

ISS CA DJS CERTIFICATION
FINAL
REPORT

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Remington.

Research & Development Technical Center
Project 241328

**ISS CA DOJ CERTIFICATION
FINAL REPORT**

JANUARY 2004

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REMINGTON PROJECT 241328

CA DOJ CERTIFICATION
FIREARMS SAFETY DEVICE

REMINGTON ISS & ETRONX PRODUCTS
FINAL REPORT & HISTORY

Prepared by:

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January 22, 2004

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REFERENCED DRAWINGS

E-110560 Alt. 2	Trigger Plate Blank - Syn.
D-110570	Trigger Plate - Synthetic
B-110580	Tamper Proof Pin
E-110585 Alt. 1	Trigger Plate Blank - Syn.
D-110590	Trigger Plate - Synthetic
E-110650 Alt. 3	Trig Plate Assembly
D-110700	Trigger Plate Synthetic
E-110710 Alt. 5	Trigger Plate - Alum Casting
D-110715 Alt. 1	Trigger Plate Common Blank
D-110720	Trigger Plate
D-110740	Trigger Plate
D110760	Trigger Plate
B-110780	Trigger Plate Assembly
D-110820 Alt. 1	Trigger Plate Assembly
C-110870	Trigger Plate
D-110905 Alt. 18	Trigger

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HISTORY

The state of California (CA) has passed legislation that added §12087.0 - §12088.9 to the California Penal Code. This addition requires that all firearms sold in the state of California are to be sold with either an approved firearms safety device or that the purchaser of the firearms show proof that they have an approved firearms safety device or an approved firearms storage device. Pursuant to the additions in the California Penal Code, an addition to the California Code of Regulations, Chapter 12.6, §977.10 - §977.90 of Title 11 was made to give the CA Department of Justice (DOJ) the authority to certify firearms safety devices for use to satisfy the requirements of the Penal Code. The additions to the California Code of Regulations outlines the requirements for CA DOJ certification, testing laboratories, and testing procedures to be used to test potential approved firearms safety devices.

Table 1 presents a complete history of the CA DOJ testing that was performed on Remington ISS equipped firearms. The initial testing was performed on the current production designs while the subsequent tests were performed on ISS design versions that were modified in an attempt to satisfy the CA DOJ testing requirements. Figure 1 presents a flowchart that depicts the chain of events that resulted in the testing that was completed. This report details the progression of the common (M/870) fire-control ISS development to meet the certification criteria of the CA DOJ. Articles in the appendix of this report cover the work completed on the EtronX product pursuant to CA DOJ certification. Further development and design work completed on the M/710 and M/597 ISS designs were performed by other Remington personnel.

CA DOJ Testing History			
Safety Device	Date Tested	USTL I.D.	Result
M/700 I.S.S.	October 2, 2001	FSD098	PASS
M/710 I.S.S.	October 3, 2001	FSD096	FAIL
M/870 Aluminum I.S.S.	October 3, 2001	FSD097	FAIL
M/870 Synthetic I.S.S.	October 2, 2001	FSD094	FAIL
M/597 I.S.S.	October 2, 2001	FSD095	FAIL
M/780 EtronX Keyswitch	October 2, 2001	FSD092	FAIL
M/870 Improved Synthetic I.S.S.	September 12, 2002	FSD322	PASS
M/870 2-Dot Aluminum I.S.S.	January 9, 2003	FSD322	PASS
M/870 2-Dot Synthetic I.S.S.	January 9, 2003	FSD320	FAIL
M/597 2-Dot I.S.S.	January 9, 2003	FSD321	FAIL
M/870 2-Dot Aluminum I.S.S.	November 12, 2003	FSD430	PASS
M/870 2-Dot Synthetic I.S.S.	November 12, 2003	FSD430	FAIL
M/597 2-Dot I.S.S.	November 12, 2003	FSD430	FAIL

Table 1. CA DOJ Testing History for all I.S.S. type fire-controls.

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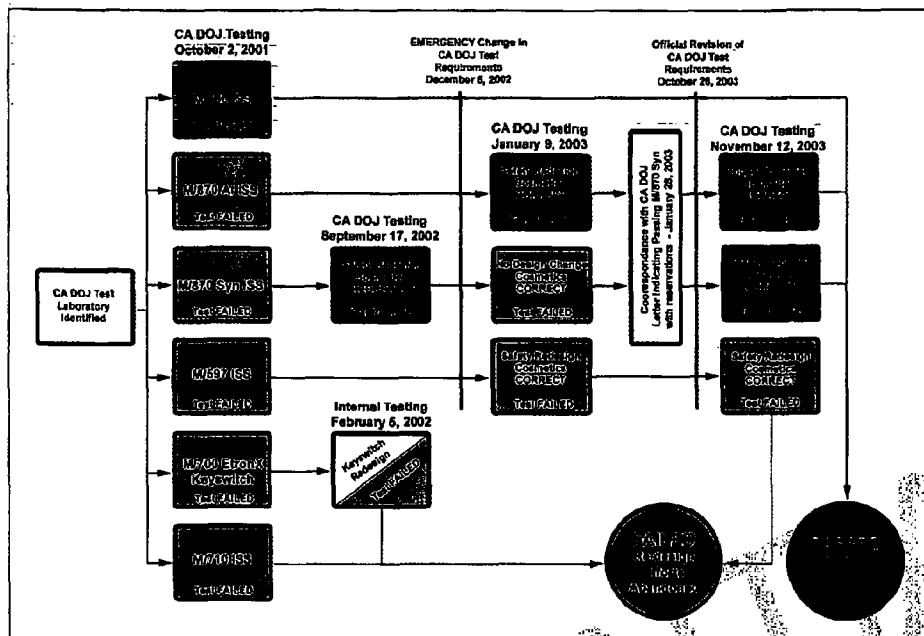
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Figure 1. Flowchart of the testing procedures that were carried out by Remington.

SUMMARY

Remington has received certification of the current production M/700 ISS device as a CA DOJ approved firearms safety device. The certified device is per the current production design as of the writing of this report.

Remington has received certification of a modified common fire-control in both synthetic and aluminum housings as a CA DOJ approved firearms device. The CA DOJ has been informed that the new design is not currently being produced. If Remington decides to produce the CA DOJ approved design of the common ISS, the CA DOJ will need to be notified that the products will be available in order to update their website. Additionally, other Remington products that utilize the common fire-control have been self certified by Remington including model 870, 1100, and 11-87 shotguns, model 7400 and 7600 centerfire rifles, and model 552 and 572 rimfire rifles.

The modified common fire-control design is referred to as the "2-Dot ISS" due to the two white dots added to distinguish it from the current production design of the common fire-control ISS. The modifications over the current production version of the common fire-control ISS include two design changes and one cosmetic change. The first design change is a metal injection molded (MIM) trigger that is case hardened, with the upper portion induction annealed for final assembly. The hardness of the lower portion of the trigger is HR15n 88 minimum. The second design modification is a 1.125" hardened pin (HRc 58 minimum) inserted into the trigger housing behind the safety button. The cosmetic change is the addition of the two white dots that indicate the ISS system is engaged.

The design specifications for these modifications are referenced in the index at the beginning of this report and are stored electronically on the computer server at Remington's Ilion, NY

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firearms manufacturing facility. The re-design and testing effort was a joint project that included Marlin Jiranek at the Remington R&D Technical Center and Dave Findlay and Glen Sietsema at the Remington manufacturing facility located in Ilion, NY.

The M/710 and M/597 ISS designs have not received CA DOJ approval as a certified firearms safety device. The EtronX keyswitch failed the CA DOJ testing and did not receive approval. These systems were evaluated for cost-effective design changes that may be done to bring the systems into compliance with the CA DOJ specifications. The M/710 effort was assigned to Brad Howard at the Remington R&D Technical Center. The M/597 effort was assigned to Todd Cook at the Remington R&D Technical Center. The EtronX was assigned to Marlin Jiranek at the Remington R&D Technical Center.

The balance of this report describes in detail the efforts which resulted in the certification of the M/870 common fire-control and the supporting documents of all of the testing that has been performed to the date of this report.

The CA DOJ testing criteria is summarized in detail in a report dated July 17, 2001 entitled "Remington I.S.S. Testing per California DOJ Lock Regulations", included in the appendix of this report. The testing procedures outlined in the referenced report may be slightly different than the current testing procedures. The current procedures are outlined in the CA DOJ text of regulations, included in the appendix of this report. For the most current information, the CA DOJ, firearms division website contains the down-loadable text of regulations reflecting the most current standards.

Per the CA DOJ testing regulations, there are potentially nine different tests, seven of which apply to the Remington ISS type safety devices. These applicable tests include:

- | | |
|---|---------------------------------|
| 1. Picking or Manipulating Test | 5. Plug Torque Test |
| 2. Forced Removal Inspection | 6. Sawing Test (Hacksaw Attack) |
| 3. Shock Test (Impact) | 7. Drop Testing |
| 4. Plug Pulling Test (Drilling the lock cylinder) | |

INITIAL TESTING - OCTOBER 2001

The initial testing (October 2001) was performed on the current production models of the Remington I.S.S. equipped firearms and the Remington EtronX firearm. The results of these tests were reported in a report dated October 12, 2001 entitled "Remington ISS / EtronX Testing per California DOJ Lock Regulations", included in the appendix of this report. During this test, the M/700 ISS passed the CA DOJ criteria and became a CA DOJ certified firearms safety device. All of the ISS equipped devices that did not pass the initial test failed the "saw test" portion of the testing procedure. The M/700 EtronX failed the "plug torque" testing procedure.

ETRONX KEYSWITCH RE-DESIGN

Subsequent design work was done on the EtronX product keyswitch that included utilizing a new keyswitch that was manufactured from metal stampings rather than plastic injection molding. The new keyswitch was an improvement over the old style, but did not meet the CA DOJ testing requirements as tested in-house at the Remington R&D Technical Center. The Remington internal testing yielded results that indicated the new design would not meet the CA DOJ specifications. The result of this work was reported to Dale Danner in a report entitled "CA DOJ Plug Pulling Test Results - New EtronX Keyswitch", dated February 5, 2002. A

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copy of the report is included in the appendix of this report. Attempts to further redesign the EtronX keyswitch were deemed too costly and further work was abandoned.

M/870 (COMMON FIRE-CONTROL) RE-DESIGN

Design work to alter the current common fire-control to pass the CA DOJ specifications continued in a joint effort between the Remington manufacturing site in Ilion, NY and the Remington R&D Technical Center in Elizabethtown, KY. The design intent was to protect the safety button from removal by the saw attack, the method by which the fire-control failed the initial testing. Figure 2 presents an image of a failed M/870 fire-control in which the safety button was completely removed from the fire-control by a saw attack. The design alteration was accomplished by utilizing two design modifications.

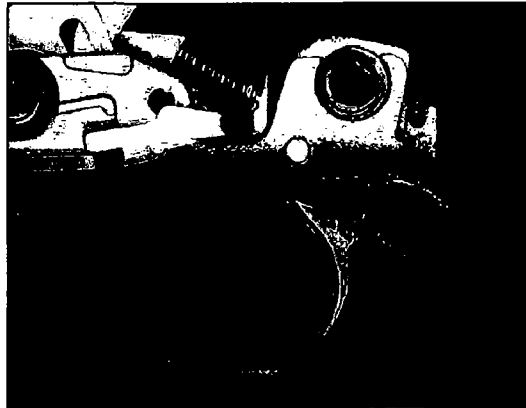


Figure 2. An image of a M/870 fire-control safety button defeated by attack with a hacksaw, where the safety button was completely removed from the fire-control.

The first design modification was to insert a hardened steel pin into a blind hole behind the safety button. Figure 3 presents a cross-section sketch of the M/870 fire control showing the location of the hole. This pin would successfully block a saw attack directly from the back of the trigger bow, similar to the attack presented in Figure 2.

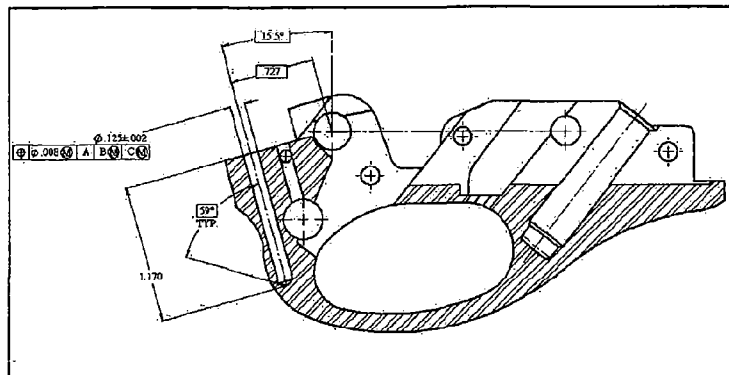


Figure 3. A sketch of a cross-section of the M/870 fire-control showing the location of the hardened pin (yellow).

The second design modification was done to prevent a saw attack either partially through the trigger or just behind the trigger cutting up to the bottom of the safety button. To prevent this type of attack, a MIM trigger was designed that had two protruding shark fins below the safety button. Figure 4 presents a view of the new trigger design. The entire trigger was case hardened to a surface hardness of HR15n 88 minimum. The portion of the trigger above the shark-fin features was then induction annealed so that the trigger could be assembled using the standard production method of assembly and reaming to fit.

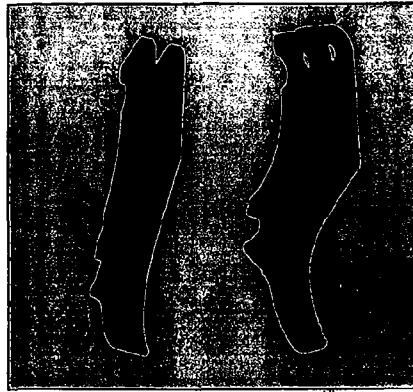


Figure 4. A sketch of the first CA DOJ trigger design. The shark-fin features are the lower fins on the back of the trigger.

The CA DOJ standard also required that the firearms safety device be discernable from other similar devices to be easily identified as a CA DOJ certified device. To accomplish this, the fire control housing was altered to incorporate two white dots at the engaged position of the ISS system, differentiating it from the current production ISS fire-control that has only one white dot. Figure 5 presents an illustration of the 2-dot fire-control and Figure 6 presents a sketch showing the exact location on the trigger bow of the two dots with respect to the safety button hole.

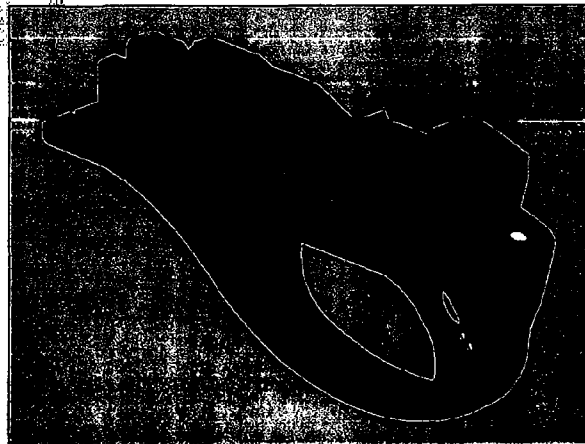


Figure 5. An illustration of the cosmetically correct CA DOJ M/870 fire-control housing, containing two white dots at the ISS locked position. The blind hole for the hardened pin is shown in yellow.

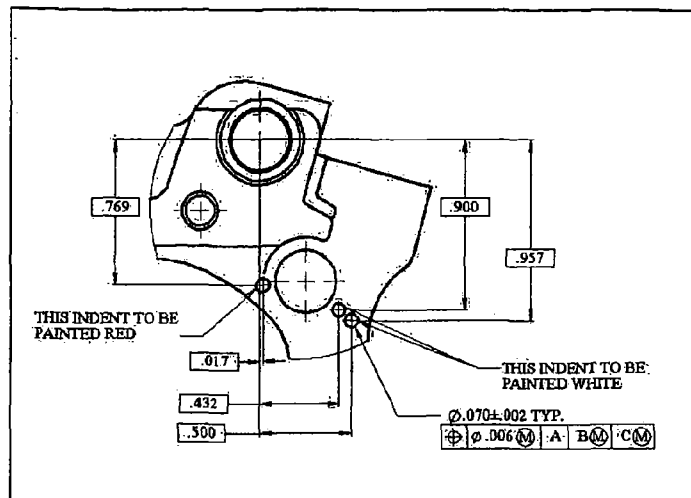


Figure 6. A sketch of the location of the two white dots with respect to the safety button hole on the M/870 fire-control.

To complete testing per the CA DOJ specifications, all of the firearms safety device components must have been fabricated using materials and processes that are the same for the commercially available devices. In this case, the MIM trigger mold and the modification of the production fire-control housing tooling had not been completed. As the cost of the MIM mold was high, prototypes of the MIM trigger were manufactured using MIM material blanks to machine and heat treat the triggers. As the cost of the fire-control housing tool modification was also high, a standard M/870 synthetic fire-control housing was used to assemble the prototypes.

The re-designed M/870 fire control was tested by the certified testing laboratory utilizing these prototype parts, the synthetic fire-control housing that did not contain the two white dots and the trigger machined from MIM blanks. This was done to prove that the design changes would pass the test, prior to incurring the expenses associated with the manufacture of the MIM trigger mold and modification of the production tooling. At the time of the testing (September 2002), the CA DOJ testing requirements required the firearms safety device to be in its final cosmetic configuration for the test to be used as a certification test, therefore, this test could not be used as an official certification test for the design.

CA DOJ TESTING M/870 SYNTHETIC FIRE-CONTROL SEPTEMBER 2002

A prototype of the synthetic common fire-control was tested on September 17, 2002 and a report generated on September 18, 2002 entitled "Preliminary Remington Common F/C ISS Testing per California DOJ Lock Regulations", included in the appendix of this report. The written report reflects the fact that the fire-control passed the CA DOJ testing procedures. Based on the test result, the MIM trigger mold was processed and the fire control housing was altered to manufacture new, cosmetically and materially correct, samples for test in January 2003.

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**CA DOJ EMERGENCY ALTERATIONS TO PROCEDURES
DECEMBER 5, 2002**

On December 5, 2002, the CA DOJ notified by fax the certified test laboratories that there was a change to the testing procedures effective immediately. Specifically, the change incorporated an additional manipulation step to the saw test that included manipulation with an 8-10" flathead screwdriver for a period of two minutes after the sawing was completed. This change in procedures was not updated on the website until January 8, 2003.

**CA DOJ TESTING M/870 SYN/AL & M/597
JANUARY 2003**

The parts to build the prototype common fire-controls were available at the end of December 2002. Aluminum and synthetic fire-controls were built for test along with a sample of M/597 fire-controls that incorporated some design changes by T. Cook. The testing resulted in the passing of the aluminum common fire-control, but the failure of the synthetic common fire-control and the M/597 fire-control. The synthetic common fire-control was identical to the samples tested in September 2002 by design, with exceptions that the triggers were actually produced in the MIM mold and the cosmetics of the housing were correct and contained the two white dots in the ISS locked position. 83

The emergency change to the CA DOJ testing procedures resulted in the failure of the synthetic fire-control because the screwdriver was used to pry-off the two trigger fins below the safety button. Once the fins were fractured off of the trigger, the safety button could be pried out of the fire control housing and the fire-control could then be operated normally, without the safety in place.

The emergency alterations from the CA DOJ also included that the firearms safety devices do not have to be tested in their final cosmetic configuration, so long as the differences between the tested version and the commercial product were solely cosmetic.

Based on the latter, the test laboratory contacted the CA DOJ directly by telephone and was instructed by the CA DOJ that both the aluminum and synthetic designs would pass based on the January 2003 test results of the aluminum fire-control and the September 2002 test results of the synthetic fire control.

D. Danner, then Director of Technology and Testing of Remington Arms Company, indicated that to legally protect Remington from litigation, Remington would need to obtain a letter from the CA DOJ indicating that Remington informed the CA DOJ of the failure and that the CA DOJ would accept the September 2002 test results over the January 2003 test results to approve the common synthetic fire-control as a CA DOJ approved firearms safety device, in writing.

CA DOJ RULING AND CORRESPONDENCE

Per the instruction of D. Danner, the test laboratory sent a letter to CA DOJ informing the CA DOJ of the synthetic fire control passing the CA DOJ test criteria in September 2002 and failing the current emergency procedures CA DOJ test criteria in January 2003. Remington contacted the CA DOJ and requested a letter confirming that they received all of the information and that the fire-control would become an approved safety device based on the results of the September 2002 testing. A letter was received from the CA DOJ on January 28,

2003 indicating the that the previous test results would stand and that the CA DOJ would allow the synthetic M/870 fire-control to become an approved safety device. However, the letter also stated that the CA DOJ did this with reservation and indicated that Remington may not want to market the device as a CA DOJ approved device on their own. A copy of the correspondence from the CA DOJ is included in the appendix of this report.

Based on this correspondence, Remington viewed the testing as a failure. This prompted a small design change for a re-test of the M/870 synthetic fire control. In talking with the representatives from the CA DOJ, it was discovered that the emergency actions of the CA DOJ would be altered in the near future and that the alteration would include the removal of the screwdriver manipulation at the end of the sawing test. Based on this information, it was decided by D. Danner that Remington would move forward with the redesign of the trigger and then re-test the fire-control when the CA DOJ changes go into effect. The CA DOJ changes went into effect in October 2003.

M/870 (COMMON FIRE-CONTROL) TRIGGER RE-DESIGN

The trigger was modified by adding a web of material in the MIM component that effectively joined the two shark-fin features on the back of the trigger. This web of material blocked the entrance of a screwdriver tip between the two fins from the bottom of the trigger, effectively blocking the methodology used to defeat the fire-control in the January 2003 test. Figure 6 presents an illustration of the improved trigger design. Figure 7 presents a sketch of the trigger design in cross-section with the web of additional material highlighted in yellow color.

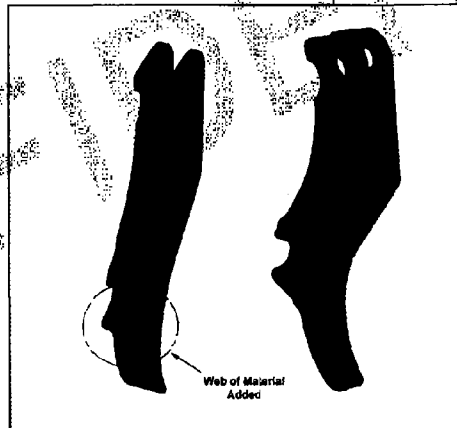


Figure 6. An illustration of the improved trigger design. The additional web of material is circled as compared to the first redesign effort.

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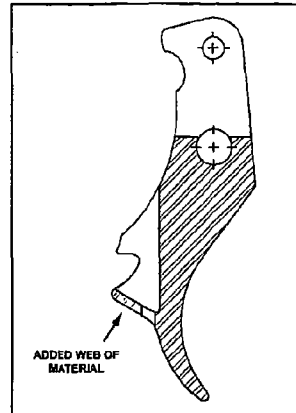
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Elizabethtown, Kentucky

Figure 7. A sketch of the improved trigger design in cross section showing the location of the additional web of material.

CA DOJ TESTING M/870 SYN/AL & M/597 NOVEMBER 2003

The official CA DOJ change in the regulations was completed in October 2003 and the testing of the improved designs of the M/870 and M/597 fire-controls was scheduled for November 12, 2003. Both the synthetic and aluminum versions of the M/870 fire-control passed the CA DOJ certification testing. The M/597 fire-control failed the CA DOJ testing process. Based on the design efforts to date on the M/597 fire-control, further work has been abandoned.

A letter was received from the CA DOJ acknowledging that the two M/870 fire-controls passed the testing criteria and has received CA DOJ certification as approved firearms safety devices.

The CA DOJ has been notified that the 2-dot version of the common-fire control ISS has not been implemented into current production and is not commercially available at this time. Self certification of the other Remington firearms products that utilize the common fire-control has been completed and is posted on the CA DOJ website. The self-certified firearms include all variants of the M/870, 1100, 11-87, 7400, 7600, 552, and 572 shotguns and rifles. If Remington decides to manufacture the 2-dot version of the common fire-control ISS, the CA DOJ will need to be informed that the products will be available in the market and that the CA DOJ database is updated correctly.

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Remington® I.S.S. Testing

(Integrated Security System)

per

California DOJ Lock Regulations

Proposed addition of Chapter 12.6, §977.10 -- §977.90 of Title 11 of the
California Code of Regulations, pursuant to §12087.0 -- §12088.9 of the
Penal Code.

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HISTORY

Commencing on January 1, 2002, The California Penal Code, §12087.0 - §12088.9, prohibits the manufacture and sale of a firearm unless it is accompanied by a California Department of Justice (DOJ) approved safety device. The California DOJ is therefore required to complete the following:

- Develop and set the standards for gun safes and firearms safety devices
- Develop testing standards relative to firearms safety devices
- Certify independent testing laboratories to test firearms safety devices
- Provide for the testing of firearms safety devices by such laboratories
- Produce a roster listing all models of devices that have passed testing

It is in Remington Arms Company's interest to determine if the recently developed Integrated Security System (ISS) satisfies the proposed requirements of the California DOJ. These requirements are listed in two sections of the proposed regulations, §977.44, "Firearms Safety Device Standards", and §977.45, "Testing Procedures".

The proposed testing protocol for the ISS system is detailed in the following sections. Based on the results of the testing, a decision will be made whether to contact and send samples to a California DOJ approved independent testing laboratory for official DOJ certification per the regulations. This test plan has been designed to test to the most current of the proposed California DOJ regulations, Revision 2, which was last updated on May 29, 2001 and open for comment until 5:00pm on June 13, 2001. **Appendix A contains the document (in Adobe PDF format) as submitted by the California DOJ.** There have two further revisions of the standards, however, they were only revisions to the Gun Safe Standards section of the Regulations. Further information can be obtained at the California DOJ web-site: <http://caag.state.ca.us/firearms/regs/ab106index.htm>

The cost of completing the evaluation is estimated to be \$4,000. The estimated completion date of testing, based on a start date of July 30, 2001, is October 31, 2001. The reason for the length of time the test will take to be completed is primarily driven by the necessity to design and manufacture specialized fixtures for the shock testing portion required by the California DOJ regulations.

TESTING PROCEDURES

The testing procedures are presented in three separate sections. The first section, Timeline / Cost Proposal, includes a complete list and estimated cost of the equipment which will be required to complete this evaluation and an estimated timeline to which the evaluation will be executed. The second section, Firearms Safety Device Standards, presents the proposed tests to certify that the ISS satisfies the requirements of §977.44, "Firearms Safety Device Standards". The third section, ISS Device Testing Procedures, presents the proposed tests to certify that the ISS satisfies the requirements per §977.45, "Testing Procedures" and their relevance to testing the ISS device.

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Timeline / Cost Proposal

To perform a complete evaluation of the ISS device, the device is required to be tested on all of the firearms which it is used. For the purpose of this test, it is proposed that the testing be conducted on the primary models of firearms which the ISS device is implemented. Table 1 presents the required Remington product and the estimated manufacturing costs associated with the products which are required to complete the proposed test. Figure 2 presents a GAANT chart which presents the proposed timeline and total project cost which is required to complete the proposed test.

Remington Product Required for Testing				
Quantity	Product Model	Component	Cost	Extended Cost
8	710	ISS Containing Complete Firing Pin Assembly	\$23.64	\$189.12
1	710	ISS Containing Complete Rifle	\$142.43	\$142.43
5	710	Replacement Stocks	\$9.39	\$46.95
8	700	ISS Containing Complete Firing Pin Assembly	\$12.21	\$97.68
1	700	ISS Containing Complete Rifle (ADL - Wood Stock)	\$193.19	\$193.19
5	700	Replacement Stocks	\$65.70	\$328.50
8	597	ISS Containing Assembled F/C Housing	\$10.27	\$82.16
1	597	ISS Containing Complete Rifle (Carbon Bl - Wood Stock)	\$140.83	\$140.83
5	597	Replacement Stocks	\$58.18	\$290.90
8	---	ISS Containing Aluminum Common F/C Housing	\$19.57	\$156.56
8	---	ISS Containing Synthetic Common F/C Housing	\$16.60	\$132.80
1	870	ISS Containing Complete Shotgun (Express - Wood)	\$144.23	\$144.23
5	870	Replacement Stocks	\$11.06	\$55.30
TOTAL COST:				\$2,000.65

Table 1. Cost estimate for Remington supplied products. The cost estimate is based on current SAP manufacturing cost numbers.

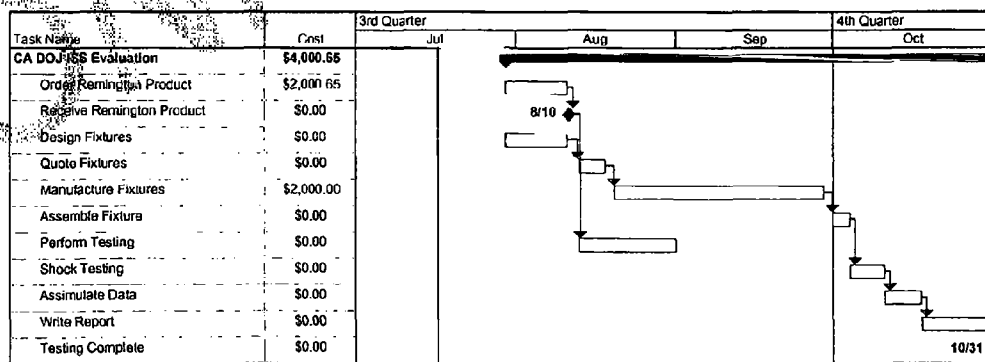


Figure 2. Estimated timeline and total cost to complete the ISS testing and evaluation.

Firearms Safety Device Standards

Based on the proposed regulations, the safety device being tested must satisfy five requirements to be considered a safety device. These requirements are presented in §977.44, subsections a, b, c, d, and e. All five of the requirements are objective in nature. While the fifth requirement at first seems to be subjective, further explanation in the DOJ regulation text clarifies the requirement. The five requirements include:

1.) §977.44, subsection a: *"The firearm safety device shall be of a design that will not allow its removal or deactivation except by utilizing a key, combination, or other unique method as intended by the manufacturer to allow access only by authorized users, within the standards set forth in these regulations."*

- (1) *Combination locking systems shall have a minimum of 1,000 possible unique combinations consisting of a minimum of three numbers, letters, or symbols per combination.*
- (2) *Key locking systems shall be unique to the manufacturer's firearms safety device(s)."*

The ISS system satisfies this requirement by requiring the J-shaped key for proper operation.

2.) §977.44, subsection b: *"The firearms safety device shall render the firearm inoperable (unable to be fired) while the firearms safety device is properly installed."*

3.) §977.44, subsection c: *"The firearms safety device shall function by at least one of the following methods:*

- (1) *By blocking travel of the trigger, striker, firing pin, or hammer.*
- (2) *By preventing the action or cylinder from closing.*
- (3) *By preventing the chamber(s) from accepting or holding a live cartridge.*
- (4) *By preventing access to the firearm."*

The ISS satisfies the second and third requirements by the nature of the operation of the device. The ISS operates by blocking the firing pin from forward motion in the M/700 and M/740 rifles. In the case of the M/597 and the firearms utilizing the common fire-control, it operates by blocking movement of the trigger.

4.) §977.44, subsection d: *"When used in the manner designed and intended by the manufacturer, the firearms safety device shall be capable of repeated use and shall pass the testing procedures described in these regulations."*

The ISS will satisfy this requirement if it passes the testing procedures presented in the next section of this testing proposal.

5.) §977.44, subsection e: *"The firearms safety device shall be capable of withstanding manipulation with common household tools for a ten-minute period without being disabled."*

Common household tools are defined in §977.20, subsection (d) as: *"...screwdrivers (8-10 inches in length, flathead or Phillips, flathead sizes up to 5/8 inches), pipe wrenches (9½ - 10 inches in length), vice grip pliers (9½ - 10 inches in length), other pliers (9½ - 10 inch arch joint, 6 - 6½-inch slip joint, 6 - 6½-inch long nose), hacksaws (12 inch, standard carbon steel blade), crowbars (16 inch), electric/cordless drills (1/3 horsepower corded/9.6 volt cordless), hammers (16 ounce), chisels (1/4-inch to 1-inch blade width wood chisels), and crescent wrenches (10 inches)"*.

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The only desirable tool which this definition does not contain is a bench vice. This specification initially is interpreted as subjective by allowing any combination of tools and a person ten minutes to de-function the device. The subjectivity is based on the person, his/her ability to work with tools, and his/her knowledge of the workings of the device and best method to defeat the device.

However, the reason that this last requirement has been interpreted as not being subjective is that the definition of the testing procedures outlined in §977.45, "Testing Procedures" has been changed from previous revisions. The initial paragraph reads as follows: *"The tests in this section are designed to replicate the forces that would be exerted on firearms safety devices through the use of common household tools for an approximate ten-minute period"*. It should be noted that in the May 2, 2001 revision of the proposed regulations, the following second sentence to this subsection (§977.45) was removed: *"The intent of the DOJ is not to restrict a testing laboratory from going beyond the testing procedures if the laboratory identifies a firearms safety device shortcoming that would allow the firearms device to be disabled in less than ten minutes using common household tools"*. Based on this information, it can be interpreted that the intent of the tests presented in the regulations are representative of simulating attempts to disable the firearms safety device using common household tools and that these tests and only these tests shall be used to determine the suitability of the safety devices for use; i.e. passing these tests and only these tests is the only requirement for being certified as a CA DOJ approved firearms safety device.

The ISS devices tested will include two each of the M/710, M/700, M/597, aluminum common fire-control, and the plastic common fire-control. If the device is defeated, the results will include a detailed description of the method used.

ISS Device Testing Procedures

There are ten tests that are described as lock criteria in the proposed regulations. These are the tests which are referenced in the fourth standard presented in the previous section and are described in §977.45, subsections c, d, and e. An assumption is made that the firearm is not allowed to be disassembled prior to testing of the ISS device unless stated in the test specifications. The tests which the safety device must pass are dependent upon whether the test can be conducted on the safety device. Some of the tests do not apply if the test cannot be performed on the device. Each of the ten tests are presented as they are stated in the proposed regulations. The tests which apply to the ISS device will be performed on two of each type of ISS device.

1.) §977.45, subsection c.1: *"Picking or manipulating test (utilize a new firearms safety device)(does not apply if test cannot be performed on the device). Cylinders in the firearms safety device shall resist picking with the use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each. Time shall be counted only while tools are in contact with the lock. Combination locks shall resist manual manipulation for two minutes. Time shall be counted only while hands are manipulating the combination lock. This test shall be performed by a tester with no*

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specialized training or skills in lock picking or manipulation (e.g. locksmith training or the use of reference guides on lock picking or manipulation). In the case of a key lock, failure occurs if the lock mechanism can be disengaged during six minutes of manipulation. In the case of a combination lock, failure occurs if the combination lock can be disengaged without the proper combination being entered during two minutes of manipulation".

This test will be conducted on the ISS device.

2.) §977.45, subsection c.2: "**Forced removal inspection.** Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools. Partial destruction includes, but is not limited to, removing a portion of an exposed trigger guard or removing the hammer spur of the firearm (if so equipped) without rendering the firearm inoperable. For example, a firearms safety device that fully encloses the trigger guard of the firearm may pass this inspection, while a firearms safety device that would allow a portion of the trigger guard to be sawed off to allow for removal of the firearms safety device may fail this inspection. Failure occurs if inspection of the firearm and firearms safety device indicates that the firearms safety device may be disabled or removed through partial destruction of the firearm as described in this subsection".

This test will be conducted on the ISS device. Note that this test, as defined, is only an inspection and does not include the actual destruction of the firearm or ISS system. For the purposes of this test, however, the ISS devices/firearms tested will be destroyed and documented as to the time and process which was included to render the device inoperable.

3.) §977.45, subsection c.3: "**Tensile test (does not apply if test cannot be performed on the device).** This test is designed to test the strength of the firearms safety device utilizing a pulling action. Support the firearm and firearms safety device in a fixture designed to enable application of forces in tension along a central axis of the mating locking components of the firearms safety device. Apply 1,000 newtons (225 pounds force) of force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either mating locking components of the firearms safety device. For firearms safety devices that have clamping components, specific fixtures may be required to allow application of the required force to the individual components. Failure occurs if the firearms safety device is disabled or if the firearm is capable of firing during the test. For instance, if the firearms safety device separates far enough to allow for the discharge of the firearm while manipulating the trigger".

This test does not apply to the ISS device and will not be tested. In the case of the ISS, the plug pulling test (test number 6) will achieve the same results as the tensile test and will suffice to provide the necessary data to determine a pass/fail scenario.

4.) §977.45, subsection c.4: "**Shock test (does not apply if test cannot be performed on the device).** This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a one-kilogram (2.2 pound) weight from a distance of one meter \pm one centimeter (39.4 inches \pm 0.4 inches) five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool (chucked blade-type tool should be crafted from the shank of a screwdriver with a $\frac{1}{4}$ to $\frac{5}{8}$ -inch (.63 to 1.6 centimeter) flathead end). Additionally, using the shock impact fixture, drop a one-kilogram (2.2 pound) weight from a distance of one meter (39.4 inches), five times to the top of the firearms safety device body using a chucked steel rod tool. Failure occurs if the firearms safety device is disabled by the shock test. Failure also occurs if following the shock test, subsequent manipulation with an 8 to 10-inch (20.3-25.4 cm) long screwdriver with a $\frac{1}{4}$ to $\frac{5}{8}$ -inch (.63 to 1.6 centimeter) flathead end allows the tester to discharge a primed case".

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This test will be conducted on the ISS device. To complete this test, a shock impact fixture will be required and must be fabricated. It is assumed, although not stated in the regulations, that the shock impact fixture should be built in accordance with ASTM specification F883-97, "Standard Performance Specification for Padlocks".

A different problem with this test is that there is no definition included in the regulations which define the dimensional requirements of a "chucked steel rod tool". Furthermore, the shock fixture which is described and presented in the ASTM specification does not allow for the lock to be "aligned to impinge and penetrate the locking keyway" and there is no reference for which part of the firearms safety device would represent the "top". This is particularly of interest with the ISS device, as the "top" could constitute the top of the firearm or the argument can be made that the "top" is the keyway itself, inline with the device.

The results of this test will include detailed information as to the alignment procedures and the dimensional characteristics of the tools used to impinge on the ISS device.

5.) §977.45, subsection c.5: "Shackle or cable cutting test (does not apply if test cannot be performed on the device). This test is designed to determine the firearms safety device resistance to cutting forces of 4,450 newtons (1,000 pounds force) for solid metal shackles or with-hand forces of 445 newtons (100 pounds force) for cables. The shackle of the firearms safety device (if so equipped) shall withstand cutting through when a blade made of steel, hardened to a minimum hardness of Rc 50, is used in conjunction with the blade positioning holder of the shackle cutting fixture. The shearing assembly must then be placed in a tensile loading device having a compression load capability and compressed with a force of 4,450 newtons (1,000 pounds force). See the ASTM F883-97 standard for details to build a shackle cutting fixture (this document is incorporated by reference into these regulations). The cable of the firearms safety device (if so equipped) shall withstand cutting through with nine-and-one-half (9½)-inch lineman pliers with a force of 100 pounds (445 newtons) for two minutes with the firearms safety device supported on both sides of the point of the shear cut with allowance for blade clearance. Failure occurs if the firearms safety device is disabled".

This test does not apply to the ISS device and will not be tested. The ISS device does not contain a shackle nor a cable.

6.) §977.45, subsection c.6: "Plug pulling test (utilize a new firearms safety device)(does not apply if test cannot be performed on the device). This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 (0.161 inch, 0.41 centimeter) diameter drill bit and insert a self tapping screw of size AB 12 at least 19 millimeters (0.75 inches) deep. Apply a required tension of 1,000 newtons (225 pounds force) axially between the case and installed screw. Failure occurs if the firearms safety device can be opened by manipulation with an 8 to 10-inch (20.3 to 25.4 cm) long screwdriver with the largest flat blade (not to exceed 5/8 inch (1.6 centimeter)) that will fit into the keyway at the conclusion of the test. Failure also occurs if the firearms safety device is disabled".

This test will be conducted on the ISS device.

7.) §977.45, subsection c.7: "Plug torque test (utilize a new firearms safety device)(does not apply if test cannot be performed on the device). This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Install the firearms safety device in a rigid fixture such as a vice to support it firmly but not restrict free rotation of the plug in the cylinder. Insert a

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screwdriver with the largest flat blade (not to exceed 5/8 inch (1.6 centimeter)) that will fit into the keyway, so that a torque load of ten newton-meters (89 pounds force-inches) can be applied to the plug. Failure occurs if the firearms safety device is disabled".

This test will be conducted on the ISS device.

8.) §977.45, subsection c.8: "Sawing test (does not apply if test cannot be performed on the device). Sawing tests shall be performed using a sawing machine or hand held saw and appropriate fixtures, to hold the device steady while sawing, to determine the firearms safety device resistance to sawing of exposed components, including cables, that would result in removal of the firearms safety device or render it disabled. The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch (2.54 centimeters) with a constant vertical downward force of ten pounds (44.5 newtons). The test shall consist of 60 cutting cycles per minute for two minutes by sawing machine or 120 cycles, with no time limit, by hand. One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion. Failure occurs if the firearms safety device is disabled".

This test will be conducted on the ISS device. It is unclear in the test description if the sawing test is intended to saw on the firearms safety device directly or to saw directly on the firearm in an attempt to disable the firearms safety device. The testing procedure will be interpreted per the worst case and the testing will consist of sawing directly on the firearm to attempt to disable the ISS.

9.) §977.45, subsection d: "In addition to the tests specified in subsection (c) of this section, the Certified FSD Laboratory shall perform the following tests on a model of each firearms safety device in which the firing chamber of the firearm is capable of accommodating a primed case with the firing chamber closed and the firearms safety device properly installed, that is submitted to the laboratory for testing pursuant to these regulations. This requirement does not apply to a firearms safety device that prevents access to the firearm by fully containing and enclosing the firearm (lock-box type devices):

(1) (Utilize a new firearms safety device). The firearms safety device shall be activated in accordance with the manufacturer's instructions as specified in paragraphs (6), (9), and (10) of subsection (b) of this section. The firearm shall be placed in a drop fixture capable of dropping the firearm from a drop height of one meter \pm one centimeter (39.4 inches \pm 0.4 inches) onto a slab of concrete having minimum dimensions of 7.5 centimeters X 15 centimeters X 15 centimeters (3 inches X 6 inches X 6 inches). The drop distance shall be measured from the lowermost portion of the weapon to the top surface of the slab. The firearm shall be dropped from a fixture and not from the hand. An approved drop fixture is a short piece of string with the firearm attached at one end and the other end held in an air vice until the drop is initiated. The firearm shall be dropped in the following orientations:

- (A) Normal firing position with the barrel horizontal.
- (B) Upside Down with the barrel horizontal.
- (C) If the firearm is a handgun, on the grip with the barrel vertical.
- (D) On the muzzle with the barrel vertical.
- (E) On either side with the barrel horizontal.
- (F) If there is an exposed hammer or striker, on the rearmost point of the device, otherwise on the rearmost point of the weapon.

(2) At the conclusion of the drop test, the tester shall attempt to fire the firearm in an attempt to discharge the primed case. Failure occurs if the firearm can be operated manually, if a primed case is discharged during any of the drop tests, or if the firearms safety device is disabled following any of the orientation drop tests".

The test will be conducted on the ISS device. This test is similar to the SAAMI drop testing procedures with the exception that the firearms is to impact a concrete slab in this test rather than an 85 durometer mat in the SAAMI test. This test will require complete

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firearms and a number of extra stocks on-hand to complete the test. There is no provision in the regulations which state that destruction of the stock without disabling the firearms safety device denotes that the device has passed the test.

10.) §977.45, subsection c: "In addition to the tests specified in subsection (c) of this section, the Certified FSD Laboratory shall perform the following tests on a model of each firearms safety device that fully contains and encloses the firearm (lock-box type devices) that is submitted to the laboratory for testing pursuant to these regulations:

(1) (Utilize a new firearms safety device) The firearms safety device shall be placed in a drop fixture capable of dropping the device from a drop height of one meter \pm one centimeter (39.4 inches \pm 0.4 inches) onto a slab of concrete having minimum dimensions of 7.5 centimeters X 15 centimeters X 15 centimeters (3 inches X 6 inches X 6 inches). The drop distance shall be measured from the lowermost portion of the firearms safety device to the top surface of the slab. The firearms safety device shall be dropped in the following orientations:

(A) With the locking mechanism facing directly up.

(B) With the locking mechanism facing directly down.

(2) Failure occurs if the firearms safety device is disabled or the firearm contained within the enclosed container discharges".

This test does not apply to the ISS device and will not be tested. The ISS device does not meet the initial criteria of this test procedure of fully containing and enclosing the firearm.

APPENDIX A

California Department of Justice (DOJ), Firearms Division

Assembly Bill (AB) 106

Revision 2

May 29, 2001



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Research Engineer

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3448 N. Emporia 316-832-1600
Wichita, KS. 67219 Fax 316-832-1602

Remington Arms
Mr. Marlin Jiranek
Research & Development
315 W. Ring Road
Elizabethtown, KY 42701

August 3, 2001

Dear Mr. Jiranek,

In response to your request, I offer this price quote on Firearm Safety Device Testing to California Penal Code Section 12088 and regulation section 977.45, Chapter 2.6, Division 1, Title 11.

USTL will test the Remington products to the applicable test as required by the regulation above.

USTL will need three complete rifles or shotguns that have the safety device installed and an additional three (2) device that can be installed in the rifle or shotgun when the others are damaged in testing.

After successful completion of the testing, one of each type of system will be sent to California DOJ, the other will be retained by USTL. The remaining safety devices will be returned to Remington Arms.

Shipping to USTL and California DOJ, is to be provided by Remington Arms, or we will bill you for the shipping charges.

The fee for the testing is \$800.00 per model. Terms are Net 30 days from invoice date.

Should you have any further questions, please feel free to give me a call. Our current FFL is enclosed.

Sincerely,

Richard W. Mouser
President

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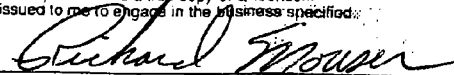
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DEPARTMENT OF THE TREASURY - BUREAU OF ALCOHOL, TOBACCO AND FIREARMS

LICENSE (18 U.S.C. Chapter 44)

In accordance with the provisions of Title I, Gun Control Act of 1968, and the regulations issued thereunder (27 CFR Part 178), you are licensed to engage in the business specified in this license, within the limitations of Chapter 44, Title 18, United States Code, and the regulations issued thereunder, until the expiration date shown. See "WARNINGS" and "NOTICE" on reverse.

DIRECT ATF CORRESPONDENCE TO	CHIEF, NATIONAL LICENSING CENTER ATF, P.O. Box 2994 Atlanta, GA 30301-2994	LICENSE NUMBER: 5-48-173-01-3G-00053 EXPIRATION DATE: July 1, 2003
NAME	UNITED STATES TEST LABORATORY Licensee Address: 3448 N EMPORIA WICHITA, KS 67219-	
TYPE OF LICENSE	01-DEALER IN FIREARMS, OTHER THAN DESTRUCTIVE DEVICES	
CHIEF, NATIONAL LICENSING CENTER		
PURCHASING CERTIFICATION I certify that this is a true copy of a license issued to me to engage in the business specified:  (SIGNATURE OF LICENSEE) The licensee named herein shall use a reproduction of this license to assist a transferor of firearms to verify the identity and the licensed status of the licensee as provided in 27 CFR Part 178. The signature on each reproduction must be an ORIGINAL signature.		
	LICENSEE: MOUSER, RICHARD W UNITED STATES TEST LABORATORY 3448 N EMPORIA WICHITA, KS 67219-	

ATF FORM 9-5310 (11/89) PREVIOUS EDITION IS OBSOLETE

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Williams v. Remington

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Remington® ISS / EtronX Testing

(Integrated Security System)

Per

California D.O.J. Lock Regulations

Proposed addition of Chapter 12.6, §977.10 – §977.90 of Title 11 of the
California Code of Regulations, pursuant to §12087.0 – §12088.9 of the
Penal Code.

TEST REPORT

written by:

Marlin R. Jiranek, II

Marlin R. Jiranek, II
Research Engineer

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October 12, 2001
Remington Project: 241315

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SCOPE

Pursuant to the Aroner-Scott-Hayden Firearms Safety Act of 1999, which added to the California Penal Code section 12087 et. Seq., the California Department of Justice (CA DOJ) was missioned with creating a list of standards and certifying independent test laboratories to test firearms safety devices to this list of standards, which then could become eligible for approval as a CA DOJ certified firearms safety device. Section 12088.1, section a, reads as follows:

12088.1. Effective January 1, 2002:

(a) All firearms sold or transferred in this state by a licensed firearms dealer, including private transfers through a dealer, and all firearms manufactured in this state, shall include or be accompanied by a firearms safety device that is listed on the Department of Justice's roster of approved firearms safety devices.

The purpose of this test was to determine if the current Remington Integrated Security System (ISS) and EtronX product would satisfy the requirements of the CA DOJ for firearms safety devices, which could give Remington a competitive advantage in the state of California, as it's product would not have to be transferred or sold with an additional gun lock. Additionally, if the product were to fail the CA DOJ testing, observation of the testing procedure could be used to develop an engineering change, which may allow the ISS or EtronX keylock to pass the CA DOJ testing.

PROCEDURE

All of the current ISS systems and the EtronX key-switch safety systems were tested per the proposed CA DOJ firearms safety device standards by a certified testing laboratory. In the case of the ISS testing, three firearms and two extra devices were required by the testing laboratory. For the EtronX system, four complete firearms were required for testing. In all cases, WIP product was utilized to minimize the cost incurred by Remington. The following is a list of materials that were required by the testing laboratory to complete the tests:

3 M/700 Rifles
2 M/700 Bolt Assy.
3 M/597 Rifles
2 M/597 Fire-control Assy.
3 M/870 Express Shotguns

2 M/870 Syn. Fire-control Assy.
4 M/11-87 A1 Fire-control Assy.
4 M/710 Rifles
4 M/700 EtronX Rifles

The testing was performed in its entirety by a testing laboratory certified by the CA DOJ. The principle contact information for the testing laboratory is as follows:

United States Test Laboratory

3448 North Emporia Street
Wichita, KS 67219

Phone: (316) 832-1600

FAX: (316) 832-1602

Richard W. Mouser

President

FFL No.: 5-48-173-01-3G-00053

Exp. Date: July 1, 2003

Marlin R. Jiranek, II
Research Engineer

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Representatives from Remington Arms Company, Inc. were present for the testing process. These representatives included Dale Danner, Director of Research & Technology, and Marlin Jiranek, Research Engineer.

SUMMARY

There are ten tests specified in the CA DOJ standards for the certification of firearms safety devices. Each of the tests was performed if it could be applied to the device. The results were that the M/700 passed the testing while all of the other variants failed at least one portion of the test standards. Table 1 presents a summary of the tests and the results of each of the safety devices tested.

Remington ISS Testing per the California DOJ Firearms Safety Device Regulations								
Test No.	Test Description	DOJ Regulation	Results					
			Fire Control Type					
			710 Bolt	700 Bolt	597 Housing	870 Syn. Housing	870 AS Housing	700 Stoner
1	Picking / Manipulation Test	977.45 subsection c.1	Pass	Pass	Pass	Pass	Not Tested	Pass
2	Forced Removal Inspection	977.45 subsection c.2	Pass	Pass	Pass	Pass	Not Tested	Pass
3	Tensile Test	977.45 subsection c.3	N/A	N/A	N/A	N/A	N/A	N/A
4	Shock Test	977.45 subsection c.4	Pass	Pass	FAIL	Pass	Not Tested	FAIL
5	Shackle/Cable Curling Test	977.45 subsection c.5	N/A	N/A	N/A	N/A	N/A	N/A
6	Plug Pulling Test	977.45 subsection c.6	Pass	Pass	Pass	Pass	Not Tested	Pass
7	Plug Torque Test	977.45 subsection c.7	Pass	Pass	Pass	Pass	Not Tested	FAIL
8	Sawing Test	977.45 subsection c.8	FAIL	Pass	FAIL	FAIL	FAIL	N/A
9	Drop Testing (Firearms)	977.45 subsection c.9	Pass	N/A	Pass	Pass	Not Tested	Pass
10	Drop Testing (Enclosures)	977.45 subsection c.10	N/A	N/A	N/A	N/A	N/A	N/A

Table 1. Overall testing results of the CA DOJ Firearms Safety Device testing for each of the Remington devices tested.

The test report generated by the testing laboratory for each of the systems tested is located in the Appendix of this report. As the M/700 passed the required testing, the test laboratory has kept one of the M/700 test rifles for their records (E6415859) and has sent one of the M/700 test rifles onto the CA DOJ for their archives (E6588181). All other test firearms and test components were returned to the Remington R&D facility.

The Results section of this report briefly details all of the tests that were performed and then highlights the failures of each of the models tested.

RECOMMENDATIONS

The next step for the M/700 and M/Seven product is to self certify all standard production M/700 and M/Seven variants of the rifle for sale in the state of California. Appendix E contains a copy of the test lab report of the M/700 results and Appendix F contains a copy of the letter that was sent to the CA DOJ by the test laboratory indicating that the M/700 ISS passed the testing. This self certification is to be done through the California Department of Justice and the list or statement describing the firearms on which device will work should be made through the following contact:

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Research and Development Technical Center
Elizabethtown, KentuckyState of California - Department of JusticeFirearms Division
PO Box 160487
Sacramento, CA 95816-0487Steven Teeters
Phone: (916) 263-0849
FAX: (916) 263-0676

Appendix G contains a FAX transmission that was received by Remington from Steven Teeters on behalf of the CA DOJ with instruction on self-certifying additional firearms for use with the ISS device. The self-certification procedure is currently in process within Remington corporate activities.

There are some potential remedies to address the failures of the other tested safety systems. These possible solutions should be further investigated to validate the concept of each suggestion and to determine as associated cost with implementing the solution across the board. These potential solutions are outlined by firearm model.

EtronX Fire Control

This safety key-switch system failed the Shock Test and the Plug Torque Test and passed the Drop Test on a technicality. A solution to address the failures that occurred in the Shock Test and the Plug Torque Test is to purchase a more robust key-switch to place into the firearm.

During the drop testing, the lock key-switch actually fell out of the stock, exposing the two wires connected to the switch. To address the issue of "hot-wiring" exposed wires, the technicality that allowed the passing of the drop test, there are two possible solutions. The first is to install the switch in a more permanent and secure manner. This may be accomplished by the use of epoxy. The second, and more involved, solution is the placement of a resistive shunt into the key-switch and a change to the software. In this new system, the key-switch would be interpreted by the gun as being in an "off" state if there is no connection or if the connection has no resistance. The system would look for the required resistance to be present that would signal an "on" condition.

Common Fire-Control I.S.S.

This fire control, both in the synthetic and the aluminum models, failed the Sawing Test. This could possibly be remedied by drilling and inserting a 0.9" long hardened steel pin in the fire-control housing just behind the I.S.S. tumbler. The pin would be inserted from the top of the fire-control and would be case hardened to a surface hardness of HR15n 88 minimum. This hardness level is significantly harder than the carbon steel hacksaw blade used in the testing, subsequently, the saw will cut to the pin and not be able to continue through the fire-control housing.

597 Fire-Control I.S.S.

The M/597 ISS device failed the second portion of the Shock Test and the Sawing Test in a similar fashion as the common fire-control. Most likely, the failure in the shock test was caused by debris in the safety channel, although this hypothesis is un-confirmed. A

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potential solution to the Sawing Test would be similar to the solution presented for the common fire-control ISS device and would consist of inserting a hardened pin into the fire-control housing behind the ISS tumbler. This pin may be inserted from the top of the fire-control or possibly from the bottom of the trigger bow. Due to the unique M/597 geometry, this modification may be more difficult to perform in production than the suggested common fire-control modification.

710 Fire-Control I.S.S.

The M/710 I.S.S. device failed the Sawing Test. Most likely, this failure was caused by the hardness of the M/710 I.S.S. tumbler being softer than the steel hacksaw blade. This may possibly be remedied by changing the material and hardness of the M/710 system to mirror that of the M/700 system. This would consist of a material and heat treatment change to MPIF MIM-2200, carburized to a surface hardness of HR15n 88-92 (HRC 55-65) from MPIF MIM-4605, through hardened to a hardness of HRC 42-47.

RESULTS

The Results section of this report is broken down into six sections. The first section provides a description of each of the tests that were performed on the firearms safety devices by the certified testing laboratory. The subsequent sections detail the failures of each of the Remington devices that did not pass all of the testing requirements.

TEST DESCRIPTIONS

- **Picking/Manipulation Test**

During this test, the locking device was manipulated for a period of two minutes each with a "jumbo" paper-clip, a no. 1 sized paper-clip, and a 1.4mm jewelers flathead screwdriver. A time was set for two minutes for each tool and the tester simply tried to "pick" the ISS tumbler or the EtronX keyway for the specified time period.

- **Forced Removal Inspection**

This was not a test at all, but a visual inspection of the firearm safety device and general discussion as to how it could be defeated among several testers at the certified laboratory.

- **Tensile Test**

This test was not performed on any of the devices because it is not possible to grip onto the safety device and apply the required load.

- **Shock Test**

This test was performed by placing the firearm under a drop apparatus with the key-way of the locking device facing upwards. A ¼" flat blade screwdriver bit was then placed

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directly on the keyway. A 2.2-pound weight was dropped onto the screwdriver bit apparatus from a height of 1 meter, five times in succession. After five drops, the safety device was manipulated with a screwdriver in an attempt to overcome the device. The device failed if the firearm could be fired after the Shock Test and manipulation with the screwdriver.

In the case of the trigger block type ISS devices (common and 597), the test was continued by striking the opposite side of the safety device with a punch type tool apparatus in the same manner as was used with the 1/4" flat blade screwdriver bit apparatus. Again, the device would fail if the firearm could be fired after this drop test and manipulation with a screwdriver.

- **Shackle/Cable Cutting Test**

This test was not performed on any of the devices because the safety systems are internal to the firearms and do not have any shackles or cables.

- **Plug Pulling Test**

This test was performed by attempting to drill a hole with a number 20 sized high speed steel drill bit into the keyway of the safety device either 0.75" deep or through the device, whichever is smaller. After the hole is drilled, a size AB12 self-tapping screw is inserted into the hole. A tension force was then applied, up to 225 pounds, on the exposed screw in an attempt to pull the keyway from the safety device. The device would fail if either the keyway was removed and the lock could be manipulated with a small screwdriver to allow the firearm to fire or if the safety device was damaged during the test preparation in such a manner that the device could be manipulated with a screwdriver allowing the firearms to fire.

- **Plug Torque Test**

This test was performed by inserting a small screwdriver bit into the locking keyway of the safety device and then applying a torque load of 89 inch-pounds to the screwdriver bit. The device would fail if the locking mechanism was overcome allowing the firearm to be fired.

- **Sawing Test**

This test was performed by utilizing a standard hacksaw equipped with a standard carbon steel blade (32 teeth / inch) and a ten pound weight strapped to the top of the hacksaw to provide a constant downward force on the blade during the cutting cycle. The number of cutting cycles was limited to 120 cycles, each cycle consisting of one 6-inch stroke forward and one 6-inch stroke rearward. In the case of the ISS devices, as the devices were integral to the firearm, the sawing was done directly on the firearm in an attempt to remove the ISS tumbler. Failure of the device occurred if, within the 120 strokes, the

safety device could be removed or disabled in such a manner that would allow the firearm to fire.

• **Drop Test (Firearms)**

This test was only performed if a live round of ammunition could be loaded into the chamber of the firearm while the safety device was properly installed and engaged. The testing consisted of engaging the firearm safety device, loading a primed case into the chamber of the firearm, closing the chamber, disengaging any external safeties on the firearm, and making the firearm ready to fire. The firearm was then dropped a total of 6 times in five orientations from a height of 1 meter onto a small slab of concrete. The five orientations were:

- (1) Normal firing position; barrel horizontal
- (2) Upside down; barrel horizontal
- (3) Muzzle down, barrel vertical
- (4) Muzzle up, barrel vertical (2 times)
- (5) On either side, barrel horizontal

Failure of the device occurred if, during the course of the drop testing, the firearm discharged the primed case or at the conclusion of the dropping portion of the test the firearm can be discharged without unlocking the safety device.

• **Drop Test (Enclosures)**

This test was not performed on any of the devices because the safety devices do not enclose the firearm.

ETRONX RESULTS

The EtronX product passed all of the tests with the exception of the Shock Test and the Plug Torque Test. A copy of the official report of the results as generated from the testing laboratory is located in Appendix A. While the device passed the Plug Pulling Test and the Drop Testing, these two tests could be subject to interpretation by the CA DOJ. For reference, Figure 1 presents an image of a normal key-switch device currently used in the EtronX product. This particular key-switch is in a prototype M/700 EtronX Hunting rifle, although all of the key-switches are identical components.

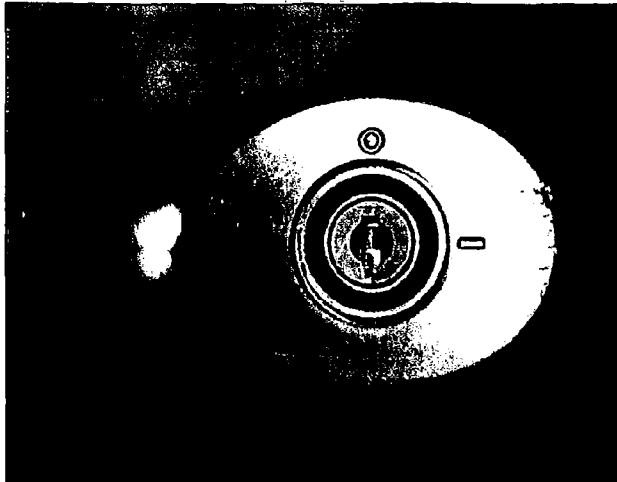


Figure 1. Image of a EtronX key-switch device as used in the current manufacturing process. This specific device is installed on a prototype M/700 EtronX Hunting version.

During the Plug Pulling Test, the keyway plug was pulled from the key-switch assembly with only 30.3 pounds of force. However, because of the design of the switch, the electrical connection cannot be easily established when the keyway is removed. Figure 2 presents an image of the removed keyway after the Plug Pulling Test was completed.

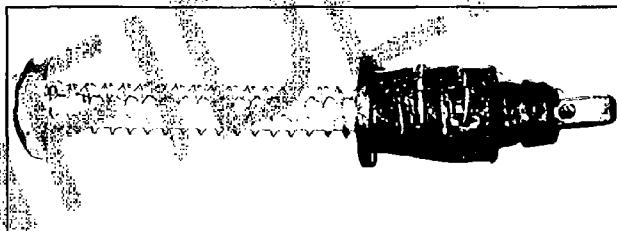


Figure 2. Image of the EtronX keyway after removal during the Plug Pulling Test. Note the small silver ball located near the end of the keyway (adjacent to the synthetic protruding end on the right side of the image).

The key-switch works by having two electrically connected balls in the keyway mechanism which contact mating surfaces to complete the electrical connection when the keyway is turned to the "on" position. When the keyway was removed from the key-switch body, this electrical bridge was also removed and no electrical connection could be established, regardless of the position of the key-switch body. However, it may be possible to establish an electrical connection using a properly sized screwdriver inserted into a specific location in the key-switch body after removal of the keyway, effectively short circuiting the key-switch, allowing the gun to fire.

Figure 3 presents an image of the key-switch with the keyway removed, after completion of the Plug Pulling Test. In this image, the mating electrically conductive surfaces (copper colored) can be seen at the bottom of the key-switch body. If an electrical

connection can be established between these two surfaces, the key-switch can be effectively by-passed.

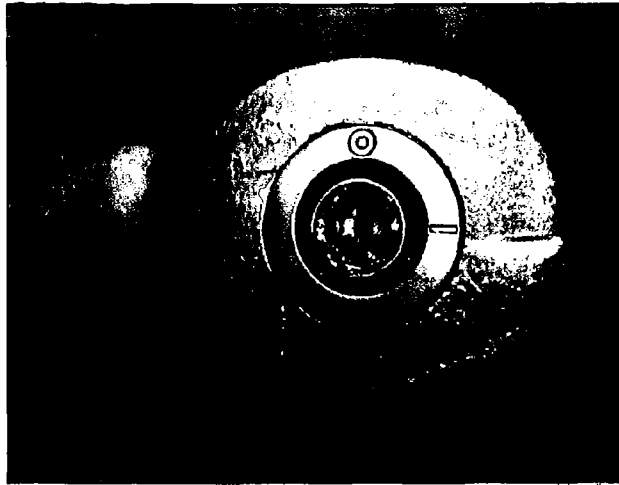


Figure 3. Image of the EtronX key-switch body after removal of the keyway by the Plug Pulling Test procedure.

During the Drop Test, the key mechanism was dislodged from the hand-grip portion of the stock and the wires were exposed. The product passed the test, even though the wires were exposed, because there was no stipulation in the test regulations that would allow the testing laboratory to cut, strip, and twist the wires together, in effect by-passing the key-switch, which would have defeated the key-lock safety device.

EtronX Shock Test Failure

The EtronX key-switch device failed during the shock testing as the 1/4" flat blade screwdriver tip was driven deep into the keyway. After the five impacts, the screwdriver blade was easily turned by hand and the firearm was placed in the ready state, fully capable of firing a loaded round. Figure 4 presents an image of the keyway after the Shock Testing was completed.

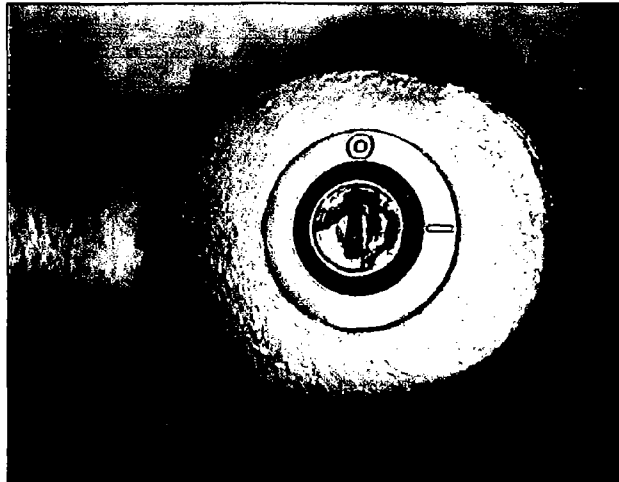


Figure 4. Image of the EtronX key-switch after the shock testing was completed.

EtronX Plug Torque Test Failure

The EtronX key-switch device failed during this testing procedure at a level below 89 inch-pounds. This failure resulted because the key-switch was never intended to withstand this level of torque loading.

COMMON FIRE-CONTROL RESULTS

The synthetic common fire-control (M/870) product passed all of the tests with the exception of the Sawing Test. A copy of the official report of the results as generated from the testing laboratory is located in Appendix B. The Sawing Test was performed on the synthetic and the aluminum versions of the common fire-control. The synthetic common fire-control version tested was a M/870 express fire-control and the aluminum body version was a M/11-87 fire-control.

