

John Trull

From: Trull, John
Sent: 10/22/2003 09:22:03 AM
To: Golem, Todd E.; Shoemaker, Christopher D.
CC: Joy, Robert L.; Perniciaro, Stephen
BCC:
Subject: RE: Problem with Rifle for Sports Afield Test.

Todd,

I have one here. The gun is on my consignment account, so I will need it back, or it will need to go back on a RGA. I would prefer to send it to your attention and then get it back as I am afraid that if we RGA it, it will end up on the rack as a WIP gun. Does it need to come to your attention? Also, this gun had an issue with the bolt binding when the front take down screw was torqued to spec. The screw appears much too long, so you guys may want to have someone review this as well.

Thanks,

John Trull
Product & Planning Manager, Firearms
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-----Original Message-----

From: Golem, Todd E.
Sent: Wednesday, October 22, 2003 8:44 AM
To: Shoemaker, Christopher D.
Cc: Joy, Robert L.; Trull, John; Perniciaro, Stephen
Subject: RE: Problem with Rifle for Sports Afield Test.

Chris,

I will begin to look into the fire control issue, but it would be VERY helpful to have an example of one of these rifles with a hard force safety. Would it be possible to get one to me?

Regards,
Todd E Golem
Quality Engineer
Ext.-3364
Pager-157

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

From: Shoemaker, Christopher D.
Sent: Tuesday, October 21, 2003 5:37 PM
To: Perniciaro, Stephen
Cc: Golem, Todd E.
Subject: FW: Problem with Rifle for Sports Afield Test.

Steve, I think the action on the take down screw torque and length is a process issue and belongs to your group. I will ask Todd Golem to add the fire control quality issue to his list of to do's when he is not tied down with 2100 tasks.

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

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

chance to repair their molds. This deviation caused us to have to grind some take down screws to prevent them from protruding too far. It is possible that this stock was one produced to the deviation and the take down screw was ground improperly or not at all.

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

From: Joy, Robert L.
Sent: Tuesday, October 21, 2003 7:38 AM
To: Perniciaro, Stephen
Cc: Shoemaker, Christopher D.
Subject: RE: Problem with Rifle for Sports Afield Test.

Steve / Chris,

RE: Takedown screw - We have a process specification of 35 in-lbs (Max) for takedown screw torque. A screw can bind the bolt lugs if it is the wrong screw (too long), the stock inletting is incorrect, the screw is over-torqued, or similar reasons. There are many opportunities in our process to catch this condition, if it exists. We will not know, however, if someone improperly re-torques the screws outside of the plant.

RE: Safety force - The safety always moves easily back and forth with the bolt open, or out of the rifle. This is true because little work is being done by the safety cam in lifting the sear when the bolt is removed. With the bolt in the action and closed down, the act of lifting the sear is also pushing back the firing pin against the compression of the firing pin spring. Thus, the sensation of higher safety force. When the rifles are function tested in our gallery, the safety is operated 3-times and operating effort is considered. At final inspection we control the most important attribute - sear lift. It is held between .008 and .018. Safety force is a product of sear lift. The higher the amount of lift, the higher the perceived safe operating force. Sear lift is a measure of the distance that the safety cam lifts the sear off the top of the trigger connector (more is better in terms of safety function.) If the safety operating force "feels" heavy, sear lift is probably in the .015 - .018 range.

Chris: Next step? We might audit some rifles to see where our sear lift is running. A few years ago we had trigger holes high in the triggers and sear lift was running around .020. The safeties did feel heavy and we brought things back into control by attacking the trigger process. Your call...

Bob

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

From: Perniciaro, Stephen
Sent: Monday, October 20, 2003 1:51 PM
To: Trull, John; Shoemaker, Christopher D.; Bunnell, Jim; Longo, Robert W.; Evans, Danny; Joy, Robert L.
Subject: RE: Problem with Rifle for Sports Afield Test

Bob Joy,

Please work with Chris on this and answer John's questions.

Steve P.

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

From: Trull, John
Sent: Monday, October 20, 2003 8:48 AM
To: Shoemaker, Christopher D.; Perniciaro, Stephen; Bunnell, Jim; Longo, Robert W.; Evans, Danny
Subject: FW: Problem with Rifle for Sports Afield Test.

Gentlemen,

Please see the comment below regarding the front takedown screw on a M700 BDL SS. I just encountered the same issue with a M700 I have here. It appears that the front take down screw is too long, extending into the locking lug area of the receiver. Please look into this. Do we torque all take down screws to a specific torque setting? I would imagine that if we did, this condition would show itself pretty readily.

Also, I noticed on the M700 Classic and M700 CDL samples that I received that it is extremely difficult to move the safety from Fire back to Safe with the bolt closed in battery. Seems that there is some sort of tolerance stack up that is causing this as the safety arm moves pretty easily with the bolt out of the gun. What checks do we make in assembly for this condition? These guns were not acceptable to put in the field.

Please advise.

Thanks,

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

From: Powell, Linda
Sent: Monday, October 20, 2003 8:18 AM
To: Trull, John
Subject: FW: Problem with Rifle for Sports Afield Test

Your thoughts?

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

From: John Ross [mailto:jross@crosslink.net]
Sent: Tuesday, October 14, 2003 11:53 PM
To: Powell, Linda
Subject: Problem with Rifle for Sports Afield Test

Linda,

Received BDL-SS rifle #S6464393 in .300 SA Ultra Mag. While I like the configuration of the rifle, when I tighten the front guard screw thoroughly, the bolt binds in the action and will not open. I suspect that the action is warping as the stock compresses. Can't possibly write a favorable review of this model. Most hunters won't travel with a torque wrench.

Do you have another which has a firmer bedding system?

Sorry to be a pill, but for a traveling hunter, one needs to be able to remove and return the barreled action from the stock with a reasonable assumption that the guard screws can be tightened completely and the rifle will return close to zero.

Thoughts?

John Ross,
Contributing Editor
Sports Afield

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

From: Powell, Linda [mailto:Linda.Powell@remington.com]
Sent: Tuesday, September 30, 2003 1:22 PM
To: John Ross
Subject: RE: All-weather Rifle

John,

We always need exposure on our existing core group of products. I would prefer the Model 700 BDL SS in the caliber of your choice. We can supply a couple of boxes of ammo as well. Since I am on

the road, I will ask Teresa to check inventory for the two BDL SS models and contact you regarding availability. We should have no problem getting the rifle to you within 7 to 10 days.

Thanks for your support and good luck on your hunt!

regards,

Best

Linda Powell

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

From: John Ross [mailto:jross@crosslink.net]
Sent: Tuesday, September 30, 2003 10:11 AM
To: Powell, Linda
Subject: All-weather Rifle

Dear Linda,

Doing a piece for Sports Afield on extreme weather hunting -- in this case woodland caribou in Newfoundland in November.

Just got off the phone with your colleague who suggested that the 700 BDL -- SS is the ideal rifle in 300 SA Ultra Mag (#26436) or 300 Win Mag (#29694) for lousy weather hunting. Other possibilities include the Model 7 Alaska Wilderness Rifle in 300 SA Ultra Mag (#29561) because of its lighter weight and matte black finish.

As a traveling hunter, availability of ammo in foreign countries is a real concern. Thus my tendency to opt for a standard caliber. However, if you'd rather I reported on the SA Ultra Mag, I can do that and mention that the rifle is also available in other chamberings.

Is it possible to obtain one of these rifles and ammo for testing on the trip? I'm leaving on 1 Nov.

Hope we can work something out.

Thanks,

John Ross, Contributing Editor
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