

OPERATORS MANUAL FOR
WOS-SERIES
OIL/WATER/SOLIDS SEPARATOR



CAUTION

RISK OF INJURY!


READ MANUAL BEFORE OPERATING!

This manual is an important part of the Oil/Water/Solids Separator and must remain with the unit when you sell it!


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WARNING

 **WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

WARNING

 **WARNING:** This product can expose you to chemicals including carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

INTRODUCTION

Congratulations on the purchase of your new Oil/Water/Solids Separator! You can be assured your Oil/Water/Solids Separator was constructed and designed with quality and performance in mind. Each component has been rigorously tested to ensure the highest level of acceptance.

This operator's manual was compiled for your benefit. By reading and following the simple safety, installation, operation, maintenance and troubleshooting steps described in this manual, you will receive years of trouble free operation from your new Oil/Water/Solids Separator. The contents of this manual are based on the latest product information available at the time of publication. The manufacturer reserves the right to make changes in price, color, materials, equipment, specifications or models at any time without notice.

! IMPORTANT !

These paragraphs are surrounded by a "SAFETY ALERT BOX". This box is used to designate and emphasize Safety Warnings that must be followed when operating this oil/water/solids separator. Accompanying the Safety Warnings are "signal words" which designate the degree or level of hazard seriousness. The "signal words" used in this manual are as follows:

DANGER: Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

WARNING: Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

CAUTION: Indicates a potentially hazardous situation which, if not avoided MAY result in minor or moderate injury.



The symbol set to the left of this paragraph is a "Safety Alert Symbol". This symbol is used to call attention to items or procedures that could be dangerous to you or other persons using this equipment.

ALWAYS PROVIDE A COPY OF THIS MANUAL TO ANYONE USING THIS EQUIPMENT. READ ALL INSTRUCTIONS BEFORE OPERATING THIS OIL/WATER/SOLIDS SEPARATOR AND ESPECIALLY POINT OUT THE "SAFETY WARNINGS" TO PREVENT THE POSSIBILITY OF PERSONAL INJURY TO THE OPERATOR.

Once the unit has been uncrated, immediately write in the serial number of your unit in the space provided below.

SERIAL NUMBER _____

Inspect for signs of obvious or concealed freight damage. If damage does exist, file a claim with the transportation company immediately. Be sure that all damaged parts are replaced and that the mechanical and electrical problems are corrected prior to operation of the unit. If you require service, contact your customer service representative.

Please have the following information available for all service calls:

1. Model Number
2. Serial Number
3. Date and Place of Purchase

CONTENTS OF WOS-SERIES OIL/WATER/SOLIDS SEPARATOR

Carefully unpack your new WOS-Series Oil/water/solids separator. Check the contents against the packing list. Contact the freight line if a damage claim is required on any component. The following items are the basic equipment sent with your WOS-Series Oil/water/solids separator.

1. Sump Pump
2. Unattached Float with Piggy Back Plug for Sump Pit
3. Oil/Water/Solids Separator Platform
 - a. Ozone Generator
 - b. Oil/Water/Solids Separator
4. Manual

SPECIFICATIONS

MODEL	WOS-15	WOS-30
MAXIMUM FLOW	15 GPM	30 GPM
ELECTRICAL	115 V 1 Phase 15 Amps	115 V 1 Phase 15 Amps
SUMP PUMP	1/2 HP	1/2 HP
OIL/WATER/SOLID SEPARATOR CAPACITY	170 Gallons	340 Gallons
OIL COALESCING GRID	672 Square Feet	1152 Square Feet
DIMENSIONS L x W x H	91" x 31" x 40"	97" x 50" x 44"
NET WEIGHT	500 lbs.	650 lbs.

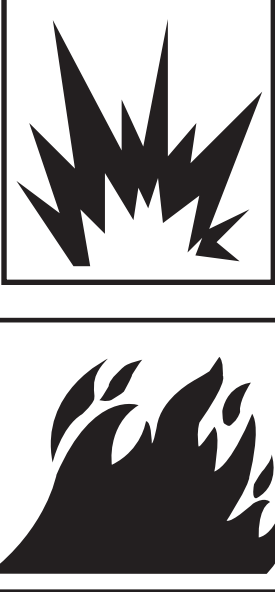



IMPORTANT SAFETY WARNINGS

WARNING: When using this product, basic precautions should always be observed, including the following:
READ ALL SAFETY WARNINGS BEFORE USING OIL/WATER/SOLIDS SEPARATOR

