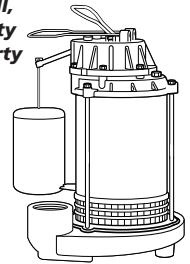


Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.



Submersible Sump Pump

Description

This submersible pump is designed for home sump applications. The unit is equipped with an 8-ft long, 3-prong grounding type power cord. Motor is oil filled and sealed for cooler running and designed to operate under water. A float switch is provided for automatic pump operation. This pump is not suitable for aquatic life.

Unpacking

Inspect this unit before it is used. Occasionally, products are damaged during shipment. If the pump or components are damaged, return the unit to the place of purchase for replacement. Failure to do so could result in serious injury or death.

READ & FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS
DO NOT DISCARD

Safety Guidelines

This manual contains information that is very important to know and understand. This information is provided for SAFETY and to PREVENT EQUIPMENT PROBLEMS. To help recognize this information, observe the following symbols:

⚠ DANGER *Danger indicates an imminent hazardous situation which, if not avoided, WILL result in death or serious injury.*

⚠ WARNING *Warning indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.*

⚠ CAUTION *Caution indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.*

NOTICE *Notice indicates important information, that if not followed, may cause damage to equipment.*

NOTE: Information that requires special attention.

General Safety Information

CALIFORNIA PROPOSITION 65

⚠ WARNING *This product or its power cord may contain chemicals, including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.*

GENERAL SAFETY INFORMATION

⚠ DANGER *Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in a flammable and/or explosive atmosphere. Pump should only be used to pump clear water. Personal injury and/or property damage could result.*



NOTICE *This pump is not designed to handle salt water, brine, laundry discharge or any other application which may contain caustic chemicals and/or foreign materials. Pump damage could occur if used in these applications and will void warranty.*

⚠ WARNING *All wiring must be performed by a qualified electrician.*

⚠ DANGER *If the basement has water or moisture on the floor, do not walk on wet area until all power is turned off. If the shut-off box is in the basement, call an electrician. Remove pump and either repair or replace. Failure to follow this warning could result in fatal electrical shock.*

NOTICE *A backup system should be used. Call 1-888-636-6628 for backup model number.*

Installation

1. Install pump in a sump pit with minimum size as shown in Figure 1 below. Construct sump pit of tile, concrete, steel or plastic.
2. The unit should be located and rest on a solid, level foundation. Do not place pump directly on clay, earth, gravel or sandy surface. These surfaces contain small stones, gravel, sand, etc. that may clog or damage the pump and cause pump failure.

Specifications

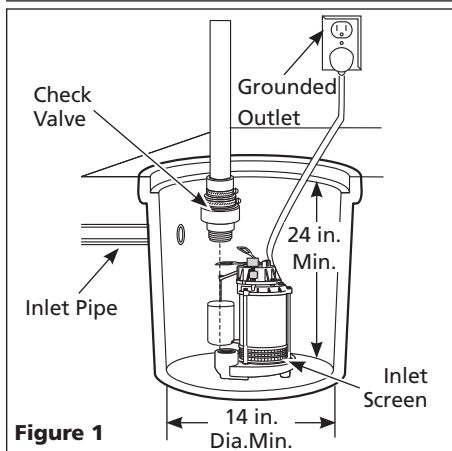
Power supply requirements	120V, 60 Hz
Motor	Single phase, oil filled
Horsepower	
1/3 HP	(BSPF33, BCS33, BCS33HH, SSBCS33, SSBCSF33)
1/2 HP	(BCS50-2, BCS50, BSPF50, SSBCSF50-2, SSBCS50)
Liquid temperature range	40°F to 120°F
Circuit requirements	15 amps (min)
Dimensions	11-1/2 in. high x 9-3/4 in. base
Cut-in level (factory set)	9 in.
Cut-out level (factory set)	4 in.

Construction

Motor housing Cold rolled steel; Stainless steel (SSBCS series)
Volute Cast iron (BCS); Thermoplastic (BSPF)
Impeller Glass reinforced thermoplastic
Shaft Low carbon steel
Seals Buna N
Discharge 1-1/2 in. NPT
Motor cover Glass reinforced thermoplastic

REMINDER: Keep your dated proof of purchase for warranty purposes! Attach it to this manual or file it for safekeeping.

Installation (continued)



WARNING *Flood risk. If flexible discharge hose is used, make sure pump is secured in sump pit to prevent movement. Failure to secure pump could allow pump movement and switch interference and prevent pump from starting or stopping.*

3. A check valve is required in the discharge line to prevent back-flow when the pump shuts off. It is best to install the check-valve directly to the pump discharge. Thread a check valve into the pump discharge.
4. Connect 1-1/4 in. or 1-1/2 in. rigid pipe to rubber boot on check valve. (Reverse boot for 1-1/2 in. diameter pipe.) Tighten hose clamps.

