Master Fluid SOLUTIONS™

USER MANUAL

Purifier Plus™

Cutting Fluid Purifying System

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PRECAUTIONS AND DISCLAIMERS PRIOR TO THE USE

When installing this product, note the following.

(1) Confirm the voltage is correct and confirm the power supply is connected.

(2) Before installation, make sure that there is no corrosive solvent in the coolant tank to avoid damage to the machine.

(3) If there is any odd sound, smoke, or spark during operation, please turn off the power immediately and contact the representatives of Master Fluid Solutions.

(4) Before being engaged in inspection, adjustment or cleaning, the power must be turned off to prevent any liquid, electrical leakage, or operation failure.

(5) The oil skimmer belt contains recyclable grease and may degrade over time. Annual replacement is recommended to ensure efficient oil removal. If there is floating debris in the coolant tank, please remove it before turning on Purifier Plus.

(6) It's recommended to not operate the ozone device more than 3 hours a day unless in special conditions.

FUNCTIONAL CONDITIONS AND SPECIFICATION

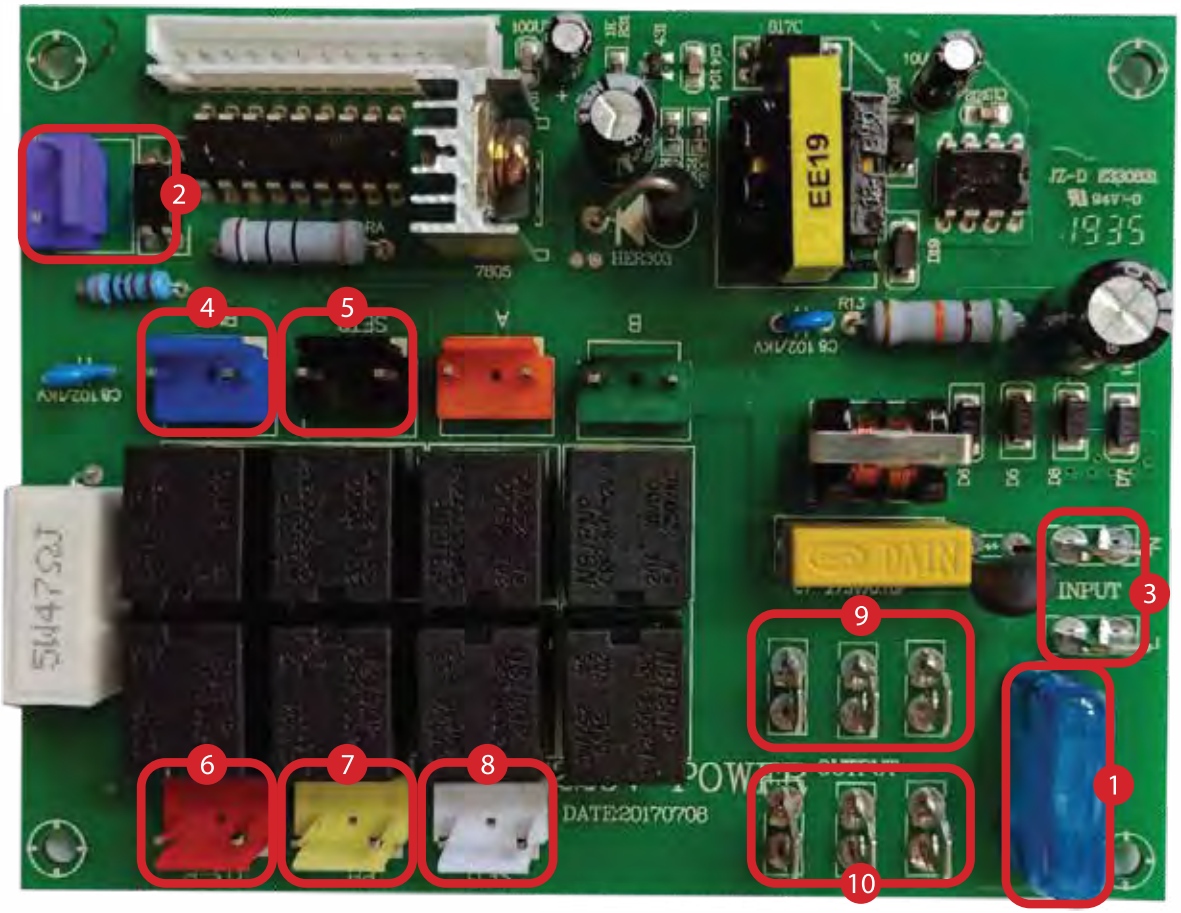
Functional conditions:

- Applicable Fluid: water-soluble liquid with a specific gravity of 1.0 or more, viscosity of 1.0PC or less, and surface tension of 70dgn / cm or more.
- Discharged Oil: waste oil with a specific gravity of 0.9 or less, viscosity of 1.5 or more, and surface tension of 40dgn / cm or less.

Specification:

Items	*Description*	*Remarks*
Model	*Purifier Plus*	
Machine size	*520×410×880mm*	
Packing Size	*560×450×930mm*	
Net Weight	*45Kgs*	
Machine Capacity	*35 liters*	
Power supply	*Single Phase. 220V.AC50HZ*	
Power consumption	*Consumption of 1KWH of*	
	Electricity in 24 hours	
Filter mesh size	*0.4mm*	*(Max. particle)*
Flow speed	*Up to 30L / min.*	*(Max. amount)*
Pump liquid inlet	*3/8"*	
Machine liquid outlet	*1"*	
Oil Skimmer Motor	*AC-220V.50HZ*	
Power Capacity	*7W*	
Rotating speed	*15 RPM/min*	*15 RPM/min.*
Ozone value	*500mg/hr*	*Produced internally*

