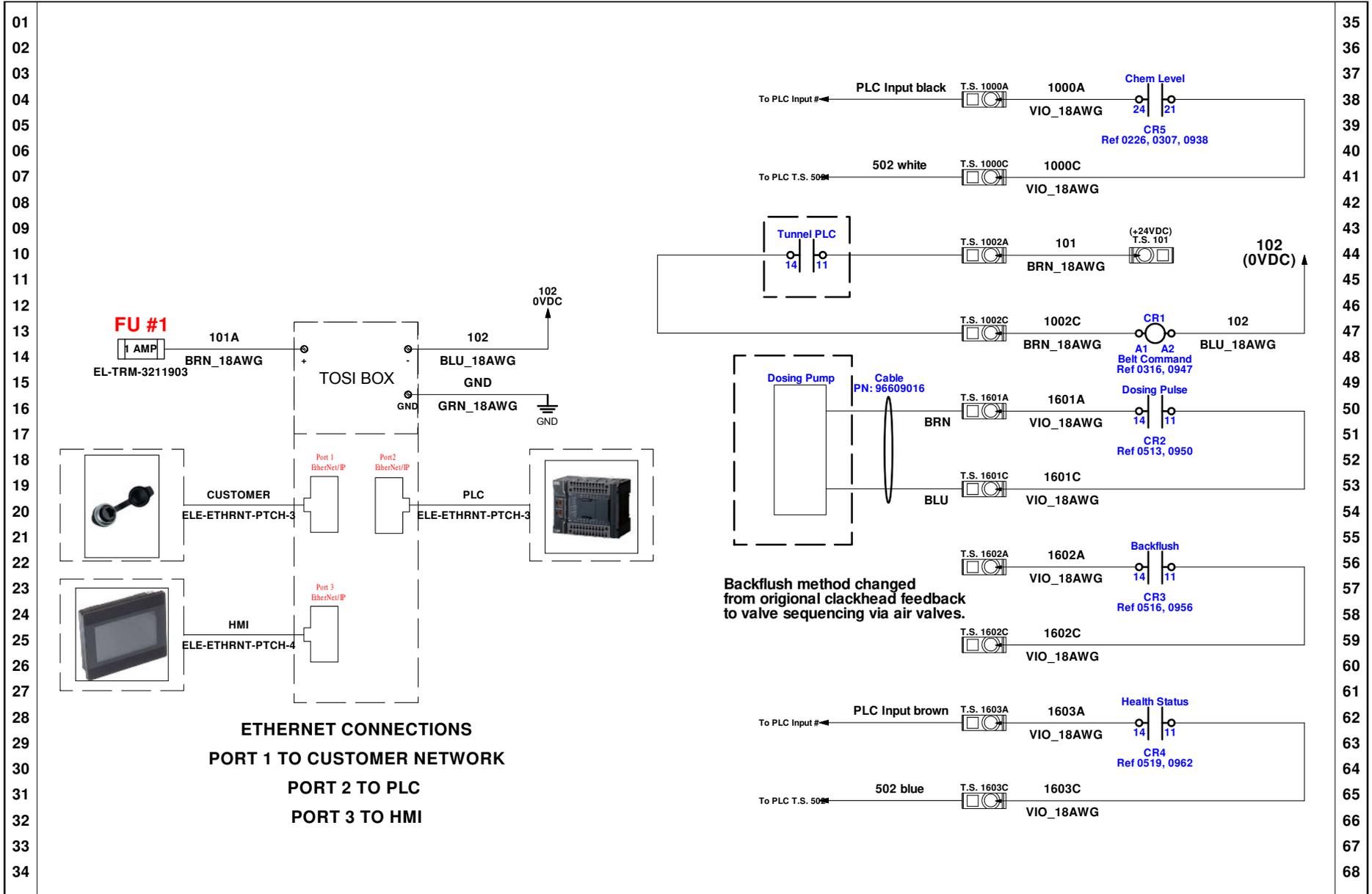
02	GT	Drawing released	10/21/22
01	CJH	Drawing released	7/21/22
REV	BY	DESCRIPTION	DATE

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		CHKD		TITLE: PLC Node 1, Unit 1, Additional I/O Power Supply Unit	
		APPRVD		DRAWING NO: Reclaim System R2	
		ENG. INFO	XXXX	SIZE:	SCALE: NONE
		DO NOT SCALE DWG.		SHEET: PAGE 7 OF 9	REV: 02



02	GT	Drawing released	10/21/22
01	CJH	Drawing released	7/21/22
REV	BY	DESCRIPTION	DATE

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ALL DESIGN RIGHTS RECORDED IN THIS DESIGN DOCUMENT ARE THE PROPERTY OF INNOVATE IT CAR WASH EQUIPMENT. THE DESIGN MUST NOT BE REPRODUCED WITHOUT EXPRESS WRITTEN PERMISSION OF INNOVATE IT CAR WASH EQUIPMENT.		CHKD			TITLE: PLC Node 1, Unit 2, Analog Inputs 0-1
CONFIDENTIALITY THIS DRAWING MUST NOT BE DISCLOSED TO ANY THIRD PARTY WITHOUT THE EXPRESS WRITTEN PERMISSION OF INNOVATE IT CAR WASH EQUIPMENT.		APPRVD			DRAWING NO: Reclaim System R2
		ENG. INFO	XXXX		SIZE: SCALE: SHEET: REV:
		DO NOT SCALE DWG.		NONE	PAGE 8 OF 9 02