The heat treatment and resulting hardness of the ISS tumbler accounted for the device doing very well in the testing that required the ISS tumbler to be deformed or manipulated, such as the Shock Test and the Plug Pull Test. While the ISS tumbler is manufactured from a low strength alloy (MIM Iron 2% Ni), it is subsequently case hardened to a surface hardness of HR15n 88-92, which is in excess of HRc 55. This hardness is slightly harder than a screwdriver bit, standard high speed drill bit, and standard carbon steel hacksaw blade.

Figure 5 presents an image of ISS device installed in the fire control after the Shock Test was completed. In this image, indents on the surface of the tumbler can be seen on the long portion of the "J" channel that resulted from the impact of the flat bladed screwdriver bit directly onto the ISS tumbler.

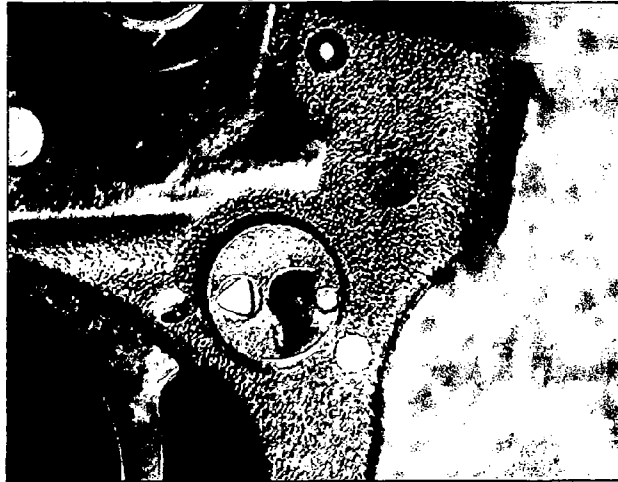


Figure 5. Image of the ISS device after the Shock Test was completed. Note the indentation on the long leg of the "J" channel from the impact with the flat bladed screwdriver bit.

Figure 6 presents an image of the ISS device after the "J" channel was attempted to be drilled for the Plug Pulling Test. The result was that the hardness of the ISS tumbler effectively dulled the drill bit and there was no resulting penetration into the tumbler.



Figure 6. Image of the ISS device after unsuccessful drilling on the "J" channel in preparation for the Plug Pulling Test.

Common Fire-Control Sawing Test Failure

The common fire-control failed the Sawing Test by removal of the ISS tumbler completely from the fire-control housing. This test was performed on the synthetic housing version two times and on the aluminum housing version two times. Out of a total of four tests, the safety device failed three times. One of the cuts was slightly

misplaced on one of the aluminum fire-controls which resulted in the fire control remaining intact after all 120 strokes were used. The two synthetic housing fire-controls failed after 78 and 41 cutting strokes. The aluminum housing fire-control failed after 44 cutting strokes. Figures 7 and 8 present images of the synthetic and aluminum housing ISS devices respectively after failing the Sawing Test.

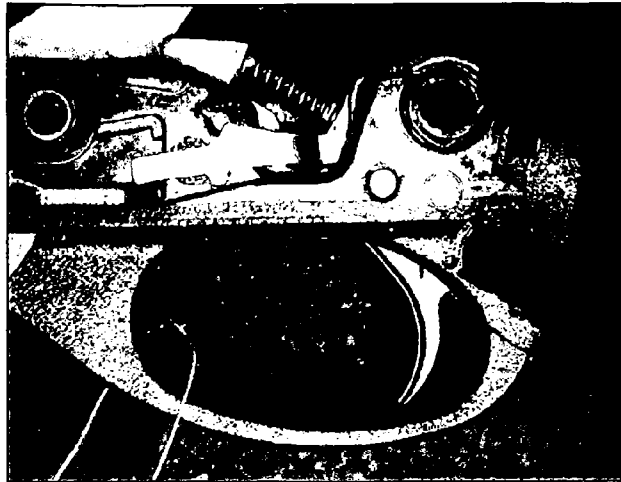


Figure 7. An image of the synthetic housing version of the common ISS safety device after failing the Sawing Test.

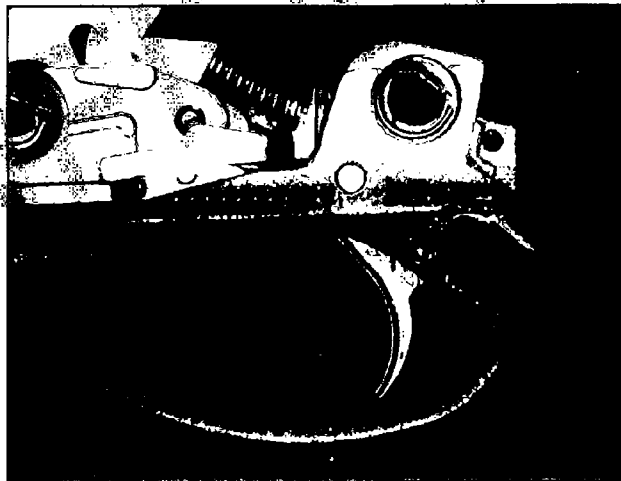


Figure 8. An image of the aluminum housing version of the common ISS safety device after failing the Sawing Test.

M/597 RESULTS

The M/597 fire-control product passed all of the tests with the exception of the Shock Test and the Sawing Test. A copy of the official report of the results as generated from the testing laboratory is located in Appendix C.

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M/597 Shock Test Failure

The M/597 ISS failed the second portion of the Shock Test, in which a rod type tool, similar to a punch tip, was impacted with a two pound weight dropped from a height of 1 meter, five times onto the non-"J" channel side of the I.S.S. tumbler. This action pushed the tumbler partially through the fire-control housing. After the impacts, the tumbler was turned using a standard screwdriver and the firearm could be made to fire.

M/597 Sawing Test Failure

The M/597 ISS failed in a manner consistent with the common fire-control Saw Test failure. The ISS tumbler was completely removed from the fire-control housing using 33 cutting cycles. Figure 9 presents an image of the M/597 housing after the Saw test failure.

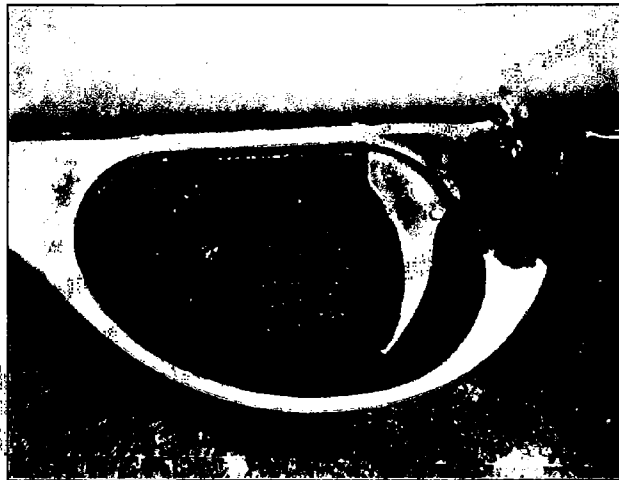


Figure 9. An image of the M/597 housing after the removal of the ISS tumbler during the Saw Test.

M/710 RESULTS

The M/710 product passed all of the tests with the exception of the Sawing Test. A copy of the official report of the results as generated from the testing laboratory is located in Appendix D. While the device passed the plug pulling test, this was most likely due to the lack of new drill bits at the certified testing laboratory at the time of testing. The material and hardness of the M/710 ISS tumbler is different than all of the other ISS devices. While the material is suitable for the safe operation of the ISS device, it is softer than a drill bit or a standard carbon steel hacksaw blade. The M/710 ISS tumbler may be as much as 12 HRC points softer than the corresponding M/700 tumbler.

Table 2 presents the materials, heat treatments, and final part hardness' of all of the ISS device tumblers. It should be noted that the material designation "MIM Iron 2% Ni"

contains no material specifications for use outside of the Remington Arms Company and that this designation should either be re-stated as the industry standard material (MPIF MIM-2200) or a Remington material specification should be created which contains the material requirements and limits.

REMINGTON I.S.S. DEVICE MATERIAL SPECIFICATIONS					
MODEL	PART NAME	DRAWING NO.	MATERIAL	HEAT TREATMENT	HARDNESS
Common	Safety - Right Hand	D-201212	MIM Iron 2% Ni	Carburize 0.7% C. Potential	HR15n 88-92
700 / Seven	Lock Tumbler Blank	D-210222	MIM Iron 2% Ni	None Specified	None Specified
700 / Seven	Lock Tumbler	C-109540	MIM Iron 2% Ni	Carburize 0.7% C. Potential	HR15n 88-92
597	Safety - Right Hand	D-201216	MIM Iron 2% Ni	Carburize 0.7% C. Potential	HR15n 85-91
710	Lock Tumbler Blank	D-300420	MPIF MIM-4605	Oil Quench & Temper	HRc 42-47 or Equivalent

NOTE: MIM Iron 2% Ni should be re-designated to the corresponding MPIF Standard: MPIF MIM-2200

Table 2. Listing of all of the ISS device tumbler materials, heat treatments, and final part hardness'.

M/710 Sawing Test Failure

The M/710 failed the Sawing Test because the saw blade cut through the I.S.S. tumbler and allowed the manipulation of the I.S.S. plunger and tumbler using a standard flat blade screwdriver. In this manner, the remaining portion of the tumbler was easily rotated and the rifle allowed to be placed in the fire state, thus failing the test. Figure 10 presents a top image of the failed bolt assembly after the Saw Test was completed. Figure 11 presents an image of the side view, showing the exposed "I" channel and I.S.S. plunger after the Saw Test was completed. It is suspected that this failure would not have occurred if the tumbler was hardened to a higher hardness similar to the M/700 tumbler.



Figure 10. Top view image of the failed M/710 ISS system after completion of the Saw Test.

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Elizabethtown, Kentucky

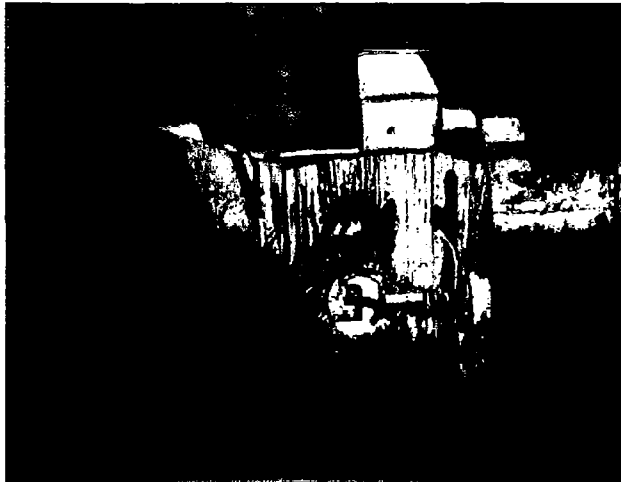


Figure 11. Side view image of the failed M/710 ISS system after the Saw Test was completed. The ISS plunger and tumbler section can be seen in this image.

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APPENDIX A
ETRONX TEST RESULTS - 2 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 9/26/01
Via: UPS
Returned Via: UPS

Record No: FSD092
Test Date: 10/2/01
Customer: Remington

Sample
Manufacturer: Remington
Lock Type: Internal/Integrated
Key Type: Key-Other
Model: 700 EtronX
Serial/Lot: N/A
Test Spec.: California Title 11, Div. 1, Ch. 12.8

Sample Dimensions
Body Height: N/A in.
Body Width: N/A in.
Body Depth: N/A in.
Shackle/Cable Diameter: N/A in.
Shackle/Cable Length: N/A in.
Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearm safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearm safety device to determine if the firearm safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
3	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearm safety device locking components.

Without interfering or giving support to either the mating locking components of the firearm safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearm safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches \pm 0.4 inches five times to the top of

the firearm safety device body designed to engage and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of

39.4 inches \pm 0.4 inches five times to the top of the firearm safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.	blade	5	Fail
	Firearm safety device tested without firearm.	rod	-	N/A

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APPENDIX A
ETRONX TEST RESULTS - 2 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

Record No.: F8D082

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearm safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm. Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size #812 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm. Firearm safety device tested without firearm.	30.29	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearm safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbf.in.)	Results (Pass/Fail)
4	X Firearm safety device tested with firearm. Firearm safety device tested without firearm.	89	Fail

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hand saw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand. One cutting cycle is defined as the combination of one 8-inch forward and one 8-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm. Firearm safety device tested without firearm.	-	N/A

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
2	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	Pass
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or action, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

Firearms Used: Remington, model 700 EtronX, #1: EG0001XX (22-250; 26" barrel), #2: XC13XX (30-06; 24" barrel), #3: EG0005XX (243; 26" barrel), #4: S62839XX (22-250; 26" barrel).

Sample Description: Internal electronic locking mechanism consisting of a lock cylinder at the base of grip.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

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United States Test Laboratory Phone 316-832-1800
3448 N. Emporia, Wichita, KS 67219 Fax 316-832-1602

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APPENDIX B
M/870 TEST RESULTS - 4 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 9/26/01
Via: UPS
Returned Via: UPS

Record No: FSD094
Test Date: 10/2/01
Customer: Remington

Sample

Manufacturer: Remington
Lock Type: Internal
Key Type: Key-Other
Model: 870
Serial/Lot: N/A
Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
Body Width: N/A in.
Body Depth: N/A in.
Shackle/Cable Diameter: N/A in.
Shackle/Cable Length: N/A in.
Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearm safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components.

without fastening or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearm safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of

the firearm safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool.

Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of

39.4 inches + 0.4 inches five times to the top of the firearm safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	5	Pass

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M/870 TEST RESULTS - 4 PAGES

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Record No.: F8D084

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearm safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearm safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbf.in.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand. One cutting cycle is defined as the combination of one 8-inch forward and one 8-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	78	Fail
3	Firearm safety device tested without firearm.	41	Fail

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
2	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	Pass
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or trigger, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(6)(7) Test could not be completed due to size and hardness of cylinder material.

Firearm Used: #1: C91868XX (12 ga.; 28" barrel), #2: C87488XX (12 ga.; 28" barrel), #3: C89415XX (12 ga.; 26" barrel).

Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard behind trigger.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold

United States Test Laboratory

Phone 316-832-1600

3448 N. Emporia, Wichita, KS 67219

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APPENDIX B
M/870 TEST RESULTS - 4 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 10/3/01
Via: Fed Ex
Returned Via: UPS

Record No: FSD097
Test Date: 10/3/01
Customer: Remington

Sample
Manufacturer: Remington
Lock Type: Internal
Key Type: Key-Other
Model: 870
Serial/Lot: N/A
Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions
Body Height: N/A in.
Body Width: N/A in.
Body Depth: N/A in.
Shackle/Cable Diameter: N/A in.
Shackle/Cable Length: N/A in.
Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	jumbo paper clip	-	N/A
	Firearm safety device tested without firearm.	#1 paper clip	-	N/A
		1.4 mm screwdriver	-	N/A

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
N/A	Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	N/A
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearms safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches \pm 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches \pm 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	blade	-	N/A
	Firearm safety device tested without firearm.	rod		

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Research Engineer

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Remington Project: 241315

ET47609

Remington Arms Company, Inc.

APPENDIX B
M/870 TEST RESULTS - 4 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

Record No.: FSD097

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearm safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.			N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.		N/A

(7) Plug Torque Test

This test is designed to test the ability of a firearm safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 80 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbf.in.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.		N/A

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 8-inch forward and one 8-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	44	Fail

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
N/A	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	N/A
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	N/A
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	N/A
	(E) On either side with the barrel horizontal.	N/A
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	N/A

REMARKS/NOTES

(B) Sample tested at cylinder lock on trigger guard behind trigger.

Firearm Used: Remington, model 870, 12 ga., 28" barrel, S/N 091888XX.

Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard (aluminum) behind trigger.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold	United States Test Laboratory	Phone	318-832-1800
	3448 N. Emporia, Wichita, KS 67219	Fax	318-832-1602

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Remington Arms Company, Inc.

APPENDIX C
M/597 TEST RESULTS - 2 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 9/26/01
Via: UPS
Returned Via: UPS

Record No: FSD095
Test Date: 10/2/01
Customer: Remington

Sample

Manufacturer: Remington
Lock Type: Internal
Key Type: Key-Other
Model: 597
Serial/Lot: N/A
Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
Body Width: N/A in.
Body Depth: N/A in.
Shackle/Cable Diameter: N/A in.
Shackle/Cable Length: N/A in.
Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearm safety device locking components.

Without interfering or giving support to either the mating locking components of the firearm safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearm safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of

the firearm safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool.

Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of

39.4 inches + 0.4 inches five times to the top of the firearm safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	5	Fail

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Remington Arms Company, Inc.

APPENDIX C
M/597 TEST RESULTS - 2 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

Record No.: FSD095

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbf/in.)	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.		Pass

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit by hand. One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	33	Fail

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	Pass
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(8)(7) Test could not be completed due to size and hardness of cylinder material.
Firearm Used: Remington, model 597, #1: 27889XX (22 LR; 20" barrel), #2: 27948XX (22 LR; 20" barrel), #3: 27954XX (22 LR; 20" barrel).
Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard behind trigger.
This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

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Remington Arms Company, Inc.

APPENDIX D
M/710 TEST RESULTS - 2 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 10/3/01
Via: Fed Ex
Returned Via: UPS

Record No: FSD086
Test Date: 10/3/01
Customer: Remington

Sample
Manufacturer: Remington
Lock Type: Internal
Key Type: Key-Other
Model: 710
Serial/Lot: N/A
Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions
Body Height: N/A in.
Body Width: N/A in.
Body Depth: N/A in.
Shackle/Cable Diameter: N/A in.
Shackle/Cable Length: N/A in.
Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearm safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearm safety device to determine if the firearm safety device is such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
2	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearm safety device locking components.

Without interfering or giving support to either the mating locking components of the firearm safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearm safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches \pm 0.4 inches five times to the top of the firearm safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches \pm 0.4 inches five times to the top of the firearm safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	-	N/A

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Remington Arms Company, Inc.

APPENDIX D
M/710 TEST RESULTS - 2 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

Record No.: FSD096

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearm safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.			N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size A812 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
4	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.		Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearm safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 3/8 inch) that will fit into the keyway, so that a torque load of 69 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbf.in.)	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.		Pass

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 8-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	120	Fail

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
4	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	Pass
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(B)(7) Test could not be completed due to size and hardness of cylinder material.

Firearms Used: Remington, model 710, #2: 71026290 (270; 22" barrel), #3: 71025667 (270; 22" barrel), #4: 71026291 (270; 22" barrel).

Sample Description: Internal locking mechanism consisting of a cylinder lock at bolt.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold

United States Test Laboratory Phone 916-832-1600
3448 N. Emporia, Wichita, KS 67219 Fax 316-832-1602

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Remington Arms Company, Inc.

APPENDIX E
M/700 TEST RESULTS - 7 PAGESResearch and Development Technical Center
Elizabethtown, Kentucky

October 3, 2001

Remington Arms Company
870 Remington Dr.
Madison, NC 27026

Dear Mr. Danner:

As per your request, United States Test Laboratory (USTL) conducted Firearm Safety Device test(s) as required by California Penal Code Sections 12088 and Regulation Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations.

The results of those tests are outlined below:

Model	Results
700	Pass

The test results indicate that the samples submitted met the requirements of the test specifications as noted above.

This conclusion is based on the samples tested and should not be interpreted as an assurance that the quality and/or performance of devices of the same or similar design or materials will meet these requirements. United States Test Laboratory does not certify or endorse this product. USTL emphasizes that Firearm Safety Devices have limitations and note that any such device can be defeated through the utilization of time, energy and tools. USTL is not liable for any injury, death or property damage as a result of the use or misuse of this product.

A copy of the test report and one sample has been forwarded to the California Department of Justice as required. United States Test Laboratory has also retained one sample for its archive.

Should you have any questions, please feel free to contact us.

Sincerely,

Richard Mouser
President

Attachment: California Compliance Test Report

Marlin R. Jiranek, II
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Remington Arms Company, Inc.

APPENDIX E
M/700 TEST RESULTS - 7 PAGESResearch and Development Technical Center
Elizabethtown, KentuckyCALIFORNIA DEPARTMENT OF JUSTICE
FIREARMS SAFETY DEVICE
COMPLIANCE TEST REPORT

FD 033 (Rev. 3-01)



The Certified Firearms Safety Device Laboratory identified below has completed testing required by Penal Code Sections 12088 and Regulation Section 977.45, Chapter 12.5, Division 1, Title 11, California Code of Regulations is submitting this Compliance Test Report as required by Regulation Section 977.46, Chapter 12.6, Division 1, Title 11, California Code of Regulations. The reference number/identifier should refer specifically to the testing of the named firearms safety device model, not to the laboratory in general. The number/identifier must be noted in the space provided on each page of this Report.

Laboratory Information

Laboratory Reference Number/Identifier FSD093 Date Submitted: 10/3/01Certified Firearms Safety Device Laboratory: United States Test LaboratoryAddress: 3448 N. Emporia
Wichita, KS 67219

Name and Telephone Number of the DOJ-Certified Laboratory staff person to be contacted regarding this report:

Richard W. Mouser, 316-832-1600Date of Test: 10/2/01 Time of Test: 1000-1200Location(s) of Test, including any off-site locations: USTL

Name(s) and Title(s) of laboratory staff who conducted and/or performed the required testing:

B. Arnold, D. Newman and R. Mouser

Name(s) and business affiliations of all persons who have witnessed any part of the testing procedure:

Dale Danner and Marlin Jiranek, II of Remington Arms CompanyMarlin R. Jiranek, II
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BARBER - 5.22.06r0009483
Williams v. Remington

COMPLIANCE TEST REPORT
LABORATORY REFERENCE NUMBER:
FD 033 (Rev. 3-01)

FSD093

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FIREARMS SAFETY DEVICE MODEL INFORMATION:

Firearms Safety Device Type (check one): External: _____ Internal: ☒ Integral: _____Make: RemingtonModel: 700Construction Material(s) (e.g., steel, alloy, etc.): Steel

Tested on which firearm(s)

Type: Handgun: _____ Revolver: _____ Pistol: _____
Longgun: _____ Shotgun: _____ Rifle: ☒
Other: _____Firearms Make(s) and Model(s): Remington Model 700Caliber(s): 22-250, 270 Barrel Length(s): 26", 22"

PRIMED CASE INFORMATION

Primed Case Used: _____ Manufacturer: N/A
Primer: N/A☒ No primed case was used. (When firearms safety device is properly installed, firearm is incapable of accepting cartridges)Marlin R. Jiranek, II
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Remington Arms Company, Inc.

APPENDIX E
M/700 TEST RESULTS - 7 PAGESResearch and Development Technical Center
Elizabethtown, KentuckyCOMPLIANCE TEST REPORT
LABORATORY REFERENCE NUMBER: FSD083
FD 033 (Rev. 3-01)

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FIREARMS SAFETY DEVICE MANUFACTURER OR DEALER INFORMATION

Firearms Safety Device Submitted by: Remington Arms CompanyAddress: 870 Remington Dr., Madison, NC 27025Country: USAContact Person: Dale DannerPhone Number: 270-768-7628

TEST RESULTS

The four firearms safety devices have passed the test as defined in Regulations Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations. With a check mark, indicate that the firearms safety device passed a specific test. If a test was not applicable, indicate so with N/A.

☒ (1) Picking or manipulation test☒ (2) Forced removal inspection☐ N/A (3) Tensile test☒ (4) Shock test☐ N/A (5) Shackle or cable cutting test☒ (6) Plug pulling test☒ (7) Plug torque test☒ (8) Sawing test☐ N/A (9) Drop test

* See attached report.

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Remington Arms Company, Inc.

APPENDIX E
M/700 TEST RESULTS - 7 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

COMPLIANCE TEST REPORT

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LABORATORY REFERENCE NUMBER: FSD093

FD 633 (Rev. 3-01)

Firearms Safety Device Standards

The tested firearms safety device meets the standards in Regulation Section 977.44, Chapter 12.6, Division 1, Title 11, California Code of Regulations.

(a) The firearms safety device is of a design that will not allow its removal or deactivation except by utilizing a key, combination, or other unique method as intended by the manufacturer to allow access only authorized users. (Please indicate locking system)

_____ (1) If a combination locking system, there are a minimum of 1,000 possible combinations consisting of a minimum of three numbers, letters, or symbols per combination.

X (2) If a key locking system, the key locking system shall be unique to the manufacturer's firearms safety device(s)).

_____ (3) Other: _____

(b) The firearms safety device renders the firearm inoperable (unable to fire) while the firearms safety device is properly installed.

(c) The firearms safety device functions by at least one of the following methods (please indicate all applicable methods):

X (1) By blocking travel of the trigger, striker, firing pin, or hammer.

_____ (2) By preventing the action or cylinder from closing.

_____ (3) By preventing the chamber(s) from accepting or holding a cartridge.

_____ (4) By preventing access to the firearm.

(d) The firearms safety device is capable of repeated use.

X The tested device meets all of the above standards.

I declare under penalty of perjury according to the laws of the State in which this report was executed that all statements made in this report and Attachment A are true and complete.

Signature: Richard W. MouserName/Title (Printed): Richard W. Mouser, PresidentDate: 10-3-01

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Remington Arms Company, Inc.

APPENDIX E
M/700 TEST RESULTS - 7 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 9/29/01
Via: UPS
Returned Via: UPS

Record No: F80063
Test Date: 10/2/01
Customer: Remington

Sample
Manufacturer: Remington
Lock Type: Internal
Key Type: Key-Other
Model: 700
Serial/Lot: N/A
Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions
Body Height: N/A in.
Body Width: N/A in.
Body Depth: N/A in.
Shackle/Cable Diameter: N/A in.
Shackle/Cable Length: N/A in.
Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components.

Without tilting or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lb.)	Results (Pass/Fail)
N/A	X Firearm safety device tested with firearm.	-	N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches ± 0.4 inches five times to the top of

the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of

39.4 inches ± 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	-	N/A

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October 12, 2001
Remington Project: 241315

ET47620

Remington Arms Company, Inc.

APPENDIX E
M/700 TEST RESULTS - 7 PAGES

Research and Development Technical Center
Elizabethtown, Kentucky

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 9/28/01
Via: UPS
Returned Via: UPS

Record No: FSD093
Test Date: 10/2/01
Customer: Remington

Sample
Manufacturer: Remington
Lock Type: Internal
Key Type: Key-Other
Model: 700
Serial/Lot: N/A
Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions
Body Height: N/A in.
Body Width: N/A in.
Body Depth: N/A in.
Shackle/Cable Diameter: N/A in.
Shackle/Cable Length: N/A in.
Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearms safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without twisting or pulling applied to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	X Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches \pm 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches \pm 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	-	N/A

Page 1 of 2

Marlin R. Jiranek, II
Research Engineer

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October 12, 2001
Remington Project: 241315

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Remington Arms Company, Inc.

APPENDIX E
M/700 TEST RESULTS - 7 PAGESResearch and Development Technical Center
Elizabethtown, Kentucky

Record No.: F8D083

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	-	N/A
	Firearm safety device tested without firearm.	-	-	

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	-	Pass
	Firearm safety device tested without firearm.	-	

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 60 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbf.in.)	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.	-	Pass
	Firearm safety device tested without firearm.	-	

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	120	Pass
	Firearm safety device tested without firearm.		

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
N/A	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	N/A
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	N/A
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	N/A
	(E) On either side with the barrel horizontal.	N/A
	(F) Exposed hammer or trigger, otherwise on the rearmost point of the weapon.	N/A

REMARKS/NOTES(6)(7) Test could not be completed due to size and hardness of cylinder material.
Firearms Used: Remington, model 700, #1: E66794XX (22-250; 26" barrel), #2: E64156XX (270; 22" barrel), #3: E65881XX (270; 22" barrel).

Sample Description: Internal locking mechanism consisting of a cylinder lock at bolt.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold
United States Test Laboratory
3448 N. Emporia, Wichita, KS 67219
Phone 316-832-1800
Fax 316-832-1602

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Marlin R. Jiranek, II
Research EngineerPage 32 of 32
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Remington Project: 241315

ET47622

Remington Arms Company, Inc.

APPENDIX F
LETTER FROM TEST LAB TO CA DOJ - 3 PAGESResearch and Development Technical Center
Elizabethtown, Kentucky

Dale R. Danner
Remington Arms Company, Inc.
R & D Technical Center
315 W. Ring Road
Elizabethtown, KY 42701-9318

October 4, 2001

Dear Mr. Danner:

In accordance with your instructions, United States Test Laboratory, conducted a Firearm Safety Device Test of Remington, Models: 870, 700 EtronX, 710, and 597, which were received on 9/26 and 10/3/01. The results of this test are detailed below.

During the Shock Test of models 700 EtronX and 597 the locking mechanism disengaged after manipulation with a 1/4" screwdriver subsequent to being impacted with 5 drops from a chucked blade-type tool (model 700 EtronX) and chucked steel rod tool (model 597).

During the Plug Torque Test of model 700 EtronX the locking mechanism disengaged while attempting to obtain a torque load of 89 in/lbs.

During the Sawing Test of models 597, 870, and 710 the locking mechanism disengaged after the lock housing was removed from the firearm in 33 cycles (model 597-trigger guard), 78 and 41 cycles (model 870-trigger guard) and 120 cycles (model 710-bolt).

This information is provided in addition to the Firearm Safety Device Test Summary in an effort to more thoroughly assist you in understanding the manner in which the Firearm Safety Device performed.

Sincerely,

Branden M. Arnold
Lab Technician

Marlin R. Jiranek, II
Research Engineer

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October 12, 2001
Remington Project: 241315

ET47623

Remington Arms Company, Inc.

APPENDIX F

Research and Development Technical Center

LETTER FROM TEST LAB TO CA DOJ - 3 PAGES

Elizabethtown, Kentucky



California Dept. of Justice
Ms. Lesa Saville
PO Box 160487
Sacramento, CA 95816

October 4, 2001

Dear Ms. Saville,

Enclosed you will find a Firearms Safety Device (Remington Model 700 Rifle) that has successfully completed testing at our laboratory. In the accompanying reporting form provided by your agency you will see the test that have been performed by USTL on this particular Firearms Safety Device. If after your inspection you find other test that could or should have been performed, please let us know.

In addition to the rifle enclosed, you will find part of the bolt assembly that includes the FSD locking assembly. For information purposes, the enclosed assembly is made of stainless steel with a carbon steel lock assembly, where the assembly in the rifle is carbon steel with a carbon steel lock assembly. It is our opinion that the locking assembly is made of the same material (carbon steel) and does not require a separate test since the stainless steel portion of the bolt assembly is not an integral portion of the FSD.

If after your inspection, you have any questions or concerns please contact us.

The make/model tested was:

Remington Model 700 center fire rifle.

If we can be of any assistance, please let us know.

Sincerely,

Richard W. Mouser
President

Cc: Remington Arms Co.

Marlin R. Jiranek, II
Research Engineer

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October 12, 2001
Remington Project: 241315

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Remington Arms Company, Inc.

APPENDIX F
LETTER FROM TEST LAB TO CA DOJ - 3 PAGESResearch and Development Technical Center
Elizabethtown, Kentucky

September 3, 2001

Attachment "A"

* The "plug pull" test was attempted, however the keyway slot could not be drilled with a #20 drill bit per the test requirement due to the hardness of the keyway assembly. Therefore a screw could not be inserted to attempt the plug pull portion of the test. We interpret this as a "pass" for this portion of the test. Should you have a different opinion after viewing the FSD, please advise.

* The "plug torque" test was attempted, however the keyway slot was too narrow to insert a screwdriver that could withstand 89 inch pounds of force. While attempting to deliver the required load, the screwdriver failed before the full load could be applied. We interpret this as a "pass" for this portion of the test. Should you have a different opinion after viewing the FSD, please advise.

Marlin R. Jiranek, II
Research EngineerPage 35 of 35
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Remington Project: 241315

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Remington Arms Company, Inc.

APPENDIX G
FAX FROM CA DOJ - 3 PAGESResearch and Development Technical Center
Elizabethtown, Kentucky

10/15/2001 14:11

DEPT OF JUSTICE FIREARMS DEPT + 8270737576

NO. 474 06

DILL LOCKYER
Attorney GeneralState of California
DEPARTMENT OF JUSTICE

FAX TRANSMISSION COVER SHEET

IMPORTANT/CONFIDENTIAL: This communication is intended only for the use of the individual or entity to which it is addressed. This message contains information from the State of California, Attorney General's Office, which may be privileged, confidential, and exempt from disclosure under applicable law. If the reader of this communication is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited.

DATE: 10/15/01 TIME: 1:55 PM NO. OF PAGES: 3
(INCLUDING COVER SHEET)

TO:

NAME: Dale Danner
OFFICE: Remington Arms Company
LOCATION:
FAX NO: 270-737-9576 PHONE NO:

FROM:

NAME: Steven Testers
OFFICE: Firearms Division
LOCATION: P.O. Box 180487, Sacramento, CA 95816-0487
FAX NO: 916-263-0676 PHONE NO: 916-263-0849

MESSAGE/INSTRUCTIONS

Dear Mr. Danner:

When completing the Department of Justice Firearms Safety Device Listing Request, if you decide to provide a list of firearms that your device can be properly installed and used with, the list must be submitted using a standardized Excel spreadsheet template. The template will be provided to you upon request, and the completed spreadsheet should be returned via email. Please email your request or completed spreadsheets to steven.testers@doj.ca.gov.

Thank you!

PLEASE DELIVER AS SOON AS POSSIBLE!
FOR ASSISTANCE WITH THIS FAX, PLEASE CALL THE SENDER

Marlin R. Jiranek, II
Research EngineerPage 36 of 36
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Remington Project: 241315

ET47626

Remington Arms Company, Inc.