HAZARD	POTENTIAL CONSEQUENCE	PREVENTION
<p style="text-align: center;">RISK OF ELECTRIC SHOCK OR ELECTROCUTION</p> <div style="text-align: center;">  </div>	<p>Serious injury or death could occur if the oil/water/solids separator is not properly grounded. Your oil/water/solids separator is powered by electricity and may cause electric shock or electrocution if not installed properly.</p> <p>Electrical shock may occur if oil/water/solids separator is not operated properly.</p> <p>Serious injury or death may occur if electrical repairs are attempted by unqualified persons.</p>	<p>Installation of this unit, including all electrical connections, must comply with all local, state and national codes.</p> <p>This product must be grounded. Connect to a GFCI circuit breaker when available. If the unit should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. Do not ground to a gas supply line.</p> <p>Improper connection of the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the system is properly grounded.</p> <p>Always be certain the unit is receiving proper voltage (+/- 5% of the voltage listed on the nameplate). Before installing electrical connections, be certain the power switches are in the "OFF" position.</p> <p>Keep all connections dry and off the ground.</p> <p>Do not touch pump, pump motor, discharge piping or water when the unit is connected to the power supply; regardless of whether the unit is operating correctly or experiencing an operation failure.</p> <p>DO NOT allow metal components of the oil/water/solids separator to come in contact with live electrical components.</p> <p>Never operate the oil/water/solids separator with safety guards/covers removed or damaged. Ensure all electrical covers are securely in place when unit is operating.</p> <p>Any electrical wiring or repairs performed on this oil/water/solids separator should be done by Authorized Service Personnel in accordance with National and Local electrical codes.</p> <p>Before opening any electrical enclosure, always shut off the oil/water/solids separator and drain the water. Disconnect the oil/water/solids separator from the power source. If the power disconnect is not in sight, lock it in the open position and tag it to prevent power usage. (Never assume the oil/water/solids separator is safe to work on just because it is not operating, it could restart at any time! Always disconnect from the power source.) Allow the oil/water/solids separator to cool down. Service in a clean, dry, flat area.</p>


IMPORTANT SAFETY WARNINGS

READ ALL SAFETY WARNINGS BEFORE USING OIL/WATER/SOLIDS SEPARATOR

HAZARD	POTENTIAL CONSEQUENCE	PREVENTION
<p>RISK OF EXPLOSION OR FIRE</p> 	<p>Serious injury or death could occur from an explosion or fire caused by a system electric spark.</p>	<p>This unit must be placed in an area that is well ventilated, free of flammable vapors, combustible dust, gases or other combustible materials.</p>
<p>RISK OF BURSTING</p> 	<p>Serious injury or death could occur from bursting caused by excessive pressure in the system.</p> <p>Serious injury may occur if attempting to start the oil/water/solids separator when the pump is frozen.</p>	<p>Do not use this oil/water/solids separator to pump flammable material! An explosion could occur from a gas vapor buildup inside the system.</p> <p>In freezing temperatures, the unit must always be warm enough to ensure there is no ice formation in the pump. Do not start the oil/water/solids separator if it has been in a freezing environment without first allowing the pump to thaw.</p>
<p>RISK OF BURNS</p> 	<p>Serious injury may occur from touching the electrical motor. This area can remain hot for some time after the oil/water/solids separator is shutdown.</p>	<p>Never allow any part of your body to contact the electrical motor until cooled.</p>
<p>RISK FROM MOVING PARTS</p> 	<p>Serious injury may occur to the operator from moving parts on the oil/water/solids separator.</p>	<p>Do not operate the unit without all protective covers in place.</p> <p>Follow the maintenance instructions specified in the manual.</p>

