

Date of Hearing: March 21, 2023

Counsel: Mureed Rasool

ASSEMBLY COMMITTEE ON PUBLIC SAFETY

Reginald Byron Jones-Sawyer, Sr., Chair

AB 1089 (Gipson) – As Introduced February 15, 2023

REVISED

As Proposed to be Amended in Committee

SUMMARY: Defines three-dimensional (3D) printers and includes such devices in the statutes regulating the manufacture of firearms. Requires persons to relinquish certain 3D printers. Expands firearm civil liability laws to include the use of computer numerical control (CNC) machines and 3D printers. Imposes strict civil liability on persons who unlawfully distribute 3D firearm manufacturing codes. Specifically, **this bill:**

- 1) Includes a “firearm manufacturing machine” in the definition of a “firearm-related product” for purposes of the Firearm Industry Responsibility Act.
- 2) Defines a “firearm manufacturing machine,” in the civil liability context, as a 3Dprinter or CNC milling machine that is marketed or sold as, or reasonably designed or intended to be used to manufacture or produce a firearm.
- 3) Authorizes civil actions against persons who knowingly distribute any digital firearm manufacturing code when a firearm produced by such code and imposes strict liability when it is used to inflict personal injury or property damage.
- 4) Exempts military members from such civil actions if they distributed the digital firearm manufacturing code if they were acting within the scope of their employment, and also exempts law enforcement agencies, forensic laboratories, and state-licensed firearm manufacturers regardless of whether they were acting within the scope of their employment.
- 5) Defines “digital firearm manufacturing code” as any digital instruction in the form of computer-aided design files or other code or instructions stored and displayed in electronic format as a digital model that may be used to program a CNC milling machine, 3D printer, or other machine, to manufacture a firearm, including frames, receivers, and precursor parts.
- 6) Specifies that only state-licensed firearms manufacturers are exempt from CNC milling machines and 3D printer regulations on manufacturing firearms.
- 7) Defines a “state-licensed firearms manufacturer” as a person licensed to manufacture firearms under California state law.
- 8) Makes it a crime to sell, transfer, or possess a CNC milling machine or 3D printer that has a sole or primary function of manufacturing firearms, unless by a state-licensed manufacturer.

- 9) Requires a person who possesses a 3D printer that has the sole or primary function of manufacturing a firearm before July 1, 2024, to do the following within 90 days of that date in order to not be in violation of state law:
 - a) Sell or transfer the device to a state-licensed firearms manufacturer,
 - b) Sell or transfer the device to a businessperson that sells such devices to state-licensed firearms manufacturers,
 - c) Take the device out of state,
 - d) Give the device to a law enforcement agency, or;
 - e) Otherwise lawfully terminate possession of the device.
- 10) Contains a severability clause.

EXISTING LAW:

- 1) Defines a “firearm,” in certain parts of the Penal Code as, “a device, designed to be used as a weapon, from which is expelled through a barrel, a projectile by the force of an explosion or other form of combustion.” (Pen. Code, § 16520, subd. (a).)
- 2) Defines a “firearm” for specified other provisions in the Penal Code, as including the frame or receiver, or a firearm precursor part; including the provision governing CNC milling machines. (Penal Code §16520, subd. (b)(17).)
- 3) Defines a “firearm precursor part” as “any forging, casting, printing, extrusion, machined body, or similar article that has reached a stage in manufacture where it may readily be completed, assembled or converted to be used as the frame or receiver of a functional firearm, or that is marketed or sold to the public to become or be used as the frame or receiver of a functional firearm once completed, assembled or converted.” (Pen. Code, § 16531, subd. (a).)
- 4) Prohibits any person or corporation from manufacturing more than three firearms in this state over the course of a year unless they are licensees. (Pen. Code, § 29010, subd. (a).)
- 5) Defines “three-dimensional printer” and prohibits any person or corporation from manufacturing a firearm through use of a 3D printer unless they are a licensee. (Pen. Code, § 29010, subd. (b).)
- 6) Defines a “licensee” as a person or corporation that the DOJ has confirmed possesses a federal license to manufacture firearms, necessary local government licenses, a certificate of eligibility issued by the DOJ, is on a DOJ maintained centralized list, and other specified requirements. (Pen. Code, § 29050.)
- 7) Provides that a licensee’s license cannot be valid for more than one year from the date of issuance. (Pen. Code, § 29050, subd. (c).)