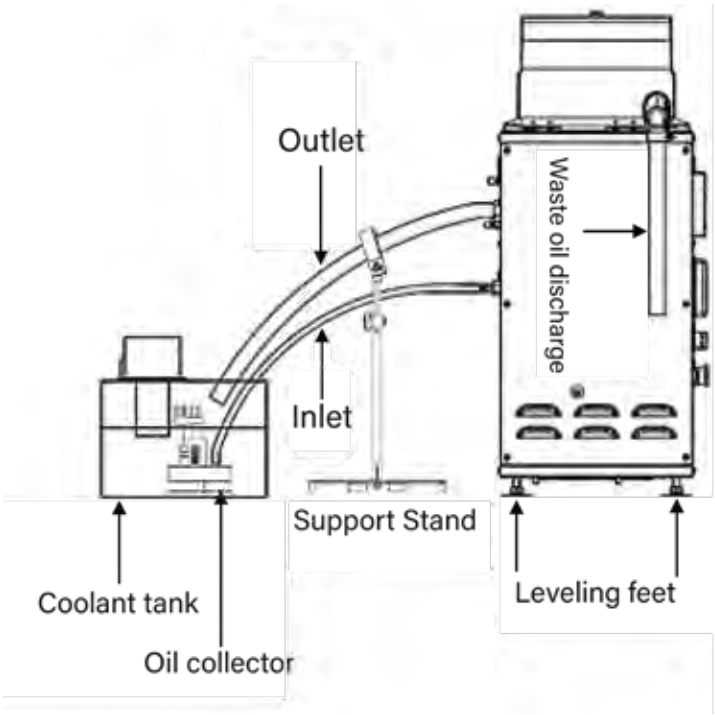
Control Panel Board

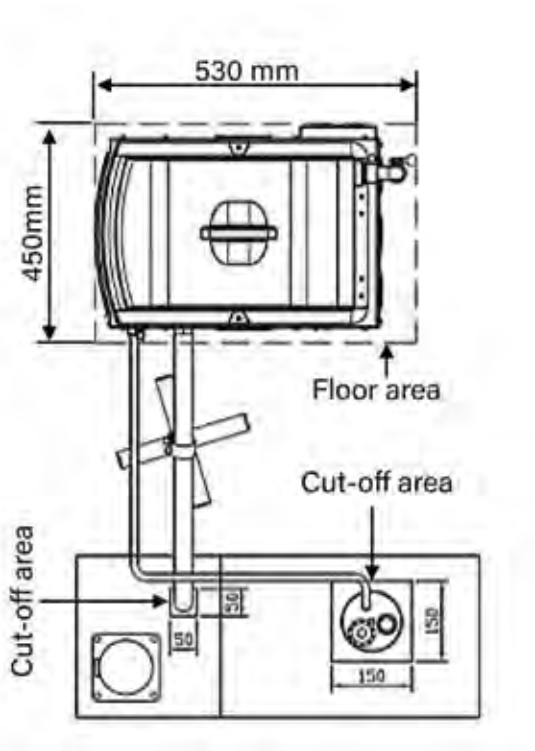


Electronic Control Unit

1. Fuse
2. Level Switch
3. Power Supply
4. (Blue) Ozone pump
5. (Black)small motor
6. (Red) Ozone Generator
7. (Yellow) pH value
8. (White) Three-point Combination
9. Fan Area “a”
10. Fan Area “b”

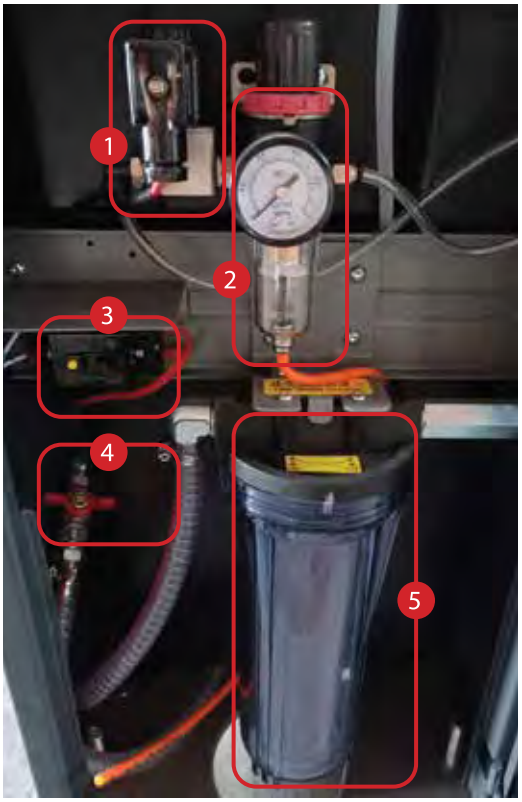
Diagram of Installation



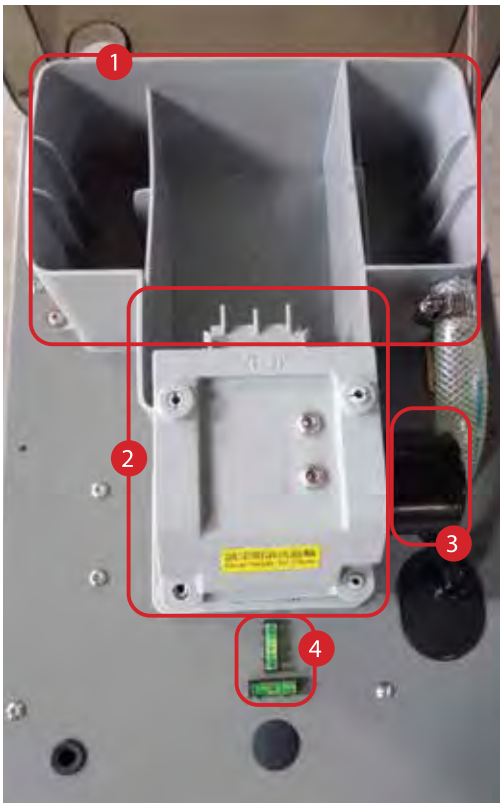


Machine Features

1. Control panel
2. PH value device
3. Power oulet
4. Emergency switch
5. Leveling feet



1. Solenoid value set
2. Three-point combination
3. Leakage circuit breaker
4. Drain valve for inner reserve tank
5. Filter Set

