



MAZDA MIATA

LO-PRO HEADLIGHT

Part Number 906-055 & 906-056

440 Rutherford St. P.O. Box 847 Goleta, CA 93116
1-888-642-8295 • FAX 805-692-2525 • www.mossmotors.com

Miata Lo-Pro Headlight Instructions

1. Install one Miata Lo-Pro Headlight conversion at a time starting with the Drivers side first. Please note that when “Right” or “Left” is mentioned, it is referenced from behind the steering wheel. With the headlights and the hood in the UP position remove the black plastic mask by removing the four phillips (cross) head retaining screws.

2. Next remove the four phillips (cross) head screws securing headlight cover and then the cover itself. Use care, as these screws will be very tight!

Illustration 1

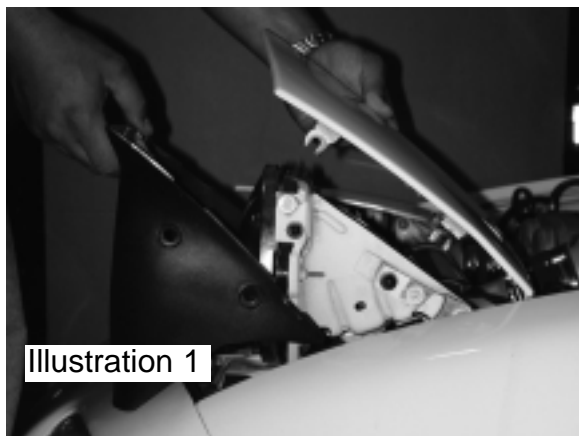


Illustration 1

3. Unplug the electrical connector from the back of the headlight unit and remove the wiring anchor from the side of the headlight assembly.

4. Locate the headlight actuator motor behind each head light assembly. It is black in color and mounted in a vertical position. At the bottom and towards the outside of each motor is the actuator crank and link. The link will appear as a thin, dark green metal bar with white plastic ends that connect the headlight assembly to the actuator motor. Using a large flat blade screwdriver, separate the link from the crank by prying between the two until the white plastic end “pops” off the crank stud. Make sure to hold the headlight assembly, so that it doesn’t fall.

Illustration 2



Illustration 2

5. Using 10 and 12mm wrenches, remove the two pivot bolts and then remove the headlight assembly complete from the car.

6. With a felt tip pen, mark the end of the link that attaches to the headlight assem-

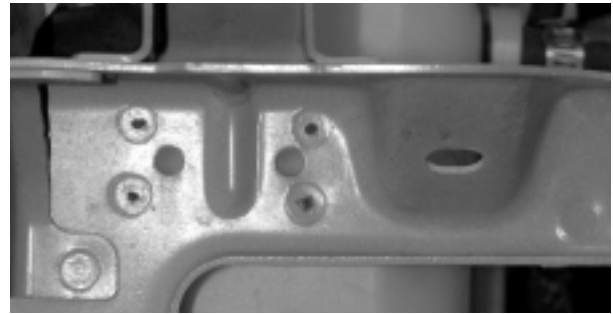
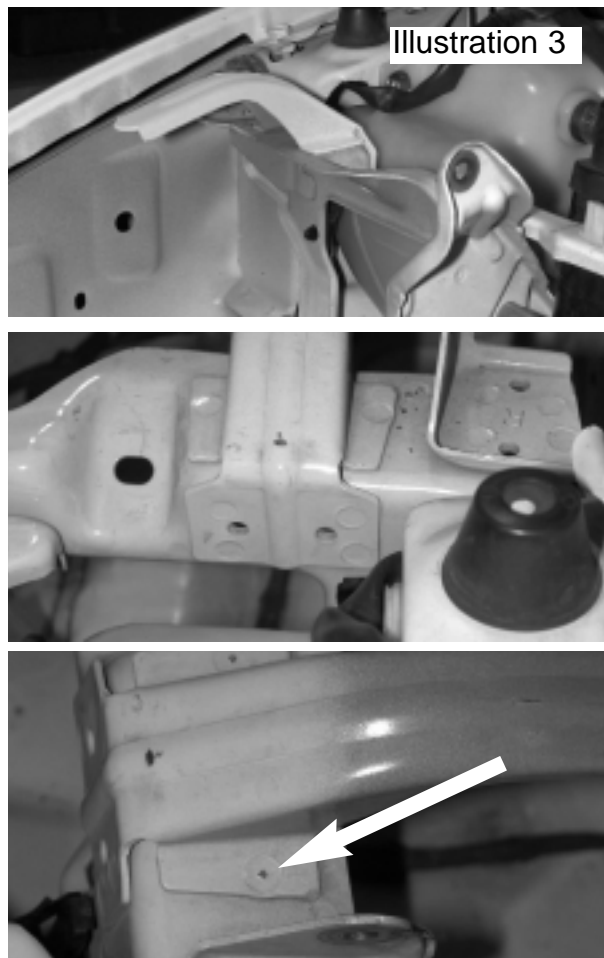
Lo-Pro Headlight Installation Instructions

bly, then remove the link from the assembly in the same manner as before.

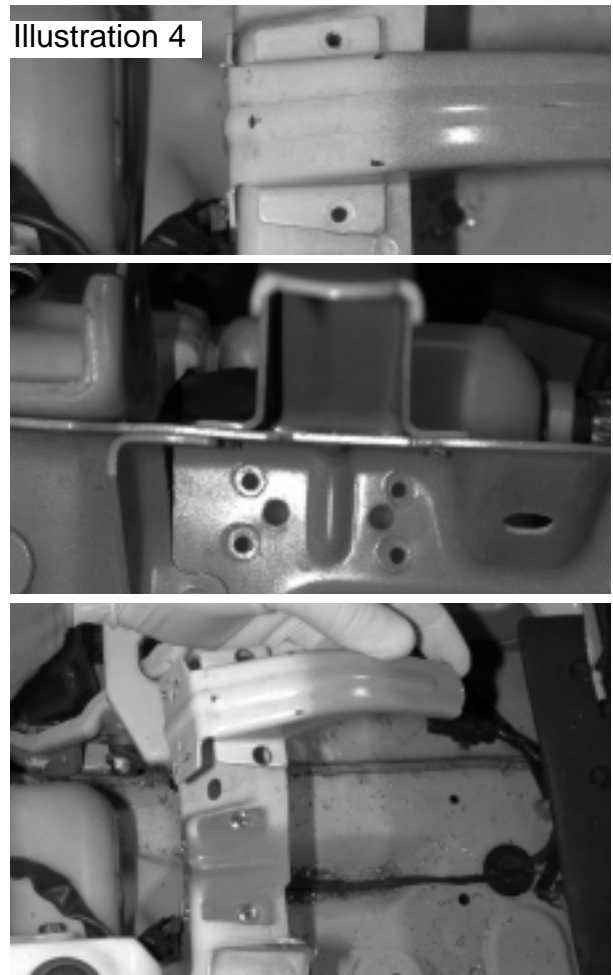
7. Remove the Upper Headlight Stop and lock nut from the headlight assembly.

8. Now remove the factory upper bump stop. Locate the six spot welds holding the upper stop to its framework. Using a center punch, carefully find the center of each spot weld and punch a mark to start the drill. The four spot welds on the vertical part of the upper stop will be center punched and drilled from the front of the car, underneath the framework.

Illustration 3



9. Once all six spot welds are center punched, drill a 1/8" pilot hole through them. Then drill them out to 5/16". If you are using Rotabroach you only have to drill through the first layer of sheet metal or if your using a regular drill you will drill all the way through. Illustration 4

