

Remington Arms Company, Inc.  
Ilion Research Division

April 19, 1977

**FIRE CONTROL ALTERATIONS**  
**MOHAWK 600**

**HISTORY OF PROBLEM**

**1. Malfunction Description:**

When the rifle Safety is put in the "on safe" position, the trigger pulled, and the Safety repositioned to the "off safe" position, the rifle fires. The rifle fires when the Safety Lever is positioned to "off safe" when the previous conditions are established.

**2. Where Discovered:**

The first complaint of this malfunction came from a customer in Houston, Texas, in the first quarter of 1975. Representatives were sent to this area where a warehouse audit was performed on the wholesaler's inventory and four rifles which would fire as described were found.

**IMMEDIATE CORRECTIVE ACTION TAKEN**

The cause of the malfunction was determined and a procedure was established to check the rifles without disassembly. This procedure consisted of the following elements.

1. Cock rifle
2. Put Safety in "on safe" position
3. Pull Trigger; no click, Trigger should retract
4. Position Safety in "fire" position - rifle should not fire
5. Repeat test 3 times

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IMMEDIATE CORRECTIVE ACTION TAKEN - Cont'd.

To allow an extra measure of safety clearance the following test was also conducted.

1. Cock rifle
2. Position Safety to "on safe"
3. Move back half way to "off safe"
4. Pull Trigger - Firing Pin should remain cocked; Trigger should return
5. Position Safety to "fire" position-rifle must not fire
6. Repeat test 3 times

All of the Mohawk 600 rifles in the warehouse were checked. An audit was then conducted on all the rifles shipped to the wholesalers in the month of January 1975. These rifles were returned to the factory and checked for proper safety function. Of all the 585 rifles returned to Ilion, two were found to have failed the worst test. The gallery and field reports were checked and no problem could be found in the field relating to the Safety.

ALTERATIONS MADE TO THE RIFLES

The cam on the Mohawk 600 Safety Lever was swaged to give a greater clearance between the Sear and Connector. The parts which were not in the desired tolerance range were altered to also increase the Safety clearance between the Trigger-Connector and Sear.

The method of safety mechanism inspection was altered to be more comprehensive and combined the experience gained on rifles which passed our initial tests. The Safety is checked by the assembler, gallery, and final inspector.

The Safeties which malfunctioned were also found to have a spongy action. The "safe" and "fire" positions were not definite and positive positions. Efforts were made to make the existing Safety with more positive definite "on safe" "off safe" positions.

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LONG TERM CORRECTIVE ACTION

The Safety functions by camming the Sear away from the Trigger by disconnecting the Trigger from the firing mechanism.

The cam on the Safety Lever was altered to increase the clearance between the Sear and Trigger Connector when the rifle is in the "on safe" position. This change necessitated a clearance alteration to the Sear.

The Fire Control Housing from the M/700 was adapted to the M/600 so the rifles would have a common assembly. This change became obvious as we were working on the problem to standardize on one assembly. This is a cost reduction item. The change also gives the M/600 a more positive "safe on" - "safe off" detent action as the side plates on the M/700 assembly are heat treated.

A fixture was designed and built to measure the Safety lift of all M/600-M/700 Fire Controls in addition to the safety checks performed by the assembler, gallery, and final inspector.

IN CONCLUSION:

The alterations which were made were:

To increase the clearance between the Trigger-Connector and Sear by altering the Safety Lever.

To add use the M/700 Trigger Assembly to standardize on one design.

To institute another check point in Production to gage the Safety mechanism function.

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