



FAA UPN 2026-AAE-EHL-20250507-177

3D-PRINTED AIRCRAFT PARTS

What the FAA notice means for owners, mechanics, repair stations, and sellers

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FAA NOTICE	UPN 2026-AAE-EHL-20250507-177, dated August 18, 2026
SCOPE	Replacement and modification articles for type-certificated aircraft
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AVIATION. PRECISION. PASSION.

Executive Summary

BOTTOM LINE The FAA did not ban 3D-printed aircraft parts. It identified specific articles that were produced and sold for installation on type-certificated aircraft without an established FAA production approval or authorization.

The August 18, 2026 Unapproved Parts Notification concerns articles manufactured or sold by Michael Graham, doing business as MadeByMike3D, between May 2024 and August 2025. The listed products include cup holders, headset holders, yoke grips, defroster vent components, shades, interior-plastic repair strips, and other cockpit or interior accessories.

The manufacturing method is not the approval basis. A part can be additively manufactured and still be eligible for installation when it is produced and installed through a lawful pathway. Conversely, a conventionally machined, molded, or fabricated part can be unapproved if its production and installation do not meet the applicable requirements.

What the FAA Directed

- Inspect aircraft and parts inventories for the articles identified in the notice.
- Quarantine affected articles found in inventory to prevent installation until eligibility is determined.
- Provide the FAA information about discovered articles, how their source was identified, and actions taken to remove them from aircraft or inventory.

What the Notice Does Not Establish

- It does not prohibit additive manufacturing or 3D printing in aviation.
- It does not say that every removable cockpit convenience item is an installed aircraft article.
- It does not eliminate the owner- or operator-produced article pathway in 14 CFR § 21.9(a)(5).
- It does not make PMA the only possible production basis. Section 21.9 lists several lawful pathways.
- It does not determine whether every listed item is installed on every aircraft where it may be found. Installation and eligibility remain fact-specific.

The FAA Notice in Plain Language

FAA UPN 2026-AAE-EHL-20250507-177 states that the listed articles were produced and sold for installation on FAA type-certificated products without FAA approval and authorization. The notice says the articles may be identifiable by Etsy listings, a lack of evidence showing production by an FAA-approved manufacturer, and missing markings under 14 CFR § 45.15.

IMPORTANT A UPN is a safety notification based on an FAA investigation. It is not an airworthiness directive, a new regulation, or a blanket prohibition on a manufacturing process.

Affected Articles Listed by the FAA

ARTICLE	LISTED APPLICATION
Microphone-slot caddy armrest	Beechcraft Bonanza
Custom cup holder	Beechcraft Bonanza
Custom cup holder	Beechcraft Debonair
Ergonomic yoke grips	Cessna 150 simulator
Headset hooks	Cirrus
Front cup holder	Grumman AA1
Yoke grips	Grumman AA1
Defroster vent extenders	Grumman AA5
Front cup holder	Grumman AA5
Front headset holder	Grumman AA5
Hood defrost vents	Grumman AA5
Rear cup holder	Grumman AA5
Yoke grips	Grumman AA5
Yoke-pad cover	Grumman AA5
Yoke grips	Grumman AA5 simulator
Battery-box cover with logo	Grumman
Raised emblem	Grumman
Windshield shades	Grumman
Simulator instrument-panel storage insert	Aircraft not specified
Bose ProFlight controller and spare-battery holder	Aircraft not specified
Interior-plastic repair strips	Aircraft not specified
Sunshield for MyGoFlight-mounted iPad	Aircraft not specified
Universal headset-holder mount for Rosen visors	Aircraft not specified

Note: This table paraphrases the nomenclature in the FAA notice for readability. The official UPN controls.

Why “3D Printed” Is Not the Regulatory Test

Additive manufacturing is a fabrication method. FAA materials recognize additive manufacturing for approved aviation applications, including TSO articles and engine parts. The approval question is whether the article conforms to an approved design or otherwise fits a permitted production pathway, and whether its installation complies with the applicable maintenance and alteration rules.

