

INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR SENTRY™ WARNING LIGHTS

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 the products. In addition, listed below are some other important safety instructions and precautions you should follow:

- To properly install this kit: you must have a good understanding of automotive electrical procedures and systems, along with proficiency in the installation and use of safety warning equipment.
- DO NOT install equipment or route wiring in the deployment path of an air bag.
- When drilling into a vehicle structure, be sure that both sides of the surface are clear of anything that could be damaged.
- In order for the light 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 system is to be used.
- Locate light control so the VEHICLE and CONTROL can be operated safely under all driving conditions.
- Do not attempt to activate or deactivate light control while driving in a hazardous situation.
- 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. UNPACKING.

After unpacking the unit, inspect it for damage that may have occurred in transit. If the unit has been damaged, 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. Ensure that the parts listed in the appropriate KIT CONTENTS LIST are contained in the package.

II. KIT CONTENTS LIST.

SURFACE MOUNT MODELS

Qty.	Description	Part Number
1	Cable Tie	150A109
1	Terminal, Female	224A216-04L
1	Terminal, Male	224A217-02L
3	Screw, #10 Thd. Frm.	7011A122-12
3	Flat Washer, #10	7072A119
1	Gasket, Mounting	8433011
1	Grommet	8108A002

PIPE MOUNT MODELS

Qty.	Description	Part Number
1	Cable Tie	150A109
1	Terminal, Female	224A216-04L
1	Terminal, Male	224A217-02L

MAGNETIC MOUNT MODELS

Qty.	Description	Part Number
1	Cover, Magnet, Mylar	16111464-01
1	Label, Caution, Magnetic Mnt.	200389

III. INSTALLATION.

A. Surface Mount Models.

To install the light, proceed as follows:

1. Push and hold the dome release button (located in the plastic base). Turn the dome counter-clockwise and lift the dome off the base (see figure 1).
2. Position the vehicle on a level surface. Select a relatively flat mounting position which provides sufficient rigidity to support the light and prevent vibrations caused by the light when the vehicle is in motion.

CAUTION

Turning reflector by hand may damage motor or worm gear. To rotate the reflector, connect to an appropriate power source.

3. Position the light with the dome release button toward the rear at the selected mounting location.

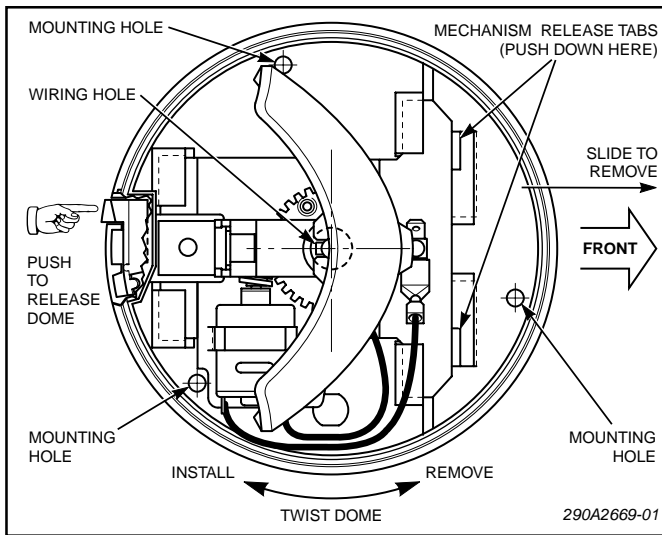


Figure 1.

4. Use the base of the light as a template and scribe three mounting hole drill position marks on the mounting surface. Also, scribe one wire routing hole drill position mark at the center.

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.

5. Drill one 1/2" (0.50) hole (wire routing hole) at the previously scribed center drill position mark. Drill three 9/64" (0.140) holes (mounting holes) at the previously scribed outer drill position marks.

6. Install the grommet in the 1/2" wire routing hole.

WARNING

When installing equipment inside air bag equipped vehicles, the installer **MUST** ensure that the equipment is installed **ONLY** in areas recommended by the vehicle manufacturer.

Failure to observe this warning will reduce the effectiveness of the air bag, damage the air bag, or potentially damage or dislodge the equipment, causing serious injury or death to you or others.

