

Automatic Outboard Flushing System Version 2.0



Shown: 4 engine setup # 35-3864-01 and fitting kit # 35-3955-04

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System Overview and Technical Specifications

Fitting Kit (sold separately)

- 1 3/4" hose barb set for water inlet
- 2 1/2" hose barb set for water outlet of engine
- 3 3/8" hose barb set for water outlet of engine

Inlet Hose kit (sold separately)

- 8 Capped fitting of the hose kit
- 9 Connects to water inlet on system

System

- 4 Connection for Inlet Hose Kit
- 5 Start button and LED status indicator
- 6 Connection for Remote Switch
- 7 Power input



Technical Specifications

Voltage	12V	
Max. Amp. Draw	3A / 12V 1.5A / 24V	
Dimensions of Automatic Outboard Flushing System	A	8.13" / 206 mm
	B	5.7" / 145 mm
	C	5.58" / 142 mm

Basic Features

- 12 volt
- 1, 2, 3, or 4 Engine setup
- Start button with LED status indicator
- Fitting kit sold separately

Optional Features

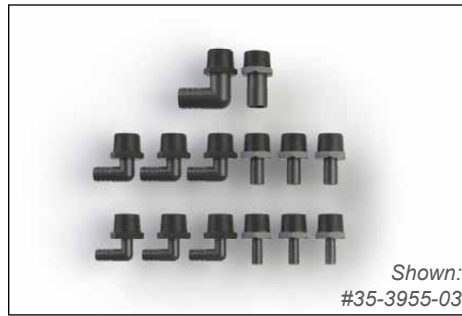
- Remote Switch Kit with Start button/LED status indicator. Available in lengths of 3, 6, 9, 12, 15, and 18 feet
- Inlet Hose Kit. Available in hose lengths of 1, 2, 3, 6, and 9 feet



1 Choose your system

A basic system to flush all outboard motors. Fittings sold separately.

Part #	Automatic Outboard Flushing System
35-3861-01	1 Engine Setup
35-3862-01	2 Engine Setup
35-3863-01	3 Engine Setup
35-3864-01	4 Engine Setup



2 Choose Fitting Kit

Required: Inlet 3/4" straight and 90° elbow fitting, Outlet 3/8" and 1/2" hose barb in straight and 90° elbow fittings.

Part #	Fitting Kit
35-3955-01	For 1 Engine Setup
35-3955-02	For 2 Engine Setup
35-3955-03	For 3 Engine Setup
35-3955-04	For 4 Engine Setup



3 Choose Remote Switch

Optional: To mount a remote switch in an area easier to access than the system itself.

Part #	Remote Switch Kit
35-3954-01	3' harness assembly
35-3954-02	6' harness assembly
35-3954-03	9' harness assembly
35-3954-04	12' harness assembly
35-3954-05	15' harness assembly
35-3954-06	18' harness assembly



4 Choose Inlet Hose

Optional: To mount a remote hose connection elsewhere or provide a comfortable reach to connect hose.

Part #	Inlet Hose Kit
35-3951-02	2' hose length
35-3951-03	3' hose length
35-3951-04	6' hose length
35-3951-05	9' hose length



5 Choose Deck Kit






Optional: Can be used with Inlet Hose Kit. Includes straight connector.

Part #	Deck Kit
35-3952-01	With 3/4" hose barb straight fitting
35-3952-02	With 3/4" hose barb 90-degree elbow fitting



6 Choose Faceplate

Optional: To mount a Deck Kit only, or Deck Kit and Remote Switch.

Part #	Faceplate
35-3952-07	For Deck Kit only 
35-3952-03	For Deck Kit and Remote Switch 
35-3952-04	For Deck Kit and Remote Switch 90° 
35-3952-05	For Deck Kit and Remote Switch 180° 
35-3952-06	For Deck Fitting and Remote Switch 270° 

Electrical, Installation, Inlet Hose Kit, and Remote Switch Kit

Mounting

- Mounting holes: \varnothing 3/16"
- Orientation: Any direction on a flat surface.

Electrical

- Installation must include protection with 5A fuse or breaker (provided by installer).
- **Only connect black (-) and red (+) wires to same respective color. Damage can occur to the system if these wires are crossed.**
- **Installation of unit should only be performed by qualified electrician who have thoroughly read and understands the installation instructions covered in this manual and adhere to ABYC requirements.**
- **To avoid the risk of harm or injury, make sure that the power supply is disconnected. Ensure that the power supply is at zero volts with a multimeter before making any electrical connections.**
- Be sure that the power source available matches the power requirements.

Installing Fitting Kit

Contains water inlet options:

- 3/4" straight hose barb
- 3/4" 90° elbow hose barb

Contains water outlets for engines below 300 HP:

- Set of 3/8" straight hose barb
- Set of 3/8" 90° elbow hose barb

Contains water outlets for engines 300 HP and above:

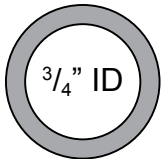
- Set of 1/2" straight hose barb
- Set of 1/2" 90° elbow hose barb

Install the hose barbs hand-tight (40 in-lb) and use one of the following:

- Teflon tape
- Plastic thread sealant

Connection to Engines

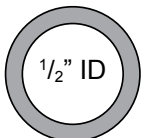
Using hose smaller than the required inner diameter is not recommended.



*3/4" inner diameter hose is required for water **inlet**.*



*3/8" inner diameter hose is required for water **outlet** (to engines). Reinforced hose is recommended.*



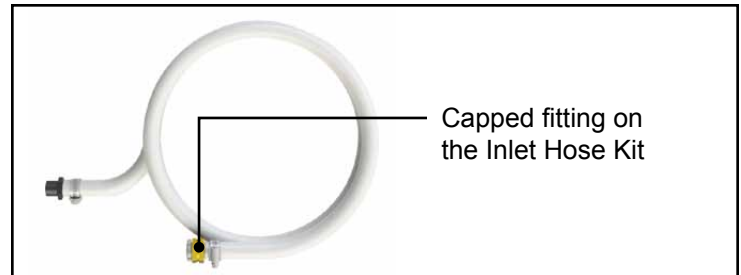
*For engines over 300HP, it is best to use 1/2" inner diameter hose is required for water **outlet** (to engines). Reinforced hose is recommended.*

Choose fittings which fit the appropriate hose size. The hose will run from the system, through the outboard loom, and to each engine. Locate the flushing port on the engine, split the line, and connect the hose. Or, choose to install a tee.

