

INSTRUCTION SHEET FOR PERMANENT AND MAGNETIC MOUNTING KITS FOR MINI-LIGHTBAR LIGHT ASSEMBLIES

SAFETY MESSAGE TO INSTALLERS AND USERS

People's lives depend on your safe installation of our products. It is important to read, understand and follow all instructions shipped with this product and the related add-on products. In addition, listed below are some other important safety instructions and precautions you should follow:

- To properly install this light: you must have a good understanding of automotive electrical procedures and systems, along with proficiency in the installation and use of safety warning equipment.
- When drilling into a vehicle structure, be sure that both sides of the surface are clear of anything that could be damaged. Remove all burrs from drilled holes. To prevent electrical shorts, grommet all drilled holes through which wiring passes.
- A light system is a high current device. In order for it to function properly, a separate ground connection must be made. If practical, it should be connected to the negative battery terminal. At a minimum, it may be attached to a solid metal body or chassis part that will provide an effective ground path as long as the light is to be used.
- Because vehicle roof construction and driving conditions vary, Federal does not recommend driving a vehicle with a magnetically mounted warning light installed. The light could fly off the vehicle causing injury or damage. Repair of damage incurred because of ignoring this warning shall be the sole responsibility of the user.
- Locate light system controls so the VEHICLE and CONTROLS can be operated safely under all driving conditions.
- You should frequently inspect the light to ensure that it is operating properly and that it is securely attached to the vehicle.
- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the product.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you or others.

I. GENERAL.

This instruction sheet provides directions for installation of mounting kits and wiring of the Mini-Lightbar Light Assemblies.

After unpacking the Light Assembly, inspect it for damage that may have occurred in transit. If the unit has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of damage. Carefully check all envelopes, shipping labels, and tags before removing or destroying them.

II. INSTALLATION.

The Light Assembly is completely wired at the factory and does not require any additional internal wiring. User-supplied 18 gauge or larger wire may be added if required. Optional 15-foot cable kits are available from your dealer. Determine the Light Assembly's operating voltage before selecting the user-supplied switch(es) and fuse.

A. Permanent Mount.

1. Remove the lenses as follows:

- a. See figure 1. Slide the grooved end of the lens removal tool under each plastic lens fastener and pull out to remove.

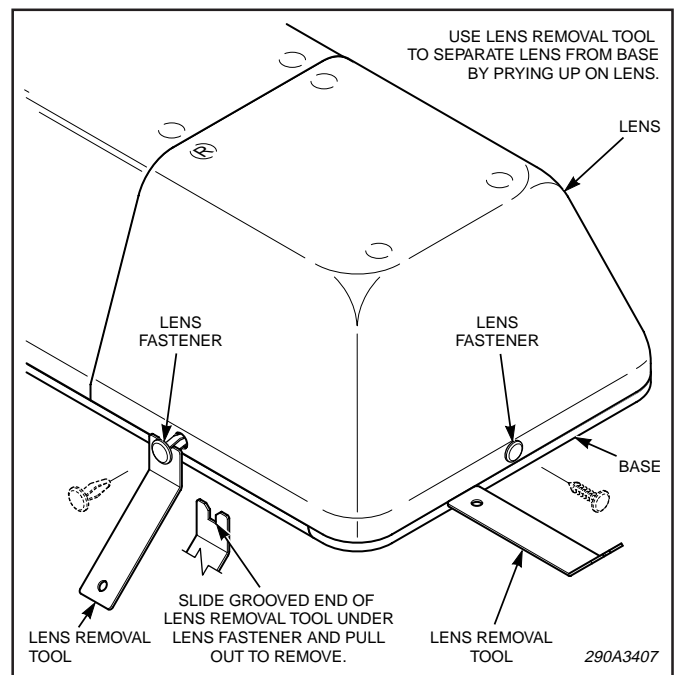


Figure 1.

b. Starting with the lens marked "R", use the end of the lens removal tool to separate the lens from the base as shown in figure 1.

c. See figure 2. Working from right to left, remove each lens starting with the lens marked "R".

2. To mark the mounting and wire routing hole locations, proceed as follows:

a. Flush Base.

Select a relatively flat and level position on the mounting surface. Place the Light Assembly at the selected location. Use the mounting holes (see figure 3) in the base plate as a template and scribe four drill position marks on the mounting surface. Scribe a drill position mark (wire routing hole) on the mounting surface directly under the Light Assembly's wire exit hole. Temporarily place the Light Assembly aside.

b. Raised Base.

