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Installation Guide Model AF-6016 Ambulance Halogen Flasher System

Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.**
- **If this product is mounted with tape or Velcro™, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.**
- **Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owners manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.**
- **For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the NEGATIVE (-) battery post.**
- **If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.**
- **Do not attempt to activate or control this device in a hazardous driving situation.**
- **It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.**
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

THE FLASHER CONTROL MODULE, MODEL AF-6016, IS COMPLETELY FACTORY ASSEMBLED, WIRED AND TESTED, READY FOR THE REMOTE HALOGEN LIGHT HEAD CABLES TO BE CONNECTED.
(SEE IMPORTANT GROUNDING NOTE ON PAGE 3).

The 16 connectors mounted on the halogen flasher control module, are AMP 3 position socket connectors. Each one of these connectors is clearly numbered and labeled on the internal slide-on cover (see figure 5, page 3), to indicate where the remote halogen light head assemblies should be connected. The right side and left side designation used for positioning of the light head assemblies is based on the direction of travel of the vehicle.

INSTALLING THE HALOGEN LIGHTING SYSTEM.

To install the Model AF-6016 flasher control module and the halogen lighting system on the vehicle, it is recommended following the general order of steps as indicated below:

1. Choose an accessible location for the halogen flasher control module, protected from the weather and abuse.
2. Determine, on the vehicle, the desired locations of the remote halogen light head assemblies.
3. String interconnecting cables from halogen flasher control module to the locations chosen to hold the remote halogen light head assemblies.
4. Connect the interconnecting cables to the halogen flasher control module. **IMPORTANT NOTE: MAKE SURE THE HALOGEN CONTROL FLASHER MODULE IS NOT CONNECTED TO POWER SOURCE.**
5. Install, at the chosen locations, the remote halogen light head assemblies, and connect them to the interconnecting cables. Do not, at this time, finalize the installation of the light heads until the system's final test.
6. Install control switch and connect to halogen flasher module.
7. Install and connect the two input power cables to the power source of the vehicle (battery), and test the halogen light system.

NOTE: When passing interconnecting cables through metal surfaces, remove burrs from edges of the holes, and, if possible, use rubber grommets to protect the cables. It is advisable to support the cables with cable ties, cable clamps, or with any other means, to make sure the interconnecting cables will not shift around or put tension on the connectors.

MOUNTING THE MODEL AF-6016 HALOGEN FLASHER MODULE.

When choosing the location for installing the halogen flasher module, the following guidelines should be considered:

- **The unit must be mounted with the cooling fins in the vertical plane for maximum heat dissipation (see figure 1). Because of the weight of the power wires, it is recommended keeping the two power input studs (see figure 5, page 3, and figure 7, page 4) on the bottom of the halogen flasher module.**

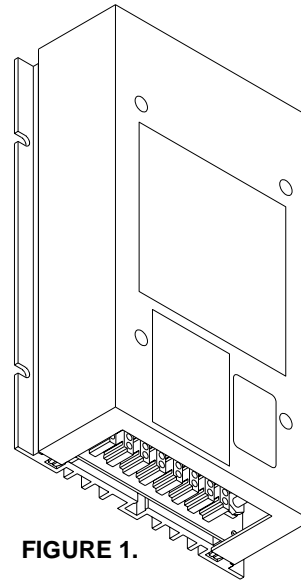


FIGURE 1.

- **Keep enough clearance, 3 inches minimum, around the unit for proper ventilation, and room for easy access to the remote halogen light head interconnecting cable connectors. Sufficient room is also required to remove or install both the module outer cover (figure 4), and the internal slide-on cover (figure 5).**
- **Mount the halogen flasher module on a metal surface to enhance heat dissipation.**

INSTALLING HALOGEN LIGHT HEAD INTERCONNECTING CABLES (customer supplied).

IMPORTANT NOTE: DURING THIS OPERATION MAKE SURE HALOGEN FLASHER MODULE IS NOT CONNECTED TO POWER SOURCE.