- 8) Makes it a misdemeanor for a person to knowingly possess a firearm without a valid state or federal serial number. (Pen. Code, § 23920.)
- 9) States that prior to manufacturing or assembling a firearm (not including precursor parts) that does not have a valid state or federal serial number, a person must:
 - a) Apply to the DOJ for a serial number,
 - b) Describe the firearm they intend to assemble, and;
 - c) Provide their date of birth, address and full name. (Pen. Code, § 29180, subd. (b)(1).)
- 10) Requires that within 10 days of manufacturing or assembling a firearm (not including precursor parts), they must engrave or permanently affix the serial number previously provided to them by the DOJ and notify the DOJ of such. (Pen. Code, § 29180, subd. (b)(2)-(3).)
- 11) Prohibits persons or corporations from using a CNC milling machine to manufacture a firearm or firearm precursor part unless they are a federally licensed firearms manufacturer or importer. (Pen. Code, § 29185, subd. (a).)
- 12) States that it is unlawful to sell, offer to sell, or transfer a CNC milling machine that has the sole or primary function of manufacturing firearms to any person aside from a federally licensed firearms manufacturer or importer. (Pen. Code, § 29185, subd. (b).)
- 13) Provides that it is unlawful to possess, purchase, or receive a CNC milling machine that has the sole or primary function of manufacturing firearms unless a person is a federally licensed firearms manufacturer or importer. (Pen. Code, § 29185, subd. (c).)
- 14) Exempts air carriers, certain business persons, and other specified persons from the prohibition on possessing or selling specified CNC milling machines. (Pen. Code, § 29185, subd. (d).)
- 15) Establishes the “Firearm Industry Responsibility Act” which allows for civil actions to be brought against firearm industry members who deal in abnormally dangerous firearm-related products. (Civ. Code, § 3273.50 *et seq.*)
- 16) Authorizes any resident of, or visitor to, California, other than an officer or employee of a state or local governmental entity in this state, to bring a civil action against any person who knowingly traffics in illegal firearms and in firearm parts in the state. Also requires persons who bring lawsuits against enforcement of firearms laws to pay for the attorney’s fees of the state if the state prevails. (Bus. & Prof. Code, § 22949.60 *et seq.*; Civ. Code, § 1021.11)

FEDERAL LAW

- 1) Prohibits, in part, the taking of private property for public use without just compensation. (U.S. Const. amend. V.)

FISCAL EFFECT: Unknown

COMMENTS:

- 1) **Author's Statement:** According to the author, “Even before the COVID-19 pandemic, stories from families of gun violence have kept me up at night. My own son and his fiancé were victims... and this issue has only gotten worse in our communities. For communities alike, gun violence is a wildfire that we work diligently trying to contain. And the casualties are our babies, sisters, brothers, friends, and acquaintances - all deserving of life but were cut short of their potential. To say that this issue is personal to me is an understatement, and sending thoughts and prayers just isn't enough. AB 1089 will close the loop on ghost guns and getting one step closer to getting illegal guns off the street. My heart breaks every single time I hear of another life lost from senseless gun violence. Not one more rally. Not one more vigil. Not one more shooting. We need the comprehensive solutions - this is wholeheartedly about saving lives, and nothing less.”
- 2) **3D Printing in General:** 3D printing is an additive manufacturing process which lays down consecutive layers of material to create objects. This differs from the more traditional method of subtractive manufacturing like wood carving, laser cutting, and CNC milling, which all take a block of material and either cut, drill, mill, or machine off parts. (Jandyal et al. *3D printing – A review of processes, materials and applications in industry 4.0*. (Oct. 7, 2021) <<https://reader.elsevier.com/reader/sd/pii/S2666412721000441?token=908AF5C6C38EEF951C10B187DE0F05F7A207AD8CB919B05D12C08BC5EBE01883314CAB5F86ACE0FC723A50808F855E4A&originRegion=us-east-1&originCreation=20230324020851>> [as of Mar. 23, 2023] at p. 33.)

3D printers use digital files containing three-dimensional data to create physical objects out of a variety of different materials. 3D printing has been used to make furniture, automotive and aviation parts, sculptures, hearing aids, prosthetics, and artificial teeth. 3D printing has been used to create prosthetic arms and hands for victim of violence in Sudan. NASA's 3D printing research includes food printing, such as 3D-printed pizza. (PC Magazine. *3D Printing: What You Need to Know*. (Updated Jul. 1, 2020) <<https://www.pcmag.com/news/3d-printing-what-you-need-to-know>> [as of Mar. 23, 2023].)