Inlet Hose Kit - *Important: Sealed Water Inlet*

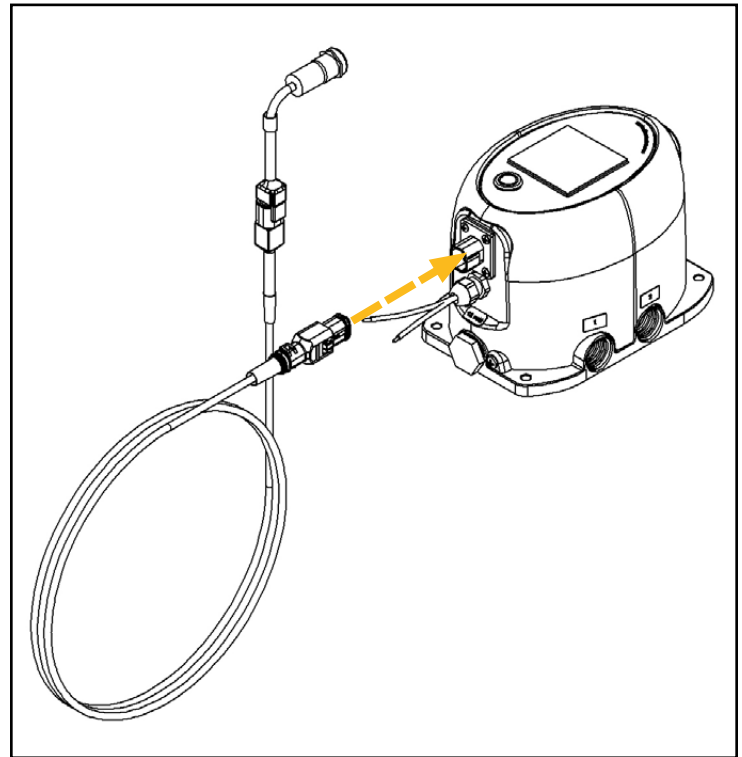
Incorporate a sealed cap for the water inlet to block the possibility of any backflow. Choose one of the following ways:

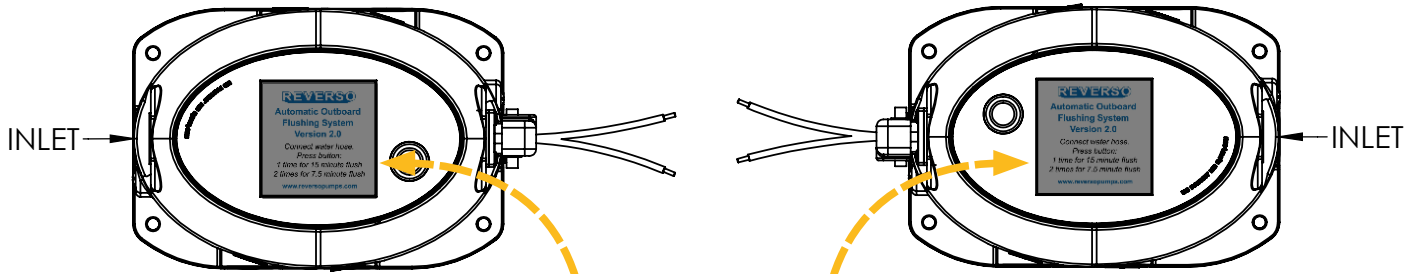
- Install the Inlet Hose Kit which includes a cap on the hose end already (shown below).
- If the Inlet Hose Kit is not used, an alternative can be a bulkhead cap, quick disconnect, or other sealed fitting provided by the installer.



Remote Switch Kit

Remove the dust cover and connect the remote switch kit (Deutsch connector).



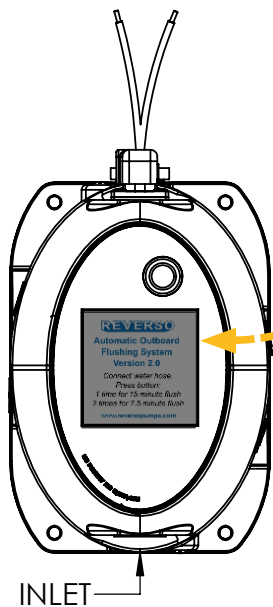


The system can be mounted in any direction on a flat surface of the bulkhead or accessories compartment. Apply the label as needed.

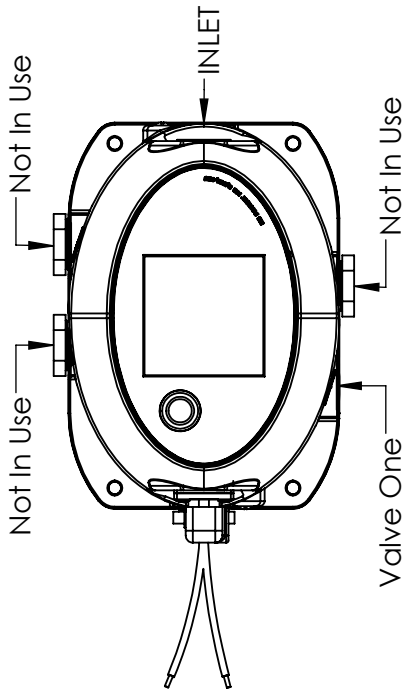
REVERSO
**Automatic Outboard
 Flushing System
 Version 2.0**

*Connect water hose.
 Press button:
 1 time for 15 minute flush
 2 times for 7.5 minute flush*

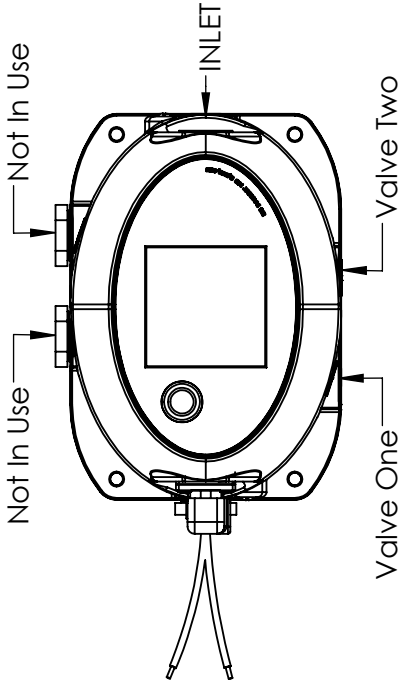
www.reversopumps.com



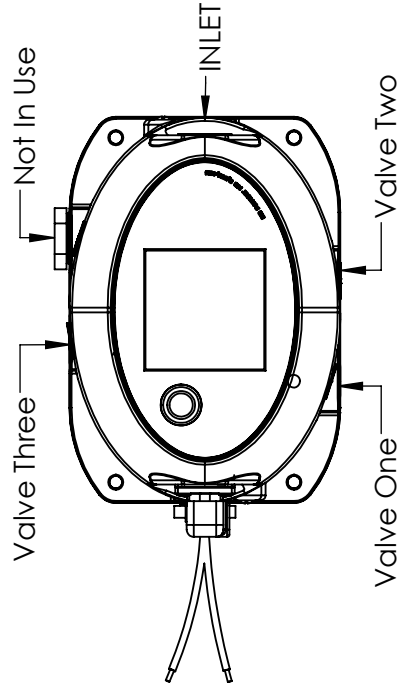
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Single Engine Setup**