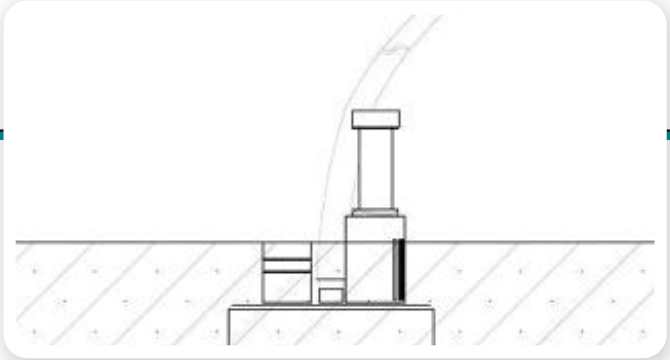


1. Oil removal device
2. Oil skimmer unit
3. Motor
4. Bubble level

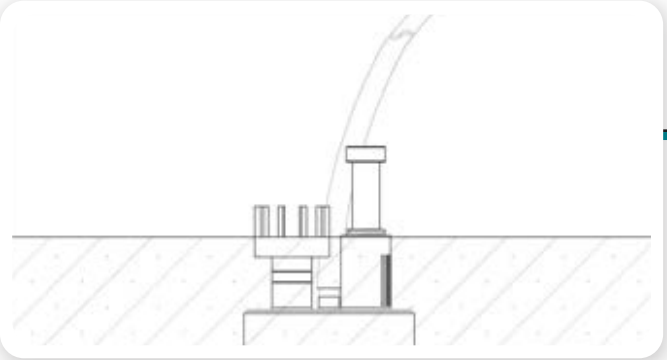
INSTALLATION AND SETUP

(1) Remarks:

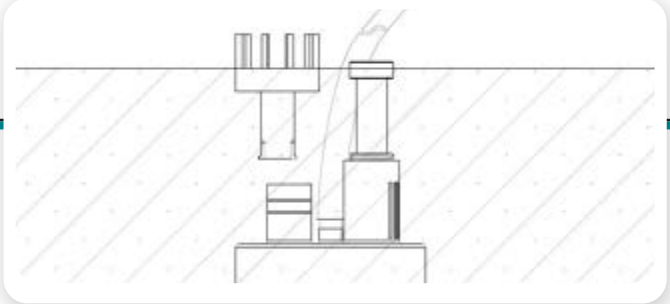
LOWEST WATER LEVEL FOR COOLANT DRAWING:



01 When drawing coolant without using the buoy, the water level should be between 60mm - 75mm high.



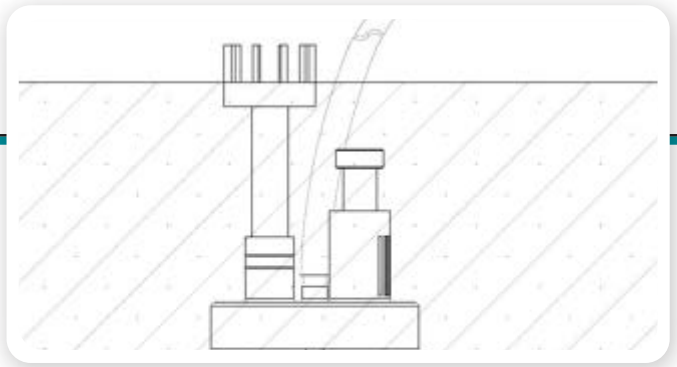
02 When drawing coolant with a short buoy, the water level should be between 75mm - 100mm.



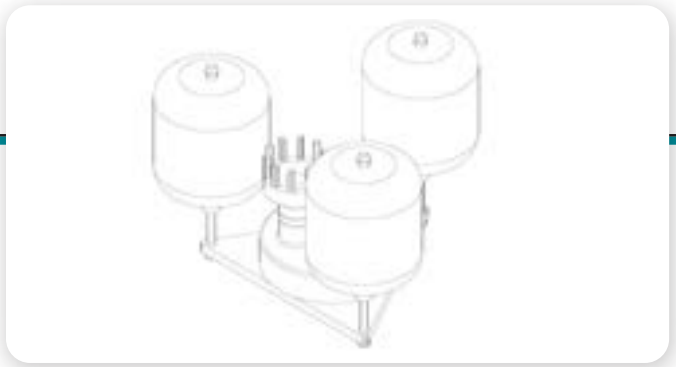
03 When drawing coolant by using a medium buoy, the water level should be between 100mm - 160mm.

INCORRECT WATER LEVEL:

The buoy is parted from the oil collector and will cause suction failure.



Please install the elevated seat when water level of the coolant tank is higher than 175mm. The water level must be between 175mm - 210mm.



Please install the floating foundation when water level of the coolant tank is higher than 240mm. If required of cutting, please inform the dimensions of the area needed to be cut off.

(2) Fluids Collectors: Standard, Riser, and Floating type

STANDARD TYPE

RISER TYPE

FLOATING TYPE (OPTIONAL)

FLOATING TYPE MUST WITH SHORT BUOY

THE FLOATING TYPE NEEDS TO BE ASSEMBLED WITH THE OIL COLLECTOR

(3) Accessories

Item	Quantity
Fuse	1
1-1 / 2" hose clamp	2
3/4" hose clamp	2
Filter O-ring	1
L type elbow with O-ring	1
Handle for filter set	1
Stainless filter	1
Cleaning brush	1
Elevated oil collector	1
Buoys	2 (medium + short)
Power cord	1
1/2" inlet hose	1
1" outlet hose	1
1" waste oil discharge hose	1
User Manual	1

(4) Installation Steps

4.1

4.1 LEVEL ADJUSTMENT

Position the Purifier Plus unit next to the coolant tank and shorten the distance between the two as much as possible by facing the side of the inlet/outlet to the coolant tank. Make sure the hoses are not bent and of over-length.

02

4.2 LEVEL ADJUSTMENT

Adjust the leveling feet in order for the tramp oil to be skimmed more efficiently. Please follow the next steps.