1. The interconnecting cables should be a minimum size of 16 AWG, with color coded wires. The halogen flasher module Model AF-6016 is supplied with sixteen 2 wire pigtail assemblies (see figure 7, page 4), one for each of the halogen connectors. Each one of these connectors is clearly numbered and identified on the slide-on plate. Butt splice these pigtail assemblies to the interconnecting cables and insert in the proper halogen connector. A good installation practice is to label the opposite end of the interconnecting cable with an indelible marker with the number of the halogen connector to which it is connected. Leave a service loop in the interconnecting cable at the halogen flasher module location, if ever maintenance should be required at a later date.
2. Route the interconnecting cables through the vehicle to the location chosen for installation of the remote halogen light head assemblies (see figure 6, page 4). Cut interconnecting cable length leaving an allowance for a service loop. During the installation of the interconnecting cable avoid sharp edges and chafe points.
3. Each Whelen halogen remote light head assembly is supplied with a 2 wire pigtail assembly (see figure 2), to be butt spliced to the interconnecting cables. Make sure, when butt splicing, to match the colored wires of the pigtail assembly to the same colored wires of the flasher module.

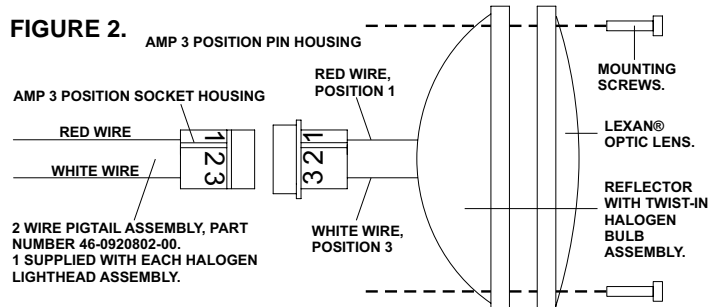


FIGURE 2.

INSTALLING THE REMOTE HALOGEN LIGHT HEAD ASSEMBLIES.

The head assemblies are supplied un-assembled, and parts vary for the different models making up the system. After connecting the halogen reflectors to the interconnecting cables using the 2 wire pigtail assemblies (see figure 2, page 2), install the unit according to the instructions provided with the halogen light heads. It is recommended not to finalize the installation of the individual remote halogen light head assemblies until the complete system has been tested, since it is possible that minor adjustments may be needed later on.

CONNECTING THE HALOGEN FLASHER MODULE, MODEL AF-6016, TO THE CONTROL SWITCH (customer supplied).

The halogen flasher module is supplied with one 2 wire pigtail assembly to be connected to customer supplied mode control switch (see figure 7, page 4). The control switch, to be installed inside the vehicle's cab, is of the single pole, double throw, center off type. In the Mode 1 position (primary mode), all remote halogen light head assemblies on the vehicle are flashing. In the Mode 2 position (secondary mode), only the

remote halogen light head assemblies, located on the box of the vehicle, will be flashing. The flashing sequence of both modes is controlled by the halogen flasher module. NOTE: Control switch will be wired directly to the positive post on the power source (see figure 7, page 4).

CONNECTING THE HALOGEN FLASHER MODULE, MODEL AF-6016, TO THE POWER SOURCE (battery).

IMPORTANT NOTE: DURING THIS STEP, MAKE SURE THAT CONTROL SWITCH IS IN THE OFF POSITION.

Use two #8 AWG minimum size wires (customer supplied) with ring lugs to fit the power input studs located on the halogen flasher unit (see figure 7, page 4). These studs are clearly marked positive (+) and negative, and are colored red and black respectively. Connect the positive wire (+) directly to the battery positive post through a customer supplied 50 amp master fuse (see figure 7, page 4). Install this master fuse as close to power source as possible. Connect the negative wire (-) directly to the battery negative post.

IMPORTANT GROUNDING NOTE: The halogen flashing system described in this manual is a 2 wire system. **DO NOT** ground any of the connections making up this system, located either on the flasher control module, or the remote halogen light assemblies. If remote halogen light head assemblies, other than Whelen made, are used in the system, make sure that none of the connections are grounded. The only grounded connection in the system should be the negative wire running from the flasher control module to the power source. System will not function if grounding is done in any way other than indicated above.

