

How to make your own rear rack

The Rear Rack

My 1937 Sunbeam Model 9 had no pillion seat although it has pillion foot rests (figure 1). It also had no rear carrier like previous models. I decided design a carrier so that a pillion seat can be placed onto it.

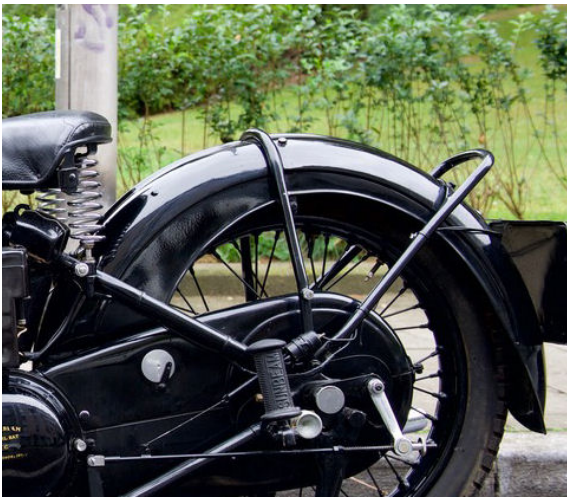


Figure 1 – Rear part of my 1937 Sunbeam Model 9.

There are some points which have to be taken into consideration.

1. An anchor point for the carrier is needed which carries the main load. The central bolt of the central mudguard stay sitting on the rear axle triangle is an obvious choice.
2. In driving direction the rack can not have a symmetrical design because of the rear chaincase (in my case on the left side).
3. Because the carrier width will be smaller than the distance between the two central anchor points on both sides the left carrier stay needs to be inclined.

To get a feeling for the geometry and the measures I first made a mock-up out of plywood (figures 2 and 3). With this mock-up I was then able to finalise the drawings for my local locksmith who had to bend and weld the steel (figures 4, 5 and 6). The carrier needs to be out of steel because it should be strong



Figure 2 – Wooden mock-up. Side view.



Figure 3 – Wooden mock-up. Rear view.

