FEDERAL SIGNAL CORPORATION
Emergency Products

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# WIRING AND MAINTENANCE INSTRUCTIONS FOR MODEL 22I AeroDynic® LIGHT ASSEMBLY

## SAFETY MESSAGE TO INSTALLERS OF FEDERAL SIGNAL LIGHT SYSTEMS

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 a light assembly, you must have a good understanding of automotive electrical procedures and systems.
- When drilling into a vehicle structure, be sure that both sides of the surface are clear of anything that could be damaged.
- 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 system is to be used.
- Locate light system controls so the VEHICLE and CONTROLS can be operated safely under all driving conditions.
- You should frequently inspect the light system 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. ELECTRICAL WIRING.

The Light Assembly is completely wired at the factory and does not require any internal wiring. The cable connected to the Light Assembly contains all the necessary conductors for proper operation. The Light Assembly Wiring Diagram (figure 1) illustrates the function of the conductors in the cable. Be sure to use fuses (current rating shown in wiring diagram), wire and switches with adequate current capacity for each function. The necessary switch current capacity for the Model 22I is 18 amperes. We recommend Federal Model SW6 or Model SW8 (or equivalent) switches be used. If a low current capacity switch is used, an appropriate relay such as Federal Model R2 should be installed.

## II. NFPA INSTALLATION.

### MESSAGE TO NFPA INSTALLERS

For mounting, color configuration, and mounting considerations, refer to the latest edition of the NFPA standard for automotive fire apparatus.

Use figure 2 as a guide (for mounting and wiring) when installing this light assembly as part of an NFPA certified system.

