



GREASE, OIL, AND SEDIMENT SEPARATION

# Proceptor<sup>®</sup>

*Owner's Manual*





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# 1 Proceptor Overview

Congratulations on purchasing a Proceptor separator! Proceptor oil, grease and solids separators are a cost-effective solution, allowing you to focus on your business, not your wastewater.

## 1.1 BENEFITS

Drainage and wastewater contaminated with oils, fuels, grease and suspended solids are common in many commercial, institutional and industrial businesses due to the products produced, used, distributed and/or stored. Increasingly, stringent environmental regulations require that oil, grease and suspended solids be restricted to certain levels prior to being discharged into receiving sewer systems.

Proceptor oil, grease and solids separators effectively remove floatables (i.e., free oil, grease) and allow solids to settle, resulting in reduced and/or eliminated sewer-use surcharges and penalties to end users.

Developed by Zurn Green Turtle, Proceptor separators achieve maximum removal treatment efficiency of free oil, grease and suspended solids from wastewater flows because of its unique hydraulic flow patterns. The controlled hydraulic flow patterns further ensure captured contaminants will not scour or resuspend. The elliptical design of the unit allows for enhanced treatment efficiency and ease of cleaning. Proceptor is useful as a point-source spill control device. Its fiberglass construction eliminates corrosion that can lead to soil and/or ground water contamination and costly remediation.

## 1.2 DESIGN

- Tough reinforced fiberglass construction eliminates corrosion
- Elliptical separation chamber optimizes separation conditions
- Internal piping design eliminates scouring of stored oil, grease and solids
- Sized based on site-specific water flow and usage to ensure superior performance
- Multiple system configurations available for flexibility of installation
- If sized properly, eliminates or reduces sewer use surcharges
- The curved bottom design promotes easy maintenance, including removal of contaminants by vacuum or pump truck
- Lifetime warranty against cracks and leaks

## 1.3 CONSTRUCTION

The Proceptor tank is equipped with two 3" diameter PVC vent connections (per tank) for venting gases to the outside, inspection ports and an accessway for regular inspection and maintenance. The contractor installing a Proceptor is required to provide piping from the vent connections to the venting system. An extension collar located at the center and/or at both ends of the separator provides access for maintenance. A frame and cover, supported by a concrete slab or similar support structure, are placed above the extension collar to provide access to the separator.

The standard, single tank separator design includes a baffle that creates two chambers in the unit. **Note:** For designs such as the Uniform Plumbing Code (UPC) oil separator tanks, the unit consists of three chambers separated by two baffles.



Figure 1: Illustrates the components of a standard, single tank Proceptor separator