APPENDIX G
FAX FROM CA DOJ - 3 PAGESResearch and Development Technical Center
Elizabethtown, Kentucky

10/15/2001 14:11

DEPT OF JUSTICE FIREARMS DEPT + 8270737576

NO. 474

BILL LOCKYER
Attorney GeneralState of California
DEPARTMENT OF JUSTICEFIREARMS DIVISION
P.O. Box 149467
SACRAMENTO, CA 95816-0467
Phone: (916) 227-3703
Facsimile: (916) 263-0676

October 15, 2001

Via Facsimile Transmission (270)731-9576Dale Danner
Remington Arms Company
870 Remington Drive
Madison, NC 27025RE: California Firearms Safety Device Certification

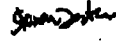
Dear Mr. Danner:

The Firearms Division has received the Compliance Test Report and firearms safety device for the model indicated on the enclosed Listing Request. Pursuant to section 977.85, Title 11, Division 1, Chapter 12.6, of the California Code of Regulations, this firearms safety device will be added to the Roster of Approved Firearms Safety Devices.

There is a certification section at the bottom of each Listing Request. To ensure that the Roster of Certified Firearms Safety Devices contains correct information regarding your firearms safety device, please review the Listing Request, and answer the questions for the model indicated on each certification form. In addition, if the firearms safety device can be properly installed and used on firearms other than the firearm(s) that was used for testing, you may provide a listing of those firearms or the dimensions of firearms with characteristics that will allow your device to perform in a safe and proper manner. For example: you may specify a make and model of firearm; specific or range of caliber; types (pistol, revolver, shotgun, rifle, etc.); or firearms with a trigger guard that is X-inches long and X-inches wide, etc. The information regarding the firearm(s) on which the firearms safety device was tested and the additional firearm(s) for which you certify that the firearms safety device can be properly used will be included on the Roster of Certified Firearms Safety Devices. The certification must be completed by a representative of the company, signed, and returned to the Division.

If you have any questions, please call me at (916) 263-0849

Sincerely,


STEVEN TENTERS, ANALYST
Firearms Information Services Section
For **BILL LOCKYER**
Attorney GeneralMarlin R. Jiranek, II
Research EngineerPage 37 of 37
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Remington Arms Company, Inc.

APPENDIX G
FAX FROM CA DOJ - 3 PAGESResearch and Development Technical Center
Elizabethtown, Kentucky

10/15/2001

14:11

DEPT OF JUSTICE FIREARMS DEPT + 82787379376

NO. 474 DE

**Department of Justice (DOJ)
Firearms Safety Device Listing Request**

Report ID:	22	F&D Model:	700
Lab Ref #:	FSD083	Lock Type:	Remington
		F&D Make:	Remington
		F&D Type:	Internal
Firearm Make:	Remington	Firearm Model:	700
Caliber:	28-250, 270	Barrel Length:	28", 22"
		Primer:	N/A

**Department of Justice
Firearms Safety Device Manufacturer/Dealer
Model Designation Certification**

Were the firearms safety devices for the above referenced model in any way modified from those that are currently in stock and/or being sold by retail outlets in California?

Yes ___ No ___ (If "Yes," please explain)

If the firearms safety device can be properly installed and used on firearms other than the firearm(s) that was used for testing, you may provide a listing of those firearms or the dimensions of firearms with characteristics that will allow your device to perform in a safe and proper manner. For example: you may specify a make and model of firearm; specific or range of calibers, types (pistol, revolver, shotgun, rifle, etc.), or firearms with a trigger guard that is X-inches long and X-inches wide, etc. The division will review the installation of the device and the firearm on which the device will be installed, and if the installation method is the same as what was tested the device can be extended DOJ-certification. The information regarding the firearm(s) on which the firearms safety device was tested and the additional firearm(s) the division has approved for use will be included on the Roster of Firearms Safety Devices Certified for Sale. The certification must be completed by a representative of the company, signed, and returned to the division. Attach additional copies of this sheet if necessary.

I declare under penalty of perjury according to the laws of the state in which this certification is executed that all statements made herein are true and complete.

Signature: _____
Name/Title (Printed): _____
Date: _____

Phone number(s) that you would like posted on the Internet with your product certification
(optional): _____
Toll Free: _____

Marlin R. Jiranek, II
Research EngineerPage 38 of 38
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Remington Project: 241315

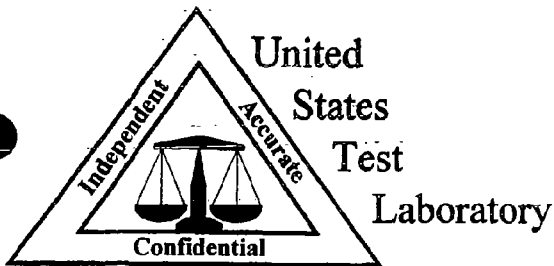
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Appendix 4
M700 Certification

ET47629



3448 N. Emporia 316-832-1600
Wichita, KS. 67219 Fax 316-832-1602

October 3, 2001

Remington Arms Company
870 Remington Dr.
Madison, NC 27025

Dear Mr. Danner:

As per your request, United States Test Laboratory (USTL) conducted Firearm Safety Device test(s) as required by California Penal Code Sections 12088 and Regulation Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations.

The results of those tests are outlined below:

Model	Results
700	Pass

The test results indicate that the samples submitted met the requirements of the test specifications as noted above.

This conclusion is based on the samples tested and should not be interpreted as an assurance that the quality and/or performance of devices of the same or similar design or materials will meet these requirements. United States Test Laboratory does not certify or endorse this product. USTL emphasizes that Firearm Safety Devices have limitations and note that any such device can be defeated through the utilization of time, energy and tools. USTL is not liable for any injury, death or property damage as a result of the use or misuse of this product.

A copy of the test report and one sample has been forwarded to the California Department of Justice as required. United States Test Laboratory has also retained one sample for its archive.

Should you have any questions, please feel free to contact us.

Sincerely,

Richard Mouser
President

Attachment: California Compliance Test Report

ET47630



CALIFORNIA DEPARTMENT OF JUSTICE FIREARMS SAFETY DEVICE COMPLIANCE TEST REPORT

FD 033 (Rev. 3-01)



The Certified Firearms Safety Device Laboratory identified below has completed testing required by Penal Code Sections 12088 and Regulation Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations is submitting this Compliance Test Report as required by Regulation Section 977.46, Chapter 12.6, Division 1, Title 11, California Code of Regulations. The reference number/identifier should refer specifically to the testing of the named firearms safety device model, not to the laboratory in general. The number /identifier must be noted in the space provided on each page of this Report.

Laboratory Information

Laboratory Reference Number/Identifier FSD093 Date Submitted: 10/3/01

Certified Firearms Safety Device Laboratory United States Test Laboratory

Address: 3448 N. Emporia
Wichita, KS 67219

Name and Telephone Number of the DOJ-Certified Laboratory staff person to be contacted regarding this report:

Richard W. Mouser, 316-832-1600

Date of Test: 10/2/01 Time of Test: 1000-1200

Location(s) of Test, including any off-site locations: USTL

Name(s) and Title(s) of laboratory staff who conducted and/or performed the required testing:

B. Arnold, D. Newman and R. Mouser

Name(s) and business affiliations of all persons who have witnessed any part of the testing procedure:

Dale Danner and Marlin Jiranek, II of Remington Arms Company

ET47631

COMPLIANCE TEST REPORT

Page 2

LABORATORY REFERENCE NUMBER:

FSD093

FD 033 (Rev. 3-01)

FIREARMS SAFETY DEVICE MODEL INFORMATION:

Firearms Safety Device Type (check one): External: _____ Internal: ☒ Integral: _____Make: RemingtonModel: 700Construction Material(s) (e.g., steel, alloy, etc.): Steel

Tested on which firearm(s)

Type: Handgun: _____ Revolver _____ Pistol _____
Longgun: Shotgun _____ Rifle ☒
Other: _____

Firearms Make(s) and Model(s): Remington Model 700Caliber(s): 22-250, 270 Barrel Length(s): 26", 22"

PRIMED CASE INFORMATION

Primed Case Used: Manufacturer: N/APrimer: N/A

☒ No primed case was used. (When firearms safety device is properly installed, firearm is incapable of accepting cartridges)

ET47632

COMPLIANCE TEST REPORT
LABORATORY REFERENCE NUMBER: FSD093

Page 3

FD 033 (Rev. 3-01)

FIREARMS SAFETY DEVICE MANUFACTURER OR DEALER INFORMATION

Firearms Safety Device Submitted by: Remington Arms CompanyAddress: 870 Remington Dr., Madison, NC 27025Country: USAContact Person: Dale DannerPhone Number: 270-769-7628

TEST RESULTS

The four firearms safety devices have passed the test as defined in Regulations Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations. With a check mark, indicate that the firearms safety device passed a specific test. If a test was not applicable, indicate so with N/A.

☒ (1) Picking or manipulation test☒ (2) Forced removal inspection☐ N/A (3) Tensile test☒ (4) Shock test☐ N/A (5) Shackle or cable cutting test☒ (6) Plug pulling test☒ (7) Plug torque test☒ (8) Sawing test☐ N/A (9) Drop test

* See attached report.

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COMPLIANCE TEST REPORT

Page 4

LABORATORY REFERENCE NUMBER: FSD093

FD 033 (Rev. 3-01)

Firearms Safety Device Standards

The tested firearms safety device meets the standards in Regulation Section 977.44, Chapter 12.6, Division 1, Title 11, California Code of Regulations.

(a) The firearms safety device is of a design that will not allow its removal or deactivation except by utilizing a key, combination, or other unique method as intended by the manufacturer to allow access only authorized users. (Please indicate locking system)

_____ (1) If a combination locking system, there are a minimum of 1,000 possible combinations consisting of a minimum of three numbers, letters, or symbols per combination.

X (2) If a key locking system, the key locking system shall be unique to the manufacturer's firearms safety device(s).

_____ (3) Other: _____

(b) The firearms safety device renders the firearm inoperable (unable to fire) while the firearms safety device is properly installed.

(c) The firearms safety device functions by at least one of the following methods (please indicate all applicable methods):

- X (1) By blocking travel of the trigger, striker, firing pin, or hammer.
_____ (2) By preventing the action or cylinder from closing.
_____ (3) By preventing the chamber(s) from accepting or holding a cartridge.
_____ (4) By preventing access to the firearm.

(d) The firearms safety device is capable of repeated use.

X The tested device meets all of the above standards.

I declare under penalty of perjury according to the laws of the State in which this report was executed that all statements made in this report and Attachment A are true and complete.

Signature: Richard W. MouserName/Title (Printed): Richard W. Mouser, PresidentDate: 10-3-01

ET47634

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 9/26/01
 Via: UPS
 Returned Via: UPS

Record No: FSD093
 Test Date: 10/2/01
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Internal
 Key Type: Key-Other
 Model: 700
 Serial/Lot: N/A
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Diameter: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components

without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of

the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool.

Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	-	N/A

Record No.: FSD093

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm	120	Pass

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
N/A	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	N/A
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	N/A
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	N/A
	(E) On either side with the barrel horizontal.	N/A
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	N/A

REMARKS/NOTES

(6)(7) Test could not be completed due to size and hardness of cylinder material.

Firearms Used: Remington, model 700, #1: E66794XX (22-250; 26" barrel), #2: E64158XX (270; 22" barrel), #3: E65881XX (270; 22" barrel).

Sample Description: Internal locking mechanism consisting of a cylinder lock at bolt.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold

United States Test Laboratory
3448 N. Emporia, Wichita, KS 67219

Phone 316-832-1600
Fax 316-832-1602



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Appendix 5
M700 DOJ Correspondence

ET47637

Jiraneck, Marlin R.

From: Jiraneck, Marlin R.
Sent: Wednesday, November 14, 2001 4:31 PM
To: 'steven.teeters@doj.ca.gov'
Subject: Updated Wording for the Firearms Safety Device Website

Steven,

These are the recommended changes to what is currently posted on the DOJ website document. These have been through the proper channels at Remington (Legal/Marketing). Please let me know if you have any problems with the verbiage or other recommendations if this is not satisfactory. Thank you for your time and efforts.

Sincerely,

Marlin R. Jiraneck

a) Recommend that the BOLD title changes:

FROM: Remington 700 Internal
TO: Remington Integrated Security System (ISS) Internal

b) New paragraph:

Manufacturer states that Remington Model 700 and Model Seven centerfire rifles equipped with the Remington Integrated Security System (ISS), patent number 6,240,670B1, function properly without an additional firearms safety device. To identify a Remington Model 700 or Model Seven rifle which has an ISS device installed, look for a locking cylinder with a J-shaped keyway protruding from the left side of the rear portion of the firearm bolt.

Marlin R. Jiraneck, II
Remington Arms Company, Inc.
Research & Development Technical Center
315 West Ring Road
Elizabethtown, Kentucky 42701

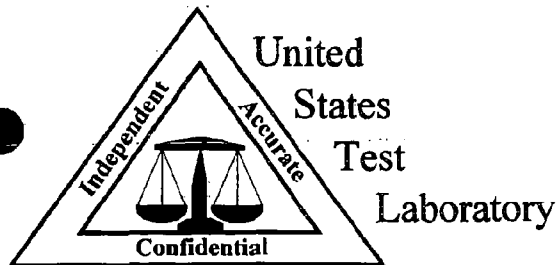
(270) 769-7645 Phone
(270) 737-9576 FAX

Please note my new e-mail address: jiraneckmr@remington.com

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Appendix 6
Failure Reports from Lab

ET47639



3448 N. Emporia 316-832-1600
Wichita, KS. 67219 Fax 316-832-1602

Dale R. Danner
Remington Arms Company, Inc.
R & D Technical Center
315 W. Ring Road
Elizabethtown, KY 42701-9318

October 4, 2001

Dear Mr. Danner:

In accordance with your instructions, United States Test Laboratory, conducted a Firearm Safety Device Test of Remington, Models: 870, 700 EtronX, 710, and 597, which were received on 9/26 and 10/3/01. The results of this test are detailed below.

During the Shock Test of models 700 EtronX and 597 the locking mechanism disengaged after manipulation with a 1/4" screwdriver subsequent to being impacted with 5 drops from a chucked blade-type tool (model 700 EtronX) and chucked steel rod tool (model 597).

During the Plug Torque Test of model 700 EtronX the locking mechanism disengaged while attempting to obtain a torque load of 89 in/lbs.

During the Sawing Test of models 597, 870, and 710 the locking mechanism disengaged after the lock housing was removed from the firearm in 33 cycles (model 597-trigger guard), 78 and 41 cycles (model 870-trigger guard) and 120 cycles (model 710-bolt).

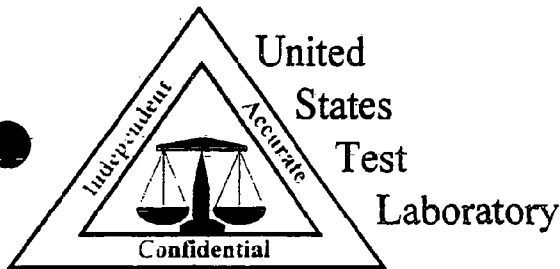
This information is provided in addition to the Firearm Safety Device Test Summary in an effort to more thoroughly assist you in understanding the manner in which the Firearm Safety Device performed.

Sincerely,

Branden M. Arnold
Lab Technician

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ET47640



3448 N. Emporia 316-832-1600
Wichita, KS. 67219 Fax 316-832-1602

California Dept. of Justice
Ms. Lesa Saville
PO Box 160487
Sacramento, CA 95816

October 4, 2001

Dear Ms. Saville,

Enclosed you will find a Firearms Safety Device (Remington Model 700 Rifle) that has successfully completed testing at our laboratory. In the accompanying reporting form provided by your agency you will see the test that have been performed by USTL on this particular Firearms Safety Device. If after your inspection you find other test that could or should have been performed, please let us know.

In addition to the rifle enclosed, you will find part of the bolt assembly that includes the FSD locking assembly. For information purposes, the enclosed assembly is made of stainless steel with a carbon steel lock assembly, where the assembly in the rifle is carbon steel with a carbon steel lock assembly. It is our opinion that the locking assembly is made of the same material (carbon steel) and does not require a separate test since the stainless steel portion of the bolt assembly is not an integral portion of the FSD.

If after your inspection, you have any questions or concerns please contact us.

The make/model tested was:

Remington Model 700 center fire rifle.

If we can be of any assistance, please let us know.

Sincerely,

Richard W. Mouser
President

Cc: Remington Arms Co.

ET47641

September 3, 2001

Attachment "A"

* The "plug pull" test was attempted, however the keyway slot could not be drilled with a #20 drill bit per the test requirement due to the hardness of the keyway assembly. Therefore a screw could not be inserted to attempt the plug pull portion of the test. We interpret this as a "pass" for this portion of the test. Should you have a different opinion after viewing the FSD, please advise.

* The "plug torque" test was attempted, however the keyway slot was too narrow to insert a screwdriver that could withstand 89 inch pounds of force. While attempting to deliver the required load, the screwdriver failed before the full load could be applied. We interpret this as a "pass" for this portion of the test. Should you have a different opinion after viewing the FSD, please advise.

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ET47642

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 9/26/01
 Via: UPS
 Returned Via: UPS

Record No: FSD095
 Test Date: 10/2/01
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Internal
 Key Type: Key-Other
 Model: 597
 Serial/Lot: N/A
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Diameter: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components

without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of

the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool.

Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of

39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	5	Fail

Record No.: FSD095

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	33	Fail

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
2	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	Pass
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(6)(7) Test could not be completed due to size and hardness of cylinder material.

Firearm Used: Remington, model 597, #1: 27869XX (22 LR; 20" barrel), #2: 27948XX (22 LR; 20" barrel),

#3: 27954XX (22 LR; 20" barrel).

Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard behind trigger.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold

United States Test Laboratory

Phone

316-832-1600

3448 N. Emporia, Wichita, KS 67219

Fax

316-832-1602

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 9/26/01
 Via: UPS
 Returned Via: UPS

Record No: FSD092
 Test Date: 10/2/01
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Internal/Integrated
 Key Type: Key-Other
 Model: 700 EtronX
 Serial/Lot: N/A
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Diameter: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
3	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components

without interfering or giving support to either the moving locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of

the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool.

Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of

39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.	blade	5	Fail
	Firearm safety device tested without firearm.	rod	-	N/A

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	30.29	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
4	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	89	Fail

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	N/A

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
2	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	Pass
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

Firearms Used: Remington, model 700 EtronX, #1: EG0001XX (22-250; 26" barrel), #2: XC13XX (30-06; 24" barrel), #3: EG0005XX (243; 26" barrel), #4: S62839XX (22-250; 26" barrel).

Sample Description: Internal electronic locking mechanism consisting of a lock cylinder at the base of grip.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold
United States Test Laboratory Phone 316-832-1600
3448 N. Emporia, Wichita, KS 67219 Fax 316-832-1602

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 10/3/01
 Via: Fed Ex
 Returned Via: UPS

Record No: FSD096
 Test Date: 10/3/01
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Internal
 Key Type: Key-Other
 Model: 710
 Serial/Lot: N/A
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Diameter: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
2	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	-	N/A

Record No.: FSD096

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
4	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	120	Fail

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
4	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	Pass
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(6)(7) Test could not be completed due to size and hardness of cylinder material.

Firearms Used: Remington, model 710, #2: 71026290 (270; 22" barrel), #3: 71025667 (270; 22" barrel),

#4: 71026291 (270; 22" barrel).

Sample Description: Internal locking mechanism consisting of a cylinder lock at bolt.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold
United States Test Laboratory Phone 316-832-1600
3448 N. Emporia, Wichita, KS 67219 Fax 316-832-1602

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 9/26/01
 Via: UPS
 Returned Via: UPS

Record No: FSD094
 Test Date: 10/2/01
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Internal
 Key Type: Key-Other
 Model: 870
 Serial/Lot: N/A
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Diameter: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	5	Pass

Record No.: FSD094

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	78	Fail
3	Firearm safety device tested without firearm.	41	Fail

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
2	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	Pass
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(6)(7) Test could not be completed due to size and hardness of cylinder material.

Firearm Used: #1: C91868XX (12 ga.; 28" barrel), #2: C87486XX (12 ga.; 28" barrel), #3: C89415XX (12 ga.; 26" barrel).

Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard behind trigger.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold

United States Test Laboratory

3448 N. Emporia, Wichita, KS 67219

Phone

316-832-1600

Fax

316-832-1602

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 10/3/01
 Via: Fed Ex
 Returned Via: UPS

Record No: FSD097
 Test Date: 10/3/01
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Internal
 Key Type: Key-Other
 Model: 870
 Serial/Lot: N/A
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Diameter: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	jumbo paper clip	-	N/A
	Firearm safety device tested without firearm.	#1 paper clip	-	N/A
		1.4 mm screwdriver	-	N/A

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
N/A	Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	N/A
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	blade	-	N/A
	Firearm safety device tested without firearm.	rod		

Record No.: FSD097

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			N/A
	Firearm safety device tested without firearm.	-	-	

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.	-	

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.	-	

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
	Firearm safety device tested with firearm.		Fail
	Firearm safety device tested without firearm.	AB	

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
N/A	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	N/A
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	N/A
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	N/A
	(E) On either side with the barrel horizontal.	N/A
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	N/A

REMARKS/NOTES

(8) Sample tested at cylinder lock on trigger guard behind trigger.

Firearm Used: Remington, model 870, 12 ga., 26" barrel, S/N 091868XX.

Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard (aluminum) behind trigger.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

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Appendix 7
Eironx Redesign Results

ET47653

February 5, 2002

To: Dale Danner
From: Marlin Jiranek

RE: CA DOJ Plug Pulling Test Results - New EtronX Keyswitch**BACKGROUND**

An alternative safety key-switch was identified for potential use in the M/700 EtronX rifle. The alternative key-switch is manufactured using stamped metal construction rather than the polymer construction of the currently utilized key-switch. This alternative key-switch was tested per the State of California Department of Justice (CA DOJ) Firearms Safety Device standards in all aspects which the current key-switch model failed the testing procedure.

Three tests were conducted on the alternative key-switch including the Plug Pulling Test, the Shock Test, and the Plug Torque Test. The Plug Torque Test and the Plug Pulling Test were done exactly to the CA DOJ specifications while the Shock Test used a slightly modified procedure, as Remington does not have an impact fixture per the standard.

CONCLUSION

The alternative safety key-switch failed the Plug Pulling Test and most likely will fail the Shock Test per the CA DOJ testing procedures. An improvement over the old design is that the key-switch did pass the Plug Torque Test.

The key-switch **FAILED** the Plug Pulling Test by the lock cylinder being removed under the specified 225 pounds-force, thus exposing two metal contacts in the bottom of the lock that could be electrically connected using a standard 1/4" flathead screwdriver.

The key-switch would **most likely fail** the Shock Test using the CA DOJ testing procedure. The CA DOJ specified procedure was modified for this test, using a 0.150" flathead screwdriver blade (rather than a 1/4") and striking from about 1.5 feet with a 2.3 pound mass (rather than striking from 1 meter with a 2.2 pound mass). The screwdriver was driven into the lock cylinder and was then able to be rotated to the "ON" position, thus defeating the key-switch.

The key-switch did **PASS** the Plug Torque Test. At a torque level less than the maximum allowable torque, the lock cylinder appeared to turn in the lock body to the "ON" position. However, the screwdriver bit actually destroyed the top of the plastic locking cylinder and did not disengage the lock. This passed the test, as the lock could not be defeated in this manner.

Marlin R. Jiranek, II
Research Engineer

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February 5, 2002
Remington Project: 241328

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PROCEDURE / RESULTSPlug Pulling Test

The adopted CA DOJ Firearms Safety Device standards for the Plug Pulling Test are stated as follows:

Plug pulling test (utilize a new firearms safety device)(does not apply if test cannot be performed on the device). This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 (0.161 inch, .41 centimeter) diameter drill bit and insert a self tapping screw of size AB12 at least 19 millimeters (.75 inches) deep. Apply a required tension of 1,000 newtons (225 pounds force) axially between the case and the installed screw. Failure occurs if the firearms safety device can be opened by manipulation with an 8 to 10-inch (20.3 to 25.4cm) long screwdriver with the largest flat blade (not to exceed 5/8 inch (1.6 centimeter)) that will fit into the keyway at the conclusion of the test. Failure also occurs if the firearms safety device is disabled.

Per this specification, two samples of the alternative key-switch were tested. Each of the locks was drilled using a No. 20 drill bit and then a self tapping size AB12 screw was inserted into each lock $\frac{3}{4}$ " deep. The plug was then removed using the Instron Tensile Testing machine to obtain a plug removal force profile. Figure 1 presents a graph of the force required to remove the locking cylinders from each of the two sample locks.

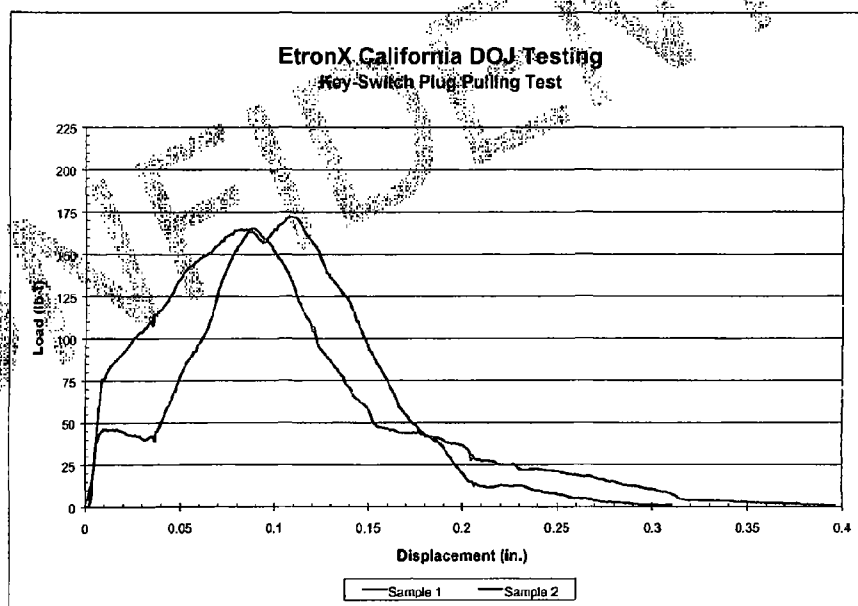


Figure 1. A graph presenting the force/displacement profile required to remove the locking cylinder from each of the two key-switch samples. The CA DOJ maximum force requirement is 225 pounds-force, which corresponds to the top of the y-axis.

The maximum load required to remove the lock cylinders from the test samples 1 and 2 was 172 lb-f and 165 lb-f respectively. The maximum allowable force per the CA DOJ specification is 225 lb-f. Once the plug was removed from the lock body two electrical

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contacts were exposed at the bottom of the lock body that could easily be connected using a standard 1/4" flathead screwdriver. Figure 2 presents an image of the electrical contacts at the bottom of the lock body that were exposed after the cylinder was removed from the lock.

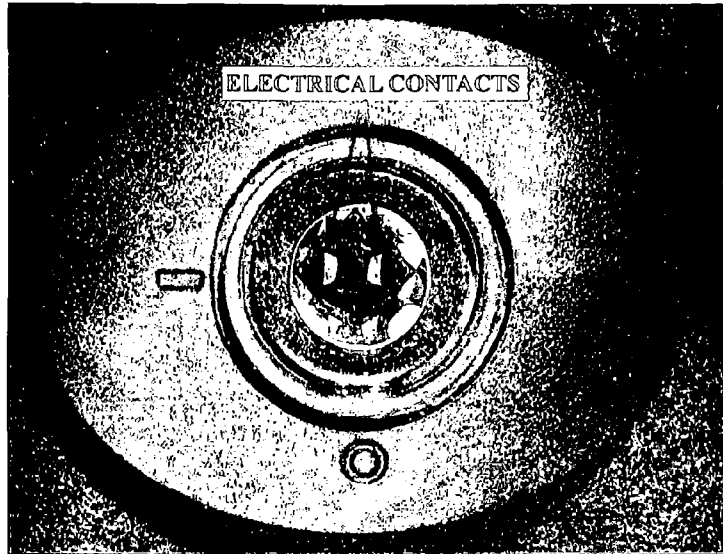


Figure 2. An image of the electrical contacts plainly visible after removal of the locking cylinder from the key-switch lock body.

Shock Test

The adopted CA DOJ Firearms Safety Device standards for the Shock Test are stated as follows:

Shock test (does not apply if test cannot be performed on the device). This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a one-kilogram (2.2 pound) weight from a distance of one meter \pm one centimeter (39.4 inches \pm 0.4 inches) five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool (chucked blade-type tool should be crafted from the shank of a screwdriver with a 1/4 to 5/8-inch (.63 to 1.6 centimeter) flathead end). Additionally, using the shock impact fixture, drop a one-kilogram (2.2 pound) weight from a distance of one meter (39.4 inches), five times to the top of the firearms safety device body using a chucked steel rod tool. Failure occurs if the firearms safety device is disabled by the shock test. Failure also occurs if the following the shock test, subsequent manipulation with a 8 to 10-inch (20.32 to 25.4 cm) long screwdriver with a 1/4 to 5/8-inch (.63 to 1.6 centimeter) flathead end allows the tester to discharge a primed case.

As Remington does not have a shock impact fixture per the CA DOJ specification, a simple laboratory set-up was utilized to make a determination of the likelihood that the alternative key-switch may pass this testing procedure. For the laboratory test, a 0.150" width flathead screwdriver was placed in the keyway as a 2.3 pound mass was dropped onto the back of the screwdriver five time from a height of roughly 1.5 feet (18-20 inches). After the impacts were completed, the screwdriver could be turned and the lock

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cylinder rotated into the "ON" position. If the test were run per the CA DOJ procedure, it would most likely end with the same result. Figure 3 presents an image of the key-switch with the screwdriver impacted into the lock keyway. Next to the key-switch is an identical screwdriver to show the depth of penetration of the screwdriver into the lock cylinder.

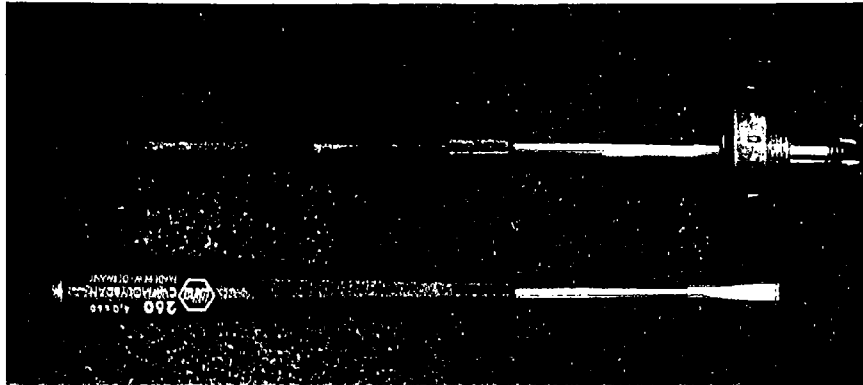


Figure 3. An image of the new key-switch with a screwdriver impacted into the keyway. This screwdriver could be turned to activate the key-switch after the five impacts were completed.

Plug Torque Test

The adopted CA DOJ Firearms Safety Device standards for the Plug Torque Test are stated as follows:

Plug torque test (utilize a new firearms safety device) (does not apply if test cannot be performed on the device): This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Install the firearms safety device in a rigid fixture such as a vise to support it firmly but not restrict free rotation of the plug in the cylinder. Insert a screwdriver with the largest flat blade (not to exceed 3/8 inch (1.6 centimeter)) that will fit into the keyway, so that a torque load of ten Newton-meters (89 pounds force-inches) can be applied to the plug. Failure occurs if the firearms safety device is disabled.

This test was conducted per the CA DOJ specifications. During the test, the screwdriver bit was inserted into the cylinder keyway and successfully turned using less than the maximum 89 inch-pounds. This action did not disengage the locking mechanism, however, the screwdriver bit destroyed the upper portion of the cylinder plug of the lock.

The locking cylinder is primarily composed of polymer material with small metal "pins" in the keyway. During the plug torque testing, the locking cylinder construction allowed for the top of the cylinder plug to be destroyed by the rotation of the screwdriver bit in the top of the keyway as the remaining "pins" held the locking cylinder in place. In this manner, the locking mechanism was not compromised during this test. Figure 4 presents an image of locking keyway after completion of the testing procedure.

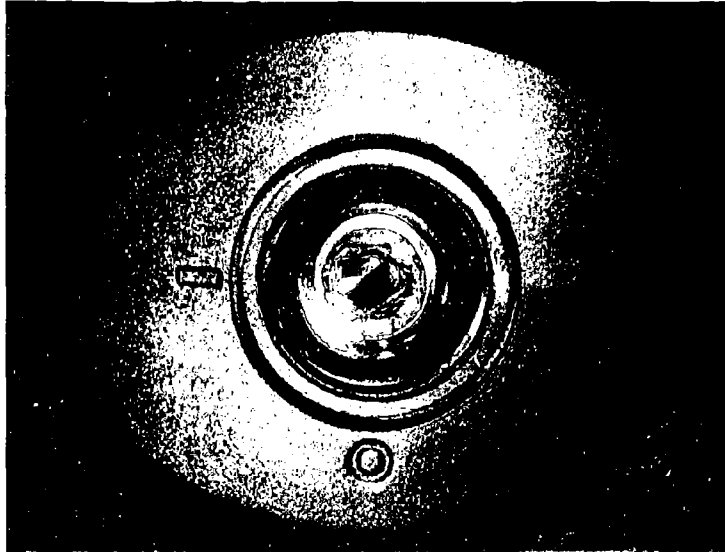


Figure 4. An image of the locking keyway after the completion of the torque testing procedure showing the damage done to the top portion of the locking cylinder by the screwdriver bit.