Select a relatively flat and level position on the mounting surface. Using figure 4 as a guide, scribe four drill position marks on the mounting surface. Scribe a drill position mark (wire routing hole) on the mounting surface directly under the Light Assembly's wire exit hole. Temporarily place the Light Assembly aside.

CAUTION

To avoid damage when drilling, ensure that both sides of mounting surface are clear of any parts or wires.

Also, when drilling any holes, ensure that holes are drilled only through sheet metal and not through upholstery.

3. Drill four 9/32" (.281") holes (mounting holes) at the previously scribed drill position marks.

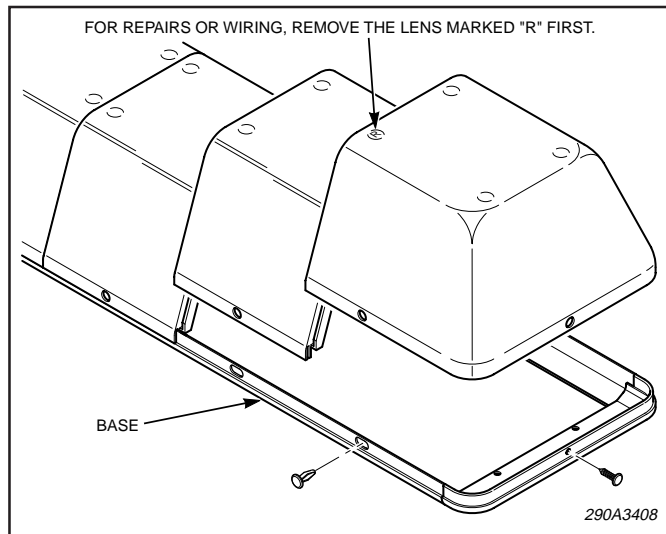


Figure 2.

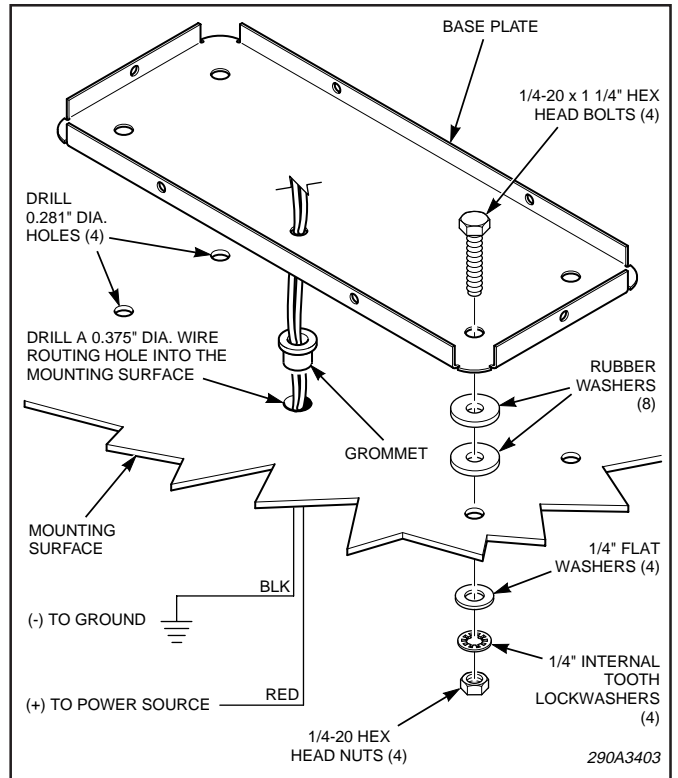


Figure 3.

Drill one 3/8" hole (wire routing hole) at the previously scribed drill position mark. Install the grommet in the wire routing hole.

4. Install a user-supplied control head or switch(es) at a location which allows the vehicle and all controls to be operated safely under all driving conditions. Switch current capacity should be at least 15-amperes for 12VDC units, or 10-amperes for 24VDC units.

5. Install a user-supplied in-line fuseholder in the positive (+) lead as close to the power source as possible. Install a fifteen-ampere fuse for 12VDC units, or a ten-ampere fuse for 24VDC units, in the fuseholder.

