TM SOP-II-1 Serial Number Restoration - Polishing

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Approved by Director: Dr. Guy Vallaro

A. Purpose:

- 1. To recover an obliterated serial number. Many valuable items manufactured today have serial numbers for identification. These numbers are usually die stamped. Die stamping results in the compression of the metal or plastic in the area immediately surrounding and a short distance below the penetration of the die. Serial numbers are removed and/or obliterated in a variety of ways. The serial number may be restored if the removal/obliteration is not taken past the previously mentioned compression zone.
- 2. It is desirable to remove (polish) the grinding and filing scratches introduced during obliteration. The polishing procedure can be effective independently but is more often used in conjunction with various chemical or heat restoration procedures.

B. Responsibility:

- 1. It is the examiner's responsibility to thoroughly examine and document the evidence prior to beginning any restoration attempts to determine if any portions of the serial number remained after the obliteration.
- 2. It is the examiner's responsibility to research the structure of the serial number they will be attempting to restore.

C. Safety:

- 1. The examiner must wear eye protection, and work within a fume hood.
- 2. The examiner will consider the use of gloves, and other types of personal protective devices, when examining evidence that has potentially come into contact with bio-hazardous materials.

D. Procedure:

- 1. Note and record any visible characters prior to polishing.
- 2. Polish the area of obliteration by using 1) a Dremel® type tool with a sanding/polishing disc or 2) fine grit sand paper or emery cloth.
- 3. Depending on the extent of the obliteration, continue polishing until the surface is mirror-like, removing all of the scratches. If the obliteration is severe it may not be possible or desirable to

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remove all of the scratches.

4. INTERPRETATION OF RESULTS:

- a. If any characters become visible note these characters.
- 5. If the serial number is not visible after polishing, or if only a portion of the serial number is visible after polishing, proceed to the appropriate chemical or heat restoration procedure.

E. Equipment:

- 1. Dremel® tool with appropriate sanding discs
- 2. Emery or sand paper
- 3. Fume hood

F. References:

- 1. AFTE glossary
- 2. AFTE procedures manual
- 3. Laboratory safety manual

G. Appropriate Appendices:

1. Appendix 1 – Work Sheets

