



genuine ingenuity

Sahara Series Automatic Bilge Pumps

4505 / 4507 / 4511 Installation Instructions

SAVE THESE INSTRUCTIONS

Form Number 69370 Rev. D

08-09

CAUTION:

Read all instructions carefully before installing and using this product. This pump is sealed and, therefore, submersible. However, the electrical wire connections must not be submerged. For extra protection, coat the butt joints and adjacent wire ends liberally with liquid electrical tape such as MDR® or Starbrite®.

Specifications

Part Num.	Model	Amp	Fuse	ABYC Specifications 13.6-volts DC (GPH=Gallons Per Hour)		ISO Specifications 12.0-volts DC (LPH=Liters Per Hour)		Max. Head (ft. @13.6V/ kPa@12V)
				Head GPH/ amps	Head GPH/ amps	Head 10kPa LPH/ amps	Head 10kPa LPH/ amps	
4505	S500	2.0	500/1.5	350/1.4	200/1.4	1136/1.2	598/1.2	9/24
4507	S750	5.0	750/3.0	625/2.8	450/2.8	1817/2.5	1306/2.5	16/36
4511	S1100	6.0	1100/4.0	970/3.8	750/3.8	3104/3.3	2328/3.3	11/7/28

WARNING: To prevent injury, always disconnect the power source when installing or servicing any electrical product.

DO NOT use pump to remove gasoline, oil or other flammable liquids. Always use the fuse amperage rating specified for your pump model. Failure to do so could result in serious personal injury or fire hazards.

Attwood bilge pumps are designed to exhaust **STANDING WATER ONLY**. They are not intended to prevent rapid accumulation of on-board water due to rough weather, hull damage, and/or other unsafe navigational conditions.

REQUIRED MATERIALS

- Hose and thru-hull fittings, available separately from Attwood:
 - 3/4" I.D. hose: Attwood No. 4199 (includes 2 clamps)
 - 3/4" I.D. thru-hull: No. 3873 (straight), No. 66541 or 66547 (stainless steel straight), No. 3877 (90°), or No. 3878 (double-end)
- Sahara Model 4511-**
 - 1-1/8" I.D. hose: No. 11551 (clamps not included)
 - 1-1/8" I.D. thru-hull: No. 3874 (white), No. 3874A (black) or No. 66543, 66549 (stainless steel), or No. 3879 (90°)
- Two (2) hose clamps suitable for (3/4" or 1-1/8") hose.
- AUTO/OFF/MANUAL dash-mounted control switch (Attwood No. 7615A).
- In-line fuse connector (Attwood No. 14341) and appropriate size fuse.
- Three (3) stainless steel #6 x 1/2" self-tapping screws, round or pan head. Use a #32 drill bit for pilot holes.
- Four (4) wire butt-connectors for 16-gauge wire.
- Two (2) insulated spade terminal connectors for 16-gauge wire.
- Suitable means to make electrical connections waterproof.
- Cordless drill.
- Screwdriver.

OPTIONAL MATERIALS

- 1/2"-thick marine plywood block (slightly larger than pump base).
- Waterproof adhesive (epoxy, silicone adhesive, or fiberglass resin) to mount block.
- 16-gauge wire (brown and black).

PUMP MOUNTING INSTRUCTIONS

WARNING: Remove the pump mounting base (See Figure 3). Failure to do this prevents the pump from starting when water is present.

- Make sure the hull thickness is at least 1/2" thick. If not, place a block of 1/2" marine plywood (slightly larger than pump base) in the lowest part of the bilge. Be sure that the pump cover can be removed for cleaning in this position. Glue the plywood to the hull with a waterproof adhesive (epoxy, silicone adhesive, or fiberglass resin). See Figure 1.
- Position the pump in the lowest part of the bilge on a flat, level surface (on the plywood block if it has been installed) with the outlet pointing toward the transom.
- Be sure outlet nozzle is level. If pointed upward or downward, an airlock may form in the pump. (See Figure 1.)
- The float end of the pump must be level with or above the pump end** (See Figure 1). This prevents the pump from running out of water while the float is still high enough to activate the pump.
- Mark location of the three (3) mounting holes with a pencil or scribe.

WARNING: When drilling holes do not drill through the hull!

