

Tuning the 1858 Remington Repro to Win

Most cap and ball revolvers are capable of extremely good accuracy but they do need tuning. Much of this information will apply to any cap and ball revolver but if you are a serious competitor you should have a Remington. The reason for this is that the Remington has the best sights of all cap and ball repro revolvers and it is also far easier to manage.

Working through the various components we will see what can be done to improve your revolvers potential.

Barrel: Not too much can be done here other than complete replacement if the rifling is off centre, as I have seen on some stainless steel revolvers.

Cylinder, Pin: Make sure you can remove the cylinder pin with your fingers only. If you have to tap it out it is too tight. Find out where it binds and ease the area. It should be possible to remove the cylinder in 3 seconds and replace it in 5 seconds. The pin usually sticks where it enters the rear frame but check with cylinder removed.

Cylinder: Chamber mouths should be slightly chamfered so as to give a swaging effect to the ball rather than a shearing one which is what you get if the chamber mouths are dead sharp. Fitting a small shroud to the centre hole has the effect of preventing fouling entering said hole and also stops gas cutting on the arbour pin. It will also ease cylinder withdrawal thus making it easier to brush out the barrel. The installation of this shroud is quite easy if you have a lathe but can be accomplished with hand tools, if reasonable care is used. Drill out the front of the cylinder hole 3/8" dia. to a depth of approx. 3/8" dia. Solder or glue a piece of 3/8" dia mild steel into the hole then cut off leaving about 30-40 thou protruding. Drill through from the rear of the cylinder with a drill that fits the existing hole. Usually 7mm or letter J drill. With this operation complete it only remains to file enough metal from the frame just under the rear of the barrel to clear the new shroud. Take care not to file the barrel.

Frame: Again not a lot to do here other than deepening and widening the rear sight slightly. You may also have to deepen the channel in the top strap to give enough clearance for the rear sight. Do not alter the "V" to a square shape or your pistol will fall outside the "spirit of original" category.

Grips: These are usually somewhat slimmer than they should be (try to compare them with an original). This may be corrected by (a) glueing veneer to the inner faces. About 1/16" on each side will do or (b) making yourself a new pair of grips. Always try to use walnut as most other woods look hopelessly wrong. Do not build fancy thumb rest or finger grooves otherwise you will once again be outside the "spirit of original".

Rammer: Again not much to do here other than to cup out the face that actually contacts the ball. This can be done with a 7/16" (11mm) ball nose cutter, a rotary file or ball ended grinding bob in an electric drill.

Springs: The main spring should be polished along its length so as to get rid of all tool marks which could cause a fracture. The same applies to the arms of the locking bolt. The trigger and bolt spring limbs should be tapered slightly (see illus) so as to make them more flexible and less likely to break at the root. Also polish the faces where they contact locking bolt and trigger.

Hammer and Trigger: We now come to the most important parts regarding ease of handling. All cap and ball revolvers straight from the box have dreadful trigger pulls and this is the first item that should be corrected. The engagement of the trigger in full cock notch is invariably too deep. This leads to a heavy and dragging trigger pull. To cure this problem soft solder a piece of brass just under the full cock notch. This should be dressed down so that the trigger engages no more than 20 thou. Do not grind the notch away to achieve this or else you will find the hammer falls into half cock every time you release the trigger. The half cock notch should also be radiused slightly (see illus.) to prevent it catching and damaging the sear of the trigger. If the top of the hammer obscures the sights when at full cock then grind off an appropriate amount. The trigger is usually too curved and has uncomfortably sharp corners. Bring the lower part of the trigger to a red heat and straighten slightly. Take care not to get the top of the trigger hot by holding it in a pair of pliers or vice while you do. Radius corners until the trigger feels comfortable to your finger. If the hammer and trigger are sloppy on their pivot screws, you may accordingly to your engineering ability, overcome this by fitting larger screws.

Sights: Having got a usable trigger pull take the pistol to the range and shoot a group. If you have to use a rest do not let any part of the pistol touch the rest. Only rest your hand(s). As most Remingtons shoot high (the originals were sighted for 50 yds.) aim at the bottom of the target. This, with luck will give you a group just above the black.

Using the formula $SXE \div R = A$. Where S = sightbase E = error R = range and A = adjustment. Multiply sight base (9" on .44 Rem) by the difference between your point of aim and the centre of group- (error) say 11". Then divide by length of range in inches (25 metres = approx 985").

Therefore $9" \times 11" \div 985" = 99 \div 985 = .100"$. So, if you build up the front sight of you pistol by .100 thou. in this instance you should find it shooting point of aim. Estimate how much you will need to put on your front sight, measure the existing blade and then soft solder on a piece of mild steel of sufficient size to allow the extra height. Carefully shape this to the original profile or else you may find your pistol disqualified under the "Spirit of original" rule. If you wish to use the six o'clock hold or area aim as I do then proceed as follows;

For six o'clock hold subtract 4" from E before proceeding with calculations.

For area aim subtract 7" before calculating.

If the group goes left or right adjust as follows. If the group is to the left you can do one or all three of the following. File the right side of the front sight, this will in effect move the front sight to the left. You may also file the right side of the rear sight. This will have the effect of moving the rear sight to the right.

The barrel may also be screwed a little tighter, thereby effectively moving the front sight slightly to the left. All directions refer to the pistol pointing in the down range position. Do none of these sight adjustments until your pistol shoots a group.

The cylinder should be removed and the barrel brushed through after every six shots. If you do not do this you may find your shots creeping up the target. This is particularly true if you use heavy charges and the weather is hot. The reason for this is that during the time it takes to reload, the fouling will harden in the barrel and cause the pistol to recoil harder, thereby throwing its shots higher. Harder recoil is also the reason why heavier bullets shoot higher than round balls. The grease applied over the balls is to keep the fouling soft and not as many writer will tell you, to stop flash over from one chamber to another. The only things that will stop flashover are a close fitting ball or bullet or a felt or fibre wad.

Finally, remember that a well set up Remington will quite easily hold its own against the most expensive single shot muzzle loading target pistols.

If you have any problems I will gladly try to give you some help www.ballmoulds.com

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