

**WIRING AND MAINTENANCE INSTRUCTIONS
FOR
MODEL AD SERIES AND ADL SERIES INDEPENDENT ROTATOR LIGHT ASSEMBLIES**

**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, 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.
- A light system is a high current device. In order for it to function properly, separate ground (-) and positive (+) connections must be made. If practical, they should be connected to the battery terminals. A suitable fuse should be installed as close to the battery as practical. At a minimum, the ground connection 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.

A. UNPACKING.

After unpacking the light bar, 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.

B. INSTALLATION.

The light bar is completely wired at the factory and does not require any additional internal wiring. All the conductors necessary for control of any and all basic and optional functions are contained in the cable.

The basic light functions of the unit must be controlled by a user-supplied control head.

Before proceeding, ensure that the light bar has been installed on the vehicle roof in accordance with the instructions packed with the mounting kit. Route the light bar cable as described below.

WARNING

Ensure that light system controls have been located so that VEHICLE and CONTROLS can be operated safely under all driving conditions.

1. Route the control cable into the vehicle and under the dash, near the eventual location of the user-supplied control head.
2. For proper operation, the control cable must be properly terminated inside the user-supplied control head. Use figure 1 as a guide and make the appropriate electrical connections shown in table 1 or 2, as applicable. Ensure that the lines are adequately fused as shown in figure 1.

NOTE

Any of the light bar functions can be activated by applying 12VDC to the appropriate control line. To perform a function check, the heavy black lead (-) must be connected to vehicle ground.

3. Connect the black lead (-) to chassis ground.

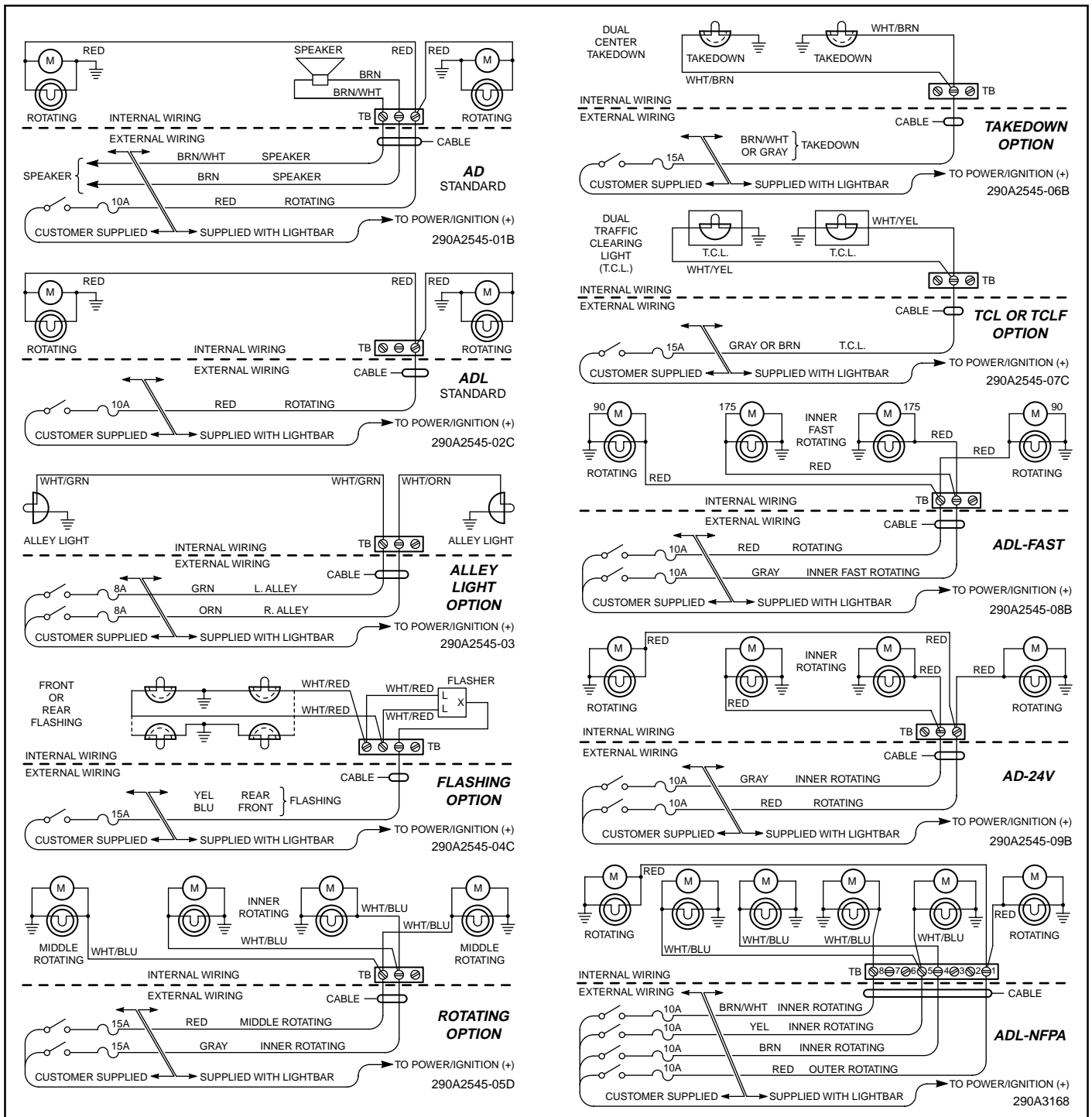


Figure 1.

Table 1. AD Electrical Connections.

