Navigational Light

O & M Manual

Toll Free (888) 560-2060 15191 Highway 243 Russellville, AL 35654 Fax 256-332-4036

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Installation

1. If your navigation light has been shipped with a junction box, position the junction box under the mounting base with the included gasket between the junction box and the base. When installed through the mounting base, the anchor bolts will hold the junction box captive. The junction box can be rotated in 90 degree increments to suit the entry conduit's location. Arrange wiring pigtail as needed through the junction box.

2. If you are installing a hanging light, the light is designed so that it can be drawn up for service from either side. If you need to draw the light up in the clockwise direction (as viewed from the perspective of approaching boat traffic), you might find that the chain will slide more easily if you thread it through the pulley in the opposite direction from the shipped configuration.

3. Secure the light fixture to a flat horizontal or plumb surface, whichever is appropriate for your fixture, using (4) ½" diameter anchor bolts suitable for your installation conditions. The use of lockwashers and/or elastic stop nuts is strongly recommended.

4. If applicable, connect wiring as indicated on the wiring diagram.
   Test.

   Notes:
   a. If your fixture is equipped with dual lamps, unscrewing or removing the primary (burning) lamp should cause the second lamp to light. If it does not, see maintenance section.
   b. Power circuits to navigation lights should be equipped with appropriate electrical protection, including over-current, power surge and lightning protection. This is particularly critical if LED lamps are being used.

5. Ensure all covers are secured with gaskets in place beneath them and that the lid is also firmly fastened in place.

If assistance is required, contact the factory at the number listed below.

B&B Roadway
15191 Hwy 243
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Operation

Operation of navigational lights is basically a simple matter of turning power on or off at the appropriate times. The following offers additional information for specific types of navigational light fixtures.

Single Head (Single Lens) Lights

Single head navigational light fixtures are operated simply by connecting or disconnecting power. This is generally done through the bridge system controls and/or a photo switch.

Double Head (Two Lens) Lights

Double head navigational light fixtures require power to be switched between the red and green lens depending on the bridge status. This is generally done through the bridge system controls. A photo switch may also be employed in the control circuit. If used, the photo switch is also generally part of the bridge controls, external to the fixture. Refer to wiring diagram following or bridge plans for details of control circuit.

Swing Span Lights (Segmented Lens)

Bridges with newer control systems generally use double head fixtures, as recommended by the Coast Guard, to indicate span position/navigational permission with the bridge control system switching power between the red and green sections. Older systems without the capability of switching power based on bridge position may use the old style single head fixture with a 3- or 4-segment lens.

Dual/Backup Lamp Configuration

If your fixture is equipped with 2 lamps (4 lamps for double head fixtures) with a built-in transfer circuit, power will automatically transfer to the second lamp when the first burns out. The circuit board provides “lamp out” signals which you may utilize at your option for remote indication. Upon replacement of the primary lamp, power will automatically switch back to the primary lamp.

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Maintenance

Navigational lights require little regular maintenance. Please refer to the chart below for recommended maintenance tasks and frequency. Instructions can be found on the next page.

Single Lamp; No "Lamp Out" Monitoring			
Lamp Type	**Photocell**	**Inspection Frequency**	**Replace Lamps**
Incandescent	Yes	annually	every 3 years
Incandescent	No	annually	annually
LED	Yes	every 4 years	every 8 years
LED	No	every 2 years	every 5 years

Dual/Backup Lamp; No "Lamp Out" Monitoring			
Lamp Type	**Photocell**	**Inspection Frequency**	**Replace Lamps**
Incandescent	Yes	every 5 years	as needed
Incandescent	No	every 2 years	as needed
LED	Yes	every 5 years	as needed
LED	No	every 5 years	as needed

Single Lamp; WITH "Lamp Out" Monitoring			
Lamp Type	**Photocell**	**Inspection Frequency**	**Replace Lamps**
Incandescent	Yes	every 5 years	when indicated
Incandescent	No	every 5 years	when indicated
LED	Yes	every 5 years	when indicated
LED	No	every 5 years	when indicated

Dual/Backup Lamp; WITH "Lamp Out" Monitoring			
Lamp Type	**Photocell**	**Inspection Frequency**	**Replace Lamps**
Incandescent	Yes	every 5 years	when indicated
Incandescent	No	every 5 years	when indicated
LED	Yes	every 5 years	when indicated
LED	No	every 5 years	when indicated

CAUTION: Never reach into the fixture with power connected. Always disconnect power before removing or installing a lamp.

CAUTION: Burning incandescent lamps will be hot.

For single lamp arrangements, for each head or section of the fixture:

1. Observe whether the fixture is lit when power is on and directed to that section (red or green) if applicable.
2. Disconnect power.
3. Open the lid and/or door.
4. If it is time for scheduled lamp replacement, replace the lamp. Or, if the lamp is burned out, replace it.
5. Inspect gaskets for damage or wear that prevent proper sealing. Replace if needed.
6. Inspect lens for cracks or other damage that affects the light performance.
7. Secure lid or door snugly, ensuring gaskets are seated properly.

For fixtures with backup lamp arrangements, for each head or section of the fixture:

1. Open the lid and/or door of the section to which power is connected.
2. Observe the lamps.
    a. If **neither** lamp burns when power is connected for that section (red or green), both lamps require replacement.
    b. If **one** lamp burns, disconnect power, unscrew the burning lamp, and restore power.
        i. If the remaining lamp burns, both lamps are good.
        ii. If the remaining lamp does NOT burn, it is the primary lamp and has burned out and will require replacement.
    c. If you have LED lamps and **both** are burning, you will note that one lamp is dim and many of the individual LEDs are out; the dim lamp will require replacement.
3. Disconnect power and replace the lamps indicated above.
4. Restore power and retest.
5. Inspect gaskets for damage or wear that prevent proper sealing. Replace if needed.
6. Inspect lens for cracks or other damage that affects the light performance.
7. Secure lid or door snugly, ensuring gaskets are seated properly.

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