How To Fabricate A Hidden Tail Light
By Howard

1. Take your fender and cut out the design you want by first drawing it out than transferring it onto the fender.
2. Make a backing plate with #10 X 24 mounting flat head bolts long enough to be able to mount the rear of the light box. Spot-weld bolts/studs to backing plate. Mount backing plate to fender.
3. Paint fender
4. Cut diffuser lens to fit
5. Silicone diffuser lens.
7. Lay it out and make the depth enough clearance to take into consideration the thickness of PVC channel, epoxy, and depth of the Led lights.
8. Make light box with mounting flanges.
9. Lay out the light box as to center the Led’s in the center of the design you had cut into the fender. LED’s, generally, are directional.
10. Notice the measurements scribed in the layout blue.

11. Center the PVC channel in the center of your layout and epoxy. This will insolate the led connections & give the epoxy depth to weatherproof your LED connections.
12. Epoxy in the LED’s. I used amber on the outside (2 strip) for turn/brake signals. The rest are red. All have medium/high intensity + ground
13. Use weights to hold your LED’s from shifting while drying.

14. Wire the circuit together in the way you want them. I wired all the high intensity red together along with the low intensity amber outer LED’s for brake light. All the red low intensity together for running lights. The two outer amber high intensity for respective turn signals. Solder & shrink wrap into 1 lead each circuit.
15. Take the leads & shrink wrap them together & run them through a rubber grommet & exit the light box in an egress of your choosing
16. It should look similar to this.

![Image of light box with leads and grommet]

17. Now install the light box by silicone onto the flange and affix the light box to the fender by the bolts. Wire together and connect to your circuit.

18. This is the finished product. If a steel fender is used, you may make a chrome bezel or nothing at all. Any design can work as long as you have LED'S aligned to your design.

19. This is with the lights off.

![Image of light box off]

20. Lights On
I know that these photos are not showing the LED’S very bright, however, they are. If I can figure out how to take this photo in the dark, I will replace the picture. For the time being, trust me, they are very bright. Notice the amber on the left side, they are my blinkers.

With a little imagination you can also put this light box & LED’s anywhere. Front, Rear, In Fairing, Lower Fairings, and Bags. You name it! Here are some ideas:

Need LED’S? No Problem, I have got them here. Just ask about our services!

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