6. Route user-supplied wires, or the optional cable kit, through the wire routing hole to the control head or switch(es). Allow approximately 6-inches of wire/cable above the mounting surface to allow connection to the light assembly's terminal block.

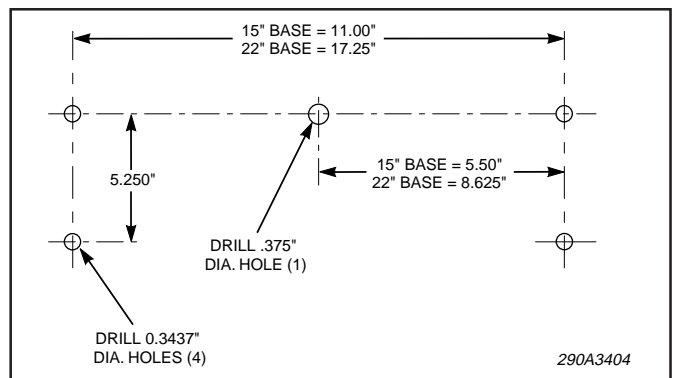


Figure 4.

CAUTION

Light Assembly will not function properly without a good ground connection. Ensure that the black wire is attached to known good vehicle ground.

7. Apply a silicone sealing compound around the wires and grommet where the wires pass through the mounting surface to prevent leakage.

CAUTION

To prevent a short circuit or broken wire, dress the wires or cable to avoid pinching between the base plate and mounting surface. Also, do not allow the mounting screws to pierce the wires or cable.

8. To install the light assembly on the mounting surface, proceed as follows:

- a. Flush Base.

See figure 3. Route the wires/cable through the wire routing hole in the base. Place two rubber washers at each mounting hole location. Carefully position the light assembly over the mounting holes. Secure the light assembly on the mounting surface using the 1/4-20 bolts, washers, lockwashers, and nuts.

- b. Raised Base.

See figure 5. Route the wires/cable through the wire routing hole in the base. Place two rubber washers at each mounting hole location. Align the carriage bolts with the mounting holes and carefully position the light assembly on the mounting surface. Secure the light assembly on the mounting surface using the 5/16" washers, lockwashers, and nuts.

9. Route the wires/cable inside the light assembly to the terminal block. Cut the wires to the appropriate length. Strip approximately 1/4" of insulation from the end of both wires. See figure 6. Connect the positive (+) lead to the terminal block position with the red wire(s). Connect the negative (-) lead to the terminal block position with the black wires.

10. Replace the lenses starting with the left (L) lens. Secure the lenses using the supplied plastic fasteners. Note that the smaller fasteners are used in the end positions.

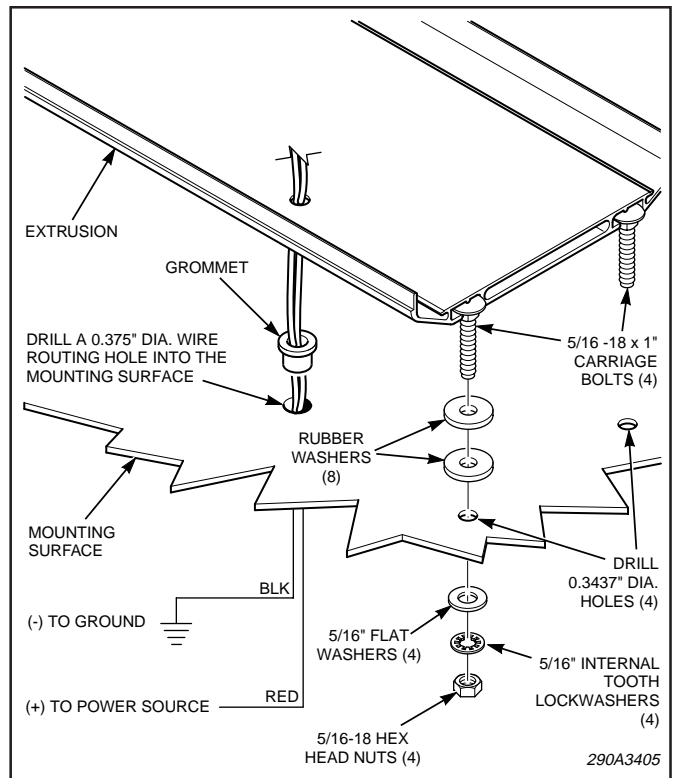


Figure 5.

