



A Division of RGF Environmental Group, Inc.

**AFL INDUSTRIES**

1101 West 13th Street

Riviera Beach, Florida 33404

(561) 844-5200

# PRODUCT BULLETIN NO. 8-05.B.1 A

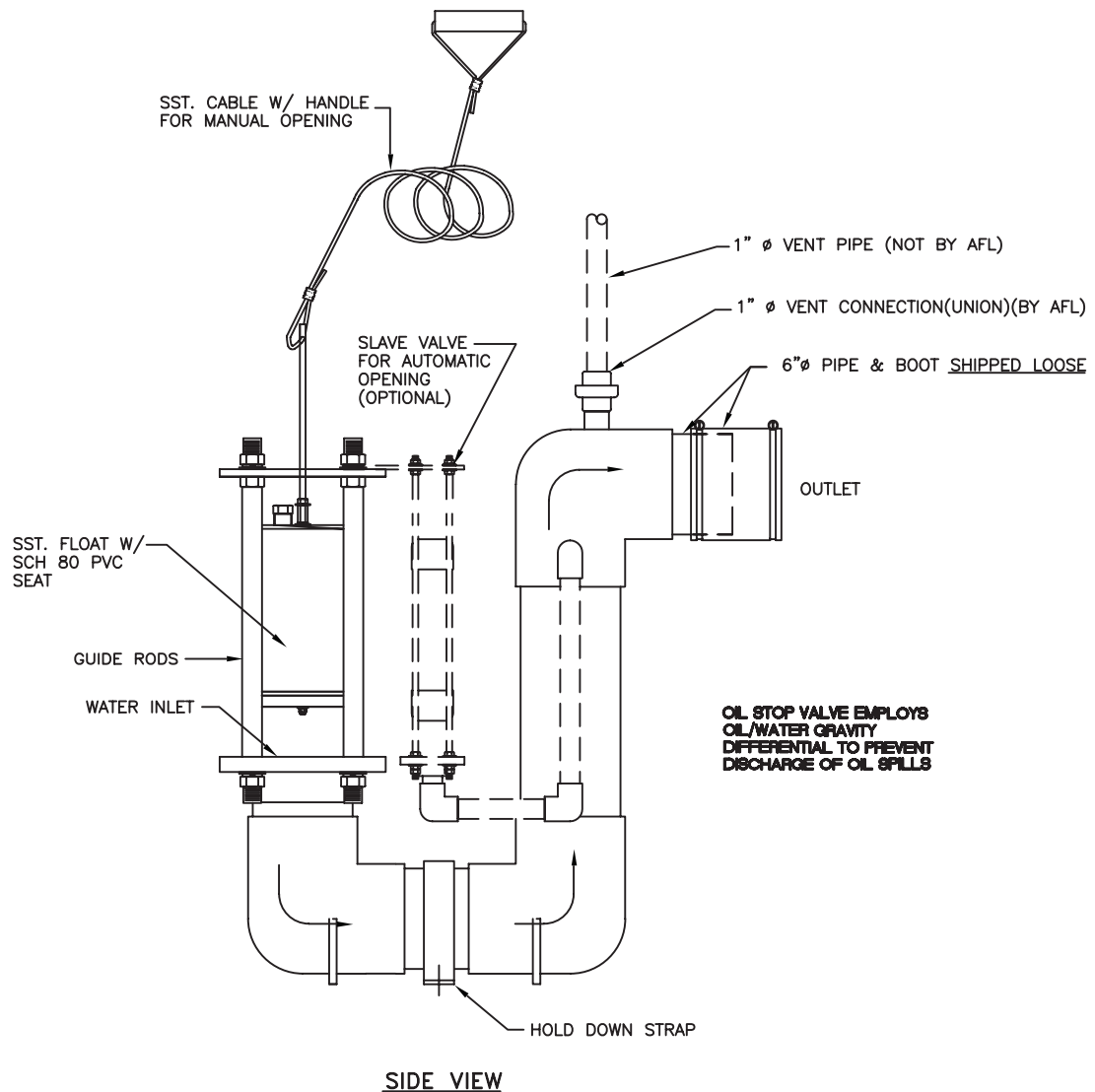
**AFL  
OIL STOP VALVE**  
PVC MODELS  
FLOW RATES 0-600 GPM

## FUNCTION

PREVENTS DISCHARGE OF  
SEPARATED OIL TO SEWERS/STREAMS



ENGINEERING A BETTER ENVIRONMENT



## FEATURES

**Dependable Gravity Operation**  
**Single Moving Part**  
**Large Flow Capacity**  
**Self-Opening (Slave Valve Option)**  
**No Power Requirement**  
**Corrosion Resistant Construction**  
**Sizes: 4", 6" and 8"**

Large, unpredictable oil spills can defeat the most conservatively designed pollution control system, but while the cost of such a system can be prohibitive, the consequences of not controlling a spill can be equally catastrophic. The AFL/Clark Oil Stop Valve (OSV) is designed to solve these problems.

Oil Stop Valves confine even large oil spills to the premises. The OSV is available from AFL prepackaged in a fiberglass catch basin or as an option on AFL oil/water separators. In addition, the OSV is available separately for installation in existing separators, catch basins or manholes.

The OSV has only one moving part, a ballasted float set at a specific gravity between that of oil and water. When an oil spill occurs, the float loses buoyancy as the oil level increases until it finally seats itself on the discharge port. Thus the oil spill is confined.

The Oil Stop Valve is fabricated from non-corrosive PVC and stainless steel. Standard sizes are 4", 6" and 8".

Consider the OSV for those application where oil spills are possible, but unpredictable such as electrical transformers, oil storage areas, and transportation fueling systems. The Oil Stop Valve is the most cost effective method to prevent a major disaster.

## OSV Options

**SLAVE VALVE** - The slave is added to an Oil Stop Valve to allow the main float to reopen. Due to lack of water the main float will close. When additional rain water enters the sump, the slave valve float will open and allow water to enter the Oil Stop Valve Body. As the water level rises the main float will open due to water pressure pushing up against the bottom of the main float. In the event of an oil spill, the slave valve float and the main float will close containing the spill.

**LEVEL SWITCH**

**FREEZE PROTECTION**

## HOW TO PICK THE PROPER VALVE TYPE & SIZE FOR YOUR APPLICATION

### PVC

PVC models are the most economical way to prevent bulk hydrocarbon spills. Corrosion resistant PVC construction is an ideal choice for warm climates.

### STAINLESS STEEL NOT EXTENDED

Stainless steel not extended models are used in lieu of PVC units in colder climates which may eliminate the necessity for an electric freeze protection package.

### STAINLESS STEEL EXTENDED

Stainless steel extended model is our most popular valve if fire is possible. By extending the pipe thru the sump wall, there is no connection inside the sump to burn and fail.

### VALVE SIZE

### (MAX) FLOW RATE

|             |         |
|-------------|---------|
| 4" DIAMETER | 160 GPM |
| 6" DIAMETER | 360 GPM |
| 8" DIAMETER | 600 GPM |

### WARNING: EXCEEDING THESE FLOW RATES MAY CAUSE PREMATURE CLOSING.

#### AFL RECOMMENDS:

- Sanitary catch basin used to prevent premature valve closure due to leakage.
- 4' diameter catch basin for the OSV-4 and OSV-6, and a 5' diameter for the OSV-8.



A Division of RGF Environmental Group, Inc.

**AFL INDUSTRIES**

1101 West 13th Street

Riviera Beach, Florida 33404

(561) 844-5200

# PRODUCT BULLETIN

NO. 8-05.B.1 B

## AFL OIL STOP VALVE

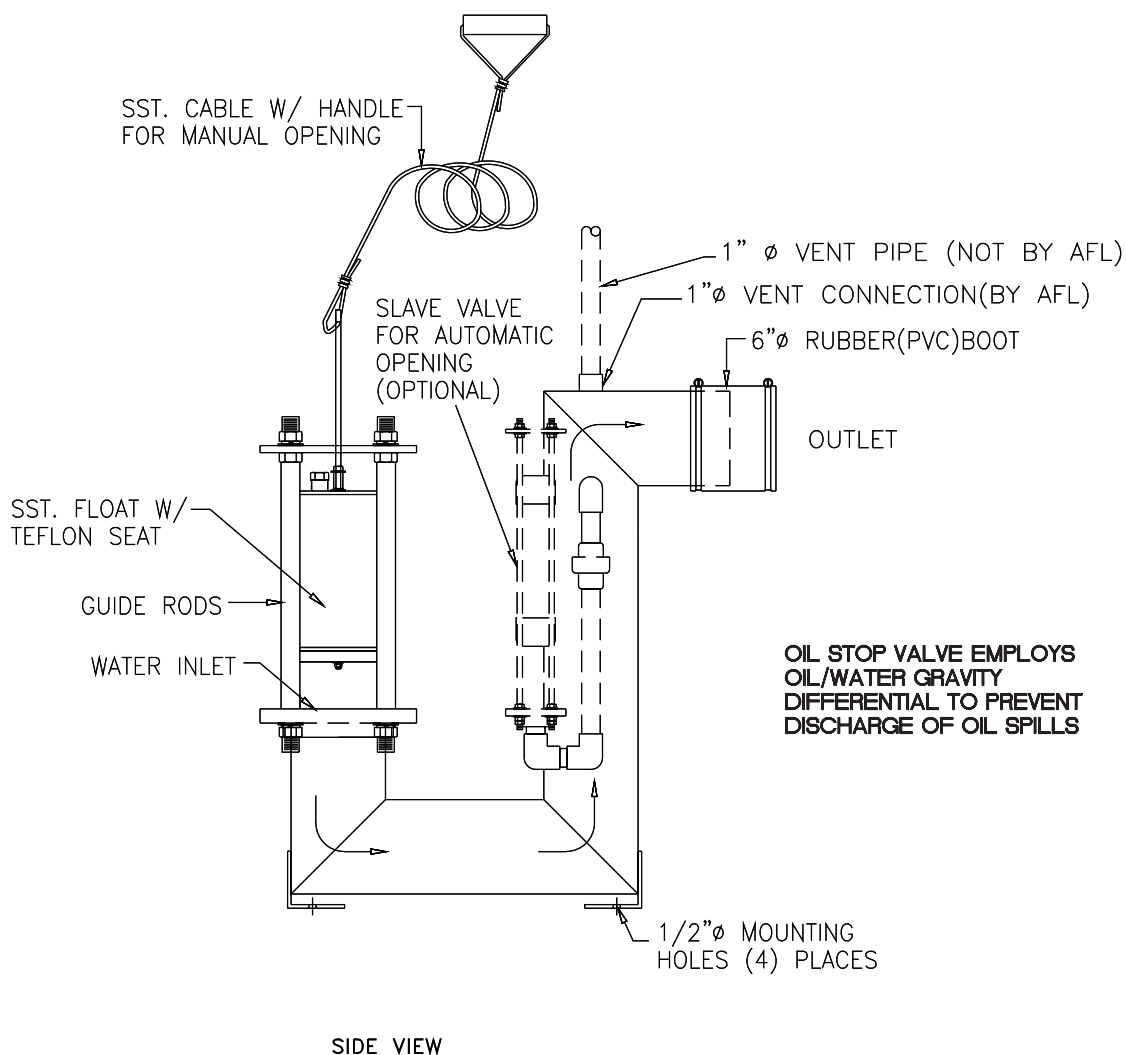
STAINLESS STEEL NOT EXTENDED MODELS  
FLOW RATES 0-1400 GPM

## FUNCTION

PREVENTS DISCHARGE OF  
SEPARATED OIL TO SEWERS/STREAMS



ENGINEERING A BETTER ENVIRONMENT



SIDE VIEW

## FEATURES

**Dependable Gravity Operation**  
**Single Moving Part**  
**Large Flow Capacity**  
**Self-Opening (Slave Valve Option)**  
**No Power Requirement**  
**Corrosion Resistant Construction**  
**Sizes: 4", 6", 8", 10" and 12"**

Large, unpredictable oil spills can defeat the most conservatively designed pollution control system, but while the cost of such a system can be prohibitive, the consequences of not controlling a spill can be equally catastrophic. The AFL/Clark Oil Stop Valve (OSV) is designed to solve these problems.





Oil Stop Valves confine even large oil spills to the premises. The OSV is available from AFL prepackaged in a fiberglass catch basin or as an option on AFL oil/water separators. In addition, the OSV is available separately for installation in existing separators, catch basins or manholes.

The OSV has only one moving part, a ballasted float set at a specific gravity between that of oil and water. When an oil spill occurs, the float loses buoyancy as the oil level increases until it finally seats itself on the discharge port. Thus the oil spill is confined.

The Oil Stop Valve is fabricated from non-corrosive stainless steel. Standard sizes are 4", 6", 8", 10" and 12". Larger piping systems can be accommodated by manifolding units together.

Consider the OSV for those application where oil spills are possible, but unpredictable such as electrical transformers, oil storage areas, and transportation fueling systems. The Oil Stop Valve is the most cost effective method to prevent a major disaster.

## OSV Options

**SLAVE VALVE** - The slave is added to an Oil Stop Valve to allow the main float to reopen. Due to lack of water the main float will close. When additional rain water enters the sump, the slave valve float will open and allow water to enter the Oil Stop Valve Body. As the water level rises the main float will open due to water pressure pushing up against the bottom of the main float. In the event of an oil spill, the slave valve float and the main float will close containing the spill.

**LEVEL SWITCH**

**FREEZE PROTECTION**

## HOW TO PICK THE PROPER VALVE TYPE & SIZE FOR YOUR APPLICATION

### PVC

PVC models are the most economical way to prevent bulk hydrocarbon spills. Corrosion resistant PVC construction is an ideal choice for warm climates.

### STAINLESS STEEL NOT EXTENDED

Stainless steel not extended models are used in lieu of PVC units in colder climates which may eliminate the necessity for an electric freeze protection package.

### STAINLESS STEEL EXTENDED

Stainless steel extended model is our most popular valve if fire is possible. By extending the pipe thru the sump wall, there is no connection inside the sump to burn and fail.

### VALVE SIZE

4" DIAMETER  
6" DIAMETER  
8" DIAMETER  
10" DIAMETER  
12" DIAMETER

### (MAX) FLOW RATE

160 GPM  
360 GPM  
600 GPM  
900 GPM  
1400 GPM

**WARNING: EXCEEDING THESE FLOW RATES MAY CAUSE PREMATURE CLOSING.**

**AFL RECOMMENDS:**

- Sanitary catch basin used to prevent premature valve closure due to leakage.
- 4' diameter catch basin for the OSV-4 and OSV-6, and a 5' diameter for the OSV-8, OSV-10 and OSV-12.





A Division of RGF Environmental Group, Inc.

**AFL INDUSTRIES**

1101 West 13th Street

Riviera Beach, Florida 33404

(561) 844-5200

# PRODUCT BULLETIN

NO. 2-05.B.1

## PRIMARY TREATMENT

VERTICAL TUBE COALESCING SEPARATOR (VTC)

0-500 GPM IN A SINGLE STRUCTURE

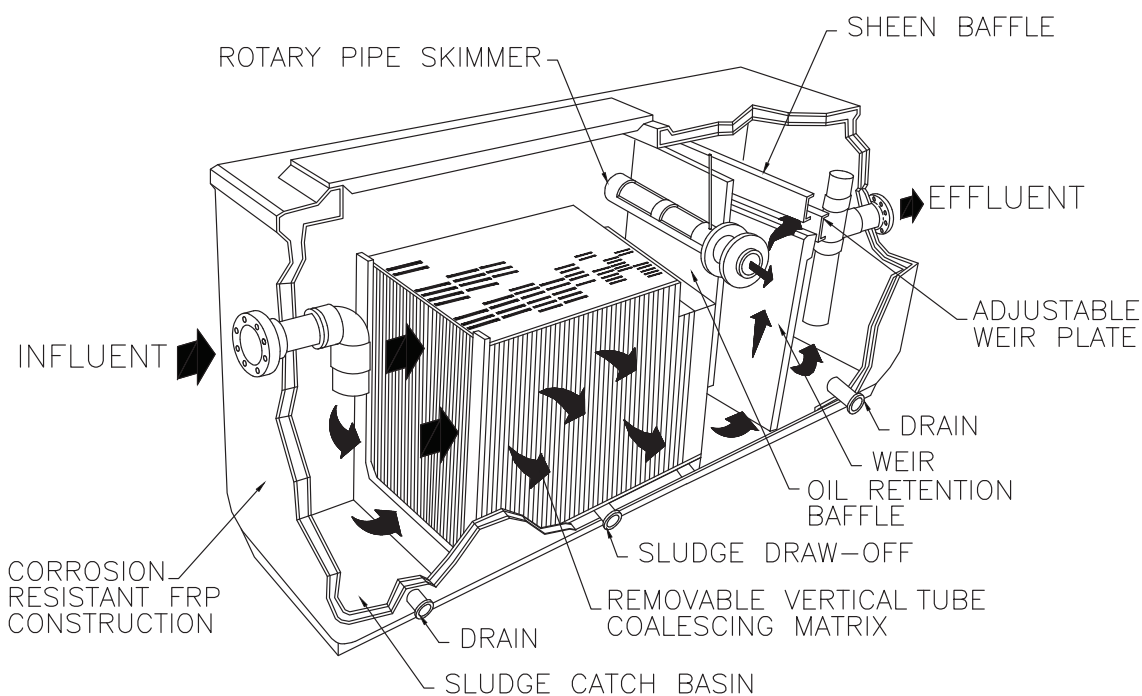
600 GPM AND GREATER REQUIRE MULTIPLE STRUCTURES