4.3

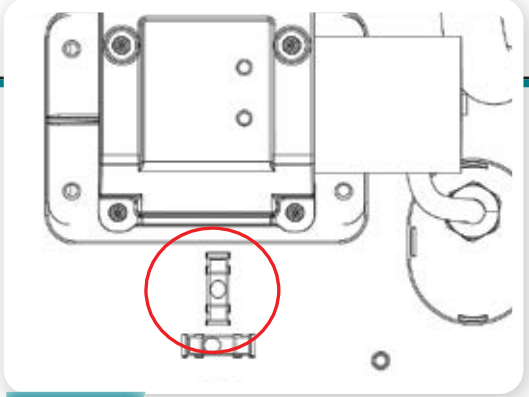
4.3 LEVEL ADJUSTMENT

Adjust the two leveling feet on the right side (the side with the inlet/outlet) to raise for about 5 cm.

4.4

4.4 LEVEL ADJUSTMENT

Elevate the two leveling feet on the left side (the side with the control panel) and make them higher than the right side.



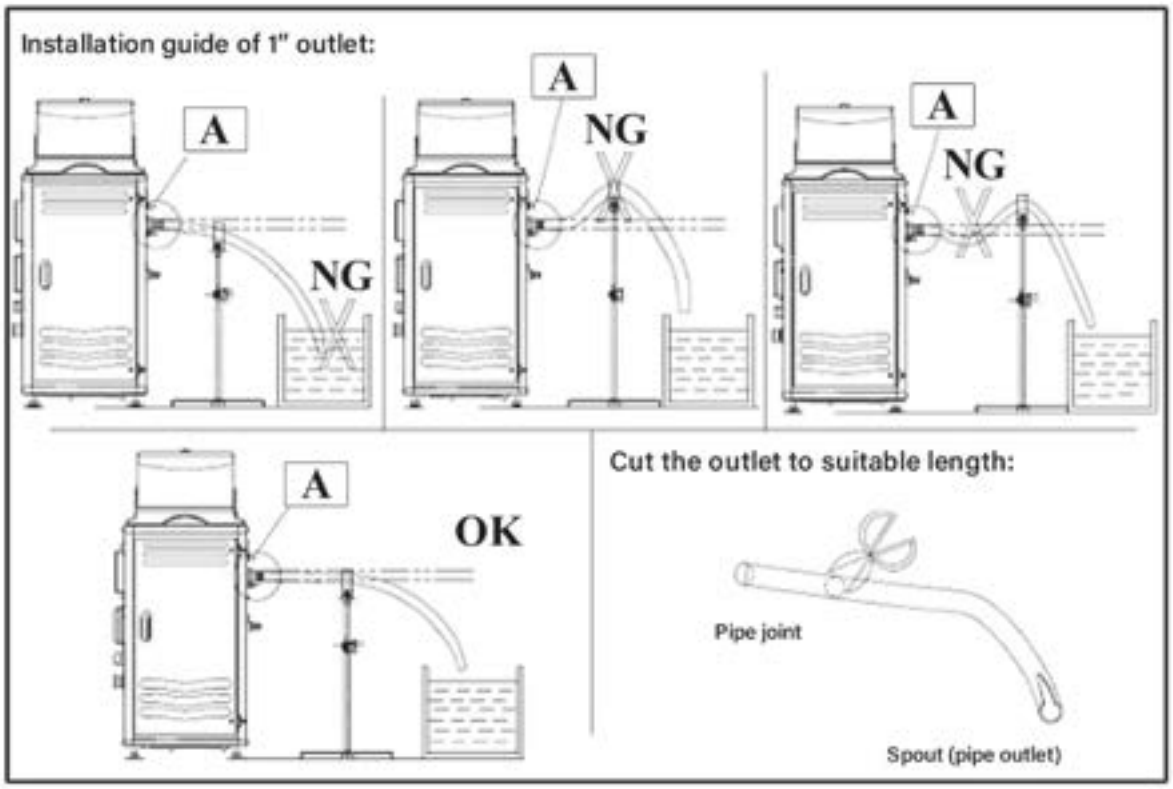
4.5

4.5 LEVEL ADJUSTMENT

After the adjustment of the previous two steps, the bubble level should be as shown in this figure. As the thickness of oil is around 2mm above water surface, it will result in higher separation efficiency with one side higher (left side).

(5) Pipeline Installation & Machine Settings

5.1 DIAGRAM OF PIPELINE INSTALLATION



5.2 PIPELINE INSTALLATION & MACHINE SETTINGS

01

Obtain all parts from the accessory kit.

02

Obtain the 1" outlet and a 1-1 / 2" hose clamp. Install and tighten it to the outlet connector.

03

Use a support stand to support the outlet and keep it high in order for the recycled coolant to flow smoothly back to the coolant tank. Do not insert it deep into the coolant.

04

Obtain the 1/2" inlet and a 3/4" hose clamp. Install and tighten it to the inlet (suction) connector.

05

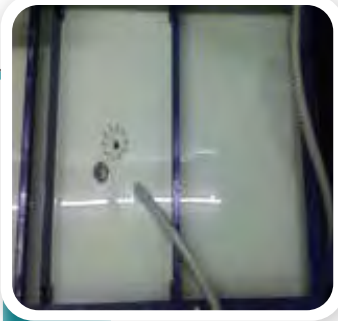
Connect the other end of the inlet to the oil collector. Tighten it with a 3/4" hose clamp.

06

Twist to adjust the elevated seat of the oil collector to suitable height.

07

Place it into the coolant tank.



08

The buoy should stay and be visible on the coolant surface.

09

Connect the air hose to the air input connector.

10

Place the O-ring into the L elbow.

11

Connect the L elbow to the waste oil discharge outlet and twist it at a 90-degree angle.

12

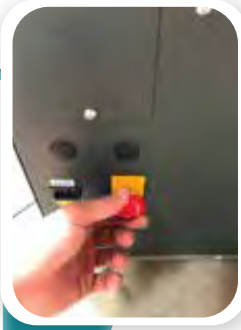
Tighten it with a 1-1 / 2" hose clamp.

13

Place a barrel of 5 gallons to collect the waste oil being discharged during purification.

14

Confirm the voltage is correct and connect the power.



