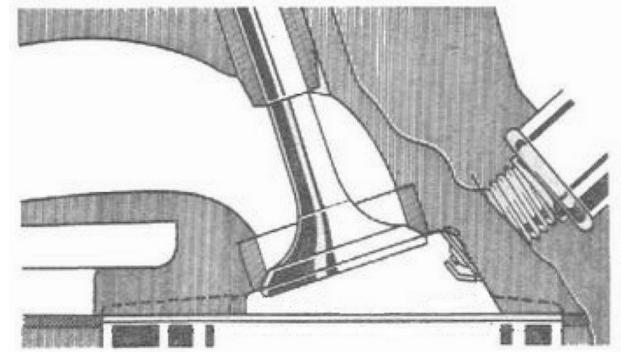
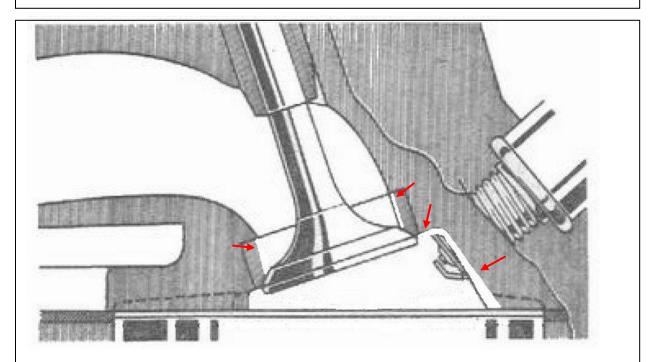
Source: Steve C. (http://www.turbo124.com/forum/viewtopic.php?f=10&t=5772)

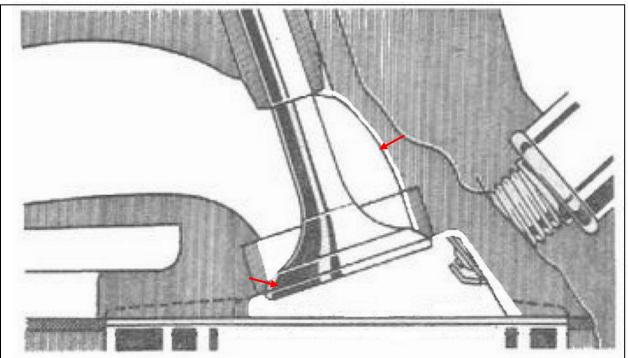
I found it hard to take pictures that clearly showed what I mean by throating out the seats, so I thought a sort of slideshow of cross section pictures will show the areas that require metal removal. It's not a lot of metal that needs to come out for a mild port job, but it can make a considerable difference to the flow.



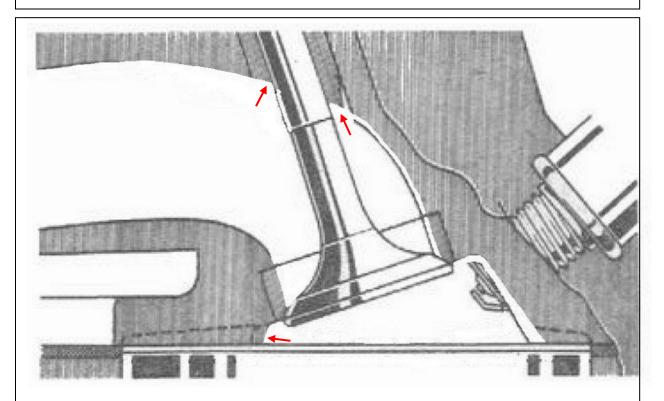
This first picture shows the stock late model combustion chamber in cross section, no modifications.



This second picture shows the combustion chamber modification on the inlet valve plug side, as well as the seat being throated. The chamber modification straight lines the lower corner of the chamber and removing up to 2mm (or more if the valve is larger in head size than 37mm) from the upper edge of the chamber (plug side). The throating of the valve seat shows how much more of the valve head is now directly exposed to the flow in the port.



This third picture shows the blending of the long side radius from the throating cut (or plunge cut) into the port as well as a back cut on the left hand side of the inlet valve to blend the flow into the seat contact face. (see how different it is to the stock valve seat a couple of pictures above)



The fourth picture shows the blending of the port roof into the cut back valve guide. Very little of the guide is removed, so it makes no difference to valve seat or guide life to trim this little of the guide away, but it does make a difference in flow thru this hi flow area. This picture also shows the chamber blending on the non spark plug side of the chamber, basically blending the sharp edges.