## FUNCTION

REMOVES FREE OILS

NON-PERMANENT MECHANICALLY EMULSIFIED OILS

SETTLABLE SOLIDS



## FEATURES

**More efficient separation**

**Flow rates: 5-2,500 GPM**

**Low heat transfer, less than 1.0 U factor**

**Corrosion-resistant throughout**

**Pre-engineered, prepackaged, ready to install**

**Self contained, no power source required**

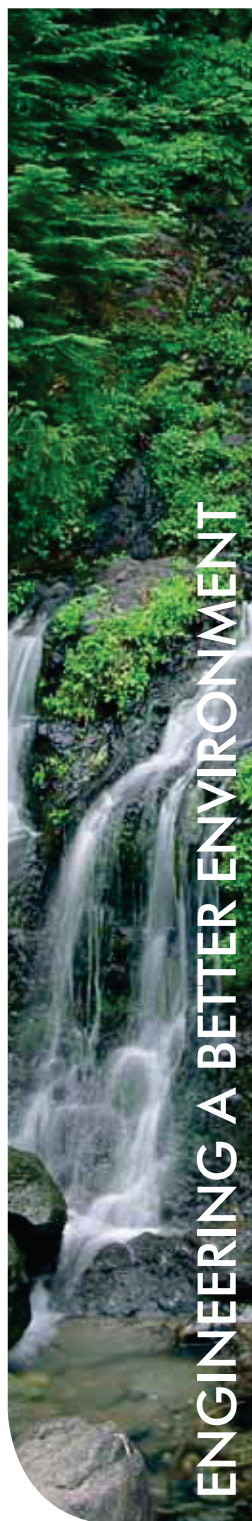
**Built-in oil storage (optional)**

The VTC removes hydrocarbons and settleable solids from industrial wastewater and coolant. In operation, this separator accepts industrial liquid waste in the inlet chamber. Here settleable solids fall to the bottom as sludge for periodic removal.

Then the waste stream enters the coalescing separation chamber. A matrix of vertically-positioned polypropylene tubes gives laminar flow characteristics to the liquid. The results is a liquid more responsive to gravity separation.

The tubes also provide a coalescing medium. Oleophilic innature, they attract small oil globules which coalesce with other globules, increase in size and buoyancy, then break away to rise through the tubes to the top. Surface oil drains by gravity into a rotary pipe skimmer for discharge to a storage facility.

ENGINEERING A BETTER ENVIRONMENT



Performance that can be expected of the VTC separator is:

1. Removal of oil globules down to **20-micron size**
2. Reduction of oil content to **10mg/ltr/10ppm.**

The VTC removes even non-permanent mechanically emulsified oil. It leaves no visible sheen and traps the solids too. In metalworking and similar applications, it removes more than 99 percent of tramp oils from coolants.

The VTC incorporates a molded fiberglass construction. Internally reinforced, the structure withstands severe soil and hydraulic loadings.

The entire surface is covered with corrosion-resistant gel coat, integrally-colored and ultra-violet resistant. Since the envelope and fittings are corrosion-resistant, the separator can be installed in many hostile environments. No sacrificial cathodic protection is required.

Equipment and construction options are available. These include heater packages, sludge removal provisions, effluent pump-out systems, built-in oil storage tank, oil stop valve and special resins or stainless steel construction.

## VTC Options

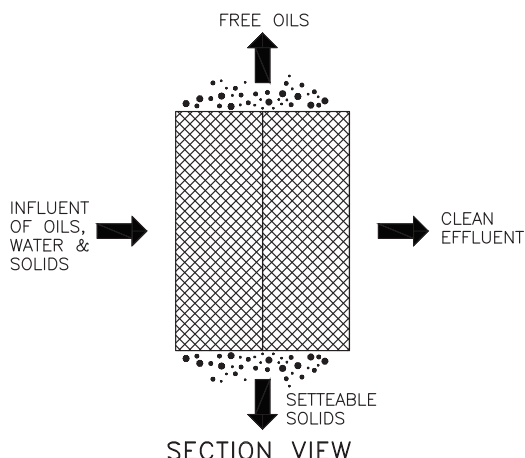
Ladders and Hand Rails  
Height Extension  
Internal Oil Storage  
Separate Oil Storage  
Manifolding In and Out  
Oil Stop Valve Installed

Stainless Steel Construction  
Special Resins  
FRP Piping  
CPVC Piping  
Delta Packs

Freeze Protection - Elect  
Influent Pumps Air and Elect  
Effluent Pumps Air and Elect  
Sludge Pumps Air and Elect  
Level Switch Oil and Water  
Nema 4x and Nema 7 Packages  
Floating Skimmers - Air Only

## TUBES REMOVE OIL

VERTICAL TUBE COALESCING  
PRINCIPLE OF OPERATION



At the heart of the AFL Industries separator is a unique vertical-tube coalescer. Tubes reduce free oil content of effluent down to **10 mg/ltr/10ppm**, or less. The growing oil globules, when sufficiently buoyant, break free to rise to the surface. The random tube matrix provides laminar flow essential for proper separation. Small oil droplets are attached to the virgin-polypropylene tube matrix because of its oil-attracting characteristics. Once attached, they provide additional surface area to the tubes while attracting other small oil droplets with their own inherent properties. This process combines oil droplets until they are large enough to rise to the surface to await periodic removal. The coalescer is lightweight and removable for maintenance.



A Division of RGF Environmental Group, Inc.

**AFL INDUSTRIES**

Copyright RGF©2013

1101 W. 13th Street Riviera Beach, Florida 33404 (561) 844-5200

A Division of RGF Environmental Group, Inc. [www.aflindustries.com](http://www.aflindustries.com)





A Division of RGF Environmental Group, Inc.

**AFL INDUSTRIES**

1101 West 13th Street

Riviera Beach, Florida 33404

(561) 844-5200

## PRODUCT BULLETIN

### PRIMARY TREATMENT

VERTICAL TUBE COALESCING SEPARATOR (CVF)

0-100 GPM IN A SINGLE STRUCTURE

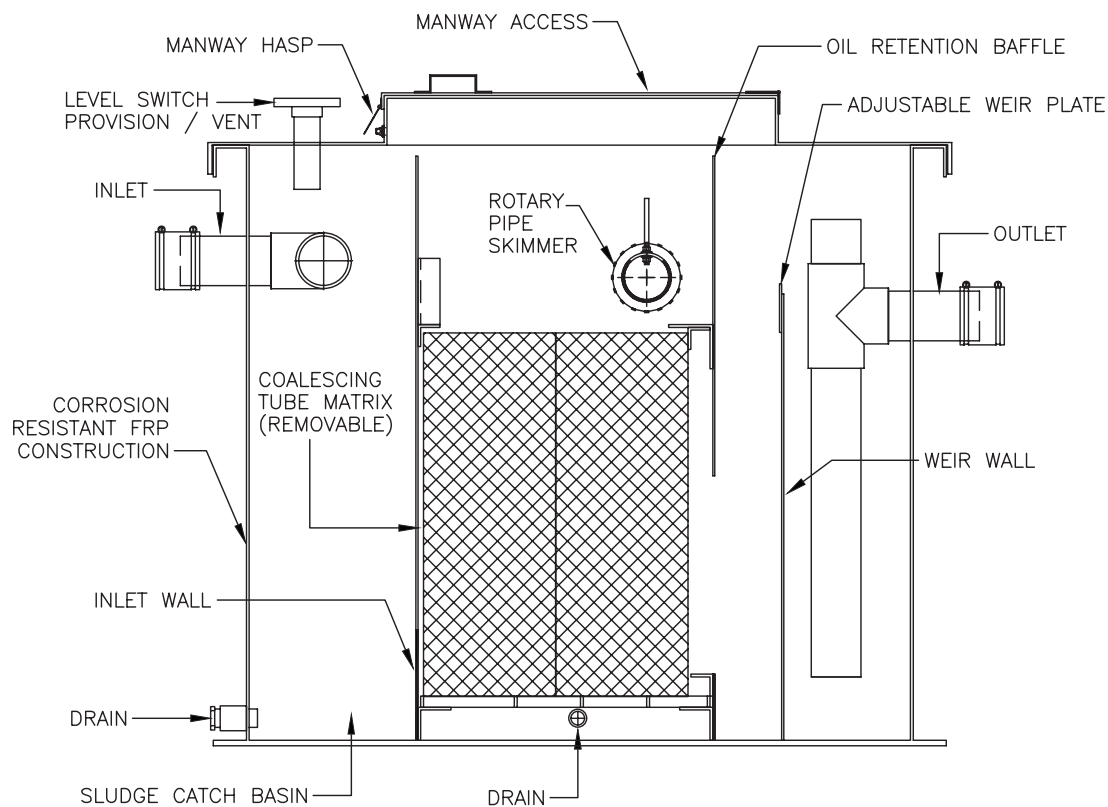
NO. 2-15.B.1

### FUNCTION

REMOVES FREE OILS

NON-PERMANENT MECHANICALLY EMULSIFIED OILS

SETTLEABLE SOLIDS



### FEATURES

**More efficient separation**

**Flow rates: 0-100 GPM**

**Low heat transfer, less than 1.0 U factor**

**Corrosion-resistant throughout**

**Pre-engineered, prepackaged, ready to install**

**Self contained, no power source required**

**Built-in oil storage (optional)**

The CVF removes hydrocarbons and settleable solids from industrial wastewater and coolant. In operation, this separator accepts industrial liquid waste in the inlet chamber. Here settleable solids fall to the bottom as sludge for periodic removal.

