

STOCK BENDING AN AUTO

Dear Technoid,

I am very curious as to the particulars involved in stock bending. I have read and been told that relatively large changes in stocks can be made with no damage to the finish or wood. Just how does this process work? I understand that over-under shotguns are most easily modified with this procedure since they have no mainspring tube in the stock, but could the cast at the toe of an automatic such as the Winchester Super-X be influenced as well?

Thank you, Jim

Dear Jim,

I am no stock maker. My experience has been that of a practical, but observant, layman. Of course, that never stopped me from making something up! Here goes:

There are basically two ways to move a stock- 1) bending the wood and 2) reconfiguring the reinletting via cutting or shimming. I have had both done with equally good results when going for a standard change in height or cast. If you want the "twisting" associated with increased toe out, bending would be in order.

Bending is normally done in a jig by applying heat to the wood (usually in the wrist area) via hot oil, dry heat (often infra red) or steam. All three methods have successful practitioners and all three methods can be used without requiring refinishing- if you know what you are doing. Always the caveat. One has to bend a bit further than desired to account for the inevitable "spring back". Once properly bent, the stock will "usually" hold its bend.

As to whether it is "easier" to bend the stock of the O/U compared to the semi-auto, I doubt it. Most simple adjustments to the semi are easily made by inserting a few shims between the head of the stock and the rear of the receiver. Beretta 390s, Benellis and some others offer this as a standard feature. On my 1100s I often made a little "U" shaped shim from a piece of plastic hull to get the stock exactly right.

When moving a semi-auto's stock one obviously has to be careful not to over bend the tube containing the mainspring. This tube receives the "link" (Remington term) or rat tail that connects the bolt carrier to the main spring receptacle. If the main spring tube is bent too much this link will bind when recoil pushes it into the tube. The simple fix is to enlarge the hole in the stock that houses the mainspring tube and use an end washer with a hole located in a slightly different place. This is not very involved and I have successfully used this technique on some B-80s.

Increasing cast off at toe is a different matter. Here the stock comb remains unmoved whilst the bottom rear part (toe) of the stock is bent out. This must be done by steaming as the stock must be twisted aft of the wrist. Any change of inletting will move the entire stock, especially in the pistol grip where it might not be desired. As this twisting is done on the central axis of the stock,

it should have no affect on the main spring tube. Of course, if you want cast off and also increased toe out, things become more complicated.

You might wish to experiment with "poor man's toe out". To achieve this simply replace your existing pad with a solid one inch Kickeeze and cut away some of the lower left rear of the pad (when viewing the gun from the rear). This will give you a sort of toe out and suffices for many. A heavy rounding of the toe of the recoil pad, as you do for a lady shooter, might also achieve your goal. You could also affix the pad at an angle, but that looks pretty bad. After all, we must maintain esthetic standards.

One final thought. You may well find that increasing the pitch of the stock by inserting a shim between the top of the recoil pad and the stock will obviate the need for increased toe out. It will pull the toe away from the pectoral muscle. Increasing pitch also does other things so I wouldn't go to far with it, but it only takes a moment or two to insert a shim and you can always take it out with no harm done.

As you can see, there are a lot of different ways to approximate toe out short of selling your soul to your local stock maker.

Regards,
Bruce Buck
Shotgun Report's Technoid