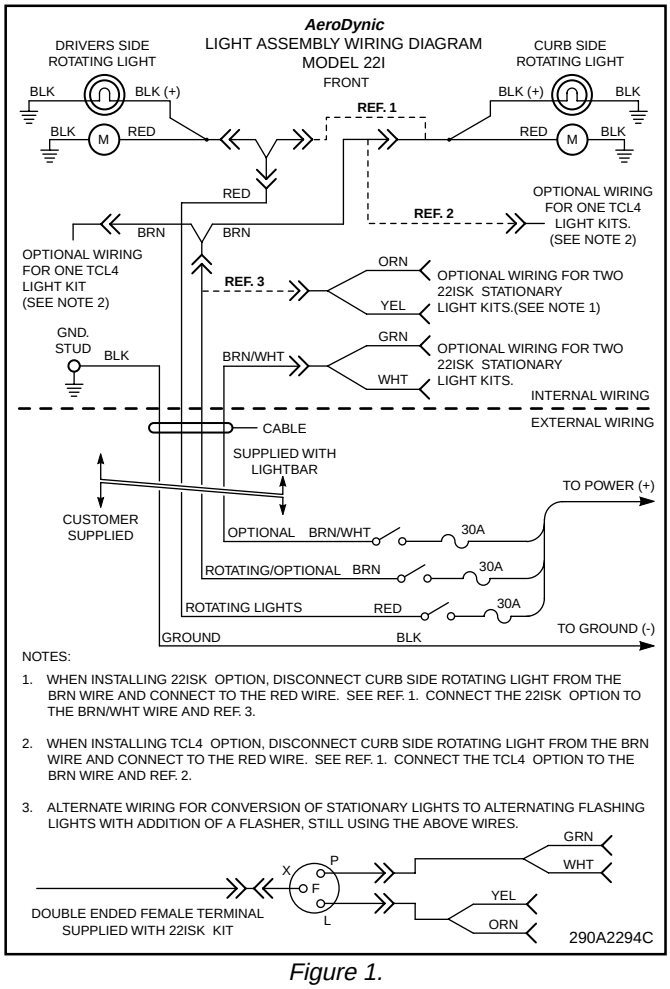


*Figure 1.*

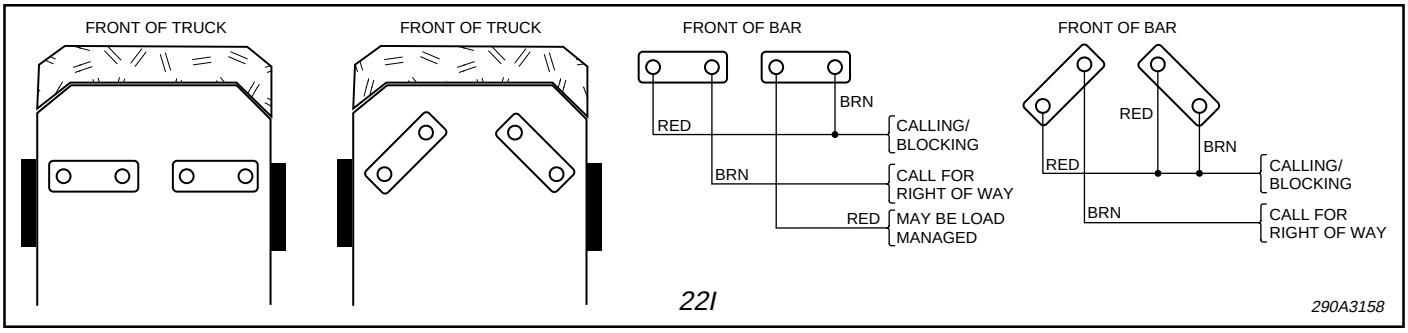


*Figure 2.*

## III. MAINTENANCE.

**WARNING**

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

A. *Cleaning the Plastic Domes.*

Ordinary cleaning of the plastic domes can be accomplished by using mild soap and a soft rag. Should fine scratches or a haze appear on the domes, they can ordinarily be removed with a non-abrasive, high quality, one-step, automotive paste cleaner/wax and a soft cloth.

B. *Halogen Lamp Replacement (see figure 3).*

**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**

Forced rotation of the light mechanism will cause damage to the worm gear. ALWAYS rotate the light mechanism by rotating the motor shaft.

1. Rotate the reflector until the lamp clip (located at the base of the lamp) can be removed, and remove the clip by sliding it away from the reflector.

2. Note the lamp's orientation and pull the defective lamp and connector out of the socket.

**CAUTION**

When installing a new lamp, do not touch the glass portion. If the glass has been touched, shortened lamp life will result. If the glass end has been handled, it should be carefully cleaned with a grease solvent.

3. Replace the defective lamp with a new H-1 halogen lamp. When reassembling, ensure that the lamp is secured to the connector and that the clip is properly seated in the grooves on the lamp socket.

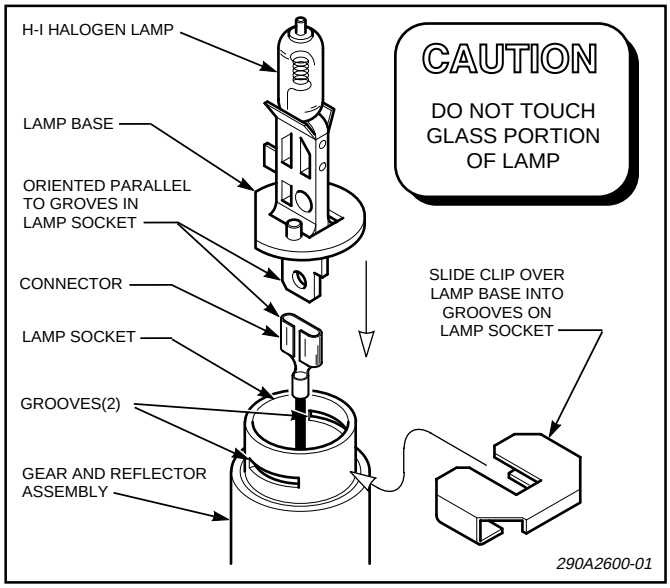


*Figure 3.*