



Adjustable Breech Plug Manual



**READ AND FULLY UNDERSTAND THE WARNINGS AND DIRECTIONS IN
THIS MANUAL BEFORE ATTEMPTING TO USE THE ADJUSTABLE BREECH
PLUG IN ANY MUZZLELOADER**

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**DO NOT USE SMOKELESS RIFLE POWDER IN ANY 50 CALIBER PATRIOT MUZZLELOADING RIFLE!
45 & 50 CALIBER PATRIOT BARRELS MARKED "G2" ACCEPT THE ADJUSTABLE BREECH PLUG. NOT ALL OF THE PRESSURES DISCUSSED HERIN APPLY TO .50 CALIBERS!**

REV I 02042022

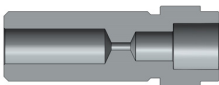
The Woodman Arms adjustable breech plug features pressure regulation and headspace adjustment to enable sealing of the 209 primer.

This simple and effective design allows the user to adjust the headspacing on any brand of 209 primer they choose. Once set, the headspace can be locked which allows the breech plug to be removed and installed without changing the set headspace. The breech plug body and primer pocket are made from heat treated 17-4 stainless steel. The fine pitch threads on these two components are both made of the same material. It is crucial that they are always assembled with anti-seize grease, such as our Woodman Arms Anti-Seize Grease, to prevent galling.

We offer several different configurations in the adjustable plug that regulate pressure put on the primer. The load pressure and action determine the appropriate components to be used. For use in the .45 caliber Woodman Arms Patriot muzzleloader, there are 3 load pressure categories to determine the best components to use. Bullet/powder combinations and the pressures created are beyond the scope of this manual.

LOW PRESSURE

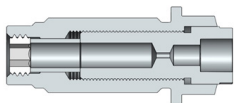
Under 30kpsi, typical with saboted bullets 250 grains and under, with up to 120 grains by volume Blackhorn 209. Light loads of smokeless rifle powder and saboted bullets 250 grains and under. For these loads, insert the components below into the breech plug body and secure with the hollow set screw.



Cutaway of primer pocket to be used with LOW PRESSURE loads



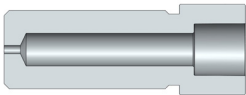
Cutaway of spacer to be used with LOW PRESSURE loads



Cutaway of complete Breech Plug Assembly configured
for LOW PRESSURE loads

MEDIUM PRESSURE

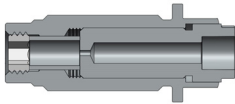
Over 25kpsi and up to 35kpsi. Up to 250 grain full bore non-saboted bullets with either Blackhorn 209 or light smokeless powder loads. For these loads, insert the components below into the breech plug body and secure with the hollow set screw.



Cutaway of primer pocket to be used with
MEDIUM PRESSURE loads



Cutaway of spacer to be used with
MEDIUM PRESSURE loads



Cutaway of complete Breech Plug Assembly configured for
MEDIUM PRESSURE loads



Comparison of hole sizes of the spacer vs carbide bushing

HIGH PRESSURE

Over 35kpsi and up to 45kpsi. (DO NOT EXCEED 45kpsi IN .45 CALIBER PATRIOT MUZZLELOADERS). For these loads, insert the components below into the breech plug body and secure with the hollow set screw.

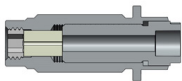
**The adjustable breech plug itself can be used in other applications with maximum pressures of 60kpsi.*



Cutaway of primer pocket to be used with
HIGH PRESSURE loads



Cutaway of carbide bushing .035 to be used with
HIGH PRESSURE loads

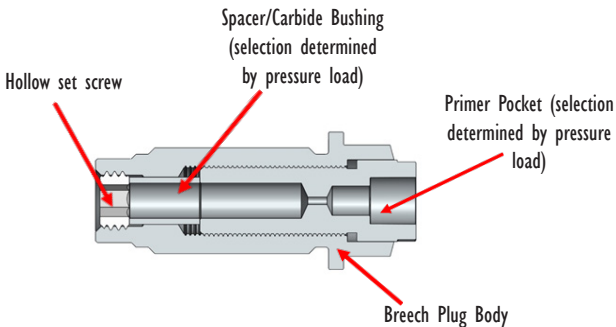


Complete Breech Plug Assembly configured for
HIGH PRESSURE loads

HOW TO ADJUST

**ENSURE THAT THE RIFLE IS NOT LOADED, NO CHARGE/BULLET
IN THE BARREL**

It is recommended to clean the breech plug threads and apply
anti-seize grease to the threads prior to starting.



1. Loosen the hollow set screw in the front of the breech plug so approximately half of it protrudes.
2. Turn primer pocket clockwise to screw it into the breech plug body. Do not force it once it has bottomed out.
3. Install the breech plug in the barrel.
4. Insert a 209 primer in the pocket.
5. Turn the primer pocket counterclockwise until the primer looks flush with the end of the barrel.
6. Attempt to lightly close the rifle. If it closes completely, repeat starting at step 5. Only turn in 1/2 rotation increments.
7. When primer protrusion causes the break trigger to stop shy of closing (about 3/16 to 1/4 of an inch), it is set to the right headspace.
8. Carefully remove the entire breech plug. Using a socket on the larger, main body drive to completely unscrew will ensure the primer pocket does not get moved.
9. Tighten front hollow set screw to lock everything in place.

WARNING - It is crucial that with whatever configuration used, the proper components are used and there is a .035/.040 restriction in the breech plug assembly. A 5/32 hole all the way through the breech plug assembly will expose the action to significant pressure causing permanent damage and possible bodily injury!