

Idaho State Police  
Forensic Services  
Firearms/Toolmarks

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1 Procedure for measuring trigger pull on firearms

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### 1.1. BACKGROUND

The examination of a firearm for the amount of force applied to the trigger to effect its discharge is useful for safety reasons and as an aid in determining the likelihood of accidental discharge.

### 1.2. PRINCIPLE

This procedure utilizes the force of gravity on known weights applied to a firearm placed in a "cocked" configuration while the muzzle is pointed away from and parallel to the applied force. The usual configuration involves holding the firearm with the muzzle vertical to the floor.

### 1.3. EQUIPMENT

The equipment used is a standard device with which weights in varying amounts can be applied to a rod constructed so that it can be hooked over a trigger without touching any other part of the firearm.

### 1.4. STANDARDS

Standards consist of weights that can be combined for a cumulative effect and which have been checked by weighing on a calibrated and checked balance. These checks need to be documented upon initial use and thereafter when there is reason to believe the weights may have changed.

### 1.5. PROCEDURE

- 1.5.1. Make sure no live ammunition is in the weapon
- 1.5.2. In single action mode, apply weights to the trigger using the described trigger pull equipment so that the force is applied parallel to the barrel until the firearm will fire (WF).
- 1.5.3. Remove weights (applied parallel to the barrel) until the firearm will not fire (WNF).

1.5.4. Repeat these measurements until at least two measurements for each condition (will fire, and will not fire) agree within one quarter to one half pound of force.

1.5.5. Record results

1.5.6. Repeat steps 1.5.1 through 1.5.5 for double action mode.

**1.6. QUALITY MEASURES**

1.6.1. Weights used should be checked on a balance that has been calibrated and checked in accordance the appropriate procedure for that balance.

**1.7. REPORTING RESULTS**

1.7.1. Resultant trigger pulls should be recorded on an appropriate worksheet or other notes. These results may be included in a final report.

**1.8. REFERENCES**

**AFTE GLOSSARY**

Revision #	Issue Date	History
0		This is an original procedure offered 06/02

**Approval**

Technical Leader: \_\_\_\_\_ Date: \_\_\_\_\_  
Chester A. Park

**Issuance**

QC Manager: \_\_\_\_\_ Date: \_\_\_\_\_  
Richard D. Groff  
Properly reviewed; Validation not required; Appropriate detail

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