CONFIDENTIAL

Marlin R. Jiranek, II
Research Engineer

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February 5, 2002
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Appendix 8
M070301, P10101 Result 0902

ET47659

PRELIMINARY
Remington® Common F/C ISS Testing
(Integrated Security System)

Per

California D.O.J. Lock Regulations
Proposed addition of Chapter 12.6, §977.10 -- §977.90 of Title 11 of the
California Code of Regulations, pursuant to §12087.0 -- §12088.9 of the
Penal Code.

TEST REPORT

written by:

Marlin R. Jiranek, II

Marlin R. Jiranek, II
Senior Research Engineer

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September 18, 2002
Remington Project: 241328

ET47660

HISTORY

Pursuant to the Aroner-Scott-Hayden Firearms Safety Act of 1999, which added to the California Penal Code section 12087 et. Seq., the California Department of Justice (CA DOJ) was missioned with creating a list of standards and certifying independent test laboratories to test firearms safety devices to this list of standards, which then could become eligible for approval as a CA DOJ certified firearms safety device.

Remington Arms company had tested all of the ISS equipped fire-controls in October 2001, pursuant to this CA DOJ requirement. The results from this previous testing certified the M/700 and M/Seven ISS systems as CA DOJ approved firearms safety devices. In an effort to achieve CA DOJ approval for the other ISS equipped firearms in the Remington product line, Remington has made design changes to the ISS systems that address the shortcomings of the ISS as it applies to the CA DOJ testing requirements. These re-designed systems will be re-tested to gain certification by the CA DOJ as an approved firearms safety device.

A sample of the common fire control was tested at a certified testing laboratory, pursuant to the CA DOJ specifications. The fire controls were not cosmetically correct and therefore could not be submitted as the actual CA DOJ device, however, all of the design specifics of the fire controls are as they will be in production.

SUMMARY

The samples that were tested passed the CA DOJ testing requirements for certification as a CA DOJ approved firearms safety device. In addition to the standard tests required for certification, the fire controls also passed an "extended" version of the shock test and the sawing test procedures. Table 1 presents a table of results of the testing. The actual results are included in Appendix 1 at the end of this report.

Remington ISS Testing per the California DOJ Firearms Safety Device Regulations			
			Results
Test No.	Test Description	DOJ Regulation	870 Synthetic Housing
1	Picking / Manipulation Test	977.45 subsection c.1	Pass
2	Forced Removal Inspection	977.45 subsection c.2	Pass
3	Tensile Test	977.45 subsection c.3	N/A
4	Shock Test	977.45 subsection c.4	Pass
5	Shackle/Cable Cutting Test	977.45 subsection c.5	N/A
6	Plug Pulling Test	977.45 subsection c.6	Pass
7	Plug Torque Test	977.45 subsection c.7	Pass
8	Sawing Test	977.45 subsection c.8	Pass
9	Drop Testing (Firearms)	977.45 subsection d	Pass
10	Drop Testing (Enclosures)	977.45 subsection e	N/A
11	Extended Shock Test	-----	Pass
12	Extended Saw Test	-----	Pass

Table 1. Testing results from the certified testing laboratory.

PROCEDURE & RESULTS

The fire controls were subjected to the entire gamut of testing as required by the CA DOJ regulations. This included a total of seven tests that could be applied to the ISS device. In addition to the standard tests, two additional "extended" tests were performed to determine whether the current product is near the design limit when tested to the required regulations.

The "extended" tests included a more severe shock test and a more severe saw test. The standard shock test procedure is as follows:

§977.45, subsection c.4: "*Shock test (does not apply if test cannot be performed on the device). This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a one-kilogram (2.2 pound) weight from a distance of one meter \pm one centimeter (39.4 inches \pm 0.4 inches) five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool (chucked blade-type tool should be crafted from the shank of a screwdriver with a $\frac{1}{4}$ to $\frac{5}{8}$ -inch (.63 to 1.6 centimeter) flathead end). Additionally, using the shock impact fixture, drop a one-kilogram (2.2 pound) weight from a distance of one meter (39.4 inches), five times to the top of the firearms safety device body using a chucked steel rod tool. Failure occurs if the firearms safety device is disabled by the shock test. Failure also occurs if following the shock test, subsequent manipulation with an 8 to 1-inch (20.3 to 25.4 cm) long screwdriver with a $\frac{1}{4}$ to $\frac{5}{8}$ -inch (.63 to 1.6 centimeter) flathead end allows the tester to discharge a primed case*".

After the standard shock test was completed. The same test was conducted on a new fire control using a drop height of 1.45 meters rather than one meter. The blade tool was impacted into the key-way side of the ISS five times in successions followed by the steel rod tool being impacted onto the opposite side of the safety button a ten times in succession. The results were that the safety button was pushed to a point at which the ISS detent became wedged between the plastic housing and the dimple in the safety button. This test did not result in failure of the ISS, rather, the test resulted in an operational ISS that could not be fired after the impacts.

The additional height resulted in an increase of the impact velocity of the weight by 20%, from 4.42 m/s (14.5 ft/s) using the standard procedure to 5.33 m/s (17.5 ft/s) using the "extended" procedure. This impact velocity increase resulted in an impact energy increase of 45%, from 9.8 Joules (7.2 ft-lb) using the standard procedure to 14.2 Joules (10.5 ft-lb) using the "extended" procedure.

The saw test procedure is as follows:

§977.45, subsection c.8: "*Sawing test (does not apply if test cannot be performed on the device). Sawing tests shall be performed using a sawing machine or hand held saw and appropriate fixtures, to fold the device steady while sawing. To determine the firearms safety device resistance to sawing of exposed components, including cables, that would result in removal of the firearms safety device or render it disabled. The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch (2.54 centimeters) with a constant vertical downward force of ten pounds (44.5 newtons). The test shall consist of 60 cutting cycles per minute for two minutes by sawing machine or 120 cycles, with no time limit, by hand. One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion. Failure occurs if the firearms safety device is disabled*".

ET47662

After the standard sawing test was completed, the design changes were shared with the testing personnel and a second fire control was tested. During the second test, the entire blade of the saw was used (10-inch blade strokes rather than 6 inch blade strokes) and the down-force was substantially increased. The increase in down-force was achieved by using the standard 10-pound hacksaw and allowing the tester to apply as much additional pressure as he could. A total of 120 strokes was utilized and the tester gave up when he was satisfied that there was no method that he could determine that would result in removal of the ISS safety button or the ISS becoming disabled.

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Marlin R. Jiranek, II
Senior Research Engineer

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September 18, 2002
Remington Project: 241328

ET47663

APPENDIX 1 - LABORATORY TEST REPORT

UNITED STATES TEST LABORATORY
Firearm Safety Device Test SummaryDate Received: 9/16/02
Via: Fed Ex
Returned Via: Fed ExRecord No: FSD302
Test Date: 9/17/02
Customer: Remington**Sample**Manufacturer: Remington
Lock Type: Integral
Key Type: Key-Other
Model: 870 Express Magnum
Serial/Lot: N/A
Test Spec.: California Title 11, Div. 1, Ch. 12.6**Sample Dimensions**Body Height: N/A in.
Body Width: N/A in.
Body Depth: N/A in.
Shackle/Cable Dia.: N/A in.
Shackle/Cable Length: N/A in.
Weight: N/A lbs.**(1) Picking or Manipulating Test**

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1a	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1a	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This testing is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool.

Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1a, 3b	X Firearm safety device tested with firearm.	blade	10	Pass
	Firearm safety device tested without firearm.	rod	15	Pass

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Marlin R. Jiranek, II
Senior Research Engineer

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September 18, 2002
Remington Project: 241328

ET47664

APPENDIX 1 - LABORATORY TEST REPORT

Record No.: FSD302

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	-	N/A
	Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size #12 of least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2a	Firearm safety device tested with firearm.	-	Pass
	Firearm safety device tested without firearm.	-	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearm safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbf.in.)	Results (Pass/Fail)
2a	Firearm safety device tested with firearm.	-	Pass
	Firearm safety device tested without firearm.	-	Pass

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
2a, 4a	Firearm safety device tested with firearm.	120	Pass
	Firearm safety device tested without firearm.	120	Pass

Drop Test

Sections (A) through (F) do not apply to lock-box type devices.

Sample No.	Test Condition	Results (Pass/Fail)
2a, 4a	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(4) Sample 1a tested at 1m drop height 5 drops each, sample 3b tested at 1.5m drop height and 5 drops blade and 10 drops rod.
 (8)(7) Due to FSD design keyway could not be drilled (hardened cylinder) and a torque load of 89 in/lbs. could not be attained (keyway size).
 (8) Sample tested at cylinder lock on trigger guard behind trigger.
 Firearm Used: Remington, model 870 Express Magnum, 12 ga., S/N (a) 878370XX & (b) D01809XX.
 Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard (plastic) behind trigger.
 This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold/Childers
United States Test Laboratory
3448 N. Emporia, Wichita, KS 67219
Phone 316-832-1600
Fax 316-832-1602

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Marlin R. Jiranek, II
Senior Research Engineer

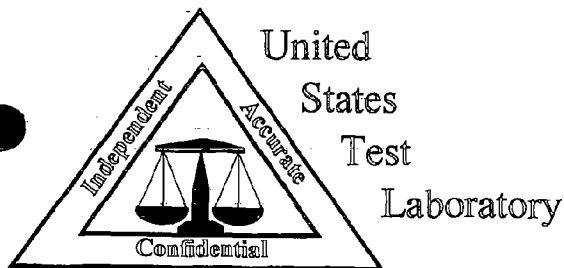
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September 18, 2002
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ET47665

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ET47666



3448 N. Emporia 316-832-1600
Wichita, KS. 67219 Fax 316-832-1602

January 10, 2003

Dear Mr. Teeters,

Attached you will find the test reports from the Remington Model 870 shotgun. As we had discussed on January 9, 2003 Remington Arms had submitted a Firearms Safety Device for testing on September 17, 2002. The plastic fire control assembly (trigger assembly) on the Model 870 shotgun was tested in accordance with all current DOJ procedures. This model passed the entire test. However, since there were cosmetic changes to be made before production it was decided that it would not be submitted for certification until the cosmetic changes could be incorporated.

On January 9, 2003 Remington Arms submitted the same type of fire control group for the Model 870 shotgun for certification testing with the cosmetic changes (two dots instead of one to indicate that the shotgun is in the unlocked position). The FSD passed all the requirements of the updated test until the manipulation with the screwdriver at the conclusion of the saw test. It was only after the screwdriver manipulation that was added to the test procedure on December 5th, 2002 that caused the device to fail.

You advised us that you would accept the test results from the September 17th test for certification purposes since it was conducted prior to the changes on December 5th. Your decision was based on a meeting you had with others in your department.

Also enclosed you will find one Remington Model 870 Shotgun with the cosmetically correct plastic fire control group installed, which was tested on September 17th, and an aluminum fire control group, which was tested on January 9, 2003 and passed all current testing procedures. You will notice that the material and functionality of the plastic version are identical. For your reference, we have enclosed a copy of the test report from January 9, 2003.

As always, should you have any questions please don't hesitate to call.

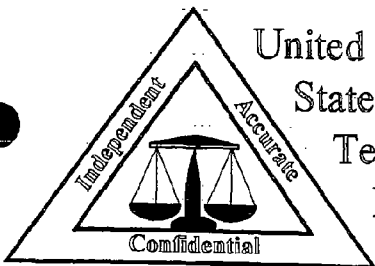
Best regards,

Richard Mouser

Richard Mouser
President

Cc: Dale R. Danner, Remington Arms

ET47667



United
States
Test
Laboratory

3448 N. Emporia 316-832-1600
Wichita, KS. 67219 Fax 316-832-1602

January 10, 2003

Remington
Marlin Jiranek
315 W. Ring Rd.
Elizabethtown, KY 42701

Dear Mr. Jiranek:

As per your request, United States Test Laboratory (USTL) conducted Firearm Safety Device test(s) as required by California Penal Code Sections 12088 and Regulation Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations.

The results of those tests are outlined below:

Model	Results
870 Express Magnum Plastic Trigger Guard	Pass
870 Express Magnum Aluminum Trigger Guard	Pass

The test results indicate that the samples submitted met the requirements of the test specifications as noted above.

This conclusion is based on the samples tested and should not be interpreted as an assurance that the quality and/or performance of devices of the same or similar design or materials will meet these requirements. United States Test Laboratory does not certify or endorse this product. USTL emphasizes that Firearm Safety Devices have limitations and note that any such device can be defeated through the utilization of time, energy and tools. USTL is not liable for any injury, death or property damage as a result of the use or misuse of this product.

A copy of the test report and one sample has been forwarded to the California Department of Justice as required. United States Test Laboratory has also retained one sample for its archive.

Should you have any questions, please feel free to contact us.

Sincerely,

Richard Mouser

Richard Mouser

President

Attachment: California Compliance Test Report

ET47668

CALIFORNIA DEPARTMENT OF JUSTICE
FIREARMS SAFETY DEVICE
COMPLIANCE TEST REPORT

FD 033 (Rev. 10-01)



The Certified Firearms Safety Device Laboratory identified below has completed testing required by Penal Code Sections 12088 and Regulation Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations is submitting this Compliance Test Report as required by Regulation Section 977.46, Chapter 12.6, Division 1, Title 11, California Code of Regulations. The reference number/identifier should refer specifically to the testing of the named firearms safety device model, not to the laboratory in general. The number /identifier must be noted in the space provided on each page of this Report.

Laboratory Information

Laboratory Reference Number/Identifier FSD302 Date Submitted: 1/10/03Certified Firearms Safety Device Laboratory United States Test Laboratory 83Address: 3448 N. Emporia
Wichita, KS 67219

Name and Telephone Number of the DOJ-Certified Laboratory staff person to be contacted regarding this report:

Richard W. Mouser, 316-832-1600Date of Test: 9/17/02 Time of Test: 1300-1500Location(s) of Test, including any off-site locations: USTL

Name(s) and Title(s) of laboratory staff who conducted and/or performed the required testing:

Branden Arnold, Lab Technician

Name(s) and business affiliations of all persons who have witnessed any part of the testing procedure:

Marlin Jiranek of Remington

ET47669

COMPLIANCE TEST REPORT

Page 2

LABORATORY REFERENCE NUMBER:

FSD302

FD 033 (Rev. 10-01)

FIREARMS SAFETY DEVICE MODEL INFORMATION:

Firearms Safety Device Type (check one): External: _____ Internal: _____ Integral: XMake: RemingtonModel: 870 Express Magnum Plastic Trigger GuardConstruction Material(s) (e.g., steel, alloy, etc.): Plastic

Tested on which firearm(s)

Type: Handgun: Revolver _____ Pistol _____
Longgun: Shotgun X Rifle _____
Other: _____

Firearms Make(s) and Model(s): Remington, model 870 Express MagnumCaliber(s): 12 gauge Barrel Length(s): 28"

PRIMED CASE INFORMATION

Primed Case Used: Manufacturer: FederalPrimer: Federal

_____ No primed case was used. (When firearms safety device is properly installed, firearm is incapable of accepting cartridges)

ET47670

COMPLIANCE TEST REPORT
LABORATORY REFERENCE NUMBER: FSD302

Page 3

FD 033 (Rev. 10-01)

FIREARMS SAFETY DEVICE MANUFACTURER OR DEALER INFORMATION

Firearms Safety Device Submitted by: RemingtonAddress: 315 W. Ring Rd., Elizabethtown, KY 42701Country: USAContact Person: Marlin JiranekPhone Number: 270-769-7645

TEST RESULTS

The four firearms safety devices have passed the test as defined in Regulations Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations. With a check mark, indicate that the firearms safety device passed a specific test. If a test was not applicable, indicate so with N/A.

☒ (1) Picking or manipulation test☒ (2) Forced removal inspection☐ N/A (3) Tensile test☒ (4) Shock test☐ N/A (5) Shackle or cable cutting test. In addition, provide measurements and a description, or measurements and a diagram, of where the shackle and/or cable was attacked.☒ (6) Plug pulling test- If the self tapping screw was not inserted at least 3/4-inch as described in the testing procedure, provide the depth to which the self tapping screw was inserted and explain why it was not inserted at least 3/4-inch.☒ (7) Plug torque test☒ (8) Sawing test- In addition, provide measurements and a description, or measurements and a diagram, of where the firearms safety device was attacked.☒ (9) Drop test

ET47671

COMPLIANCE TEST REPORT
LABORATORY REFERENCE NUMBER: FSD302

Page 4

FD 033 (Rev. 10-01)

Firearms Safety Device Standards

The tested firearms safety device meets the standards in Regulation Section 977.44, Chapter 12.6, Division 1, Title 11, California Code of Regulations.

(a) The firearms safety device is of a design that will not allow its removal or deactivation except by utilizing a key, combination, or other unique method as intended by the manufacturer to allow access only authorized users. (Please indicate locking system)

_____ (1) If a combination locking system, there are a minimum of 1,000 possible combinations consisting of a minimum of three numbers, letters, or symbols per combination.

_____ (2) If a key locking system, the key locking system shall be unique to the manufacturer's firearms safety device(s)).

X (3) Other: special "J" shaped key

(b) The firearms safety device renders the firearm inoperable (unable to fire) while the firearms safety device is properly installed.

(c) The firearms safety device functions by at least one of the following methods (please indicate all applicable methods):

- X (1) By blocking travel of the trigger, striker, firing pin, or hammer.
_____ (2) By preventing the action or cylinder from closing.
_____ (3) By preventing the chamber(s) from accepting or holding a cartridge.
_____ (4) By preventing access to the firearm.

(d) The firearms safety device is capable of repeated use.

X The tested device meets all of the above standards.

I declare under penalty of perjury according to the laws of the State in which this report was executed that all statements made in this report and Attachment A are true and complete.

Signature: Richard MouserName/Title (Printed): Richard W. Mouser, PresidentDate: 1/10/03

ET47672

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 9/16/02

Via: Fed Ex

Returned Via: Fed Ex

Record No: FSD302

Test Date: 9/17/02

Customer: Remington

Sample

Manufacturer: Remington

Lock Type: Integral

Key Type: Key-Other

Model: 870 Express Magnum

Serial/Lot: N/A

Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.

Body Width: N/A in.

Body Depth: N/A in.

Shackle/Cable Dia.: N/A in.

Shackle/Cable Length: N/A in.

Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1a	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1a	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1a, 3b	X Firearm safety device tested with firearm.	blade	10	Pass
	Firearm safety device tested without firearm.	rod	15	Pass

Record No.: FSD302

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2a	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the

largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
2a	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
2a, 4a	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	120	Pass

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
4a, 4b	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(4) Sample 1a tested at 1m drop height 5 drops each, sample 3b tested at 1.5m drop height and 5 drops blade and 10 drops rod.

(6)(7) Due to FSD design keyway could not be drilled (hardend cylinder) and a torque load of 89 in/lbs. could not be attained (keyway size).

(8) Sample tested at cylinder lock on trigger guard behind trigger.

Firearm Used: Remington, model 870 Express Magnum, 12 ga., S/N (a) B78370XX & (b) D01809XX.

Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard (plastic) behind trigger.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold/Childers

United States Test Laboratory

3448 N. Emporia, Wichita, KS 67219

Phone

316-832-1600

Fax

316-832-1602

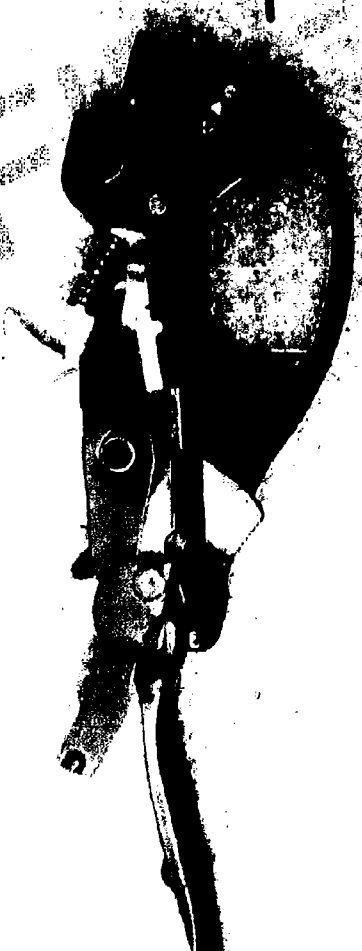
ET47674

FSD302

CONFIDENTIAL

1	2	3	4	5	6	7	8	9	10	11	12

120 cycles



ET47675



**CALIFORNIA DEPARTMENT OF JUSTICE
FIREARMS SAFETY DEVICE
COMPLIANCE TEST REPORT**

FD 033 (Rev. 10-01)



The Certified Firearms Safety Device Laboratory identified below has completed testing required by Penal Code Sections 12088 and Regulation Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations is submitting this Compliance Test Report as required by Regulation Section 977.46, Chapter 12.6, Division 1, Title 11, California Code of Regulations. The reference number/identifier should refer specifically to the testing of the named firearms safety device model, not to the laboratory in general. The number /identifier must be noted in the space provided on each page of this Report.

Laboratory Information

Laboratory Reference Number/Identifier FSD322 Date Submitted: 1/10/03

Certified Firearms Safety Device Laboratory United States Test Laboratory **83**

Address: 3448 N. Emporia
Wichita, KS 67219

Name and Telephone Number of the DOJ-Certified Laboratory staff person to be contacted regarding this report:

Richard W. Mouser, 316-832-1600

Date of Test: 1/9/03 Time of Test: 0800-1000

Location(s) of Test, including any off-site locations: USTL

Name(s) and Title(s) of laboratory staff who conducted and/or performed the required testing:

Branden Arnold and Chad Childers; Lab Technicians

Name(s) and business affiliations of all persons who have witnessed any part of the testing procedure:

Marlin Jiranek of Remington

ET47676

COMPLIANCE TEST REPORT

Page 2

LABORATORY REFERENCE NUMBER:

FSD322

FD 033 (Rev. 10-01)

FIREARMS SAFETY DEVICE MODEL INFORMATION:

Firearms Safety Device Type (check one): External: _____ Internal: _____ Integral: XMake: RemingtonModel: 870 Express Magnum Aluminum Trigger GuardConstruction Material(s) (e.g., steel, alloy, etc.): Aluminum

Tested on which firearm(s)

Type: Handgun: Revolver _____ Pistol _____
Longgun: Shotgun X Rifle _____
Other: _____

Firearms Make(s) and Model(s): Remington, model 870 Express MagnumCaliber(s): 12 gauge Barrel Length(s): 28"

PRIMED CASE INFORMATION

Primed Case Used: Manufacturer: FederalPrimer: Federal

_____ No primed case was used. (When firearms safety device is properly installed, firearm is incapable of accepting cartridges)

ET47677

COMPLIANCE TEST REPORT

Page 3

LABORATORY REFERENCE NUMBER: FSD322

FD 033 (Rev. 10-01)

FIREARMS SAFETY DEVICE MANUFACTURER OR DEALER INFORMATION

Firearms Safety Device Submitted by: RemingtonAddress: 315 W. Ring Rd., Elizabethtown, KY 42701Country: USAContact Person: Marlin JiranekPhone Number: 270-769-7645

TEST RESULTS

The four firearms safety devices have passed the test as defined in Regulations Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations. With a check mark, indicate that the firearms safety device passed a specific test. If a test was not applicable, indicate so with N/A.

☒ (1) Picking or manipulation test☒ (2) Forced removal inspection☐ N/A (3) Tensile test☒ (4) Shock test☐ N/A (5) Shackle or cable cutting test. In addition, provide measurements and a description, or measurements and a diagram, of where the shackle and/or cable was attacked.☒ (6) Plug pulling test- If the self tapping screw was not inserted at least 3/4-inch as described in the testing procedure, provide the depth to which the self tapping screw was inserted and explain why it was not inserted at least 3/4-inch.☒ (7) Plug torque test☒ (8) Sawing test- In addition, provide measurements and a description, or measurements and a diagram, of where the firearms safety device was attacked.☒ (9) Drop test

ET47678

COMPLIANCE TEST REPORT

Page 4

LABORATORY REFERENCE NUMBER: FSD322

FD 033 (Rev. 10-01)

Firearms Safety Device Standards

The tested firearms safety device meets the standards in Regulation Section 977.44, Chapter 12.6, Division 1, Title 11, California Code of Regulations.

(a) The firearms safety device is of a design that will not allow its removal or deactivation except by utilizing a key, combination, or other unique method as intended by the manufacturer to allow access only authorized users. (Please indicate locking system)

 (1) If a combination locking system, there are a minimum of 1,000 possible combinations consisting of a minimum of three numbers, letters, or symbols per combination.

 (2) If a key locking system, the key locking system shall be unique to the manufacturers' firearms safety device(s)).

 X (3) Other: special "J" shaped key

(b) The firearms safety device renders the firearm inoperable (unable to fire) while the firearms safety device is properly installed.

(c) The firearms safety device functions by at least one of the following methods (please indicate all applicable methods):

 X (1) By blocking travel of the trigger, striker, firing pin, or hammer.

 (2) By preventing the action or cylinder from closing.

 (3) By preventing the chamber(s) from accepting or holding a cartridge.

 (4) By preventing access to the firearm.

(d) The firearms safety device is capable of repeated use.

 X The tested device meets all of the above standards.

I declare under penalty of perjury according to the laws of the State in which this report was executed that all statements made in this report and Attachment A are true and complete.

Signature: Richard Mouser

Name/Title (Printed): Richard W. Mouser, President

Date: 1/10/03

ET47679

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 1/7/03
 Via: Fed Ex
 Returned Via: Fed Ex

Record No: FSD322
 Test Date: 1/9/03
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Internal
 Key Type: Special
 Model: 870 Exp. Mag.
 Serial/Lot: Aluminum
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Dia.: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	5	Pass

Record No.: FSD322

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	-	N/A
	Firearm safety device tested without firearm.			

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	-	Pass
	Firearm safety device tested without firearm.		

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	-	Pass
	Firearm safety device tested without firearm.		

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand. One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	120	Pass
	Firearm safety device tested without firearm.		

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
3	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(6)(7) Due to FSD design keyway could not be drilled (hardend cylinder) and a torque load of 89 in/lbs. could not be attained (keyway size).

Firearm Used: Remington, model 870 Express Magnum, 12 ga., S/N (a) B40014XX & B36525XX.

Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard (aluminum) behind trigger.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold/Childers

United States Test Laboratory

3448 N. Emporia, Wichita, KS 67219

Phone

316-832-1600

Fax

316-832-1602

FSD322

120 Cycles

18 19 20

STAINLESS STEEL

ET47682

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 1/7/03
 Via: Fed Ex
 Returned Via: Fed Ex

Record No: FSD320
 Test Date: 1/9/03
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Internal
 Key Type: Special
 Model: 870 Exp. Mag.
 Serial/Lot: Synthetic
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Dia.: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	5	Pass

Record No.: FSD320

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	-	N/A
	Firearm safety device tested without firearm.			

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	-	Pass
	Firearm safety device tested without firearm.		

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the

largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	-	Pass
	Firearm safety device tested without firearm.		

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	120	Fail
	Firearm safety device tested without firearm.		

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
3	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(6)(7) Due to FSD design keyway could not be drilled (hardend cylinder) and a torque load of 89 in/lbs. could not be attained (keyway size).

(8) Firearm discharged during 2 min. manipulation after Sawing Test.

Firearm Used: Remington, model 870 Express Magnum, 12 ga., S/N (a) B40014XX & B36525XX.

Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard (plastic) behind trigger.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold/Childers

United States Test Laboratory

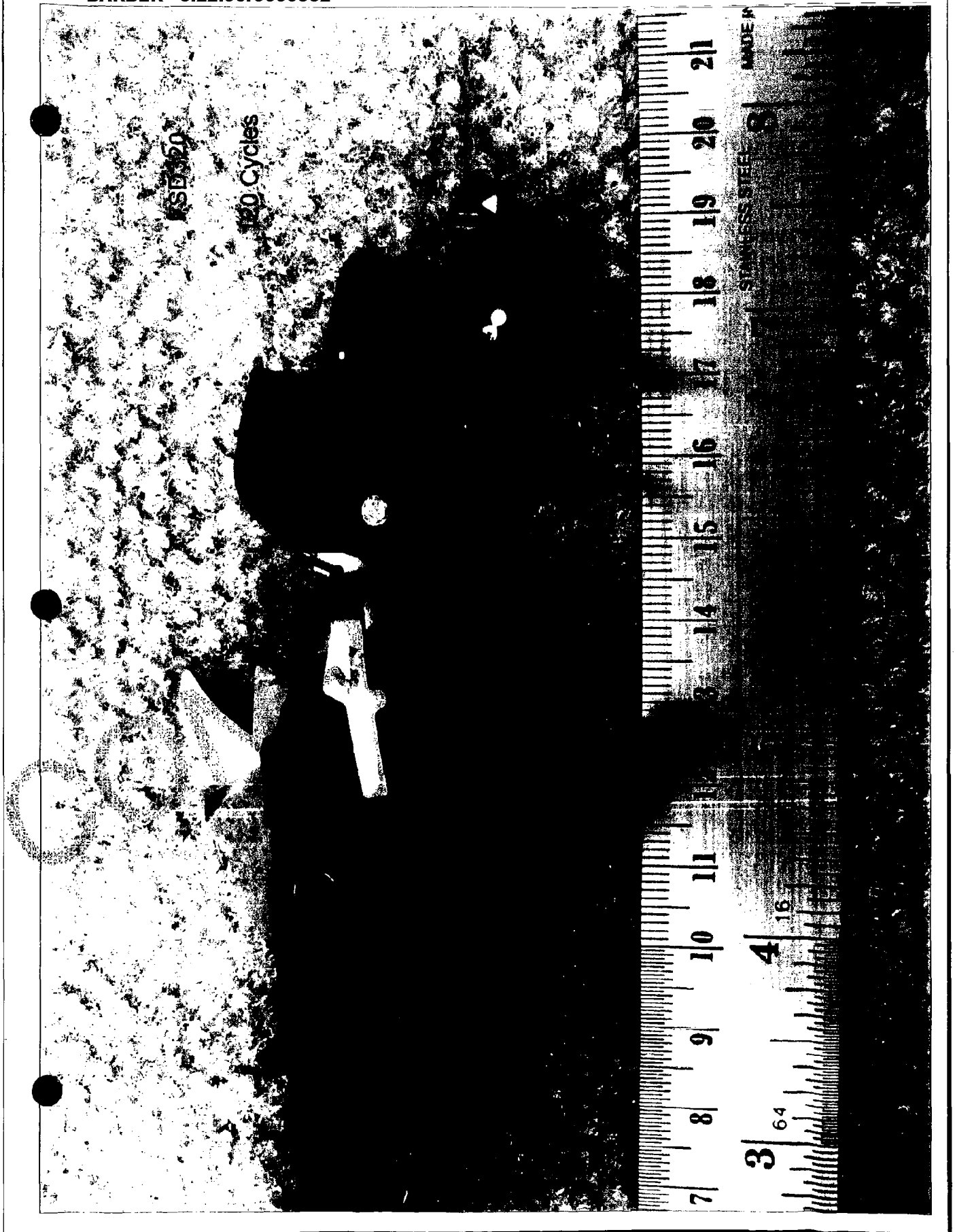
3448 N. Emporia, Wichita, KS 67219

Phone

Fax

316-832-1600

316-832-1602



ET47685

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 1/7/03
 Via: Fed Ex
 Returned Via: Fed Ex

Record No: FSD321
 Test Date: 1/9/03
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Internal
 Key Type: Special
 Model: 597 Mag.
 Serial/Lot: Synthetic
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Height: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Dia.: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

(3) Tensile Test

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components

without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lb.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	N/A
	Firearm safety device tested without firearm.		

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	5	Pass

Record No.: FSD321

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.	-	-	N/A

(6) Plug Pulling Test

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the

largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	Pass

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand.

One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	60	Fail

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
3	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

REMARKS/NOTES

(6)(7) Due to FSD design keyway could not be drilled (hardend cylinder) and a torque load of 89 in/lbs. could not be attained (keyway size).

Firearm Used: Remington, model 597 Magnum, 22 LR, S/N (a) 291089XX & 294891XX.

