



Centre of Forensic Sciences Investigators & Submitters Technical Information Sheets

Firearms & Ammunition Classification

Introduction

Section 2 of The *Criminal Code of Canada* provides the definition of a firearm. Section 84(1) of The *Criminal Code* subdivides firearms into specific classes and defines the factors required for an item to be included in a specific class. The classes include firearms, restricted firearms, prohibited firearms, replica firearms, and antique firearms. Submitted items are examined in order to determine to which class they belong.

To be defined as a firearm, an item must meet three requirements. First, it must be a barrelled weapon. Second, it must be capable of discharging any shot, bullet or other projectile. Third, the projectiles must be capable of causing serious bodily injury or death to a person. It includes any frame or receiver of such a barrelled weapon and anything that can be adapted for use as a firearm.

Air guns are accepted for classification purposes when they have been used in the commission of an offence.

Section 84 of The *Criminal Code* provides a definition for ammunition and subdivides ammunition into two categories; ammunition and prohibited ammunition. Cartridge cases and projectiles can be further classified by their construction, profile and type. Cartridge cases can be differentiated into rimfire or centre fire.

Examination

- Firearms Examination
The examination may include the following steps:
 - Measuring the barrel and overall length of the item
 - Examining to determine if the item is mechanically able and safe to fire
 - Test firing the item
 - Measuring the velocity of the test fired projectile(s)
 - Comparing the item to firearms held in the CFS Firearms Reference Collection
 - Determining the magazine capacity
 - Researching the repairs required and/or availability of replacement parts for non-functioning firearms
 - Restoring a non-functioning firearm into firing condition
- Ammunition/Ammunition Components Examination
The examination may include the following steps:
 - Macroscopic and microscopic examinations

- Determining calibre from the head stamp of the cartridge case, or by the size and shape of the cartridge case, or by the weight and diameter of the projectile
- Unfired cartridges may be examined macroscopically and microscopically to determine if they are factory loaded or re-loaded, have been chambered in and extracted from a firearm, or struck by a firing pin, striker or hammer
- Unfired cartridges can be test fired in an appropriate firearm or examined to determine if they meet The *Criminal Code* definition of ammunition
- If a firearm is submitted, then submitted cartridge cases and/or projectiles may be microscopically compared to cartridge cases and/or projectiles that have been test fired in the submitted firearm

Interpretation

For classification of suspected firearms and ammunition, possible conclusions are

- The Item X is a "Firearm" as defined in Section 2 of the Criminal Code of Canada.
- The Item X is a "Prohibited Firearm" as defined in Section 84 of the Criminal Code of Canada.
- The Item X is a "Restricted Firearm" as defined in Section 84 of the Criminal Code of Canada.
- The Item X detachable cartridge magazine is a "Prohibited Device" as defined in Section 84 of The Criminal Code of Canada.
- The Item X cartridges are/were "Ammunition" as defined in Section 84 of the Criminal Code of Canada.

A restricted firearm includes

- A handgun that is not a prohibited firearm, or
- Any firearm that is not a prohibited firearm that has a barrel less than 470 mm in length and is capable of discharging centre-fire ammunition in a semi-automatic manner, or
- A firearm that is designed or adapted to be fired when reduced to a length of less than 660 mm by folding, telescoping or otherwise, or
- A firearm of any other kind that is prescribed to be a restricted firearm

A prohibited firearm includes

- A handgun that has a barrel equal to or less than 105 mm in length, or
- Is designed or adapted to discharge a 25 or 32 calibre cartridge, or
- A firearm that is adapted from a rifle or a shotgun, whether by sawing, cutting or any other alteration and that, as so adapted, is less than 660 mm in length, or is 660 mm or greater in length and has a barrel less than 457 mm in length, or
- An automatic firearm, whether or not it has been adapted to discharge only one projectile with one pressure of the trigger, or
- Any firearm that is prescribed to be a prohibited firearm

A firearm that is determined to be neither restricted nor prohibited is by default classified only as a firearm.

An antique firearm includes

- Any firearm that was manufactured before 1898 that was not designed to discharge rim-fire or centre-fire ammunition, and
- That has not been redesigned to discharge such ammunition, or
- Any firearm that is prescribed to be an antique firearm

This category includes wheel-lock, matchlock, flintlock and muzzle loader firearms that were manufactured before 1898.

A replica firearm is any device that is designed or intended to exactly resemble, or to resemble with near precision, a firearm, and that itself is not a firearm. This does not include any such device that is designed or intended to exactly resemble, or to resemble with near precision, an antique firearm.

Ammunition is a cartridge containing a projectile(s) designed to be discharged from a firearm. This definition includes caseless cartridges and shot shells.

Prohibited ammunition includes

- Handgun calibre cartridges with projectiles that are capable of penetrating body armour, or
- Any projectile, that does not exceed 15 mm in diameter, that ignites on impact or explodes on impact, or
- Any shotgun cartridges that contain “flechettes” or similar projectiles

Glossary

Air gun

A gun that uses compressed air or gas (usually CO₂) to propel a projectile. Also called air rifle, air pistol, pellet rifle, pellet gun and BB gun.

Ammunition

A cartridge that contains a projectile that is designed to be fired in a firearm. It is usually comprised of the cartridge case, propellant, primer and projectile. This also includes a caseless cartridge and a shot shell.

Armour piercing bullet

A bullet consisting of a hardened core or wholly composed of a substance other than lead or lead alloy. Or, any bullet manufactured, represented or designed to be metal or armour piercing.

Bullet

A component of an ammunition cartridge. Typically a non-spherical projectile for use in a rifled barrel.

Bullet core

The inner portion of a jacketed bullet, usually lead

Calibre of Firearms

The approximate diameter of the circle formed by the tops of the lands of a rifled barrel

Calibre of Ammunition

A numerical term, included in a cartridge name to indicate the nominal bullet diameter

Cartridge

A single unit of ammunition

Cartridge case

The container for all the other components that comprise a cartridge

Centre fire cartridge

Any cartridge that has its primer central to the axis in the head of the case

Full metal jacketed bullet

A projectile in which the bullet jacket encloses the entire bullet, with the usual exception of the base

Flechette

A small dart multiply loaded in some shot shells and rifle cartridges used by the military

Hollow point bullet

A bullet with a cavity in the nose to facilitate expansion

Jacket

The envelope enclosing the lead core of a projectile

Lead-free ammunition

A cartridge designed to have no lead in the priming mixture and a bullet with an enclosed base which prevents the vaporization of the lead core, or that may be loaded with a projectile constructed of materials other than lead

Pellet

A common name for the small spherical projectiles loaded in shot shells. Also known as shot. Or, a nonspherical projectile used in some air rifles and air pistols.

Primer

The ignition component of a cartridge

Projectile

An object propelled by the force of rapidly burning gases or other means

Rifling

Helical grooves in the bore of a firearm barrel to impart rotary motion to a projectile

Rimfire cartridge

A rimmed cartridge containing the priming mixture inside the rim cavity

Semi-wadcutter

A projectile with a distinct, short truncated cone at the forward end

Shot

Spherical pellets used in loading shot shells or cartridges

Shot shell

A cartridge containing projectiles designed to be fired in a shotgun. The cartridge body may be metal, plastic or paper.

Wadcutter

A cylindrical bullet design having a sharp shouldered nose intended to cut target paper cleanly to facilitate easy and accurate scoring