

### THE WILSON ADJUSTABLE CARTRIDGE CASE GAGE FOR BELTED CALIBERS

#### INTRODUCTION TO WILSON ADJUSTABLE CASE GAGE:

Congratulations on your purchase! We thank you for supporting our MADE IN THE USA family owned business! LE WILSON is the ORIGINAL Case Gage Manufacturer, we have been making Case Gages since 1936! By using WILSON TOOLS & GAGES, you are on your way to developing more accurate uniform handloads. The Adjustable Case Gage has several uses and allows for proper case prep in determining case length and can be used as a basis for setting up full length sizing dies. Below we have outlined how to best use your Gage and enjoy years of use.

#### NOTE ON BELTED CALIBERS VS. RIMLESS CARTRIDGES:

In belted calibers, proper ignition does not depend on the cone-to-head length of the cartridge relative to the chamber. Instead, the firing pin thrust is taken by the belt against its seat in the chamber. This means that cone-to-head length of belted cartridges is of no consequence as far as ignition is concerned and the factory can be, and in many cases is, quite tolerant regarding the fit of the cartridge beyond the belt recess. Case manufacturers are concerned only with the firing of the cartridge once and new brass will stand a lot of stretching. The reloader, however, is concerned with the fit of the cartridge beyond the belt and the less the brass is worked in reloading and firing the longer it will last.

After a great deal of time spent on this problem, we have come up with a solution. Now you can readily adjust a Case Gage to fit his/her particular rifle and can then adjust your sizing die to correspond with your guns chamber!

#### INSTRUCTIONS

##### Step 1: Note the correct position of the insert in gage body.

The cone is inside and the lettered end facing out.

##### Step 2: Clean Gage with Solvent. Check Contents

Loosen the small set screws, with the provided 3/32 hex wrench. The screws have fiber pads underneath. Now push the insert out of the gage body. You may use a soft instrument like a wooden dowel, this will not damage the gage. Wipe all oil from inside of the gage, insert, and all gaging surfaces. Look into the Gage to see that it is free of any and all debris.

##### Step 3: Reassemble gage

Check to make sure fiber pads are still in place, then push insert into gage body until outer end is about 1/8th inch inside. Tighten screws **very lightly**.

##### Step 4: Setting the insert

Drop one of your AS-FIRED cases into the gage, the head should protrude out of the top of the gage. Next, push a de-capped case into the gage, causing the insert to slip, until the head of the case is even with the high steps of the gage. You may do this by using a steel straight edge or steel scale. Hold the gage with one end of the groove toward you and with the scale at 90 degrees to the groove, use a slow rocking motion to force the case head and insert down so head of case is even with upper surfaces of gage.

##### Step 5: Sung set screws down - DO NOT OVER TIGHTEN!

Verify insert did not move upon tightening and is in correct position by re-inserting case used in step 4. If not, adjust as necessary. With this adjustment completed, you have a case gage adjusted to your particular rifle.

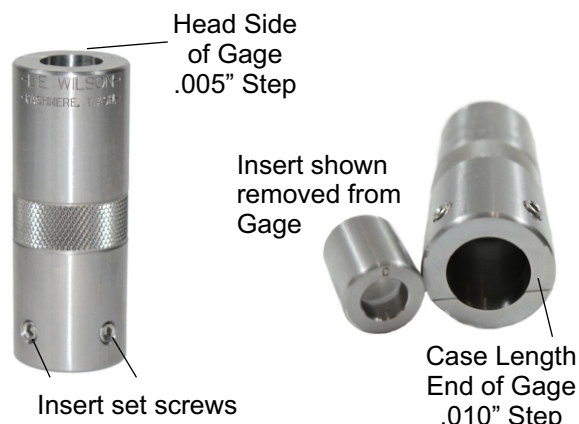
##### Step 6:

Now adjust your full-length die to produce a cone-to-head length that will allow the case head to stop about halfway between upper and lower gaging surfaces. It should not be necessary to shorten the cone-to-head length to where the case head will register with the lower gage surface. A slight reduction in cone-to-head length, which will permit closing the bolt without undue effort, is all that is required.

**\*\*We suggest, after the gage is adjusted to your rifle, you drop in a new factory cartridge and note the location of the head. This will show how the brass will be unnecessarily overworked if brought back to new dimensions for reloading, and why the case will separate after a few firings.**

##### Measuring case length:

1. With the gage adjusted for your own cases you can check over-all length by standing it, with a resized cartridge case inside, on a flat surface, head end down.
2. If the case mouth checks above the upper step, or upper surface, of the gage the case is over length and should be trimmed back to the lower gaging surface. The over-all length of the gage body represents maximum case length.
3. DO NOT allow your cases to become longer than the gage.



### Frequently Asked Questions

- 1) What if I want to set my insert to a new factory piece of brass?  
If your goal is to size back a batch of brass to work in several different chambers and you are aware that over-sizing the brass is NOT recommended. Then you can do this, in a sense to “reset” your brass to a factory shoulder position.
- 2) My cases do not fit in the Gage.  
If your cases do not fit in the gage, then you may have the incorrect caliber gage, an improperly re-chambered rifle, or a variation of your current caliber. (260 Rem vs. 260 Ackley Improved).
- 3) Why doesn't the gage measure the belt?  
Remember the goal of this gage is to determine the correct amount of shoulder set back. This is the reason we instruct you to set the insert up to an AS-FIRED case straight out of your guns chamber.
- 4) My cases have different headspace measurements after sizing.  
If you are sizing from more than one gun or a mixed batch of brass from the range, you could run into this issue. This is due to the fact that some of the brass will be harder, (More spring back when sizing) There will be a variance in headspace (Over Max, under min, etc.). It would be best to separate into three piles before sizing to achieve more consistent results.
- 5) How do I know how much I am sizing my shoulder back?  
After setting the insert to an AS-FIRED case as outlined in the instructions. Follow the procedure below.
  - 1) Measure an AS-FIRED de-primed case (Using LE Wilson Depth Micrometer) - Take note of that measurement
  - 2) Run that same case through your Full Length Sizing Die at it's current setting.
  - 3) Put the case back into the Case Gage and take another measurement. Take note.
  - 4) You will want to adjust the die to size back the shoulder about .002” on a bolt gun or .004” for semi-autos
- 6) My case passes in the gage but will NOT chamber in my gun.  
The cartridge case gage is not made to measure body diameters or neck diameters. The reason we do not measure body diameters is because we do not want the body of the case to interfere with the headspace measurement. And in MOST cases if you push the shoulder back to where you want it... The sizing die should also size the body to the desired dimension.

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