

Moulding Lead for Noseweight

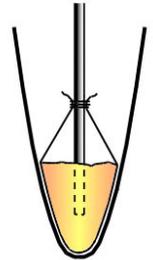
Chris Hayward



(Passed on by Dave H, with sketches — I had a lot of fun converting them into computer versions! I hope he / they approve. JL)

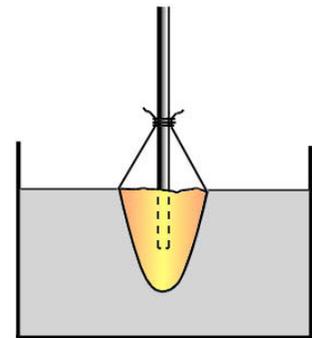
Want to get that noseweight as light as possible? . . . which means as far forward as possible? The only way is to shape it to the inside contours of the nose cone. Like so many things, it's not hard — just takes a little time, but you should agree, time well spent.

1
Balance your model and find out exactly how much lead you need.



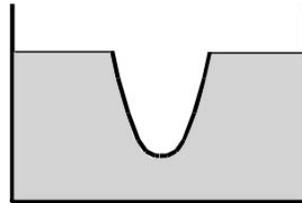
2
Force a lump of plasticine into the nose, using a sheet of cling-film to prevent it staying there permanently!
Push a length of dowel into the plasticine to act as a handle and tie the cling-film to it.

3
remove the plasticine on its handle and make a mould of it in Paris.



Carefully
Plaster of

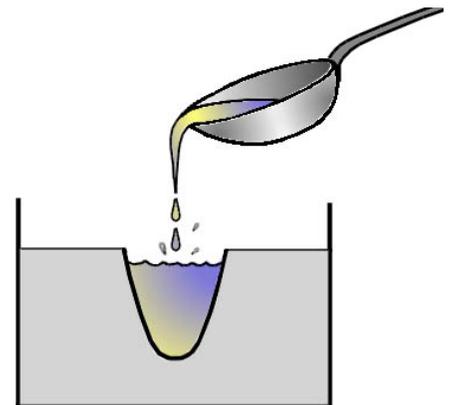
When set, remove the plug and dry thoroughly in the sun or an oven terribly when hot lead is poured



4
the mould

— any remaining moisture will spit into it.

5
Weigh out a little more lead than you decided in # 1 — an extra 10 or 20 grams — into the ladle you use, and melt it gently. It's very easy to heat molten lead way beyond its melting point, and then you have to wait ages for it to cool.



6
Pour it all carefully into the mould and allow it to cool.

7
Finally, remove it from the mould (drill a hole and screw a large woodscrew a few turns into it to give a handle, if you don't want to destroy the mould), weigh it and use a large (10 mm) drill to bore off excess from the rear face until you get the weight you want.

To round out the article by Chris, a couple more approaches . . .
One rather more barbaric and one somewhat less refined.

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Most glass fuselages can stand having the lead poured directly into their nose!
This may seem a little extreme, but it works well if a couple of simple precautions are observed —

Stand the nose in a bowl of cold water slightly deeper than the planned depth of lead — but be careful! — molten lead at 330 degC hitting water at 5 degC can be explosive! A board cover over the bowl with a hole to allow the nose through it might be a sensible precaution.
Get the right amount of lead! Too much and it becomes a bit tricky to drill out the excess as the moulded lead seldom comes out of the nose once it's cooled!

Take care to heat the lead to only just above its melting point, so there's less heat to pass through the glass nose.

* * *

I have had much success using aluminium foil to take a mould of the inside of the nose section, where I habitually use ply sides and formers and spruce longerons.

Carefully push the foil into the corners, first using your fingers and finally, for a very good result, a short dowel with its end rounded and well wrapped in cotton wool.

Gently remove the foil mould, place it in a shallow tin and pour dry sand around it to support the sides. Then pour in the right amount of lead and allow to set. Removal of the aluminum is optional but the fit in the nose will be perfect!

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