



BAVARIAN AUTOSPORT

Angel Eye Headlight Conversion Installation Instructions

INSTRUCTION NOTE: The sheet of manufacturer's instructions, which is included in the Angel Eye kit package, is **ONLY** for replacement of the Angel Eye bulbs. Keep these instructions for future bulb replacement, but **DO NOT** disassemble the lights at this time.

NOTE: The E30 H/L CONV SB kit will physically mount on all 3 series 84 thru 91. However, the low beam lights will not function properly on vehicles with original ellipsoid lights. Use kit # E30 H/L CONV for 3 series 88 thru 5/89 with original ellipsoid lights.

3 Series

84 thru 87

6/89 thru 91

92 convertible

w/out ellipsoid lights

PARTS NUMBERS:

E30 H/L CONV SB

PARTS LIST:

2 - Yellow plug housings (low beam)

2 - White plug housings (high beam)

8 - Plug pigtails

8 - Solderless (crimp) inline splice connectors

4 - H-1 bulbs

1 - Angel Eye Headlight Kit (includes harness, wire ties and 4 pin relay)

1 - High beam 5 pin relay

PROCEDURE:

3 SERIES:

1. Remove the left and right grills as follows: Remove the 3 clips along the top edge of each grill (open hood for access to the clips). Remove the two Phillips head screws along the lower edge of each grill. Remove the grills.
2. Remove the plastic inner headlight splash panels (covering the access to the back side of the headlight assemblies, from the engine compartment) by turning the upper fasteners $\frac{1}{4}$ turn in either direction and pulling them free of the sheet metal radiator support. Remove the panels.
3. Unplug the harness connectors from the high and low beam bulbs.
4. From the front of the vehicle, remove the three Phillips head screws securing each headlight assembly to the radiator support. Remove the headlight assemblies.
5. Prepare the new Angel Eye headlights for installation:
 - A. Remove and unwrap the low beam adjuster assembly (which is taped to the headlight frame).
 - B. Unsnap the black socket from the end of the adjuster assembly.
 - C. Insert the adjuster (ball end first) through the large receiver hole in the headlight frame (at the lower outer corner of the low beam).
 - D. Push and turn the black adjuster lock counter-clockwise until fully seated.
 - E. Snap the black socket back onto the ball at the end of the adjuster.
 - F. Screw the white adjuster knob, on the adjuster, until the black socket is in a proper position to snap into the receiver hole in the low beam headlight (see the other two mounts on the low beam). use a pair of needle-nose pliers to snap the socket into the receiver hole.
6. Install the headlight wiring modifications:
 - A. Cut the headlight bulb connector plugs from the vehicle's headlight wiring harnesses (leave a few inches



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of wire on the connectors in case you ever wish to restore the headlights back to the original configuration).

- B.** Strip the wires (from the harnesses) and crimp one solderless splice connector onto each wire.

NOTE: *DO NOT strip the white wires for the low beam headlight. This wire will not be used. You can either use electrical tape or a crimp-on butt connector to protect the wire.*

- C.** Strip the ends of the four supplied connector pigtails and crimp one onto each splice connector, which was installed in the prior step.
D. Install the low beam connector plug housing (yellow): Insert the spliced wire connector, from the yellow vehicle harness wire, into the flat side of the connector plug housing. Insert remaining connector from the brown vehicle harness wire into the rounded side of the connector plug housing. Lock the connectors into the plug housing by pushing the black lock-tab into position.
E. Install the high beam connector plug housing (white): In a similar manner to the prior step, insert the spliced wire connector, from the white vehicle harness wire, into the side of the connector plug housing that has the angled corner (vs. the rounded corner). Insert remaining connector from the brown vehicle harness wire into the side of the connector plug housing with the rounded corner. Lock the connectors into the plug housing by pushing the black lock-tab into position.

- 7.** Install the headlight assemblies:

- A.** Open the back bulb covers on the high and low beams (twist the plastic cap counter-clockwise) and install the H-1 bulbs. Connect the wire terminals, from the caps, to the bulbs (red wire) and connect the ground tabs on the housings next to the bulbs (black wire). Install the caps.
B. Install the headlight assemblies to the vehicle using the screws that had mounted the original headlights.
C. Carefully route the Angel Eye wires under the light assemblies and to the area behind the lights.

- 8.** Install the wiring for Angel Eye illumination (the harness supplied with the Angel Eye kit is for the Angel Eye lights):

- A.** There are six connection points on the Angel Eye harness:
1. White plug with four terminals—this is the relay socket.
2. Black plug with two terminals—this is the connection point for the “turn-on” source for the Angel Eye lights.
3. Two white plugs with two wires each—these are the connection points to the Angel Eye connector plugs on each headlight assembly (L & R).
4. Black wire with ring terminal—ground connection.
5. Red wire with a ring terminal (with fuse in-line)—positive power connection.

NOTE: *The Angel Eye lights can be wired to run in a number of ways:*

- a.** Angel Eyes are on when headlights are on:
 • You will be connecting the black plug with two terminals to a source that has power only when the headlights are on, such as one of the low beam power wires or one of the low beam fuses.
b. Angel Eyes on when parking lights are on:
 • You will be connecting the black plug with two terminals to a source that has power only when the parking lights are on, such as one of the parking light power wires or one of the parking light fuses.
c. Angel Eyes on when ignition is on (whenever the engine is running):
 • You will be connecting the black plug with two terminals to a source that has power only when the ignition is on.
d. Angel Eyes on their own separate switch:
 • You will be connecting the black plug with two terminals to a switch, which you have installed in a powered and fused circuit.

