



INDIANA STATE POLICE FORENSIC SERVICES DIVISION

PHYSICAL EVIDENCE BULLETIN

FIREARMS EVIDENCE

1.0 INTRODUCTION:

- 1.1 Firearms Identification is a discipline of Forensic Science whose primary concern is to identify a bullet, cartridge case, or other ammunition component to a particular firearm.
- 1.2 Although generally encountered in crimes against persons such as assault and homicide, firearms may be found in other types of cases; e.g., burglary, rape, or narcotics violations. In addition to bullet and cartridge case comparisons, function examinations, characterization examinations, and distance determinations; trace evidence such as blood, hair, or fiber may be adhering to exposed surfaces. All of which may yield valuable information to an investigator and his case.
- 1.3 To ensure the maximum value of this evidence is obtained, it first must be properly identified, preserved, and packaged. This bulletin is designed to assist you in these areas. Any situation not sufficiently explained to your specific needs may be handled on an individual basis by contacting the Firearms Examiner in your area. Their phone numbers are listed at the end of this document.

2.0 FIREARMS

- 2.1 As important as physical evidence or fingerprints may be, safety is of greater concern. Firearms shall be rendered safe to handle before proceeding with further investigation or examination, but with caution to preserve any possible physical and/or fingerprint evidence that may be present. Firearms shall be submitted to the Indiana State Police (ISP) Forensic Services Division (FSD) unloaded. If a firearm cannot be unloaded or if it is unknown if it is loaded, it may only be brought to an ISP Regional Laboratory upon appointment with a Laboratory Manager and a Firearm Examiner.

NOTE: For the safety of all who handle a firearm, all efforts shall be made to ensure the firearm is submitted unloaded. Individuals who package firearms for submission to the ISP FSD shall mark on the outside of the packaging, “**UNLOADED**”, communicating to everyone involved that the firearm is indeed not loaded with a cartridge.

2.2 Unloading the Revolver:

2.2.1 If cocked, cautiously uncock the firearm using the knurled areas if possible. Make two marks on the cylinder, one on each side of the top strap, to indicate the chamber that is in the firing position. If uncocked, these marks will indicate the chamber found indexed in front of the firing pin. Your notes should contain the following information:

Appearance of cylinder as recovered:

Marks made each side of top strap

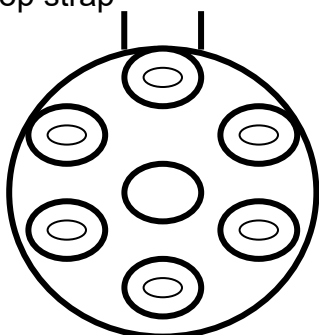
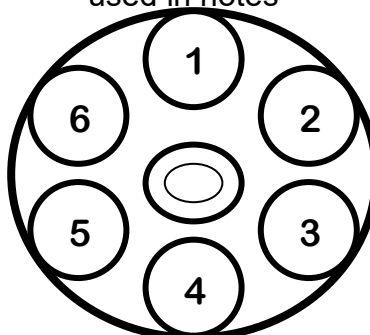
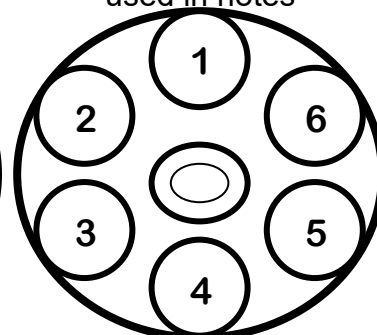


Diagram to be used in notes



Direction of rotation

Diagram to be used in notes



Direction of rotation

Example index card:

Chamber

Position	Condition	Headstamp
#1	Fired	U. S. Cartridge Co.
#2	Fired	Remington Arms Co.
#3	Fired	Winchester Repeating Arms Co.
#4	Unfired	Dominion Cartridge Co.
#5	Unfired	Western Cartridge Co.
#6	Unfired	Peters Cartridge Co.

2.2.2 Fired and unfired cartridges should be individually packaged by placing them in soft tissue or cotton, sealed in a pill box or envelope, and pertinent information placed on the container (See Projectiles: General Considerations and Precautions).