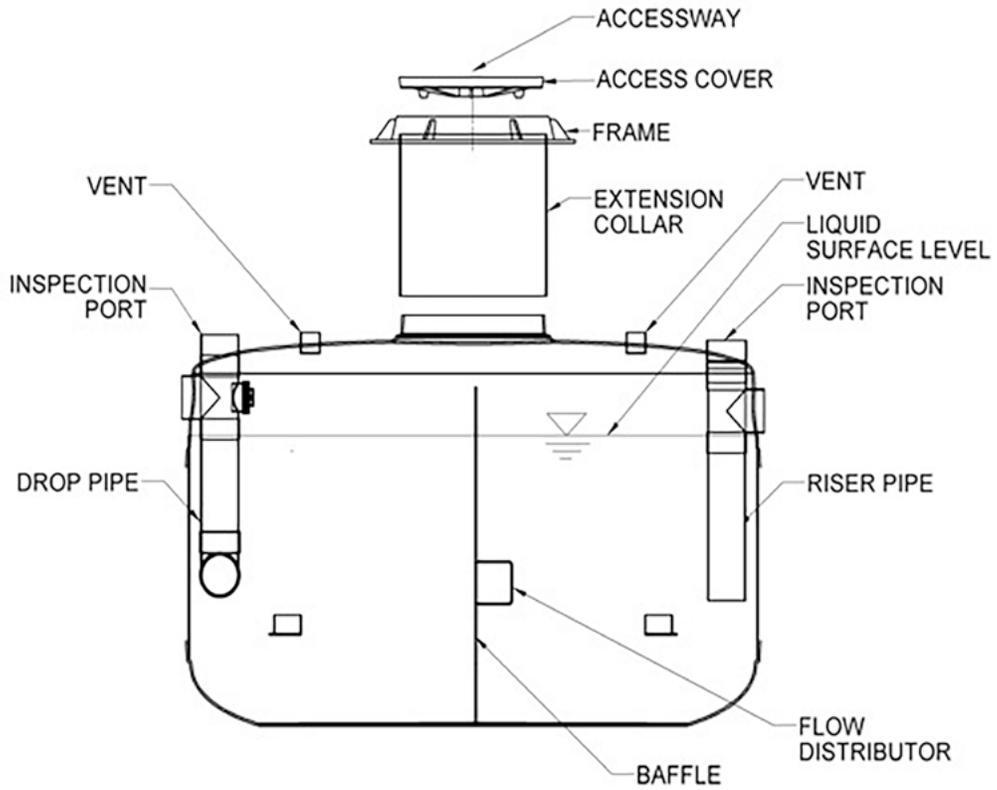


Figure 1: Single tank Proceptor design

Figure 2: The following figures depict other common unit configurations

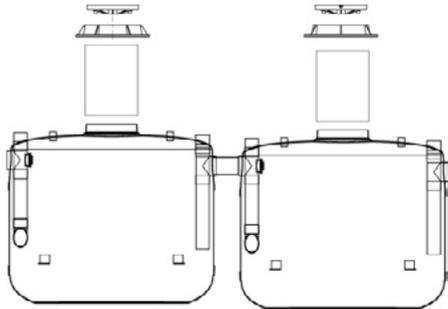


Figure 2.1: Dual tank with one accessway per tank

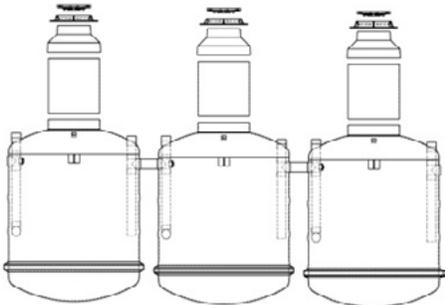


Figure 2.2: Triple tank with one accessway per tank

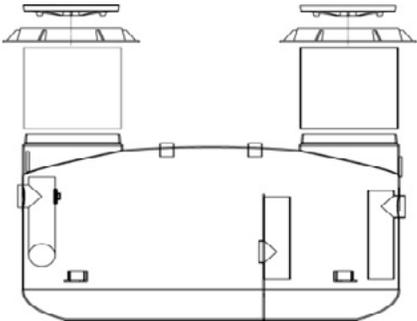


Figure 2.3: Single tank with dual accessway

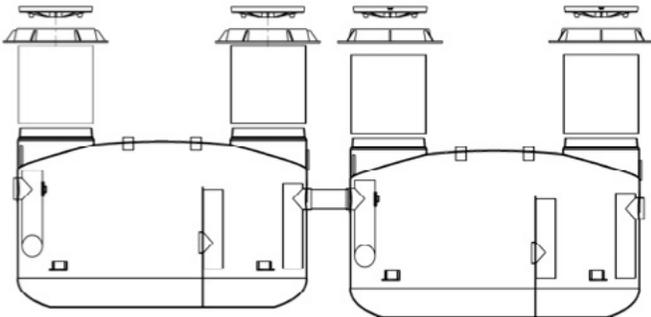


Figure 2.4: Dual tank with dual accessway

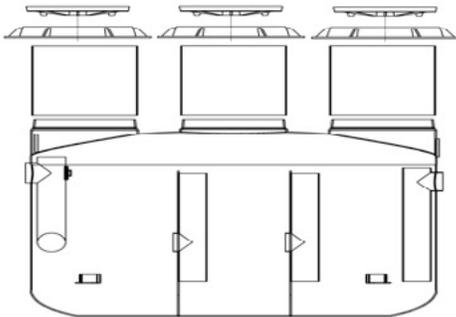


Figure 2.5: Single tank with triple accessway

## 1.4 OPERATION

Wastewater enters the unit through an inlet drop pipe, typically a 4" or 6" PVC sewer pipe, which discharges the wastewater below the normal liquid surface in the tank (see Figure 3). The inlet drop pipe is configured to discharge wastewater horizontally along the tank walls.

Upon entering the tank, oil, grease and other liquids with a specific gravity less than water rise to the surface in the first chamber, while suspended solids settle to the bottom by gravity. The wastewater then flows into the second chamber by a means of a flow distributor on the baffle wall (or riser pipe into the second tank), ensuring a smooth flow path, where further separation occurs. Cleaner water from the middle elevation of the tank is displaced through the riser pipe into the downstream sewer system.

Maintenance is performed by a licensed liquid disposal company using a vacuum or pump truck.

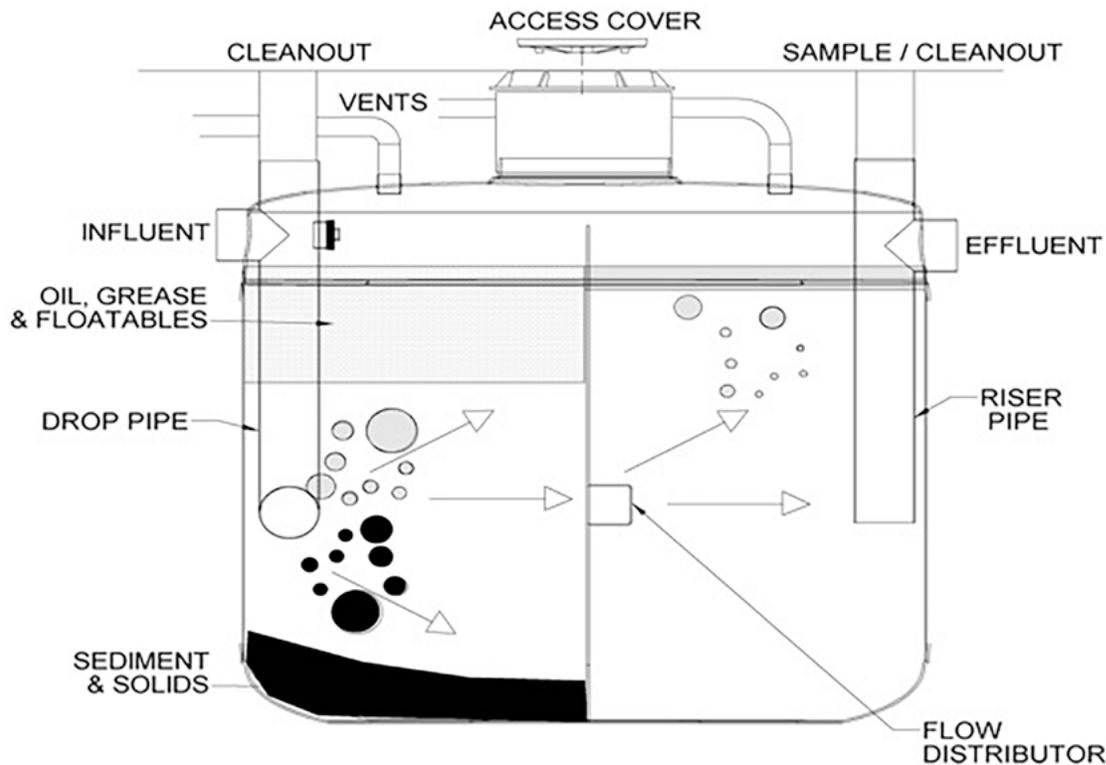


Figure 3: Proceptor operation: process flow dynamic

## 2 Protecting the Wastewater Collection System

- 1 Inspect and maintain your Proceptor separator regularly.
- 2 Be familiar with local regulations that govern the acceptable limits for wastewater from your operation and any other required practices.
- 3 Be proactive. Source a local plumber, drain cleaning service, licensed separator pumping and disposal operator before you have a plumbing emergency. With attentive maintenance, you can avoid emergency situations.
- 4 Witness all Proceptor separator maintenance to ensure that the device is being properly cleaned and is operating efficiently. Keep an inspection and service maintenance log. All inspection and maintenance records should be retained on file for a period of at least two years.

