

**Franz, Scott**

**From:** Danner, Dale  
**Sent:** Tuesday, April 17, 2001 3:26 PM  
**To:** Golemboski, Matt R.  
**Cc:** Diaz, Danny; Bristol, Ron; Franz, Scott; Reesor, Phillip K.; Keeney, Mike  
**Subject:** M/710 270Win T&P Status

Matt,

Per our telecon earlier attached is Franz's summary of work completed to date on the M/710 270Win T&P evaluation. You will note that many aspects of the evaluation have been positive. We have however elected to discontinue testing at this point due to two issues which I consider negative to a successful test exit. As follows:

**a) Misfires**

1 of 30 guns has experienced an unacceptably high number of misfires (16 misfires in 100 rounds). In addition, we had one other gun which had one misfire. I recall that from the entire 3006 DAT&P effort we had a total of two misfires -- one of which was attributable to the ammo (anvil was missing). Curious examination of the firearm with the significant misfire rate yielded no obvious issues (aka loose firing pin head bent firing pin, etc) other than the measured indent was low (0.014) and that the indent on the cartridge visually appears slightly off center. The firearm with the single misfire had nominal indent (0.017).

**b) Stem-Low Feeding Malfunctions**

23 of 30 guns experienced "stem-low" misfeeds during the 100 round/gun function test with Remington ammo. 16 of 30 guns exceed the SAAMI recommended maximum of 1% malfunction rate for feeding related errors with the worst-case gun having 8 stem-lows out of 100 rounds. Only 7 of the 30 guns performed with zero feeding malfunctions.

47 of the 67 total malfunctions occurred with the Remington Boat-Tail ammunition product however 4 out of the 5 ammo types tested experienced at least one stem-low. Only Remington ammo was used during this initial 100 rounds/gun test.

67 stem-lows out of a total of 3000 rounds produces an average 2.2% malfunction rate. Eliminating the poor performing boattail ammo product reduces the total malfunctions to 20 out of 2400 rounds for a malfunction average of 0.83%. While an argument might be made that the boattail product may not be shot significantly in the M/710 I would caution that we still have some issue with other ammo types.

Unless you disagree we will retain the entire set of 30 guns and have Keeney access the problems when he returns this coming Monday.

Dale



m710-270status.doc

To: Dale Danner  
From: Scott Franz

4/17/01

**In RE: Model 710 T & P Status (.270 Win.)**

**This test program is on hold due to unacceptable results generated during the 100 rd. Basic Function Test.** All 30 guns were fired 100 rds. using 5 different Remington ammunition types. Two types of malfunctions occurred during this portion of testing:

- Misfires
  - 17 total misfires in 3000 rds. fired
  - 16 were on one gun (Gun A-26)
  - Indents measured .014-.015" on this gun
  - Indents averaged .0171" on the 10 Measurement guns (.016"-.018")
- Stem Low malfunctions: 67 total in 3000 rds. fired (a 2.2% rate)
  - 23 of 30 guns had Stem Low malfunctions (worst gun had 8)
  - 7 guns had no Stem Lows
  - 6 guns shot clean
  - 4 of 5 ammo types had Stem Lows
  - 47 of 67 malf. w/1 ammo type (REM PRB270WA 140GR)

The Test Lab has completed the following on this test program:

- Visual Inspection - OK
- Packaging Audit - OK
- Measurements
  - Headspace - OK
  - Indent - **10 Gun Avg. = .0171"** (In line with .30-06 T & P)
  - Engagement - **.0278"** (High but in line with .30-06 T & P)
  - Sear Lift - **.0164"** OK
  - Trigger Pull - Avg. = **4.39 lbs. OK**
  - Safe On Forces - Avg. = **6.13 lbs. OK**
  - Safe Off Forces - Avg. = **3.30 lbs. OK**
  - Firing Pin Head to Sear Engagement - Avg. = **.061"-.082"** OK
  - Bolt Stop Release Force - Avg. = **4.71 lbs. OK**
- 10 rd. Safety Function Test (w/lanyard) - OK
- Bore Sight Test (POI vs POA) - **Averaged 6.4" with Std. Dev. = 2.1 OK**
- Accuracy Test (w/High Quality Scope) - **Avg. Grp(10 guns) = 1.87 in. OK**
- 100 rd. Basic Function Test (w/5 Rem. Ammo Types) - **See Above**

**Not Completed:**

- Package Drop Test
- 400 rd. Extended Function Test (10 guns)
- Hot, Cold, Heat & Humidity Test

ET28100