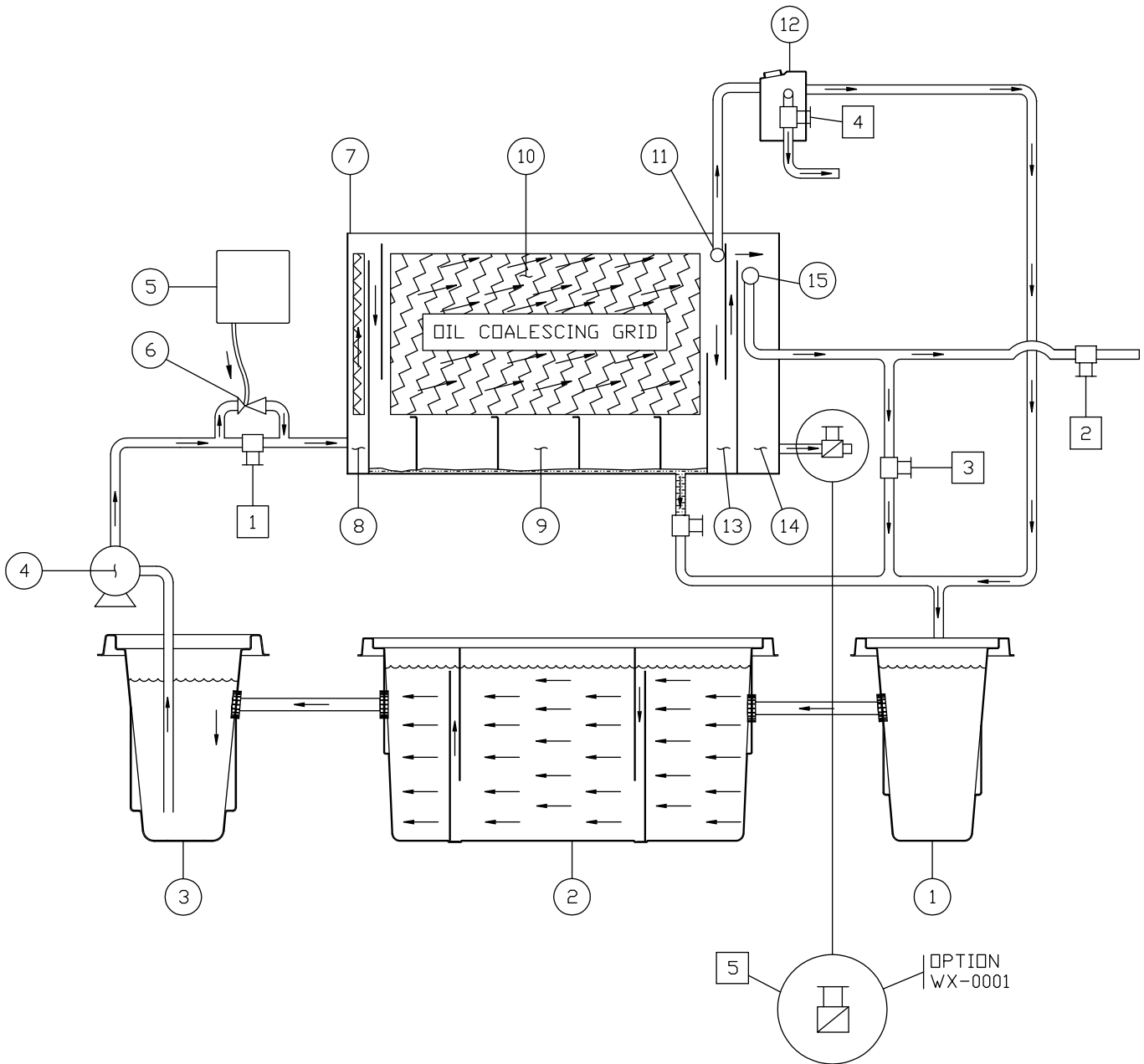
IMPORTANT SAFETY WARNINGS

READ ALL SAFETY WARNINGS BEFORE USING OIL/WATER/SOLIDS SEPARATOR

HAZARD	POTENTIAL CONSEQUENCE	PREVENTION
<p data-bbox="196 243 516 268">RISK OF BODILY INJURY</p> 	<p data-bbox="561 243 906 302">Injury may occur from the oil/water/solids separator.</p>	<p data-bbox="1008 243 1511 365">DO NOT DRINK THE WATER IN THE OIL/WATER/SOLIDS SEPARATOR!! This is non-potable water and is not suitable for consumption.</p> <p data-bbox="1008 386 1511 415">DO NOT allow children to operate this unit.</p> <p data-bbox="1008 426 1544 476">DO NOT overreach or stand on unstable support.</p> <p data-bbox="1008 489 1544 564">Wet surfaces can be slippery, wear protective foot gear and keep good footing and balance at all times.</p> <p data-bbox="1008 577 1544 632">Know how to stop the oil/water/solids separator. Be thoroughly familiar with controls.</p> <p data-bbox="1008 648 1500 709">Before servicing, ALWAYS shut off the oil/water/solids separator.</p>

!SAVE THESE INSTRUCTIONS!

OIL WATER SEPARATOR SYSTEM FLOW CHART



WOS-0001-062105-ASY

OIL WATER SEPARATOR SYSTEM FLOW CHART

As pressure washers are being operated, used water flows into the **Wash Water Catch Pit (1)**. From there, it moves to the **3-Stage Collection Pit (2)**. Heavier debris will fall to the bottom of the tank where it is trapped by a weir which is designed to stop heavy debris, while still allowing the remaining water to move into the **Sump Pit (3)**. The **Sump Pump (4)** draws water from the **Sump Pit (3)** and brings it through the Water Inlet Flow Control Valve 1. This adjustable valve is used to regulate the amount of water flow entering the oil water separator system. The **Ozone Generator (5)** creates ozone which the **Ozone Injector (6)** will put into the water before it enters the **Oil/Water/Solid Separator (7)**.

1. Ozone is used to kill bacteria approximately 3,000 times faster than chlorine.
2. Ozone is generated by oxygen molecules passing through a corona discharge ozone generator. This is an electric charge which causes the oxygen atoms to become ozone molecules. Since ozone molecules are extremely unstable, they only retain their structure for a very short time. For this reason, ozone cannot be stored, but instead must be continually produced by the **Ozone Generator (5)**.

The **Oil/Water/Solid Separator (7)** is made up of several sections which are separated by weirs. The ozone and water enter the first section at the bottom of the **Ozone Contact Tank (8)** and move up through the vertical coalescing grids. These grids force the ozone molecules to continue mixing with the water molecules, enabling the ozone to kill the bacteria and contaminants in the water. An overflow drain is positioned near the top of the **Ozone Contact Tank (8)** to send excess water back to the **Sump Pit (3)**. This prevents water from moving too quickly over the 1st weir, under the 2nd weir and into the bottom of the **Separator Tank (9)** which is composed of a horizontal **Oil Coalescing Grid (10)**.