Permitted Production Pathways Under § 21.9(a)

PATHWAY	WHAT IT MEANS
Type certificate	Produced under a type certificate.
FAA production approval	Produced under a production certificate, PMA, or TSO authorization, as applicable.
Standard part	Manufactured to a government or established industry specification.
Commercial part	A part meeting the § 21.1 definition and placed on a commercial-parts list by the design approval holder.
Owner/operator-produced	Produced by an owner or operator for maintaining or altering that owner or operator's own product.
Certificate-holder fabrication	Fabricated by an appropriately rated certificate holder with a quality system and consumed in a part 43 repair or alteration.
Other FAA-approved method	Produced in another manner specifically approved by the FAA.

SALE WARNING With limited exceptions stated in § 21.9, producing a replacement or modification article for sale and representing it as suitable for installation on a type-certificated product requires the appropriate production approval.

PMA Is Not Installation Approval

A production approval answers who may produce the article and under what approved system. Installation eligibility is a separate question. The installer must still establish applicability, conformity, condition, approved or acceptable data as required, and compliance with part 43. A PMA marking by itself does not make an article eligible for every aircraft.

Owner-Produced 3D-Printed Parts

Section 21.9(a)(5) allows an owner or operator to produce an article for maintaining or altering that owner or operator's own aircraft. The FAA's PMA guidance confirms that such an article does not require PMA, but its installation must comply with part 43. If the owner produces articles for sale for installation on other owners' aircraft, the exception no longer fits that activity.

What "Owner Produced" Should Look Like in Practice

- The article is for the owner's or operator's own identified aircraft or product.
- The owner meaningfully participates in controlling the design, materials, dimensions, fabrication, or quality of the article, rather than merely buying a finished catalog item marketed for aircraft installation.
- The design and installation basis are documented before installation.
- A properly certificated person evaluates the finished article and performs or supervises the installation when part 43 requires it.
- The maintenance record identifies the work performed and the basis for approving the aircraft for return to service.

DO NOT CONFUSE An owner-supplied part is not automatically an owner-produced part. Buying a finished item online and handing it to a mechanic does not, by itself, establish the § 21.9(a)(5) production exception.

The Digital File Does Not Decide Eligibility

A CAD or STL file can be design information, but possession of the file does not by itself establish approved design data, production authority, material suitability, or installation approval. The finished article depends on printer configuration, feedstock, build orientation, process parameters, environmental control, post-processing, and inspection. FAA additive-manufacturing guidance emphasizes control of these variables because parts made from the same digital geometry may not have the same properties.

Interior Material and Flammability

Low structural criticality does not mean no airworthiness consequence. Interior articles can implicate flammability, visibility, control interference, defrost performance, occupant injury, egress, weight and balance, and attachment integrity. FAA's 2026 small-airplane issues list specifically identifies additive-manufactured cabin-part flammability as an area where process variability can affect compliance.

Installed Article or Removable Personal Item?

The UPN applies to articles produced and sold for installation on type-certificated aircraft. The regulations do not create a universal “permanently attached” test that resolves every cockpit accessory. A loose headset bag, kneeboard, or removable sunshade may be personal equipment rather than an installed replacement or modification article. An item attached to the aircraft, replacing an aircraft feature, interacting with a control or system, or represented as aircraft-specific installation hardware is more likely to require an installation and eligibility determination.

