

PART II:

Privately Made Firearms

Overview

The GCA does not regulate the making of firearms by private individuals who are not engaged in the business of manufacturing or dealing in firearms. Consequently, provided the individual is not otherwise prohibited from possessing a firearm under federal or state law, he or she may make a non-NFA firearm for personal, lawful use without obtaining an FFL or other authorization from ATF. However, any person or entity making an NFA firearm (or other NFA weapon) must first file an ATF Form 1, *Application to Make and Register a Firearm*, pay the applicable NFA tax, and receive approval from ATF, thereby registering the firearm in the National Firearms Registration and Transfer Record (NFRTR).

Self-making of firearms in the U.S. long pre-dated the GCA. Following the GCA's enactment, many hobbyists and others continued making their own firearms. Until recently however, the volume of self-made firearms did not substantially impact the market for firearms commercially manufactured by regulated, licensed entities. In the past decade those market dynamics have changed. At least three factors have combined and converged in recent years to propel substantial growth of the self-making of firearms:

- The emergence of the internet as both an instantly accessible source of information about how to make a gun and as an always-available marketplace to obtain virtually any product needed to make a gun.
- The emergence of alternatives to metal casting and forging, such as high-strength polymers, for making many core firearm parts.
- The technological and design advancements, many of which are computer software-based, that allow for “modular” firearm design and manufacture while also steadily reducing the cost and size of tools needed to make and assemble a firearm. Advancements in three-dimensional (3D) printing technology illustrates how these factors interact. In the past few years, the cost and size of 3D printers have both substantially reduced; the polymers used in these printers to make firearm parts have decreased in cost -- while strength and durability has increased; and the availability of software to make firearm parts has proliferated.

Not surprisingly, as the factors that fueled the ease of the private making of firearms converged, many commercial entities entered the marketplace to sell a broad range of products to private firearm makers, including firearm “kits” that contained most or all of the parts necessary to assemble a functioning firearm. As is further discussed in this section, some of the products offered and sold by these commercial entities were in fact either firearms or firearm frames or receivers. Consequently, those products and the companies that sold them were both subject to the regulation by the GCA, including licensing and serial number marking requirements. Yet, in most instances, the companies selling these products were not FFLs and did not serialize the components that functioned as frames or receivers. As

firearms made from these products and kits proliferated, law enforcement agencies across the country increasingly recovered un-serialized firearms made from the parts and kits in criminal investigations. These un-serialized crime guns became widely known as “ghost guns” because they could not be traced by ATF when used to commit a crime. These circumstances reinforced the need for ATF to modernize the regulatory definition of “firearm” and “frame or receiver” to reflect changes in the marketplace and to clarify how the GCA applies to new firearm technologies and products. They also highlighted the need for a regulatory definition of privately made firearms.

ATF Final Rule 2021R-05F: Definition of “Frame or Receiver” and Identification of Firearms

To address these circumstances and needs, in May 2021, ATF began the federal rulemaking process to update the regulatory definition of firearm and “frame or receiver,” and to establish a regulatory definition for “Privately Made Firearms” (PMFs). On April 11, 2022, after full public notice and comment on the proposed updated and new definitions, the Attorney General signed ATF Final Rule 2021R-05. Final Rule 2021R-05F amended 27 CFR § 478.11, the section of the GCA regulations that sets forth regulatory definitions of terms used in the GCA. The definitions of “firearm” and “frame or receiver” in Section 478.11 had not been updated since enactment of the GCA in 1968. The Final Rule modernized the definitions of “firearm” and “frame or receiver” to reflect changes in firearm design and manufacturing; it also set forth, for the first time, a regulatory definition for the term “privately made firearm” (PMF). The Final Rule defines PMF to mean a firearm, including a frame or receiver, completed, assembled, or otherwise produced by a person other than a licensed manufacturer, and without a serial number placed by a licensed manufacturer at the time the firearm was produced. The term does not include a firearm identified and registered in the NFRTR pursuant to Title 26, U.S.C. Chapter 53, or any firearm manufactured or made before October 22, 1968 (unless remanufactured after that date).

The term PMF encompasses several different types of un-serialized firearms, including those made using commercially sold parts and kits. It also encompasses machinegun conversion devices, such as “drop in auto sears” and “switches,” even though these devices do not themselves fire projectiles, because they convert semi-automatic firearms to fire as fully automatic weapons. As such, these devices fall within the definition of “machinegun” in both the GCA and NFA.

Firearms industry vernacular and marketing have historically used a variety of terminology to describe items sold or distributed to produce a PMF. Commonly used industry terms include “80%-kit”, “80%-gun”, “80%-receiver”, “lower 80”, unfinished frame, kit gun, jig gun, casting, receiver blank, receiver body, printed gun, wiki-gun, 3D gun, downloaded gun, homemade gun, flat, ghost gun and switch. According to the Department of Justice, Final Rule 2021R-05F, which was published in the Federal Register on April 26, 2022, and will become effective on August 24, 2022, is designed to address the public safety concerns associated with the proliferation of un-serialized PMFs in several ways. These include:

- (1) To help keep guns from being sold to convicted felons and other prohibited purchasers, the rule makes clear that retailers must run background checks before selling kits that contain the parts necessary for someone to readily make a gun.