7. Install a user-supplied switch (current capacity of at least 8-amperes) at a location which allows the vehicle and all controls to be operated safely under all driving conditions.

8. Route a user-supplied 16AWG red wire from one side of the switch through the grommet in the

mounting surface and leave about 6" of excess wire above the mounting surface. Also, route a user-supplied 16AWG black wire from a known good vehicle ground through the grommet in the mounting surface and leave about 6" of excess wire above the mounting surface.

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

10. Align the holes in the mounting gasket with the appropriate holes in the base and apply the mounting gasket to the base of the light. Route the wires through the gasket's wire routing hole and into the base of the light.

11. See figure 2. Secure the base to the mounting surface with the three thread-forming screws and flat washers.

12. Strip approximately 1/4" of insulation from the end of the red and black wires previously routed into the base of the light.

13. Crimp the female terminal on the black wire and attach it to the short black wire with the male terminal.

14. Crimp the male terminal on the red wire and attach it to the short red wire with the female terminal in the light.

CAUTION

Interference with a rotating reflector can damage the reflector or wires. Ensure that wires are dressed to prevent any interference.

15. Use the cable tie to dress the wires.

16. Connect the unused terminal of the previously installed switch to one side of a user-supplied fuseholder. Connect the other side of the fuseholder to the positive (+) terminal of the vehicle's battery. Install an eight (8) ampere fuse in the fuseholder.

17. Replace the dome.

B. Pipe Mount Models.

1. Push and hold the dome release button (located in the plastic base). Turn the dome counter-clockwise and lift the dome off the base (see figure 1).

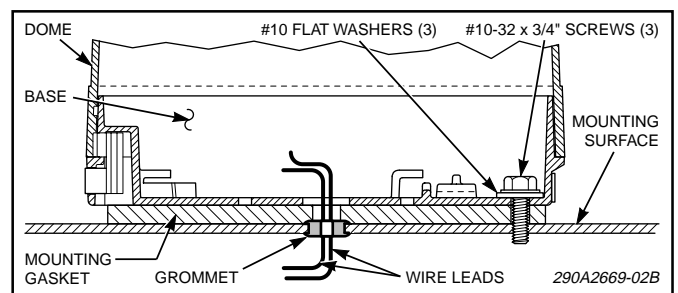


Figure 2.

WARNING

When installing equipment inside air bag equipped vehicles, the installer **MUST** ensure that the equipment is installed **ONLY** in areas recommended by the vehicle manufacturer.

Failure to observe this warning will reduce the effectiveness of the air bag, damage the air bag, or potentially damage or dislodge the equipment, causing serious injury or death to you or others.

2. Install a user-supplied switch (current capacity of at least 8-amperes) at a location which allows the vehicle and all controls to be operated safely under all driving conditions.

3. Route a user-supplied 16AWG red wire from one side of the switch through the pipe flange and into the light. Leave about 6" of excess wire above the pipe flange. Also, route a user-supplied 16AWG black wire from a known good vehicle ground through the pipe flange and into the light. Leave about 6" of excess wire above the pipe flange.

4. Screw the flange mount light onto the pipe. Position the light with the dome release button toward the rear.

5. Strip approximately 1/4" of insulation from the end of the red and black wires previously routed into the base of the light.

6. Crimp the female terminal on the black wire and attach it to the short black wire with the male terminal.

7. Crimp the male terminal on the red wire and attach it to the short red wire with the female terminal in the light.

CAUTION

Interference with a rotating reflector can damage the reflector or wires. Ensure that wires are dressed to prevent any interference.

8. Use the cable tie to dress the wires.

9. Connect the unused terminal of the previously installed switch to one side of a user-supplied fuseholder. Connect the other side of the fuseholder to the positive (+) terminal of the vehicle's battery. Install an eight (8) ampere fuse in the fuseholder.

10. Replace the dome.

C. *Magnetic Mount Models.*

Magnetic mounting provides a secure, temporary mounting method for most installations. However,

it is not intended for use on the exterior of a moving vehicle.

WARNING

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.

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.
- Magnet 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.
- If the light is to be held directly to the roof by the magnet, ensure that the power cable is not under the magnet.

1. Place the light assembly on a level steel surface. Ensure that the light is placed to promote maximum coverage and range of the light's warning signal.

