

Forensic Ballistics - Recovering Hidden Serial Numbers From Firearms

Crooks that scratch off the serial numbers of their firearms are not as smart as they believe. There are several methods that forensic firearms investigators use at their disposal for finding hidden serial numbers. All the methods have a common denominator: Whenever metal is pressure stamped, not only does the metal have indentations of numbers, but the metal underneath the numbers contains resultant structural abnormalities.

There are three methods for revealing missing serial numbers:

Magnaflux method--The forensic scientist first magnetizes the firearm. Magnetizing produces ripples of magnetic forces used to locate where the metal is disordered from the pressure stamping process. He then sprays the firearm with an oil that suspends any iron-like particles. These particles tend to settle in places where the metal is disordered. This reveals the location of the hidden serial number. This method is advantageous because it is not destructive and does not change the weapon in any way.

Chemical and electrochemical etching method--The forensic firearm examiner paints what is known as an etching solution over the area in question. The solution etches the disordered metal quicker than the metal around it. The numbers immediately come into view. Applying an electrical current (electrochemical etching) speeds up the process. This method is disadvantageous because it changes the physical makeup of the evidence. If the forensic scientist overindulges in this method, he can destroy the evidence for good.

Ultrasonic cavitation method--This particular method is a destructive method like chemical etching. In this method, the forensic scientist puts the firearm in a special ultrasonic bath and inundates it with super high frequency vibrations. These vibrations produce the *cavitation*. *Cavitation* is the process when tiny bubbles are produced along the surface of the metal. With repeated exposure, the process of cavitation starts eating away at the metal. Cavitation will eat away metal in the places where the metal is disordered, thus revealing the serial number.

If an offender attempts to file off serial numbers on a firearm he used in a crime, there are scientific ways to reveal the serial number no matter how much of the number has been destroyed. Finding such a number can help solve a crime and bring the perpetrator to justice.

About the Author

Fabiola Castillo markets for the website NinjaCOPS Superstore. This virtual store specializes in crime prevention tools where you can buy cheap stun guns, kubaton keychains, [hidden video spy surveillance cameras](#), nunchaku training videos, [hand Tasers](#), expandable steel batons, and many other personal safety products.

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