

# How to make a bigger tank for the Himalayan

You can use a slightly damaged second hand tank because a new one would just be a waste of money.

First you have to decide the volume you want to add: 2.5cm widening on each side leads to ca. 20 litre and is visually totally unobtrusive. People who see it usually do not even realize it is bigger. 3.5cm is still a good measure and will yield ca. 24 litre. I will use 3.5 here for the sake of demonstration.



Then you need to decide if you want to keep the side frames – if so you also need to extend the lower connecting rod by 3.5cm on each side. Here it is important to cut the ends off near the middle part and insert an extension between the middle and the end pieces because the end pieces are conical and just adding a piece of tube will lead to the ends not fitting into the receptacles of the frames.

If you extend more than 3.5cm on each side the top mounts of the side frames will have to bend more than may be structurally save.

Next you cut the tank into 3 pieces. You have to remember to make sure you keep the air ventilation shafts and the one for the evap system and re-connect them properly when later re-assembling the tank. If this is forgotten you will have to bore a hole into the fuel cap!



It is now necessary to clear the inner surface of the tank of all factory applied paint so the welding may no produce any residual charred remains that will inhibit the primer and sealant that will be used later and needs to bond with the clean metal surface. Sand blasting seems best, if that is not available an angle grinder may be used as well.

Then cut the stripes you want to use for the extension from thin sheet metal of the same thickness of the original material. RE has changed this thickness over the years so you have to measure the tank material you actually have. Then gas-weld them at the appropriate locations. Other welding methods

like TIG or MIG may also work but what does not work is stick welding – and here in India we only have stick or gas available.



Above: welding the lower extensions.

Right and below: The ready product shows the top welding seams – this is a 2.5cm extension before the extra sealant solder is applied.



After the welding seams are all done the entire stretch of seams must be covered with an additional layer of a specific sealant tin/lead mixture that is soldered onto the seams covering them fully. These come as thick sticks and are applied with a certain fluxing agent using the gas welding equipment with a lower grade flame. If you omit this part there will be tiny capillary in the welding that allow gasoline fumes to escape and form bubbles in the surface paint as can be seen in the following pictures. The first shows the tank after the fresh paint job, the next after 2 month of use. All the





spots where in places where the paint had formed a bubble – they are all appearing along the welding seams.



Now you are ready for the pressure test. This is quite arbitrary. We defined “passed” as holding a 10 PSI pressure for 10 minutes without any perceivable drop. Don’t go too high on the air pressure or the tank will “pop” on the underside and later will not fit in between the frame. If that happens you will have to cut a piece of wood of the correct length and hammer it into the semi-circular holding extrusions on the back

side of the tank to widen it again. That is a pain to do if the paint is already applied so make sure you test the fitting of the tank before painting.

For testing the pressure hold you obviously need to make seals for the top and bottom holes. These are then applied with a layer of rubber taken from an old tyre tube for air tight sealing. We use a 12V electric air pump to apply pressure thru a standard tyre air valve.



After pressure testing its time to apply the inner sealant with or without primer – depending on the product. Let it site for 24h, then you can work on the surface of the tank to make it smooth and apply primer that is fuel resistant. Finally spray paint it but again, make sure you only use fuel resistant paint of high quality. Not all brands



that advertise such are in fact resistant against new additives that can be quite aggressive. We had a number of re-paints to do because we believed ruthless advertising claims! Burn the last layer and if you want use a special transparent cover for extra scratch protection. A burn-in oven can be any fire proof housing with a few electric heating coils inside like this makeshift example from India:



If you give it to a professional paint shop you get something like this back:

