

### Fabricating a top box carrier

I needed a carrier and top box for my GS1000G and could not find one that was in fair condition. At an agency for Chinese Vuka scooters I bought their large top box, which comes with a baseplate and fittings. I also wanted it to function as a carrier with the top box removed. BassCliff from the GS forum kindly sent me pictures and measurements of his carrier and top box.

As I had no means for bending thin walled tubing at home, I opted for using solid round rod.

#### Material required:

3 meters x 12mm round rod

1 meter x 25mm x 3mm flat bar

4 coach head screws

some 2.5mm welding rods

1. Remove the rear flashers and the tail piece to allow easy measuring and marking. Also remove the upper domed nuts on the rear shock mounts.
2. Determine the width of the mounting plate base for the top box, which in my case was 300mm
3. Then determine the length of the rod which in my case was 1400mm, cut longer at 1600mm
4. I then mounted a off cut piece of 50mm pipe upright in a vice as a bending jig.
5. Use masking tape to mark the center of the rod.
6. Now draw a bending template with two 50mm round corners and a width of 300mm.
7. Mark the beginning and end of the corner bend with masking tape on the rod. (left & right from center mark)
8. Bend the rod physically around the pipe. You may want to clamp the rod to the pipe with the vice and only bend on the free end. Just take care that the bend is in the part that you measured so that once both corners are done the two parallel legs are 300mm apart. At this stage make sure that everything is still square/parallel.
9. Now measure the distance back to the back of the seat that you would need to mount the top box and still have it opening fully. This is then the position of the carrier once completed.
10. The next bends are a little more difficult to describe, but look at the pictures. The two long legs are now sticking back past the seat on either side. They have to be bent down at about 300mm from the back corners and at a sloped angle to meet the supporting arms below.
11. The next step is to cut two pieces of rod about 700 mm each for the lower supporting arms.
12. Cut two pieces of flat bar, about 80mm long, bend a step(+8mm) in the center and drill a hole on either end. The first hole is to fit over the rear shock mounting stud and the second hole is to attach the rear crash bars.
13. Weld this stepped bracket to the end of each 700mm length of rod.
14. At exactly 500mm from the rear shock hole bend the rod upwards around the pipe at the same sloped angle as in point 10
15. Test mount the lower supporting arms and mark the center of the hole mounting the flashers. This is 380mm from the center of the shock mounting hole.
16. Now bend two L shaped brackets from a piece of flat bar 45mm x 25mm. Drill a hole in the longer side to accommodate the flasher mounting bolt. Position this bracket properly so that the shock mounting stud and the flasher mounting bolt lines up nicely while keeping the lower bar parallel with the bottom of the seat or as horizontal as you can get it. Then weld the L shaped brackets to the inside of the supporting arm.
17. Now test fit the top frame to the lower supporting arms on the bike and make sure that the carrier is level and in the correct position and mark the angled cut on the bent down ends of the frame from the top where it meets the lower supporting arms. It should meet close to the flasher mounting bracket, preferably on the inside towards the shocks. Cut those legs at the correct angle and test fit and bend until everything fits.
18. Take the lower supporting arms off and lay all flat on the ground and on its side, measure and mark the top of the bend up pieces of the lower supporting arms where they reach the

upper frame. Mark and cut off at the correct angle. Make sure the two arms are parallel at the same angle when the upper frame and bottom arms are in alignment and weld them together.

19. Now fit and bend everything until all is straight, square, level on the bike and all mounting holes line up. I put a slight bulge in the two bends coming down from the top to give a little more clearance on the sides between the carrier frame and the tail piece.
20. Weld in any strips and frame supports so that can use the frame as a carrier and a top box mount (see pictures). Cut four coach head bolts at 8mm from the heads and weld the short stubs to the underside of the carrier frame for attaching hooks and ropes etc.
21. Find a strip led stoplight from a vehicle spares place, about 28 leds, weld and drill a small mounting plate under the back of the frame. This extends your stoplight back and can be parallel connected with the existing stoplight without any discernible extra load.
22. Finally weld some flat bar stubs with drilled holes to extend you rear flashers towards the rear and maybe some stubs on the lower supporting arms for side bag mounting.
23. Clean up and have it chrome plated or powder coated and hit the road!

