

## DS650 Headlight Mod

This is a tutorial explaining how owners of the "old" headlight style DS-650's can upgrade to the new twin bulb headlight. The "old style" headlight was made of glass, was heavy and was expensive to replace. This modification uses a lighter (and safer) plastic lense with two standard bulbs inside.



Here is what you will need, parts wise.

- 705000805 - Headlight assembly - comes with bulbs and wiring.
- 705000904 - Bracket, upper
- 705000905 - Bracket, lower

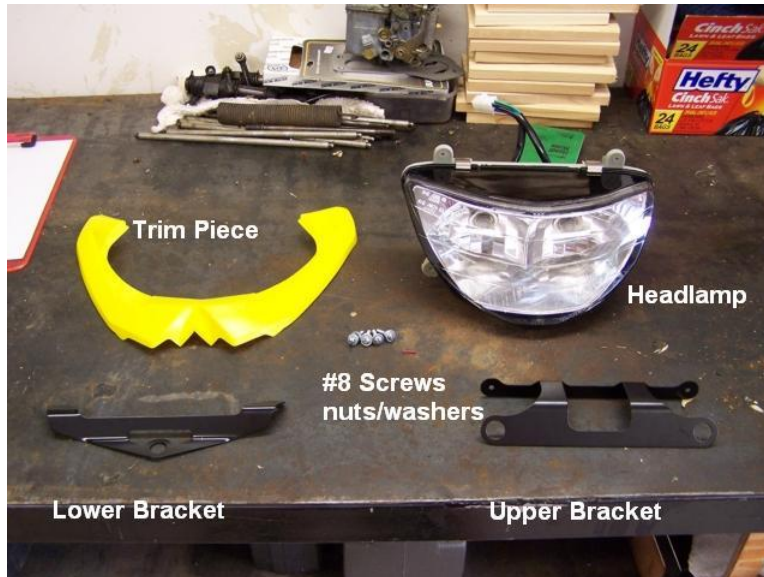
Your choice of one of the following trim pieces.

- 705000986 Yellow
- 705000806 Black
- 705000871 Orange.

3 pieces of # 10 or #12 wire, 2 inches long each.

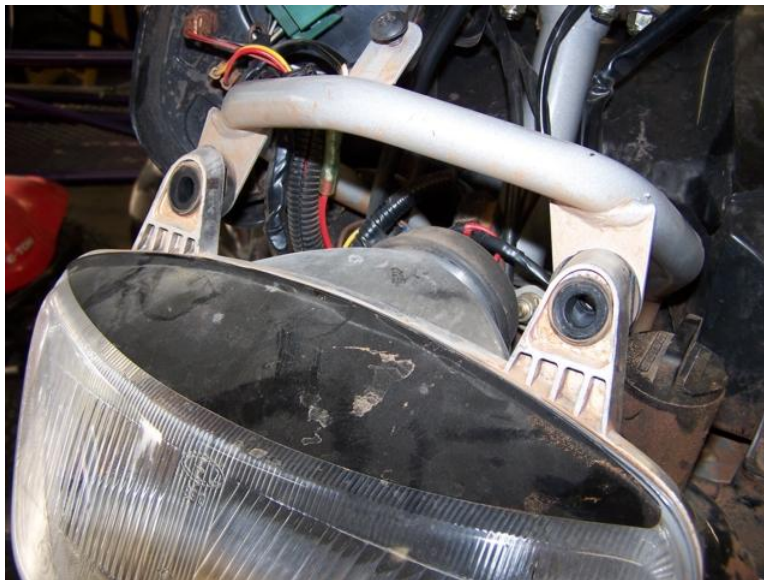
6 male spade connectors.

And last, you will need 4, #8 machine screws, 8, #8 flat washers, 4 #8 nuts.



Here is the easiest way I've found to accomplish this mod:

1. Remove the front plastics.
2. Remove the dash panel
3. Unplug the headlamp
4. Remove the 2 upper headlamp mount bolts and nuts. The rubber washer usually sticks to the mount tabs, remove them as well, they will not be re-used.



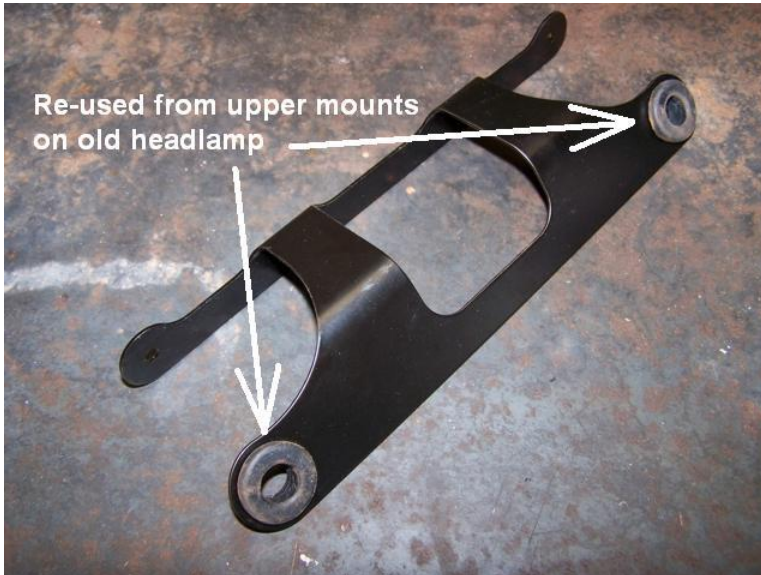
5. With an 8mm wrench, hold the backing nut on the adjustment screw. There is no need to take it all the way out, the long screw will slide out for the holder.



