



Guidelines for Barrel and Overall Length Measurements for Firearms

1.0 Objective

The purpose of this document is to set forth guidelines to Firearms Examiners conducting barrel and overall length measurements for firearms.

2.0 Introduction

- 2.1 When handling any firearm, even for the purposes of measuring, safety is the first concern. Make sure the firearm is unloaded before conducting measurements. If there is any doubt about the operation of a firearm, consult with a qualified firearms instructor (if available), protocols or manufacturers' literature before handling a firearm for measuring.
- 2.2 When measuring barrel or overall length ensure the firearm is free from movement and stable for measuring, located in an area with proper lighting, and the proper calibration certificates are current and traceable to a National Institute Standards and Technology (NIST) standard. When a measurement is made where the uncertainty of that measurement will be reported, the calibration date and unique identifier for the device(s) used should be recorded in the examination record.
- 2.3 Common equipment used to measure barrel and overall lengths are measuring tapes, steel rulers, measuring rods, and caliper devices.
- 2.4 Measurements for altered barrels should include the longest measured length.

3.0 Barrel Length Measurements

3.1 Revolvers

- 3.1.1 When measuring a revolver barrel, the distance parallel to the bore axis from the muzzle end to the farthest end of the forcing cone represents the length of the barrel.
- 3.1.2 Ruler/Measuring Tape – a revolver barrel can be measured by placing a steel ruler/measuring tape on the exterior of the barrel, parallel to the axis of the bore to determine the barrel length.
- 3.1.3 Measuring Rod - A measuring rod can be used to measure barrel length; however, it may be difficult to determine the starting point for the measuring rod. Consideration must be taken to determine how the starting point can be accurately achieved. A block at the muzzle or forcing cone end of the firearm, which is perpendicular to the axis of the bore can represent the starting point for the measuring rod to determine barrel length.

3.1.4 Caliper – a revolver barrel can be measured by placing a caliper on the exterior of the barrel, parallel to the axis of the bore to determine the barrel length.

3.2 Integral Chamber Barrels

3.2.1 When measuring the barrel of a firearm that has an integral chamber, the distance parallel to the bore axis from the muzzle end to the breechface (with the action closed) represents the length of a barrel.

3.2.2 Ruler/Measuring Tape – an integral chamber barrel can be measured by placing a steel ruler/measuring tape on the exterior of the barrel, parallel to the axis of the bore.

3.2.3 When using a ruler/measuring tape to determine the barrel length measurement, read the increments perpendicular to the muzzle bore.

3.2.4 Measuring rod - before measuring an integral chamber barrel, ensure that the firing pin is not impeding the measuring rod from making contact with the breechface. It may be necessary to cock the firearm to remove a protruding firing pin. In the case of a fixed firing pin, be certain it is not reducing the barrel length measurement.

3.2.5 Ensure that the measuring rod, when inserted in the barrel, is parallel to the bore axis.

3.2.6 All measurements are made perpendicular to the bore axis at the farthest point of the barrel.

4.0 Overall Length Measurements

4.1 When measuring the overall length of a firearm, the measurement is taken along a line which is parallel to the axis of the bore from a perpendicular tangential line which touches the rearmost point of the firearm to the muzzle.

4.2 The overall firearm length is determined using a measuring platform or fixture that can achieve a right angle to the bore axis. A measuring platform or fixture is a device which has two points (jaws); one point is fixed and the other point articulates to determine the overall length.

Appendix 1 – References

1. ATF National Firearms Act Handbook. U.S. Department of Justice Bureau of Alcohol, Tobacco, Firearms and Explosives Office of Enforcement Programs and Services [Internet]: ATFE-Publication 5320.8 [Revised April 2009]. Chapter 2. Available from: <https://www.atf.gov/sites/default/files/assets/pdf-files/atf-p-5320-8.pdf>

Appendix 2 – Document History

Date	Section	Changes
3/19/2013		Draft Approved
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