Then the waste stream enters the coalescing separation chamber. A matrix of vertically-positioned polypropylene tubes gives laminar flow characteristics to the liquid. The results is a liquid more responsive to gravity separation.

The tubes also provide a coalescing medium. Oleophilic in nature, they attract small oil globules which coalesce with other globules, increase in size and buoyancy, then break away to rise through the tubes to the top. Surface oil drains by gravity into a rotary pipe skimmer for discharge to a storage facility.

ENGINEERING A BETTER ENVIRONMENT





Performance that can be expected of the CVF separator is:

1. Removal of oil globules down to **20-micron size**
2. Reduction of oil content to **10mg/ltr/10ppm.**

The CVF removes even non-permanent mechanically emulsified oil. It leaves no visible sheen and traps the solids too. In metalworking and similar applications, it removes more than 99 percent of tramp oils from coolants.

The CVF incorporates a molded fiberglass construction. Internally reinforced, the structure withstands severe soil and hydraulic loadings.

The entire surface is covered with corrosion-resistant gel coat, integrally-colored and ultra-violet resistant. Since the envelope and fittings are corrosion-resistant, the separator can be installed in many hostile environments. No sacrificial cathodic protection is required.

Equipment and construction options are available. These include heater packages, sludge removal provisions, effluent pump-out systems, built-in oil storage tank, and special resins or stainless steel construction.

## CVF Options

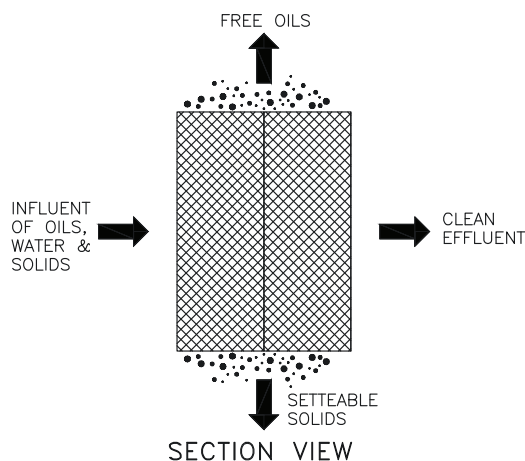
Height Extension  
Internal Oil Storage  
Separate Oil Storage  
Stainless Steel Construction  
Special Resins

FRP Piping  
CPVC Piping  
Delta Packs  
Freeze Protection - Elect  
Influent Pumps Air and Elect

Effluent Pumps Air and Elect  
Sludge Pumps Air and Elect  
Level Switch Oil and Water  
Nema 4x and Nema 7 Packages  
Floating Skimmers - Air Only

## TUBES REMOVE OIL

### VERTICAL TUBE COALESCING PRINCIPLE OF OPERATION



At the heart of the AFL Industries separator is a unique vertical-tube coalescer. Tubes reduce free oil content of effluent down to **10 mg/ltr/10ppm**, or less. The growing oil globules, when sufficiently buoyant, break free to rise to the surface. The random tube matrix provides laminar flow essential for proper separation. Small oil droplets are attached to the virgin-polypropylene tube matrix because of its oil-attracting characteristics. Once attached, they provide additional surface area to the tubes while attracting other small oil droplets with their own inherent properties. This process combines oil droplets until they are large enough to rise to the surface to await periodic removal. The coalescer is lightweight and removable for maintenance.



**AFL Industries, 1101 West 13<sup>th</sup> St, Riviera Beach, FL 33404**  
**PHONE: (561) 848-1826 FAX: (561) 848-9454**  
**E-Mail: Sales@aflindustries.com**

---

**AFL-STD  
MODEL  
OSV-12 SS  
w/ Slave Valve**

**INSTALLATION, OPERATION &  
MAINTENANCE BROCHURE**

**AFL INDUSTRIES**  
**1101 WEST 13<sup>TH</sup> STREET**  
**RIVIERA BEACH, FL 33404**

## **TABLE OF CONTENTS**

|                                      |             |
|--------------------------------------|-------------|
| About the Product                    | Page 1      |
| Installation Instructions            | I-O-M: 12.2 |
| General Instructions                 | I-O-M: 0.01 |
| Operation & Maintenance Instructions | I-O-M: 8.10 |
| Oil Stop Valve Maintenance           | I-O-M: 12.7 |
| Equipment Specifications             | Contract    |
| 12"□ Oil Stop Valve (SS)             | Drawing     |
| Float Guide Lift Cable               | Drawing     |



## **The Oil Stop Valve by AFL**

The AFL Oil Stop Valve prevents discharge of separated oil to sewers and streams.

Features:

- Dependable gravity operation
- Single moving part
- Large flow capacity
- Self-opening (optional)
- No power requirement
- Corrosion resistant construction
- Flow rates to 1400 GPM through a single valve
- Discharge heights and direction can be custom engineered for your specific application.
- ASTM 150 Lb. bolt together discharge flanges are available upon request.
- High water flashing light and or audible alarms are available. Either on site or remote.

Large, unpredictable oil spills can defeat the most conservatively designed pollution control system.

But while the cost of such a system can be prohibitive, the consequences of not controlling a spill can be equally catastrophic. The AFL Oil Stop Valve (OSV) is designed to solve these problems.

Oil Stop Valves confine even large oil spills to the premises. The OSV is available from AFL prepackaged in a fiberglass or steel catch basin or as an option on AFL oil/water separators. In addition, the OSV is available separately for installation in existing separators, catch basins or manholes.

The OSV has only one moving part, a ballasted float set at a specific gravity between that of oil and water. When an oil spill occurs, the float loses buoyancy as the oil level increases until it finally seats itself on the discharge port. Thus, the oil spill is confined.

The Oil Stop Valve is fabricated from non-corrosive PVC and stainless steel. Standard sizes are 4", 6", 8", 10", 12" discharge piping. Larger piping systems can be accommodated by manifolding units together. Optional screening can be provided if necessary to prevent the discharge of large floating solids.

Consider the OSV for those applications where oil spills are possible, but unpredictable such as electrical transformers, oil storage areas, and transportation fueling systems. The Oil Stop Valve is the most cost effective method to prevent a major disaster.

SERVICE  
MANUAL

INSTALLATION  
OVERVIEW

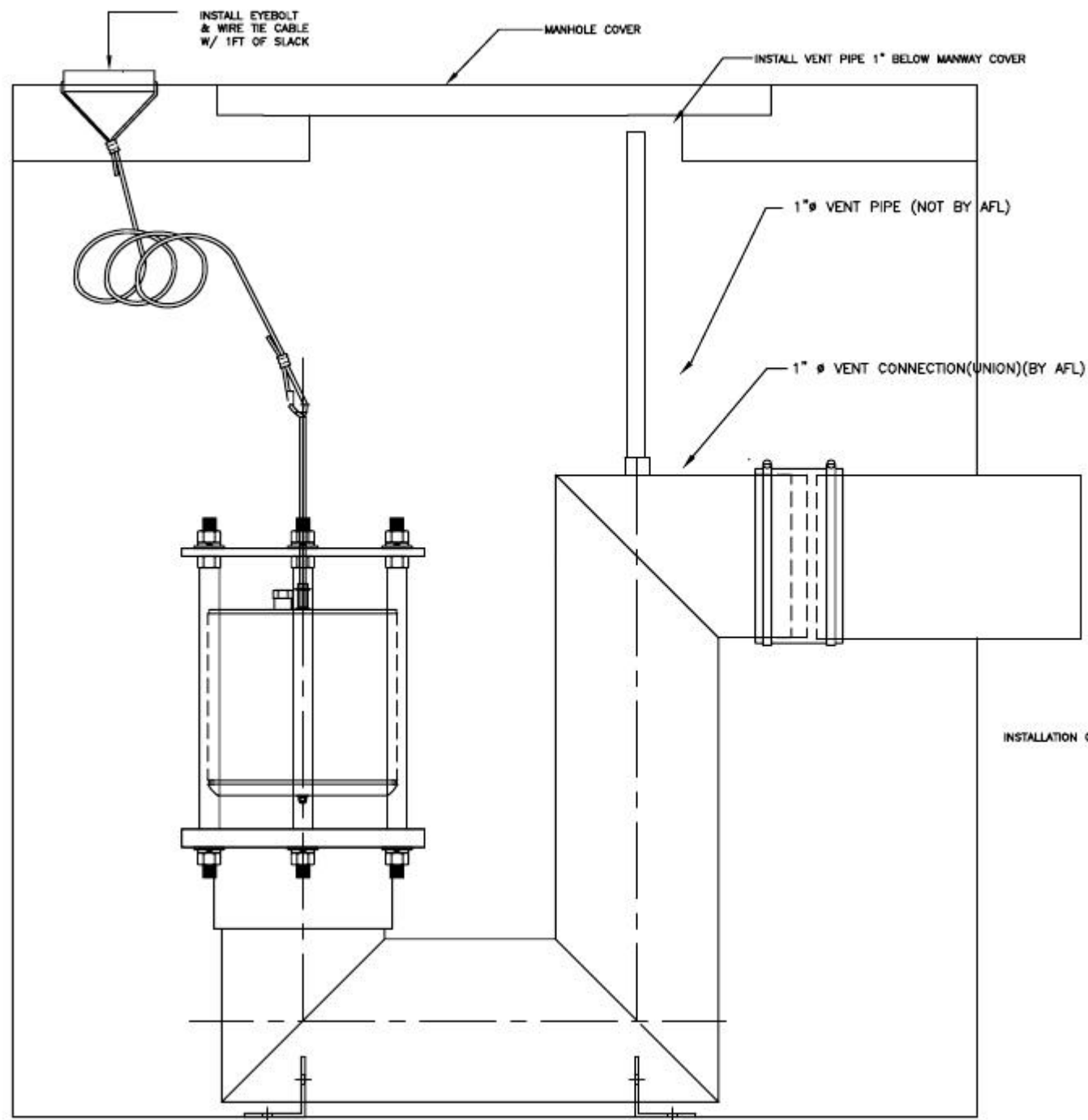
Page 1 OF 2

PRODUCT:

OIL STOP VALVES

## OSV10 & 12

1. Unit must be installed utilizing a crane, backhoe, fork truck, or similar equipment due to the size and weight (approximately 350-425 pounds).
2. Pick up unit slowly using the supplied lifting cable harness.
3. Unit will tip to the outlet pipe side. This is the desired angle to prevent excess pressure on the float cage.
4. Lower unit into manhole.
5. Remove lifting harness for use on next valve.
6. Align outlet of valve with outlet pipe, leaving 1/2" clearance between them.
7. Slide rubber boot from valve outlet pipe onto outlet pipe. Tighten stainless steel clamps on both ends.
8. Install anchors using the (4) 5/8" diameter holes provided in the support angles at the bottom of the valve.
9. Attach the stainless steel float guide cable to the under side of concrete lid within reach of the manhole cover. This will allow for manual opening of the valve.  
**NOTE: DO NOT ATTEMPT TO OPEN VALVE WHEN SUMP IS EMPTY OF WATER.  
LEVEL MUST BE AT INVERT OF OUTLET TO LIFT.**
10. Install 1" vent/siphon leaving approximately 1" gap between pipe and underside of lid.
11. Fill manhole with clean water to outlet invert. The 3/8" guide rod should be approximately 8" above the cage top plate.  
**NOTE: If float did not open, fill vent pipe with water to equalize pressure on valve float.**
12. Push down gently on guide rod, release pressure from rod and allow float to rise. Upon rising, unit is ready for operation.
13. Step #12 is used periodically to insure float operation. If float remains closed, gently pull on lift cable to break seat suction.



INSTALLATION OVERVIEW PAGE 2



**SERVICE  
MANUAL**

**GENERAL  
INSTRUCTIONS**

**Page 1 OF 1**

**PRODUCT:**

**OIL STOP VALVES**

**CONTRACTOR - PLEASE READ THIS**

**INSTRUCTION CAREFULLY**

AFL Industries provides you with several valuable aids, and the few minutes you spend reading this instruction will save you hours later. The purpose of this instruction is to acquaint you with the equipment-erecting knowledge which you now have at your fingertips.

THE INFORMATION CONTAINED IN THESE INSTRUCTIONS IS BASED ON YEARS OF EXPERIENCE WITH THE ERECTION OF OUR EQUIPMENT, BUT IS INTENDED AS A GUIDE ONLY. THE EQUIPMENT WHICH YOU HAVE AVAILABLE TO YOU MAY DICTATE OTHER, MORE CONVENIENT, PROCEDURES, BUT THE FINAL RESPONSIBILITY FOR SELECTION OF ERECTION PROCEDURES OR TOOLS IS NOT BORNE BY AFL INDUSTRIES, INC.

**IOM BROCHURE**

This brochure contains the heart of the information necessary to erect the equipment. It is structured as follows:

1. Title Page and General Instructions;
2. Table of Contents - listing of descriptions and reference numbers for all drawings;
3. Specific Contract Information.

The complete section of information provided for each contract includes:

1. Contract Equipment Specification - a written description of the equipment;
2. Installation Instructions - a general erection instruction for the equipment provided;
3. Assembly Drawings - showing the unit and its various components;
4. Operation and Maintenance Instructions;

**FURTHER ASSISTANCE**

The erection aids material provided by AFL should enable you to install, operate, and maintain the equipment. This instruction is provided to help you to help yourself, and therefore, to save you time and expense. If a problem is encountered in installing or operating the equipment which cannot be solved by referring to the available material, please feel free to contact us. Address your inquiry to our Technical Service Department, AFL Industries, Inc., 1101 West 13<sup>TH</sup> Street., Riviera Beach, Florida 33404, or call us at 561-848-1826. Our website address is **WWW.AFLINDUSTRIES.COM**.

## **PRINCIPLE OF OPERATION**

The valve operates on a buoyancy principle. The ballasted float, which is the only moving part, is weighted for a specified gravity of 0.95. In the water, the float will float and keep the valve open.

An accumulation of oil around the float will decrease the buoyant force on the float causing it to float lower in the liquid. As the oil accumulation increases, the float will sink lower and finally close the valve when the oil level is approximately 3" to 4" above the bottom of the float.

## **OSV OPERATION**

The AFL Oil Stop Valve (OSV) is designed for easy, efficient operation in confining oil spills to the premises. It is used in oil/water gravity differential separators, coalescing type separators and oil manholes to prevent the entry of oil into the effluent.

Features of the valve include:

1. Dependable gravity operation
2. Corrosion-resistant construction
3. Only one moving part
4. Outlet vent connection (siphon breaker)

The valve is available in a variety of sizes to meet a wide range of flow conditions.

The valve is supplied as an option on AFL oil/water separators and oil interceptors. It can also be provided independently for existing applications for similar equipment.

Occasionally valves are fabricated with a "weep hole" which facilitates reopening of the valves after closure due to oil spill. The weep hole equalizes the pressures in the valve and will pass a minimal amount of oil/water mixture. **This option is only added upon the customer's written request.**

On applications where this minimal discharge is objectionable, the weep hole is eliminated. In such cases, and after the valve closes due to oil spill, the valve must be re-opened manually by lifting the float by pulling on lift cable.

### **WARNING:**

**UPON VALVE CLOSURE, DUE TO A SPILL, THE OIL COLLECTED IN THE SUMP, TANK OR OIL SEPARATOR, MUST BE EVACUATED FROM THE VALVE CHAMBER AND DISPOSED OF PROPERLY. AFTER THE OIL HAS BEEN REMOVED, FILL CHAMBER WITH CLEAN WATER AND RE-OPEN THE VALVE BY LIFTING THE FLOAT BY PULLING ON LIFT CABLE. THE SAME PROCEDURE MUST BE USED DURING PROCESS START UP.**

**THE ABOVE DESCRIBED PROCEDURE ON RE-OPENING OF THE VALVE IS ESPECIALLY CRITICAL ON STOP VALVES WITHOUT WEEP HOLES.**

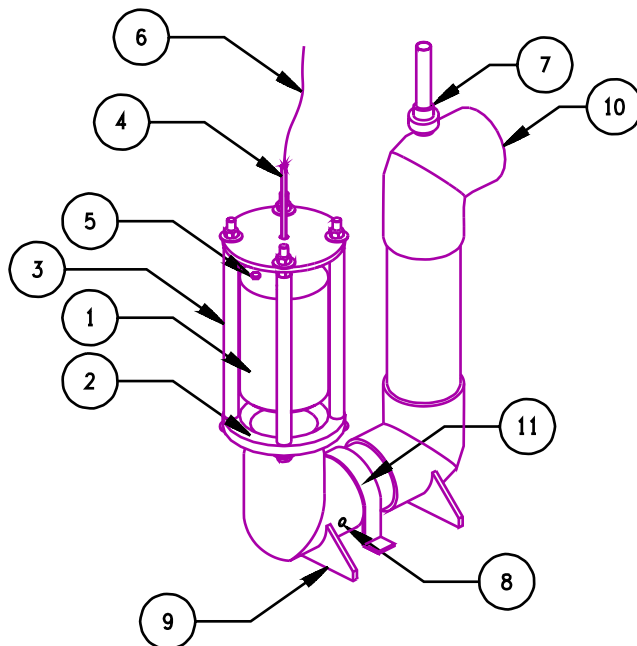
SERVICE  
MANUAL

OPERATION AND MAINTENANCE  
INSTRUCTIONS

PAGE 2 OF 5

PRODUCT:

OIL STOP VALVE



ASSEMBLY LIST

- (1) FLOAT
- (2) FLOAT SEAT
- (3) RETAINING RODS
- (4) FLOAT GUIDE
- (5) BALLAST ACCESS HOLE
- (6) 1/8"Ø MANUAL RELEASE CABLE
- (7) 1"Ø SIPHON BREAKER UNION  
( SIPHON BREAKER PIPE NOT BY AFL. )
- (8) WEEP HOLE
- (9) LEGS
- (10) DISCHARGE ELBOW
- (11) HOLD-DOWN STRAP

**INSTALLATION INSTRUCTIONS:**

**NOTE:** OSV discharge pipe (Plain ends) are shipped loose (not glued to the discharge elbow). The contractor, at his discretion, may solvent glue to the valve discharge elbow, or select other suitable means for connecting OSV

**SERVICE  
MANUAL**

**OPERATION AND MAINTENANCE  
INSTRUCTIONS**

**PAGE 3 OF 5**

**PRODUCT: OIL STOP VALVE**

discharge to outlet pipe.

a) Plain End Connections

All valves with plain end connections are supplied with PVC coupling and two stainless steel worm drive hose clamps. Slide the coupling on valve discharge and install the clamps by sliding them on the coupling.