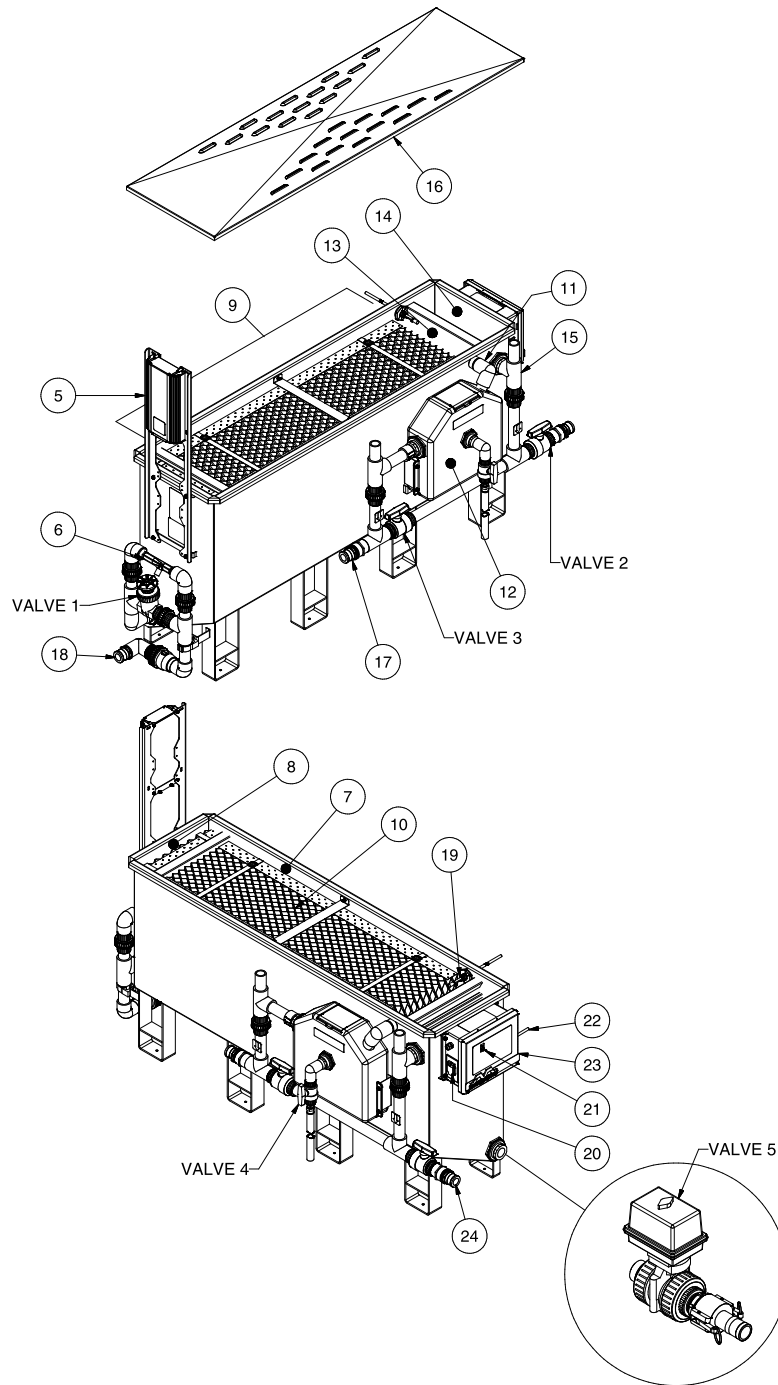
1. The oil molecules in the water adhere to the **Oil Coalescing Grid (10)**. When enough oil molecules attach to each other, the oil droplets float to the surface. The **Oil Skimmer (11)** is positioned near the top of the **Separator Tank (9)** which allows the thin layer of surface oil and water to drain into the **Waste Oil Decanter (12)**. Since oil is lighter than water, the oil floats to the top and is released from the **Waste Oil Decanter (12)** when the Oil Release Valve 4 is opened. Excess water is returned to the **Wash Water Catch Pit (1)**.
2. Heavier debris will fall to the bottom of the **Separator Tank (9)** where it is trapped by a 3rd weir. This weir is only half the height of the other weirs. It is constructed to stop the debris, while still allowing the oil-free, debris-free water to move over the 3rd weir.

The water then travels under the 4th weir and into the **Water Level Control Tank (13)**. This very small section has a 5th weir positioned to control the level of water in the previous **Separator Tank (9)** tank. The top of the 5th weir is as high as the water level in the **Separator Tank (9)** can get. The water moves over this final 5th weir and into the **Holding Tank (14)**. From there the water moves through the **Overflow Drain (15)** positioned at the top of the **Holding Tank (14)**. Excess water moves out of this drain and past one of two valves:

1. Pit Return Valve 3: When this valve is open and the Water Outlet Valve 2 is closed, water flows back to the pit for continual recycling.
2. Water Outlet Valve 2: When this valve is open and the Pit Return Valve 3 is closed, water flows through the Water Outlet Valve 2 to be used as desired.

WX-OPTION: The Pit Return Valve 3 must be opened and the Water Outlet Valve 2 must be closed for Auto-discharge.