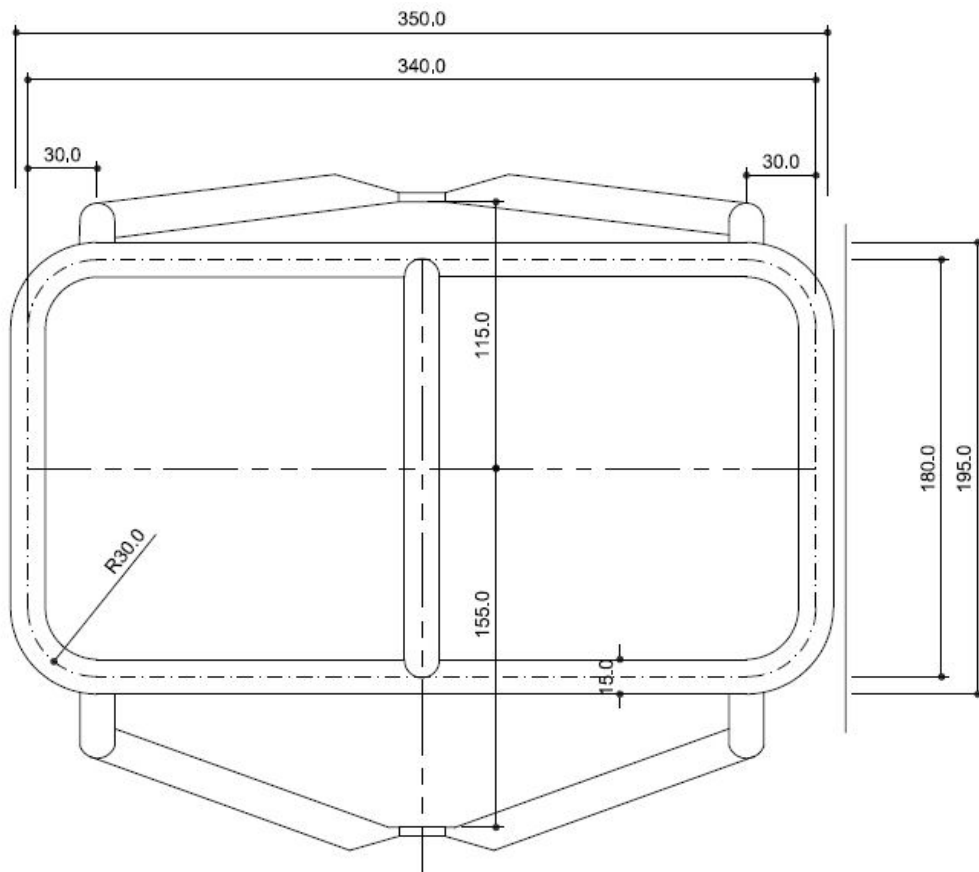


Figure 4 – Rack drawing. Top view.



Figure 7 – Rear part of my 1937 Sunbeam Model 9.
Inset: The central anchor point.

enough to carry a heavy person. I first thought that tubes are a good choice. My locksmith recommended massive material, though. The tube diameter can then be reduced to 12 Millimeters.

The drawings do not contain the fixation stays between the carrier rear side and the two bolts of the rear mudguard stay. These two stays avoid tilting of the carrier in driving direction. Unfortunately, the locksmith added the stays when the machine was on its main stand so that the carrier level was not cor-

rect! As a remedy he modified the two support stays. Hence, the two stays are slightly bended. The final result is shown in figure 7

The pillion seat

Classic pillion seats are easily available in the market and mostly made in India. They are often sold for Royal Enfields and their clamps are supposed to match the respective carriers. I had ordered a pillion seat via EBAY at "ENFIELD COUNTY". Interestingly, it arrived with only two out of four springs. After a respective request, the company sent the other two. However, these two springs had been of different lengths (about 5 Millimeters) and further requests from my side had not been answered anymore. I circumvented the problem by using an additional nut which "pseudo-lengthened" the short spring. I waived the two Enfield clamps which would severely scratch the carrier and made flat steel brackets with leather pads at the bracket-to-carrier connection. Now one can quickly attach and detach the seat with a wrench. The result is shown in figures 8 and 9.