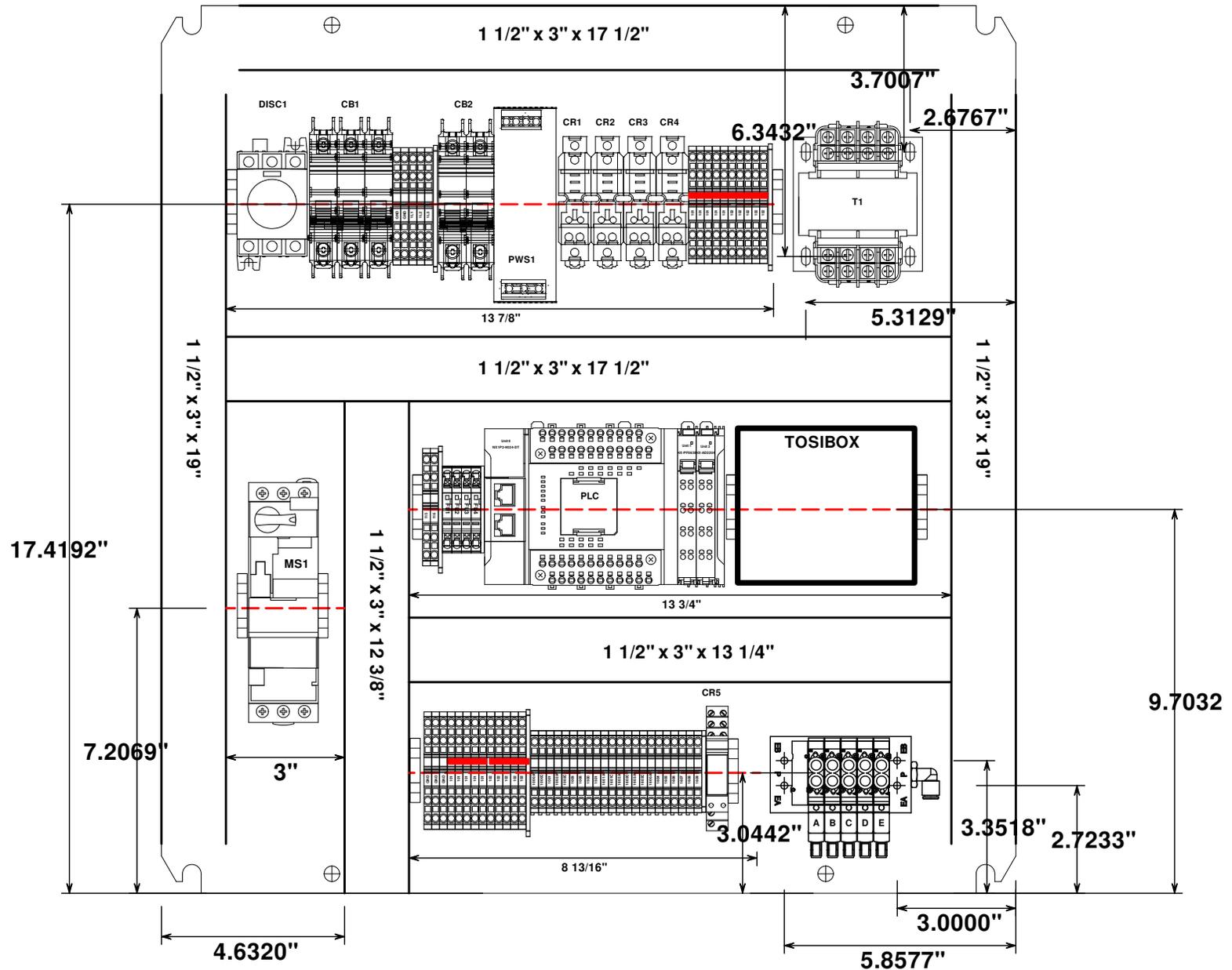


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REV	BY	DESCRIPTION	DATE

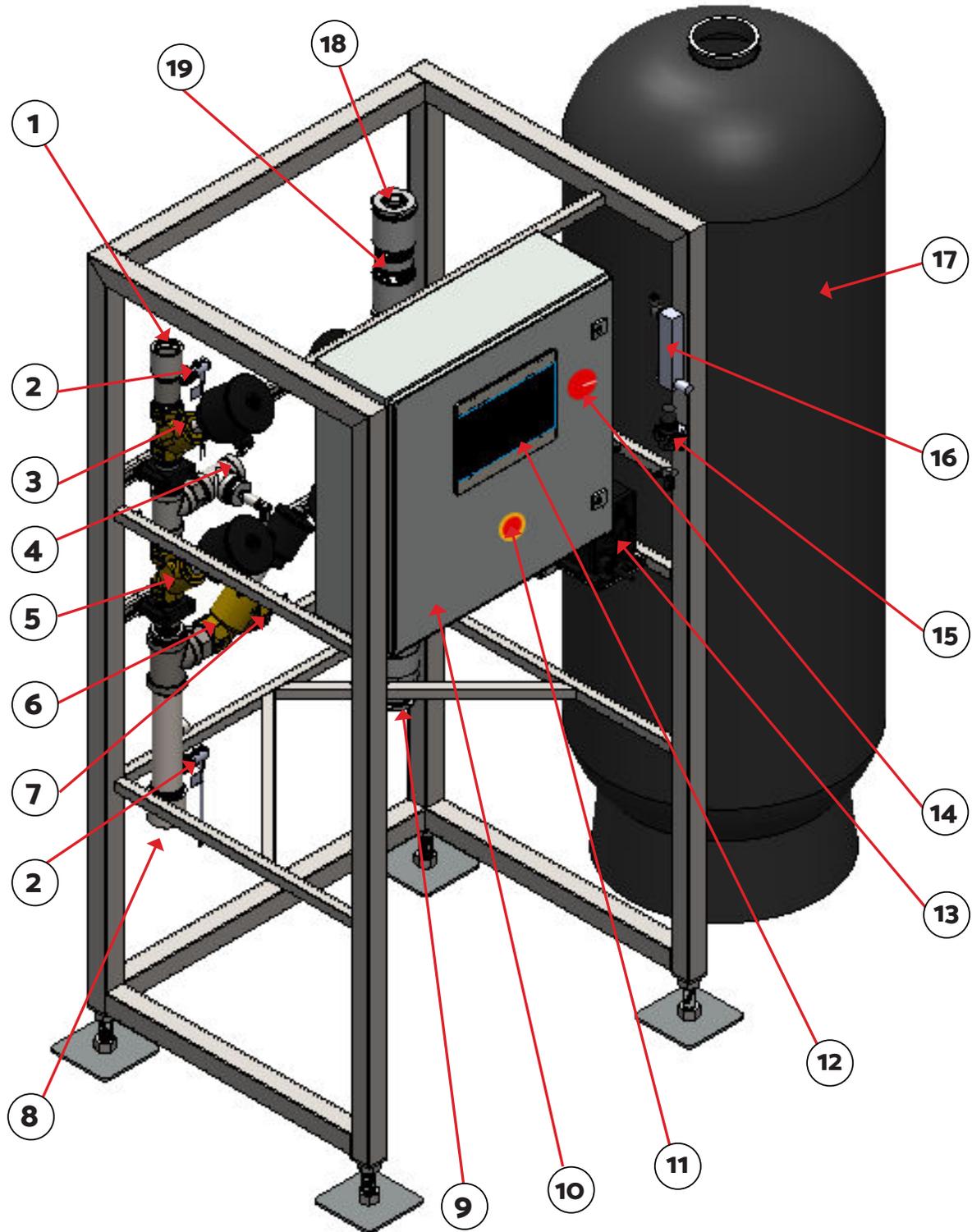
THIS DRAWING IS THE PROPERTY OF <b>INNOVATE IT</b>		APPROVALS	DATE	INNOVATE IT CAR WASH EQUIPMENT	
THIS DRAWING MUST NOT BE COPIED WITHOUT EXPRESS WRITTEN PERMISSION OF INNOVATE IT CAR WASH EQUIPMENT.		DRAWN CJH	7/21/22	PROJECT: Reclaim System	
DESIGN RIGHT		CHKD		TITLE: Tunnel Controller Signals	
ALL DESIGN RIGHTS RECORDED IN THIS DESIGN DOCUMENT ARE THE PROPERTY OF INNOVATE IT CAR WASH EQUIPMENT. THE DESIGN MUST NOT BE REPRODUCED WITHOUT EXPRESS WRITTEN PERMISSION OF INNOVATE IT CAR WASH EQUIPMENT.		APPRVD		DRAWING NO: Reclaim System R2	
CONFIDENTIALITY		ENG. INFO	XXXX	DRAWING NO: Reclaim System R2	
THIS DRAWING MUST NOT BE DISCLOSED TO ANY THIRD PARTY WITHOUT THE EXPRESS WRITTEN PERMISSION OF INNOVATE IT CAR WASH EQUIPMENT.		DO NOT SCALE DWG.		SIZE:	SCALE: NONE
				SHEET: PAGE 9 OF 9	REV: 02