- Carefully drill two 1/8" diameter pilot holes in marked area and drive a screw in each hole.
- Slide hose clamps (one to clamp hose to the pump, the other for the thru-hull connector) over end of the hose. Force hose over the discharge nozzle of the pump. Install clamp.
- Route hose on an upward incline to the thru-hull connector. Avoid dips in hose that can trap water and airlock the pump. Avoid putting excess tension on hose, which can damage the pump outlet.
- Force the hose over the thru-hull barbs and clamp into place.

THRU-HULL CONNECTOR INSTRUCTIONS

If no thru-hull connector exists, choose a location for the fitting.

- Position thru-hull fittings at least 12" above the water line to prevent water from coming back into the hull. On sailboats, mount the thru-hull high enough on the center of the transom to be above the water line at all times.
 - Place fitting, if possible, on the same side as the steering wheel so the driver can see discharge of water when the pump is working properly.
 - Drill hole to match outside diameter of the thru-hull connector thread.
 - Place a small bead of suitable marine sealant around inside of the thru-hull connector flange.
- WARNING:** Do not allow sealants containing acetic acid (smells like vinegar) such as silicone rubber sealant to contact the plastic pump housing or thru-hull connector. Such sealants can attack the plastic, causing the pump housing to crack, resulting in pump failure.
- Insert thru-hull connector through the hole and tighten to hold the thru-hull connector firmly in place. **CAUTION: Do not overtighten the nut.**

WIRING INSTRUCTIONS

WARNING: Be certain that power source is 12-volt D.C. Higher voltage will damage the pump. 1. Using the full length of wire provided (and additional wire if necessary), connect wires to the pump as shown in the diagram. (See Figure 2.)

- Route wires out of the way and secure them to the bulkhead to avoid pulling.
- Using butt connectors sized for 16-gauge wire, splice fuse holder into positive lead (brown) between the battery and switch. Position fuse holder in a location that is easily accessible for changing fuses.

IMPORTANT: Use fuses of the proper amperage (See Specification Chart at top of sheet).

WARNING: FAILURE TO PROPERLY FUSE AND MAKE THE APPROPRIATE WATERPROOF CONNECTIONS WILL VOID THE PRODUCT WARRANTY.

- Install a Three-Way Switch (Attwood No. 7615A) that allows for automatic or manual switching modes.
- Turn the pump on and twist the Test Knob clockwise to check operation. Feed water into the pump. If output appears to be too low, check the wire connections. Reversed connections result in opposite impeller rotation that drastically reduces capacity and can cause premature pump failure.

CARE AND MAINTENANCE

Occasionally check your pump to be certain debris is not jamming the impeller and/or float within the housing. Use the test knob by rotating in a clockwise direction. Careful attention will guarantee outstanding pump performance.

To clean the water chamber, remove pump housing from the mounting base by pressing in tabs on sides. Lift the pump housing away. (See Figure 3.)

To clean the impeller, remove the impeller guard screw and lift the impeller guard.

Remove all debris that has accumulated in pump chamber and around the impeller. Ensure that all debris is removed from strainer slots around the pump base.

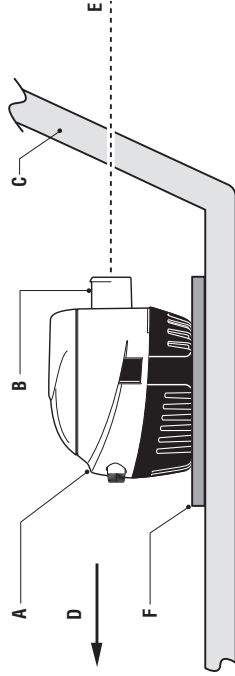
Inspect the impeller to ensure that it is firmly attached to shaft and is not cracked or broken.

Replace impeller guard, screw, and pump housing on base. Be certain that all tabs are fully engaged. Periodically check the electrical connections to ensure they are water-resistant and mounted high and dry. Do not use household cleaners on the pump because many of them may damage the pump materials.

ATTWOOD BILGE PUMPS LIMITED WARRANTY

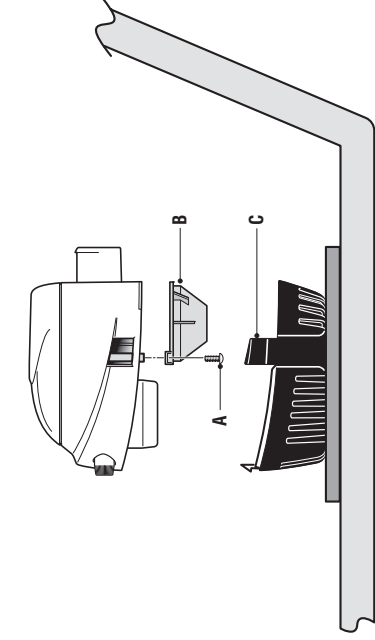
This Attwood Bilge Pump carries a three (3) year warranty. See product catalog or www.attwoodmarine.com for details.