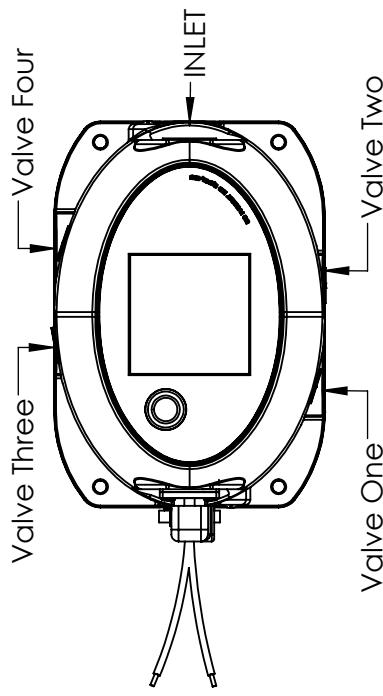
**OFS V2.0
Two Engine Setup**



**OFS V2.0
Three Engine Setup**



**OFS V2.0
Four Engine Setup**



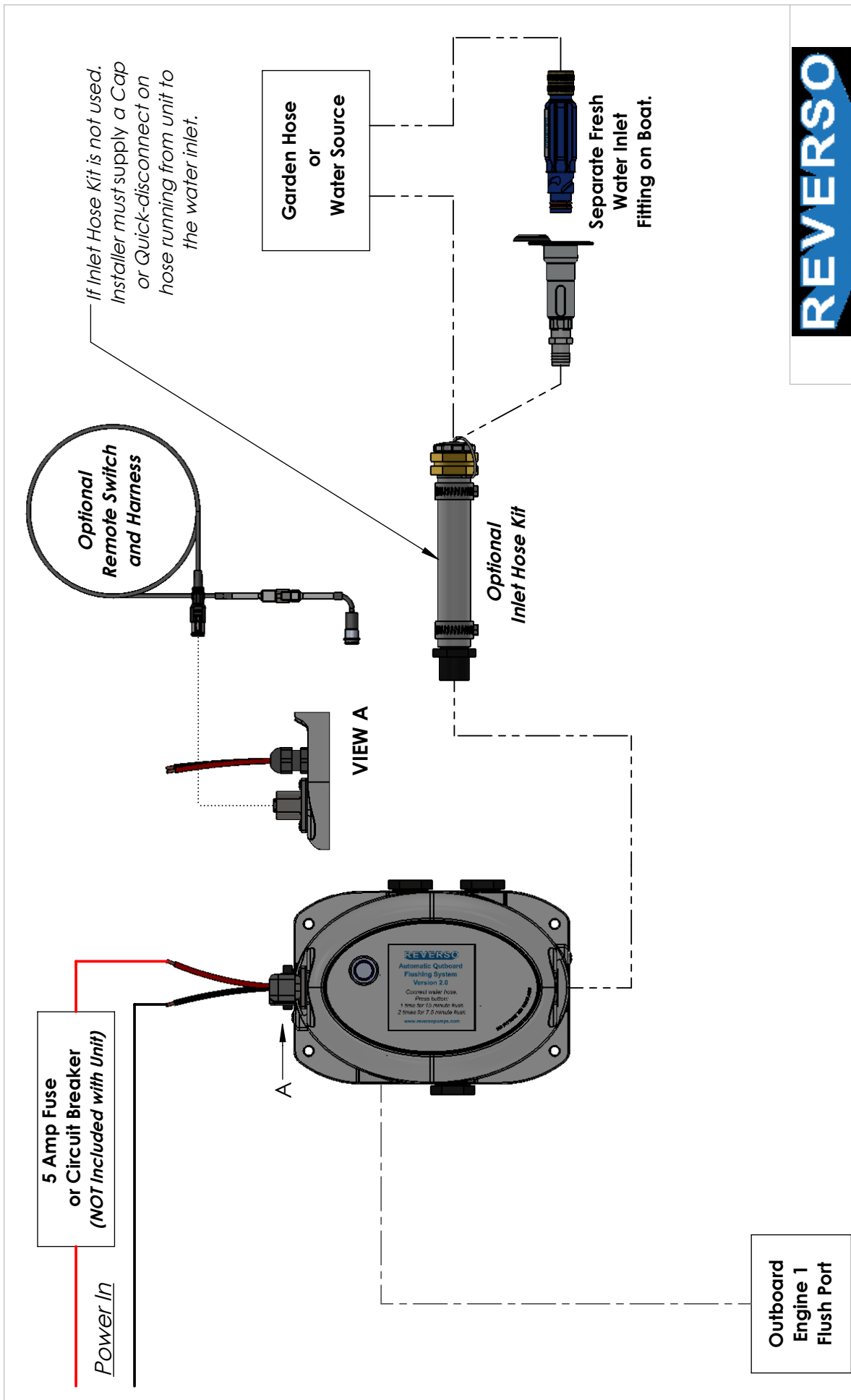
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	Drawing was made to show customer the valve layout	10/6/2017	JC

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 TWO PLACE DECIMAL ±.01
 THREE PLACE DECIMAL ±.005

