

FORESIGHTS and the No4 rifle

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A bit of heavy weekend reading for you.....

There has recently been some too-ing and fro-ing correspondence about the sights used on the No4 rifles. Maybe it's time to open up a few little previously unknown or certainly not fully understood points.

Let's take the foresights first. For the No4 rifle, there were 4 distinct TYPES of foresight blade. The very FIRST was, naturally enough, designated the BLADE, foresight. It came in eight sizes, from $-.030''$, $-.015$, 0 , $+.015''$, $+.030''$, $+.045''$, $+.060''$ and $+.075''$. These sizes (and I'm sure you all know this by heart.....) indicate the tip of the blade height below or above $1''$ of the exact centerline of the bore while the blade size '0' is exactly $1''$ above the centre line of the bore, phew! Now for another misunderstood point. All of the actual BLADE heights are the same of approx $.140''$ but it's the $.38''$ wide blade BASE (or stool) height that differs to make up the sizes. I know that some of you will say that this isn't correct because I know this and that's because some of the commercial companies, including Parker Hale made their own variants including thinner widths, blow-up tyres and wind-up windows etc. BUT I'm talking about the Ministry of Supply/Army issue blades

This blade was followed by a later blade style so as a result, the first original blade was redesignated the BLADE, foresight, Mk1. The Mk1 blade is easily identifiable by having a SOLID base. This is because it was retained firmly in position, gripped by the split BLOCK, band, foresight. The split foresight block is closed, to grip the solid blade, by a reverse headed screwdriver. It is the REAR of the Mk1 blade that we ought to be aware of now, where the undercut/inward sloping blade part meets up with the block, which then slopes outwards towards the base of the block. So, the side elevation of the blade forms a side-on 'V' shape.

This rearwards and upwards sloping base could and did allow a line of reflected light to shine straight back into the shooters eye. Maybe not on the manicured ranges at Bisley but it certainly did in the bleak sunshine of Tunisia and Italy from where the complaints came

The next foresight blade was introduced as a result of efforts to cheapen the cost of the No4 rifle in 1941. This time, instead of using a split block, band, foresight and the reverse headed 4BA screw, the block, band was left solid. But in accordance with good engineering practice and to maintain the required friction to hold the blade secure within the block band foresight, the BLADE base was manufactured with a split block. This split block blade was called the BLADE, foresight, Mk1*

The sizes remained the same as did the zeroing procedure, as did the side-on 'V' side elevation of the rear of the blade. It's just that the block was easier and cheaper to manufacture. The new slot made very little difference to the cost of the blades because a), they were manufactured 'biscuit-block (some call it chocolate block) fashion anyway and b), the addition of a simple slitting saw operation along the base was an almost academic addition and c), the original blades were still being produced anyway!

So there you have the earliest Mk1 and Mk1* blades.

Now here is where we get a little more complicated. The Mk2 blade..... The Mk2 blade was very similar to the Mk1 blade with its 8 sizes and its solid block base only this time, where the undercut/outward sloping blade part meets the base part, the base extends rearwards a small amount, then the BASE takes on an undercut inward sloping angle too. This immediately solved the reflected light problem because now, both the blade and the base reflected downwards. This blade was introduced as the BLADE, foresight, Mk2

If things were simple, the next blade would be designated the Mk2* but we don't do simple...., we do complicated! So, the next blade became the BLADE, foresight, Mk3. As you might expect, the Mk3 blade was identical to the double undercut Mk2 but this time came with a split base to use in the solid block band foresight.

The earlier Mk1 and Mk1* blades were thereafter, obsolescent. Obsolescent but not obsolete so there are thousands of thousands still in service.....

THE No5 RIFLE

If you have a No5 rifle, then a similar situation arose there too but the situation was even more dire as the reflected line of shine certainly DID cause problems. So while the No5 blades were all split blocks, the;

Mk1 split block blade for the No5 equates to the Mk1* blade for a No4 rifle and the Mk 2 split block blade for the No5 equates to the Mk3 blade for a No4 rifle. There were different part numbers for the blades indicating that there were subtle differences between the No4 and No5 types. Quite what the differences between the blades were on paper didn't manifest its way to us as young Armourers in Malaya! We used split block 'double undercut' blades on every No5 we zeroed of course, but they all came from the same tubs, regardless of whether it was a No4 or 5 blade. They all looked the same to us and we treated them the same too!

But back to No4 rifles and the BLOCK band, foresight. Are you in for the long haul? Soon after the large late 40's FTR programmes, it was established at Fazakerley that a large percentage of fully refurbished rifles were impossible to zero due to them shooting too high. Fazakerley sought to obtain a relaxation in order to use the +.090" and +.105" STEN gun foresight blades but already there were problems relating to the

final inspection standards that I won't go into. But the same problems were apparent outside the factories and Base Workshops, in service too so while the factories, FTR programme contractors and the large REME Base workshops were NOT permitted to use the higher Sten foresight blades, a relaxation was sought that they could be used at unit level (both high sizes) and Field workshop level (just the .090 size). But this was palliative and not a cure by any means. The answer was that where a rifle was perfect in every other way, then a Mk2 BLOCK Band foresight was available.

The 'new' BLOCK, band, foresight was .030" taller, at .490" than the original Mk1 block band, at .460" tall. This immediately, but invisibly, allowed for a further 2 increases in blade height (..... think about it!). The new blocks can be identified by the figure 1H for the Mk1 split block or a 2H for the Mk2 solid block, marked on the rear sloping surface. But even these didn't last long because they only allowed for a further two 'invisible' increases of foresight. The problem was more acute than that with thousands otherwise perfect No4 rifles stacking up in Ordnance depots unable to be zeroed. So in an act of almost desperation in January 1954, two FURTHER foresight block bands were introduced. These blocks were heightened by a further .030" to .520". So we have the original block band height of .460", the 1949 increased height to .490" then the 1954 block band with a height of .520". At a stroke, we now have a block band foresight that allows the highest blade (the .075"....., don't forget that anything higher was for the Sten gun) to be, in effect .135"..... which is 1.135" above the centre line of the bore

So now we have a total of SIX BLOCK, band foresights.

The Mk1 and Mk2 original, the Mk1H and 2H modified both .030" higher than the original, and the Mk1 and 2 SECOND modified, now .060" higher than the original! You're not quite believing this are you? But help was at hand. The second block was pure duplication so was declared obsolescent. So that after 1954, only the first, original blocks and the third pattern, .060" taller were available from Ordnance stores. While the second pattern was obsolescent, you HAD to have the original, lower block of course in order to cater for those rifles firing LOW!

Jeeees, we had to learn, know and put into practice all of this rubbish! The most astute of you will now be looking at your 'original, untouched since the factory' rifles to see if it has the higher foresight block band fitted. Only a post 1949 made rifle will have a block marked 1H or 2H and only a post 1954 made rifle will have a block marked 1 or 2 on the rear surface as original. Before that, they were bare!

But there's a little more..... Our acceptable zeroing standards state after zeroing, the blade of the foresight will overhang or be level with the edge of the foresight block. If the edge is inboard of the edge of the block, then it indicates that something is wrong with the rifle. BUT, it was discovered that while the UK made foresight blade bases were .38" wide, due to a tolerance error, the Canadian bases were .43" wide. Without going into the technicalities, a rifle fitted with a Canadian .43" wide base could fail the zeroing criteria unnecessarily. So these Canadian .43"

wide blades were all declared obsolete and withdrawn.

There, a little bit about a previously unknown feature of the No4 rifle! Not a lot of people know that!