

WHELEN[®]

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Installation Guide:
M4, M7, 400, 500 and 700 Series
Lighthouse Housings
2008 Ford E- & F-Series

Warnings to Installers

Whelen's emergency vehicle warning devices must be properly mounted and wired in order to be effective and safe. Read and follow all of Whelen's written instructions when installing or using this device. Emergency vehicles are often operated under high speed stressful conditions which must be accounted for when installing all emergency warning devices. Controls should be placed within convenient reach of the operator so that they can operate the system without taking their eyes off the roadway. Emergency warning devices can require high electrical voltages and/or currents. Properly protect and use caution around live electrical connections. Grounding or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or vehicle damage, including fire. Many electronic devices used in emergency vehicles can create or be affected by electromagnetic interference. Therefore, after installation of any electronic device it is necessary to test all electronic equipment simultaneously to insure that they operate free of interference from other components within the vehicle. Never power emergency warning equipment from the same circuit or share the same grounding circuit with radio communication equipment. All devices should be mounted in accordance with the manufacturer's instructions and securely fastened to vehicle elements of sufficient strength to withstand the forces applied to the device. Driver and/or passenger air bags (SRS) will affect the way equipment should be mounted. This device should be mounted by permanent installation and within the zones specified by the vehicle manufacturer, if any. Any device mounted in the deployment area of an air bag will damage or reduce the effectiveness of the air bag and may damage or dislodge the device. Installer must be sure that this device, its mounting hardware and electrical supply wiring does not interfere with the air bag or the SRS wiring or sensors. Mounting the unit inside the vehicle by a method other than permanent installation is not recommended as unit may become dislodged during swerving; sudden braking or collision. Failure to follow instructions can result in personal injury. Whelen assumes no liability for any loss resulting from the use of this warning device. **PROPER INSTALLATION COMBINED WITH OPERATOR TRAINING IN THE PROPER USE OF EMERGENCY WARNING DEVICES IS ESSENTIAL TO INSURE THE SAFETY OF EMERGENCY PERSONNEL AND THE PUBLIC.**

Warnings to Users

Whelen's emergency vehicle warning devices are intended to alert other operators and pedestrians to the presence and operation of emergency vehicles and personnel. However, the use of this or any other Whelen emergency warning device does not guarantee that you will have the right-of-way or that other drivers and pedestrians will properly heed an emergency warning signal. Never assume you have the right-of-way. It is your responsibility to proceed safely before entering an intersection, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes. Emergency vehicle warning devices should be tested on a daily basis to ensure that they operate properly. When in actual use, the operator must ensure that both visual and audible warnings are not blocked by vehicle components (i.e.: open trunks or compartment doors), people, vehicles, or other obstructions. It is the user's responsibility to understand and obey all laws regarding emergency warning devices. The user should be familiar with all applicable laws and regulations prior to the use of any emergency vehicle warning device. Whelen's audible warning devices are designed to project sound in a forward direction away from the vehicle occupants. However, because sustained periodic exposure to loud sounds can cause hearing loss, all audible warning devices should be installed and operated in accordance with the standards established by the National Fire Protection Association.

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.**
- **Whelen Engineering requires the use of waterproof butt splices and/or connectors if that connector could be exposed to moisture.**
- **Any holes, either created or utilized by this product, should be made both air- and watertight using a sealant recommended by your vehicle manufacturer.**
- **Failure to use specified installation parts and/or hardware will void the product warranty.**
- **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 the holes and remove any metal shards or remnants. Install grommets into all wire passage holes.**
- **If this manual states that this product may be mounted with suction cups, magnets, 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 owner's 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 (this does not include products that use cigar power cords).**
- **If this product uses a remote device for activation or control, make sure that this device is located in an area that allows both the vehicle and the device to be operated safely in any driving condition.**
- **Do not attempt to activate or control this device in a hazardous driving situation.**
- **This product contains either strobe light(s), halogen light(s), high-intensity LEDs or a combination of these lights. Do not stare directly into these lights. Momentary blindness and/or eye damage could result.**
- **Use only soap and water to clean the outer lens. Use of other chemicals could result in premature lens cracking (crazing) and discoloration. Lenses in this condition have significantly reduced effectiveness and should be replaced immediately. Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.**
- **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!**

Installation:

WARNING: Lights on the front of the vehicle must be mounted a minimum of 18" apart, measured from the center of the lighthouse. Lights must also be a minimum of 30" from the road and be mounted below the windshield. Read all warnings before starting installation.