- B.** Lay out the harness so that the plugs for the Angel Eye connectors at the headlights are in a position to enable connection to the plugs from the headlight assemblies (long end to the driver’s side of the vehicle). The positive and negative power connection ends should run up the passenger side of the engine compartment, to the positive junction block at the firewall.
C. Connect the white harness plugs to the Angel Eye connector plugs (from the headlights) on both the left and right sides.
D. Connect the red power wire ring terminal to the positive junction block at the passenger side of the firewall.
E. Connect the black ground wire ring terminal to a secure ground, such as a strut tower mount stud.



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- F. Cut the black connector plug (for the Angel Eye "turn-on") from the harness and run the black wire to a secure ground and the red wire to your "turn-on" source as noted above.
 - G. Install the supplied 4 pin relay into the harness relay socket.
 - H. Use the supplied cable ties to secure the Angel Eye harness to the vehicle.
 - I. Test the operation of the Angel Eye lights.
9. Replace the original high beam relay, (see Figure 1), with the supplied 5 pin relay.
 10. Plug the high and low beam harness connector plugs into the high and low beam headlight assemblies. Test the operation of the high and low beam lights.
 11. Install the grills. If the headlights are not properly aligned with the grills, loosen the headlight mounting screws and adjust the position of the lights to align with the installed grills. Install any remaining hardware that was removed.
 12. Adjust the headlights:
 - A. With the vehicle on a level surface, squarely facing a vertical wall 10 meters away from the front of the vehicle, the horizontal cut-off of the low beams shining on the wall should be 10cm lower than the height of the headlights, from the ground.
 - B. The point where the horizontal cut-off angles up at about a 45° angle, should be at the vehicle's centerline for the left headlight and at the right edge of the vehicle for the right headlight.
 - C. The center of the beam for the high beams should be just below the height of the headlights and just a bit inboard of their positions on the vehicle.
 - D. Drive the vehicle and adjust as required.

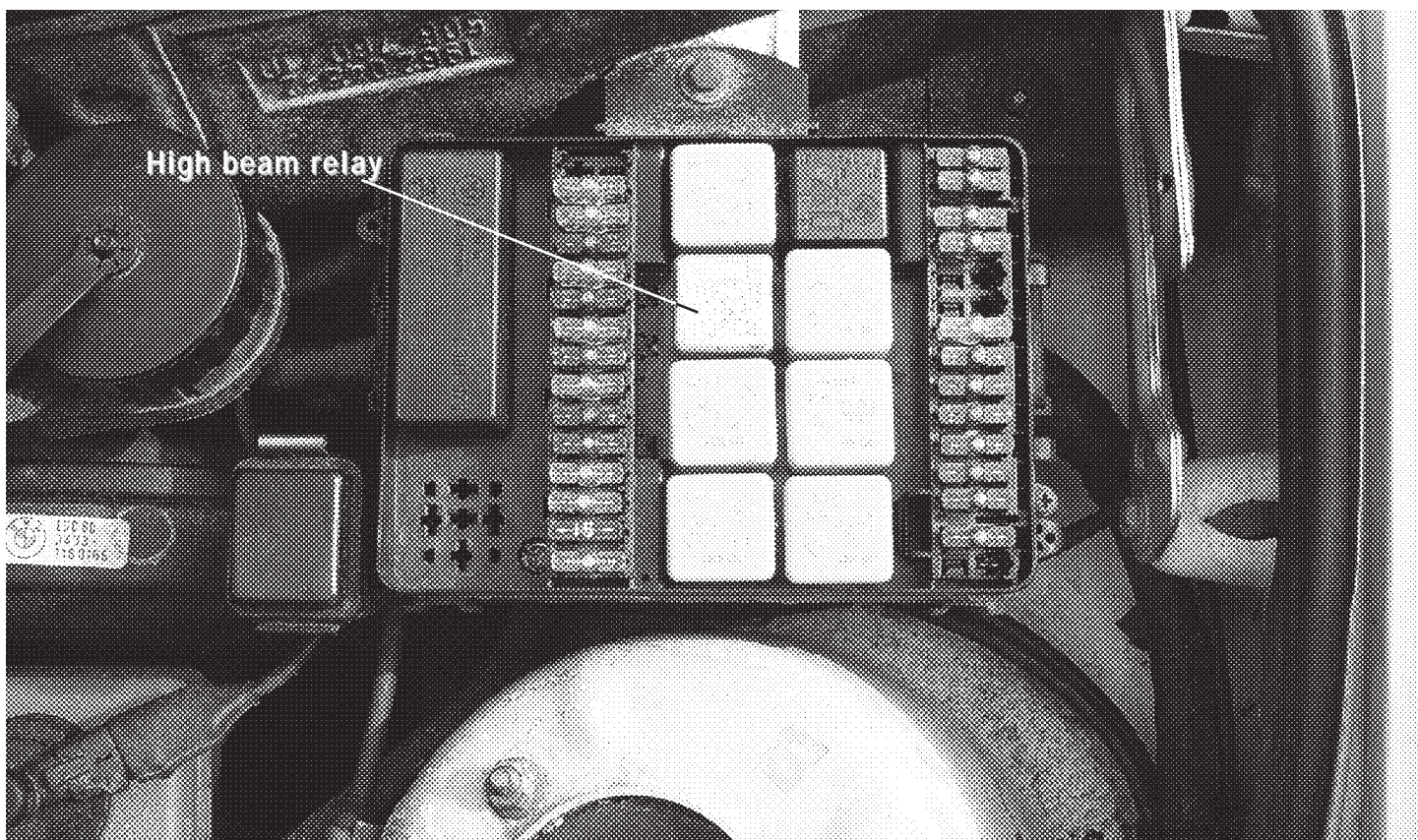


Figure 1