Mr John Lamb Viamed 15 Station Road Cross Hills Keighley West Yorkshire BD20 7DT Neonatal Unit Sunderland DGH Kayll Road Sunderland SR4 7TP

13.10.93

Dear Mr Lamb,

## Resuscitation block

Many thanks for sending me an example of the new resuscitation block which I am now returning. It seems very well constructed and works effectively. The adjustable blow off valve works well and almost all the ports are interchangeable. I have only two small refinements to suggest and they are as follows:

1. My first point concerns the robustness of the pressure monitor. These blocks are likely to have quite a lot of handling in use, perhaps being used on transport incubators and such like and, given that the adjustable valve has no pressure markings on it, one is totally dependent on the <u>continued</u> accuracy of the pressure monitor.

We have used these particular monitors (or ones that look identical) on the prototypes and they frequently misread after some time in use. On the prototypes, which have fixed value blow off valves, this is obviously less important but where the pressure is adjustable it becomes crucially important. If you were meaning to ventilate a baby at pressures of 20 cms of water and were actually using 35 or 40 cms you might run into serious problems.

2. The block would be more versatile if the aluminium clamp was one of the 'lightweight' variety. The advantage would be that while the lightweight clamp fits both 'lightweight' and 'heavy duty' Modura rail, the heavy duty clamp can only be used on heavy duty rail. I enclose an example of a lightweight clamp.

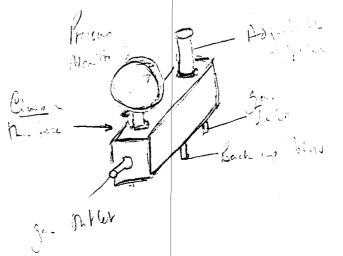
For my particular purpose I would need a vertically mounted pressure gauge as I will be using the blocks at eye level (See sketch below). Eventually we will be needing at least 12 blocks.

Yours sincerely,

Sam Richmond

Consultant Neonatologist

cc. Dr Hey, PMMH.



TT 55

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## FACSIMILE MEMO

FROM:

Chris Munn

No of Pages

TO:

John Lamb

Date 19th October 1993

Dear John

Re your fax 7191

Can I deal with item 2 of Dr Richmonds letter first.

As far as I am aware, our Rail clamp will fit any Rail system, and I do not understand his comments about only being used on heavy duty rail.

We do not have any alternative to the rail clamp that we put on the unit.

## Point 1 (a)

I have discussed the robustness of the gauge with WIKA. The accuracy limit is +/- 1.6%, which under normal usage should be maintained. Provided that the gauge pointer sits within the Zero band whilst at rest then the accuracy limits should be achieved.

If through rough handling the pointer goes off zero whilst at rest, it can be re-set to the zero mark by using the adjustment screw in the bottom of the gauge. If THE GAUGE IS RESET, THE CALIBRATION ACCURACY SHOULD BE RE-CHECKED. For our own peace of mind, however, I would suggest that the gauges are checked every year.

(b)

It is not possible to graduate the existing valve with any guaranteed accuracy. Each one is set individually, and the actual setting is very much dependent on the tolerance limit of the internal spring.

The adjustable concept seems to be moving away from the original thinking, that a fail-safe mechanism was required to avoid over-ventilating.