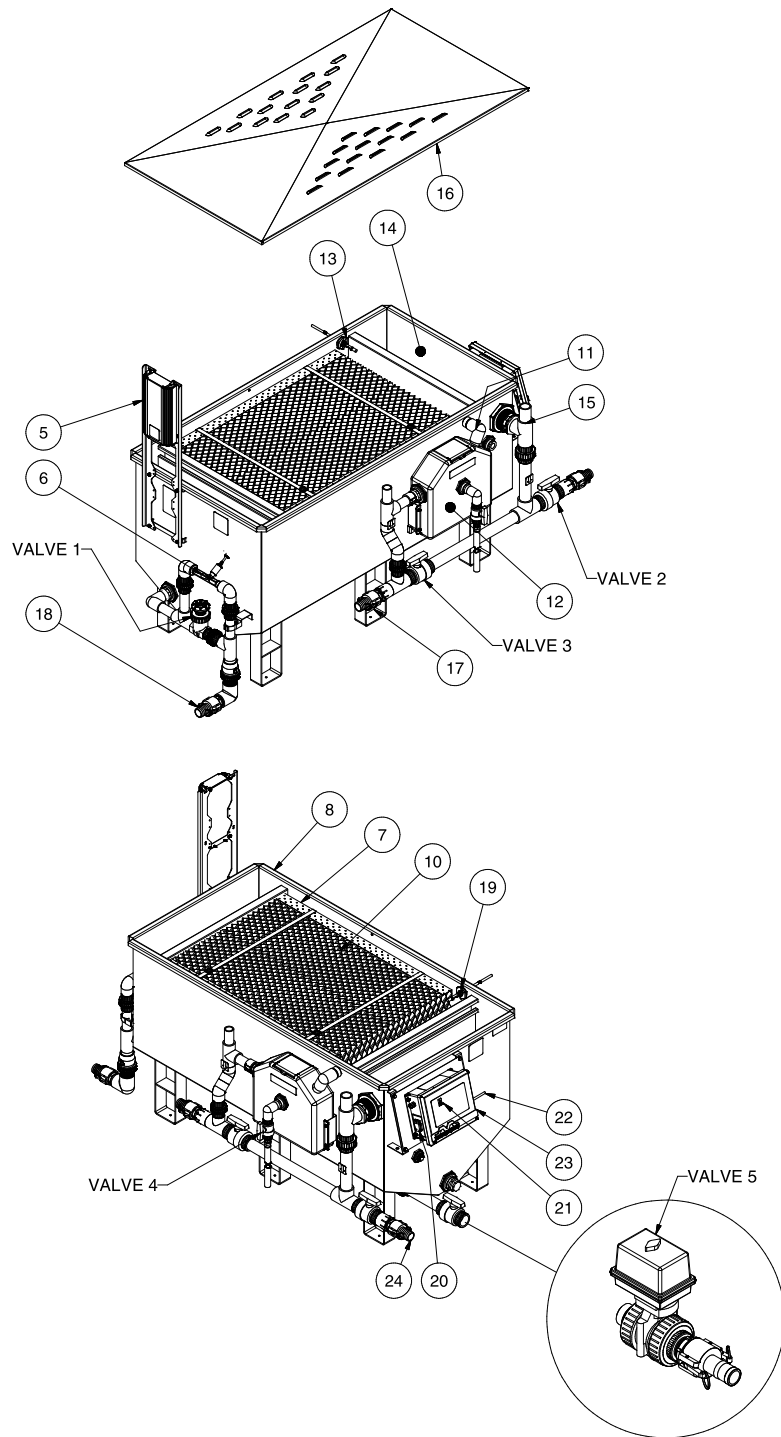
FEATURES VIEW WOS-15



FEATURES DESCRIPTION WOS-15 & WOS 30

- | | | | |
|-----|---|-----|------------------------------|
| 1. | Waste Water Catch Pit (shown on pg. 8) | 13. | Water Level Control Tank |
| 2. | 3-Stage Collection Pit (shown on pg. 8) | 14. | Holding Tank |
| 3. | Sump Pit (shown on pg. 8) | 15. | Overflow Drain |
| 4. | Sump Pump (shown on pg. 8) | 16. | Tank Lid |
| 5. | Ozone Generator | 17. | Outlet Return to Pit |
| 6. | Ozone Injector | 18. | Inlet from Sump Pump |
| 7. | Oil/Water/Solids Separator | 19. | Level Limit Switch |
| 8. | Ozone Contact Tank | 20. | Sump Pump Receptacle |
| 9. | Separator Tank | 21. | Power Supply Switch (On/Off) |
| 10. | Oil Coalescing Grid | 22. | Power Cord w/20 Amp Plug |
| 11. | Oil Skimmer | 23. | Control Panel |
| 12. | Waste Oil Decanter | 24. | Outlet to Discharge |

FEATURES VIEW WOS-30



VALVES WOS-15 & WOS 30

-Water Inlet Flow Control **Valve 1**

-Water Outlet **Valve 2**

-Pit Return **Valve 3**

-Oil Release **Valve 4**

-Actuated Ball **Valve 5**

INSTALLATION

ATTIRE:

1. Proper attire is essential to your safety. It is advised to utilize whatever means necessary to protect eyes, ears, and skin.

INSTALLATION:

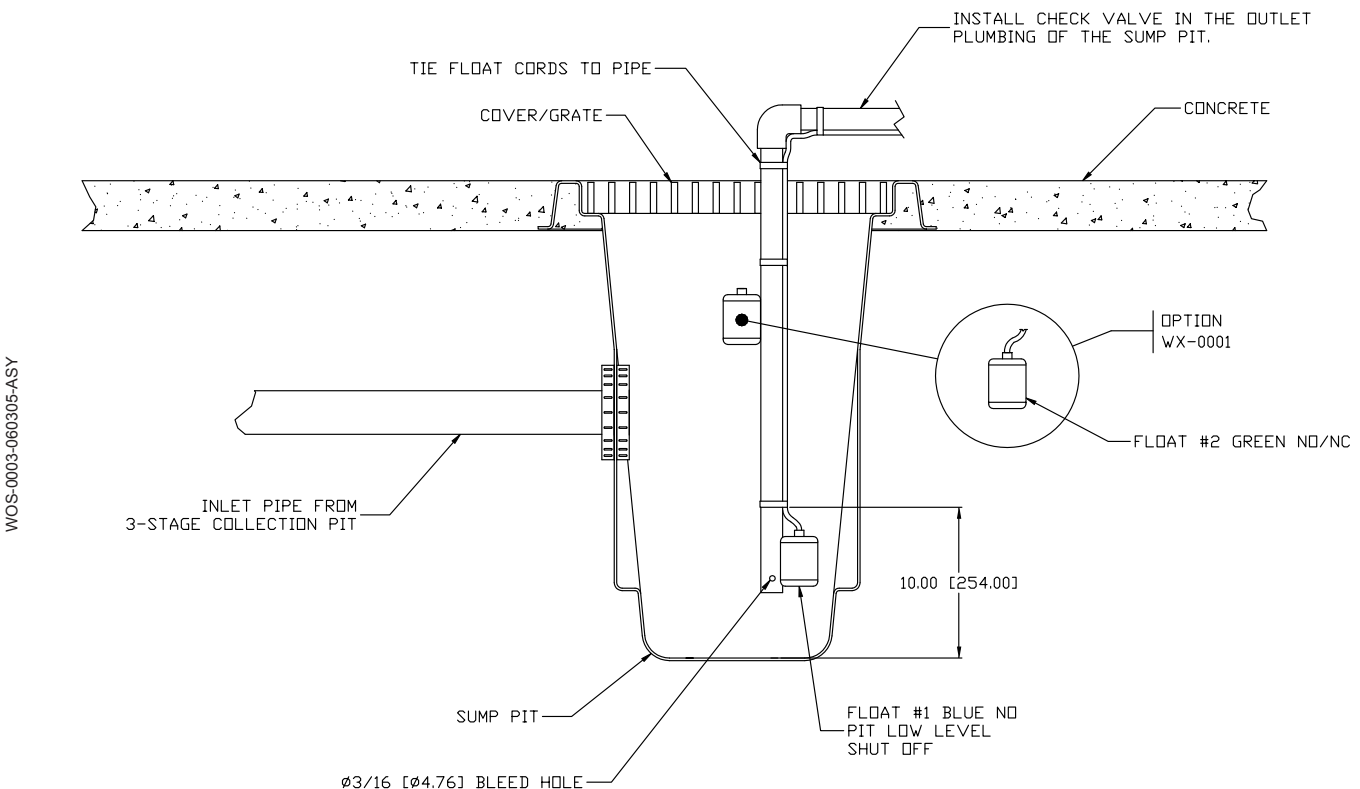
1. A Collection Pit System must already be an established structure before installing the WOS-Series oil water separator system. A well designed pit system is critical for the proper operation of the recycle system. Consult your dealer for installation requirements.
2. Place the oil water separator system platform on a hard, level surface in an area free of flammable vapors, combustible dust, gases or other combustible materials. Set the unit so you have access to the **Control Panel (23)**. Place a level on the **Oil/Water/Solids Separator (7)** to ensure it is level.
3. Do not place unit in an area:
 - with insufficient ventilation.
 - where environmental hazards (i.e. rain and snow) can come in contact with the oil water separator system.
 - in a freezing environment.
4. The oil water separator system may be shipped with union connections loosened to protect the unit from shipping damage. Tighten all union connections at this time.
5. Hook up the **Inlet From Sump Pump (18)** and **Outlet Return To Pit (17)** plumbing. The WOS-15 and WOS-30 is shipped with male cam and groove fittings pre-installed.
 - a. Install the **Sump Pump (4)** near the **Sump Pit (3)**.
 - b. Install plumbing from **Sump Pump (4)** using minimum connection sizes as listed:

WOS-15 & WOS-30
2"
 - c. Install a check valve near the outlet plumbing of the **Sump Pit (3)**.
 - d. Install the return plumbing using minimum connection sizes as listed:

WOS-15 & WOS-30
2"
6. Install the float in the **Sump Pit (3)**. Allow a 2" tether and enough room for them to move freely without interfering with the plumbing.
 - a. Float #1 Blue: Pit low level shut-off. Attach this float 10" above the **Sump Pump** inlet.

WX-OPTION: Float #2 Blue: Rain water overflow. Attach this float at the high level of the pit for high level control.

NOTE: The above information is for reference only. Professional installers or architects may use this guideline to meet specific site requirements.



STOP

TO ENSURE YOUR WATER RECYCLE TREATMENT SYSTEM OPERATES SAFELY AND EFFICIENTLY, COMPLETE THE PRE-OPERATION CHECKLIST BEFORE PROCEEDING.

PRE-OPERATION CHECKLIST

Before proceeding, answer all the questions on this checklist.	YES	NO
CODES:		
1. Does the electrical wiring meet all codes?		
2. Does plumbing meet all codes?		
LOCATION:		
1. Is the unit located on a hard level surface free of flammable vapors, combustible dust, gases or other combustible materials?		
2. Is the unit located in a large ventilated area?		
ELECTRICAL:		
1. Is the unit properly grounded?		
2. Does the power supply, voltage and amperage match the data plate?		
PLUMBING:		
1. Is the plumbing sized correctly?		
2. Is the check valve installed near the Sump Pump (4) ?		
3. Are all unions tightened?		
GENERAL:		
1. Have all operators using this unit read and understood this entire manual?		
2. Has the unit been installed by qualified service people who followed the instructions listed in this manual?		