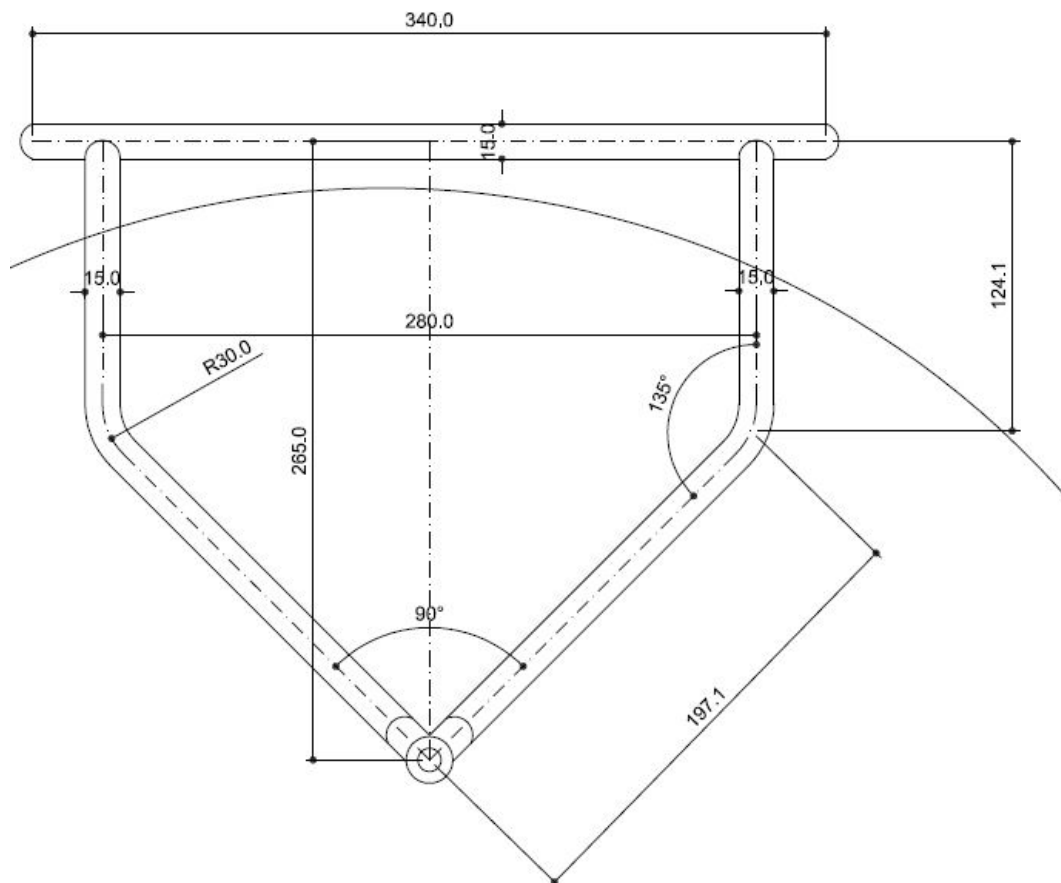


Figure 5 – Rack drawing. Side view. Note the curved line indicating the rear mudguard.



Figure 8 – Rear part of my 1937 Sunbeam Model 9.



Figure 9 – Rear part of my 1937 Sunbeam Model 9.

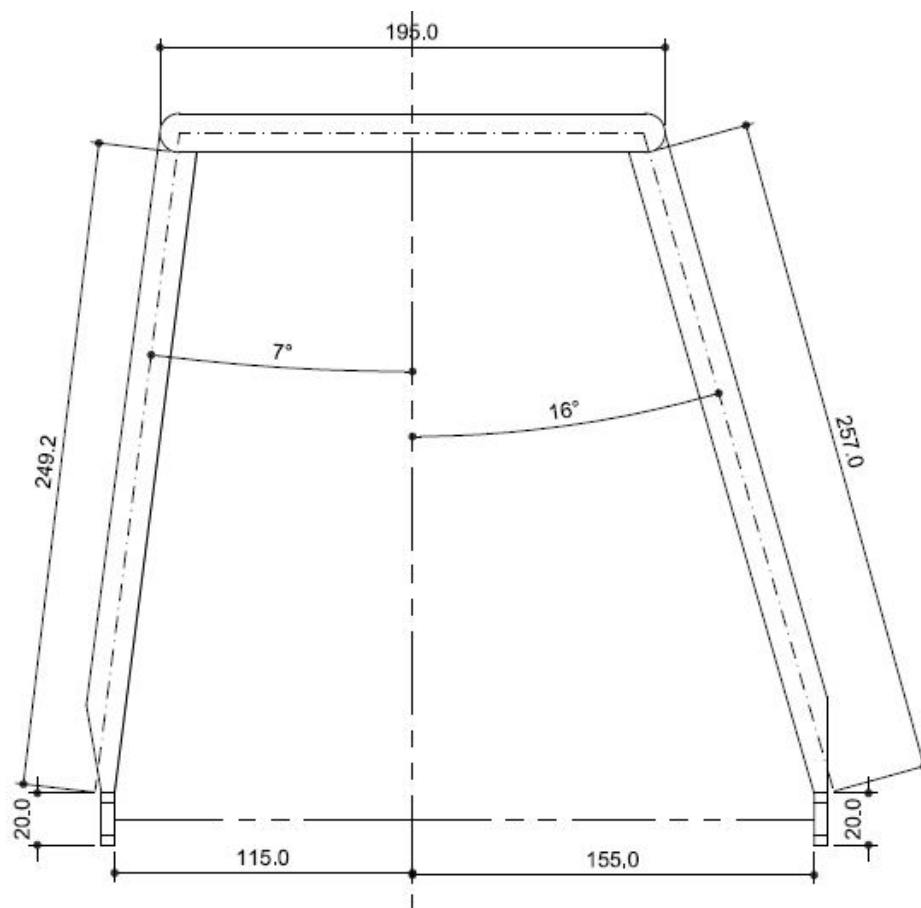


Figure 6 – Rack drawing. Rear view.