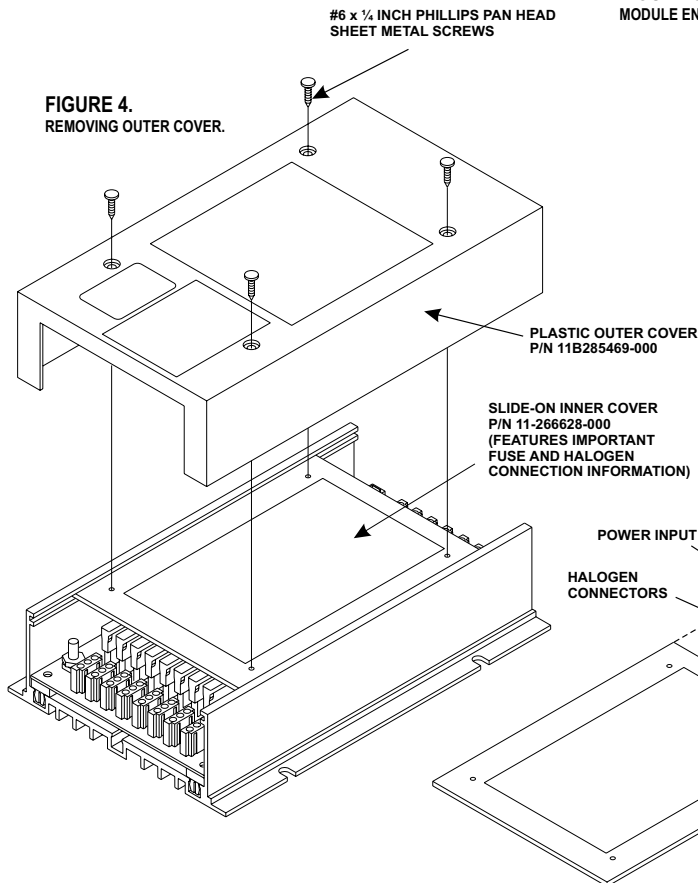


FIGURE 3.
MODULE ENCLOSED.

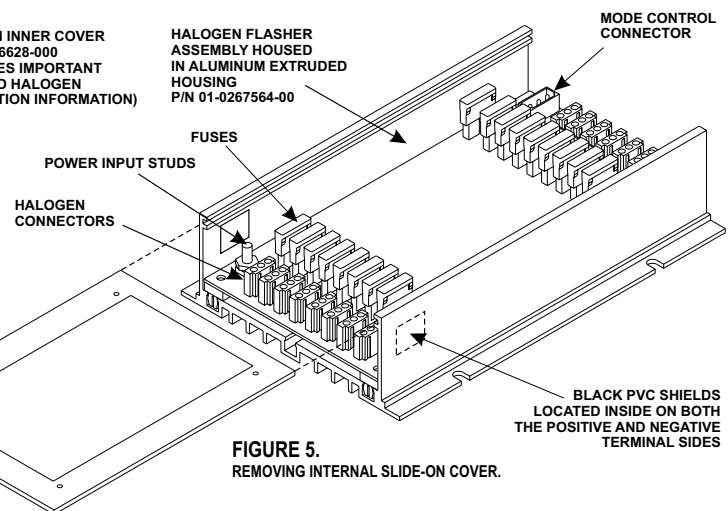
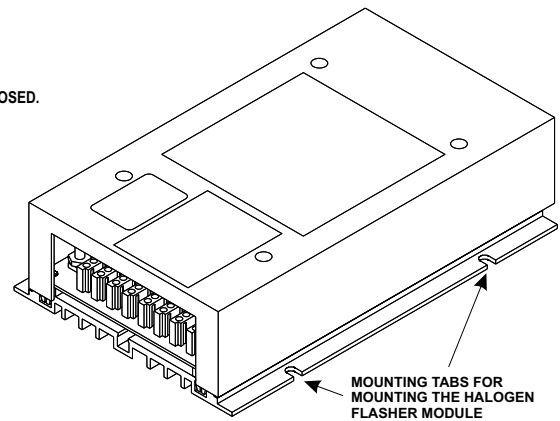


DIAGRAM OF HALOGEN LIGHTING SYSTEM, AAMVA CERTIFIED, WITH USE OF WHELEN REMOTE LIGHTHEAD ASSEMBLIES, AND MODEL AF-6016 HALOGEN FLASHER MODULE.

