

Repair Station Training

Suspected Unapproved Parts

Detecting and Reporting Unapproved Parts

Information & References

Title 14 CFR

Part 1
Part 21
Part 43
Part 45
Part 91
Part 121
Part 135
Part 145

Advisory Circular

AC 21-29-B
AC 20-62

General FAA Info

"Suspected Unapproved
Parts" Program Plan (Report
found on FAA Web Site)

SUP Web Site

[http://www.faa.gov/avr/sups/
index.cfm](http://www.faa.gov/avr/sups/index.cfm)

FAA SUP Address

SUP Program Office AVR-20
45005 Aviation Drive
Suite 214
Dulles, VA 20166

The Goal of *SUP* Training

Suspected Unapproved Parts training provides guidance to Repair Station Supervisors, Inspectors and Technicians in the detection and reporting of suspected unapproved parts (SUP).

This SUP Training embraces the vision of the SUP Task Force which is

To promote the highest level of aviation safety by eliminating the potential safety risk posed by the entry of "unapproved parts" in the U.S. aviation community.

Suspected Unapproved Parts Program Plan
Executive Summary, p. vi.

Outline of *SUP* Training

Introduction

Understanding the Exceptions

I. Definitions

Defining terms relevant to SUP

II. Detection

Steps for Detecting Suspected Unapproved Parts

III. Reporting

What To Do once SUP are detected.

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CFR

Title 14 CFR Part 43.13(b) Performance Rules

(b) Each person maintaining or altering, or performing preventive maintenance, shall do that work in such a manner and use materials of such a quality, that the condition of the aircraft, airframe, aircraft engine, propeller, or appliance worked on will be at least equal to its original or properly altered condition (with regard to aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness).

Title 14 CFR Part 21.303 Replacement and modification parts.

(a) Except as provided in paragraph (b) of this section, no person may produce a modification or replacement part for sale for installation on a type certificated product unless it is produced pursuant to a Parts Manufacturer Approval issued under this subpart.

How SUP Applies to the Goal of Maintenance . . . Understanding the regulations.

While Part 43.13(b) does not address “approved parts” specifically **the issue of the quality of parts factors into the goal of maintenance which is to return the article to its “original or properly altered condition.”**

Introduction Understanding the Exceptions

As stated in the Suspected Unapproved Parts Program Plan
3.0 Terminology 3-2

“The language of 14 CFR § 43.13 can be construed to give mechanics, repair stations, and airlines some flexibility in selecting or even fabricating parts if they can determine that the item being worked on will be at least equal to its original or “properly altered condition.” Part 43 contains no explicit requirement that mechanics or repair stations use only “approved parts” or parts produced in accordance with Part 21.”

14 CFR Part 21.303 is the key regulation for understanding the approved parts issue.

The Exceptions are noted in Part 21.203 (b) they are:

- (1) Parts produced under a type or production certificate.
- (2) Parts produced by an owner or operator for maintaining or altering his own product.
- (3) Parts produced under an FAA Technical Standard Order.
- (4) Standard parts (such as bolts and nuts) conforming to established industry or U.S. specifications.

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Terms

Approved Parts

Counterfeit Parts

Distributors

Parts Manufacturing Approval

Production Approval Holder

Production Certificates

Standard Parts

Supplemental Type Certificates

Suspected Unapproved Part

Technical Standard Order Authorization

Type Certificates

Unapproved Part

**For additional terms see
AC 21-29B**

I. Definitions Defining terms relevant to SUP

The need for defining terms is discussed in Suspected Unapproved Parts Program Plan “3.0 Terminology”

Issue: *The concept of “approved parts” versus “unapproved parts” is not well understood because there is no single, comprehensive definition of an “approved part” or other key terms used in the discussion of SUP issues.*