# RECLAIM UNIT

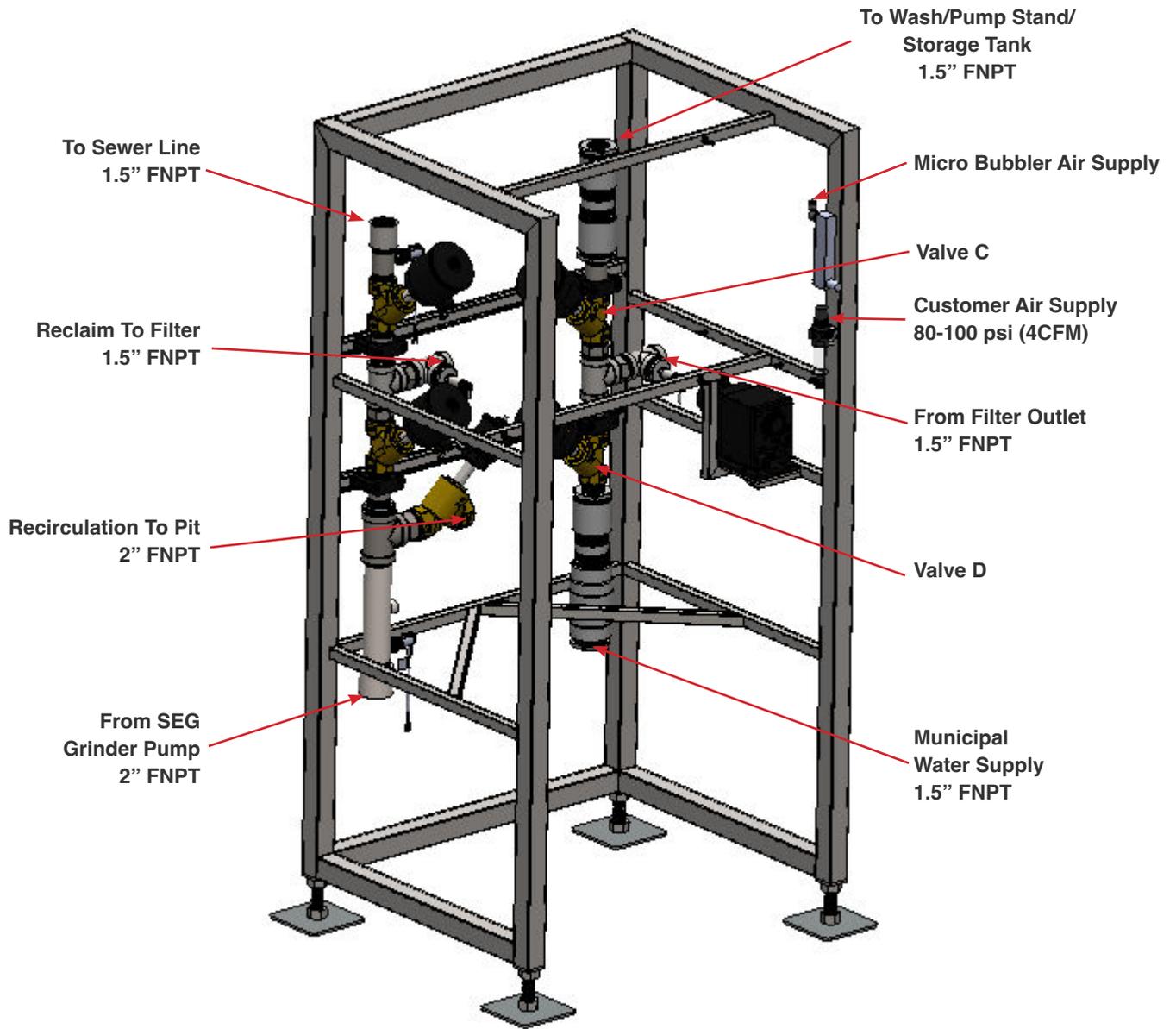
Revision 3 (10/20/22)

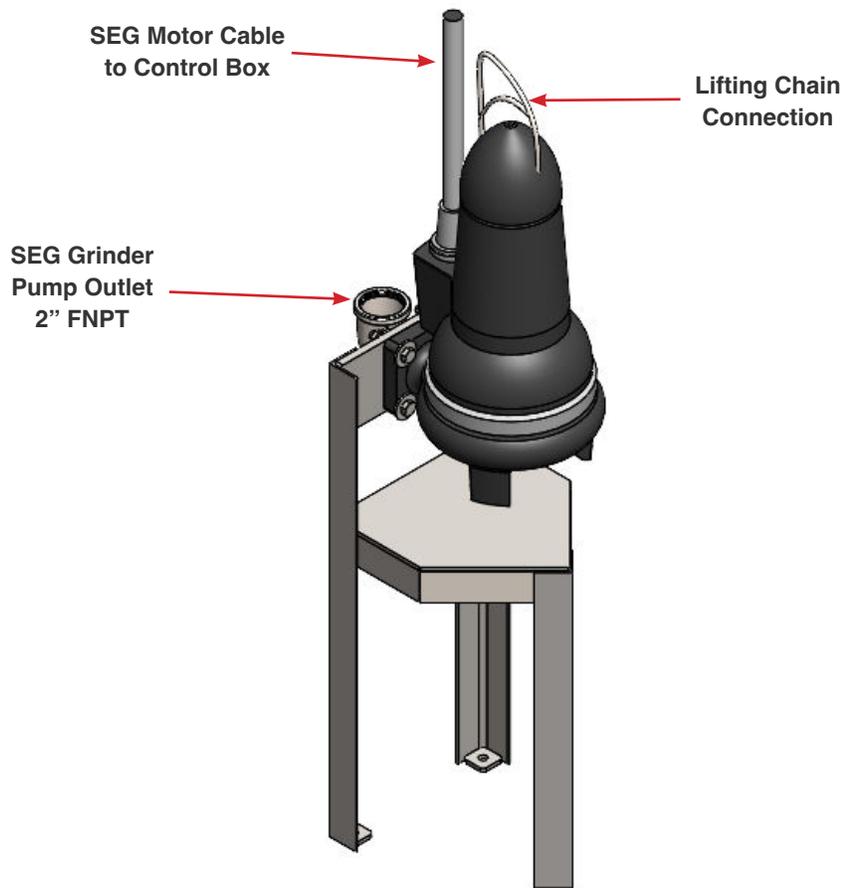
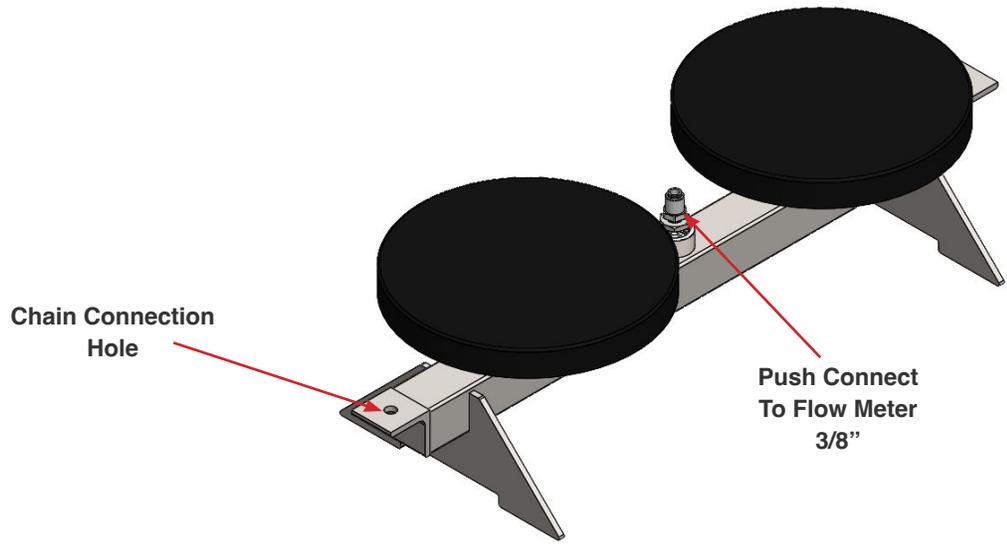


