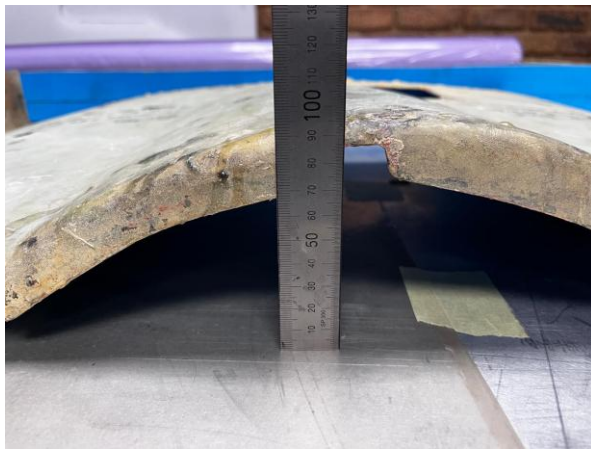


RV Bits plenum install guidelines

Thank you very much for choosing this premium product from RV Bits. Installation is easy and simple.

Before installing your plenum: We have seen something which might have to do with the couriers stacking on top of the plenums, or it might be after it has been taken out of the mould. Please do the following before you start installing it.

Put it on a flat surface and measure at the front as shown in the picture. You should get about 90mm (3.5 inches) at the front and about 60mm (2.36 inches). If it is less than this you can use ratchet straps or long clamps to pull in the sides a bit. Leaving it in the sun or heating it slightly with a heat gun should help to get it back to where it should be.



Picture of measurement taken on factory mold

Installing your plenum: First trim the cooling baffles plates as per the normal instructions that came with your kit. This means you can swap back to the standard Vans Baffle rubbers in the future if you so chose and does not lock you into a plenum design. Note that it is very important to have the bottom cowl fitted as well as the air scoops in the top cowl glassed in.

Tip:- I found the “paper clip method” very helpful. How this works is to fit paper clips on the cooling baffle plates as seen below. Initially they should sit as high up as possible and about 40 will do. Then carefully install the top cowl and remove it again. How much the paper clips are pushed down, will now give you a clear indication of the gap you will have. Trim the baffles to the required gap as per normal with your Vans Kit Instructions. Once you have the right gap move on to the next step.



The flanges of the plenum can be protected at this stage by applying strips of UHVM tape or similar to it. Also remove the angle bracket between the top center of the engine and the rear baffle plate as it might interfere with the plenum fit.

Then “drop in” your plenum to sit flush with the cooling baffle plates. You might need to support it with foam or wooden spacers underneath. Final trimming of the baffle plates to match the plenum lid should be done in stages. A small bit at a time.

Mark the plate nut holes on the baffle plates. About six holes per side will be sufficient. Then drill the four corner holes first and cleco. Drill and cleco all the other holes making sure that you are drilling through the center of the plenum flange. See picture below.



The left hand back hole will need an extra access hole through the rear baffle plate. See picture below.



Test fit the top cowl and have a careful look at where the front ends of the plenum interferes with the top cowl inlet air ramps. The front ends are slightly longer than necessary in order to accommodate different positions of the inlet air ramps. Mark and trim the front ends to leave a gap of about $\frac{1}{4}$ inch.

The gap can be left as is or two rubber strips can be glued onto the front edges. A soft foam type with adhesive works well. The standard vans rubber used below the Horizontal Stab can also be used. See picture below.



Now install all the plate nuts. Part number K1000-08 is normally used for the sides and the rear. Use AN526C832R12 SS Machine Screws and nylon washers on the plate nuts. Remember to make the holes slightly bigger in order to allow for inter cylinder movement. It is also advised to substitute the three plate nuts behind the ring gear with K1000-03 plate nuts and to use EN3 bolts on there. This will make it much easier to install and remove the plenum lid.

Note that it is also an option to install the plate nuts onto a plate and then bond the plate onto the plenum. The plenum is however strong enough to be used without the plate. About 20 plate nuts will be needed on the RV10 and about 16 on the four cylinder engines.

Attach the plenum with the screws to check final fit. It is recommended to apply a thin (3mm) soft foam with adhesive strip all around on the plenum flange. This will ensure a better seal where plate overlap etc. Another method to create a seal is to use high temperature gasket maker RTV.

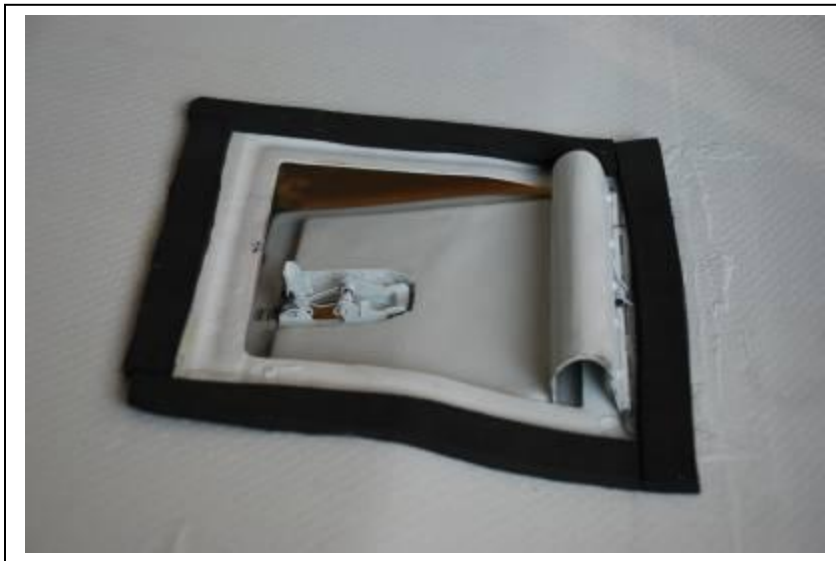


The final step is to enlarge the oil door hole as needed for your type of oil door and hinge. Make sure that the hole is big enough in order for the oil door hinge and fasteners not to interfere.

There are two ways of sealing off this hole. One can use a rubber seal with a bulb (McMaster-Carr 1120A311 rubber seal) as in the picture below.



The second method is to apply strips of soft foam seal with adhesive backing onto the inside of the top cowl as seen in the picture below.



Remember to visit www.rvbits.com or <https://rvbits.mybigcommerce.com/> to view other products.