Figure 1 / Figura 1
Abbildung 1 / Figur 1



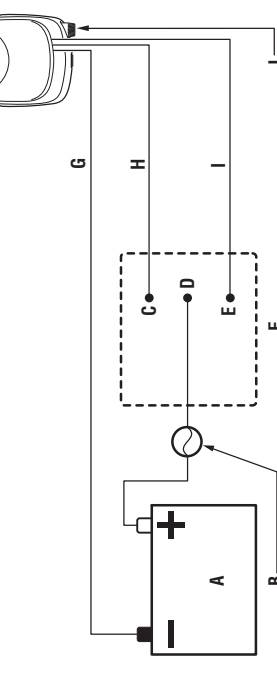
- Figure 1
A. Float End Of Pump
B. Pump Outlet Pointing To Transom
C. Transom
D. Toward Bow
E. Level Parallel To Bottom Of Boat
F. 1/2" Thick Mounting Block
- Figure 1
A. Extremo flotante de la bomba
B. Salida de la bomba en direcci3n hacia la bovedilla
C. Bovedilla
D. Hacia la proa
E. Nivel paralela a la parte inferior de la embarcaci3n
F. Tabla de montaje de 1.3 cm de espesor
- Figure 1
A. pumpens flott3r3nde
B. pumputloppet riktat mot botten p3 b3ten
C. akterspegel
D. mot f3ren
E. v3gr3tt parallellt med botten p3 b3ten
F. 1/2 tum tjock monteringskloss
- Figure 1
A. Extr3mit3 de la pompe o3 se trouve le flotteur pointant
B. Orifice de refoulement de la pompe pointant vers le caisson
C. Caisson
D. Vers l'3trave
E. Bloc de fixation de 1/2 po d'3paisseur
F. 3 niveau et parall3le au fond de l'embarcation
- Abbildung 1
A. Schwimmende der Pumpe
B. Pumpenauslass zeigt zum Heckspiegel
C. Heckspiegel
D. Zum Bug
E. Niveau parallel zum Kiel des Boots
F. Montageplatte 1/2 Zoll

Figure 3 / Figura 3
Abbildung 3 / Figur 3



- Figure 1
A. Remove (1)Screw
B. Impeller Guard
C. Depress (2)Tabs
- Figure 1
A. avl3gsna (1) skruv
B. impellerskydd
C. tryck ned (2) filkar
- Figure 1
A. Retirez 1 vis
B. Garde-p3lettes
C. Appuyez sur les (2) languettes
- Abbildung 1
A. Eine Schraube entfernen
B. Rotorsicherheitsabdeckung
C. Zwei Laschen hinein dr3cken

Figure 2 / Figura 2
Abbildung 2 / Figur 2



- Figure 2
A. 12 Volt Battery
B. Suitable Fuse (see chart)
C. Manual
D. Off
E. Automatic
F. 3-Way Switch #7615A
G. Black
H. Brown/White or Tan
I. Brown
J. Test Knob
- Figure 2
A. Batterie de 12 volts
B. Fusible convertible (voir le tableau des sp3cifications)
C. Manuel
D. Arr3t
E. Automatique
F. Interrupteur automatique 3 directions - N°7615A
G. Noir
H. Brun/blanc ou beige
I. Brun
J. Poign3e d'essai
- Abbildung 2
A. 12 Volt Akkumul3tor
B. Passende Sicherung (siehe Tabelle)
C. Von Hand
D. Aus
E. Automatisch
F. 3-Weg-Schalter Teilenummer 7615A
G. Schwarz
H. Braun / We33 oder Hellbraun
I. Braun
J. Testknopf
- Figure 2
A. Bater3a de 12 voltios
B. Fusible adecuado (ver Tabla)
C. Manual
D. Apagado
E. Autom3tico
F. Interruptor de tres v3as #7615A
G. Negro
H. Marr3n/blanco o caf3
I. Marr3n
J. Perilla de prueba
- Figure 2
A. 12-voltsbatteri
B. passande s3kring (se diagram)
C. manuell
D. fr3n
E. automatiskt
F. 3-v3gsstr3mbrytare nr 7615A
G. svart
H. brun/vit eller beige
I. brun
J. testknapp