(2) To help law enforcement trace guns used in a crime, the rule modernizes the definition of frame or receiver, clarifying what must be marked with a serial number – including in easy-to-build firearm kits.

(3) To help reduce the number of unmarked and hard-to-trace “ghost guns”, the rule establishes requirements for FFL dealers and gunsmiths to have a serial number added to 3D printed gun

See, Justice Department Announces New Rule to Modernize Firearm Definitions | OPA | Department of Justice.

PMF Making

Early PMF Making

As noted, PMFs are not new. In the 1980s and 1990s, PMFs were predominantly made from receiver “flats.” Flats are stamped or cut receiver bodies formed from sheet metal (steel or aluminum) that must be bent into shape using various tools and presses. This process required both a degree of technical skill and tools that were not commonly owned or used by non-firearm hobbyists or others involved in activities involving metal fabrication and manipulation. Historically, the type of firearms made from flats were MAC-type and AK-type firearms.



MAC Flat



AK Flat

Specifically, PMFs made from the 1980s into the late 1990s required technical expertise, certain hydraulic metal brakes and presses, welding, and working knowledge of where to source the firearm parts. Moreover, there was no ability to conduct internet searches. These technical barriers meant that the making of PMFs during that time was relatively rare and the firearms were often not equivalent to a commercially manufactured firearm in terms of functionality or marketability.

Technological Advances in PMF Making

Since the early 2000s, technological advances outlined in the overview of this Section, have made it easier for unlicensed persons to make PMFs, particularly from commercially sold weapon parts kits. As a result, in recent years PMFs have proliferated -- and have increasingly become substitutes in the firearm marketplace for serialized firearms produced and sold by traditional FFL manufacturers and retail dealers. The expansion of PMFs in the firearm marketplace also implicates public safety considerations. First, because PMFs, when made for personal, lawful purposes, are not required by the GCA to have a serial

number placed on the frame or receiver, they are extraordinarily difficult for ATF to trace when recovered in criminal investigations. Without the ability to trace a crime gun, law enforcement investigations involving that firearm are hampered: it is exponentially more difficult to determine where, by whom, or when an un-serialized firearm was made, and to whom that firearm was sold or otherwise transferred.¹⁴ Second, the components and weapon kits from which many PMFs are assembled have been sold without conducting background check on the purchaser. This allows felons and other individuals prohibited by federal and state law from possessing firearms to circumvent the background check requirement by instead purchasing easily assembled PMF parts and kits.

“Unfinished Frames or Receivers” / “80% Receivers” / “Weapons Kits”

The predominant types of PMFs entering commerce are assembled from so-called “unfinished” frames and receivers. An unfinished frame or receiver is a product that is manufactured specifically to function as a firearm frame or receiver but is in a stage of manufacturing process at which it would not yet be classified by ATF to be a regulated “frame” or “receiver” under the (then-applicable) GCA regulatory definition. A frame or receiver at this non-final stage of manufacture is technically designated to be a “frame or receiver blank,” but are also referred to in the firearm industry as “frame or receiver bodies.” (Frame or receiver “blanks” are regulated for purposes of importation into the U.S., but not for domestic manufacturing purposes). For purposes of marketing frame or receiver blanks to makers of PMFs, they are often referred to as “80%” frames or receivers; neither the GCA nor ATF, however, apply any specific percentage of manufacturing completion – “80 %” or otherwise – to distinguish regulated frames and receivers from un-regulated blanks.



AR Receiver Blank

The initial marketing of so-called “80% receivers” to PMF makers focused on lower receivers for AR-type firearms. The marketing and sale of “80% receivers” and related parts kits began to proliferate on the west coast in 2009 and predominantly involved unfinished receivers for AR-type and AK-type firearms. This proliferation aligns with the enactment of a California law¹⁵ that controlled and restricted assault weapons.

Later, numerous unlicensed companies began producing and marketing “*build-your own*” firearm part kits for smaller-framed semi-automatic pistols, particularly 9mm models. The kits typically contained a



Semi-Automatic Handgun Weapons Kit

partially complete frame or receiver, firearm parts, drill bits, a plastic jig in which to place the unfinished frame or receiver for final milling into a firearm, and instructions. The kits were designed to make building a PMF quick and easy by someone with limited skills, using commonly available and affordable tools. Prior to the issuance of the Final Rule 2021R-05F, most manufacturers and sellers of

these kits viewed these products as not subject to GCA regulation, and thus no markings were affixed, no background checks were conducted, and no records on their manufacture or disposition were maintained.

CAD/CAM Firearm Designs

Computer-aided design and computer-aided manufacturing (CAD/CAM) software is used to design and manufacture prototypes, finished products and production runs of an item. The CAD application is used in the product design phase and the CAM software is used in the manufacturing phase by providing the coded instructions to control the operations of a 3D printer or computer numerical control¹⁶ (CNC) machine. The CAD/CAM files for PMFs and their related parts are typically downloaded from the internet by the maker of a PMF or are provided by the vendor, to be uploaded into the CNC machine's computers or 3D printer. CAD/CAM files are often shared online with other users who are looking to make their own firearms.