### 2.1 ESSENTIAL BEST MANAGEMENT PRACTICES (BMPs)

The practice of preventing or reducing the amount of oils, grease and solids discharged into the drainage system can prove to be very beneficial to your company. The reduction of oils, grease and solids going down the drain will result in less frequent maintenance of your Proceptor, and greater assurance of being compliant with local regulatory bylaws. The reduced chance of drain line blockages and a reduced maintenance frequency will result in lower costs for your company.

Check to see if your government has published BMPs. They may be available on a website or from your municipal office. The following are brief outlines of major points found in typical BMPs. Your industry's BMPs will likely have additional items and useful tips.

### 2.2 KITCHEN BMPs

- 1 **Keep grease out of the drains.** Prevent pouring excess oil or grease down the drain. The thick 'yellow grease' should be collected and rendered. The more 'yellow grease' collected and rendered, the less grease that ends up in the drains or in your Proceptor separator. Yellow grease can be used as raw material for biofuels. Grease that goes down the drain and mixes with water becomes 'brown grease' that is more difficult to recover.
- 2 **Scrape grease and food from plates and cookware before washing.** Using gloves or rubber spatulas, grease and food scraps should be scraped off plates and cookware before washing. This material should be added to the trash, recycled or composted as part of a food waste recycling program.
- 3 **Use drain screens.** Using drain screens, particularly on sink drains, will prevent much of the grease and greasy food particles from ending up in the drains.
- 4 **Wipe up grease spills before using water.** Grease spills or drippings should be wiped up with a paper or cloth towel before using water to minimize the amount of grease ending up in the drains.
- 5 **Limit garbage disposal use to non-greasy food materials.** Restaurants with garbage disposals should be limited to processing non-greasy food materials like fruits or vegetables in food preparation areas to minimize the amount of grease ending up in the drains.
- 6 **Train employees.** Employees must be trained to implement the kitchen BMPs and/or properly inspect and maintain your Proceptor separator. Also, a 'NO GREASE' sign above sinks or on the front of dishwashers acts as a constant reminder of employee training and the kitchen BMPs.



## 2.3 GARAGE BMPs

A detailed BMP can be obtained from Petroleum Products Institutes, or your Provincial/State or Municipal Government. Most of these items are geared to keeping oil and other chemicals from going down the drain.

- 1 Use spill containment protection for acid batteries, solvents, oils, fuels, antifreeze, transmission fluid, brake fluid and any other substances whose discharge into the sewer system is regulated.
- 2 Have a spill response plan and personnel trained to carry it out.
- 3 Do not dump oil or other chemicals down the drain or into the separator. Store and dispose according to regulations.
- 4 Any accumulation of volatile liquids must be removed immediately by a licensed pumping company.
- 5 Clean up oil spills with rags and store in closed containers for cleaning or disposal.
- 6 Use drip pans to contain leaks under vehicles.
- 7 Do not wash service bays with hot water and soap as these emulsify oils. Dry sweep floors as much as possible.
- 8 Where soaps are used, quick-break types are recommended. These emulsify oils for a shorter period of time, giving them more chance to be unbonded from soap within the separator instead of further downstream.

## 3 Inspection

Regular inspection is important to ensure the drainage system is working properly. When the unit is first commissioned, check the levels of solids, grease, and oil at weekly intervals for food applications to determine how much material is accumulating. Oil separators in garages should be checked monthly to start. These observations will help establish the best maintenance interval based on site specific conditions.

Normal inspection and maintenance of a Proceptor separator does not require entrance into the separator. The separator may contain noxious, toxic or explosive gases, even if empty, that could be harmful or fatal to workers inside the tank. Entrance to the tank may only be made by workers trained to work in confined spaces having obtained confined space certification from a recognized certifying authority.

Proceptor separators must be examined annually for damage to both the interior surface and internal components. Damage must be repaired immediately upon discovery.

### 3.1 WATER LEVEL AND TANK DEPTH

For any inspection and maintenance work, it is important to have a benchmark measurement of two reference points:

- 1 Static water level to top of grade (floor level)
- 2 Clean bottom of the tank to top of grade (floor level) (see Figure 4).

The distance from the top of grade to the tank bottom will be your reference for measuring solids depth. Make sure you record which units (inches or centimeters) that you are using.

A Static Water Level to Floor Level = \_\_\_\_\_ in or cm (circle one)

Make sure the tank is full of water and not backed up. Record this measurement after it is pumped out and refilled with clean water. With no flow running into the separator, open the cover and put the zero end of a measuring tape or rod on top of the liquid surface, and measure to the top of the floor level. Enter this into your records.

If during a routine inspection the water level is unusually high, there may be a blockage downstream. The water level should not rise as high as the tank neck and extension collar through the accessway.

B Bottom of Tank to Floor Level = \_\_\_\_\_ in or cm (circle one)

Measure from the tank bottom to the floor level and record the height in your separator maintenance records. Record this measurement after the tank is pumped out and before it is refilled with clean water. Shine a flashlight into the dark tank to visually check that the measuring tape is contacting the bottom of the tank.

