

The Thompson/Center Dimension

- a rifle for all seasons

by Technical Advisor Brendan Atkinson



Technical Advisor
Brendan Atkinson
enjoyed dismantling and
swapping over barrels
on the new Thompson/
Center Dimension rifle -
but only after reading the
owner's manual!

The idea of changing rifle barrels may sound like a 'gunsmith-only' procedure to many, but in the world of competition rifles, we change barrels without a second thought - and it's a relatively quick process, as long as you have the correct tools and knowledge. We change barrels to suit the various weight classes in Benchrest or perhaps to try another barrel in the search for accuracy.

But what about in the hunting world? What sort of application would it have there? Does it work, and why would you bother? The simple answer to the above is that not all of us can afford a collection of rifles to suit every type of hunting situation. We may have a nice .223 in the safe and use it on foxes and other vermin, but what if there were some deer or larger game to be dealt with? You would need another rifle in a more suitable calibre to humanely do the job.

The idea of building a switch-barrel rifle is not a new one. The usual recipe was to get hold of a good action and have it blue-printed by a gunsmith. The Remington 700 was perfect for this, as there were so many aftermarket bits, such as custom bolts and triggers, for them. Choose a good stock and mate the action to it. In some cases, that meant glueing it in. Then it was just a matter of choosing barrels in a series of calibres with bolts to match. In effect, you had a switch-barrel/switch-bolt rifle. A word of caution here though: You would need to check with the relevant firearms branch in your home state or territory to see what the licensing requirements would be; that is, which calibre you register it as.

Now, if all this sounds like just too much trouble, Thompson/Center has solved the puzzle for you - enter the T/C Dimension rifle! This rifle was first shown at the recent SSAA SHOT Expo in Sydney. The Papps brothers from Frontier Arms, the Australian T/C distributor, just about wore themselves out dismantling and assembling the Dimension for the hordes of people clamouring to see it. It was certainly something different. Our test rifle was supplied

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The Thompson/Center Dimension rifle under review had .223 and .30-06 barrels.



The rifle is fitted with a very efficient recoil pad, which tamed the kick of the .30-06. Spacers are fitted between the pad and the stock to adjust the length of pull to suit the shooter.

in .223-calibre, with a spare barrel kit to convert it to .30-06.

The rifle

The Dimension is an unusual looking rifle, mainly due to the shape of the stock. Refer to the profile photo and make your own decision - it's a bit different. The action is cylindrical in shape and on the test rifle, it had Weaver-type bases topside.

The bolt is a three-lug arrangement, but unlike the usual method of lockup, the lugs actually engage a recess in the back end of the barrel. Those familiar with the Omark target rifle will have seen this method before. The bolt release is on the rear left-hand side and it would be prudent for the new owner to study the instructions as to how to remove and replace the bolt. The conventional method of just pulling the bolt back until it clears the action will not work, as it fouls the comb of the stock. One must rotate the bolt 180 degrees and wriggle it around a bit until it clears. Replacing the bolt is a reverse of this procedure. Yes, it's fiddly and annoying, but there it is.

There is a two-position safety catch, which, when engaged, disables the trigger, but allows the bolt to be lifted and opened or removed. At the front of the action there is what looks like a gear wheel - T/C calls it a torque collar and this is used to lock the barrel firmly in place. More on that procedure later.



The torque collar holds the barrel in place and requires a special tool to tighten and release it.

The barrels are sporterweight. The .223 was 22" in length, which is fine for a light-weight hunting rifle. T/C barrels all feature the 5R rifling system, so called because it has five lands and grooves and was developed in Russia. I have examined the internals of a number of these barrels using my Hawkeye borescope and have not found a substandard one as yet.

The .223 barrel had a twist rate of one turn in 12", while the .30-06 had a twist rate

of one turn in 10". These are the standard twist for these calibres and will handle all but specialist target bullets. This is a hunting rifle, remember.

The stock shape is a little bit 'out there' and comments made to me on the range showed that people either liked it or hated it, with not much in between. It is made from a black polymer material, with grey inserts on the pistol grip and fore-end. Sling swivel mounts are supplied, as is a soft ventilated-style recoil pad, which helped tame the kick when the rifle was configured in .30-06 calibre. There is a very large gap between the barrel and the fore-end, which gives a whole new meaning to 'free floating'.

Changing barrels

Having changed many barrels during my Benchrest shooting career, I was curious to see how it worked with this rifle. All necessary tools are supplied for the job - do not attempt to use any others!

Before changing barrels, you will have to remove the scope from the rifle. This is necessary because the locking ring may not pass under the bell housing of the scope



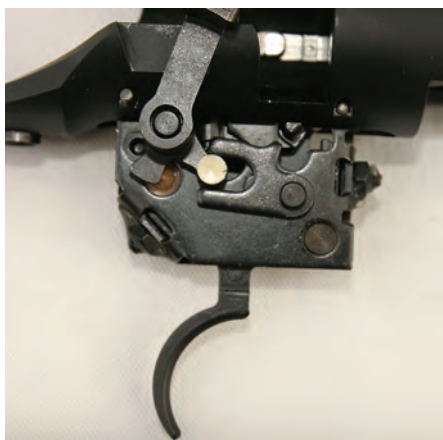
What you see here is a complete kit that gives you two rifles in one. Barrel changing is a five-minute job and gives the shooter a range of calibres to pick from.

