

CONTINUATION -

Enter handloading:

The .303 British round is a prime candidate for handloading. Components are widely available and with the variation in internal dimensions of chambers and barrels a well-developed handload is often the only way to extract the very best accuracy for a LE. Without going into too much specific detail to handloading, numerous books on which exist, there are a few .303 specific rules I follow.

i. I fire form all new brass by flaring the case mouth to fit tight in the chamber neck and charging the lightly oiled case with 15gr of fast powder (eg: Green Dot) topped of with corn meal. On firing the case forced back against the bolt head then expands to match the internal dimensions of the chamber. The oil allows the brass to slip in the chamber and the flared neck helps keep the case centralized. The case will expand both longitudinally and radially and create a headspace between the chamber should and bolt face as per rimless cartridges. It is this headspacing that goes a long way towards greater case life.

ii. Once I have fire formed the cases I use only a Lee Collet die for neck sizing in all subsequent loading to avoid working the brass and shortening the life of the case. Neck sizing with neck sizing dies will not alter the position of the case shoulder and the headspace generated by the fireforming action above will remain constant. This practice greatly increases the number of loading cycles a cartridge case will withstand as the brass is not being overworked (expanding on firing and sizing during loading) and due to the shoulder headspacing the case will not stretch lengthwise as such a great rate as full length sizing would promote.

iii. I anneal case necks approximately every 5th firing. My No.4 MkII is very fussy about neck tension and as the brass is work hardened on firing and sizing the tension begins to vary and this is reflected on the target. Neck walls on .303 brass are very thin and annealing will prevent necks splitting. Interestingly enough .30-40 Krag brass can be shortened and fire formed with good results in .303 British chambers in order to get a case with a heavier neck wall.

iv. Load projectiles that are as close to groove diameter as possible. Bullets are available in .310, .311, .312 commercially and .313, .314 and .316 from boutique sources. Cast bullet shooting allows the handloader great control over bullet diameter again. I match my cast bullets to the chamber THROAT diameter these days and in the case of both of my LE's I size cast projectiles to .314 with great success.

v. Remember the limits of the .303 British round and don't try and "magnumise" it. You will definitely burn out brass quicker and likely damage your rifle(s) and person by asking more of the round than it can give. If you must chase high velocity with your LE please consider the .303 Epps; an improved, blown out version of the .303 British developed by Mr Epps of Canada matching .30-06 performance. Search the internet for Epps details.

A word of warning for competition shooters. Before launching into the accurising process make sure to be totally familiar with the rules of the clubs you are likely to compete with. Certain service rifle events call for true "as issued" rifles IE: EXACTLY as they left the factory. Others allow for modifications to specific levels only so best be safe than sorry and get the information PRIOR to any modifications.

So there you have it. Everything that has worked for me and some. I can't reinforce enough that to be fair to yourself and your rifle(s) your expectations of what a LE can do should be realistic. With a lot of after factory work and time my No.4 MkII is a reliable 2 MOA rifle now and on a good day (for us both) it will go sub 2 MOA. The best it ever turned in was 0.875 inch at 100m with cast bullets as witnessed by a local shooter. A combination of good luck and hard work. When my eyes allow the SMLE with tailored cast loads is a 2 MOA rifle also. I firmly believe that 2 MOA is a realistic expectation of LE rifles but anything better than this is a bonus. My believe if based on my experience with 5 and 10 shot groups at 100m.

I don't quite know why these rifles are so addictive but I guess it is probably because they have played such an important part in our past. There is a huge amount of history in the Lee Enfield and it is our passion for them that will keep the three oh three and LE going for many years to come. My latest addition to my LE stable is a wildcat .303 "Pygmy" – a .303 case cut down to 1.5 inches in length for reduced loads. Stay tuned for this unique LE.

Tight groups.

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Cheers from New Zealand.

Jeff.