

## CONFIDENTIAL

Remington Arms Company Inc.  
RESEARCH & DEVELOPMENT TECHNICAL CENTER  
315 WEST RING ROAD  
ELIZABETHTOWN, KY 42701

## TLW 1005

component failure will be one that prevents (or could prevent) the firearm from functioning as intended. These are failures that can be fixed relatively easily by the simple replacement of a part such as could be done by the gun owner using only simple household tools. System failures are defined as failures of a major nature, the extent of which would require specialized tooling or methods to repair not normally available to the average gun owner. Such a repair would be most likely made by a qualified gunsmith or by return to the factory.

This Endurance Test will be shot in the test jacks. Only ten (10) shotguns will be used for this test. The test will be performed according to Remington's standard endurance test procedures for shotguns. The test "pyramid" for this test will use the test schedule tabulated on the test process flowchart.

Use any 2-3/4" lead round of Remington manufacture that are currently in inventory.

The covers on the "belly-protectors" will be down and in place for each test shot. Careful monitoring of each test gun is essential to evaluate the malfunction rate for each firearm. The standard Remington test jacks will be used for all jack-related testing.

Each shotgun will be shot no more than 100 rounds before being put aside for cooling. Compressed air applied to the inside of the chamber will be an acceptable method to assist in the cool-down process.

The S.A.A.M.I. recommendation for the minimum acceptable total malfunction rate for a auto-loading shotgun is a malfunction rate of  $\leq 4\%$ . For this test, if the overall malfunction rate average for the test samples is  $> 4\%$ , the DAT test will be stopped and the guns returned to Design for modification and improvement before being re-submitted for continuation of the endurance test. If the overall average malfunction rate is  $\leq 4\%$  but two (i.e. 20% of the test sample) of the firearms is significantly greater than the 4% malfunction rate, the test may continue with the other eight test samples while Design attempts to fix the problem with malfunctioning gun. After repair, this gun will again be required to pass the 200 round jack function test (only) at  $\leq 4\%$  malfunction rate before being again submitted for endurance testing. If the gun passes these criteria it will then be re-introduced into the Endurance test at the appropriate total round level for the endurance test. It is important that total endurance rounds on the gun include any rounds that are put through the gun for re-test purposes.

Record all instances of malfunctions and failures, and replace parts when they become unserviceable noting the round level when they were replaced.

After every 100 rounds one live round will be extracted and ejected from the chamber to check on live round ejection. The ejected round will then be re-inserted into the chamber and fired to help keep the endurance round count accurate.

Method:

- Disassemble, thoroughly clean, lubricate per the design team's instructions, and reassemble.
- Fire each test firearm in accordance with the firing procedure (number of rounds, firing cycle) specified by engineering and the test plan.
- Before commencing design acceptance testing, calibrate, adjust, or re-build the shooting jacks, if necessary.
- Allow the firearm to completely recover in the shooting jack between each shot and do not lean or "stiff arm" the firearm while shooting the gun.
- All ammunition is to be functioned through the magazine - no "single shot" hand feeding permitted.
- Allow the shotgun to cool between cycles. One cycle is 100 rounds. The use of forced air to accelerate cooling of the barrels between firing trials is permitted. The air should be directed from the chamber toward the muzzle to prevent it from washing the lubricant from the firearm's action.
- Cycle the safety from the "Off-Safe" to the "On-Safe" position at the end of every eight (8) rounds, and from the "On-Safe" to the "Off-Safe" position at the start of the next eight (8) round cycle.
- After every 500 rounds, disassemble, inspect, clean and lubricate the entire mechanism and take all required measurements.
- The standard Remington Jacks are to be used for this test. Alternate light and heavy jack position between every 100 rounds.

Data Required:

- Shotgun serial number
- Tester's name
- The Test Jack Identification
- TLW Number
- Date of actual testing

J.R. Snedeker

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