- 3) **3D Printed Firearms:** Certain 3D printers can also manufacture firearms. In December 2021, the U.S. Office of Inspector General (OIG) conducted an audit of the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) in regards to 3D printed firearms and ATF's response readiness. The OIG's report provides a comprehensive look into the danger 3D printed firearms pose. 3D printed firearms became prominent in 2013, when a company released its designs on the Internet for a fully functional, fully 3D printed firearm called the “Liberator.” (OIG. *Audit of the Bureau of Alcohol, Tobacco, Firearms and Explosives' Monitoring of 3-D Firearm Printing Technology*. (hereafter *OIG Report*) (Dec. 2021) <<https://oig.justice.gov/sites/default/files/reports/22-016.pdf>> [as of Mar. 13, 2023].)

The ATF tested the Liberator and concluded it could successfully fire a single or a few shots before it was destroyed in the process. (*OIG Report* at 10-11.) Since 2013, however, the quality and design of 3D printed firearms have improved significantly. In 2019 the FBI tested another 3D printed firearm design and concluded the firearm was functional and lethal as designed. (*Id.* at 14.) While most commercial-grade polymer 3D printers are unaffordable

for most individuals, academic and industry experts state that motivated individuals can use more affordable 3D printers to print and subsequently strengthen the quality and reliability of a 3D printed firearm. (*OIG Report* at 13.) The OIG estimated that the full cost for 3D printing a 9 millimeter handgun frame and adding unregulated firearm components (such as the barrel, trigger, slide, magazine, etc.) was around \$700. (*Ibid.*) For similarly 3D printing and assembling an AR-15 style rifle it was around \$840. (*Ibid.*) The OIG noted that these prices reflect the range of cost for similar firearms purchased from a firearms dealer. (*Ibid.*)

When it comes to 3D firearm blueprint files, the files containing the manufacturing schematics, the US government had for years restricted their dissemination. Based on that, a private company that distributed 3D firearm blueprints sued the federal government. The US government initially defended against the lawsuit, however, in 2018, the Trump administration did an about face, and agreed to settle the lawsuit and remove 3D firearm blueprints from any restrictions. Twenty-two state Attorney Generals sued to prevent the change from taking effect, however, they eventually lost their lawsuit. The dissent in that case noted that previously the U.S. government had argued distribution of the files would irreparably harm the U.S.' national security interest. (*Washington v. United States Dep't of State* (2021) 996 F.3d 552; Courthouse News Service. *Ninth Circuit Lifts Ban on 3D-Printed Gun Blueprints*. (Apr. 27, 2021) <<https://www.courthousenews.com/ninth-circuit-lifts-ban-on-3d-printed-gun-blueprints/>> [as of Mar. 23, 2023].)

According to the OIG's 2021 report, the ATF has not considered 3D printed firearms a priority because few of them have been confirmed to have been used in crimes that the ATF has investigated. (*OIG Report* at 12.) Of course it was an ATF decision in 2015 that deemed unfinished firearm receivers as "not firearms," which led to the mass proliferation of ghost guns (firearms without any type of legally required serial number) stemming from such unfinished firearm receivers being found by law enforcement all over the country. (Governing. *Why Outlawing Ghost Guns Didn't Stop America's Largest Maker of Ghost Gun Parts*. (Aug. 28, 2022) <<https://www.governing.com/now/why-outlawing-ghost-guns-didnt-stop-americas-largest-maker-of-ghost-gun-parts>> [as of Mar. 23, 2023].) According to the ATF's own numbers, law enforcement recovered 1,758 ghost guns at crimes scenes in 2016; in 2021 that number had jumped to 19,344. (*Ibid.*) That type of proliferation may likely occur with 3D printed ghost guns. It may already be occurring at least with 3D printed firearm components.

In Fort Worth, Texas, a police officer reached out to the ATF after he noticed a surge in gang shooting where officers found handguns with a "switch" on them. A handgun switch is a Lego-sized device that can be installed on a handgun to allow it to shoot fully automatic. An ATF official stated that these switches allowed the handguns to fire faster than guns used by the military. The ensuing ATF investigation uncovered that these switches were being illegally 3D printed out of an apartment, and investigators were told by the suspect that between two 3D printers, about 400 machine gun conversion devices could be made daily. (CBS. (Jan. 10, 2023) <<https://www.cbsnews.com/texas/news/3d-printers-used-to-make-illegal-handgun-switches-magnifies-the-challenge-for-law-enforcement/>> [as of Mar. 23, 2023].)

- 4) **What This Bill Does:** This bill has a number of provisions that include both civil and criminal liability. Since this bill has been double referred to the Assembly Judiciary Committee, issues involving civil liability will not be discussed. Relevant here are the

provisions that establish criminal liability. These provisions seek to further the regulation of firearm manufacturing devices.

