



## **Notes on the Care and Feeding of Lever Guns - Part 1**

All repeating firearms have some cartridge parameters that must be met if they are to function properly. Revolvers are quite simple in this respect. They require that the ammunition used meet the SAAMI specifications for dimensions and pressure. As repeating firearms get more complex (using magazines, feeding mechanisms, etc.), the parameters get more complex as well.

Lever action guns are no exception to this concept. Browning style lever guns generally use rimmed, revolver cartridges and are particularly sensitive to something I'll call "Real Cartridge Length" (RCL). RCL is similar to, but different than, Over All Length (OAL). OAL is the actual distance from the base to the very end of the bullet. RCL is the distance from the base to the working surface of the ogive of the bullet. This working surface with regards to Browning style lever actions is the point on the bullet ogive that contacts the upper surface of the chamber. This contact point provides a leverage point for the spring-loaded carrier mechanism to push against when the rim of the cartridge is released by the cartridge guides of the receiver. The spring-loaded carrier functions as a moving fulcrum and pushes the back of cartridge up and in line with the chamber, allowing easy feeding.



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When Winchester first introduced lever guns this was a moot point. You got your gun and ammunition from Winchester and they were compatible with each other. Current lever gun users have many sources for ammunition. Some of these sources test their cartridge/bullet combinations in available guns. Others do not. This causes the user some consternation when a particular manufacturer's cartridge load does not work well in his particular lever gun.



A practical example may help to clarify this point. Big Horn Armory makes Browning style lever guns. Our Model 89 is designed and crafted around the 500 S&W Magnum. We test various factory loads in our guns to ensure proper feeding. Most factory loads use bullets that are compatible with lever guns. Examples include offerings from Buffalo Bore, Hornady, Double Tap, Underwood, Corbon, and others. Most of these use large meplat bullets which makes for a wide bullet ogive near the tip and creates an RCL very near to OAL. There is also a fairly narrow range for RCL in any particular lever gun. Big Horn

Armory tunes our Model 89 to have an RCL no more than .080" less than OAL. This is the range where most 500 S&W cartridges fall into.

Some factory loads have an RCL that is much shorter than the OAL compared to normal lever guns cartridges. A case illustrating this point is the Hornady 300 grain FTX bullet loading. It has a conical ogive that places RCL more than .200" shorter than OAL. This causes problems in feeding in Big Horn Armory's Model 89 as it is tuned for a longer RCL. We can tune our guns to feed the FTX bullet, but then most other bullets won't feed correctly.



Lever gun users should be aware of this common issue with certain ammunition and consult with the manufacturer of their firearm to make sure that the intended ammunition has been tested for proper feeding.



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