

TO: K.W. SOUCY
FROM: T.C. DOUGLAS

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SUBJ: PREMIER SLUG PROGRAM STATUS

- o A NEW MOLD CAVITY (.745" O.D. VS PREVIOUS .735" O.D. WAS COMPLETED AND RUN WITH THE EXISTING .735" CORE PIN WHICH WOULD GIVE US A LITTLE FLASHING ON THE PETAL SLOTS BUT SHOULD NOT AFFECT PERFORMANCE.
 - LARGER O.D. SAMPLES OF LEXAN AVERAGED 4.8 INCHES FOR 42 FIVE-SHOT GROUPS SHOT THROUGH 10 DIFFERENT BARREL COMBINATIONS (ATTACHED).
 - THIS MOLD COMBINATION WAS ALSO USED TO RUN A NEW MATERIAL (GE'S NORYL SE1 ENGINEERED THERMOPLASTIC RESIN). THESE SABOTS HAVE AVERAGED 3.9 INCHES FOR 88 FIVE-SHOT GROUPS. THE NORYL SABOTS WERE FOUND TO BE LOSING SOME OF THEIR PETALS BUT THE ACCURACY WAS STILL SUPERIOR TO THE LEXAN. DISCUSSION WITH THE MOLDING VENDOR INDICATED THAT NORYL SHOULD BE RUN WITH A LARGER GATE INTO THE MOLD FOR ENHANCED MATERIAL FLOW. THE GATE WAS OPENED UP FROM .040" DIA. TO .075" DIA.
 - THE .745" O.D. SABOTS MADE WITH THE .075" DIA. GATE AVERAGED 3.1 INCHES FOR 37 FIVE-SHOT GROUPS. THE PETAL FAILURES DECREASED DRAMATICALLY WHICH PROBABLY ACCOUNTS FOR THE DRAMATIC ACCURACY IMPROVEMENT.
 - THE .735" O.D. MOLD CORE WAS REPEATEDLY SAMPLED THROUGHOUT THIS TESTING, BUT THE ACCURACY DOES NOT PERFORM LIKE THE .745" O.D. SABOTS.
 - A NEW .745" O.D. CORE PIN HAS BEEN MADE TO ELIMINATE THE FLASHING ON THE SABOT PETALS. THE FIRST SAMPLE OF SABOTS FROM THIS MOLD COMBINATION WAS UNSATISFACTORY. A .006-.007" ECCENTRICITY EXISTS IN THE PETAL AREA. THE CORE PIN WILL BE PLATED TO CORRECT A DIMENSIONAL FIT PROBLEM. THE MOLD IS AT THE MOLDMAKER FOR CORRECTION.
- o THE THREE HOPPERS NEEDED TO MACHINE LOAD THIS PRODUCT WILL ALL ARRIVE IN NOVEMBER. WE WILL ATTEMPT TO RUN A HAND-FED EXPERIMENTAL RUN DURING NOVEMBER WITH A FULL EQUIPMENT EXPERIMENTAL RUN IN EARLY DECEMBER. THIS WOULD PLACE THE T&P IN JANUARY. IT IS ASSUMED THAT EXPERIMENTAL AND T&P QUANTITIES OF SABOTS WILL BE RUN ON THE SINGLE CAVITY EXPERIMENTAL MOLD. THE PRODUCTION SABOT MOLD WILL NOT BE ORDERED UNTIL WE ARE SATISFIED WITH THE FINAL PRODUCT. 1000 PIECE QUALIFICATION SAMPLE RUNS OF COPPER SLUGS HAVE BEEN ORDERED FROM TWO SLUG VENDORS.