Line up the valve discharge with outlet pipe, leave 1/4" gap between pipe ends, and slide this coupling and clamp on the outlet pipe. Do not tighten the hose clamps at this time.

b) Flanged End Connections

Line up the flange bolt holes, insert a gasket and bolt flanges. Do not tighten bolts at this time.

**WARNING: FLANGES SUPPLIED WITH THE VALVES ARE FLAT FACE; MAKE SURE THE MATING FLANGE IS OF THE SAME DESIGN. USE OF RAISED FLANGES WILL BREAK THE PVC FLANGES.**

C. Anchorage

1. OSV valves are supplied with hold down straps, which are designed to secure the valves to the concrete. After the valve has been lined up with outlet nozzle, install the strap on the valve body and use the two holes as a template for locating the anchor bolts.
2. Remove straps and drill in anchors.
3. Replace the strap and bolt down the strap.

D. Siphon Breaker

1. Siphon breaker connection is located on the valve discharge elbow and is furnished with a union to facilitate installation of siphon breaker pipe.
2. In order to calculate siphon breaker pipe length, determine the maximum liquid level in the sump/tank at a spill condition, subtract elevation of the top of the OSV discharge pipe from maximum liquid level and add 1'-6".

After the length of the pipe has been cut, attach the pipe to the union using PVC solvent cement.

Install the siphon breaker pipe on the valve and support it as required.

**NOTE:** Ideally, the top of the pipe should be as close to grade as possible.

**WARNING: IMPROPER SIPHON PIPE ELEVATION WILL RESULT IN OIL DISCHARGE THROUGH THE SIPHON BREAKER DURING SPILL CONDITION.**

CAPACITIES

A minimum recommended water level, sufficient to completely submerge the float housing, is required for proper operation of the OSV. Operation at less than the minimum recommended water level will reduce the capacity of the OSV.



The recommended operating flow rate versus its associated head loss is shown in **Figures 2.01** through **2.03**.

**NOTE:** For the valve to operate properly at required flow(s), the valve discharge pipe centerline must be below the liquid level at a distance equal to (or greater than) the associated head loss.

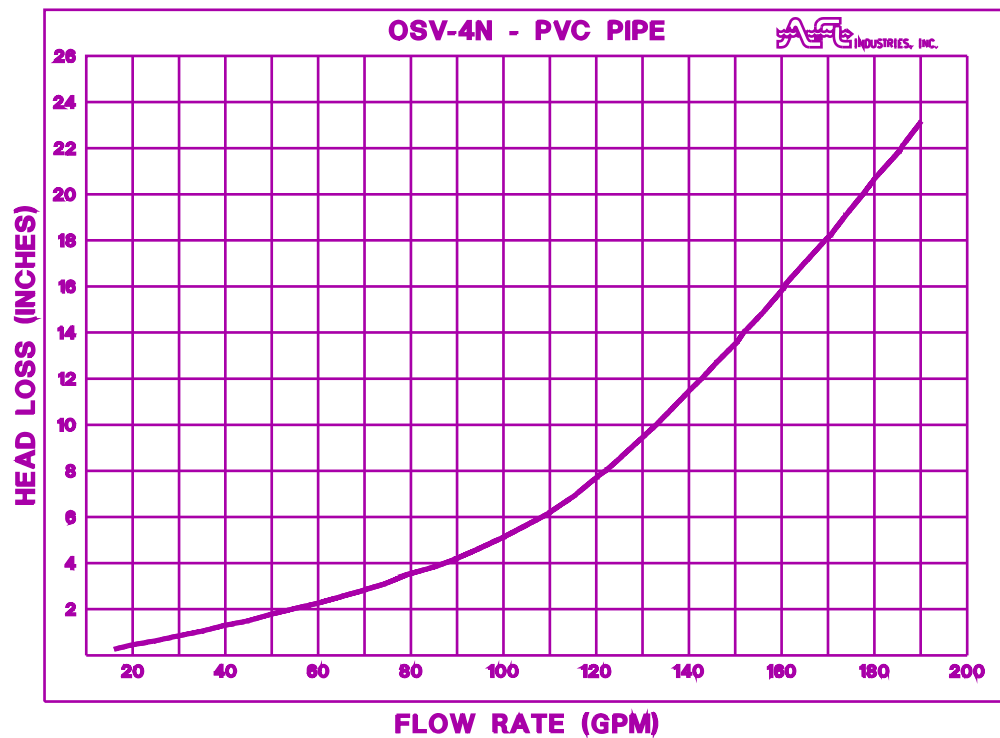


Figure: 2.01 OSV-4 HEAD LOSS VS. FLOW RATE

WARNING: IF THE VALVE IS OPERATED AT GREATER THAN DESIGN OR RECOMMENDED FLOWS IT MAY SHUT OFF AUTOMATICALLY, WHICH MAY NECESSITATE THAT THE VALVE BE REOPENED MANUALLY.

PRODUCT:

OIL STOP VALVE

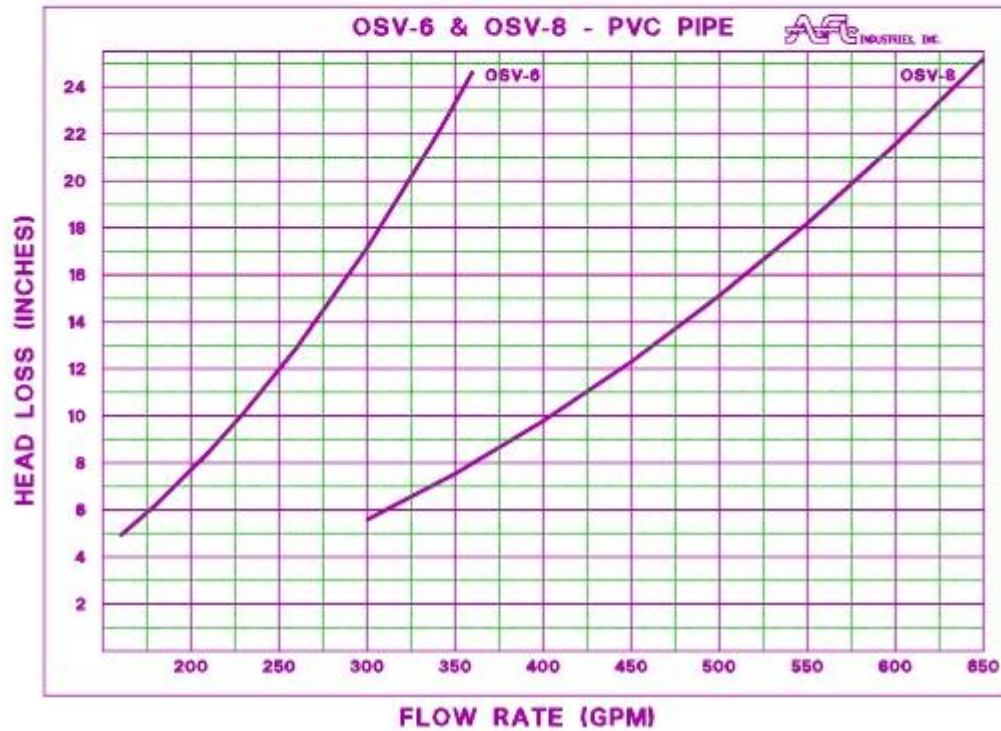


FIG. 2.02

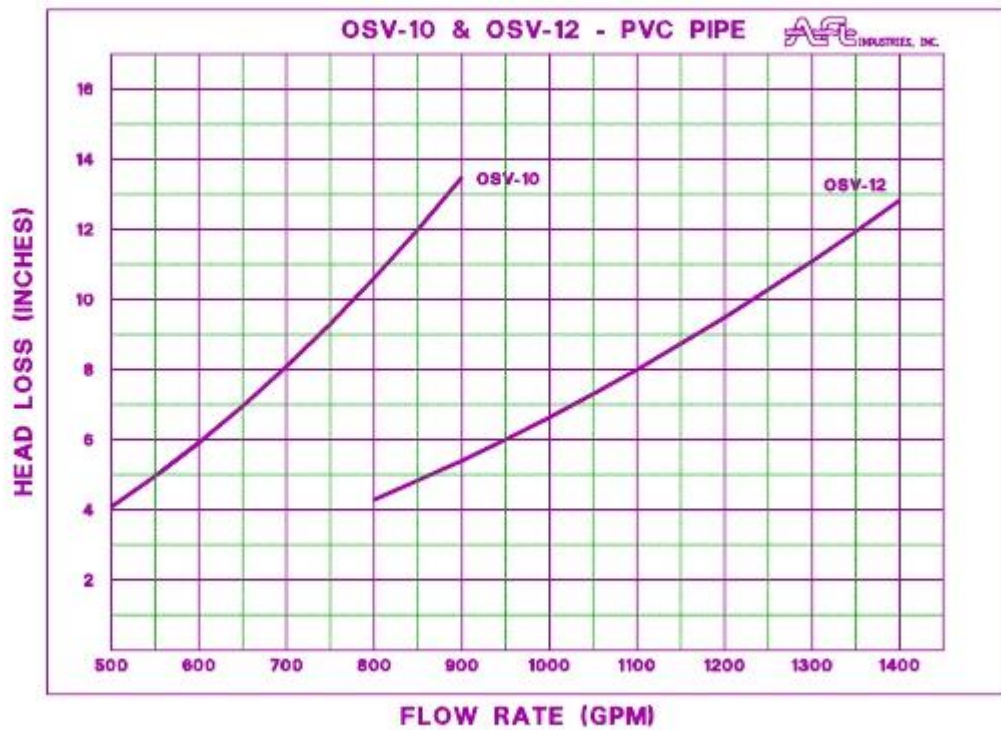


FIG. 2.03

## **OSV MAINTENANCE**

**Please read entire page before performing maintenance**

- 1.** Remove floating debris.
- 2.** Remove solids from bottom of sump as required. 6" of build up maximum.
- 3.** With water level in sump at outlet invert gently push guide rod downwards approximately 6". This will allow float to come in contact with the bottom flange.
- 4.** Release guide rod. The rod should rise up to the original position. If this procedure was successful the valve is in proper working order. Occasionally the float will stay seated on the bottom flange when pushed down. Simply pull upwards on the stainless steel cable attached to the guide rod. This will break the suction and allow the float to rise. If when attempting to push guide rod downwards and it appears to be stuck, pull up on stainless steel cable to raise the float again approximately 6". If float rises release cable. If the float sinks it is inoperable and must be replaced.
- 5.** This procedure should be performed at least yearly.
- 6.** No other maintenance is required.

**AFL INDUSTRIES  
1101 WEST 13<sup>TH</sup> STREET  
RIVIERA BEACH, FL 33404**

### **AFL OIL STOP VALVE SPECIFICATION**

|                 |                      |
|-----------------|----------------------|
| Application     | Oil Spill Prevention |
| Model Number    | OSV-12 (SST)         |
| Number of Units | One (1)              |

**Each unit will conform to the following specifications:**

|                   |                                                                                                                                                                                                                                    |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description       | Fabricated control valve designed to control Oil spills. Valve assembly shall consist of Base, guides, inlet housing, float, and Outlet connection. Valve shall be designed To operate on specific gravity differential principle. |
| Float Weight      | Ballasted for 0.95 Sp. Gr.                                                                                                                                                                                                         |
| Flow              | 1400 GPM Gravity (MAX.)                                                                                                                                                                                                            |
| Inlet Size        | 12" Diameter                                                                                                                                                                                                                       |
| Outlet Connection | 12" Diameter plain end pipe with flexible Connector and clamps.                                                                                                                                                                    |
| Vent              | 1" (SS) threaded coupling located on top of discharge pipe. Vent pipe to extend above max. oil level to be supplied by contractor. Material to be galvanized pipe.                                                                 |
| Coupling          | 1" SST threaded coupling and plug located on side of discharge pipe for future use.                                                                                                                                                |



**AFL INDUSTRIES  
1101 WEST 13<sup>TH</sup> STREET  
RIVIERA BEACH, FL 33404**

**Materials of Construction**

Base, Housing &  
Outlet Piping

304L (SS)

Float

SST w/ Teflon Seat

Float Guides

Type 304 (SS) & 304L (SS) sleeves.

**Design Requirements:**

Pressure Rating

Atmospheric

Temperature

Ambient with 450°F maximum

Valve to be shipped completely assembled by **AFL INDUSTRIES** for field installation by customer.

**AFL INDUSTRIES  
1101 WEST 13<sup>TH</sup> STREET  
RIVIERA BEACH, FL 33404**

## **AFL-STD**

### **SLAVE VALVE SPECIFICATION**

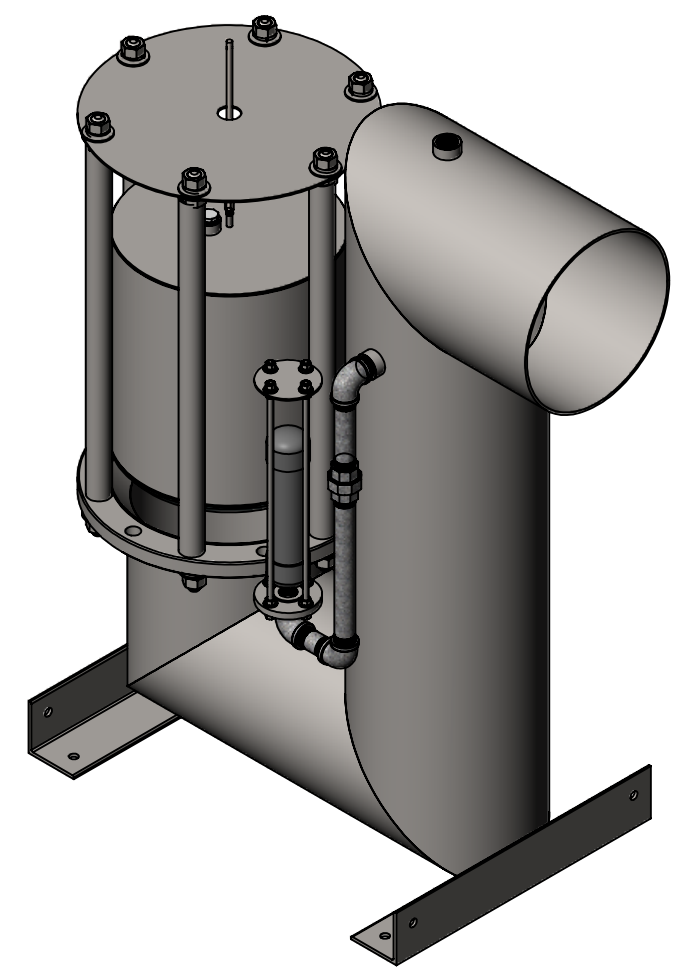
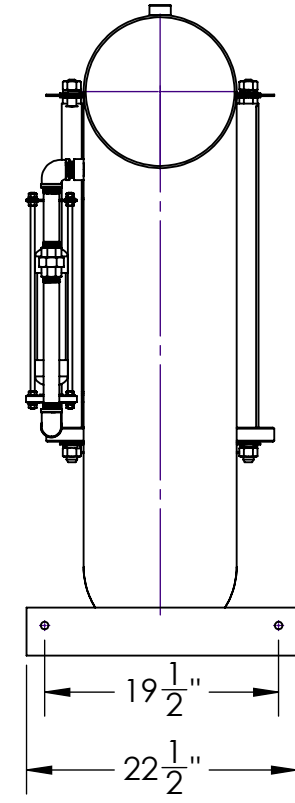
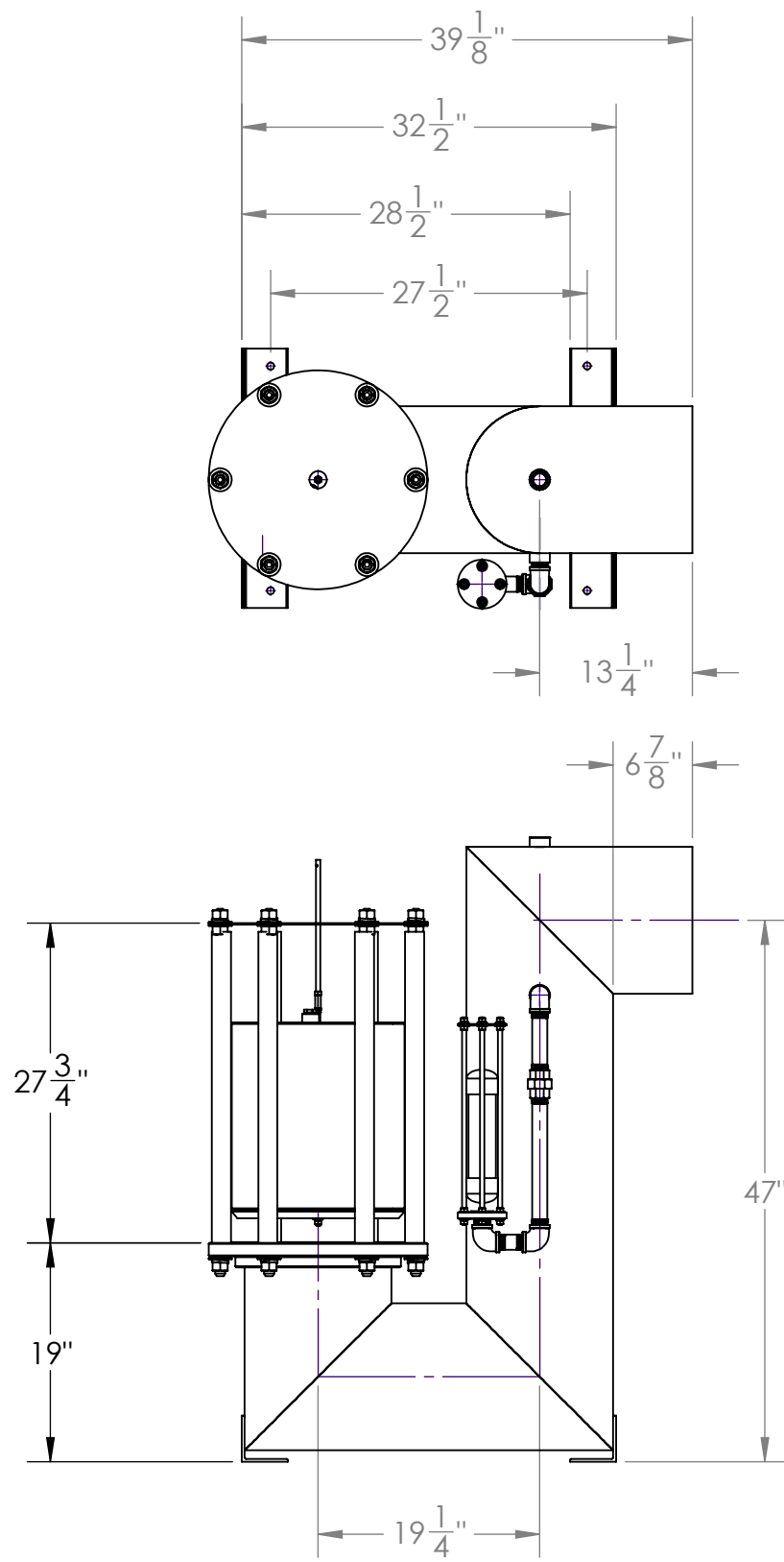
|              |                                                                                                  |
|--------------|--------------------------------------------------------------------------------------------------|
| Application  | Oil Spill Prevention                                                                             |
| Model Number | SV-S.S/PVC                                                                                       |
| Description  | Fabricated to reopen our oil stop Valves in the event of water loss (Leakage, Evaporation, Etc.) |
| Float Weight | Ballasted for .95 Sp. Gr.                                                                        |