Sample Description: Internal locking mechanism consisting of a cylinder lock at trigger guard (plastic) behind trigger.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold/Childers

United States Test Laboratory

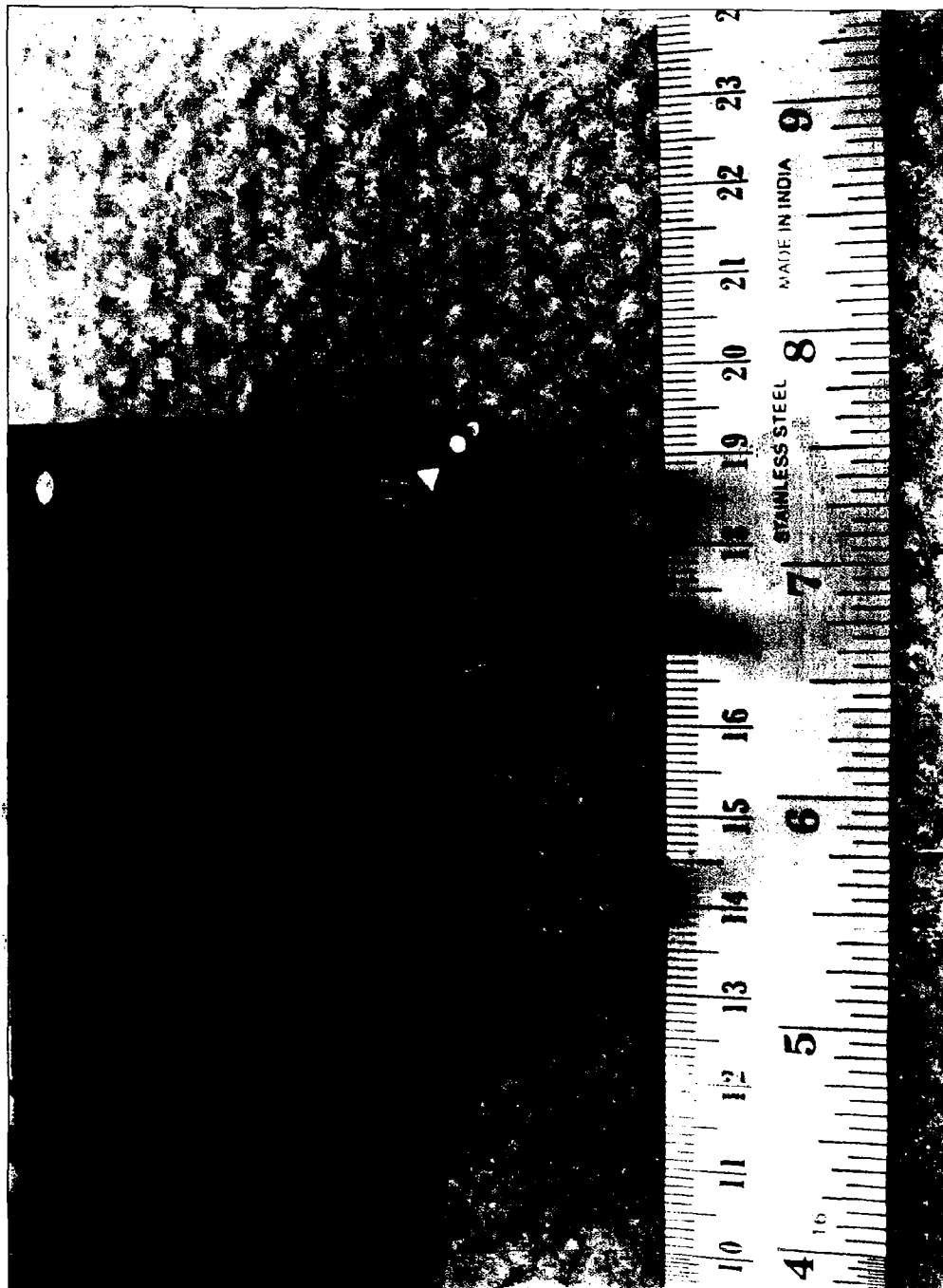
3448 N. Emporia, Wichita, KS 67219

Phone

316-832-1600

Fax

316-832-1602



ET47688

CONFIDENTIAL

ET47689

BILL LOCKYER
Attorney General

State of California
DEPARTMENT OF JUSTICE



P.O. BOX 160487
SACRAMENTO, CA 95816-0487
Facsimile: (916) 263-0676
(916) 263-0802

January 28, 2003

Marlin Jiranek
Remington Arms Company, Inc.
315 West Ring Road
Elizabethtown, KY 42701

RE: Firearms Safety Device Testing Results

Dear Mr. Jiranek:

The Department of Justice (DOJ) Firearms Division recently received the Firearms Safety Device Compliance Test Reports and samples of the Remington 870 Express Magnum Aluminum Trigger Guard and Remington 870 Express Magnum Plastic Trigger Guard. The reports and samples have been analyzed by the Firearms Safety Device Review Committee. 83

Upon review of the laboratory cover letter, the laboratory test reports and accompanying photos, the Committee concludes that the Remington 870 Express Magnum Aluminum Trigger Guard and Remington 870 Express Magnum Plastic Trigger Guard met the minimum testing standards that were in place at the time of their testing. Based on the results of these tests, the Committee is certifying these firearms safety devices for use in California. However, the Committee does not provide this certification for the Remington 870 Express Magnum Plastic Trigger Guard without some reservation.

As you know, the testing standards outlined in the Regulations for Certified Firearms Safety Device Laboratories, Firearms Safety Device Testing and Standards, and Standards for Gun Safes were modified effective December 4, 2002. It is not the Department's intention to require previously tested and approved firearms safety devices to be retested to the latest standard. Your company has been forthright in informing the Committee that while the Remington 870 Express Magnum Plastic Trigger Guard was capable of passing the testing standard in place at the time of the original testing (September 17, 2002), further investigative testing requested by Remington has shown the same plastic trigger guard is not capable of passing the standard in effect today. We will honor testing results performed prior to December 4, 2002 (as was the case with the Remington 870 Express Magnum Plastic Trigger Guard). However, the fact that the Remington 870 Express Magnum Plastic Trigger Guard does not meet the current standard causes us concern. The reason the Department changed the approximate 10 minute testing standard to include manipulation with a screwdriver was because it was determined that manipulation could be a key factor in testing a firearms safety device against intrusion.

ET47690

Marlin Jiranek
January 28, 2003
Page 2

Upon return of the enclosed Listing Request forms, the Remington 870 Express Magnum Aluminum and/or Plastic Trigger Guards will be listed on the Roster of Firearms Safety Devices Certified for Sale. Although, in light of the circumstances you may wish to reconsider your decision to market the Remington 870 Express Magnum Plastic Trigger Guard as a DOJ-approved product.

If you have any questions, please call me at (916) 263-0802.

Sincerely,



TIM RIEGER, Deputy Attorney General
Firearms Division

For BILL LOCKYER
Attorney General

st
Enclosure
cc: United States Test Laboratory

CONFIDENTIAL

ET47691

BILL LOCKYER
Attorney General

State of California
DEPARTMENT OF JUSTICE



P.O. BOX 160487
SACRAMENTO, CA 95816-0487
Facsimile: (916) 263-0676
(916) 263-0849

January 28, 2003

Marlin Jiranek
Remington Arms Company, Inc.
315 West Ring Road
Elizabethtown, KY 42701

RE: California Firearms Safety Device Certification

Dear Mr. Jiranek:

The Firearms Division has received the Compliance Test Reports and firearms safety devices for the models indicated on the enclosed Listing Requests. Pursuant to section 977.85, Title 11, Division 1, Chapter 12.6, of the California Code of Regulations, these firearms safety devices will be added to the Roster of Approved Firearms Safety Devices. 83

There is a certification section at the bottom of each Listing Request. To ensure that the Roster of Certified Firearms Safety Devices contains correct information regarding your firearms safety device, please review the Listing Request, and answer the questions for the model indicated on each certification form. In addition, if the firearms safety device can be properly installed and used on firearms other than the firearm(s) that was used for testing, you may provide a listing of those firearms or the dimensions of firearms with characteristics that will allow your device to perform in a safe and proper manner. For example: you may specify a make and model of firearm; specific or range of calibers; types (pistol, revolver, shotgun, rifle, etc.); or firearms with a trigger guard that is X-inches long and X-inches wide, etc. The information regarding the firearm(s) on which the firearms safety device was tested and the additional firearm(s) for which you certify that the firearms safety device can be properly used will be included on the Roster of Certified Firearms Safety Devices. The certification must be completed by a representative of the company, signed, and returned to the Division.

If you have any questions, please call me at (916) 263-0849.

Sincerely,

STEVEN TEETERS, Analyst
Firearms Information Services Section

For BILL LOCKYER
Attorney General

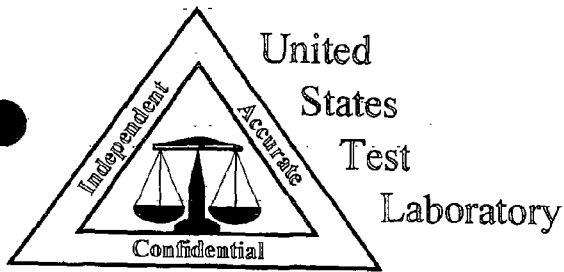
Enclosure

ET47692

CONFIDENTIAL 83

Appendix 11
Micro Result from Lab

ET47693



7447 W. 33rd St. N. 316-832-1600
Wichita, KS. 67205 Fax 316-832-1602

November 21, 2003

Remington
Marlin Jiranek
315 W. Ring Rd.
Elizabethtown, KY 42701

Dear Mr. Jiranek :

As per your request, United States Test Laboratory (USTL) conducted Firearm Safety Device test(s) as required by California Penal Code Sections 12088 and Regulation Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations.

The results of those tests are outlined below:

Model	Results
870 Express Plastic Two-Dot ISS Trigger Guard	Pass
870 Express Aluminum Two-Dot ISS Trigger Guard	Pass

The test results indicate that the samples submitted met the requirements of the test specifications as noted above.

This conclusion is based on the samples tested and should not be interpreted as an assurance that the quality and/or performance of devices of the same or similar design or materials will meet these requirements. United States Test Laboratory does not certify or endorse this product. USTL emphasizes that Firearm Safety Devices have limitations and note that any such device can be defeated through the utilization of time, energy and tools. USTL is not liable for any injury, death or property damage as a result of the use or misuse of this product.

A copy of the test report and one sample has been forwarded to the California Department of Justice as required. United States Test Laboratory has also retained one sample for its archive.

Should you have any questions, please feel free to contact us.

Sincerely,

Richard Mouser

President

Attachment: California Compliance Test Report

ET47694



**CALIFORNIA DEPARTMENT OF JUSTICE
FIREARMS SAFETY DEVICE
COMPLIANCE TEST REPORT**

FD 033 (Rev. 10-01)



The Certified Firearms Safety Device Laboratory identified below has completed testing required by Penal Code Sections 12088 and Regulation Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations is submitting this Compliance Test Report as required by Regulation Section 977.46, Chapter 12.6, Division 1, Title 11, California Code of Regulations. The reference number/identifier should refer specifically to the testing of the named firearms safety device model, not to the laboratory in general. The number /identifier must be noted in the space provided on each page of this Report.

Laboratory Information

Laboratory Reference Number/Identifier FSD429 Date Submitted: 11/12/2003 ⁸³

Certified Firearms Safety Device Laboratory United States Test Laboratory

Address: 7447 W. 33rd St. N.
Wichita, KS 67205

Name and Telephone Number of the DOJ-Certified Laboratory staff person to be contacted regarding this report:

Richard W. Mouser, 316-832-1100

Date of Test: 11/12/2003 Time of Test: 0800-1145

Location(s) of Test, including any off-site locations: USTL

Name(s) and Title(s) of laboratory staff who conducted and/or performed the required testing:

Richard Mouser; President

Branden Arnold; Lab Technician

Name(s) and business affiliations of all persons who have witnessed any part of the testing procedure:

Marlin Jiranek; Remington Representative

ET47695

COMPLIANCE TEST REPORT

Page 2

LABORATORY REFERENCE NUMBER:

FSD429

FD 033 (Rev. 10-01)

FIREARMS SAFETY DEVICE MODEL INFORMATION:

Firearms Safety Device Type (check one): External: X Internal: _____ Integral: _____Make: RemingtonModel: 870 Express Aluminum Two-Dot ISS Trigger GuardConstruction Material(s) (e.g., steel, alloy, etc.): Trigger Guard: Aluminum; Trigger: Steel;Lock Bolt: Steel

Tested on which firearm(s)

Type:	Handgun:	Revolver	Pistol
	Longgun:	Shotgun	<u>X</u> Rifle
	Other:		

Firearms Make(s) and Model(s): Remington 870 ExpressCaliber(s): 12 gaugeBarrel Length(s): 28.0"

PRIMED CASE INFORMATION

Primed Case Used: Manufacturer: FiocchiPrimer: Fiocchi

_____ No primed case was used. (When firearms safety device is properly installed, firearm is incapable of accepting cartridges)

ET47696

COMPLIANCE TEST REPORT
LABORATORY REFERENCE NUMBER: FSD429
FD 033 (Rev. 10-01)

Page 3

FIREARMS SAFETY DEVICE MANUFACTURER OR DEALER INFORMATION

Firearms Safety Device Submitted by: RemingtonAddress: 315 W. Ring Rd., Elizabethtown, KY 42701Country: USAContact Person: Marlin JiranekPhone Number: 270-769-7645

TEST RESULTS

The four firearms safety devices have passed the test as defined in Regulations Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations. With a check mark, indicate that the firearms safety device passed a specific test. If a test was not applicable, indicate so with N/A.

X (1) Picking or manipulation testX (2) Forced removal inspectionN/A (3) Tensile testX (4) Shock testN/A (5) Shackle or cable cutting test. In addition, provide measurements and a description, or measurements and a diagram, of where the shackle and/or cable was attacked.N/A (6) Plug pulling test- If the self tapping screw was not inserted at least 3/4-inch as described in the testing procedure, provide the depth to which the self tapping screw was inserted and explain why it was not inserted at least 3/4-inch.N/A (7) Plug torque testX (8) Sawing test- In addition, provide measurements and a description, or measurements and a diagram, of where the firearms safety device was attacked.X (9) Drop test

ET47697

COMPLIANCE TEST REPORT
LABORATORY REFERENCE NUMBER: FSD429
FD 033 (Rev. 10-01)

Page 4

Firearms Safety Device Standards

The tested firearms safety device meets the standards in Regulation Section 977.44, Chapter 12.6, Division 1, Title 11, California Code of Regulations.

(a) The firearms safety device is of a design that will not allow its removal or deactivation except by utilizing a key, combination, or other unique method as intended by the manufacturer to allow access only authorized users. (Please indicate locking system)

 (1) If a combination locking system, there are a minimum of 1,000 possible combinations consisting of a minimum of three numbers, letters, or symbols per combination.

 (2) If a key locking system, the key locking system shall be unique to the manufacturer's firearms safety device(s)).

 X (3) Other: Special "J" key (Male)

(b) The firearms safety device renders the firearm inoperable (unable to fire) while the firearms safety device is properly installed.

(c) The firearms safety device functions by at least one of the following methods (please indicate all applicable methods):

- X (1) By blocking travel of the trigger, striker, firing pin, or hammer.
 (2) By preventing the action or cylinder from closing.
 (3) By preventing the chamber(s) from accepting or holding a cartridge.
 (4) By preventing access to the firearm.

(d) The firearms safety device is capable of repeated use.

 X The tested device meets all of the above standards.

I declare under penalty of perjury according to the laws of the State in which this report was executed that all statements made in this report and Attachment A are true and complete.

Signature: Richard MouserName/Title (Printed): Richard W. Mouser, PresidentDate: 11/12/03

ET47698



**CALIFORNIA DEPARTMENT OF JUSTICE
FIREARMS SAFETY DEVICE
COMPLIANCE TEST REPORT**
FD 033 (Rev. 10-01)



The Certified Firearms Safety Device Laboratory identified below has completed testing required by Penal Code Sections 12088 and Regulation Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations is submitting this Compliance Test Report as required by Regulation Section 977.46, Chapter 12.6, Division 1, Title 11, California Code of Regulations. The reference number/identifier should refer specifically to the testing of the named firearms safety device model, not to the laboratory in general. The number /identifier must be noted in the space provided on each page of this Report.

Laboratory Information

Laboratory Reference Number/Identifier FSD428 Date Submitted: 11/12/2003

Certified Firearms Safety Device Laboratory United States Test Laboratory

Address: 7447 W. 33rd St. N.
Wichita, KS 67205

Name and Telephone Number of the DOJ-Certified Laboratory staff person to be contacted regarding this report:

Richard W. Mouser, 316-832-1600

Date of Test: 11/12/2003 Time of Test: 0800-1145

Location(s) of Test, including any off-site locations: USTL

Name(s) and Title(s) of laboratory staff who conducted and/or performed the required testing:

Richard Mouser; President

Branden Arnold; Lab Technician

Name(s) and business affiliations of all persons who have witnessed any part of the testing procedure:

Marlin Jiranek; Remington Representative

ET47699

COMPLIANCE TEST REPORT

Page 2

LABORATORY REFERENCE NUMBER:

FSD428

FD 033 (Rev. 10-01)

FIREARMS SAFETY DEVICE MODEL INFORMATION:

Firearms Safety Device Type (check one): External: X Internal: _____ Integral: _____Make: RemingtonModel: 870 Express Plastic Two-Dot ISS Trigger GuardConstruction Material(s) (e.g., steel, alloy, etc.): Trigger Guard: Synthetic; Trigger: SteelLock Bolt: Steel 83

Tested on which firearm(s)

Type:	Handgun:	Revolver	Pistol
	Longgun:	Shotgun	<u>X</u> Rifle
	Other:		

Firearms Make(s) and Model(s): Remington, 870 ExpressCaliber(s): 12 gauge Barrel Length(s): 28.0"

PRIMED CASE INFORMATION

Primed Case Used: Manufacturer: FiocchiPrimer: Fiocchi

_____ No primed case was used. (When firearms safety device is properly installed, firearm is incapable of accepting cartridges)

ET47700

COMPLIANCE TEST REPORT
LABORATORY REFERENCE NUMBER: FSD428
FD 033 (Rev. 10-01)

Page 3

FIREARMS SAFETY DEVICE MANUFACTURER OR DEALER INFORMATION

Firearms Safety Device Submitted by: RemingtonAddress: 315 W. Ring Rd., Elizabethtown, KY 42701Country: USAContact Person: Marlin JiranekPhone Number: 270-769-7645

TEST RESULTS

The four firearms safety devices have passed the test as defined in Regulations Section 977.45, Chapter 12.6, Division 1, Title 11, California Code of Regulations. With a check mark, indicate that the firearms safety device passed a specific test. If a test was not applicable, indicate so with N/A.

☒ (1) Picking or manipulation test☒ (2) Forced removal inspection☐ N/A (3) Tensile test☒ (4) Shock test☐ N/A (5) Shackle or cable cutting test. In addition, provide measurements and a description, or measurements and a diagram, of where the shackle and/or cable was attacked☐ N/A (6) Plug pulling test- If the self tapping screw was not inserted at least 3/4-inch as described in the testing procedure, provide the depth to which the self tapping screw was inserted and explain why it was not inserted at least 3/4-inch.☐ N/A (7) Plug torque test☒ (8) Sawing test- In addition, provide measurements and a description, or measurements and a diagram, of where the firearms safety device was attacked.☒ (9) Drop test

ET47701

COMPLIANCE TEST REPORT
LABORATORY REFERENCE NUMBER: FSD428
FD 033 (Rev. 10-01)

Page 4

Firearms Safety Device Standards

The tested firearms safety device meets the standards in Regulation Section 977.44, Chapter 12.6, Division 1, Title 11, California Code of Regulations.

(a) The firearms safety device is of a design that will not allow its removal or deactivation except by utilizing a key, combination, or other unique method as intended by the manufacturer to allow access only authorized users. (Please indicate locking system)

 (1) If a combination locking system, there are a minimum of 1,000 possible combinations consisting of a minimum of three numbers, letters, or symbols per combination.

 (2) If a key locking system, the key locking system shall be unique to the manufacturer's firearms safety device(s)).

 X (3) Other: Special "J" key (Male)

(b) The firearms safety device renders the firearm inoperable (unable to fire) while the firearms safety device is properly installed.

(c) The firearms safety device functions by at least one of the following methods (please indicate all applicable methods):

- X (1) By blocking travel of the trigger, striker, firing pin, or hammer.
 (2) By preventing the action or cylinder from closing.
 (3) By preventing the chamber(s) from accepting or holding a cartridge.
 (4) By preventing access to the firearm.

(d) The firearms safety device is capable of repeated use.

 X The tested device meets all of the above standards.

I declare under penalty of perjury according to the laws of the State in which this report was executed that all statements made in this report and Attachment A are true and complete.

Signature: Richard W. Mouser

Name/Title (Printed): Richard W. Mouser, President

Date: 11/12/03

ET47702

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 11/11/03
 Via: UPS
 Returned Via: UPS

Record No: FSD428
 Test Date: 11/12/2003
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Integral
 Key Type: Special "J" (Male)
 Model: 870 Express Plastic Two-Dot
 ISS Trigger Guard

Sample Dimensions

Body Length: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Dia.: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

Firearm Used: Remington, 870 Exp. 12 ga., 28" bbl.

Test Spec.: California Title 11, Div. 1, Ch. 12.6 Sample Description: Trigger Guard: Synthetic;
 Trigger: Steel; Lock Bolt: Steel.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.

Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

Remarks/Notes:

* Test could not be conducted due to minimal keyway dimension.

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools	

Remarks/Notes:**(3) Tensile Test**

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	N/A
	Firearm safety device tested without firearm.		

Remarks/Notes:

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool. Failure also occurs if following the shock test, subsequent manipulation with an 8-10-inch long screwdriver with a 1/4 to 5/8-inch flathead end for fifteen seconds allows the tester to discharge a primed case.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	5	Pass

Remarks/Notes:

Manipulation conducted with a 1/4" screwdriver at keyway for 15 sec. subsequent to Shock Test (Pass).

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.			
	Firearm safety device tested without firearm.			N/A

Remarks/Notes:**(6) Plug Pulling Test**

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw. Failure occurs if the firearms safety device can be opened by fifteen seconds of manipulation with an 8-10-inch long screwdriver with the largest flat blade (not to exceed 5/8") that will fit into the keyway at the conclusion of the test.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	*

Remarks/Notes:

* Test could not be completed, due to hardened keyway.

Record No.: FSD428

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	*

Remarks/Notes:

* Test could not be completed, due to minimal keyway dimension.

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand. At the conclusion of the sawing test, the testing agent shall manipulate the firearms safety device for fifteen seconds by hand in an attempt to disable the firearms safety device.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	120	Pass

Remarks/Notes:

Sample tested between locking bolt and trigger.

Manipulation conducted by hand at locking bolt and trigger subsequent to Sawing Test for 15 sec. (Pass).

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
3	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

Remarks/Notes:

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold/Mouser
United States Test Laboratory Phone 316-832-1600
7447 W. 33rd St. N., Wichita, KS 6720 Fax 316-832-1602

120 Cycles

11

15

14

13

12

83



ET47706

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 11/11/03
 Via: UPS
 Returned Via: UPS

Record No: FSD429
 Test Date: 11/12/2003
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Integral
 Key Type: Special "J" (Male)
 Model: 870 Express Aluminum Two-Dot
 ISS Trigger Guard
 Firearm Used: Remington, 870 Exp. 12 ga., 28" bbl.
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Length: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Dia.: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.

Sample Description: Guard: Alum.; Trigger: Steel;
 Locking Bolt: Steel.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.
 Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	
	Firearm safety device tested without firearm.	#1 paper clip	2	Pass
		1.4 mm screwdriver	2	Pass

Remarks/Notes:

* Test could not be conducted due to minimal keyway dimension.

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	Pass

Remarks/Notes:**(3) Tensile Test**

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	N/A

Remarks/Notes:

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool. Failure also occurs if following the shock test, subsequent manipulation with an 8-10-inch long screwdriver with a 1/4 to 5/8-inch flathead end for fifteen seconds allows the tester to discharge a primed case.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	5	Pass

Remarks/Notes:

Manipulation conducted with a 1/4" screwdriver at keyway for 15 sec. subsequent to Shock Test (Pass).

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	-	N/A
	Firearm safety device tested without firearm.	-	-	

Remarks/Notes:**(6) Plug Pulling Test**

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw. Failure occurs if the firearms safety device can be opened by fifteen seconds of manipulation with an 8-10-inch long screwdriver with the largest flat blade (not to exceed 5/8") that will fit into the keyway at the conclusion of the test.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.	-	*
	Firearm safety device tested without firearm.	-	

Remarks/Notes:

* Test could not be completed, due to hardened keyway.

Record No.: FSD429

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	-	*

Remarks/Notes:

* Test could not be completed, due to minimal keyway dimension.

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand. At the conclusion of the sawing test, the testing agent shall manipulate the firearms safety device for fifteen seconds by hand in an attempt to disable the firearms safety device.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
2	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	120	Pass

Remarks/Notes:

Sample tested between locking bolt and trigger.

Manipulation conducted by hand at locking bolt and trigger subsequent to Sawing Test for 15 sec. (Pass).

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
3	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	Pass
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	Pass
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	Pass
	(E) On either side with the barrel horizontal.	Pass
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	Pass

Remarks/Notes:

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

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120 Cycles

15

14

13

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11

83

ET47710

UNITED STATES TEST LABORATORY
Firearm Safety Device Test Summary

Date Received: 11/11/03
 Via: UPS
 Returned Via: UPS

Record No: FSD430
 Test Date: 11/12/2003
 Customer: Remington

Sample

Manufacturer: Remington
 Lock Type: Integral
 Key Type: Special "J" (Male)
 Model: 597
 Serial/Lot: N/A
 Firearm Used: Remington, 597, 22 LR, 20" bbl.
 Test Spec.: California Title 11, Div. 1, Ch. 12.6

Sample Dimensions

Body Length: N/A in.
 Body Width: N/A in.
 Body Depth: N/A in.
 Shackle/Cable Dia.: N/A in.
 Shackle/Cable Length: N/A in.
 Weight: N/A lbs.
 Sample Description: Guard: Synthetic; Trigger: Steel;
 Locking Bolt: Steel.

(1) Picking or Manipulating Test

Cylinders in the firearms safety device shall resist picking with use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each.
 Combination locks shall resist manual manipulation for two minutes.

Sample No.	Test Condition	Tool	Time (min.)	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	jumbo paper clip	2	Pass
	Firearm safety device tested without firearm.	#1 paper clip	2	
		1.4 mm screwdriver	2	

Remarks/Notes:

* Test could not be conducted due to minimal keyway dimension.

(2) Forced Removal Inspection

Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through the partial destruction of the firearm with common household tools.

Sample No.	Description/Explanation	Results (Pass/Fail)
1	X Firearm safety device does not appear that it may be disabled through the partial destruction of the firearm with common household tools.	Pass
	Firearm safety device appears that it may be disabled through the partial destruction of the firearm with common household tools.	

Remarks/Notes:**(3) Tensile Test**

This test is designed to test the strength of the firearm safety device utilizing a pulling action. Apply 225 pounds force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either the mating locking components of the firearms safety device.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.		N/A
	Firearm safety device tested without firearm.		

Remarks/Notes:

(4) Shock Test

This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a 2.2 pound weight from a distance of one 39.4 inches + 0.4 inches five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool. Additionally, using the shock impact fixture, drop a 2.2 pound weight from a distance of 39.4 inches + 0.4 inches five times to the top of the firearms safety device body using a chucked steel rod tool. Failure also occurs if following the shock test, subsequent manipulation with an 8-10-inch long screwdriver with a 1/4 to 5/8-inch flathead end for fifteen seconds allows the tester to discharge a primed case.

Sample No.	Test Condition	Tool	Drops	Results (Pass/Fail)
1	X Firearm safety device tested with firearm.	blade	5	Pass
	Firearm safety device tested without firearm.	rod	5	Pass

Remarks/Notes:

Manipulation conducted with a 1/4" screwdriver at keyway for 15 sec. subsequent to Shock Test (Pass).

83

(5) Shackle or Cable Cutting Test

This test is designed to determine the firearms safety device resistance to cutting forces of 1,000 pounds force for solid metal shackles or with hand forces of 100 pounds force for cables.

Sample No.	Test Condition	Max. Load (lbf.)	Time (s.)	Results (Pass/Fail)
N/A	Firearm safety device tested with firearm.	-	-	N/A
	Firearm safety device tested without firearm.	-	-	N/A

Remarks/Notes:**(6) Plug Pulling Test**

This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder. Drill the keyway with a number 20 diameter drill bit and insert a self tapping screw of size AB12 at least 0.75 inches deep. Apply a required tension of 225 pounds force axially between the case and installed screw. Failure occurs if the firearms safety device can be opened by fifteen seconds of manipulation with an 8-10-inch long screwdriver with the largest flat blade (not to exceed 5/8") that will fit into the keyway at the conclusion of the test.

Sample No.	Test Condition	Max. Load (lbf.)	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.	-	*
	Firearm safety device tested without firearm.	-	*

Remarks/Notes:

* Test could not be completed, due to hardened keyway.

Record No.: FSD430

(7) Plug Torque Test

This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch) that will fit into the keyway, so that a torque load of 89 pounds force-inches can be applied to the plug.

Sample No.	Test Condition	Max. Load (lbs/in.)	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.		*

Remarks/Notes:

* Test could not be completed, due to minimal keyway dimension.

(8) Sawing Test

The testing agent shall accomplish a test using a standard carbon steel hacksaw blade with 32 teeth per inch with a constant vertical downward force of ten pounds. The test shall consist of 120 cycles, with no time limit, by hand. At the conclusion of the sawing test, the testing agent shall manipulate the firearms safety device for fifteen seconds by hand in an attempt to disable the firearms safety device.

Sample No.	Test Condition	Cycles	Results (Pass/Fail)
3	X Firearm safety device tested with firearm.		
	Firearm safety device tested without firearm.	120	Fail

Remarks/Notes:

Sample tested between locking bolt and trigger.

Manipulation conducted by hand at locking bolt and trigger subsequent to Sawing Test for 15 sec. (Fail).

Drop Test

Sample No.	Sections (C) thru (F) do not apply to lock-box type devices.	Results (Pass/Fail)
N/A	(A) Normal firing position with the barrel horizontal/With the locking mechanism facing directly up.	N/A
	(B) Upside down with the barrel horizontal/With the locking mechanism facing directly down.	N/A
	(C) If the firearm is a handgun, on the grip with the barrel vertical.	N/A
	(D) On the muzzle with the barrel vertical.	N/A
	(E) On either side with the barrel horizontal.	N/A
	(F) Exposed hammer or striker, otherwise on the rearmost point of the weapon.	N/A

Remarks/Notes:

Drop Test not conducted, due to failure during Sawing Test.

This test was performed in accordance with the specification requirements and the results properly reflect the performance of the listed sample.

Arnold/Mouser	Phone	316-832-1600
United States Test Laboratory	Fax	316-832-1602
7447 W. 33rd St. N., Wichita, KS 6720		



120

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10 11 12 13 14 15 16

ET47714

CONFIDENTIAL

Appendix 12
Current CA DOJ Standards

ET47715

DEPARTMENT OF JUSTICE
FIREARMS DIVISION
FIREARMS SAFETY DEVICE TESTING AND GUN SAFE STANDARDS

Department of Justice
P.O. Box 160487
Sacramento, CA 95816-0487

NOTICE OF APPROVAL OF REGULATORY ACTION

The Department recently proposed new language that would amend the Firearms Safety Device Testing and Gun Safe Standards. These amendments were approved and now have the force of law. Therefore, effective immediately the attached regulations shall supercede all other versions. All firearms safety device testing and approval processes shall be conducted under the standards adopted into these newly revised regulations. 83

An electronic version of these regulations can also be found on the Internet under the Department's Current and Proposed Regulations section at <http://www.caag.state.ca.us/firearms/regs/index.html>.

Please direct any questions that you may have regarding safety device testing or gun safe standards to Steven Teeters at (916) 263-0849.

ET47716

CHAPTER 12.6

Department of Justice Regulations For Certified Firearms Safety Device Laboratories, Firearms Safety Device Standards and Testing, and Standards For Gun Safes

Article 1- General: Title; Scope; Extensions for Compliance

§ 977.10 - Title and Scope

- (a) This chapter shall be known as "Department of Justice Regulations For Certified Firearms Safety Device Laboratories, Firearms Safety Device Standards and Testing, and Standards For Gun Safes," may be cited as such, and is herein referred to as "these regulations."
- (b) The provisions of these regulations implement, interpret, and make specific the laboratory certification and firearms safety device testing programs mandated by California Penal Code sections 12087 through 12088.9, which became effective January 1, 2000. These regulations also establish procedures to create and maintain both a roster of FSD laboratories and a roster of certified firearms safety devices. These regulations additionally establish standards for gun safes and Firearms Safety Device (FSD) standards and testing requirements. These regulations also apply to any person, firm, and/or corporation that wishes to become certified as a Certified FSD Laboratory.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.15 - Extensions for Compliance

If a Certified Firearms Safety Device Laboratory provides the Department of Justice (DOJ) with written proof that through no fault of its own it is not able to meet a deadline provided for in these regulations, the DOJ may grant a temporary extension of time to meet that deadline. Any such extension shall be in writing and shall designate a specific time period for the extension.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

Article 2 - Definition of Key Terms

§ 977.20 - Definition of Key Terms

- (a) "ATF" means the United States Department of Justice, Bureau of Alcohol, Tobacco, Firearms and Explosives.
- (b) "Certified Firearms Safety Device Laboratory" or "Certified FSD Laboratory" means a laboratory that has been granted FSD Laboratory Certification by the DOJ.
- (c) "COE" means a Certificate of Eligibility issued by the DOJ pursuant to subdivision (a)(4) of Penal Code section 12071 and the regulations issued thereunder after a check of state and federal files has determined that at the time the check was performed, and based upon available information, the applicant was not a person who was prohibited from possessing firearms pursuant to state and federal laws.

