Once you find a distance from the rifling that works best you can usually use this distance for other bullets. If a Sierra 52 gr. MatchKing shoots best when loaded .010" from the rifling, then a Hornady 55 gr. V-Max will probably like the same jump. You will have to come up with a new OAL to the rifling for the Hornady bullet since all bullets are generally shaped a little different and they will contact the beginning of the rifling in a different manner. Make up a new dummy round for the Hornady bullet, mark it, and use it to load some rounds that are the same distance from the rifling that your Sierra's were. You might try .005" in either direction to see if you can fine tune it.

You can also use your Comparator to check the rifles' throat erosion. As a barrel continues to be shot, the throat will erode. How fast it erodes depends on the barrel, the cartridge design, the bullet, and the powder (type and how much). You can measure a new round that just touches the rifling and compare it to your original dummy round to get an idea of the mouth of erosion that has occurred. Significant amounts (.055" or more) would be reason to adjust your seater so the same amount of bullet jump you had before still exists. A lot of people give up on a rifle because it stops shooting. The barrel must be worn out they say! Usually all it takes is to adjust your seater so your rounds are a little longer.

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Sinclair INTERNATIONAL™
A BROWNELLS Company

200 South Front Street • Montezuma, IA 50171
800-717-8211 • Fax: 260-482-3735
www.sinclairintl.com • support@sinclairintl.com

#749-002-942
Sinclair Bullet Comparator

Congratulations on purchasing a Sinclair Bullet Comparator. This tool was designed for calibers .224, .243, .257, .264, .284, and .308. This Comparator was machined from high grade stainless steel and was produced to high tolerances. Each hole has been drilled and then reamed with the proper caliber throating reamer. This duplicates the throat of your rifle so that when you measure a loaded round or bullet with this tool it is as close as you can come to duplicating your barrel. The only better way would be to use the same reamer used on your barrel.

The Comparator will measure further down on the bullet than any tool we have used. Because of this, it is important to use a light touch with your calipers and avoid cramming the bullet into the gage.

INSTRUCTIONS FOR USE:

When measuring a bullet or loaded round, insert the bullet into the correct sized hole in the comparator. One edge of the caliper blade should be against the opposing edge of the Comparator and the other blade should be against the base of the bullet or base of the cartridge case. Rest the whole assembly in the palm of your hand

as shown in the picture below. The caliper blades should be centered on the ***flat edge*** of the Comparator and on the base of the bullet or cartridge. Close the blades of the calipers until the bullet seats into the Comparator. This ***DOES NOT*** mean squeezing the bullet as hard as you can. To achieve accurate and consistent measurements you must maintain a light touch and feel the bullet seat. A caliper has considerable leverage, so avoid crushing the bullet.

Once you have seated the bullet, obtain your reading from your caliper. If you don't completely understand what you are measuring, we suggest you read the next section which provides a brief discussion on seating depth and what a Comparator is used for.

SEATING DEPTH AND COMPARATOR USE

When we are talking about seating depth we are referring to the amount of "jump" the bullet has after leaving the case and before contacting the rifling. Each barrel/cartidge combination has a certain amount of bullet jump that provides the best accuracy. Shooters using magazines are forced to accept the amount of bullet jump that the magazine length dictates. Shooters loading one at a time can usually obtain a higher degree of accuracy because they can adjust the amount of bullet jump to what works best. The amount of bullet jump that works best is usually less than the magazine length will allow.

We usually find that a rifle prefers the same amount of bullet jump regardless of what bullet is being shot. When we are talking about bullet jump we are referring to the number of thousands of an inch that the bullet's ogive (beginning of the major diameter) is from the rifling. Unfortunately, finding the bullet jump that produces the best accuracy is somewhat of a trial and error process.

To start with, measure the overall length (OAL) for a particular bullet in your rifle. This OAL is measured from the bolt face to where the bullet touches the rifling. This can be done accurately with a Sinclair Seating Depth Tool. When you have obtained an OAL you can use the Comparator to assemble a dummy round. A dummy round is a case with a bullet seated in it but no primer and no powder.

To assemble the dummy round, back out the seater stem so it will just barely seat the bullet into the case mouth. Then, alternating between measuring and adjusting your bullet stem a little bit at a time, you should be able to end up with a dummy round that measures the same as the OAL you measured with your seating depth tool. This dummy round becomes your reference point for future seating depth adjustments when loading that particular bullet. We usually mark this round with the bullet type and what it measured using the Comparator. This round also comes in handy if you want to check throat erosion.

You now can use the Comparator to set up your seater to load some rounds with different amounts of bullet jump. Again, working with the same box of bullets, adjust the seater so that the measurement of a loaded round with the Comparator is, say, .015" shorter than the dummy round. Try some of these loads and see how they do. Then change your seater again and try a different seating depth.