

WHELEN[®]

ENGINEERING COMPANY INC.

Route 145, Winthrop Road,

Chester, Connecticut 06412

Phone: (860) 526-9504

Fax: (860) 526-4078

Internet: www.whelen.com

Sales e-mail: autosale@whelen.com

Canadian Sales e-mail: autocan@whelen.com

Customer Service e-mail: custserv@whelen.com

Installation Guide: Mirror-Beam™ Models: MBLP98 / MBMP98 / MBRP98 1998 Ford Expedition

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 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.**
- **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.
3. Carefully remove the mirror assembly from the vehicle.
4. The glamour cap will now be removed from the mirror assembly.

To Remove the Glamour Cap from the Mirror Assembly:

1. To remove the glamour cap from the mirror assembly, the glamour caps four 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 it's 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.
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 tabs, 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 tabs 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 four retaining tabs free, pull the 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 straight edge section in the inboard area of the assembly.
2. Measure 2 inches straight down from the top of the edge shown. Mark this distance.
3. From the mark made in the previous step, measure a line 1.1 inches long perpendicular to the straight edge. Mark this distance.

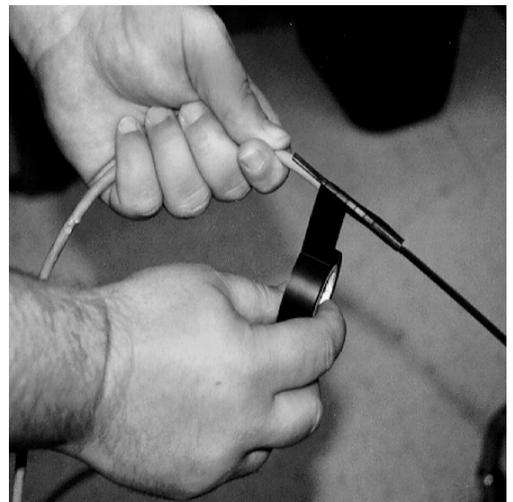
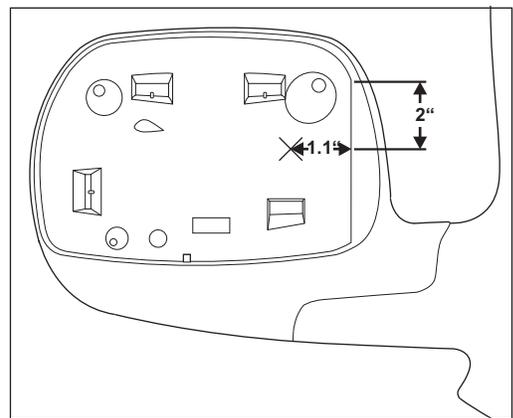
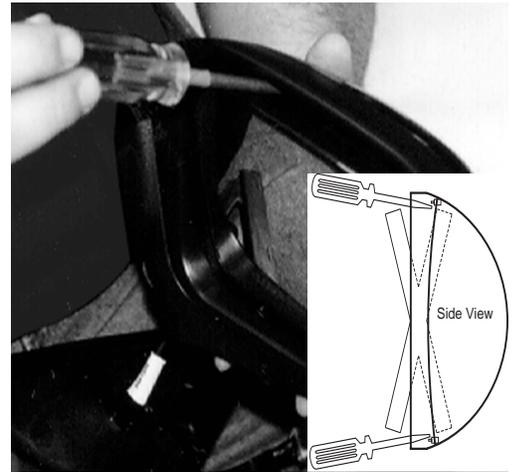
WARNING! The location of this hole is critical. Be sure that all of the indicated distances are measured accurately. Failure to do so could damage the mirror's motor and/or wiring components!

4. Using a 3/8" drill bit, carefully drill a hole in this location. There is both an outer *and* inner layer through which this hole must be drilled. Do not allow the drill bit to penetrate more than 1/4" beyond this inner layer.
5. Now remove the triangular foam mounting gasket from the mirror assembly by pulling this gasket over the three, mirror assembly mounting studs.

To Prepare the Harness Cable:

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

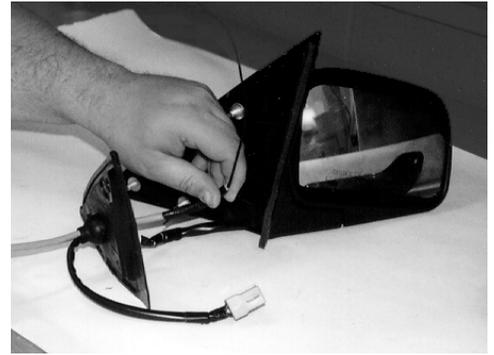
1. Locate the tie-wrap included with your mirror beam and cut the fastener-end off.
2. Locate the end of the harness cable that has SOCKET-type terminals installed on the free wires. Cut off the non-insulated wire (it is not used in this application).
3. Strongly secure the tie-wrap to the harness cable with electrical or similar tape. Although the purpose of this procedure is to extend the harness cable length as much as possible using the tie-wrap, it is important to have a sufficient length of the tie-wrap secured to the harness (2" minimum).



