

Status ReportProduct Development

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Model 7400 LT-20 Limited

Mail & Relat guns were tested satisfactory.
A special field test with 8 boys and girls was
successfully completed. The guns were accepted.

Model 7400 - 7600

Final Production model 7400 rifled consisting
of a selection of 30-06, 270, and 7mm Exp. Rem.
calibers were successfully tested for ball velocity
verification.

Receiver marking drawings are being prepared for
the designation of Model 4 and 6. Drawing
transmittals will be made once location has
been approved by Marketing.

Satisfactory production samples of the bore grip cap have
been made on a single cavity die.

M/870 Competition Trap

Production of this new model is in delay as a
result of failure of the action bar and fore end
tube assembly. Three design modification have
been tested.

The first design ^{tested was} ~~used~~ the present production site.

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with the thread changed ^{design} to increase the area thru the threaded section by approximately 40%. The complete action bar is copper brazed together, microcarbed and heat treated. Using ~~an~~ accelerated firing tests, one assembly went to 13,000 rounds with the tube failing next to the action bars. Two assemblies went up to 25,000 rounds without failure. A slow rate of fire test ^{also} was conducted to determine if the rate of firing was a factor. Two assemblies went to 25,000 without failure.

The second design tested was the same as the first with the exception of a shock ring added to the test gun between the fore end nut and the gas cylinder. Using the accelerated firing test method one assembly went to 25,000 rounds without failure.

The third design tested was fore end tubes of heavier wall thickness, ^{copper brazed together, microcarbed and heat treated.} Five assemblies went 25,000 rounds without failure under the accelerated mode of testing.

Test results indicated that the first design using the standard production tube is satisfactory. Process Engineering feels that for sake of assembly the heavier wall tube be purchased.

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During the intensive testing of the new fore end tube designs the premature cracking of the receiver was detected. Initial endurance testing of the prototype guns showed cracks developing at the rear of the ejection port at 32,000, 35,000 and 30,000 rounds. Cracking of receivers on production guns began to show after 5,000 rounds. Two M/870 control went to 25,000 rounds without cracking the receivers.

To further investigate the problem strain analysis tests were conducted on the M/870 completion trap gun receiver using CT barrels and a standard M/870 barrel. Test results showed similar stress levels. Tests on a standard M/870 receiver showed similar results.

Further strain analysis measurements are being made to the locking block area. ~~on the magazine cap affect the strain gauge reading. Two production guns are currently in test to determine the relationship of the magazine cap and stress.~~