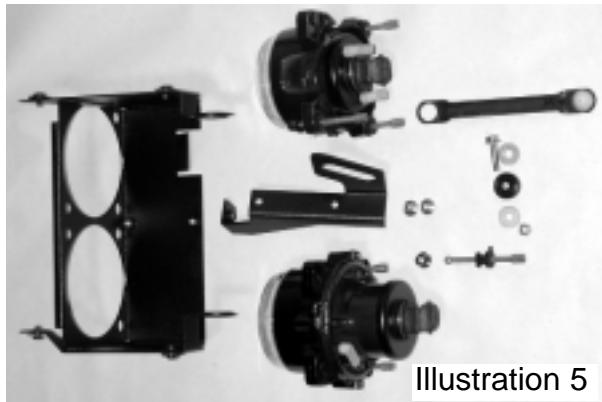


Lo-Pro Headlight Installation Instructions

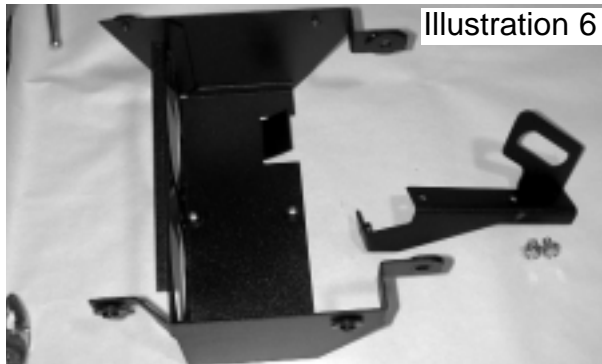
10. If you have drilled all six spot welds and the upper stop is still attached, a chisel and light tapping will aid in removal.

11. File any burrs that may exist and paint raw metal with the appropriate color paint.

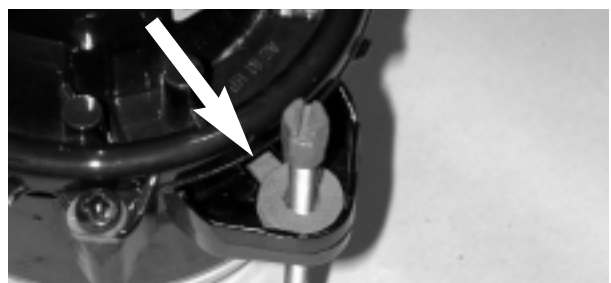
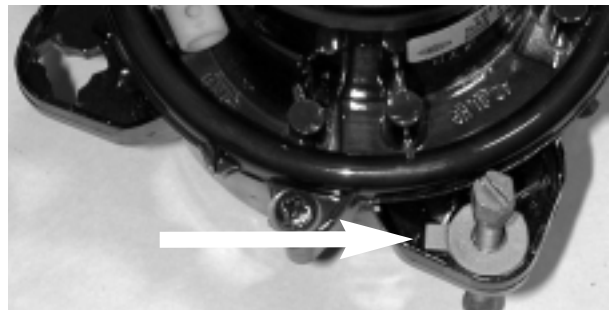
12. Next, starting with the left, locate your new Lo-Pro Headlight Buckets (left is stamped on the center floor of the bucket). Locate the left lift bracket (also marked). Locate your headlight link, one of each headlight, six headlight adjusters, two short 10mm headed bolts, one longer 10mm headed bolt, one lock nut for 10mm headed bolt, two nylon flat washers, a black actuator bushing, and thread locker. Illustration 5



13. Using a 10mm socket, assemble the lift bracket to the bucket as shown. Use the two short 10mm headed bolts. Apply thread locker to the bolts and then start and tighten bolts. Set bucket aside. Illustration 6



14. Now, assemble the adjusters to the headlights. You will use three adjusters per light. Two adjusters will be used in the holes on the bottom of both lights. (plug on the back faces down) Slip the adjusters in from the back and rotate the black plastic 45 degrees until the plastic tab locks into place. Illustration 7.

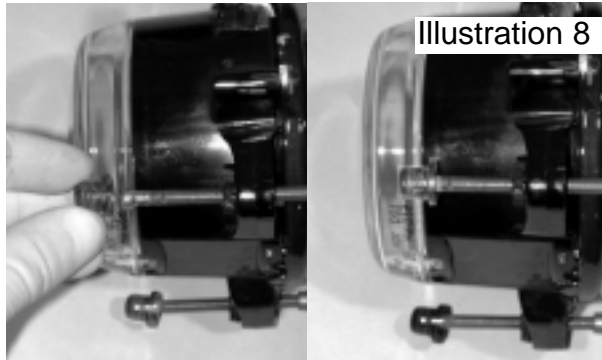


Lo-Pro Headlight Installation Instructions

15. The upper (single) adjuster in each light will correspond to a hole in the face of the headlight bucket. Note: the longer of the two lights (low beam) installs toward the outside of the car (left side of her headlight bucket) Its adjuster installs in the upper right side of the light and the shorter light's (high beam) adjuster installs in the upper left side of the light. (This will be opposite when working on the right hand side of the car.)

16. Once all of the adjusters are in and locked in place, install the plastic sockets over the ball on each adjuster.

Illustration 8



17. Set the lights in their correct location behind the headlight bucket and verify that all the adjusters have a hole to slip into. Once you've confirmed the correct adjuster locations, install the light into the bucket, starting with the shorter light (high beam). You will need to tip the light rearward to slip it past the lift bracket. Align the sockets and press them into the holes. You will have to press firmly and should hear a snap when they pop all the way in. **Note:** Once the adjusters are in the holes they are difficult to remove, so be certain you are ready to install them.

Illustration 9

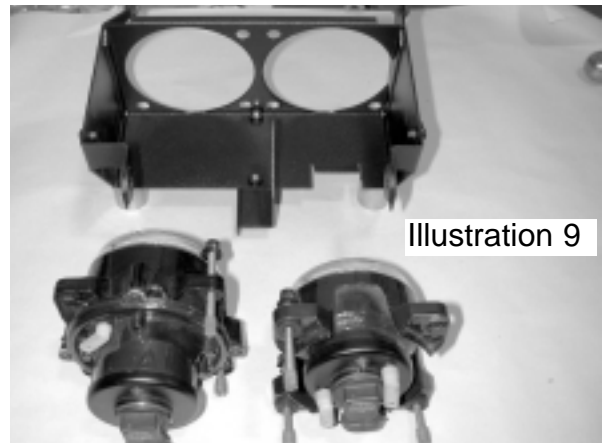
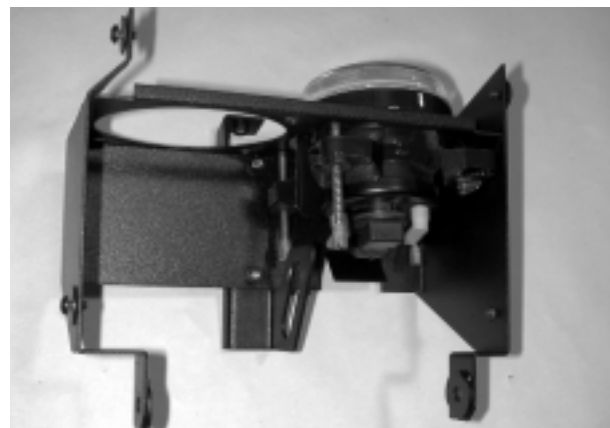
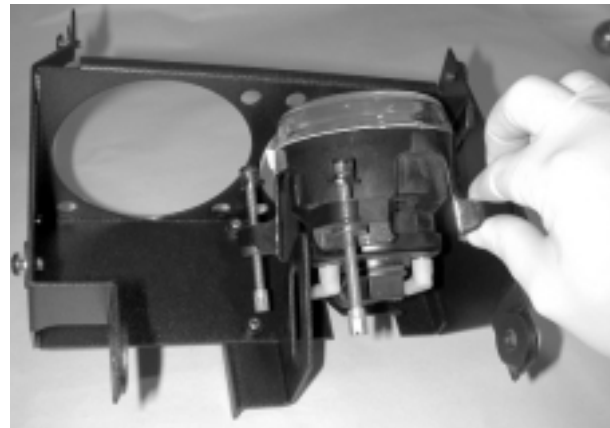
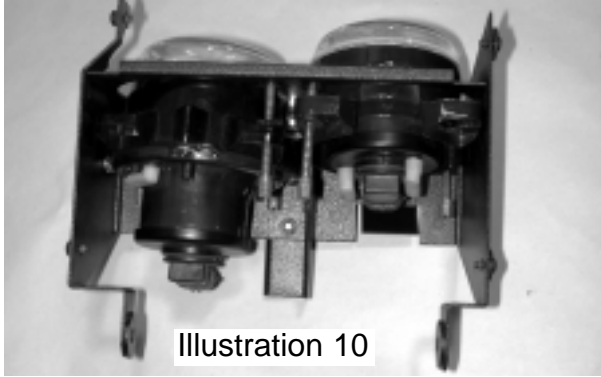


Illustration 9

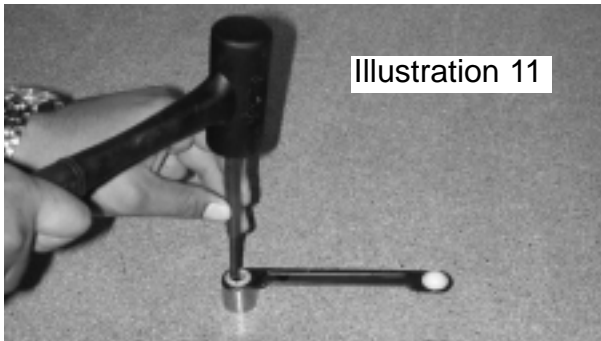


18. Next, install the long light (low beam) in the same manner. If either light is difficult to install you may need to adjust an adjuster longer or shorter to aid installation. Illustration 10

Lo-Pro Headlight Installation Instructions

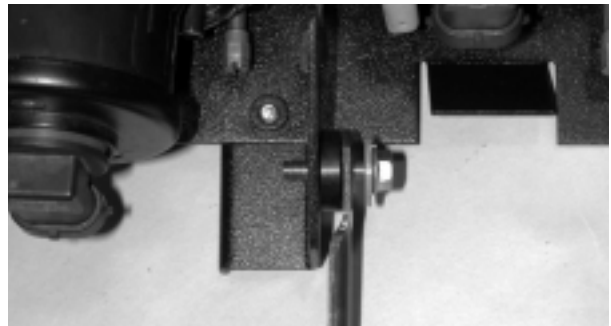
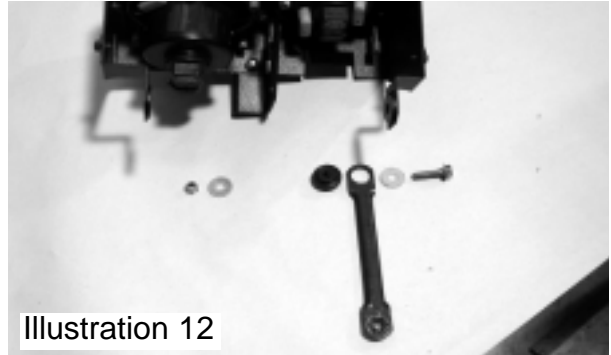


19. Locate the previously removed headlight link. Remove the white plastic ball end connector from the end of the link that you marked with a felt tip pen. Do this by placing the round side of the connector into the open end of a 17mm socket to hold it. Using a drift or punch, drive the connector into the socket by striking the drift with a hammer. Take care not to damage the metal part of the link. Illustration 11



20. Now, attach the headlight link to the lift bracket on the headlight bucket. Slip one of the nylon flat washers over the long 10mm headed bolt and then slip the bolt through the headlight link. Slip the black actuator bushing over the bolt and into the headlight link. The bushing fits the slot in the lift bracket on the headlight bucket assembly. Slip the second nylon washer over the bolt and start the lock nut. Before you tighten the lock nut, be sure the ball socket in the end of the

headlight link is faced the correct direction to attach to the actuator motor in the car. Snug the nut using a 10mm nut driver and 10mm combination wrench. Illustration 12



21. Plug the power and ground wires into the electrical connections on the end of the bulbs. The small connector of the Red/White wire connects to either of the terminals of the High beam bulb. The Red/Black wire connects to either of the

Lo-Pro Headlight Installation Instructions

terminals on the Low beam bulb. The black wire has two small connectors and these will connect to the remaining terminals on each bulb. Illustration 13

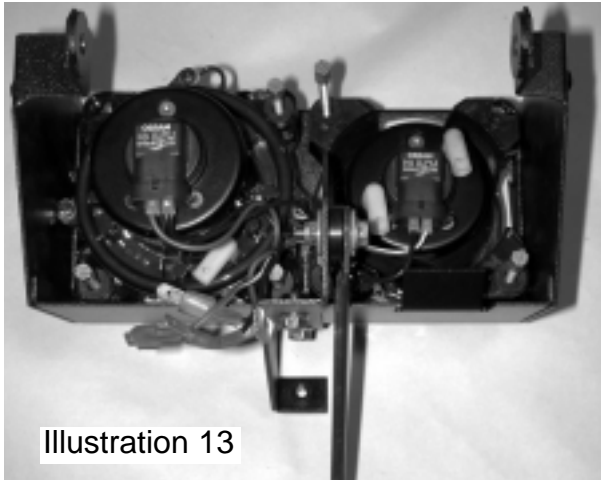


Illustration 13

22. Locate the rubber bump stop and jam nut you previously removed from the factory headlight. This will install in the front of the lift bracket. Screw it all the way in and just start the jam nut on the back