2.2.3 If you mark the firearm for identification, do so somewhere on the frame where it doesn't destroy overall appearance (e.g., inside

cylinder crane or under grips). As an alternative to engraving on the firearm, use the serial number for later identification.

2.3 Unloading the Semi-Automatic pistol

2.3.1 Note the positions of any manual safety devices or cocking indicators. Carefully disengage the magazine and remove it from the firearm. Cartridges should be left in the magazine or packaged and sealed in an envelope or cardboard box. Open the action and visually check the chamber for a cartridge or cartridge case. If possible, lock the slide to the rear keeping the action in the opened position, if not, let the action close then engage any manual safety devices that may be on the firearm. Make sure no unfired cartridge is left in the chamber.

2.3.2 If you mark the firearm for identification, do so somewhere on a part not readily removable from the firearm. The magazine, if found in the firearm, may be included in the same item as the firearm for submission to the ISP FSD, however, if it is found not in the firearm it should be submitted as a separate item. As an alternative to engraving on the firearm, use the serial number for later identification.

NOTE: If fingerprinting is requested the cartridges may be left in the magazine but should not be left in the chamber.

2.4 Unloading Shotguns and Rifles

2.4.1 These are handled in similar manner to the handguns listed above. Safety and preservation of physical evidence should always be considered.

3.0 TRACE EVIDENCE AND FINGERPRINTS

3.1 After the firearm is in a safe condition, examine it for trace material; e.g. blood, hair, fiber, or tissue. If in doubt about proper processing, do not proceed further until contacting the ISP FSD and discussing the situation with a Firearms Examiner.

4.0 PACKAGING OF FIREARMS AND DELIVERY TO THE ISP FSD

4.1 Personal delivery is the preferred means of transportation to the ISP FSD. However, if it is impossible to hand carry the evidence to an ISP Regional Laboratory, the U.S. Postal Service or a commercial delivery service with traceable shipping (UPS, FedEx, etc.) can be used.

4.2 If the firearm must be shipped, it is imperative that it be properly packaged. It should be placed in a heavy corrugated container and secured in place to prevent shifting within the container. It should be wrapped securely with heavy paper, sealed, and marked.

- 4.2.1** Rifles and shotguns should not be dismantled before packaging as this could alter their evidentiary value.
- 4.3** All firearms (both handguns and long guns) shall be packaged upon submittal to the ISP FSD. Suitable packaging for firearms includes boxes, manila envelopes, and paper wrapping.
 - 4.3.1** The use of plastic bags should be avoided whenever possible. Plastic bags trap moisture which will possibly rust and corrode firearms which may alter the forensic characteristics of the firearm. Also, if the firearm is to be analyzed for biological or fingerprint evidence, plastic bags are unacceptable.
- 4.4** If zip ties are used to secure the firearm during packaging, they should be used around the slide and grip or stock. Zip ties should not be placed in the area of the trigger guard, especially in front of the trigger of the firearm.
- 4.5** Firearms recovered in water should be submitted in the same water in a watertight container. However, a Firearms Examiner shall be contacted prior to submission if it is unknown whether the firearm is loaded.

5.0 BULLETS AND WADDING

- 5.1** Bullets should always be handled with the utmost care to avoid destroying the microscopic striations on the bullet. They should be packed in soft cotton or tissue, sealed in a paper envelope or pillbox, and the container marked for identification. The bullet should not be marked due to the possibility of destroying valuable evidence.
 - 5.1.1** Plastic or glass airtight containers should never be used for bullets. They trap moisture which allows corrosion of identifiable detail on the bullet. Paper or cardboard should be used.
- 5.2** Unless absolutely necessary, do not attempt to dig out bullets embedded in wood, plaster, or other rigid surface. Remove the portion of material in which the projectiles are embedded and submit the entire piece to the ISP FSD. If not practical to remove a section of the material, the projectile or projectiles should be recovered by removing the material, adjacent to the projectile to prevent damage to the evidence. This procedure can be explained in detail by contacting a Firearms Examiner.
- 5.3** Bullets removed from a person or body should be X-rayed to locate the position of the projectile. They should be removed with rubber-tipped forceps or by using just the fingers to prevent mutilation of the projectile. If asked, doctors are usually willing to comply with this request.
 - 5.3.1** The projectile should be rinsed off using only running water. Do not scrub the projectile. Dry the projectile by blotting with soft dry tissue or cotton prior to packaging. Do not use the same piece of material to

package the projectile that you used to dry it. Package the projectile, seal and mark the container. Do not package the projectile in a plastic specimen container. A breathable container (e.g., pill box, manila envelope...) is preferred.

