

September 8, 1977

Mr. Murray E. Salter
87 Gardiner Street
Raynham Center, Mass. 02767

Dear Mr. Salter:

I have read the section to which you made reference in Mr. Frank deHaas' book on bolt action rifles.

Regarding the question of installing another gas vent hole in the left side of the receiver, the breeching system on the Model 700 Rifle essentially works on the principle of containing the high pressure gas as opposed to trying to pipe it out of the action. To relieve the pressure of a hot handload would require a lot larger hole than could safely be drilled in a bolt action receiver. You would be trying to vent gas at over 80,000 psi pressure in a fraction of a second. The rifles such as the Mauser 98 do not fully support the cartridge case. The rear section where the case abutts the bolt is left unsupported. The Remington Model 700 bolt head fully encircles the cartridge case. As Mr. deHaas says in his article there is a cut in the bolt head for the extractor but this circular cut is located adjacent to the strongest section of the cartridge case. In one of his examples the pressure in the chamber was so great as to form the brass right into the extractor groove. To form solid brass in this manner requires considerable pressure. The case was overloaded. This cartridge would have blown the bottom right out of competitive vented actions, including the Mauser 98.

The possibility of gas along the left side rail is quite remote when you consider that the bolt head encircles the cartridge case, the bolt head is encircled by the barrel, and the barrel is encircled by the receiver. Also, the bolt plug covers the left side slot at the rear of the receiver.

The Remington Model 700 BDL Varmint Special chambered for the 308 Win. cartridge has been well received by silhouette shooters and is being used by many competitors.

Very truly yours,

John P. Linde
Manager - Manual Firearms Design
Ilion Research Division

JPL:T

In any situation, whether with rifle or shotgun, shooting glasses should be worn.