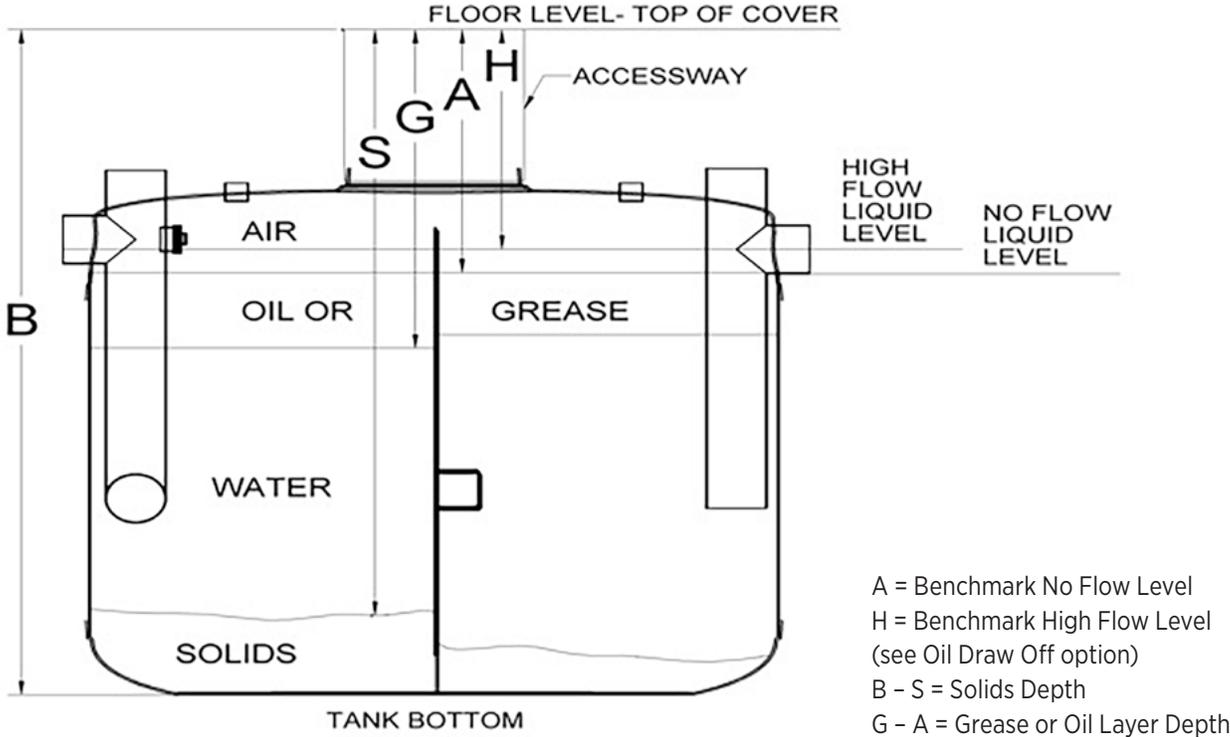


Figure 4: Measurements of materials in unit



## 3.2 GREASE/OIL AND SOLIDS LEVELS

Solids generally settle to the bottom, and grease or oil will float on the top. Solids can block the inlet or outlet if the layer becomes too deep. If grease or oil becomes too deep, the concentrated grease or oil will exit the separator and enter the sewer pipe. This will cause problems in the pipe downstream, and may cause sewer backups into your facility.

In a single tank system, be sure to measure within the inlet side of the accessway. To determine the inlet side of the accessway, look at your facility layout to figure out which direction the inlet would be coming in. If this is not clear, try running water down the drain and watch the liquid in the tank to see if you can observe the direction of flow. In a double or triple tank system, it is recommended to measure in all tanks.

Compare these measured amounts to the limits in Table 1 (page 11) to determine if a pump out is required.

### **Solids Layer**

The solids layer depth can be determined two ways: either by probing with a graduated rod or weighted measuring tape or by using a specially designed sampling/measuring tube (see section 3.3).

To measure with a rod or tape, slowly lower the rod or tape into the fluid on the inlet side of the accessway until increased resistance is felt. Depending on your operation, this might be a soft layer (more typical of restaurants), or a harder layer (i.e. sand in an oil separator). When resistance is met, hold the rod or tape steady and measure to the floor (top of cover). Subtract this measurement from the previously measured tank depth to find inches or centimeters of solids.

### **Oil or Grease Layer**

The oil or grease layer depth can be determined two ways; either with a dipstick rod and water finding paste, or by using a specially designed sampling/measuring tube (see section 3.3).

Spread a thin coating of water level indicator paste (i.e. Kolor Kut) on the bottom six inches or so of the dipstick, measuring tape or gauge rod. Slowly lower the measuring device into the liquid, coated end down, to where the oil-water interface is anticipated. Mark the floor level against the rod.

Slowly pull the rod back up without stirring the oil. A change in color by the water paste indicates where the oil-water interface occurs. The distance between the color change on the rod and the floor level is the 'G' dimension in Figure 4. The absence of color change indicates that the measuring device did not reach far enough down to the oil-water interface, therefore remeasurement is necessary.

## 3.3 TOTAL WASTE COLUMN MEASUREMENT

The sludge/solids, water and oil/grease level can be measured collectively in a sampling tube equipped with a built-in ball check valve to hold the material. The tube should be graduated (marked in inches or centimeters with zero at the bottom) to indicate the depth of the sludge, water level and oil or grease layer in the Proceptor separator.

Follow the manufacturer's usage instructions. Slowly lower the dipstick tube to the bottom of the tank. Do not plunge the device to the bottom as it will result in an inaccurate reading and possibly damage the ball check valve. Keep the dipstick tube as vertical as possible when raising it up, without allowing it to bend or bounce while it is full of wastewater. A 'water core' sample should be visible within the tube showing the solids depth and oil/grease depth. Release the sample back into the inlet side of the separator or dispose of according to acceptable practice.

## 3.4 TREATED WASTEWATER SAMPLING

The inspection/sample port at the outlet pipe is designed to allow sampling of the discharge to determine compliance with local effluent standards. There should be two ports (4" or 6") extended to grade and capped on either side of the access cover. The outlet side port is the sample port. Avoid hitting the sidewalls of the sample port pipe, which can result in an inaccurate reading. If there are no accessible sample ports, take a sample from the outlet side of the tank through the access cover.

Samples should be taken from mid-liquid depth inside the Proceptor using an underwater grab sampler. Testing is generally done through a laboratory that can check for 'Total Oil and Grease' or 'Mineral Oil and Grease' (for oil). Testing should be done by a laboratory that is certified by your local municipality.