15

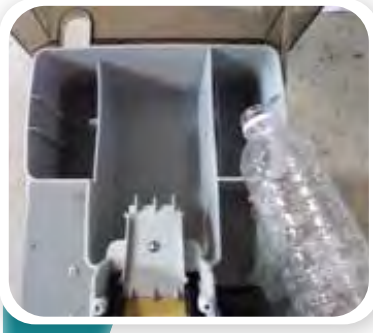
Turn on by twisting the emergency switch clockwise and press the power button on the control panel.

16

The settings of the control panel are completed before delivery. For more details, please refer to section (8) control - panel settings.

17

Adjust the speed of the suction by twisting the first knob on the right side. A moderate state is suggested. If the speed's too high, it will not allow sufficient time for the oil-water separation process.



18

Pour clean water into the right section of the oil removal device and ensure the water level to align with the left partition.

19

The reserve tank of Purifier Plus is 30L and has to be nearly full to quickly start up the purification process. Fill up the reserve tank with coolant by sucking with the inlet hose.

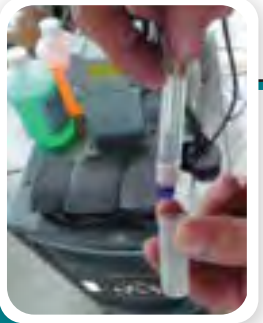
20

Complete all settings listed above, and now you can begin the operation to immediately solve these waste oil issues.

(6) Instructions of pH Value Device

01

Take out the sensor rod



02

Take off the protective cover

03

Open the black lid that's connected to the motor and insert the sensor.

04

Make sure the sensor is inserted to the bottom.

(7) Before Moving the Part

01

Detach the inlet hose from the oil collector.

02

Place the inlet hose into the oil removal device. Suck to remove all the fluid to prevent it from leaking and damaging to the machine.

03

Switch on the drain valve to discharge all the fluid from the inner reserve tank of Purifier Plus

04

Unplug the power cord. Disconnect all the pipelines sequentially.

05

After relocating the Purifier Plus, please follow steps (4) Installation steps and (5) Pipeline Installation & Machine Settings again to complete re-installation.

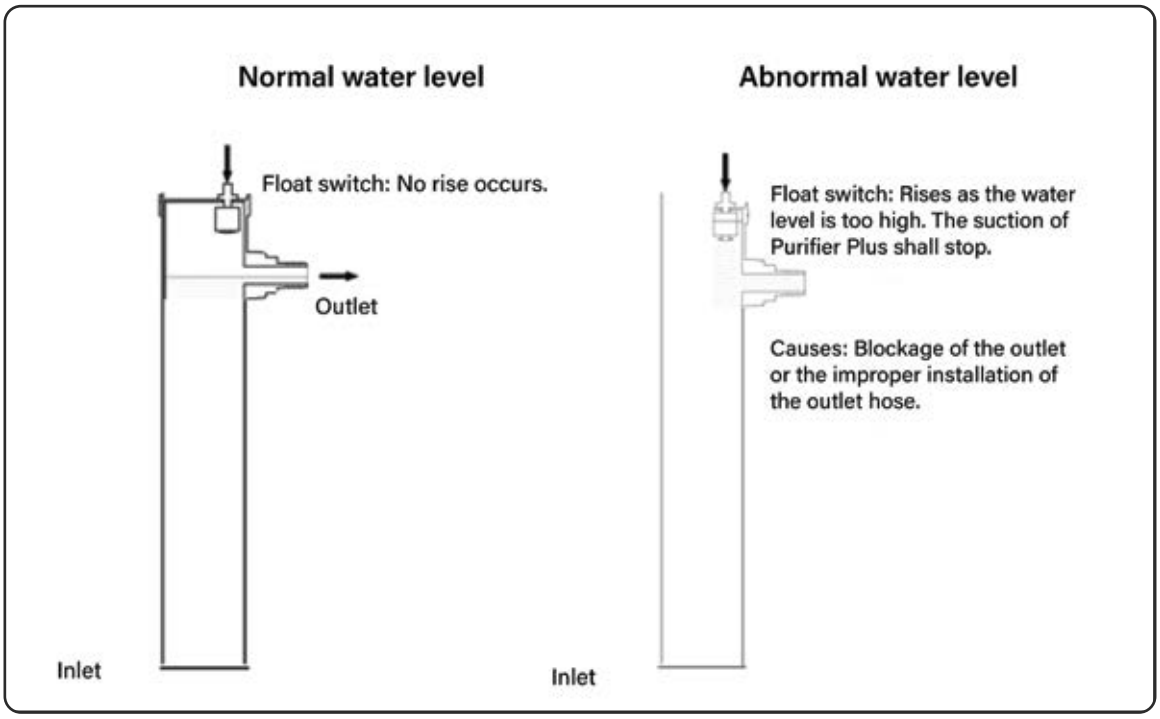
(8) Control Panel Setting

Functions from left to right:

Power On/Off: Press and hold for 3 seconds to turn on/off the power.
The section of Pumping: (24 hour automatic cycling)
Pumping duration: The recommended setting is 10 minutes. Each press equals an addition of 5 minutes.
Resting time: The recommended setting is 20 minutes. Each press equals an addition of 10 minutes.
The section of Oil Skimming: (24 hour automatic cycling)
Skimming duration: The recommended setting is 25 minutes. Each press equals an addition of 5 minutes.
Resting time: The recommended setting is 5 minutes. Each press equals an addition of 5 minutes.
The section of O3: (Ozone sterilization in 24 hour automatic cycling)
Ozone working duration: The recommended setting is 3 hours a day. Each press equals an addition of 1 hour.
The button **"O3"** will flash and beep when the ozone device is abnormal.
The section of **pH value**: (Optional Device)
Press the pH switch to turn on the pH value.
The AB switch: Applicable when Purifier Plus is installed dually.
Please disregard this function as it's still in trial test.

The section of **Pumping** will flash and beep when the water level of the inner reserve tank is too high. Check to make sure the outlet hose is correctly installed as referring to (5.1) Diagram of Pipeline Installation on page 12. The hose should not be bent or positioned highly.

(9) Reserve Tank Error Diagnosis



The maintenance and replacement of Purifier Plus [Level 1 ~ 5]

Level 1 [Daily Maintenance]
(1) Filter: Regularly clean the filter. Please refer to (1) filter maintenance.
(2) Oil collector: Check to see if it's working properly.
(3) Buoy: Check to see if it's at the correct water level.

Level 2 [Weekly Maintenance]
(1) Scraper: The part which scrapes off the tramp oil from the belt. Clean it regularly to avoid dirt accumulation.
(2) Oil collector: Please refer to (3) Oil collector

Level 3 [Monthly Maintenance]
(1) Oil removal device: Please refer to (2) The belt of the oil removal device
(2) Pipeline: Check whether there is clogging in the pipeline.
(3) pH value: Check the sensor regularly. Simply clean with a towel.

Level 4 [Seasonal Maintenance]
Oil removal device: Please refer to (5) Oil removal device

Level 5 [Annual maintenance]
Reserve tank Please refer to (6) Reserve tank

MAINTENANCE AND REPLACEMENT

(1) Filter

01

Take out the stainless filter and clean it with either water or an air gun.

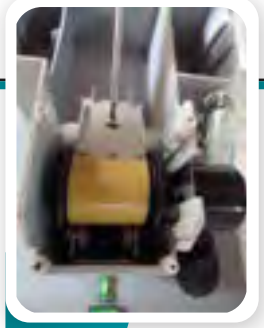
02

While replacing, ensure that the black O-ring is correctly placed.

(2) Belt of the Oil Removal Device

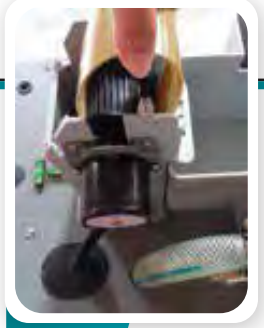
01

Take off the upper cover.



02

Loosen the screw on the scraper and remove it.

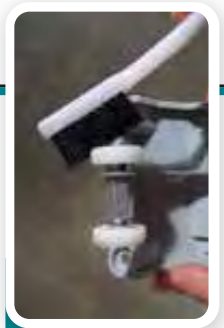


03

Lightly pull the belt and take it off.

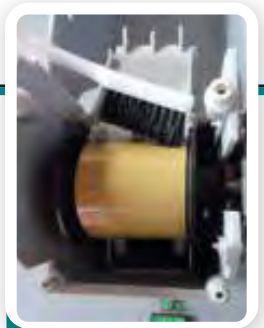
04

Tilt it in 70 degrees to make it easier to be removed.



05

Use a brush to clean rollers of the upper cover.



06

Use a brush to clean the impurities on the scraper and the belt.

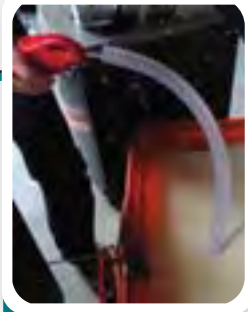
(3) Oil Collector

01

Take the oil collector out from the coolant tank.

02

Remove the buoy.



03

When clogging occurs, use an air gun, and insert it into the inlet hose to blow and remove the impurities.

(4) Buoy

01

Simply clean the buoy with a brush.

(5) Oil Removal Equipment

01

Detach the inlet hose from the oil collector

02

Use the inlet hose to suck and remove all the fluid, dirt and oil from the oil removal device.

03

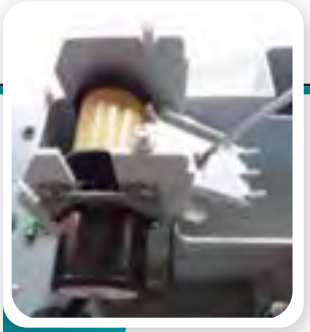
When cleaning is done, pour clean water into the right section of the oil removal device.

(6) Reserve Tank

01

Switch the drain valve on to discharge all the fluid from the inner reserve tank of Purifier Plus.

(7) Oil Skimmer Motor



01

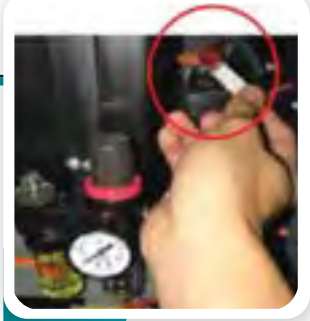
Uninstall scraper.

02

Unscrew the part that connects the motor and the belt roller.

03

Remove the four screws at each corner.



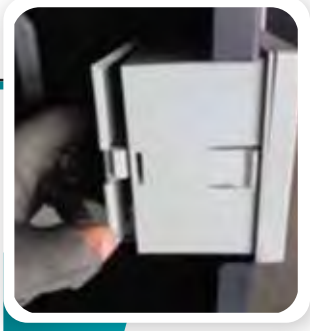
04

Disconnect the white plug to replace the motor.

(8) Control Panel

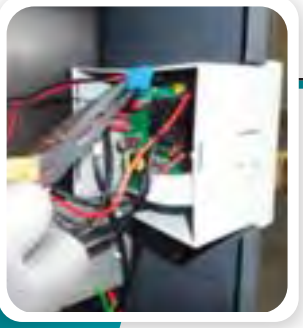
01

Unscrew to remove the back cover of the Purifier Plus unit.



02

Dismantle and open up the back cover of the control panel device.

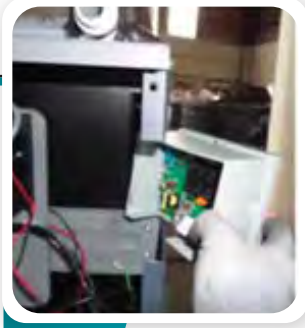


03

Unplug each circuit connector.

04

Take off the entire control panel box



05

Reinstall it when maintenance and repair are done

06

Refer to page 4 and reconnect all the circuit connectors.

