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From: Trull, John  
Sent: Tuesday, October 21, 2003 5:20 PM  
To: Shoemaker, Christopher D.  
Cc: Perniciaro, Stephen; Joy, Robert L.; Bunnell, Jim  
Subject: RE: Problem with Rifle for Sports Afield Test.

Chris,

Please let me know what corrective actions are being taken. I can confirm on the rifle that I had a problem with the bolt closing that the wrong screw was used. I compared the front takedown screw that gave me a problem with one from a gun that didn't and there was probably 0.200" difference in length. I would certainly prefer that we assemble each rifle to the same torque specification rather than making it technique sensitive. Backing the front take down screws down can lead to their own problems with inconsistent bedding from gun to gun and grinding the bolt to correct an improper fit absolutely makes me cringe. I guess my point is this. Everyone knows that many factors contribute to a gun's accuracy. Why not control every variable we can to make the process and product as consistent as possible?

Please let me know what it will take to implement this in our assembly process. To Bob's point about us not knowing if someone improperly re-torques the screws to the wrong torque setting, we can't prevent that internally. But we need to make sure that our guns are torqued to the proper torque setting and that they work at that setting. Based on what I am hearing, it is possible for a consumer to take apart and re-torque the take down screws to the 35 inch lb specification and have a rifle that they can't close the bolt on. That we can control. Our guns should go together at the proper torque setting and work every time. Grinding, filing and cutting parts so they will go together is indicative of a short term solution to a much longer term problem. I am not coming down on Assembly. If they aren't given the correct parts to do their job, they are left to resort to this sort of tweaking. We need to implement procedures to assemble to a specific set of criteria and to do so means that emphasis needs to be placed on getting quality right at the source or component level.

On the safety force issue I will say this. I have operated enough of our safeties to know what is hard and what isn't. I can tell you what I experienced is as hard as I have seen it. I would say that Bob's synopsis pertaining to sear lift is right on. There needs to be an extensive audit to look at this. The force required to move from fire to safe was way too high.

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-----Original Message-----

From: Shoemaker, Christopher D.  
Sent: Tuesday, October 21, 2003 4:29 PM  
To: Trull, John  
Cc: Perniciaro, Stephen; Joy, Robert L.; Bunnell, Jim  
Subject: FW: Problem with Rifle for Sports Afield Test.

John,

Please see Bob Joy's note below. I reviewed the assembly process today, we do not torque the take down screws. We use an air powered driver and each operator has his own technique of how tight he drives the takedown screw. They are trained to test the bolt and if the screw is interfering they back it off until it works freely, or in some cases may even grind down the bolt. The issue may be compounded by the tolerance stack ups between the receiver (bolt hole and OD), the stock (barrel channel and bottom inletting), the trigger guard and the screw length. It is also possible to have even used the wrong take down screw. The stock on this model does not have an aluminum bedding block so some (minimal) compression of the stock is possible if the screw is over tightened. The stock is made by ORC and we did experience some inletting issues after they modified the mold to eliminate a visual defect on the top rails. They produced a quantity of stocks to a deviation on the inletting dimensions until they had a