### Test results under allowable limits:

If the test results indicate compliance with local bylaws — that's great! You can continue to be confident that your wastewater complies with legislation limits and your business is environmentally responsible.

### Test results above allowable limits:

If the test results indicate non-compliance with local bylaws:

- 1 Measure the solids and oil/grease depths in the unit.
- 2 If at or near capacity, pump out the Proceptor and refill with clean water.
- 3 Verify that the maximum flow rate does not exceed the Proceptor model design.
- 4 Evaluate facility standard operating procedures to confirm that best practices are enforced to reduce the quantity of solids and contaminants entering the Proceptor.

## 4 Maintenance

### 4.1 EMPTYING AND SERVICING PROCEPTOR

Regular maintenance of a Proceptor unit is critical to ensure separation efficiency is not compromised. The buildup of floatables and solids within the separator reduces the water retention time and results in reduced separation efficiency. If contaminants are allowed to accumulate, maximum storage capacities may be exceeded, resulting in the loss of previously captured oil, grease and solids. This may expose the Owner/Operator to unnecessary liability and/or higher sewer-use surcharges.

Proceptor separators must be serviced by a vacuum or pumping truck. Liquid waste pump-out companies are a well-established sector of the servicing industry. Costs to clean a Proceptor separator vary based on the unit size, geographic area and transportation distances. Consult your local Waste Management Authority for an approved list of licensed liquid waste handlers.

Find out the normal liquid volume or model number of your unit. Maintenance companies will require this information to quote for service. **Note:** 1 Imperial Gallon = 1.2 US Gallon.

To service or maintain a Proceptor, the unit must be emptied completely. Once the tank is emptied, it should be rinsed with water to remove any oil, grease or solids in the unit. If tools are necessary for complete removal of crusted grease or solids, care should be taken not to damage internal PVC piping, baffles and tank walls. For units with remote suction, it is recommended to open, rinse and inspect at least annually.

Proceptor separators must be filled with clean water after cleaning the unit by running a tap that drains into the separator. To determine approximately how long to run the tap, divide the tank volume in US gallons (USG) by 5 (USG per minute for a typical tap). For example: 300 Gallon tank / 5 = 60 minutes. If you do not fill the tank with clean water after pumping out, your operation will discharge unseparated waste from the separator on startup.



## 4.2 MAINTENANCE FREQUENCY

Maintenance frequency depends on the application and the size of the Proceptor separator which is summarized in the following table.

**Table 1: Maintenance Schedule**

Model Number		US Gallons			Inches	
		Total Liquid Capacity	Storage Capacity		Maintenance Recommended	
			Oil/Grease	Solids/Sediment	Oil/Grease	Solids/Sediment
GMC 50	OMC 50	50	12	11	1.0	1.5
GMC 100	OMC 100	100	42	23	4	3
GMC 150	OMC 150	150	66	48	6	5
GMC 200	OMC 200	200	90	72	8	7
GMC 250	OMC 250	250	123	87	10	8
GMC 300	OMC 300	300	156	103	13	9
GMC 500	OMC 500	500	279	87	8	3
GMC 750	OMC 750	750	410	200	11	6
GMC 1000	OMC 1000	1,000	577	295	16	9
GMC 1300	OMC 1300	1,300	707	446	19	13
GMC 1500	OMC 1500	1,500	819	540	22	15
GMC 1000(2)	OMC 1000(2)	1,000	559	174	8	3
GMC 1500(2)	OMC 1500(2)	1,500	819	401	11	6
GMC 2000	OMC 2000	2,000	1154	589	16	9
GMC 2600	OMC 2000	2,600	1415	891	19	13
GMC 3000	OMC 3000	3,000	1638	1080	22	15
GMC 4000	OMC 4000	4,000	1712	1315	15	15
GMC 5000	OMC 5000	5,000	2226	1776	20	19
GMC 6000	OMC 6000	6,000	2883	2092	26	22
GMC 7000	OMC 7000	7,000	3396	2611	30	27
GMC 8000	OMC 8000	8,000	3810	2707	23	15
GMC 9000	OMC 9000	9,000	4324	3139	26	22
GMC 10000	OMC 10000	10,000	4795	3700	28	30
FOG-ceptor® Z50H	—	50	18	9	1	1.5
FOG-ceptor Z75H	—	75	20	10	2.5	2.25
FOG-ceptor Z250H	—	250	123	87	10	8

For larger units, contact Zurn Green Turtle at 1.877.428.8187 (USA) or 1.877.966.9444 (Canada).

Maintenance procedures for Proceptor oil separators can be found in section 5.1.

## 4.3 TROUBLESHOOTING

### **Inlet blockage:**

If the drain upstream of the separator backs up, visually check the inlet pipe through the inspection port for a blockage and snake the pipe if necessary.

### **Outlet blockage:**

If the liquid level within the Proceptor separator rises above normal, visually check the outlet pipe through the inspection port for blockage. Clean carefully with a snake (pipe cleaning tool) as required.

Check the levels of solids and grease within the separator. Have it pumped out if necessary. Eliminate the possibility of drain blockages occurring elsewhere.

**Note:** Repeated blockages may indicate a need for usage evaluation (e.g. the amount of solids entering the Proceptor, excess grease in the system may be solidifying in the pipes, etc.). To ensure the separator functions correctly, take all corrective actions required to reduce the quantity of solids and contaminants entering the Proceptor and ensure that all BMPs are being followed.

## 4.4 ODOR CONTROL

### **Vents**

Vent ports are provided with the Proceptor separator. The installer should connect the port(s) in the top of the tank. This will help maintain air pressure equilibrium in the tank, allowing for smooth flow and eliminating odors in the building.

### **Frame and Cover**

Check the condition of the gaskets and/or O-ring under the access cover. Clean and replace if necessary.

## 4.5 SPILLS

Proceptor separators can be susceptible to spills given the sometimes unpredictable nature of wastewater surges. If excessive oil, grease or solids flow into the separator, the tank must be pumped immediately to help prevent a spill. If there is an overflow, the appropriate governing agency must be notified.

