

MODELS 742X AND 1100X - contd.

an autoloading action with strength equal to the Model 700, and this will be a distinct advantage over existing competing autoloading rifles.

Exhibit 5 shows the relative sizes of the Receivers comparing the Browning, Model 742, and Model 742X.

The locking system for the new shotgun is planned to be similar to the Model 1100 because it seems to provide a greater safety advantage.

For example: Compare the extremes of locking systems - - the Model 1400 Winchester, which locks completely around 360° of the breech, and the Model 1100 which locks at the top. The full locking system such as the Model 1400 allows overloaded pressures to reach a higher level before releasing, and then the blowup becomes really dangerous, especially in the Barrel section which is weaker than the locking system. When such occurs, the aluminum Receiver aggravates the Model 1400 problems. With the Remington system, high peak pressures are not allowed to reach a dangerous level and the gas escapes downward between the shooter's hands. One other disadvantage of the 360° locking system is that it requires the Receiver to be about 1" more in length to accommodate the locking lugs.

Our experience in destructive testing guns of all types for experimental and design purposes is considerable, and one of the culprits that causes more trouble in shotguns than anything else is a shell with a leaky base wad, or a structural defect between the shell head and the body. This is why gun designers are very skeptical of any ammunition that does not provide an adequate support and seal at the head.

The Receiver sizes shown in Exhibit 7 compare the dimensions of the most popular shotguns in the autoloading category. Note that our design is appearing shorter and a little wider.

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