# Appendix 3 - System Identification



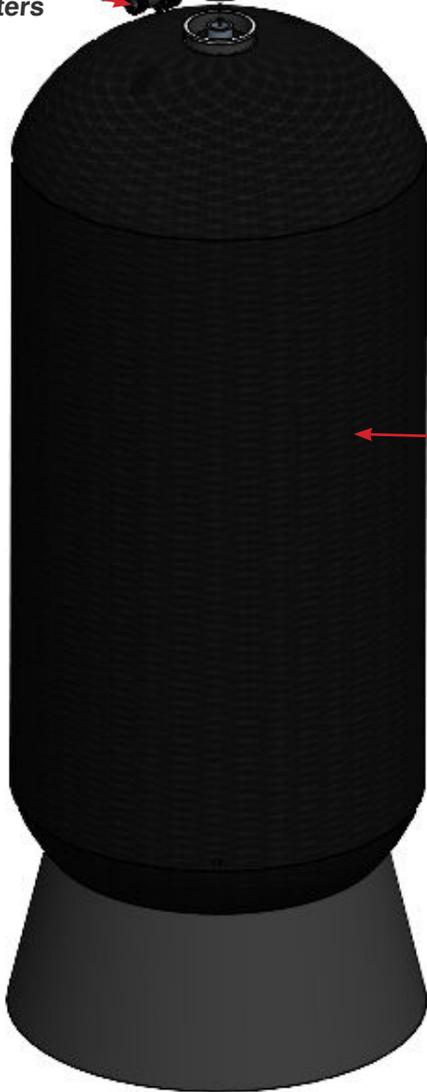
#	Component
1	To Sewer Line
2	Process Sensor
3	Valve E
4	Reclaim To Filter
5	Valve B
6	Valve A
7	Recirculation To Pit
8	SEG Tank Water
9	Municipal Water Supply
10	Electrical Enclosure
11	E-Stop Button
12	HMI
13	Dosing Pump
14	480VAC Main Disconnect
15	Main Air Regulator
16	Micro Bubbler Air Regulator
17	Multimedia Filter
18	To Wash/Pump Stand/Storage Tank
19	Flow Regulator