B. Magnetic Mount.

- 1. Magnet Installation.

- a. Flush Base.

Remove the lenses. Secure the magnets to the base using the bolts, flat washers, lockwashers, and nuts as shown in figure 7.

- b. Raised base.

Remove the lenses. Remove one end cap by unscrewing the two screws in the end of the cap.

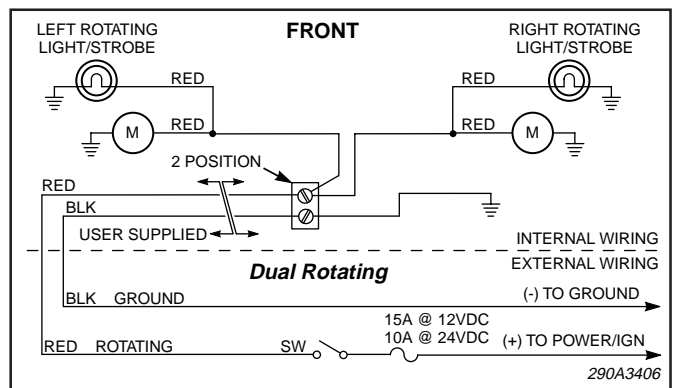


Figure 6.

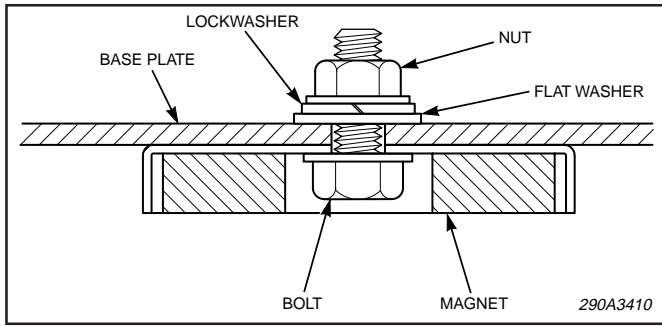


Figure 7.

Slide out the four 5/16" by 1" bolts. Slide in four 5/16" by 1/2" long bolts into the slots in the end of the base. Replace the end cap and the lenses. Attach the magnets using rubber washers and half nuts as shown in figure 8.

2. Installation on Vehicle.

Place the light assembly on the vehicle roof at a location which provides maximum signalling effectiveness for your application.

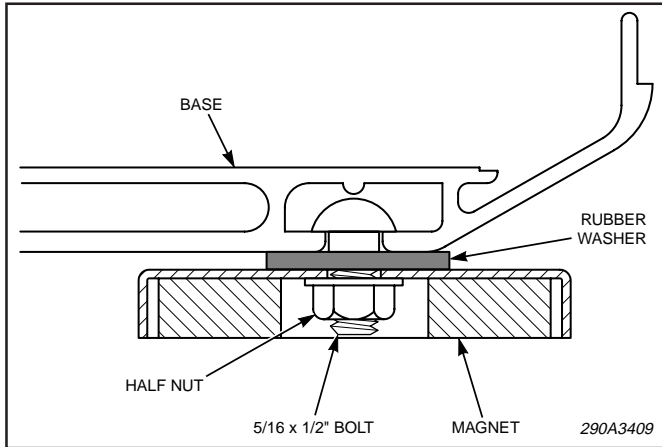


Figure 8.

SAFETY MESSAGE TO OPERATORS

Holding power of magnetic mounting systems is dependent upon surface finish, surface flatness, and thickness of the steel mounting surface. Therefore, to promote proper magnetic mounting:

- Mounting surface and magnets must be kept clean, dry, and free of foreign particles that prevent good surface contact.
- Ensure that mounting surface is flat.
- Magnetic mounting system should not be used on vehicles with vinyl tops.
- To prevent sliding of light assembly on mounting surface, quick acceleration and hard stops should be avoided.

WARNING

If driving conditions require your full attention, you should avoid inserting the plug in the cigarette lighter socket.

CAUTION

The plug may overheat and become damaged if the cigarette lighter socket is not clean. Ensure that the cigarette lighter socket is free from dirt and ashes.

To operate the magnet mount light assembly, insert the plug on the end of the cable assembly in the cigarette lighter socket.