Recommendation: *The FAA should adopt definitions of the following main terms used with regard to parts eligible for installation in type certificated products to ensure that use of the terminology in government and the public is consistent and promotes a common understanding and use of the concepts: “approved part;” “unapproved part;” standard part; and counterfeit part. Such definitions are intended for the purpose of this Proposed Program Plan as well as for the purpose of future respective guidance documents and for colloquial use, as opposed to legal definitions. Hence, the Task Force does not recommend regulatory changes to adopt the definitions.*

Discussion: *The regulations do not explicitly state in a single place when a part is acceptable, or eligible, for installation in terms of its manufacture, documentation, and maintenance status; however, all of these factors — i.e., the part’s origin (be it through an FAA-approval or other acceptable manufacture), its current condition in terms of maintenance, and the documentation for its origin and maintenance — are addressed separately in the regulations and are related to a part’s acceptability, or eligibility, for installation.*

The following Definitions are derived from the AC, and the Suspected Unapproved Parts Program Plan.

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Approved Parts

Approved Parts- are identified as parts which have met one of the following requirements:

1. Produced in accordance with a Parts Manufacturer Approval (PMA).
2. Produced in accordance with a Technical Standard Order Authorization (TSOA).
3. Produced during the Type Certificate (TC) or the Supplemental Type Certificate (STC).
4. Produced under a (TC) without a separate production authorization and an Approved Production Inspection System (APIS).
5. Produced under a Production Certificate (PC).
6. Produced in accordance with an approval under a bilateral airworthiness agreement. (Manufactured in other countries recognized and approved by the FAA)
7. Approved in any other manner acceptable to the Administrator.
8. Produced as standard parts that conform to established industry or U.S. specifications. (E.g. MS, AN, SAE)
9. Produced by an owner or operator for the purpose of maintaining or altering their own product.
10. Manufactured by a repair station or other authorized person during alteration in accordance with an (STC) or Field Approval (which is not for sale as a separate part- only repair).
11. Fabricated by a qualified person in the course of a repair for the purpose of returning a (TC) product to service (which is not for sale as a separate part- only repair).

Note: In summary, "Approved Parts" are those which are produced in accordance with the means outlined in FAA part 21, maintained in accordance with FAA parts 43 and 91, and meet applicable design standards.

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Counterfeit Parts

A part made or altered so as to imitate or resemble an “Approved Part” without authority or right and with the intent to mislead or defraud by passing the imitation as original or genuine.

Distributors

Brokers, dealers, re sellers, or other persons or agencies engaged in the sale of parts for installation in TC aircraft, aircraft engines, propellers, and in appliances.

Parts Manufacturing Approval (PMA) [issued to first tier suppliers]

FAA approval for design, manufacturing and installation of modification and replacement parts for sale and for installation on type certificated products.

Production Approval Holder (PAH)

Anyone approved by the FAA to produce airworthy parts. (E.g. PMA, TSOA, PC).

Production Certificates (PC) [issued to OEM]

Certificates issued by the FAA for the manufacturing of products (aircraft, engines and propellers).

Standard Parts

A part manufactured in complete compliance with an established industry or U.S. government specification which includes design, manufacturing, test, and acceptance criteria, and uniform identification requirements.

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Supplemental Type Certificates- STC) [issued to anyone]

Certificates issued by the FAA for minor changes of design on TC products (aircraft, engines, and propellers).

Suspected Unapproved Part (SUP)

A part, component, or material that is suspected of not meeting the requirements of an Approved Part.

Technical Standard Order Authorization (TSOA) [issued to anyone]

FAA approval for design and manufacturing of articles for which the FAA has established a performance standard. (APUs, wheels, brakes, avionics, instruments)

Type Certificates (TC) [issued to OEM]

Certificates issued by the FAA for design on products (aircraft, engines, and propellers).

Unapproved Part

A part, component, or material that does not meet the requirements of an Approved Part.

The FAA recognizes three categories for all parts.
Approved Parts
Unapproved Parts
Suspected Unapproved Parts
Knowing the difference is key to detection of SUPs.