Clack V4430  
Quick Connect  
Adapters

Clack D1403  
Cross Flow Head



Multimedia  
Filter

Multimedia Filter  
Distributor



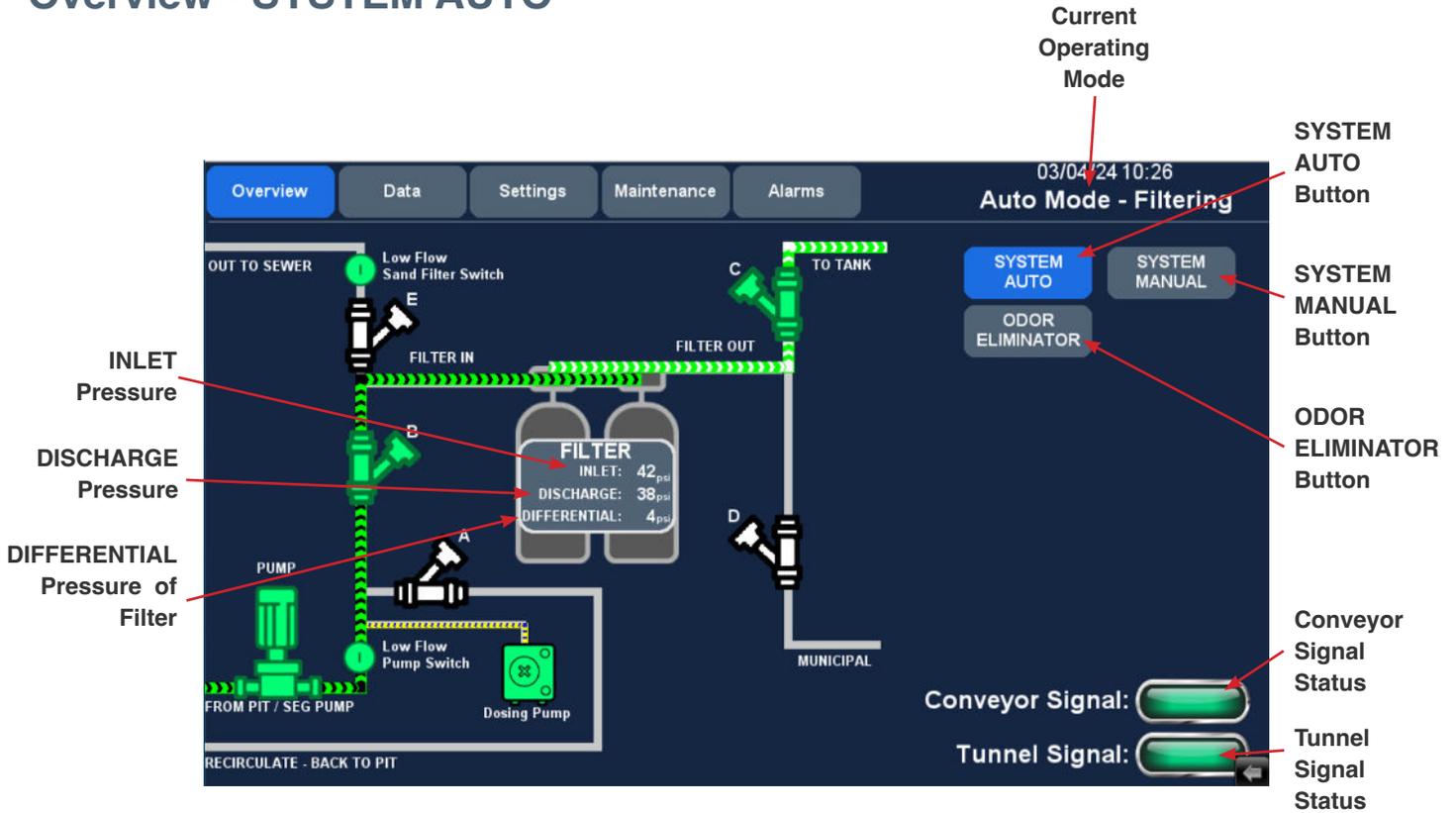


Power Supply  
Knockout

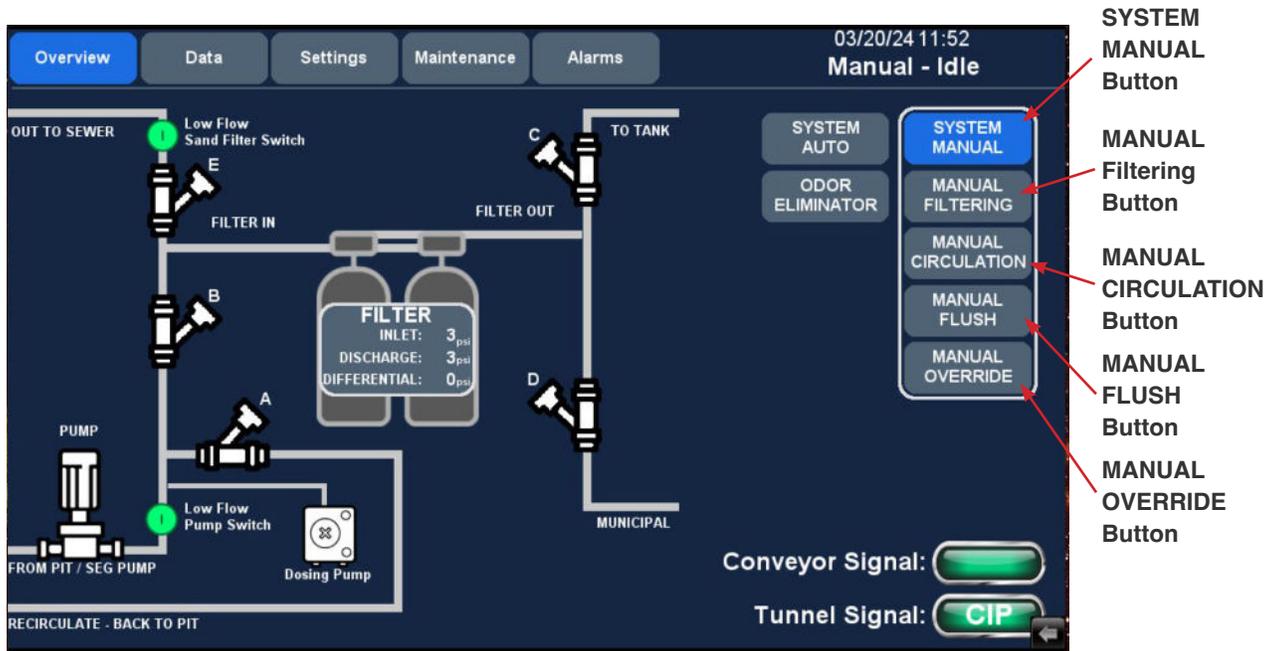
Customer  
Network Interface  
RJ-45 CAT5 Shielded