### **Materials of Construction**

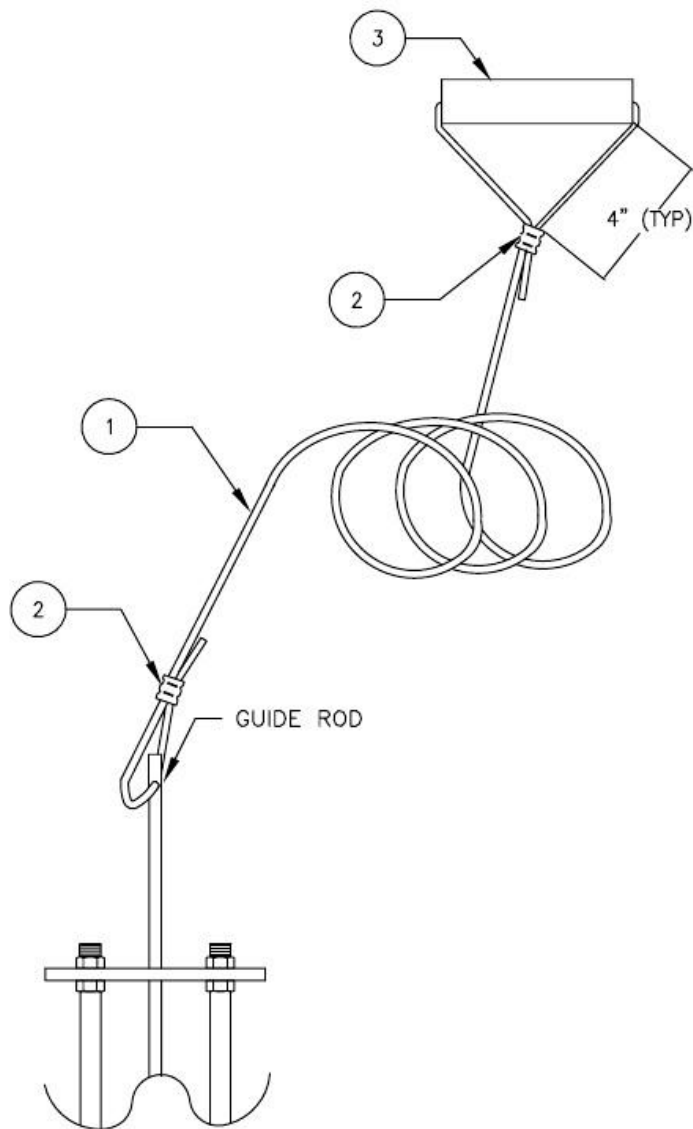
|                        |                          |
|------------------------|--------------------------|
| Base, Housing & Piping | S.S.                     |
| Float                  | PVC                      |
| Float Guides           | Type 304 Stainless Steel |
| Pressure Rating        | Atmospheric              |
| Temperature            | Ambient with 130°F Max.  |

### **PRINCIPLE OF OPERATION**

The slave valve is added to an oil stop valve to allow the main float to reopen. Due to the lack of water the main float will close. When additional rain water enters the sump, the slave valve float will open and allow water to enter the oil stop valve body. As the water level rises the main float will open due to water pressure pushing up against the bottom of the main float. In the event of an oil spill , the slave valve float and the main float will close containing the spill.



|                                                                                                                                                |  |                                                                               |  |                                                                                                                                                                                                                             |            |                                                                                       |                            |                          |
|------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------|----------------------------|--------------------------|
|                                                           |  | AFL INDUSTRIES, INC.<br>1101 WEST 13TH STREET<br>RIVIERA BEACH, FLORIDA 33404 |  | NAME<br>DATE                                                                                                                                                                                                                |            | TITLE:<br><br>GENERAL ARRANGEMENT<br>OSV-12 SS/SV                                     |                            |                          |
|                                                                                                                                                |  | UPPER ASSEMBLY                                                                |  | DRAWN<br>APPROVED                                                                                                                                                                                                           | JRH<br>SJS |                                                                                       |                            | 01/28/2015<br>08/11/2015 |
| UNLESS OTHERWISE SPECIFIED:                                                                                                                    |  | INTERPRET GEOMETRIC<br>TOLERANCING PER: ASME Y14.5M<br>MATERIAL               |  | USED ON                                                                                                                                                                                                                     |            |                                                                                       |                            |                          |
| DIMENSIONS ARE IN INCHES<br>TOLERANCES:<br>FRACTIONAL ±1/32<br>ANGULAR: X° ± 1°<br>TWO PLACE DECIMAL    ± .250<br>THREE PLACE DECIMAL   ± .125 |  | 304 STAINLESS STEEL                                                           |  | PROPRIETARY AND CONFIDENTIAL                                                                                                                                                                                                |            | THIRD ANGLE PROJECTION                                                                |                            |                          |
|                                                                                                                                                |  | FINISH                                                                        |  | THE INFORMATION CONTAINED IN THIS<br>DRAWING IS THE SOLE PROPERTY OF<br>RGF ENVIRONMENTAL, INC. ANY<br>REPRODUCTION IN PART OR AS A WHOLE<br>WITHOUT THE WRITTEN PERMISSION OF<br>RGF ENVIRONMENTAL, INC. IS<br>PROHIBITED. |            |                                                                                       |                            |                          |
|                                                                                                                                                |  | DO NOT SCALE DRAWING                                                          |  |                                                                                                                                                                                                                             |            |  |                            |                          |
|                                                                                                                                                |  |                                                                               |  |                                                                                                                                                                                                                             |            | SIZE<br><b>B</b>                                                                      | DWG. NO.<br>OSV 12IN SS-SV | REV<br>—                 |
|                                                                                                                                                |  |                                                                               |  |                                                                                                                                                                                                                             |            | SHEET 1 OF 1                                                                          |                            |                          |



| QTY | ITEM | DESCRIPTION                | MAT  |
|-----|------|----------------------------|------|
| 1   | 1    | CABLE 1/16"Ø X 10' LG.     | S.S. |
| 2   | 2    | CRIMP FOR 1/16"Ø CABLE     | S.S. |
| 1   | 3    | 1/2" SCH 80 PIPE X 4" LONG | PVC  |

**AFL** INDUSTRIES, INC.

|             |                                                                                                                                                                              |             |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| SCALE: NONE | THIS DRAWING AND SPECIFICATION IS THE PROPERTY OF AFL INDUSTRIES. 1751 WEST 10TH STREET, PINEHURST BEACH, FLA. 33464 AND SHALL NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. | DRAWN BY:   |
| DATE:       |                                                                                                                                                                              | CHECKED BY: |
| MODEL:      | FLOAT GUIDE LIFT CABLE                                                                                                                                                       | AFL JOB No. |
| JOB:        | AFL                                                                                                                                                                          | DRAWING No. |