



Accurizing the TC Encore 209X50 Muzzle Loader - Encore muzzle loader accuracy is easy once you know how.

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Accurizing the TC Encore 209X50

Accuracy Comes from Bore Preparation, Loading Knowledge, and Good Sights

by Eben Brown, [For Reference Only - Use This Information at Your Own Risk](#)

To begin with, we're a company that specializes in accuracy for the TC Encore... But until a few years ago, that did not include the muzzle loader version. We just weren't into muzzle loading. Well, enough of our Encore rifle customers began ordering muzzle loader barrels that we started getting requests for help in solving accuracy problems. Yes we've had customers who have had accuracy problems... and learning my way through it, I had my own share of accuracy problems, too. But I would say the problems have never been exclusive to the TC Encore... Rather that muzzle loaders are just a different type of rifle that requires a handload by design. Most hunters don't handload, so they bring no basic knowledge to this. Add into that the fact that muzzle loading is different... the powder burns differently and you have to deal with barrel fouling. And finally, add into this that many states require muzzle loaders to use iron sights which are harder to master than scopes and usually are not even very good sights to begin with as installed by gun factories. The key to success is to get some knowledge and proper equipment in all of these areas. So, let's begin...

The First Problem is that modern muzzle loading rifles have been pitched as flat shooting "Magnums" with the advocacy of up to 150 grains of powder in the loads. As it turns out, these magnum loads are usually the ones that have the most accuracy problems. And for good reason. Back at the height of black powder accuracy... when they were shooting it in long range cartridge guns like the Sharps, the most powder they would use was 120 grains. We've all heard of the 45-70, 45-90, 45-110, and 45-120 cartridges? The second number in those names refers to the powder charge. And if you talk to modern muzzle loaders who know their sport, they will tell you the best accuracy comes with loads in the 80-120 grains of powder range. Back in the old days that was enough to kill buffalo the size of Volkswagens so don't feel like you have to make your rifle work with any more... in spite of folks telling you to shoot 150 grains.

The Second Problem is Related to the First... "Flat Shooting" is associated with magnum charges of powder. But if you really want flatter trajectory, you have to shoot sabots. Sabots shoot the same weight bullet at the same velocity only in a smaller caliber. This configuration has a higher ballistic coefficient and shoots a flatter trajectory. So for hunting deer with my 209X50 Encore, I shoot TC Shockwave 50 caliber sabots with a 250 grain 45 caliber pointed bullet. Now, in the last year or so a lot of folks have hunted with 50 caliber (low ballistic coefficient) PowerBelt™ bullets and Triple 7 powder... The main reason has been that the undersized Power-Belts are easier to push down into a fouling encrusted barrel and Triple 7 isn't quite as dirty as Pyrodex. But neither of these approaches address the goal of a flatter trajectory and consistent, shot after shot accuracy.

Third, Accuracy Requires Consistency. If you don't clean between shots, the bore fouling keeps changing the bore from one shot to the next. And consistent accuracy becomes impossible. A lot is made of shooting from a CLEAN barrel but the barrel must also be CONSISTENT. If there is any solvent or lubricant residue after cleaning, it will screw up your accuracy. Add into this my personal experience with cleaning was that I'd run a patch down the bore and the jag would stick in the fouling down there and end my shooting session. So for the best Accuracy, what's needed is a way to clean the barrel between shots, without getting the jag stuck, and leave the bore in exactly the same condition from one shot to the next.

Here's what I do: For a 50 caliber bore, instead of a jag I use a 45 caliber bronze cleaning brush. Wrap a TC "Seasoning" Patch around the brush and scrub it down the bore all the way to the breech plug. [Seasoning patches](#) are impregnated with borebutter that loosens the crud while seasoning the bore surface. Scrub the ignition area at the bottom especially well until you can feel that you are scrubbing smooth, bare metal. Usually its about 20 strokes. Next, wrap a DRY cleaning patch around the brush and scrub the barrel like before... about 20 strokes. This method results in a clean, consistent barrel that also loads easily and consistently. And the brush/patch combination never sticks in the barrel. Now, refer to the TC Muzzle Loading instruction manual for details of loading muzzle loader rifles, fully seating bullets, marking your ramrod for depth reference, etc... Then adapt that information to the following load at your own risk. [For Pictures, Click Here.](#)

My Tack-Driver Deer Load - I discovered this loading method while cleaning my barrel (as described above) in our shop and test firing out back at a 28 yard 3" bullseye. The load is 90 grains of Pyrodex RS with my TC Shockwave 250 grain sabot and a Remington 209 primer. For the first three shots. I thought I had missed twice

because there was only one hole... all three shots went into just one hole in the bullseye. The next 10 shots went into the same hole and only widened it slightly... 13 shots into the same hole! I'd never seen this thing shoot so accurately before. I cleaned the barrel one more time the same way, loaded it once more with the same load and packed it out to the woods for an afternoon of deer hunting. Long story short, I got a chance at a doe at 80 yards and my Encore put that bullet right through the heart.

Note: - This 250 gr TC Shock Wave load at 1623 fps, uses ED value .0667 in the BRC (Ballistic Reticle Calculator) software with [Hawke Ballistic Scopes](#) . Zeroed a 150 yds, it hits 4" high at 100 yds and 9.8" low at 200 yds.

The Fourth Problem is Shooting with Iron Sights, it's a lot harder than a scope and takes a lot more practice. To make matters worse, the sights they put on muzzle loaders aren't very good... they have a short sight radius and they suffer from alignment that changes with the angle and intensity of available light. Fast action iron sights were perfected with the peep sights of World War Two Garands. Ask anyone who knows them... they could shoot as accurately as modern scoped rifles with those peep sights. I installed a peep system on my Encore (see <https://www.eabco.com/tcencore209X50.html>) and credit it with the aiming portion of my ability to shoot accurately with the TC Encore 209X50 Muzzle Loader.

Accuracy Products for the Encore 209X50 Muzzle Loader

[Info/Order 207-7003](#) Encore Seasoning Patches (100)

[Info/Order 207-7037](#) Encore Dry Cleaning Patches (100)

[Info/Order 207-9500](#) Bronze 45 Caliber Ramrod Brush (10/32 thread)

[Info/Order 207-8236](#) TC ShockWave Sabots .50 Cal 250 gr. (30)

[Info/Order 129-6684](#) TC Shockwave 50 Cal SST Ramrod Tip

Note: The above supplies will get you by just fine in the field. But for convenience and speed of loading while you are working up your load and practicing at the range, I recommend you use a separate, standard cleaning rod and brush to do the cleaning between shots and use your ramrod just for seating bullets...

[Info/Order 715-26-22-26](#) Standard 26" Cleaning Rifle Rod

[Info/Order 715-45R](#) Bronze .45 Cal Rifle Rod Brush (8/32 thread)

Note: - The 250 gr TC Shock Wave and Hornady 250 SST at 1623 fps, use ED value .0667 in the BRC software with [Hawke Ballistic Scopes](#).



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