Control Cable Wire Color	Functions
RED	Rotating Lights & Middle Rotating Lights
BLK	Power (-)
BRN	Speaker
BRN/WHT	Speaker
GRY	Traffic Clearing Light
GREEN	Left Alley
ORANGE	Right Alley
GRY (BLUE if GRY is used.)	Takedown
BLUE	Front Flashing Lights
YEL	Rear Flashing Lights

Table 2. ADL Electrical Connections.

Control Cable Wire Color	Functions
RED	Rotating Lights & Middle Rotating Lights
BLK	Power (-)
BRN	Traffic Clearing Light
GREEN	Left Alley
ORANGE	Right Alley
GRY	Inner Rotating Lights
BRN/WHT	Takedown
BLUE	Front Flashing Lights
YEL	Rear Flashing Lights

4. Connect the light bar's red power lead to a fuse or circuit breaker rated at 50 amperes. Connect the other side of the fuse/circuit breaker to the +12VDC supply.

C. 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.

For Models ADL5202 and ADL5256, use figure 2 and table 3 as a guide (for mounting and wiring) when installing this light assembly as part of an NFPA certified system.

D. MAINTENANCE.

1. *Cleaning the Plastic Domes.*

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.

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 domes, they can ordinarily be removed with a non-abrasive, high quality, one-step, automotive paste cleaner/wax and a soft cloth.

2. *Lamp Replacement.*

CAUTION

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

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.

To replace the halogen lamp, proceed as follows (see figure 3):

CAUTION

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

- a. 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.
- b. 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.

- c. Replace the defective lamp with a new H-1 halogen lamp (Federal Part No. 8440A265A).

Table 3. ADL Electrical Connections for NFPA Models.

Term. Block Position	Control Cable Wire Color	Functions
	BLK	Power (-)
1	RED	Outboard Rotating Lights
2	GRY	Front/Rear Work Lights
3	BLUE	Front/Rear Flashers
4	BRN	Call for Right of Way
5	YEL	Load Managed Inboard Rotators
6	ORANGE	Right Work Light
7	GREEN	Left Work Light
8	BRN/WHT	Load Managed Call for Right of Way

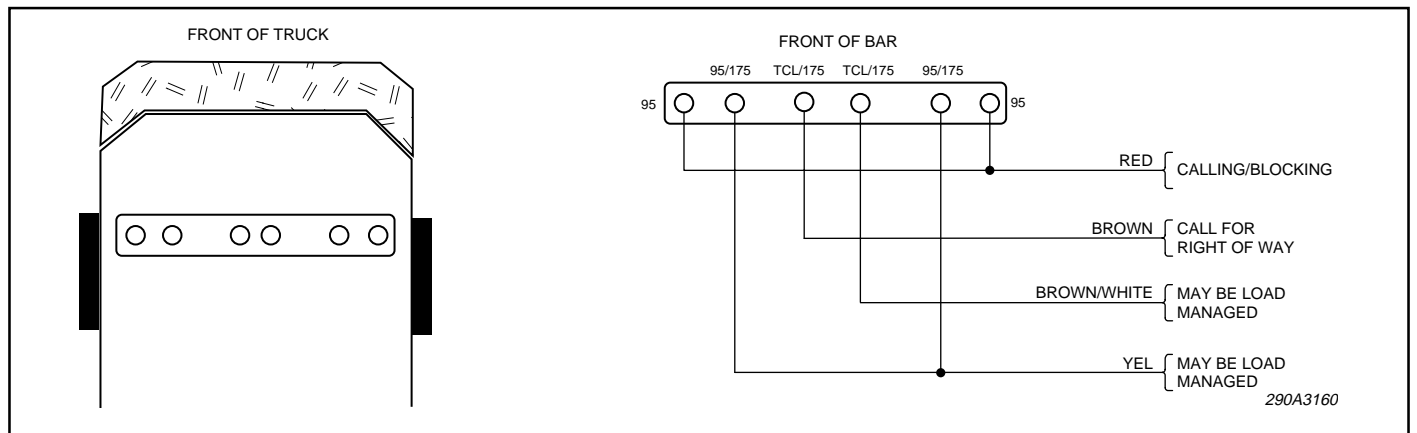


Figure 2.

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.

3. *Cleaning Reflectors and Mirrors.*

WARNING

Scratched or dulled reflectors or mirrors will cause reduced effectiveness of light system. Avoid heavy pressure and use of caustic or petroleum based products when cleaning. If crazing of reflectors or mirrors does occur, reliability of light for emergency warning purposes may be reduced until reflectors or mirrors are replaced.

Use a soft tissue to clean the reflector and mirrors.

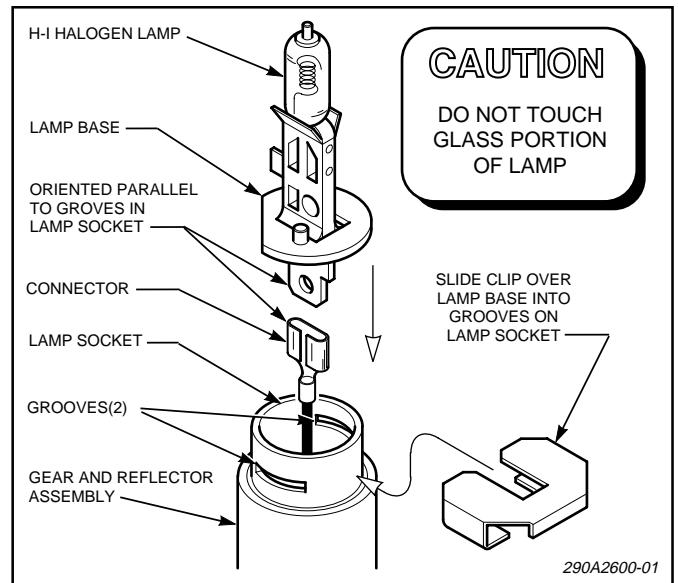


Figure 3.