2. Insert the plug on the end of the power cord into the cigar lighter socket.

NOTE

When using the vehicle's cigar lighter socket as the light's power source, Federal recommends replacing the original lighter circuit fuse with an eight-ampere fuse. After the original fuse has been replaced, devices requiring more than eight amperes will cause failure of the lighter circuit fuse and therefore should not be plugged into the cigar lighter socket.

If direct connection to the power source (not utilizing the cigar lighter plug) is desired, a user-supplied in-line fuseholder and eight-ampere fuse must be installed in the power cord's ribbed (positive) lead.

D. DIN Mount Models.

These models utilize a DIN mounting/connection installation. They are designed for installation on a 24mm tube/female DIN connector.

NOTE

If a user-supplied switch is used, it must have a current capacity of at least 8-amperes.

1. Loosen the wing nut on the base of the light assembly.
2. Slide the light assembly onto the 24mm tube/female DIN connector. Ensure that the connector is seated in the base of the light.
3. Finger-tighten the wing nut until the base is snug on the DIN connector.
4. Install a user-supplied fuseholder in the light's positive lead and install a 8-ampere fuse in the fuseholder.

IV. MAINTENANCE.

A. General.

WARNING

Crazing (cracking) of domes will cause reduced effectiveness of the light. Do not use cleaning agents (which will cause crazing) such as strong detergents, solvents, or petroleum products. If crazing of dome does occur, reliability of light for emergency signalling purposes may be reduced until dome is replaced.

1. The dome can be cleaned using a non-abrasive, high quality, automotive paste wax and a soft cloth.
2. On magnetic mount lights, periodically inspect the magnet for dirt and metal shavings. Clean the magnet as necessary. Keep the area around the magnetic mount light free of dirt and metal shavings.
3. Apply a film of light grease to the gears when necessary.

B. Lamp Replacement.

WARNING

A serious injury may result if lamp is touched when hot. Always allow lamp to cool before removing. Halogen lamps are pressurized and if broken can result in flying glass. Always wear gloves and eye protection when handling the lamps.

CAUTION

Service life of lamp will be shortened if glass portion is touched. If glass has been handled, clean carefully with a grease solvent.

1. Rotate the reflector until the C-clip (located at the base of the lamp) can be removed, and remove the C-clip by sliding it away from the reflector.
2. See figure 3. Note the lamp's orientation and replace the lamp with the straight edge of the lamp's base toward the reflector. Replace the 12V lamp with Part No. 8440A265 and the 24V lamp with Part No. 8444A151.

C. Mechanism Removal (for servicing).

1. Push and hold the dome release button (located in the plastic base). Turn the dome counter-clockwise and lift the dome off the base (see figure 1).
2. Disconnect power to the light. Disconnect the red and black leads in the light.
3. See figure 1. Push and hold the mechanism release tabs.
4. Slide the mechanism over the release tabs and lift the mechanism out of the base.
5. After servicing, replace the mechanism by performing the above steps in reverse order.

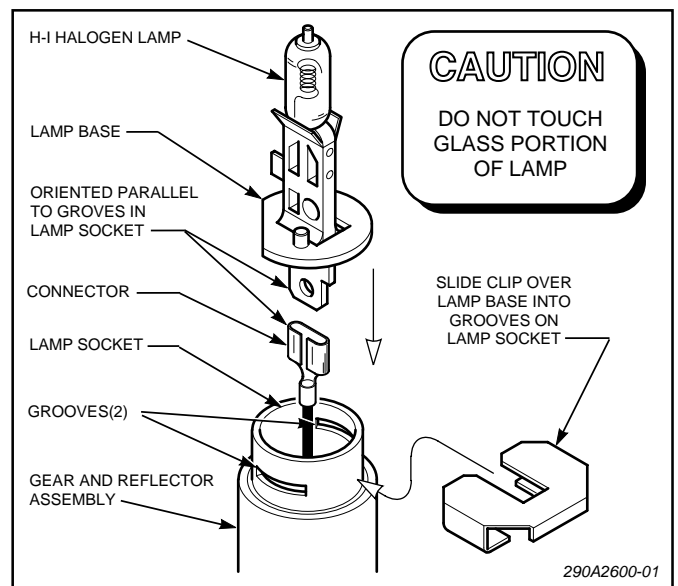


Figure 3.