IF "NO" WAS MARKED TO ANY OF THESE QUESTIONS, CORRECT THE SITUATION BEFORE OPERATING.

PREPARATION

PRE-START PROCEDURES:

1. Open the Pit Return Valve 3 and close the Water Outlet Valve 2 to allow water to flow back to the pit for continual recycling.
2. Be certain all hoses are securely connected.
3. Be certain the incoming air tube to the **Ozone Generator (5)** is not obstructed.

WX-OPTION: Be certain all switches on the **Control Panel (23)** are in the "OFF" position.

WARNING

RISK OF ELECTROCUTION! TO REDUCE THE RISK OF ELECTROCUTION, KEEP ALL CONNECTIONS DRY AND OFF THE GROUND.

4. Plug the pump plug into the piggyback plug and then into the grounded outlet on the **Control Panel (23)**.
5. Plug the power supply cord into a grounded outlet. Turn on the **Power Supply Switch (21)**.

START-UP:

1. Ensure the pit is filled with water.
2. Turn on the **Sump Pump Switch (22)**. Water will flow into the **Oil/Water/Solids Separator (7)**.
3. Turn on the switch located on the **Ozone Generator (5)**.
4. Flow can be increased by opening the Water Inlet Flow Control Valve 1. Fill the **Oil/Water/Solids Separator (7)**.
5. As the water fills the **Holding Tank (14)**, it will begin to flow out the **Overflow Drain (15)** at the top of the tank. At this point, flow can be adjusted with the Water Inlet Flow Control Valve 1. Maximum flow is achieved when the water level remains constant in the **Holding Tank (15)**.
6. Water is now completely cycled in the system.

OPERATION

BEGIN:

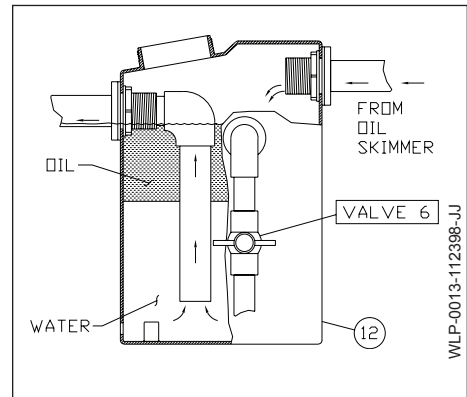
1. The oil water separator system is now ready to operate.
 2. Ensure all switches on the **Control Panel (23)** are on.
 3. Valve Positioning:
 - a. Pit Return Valve 3: When this valve is open and the Water Outlet Valve 2 is closed, water flows back to the pit for continual recycling.
 - b. Water Outlet Valve 2: When this valve is open and the Pit Return Valve 3 is closed, water flows through the Water Outlet Valve 2 to be used as desired.
- WX-OPTION:** The Pit Return Valve 3 must be opened and the Water Outlet Valve 2 must be closed for Auto-discharge.
4. Monitor the system closely the first few days to ensure smooth operation.

MAINTENANCE

WASTE OIL DECANTER:

1. The **Oil Skimmer (11)** removes the top layer of oil and water from the **Oil/Water/Solids Separator (7)** and places it in the **Waste Oil Decanter (12)**. As the **Waste Oil Decanter (12)** fills with the oil/water mixture, the oil will float to the top while the water remains on the bottom. The water then moves out of the bottom of the tank and back to the pit to be recycled again. As the amount of oil accumulates, it will have to periodically be removed from the **Waste Oil Decanter (12)** to prevent it from building up and flowing out of the bottom of the **Waste Oil Decanter (12)**.
 - a. Place a 5 gallon bucket below the hose on the Oil Release Valve 4.
 - b. Open the Oil Release Valve 4 and allow oil to flow into the 5 gallon bucket. Turn off valve when water begins flowing into the bucket.
 - c. Dispose of oil according to EPA Standards.

WASTE OIL DECANTER



SOLIDS COLLECTION AREA:

The solids collection area of the **Separator Tank (9)** will need to be cleaned occasionally to prevent overflow of solids into the **Holding Tank (14)**. This could be done one of two ways. In either situation, do not use pressure washers while performing this maintenance.

1. Using 2" PVC, plumb a discharge line with a shut-off valve from the solids collection area back to the **Wash Water Catch Pit (1)**, or other settling area. This will allow manual control of solids flow out of the oil water separator system, eliminating the need to stop the unit and clean the **Separator Tank (9)**.
2. The unit will need to be stopped for cleaning purposes. Turn the **Power Supply Switch (22)** to off.
 - a. Unplug the unit.
 - b. Place a catch basin under the solids collection area drain.
 - c. Open the drain at the bottom of the solids collection area.
 - d. Allow water and solids to flow out of **Separator Tank (9)**.
 - e. Wash out the solids collection area. The **Oil Coalescing Grid (10)** and baffles may be removed at this time for more thorough cleaning.
 - f. When clean, reinsert the **Oil Coalescing Grid (10)** and baffles if applicable.
 - g. Plug the pump plug into the piggyback plug and then into the grounded outlet on the **Control Panel (23)**.
 - h. Plug the power supply cord into a grounded outlet. Turn on the **Power Supply Switch (21)**.
 - i. Solids collected in the catch basin should be returned to the **Wash Water Catch Pit (1)** or disposed of according to EPA standards.

