G.A. Precision
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CENTERFIRE BARREL BREAK-IN & CLEANING INSTRUCTIONS

G.A. Precision recommends that your new match grade barrel be properly broken-in to obtain the best accuracy. A proper break-in will help ensure that your barrel will clean easily in the future. Properly breaking in a barrel also ensures it will achieve maximum accuracy potential. Please follow these important instructions.

WARNING: Do not break your rifle in with moly coated bullets.

We are concerned with two types of fouling:

Copper Fouling

Copper fouling is caused by bullet jacket material being left in the barrel. During the first few rounds a lot of copper fouling will be left in the barrel. It is important to remove this fouling, **completely**, after each shot to help prevent a build-up later on.

Carbon Fouling

Carbon fouling, also known as powder fouling, is caused by the power burn and is ongoing, but easy to remove.

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The G.A. Precision Break In Procedure

For break-in, the barrel should be cleaned after every shot for the first 10-12 rounds or until copper fouling stops. Our procedure, outlined below consists of removing the carbon fouling followed by the copper fouling.

Step 1

Carbon Fouling:

Push 2 saturated cotton patches through the barrel (Bore Tech C4 Carbon Remover or Eliminator Bore Cleaner). This will remove the loose powder fouling and wet the inside of the barrel with solvent. Next, wet a **nylon brush** with solvent and stroke the inside of the barrel 5-10 times. This is followed by another wet patch and then 2 dry patches.

Step 2

Copper Fouling:

Now, push 2 saturated cotton patches through the barrel (Bore Tech Cu+2 Copper Remover or Eliminator Bore Cleaner,). Next, wet a **nylon brush** with solvent and stroke the inside of the barrel 5-10 times. Let the chemical soak for 3-5 minutes. This is followed by another wet patch and then 2 dry patches. Repeat steps if necessary.

REPEAT: Steps 1 & 2 after each shot for the first 10-12 rounds.

The copper fouling will be heavy for a few rounds and then taper off quickly in just one or two shots. Once it has stopped or diminished significantly (***normally 10-12 rounds***) it is time to start shooting 5 shot groups, cleaning after each one. After 25-30 rounds, clean at a normal interval of 10-25 rounds. Your barrel is now broken-in.

IMPORTANT: Be sure to dry out the chamber after cleaning to remove solvent, a pistol rod with a 45 cal nylon brush works well using a patch over it. Failure to keep the chamber clean and dry will raise pressure to extreme levels.

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Normal Cleaning

For a normal cleaning (after a string of 10-25 shots) after break-in, the above procedure is slightly modified. A good carbon and copper remover like Bore Tech Eliminator can be used to remove both carbon and copper fouling. Our procedure is outlined below:

Carbon/Copper Fouling:
Push 2 saturated cotton patches through the barrel. Next, wet a **nylon brush** with solvent and stroke the inside of the barrel. A good rule of thumb is to stroke the barrel with a brush, one cycle for every shot fired. Let the chemical soak for 5-10 minutes. Follow this by another wet patch and then 2 dry patches. Repeat steps if necessary.

For shooters wishing to use moly-coated bullets we do not recommend shooting more than 40 rounds or so without using the normal cleaning procedure outlined above.

Periodic Cleaning

It is probably a good idea to check the barrel for copper fouling every 200 rounds or so. The Break-in procedure listed above should be used and the Copper Fouling process repeated until the patches come out clean. We **do not** recommend the routine use of abrasive cleaners for normal cleaning. However, they can be used every 500-1000 rounds to remove the carbon build-up (***caused by powder fouling***) in the throat area of the barrel. ***(A good carbon remover and maintenance schedule will most likely eliminate the need for abrasive cleaners' altogether.)*** When using abrasive cleaners, wrap a cotton patch around a worn out brush or cleaning jag and liberally apply the abrasive cleaner to the patch. Short stroke the abrasive for 6" or so in the throat area and one or two full length passes through the barrel. Do not clean the barrel like this for more than 1-2 minutes.

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Suggested equipment and solvents

Bore Guide:

It is critical to use an action rod guide (Bore Guide) when cleaning. The guide aligns the rod with the bore and helps prevent uneven wear in the throat area. Be careful not to raise the handle end of the rod while stroking. This will put a "bow" in the rod that will wear the barrel.

Cleaning Rods:

We recommend coated rods, like the Bore Tech Bore Stix or Dewey, be used. Try to avoid flimsy screw together rods. These have the potential to bow and score the barrel.

Jag & Brushes:

Do not apply an aggressive copper remover, like Bore Tech or Sweets, on a bronze brush or brass jag. It will dissolve the brush and give the false indication that the barrel has copper in it. We recommend nylon brushes and non-brass jags for use with copper removers. Brass brushes and jags can be used with carbon removers.

WARNING: Do not use a stainless steel brush or jag in your barrel under any circumstances.

Solvents:

We've used a number of solvents over the years and have found that Bore Tech's C4 Carbon Remover, Bore Tech Cu+2 Copper Remover or Eliminator Bore Cleaner is great for copper removal. The Eliminator is good at attacking both powder and copper fouling.

Other solvents we have had success with are Shooter's Choice, Barnes CR-10, Butches, and Sweets. For the occasional use only, abrasives like J-B paste, Flitz, or RemClean can be used. Have fun shooting!

The G.A. Precision Team www.boretech.com