Questions to Ask

QUESTION		WHY IT MATTERS
1	Is it attached, substituted, or integrated?	Does it replace, extend, cover, fasten to, or alter an aircraft part or system?
2	Was it marketed for installation?	Aircraft-specific listings, model references, and installation instructions matter.
3	Can it affect airworthiness?	Consider controls, visibility, defrost airflow, egress, fire behavior, load paths, and loose-object hazards.
4	What is the production basis?	TC/PC, PMA, TSOA, standard part, commercial part, owner-produced, certificate-holder fabrication, or other FAA approval.
5	What is the installation basis?	Determine whether the work is maintenance, preventive maintenance, a minor alteration, or a major alteration, and use the required data and approval path.
6	Can it be documented and traced?	Record the source, material/process information, inspection, applicability, and maintenance entry.
CONSERVATIVE RULE If the item interfaces with the aircraft, performs an aircraft function, or is marketed as a model-specific aircraft installation, stop treating it like ordinary consumer merchandise and establish its eligibility before installation.		

Experimental Aircraft Are Different, Not Unregulated

The part 21 production-approval restriction at issue concerns articles reasonably likely to be installed on type-certificated products. Experimental aircraft operate under a special airworthiness certificate and their operating limitations. That can provide substantially more flexibility, but the aircraft's operating limitations, maintenance requirements, condition-inspection rules, and safe-operation obligations still control.

Action Guide for Owners and Maintainers

If a Listed MadeByMike3D Article Is in Inventory

- Identify and segregate the article.
- Mark or control it to prevent accidental installation.
- Retain purchase records, packaging, photographs, listings, and correspondence.
- Determine whether a lawful eligibility basis exists before release from quarantine.
- Provide the FAA the requested discovery, source-identification, and disposition information.

If a Listed Article Is Already Installed

- Do not assume the airplane is automatically unsafe, but do not ignore the notice.
- Identify the article and installation, review the maintenance records, and determine how eligibility and installation approval were established.
- Evaluate interference, attachment, material condition, flammability, system effects, and other airworthiness concerns appropriate to the article.
- Coordinate removal, replacement, or an FAA-acceptable resolution with an appropriately certificated mechanic, repair station, and the FAA when needed.
- Make accurate maintenance records for any removal, reinstallation, repair, or alteration performed.

Before Installing Any 3D-Printed Article

CHECK	VERIFY BEFORE INSTALLATION
Aircraft	Identify the aircraft, serial-number applicability, type design, and operating limitations.
Function	Define what the article replaces, modifies, supports, covers, redirects, or attaches to.
Design	Identify the drawing, dimensions, tolerances, material, process, and substantiation basis.
Production	Document the applicable § 21.9 pathway.
Conformity	Verify the finished article conforms to the design and is in a condition for safe operation.
Installation	Classify the work and use the required maintenance or alteration data.
Records	Complete the required maintenance entry and retain supporting traceability.

Practical Takeaways

- Do not reject a part solely because it was 3D printed.
- Do not accept a part solely because it looks simple, is nonstructural, or came from a popular online seller.
- Separate production eligibility from installation approval. Both must be addressed when both apply.
- Treat owner-produced parts as a documented production pathway, not a label applied after purchase.
- For interior parts, consider flammability and functional interference in addition to fit and strength.
- When the item is arguably personal equipment rather than an installed article, document the facts instead of relying on an invented “permanently attached” rule.
- When in doubt, quarantine first and resolve eligibility before installation.

Primary Sources

- [FAA UPN 2026-AAE-EHL-20250507-177](#)
- [FAA Suspected Unapproved Parts Program](#)
- [14 CFR § 21.9, Replacement and modification articles](#)
- [FAA PMA design approval and exceptions guidance](#)
- [AC 20-62E, Eligibility, Quality, and Identification of Aeronautical Replacement Parts](#)
- [AC 21-29D, Detecting and Reporting Suspected Unapproved Parts](#)
- [FAA Additive Manufacturing for TSO Applications](#)
- [FAA Q1 2026 Small Airplane Issues List](#)

Scope and Disclaimer

This guide summarizes public regulations and FAA materials available on August 26, 2026. The regulation, the aircraft's approved data and operating limitations, and current FAA determinations control if they conflict with this guide. Eligibility and installation decisions depend on the specific article, aircraft, production history, intended function, and work performed. This guide is educational information, not legal advice or an FAA approval.

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