- 5.4** An attempt should be made to locate fired wads from shotshells. When a shotshell is fired, the wad or wads travel along with or behind the shot charge. In cases involving relatively close muzzle to target distances, wadding may be found in the victim's clothing or body. When located, the shotshell wad or wads should be handled in the same manner as projectiles.

6.0 CARTRIDGES AND OTHER AMMUNITION COMPONENTS

- 6.1** Unfired cartridges and cartridge cases should be packaged in the same manner as projectiles. Larger quantities should be grouped together as to location of recovery and may be listed as a single item. The larger quantities may be packaged in cardboard or paper containers. The containers should then be marked for identification.
- 6.1.1** The use of plastic bags should be avoided whenever possible. Plastic bags trap moisture which will possibly rust and corrode the cartridge and/or cartridge case which may alter the forensic characteristics of the firearm. Also, if the cartridge and/or cartridge case is to be analyzed for biological or fingerprint evidence, plastic bags are unacceptable.
- 6.1.2** Postal regulations prohibit shipment of explosive substances through the mail. Unfired ammunition must be personally delivered to the ISP FSD or shipped via a commercial delivery service.
- 6.2** Due to extremely low success rates, the ISP FSD will not examine cartridges or cartridge cases for the presence of fingerprints and/or DNA except in extenuating circumstances with the approval of the Laboratory Manager or Unit Supervisor.

7.0 DISTANCE DETERMINATION EVIDENCE/MUZZLE TO TARGET

- 7.1** Clothing shall be air-dried before packaging. After drying, clean paper should be placed over each surface. This is to prevent the destruction of evidence by rubbing of other areas of clothing. The clothing should then be individually packaged in clean paper, sealed, and marked for identification. When projectiles have passed through a garment or garments, a good photograph of the bullet hole positions in the victim is desirable. A scale should be used in these photos.
- 7.2** Distance determinations may also be completed from the interpretation of shotgun patterns. For shotgun patternization a photograph with scale of the

pattern may be submitted. Also acceptable is a pathologist report of the pattern size.

- 7.3** All of the unfired ammunition associated with the case, as well as the firearm used in the case must be submitted with the above item(s). These items are essential during a distance determination examination.
- 7.4** The ISP Forensic Firearms Identification Unit (FFIU) does not perform gunshot residue testing on clothing for maximum distance if no residues are found. The guiding principle for this is that physical effects and residues which are present are a basis for reproduction and comparison, not residues which are found to be absent.
- 7.5** The ISP FFIU does not perform gunshot residue testing on “shooters” clothing if said “shooter” has no bullet wounds or bullet related defects to his clothing. Also, “hand swab” kits are not accepted or analyzed.

8.0 SERIAL NUMBER RESTORATION

- 8.1** Firearm(s) recovered with an obliterated/unable to locate serial number(s) can be submitted to the ISP FSD for a serial number restoration examination. No attempt should be made to recover the serial number(s) before the firearm is submitted to the ISP FSD.
- 8.2** All firearms submitted for a serial number restoration shall be submitted in accordance with section 4.0 in this Physical Evidence Bulletin.

9.0 Machine Gun Conversion Devices

- 9.1** Machine gun conversion devices will only be accepted if they are attached to a firearm. Machine gun conversion devices not attached to a firearm will not be accepted.

10.0 GENERAL INFORMATION

- 10.1** Evidence shall be returned to the contributing agency. Any deviations to this policy shall be communicated to the contributor in the Certificate of Analysis.
- 10.2** In firearm cases, you may wish to consult with the Firearms Examiners at the ISP Regional Laboratory serving your area.

Evansville	812-867-3157	Toll Free - 800-852-3970
Fort Wayne	260-436-7522	Toll Free - 800-552-0976
Indianapolis	317-921-5300	Toll Free - 866-855-2840
Lowell	219-696-1835	Toll Free - 877-874-0009