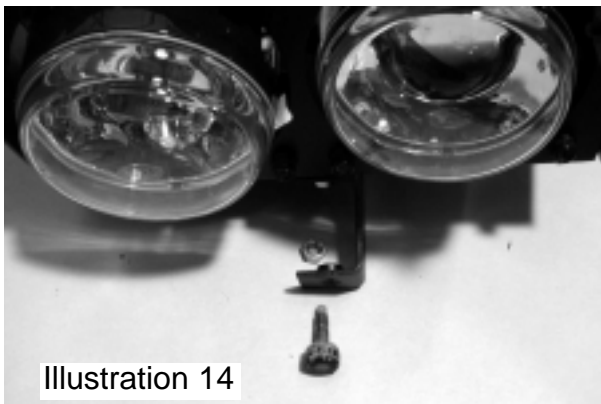


Illustration 14



side. Illustration 14

23. Install the assembled headlight bucket on to the car by re-using the previously removed pivot bolts and nuts. Attach the link onto the actuator motor by snapping the ball socket onto the ball stud. The new headlight assembly should be in the up position. Adjust the bump stop on the lift bracket until it contacts the body of the car. Lower the headlights and rotate the bump stop out an additional two turns. Raise the headlights and tighten the jam nut with a 10mm combination wrench. When properly adjusted, the rubber bump stop should be compressed slightly against the body of the car. Route the wires from the high beam around the lift bracket. Plug all the wires into the factory headlight plug, matching the colors; red/white to red/white, black to black, and red/black to red/black. Tie wrap the wires clear of the linkage. Illustration 15

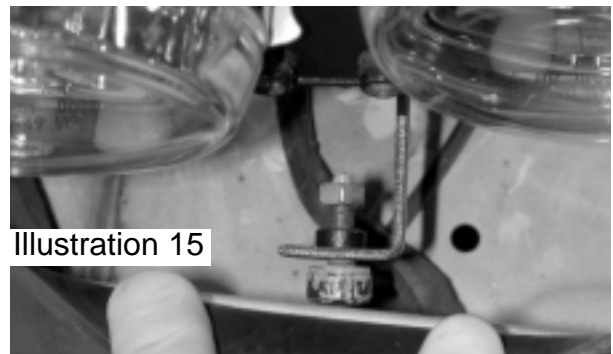


Illustration 15

24. Attach the headlight cover to the new headlight assembly using the new black screws and washers supplied. Do not tighten the screws securely yet, as some adjustment will be required to insure a good fit with the surrounding panels. Cycle the headlights down. Adjust the headlight cover into position, so that it is flush with the outside panels with even gaps all around. Cycle the headlights up and tighten the screws securely. You may

Lo-Pro Headlight Installation Instructions

need to repeat this exercise a few times to get a perfect fit. If you find that the headlight assembly is too low and you cannot raise the cover enough to get a good fit, re-adjust the lower headlight stop on the body to slightly raise the assembly when it is in the down position.

25. Repeat steps 8 through 24 for the right side of the car.

26. Adjust the headlight beams by starting with the car on a flat, level surface with the tires properly inflated. Position the car so that it is 25-30 feet (five meters) from a clean vertical surface, the back wall of a garage will work fine. Measure from the ground to the center of the individual light unit and then from the one light unit to its sister on the other side of the car. Record both these measurements and then using some tape or a pencil mark the wall in front of the car these same distances. When the lights shine on to wall, the brightest portion of the light should be the same distance from the ground and same space apart as on the car. If you have trouble distinguishing one beam pattern from the other, place a towel over one side to allow you to see where the beam patterns are. Adjust the beams by turning the ball end of the adjuster screws with a crosshead screwdriver. Use the top screws for vertical adjustment and the two lower screws for horizontal adjustment.

27. Re-check all electrical and mechanical connections.

