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MEMORANDUM

TO: C. B. Workman

FROM: A. A. English and T. Plunkett

XP 100 DROP TESTING WITH POWDER METAL SEARS

A standard production XP 100 serial number 6925 was drawn from the warehouse for powder metal sear drop testing purposes. Five powder metal sears and one standard production sear were drop tested as per enclosed drop test procedure. Drop testing at 10" corresponds to the test manual standard, and waist high drop testing (48") was included for increasing drop test severity.

Fire control adjustment was made by production prior to drop testing of each sear.

Listed below are XP 100 powder metal sear drop test observations:

1. The measured hardness of 89 - 90 R-15-N was found to be in drawing specs. of 88 - 92 R-15-N.
2. Page 2 is a summary of drop test results.
3. Tight sear pin holes of the test sear were polished out prior to drop testing.
4. Minor chipping (note enclosed photo) of the sear at the cocking cam surface due to the XP 100 rebounding on the exposed firing pin head was noticed during the drop testing.

RECOMMENDATION

Based on K 700, K/600, and XP 100 chrome plated powder metal sear *adequate* testing, the new chromed powder metal sear should be considered for use in the XP 100.

The K/600 export bolt plug should be adapted to cover the exposed XP100 firing pin head, which received hits during this drop testing.

AAH:TP:rc
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