WARNING *Support pump and piping when assembling and after installation. Failure to do so could cause piping to break, pump to fail, etc. which could result in property damage and/or personal injury.*

NOTICE *Make sure there is adequate room for the float switch to move freely during operation (see Figure 2).*

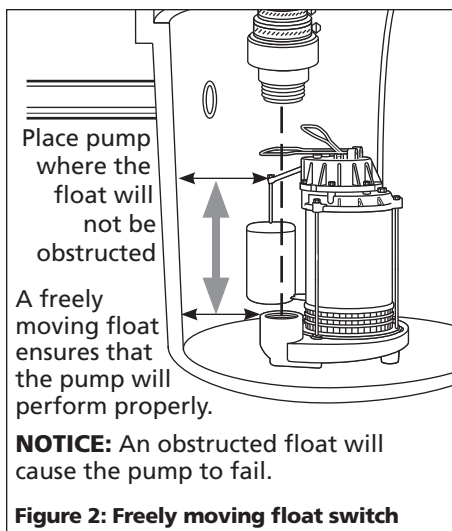


Figure 2: Freely moving float switch

5. Protect electrical cord from sharp objects, hot surfaces, oil and chemicals. Avoid kinking the cord and replace damaged cords immediately.
6. A sump pit cover must be installed to prevent debris from clogging or damaging the pump.

Operation

DANGER *Always disconnect the power source before attempting to install, service, relocate or maintain the pump. Never touch sump pump, pump motor, water or discharge piping when pump is connected to electrical power. Never handle a pump or pump motor with wet hands or when standing on wet or damp surface or in water. Fatal electrical shock could occur.*



1. A ground fault circuit interrupter (GFCI) is required.

WARNING *Risk of electrical shock! This pump is supplied with a grounding conductor and grounding type attachment plug. Use a grounded receptacle to reduce the risk of fatal electrical shock.*

Never cut off the round grounding prong. Cutting the cord or plug will void the warranty and make the pump inoperable.

2. This pump is only for use on 120 Volt (single-phase), 60 hz, 15 amp service and is equipped with a 3-conductor cord and 3-prong, grounding type plug.

DO NOT USE AN EXTENSION CORD.

3. Insert the pump power cord plug directly into a GFCI protected 120 Volt outlet (See Fig. 3).

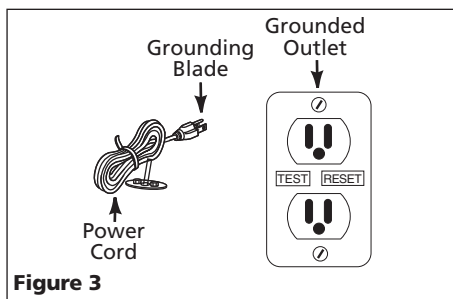


Figure 3

4. Fill sump with water. The pump will start automatically when the water has filled the sump to a depth of approximately 9 in. The pump will stop when the water depth is approximately 4 in. The pump will recycle thereafter as required.

NOTICE *Do not operate the pump unless it is submerged in water. Dry running causes pump failure.*

5. While the pump is draining the pit, verify that the discharge piping is carrying the water to a point several feet away from the foundation.
6. If pump discharge line is exposed to freezing temperature, the exposed line must be pitched to drain. Trapped water will freeze and damage the pump.

NOTE: The motor is equipped with an automatic reset thermal protector.

Maintenance

DANGER *Always disconnect the electrical supply before attempting to install, service, relocate or perform any maintenance. If the power source is out of sight, lock and tag in the open (off) position to prevent unexpected power application. Failure to do so could result in fatal electrical shock. Only qualified electricians should repair this unit. Improper repair could result in fatal electrical shock.*



1. Let the pump cool for a minimum of two hours before servicing because the pump contains hot oil under pressure and the motor is hot.
2. Disassembly of the motor prior to expiration of warranty will void the warranty. If repairs are required, see troubleshooting chart.
3. Inlet should be kept clean and free of all foreign objects and inspected annually. A clogged inlet will damage pump.
4. Pump should be checked monthly for proper operation. Check pump by following step 4 listed in the operation section.