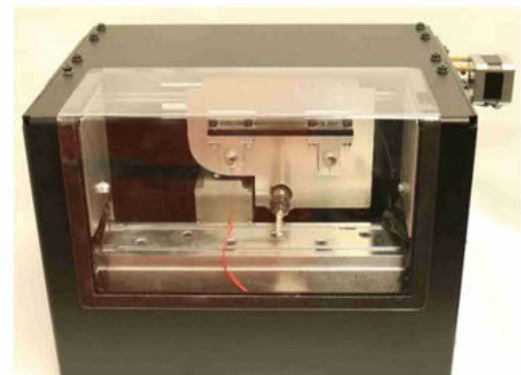
3D Printed Gun

Advances in Polymers

Advances in high-strength and heat-tolerant polymer resins, epoxies, and plastics have become a common material incorporated into the design and manufacture of firearms across the market. Polymers are typically used for components with the least exposure to stress from the forces produced during the discharge of the firearm. These components include, but are not limited to, pistol frames, long gun receivers, machinegun conversion devices, stocks, grips, magazines, and sights. Polymers offer design and manufacturing advantages in terms of reduced costs, wider design options, molding, and ease of fabrication. They also offer advantages for the user, in terms of less weight, recoil reduction, and resistance to corrosion. In addition, the same manufacturing benefits carry over and have made it much easier for an individual to make a firearm, using common, less costly tools as opposed to more complex commercial fabrication machinery. Liquid polymer resin casting kits that can produce AR-type variant receiver bodies are available on the internet. These high-strength heat tolerant polymer compounds suitable for use in the production of certain firearm parts, can be molded and cast into shape, fabricated on 3D printers or tabletop milling machines, and finished using prefabricated jigs, drills, files, and other widely available household tools.

Introduction of Tabletop CNC for Home Use

CNC machines have been used by industrial manufacturers since their invention in the 1950s. Historically, CNC machines have been large, costly, and primarily used by large manufacturing companies. In the 1990s, the development of small-scale CNC milling machines converged with the development of personal computers and CNC software systems. Today, tabletop CNC milling machines, controlled by pre-programmed software designed for specific applications and downloadable from the internet, have made the fabrication of all types of products possible by hobbyists and home-based small business operators with



Tabletop CNC Machine

little to no formal training or experience. The first tabletop CNC machine designed specifically for home-based firearm production was approximately one square foot in size and became commercially available in 2014. First generation units sold for approximately \$1,200. Versions of tabletop CNC machines currently sell for approximately \$2,500 and are roughly the same size. An operator of a 3rd generation CNC machine can produce firearms, frames, or receivers at home at the rate of 1 every 35 minutes using readily available downloadable software code.¹⁷

In May 2021, ATF published a *Notice of Proposed Rulemaking* 2021R-05, *Definition of “Frame or Receiver” and Identification of Firearms (the “NPRM”)*, outlining what would become Final Rule 05. Following publication of the NPRM one manufacturer of PMF CNC machines began marketing a new CNC. This new CNC machine allows users to mill a complete and un-marked AR-15 receiver from an unformed block of aluminum. Previously, these CNC machines were configured to allow users to mill a complete and un-marked AR-15 receiver from a receiver blank (“80% receiver”).

Reductions in the Cost and Size of 3D Printers

A 3D printer is a machine that allows for the creation of a physical object from a 3D digital model by printing thin layers of a material in succession until the full item is complete. This process is commonly known as additive manufacturing. 3D printers can be used to make firearm parts, frames, and receivers. First generation 3D printers suitable for home use may be programmed to make polymer firearm frames or receivers. The firearm parts, frames, and receivers produced using first generation polymer technology were often unreliable and only capable of firing a small number of rounds before failing. However, the reliability of 3D printed firearm parts, frames, and receivers has increased in recent years with advances in polymers, technology, coding, programming, and materials, thereby making home use of 3D printers to make firearm parts, frames, and receivers more affordable. 3D printers capable of printing polymer firearm parts, frames, and receivers, range in price from \$200 to \$1,000 and are readily available online. These printers will also fit on a small table.

Since 2013, the use of 3D printing technology to produce firearm parts, frames and receivers has received national attention in part as the result of individuals releasing CAD/CAM files for firearms that can be readily assembled from 3D printed parts. By 2020, CAD/CAM designs for a wide variety of firearm frames and receivers, including AR-type, AK-type, and handgun designs, were readily available for purchase online.

The Internet and PMFs

Advances in manufacturing technology and composite materials have played a major role in the rapid growth of PMFs. The internet has accelerated this effect by providing the general public with ready-access to construction plans, how-to tutorials, technology, tools, and parts to make any type of firearm. In addition, the internet provides manufacturers of these technologies, plans, and parts direct access to a mass market. To illustrate this point, one need only conduct an internet search and review the number of results and speed at which the results are returned.

PMF Related Search Engine Results

Table P-01 reflects the total number and return rate of results for ten Google searches of keywords or phrases that may be commonly used by individuals interested in learning more about PMFs. Five Google searches on PMF related phrases were conducted with quotation marks to ensure all hits returned were exact matches for the entire phrase¹⁸. The Google searches returned more than 5 million pages of search results and more than 130 thousand marketing and instructional videos.

