

# Ground Shoe, Model: 18E

## Installation Instructions

The 18E Ground Shoe is cast of a porous bronze material which, when immersed water, magnifies the contact area with the water many times beyond that defined by its outer dimensions.

Water penetrates through the shoe, creating a ground that is superior to a simple metal plate of the same size. This provides a low impedance ground which is necessary for the proper operation of many types of electronics, such as single sideband radios.

The shoe is installed on the outside of the hull, below the waterline. The aerodynamic shape minimizes drag.

The boat must be out of the water for this installation.

**Note:** All of the hardware provided is made from silicon bronze to eliminate possible galvanic corrosion. Do not use any other type of hardware. If any items are lost, contact NEWMAR for replacement. If different length bolts are needed, specify silicon bronze hardware from your marine supply store

- 1) Inspect the ground shoe for damage before installation.
- 2) Choose a flat location on the hull that is accessible from the inside of the boat and from where the copper strap can be routed to connect to the electronics.
- 3) Orient the shoe parallel to the keel to minimize drag (refer to installation diagram) and hold the Ground Shoe against the hull. Make sure any gaps between the ground shoe and hull do not exceed 1/4" (6 mm). If the gap is greater than 1/4" (6 mm), select a flatter mounting location. Using the ground shoe as a template, mark the center of the mounting holes on the hull.
- 4) Drill the mounting holes using a 3/8" drill bit.
- 5) Apply a small amount of marine sealant (3M #5200 or equivalent) to the mounting screw threads and to the area around the screw holes on the back (flat) side of the shoe. Push the screws through the shoe and into the hull.

**Note:** If there is a small gap between the leading edge (forward facing) of the ground shoe and the hull, apply a small bead of marine sealant between the hull and leading edge of the ground shoe. Do not place sealant around the other edges of the ground shoe.

- 6) On the inside of the hull, apply more sealant around where the screws will emerge through the hull, as well as on one side of each white nylon ground shoe seal. Place the seals over the screws with the sealer side against the hull.
- 7) Place a flat washer on each screw and then tighten them down snugly with four provided hex nuts.
- 8) Attach a copper ground strap to one of the screws and tighten it securely with the remaining hex nut.
- 9) After the boat is launched, check carefully for leaks. If necessary, apply additional sealant and re-tighten the hex nuts.