07

Replace the back cover of the control panel

08

Make sure all sides are well fitted when putting the rear cover back

TROUBLESHOOTING

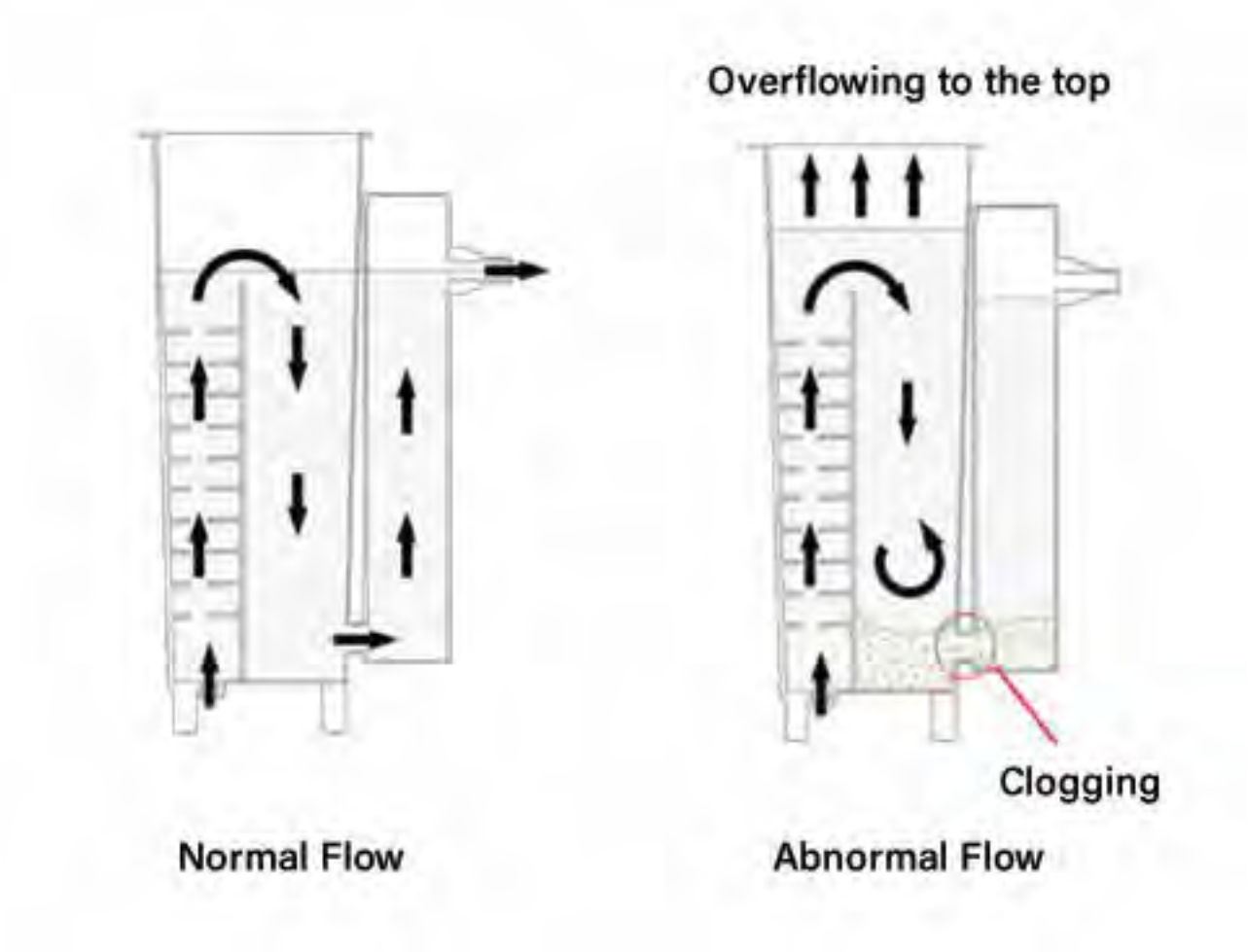
Overflowing / Shining Screen / Beeping Alarm

1. The 1" inch outlet hose blockage or abnormal outgoing flow pressure.

- Check to see if the hose is blocked by particulates or crooked.
- Ensure the proper installation of the pipelines according to (5-1) Diagram.
- The hose should not be installed higher than the outlet connector.
- The other end should be placed right at or above the water level.
- Do not insert it deeply into the coolant tank so it does not cause pressure problems.

2. Clogging in the inner tank of unit Purifier Plus caused by impurity accumulation.

- The inner reservoir of Purifier Plus shown as below



Cleanup Steps

01

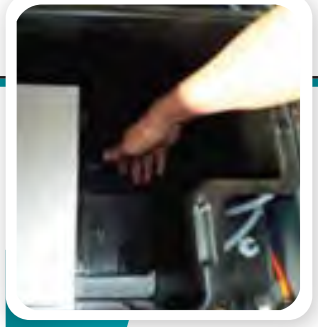
Remove the three screws (as circled in the photo) on both sides.

02

Unplug the motor.

03

Lift to remove the upper cover



04

Clean up the impurities at the bottom of the reservoir

05

Use as lotted screwdriver to lift and remove the upper cover of the secondary reservoir.

06

Check and make sure it cleaned as well

Power-On Failure

- Check the Power Supply: Make sure the power supply is working and the voltage is correct.
- Inspect the Leakage Circuit Breaker: Look at the leakage circuit breaker. If there's been any overflow, moisture might have caused problems. Dry it with an air gun and try restarting. If that doesn't work, replace the circuit breaker.
- Verify the Emergency Switch: Ensure the emergency switch is turned off.
- Examine the Circuit Board: Take out the circuit board behind the control panel. Check if the fuses and breakers are working. Replace any that are burned out with new ones.

Suction Problems

1. The filter set is not installed tightly. (Airtight or in vacuum)

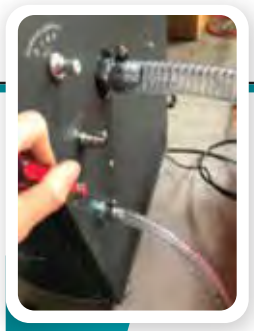
- Clean up the filter mesh with an air gun or rinse it with water.
- Make sure the O-ring is correctly positioned and tight.
- Confirm that there is no clogging in the pipeline or in the oil collector.

2. Air Pump Failure

- Restart the power repeatedly or turn the sucking adjustment knob to the highest.
- Find the switch in the round hole on the rear cover and press it. (as shown in the picture below)
- Please contact Master Fluid Solutions for support.