WARNING: Permanent mounting of this product will require drilling. It is absolutely necessary to make sure no other vehicle components could be damaged by this process. Check both sides of the mounting surface before starting. If damage is likely, select a different mounting location.

Before Mounting: Be sure the vehicle is parked on a level surface.

For the Front Fender: For maximum effectiveness mount the housings as far forward as possible.

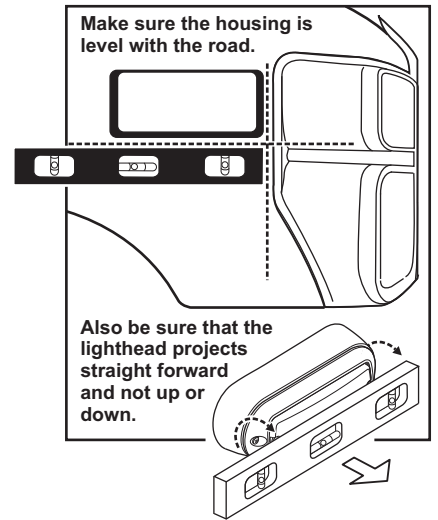
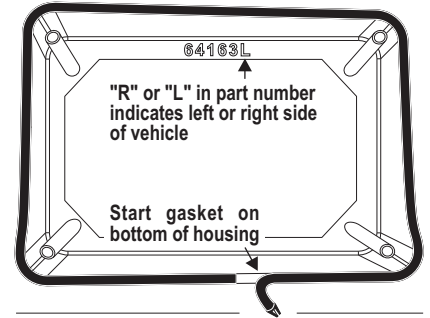
For the Front of the Vehicle: housings will mount to the front of the hood. No less than 18" apart.

For the Vehicle Grille: Housing is contour-cut to self locate to the upper corner of the grille it is designed for. No gasket is required for grille mounting. Lighthouse must project parallel with the road.

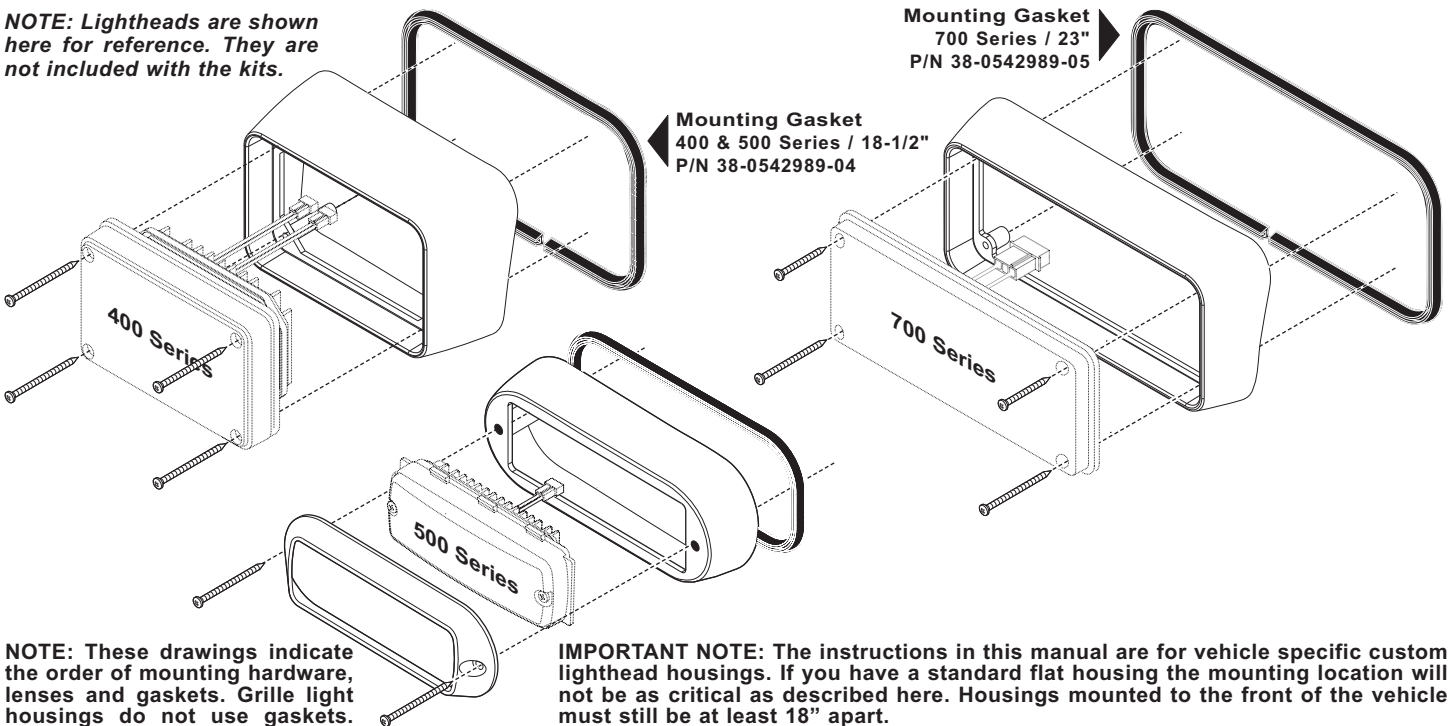
1. On the next page, find the photo for your vehicle showing mounting location and specifications.
NOTE: In the part number of the housing, there will be an "R" or an "L" to indicate whether it goes onto the Right or Left of the vehicle.
2. Hold the housing up against the mounting surface in its suggested mounting location. Measure the distances shown in the photo and position the housing accordingly.
3. With the housing in place put a level on top and make sure it sits level with the road (for grille housings also put a level on the front to be sure the lighthouse isn't pointing up or down). With the housing in position, mark off the 4 mounting holes using the housing as a template.
4. Install the supplied rubber gasket onto the housing. Start the gasket at the bottom of the housing. The gasket will be longer than needed so you will have to cut off the excess to fit. Pinch the back of the gasket together as you install it to make the job easier (see illustration). No gasket is used for grille mounting.
5. Drill the mounting holes with an appropriately sized drill bit depending which mounting hardware is supplied with your housing. You will also need to drill a wire hole. Refer to the lighthouse manual for wire hole size and location.
CAUTION: When mounting onto fiberglass, after you drill the mounting holes, chamfer the top of the hole or the fiberglass will crack with use.
6. Secure lighthouse with housing to vehicle using supplied mounting hardware.

IMPORTANT: Certain housings may have up to four different sized mounting screws to match the vehicle contour. To be sure you use the correct screws, insert them into the housing before mounting. All four screws should extend out of the housing the same amount.

IMPORTANT! Before returning this vehicle to active service, visually confirm the proper operation of this product, as well as all vehicle components/equipment.



NOTE: Lighthouses are shown here for reference. They are not included with the kits.



NOTE: These drawings indicate the order of mounting hardware, lenses and gaskets. Grille light housings do not use gaskets.

IMPORTANT NOTE: The instructions in this manual are for vehicle specific custom lighthouse housings. If you have a standard flat housing the mounting location will not be as critical as described here. Housings mounted to the front of the vehicle must still be at least 18" apart.

Mounting Locations