## Maintenance

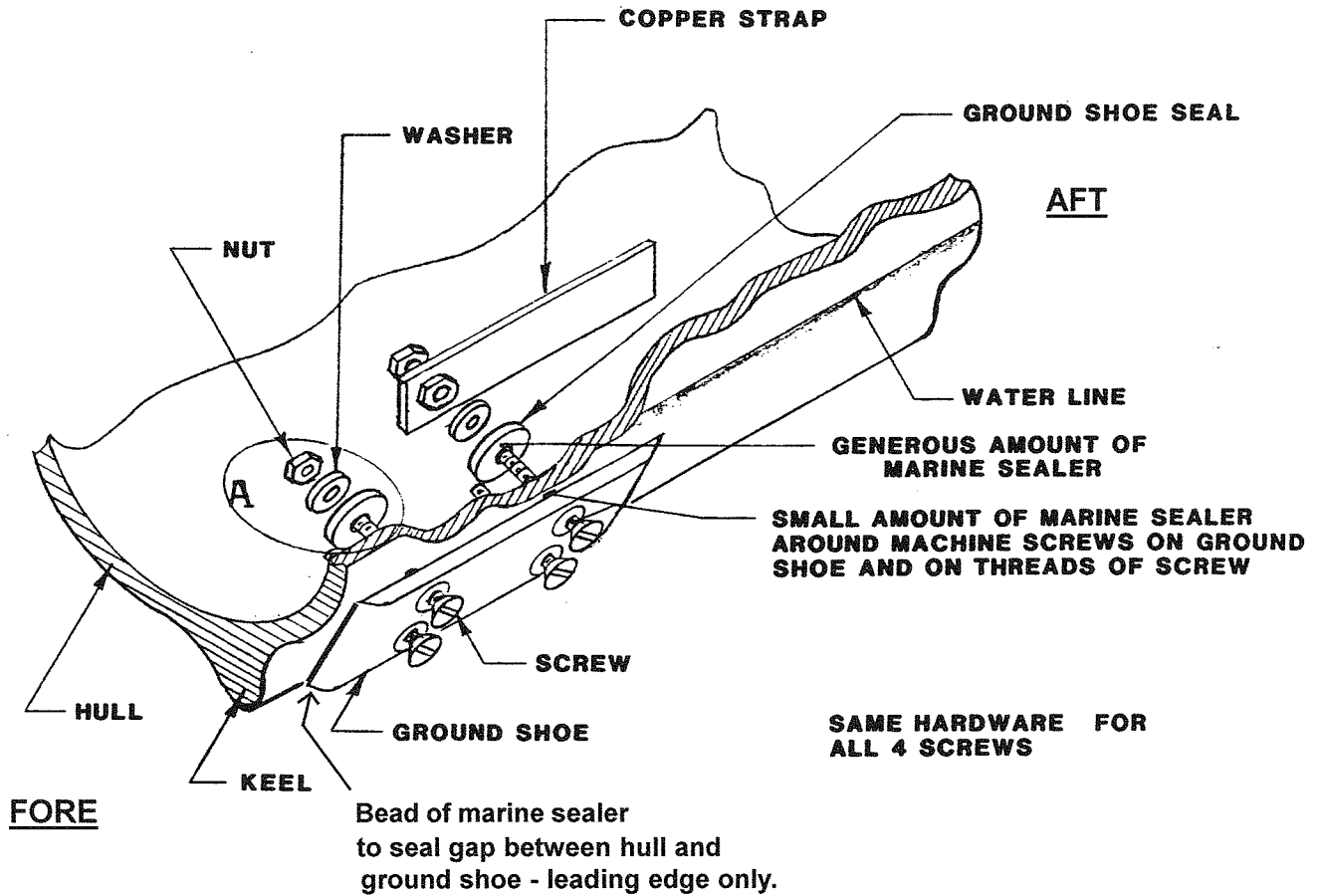
Do not paint any of the shoe surfaces. This will prevent water contact and render the shoe ineffective.

For optimum performance scrub the surface of the shoe with a stiff bristle brush each time the hull is cleaned.

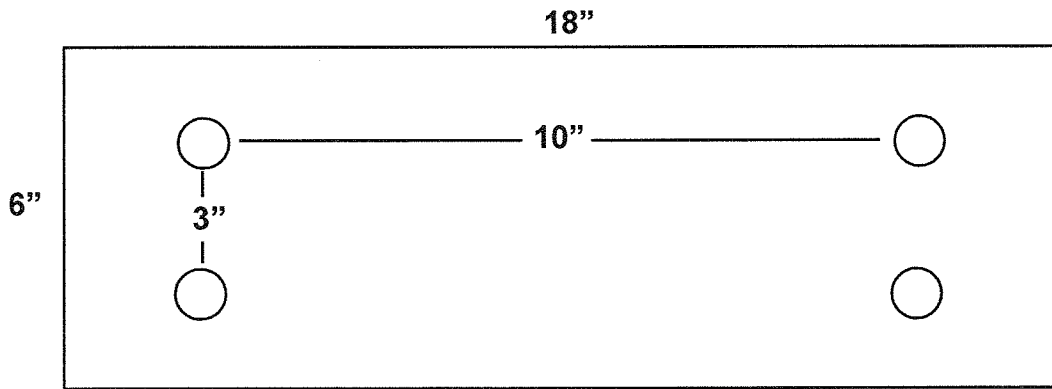
When the boat is hauled, scrub the shoe and pour chlorine bleach over it to kill any growth.

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## Installation Diagram



### Dimensions



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DC Power Onboard