

ScreenBox BMP

Operation & Maintenance Guide



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Safety Precautions:

The ScreenBox BMP filter should be maintained by trained individuals who are familiar with local traffic safety regulations and disposal procedures.

ScreenBox BMP Filter Description:

The Fabco ScreenBox BMP filter unit is specifically engineered for drop grated inlets. The ScreenBox BMP is a superior catch basin inlet filter designed to capture gross pollutants and sediments. This unit has been valued engineered to deliver high performance, durability, ease of installation and maintenance. The ScreenBox BMP features high quality stainless steel woven wire debris screening, specifically chosen to optimize the filtered flow rate while still capturing the target pollutants. Additional features include adjustable support flanges, optional oil boom, lightweight welded aluminum construction, and a hooded bypass to prevent resuspension of captured floatables. The ScreenBox BMP filters are designed using state-of-the-art CAD Modeling software and are fabricated using computer-controlled plasma cutting and forming equipment. Like all Fabco products, the ScreenBox BMP is Made in the USA.

Product Features Summary:

- Designed with high durability 300-Series stainless steel woven wire cloth to collect solid materials, sediments, trash, and other debris while maintaining high flow rates.
- Typically, the ScreenBox BMP combines two (2) screen mesh sizes with Percent Open Areas (POA) of 56% to 68% to maintain high flow rates during storm events.
- Includes a removable hooded bypass to prevent resuspension of captured debris.
- Includes 2" flange adjustability in both directions to accommodate most drain irregularities. No special tools are required for installation or maintenance.
- Corner lifting tabs are provided to lift the ScreenBox BMP out of the storm drain using standard grate hooks.
- An oil boom option is also available for added environmental protection.

Storm Drain Inlets:

Storm drain inlets tend to trap sediments and debris that are washed off the road surface during a storm event. These pollutants, if not removed from the basins and inlets, have the potential to pollute water bodies. It is recommended that drain inlets are inspected four times per year, and cleaned when necessary to remove accumulated sediment, fluids, and trash. This maintenance should also include inspection of the oil boom and its replacement if necessary.

General Procedures:

Safety tips:

- **Have a Plan.** Every road project should have a transportation management plan. The plan should consist of a temporary traffic control plan to protect workers by safely conducting traffic around or through the work zone.
- **Properly Control Traffic.** The work zone should consist of an advanced warning area with warning signs alerting motorists of upcoming changes in driving conditions, a transition area using traffic control devices for lane closures and traffic pattern shifts, a buffer area, the work area and a termination area to allow traffic to resume back to normal and a sign indicating that the work zone has ended. All traffic control devices whether its cones, barrels, barriers or signs should comply with the Federal Highway Administration's [Manual on Uniform Traffic Control Devices \(MUTCD\)](#) along with any state agency requirements.
- **Wear Proper Safety Equipment.** Proper safety equipment should be worn by all personnel inside the work zone. Personal protective equipment (PPE) including hard hats, steel-toed boots, highly visible clothing and, depending on the noise levels, hearing protection. All PPE should meet or exceed the American National Standards Institute's (ANSI) developed standards. All highly visible clothing whether it's a vest, jacket or shirt should be bright fluorescent orange or lime/yellow and also have visible reflective material especially if working at night and should meet ANSI Class 2 or 3 standards.
- **Lifting Caution.** Grates can be extremely heavy. Some type of lifting mechanism is highly recommended.
- **Be Aware of Your Surroundings.** Regardless of what your job duties entail in the work zone you should always be mindful of what's going on around you. Whenever possible, face traffic while inside the work zone and have a spotter available when you have to have your back turned.
- **Have a Competent Person on Hand.** A competent person should be onsite whenever work is being performed. According to OSHA, a competent person is someone who is "capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them." A competent person is needed to conduct hazard assessments and regular inspections of the worksite. A competent person is also needed to select the appropriate class of PPE to be used by workers and to approve the appropriate types of traffic control devices. Workers should report any unsafe hazards or equipment to the competent person assigned to the work zone so they can be corrected immediately.

Inspection:

Inspection and cleaning should be performed only after NO rainfall for at least 24 hours.

Inspect the storm drain inlet and the ScreenBox BMP at least four times per year, more often if necessary. Periodically inspect the surrounding areas for pollutants, such as leaks from dumpsters, minor spills, and oil dumping. Act to have the pollutant source removed.

Visually inspect the storm drain for heavy sediment, trash and debris loading. A battery powered flashlight or droplight is recommended for thorough inspection. Some telltale signs that cleaning or filter replacement is necessary are as follows:

- Standing water in the ScreenBox BMP.
- Cannot see the ScreenBox BMP filter unit due to sediment, trash and debris, etc.

Record observations and comments on the maintenance log sheet. In addition, the use of digital photographs and/or sketches may be warranted to maintain the most accurate historical records.

Cleaning Frequency:

There are no hard and fast rules regarding cleaning frequency. The fact is, installation sites with higher than expected sediment loads or areas with significant trees and foliage require more maintenance. In general, Fabco Industries recommends cleaning ScreenBox BMP units when they become about one-third full in order to maintain sediment-trapping capacity and sustain optimal performance of the filter system. In addition, all cleaning operations should be performed in a manner that keeps removed sediment and contaminated water from being discharged back into the storm drain system.

Cleaning:

Be sure to follow all safety and traffic control protocols. With the storm drain grate removed, the ScreenBox BMP filter unit is now accessible for cleaning (note that it is not always necessary to remove the filter unit from the storm drain for cleaning). First, remove the bypass hood. Then carefully remove the sediment and debris from the storm drain and filter system. This can be done manually or with a vacuum device. Thoroughly rinse the ScreenBox BMP filter with a high-pressure hose to dislodge and remove any sediment and debris that may be clogging the bypass or screened openings. If a high-pressure hose is not available, a stiff scrub-brush can be used instead.

Again, Record observations and comments on the maintenance log sheet. In addition, the use of digital photographs and/or sketches may be warranted to maintain the most accurate historical records.

When possible, measures should be taken to keep the inlet grate cleared of debris and litter.

Materials Handling:

Under typical local and state regulations, the collected material from storm drains is considered equivalent to material collected during street sweeping operations. This material is normally considered contaminated non-hazardous solid waste. However as with all waste products intended for disposal, it is up to the generator to properly characterize the waste prior to disposal. After proper characterization the generator can proceed with disposal under the guidance of local, state and federal regulations.

Inspection and Maintenance Log Sheet
- ScreenBox BMP -

Maintenance Company

Company Name:

Onsite Technician:

Contact Phone Number:

Treatment System

Date of Maintenance:

ScreenBox BMP Filter Type (Size/Type):

Trench Drain Location:

Maintenance Item

Comments

Storm Grate is Clear of Debris Prior to Maintenance (Y/N):

Standing Water Depth (prior to maintenance) in Drain, in:

Structural Damage:

Maintenance Performed:

Additional Work Required:

Structural Repairs:

Other: