

WHELEN[®]

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Installation Guide:
CHP Mirror-Beam™
1998-2007 Ford Crown Victoria

Safety First

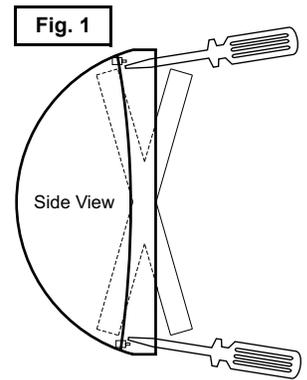
This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained 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 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.**
- **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.**
- **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!**

For warranty information regarding this product, visit www.whelen.com/warranty

To Remove the Side Mirror Assembly:

1. Remove the driver side door panel from the vehicle.
2. Remove the three hex nuts that secure the mirror assembly to the vehicle. Unplug the mirror assembly harness cable from the door's power harness and carefully remove the mirror assembly from the vehicle.



To Remove the Glamour Cap from the Mirror Assembly:

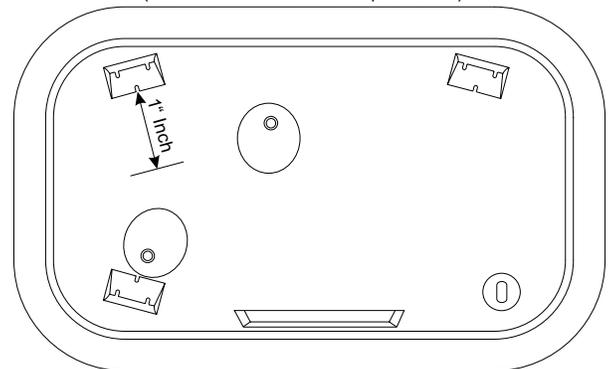
1. To remove the glamour cap from the mirror assembly, the glamour caps three retaining tabs must be carefully lifted off the rear housing retaining pins. This is accomplished with a small flatblade screwdriver or other suitable device.
2. To gain access to the glamour caps upper retaining tabs, the mirror must be gently positioned so that its lower edge is pressed inwards as far as it will travel. This will allow the two, upper retaining tabs to be accessed with the screwdriver (Fig. 1).
3. Position the screwdriver blade under either of the upper retaining tabs and pry tab upwards and off its retaining pin. Repeat for remaining upper retaining tab.
4. To gain access to the glamour cap's lower retaining tab, the mirror must be gently positioned so that it's upper edge is pressed inwards as far as it will travel. This will allow the lower retaining tab to be accessed with the screwdriver.
5. Position the screwdriver blade over the retaining tab and pry tab downwards and off its retaining pin. With all three retaining tabs free, pull glamour cap and its guide pin away from the mirror assembly.

To Prepare the Mirror Assembly:

1. With the glamour cover removed, look at the rear of the mirror assembly. Locate the upper retaining tab slot indicated. Draw a perpendicular line that extends 1" from the middle of the bottom of the slot (Fig. 2).
2. At the end of this perpendicular line, carefully drill a 1" hole into the mirror assembly (Fig. 3).
3. Now fold the lower section of the triangular foam mounting gasket so that access to the lower section of the mirror assembly's mounting surface is gained.
4. Locate the area along the bottom of the mirror assembly's mounting surface where the mirror harness has been routed from inside the assembly. The adjacent passage (closer to the rear of the assembly) will also be drilled using a 3/8" drill bit. As shown in Fig. 4, make sure that as the hole is drilled, the bit stays parallel with walls of the passage.

Fig. 2

Left (Driver) Side Mirror
(Rear view with Glamour Cap removed)



Note: The location of these holes are critical. Be sure that the indicated distances are measured accurately. Failure to do so may result in damage to the mirror's motor and/or wiring components.

To Prepare the Wiring Harness:

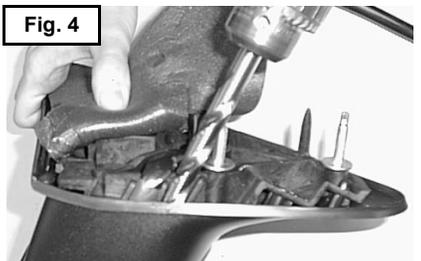
Note: Because the harness must be routed through a specific, narrow and twisting path within the mirror assembly, it is necessary to temporarily extend the length of the harness with a make-shift "snake."

1. Locate the ty-wrap included with your Mirror-Beam™ and cut the fastener-end off.
2. Insert the 2 (two) Fastex® grommets provided into the square openings in the Mirror-Beam housing. Mount the lighthead onto the housing using the provided hardware.
3. Locate the end of the harness that has SOCKET-type terminals installed on the free wires. If present, cut off the non-insulated wire (not used).
4. Strongly secure the ty-wrap to the harness with electrical or similar tape. It is important to have at least 2" of the ty-wrap secured to the harness jacket.
5. Route the harness through the mirror assembly.

Fig. 3



Fig. 4



Routing the Wiring Harness:

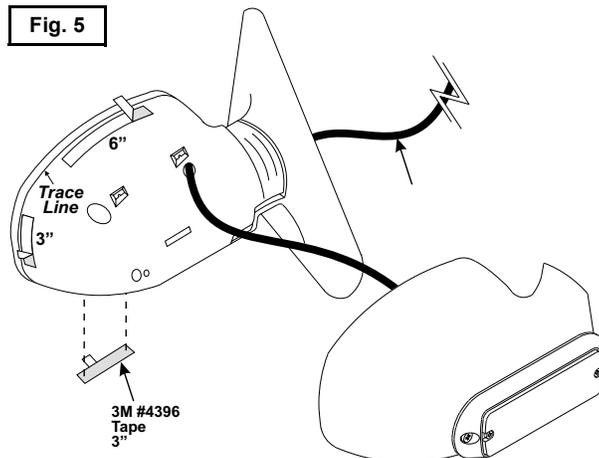
1. Insert the end of the ty-wrap through the 3/8" hole drilled in step 4 of "To Prepare the Mirror Assembly".
2. Feed the ty-wrap through the mirror assembly until the ty-wrap can be pulled through the 1" hole drilled in step 2 of "To Prepare the Mirror Assembly". There should not be more than 4 - 5" of harness sticking out of the hole. If the length is different from this, adjust harness length accordingly.

The ty-wrap is now removed from the harness and the wire terminals inserted into their 2 or 3 position connectors (see wiring diagrams).

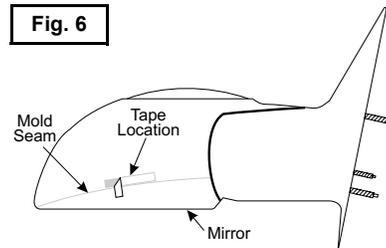
Affixing the Mirror-Beam™ Housing to the Mirror Assembly:

Note: The following procedure requires that the mirror assembly be no colder than 60°F (18°C).

1. Thoroughly clean the plastic mirror assembly and the inside surface of the Mirror-Beam housing using a 50/50 mixture of isopropyl (not rubbing) alcohol and water. Dry completely.
2. Locate the 6" strips of double-sided adhesive tape included with your Mirror-Beam. Cut one into two, 3" lengths.
3. Place the Mirror-Beam housing onto the mirror assembly. When properly positioned, the leading edge of the housing will be approximately 3/16" behind the leading edge of the mirror assembly.
4. With the housing properly positioned, trace the outline of the housing onto the mirror assembly using a suitable marking device. Place the 6" tape piece on the top of the mirror assembly. Place a 3" tape piece on the end of the mirror assembly as shown in Fig. 5. **Be sure to place these pieces behind the trace line as shown.**



5. The remaining 3" length must be adhered in a specific location. On the bottom of the mirror assembly, locate the mold seam. Position the tape in the location 1/4" back away from this seam (Fig. 6).
6. Fold the protective backing strips on each tape strip so that 1/2" to 3/4" of backing is extended over the edge of the mirror assembly (or the mold seam, in the case of the bottom tape). Trim and remove the exposed tape.
7. Place the mirror assembly mirror-side down on the workbench. Mount the Mirror-Beam housing onto the mirror assembly. *The housing must fully engage the mirror assembly.*
8. The protective backing strips must now be removed. To accomplish this, the housing must not be in contact with the backing strips. Using a small, flat blade screwdriver (or similar tool) gently pry the housing about 1/4" away from the mirror assembly. Carefully pull the protective strip "tab" created in step 5, and gently remove it completely from the tape strip. Do not allow the Mirror-Beam housing to shift while removing the backing. Also, do not allow the strip to tear while being removed. Repeat process for remaining tape strip.
9. Apply pressure to the Mirror-Beam assembly at the tape locations. Maintain pressure for a minimum of 20 minutes to allow the tape to properly setup. This can be accomplished by wrapping the Mirror-Beam/mirror assembly tightly with adhesive tape. See important adhesion information at the end of this manual.
10. Using a 1/8" drill bit and the Mirror-Beam housing as a template, drill a hole into the mirror housing. Locate the #8 x 1/2" sheet metal screw (included) and secure the Mirror-Beam housing to the mirror housing.



Reassembling the Mirror-Beam Assembly:

1. Reconnect the mirror assembly to its main power harness. Route the Mirror-Beam harness through the door, along the same path as the vehicle's main power harness.
2. Cut the non-insulated wire off the wiring harness. Insert the PIN-type terminals into the provided connector as detailed in the "Routing the wiring harness" section of this manual. Select a connection style (see next page) and confirm proper operation.

IMPORTANT! The tape adhesive used in this procedure is fully bonded after 72 hours @ 70°F (21°C). During this period, do not expose the Mirror-Beam to any un-necessary force, such as the high-pressure water from a car wash.

WARNING! The outer surfaces of this product may be cleaned with mild soap and water. Use of any other chemicals may void the product warranty. Do not use a pressure washer.

Scan-Lock™ (White-Violet)

TO CHANGE PATTERNS: Apply +12 volts to the WHITE-VIOLET wire for less than 1 second and release to cycle forward to the next available pattern. Apply +12 volts to the WHITE-VIOLET wire for more than 1 second and release to cycle back to the previous pattern.

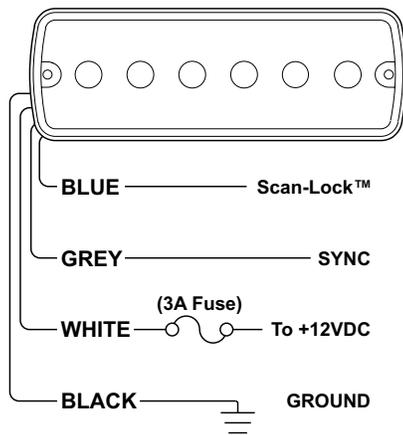
TO CHANGE THE DEFAULT PATTERN: When the desired pattern is displayed, allow it to run for more than 5 seconds. The lightbar will now display this pattern when initially activated.

TO RESTORE THE FACTORY DEFAULT PATTERN: With the power to the lightbar off, apply +12 volts to the WHITE-VIOLET wire. Now turn power to the lightbar on. The factory default pattern should now be displayed.

Note: A Normally Open momentary switch can be used to control Scan-Lock™ operation.

Scan-Lock Patterns

- | | |
|---------------------------|----------------------------|
| 1. SingleFlash 90 Phase 1 | 5. SingleFlash 60 Phase 1 |
| 2. SingleFlash 90 Phase 2 | 6. SingleFlash 60 Phase 2 |
| 3. SingleFlash 75 Phase 1 | 7. SingleFlash 120 Phase 1 |
| 4. SingleFlash 75 Phase 2 | 8. SingleFlash 120 Phase 2 |

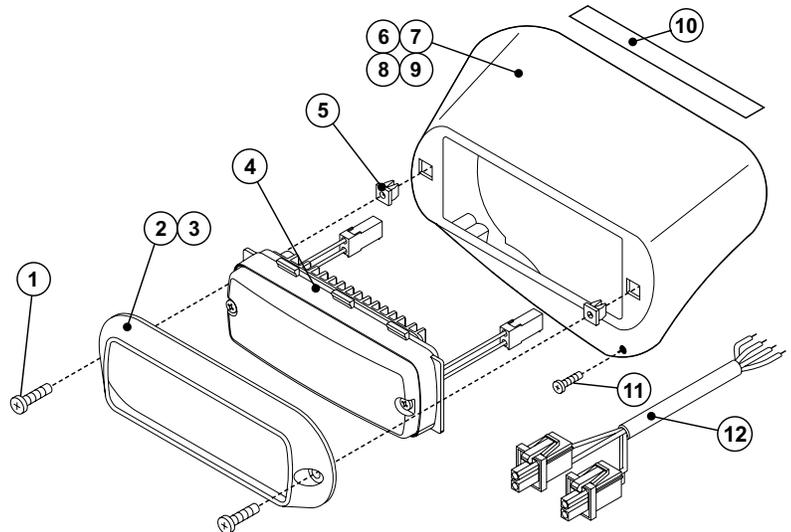


| QTY | QTY | QTY | QTY | ITEM | PART NUMBER | DESCRIPTION |
|-----|-----|-----|-----|------|---------------|--|
| | | | * | | 01-0664823-5R | CHP MIRROR-BEAM™, CROWN VIC (PASS - WHT) |
| | | | * | | 01-0664823-5L | CHP MIRROR-BEAM™, CROWN VIC (DRIVER - WHT) |
| | | * | | | 01-066482315R | CHP MIRROR-BEAM™, CROWN VIC (PASS - BLK) |
| * | | | | | 01-066482315L | CHP MIRROR-BEAM™, CROWN VIC (DRIVER - BLK) |
| 2 | 2 | 2 | 2 | 1 | — | SCREW, #8 X 5/8" PPHSMS |
| - | - | 1 | 1 | 2 | 11-763226-002 | FLANGE, 500-SERIES (WHITE) |
| 1 | 1 | - | - | 3 | 11-763226-001 | FLANGE, 500-SERIES (BLACK) |
| 1 | 1 | 1 | 1 | 4 | 01-0664818-50 | ASSY, 500 LINEAR-LED® RED SYNC CHP |
| 2 | 2 | 2 | 2 | 5 | 13-062C40-16J | GROMMET, FASTEX (#6 / #8) |
| - | - | - | 1 | 6 | 11-484229-R0W | HOUSING, MIRROR-BEAM (PASS - WHT) |
| - | - | 1 | - | 7 | 11-484229-L0W | HOUSING, MIRROR-BEAM (DRIVER - WHT) |
| - | 1 | - | - | 8 | 11-484229-R00 | HOUSING, MIRROR-BEAM (PASS - BLK) |
| 1 | - | - | - | 9 | 11-484229-L00 | HOUSING, MIRROR-BEAM (DRIVER - BLK) |
| 2 | 2 | 2 | 2 | 10 | 66-0416642-00 | TAPE, MOUNTING |
| 1 | 1 | 1 | 1 | 11 | 15-08121B-082 | SCREW, #8 X 1/2" PPHSMS / BLACK, SS |
| 1 | 1 | 1 | 1 | 12 | 46-0743751-00 | ASSY, CABLE 4-CONDUCTOR 6" |

WARNING! All customer supplied wires that connect to the positive terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED at the battery to carry that load. DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!

IMPORTANT WARNING!

CAUTION! DO NOT LOOK DIRECTLY AT THESE LEDS WHILE THEY ARE ON. MOMENTARY BLINDNESS AND/OR EYE DAMAGE COULD RESULT!



Sync (Grey)

Sync - To sync two lighthead, configure both lighthead to display the same Phase 1 pattern. With the power off, connect the GREY wires from each lighthead together. When the lighthead are activated, their patterns will be synchronized. To configure the two lighthead to alternate their patterns, advance the pattern of one of the lighthead to the Phase 2 mode of the that pattern.

IMPORTANT! It is the responsibility of the installation technician to make sure that the installation and operation of this product will not interfere with or compromise the operation or efficiency of any vehicle equipment!

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