## 5 Advanced Accessories and Options

### 5.1 OIL COALESCER

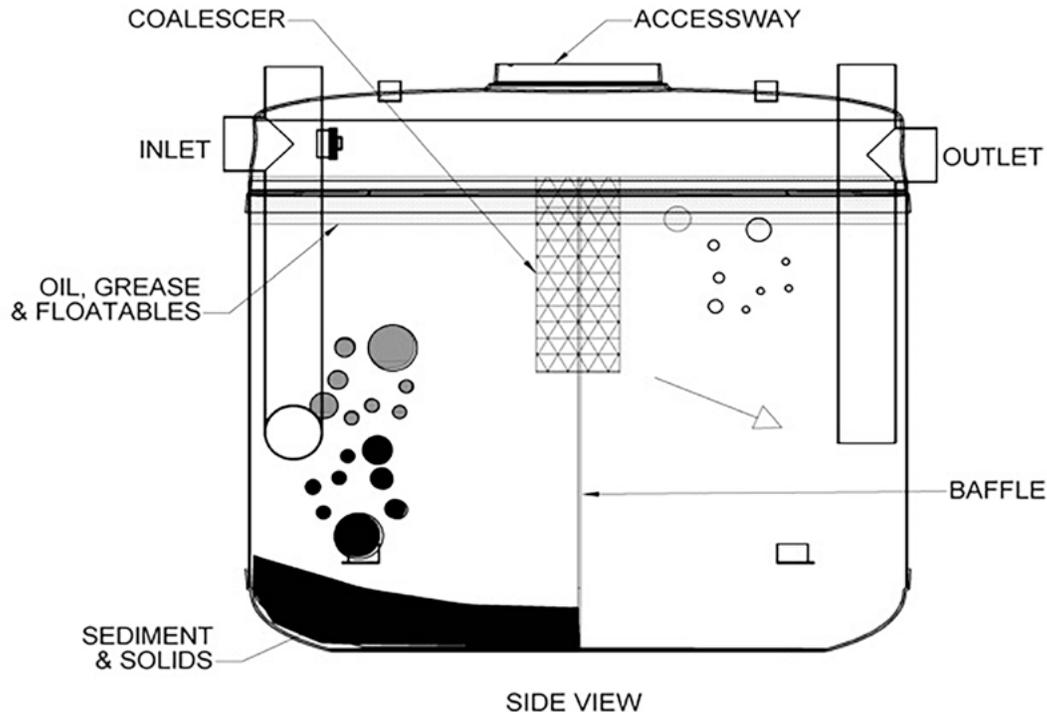


Figure 5: Proceptor separator with coalescer

The Zurn Green Turtle coalescer system is specifically designed for use in a Proceptor separator to assist removing free oil and mechanically dispersed oil. It is comprised of corrugated porous PVC plates mounted in a fiberglass frame within a baffle of the separator.

As wastewater enters the Proceptor, some free oil will immediately rise in the first chamber to the surface. Most solids will settle to the tank bottom before reaching the coalescer system. Residual fine oil droplets within the water will continue to encounter the wetted surfaces of the coalescer material. They will meet with other oil droplets clinging to the plates and combine to form larger droplets (coalesce).

The oil globules will follow the inclined channels upwards to the top of the coalescer pack and exit to float on the liquid surface. The newly formed larger oil globules will rise faster. Most suspended solids reaching the coalescer will slide down the inclined surfaces to exit the bottom of the pack and continue to the tank bottom.

In a gravity separator, coalescers are not suitable for removing chemically emulsified or dissolved oil. Soap in wastewater will cause chemical emulsification keeping the oil particles suspended like a colloid, impairing the separation efficiency of the Proceptor and the performance of the coalescer system. Use of 'quick break' type of soap will help. Quick break soaps are more likely to release the oil held by the soap in the water before reaching the separator, allowing the oil to separate within the separator, instead of being carried downstream.

For optimal efficiency, the Proceptor separator must be cleaned and maintained at regular intervals. The interval depends on the characteristics and flow volume of your wastewater.

## Maintenance: Coalescer

Regularly monitor oil and sediment level in your Proceptor separator.

When the separator is pumped out, Zurn Green Turtle recommends cleaning the coalescer system at the same time. The coalescer may become plugged up if the loading solids are too high in the influent wastewater. Although this will not affect flow through the separator, it may reduce the oil removal efficiency and expose the Owner/Operator to unnecessary liability.

### To clean the coalescer system:

- 1 Visually inspect the unit from the accessway to make sure there is no obstruction on top of the coalescer, and the lifting device is secured. There may be tabs bolted on the baffle to hold the coalescer in place during the original shipment. Swivel them out of the way if they are holding the coalescer down.
- 2 Pull the handle gently to lift and remove coalescer pack(s) one at a time.
- 3 Use caution when handling the coalescer packs to avoid damage.
- 4 Inspect for damage. Ensure frames are intact.
- 5 Rinse each coalescer pack with low-pressure clean water. **Note: Do not use soap** in the cleaning process. **Tip:** Before the separator is pumped out, suspend each pack over the tank accessway using a bar through the handle at floor level. The rinse water will flow back into the tank and be pumped out by the waste maintenance company.
- 6 Look through the porous sides of the pack to ensure channels are clear. If low-pressure flow will not clear the channels due to packed solids, a high-pressure wash may be used. Use care not to damage the internal parts of the pack with a high-pressure wash.
- 7 Ensure all oil, water and sediment is pumped out/removed from the oil separator until it is clean to the bottom.
- 8 Ensure the frames in the Proceptor baffle inside the tank are free of debris, especially at the bottom where the coalescer is installed.
- 9 Before refilling the separator with clean water, reinstall each pack by lowering carefully into the baffle frame, making sure pack(s) are seated and level with the top of the baffle. When the coalescer packs are equipped with vertical guide bars (a feature added in 2007), it prevents the packs from being reinstalled incorrectly. These bars protrude from the box frame.