Routing the Harness Cable:

1. Insert the end of the tie-wrap through the hole in the rubber mounting gasket where the mirror assembly power harness is routed. It should only be necessary to pull about 2 and a half feet of the harness cable through the gasket.
2. Insert the end of the tie-wrap into the mirror assembly via the same pathway as the mirror power cable. Push the tie-wrap through this opening until the end of the tie-wrap sticks out from behind the top, inboard corner of the mirror. Pull the tie-wrap until the slack in the harness cable is gone.
3. Now push the tie-wrap back into the mirror cavity and out the hole drilled in the "To prepare the mirror assembly" section. There should not be more than 4 or 5 inches of harness cable sticking out of the hole. If there is more, adjust accordingly.

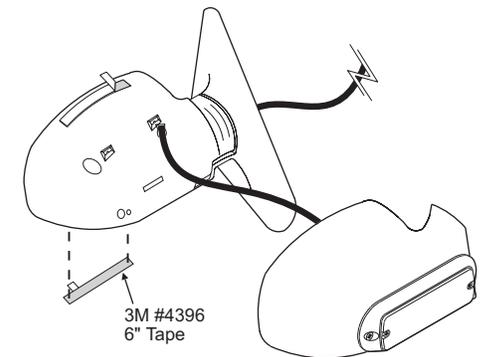
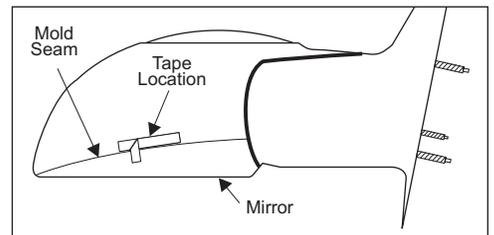
The tie-wrap is now removed from the harness cable and the wire terminals inserted into their 3 position connector as follows (For detailed information, refer to the instruction tag attached to the harness): **Position 1 = Red** **Position 2 = None** **Position 3 = Black**



Affixing the MirrorBeam Housing to the Mirror Assembly:

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

1. Clean the plastic mirror assembly and the inside surface of the MirrorBeam 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 MirrorBeam and position one 6" strip on top of the mirror assembly. When properly positioned, the tape will be centered between the inboard and outboard ends of the mirror assembly and the leading edge of the tape will be set back approximately 1/4" from the rear (mirror side) edge of the assembly. After the tape is positioned, it is important to apply pressure to the protective backing so that the tape adheres to the surface.
3. Cut the remaining 6" length of tape in half. Using the procedure outlined in the previous step, adhere one 3" length of tape to the outboard end of the mirror assembly. 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 shown.
4. Fold the protective backing strips on the top, bottom and outboard tape strips 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. Mount MirrorBeam housing onto mirror assembly. Housing must fully engage mirror assembly!
5. The protective backing strips must now be removed. To accomplish this, the housing must not be in contact with the backing strips. Starting with the outboard strip, and 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 6, and gently remove it completely from the tape strip. Do not allow the strip to tear while being removed. Repeat for the tape strips on the top and bottom of the assembly.
6. Apply pressure to the MirrorBeam 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.



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

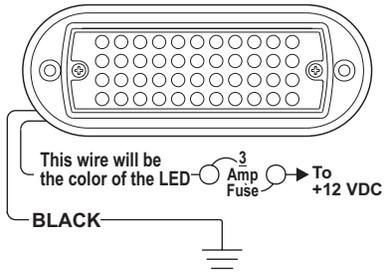
7. Locate the factory-drilled hole in the MirrorBeam housing. Using a 1/8" drill bit and the MirrorBeam housing as a template, drill a hole into the mirror housing. Secure the MirrorBeam housing to the mirror housing with the #8 x 1/2" sheet metal screw.

Re-assembling the MirrorBeam Assembly:

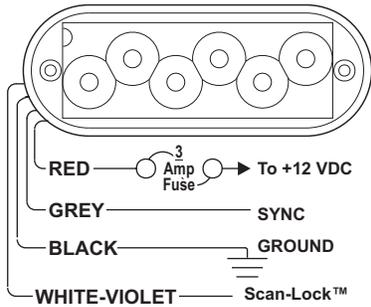
1. Re-connect the mirror assembly to its main power harness. Route the MirrorBeam harness through the door, along the same path as the vehicle's main power harness. Connect to a switched +12VDC power source. Install a 3 Amp fuse (customer supplied) within 2 wire feet of this source.
2. Cut the non-insulated wire off the harness cable. Insert the PIN-type terminals into the provided connector as detailed in the "Routing the harness cable" section of this manual. Insert plug into power supply and confirm proper operation. Using the original hardware, remount the mirror onto the vehicle.