Table P-01: Five PMF Related Google Searches

Google Keyword Searches¹⁹	# of Results	# of Videos
"80% Receivers"	4,830,000	88,700
"Ghost gun kit"	11,800	4,560
"AR-15 Receiver"	41,900	2,120
"3d printed gun"	110,000	15,100
"Polymer 80"	328,000	25,600
Total	5,321,700	136,080

PMF Related Video Search Results

Several YouTube searches for instructional videos on how to make a PMF were conducted. The search results revealed many instructional videos and tutorials for making a variety of PMFs. For the videos returned in the searches, they have been available on YouTube for between 8 months and 6 years and have between 1.3 and 8 million views.

PMF Related News Media Search Results

Law enforcement investigations involving recoveries of PMFs used in crimes have been widely reported in the media with increasing frequency. The increase in news stories is reflective of the increase in PMF use in crimes and PMF recoveries by law enforcement. Table P-02 shows the total number and return rate of results for four Google searches of news stories involving common terms used to describe PMFs.²⁰ The four searches listed in the table returned more than 185,000 pages of results for news stories.

Table P-02: PMF Related News Stories and Videos

Google Keyword Searches²¹	# of Results
"Ghost Gun"	117,000
"Polymer 80"	1,010
"Homemade Gun"	45,060
"80% Receiver"	22,300
Total	185,370

PMF Trend Analysis

Google Trends data capture the popularity of search terms normalized by time range and geography. The data are then indexed to create a measure of relative popularity for each term, which ranges from 0 to 100. Index values are provided for each unit of time (either monthly or weekly), with a value of 100 signifying peak popularity.²² Google Trends data extend from 2004 up to 36 hours from real-time.

Table P-03 displays the results of a Google Trends analysis that captures the peak popularity of 11 PMF related terms searched on the web in the U.S from 2004 through 2020. “Glock Full Auto Switch” is the most recent popular term, closely followed by “Polymer 80 Kit.”

*Table P-03, Google Trends Analysis for PMF Related Search Terms in U.S.
2004 – 2020*

PMF Related Search Terms	Peak Popularity
Glock Full Auto Switch	2020-12
Polymer 80 Kit	2020-11
Glock Build Kit	2020-06
Ghost Gun Kit	2020-05
3D Print Guns	2018-07
Ghost Gun	2018-02
80% Glock Lower	2016-12
How to Make a 3D Printed Gun	2013-07
Make Your Own Gun	2011-01
Homemade Gun	2007-12
80% Receivers	2005-02

Figure P-01 displays the results of a Google Trends analysis for the search term “Ghost Gun,” which is one of the more common and publicly used terms associated with PMFs. An initial upward trend in the use of the term began in mid-2013, coinciding with when 3D printed gun plans were made available on the internet and the company that manufactures Polymer 80 was founded. While the search term reached its peak popularity in early 2018, it remained in use and regained popularity through 2020.

Figure P-01, Google Trends Analysis: “Ghost Gun” in U.S. Web Searches, 2004 – 2020

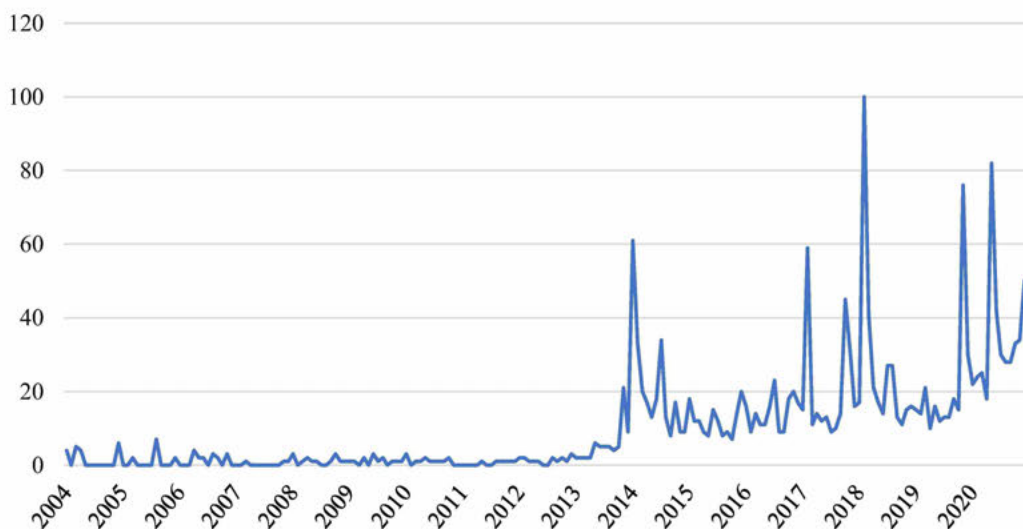


Figure P-02 displays the results of a Google Trends analysis for the search term “Polymer 80 Kit.” The term did not start to gain popularity until 2016, approximately three years after the founding of the

company that manufactures Polymer 80. Thereafter, the search term’s popularity increased, following a similar trend to that of the search term “Ghost Gun.” The term reached its peak popularity in late 2020.