Last year, California enacted laws regulating who can possess a CNC milling machine that had a sole or primary function of manufacturing firearms. (AB 1621 (Gipson) Chapter 76, Statutes of 2021-2022.) AB 1621, in part, also outlined how such CNC machines can be transported, transferred, and, if a person was in unauthorized possession, how they must be dispensed with. This bill, in part, would include 3D printers that have a sole or primary function of manufacturing firearms, in the transportation, transfer, and possession laws that AB 1621 outlined for CNC machines.

Part of this bill also deletes references to “firm” or “corporation” when it comes to firearm manufacturing laws, and simply leaves “person.” This is a nonsubstantive change because the Penal Code defines “person” as including a corporation. (Pen. Code, § 7.)

- 5) **Takings Claims:** The Fifth Amendment of the U.S. Constitution provides, in part, that private property shall not be taken for public use without just compensation. That said, there are times when a government can justly deprive an individual of their property. A recent Ninth Circuit case examined, in part, whether California’s ban on extended capacity magazines constituted a facial regulatory taking. (*Duncan v. Bonta* (2021) (hereafter *Duncan*) 19 F.4th 1087 [vacated and remanded by the Supreme Court for further consideration in light of *New York State Rifle & Pistol Assn., Inc. v. Bruen* (2022) 142 S.Ct. 2111]; see *Def. Distributed v. Bonta* (2022) U.S. Dist. LEXIS 195839 [finding that *Bruen* primarily focused on the right to keep or bear arms, not regulations on manufacturing].)

This bill would require persons with CNC milling machines or 3D printers with the sole or primary function of manufacturing firearms to relinquish them by July 1, 2024, or 90 days thereafter, either by sale, legal transfer, removal from the state, relinquishment to law enforcement, or otherwise lawful termination of possession, even though these items were legally purchased and possessed. This bill does not provide for any sort of compensation for that property. Moreover, while the bill would allow for sale or legal transfer of the CNC machine or 3D printer, it could not be sold or transferred to any civilian in the state.

The Ninth Circuit found that California’s ban on extended capacity magazines was not a regulatory facial taking in part because there was no record demonstrating the relinquishment procedures deprived owners of all economically beneficial use of the property with respect to every owner of an extended capacity magazine. (*Duncan*, 19 F.4th at 1112.) It was also not a facial physical taking as, “[m]andating the sale, transfer, modification, or destruction of a dangerous item cannot reasonably be considered a taking akin to a physical invasion of a rental building or the physical confiscation of raisins.” (*Id.* at 1113.)

Last year, AB 1621 mandated the relinquishment of CNC milling machines that had the sole or primary function of manufacturing firearms in a manner that was similar to the relinquishment procedures for extended capacity magazines. Arguably, it is plausible to analogize this situation to the *Duncan* case because such a device could be considered dangerous and the relinquishment procedures were similar to the procedures for extended capacity magazines. This bill would take AB 1621’s mandated relinquishment procedures and classifications for CNC machines and extend them to 3D printers, making it plausibly arguable that this bill’s requirements regarding 3D printers would also possibly be analogous

to the *Duncan* case.

- 6) **Argument in Support:** According to the bill's sponsor, *Giffords*, "...Despite the enormous positive impact California's ghost gun reform legislation has had in reforming most ghost gun product sellers' business practices, certain companies have openly declared, including in court filings, that they are continuing to sell ghost gun manufacturing machines as an effort to circumvent California's regulations on ghost gun kits and components. These digitally programmable machines are designed to enable untrained amateurs to produce firearm frames or receivers with the press of a button, either by additive manufacturing (from a 3-D printer) or subtractive manufacturing (from a CNC milling machine that carves the product out of metal or other material). Instead of selling ghost gun kits, these sellers claim that they are selling merely the machines, unformed material, and digital files for use in those machines.

We believe they are very clearly violating both the spirit and letter of California law. For instance, AB 1621 (Gipson) already enacted some important restrictions on the sale, purchase, and use of digitally programmable CNC milling machines that have the sole or primary function of manufacturing firearms. AB 1621 (Gipson) also unambiguously prohibited any person who does not have a federal firearm manufacturer's license from using such machines to produce any number of firearms. AB 2156 (Wicks) similarly prohibited using 3-D printers to produce any number of firearms without both a California and federal manufacturer's license.

