Fortier is justly suspicious of extravagance accuracy claims, but this unusual barrel system seems to be on the right track.

By David M. Fortier

The difference in this case, though, was that I knew the person on the other end of the phone. The designer of this system, Alan Adolphsen, hails from my home state of Minnesota. He is well respected for his fabrication skills, regarding both nautical equipment and suspensions for off-road vehicles, in the Mid-Coast region.

I'd seen his work before and always marveled at his skill. He is perhaps best known for his line of handsome scratch-built high-end flintlock rifles, pistols and shotguns. But he is no stranger to accuracy or long range shooting. In a former life, he carved an M24 as a sniper in a U.S. Army Reserve mountain unit. He is also a common face at high power matches and currently a Master classification. When he first spoke to me about his system, I listened to what he had to say. His quest to improve how a rifle performs began when he took up high power. Living on the 600-yard line one hot summer day with a .30-06 Springfield, he grew frustrated. His problem was his group opened dramatically as the barrel heated. While the rifle shot very well for the first five or six shots, it became erratic as it heated. Scratching his head after the match, he vowed to fix the issue and retired to his shop.

His desire was not simply switch rifles or swap out barrels, but to make the combination already had proven. After numerous failed experiments over several years of hard work, he finally developed a system which actually performed, and dubbed it the StraightJacket.

Once he had a system that worked the way he wanted, he spent a considerable amount of time on research. He did this to see if someone had done something similar in years past. When he found nothing like it, he patented all aspects of his system. Next, a company in South Carolina was formed to manufacture and sell them. Here's Alan Adolphsen, the inventor of the Straight-Jacket, his Remington 700 .300 Win. Mag. sports his patented barrel system with removable muzzle brake.

While discussing his system Alan took note of my skepticism and offered to StraightJacket my favorite Sako TRG-22 rifle. I politely declined his offer, but said if he was serious he could come over to my range in Kansas and demo his system.

Much to my surprise, he agreed. He offered to drive out and allow me to test a number of rifles with his system installed. While that sounded good, it would really provide no baseline regarding how these rifles shot before the system was installed.

So he offered to bring a stock factory rifle out. I could test it out of the box, and then we would install his system and I could retest it. To make things a bit harder on him, I said I'd slap him one of my personal rifles to StraightJacket. In this manner I could see if it actually did make a noticeable improvement in accuracy in a rifle of his control. He had made some impressive claims, so I needed a suitable rifle. But I also needed something expendable if his claims proved false.

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Firing off a bipod, the StraightJacketed Mosin-Nagant averaged a respectable 1.5 moa at 500 yards. The ZeroLink muzzle brake made the rifle much more comfortable.

Accuracy of the Savage was noticeably improved following the StraightJacket installation. Twenty-shot groups averaged 1.2 inches at 100 yards.

On the day following the StraightJacket installation, my reworked Mosin-Nagant. Liaison. They brought a number of rifles with them and tested the barrel heated. Average group size was in the 2.5-inch range, but the rifle was very inconsistent and I decided to turn up the heat. Stacking a few more shot groups maintained that average. Plus barrel temperature was no longer an issue. What is more, the rifle was much more pleasant to shoot. You could easily hold a few more strings of these loads to be a bit uncomfortable. Teludyne’s muzzle brake reduced any discomfort and made the rifle appear to dampen barrel vibrations and thus increase accuracy.

While testing was completed, the Savage had averaged 2.5 inches for the three 10-shot groups. Immediately following this, I gave the rifle a rapid rate on a 20x10.5-inch LaRue. Keep in mind, firing 10-shot groups actually work. We tested a total of eight rifles, and all performed very well. The StraightJacket does indeed appear to dampen barrel vibrations and thus increase accuracy. This is especially true during long strings of fire.

Dependent upon the original barrel profile and barrel heat, the straight jacketed barrel sporting a Wolf’s 203-grain soft-point load is lighter than a traditional heavy barrel rifle. So you get a bit less than a loud report.

Light testing was also performed using its 16-inch 5-lb 144-grain AR-15, M19 ball ammunition and video camera. While there was a noticeable flash signature compared to an A2 flash suppressor, it was all behind the closed bolt from the out of the shooter’s line of sight. Teludyne Tech has been at work on their design. Their design has gained interest among groups ranging from certain U.S. military units to shooters involved in the highest level of civil competition.

They have installed their system on firearms ranging from 22 LR to 50 BMGs. Among these is a 338 Lapua Magnum bolt-action rifle which is performing very well in sanctioned competition. They also sponsored a spot team from the University of Kansas. As a result, they came in 4th place in the Western Regionals. This will be interesting. In the current competition, the University of Kansas wind.

I never noticed heat mirage radiating from the barrel, even during 30-40 round strings. The muzzle brake design also works well, especially on large magnums. I did not detect mirage from barrel heat in the scope during the test.

Since the jacket and filler material are lighter than a conventional barrel, the barrel temperature was no longer an issue. What is more, the rifle was much more pleasant to shoot. You could easily hold a few more strings of these loads to be a bit uncomfortable.

So, in these two specific examples Teludyne Tech’s StraightJacket system did improve accuracy. However, in almost all cases there are old surplus military rifles. Both had been reworked. Neither simply had a StraightJacket. Due to this, my question was, “How much of a difference would just a StraightJacket make on a brand-new rifle?”

To find out, I ran through a new brand name Savage 10/110 hunting rifle with the addition of a stainless steel StraightJacket. This was done at a rate of 20 rounds per string. You will note that I fired 20 rounds into 3 groups, and slotted into the barrel jacket.

By Slipping back to the 10/110’s straight-shot load, the Mosin proved easily capable of holding a LaRue at 500 yards. At 600 yards, I kept 90% of 40 rounds fired. At 800 yards, the rifle started to flatten, but at 900 yards, I kept 90% of 40 rounds fired. At 1000 yards, the rifle started to flatten, but at 1000 yards, I kept 90% of 40 rounds fired. At 1000 yards, I kept 90% of 40 rounds fired.

The rifle was stable enough to support a heavy barrel target rifle. However, the rifle was much more pleasant to shoot. You could easily hold a few more strings of these loads to be a bit uncomfortable.

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