**Note:** If the coalescer system does not have guide bars, ensure the pack(s) are installed with the open-celled sides facing the inlet and outlet. The top and bottom of the packs also have open cells. If installed incorrectly, wastewater will flow over the coalescer instead of flowing through it.

Refill the separator with clean cold water. Do not add soap to the unit.

An alternative to pulling out coalescer packs is to pressure wash them in place after the tank is pumped out during scheduled maintenance. Please ensure the water used to clean the coalescer system is also pumped out.

However, Zurn Green Turtle recommends removal of the coalescer packs for optimal cleaning and inspection.

## Repair

If a coalescer system appears damaged call your Zurn Green Turtle representative for further information.

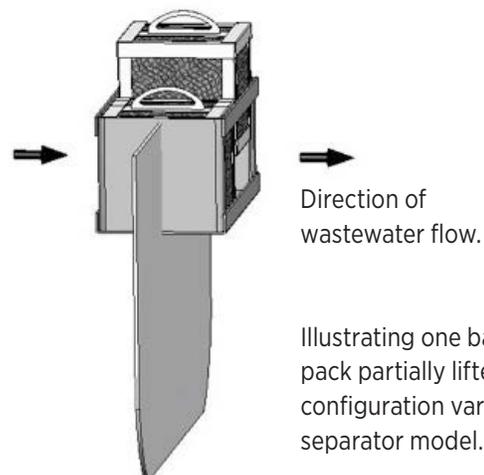
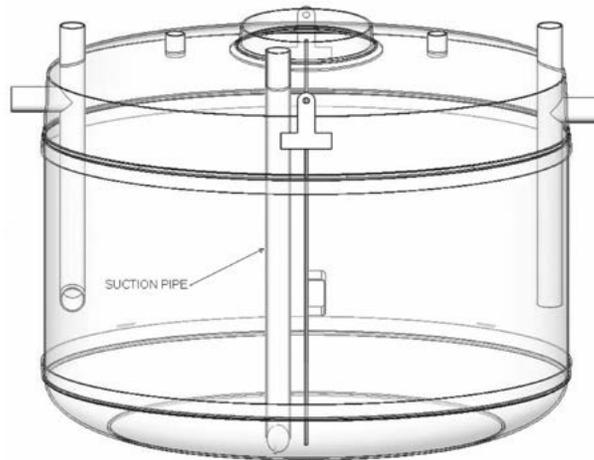


Figure 6: Typical coalescer construction

## 5.2 SUCTION PIPE

A suction pipe is used when remote tank cleanout is desired, typically for an indoor installation. The suction pipe is an internal system that allows the tank to be maintained even if a servicing vehicle cannot access the main access cover at the top of the tank.



**Figure 7: Proceptor with suction pipe option**

The suction pipe may be plumbed to floor level, or to an exterior wall allowing a pump truck to attach to the port outdoors instead of the typical service method of entering the building to open the access cover. A space at the base of the baffle allows solids to be drawn from both cells.

## 5.3 OIL AND GREASE ALARM

Any Proceptor separator may have an alarm to indicate when the oil/grease layer has reached a preset storage volume. There will be an alarm panel on a nearby wall (typically) and an alarm probe rod inside the accessway extending down into the tank.

Complete operational instructions were provided with the sensor alarm when it was originally shipped.

Two alarm options are offered as follows:

- Wireless Smartpro RF version
- Wired Smartpro version

For calibration and installation procedures, please refer to the corresponding alarm manuals on the Info Hub section of the website at [zurn.com/tools-resources/green-turtle-info-hub](http://zurn.com/tools-resources/green-turtle-info-hub).

## 5.4 DOUBLE WALL

Proceptor separators are available with a secondary wall made from durable fiberglass for added protection against leaks. The double wall Proceptor typically is ordered with an interstitial monitor for leak detection. No additional maintenance of the secondary wall is required.

## 5.5 LEVEL

There are two configurations where a level monitor may be installed – double wall (for interstitial leak monitoring), and liquid holding tank. In all of these applications, the level monitor probe is normally dry, and will trigger when fluid contacts the probe.

In holding tanks, the level probe is set at a preset elevation. In the double wall, the level probe is typically installed between the tank walls near the bottom of the tanks, where any potential leak would pool, to give early warning of a leak condition.

## Maintenance

When the monitor sounds, press the acknowledge button to silence the horn, if desired. The light should remain red as a reminder. Call your liquid waste removal company to pump out. When the tank has been pumped out, the light will go out.

If the monitor sounds and the probe is still dry, check the system for electrical faults. Power outages may also cause alarms.

To check the sensor probe condition, lift the sensor pipe out of the bracket. If debris is found on the probe forks, clean them carefully with a soft brush and detergent, being mindful not to scratch the surfaces or break the forks.

## Testing

With power supplied to the system, the following are nominal conditions for the LED lights:

Push the test button on the panel. The Caution LED will light YELLOW and stay on until the Acknowledge button is pushed.

LED	DRY	WET / TEST
Panel Alarm	OFF	RED
Panel Power	GREEN	GREEN
Panel Caution	OFF	ORANGE until acknowledged
Controller Power	GREEN	GREEN
Controller Input 1	GREEN	ORANGE (green if test only)
Controller Relay	RED	OFF (red if test only)

Adjust the horn volume by rotating the black shutter.

To test the probe operation, immerse the forks of the probe in liquid.



## 6 Lifetime Warranty

This warranty is provided by Zurn Industries, LLC, Zurn Industries Limited and their subsidiaries (collectively, "Zurn"). Proceptor and FOG-ceptor oil and grease separators are not intended for residential or consumer use, and may not be purchased or sold for those applications. Zurn warrants to the original purchaser that all Proceptor and FOG-ceptor oil and grease separators purchased from Zurn will be free from defects in materials and workmanship for a period of one (1) year following the date of initial delivery to the purchaser, subject to the terms and conditions below.