Nonetheless, irresponsible companies have continued to sell machines that are explicitly designed and marketed as ghost gun manufacturing machines (including a CNC milling machine called "the Ghost Gunner" sold by Defense Distributed) while dubiously and deceptively claiming that these same machines do not have the "primary" purpose of manufacturing firearms. The seller of the Ghost Gunner machine describes it as "the most popular way of finishing unserialized rifles and pistols in the comfort and privacy of home" and informs California buyers only that they buy ghost gun manufacturing machines "at their own risk." Similarly, sellers on "Ghostguns.com" market a 3D printing ghost gun manufacturing machine called "The Ender" along with files for printing plastic components of undetectable firearms. Companies like these marketing ghost gun manufacturing machines continue to fail to inform unlicensed customers that it is now unambiguously unlawful in California to use either a CNC milling or a 3-D printer to manufacture or in any way produce firearms (including completed or unfinished frames and receivers) without a firearm manufacturer's license.

Additionally, there is need to consolidate and standardize provisions that were separately enacted by AB 1621 and AB 2156 which separately regulated CNC milling machines and 3-D printers, respectively. For instance, while California law now prohibits unlicensed manufacturers from *using* a 3-D printer to produce firearms, state law does not regulate the purchase, possession, or sale of 3-D printers that are designed or marketed as ghost gun manufacturing 3-D printers; only AB 1621 included purchase, possession, and sale restrictions on CNC milling ghost gun machines. Additionally, while AB 1621 (Gipson) required a *federal* firearm manufacturer license to use CNC milling machines to produce firearms, AB 2156 (Wicks) required both a federal and state firearm manufacturer license to use a 3-D printer to produce firearms. (The federal license is a prerequisite under state law for a California firearm manufacturer license). Consolidating and standardizing these statutes

will promote compliance and public safety.

AB 1089 (Gipson) would help urgently and unequivocally address these threats and shut down these companies' dangerous and irresponsible attempts to circumvent California's new ghost gun reforms. This legislation would build on the strong ghost gun reforms California enacted last year by clarifying and strengthening California's limitations on the sale of ghost gun manufacturing machines and by strengthening efforts to hold individuals accountable for harms caused by their distribution of digital blueprints for printing and manufacturing guns and key firearm components..."

- 7) **Argument in Opposition:** According to the *Gun Owners of California*, "As currently written, the bill would ban any 3-D or CNC machine for the simple reason that they are capable of manufacturing unserialized firearms – as well as a host of other products. According to 3D Sourced, "3D printing has grown to impact almost every major industry worldwide in some capacity." According to their research in which they showcase developments in the 3D printing sector, hospitals are increasingly turning to 3D printing for uses in orthopedics, surgical implants, and custom surgical instruments. It also dominates the hearing aid industry and it's uses are increasingly popular in the fields of dental prosthetics as well as auto parts production and jewelry.

It's an overreach to ban a product because a tiny subsection of our society chooses to make a item that is used for an unlawful goal; the fact remains that the significant majority of 3D uses are responsible and law-abiding, and those individuals should not be penalized for the misdeeds of a few.

I believe we should get down to the business of reducing crime, rather than penalizing the lawful for the misdeeds of the unlawful – it will never have its anticipated resolution. For those who are interested in stemming the tide of illegal weapons, we share a common desire, and GOC believes we can cooperatively move towards this goal."

8) **Prior Legislation:**

- a) SB 1327 (Hertzberg), Chapter 146, Statutes of 2021-2022, created a private right of action for various conduct related to firearms.
- b) AB 1594 (Ting), Chapter 98, Statutes of 2021-2022, among other things, established a firearm industry standard of conduct and prohibited firearm industry members from marketing abnormally dangerous firearm-related products.
- c) AB 1621 (Gipson), Chapter 76, Statutes of 2021-2022, in part, established various restrictions on the possession, sale, and transfer of CNC machines.
- d) AB 2156 (Wicks), Chapter 142, Statutes of 2021-2022, in part, defined a 3D printer, and restricted persons or corporations from using a 3D printer to manufacture any firearm, frame, receiver, or precursor part.
- e) AB 2571 (Bauer-Kahan), Chapter 77, Statutes of 2021-2022, restricted firearms from being marketed to minors.

REGISTERED SUPPORT / OPPOSITION:

Support

Giffords (Sponsor)
Brady Campaign (Co-Sponsor)
Brady Campaign California (Co-Sponsor)
California Medical Association
California Nurses Association
Consumer Attorneys of California
Everytown for Gun Safety Action Fund

87 Private Individuals

Opposition

Gun Owners of California, INC.

Analysis Prepared by: Mureed Rasool / PUB. S. / (916) 319-3744