Figure P-02, Google Trends Analysis: “Polymer 80 Kit” in U.S. Web Searches, 2004 – 2020

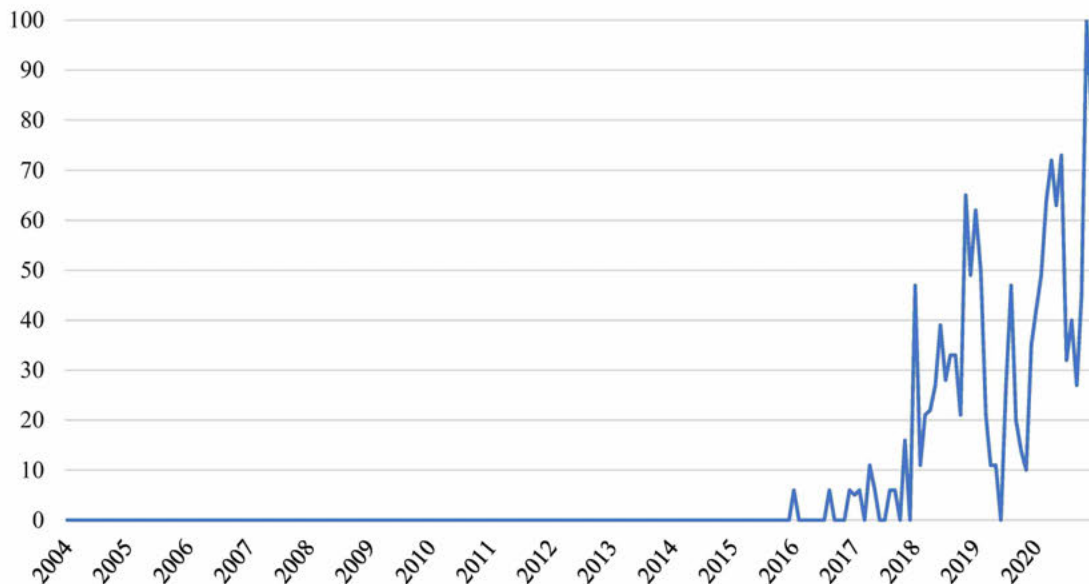
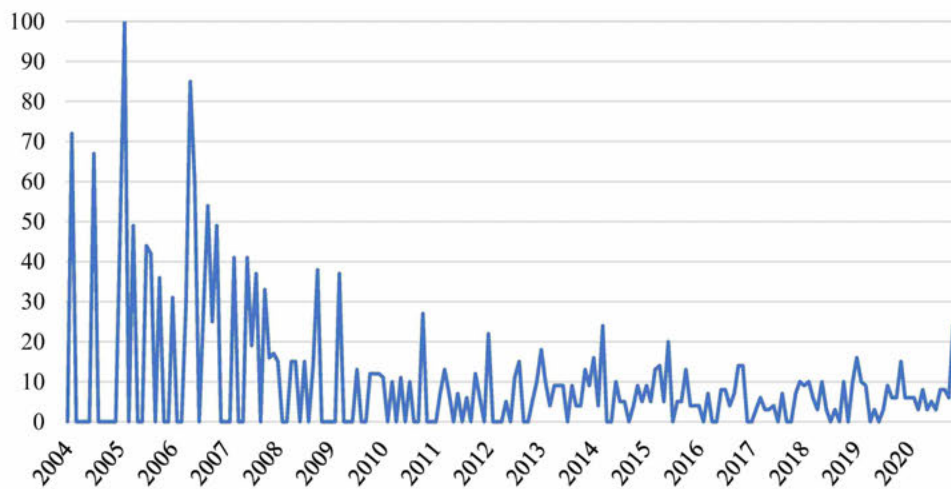


Figure P-03 displays the results of a Google Trends analysis for the search term “80% Receivers.” The term “80% Receivers” has been in use for decades in the U.S., although the items that were and are considered an 80% receiver have evolved both in type, sophistication, and popularity. Reflecting its historic use, the search term reached its peak popularity in early 2005, then declined into 2020. This period of decline coincides with the rise in the use of the search terms “Ghost Gun” and “Polymer 80 Kit.”

Figure P-03, Google Trends Analysis: “80% Receivers” in U.S. Web Searches, 2004 – 2020