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

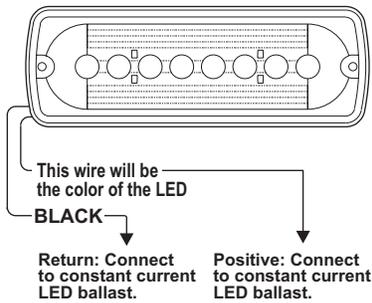
Items 4, 5, 6, 7 & 8 (LED)



Items 16, 17, 18 & 19 (TIR)



Items 20, 21, 22 & 23 (LINEAR)



OPERATION:

Depending on which lighthouse is installed in your Mirror-Beam, you may be able to change flash patterns or synchronize lightheads to flash simultaneously or alternately. This manual gives you basic wiring and installation. For information on the operation of your Mirror-Beam refer to the lighthouse manual included.

WARNING! All customer supplied wires must be sized to supply at least 125% of the maximum operating current and be fused at the battery to carry the load.

ALL FUSES ARE CUSTOMER SUPPLIED.

QTY	QTY	ITEM	PART NUMBER	DESCRIPTION	
	*		01-068360()3 ___ L	MIRROR BEAM / LED / EXPEDITION	
	*		01-068360()3 ___ T	MIRROR BEAM / TIR / EXPEDITION	
*			01-068360()3 ___ R	MIRROR BEAM / LINEAR / EXPEDITION	
2	2	1		SCREW / #10-24 X 3/4" PPHMS	
2	2	2		SCREW / #8 X 5/8" PPHSMS SS	
2	2	2A		#8 FASTEX GROMMET	
1	1	1	11-763226-000	BLACK FLANGE	
-	-	A/R	02-0383558513	ASSY / LED FLASHER / AMBER-CLEAR / 3 POS	
-	-	A/R	02-0383558523	ASSY / LED FLASHER / BLUE-CLEAR / 3 POS	
-	-	A/R	02-03835585C3	ASSY / LED FLASHER / WHITE-CLEAR 3 POS	
-	-	A/R	02-0383558543	ASSY / LED FLASHER / GREEN-CLEAR / 3 POS	
-	-	A/R	02-0383558553	ASSY / LED FLASHER / RED-CLEAR / 3 POS	
A/R	A/R	A/R	11-483110-R00	HOUSING / PASSENGER SIDE - EXPEDITION	
A/R	A/R	A/R	11-483110-L00	HOUSING / DRIVER SIDE - EXPEDITION	
1	1	1	15-08141A-080	SCREW / #8 X 1/2" PPHSMS BLACK PHOS	
2	2	12	66-0416642-00	MOUNTING TAPE (not shown)	
-	1	1	13	3/C CABLE ASSEMBLY	
-	1	1	14	3/C CABLE INSTALLATION KIT	
1	1	1	15	14 1/2" BLACK TY-WRAP (not shown)	
-	A/R	-	16	01-0663507123	ASSY / TIR FLASHER - AMBER-CLEAR / 3 POS
-	A/R	-	17	01-0663507223	ASSY / TIR FLASHER - BLUE-CLEAR / 3 POS
-	A/R	-	18	01-0663507C23	ASSY / TIR FLASHER - WHITE-CLEAR / 3 POS
-	A/R	-	19	01-0663507523	ASSY / TIR FLASHER - RED-CLEAR / 3 POS
A/R	-	-	20	01-0663709-12	ASSY / LINEAR LED - AMBER-AMP
A/R	-	-	21	01-0663709-22	ASSY / LINEAR LED - BLUE-AMP
A/R	-	-	22	01-0663709-32	ASSY / LINEAR LED - WHITE-AMP
A/R	-	-	23	01-0663709-52	ASSY / LINEAR LED - RED-AMP
1	-	-	24	46-0742993-15	2/C CABLE ASSEMBLY
1	-	-	25	01-0442994-00	2/C CABLE INSTALLATION KIT

IMPORTANT NOTE: If your Mirror-Beam housing has metal inserts where the lighthouse mounts, you will use ITEM 1 to mount the lighthouse. If it has no metal insert you will use ITEMS 2 and 2A.

PART NUMBER KEY:	MODEL	COLOR	LIGHTHEAD
01-068360 8	0 = CROWN VICTORIA	A = AMBER-AMBER	L = LED (5mm)
OR	1 = LUMINA	B = BLUE-BLUE	T = TIR LED
01-068360 9	2 = TAHOE	C = CLEAR-WHITE	R = LINEAR LED
	3 = EXPEDITION	G = GREEN-GREEN	
	4 = EXPLORER	R = RED-RED	
	5 = IMPALA	1 = AMBER-CLEAR	
	6 = SUBURBAN	2 = BLUE-CLEAR	
	7 = INTREPID	4 = GREEN-CLEAR	
		5 = RED-CLEAR	