WARNING *This pump contains dielectric oil for cooling. This oil can be harmful to the environment. Check the state environmental laws before disposing this oil.*

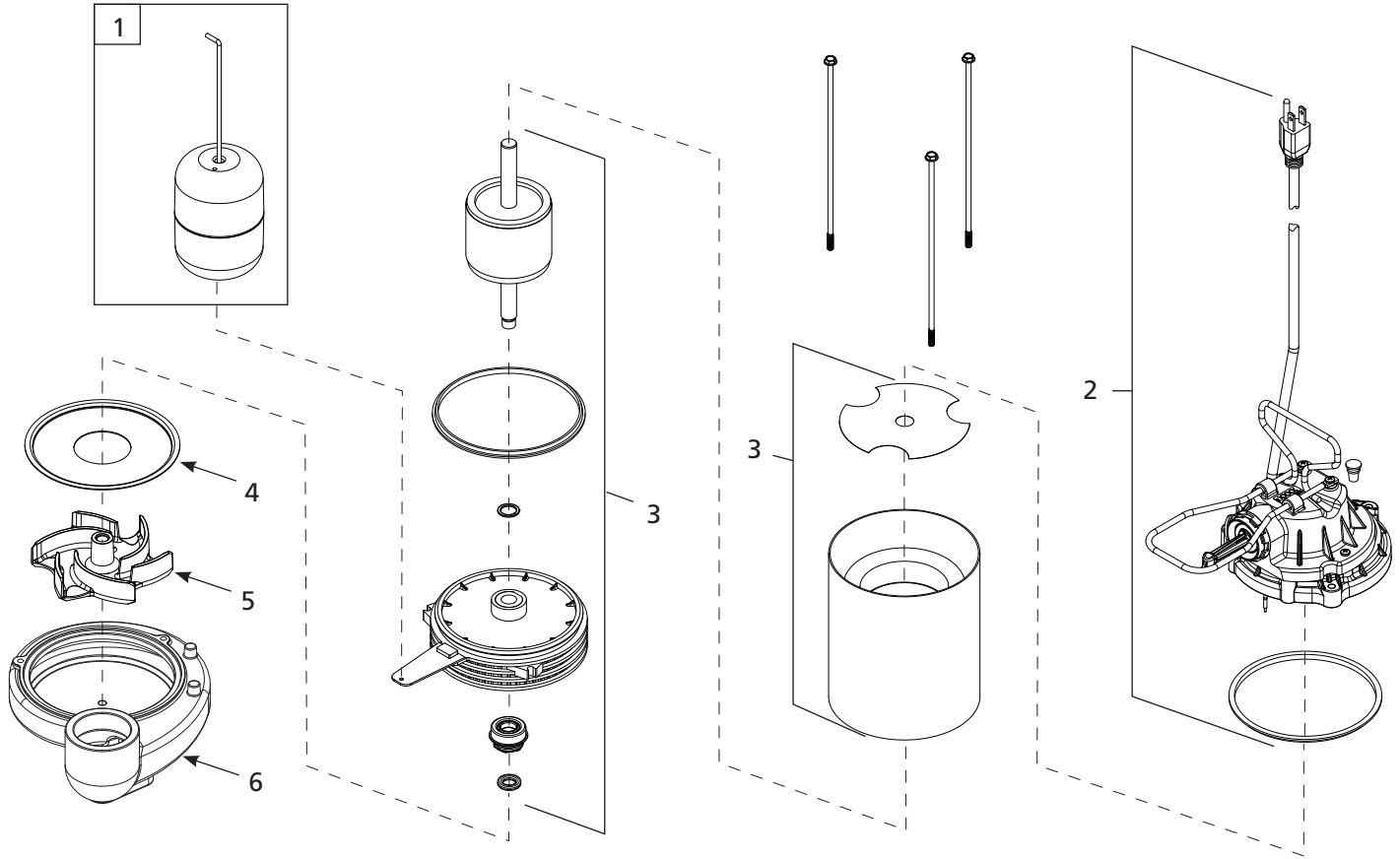
For Replacement Parts or Technical Assistance, Call 1-888-636-6628

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

Address any correspondence to:

Blue Angel Pumps™
101 Production Drive
Harrison, OH 45030 U.S.A.



Replacement Parts List

Ref. No.	Description	Part Number for Models:						Qty.
		BSPF33	BCS33	BCSF50-2	BCS50	BSPF50	BCS33HH	
1	Float Kit	60042-001	60042-001	60042-001	60042-001	60042-001	60042-001	1
2	Top Cover Kit	60017-001	60017-001	60143-001	60017-001	60017-001	60017-001	1
3	Motor Kit	60132-001	60132-001	60134-001	60134-001	60134-001	60132-001	1
4	Impeller Plate	15958	15958	15958	15958	15958	15958	1
5	Impeller	60000-001	60000-001	60001-001	60001-001	60001-001	60000-001	1
6	Volute	60007-001	60039-001	60039-001	60039-001	60007-001	60039-001	1