PMF Recoveries

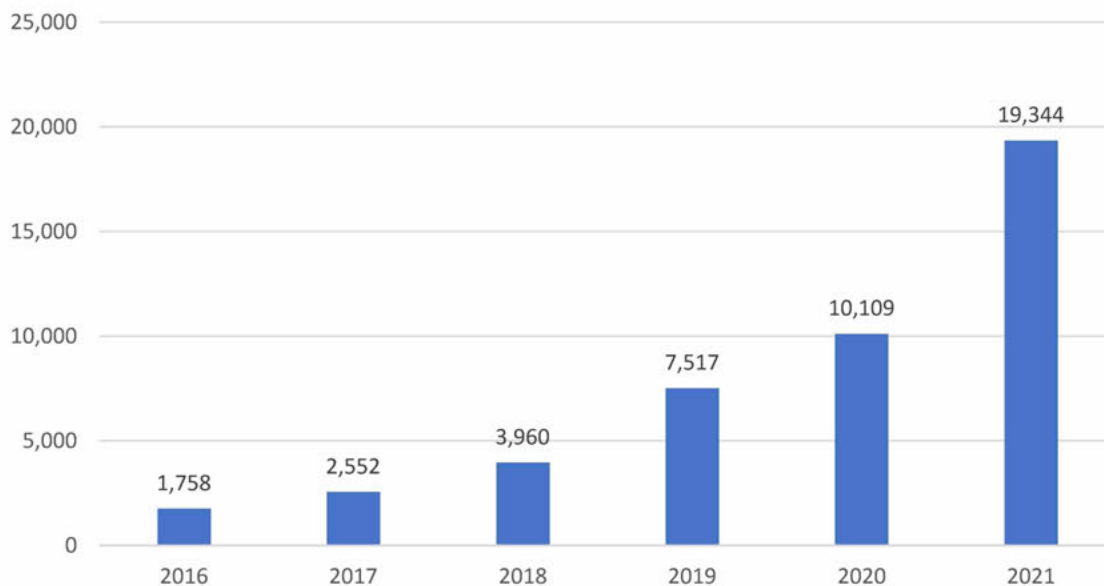
Although PMFs lack a serial number or other markings that can be traced to an FFL for a final disposition, the reporting of PMF recoveries made by law enforcement is extremely valuable in quantifying the prevalence of PMFs. Based on available firearm trace data²³, it is evident that criminals are actively making, using, and distributing PMFs both domestically and internationally.

It is also probable that current trace data significantly under represents the number of PMFs recovered in crimes by law enforcement due to a variety of challenges presented by PMFs, to include:

- PMFs involvement in crime is an emerging issue and law enforcement is just beginning to institute uniform training on the recognition, identification, and reporting of PMFs that can lead to more accurate PMF data being collected.
- PMFs by their nature may have no markings at all, duplicative markings, counterfeit markings, or markings that appear to be serial numbers on parts of the firearm other than the frame or receiver. These duplicative, counterfeit, or erroneous markings can be mistaken for authentic serial numbers and markings causing law enforcement to not recognize the firearm as a PMF and/or potentially follow false leads based on these markings.

In recent years, the number of PMFs recovered from crime scenes throughout the country has substantially increased. From January 1, 2016, through December 31, 2021, there were approximately 45,240 suspected PMFs reported to ATF as having been recovered by law enforcement from potential crime scenes, to include 692 homicides or attempted homicides, and subsequently traced by ATF.²⁴

Figure P-04: Total Suspected PMFs Recovered and Traced by ATF, 2016 – 2021



As noted in Figure P-04 and Table P-04 in Appendix P - PMF, the number of suspected PMFs recovered by law enforcement and subsequently traced by ATF has increased rapidly since 2016 with a 1,000% increase in recoveries and traces between 2016 (1,758) and 2021 (19,344). This exponential rise is likely attributable to both an increase in the number of PMFs recovered by law enforcement as well as developing law enforcement awareness for identifying and tracing recovered PMFs.

Federal Laws, Regulations, and Rulings

With the lack of identifying marks and recordkeeping requirements for PMFs, the collection and analysis of quantifiable and credible data for pattern and trend analysis needed to support policy development has been hampered. This lack of data also makes it more difficult, labor intensive, and time consuming to examine the full extent of PMF's impact on commerce and its prevalence within criminal activities. Without unique identifiable markings or records of acquisition or disposition, it is difficult for law enforcement to identify and report on PMFs or trace their history in commerce. Therefore, the unlicensed and unregulated nature of PMFs assembled by individuals, combined with the perception by many manufacturers and sellers of PMF kits that those products were not subject to the GCA, have made it nearly impossible to know how many PMFs are being made and distributed into commerce or being used by criminals.

Additionally, the proliferation of PMFs has impacted the FFL community and the lawful commerce in firearms. The growth of the PMF sector has:

- Impacted the market share of FFL manufacturers. This impact is particularly significant for certain manufacturers (i.e., Glock and Sig Sauer) whose firearm design currently seems to be the preferred choice for PMF pistol kit makers. Many of the firearm kits sold by PMF makers are similar to Glock or Sig Sauer pistol models whose 20-year patent has expired.
- Created confusion among FFLs on how to handle PMFs that oftentimes have no markings, particularly on how to maintain proper A&D records and how to ship PMFs via common carrier.
- Created inaccurate trace requests that produce false investigative leads. PMFs oftentimes resemble commercially manufactured firearms or incorporate parts from commercially manufactured firearms bearing that manufacturer's name, so some firearms are entered into eTrace using a commercial manufacturer's name rather than identifying as one privately made by an individual.
- Increased the prevalence of "counterfeit firearms". A counterfeit firearm is manufactured and designed to effectively resemble a firearm made by a known licensed manufacturer and may exhibit characteristics such as brand logos or type face text, and serial numbers. If a trace is requested on a counterfeit firearm that bears a serial number matching an authentically manufactured firearm sold by an FFL to a private citizen, the trace will lead to that authentic firearm possessed by that private citizen.

