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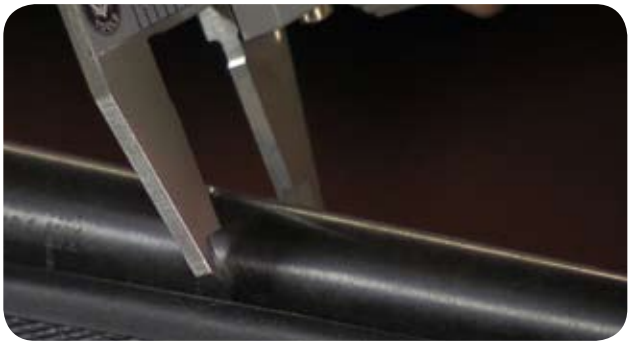
Determine Rifle Rear Sight Height

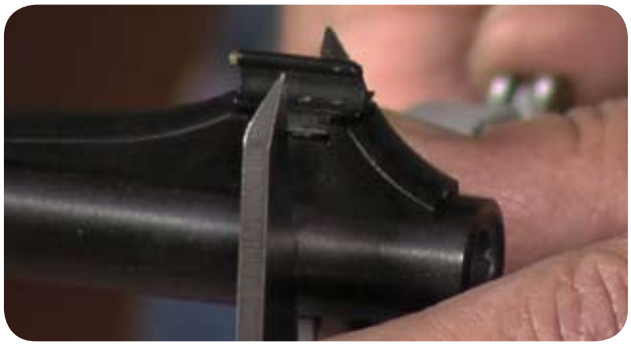
To measure a rifle barrel for a missing rear sight involves taking three measurements to determine the fourth measurement. In this example the fourth measurement is the rear sight height.

The distance from the bore-center-line – shown running through A and C – **to the line of sight –** shown at the tops of the sights -- **must be the same approximate distance or height at each sight location. The rear sight has an adjustment range and you should use the middle of the range as your starting point for measurements or to determine the correct sight for the rear sight.**
Measure the barrel diameter at each sight location – shown at long arrows A and C in the illustration. Divide each measurement by two to obtain the distance from bore-center-line to top surface of barrel at each location – represented by the short arrows at A and C in the illustration. Write down and label your results.
Measure the height of the existing front sight. Add the height of the front sight to its corresponding center-line-to-top-of-barrel figure to obtain the distance between bore-center-line and line of sight. The distance between bore-center-line and line of sight (just calculated at the front sight location) minus the remaining bore-center-line-to-top-of-barrel distance (at the rear sight) will give the needed rear sight height.

The basic principle is: B plus ½ A (short arrow) is the same total distance as D plus ½ C (short arrow) **OR** ½ A + B **AND** ½ C + D **BOTH EQUAL** the distance from center line to line of sight.



Barrel Dia. Measurement At Rear Sight .820″
.820″ ÷ 2 = .410″
.410″ is bore-center-line to top-of-barrel distance



Barrel Dia. Measured At Front Sight .596
.596″ ÷ 2 = .298″
.298″ is bore-center-line to top-of-barrel distance

Measure .503″
.298″ + .503″ = .801″
.801 is the bore-center-line to line-of-sight distance

Measure the height of the existing front sight. Add the height of the front sight to its corresponding bore-center-line to top-of-barrel figure to obtain the distance between bore-center-line and line of sight.

Barrel Diagram Example With Numbers

One half barrel diameter at front sight plus front sight height will give height of sight line above bore-center- line. Height of sight line above bore-center-line minus one half barrel diameter at rear sight will give rear sight height

OR

Use the formula for determining rear sight height in this example:

Need to find Rear Sight Height at B ⟶ (½ C) + D – (½ A) = B

Plug in the words and numbers ⟶ (½ x .596) + .503 – (½ x .820) = Rear Sight Height

Do the math ⟶ (.298) + .503 – (.410) = .391 Rear Sight Height