WINTERIZING:

If you must store your unit in an area where the temperature may fall below 32°F/0°C, you can protect your oil water separator system by draining all water from the system.

1. Turn all switches on the **Control Panel (23)** to the OFF position.
2. Unplug the unit.
3. Open the check valve near the **Sump Pit (3)** and drain the water transport line. Remove the **Sump Pump (4)** from the **Sump Pit (3)**.
4. Remove the drain plug from the solids collection area on the **Separator Tank (9)** and clean the tank.
5. Remove the plug from the **Waste Oil Decanter (12)** and drain.
6. Remove the remaining drain plugs from the **Oil/Water/Solids Separator (7)** and wipe down the **Oil/Water/Solids Separator (7)**.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	REMEDY
<i>ELECTRICAL</i>		
No power at Control Panel (23) .	Power failure to Control Panel (23) .	Check circuit breaker at power source or contact your local distributor.
<i>SUMP PUMP</i>		
Sump Pump (4) will not run.	Floats are not adjusted correctly in the Sump Pit (3) .	Readjust.
	Not enough water in the Sump Pit (3) .	Add water to the Sump Pit (3) .
	Float 1 is defective.	Replace.
	Circuit overload/breaker has tripped.	Reset breaker or replace fuse at power source.
	Motor overload.	Allow motor to cool. Motor will automatically restart when cool.
	Motor is defective.	Replace motor.
Sump Pump (4) motor starts and stops frequently.	This is a common occurrence on initial start-up while pits are filling.	Allow pits to fill.
	Excessive water flow to reclaim unit.	Turn valve clockwise to reduce flow.
	Sump Pump (4) impeller is clogged.	Disconnect power and unclog impeller.
	Motor overload.	Allow motor to cool. Motor will automatically restart when cool.
	Sump Pit (3) is not large enough.	Expand size of pit.
Sump Pump (4) runs, but there is little or no water discharge.	In-line wye strainer is plugged.	Clean, repair or replace.
	Water level is below pump inlet.	Ensure Float 1 is not caught in plumbing.
	There is an air lock in the Sump Pump (4) .	Manually fill the inlet pipe with water. Turn the Sump Pump (4) on and off several times.
	Low voltage.	Ensure wire size is capable of handling the rated amperage of the unit. If wire size is correct, contact your distributor.
	Clogged impeller or worn pump parts.	Contact your distributor.
Sump Pump (4) will not turn off.	Pump is air locked.	Cycle pump in one minute increments several times to clear air from pump. If system includes a check valve, a 3/16" hole should be drilled in the discharge pipe approximately 2" above the discharge connections.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	REMEDY
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SEPARATOR TANK

Water will not flow into the Separator Tank (9) .	Sump Pump (4) is not turned on.	Move Sump Pump Switch (40) to "ON".
	Circuit breaker has tripped or is "OFF".	Reset or turn breaker "ON".
	Dirt is lodged in the pit check valve.	Clean.
	Sump Pump (4) impeller is clogged.	Disconnect power and clean.
	Lines or valves contain frozen water.	Allow to thaw. Inject with warm water if necessary.

SHAFT SEALS

Water is leaking at pumps.	Damaged stationary shaft seal.	Seal ran dry. Ensure seal chamber is filled with liquid.
Short seal life.	Unexpected temperature and chemical usage.	Replace.

WATER FLOW

Air shoots from Water Outlet.	This is a common occurrence while pump is priming.	Air will stop shooting from the water outlet when pump is primed.
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NOTES

NOTES

STATEMENT OF WARRANTY

The manufacturer warrants all parts (except those referred to below) of your new WOS Oil/water/solids separator to be free from defects in materials and workmanship for one year from the date of original purchase.

Defective parts not subject to normal wear and tear will be repaired or replaced at manufacturer's option during the warranty period. In any event, reimbursement is limited to the purchase price paid.

EXCLUSIONS

1. The motor is covered under separate warranty by its respective manufacturer and is subject to the terms set forth therein.
2. Normal wear parts:

Seals	Filters	Gaskets
O-rings	Packings	Pistons
Valve Assembly	Brushes	Filtering Media
Sensors		
3. Parts damaged due to:
 - normal wear, misapplication, modifications/alterations, abuse,
 - operation at other than recommended speeds, pressures or temperature,
 - the use of caustic liquids,
 - chloride corrosion or chemical deterioration,
 - fluctuations in electrical or water supply,
 - operating unit in an abrasive, corrosive or freezing environment.
4. Parts damaged by failure to follow recommended:
 - installation, operating and maintenance procedures.
5. This warranty does not cover the cost of:
 - normal maintenance or adjustments,
 - labor charges,
 - transportation charges to Service Center,
 - freight damage.
6. The use of other than genuine manufacturer parts will void warranty. Parts returned, prepaid to manufacturer's factory or to an Authorized Service Center will be inspected and replaced free of charge if found to be defective and subject to warranty. There are no warranties which extend beyond the description of the face hereof. Under no circumstances shall the manufacturer bear any responsibility for loss of use of the unit, loss of time or rental, inconvenience, commercial loss or consequential damages.