As a result of these impacts, ATF has received inquiries from licensees seeking guidance on required recordkeeping and identification on PMFs. The law enforcement community has also requested that ATF take any lawful action necessary to prevent the making of untraceable PMFs as they become more prevalent in crimes. In a 2021 study on PMFs, the National Police Foundation (NPF) wrote that "...the growing representation of ghost guns in crime as well as the ease of production, lack of background checks, and poor traceability as reasons that ghost guns components and kits should be regulated like all other firearms."²⁵

As noted, ATF Final Rule 2021R-05F was published in the Federal Register on April 26, 2022, and will become effective on August 24, 2022. Final Rule 2021R-05F addresses these issues and concerns and provides clear regulations to the markings and recordkeeping requirements of PMFs acquired and disposed of by FFLs. Specifically, FFLs:

- that choose to take PMFs into inventory are required to mark and record PMFs within 7 days of the firearm being acquired by a licensee, or before disposition, whichever first occurs.
- who already have PMFs in their inventory will have until 60 days, or before disposition, whichever first occurs, after the rule becomes effective to mark the PMF. FFLs have the option to mark their existing PMFs themselves, contract with another FFL, such as a gunsmith, or directly oversee a non-FFL who can perform such engraving services on PMFs. Alternatively, FFLs may deliver or send PMFs to ATF for disposal or destroy them in accordance with ATF guidance.
- are not required to accept a PMF into inventory, and they have the option to ask the PMF maker or owner to have the firearm marked by another licensee before accepting it into inventory or the FFL can bring the PMF to another FFL or unlicensed engraver to mark the PMF with their license information, provided they directly oversee the serialization.
- licensed as dealer-gunsmiths, manufacturers, and importers are permitted to conduct same-day adjustments or repairs of unmarked PMFs without marking them so long as they do not accept them into inventory overnight and they are returned to the person from whom they were received. If, however, the licensee has possession of the firearm from one day to another or longer or taken in for a purpose other than adjustment or repair, the firearm must be recorded as an “acquisition,” serialized, and then recorded as a “disposition” in the A&D records upon return to the same customer.

Final Rule 2021R-05F also clarified and superseded prior ATF rulings in regard to the term “engaged in the business” as it applies to a “gunsmith” and the new rules regarding PMFs.²⁶

Specifically, Final Rule 2021R-05F makes clear that licensed dealer-gunsmiths are not required to be licensed as manufacturers if they only perform gunsmithing services on existing firearms for their customers, or for another licensee’s customers, because the work is not being performed to create firearms for sale or distribution. These services may include customizing a customer’s complete weapon by changing its appearance through painting, camouflaging, or engraving, applying protective coatings, or by replacing the original barrel, stock, or trigger mechanism with drop-in replacement parts. Licensed dealer-gunsmiths may also purchase complete weapons, make repairs (e.g., by replacing worn or broken parts), and resell them without being licensed as manufacturers. Likewise, under Final Rule 2021R-05F, licensed dealer-gunsmiths may make such repairs for other licensees who plan to resell them without being licensed as a manufacturer. They may also place marks of identification on PMFs they may purchase and sell, or under the direct supervision of another licensee in accordance with this rule. Persons performing these activities are distinguished from persons who engage in the business of completing or assembling parts or parts kits, applying coatings, or otherwise producing new or remanufactured firearms (frames or receivers or complete weapons) for sale or distribution. Such persons must be licensed as manufacturers.

Outreach, Education, Collaboration, and Initiatives

ATF has undertaken wide-ranging outreach and educational efforts to assist the law enforcement community with the identification of PMFs and improve their traceability. Moreover, ATF, in conjunction with DOJ components and partnering law enforcement agencies, is implementing a national strategy to combat the proliferation of PMFs in violent crime.

ATF Outreach and Education

As the proliferation of PMFs is relatively new, educating law enforcement on identifying them has been a priority. With approximately 700,000 law enforcement officers spread across approximately 18,000 agencies, it is a formidable task to educate and train them on how to identify and trace PMFs.

To this end, ATF has created and distributed the following educational materials.

- September 2020 – the ATF National Tracing Center (NTC) produced the PMF Tracing Bulletin and distributed it via email to the eTrace user community.²⁷
- November 2020 – the NTC revised the PMF Tracing Bulletin and distributed it via email to the eTrace user community. The guidance was revised based on an enhancement to eTrace that allows users to more readily identify a PMF.
- June 2021 – The NTC updated the Police Officer's Guide to Recovered Firearms and distributed it via email to the eTrace user community.

In addition, ATF has developed relevant training curriculums and conducted extensive outreach to its state and local partners about PMFs, machinegun conversion devices, and homemade silencers.

ATF's PMF and machinegun conversion device training has been delivered in-person to numerous investigative personnel of local, state, and federal partners. During the training sessions, ATF focused on how to identify and trace PMFs, machinegun conversion devices, and homemade silencers. In addition, the training addressed trends, resources, legal issues, solutions, investigative techniques, and best practices.

Moreover, the training included sources of firearm parts, kits, and what items could be made from additive manufacturing (3D). Each training is approximately four hours in length and includes firearm subject matter experts from several ATF directorates, as well as other DOJ components.

ATF Partnerships and Collaborative Efforts

In 2021, ATF collaborated with each of the Regional Information Sharing System's (RISS) to develop a survey regarding PMFs to gauge what law enforcement knew about PMFs and what types of training on the topic could be beneficial. The RISS Program is comprised of six regional centers that assist local, state, federal, and tribal criminal justice partners in responding to the unique crime problems of each region while strengthening the country's information sharing environment. More than 9,600 local, state, federal, and tribal law enforcement, and public safety agencies are members of RISS.

