Section 2.0 Barrel Length and Overall Length Measurement of a Firearm.

History Page

Revision #	Effective date	History
0	**1/12/07**	**This is an original procedure this procedure has been completely reformatted and updated from the previous procedure that was adopted from the Washington State Patrol.**

2.0 BARREL AND OVERALL LENGTH MEASUREMENT OF A FIREARM

2.1 SCOPE AND BACKGROUND

This procedure is used for determining the barrel length and overall length of a firearm. Barrel length is defined as the distance between the end of the barrel and the face of the closed breechblock or bolt for firearms other than revolvers. On revolvers, it is the overall length of the barrel including the threaded portion within the frame. Barrel length normally should include compensators, flash hiders, etc., if permanently affixed. Overall length of a firearm is defined as the dimension measured parallel to the axis of the bore from muzzle to a line at right angles to the axis and tangent at the rearmost point of the butt plate or grip. Removable barrel extensions, poly chokes, flash hiders, etc., are not part of the measured barrel length or overall length. Routine firearm dimension measurements for general documentation may be made using a standard measuring device. Any measurements critical to the determinations of possession of a "Short Barrel Rifle" or "Short Barrel Shotgun" require the use of a NIST traceable measuring device.

2.2 EQUIPMENT (refer to section 9 for maintenance and calibration procedures)

For Non Critical Measurements:

- A standard measuring device (e.g., ruler or barrel rod) capable of measurements to 1/8th of an inch.
- Non-marring barrel dowel

For Critical Measurements:

- A NIST traceable or certified measuring device (e.g., ruler or barrel rod) capable of measurements to 1/16th of an inch…

2.3 PROCEDURE or ANALYSIS

Care must be taken if any object is placed down the barrel to help expedite the measurement.

2.3.1 BARREL LENGTH:

2.3.1.1 REVOLVERS:

Measure the distance from the breech end of the barrel to the muzzle, excluding the cylinder. This measurement can be done directly or by placing a non-marring item down the barrel, marking the distance from the breech end of the barrel to the muzzle and measuring this item.

This measurement will be recorded in the case notes rounded up to the nearest 1/4th of an inch for non critical measurements and rounded up to the nearest 1/8th of and inch for critical measurements.

2.3.1.2 FIREARMS OTHER THAN REVOLVERS:

Measure the distance from the breech face in a closed and locked position to the muzzle. This measurement can be done directly or by placing a non-marring item or measuring device down the barrel, marking the distance from the breech end of the barrel to the muzzle and measuring.

This measurement will be recorded in the case notes rounded up to the nearest 1/4th of an inch for non critical measurements and rounded up to the nearest 1/8th of and inch for critical measurements.

2.3.2 OVERALL LENGTH:

Measure the distance from the butt to the muzzle. Measurement shall be made parallel to the bore and recorded in the case notes rounded up to the nearest 1/4th of an inch for non critical measurements and rounded up to the nearest 1/16th of and inch for critical measurements.

2.3.3 INTERPRETATION OF RESULTS:

Critical barrel overall lengths will be measured and reported in inches to the 1/8th of an inch.

The following are critical measurements requiring a measurement of uncertainty calculation.

- Altered barrel length of a shot gun measures between 17 & 18 inches
- Altered barrel length of a rifle measures between 15 & 16 inches.
- Altered overall length of a shotgun or rifle measures between 25 & 26 inches.

2.3.3.1 Measurement of Uncertainty Estimation

While other factors were considered (e.g., environmental conditions & procedure), the greatest source of measurable variability in this procedure can be attributed to two factors: the NIST traceable or certified measurement standard and the analyst's ability to discern the smallest measurable demarcation on the measurement standard. With the measurement standard accuracy certified to +/- .005" per foot, the primarily source of variability can be attributed to the examiners ability to visually discern measurements to the nearest 1/16th of an inch. Thus, the uncertainty of measurement for these measuring devices is +/- 1/16th of an inch.

For critical measurements that require an uncertainty of measurement consideration, the examiner's notes must record the serial number of the NIST traceable or certified measuring device used (i.e., ruler or rod).

In addition, rifle and shotgun overall and barrel length measurements will be recorded in the case notes. The measurement of uncertainty (1/16th of an inch) will be added to this value then the value rounded up to the nearest 1\8th of an inch. This will be the reported value.
Thus, the measurement of uncertainty is included in the reported value. A statement regarding the measurement uncertainty will be on the case report.

2.4 SAFETY CONSIDERATIONS

This procedure involves hazardous materials, operations and equipment. This procedure does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this procedure to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. Proper caution must be exercised and the use of personal protective equipment must be considered.

Appropriate hearing and eye protection must be worn when applicable.

2.5 REFERENCES

"The Proper Method for Measuring Weapons", AFTE Journal, Vol.14, No. 3, p. 10