Ref. No.	Description	Part Number for Models:				Qty.
		SSBCSF50-2	SSBCS50	SSBCSF33-2	SSBCS33	
1	Float Kit	60042-001	60042-001	60042-001	60042-001	1
2	Top Cover Kit	60143-001	60017-001	60143-001	60017-001	1
3	Motor Kit	60135-001	60135-001	60133-001	60133-001	1
4	Impeller Plate	15958	15958	15958	15958	1
5	Impeller	60001-001	60001-001	60000-001	60000-001	1
6	Volute	60039-001	60039-001	60039-001	60039-001	1

Troubleshooting Chart

Symptom	Possible Cause(s)	Corrective Action
Pump will not start or run	1. Blown fuse, tripped breaker 2. Low line voltage 3. Defective motor 4. Defective float switch 5. Impeller bound 6. Float obstructed 7. GFCI tripped	1. If blown, replace with proper sized fuse or reset breaker. 2. If voltage is under 108 volts, check wiring size. - DO NOT USE AN EXTENSION CORD 3. Replace pump 4. Replace float switch 5. If impeller will not turn, remove housing and remove blockage 6. Make sure float moves freely up and down float rod 7. Reset GFCI Circuit. If GFCI continues to trip, replace pump.
Pump starts and stops too often	1. Back-flow of water from piping 2. Faulty float switch	1. Install or replace check valve 2. Replace float switch
Pump will not shut off or thermal protector turns off	1. Float obstructed 2. Obstacle in piping 3. Defective float switch	1. Make sure float move freely up and down 2. Remove pump and clean pump, check valve and piping 3. Replace float switch
Pump operates but delivers little or no water	1. Low line voltage 2. Clogged inlet 3. Plugged impeller 4. Obstacle in piping 5. Check valve installed backwards 6. Too many appliances on circuit	1. If voltage is under 108 volts, check wiring size - DO NOT USE AN EXTENSION CORD 2. Clean inlet screen 3. Clean out impeller 4. Remove pump and clean pump, check valve and piping 5. Reverse position of check valve 6. Install pump on dedicated circuit. IMPORTANT: Do not use an extension cord to power pump

Limited Warranty

For (One year on Models BSPF33, BSPF50, and BSC333HH) (Three years on Models BCS33, BCS50, and BCS50-2) (Five years on Models SSBCSF33-2, SSBCS33, SSBCSF50-2, SSBCS50) from the date of purchase, Blue Angel™ will repair or replace, at its option, for the original purchaser any part or parts of its Sump Pumps or Water Pumps ("Product") found upon examination by Blue Angel™ to be defective in materials or workmanship. Please call Blue Angel (1-888-636-6628) for instructions or see your dealer. Be prepared to provide the model number when exercising this warranty. All transportation charges on Products or parts submitted for repair or replacement must be paid by purchaser.

This Limited Warranty does not cover Products which have been damaged as a result of accident, abuse, misuse, neglect, improper installation, improper maintenance, or failure to operate in accordance with Blue Angel's™ written instructions.

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO (ONE YEAR ON MODELS BSPF33, BSPF50, AND BSC333HH) (THREE YEARS ON MODELS BCS33, BCS50, AND BCS50-2) (FIVE YEARS ON MODELS SSBCSF33-2, SSBCS33, SSBCSF50-2, SSBCS50) FROM THE DATE OF PURCHASE. THIS IS THE EXCLUSIVE REMEDY AND ANY LIABILITY FOR ANY AND ALL INDIRECT OR CONSEQUENTIAL DAMAGES OR EXPENSES WHATSOEVER IS EXCLUDED.

Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusions or limitations of incidental or consequential damages, so the above limitations might not apply to you. This limited warranty gives you specific legal rights, and you may also have other legal rights which vary from state to state.

In no event, whether as a result of breach of contract warranty, tort (including negligence) or otherwise, shall Blue Angel™ or its suppliers be liable for any special, consequential, incidental or penal damages including, but not limited to loss of profit or revenues, loss of use of the products or any associated equipment, damage to associated equipment, cost of capital, cost of substitute products, facilities, services or replacement power, downtime costs, or claims of buyer's customers for such damages.

You **MUST** retain your purchase receipt along with this form. In the event you need to exercise a warranty claim, you **MUST** send a **copy** of the purchase receipt along with the material or correspondence. Please call Blue Angel™ (1-888-636-6628) for return authorization and instructions.

DO NOT MAIL THIS FORM TO BLUE ANGEL. Use this form only to maintain your records.

MODEL NO. _____ SERIAL NO. _____ INSTALLATION DATE _____

ATTACH YOUR RECEIPT HERE