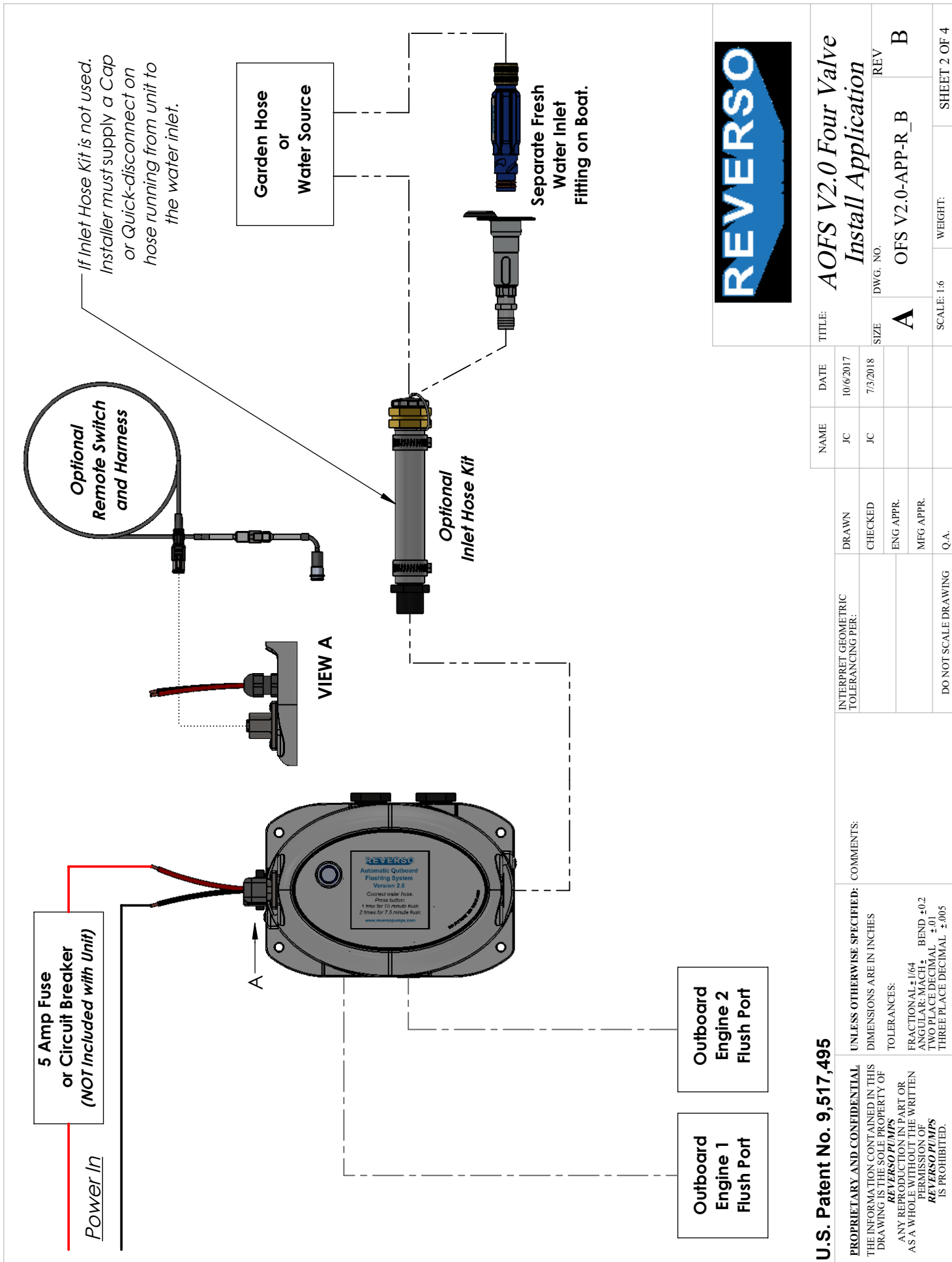
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	MFG APPR.		A
	Q.A.		DWG. NO.
			AOFS V2.0 Valve Port Layout-APP-R_A
			REV
			A
			SCALE: 1:4
			WEIGHT:
			SHEET 1 OF 1

Installation Diagram: 1 Engine Setup



U.S. Patent No. 9,517,495		U.S. Patent No. 9,517,495		U.S. Patent No. 9,517,495		U.S. Patent No. 9,517,495		U.S. Patent No. 9,517,495		U.S. Patent No. 9,517,495	
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JC	7/3/2018	CHECKED		TOLERANCES:							
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SIZE	DWG. NO.	A		OFS V2.0-APP-R_B		REV		B		1	

Installation Diagram: 2 Engine Setup



U.S. Patent No. 9,517,495

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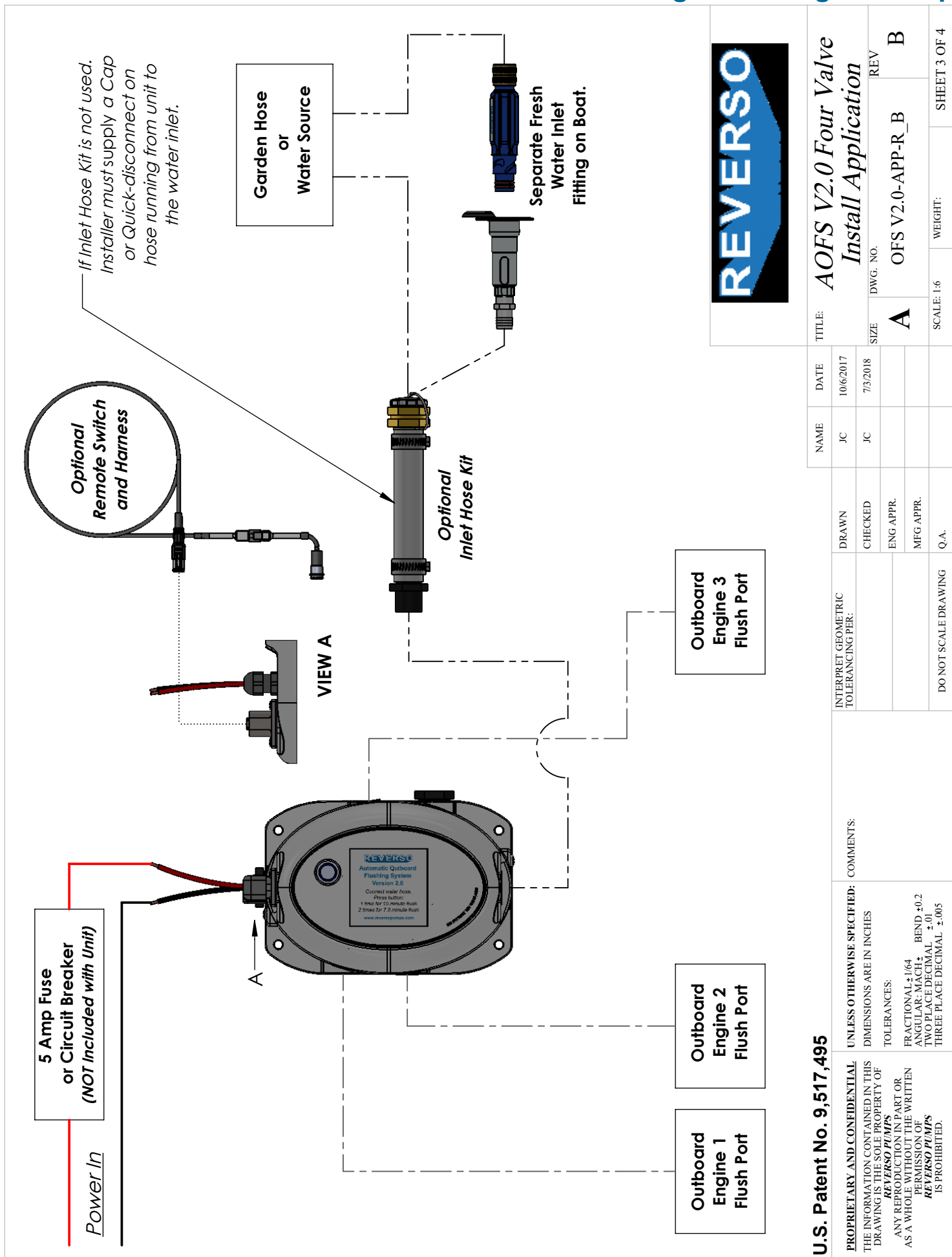
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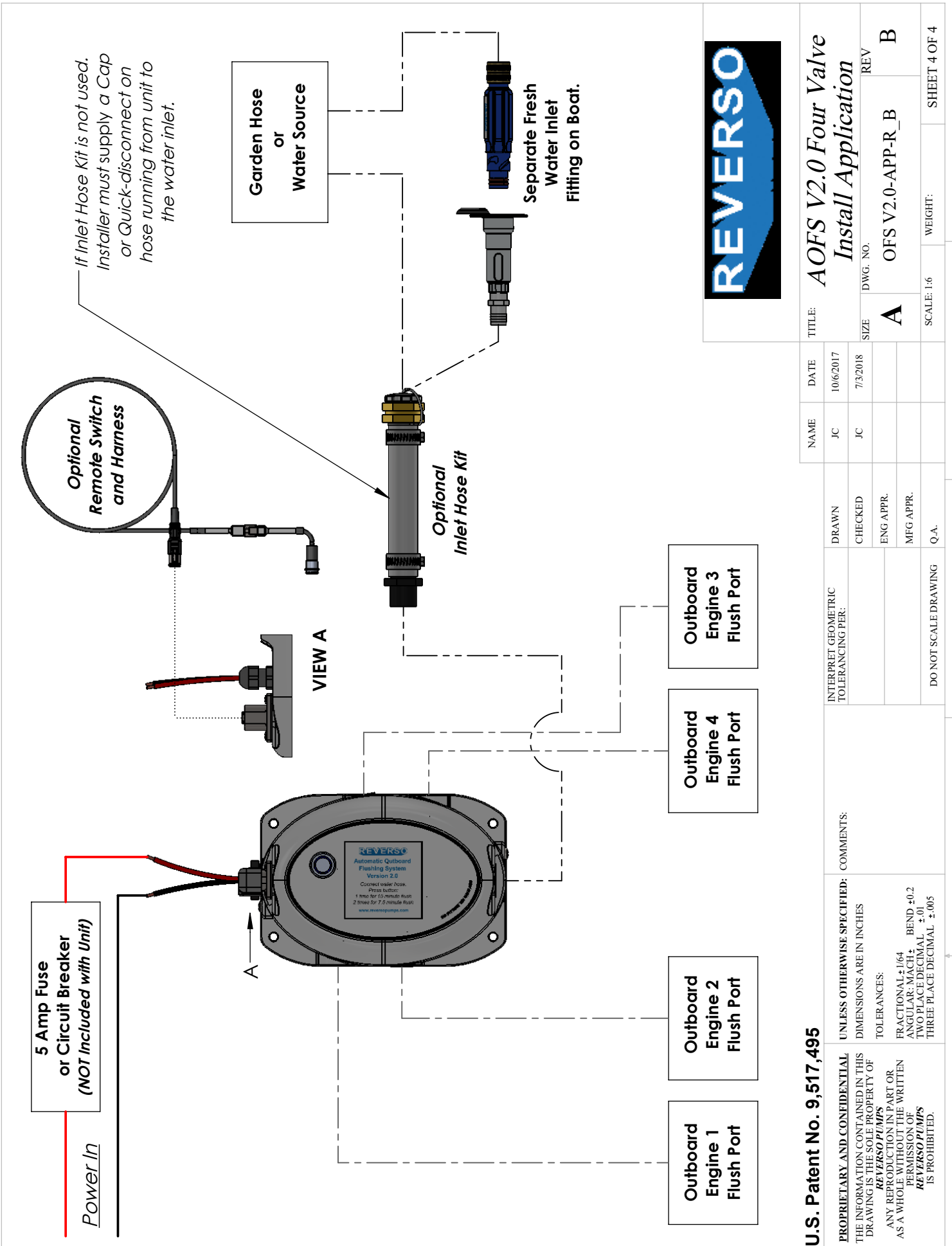
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SIZE **DWG. NO.** **REV**
A **OFS V2.0-APP-R_B** **B**
SCALE: 1:6 **WEIGHT:** **SHEET 2 OF 4**