6. Remove the old headlamp and put it on the bench
7. Remove the rubber bushings and washer/spacers from the top mounts. They will be re-used.
8. Remove the adjuster from the bottom mounts. There are 2 rubber grommets on the mount, only one will be reused.



9. Install the two rubber grommets and washer/spacers you took off the upper mounts of the old headlamp in the large holes of the new upper bracket.



10. Take one of the grommets from the lower adjuster and install it in the large hole in the new lower bracket.



11. Using the #8 screws, washers, and nuts, install the new brackets with the rubber grommets on to the new headlamp. NOTE: Do not over tighten this screw; it will crack the lower mount! Just "snug" them down, use medium strength lock-tite if you wish.



12. Install the headlamp assembly onto the bike. Insert the lower mount **BEHIND** the lower bracket on the oil tank.
13. Install the upper mount nuts and bolts. Put the bolt in from the rear and the nut on the outside.



14. Reusing the long adjustment screw, lock nut and 2 of the flat washers, install the lower mount flat up against the lower bracket on the oil tank.

**NOTE :** Installing the lower mount this way does not give you any headlight aiming adjustment. I found there was no need for adjustment on mine. It was perfectly aimed to my liking. You may or may not agree. The brackets are pretty thin and can easily be bent a little to adjust the aim of the headlamp to your liking.



**Detail of lower mount.**

15. Take the new trim piece and lay it in place on the front plastics. Mark the location for the “pins” on the top edge of the trim piece.

16. Mark the lower area behind the screw hole locations. This area will have to be removed to accommodate the shape of the new lens.



**This is the area to be cut out. Using trim as pattern.**



17. Drill the two holes you marked for the edges, I found a ¼ in bit to be just about perfect.

TIP : Notice the “pins” go in at an angle, try to drill your hole to match that angle



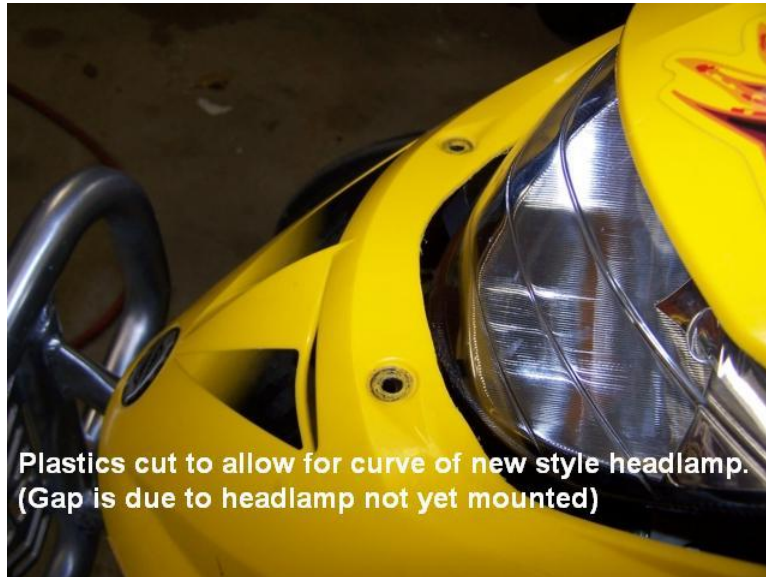
18. Cut the relief you marked on the plastics at the bottom of the headlight opening.

TIP : I used a Roto Zip on low and it worked like a charm!

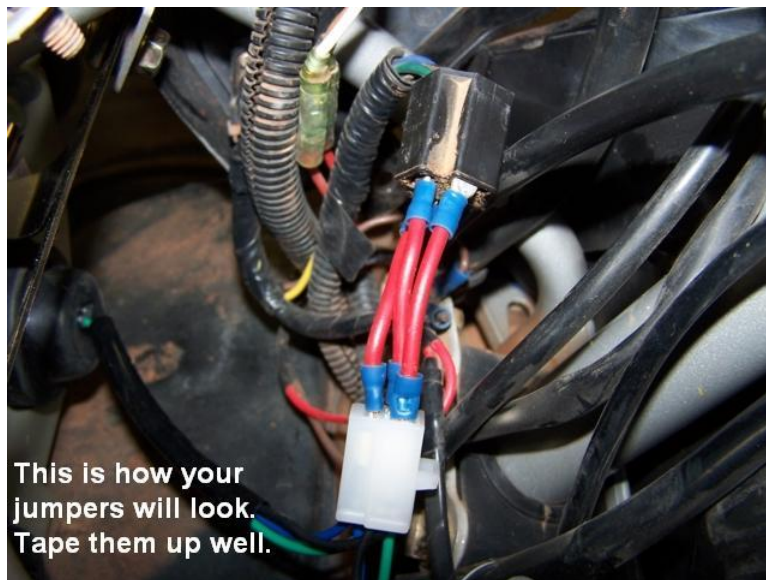
19. Take a fine file or some sand paper and smooth the edges of the cut you just made.

20. Install the front plastics and be sure the lower edge you cut clears the lens. It should not go under the headlamp.

TIP: Install the two screws at the rear of the plastics to help get the alignments correct.



21. Cut 3, 2in long pieces 10 or 12 ga. wire
22. Crimp male spade connectors on the both ends of each wire. These will be jumpers to connect the old headlamp plug to the new headlamp plug.
23. Remove the plastics again if they are still on. Connect the brown wire of the original wiring to the brown wire of the new headlamp. Do the same for the blue and green wires.



24. Wrap the entire connection with electrical tape.
25. Reinstall your dash, and front plastics. Don't forget to put the trim on before you put the 2 screws back in the front of the headlight.
26. Roll her out in your yard and re-aim the headlamp, if needed (mine needed none!).
27. RIDE!





Completed install