More specifically, the survey was administered to over 100,000 RISS participating agency access officers in the Mid-Atlantic Great Lakes Organized Crime Law Enforcement Network²⁸ (15,827), the Western States Information Network²⁹ (27,893), the Regional Organized Crime Information Center³⁰ (27,904), the Rocky Mountain Information Network³¹ (18,642), the Mid-States Organized Crime Information Center³² (13,035), and the New England State Police Information Network³³ (7,014). The survey responses provided a knowledge base for the regional assessments.

Following the survey, ATF prepared assessments and shared the findings with the law enforcement community and its federal partners to highlight PMF criminal activity from 2018 to 2020. These assessments included PMF recovery data for January 2021 through June 2021, along with a trend forecast for the remainder of 2021.

ATF Initiatives

In February 2022, Attorney General (AG) Garland released the Violent Crime Strategy Update that included direction on combatting the use of PMFs in violent crime. Specifically, the AG directed the Deputy AG to work with DOJ components to implement a national "ghost gun" enforcement initiative designed to equip investigators and prosecutors with the tools and expertise they need to help combat the unlawful use of PMFs in violent crime, and to direct U.S. Attorneys' Offices (USAO) to work closely with law enforcement partners to bring cases designed to address the use of these firearms in violent crime. In addition, as part of this initiative, each USAO and ATF field division across the country will designate specialists to work with colleagues at DOJ and its law enforcement partners to advance this work.

State Laws and Regulations

As the recoveries of PMFs in crimes by law enforcement have increased, so have the concerns expressed by law enforcement leaders and policy makers at the state and local government levels. The regulation of PMFs at the state and local level is rapidly evolving.

As of April 13, 2022, at least 11 states and the District of Columbia (DC) have passed laws that regulate some aspect of PMFs (e. g. requiring serial numbers, reporting, possessing, regulating manufacturing, sales, and transfers). Those states include California in 2016, Connecticut in 2019, Delaware in 2021, District of Columbia in 2020, Hawaii in 2020, Illinois in 2022, Maryland in 2022, Massachusetts in 2019, Nevada in 2021, New Jersey in 2018, New York in 2021, Rhode Island in 2020, Virginia in 2004, and Washington in 2019.

California, Connecticut, New Jersey, and New York require PMFs be marked with a serial number and registered while Hawaii and New Jersey banned unlicensed manufacturing.

The state law citations are as follows:

- California - Cal. Penal Code §29180
- Connecticut - Conn. Pub. Act No. 19-6
- Delaware - Del. Code Ann. tit. 11. §1459A, Del. Code Ann. tit. 11. §1463
- District of Columbia - D.C. Code § 7-2502.02
- Hawaii - Haw. Rev. Stat. § 134-10.2
- Illinois - 720 ILCS 5/24-5.1
- Maryland – MCA §§ 5-701 – 5-703
- Massachusetts – Mass. Gen. Laws Ch. 269 § 11E
- Nevada - NRS AB 286, amending Title 15, Chapter 202. In *Polymer 80, Inc. v. Sisolak, et al.*, a judge in the Third Judicial District Court of the State of Nevada in and for the County of Lyon overturned this law having found that the law's definition of "unfinished frame or receiver" was too vague to support criminal penalties. Case No. 21-CV-00690, Order on Motions for Summary Judgment (Nev. 3rd Dist. Dec. 10, 2021). The matter is currently under appeal.

- New Jersey - N.J. Stat. Ann. § 2C:39-9(l-n)
- New York - N.Y. Penal Law §§ 265.60-63, 64.
- Rhode Island - R.I. Gen. Laws Section 11-47-2(18)
- Virginia - Va. Code. Ann. § 18.2-308.5
- Washington - RCW 9A.1.190

Summary

As technology advances in the making of PMFs, there has been a corresponding increase in their use in crimes. Between 2016 and 2020, 25,896 suspected PMFs were recovered in crimes and traced by law enforcement. In 2021 alone, 19,344 suspected PMFs were recovered and traced by law enforcement. To put these figures in perspective, on average, from 2016 to 2020, approximately 5,150 suspected PMFs were traced annually, whereas, in 2021 this number nearly quadrupled.

ATF has taken numerous steps to address the rise in the criminal use of PMFs. This includes standardizing terminology used by law enforcement, as well as outreach and targeted education to local law enforcement on the identification and tracing of PMFs. Most recently, ATF's issuance of Final Rule 2021R-05F published on April 26, 2022, will result in licensing and serialization of firearm parts kits that are produced and sold commercially, and requires identifying marks be placed on all PMFs when they are taken into inventory by FFLs, including overnight repairs by licensed dealers/gunsmiths, and that FFLs record those PMFs in their A&D records. These additional requirements will assist law enforcement to more effectively trace PMFs that are recovered in criminal investigations.

Continued advancements in technology and information access will likely result in continued growth and evolution of PMF making. As this growth of PMFs occurs, the PMF market will continue to impact licensed manufacturers and their share of the firearms market.