Installation Diagram: 3 Engine Setup



U.S. Patent No. 9,517,495		U.S. Patent No. 9,517,495		U.S. Patent No. 9,517,495		U.S. Patent No. 9,517,495		U.S. Patent No. 9,517,495	
NAME	DATE	INTERPRET	DRAWN	COMMENTS:	UNLESS OTHERWISE SPECIFIED:	UNLESS OTHERWISE SPECIFIED:	UNLESS OTHERWISE SPECIFIED:	UNLESS OTHERWISE SPECIFIED:	UNLESS OTHERWISE SPECIFIED:
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SCALE: 1:6		WEIGHT:		SHEET 3 OF 4		SHEET 3 OF 4		SHEET 3 OF 4	

Installation Diagram: 4 Engine Setup

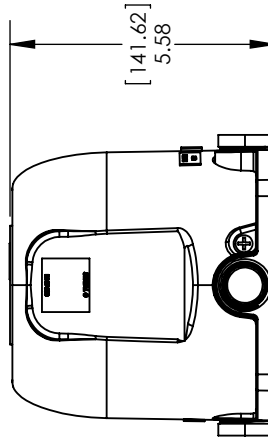
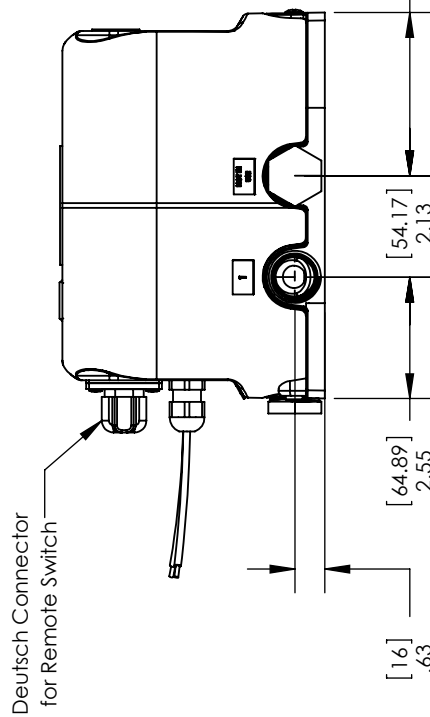
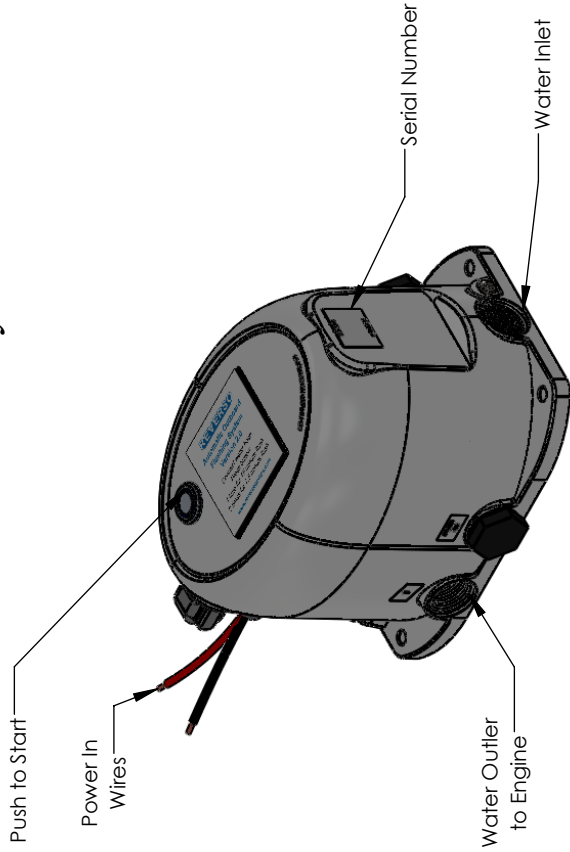
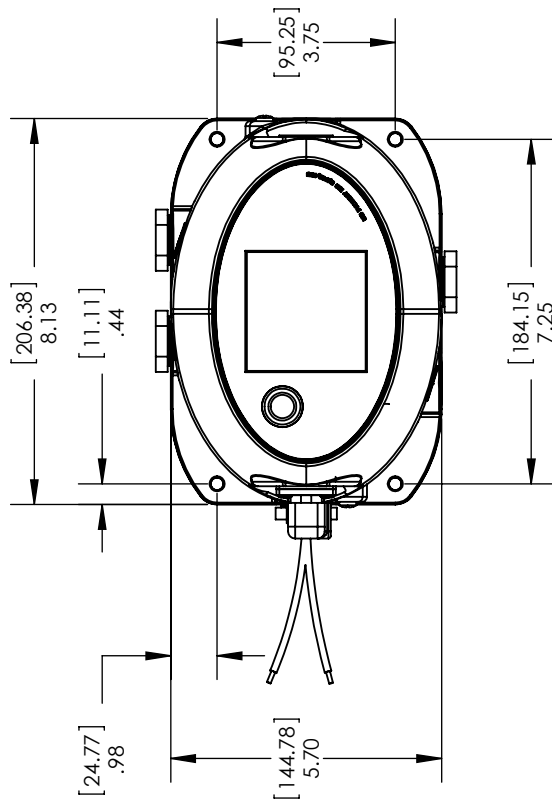