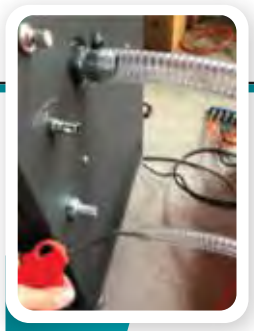
3. Pipeline Blockage

- Uninstall the pipeline.
- Use an air gun to blow clean the impurities blocking in the pipeline or follow the below steps.



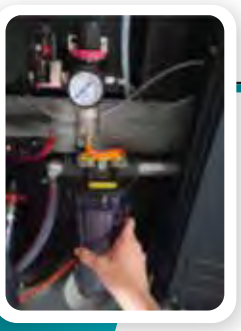
A

Uninstall the pipeline.



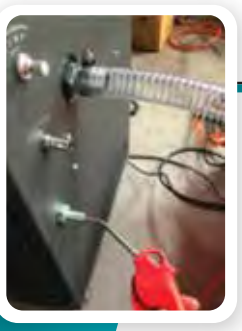
B

Insert the air gun into the pipeline to blow and clean.



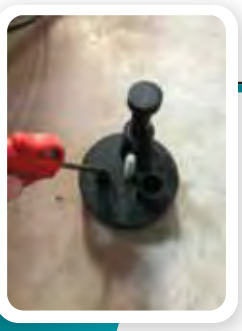
C

Uninstall the filter.



D

Insert the air gun to clean the inlet.



E

Clean the oil collector with the air gun.

Waste Oil Discharge Issue

1. Skimmer Failure

- Check the motor, if it is out of order, please replace it.

2. Incorrect Leveling

- The fluid being filtered contains high percentage of tramp oil, adjust the left leveling feet of the Purifier Plus unit and make it lower.

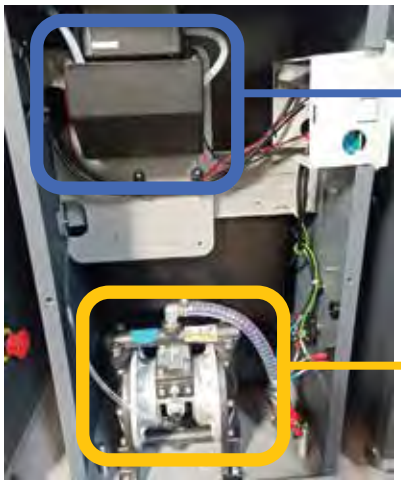
3. Discharge Portal Clogging

- Take the inlet hose and suck to clean all the fluid from the grey removal unit (container).
- Clean the discharge outgoing portal with a brush.

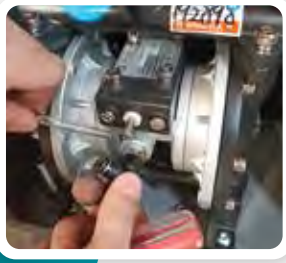
Pipeline Leak

The pipeline's damaged or worn-out. The hose clamps are loosened.
Replace the hoses or re-install the hose clamps.

Pump Maintenance and Replacement



1 Loosen the screw and disconnect the outlet hose (Top) from the pump



2 Discon-nect the air hose

3 Remove all the screws fixed at the bottom

4 Loosen the screw and disconnect the inlet hose (bottom) from the pump

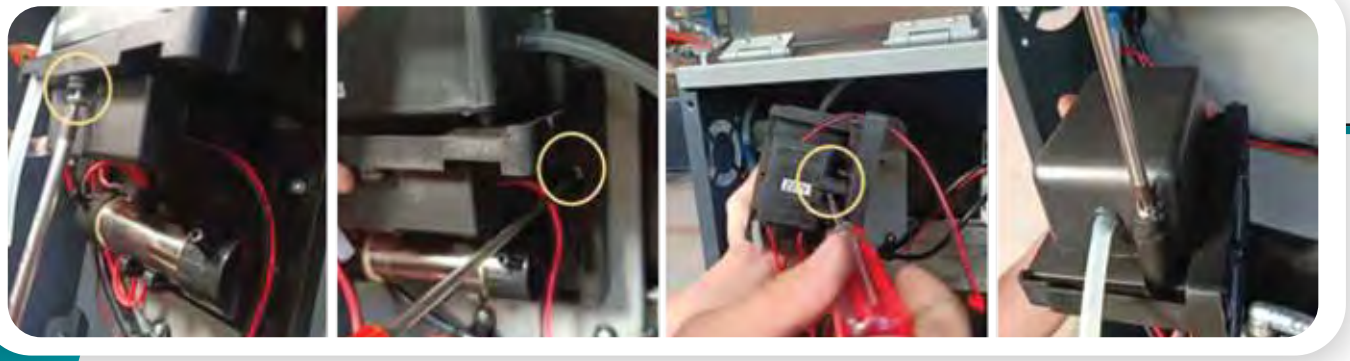
5 Replace the pneumatic pump

Ozone Generator

1 Open to remove the cover

2 Disconnect the hoses on both sides

3 Unplug (Red) from the electronic control unit and turn the power off



4 Loosen the screws

5 Unplug (Blue) from the electronic control unit and replace the entire ozone device.

MANUFACTURER'S WARRANTY CARD

Product name: Purifier Plus

Model: Purifier Plus

Serial No.: _____

Quantity: _____ Set

Warranty period: _____ year _____ month _____ date

- **Manufacturer's guarantees:**
  For units purchased from the official dealers of XYBEX that are naturally found with defects or with replacement requirements, will be able to apply for the free parts delivery and are requested for approval from either the dealers or the head branch of XYBEX.

- **Warranty period:**
  12 months warranty starting from the date of receipt.

- **Warranty coverage:**
  For newly purchased units that are within the warranty period will be provided with services of maintenance or replacement once approved and confirmed to be naturally defected or damaged.

User Info

Company name: _____

Applicant: _____

Phone: _____

Fax: _____

Address: _____

Machine Serial No.: _____

Date: _____

Master Fluid SOLUTIONS™

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Issue date: 2024-10-18