



# TO REPAIR, OR NOT TO REPAIR?

OUR RESIDENT EXPERT GUNSMITH HAS BEEN INUNDATED WITH QUESTIONS AND REQUESTS FOR STOCK REPAIRS AFTER HIS PREVIOUS ARTICLE, SO HERE HE GIVES US MORE EXAMPLES AND DETAILS OF HIS MIRACLE WORK

In the June issue of *Clay Shooting* magazine, I very briefly touched upon the subject of stock repairs, with the pictures of before and after repairs to a Beretta SO6

stock: the pictures below are a brief reminder of these.

The response to these pictures has meant that I have been rushed off my feet repairing a great number of stocks,

as well as with requests to show how I undertake various aspects of the repairs. So this month, I thought you might be interested in seeing a few more damaged, then resurrected, stocks.



THE BROKEN SO6 STOCK SHOWN IN THE JUNE ISSUE OF CLAY SHOOTING MAGAZINE

GOOD AS NEW – THE REPAIRED STOCK





## GETTING TECHNICAL

By Tim Greenwood



The damaged stock in this picture and the one below belong to a Browning 525 o/u 12b. Apart from the head of the stock being full up with action oil, which softens the timber, the main damage has been caused by someone casting the stock to left hand without relieving the head or the draw bolt hole. This major crack is the result.

**A REALLY BAD BREAK CAUSED BY POOR STOCK CASTING TECHNIQUE. NOTICE THE OIL OOZING FROM THE WOOD DUE TO OVER-OILING AND THE GUN BEING STORED STOCK DOWN**



THE GLEAM OF OIL IN THE CRACK

If you look carefully you can see how open the grain is in the head of the stock, and the glisten of the mineral oil in the crack. Before attempting the repair it is essential to extract as much of this oil from the stock as possible.

There are many ways of doing this but my favourite is to either wrap the head in kitchen roll and put it in the airing cupboard, or to gently steam the area, wiping off the oil as it bleeds from the wood, then leave to dry.



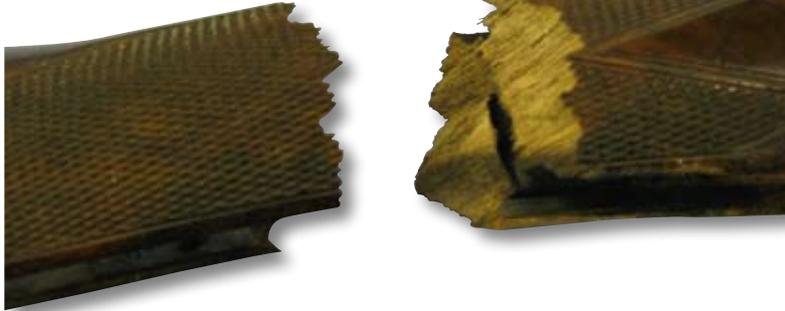
ONCE AGAIN A BROWNING TO BE PROUD OF

Once the crack and head are as free from oil as possible, industrial strength Cyanoacrylate glue is injected into the crack; the stock is then bolted back onto the action (applying a suitable releasing agent to the action first) then clamped to set overnight.

After releasing the stock from the action any excess glue is removed; the area is rubbed down, being careful not to change the profile. This picture shows the result after re-finishing.



**THE BROKEN HAND OF A CLASSIC ENGLISH BOXLOCK**



The next repair, however, was a lot harder to undertake. This picture shows a rather expensive English boxlock, with the stock snapped through the hand.

The gun had only been re-stocked three years ago, at considerable cost and inconvenience to the client, as the stocker took two years to complete the work.

**THE CROSS-SECTION OF THE BREAK. LOOK HOW FIBROUS THE GRAIN IS AND THE DIRECTION ACROSS THE GRIP**



It is interesting to see, under closer examination, that the grain through the break is very dry, open and running the wrong way to give maximum strength through the thinnest part of the stock. It is always ideal for the grain at this point to run from the stock head (the action end) towards the butt. It is lovely to see highly figured wavy grain in a stock, but not through the grip. There is an old saying in stocking – “straight is strong”.

**THE BREAK BACK TOGETHER WITH A SMALL PIECE OF WALNUT INSERTED TO REPAIR A CHIP**



The first part of the repair, as shown here, was to fit the two halves back together in as near perfect alignment as possible, using, once again, Cyanoacrylate.

I also took the opportunity to fit small pieces of walnut into the chipped areas around the break. Once again, if the the wood is full of mineral oil it is essential to remove as much as possible to ensure a good repair

**NOTE THE LENGTH OF THE BORING BIT REQUIRED TO BRIDGE THE BREAK**



However, due to the small surface area, and the weakness in the grain, a simple glue repair would not do. The next stage was to bore a hole from the head of the stock, down through the action inletting and through the grip to bridge the break. This whole operation has to be carried out slowly by hand so you can feel the response of the stock. A great deal of care is needed to not break open the crack repair or cause more damage.



## GETTING TECHNICAL

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PICTURE 10 – THE HOLE BORED THROUGH THE HEAD OF THE STOCK

I have to confess, this is the part of the repair operation that I find most nerve-racking. It is always with a sense of relief to see a nice, straight bore hole when the auger drill bit is removed. You can feel the grip flexing as the bit cuts into the wood at this point. A little too much pressure to the cutter can destroy the head, splintering the inletting and destroying the wood to metal fit when the gun is re-assembled, or worse still, you could cause a longitudinal crack from the head down through the grip, weakening the whole repair.



Once the hole has been bored a 15mm hardwood dowel, usually beech, is inserted into the hole and bonded in place with a two pack industrial resin, therefore bridging the break and adding considerable strength through the grip.

Finally, in this part of the operation, the head has to be re-inletted to accept the action, as shown in this picture

THE DOWEL INSERTED AND HEADED UP FOR THE ACTION

ALL FINISHED AND NOT A SIGN OF THE BREAK



After re-assembling the gun to check that the inletting was correct and the action functioned correctly, the stock was once again taken off the action for finishing. The excess glue had to be removed and the replacement wood fitted to the chipped areas had to be shaped by rasp then sanding.

Finally, the chequering had to be picked up and reproduced over the damaged area. As you can see, with a little colour matching and re-finishing, the repair is nearly impossible to see and, due to the hidden dowel, very strong.