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JC	7/3/2018	
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Q.A.		DWG. NO. OFS V2.0-APP-R_B
		REV B
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		WEIGHT:
		SHEET 4 OF 4

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Part #: 35-3861-01

All Dimensions for Reference Only
Secondary Dimensions in Millimeters



U.S. Patent No. 9,517,495

TECHNICAL SPECIFICATIONS

Port Size - 3/4" FNPT (Manifold Base)
Inlet: 3/4" Hose Barb
Outlet: 3/8" Hose Barb / 1/2" Hose Barb

Weight - 3lbs. / 1.36kg.

Power - 12 Volt @ 3 Amp

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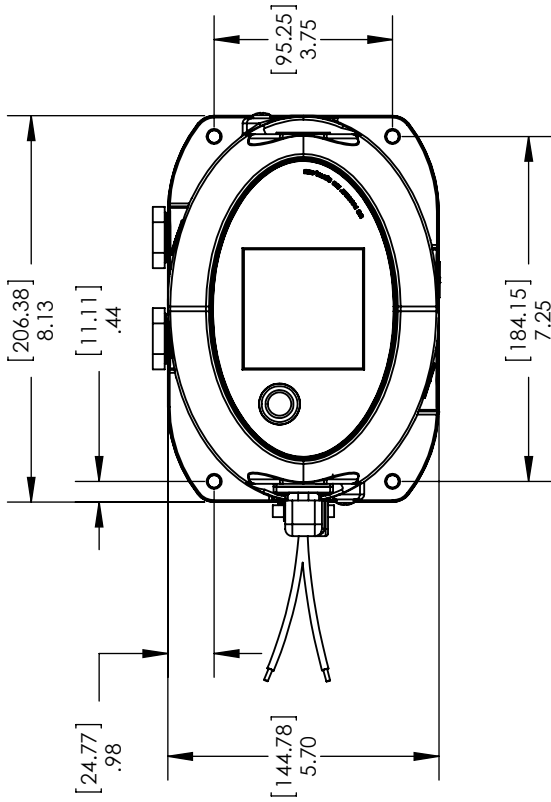
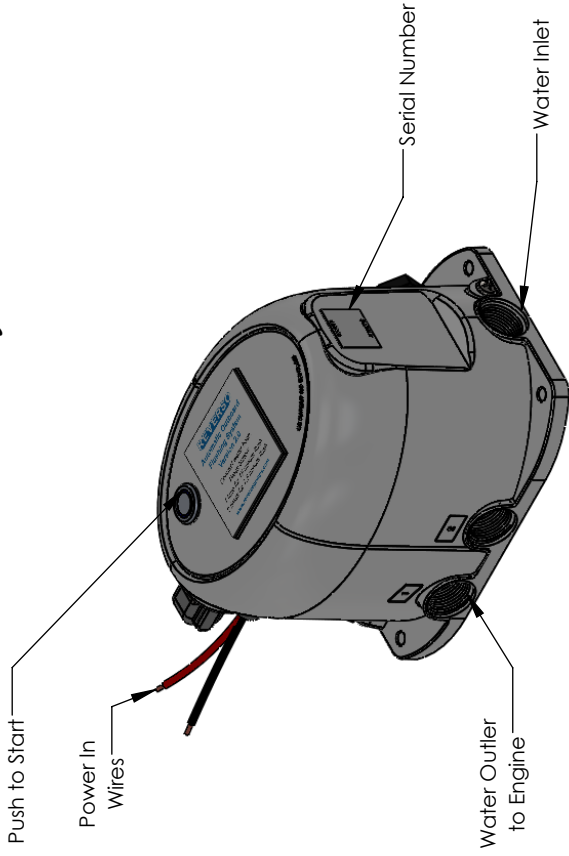
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ANGULAR: MACH ± BEND ±0.2
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THREE PLACE DECIMAL ±.005
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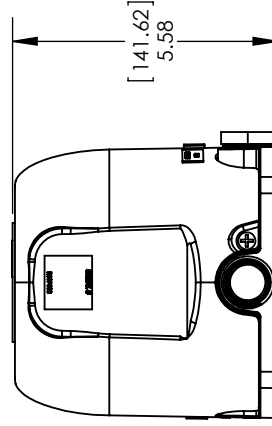
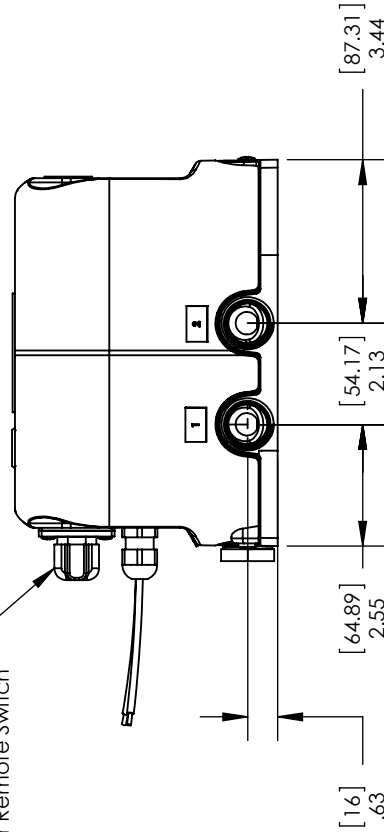
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MFG APPR.			
Q.A.			
COMMENTS:			
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OFS-1-12_V2 Outboard Flushing System - Single Engine Setup - Version 2.0 - 12 Volt		OFS-1-12_V2 Outboard Flushing System - Single Engine Setup - Version 2.0 - 12 Volt	
SIZE	DWG. NO.	REV	REV
A	AOFS V2.0 ER_R_B	B	B
SCALE: 1:4	WEIGHT:	SHEET 1 OF 8	

Part #: 35-3862-01

All Dimensions for Reference Only
Secondary Dimensions in Millimeters



Deutsch Connector for Remote Switch



U.S. Patent No. 9,517,495

TECHNICAL SPECIFICATIONS

- Port Size - 3/4" FNPT (Manifold Base)
- Inlet: 3/4" Hose Barb
- Outlet: 3/8" Hose Barb / 1/2" Hose Barb
- Weight - 3lbs. / 1.36kg.
- Power - 12 Volt @ 3 Amp

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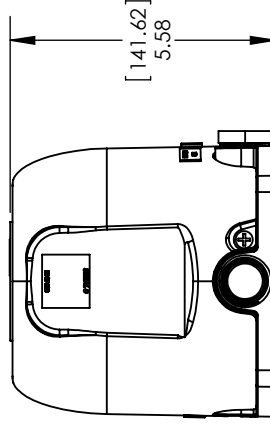
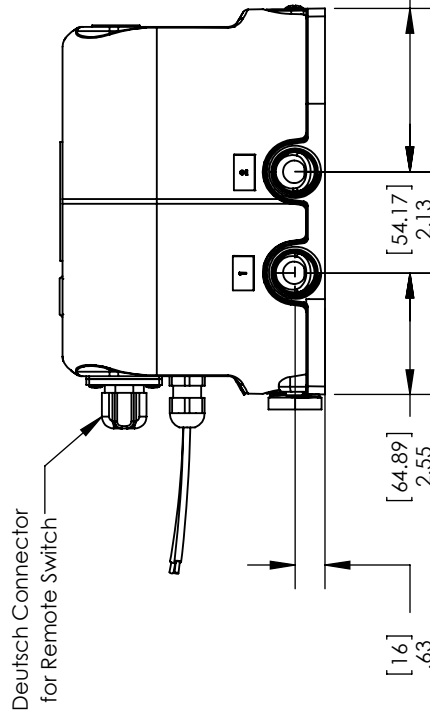
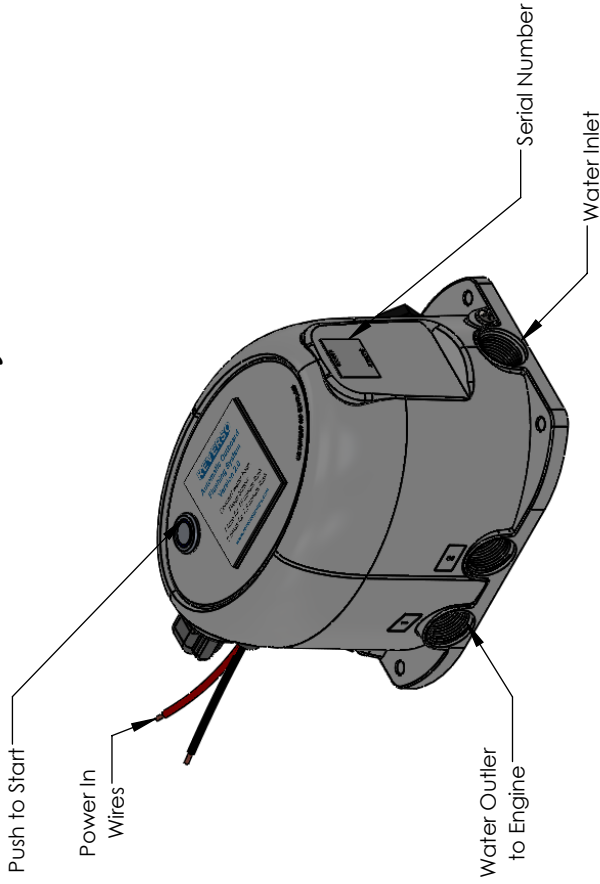
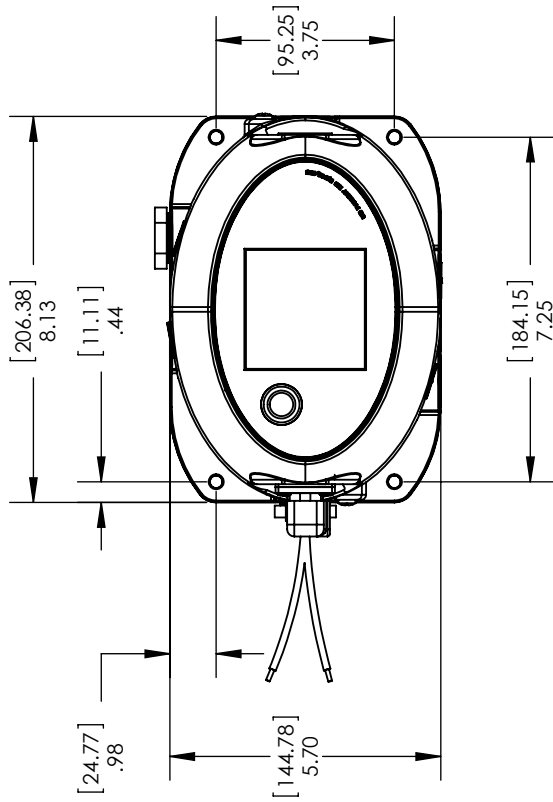
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THREE PLACE DECIMAL +.005
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CHECKED	IC	7/3/2018
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MFG APPR.		
Q.A.		
COMMENTS:		
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A	AOFS V2.0 ER_R_B	B
SCALE: 1:4	WEIGHT:	SHEET 3 OF 8

Part #: 35-3863-01

All Dimensions for Reference Only
Secondary Dimensions in Millimeters



U.S. Patent No. 9,517,495

TECHNICAL SPECIFICATIONS

Port Size - 3/4" FNPT (Manifold Base)
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Outlet: 3/8" Hose Barb / 1/2" Hose Barb
Weight - 3lbs. / 1.36kg.
Power - 12 Volt @ 3 Amp

