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REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington
DUPONT

File A-IV-T37-Y81
11094

Bridgeport, Connecticut
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TO: R. B. HARTMAN

FROM: E. F. SIENKIEWICZ

SUBJECT: BARREL DAMAGE EVALUATION WITH SHOTSHELL BODY CUT OFFS

OBJECTIVE

To determine if barrel damage would result with a round being fired with a PTL body cut off lodged in the bore.

CONCLUSION

No barrel damage occurred from firing rounds with PTL body cut offs lodged in the bore at predetermined locations.

RESULTS

Three popular over under shotguns were dimensionally characterized for wall thickness and R/A hardness (see attached Table II). The Remington Model 3200 had the thinnest bore wall thickness and was comparable in hardness to the others. A Model 870 barrel turned down to Model 3200 wall thickness specifications was used for down bore damage testing. (For information, Model 3200 barrels are made from Model 870 barrel blanks.) A Model 3200 was used for body cut-offs lodged in the chamber forcing cone.

Major areas of concern for a bore obstruction are in the chamber and choke forcing cones and down bore at the thinnest wall thickness. Therefore, the test was conducted with bore obstructions at these locations and then repeated for confirmation. The test conditions and results are in Table I. Shell bodies used for lodging down bore and in the choke were recovered body cut offs from down range which had passed through a shotgun barrel.

In the Model 3200 the shell PTL bodies selected and used for lodging in the chamber forcing cone were near body cut offs that remained in the chamber and had not entered the bore. These bodies were then manually cut off and inserted to have the rear portion 2.40" from the breech face to facilitate placement of a loaded round into the chamber and to ensure that the crimp of the round being fired would open within