Upon submission of a warranty registration card ([zurn.com/green-turtle](http://zurn.com/green-turtle) or [zurngtg.com/activations.php](http://zurngtg.com/activations.php)) to Zurn by the owner within the first 30 days of ownership, Zurn further warrants that, if the Proceptor and FOG-ceptor separators are installed, operated, and maintained in accordance with Zurn instructions and applicable state/provincial and federal regulatory requirements, the Proceptor and FOG-ceptor devices, for the lifetime of the plumbing system into which such devices were originally installed:

- 1 The Proceptor or FOG-ceptor is installed, operated, and maintained in accordance with the Proceptor or FOG-ceptor Installation Instructions and Proceptor or FOG-ceptor Owner's Manual.
- 2 Oil Multi-Cell (OMC) and Gravity Grease Multi-Cell (GMC) models up to 4000 gallons are installed as shallow burial having a maximum depth of 6 feet from the top of the tank to grade. Models 4000 gallons or more have a maximum depth of 4 feet from the top of the tank to grade. (For deeper installation, a custom reinforced Proceptor or FOG-ceptor must be authorized by Zurn.)
- 3 There are no post-installations or repairs of the original Proceptor or FOG-ceptor separator.

All of the warranties herein are subject to the following conditions. If these conditions are not met, this warranty shall be null and void.

- 1 The Proceptor or FOG-ceptor is installed, operated, and maintained in accordance with the Proceptor or FOG-ceptor Installation Instructions and Proceptor or FOG-ceptor Owner's Manual.
- 2 Oil Multi-Cell (OMC) and Gravity Grease Multi-Cell (GMC) models up to 4000 gallons are installed as shallow burial having a maximum depth of 6 feet from the top of the tank to grade. Models 4000 gallons or more have a maximum depth of 4 feet from the top of the tank to grade. (For deeper installation, a custom reinforced Proceptor or FOG-ceptor must be authorized by Zurn.)
- 3 There are no post-installations or repairs of the original Proceptor or FOG-ceptor separator.
- 4 The original installation has been carried out in Canada or the United States.
- 5 The original installation was performed following the Proceptor or FOG-ceptor installation procedures by a trained contractor with all his/her required registrations, certificates and/or licenses, to complete the installation, repair or alteration in accordance with recognized industry practices and applicable regulatory requirements.
- 6 The Proceptor or FOG-ceptor has been operated and maintained in accordance with regulatory requirements designed to minimize the possibility of structural failures and releases of regulated substances.
- 7 The Proceptor or FOG-ceptor shall not be installed or used in any application other than commercial, industrial, or institutional use.
- 8 After initial installation of the Proceptor or FOG-ceptor, the tank installation checklist supplied by Zurn must be properly completed by the contractor and/or the owner's representative, and the completed checklist must be submitted to Zurn within 30 days after installation (failure to deliver the document will result in denial of the claim).
- 9 If the Proceptor or FOG-ceptor is remanufactured, moved, or removed from the ground for any reason prior to the expiration of this warranty, the structural warranty protections will terminate.

10 The sole warranty for accessories, including but not limited to frames and covers, extension collars, alarms, pumps, valves, coalescers, suction pipes, sludge judge, draw-off pipes, strainers, etc. is that they are warranted for a period of one (1) year against defects in materials and workmanship from date of shipment.

11 Consumable parts including but not limited to gaskets and O-rings are excluded from this warranty.

ZURN'S LIABILITY UNDER THIS WARRANTY IS LIMITED, AT ZURN'S DISCRETION, TO REPAIR THE DEFECTIVE PROCEPTOR OR FOG-CEPTOR, TO REPLACE PROCEPTOR OR FOG-CEPTOR IN EXCHANGE FOR THE DEFECTIVE TANK, OR TO REFUND OF THE ORIGINAL PURCHASE PRICE. ZURN IS NOT LIABLE FOR ANY LABOR, SHIPPING, OR OTHER INSTALLATION COSTS, AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, PUNITIVE, CONSEQUENTIAL OR OTHER DAMAGES IN CONNECTION WITH SUCH PROCEPTOR OR FOG-CEPTOR INCLUDING, WITHOUT LIMITATION, COSTS, EXPENSES, OR LIABILITIES ASSOCIATED WITH ENVIRONMENTAL CONTAMINATION, FINES OR PENALTIES, FIRES, EXPLOSIONS, OR ANY OTHER CONSEQUENCES ALLEGEDLY ATTRIBUTABLE TO A BREACH OF THE WARRANTY OR DAMAGES UNDER DECEPTIVE TRADE PRACTICES OR SIMILAR CONSUMER PROTECTION ACTS. THE FOREGOING CONSTITUTES ZURN'S SOLE AND EXCLUSIVE OBLIGATION AND ZURN MAKES NO EXPRESS OR IMPLIED REPRESENTATION OR WARRANTY, OR ANY WARRANTY OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSES WHATSOEVER. NO EMPLOYEE OF ZURN OR ANY OTHER PARTY IS AUTHORIZED TO MAKE ANY OTHER REPRESENTATIONS OR WARRANTIES OTHER THAN THE WARRANTY SET FORTH HEREIN.

THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY, AND ACCEPTANCE OF THIS EXCLUSIVE REMEDY IS A CONDITION OF THE PURCHASE OF THESE PRODUCTS

12 Customer assumes the risk of and agrees to indemnify Zurn Green Turtle against and hold Zurn Green Turtle harmless from all liability relating to (i) assessing the suitability for Customer's intended use of the Proceptor and of any system design or drawing and (ii) determining the compliance of Customer's use of the Proceptor with applicable laws, regulations, codes and standards. For Proceptors resold by Customer, Customer retains and accepts full responsibility for all warranty and other claims relating to, or arising from, Customer's Proceptor system which includes or incorporates Proceptor or components thereof manufactured or supplied by Zurn Green Turtle, and Customer is solely responsible for any and all representations and warranties regarding the Proceptor system made or authorized by Customer. Customer will indemnify Zurn Green Turtle and hold Zurn Green Turtle harmless from any liability, claims, loss, cost or expenses (including reasonable legal fees) attributable to Customer's Proceptor system or representations or warranties concerning same.

⚠ **WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction -  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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