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when removing the barrel. This is a good reason for having quick-release mounts.

Remove the magazine and put it aside. The next step is to remove the barrelled action from the stock. This is done by loosening off the two take-down screws on the bottom of the stock. These are captive screws and can't fall out and be lost - a great idea!

Now take the locking optimised components (LOC) leverage tool and screw it tightly into the action screw hole at the front of the action. There are two holes in this tool and they are clearly marked as for tightening and loosening. The LOC torque tool is inserted into the loosening hole, and the small gear teeth on it mesh with the teeth on the torque collar, which is on the barrel.



The T/C trigger is adjustable for weight of pull, but the factory setting was quite satisfactory for general use.



In case you forget, the name is right there on the receiver. The overall fit and finish of the rifle was first class too.



With the barrel out, it can be seen that the receiver is just a well-built cylinder. The notch at the bottom locates the barrel.

Confused? Don't be, as it is a simple procedure when you actually do it.

With the torque collar loosened off, it can then be turned with the fingers. The barrel may now be removed from the action with a gentle pull. Do this carefully, as it is a very close fit. Now take the replacement barrel and push it back onto the receiver, making sure that everything is in alignment - if it's not, it just won't go on, and there is an alignment notch at the six o'clock position on the receiver just to make sure.

With the barrel in place, put the torque collar back on and screw it up with the fingers. Put the torque tool in the other hole and do the collar up until there is an audible 'click', which means the correct tension has been achieved. Replace the scope and the rifle is ready for sighting-in again.

Righto, you have changed barrels, but there are a few differences between a .223 and a .30-06. We must also change the magazine (for extra length) and the bolt (as the case head size is larger). Each part is stamped with a letter of the alphabet to

identify which cartridges it is suitable for. In our case, the .223 required 'A' components and for the .30-06, we needed to upgrade to 'B'. How easy is that?

Range testing

With the rifle set up in .223-calibre, I selected a variety of ammunition from different manufacturers with various weights and styles of bullets. Nothing like a mixture to sort things out! I also had some handloads that I had made up using ADI 2219 and match-grade 52-grain bullets.

For testing purposes, I used my own Weaver Grand Slam variable scope in 6-20x40mm with a duplex reticle. I knew that this scope was a good one, so any 'fliers' would not be the fault of the optics.

I used a standard Benchrest set-up with a front stand and rear sandbag, but ran into a bit of a problem. Check out the bottom of the stock at the rear - the curved shape might look good, but it can be detrimental to shooting off the bags. All Benchrest stocks have a straight surface in this area so that recoil is in a straight line. Oh well, I just had to hang onto this one with a tight grip and watch for vertical dispersion.

As the rifle had been used before I received it, there was no need to run it in. Nevertheless, I gave it a thorough scrub and a soak with Pro Shot and then cleaned after each 20 rounds during testing. The bore cleaned up well without difficulty and certainly felt smooth when passing a patch through it - 5R rifling usually does.

Having sighted-in the rifle, I then proceeded to try various types of .223 ammunition. It soon became obvious that this rifle was a little ammo fussy. Groups ranged from sub-MOA to more than 2 MOA, with the best factory ammo group measuring just more than .6 MOA, which is not bad for a lightweight hunting rifle.



They may not appeal to all, but these grip panels work well, especially with sweaty or wet hands.

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My handloads averaged around .65 MOA, and the absence of fliers suggested that there was plenty of accuracy in this barrel. Reloaders will have fun extracting good results from this set-up.

With the barrel changed to .30-06, I did some testing with factory loads from 150 to 180 grains. The soft recoil pad did its thing quite well and it was not too bad shooting off the bench. A few shots offhand were much more comfortable and no problem at all, despite the lightweight rifle.

Now, I know you are going to ask if the .30-06 barrel shot to the same point as the .223. Well, no, it didn't. In fact, there was around 30cm difference in impact point between the two barrels. This goes to show that you really must sight-in any time you change anything on a rifle set-up. A change of bullet weight or even a change of ammo



There was a good range of ammunition on offer for testing. We were to discover that it shot far better with some than others.

brand can cause some difference in impact. However, it's no big deal, and after you have done it once and written down the scope settings, it makes it a lot easier next time around.

Summary

Well, there it is, the Thompson/Center Dimension - a true switch-barrel rifle, which, at around \$950, won't cost you the earth. In fact, it's far cheaper than buying an extra rifle. An extra barrel with the magazine will set you back around \$375, and if you need another bolt, you can add around \$250 to that. All the changing tools required are supplied with the original purchase.

As mentioned, I strongly recommend that

The 'A' series magazine is for smaller cartridges such as the .223 and similar head sizes.

the new owner study the owner's manual carefully to familiarise themselves with this rifle. But give it some thought and check one out at your favourite gunshop. For more information, visit www.frontierarms.com.au ●

Specifications

Manufacturer: Thompson/Center, USA

Model: Dimension

Distributor: Frontier Arms, Adelaide

Action: Cylindrical; left-handed version available

Calibres: .204 Ruger to .300 Winchester Magnum

Bolt: Three-lug 60-degree lift

Trigger: T/C factory trigger, fully adjustable

Barrel: Match-grade sporterweight 5R rifling

Magazine: Box-type, holds three rounds

Sights: Weaver bases on receiver, no open sights

Stock: Polymer construction, aluminium pillar bedding

Weight: 3.1kg bare

RRP: Around \$950