# Appendix 4 - HMI Screens

## Overview - SYSTEM AUTO



## Overview - SYSTEM MANUAL



# Data

03/04/24 10:35  
Auto Mode - Filtering

Main **Data** Settings Maintenance Alarms

**RUNTIME & CYCLE COUNT:**

Valve A: **85674**

Valve B: **77671**

Valve C: **70497**

Valve D: **156**

Valve E: **156**

Tunnel Signal: **87458**

Pump Starts: **3885**

Doses Pump: **622460**

Odor elimin: **46**

Pump Runtime: **1910 HR**

Recirculation: **1263 HR**

Reclaim: **669 HR**

Flush: **48 HR**

**Flush History**  
History of the last 10 flushes

DATE	TIME	CARS	Gallons	Pre-Flush			Post-Flush			Disable car count:
				Inlet	Dis.	Dif	Inlet	Dis.	Dif	
3/04	7:53	500	5135	34	25	9	41	37	4	<input type="checkbox"/>
3/03	8:16	152	1430	34	27	7	48	47	1	Cars since last flush:
3/02	10:19	26	48	27	23	4	46	44	2	<b>66</b>
3/02	7:25	983	9724	43	31	12	41	38	3	Gallons Reclaimed
3/01	8:00	512	5352	29	20	9	41	38	3	<b>452</b>
2/29	8:29	2	48	21	17	4	41	38	3	High or Low Flow
2/29	6:56	232	49	42	38	4	41	38	3	<b>LOW</b>
2/28	7:37	0	7988	0	0	0	45	43	2	
2/28	7:37	798	7988	39	27	12	0	0	0	
2/27	7:17	952	9367	44	10	34	42	38	4	
2/26	7:54	878	8147	43	22	21	48	47	1	
2/25	8:18	1067	9728	48	8	40	42	38	4	
2/24	7:21	961	9202	43	22	21	41	38	3	
2/23	7:20	743	7055	36	23	13	41	38	3	
2/22	10:08	6	49	0	0	0	41	37	4	

