



NATIONAL SHOOTING SPORTS FOUNDATION, INC.

FLINTLOCK RIDGE OFFICE CENTER • 11 MILE HILL ROAD • NEWTOWN, CT 06470-2359

TEL (203) 426-1320 • FAX (203) 426-1245 • www.nssf.org

AFTE Journal - Backgrounder on Firearms Microstamping Technology

An independent peer-reviewed study of this patented technology published in the Journal of the Association of Firearms and Toolmarks Examiners (AFTE) – the relevant professional society of firearm examiners – demonstrated the technology does not function reliably (Krivosta, *NanoTag Markings from Another Perspective*, Vol. 38, No.1, Winter 2006). The study investigated three questions:

- Would the NanoTag markings be reproducible and readily decipherable?
- How resistant to wear would the NanoTag engraved firing pin be under normal use?
- How susceptible would the NanoTag engraved firing pin be to intentional defacement?

Unreliable and Easily Defeated: In reviewing cartridge cases previously expended in firearms with NanoTag micro-laser engraved firing pins, the author found that the NanoTag markings were illegible and non-reproducible due to the fact that the firing pin usually strikes the cartridge multiple times and that the additional impacts overlap. Further testing by the author confirmed this finding. He used two (2) NanoTag marked micro-laser engraved firing pins in two Colt 45s (still one of the most popular model firearms ever made). With one of the firing pins, the vast majority of the micro-laser engraved serial numbers never showed up on any of the cartridge cases fired by that pin, and those that did were very difficult to decipher. In the case of the other marked firing pin, ten separate cartridge casings fired from the firearm were needed to piece together the serial number micro-laser engraved on that one firing pin. Results of another series of tests found that the technology failed almost 50% of the time.

The author determined that normal operation of the firearm and the resulting marks left on a cartridge case from coming in contact with parts of the firearm removed part of the serial number information on the cartridge case placed there by the firing pin to be lost (removed/destroyed). The author examined the pins after test firing only 1,000 rounds and found the micro-laser engraved markings were softening in their sharpness as a result of the metal peening.

NanoTag Micro-Laser Engraved Markings Are Easily and Quickly Removed and Defaced: The microscopic laser engraved marks are only to a depth of 25 microns – a fraction of the diameter of the average human hair. The study's author showed that the markings could be removed in seconds using common household tools. Subsequent test firing established that removing the markings did not render the firearm inoperable. The test result directly contradicts and disproves legislative testimony given by Mr. Lizotte in California last year that removing the markings would shorten the firing so much as to render the firearm inoperable (not fire).

Firing Pins Are Interchangeable Parts Easily and Quickly Replaced: The study further established that NanoTag marked firing pins could be easily removed from the firearms in seconds and replaced with interchangeable firing pins that had not been micro-laser engraved.

The AFTE Journal study concludes: **“implementing this technology will be much more complicated than burning a serial number on a few parts and dropping them into firearms being manufactured.”**