- (d) "Common household tools" means: screwdrivers (8-10 inches in length, flathead or Phillips, flathead sizes up to 5/8 inches), pipe wrenches (9½ -10 inches in length), vice grip pliers (9½-10 inches in length), other pliers (9½ -10-inch arch joint, 6-6½-inch slip joint, 6-6½-inch long nose), hacksaws (12-inch, standard carbon steel blade), crowbars (16 inch), electric/cordless drills (1/3 horsepower corded/9.6 volt cordless), hammers (16 ounce), chisels (1/4-inch to 1-inch blade width wood chisels), and crescent wrenches (10 inch).
- (e) "Completed Application" means: a completed Application for Firearms Safety Device Laboratory Certification, (DOJ Form FD 031), including application copies of any applicable licenses and/or certificates; any additional sheets of paper used to provide full and complete answers to questions on the application; and copies of the laboratory's written procedures relating to security and prohibited persons.
- (f) "Corporation" means any entity organized under California Corporations Code section 102(a) or similar statute if not a California corporation.
- (g) "Day" means a calendar day unless otherwise specified in these regulations.
- (h) "Disabled" means defeating the Firearms Safety Device thereby rendering the firearm capable of firing (expelling a projectile by the force of an explosion or other form of combustion).
- (i) "DOJ" means the California Department of Justice.
- (j) "DOJ-Approved Safety Device" means a firearms safety device that has been tested by a certified FSD laboratory, has been determined to meet the standards for firearms safety devices, and may be sold in California pursuant to Penal Code section 12088.2.
- (k) "Firearms manufacturer/importer" means either: A licensed manufacturer of domestically produced firearms or, if one exists, a legal successor-in-interest or other person with the consent of the manufacturer; and/or a federally licensed importer of foreign manufactured firearms.
- (l) "Firearms safety device" means a device that locks and is designed to prevent children and unauthorized users from firing a firearm. The device may be installed on a firearm, be incorporated into the design of a firearm, or prevent access to the firearm.
- (m) "Firearms Safety Device Compliance Test Report" means a report completed by a Certified FSD Laboratory after a firearms safety device has met the requirements of Penal Code section 12088.2 and these regulations.
- (n) "Firearms safety device manufacturer or dealer" means either: a manufacturer of firearms safety devices or a dealer of firearms safety devices.
- (o) "Firing Chamber" means the chamber that is lined up with the firing pin or striker.
- (p) "Firm" means a business unit, enterprise, or partnership of two or more persons, that is not recognized as a legal person distinct from the members comprising the entity.
- (q) "FSD Laboratory Certification" means the DOJ certificate issued as evidence of compliance with the DOJ laboratory certification requirements as set forth in these regulations.

- (r) "Keyway" means the opening in a locked cylinder that is shaped to accept a key bit or blade of a proper configuration.
- (s) "Local License" means any regulatory and/or business license issued by a city, county, or other local government agency.
- (t) "Model" means the manufacturer's designation which uniquely identifies a specific design of firearms safety device.
- (u) "Plug" means the part of a cylinder which contains the keyway, with tumbler chambers usually corresponding to those within the cylinder shell.
- (v) "Properly installed" means the firearms safety device is installed according to the instructions provided by the firearms safety device manufacturer or dealer.
- (w) "Reasonable Access" means that areas and/or items to be inspected by an authorized DOJ employee are free from physical obstruction and/or other impediments that would make access difficult and/or unsafe.
- (x) "Roster of Approved Firearms Safety Devices" means a DOJ list of all DOJ-Approved Safety Devices. The roster shall list, for each DOJ-Approved Firearms Safety Device, the manufacturer, model number, model name, and other information deemed necessary by the DOJ to facilitate identifying that firearms safety device.
- (y) "Lock Box" means a firearms safety device that fully contains and encloses the firearm(s).

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

Article 3 - Certified FSD Laboratories

§ 977.30 - Who Must be a Certified FSD Laboratory

- (a) Any laboratory wishing to participate in the testing program described in these regulations must first become a Certified FSD Laboratory.
- (b) Any proposed change in the ownership of five percent or more of a Certified FSD laboratory from that reported on the initial application shall require the submission of an Application for Firearms Safety Device Laboratory Certification (DOJ Form FD 031), by the proposed ownership entity or owners.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.31 - Application for Firearms Safety Device Laboratory Certification

The DOJ shall accept completed applications from laboratories seeking FSD Laboratory Certification. Application for certification shall be made on an Application for Firearms Safety Device Laboratory Certification (DOJ Form FD 031), which shall include the following information:

- (a) Laboratory information: name of applicant laboratory; physical and mailing addresses; telephone and fax numbers; local licensing authority, business license number, and expiration date; the name of the local law enforcement agency with jurisdiction over the laboratory; state corporation/partnership number and expiration date; federal firearms license number, type, and expiration date (if licensed); business hours; e-mail address (if applicable); and copies of licenses and/or certificates identified on the application.
- (b) COE holder information: name, title, COE number, and COE expiration date of any owner, chief executive officer, or person who possesses or has applied for a COE and who is authorized to sign Compliance Test Reports.
- (c) Ownership information: ownership structure; the name, title/relation to laboratory/percentage owned and/or controlled, address, telephone and fax numbers, state corporation/partnership number and expiration date, and local business license number and expiration date of any owner that is not a natural person; and the name, title/relation to laboratory/percentage owned and/or controlled, address, and telephone number of each owner, partner, officer, director and any person who owns and/or exercises control of five percent or more of outstanding common stock; and if a corporation or partnership either original certified copies of the articles of incorporation or a current roster of general and limited partners. 83
- (d) Facility management and testing supervision information: name and title of the manager or director of the laboratory and/or unit of the laboratory that will conduct firearms safety device tests, the person(s) supervising firearms safety device tests (if different from the manager or director), and persons participating and/or performing firearms safety device tests (if different); a copy of the laboratory's security procedures; the name, address, and telephone number of any 24-hour security service or monitored alarm system that is employed by the laboratory, and a copy of the contract for services; and a copy of the procedures for ensuring that persons prohibited from possessing firearms will not have access to firearms, and a description of the method to be used to identify any such persons.
- (e) A signed certification regarding: possession of the required equipment (whether the laboratory will obtain the required equipment at the time the application is submitted or at a later date); the maintenance and calibration of that equipment; compliance with safety, design, operation, and licensing and approval requirements; the signature of the authorized representative; and the county, state, and date of signature.
- (f) Off-site location information, if applicable: name of the owner; telephone number; physical address; and the testing to be performed and/or equipment to be used at the off-site location (if more than one off-site location is desired, the applicant must also complete a Request to Utilize an Additional Off-site Location (DOJ Form FD 032).
- (g) Authorized representative information: name and title of the person who has the legal authority to sign the application and attest to the required matters on behalf of the applicant laboratory, signed certification of the authorized representative, the county, state, and date of signature, and statements of certification that the laboratory agrees to give complete and truthful answers to questions that are pertinent to the laboratory's ability to perform firearms safety device tests and to comply with all applicable federal, state, and/or local laws and/or regulations that relate to laboratory certification or firearms safety device testing.

- (h) A signed certification stating that the laboratory and/or owner is free from any conflicts of interest as defined by section 977.40 of these regulations; the signature of the authorized representative; and the county, state, and date of signature.
- (i) A signed certification ensuring: the notification to staff of laws relating to prohibitions against firearms possession, ensuring that prohibited persons do not have access to, come into contact with, and/or possess firearms; the laboratory obtaining and maintaining any required federal, state, and/or local licenses; and the laboratory complying with all applicable federal, state, and/or local laws and/or regulations; the signature of the authorized representative; and the county, state, and date of signature.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.32 - Pre-Certification Requirements

- (a) One or more of the owner(s), chief executive officer(s), or person(s) with primary responsibility for the operation of the laboratory shall obtain and maintain a valid COE as a condition of obtaining and maintaining certification.
- (b) Once a completed application has been received, the DOJ shall schedule an on-site inspection of the applicant laboratory. During this inspection the applicant laboratory shall demonstrate its possession of all necessary equipment and its ability to properly conduct all of the procedures and tests described in section 977.45 of these regulations.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.33 - Grounds for Denial

- (a) An initial application for firearms safety device laboratory certification shall be denied if the applicant laboratory:
 - (1) Makes false statements on the application.
 - (2) Fails to meet the security requirements identified in subsection (a) of section 977.41 of these regulations.
 - (3) Is wholly or partly owned by, a part of, financed by, or in any other way financially supported by any firearms and/or firearms safety device manufacturer/importer, wholesaler, distributor, or dealer. As used in this subsection, financial support does not apply to situations wherein an applicant laboratory provides testing services to a firearms and/or firearms safety device manufacturer/importer, wholesaler, distributor, or dealer.
 - (4) Fails to demonstrate the ability to conduct the required testing as set forth in section 977.45 of these regulations in an impartial, technically sound manner. Failure includes not having and using the equipment required by said subsection.
 - (5) Fails to obtain the required COE(s).
 - (6) Fails to comply with any required local, state, and/or federal laws and/or licensing requirements relating to firearms safety device testing.

- (7) Has any present or planned contractual, organizational, employment or other financial involvement and/or relationship (spouse(s), children, sibling(s), parent(s), or in-law(s)) with any firearms and/or firearms safety device manufacturer/importer, wholesaler, distributor, or dealer. This would also apply to any employee(s) directly involved in firearms safety device testing, owner(s), shareholders(s), partners(s), officer(s), and/or director(s) of the applicant laboratory who has any such involvement or relationship.
- (8) Is currently or plans to be a firearms and/or firearms safety device manufacturer/importer, wholesaler, distributor, or dealer. This would also apply to any employee(s) directly involved in firearms safety device testing, owner(s), shareholders(s), partner(s), officer(s), and/or director(s) of the applicant laboratory.
- (9) Has a present or planned direct, indirect, and/or beneficial interest aggregating \$1,000 or more in any entity that is a firearms and/or firearms safety device manufacturer/importer, wholesaler, distributor, or dealer. This would also apply to any employee(s) directly involved in firearms safety device testing, owner(s), shareholders(s), partner(s), officer(s), and/or director(s) of the applicant laboratory.
- (b) If the DOJ denies certification, the DOJ shall provide a notice of denial to the applicant laboratory. The notice will specify all grounds on which the denial is based.
- (c) An applicant laboratory that has been served with a notice of denial may request a hearing. The written request must be received by the DOJ no later than 20 days from the date of service of the notice of denial. If a hearing is requested, it will be conducted in accordance with Chapter 5 (commencing with section 11500), Part 1, Division 3, Title 2 of the Government Code. Failure to make a written request for a hearing within the time specified above constitutes a waiver of the right to a hearing. If this occurs or if the applicant laboratory withdraws its appeal, the denial shall be final.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.34 - Certification Period for Certified FSD Laboratories

The period of certification shall be two years from the date of issuance.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.35 - Processing Times

- (a) The following processing times shall apply to initial applications:
 - (1) Within 15 days from the date of receipt of an application, the DOJ will either inform the applicant in writing that the application is complete and accepted for processing, or return the application as deficient, and specify what information is required.
 - (2) Within 20 days from the date of receipt of a completed and accepted application, the DOJ will schedule an on-site inspection unless the time is waived by the applicant.
 - (3) Within 30 days from the date of receipt of a completed and accepted application the DOJ will conclude the processing of the application unless the time is waived by the applicant. This

includes: completing the pre-certification on-site inspection and making a determination regarding the approval or denial of the application.

- (b) The DOJ's minimum, median, and maximum times for processing an initial application from the date of receipt of the completed application to a final decision are:
 - (1) Minimum time: 15 days.
 - (2) Median time: 20 days.
 - (3) Maximum time: 30 days.
- (c) The following processing times will apply to application renewal:
 - (1) Within 15 days from the date of receipt of an application for renewal, the DOJ will either inform the applicant in writing that the application is complete and accepted for processing, or return the application as deficient, and specify what information is required.
 - (2) Within 20 days from the date of receipt of a completed and accepted application for renewal, the DOJ will schedule an on-site inspection unless the time is waived by the applicant. ⁸³
 - (3) Within 30 days from the date of receipt of a completed application for renewal, the DOJ will conclude the processing of the application unless the time is waived by the applicant. This includes making a determination regarding the renewal of the application.
- (d) The DOJ's minimum, median, and maximum times for processing a completed application for renewal of certification from the date of receipt to a final decision are:
 - (1) Minimum time: 15 days.
 - (2) Median time: 20 days.
 - (3) Maximum time: 30 days.

Authority cited: Section 15376, Government Code; Sections 12088, 12088.2, Penal Code. Reference: Section 15376, Government Code; Sections 12088, 12088.2, Penal Code.

§ 977.36 - Appeal Process

- (a) If the DOJ fails to meet the time periods for concluding the processing of an application, the applicant may apply in writing for a full refund of all applicable application fees. The request must be received by the DOJ within 20 days from the date of service of the final decision granting or denying the application.
- (b) The DOJ shall respond within ten days from the date of receipt of a request for refund.
- (c) If the refund is denied by the DOJ, the applicant may directly appeal the denial in writing to the Attorney General. The appeal must be filed within 20 days from the date of service of the refund denial. The appeal shall set forth a concise statement of facts and a chronology of events regarding the application.

- (d) The appeal in subsection (c) of this section will promptly be reviewed, and a decision will be issued within 30 days from the completion of any investigation which the Attorney General deems appropriate. The appeal in subsection (c) of this section will be decided in the applicant's favor if the DOJ has exceeded its maximum time period for the issuance or denial of the FSD Laboratory Certification, and the DOJ has failed to establish good cause for exceeding this time period.
- (e) The DOJ will provide information regarding this appeal process on the Application for Firearms Safety Device Laboratory Certification (DOJ Form FD 031).

Authority cited: Section 15378, Government Code; Sections 12088, 12088.2, Penal Code. Reference: Section 15378, Government Code; Sections 12088, 12088.2, Penal Code.

Article 4 - Operational Requirements, Firearms Safety Device Standards, Gun Safe Standards, Proof of Purchase or Ownership of a Gun Safe, Affixation of Required Warning

§ 977.40 - Absence of Conflict of Interest

The Certified FSD Laboratory shall at all times ensure that:

- (a) It is not wholly or partly owned by, a part of, financed by, or in any other way financially supported by any firearms and/or firearms safety device manufacturer/importer, wholesaler, distributor, or dealer. As used in this subsection, financial support does not apply to situations wherein an applicant laboratory provides testing services to a firearms and/or firearms safety device manufacturer/importer, wholesaler, distributor, or dealer.
- (b) None of the employee(s) directly involved in firearms safety device testing, or the owner(s), shareholders(s), partner(s), officer(s), and/or director(s) of the Certified FSD Laboratory will:
 - (1) Have any contractual, organizational, employment or other financial involvement and/or relationship (spouse(s), children, sibling(s), parent(s), or in-law(s)) with any firearms and/or firearms safety device manufacturer/importer, wholesaler, distributor, or dealer.
 - (2) Be a firearms and/or firearms safety device manufacturer/importer, wholesaler, distributor, or dealer.
 - (3) Have any direct, indirect, or beneficial interest aggregating \$1,000 or more in any entity that is a firearms and/or firearms safety device manufacturer/importer, wholesaler, distributor, or dealer.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.41 - Security and Safety

- (a) The Certified FSD Laboratory shall have written security procedures if firearms are to be stored and/or transported by the laboratory. The laboratory staff shall be informed of these written procedures, and these procedures shall be made available to the DOJ upon request. The procedures shall address, and the laboratory shall comply with, all of the following security and safety procedures:
 - (1) The firearm(s) shall be stored unloaded by one of the following methods:

- (A) Locked in a secure room that is a part of, or that constitutes, the licensee's business premises away from any general living or work area. All doors leading into the room shall be solid core with a dead-bolt lock or the equivalent.
 - (B) In a locked safe that meets the standards for gun safes as defined in section 977.50 of these regulations or a vault in the licensee's business premises.
- (2) If the firearm(s) are stored at a location different from the principal place of business, or at the applicant's residence and that residence is rented/leased, the applicant shall submit to the DOJ written approval from the owner and the location shall meet all security requirements.
 - (3) Ammunition shall be stored separately from the firearms in a secure room, cabinet or box which shall be locked while unattended.
 - (4) When transporting a firearm for delivery to an authorized recipient or off-site testing location, the firearm shall be transported as required by California Penal Code section 12026.1, or as required by any applicable federal, state, and/or local statute and/or ordinance when outside of California.
 - (5) Any firearm not actively being used in the testing of a firearms safety device shall be stored pursuant to subsection (a)(1) of this section. Any firearm to be shipped from the laboratory shall be stored pursuant to subsection (a)(1) of this section until arrival of the person authorized to receive the firearm or until laboratory personnel are prepared to transport the firearm for delivery to an authorized recipient.
 - (6) The Certified FSD Laboratory shall maintain proper inventory control and shall report any firearm that is lost or stolen to the submitting party, if applicable, the local law enforcement agency, and the DOJ within ten working days of discovery of the loss or theft. The report shall include, but shall not be limited to, the make, model, serial number, and caliber of the firearm. The laboratory shall maintain the following records relating to any such firearms: the type, make, model, caliber, barrel length, category, and serial number of the lost/stolen firearm; the date of the loss/theft; the date the loss/theft was reported to the submitting party (if applicable), local law enforcement, and the DOJ; and any case/report number(s) assigned by the local law enforcement agency to the loss/theft. The laboratory shall maintain these records for at least ten years.
- (b) The Certified FSD Laboratory shall at all times ensure that:
- (1) All persons conducting, supervising and/or observing firearms safety device testing under this program have and use personal safety equipment that meets or exceeds applicable current federal, state and/or local standards and the requirements of any occupational and/or industrial safety agency having jurisdiction over the laboratory and its activities.
 - (2) The design and operation of the laboratory's facilities meet or exceed applicable current federal, state and/or local standards and/or requirements.
 - (3) Laboratory testing staff are familiar with and exercise safe firearms handling and operational practices as defined in all applicable federal, state, and/or local laws. Staff shall also ensure that no ammunition shall be present in the firearms safety device testing area during testing.

- (4) The following warning in block letters not less than one inch in height shall be conspicuously posted within all areas where firearms safety device testing is performed:

"NO AMMUNITION SHALL BE PRESENT IN OR AROUND THIS TESTING AREA DURING FIREARMS SAFETY DEVICE TESTING, OR IN THE POSSESSION OF ANY PERSONNEL ACTIVELY ENGAGED IN CONDUCTING FIREARMS SAFETY DEVICE TESTS."

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.42 - Licensing/Minimum Standards Compliance

The Certified FSD Laboratory shall at all times:

- (a) Comply with all applicable local, state, and federal laws relating to firearms safety device testing.
- (b) Ensure that any required licensing and/or approvals by any federal, state, and/or local agency having jurisdiction over the laboratory have been obtained and are maintained, including the required COE(s).
- (c) Ensure that staff are informed of all applicable federal, state, and/or local laws, which apply to the jurisdiction in which the laboratory does business, that prohibit a person from possessing firearms, and ensure that persons known to be prohibited from possessing firearms do not have access to, come into contact with, or possess firearms.
- (d) Have in its possession the equipment identified in subsection (b) of section 977.45. The laboratory shall maintain and/or calibrate the equipment in accordance with the equipment manufacturer's recommendations and requirements. The laboratory shall ensure that records of such maintenance and calibration are available for use by testing personnel and for inspection by DOJ staff.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.43 - Firearms Safety Devices Testing and Submission Requirements

- (a) Each firearms safety device submitted for testing shall not be modified in any way from one of the same model that would be sold if certification is granted. If it is determined by the DOJ that a DOJ-certified firearms safety device is modified in any way from those that are being sold after certification has been granted, the DOJ will immediately remove that model of firearms safety device from the Roster of Approved Firearms Safety Devices and may recall the firearms safety device pursuant to Penal Code section 12088.4.
- (b) Four firearms safety devices of each model to be tested shall be submitted to the Certified FSD Laboratory. Three of the devices are to be utilized by the laboratory for testing pursuant to subsection (c) of section 977.45 of these regulations, and the other device is to be utilized for testing pursuant to subsections (d) and (e) of section 977.45 of these regulations and forwarded by the laboratory to the DOJ pursuant to subsection (a) of section 977.46 of these regulations. Firearms safety device manufacturers or dealers may supply any information that they believe may be needed by the laboratory for proper and safe operation of the firearms safety device. The following information shall be provided in the English language with each firearms safety device model submitted for testing:

- (1) The model name and model number of the firearms safety device.
 - (1) A description of the firearms safety device.
 - (2) A description of how the firearms safety device is intended to function and how the user should install and operate (activate/deactivate) the firearms safety device.
 - (3) The type, make, or model of firearm(s) for which the firearms safety device is designed.
- (c) The DOJ may approve an untested firearms safety device and list that firearms safety device on the Roster of Approved Firearms Safety Devices subject to all of the following:
- (1) The DOJ shall review each firearm safety device submitted pursuant to this subsection on a case-by-case basis to determine whether or not a new test will be required.
 - (2) A model of firearms safety device made by the same manufacturer must already be listed on the Firearms Safety Device Roster and the device submitted for approval pursuant to this subsection shall differ from the listed firearms safety device in only the following:
 - (A) Finish, including, but not limited to, color or engraving.
 - (B) Any feature that does not in any way alter the material or functioning of any of the components of the firearms safety device. Dimensional changes in a firearms safety device may be approved by the DOJ without additional testing on a case-by-case basis when the dimensional changes do not alter the device's ability to operate in the same manner demonstrated in the laboratory.
 - (C) Change in name or model number without affecting the design or function of the firearms safety device.
 - (3) Any manufacturer seeking to have a firearms safety device approved under this subsection shall provide the DOJ with all of the following:
 - (A) The model name and model number of the listed firearms safety device.
 - (B) The model name and model number of each firearms safety device the manufacturer seeks to have listed under this section.
 - (C) A statement, under oath, that each unlisted firearms safety device for which listing is sought differs from the listed firearms safety device only in one or more of the ways identified by this subsection and is in all other respects identical to the listed firearms safety device.
 - (D) The DOJ may, at its discretion and at any time, require a manufacturer to provide to the DOJ an example of any firearms safety device model for which listing is sought under this section, to determine whether the model complies with the requirements of this section.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.44 - Firearms Safety Device Standards

- (a) The firearms safety device shall be of a design that will not allow its removal or deactivation except by utilizing a key, combination, or other unique method as intended by the manufacturer to allow access only by authorized users, within the standards set forth in these regulations.
 - (1) Combination locking systems shall have a minimum of 1,000 possible unique combinations consisting of a minimum of three numbers, letters, or symbols per combination.
 - (2) Key locking systems shall be unique to the manufacturer's firearms safety device(s).
- (b) The firearms safety device shall render the firearm inoperable (unable to be fired) while the firearms safety device is properly installed. The firearm shall be rendered inoperable immediately upon installation and activation of the firearms safety device. Lock box style firearms safety devices must prevent removal of, and access to, the enclosed firearm.
- (c) A firearms safety device shall function by at least one of the following methods:
 - (1) By blocking travel of the trigger, striker, firing pin, or hammer.
 - (2) By preventing the action or cylinder from closing.
 - (3) By preventing the chamber(s) from accepting or holding a live cartridge.
 - (4) By preventing access to the firearm.
- (d) When used in the manner designed and intended by the manufacturer, the firearms safety device shall be capable of repeated use and shall pass the testing procedures described in these regulations.
- (e) The firearms safety device shall be capable of withstanding manipulation with common household tools, as described in section 977.45 - Testing Procedures, for an approximate ten-minute period without being disabled.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.45 - Testing Procedures

The tests in this section are designed to replicate the forces that would be exerted on firearms safety devices through the use of common household tools for an approximate ten-minute period.

- (a) The only persons allowed to conduct firearms safety device testing are authorized staff of the Certified FSD Laboratory. In addition to this staff, representatives of the firearms safety device manufacturer or dealer and/or the DOJ shall be allowed to be present during testing. Any such representative(s) shall not participate in the testing. However, if deemed necessary by the staff of the laboratory, representative(s) of the firearms safety device manufacturer or dealer may be asked to provide advice and/or guidance regarding the characteristics, handling, and/or operation of the firearms safety device.
- (b) Each laboratory testing a firearms safety device pursuant to these regulations must comply with the following test criteria relative to each firearms safety device tested:

- (1) All tests shall be conducted within the following tolerances as applicable:
 - (A) Force: 0.5% of working range.
 - (B) Height: +/- 3mm (0.12 inches).
 - (C) Torque: 4.0% of reading.
 - (D) Weight: +/- 10 grams (.02 pounds).
- (2) All tests shall be conducted at temperatures between 16 and 27 degrees Celsius (61 - 81 degrees Fahrenheit).
- (3) A tensile loading device having a load and force measuring capacity of 4,450 newtons (1,000 pounds force) shall be utilized for appropriate tests.
- (4) The American Society for Testing and Materials Standard Performance Specification for Padlocks (ASTM) F883-97 is incorporated into these regulations by reference. A shock impact fixture shall be constructed utilizing the same design as the shock impactor fixture illustrated and detailed in said specification and a shackle cutting fixture shall be constructed utilizing the same design as the shackle cutting fixture illustrated and detailed in said specification.
- (5) A mounting device shall be fashioned and used to align and to support the firearms safety device being tested on the mounting device when being subjected to required shock loads.
- (6) The firearms safety device shall be properly installed on a firearm according to the manufacturer's instructions unless otherwise stated in these regulations.
- (7) Firearms safety devices may be tested when they are not installed on a firearm if it is determined by the test laboratory that the firearm would interfere with the test equipment's ability to apply measurable forces to the firearms safety device. Testing a firearms safety device while it is not installed on a firearm is allowed only when the measurable forces are applied to areas of the firearms safety device that would be exposed when the firearms safety device is properly installed. Firearms safety devices shall be tested on a complete firearm whenever possible.
- (8) The firearms safety device shall not be of a design to allow it to be disabled or removed from the firearm through the partial destruction of the firearm with common household tools. Partial destruction includes, but is not limited to, cutting an exposed trigger guard or removing the hammer spur of the firearm (if so equipped).
- (9) Notwithstanding the firearms safety device manufacturer's instructions, for each of the tests, a primed case will be placed in the firing chamber if the chamber can be closed. The primed case shall be produced by an ammunition manufacturer and consist of the same type of case and primer as standard ammunition recommended by the firearm manufacturer. With the firearms safety device properly installed, the firearm shall be rendered incapable of firing the primed case. If the firearm discharges the primed case during any of the tests, even if only capable of firing once and even if unsafe to do so, the device is deemed to have failed testing.
- (10) Notwithstanding the firearms safety device manufacturer's instructions, for each test, the firearm shall be cocked, and the manual safety shall not be applied.
- (11) All of the tests designated in subsections (c)(1) through (c)(5) of this section shall be performed on a single firearms safety device. The test designated in subsection (c)(6) of this section shall be performed on a separate single firearms safety device. The test designated in subsections (c)(7) through (c)(8) of this section shall be performed on a separate single firearms safety device. The test designated in subsection (d) or (e) of this section shall be performed on a separate single firearms safety device.
- (12) All lock box type devices (devices designed to fully contain and enclose a firearm) shall be tested with a small handgun placed within the device. The small handgun shall be loaded with a primed case and be no greater than 5-inches (L) x 3-inches (H) x 1 1/4-inches (W) in size. The small handgun may be in addition to any other firearm(s) used in testing. Lock boxes designed to accommodate long guns must be tested with at least one long gun placed within the container in addition to the small handgun mentioned above. Lock boxes which cannot prevent

the removal of, or access to discharging, the firearm(s) contained within the device will be considered disabled.

- (13) Manipulation with a screwdriver, as described in these regulations, is to be applied only to the areas directly affected (weakened) by the proceeding test.

- (c) Each Certified FSD Laboratory shall perform all of the following tests on each firearms safety device model submitted to the laboratory for testing pursuant to these regulations in an attempt to defeat the device, cause the firearm to function, or cause the loaded primed case to discharge:

- (1) **Picking or manipulating test** (utilize a new firearms safety device)(does not apply if test cannot be performed on the device). Cylinders in the firearms safety device shall resist picking with the use of paper clips (jumbo size), paper clips (#1 size), and small screwdrivers that fit in the keyway for two minutes each. Time shall be counted only while tools are in contact with the lock. Combination locks shall resist manual manipulation for two minutes. Time shall be counted only while hands are manipulating the combination lock. This test shall be performed by a tester with no specialized training or skills in lock picking or manipulation (e.g. locksmith training or the use of reference guides on lock picking or manipulation). In the case of a key lock, failure occurs if the lock mechanism can be disengaged during six minutes of manipulation. In the case of a combination lock, failure occurs if the combination lock can be disengaged without the proper combination being entered during two minutes of manipulation.
- (2) **Forced removal inspection.** Inspect the firearm and firearms safety device to determine if the firearms safety device is of such a design that it may not be disabled or removed from the firearm through two minutes of partial destruction of the firearm with common household tools. Partial destruction attacks shall be limited to the firearm's trigger guard, hammer spur, or barrel. For example, a firearms safety device that fully encloses the trigger guard of the firearm may pass this inspection, while a firearms safety device that would allow a portion of the trigger guard to be sawed off to allow for removal of the firearms safety device may fail this inspection. Failure occurs if inspection of the firearm and firearms safety device indicates that the firearms safety device may be disabled or removed through the partial destruction of the firearm as described in this subsection. Failure also occurs if the firearm could be fired, even if unsafe to do so, as a result of the forced removal inspection. Attack by saw shall be performed in accordance with the specifications and limitations of the Saw test (included by reference).
- (3) **Tensile test** (does not apply if test cannot be performed on the device). This test is designed to test the strength of the firearms safety device utilizing a pulling action. Support the firearm and firearms safety device in a fixture designed to enable application of forces in tension along a central axis of the mating locking components of the firearms safety device. Apply 1,000 newtons (225 pounds force) of force slowly along the central axis of the firearms safety device locking components without interfering or giving support to either of the mating locking components of the firearms safety device. For firearms safety devices that have clamping components, specific fixtures may be required to allow application of the required force to the individual components. Failure occurs if the firearms safety device is disabled or if the firearm is capable of firing during the test. For instance, if the firearms safety device separates far enough to allow for the discharge of the firearm while manipulating the trigger.
- (4) **Shock test** (does not apply if test cannot be performed on the device). This test is designed to test the firearms safety device and locking mechanism ability to withstand shock. Using the shock impact fixture, drop a one-kilogram (2.2 pound) weight from a distance of one meter + one centimeter (39.4 inches + 0.4 inches) five times to the top of the firearms safety device body aligned to impinge and penetrate the locking keyway or combination lock using a chucked blade-type tool (chucked blade-type tool should be crafted from the shank of a screwdriver with a 1/4 to 5/8-inch (0.63 to 1.6 centimeter) flathead end). Additionally, using the shock impact fixture, drop a one-kilogram (2.2 pound) weight from a distance of one meter (39.4 inches), five times to the top of the firearms safety device body using a chucked steel rod

tool. Failure occurs if the firearms safety device is disabled by the shock test. Failure also occurs if following the shock test, subsequent manipulation of the firearms safety device with an 8 to 10-inch (20.3-25.4 cm) long screwdriver with a 1/4 to 5/8-inch (0.63 to 1.6-centimeter) flathead end for fifteen seconds allows the tester to discharge a primed case.

- (5) **Shackle or cable cutting test** (does not apply if test cannot be performed on the device). This test is designed to determine the firearms safety device's resistance to cutting forces of 4,450 newtons (1,000 pounds force) for solid metal shackles or with hand forces of 445 newtons (100 pounds force) for cables. The shackle of the firearms safety device (if so equipped) shall withstand cutting through when blades made of steel, hardened to a minimum hardness of Rc 50, are used in conjunction with the blade positioning holders of the shackle cutting fixture. The shearing assembly must then be placed in a tensile loading device having a compression load capability and compressed with a force of 4,450 newtons (1,000 pounds force). See the ASTM F883-97 standard for details to build a shackle cutting fixture (this document is incorporated by reference into these regulations). The cable of the firearms safety device (if so equipped) shall withstand cutting through with nine-and-one-half (9 1/2)-inch lineman pliers with a force of 100 pounds (445 newtons) for two minutes. The force shall be applied to the handles of the pliers at a point that is 6 inches (+/- 0.25 inches) from the center of the pliers' pivot pin, and the cable shall be placed between the blades so that the cable's centerline is 0.75 inches (+/- 0.05 inches) from the center of the pliers' pivot pin. The firearms safety device is to be supported on both sides of the point of the shear cut with allowance for blade clearance. Failure occurs if the firearms safety device is disabled.
- (6) **Plug pulling test** (utilize a new firearms safety device)(does not apply if test cannot be performed on the device). This test is designed to test a cylinder lock's ability to withstand a pulling action to dislodge the plug from the cylinder, but not to test the lock's ability to withstand drilling. Drill the keyway with a number 20 (0.161 inch, 0.41 centimeter) diameter drill bit and insert a self-tapping screw of size AB 12 at least 19 millimeters 0.75 inches (1.90 centimeters) deep. Apply a required tension of 1,000 newtons (225 pounds force) axially between the case and installed screw. Failure occurs if the firearms safety device can be opened by fifteen seconds of manipulation with an 8 to 10-inch (20.3 to 25.4 centimeter) long screwdriver with the largest flat blade (not to exceed 5/8 inch (1.6 centimeter)) that will fit into the keyway at the conclusion of the test. Failure also occurs if the firearms safety device is disabled. If the self-tapping screw cannot be inserted at least 0.75 inches (1.90 centimeters), insert the screw as far as possible, continue with the test and document the depth to which the screw was inserted. The test does not need to be applied to keyways which cannot accept the self-tapping screw due to the keyway's size, design, or materials. In addition, if the firearms safety device is of a design that it breaks the drill bit or self-tapping screw and prevents the test from being performed the test does not apply and does not need to be performed again on this device.
- (7) **Plug torque test** (utilize a new firearms safety device)(does not apply if test cannot be performed on the device). This test is designed to test the ability of a firearms safety device's keyway, if so equipped, to withstand torque pressures. Install the firearms safety device in a rigid fixture such as a vise to support it firmly but not restrict free rotation of the plug in the cylinder. Insert a screwdriver with the largest flat blade (not to exceed 5/8 inch (1.6 centimeter)) that will fit into the keyway, so that a torque load of ten newton-meters (89 pounds force-inches) can be applied to the plug. The test technician may lightly tap the screwdriver blade into the keyway so that the blade is seated and torque can be applied. Care should be taken so as not to mar the keyway beyond what is necessary to create enough grip to perform the test. If a keyway resists the insertion of the screwdriver blade or deforms so that torque cannot be applied and the test cannot be performed, this test does not apply and does not need to be performed again on this device. Torque may be applied in any combination of clockwise or counterclockwise directions. Failure occurs if the firearms safety device is disabled.