Trend

# Settings

**FLUSH SETUP WIZARD Button**

03/04/24 10:35  
Auto Mode - Filtering

Main Data **Settings** Maintenance Alarms

**Flush** FLUSH SETUP WIZARD

Length of Flush: **20 MIN**

TANK FEED DIRECT FEED

Pump Function Run Time: **30 SEC**

DIFFERENTIAL PRESSURE EVERYDAY

Flush at this time of day: **23 HR**

**Standby Cycle**

Filter: **2 MIN**

Circulate: **10 MIN**

Rest: **30 MIN**

**Doses Per Min**

During Filtering: **20**  
0 = OFF

During Circulating: **5**  
0 = OFF

**Odor Eliminator**

Cycle Length: **10 MIN**

Doses Per Min: **30**

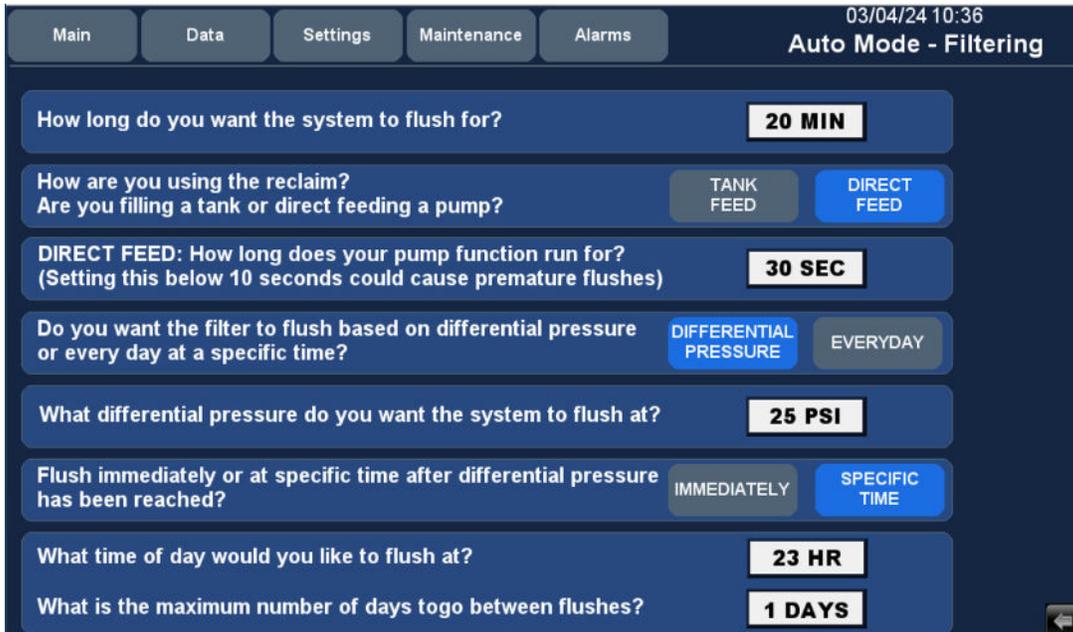
Standby Cycle Settings

Chemical Dosing Settings

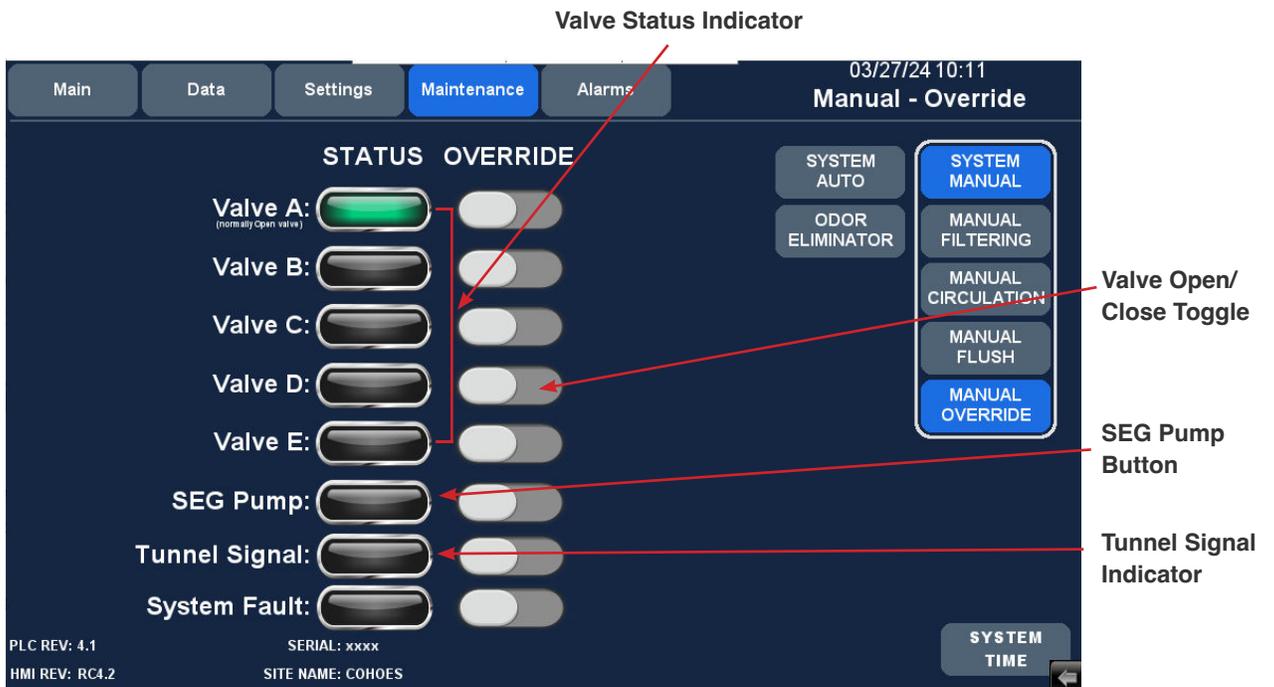
Odor Eliminator Settings

# FLUSH WIZARD

Refer to Section 4.1.6 to configure Flush settings.



# Maintenance - Manual Override



# Alarms

The screenshot displays a control panel with a top navigation bar containing buttons for 'Main', 'Data', 'Settings', 'Maintenance', and 'Alarms'. The 'Alarms' button is highlighted in blue. The top right corner shows the date and time '03/04/24 10:39' and the system status 'Auto Mode - Circulating'.

On the left side, there are two labels with red arrows pointing to the interface: 'Current Alarms' points to the 'CURRENT:' section, and 'Alarm History' points to the 'PAST:' section.

The 'CURRENT:' section is currently empty. The 'PAST:' section contains a scrollable table of historical alarm events.

Date	Time	Message
03/03/24	19:51:53	FILTER OVER PRESSURE
03/02/24	20:42:24	FILTER OVER PRESSURE
03/02/24	08:37:02	FILTER OVER PRESSURE
03/01/24	20:48:22	FILTER OVER PRESSURE
02/29/24	20:55:09	FILTER OVER PRESSURE
02/29/24	08:26:23	FILTER OVER PRESSURE
02/28/24	08:35:46	FILTER OVER PRESSURE
02/28/24	07:35:55	FILTER OVER PRESSURE
02/27/24	20:46:26	FILTER OVER PRESSURE
02/26/24	20:46:45	FILTER OVER PRESSURE
02/25/24	19:50:04	FILTER OVER PRESSURE
02/24/24	20:55:24	FILTER OVER PRESSURE
02/23/24	20:53:29	FILTER OVER PRESSURE
02/22/24	20:50:11	FILTER OVER PRESSURE