

5 October 1999

SpO₂ finger probe spring:

I attended a site meeting at Goss Components with Gerry Barton. The problem with the initial batches of the springs is lack of tension. The week prior to this visit we arranged for sample springs to be made out of a different grade of stainless steel (032). Initially Goss Component over specified the material used by using a medical grade of stainless steel which we found to be too soft and not appropriate for our application.

With the new grade of steel, besides being stronger it is also possible to temper the springs at higher temperatures, so increasing the tension of the spring.

The lengths of the spring legs were adjusted so that they were exactly the same length, since one was found to be slightly shorter. Even after this adjustment both legs of the springs were increased again by a further 1 mm. This is to make it more compatible with the original spring and also to ensure the aesthetic look of the springs once it has been assembled into the finger clip. The diameter of the spring coil is compatible with the clip buttons, and the end of the spring is flush with the outside of the buttons.

On initial tests the spring was found to be as good, if not better than the original. The tension is good so as to ensure consistent readings, without being too tight so as to adversely effect the perfusion of the patient. Aesthetically once the clip has been opened and extended the clip retains it's original position, so that there is not a gap between the button and the lower part of the clip assembly.

It is anticipated that a sample batch of the new springs will be received on the 6 October. If these are satisfactory they will be officially approved by both Viamed and Goss Components. Goss Components will then supply appropriately amended drawings. Goss component will also manufacture two test jigs, one for Goss to test each spring; and one for Viamed in order to carry out QA batch tests.

A matter that needs to be resolved is what do we do with the 714 springs of lower tension that are presently in stock. I suggest that we keep these (suitably marked) in case we ever have customers who require lower tension springs.

Goss also have a stock of the softer medical grade stainless steel which they would like us to pay for, the price of this will be approximately £300.

If necessary the spring can be further adjusted or redesigned i.e. by altering the diameter of the coil, the angle of the return, or the length of the legs.

S Nixon