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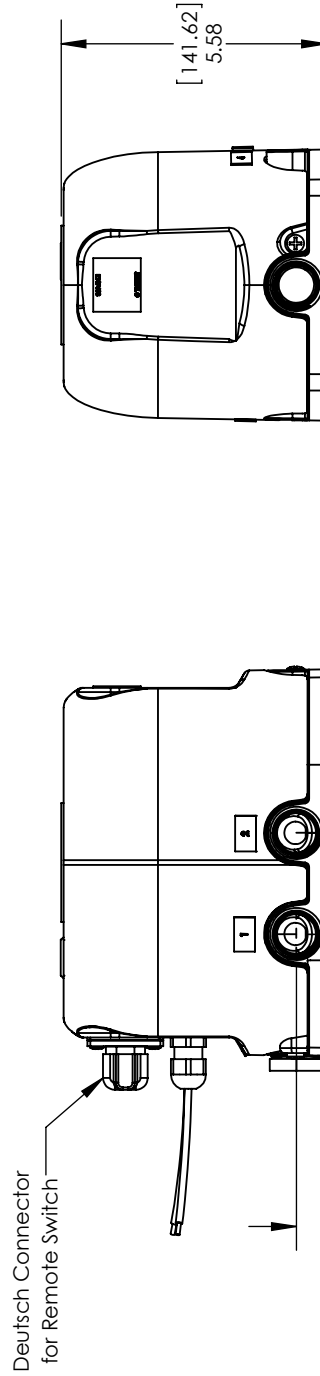
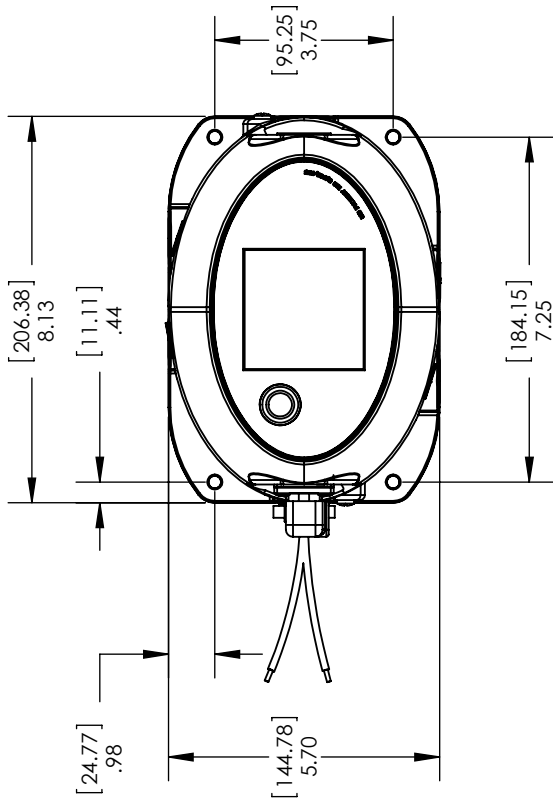
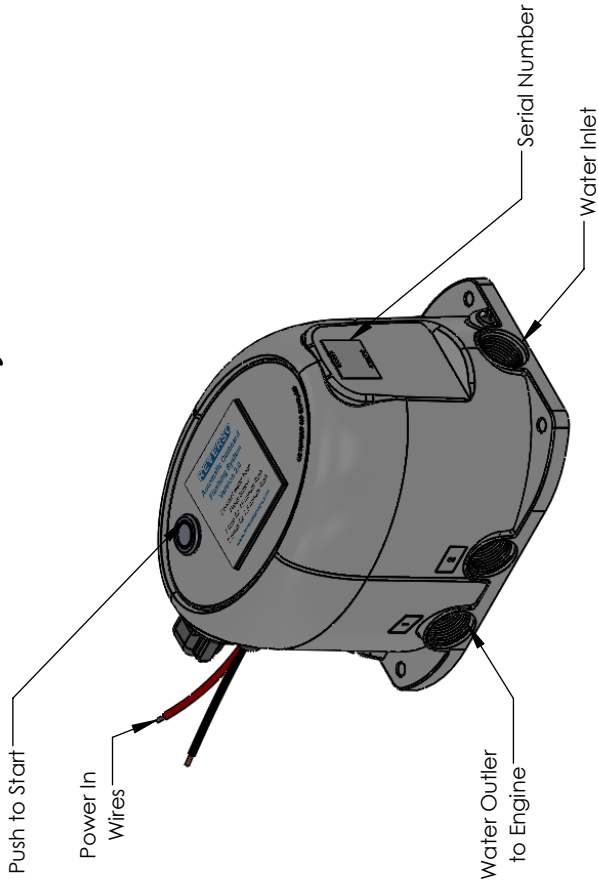
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 THREE PLACE DECIMAL ±.005
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Q.A.			
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A	AOFS V2.0 ER_R_B	B	
SCALE: 1:4	WEIGHT:	SHEET 5 OF 8	

Part #: 35-3864-01

All Dimensions for Reference Only
Secondary Dimensions in Millimeters



DRAWN	NAME	DATE
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CHECKED	JC	7/3/2018
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MFG APPR.		
Q.A.		
COMMENTS:		

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ANGULAR: MACH +
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THREE PLACE DECIMAL ±.005
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Inlet: 3/4" Hose Barb
Outlet: 3/8" Hose Barb / 1/2" Hose Barb
Weight - 3lbs. / 1.36kg.
Power - 12 Volt @ 3 Amp

REVERSO PUMPS	
TITLE: <i>OFS-4-12 V2 Outboard Flushing System - Four Engine Setup - Version 2.0 - 12 Volt</i>	
SIZE	REV
A	B
DWG. NO. AOFS V2.0 ER_R_B	
SCALE: 1:4	WEIGHT:
	SHEET 7 OF 8

Operation

1. Connect water hose to unit.
2. Turn on water. The unit will not work without water pressure.
3. To activate:
 - a. Push start button once - **15 minute** cycle per engine
 1. LED is solid blue during operation
 2. At 14 minute and 55 seconds, the next engine will engage to overlap for 5 seconds.
 - b. Push start button twice - **7.5 minute** cycle per engine
 1. LED is blinking blue during operation
 2. At 7 minute and 25 seconds, the next engine will engage to overlap for 5 seconds.
4. The unit will automatically cycle each engine and shuts off once complete.
5. Disconnect water hose.

To Stop Operation:

1. Stopping in the middle of a cycle will stop program. The system will reset back to engine
 - a. If running the **15 minute** cycle per engine, then press the button **twice** to stop.
 - b. If running the **7.5 minute** cycle per engine, then press the button **once** to stop.
2. The system can be activated again by following Operation instructions.

Loss of Water Pressure During Operation

The LED will turn solid red.

- If water pressure is restored within 5 minutes, the system will resume operation from the point of pressure loss.
- If water pressure is not restored within 5 minutes, the system will reset. Press the start button to begin the cycles again, starting at the first engine.

LED Indicator

Solid or Blinking Blue	System is in operation
Blinking Red	The number of blinks indicates the engine that did not flush.
Solid Red	Low or no water pressure and system will not activate until increase in water pressure.

Troubleshooting

- Confirm correct voltage is powering the unit.
- If connected to a battery, check that it is fully charged.
- Ensure there is enough water pressure to the system.
- Observe LED indicator. See Operation instructions for details.
- Ensure all connections have been properly tightened
- Confirm the correct fittings are installed for hose and unit.