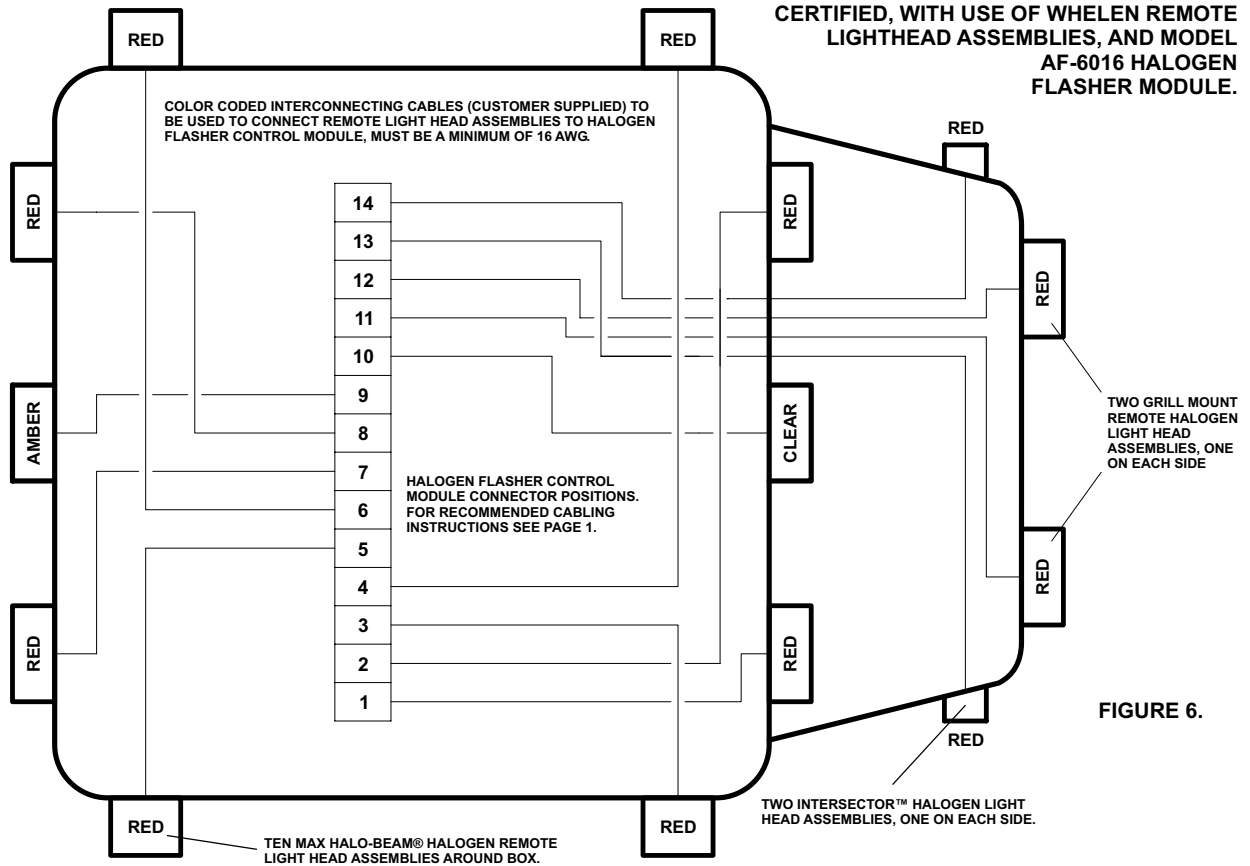
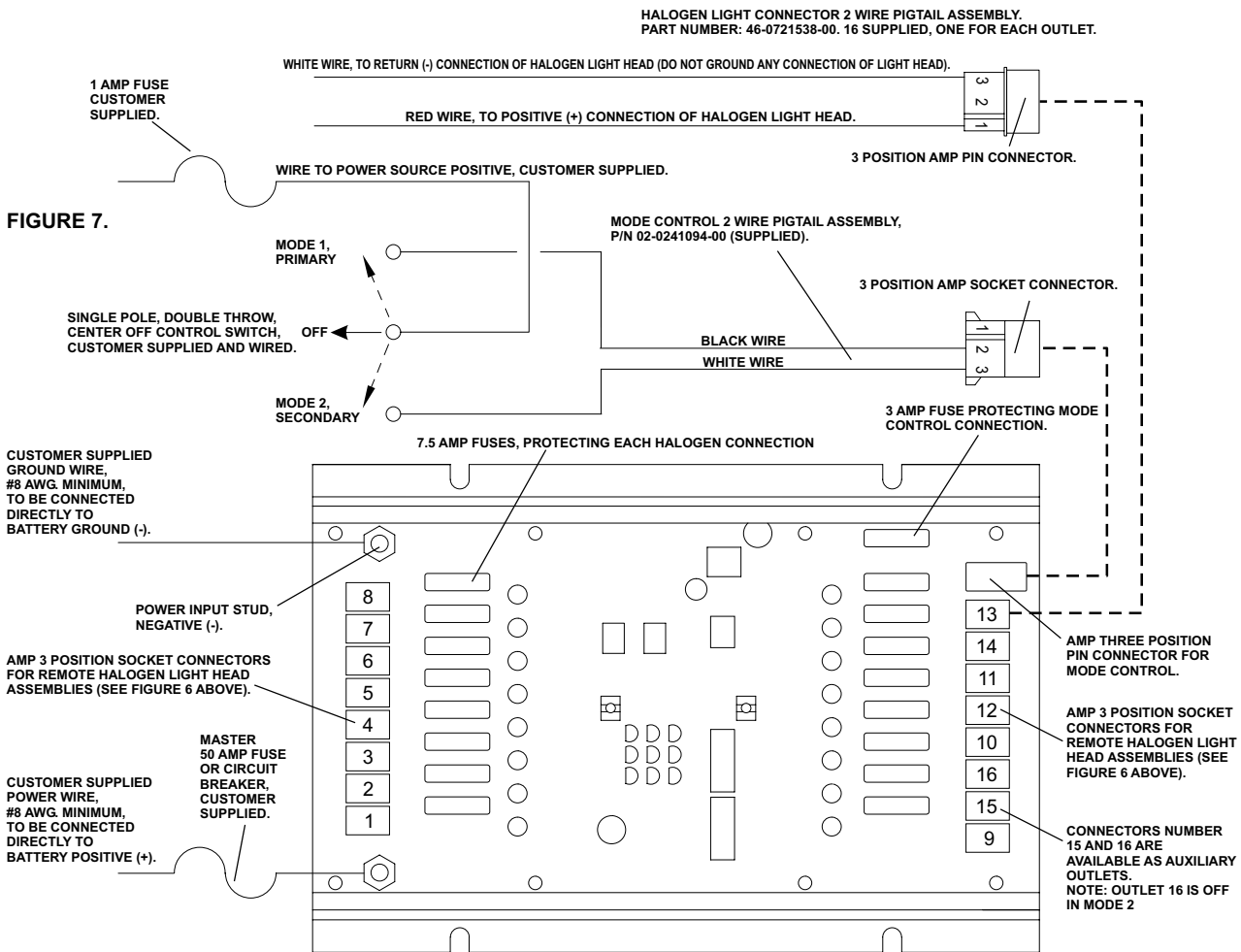


FIGURE 6.



TOP VIEW OF HALOGEN FLASHER CONTROL MODULE WITH INTERNAL SLIDE-ON COVER REMOVED (see figure 5, page 2).