



Technical Newsletter From
Your Ballistic Technicians
Volume 3, No. 2

Surfing Sierra III

by Richard Machholz

When using Zero Calculations (Z) remember the first number, sight-in distance, is your target location. The second number, New Zero Range, is the anticipated impact range point where the bullet will hit dead on. Scenario: You are zeroed at 100 yards and you only have a 100 yard range available to shoot on. Your fall Wyoming big game hunt requires a longer dead on zero than 100 yards, say 300 yards. Your sight in distance (1st number) will be 100, the second number, New Zero Range, will be 300 yards. By raising your bullet impact at 100 yards as instructed, your new dead on impact will be 300 yards.

Powder Deterioration

By Kevin Thomas

In recent months, we have spoken to several reloaders who were concerned about possible powder deterioration, due to color changes they have noticed in recently purchased cans of powder. This is not a sign of breakdown, but a normal phenomenon common to almost all powders. In its raw state, powders range from a translucent milky white, to a honey amber color. The finished powder only assumes its final coloration when the deterrent coating is added. This provides the shiny black, gray, or olive green finish most handloaders are so familiar

The Rewards of Silhouette

by Tommy Todd

In order to recognize centerfire silhouette shooters for their accomplishments, Sierra has designed award hats. These hats are Sierra green (of course) and have the silhouette animals along with 40x40, 60x60, or 80x80. For NRA rifle silhouette shooters, we also offer a 10x10 hat for those shooting ten targets on the same bank in a row. Anyone shooting a perfect score in a sanctioned State, Regional, National, or International match will qualify for the appropriate hat. This applies to both rifle and handgun silhouette. Sierra requires that the shooter be firing a centerfire cartridge and be using Sierra Bullets. We will require either a copy of the match results or score card signed by the match director. We limit our hat awards to one hat per shooter per year.

.243 Caliber (6mm) 80 grain SBT (Blitz) #1515

by Paul Box

Sierra's newest Blitz entry, the 80 grain SBT .243 dia., is quickly making a name for itself in the varmint fields. With target accuracy and thin jacket design, it makes a top choice from prairie dogs to coyotes. This fragile bullet will also be a welcome addition in the more settled areas where ricochets could be a problem. With the

with. We must understand that the powders appearance can vary from lot to lot, even from the same manufacturer. This does not indicate a problem with the powder! Powder breakdown may be the culprit when a can of powder develops a reddish dust, and starts to exhibit clumping. When these signs are accompanied by an acrid odor, and the absence of the familiar acetone/ether/alcohol scent common to fresh powder, you probably have a deterioration problem. Remember, store your powders properly in the original airtight factory container, out of direct sunlight, and in a cool, dry environment safe from wide temperature fluctuations and their shelf life is virtually indefinite. If you do have powder that needs to be disposed of, we recommend spreading it out, thinly, over your lawn or garden. Being a biodegradable compound that is exceptionally rich in nitrogen, it makes an excellent fertilizer.

Cartridge Length and Semi-Auto Handguns

by Dave Brown

The following relates the proper method of determining the correct cartridge length for any specific bullet. Maximum cartridge length varies with each bullet specifically by manufacturer, model, and each individual gun for which it is going to be loaded. Normally, the dies are setup to hold the bullet securely while allowing the cartridge to be as long as the guns magazine and chambering will allow for that specific brand and model of bullet. To do this the procedure is: 1. Take the barrel out of the gun so that it and the magazine can be used as gauges. 2. Hold the barrel muzzle down and drop an empty case of correct length into the chamber making sure it is fully forward in the chamber. 3. Note where the head of the case comes to with respect to the hood, or top rear most portion of the barrel. 4. Without primer or propellant seat the bullet into the previously used case making the cartridge as long as the

boattail design giving a higher B.C., this Varminter is a good choice where wind is a factor. If you're looking for positive expansion at all ranges, this is your bullet.

Handgun Brass and Coke-Bottle Effect

By Dave Brown

Most handloaders have gone to carbide sizing dies for the fairly straight walled brass handgunners normally encounter. This pretty much eliminates the cases need for lubrication and its later removal. A carbide steel insert die sizes all it passes over to the same dimension. However, cases often have some taper to them. If your case bodies are sunk-in beneath where the bullet is seated, try sizing the case to just slightly past where the base of the bullet will be seated. Make certain you have sized enough of the case that the bullet is being firmly held and the cartridge chambers smoothly without binding. Cartridges sized this way will look professional. They will be without the sunk-in under the bullet look which is termed the coke-bottle effect.

magazine will allow. Caution: Magazines dont always work well when fully loaded. Still, what fits in the top of the magazine may stick toward the bottom. Its a very good idea to push the dummy cartridge to the bottom of the magazine using a wooden dowel, toothbrush or what have you to check the clearance. 5. Drop this cartridge that has passed the magazine test into the chamber making certain the cartridge is fully forward. Give it a firm push. Again note where the case head extends in relation to the hood. If necessary, the bullet should be seated deeper into the case until the case head is level to where it was in test two. 6. Seat the bullet one quarter turn deeper into the case. This will allow the bullet a .020 run at the rifling which will help maintain safe pressures while allowing for differences between various lots of that specific bullet. This will result in a cartridge length that feeds well, and gives maximum case volume for the propellant. 7. Put the gun back together and strip the dummy cartridge from the magazine with a fully drawn slide. The dummy should feed and extract smoothly.



Rick Williamson and son Tyler, with their fine deer taken in Wyoming, October 18, 1995 with a .25-06 Competitor pistol and a Sierra .257, 120 Gr. HP.

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