- (8) **Sawing test** (does not apply if test cannot be performed on the device). Sawing tests shall be performed using a sawing machine or hand held saw. The firearms safety device may be held with an appropriate fixture to hold the device steady while sawing. The sawing test is designed to determine the firearms safety device's resistance to sawing of exposed components. Exposed components may include, but are not limited to, cables, lock bodies and hinges. The testing agent shall accomplish a test using a new standard carbon steel hacksaw blade with 32 teeth per inch (2.54 centimeters) with a constant vertical downward force of ten pounds (44.5 newtons). Only one saw blade shall be used during the test. The test shall consist of 60 cutting cycles per minute for two minutes by sawing machine, or 120 cycles, with no time limit, by hand. One cutting cycle is defined as the combination of one 6-inch forward and one 6-inch backward cutting motion. The saw attack may consist of a series of separate 120 cutting cycle attacks, but in no instance shall more than 120 cutting cycles be applied to any one "specified" location. For example, the testing agent may identify (specify) the hinge and lock body areas of a firearms safety device as vulnerable to attack. A total of 120 cutting cycles may be applied to the hinge of the device and an additional 120 cutting cycles may be applied to the lock body of the device. At the conclusion of the sawing test, the testing agent shall manipulate the firearms safety device for fifteen seconds by hand in an attempt to disable the firearms safety device. Failure occurs if the firearms safety device is disabled. 83

- (d) In addition to the tests specified in subsection (c) of this section, the Certified FSD Laboratory shall perform the following tests on a model of each firearms safety device in which the firing chamber of the firearm is capable of accommodating a primed case with the firing chamber closed and the firearms safety device properly installed, that is submitted to the laboratory for testing pursuant to these regulations. This requirement does not apply to a firearms safety device that prevents access to the firearm by fully containing and enclosing the firearm (lock-box type devices):

- (1) (Utilize a new firearms safety device) The firearms safety device shall be activated in accordance with the manufacturer's instructions as specified in paragraphs (6), (9), and (10) of subsection (b) of this section. The firearm shall be placed in a drop fixture capable of dropping the firearm from a drop height of one meter + one centimeter (39.4 inches + 0.4 inches) onto a slab of concrete having minimum dimensions of 7.5 centimeters X 15 centimeters X 15 centimeters (3 inches X 6 inches X 6 inches). The drop distance shall be measured from the lowermost portion of the weapon to the top surface of the slab. The firearm shall be dropped from a fixture and not from the hand. An approved drop fixture is a short piece of string with the firearm attached at one end and the other end held in an air vise until the drop is initiated. The firearm shall be dropped in the following orientations:

- (A) Normal firing position with the barrel horizontal.
- (B) Upside down with the barrel horizontal.
- (C) If the firearm is a handgun, on the grip with the barrel vertical.
- (D) On the muzzle with the barrel vertical.
- (E) On either side with the barrel horizontal.
- (F) If there is an exposed hammer or striker, on the rearmost point of the device, otherwise on the rearmost point of the weapon.

- (2) At the conclusion of the drop test, the tester shall attempt to fire the firearm in an attempt to discharge the primed case. Failure occurs if the firearm can be operated manually, if a primed case is discharged during any of the drop tests, or if the firearms safety device is disabled following any of the orientation drop tests.

- (e) In addition to the tests specified in subsection (c) of this section, the Certified FSD Laboratory shall perform the following tests on a model of each firearms safety device that fully contains and encloses the firearm (lock-box type devices) that is submitted to the laboratory for testing pursuant to these regulations. This requirement does not apply to any lock-box type firearms safety device

that weighs more than 75 pounds (27.99 kilograms) or has a combined length and girth that is greater than or equal to 110 inches (279.4 centimeters):

- (1) (Utilize a new firearms safety device. Test shall be conducted with a firearm containing a primed case with the firing chamber closed inside the firearms safety device. This test does not need to be performed with an approved drop fixture and may be performed by hand.) The firearms safety device shall be dropped from a height of one meter + one centimeter (39.4 inches + 0.4 inches) onto a slab of concrete having minimum dimensions of 7.5 centimeters X 15 centimeters X 15 centimeters (3 inches X 6 inches X 6 inches). The drop distance shall be measured from the lowermost portion of the firearms safety device to the top surface of the slab. The firearms safety device shall be dropped in the following orientations:
 - (A) With the locking mechanism facing directly up.
 - (B) With the locking mechanism facing directly down.
 - (2) Failure occurs if the firearms safety device is disabled or the firearm contained within the enclosed container discharges.
- (f) Failure of any test occurs if the firearms safety device is disabled, if the firearm is made to function, or if the firearm discharges the primed case during or as a result of the test. A failure of any one firearms safety device in any of the tests constitutes a failure of the complete test.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.46 - Test Reporting

- (a) If a firearms safety device meets the required standards and has passed the required testing, the Certified FSD Laboratory shall submit to the DOJ a completed Firearms Safety Device Compliance Test Report (DOJ Form FD 033) and the firearms safety device utilized for the drop-testing under subsections (d) or (e) of section 977.45 of these regulations in accordance with Penal Code section 12088(c). The Firearms Safety Device Compliance Test Report shall require all of the information identified in subsection (a) of section 977.47 of these regulations, and shall be signed by the person authorized to sign on behalf of the laboratory.
- (b) The Certified FSD Laboratory shall submit the required report to the DOJ within ten (10) working days of the completion of the testing. Failure to submit said report to the DOJ within the time frame identified above shall not invalidate the results of the testing. However, the DOJ may inspect the laboratory to determine whether grounds exist to revoke the certification of the laboratory.
- (c) Firearms safety device manufacturers or dealers are prohibited from placing any statement on the firearms safety device itself, the labeling, and/or accompanying user information that in any way states, implies, and/or otherwise suggests that the firearms safety device has been approved for sale in California under Penal Code sections 12088 through 12088.9 unless the firearms safety device is on the Roster of Approved Firearms Safety Devices. At that time and only while the firearms safety device is listed on the Roster of Approved Firearms Safety Devices, the firearms safety device manufacturer or dealer may place the following statement in the required user information:

"This is a California-approved firearms safety device that meets the requirements of California Penal Code Section 12088 and the regulations issued thereunder."

- (d) The manufacturer or dealer of a firearms safety device approved under these regulations shall specify, in the packaging or descriptive materials accompanying the device, those firearms for which the device meets the standards and are capable of passing the testing described in these regulations.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.47 - Required Records, Retention Periods, Reporting Changes

- (a) The Certified FSD Laboratory shall, for a minimum of five years from the date of the Firearms Safety Device Compliance Test Report (DOJ Form FD 033), maintain sufficient records to support the results of any and all such reports. The following information is required to be recorded, reported, and maintained:
- (1) The name and address of the Certified FSD Laboratory that conducted the test.
 - (2) The name and address of the firearms safety device manufacturer or dealer that submitted the firearms safety device model for testing, as well as the name and telephone number of a contact person of the submitting manufacturer or dealer. If the DOJ submitted the firearms safety device, this fact shall be noted in the records.
 - (3) Date, time, and location of the testing, and any off-site equipment and/or facilities that are used during any portion of the testing.
 - (4) The unique reference number/identifier issued by the Certified FSD Laboratory for the testing.
 - (5) The results of each phase of the required testing.
 - (6) The date the report was submitted to the DOJ.
 - (7) The name and telephone number of a contact person who should be contacted if there are any questions regarding the testing and/or the report.
 - (8) The make, model, construction material, and type of safety device tested.
 - (9) The make, model, caliber, barrel length, and type of each firearm on which the laboratory tested the device.
 - (10) Identification of the manufacturer and type of primer used in the primed cases used in the testing.
 - (11) An identification of each of the tests that was performed on the firearms safety device tested.
 - (12) A statement that the firearms safety device meets each of the standards for firearms safety devices prescribed in these regulations.
 - (13) The names and business affiliation of all persons who have witnessed any part of the testing procedure.
 - (14) The name(s) and title(s) of laboratory staff who conducted and/or performed the required testing.

- (15) The signature of the lead person who conducted the testing along with his or her title and printed name, and the date of signature.
- (b) The following records shall also be maintained by all Certified FSD Laboratories:
- (1) A listing of any and all off-site facilities that have been reported to the DOJ, and are or may be used by the Certified FSD Laboratory for firearms safety device testing.
 - (2) A listing of all current employees who are directly involved in firearm safety device testing.
 - (3) Records relating to the current ownership of the laboratory.
 - (4) Records relating each firearm stolen or lost from the laboratory must be retained for at least ten years from the date that the firearm was reported lost or stolen.
- (c) The Certified FSD Laboratory shall report within ten working days any changes:
- (1) In the ownership, involvements, relationships, license prohibitions, and/or interests identified in sections 977.33 and 977.40 of these regulations and ensure that any such change would not constitute grounds for denial of an Application for Firearms Safety Device Laboratory Certification (DOJ Form FD 031).
 - (2) Involving management personnel, firearms safety device testing supervisor(s) and/or personnel, persons authorized to sign Firearms Safety Device Compliance Test Report (DOJ Form FD 033), person(s) who hold COE(s); and/or the firearms safety device testing equipment and/or facilities of the laboratory.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.48 - Off-Site Location

- (a) A Certified FSD Laboratory may not utilize any firearms safety device testing equipment and/or facilities that are at a location other than the primary business address of the laboratory unless all of the following conditions are met:
- (1) The off-site location is not more than 100 miles from the primary business address.
 - (2) The laboratory provides the following information to the DOJ prior to beginning any testing at the off-site location: the name of the facility/owner, telephone number, physical address of the location; and the type of equipment and/or facilities to be used and/or the testing to be performed at each location.
- (b) Notwithstanding subsection (a) of this section, if more than one off-site location is needed for testing purposes, the applicant or Certified FSD Laboratory must submit a completed Request to Utilize an Additional Off-Site Location (DOJ Form FD 032) for each such location. The DOJ Form FD 032 shall include the following information:
- (1) Applicant or Laboratory Information: The person(s), firm, or corporation name; physical and mailing address(es); and telephone and fax number.

- (2) Off-Site Location Information: The name of the owner; physical street address, telephone number; the testing to be performed and/or equipment to be used at the off-site location; the signature of the Certified FSD Laboratory's authorized representative; and the county, state, and date of signature.
- (c) The DOJ reserves the right to prohibit a laboratory from conducting firearms safety device tests at an off-site location if the results of any such testing could not be rendered fairly, impartially, and independent of any manufacturer, importer or other entity which has any direct and/or indirect economic interest in the results of the testing.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.49 - Inspections

- (a) At any time during regular business hours and/or when testing is being conducted, the Certified FSD Laboratory shall allow reasonable access by any authorized DOJ employee(s), upon presentation of proper identification. The DOJ employee(s) shall be permitted to inspect facilities and records relating to firearms safety device testing and to observe any firearms safety device tests being performed to ensure compliance with any applicable federal, state, and/or local law(s) and these regulations. 83
- (b) Within six months of the date of FSD Laboratory Certification, the DOJ will conduct a follow-up on-site compliance inspection of the laboratory to observe actual firearms safety device testing and inspect equipment and facilities.
- (c) The Certified FSD Laboratory will be notified in writing of the results of any inspection conducted pursuant to this section within 15 days from the date of the completion of the inspection. The notification will include a list of any and all violations of any statute and/or these regulations and the action required to correct each violation.
- (d) The corrective action shall be completed within 15 days of the date of notification. An acknowledgment prepared by the DOJ to be signed by the owner, chief executive officer, or person with primary responsibility for the operation of the laboratory that they have been made aware of the violation(s), that the necessary corrective action(s) have been performed, and that all necessary action(s) will be taken to ensure that future violations do not occur. The acknowledgment shall be signed and returned to the DOJ within 15 days from the date of service of the notification unless the DOJ has determined that the violation requires immediate attention. If immediate attention is required, the laboratory shall take the corrective action(s) within the time specified in the DOJ notice.
- (e) The Certified FSD Laboratory shall submit to the DOJ a monthly schedule of the days on which it is planning to perform firearms safety device testing. The schedule for each month shall be submitted to the DOJ five days before the beginning of the month being reported. The DOJ may contact the laboratory telephonically for information regarding any additions/deletions to the schedule. The DOJ may accept schedules submitted by electronic transmission.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.50 - Gun Safe Standards

An acceptable gun safe is either one of the following:

- (a) A gun safe that meets all of the following standards:
 - (1) Shall be able to fully contain firearms and provide for their secure storage.
 - (2) Shall have a locking system consisting of at minimum a mechanical or electronic combination lock. The mechanical or electronic combination lock utilized by the safe shall have at least 10,000 possible combinations consisting of a minimum three numbers, letters, or symbols. The lock shall be protected by a case-hardened (Rc 60+) drill-resistant steel plate, or drill-resistant material of equivalent strength.
 - (3) Boltwork shall consist of a minimum of three steel locking bolts of at least ½ inch thickness that intrude from the door of the safe into the body of the safe or from the body of the safe into the door of the safe, which are operated by a separate handle and secured by the lock.
 - (4) A gun safe shall be capable of repeated use. The exterior walls shall be constructed of a minimum 12-gauge thick steel for a single-walled safe, or the sum of the steel walls shall add up to at least 0.100 inches for safes with two walls. Doors shall be constructed of a minimum one layer of 7-gauge steel plate reinforced construction or at least two layers of a minimum 12-gauge steel compound construction.
 - (5) Door hinges shall be protected to prevent the removal of the door. Protective features include, but are not limited to: hinges not exposed to the outside, interlocking door designs, dead bars, jeweler's lugs and active or inactive locking bolts.
- (b) A gun safe that is able to fully contain firearms and provide for their secure storage, and is certified to/listed as meeting Underwriters Laboratories Residential Security Container rating standards by a Nationally Recognized Testing Laboratory (NRTL).

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.51 - Gun Safe - Proof of Ownership of an Acceptable Gun Safe

- (a) The firearms purchaser or transferee may establish proof of ownership of an acceptable gun safe by providing the firearms dealer with both of the following:
 - (1) A receipt for purchase of the gun safe or an affidavit stating ownership and possession of the gun safe.
 - (2) An affidavit stating that the gun safe meets the standards set forth by section 977.50 of these regulations. The affidavit must state the make and model of the gun safe and must state that the gun safe is capable of accommodating the firearm being purchased. The affidavit must contain the statement "I declare under penalty of perjury that all statements made in this affidavit are true and complete." This statement shall be signed and dated by the firearms purchaser or transferee. For any gun safe which does not display a make and/or model but otherwise meets the acceptable gun safe standard, the term "unknown" will be considered an acceptable entry in the make and/or model fields of the affidavit stating ownership of an acceptable gun safe.
- (b) The firearms dealer shall maintain the statement(s) provided pursuant to subsection (a) of this section for three years with the dealer's record of sale for the firearm.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.52 - Lock Box - Proof of Ownership of an Acceptable "Lock Box" Type Firearms Safety Device

- (a) The firearms purchaser or transferee may establish proof of ownership of an acceptable lock box that is listed on the Roster of Firearms Safety Devices Certified for Sale by providing the firearms dealer with both of the following:
 - (1) A receipt for purchase of the lock box.
 - (2) An affidavit stating that the lock box is listed on the Roster of Firearms Safety Devices Certified for Sale and will accommodate the firearm(s) that is being taken into possession. The affidavit must state the make and model of the lock box and that the lock box is capable of accommodating the firearm(s) being purchased. The affidavit must contain the statement "I declare under penalty of perjury that all statements made in this affidavit are true and complete." This statement shall be signed and dated by the firearms purchaser or transferee.
- (b) The firearms dealer shall maintain the statement(s) provided pursuant to subsection (a) of this section for three years with the California Dealer's Record of Sale (DROS).

Authority cited: Sections 12088, 12088.1, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.55 - Required Warning Notice - Affixation to Firearms Sold Without Accompanying Packaging

Any firearms dealer who sells or transfers a firearm that does not have accompanying packaging bearing the warning statement specified in Penal Code section 12088.3 shall, using a string, rubber band, or similar device, affix a warning label described in Penal Code section 12088.3 to that firearm.

Authority cited: Section 12088.3, Penal Code. Reference: Section 12088.3, Penal Code.

Article 5 - DOJ Suspension or Revocation of FSD Laboratory Certification

§ 977.60 - DOJ Suspension or Revocation of FSD Laboratory Certification

- (a) The DOJ may suspend or revoke a laboratory's FSD Laboratory Certification for any of the following:
 - (1) Any act of gross negligence.
 - (2) Repeated acts of negligence.
 - (3) Any violation of these regulations and/or any applicable statute.
 - (4) Any of the grounds for denial stated in section 977.33 of these regulations
- (b) Any suspension or revocation action will be conducted in accordance with Chapter 5 (commencing with section 11500), Part 1, Division 3, Title 2 of the Government Code.
- (c) Upon DOJ suspension or revocation of certification under this section, the laboratory may not test firearms safety devices for approval under these regulations.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

Article 6 - FSD Laboratory Certification Renewal; FSD Laboratory Certification after Expiration**§ 977.70 - FSD Laboratory Certification Renewal Procedures**

An FSD Laboratory Certification must be renewed prior to expiration in order to remain valid. The procedure for FSD Laboratory Certification renewal is as follows:

- (a) The DOJ will mail an application to the laboratory 60 days prior to the expiration date of the FSD Laboratory Certification.
- (b) The Certified FSD Laboratory wishing to renew its FSD Laboratory Certification shall submit to the DOJ an Application for Firearms Safety Device Laboratory Certification, Form FD 031.
- (c) When all applicable requirements are met and the application has been processed, the DOJ will renew the laboratory's FSD Laboratory Certification.
- (d) If a laboratory fails to comply with these renewal requirements, the FSD Laboratory Certification shall expire by operation of law at midnight on the expiration date stated on the FSD Laboratory Certification.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.71 - FSD Laboratory Certification after Expiration

When an FSD Laboratory Certification has expired and not been renewed prior to the stated expiration date, the person, firm, or corporation wishing to renew certification shall make a new application to the DOJ on an Application for Firearms Safety Device Laboratory Certification, (DOJ Form FD 031).

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

Article 7 - Service of Notices, Orders, and Communications**§ 977.80 - Service of Notices, Orders, and Communications**

- (a) Except as otherwise provided by law or in these regulations, notices, orders, and other communications may be sent by United States mail, electronic transmission, and/or common carrier to an applicant or Certified FSD Laboratory at the address shown on the Application for Firearms Safety Device Laboratory Certification, (DOJ Form FD 031).
- (b) Notices and orders shall be deemed to have been served upon their deposit, first-class postage prepaid, in the United States mail, and the time specified in any such notice shall commence to run from the date of such mailing.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

Article 8 - Roster of Approved Firearms Safety Devices, Appeal Process

§ 977.85 - Roster of Approved Firearms Safety Devices

- (a) Within ten days of the receipt of the Firearms Safety Device Compliance Test Report (DOJ Form FD 033), and one firearms safety device, from the Certified FSD Laboratory; the DOJ will determine whether the firearms safety device may be placed on California's Roster of Approved Firearms Safety Devices. After the determination by the DOJ that the firearms safety device may be listed, the DOJ will add the firearms safety device to the Roster of Approved Firearms Safety Devices.
- (b) Within ten days of the receipt of the request from a firearms safety device manufacturer or dealer to add a firearms safety device to the Roster of Approved Firearms Safety Devices, the DOJ will determine whether the firearms safety device may be listed without testing. If the DOJ finds that the firearms safety device may be listed, the DOJ will add the firearms safety device to the Roster.
- (c) A firearms safety device may be excluded from the Roster of Approved Firearms Safety Devices for any of the following reasons:
 - (1) If it is determined that the firearms safety devices submitted for testing were modified in any way from those that were sold after certification was granted.
 - (2) If it is determined that the firearms safety device does not meet established standards based upon further testing.
 - (2) If the firearms safety device manufacturer or dealer requests that the firearms safety device be removed from the roster.
- (d) A firearms safety device manufacturer or party of interest may submit a written request to list a firearms safety device that was voluntarily discontinued. The written request must state that no modifications have been made to the model and be submitted to the DOJ.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

§ 977.90 - Appeal Process for DOJ Exclusion of a Firearms Safety Device Model from the Roster of Approved Firearms Safety Devices

- (a) Upon DOJ-initiated removal of a model of a firearms safety device from the Roster of Approved Firearms Safety Devices, or a refusal by the DOJ to list a model of a firearms safety device on the roster, the DOJ shall immediately notify the manufacturer, dealer, or other affected party of interest of the action.
- (b) The manufacturer, dealer, or affected party of interest may, within 30 days following the date of removal, appeal the DOJ action by providing the DOJ with the following:
 - (1) Written request to appeal the removal.
 - (2) Evidence supporting any claim that the DOJ may have acted improperly in its exclusion of the firearms safety device from the roster or in its refusal to list the device on the roster.
 - (3) Evidence that the firearms safety device meets the standards described in these regulations.

- (4) Any other information that the manufacturer, dealer, or other affected party of interest deems of importance.
- (5) Any other information that the DOJ deems necessary to determine whether the firearms safety device meets the standards described in these regulations.
- (c) Within 30 days after the deadline prescribed in subsection (b) of this section, the DOJ shall consider all relevant facts regarding the firearms safety device and make a determination regarding whether that firearms safety device qualifies to be listed on the Roster of Approved Firearms Safety Devices. If the DOJ makes a finding that the device qualifies for listing on the roster, the DOJ shall immediately add that device to the Roster of Approved Firearms Safety Devices.

Authority cited: Sections 12088, 12088.2, Penal Code. Reference: Sections 12088, 12088.2, Penal Code.

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Appendix 13
Common Self Certification

ET47742

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BILL LOCKYER
Attorney General

State of California
DEPARTMENT OF JUSTICE

FAX TRANSMISSION COVER SHEET

IMPORTANT/CONFIDENTIAL: This communication is intended only for the use of the individual or entity to which it is addressed. This message contains information from the State of California, Attorney General's Office, which may be privileged, confidential, and exempt from disclosure under applicable law. If the reader of this communication is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited.

DATE: 12/16/03 TIME: 12:11 PM NO. OF PAGES: 3
(INCLUDING COVER SHEET)

TO:

NAME: Marlin Jiranek
OFFICE: Remington
LOCATION: _____
FAX NO: 270-737-9574 PHONE NO: 270-769-7645

FROM:

NAME: K. J. Kerr, Analyst
OFFICE: Firearms Division
LOCATION: P.O. Box 160487, Sacramento, CA 95816-0487
FAX NO: 916-274-5992 PHONE NO: 916-263-4885

MESSAGE/INSTRUCTIONS

Dear Sir:

When completing the Department of Justice Firearms Safety Device Listing Request, if you decide to provide a list of firearms that your device can be properly installed and used with, the list must be submitted using a standardized Excel spreadsheet template. The template will be provided to you upon request, and the completed spreadsheet should be returned via email. Please email your request or completed spreadsheets to karen.kerr@doj.ca.gov

Thank you!

PLEASE DELIVER AS SOON AS POSSIBLE!
FOR ASSISTANCE WITH THIS FAX, PLEASE CALL THE SENDER

JUS 133 (6/99)

ET47743

BILL LOCKYER
Attorney General

State of California
DEPARTMENT OF JUSTICE



P.O. BOX 160487
SACRAMENTO, CA 95816-0487
Facsimile: (916) 263-0676
(916) 263-0849

December 16, 2003

Via Facsimile Transmission

Mr. Marlin Jiranek
315 W. Ring Road
Elizabethtown, KY 42701

RE: California Firearms Safety Device Certification

Dear Mr. Jiranek:

The Firearms Division has received the Compliance Test Reports and firearms safety devices for the models indicated on the enclosed Listing Request. Pursuant to section 977.85, Title 11, Division 1, Chapter 12.6, of the California Code of Regulations, this firearms safety device will be added to the Roster of Approved Firearms Safety Devices.

There is a certification section at the bottom of each Listing Request. To ensure that the Roster of Certified Firearms Safety Devices contains correct information regarding your firearms safety device, please review the Listing Request, and answer the questions for the model indicated on each certification form. In addition, if the firearms safety device can be properly installed and used on firearms other than the firearm(s) that was used for testing, you may provide a listing of those firearms or the dimensions of firearms with characteristics that will allow your device to perform in a safe and proper manner. For example: you may specify a make and model of firearm; specific or range of calibers; types (pistol, revolver, shotgun, rifle, etc.), or firearms with a trigger guard that is X-inches long and X-inches wide, etc. The information regarding the firearm(s) on which the firearms safety device was tested and the additional firearm(s) for which you certify that the firearms safety device can be properly used will be included on the Roster of Certified Firearms Safety Devices. The certification must be completed by a representative of the company, signed, and returned to the Division.

If you have any questions, please call me at (916) 263-4885.

Sincerely,

K. J. KERR, Analyst
Firearms Information Services Section

For BILL LOCKYER
Attorney General

Enclosure

ET47744

TRANSMISSION VERIFICATION REPORT

TIME : 01/20/2004 17:13
NAME : REMINGTON ETOWN
FAX : 2707379576
TEL :
SER.# : BROF3J504350

DATE, TIME	01/20 17:12
FAX NO./NAME	19162745992
DURATION	00:01:10
PAGE(S)	06
RESULT	OK
MODE	FINE
	ECM

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ET47745

Remington.

FACSIMILE TRANSMITTAL SHEET

To: K.J. KERR Date: JAN-20-04
Company: CA DOJ From: MARLIN JIRANEK
Fax No.: (916) 274-5992 Fax No.: (270) 737-9576
Phone No.: (916) 263-4885 Phone No.: _____
Number of pages including Cover Sheet: 6 83

COMMENTS:

FSD 428 / FSD 429

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Remington Arms Company, Inc. • 315 W. Ring Road • Elizabethtown, KY 42701
Phone 270-769-7600 • Fax 270-737-9576 • www.remington.com

ET47746

**Department of Justice (DOJ)
Firearms Safety Device Listing Request**Rev
8/01

Report ID:	239	FSD Model:	870 Express Plastic Two-Dot ISS
Lab Ref #:	FSD428	Lock Type:	Hex Key
		FSD Make:	Remington
		FSD Type:	Trigger Lock
Firearm Make:	Remington	Firearm Model:	870 Express
Caliber:	12 gauge	Barrel Length:	28.0"
		Primer:	Fiocchi

**Department of Justice
Firearms Safety Device Manufacturer/Dealer
Model Designation Certification**

Were the firearms safety devices for the above referenced model in any way modified from those that are currently in stock and/or being sold?

Yes ☐ No ☒ (If "Yes," please explain)

If the firearms safety device can be properly installed and used on firearms other than the firearm(s) that was used for testing, you may provide a listing of those firearms or the dimensions of firearms with characteristics that will allow your device to perform in a safe and proper manner. For example: you may specify a make and model of firearm; specific or range of calibers; types (pistol, revolver, shotgun, rifle, etc.), or firearms with a trigger guard that is X-inches long and X-inches wide, etc. The division will review the installation of the device and the firearm on which the device will be installed, and if the installation method is the same as what was tested the device can be extended DOJ-certification. The information regarding the firearm(s) on which the firearms safety device was tested and the additional firearm(s) the division has approved for use will be included on the Roster of Firearms Safety Devices Certified for Sale. The certification must be completed by a representative of the company, signed, and returned to the division. Attach additional copies of this sheet if necessary.

REMINGTON MODELS 870, 1100, 11-87, 7400, 7600, 552 AND
572 RIFLES AND SHOTGUNS, ALL VARIANTS

SEE ACCOMPANYING PAGE FOR PARAGRAPH ON WEBSITE.

I declare under penalty of perjury according to the laws of the state in which this certification is executed that all statements made herein are true and complete.

Signature: Name/Title (Printed): MARLIN R. JIRANEKDate: SENIOR RESEARCH ENGINEER

Phone number(s) that you would like posted on the Internet with your product certification (optional): Local _____ Toll Free _____

ET47747

**Department of Justice (DOJ)
Firearms Safety Device Listing Request**Rev
8/01

Report ID:	240	FSD Model:	870 Express Aluminum Two-Dot I
Lab Ref #:	FSD429	Lock Type:	Hex Key
		FSD Make:	Remington
		FSD Type:	Trigger Lock
Firearm Make:	Remington	Firearm Model:	870 Express
Caliber:	12 gauge	Barrel Length:	28.0"
		Primer:	Fiocchi

**Department of Justice
Firearms Safety Device Manufacturer/Dealer
Model Designation Certification**

Were the firearms safety devices for the above referenced model in any way modified from those that are currently in stock and/or being sold?

Yes ☐ No ☒ (If "Yes," please explain)

If the firearms safety device can be properly installed and used on firearms other than the firearm(s) that was used for testing, you may provide a listing of those firearms or the dimensions of firearms with characteristics that will allow your device to perform in a safe and proper manner. For example: you may specify a make and model of firearm; specific or range of calibers, types (pistol, revolver, shotgun, rifle, etc.), or firearms with a trigger guard that is X-inches long and X-inches wide, etc. The division will review the installation of the device and the firearm on which the device will be installed, and if the installation method is the same as what was tested the device can be extended DOJ-certification. The information regarding the firearm(s) on which the firearms safety device was tested and the additional firearm(s) the division has approved for use will be included on the Roster of Firearms Safety Devices Certified for Sale. The certification must be completed by a representative of the company, signed, and returned to the division. Attach additional copies of this sheet if necessary.

REMINGTON MODELS 870, 1100, 11-87, 7400, 7600, 552, AND
572 RIFLES AND SHOTGUNS, ALL VARIANTS

SEE ACCOMPANYING PAGE FOR PARAGRAPH ON WEBSITE

I declare under penalty of perjury according to the laws of the state in which this certification is executed that all statements made herein are true and complete.

Signature: [Signature]
Name/Title (Printed): MARLIN R. JIRANEK
Date: SENIOR RESEARCH ENGINEER

Phone number(s) that you would like posted on the Internet with your product certification (optional): Local _____ Toll Free _____

ET47748

P. 03

FAX NO.

FSD Make	FSD Model	Can the FSD be used on Pistols?	Can the FSD be used on Revolvers?	Can the FSD be used on Derringers?	Can the FSD be used on Rifles?	Can the FSD be used on Shotguns?	Can the device only be used on specific caliber(s)?	Have you self-certified additional models/types of firearms?	Is the FSD available to OEM only, retail only, or a combination of retail and OEM?
Remington	870 Express Plastic Two-Dot ISS Trigger Guard	NO	NO	NO	YES	YES	ANY	YES 870, 1100, 11-87 7400, 7600 552, 572	OEM ONLY
Remington	870 Express Aluminum Two-Dot ISS Trigger Guard	NO	NO	NO	YES	YES	ANY	YES 870, 1100, 11-87 7400, 7600 552, 572	OEM ONLY

For each approved firearms safety device please indicate "yes" or "no" in each column.

If you will self certified additional models/types of firearms please provide the Department with copies of the installation instructions for each additional models/types.

DEC-16-2003 TUE 01:37 PM

ET47749

Confidential - Subject - 5.22.06r0009616 Order

Williams v. Remington

Remington.**REMINGTON ARMS COMPANY, INC.**

RESEARCH & DEVELOPMENT TECHNOLOGY CENTER

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ELIZABETHTOWN, KY 42701

(270) 769-7600 FAX (270) 737-9576

January 21, 2004

K.J. Kerr
Analyst
Firearms Division, CA Department of Justice
P.O. Box 160487
Sacramento, CA 95816-0487

RE: DOJ Firearms Safety Device Listing - 870 Express Two-Dot ISS

K.J.,

Per the CA DOJ firearms safety device listing request, I would like to present the following information for listing. Both the M/870 Express Aluminum Two-Dot ISS (**FSD429**) and the 870 Express Plastic Two-Dot ISS (**FSD428**) will have the same information in the listing, the only difference being that one has an aluminum housing and one has a plastic housing.

Internal to Remington, the FSD's are referred to as a "common fire-controls". This is because the trigger, housing in regards to the safety mechanism, and safety mechanism itself are identical and used in several different firearms products. The "common fire-control" system is utilized in all Remington 870, 1100, and 11-87 shotgun models, all Remington 7400 and 7600 centerfire rifle models, and all Remington 552 and 572 rimfire rifle models. Remington is continuously working on improving current product offerings and may, in the future, develop new firearm platforms that utilize the same common fire-control design.

Both of the firearms safety devices (**FSD429 & FSD428**) are only manufactured by Remington Arms Company for Remington products. At this time, Remington has not implemented the new device into current production shotguns and rifles, therefore, the two firearms safety devices are not currently available for sale. Remington will notify the CA DOJ when a change occurs and the firearms safety devices become available for sale.

SPORTING ARMS—AMMUNITION—TARGETS—APPAREL—ACCESSORIES—STREN FISHING LINES

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ET47750



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In response to the requested CA DOJ spreadsheet information:

1. The FSD CANNOT be used on pistols
2. The FSD CANNOT be used on revolvers
3. The FSD CANNOT be used on derringers
4. The FSD CAN be used on rifles
5. The FSD CAN be used on shotguns
6. The FSD can be used on ANY caliber or gage
7. Remington wants to self-certify the following models: 870, 1100 and 11-87 shotguns, 7400 and 7600 centerfire rifles, and 552 and 572 rimfire rifles
8. The FSD is available to OEM only. It is manufactured exclusively by Remington for Remington products only at this time.

The paragraph listed for the description on the website should read as follows:

Manufacturer states that Remington Model 870, 1100, and 11-87 shotguns, Remington Model 7400 and 7600 centerfire rifles, and Remington Model 552 and 572 rimfire rifles equipped with 2-dot version of the Remington Integrated Security System (ISS) function properly without an additional firearms safety device. To identify a Remington shotgun or rifle which has a 2-Dot ISS device installed, look for the presence of 2 white dots next to the J-shaped locking cylinder/safety button.

If you have any questions, please feel free to contact me at your convenience. My office telephone number is (270) 769-7645, 8am-5pm EDT.

Sincerely,

Marlin R. Jiranek, II
Senior Research Engineer

ET47751