

-----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.