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II. Definitions Steps for Detecting Suspected Unapproved Parts

A. Procurement Procedures

Procedures to ensure the purchasing of approved parts.

1. **Establish vendor audits** that will identify distributors who possess purchasing, inspection and documentation system which ensures traceability of parts to an FAA approved source.
(Also consider Supplier Evaluations under Part 21 that requires the quality system of a PAH to provides a means of evaluating suppliers. See AC 21-20B).
2. **What To Look Out For!** The following should raise suspicion.

Exceptionally Low Prices

A quoted or advertised price which is significantly lower than the price quoted by other distributors and / suppliers of the same part.

Exceptionally Short Delivery Schedule

A delivery schedule which is significantly shorter than that of other distributors and / or suppliers (when the stock of a like item is exhausted).

Outrageous Claims

Sales quotes or discussions from unidentified distributors which create the perception that an unlimited supply of parts, components, or materials are available to the end user.

Lack of Documentation

A distributor and / or supplier's inability to provide substantiating documentation that the part was produced pursuant to an FAA approval; or inspected, repaired, over hauled, preserved or altered in accordance with the CFR.

Repair Stations must include processes in their purchasing, receiving, inspection and service operations to detect unapproved parts. Because unapproved parts may be difficult to detect these processes must be diligently practiced to be effective. The following guidelines are derived from AC 21-29B.

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OK!

7 Forms of Positive Identification

1. FAA Form 8130-3, Airworthiness Approval Tag.
2. Joint Aviation Authorities (JAA) Form One.
3. Maintenance records or release document with approval for return to service.
4. FAA TSO markings.
5. FAA PMA markings.
6. Shipping ticket / invoice from Production Approval Holder.
7. Direct ship authority letter from Production Approval Holder.

B. Acceptance Procedures

Procedures implemented to identify Suspected Unapproved Parts during Receiving Inspection and prevent their acceptance. **8 Steps**

1. Confirm the packaging of the part identifies the supplier or distributor, and is free from alteration or damage.
2. Verify that the actual part and delivery receipt reflect the same information as the purchase order regarding part number, serial number, and historical information (if applicable).
3. Verify that the identification on the part has not been tampered with (e.g., stamped over, label, or part /serials improper or missing, vibro-etch or serial numbers located at the other than the normal location).
4. Ensure that the shelf life and/or life limit has not expired, if applicable.
5. Conduct a visual inspection of the part and supporting documents to the extent necessary to determine if the part is traceable to an FAA-approved source. See the **7 Forms of Positive Identification**.
6. Evaluate any visible irregularities. (E.g. altered or unusual surface, absence of required plating, evidence of prior usage, scratches, new paint over old, attempted exterior repair, pitting or corrosion).
7. Conduct random sampling of standard hardware packaged in large quantities in a manner which corresponds to the type and quantity of the parts.
8. Segregate parts of questionable nature and attempt to resolve issues regarding questionable status of part (e.g. obtain necessary documentation if inadvertently not provided, or determine if irregularities are a result of shipping damage and handle accordingly).

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Repair Station Manual

Your FAR Part 145 Repair Station Manual may describe procedures for reporting Suspected Unapproved Parts.

FAA SUP Contact Info

FAA
SUP Program Office, AVR-20
45005 Aviation Drive,
Suite 214
Dulles, VA 20166-7541

FAX (703)-661-0113

Phone (703)-661-0580

III. Reporting What To Do, once SUP are detected.

1. Notify the Quality Control Manager of any items suspected.
2. If the Quality Control Manager confirms the Suspected Unapproved Part, he will notify the customer and the FAA by form 8120-11.
3. These items will be tagged appropriately with the discrepancy and segregated from the shop.

Simple things to remember . . .

Knowing your supplier's is one of the most reliable defenses against unapproved parts.

When handling parts remember this rule . . . When in doubt don't install - investigate.