



CIVIL AVIATION AUTHORITY
OF THE PHILIPPINES

ADVISORY CIRCULAR AC 05-005

HANDLING OF SUSPECTED UNAPPROVED AIRCRAFT PARTS

SECTION 1 POLICY & GENERAL INFORMATION

1.1 PURPOSE

This Advisory Circular (AC) provides information and guidance to the aviation community for detecting suspected unapproved parts (SUP) and reporting them to the Civil Aviation Authority of the Philippines (CAAP).

1.2 STATUS OF THIS ADVISORY CIRCULAR

This AC is an original issuance.

1.3 BACKGROUND

- A. To determine that the installation of a part complies with the applicable regulations, the installer of the part is ultimately responsible for establishing that the part conforms to its type design and is in a condition for safe operation ("airworthy").
- B. This AC includes definitions of various terms (e.g., surplus, as is) and outlines a means by which the installer can make the required determinations.
- C. To enable compliance with the regulations, and offer further guidance and clarification relevant to the eligibility of aeronautical replacement parts, AC 05-4004 Replacement Parts, and may be used for additional guidance.

- Aircraft parts which are for sale that are not represented as being "airworthy" or eligible for installation on a TC product are not considered SUP.
- It is not contrary to the PCARs to sell aircraft parts "as is" or for decorative purposes.
- It is imperative that the buyer request and receive the necessary documentation to substantiate the status of the part!

1.4 APPLICABILITY

- A. This advisory circular is applicable to all aircraft registered in the Philippines and the parts that are installed on those aircraft.
- B. It is also applicable to the performance standards for persons performing maintenance and signing maintenance release for those parts.

- Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.
- Where a regulation contains the words "prescribed by the Authority," the AC may be considered to "prescribe" a viable method of compliance, but status of that "prescription" is always "guidance" (never regulation).

1.5 RELATED REGULATIONS

The following regulations are directly applicable to the guidance contained in this advisory circular—

- PCAR Part 5: Continuing Airworthiness of Aircraft
- PCAR Part 6: Approved Maintenance Organizations
- PCAR Part 8: Operations of Aircraft

1.6 RELATED PUBLICATIONS

For further information on this topic, individuals, organizations and other entities are invited to consult the following publications—

1) Civil Aviation Authority of the Philippines (CAAP)

- ◆ AC 05-003, Disposition of Unsalvageable Parts & Materials.
- ◆ AC 05-004, Eligibility & Traceability of Replacement Parts.

Copies may be obtained from the CAAP Flight Standards Inspectorate Service.

2) International Civil Aviation Organization (ICAO)

- ◆ Annex 8, Airworthiness of Aircraft
- ◆ Document 9760, Airworthiness Manual

Copies may be obtained from Document Sales Unit, ICAO, 999 University Street, Montreal, Quebec, Canada H3C 5H7.

1.7 DEFINITIONS & ACRONYMS

A. The following definitions apply to this advisory circular—

- 1) **Director.** The Director of Civil Aviation or any person to whom authority is delegated in the matter concerned.
- 2) **“Approved Parts.”** The term “approved parts” in quotations is used throughout this AC in a colloquial sense. The term “approved parts” in quotations is not synonymous with “a part that has received a formal CAAP approval.” “Approved parts” are identified as parts which have met one of the following requirements—
 - (a) Produced in accordance with a Parts Manufacturer Approval (PMA) issued under an acceptable signature state’s Authority procedures/authorization.
 - (b) Produced in accordance with a Technical Standard Order Authorization (TSOA) issued under an acceptable signature state’s Authority procedures/authorization..
 - (c) Produced during the Type Certificate (TC) application process under, or the Supplemental Type Certificate (STC) application process.
 - (d) Produced under a TC without a separate production authorization, and an Approved Production Inspection System (APIS).
 - (e) Produced under a Production Certificate (PC) (including by a licensee if produced under PC authority).
 - (f) Produced in accordance with an approval under a bilateral airworthiness agreement.

- Parts which have been maintained, rebuilt, altered, or overhauled, and approved for return to service in accordance with Parts 4 and/or 5 are considered to be “approved parts.”
- Parts which have been inspected and/or tested by persons authorized to determine conformity to approved design data may also be found to be acceptable for installation.

- (g) Approved in any other manner acceptable to the Director.
- (h) Produced as standard parts that conform to established industry specifications.
- (i) Produced by an owner or operator for the purpose of maintaining or altering their own product.
- (j) Manufactured by a repair station or other authorized person during modification in accordance with an STC or Field Approval (which is not for sale as a separate part), in accordance with part 4
- (k) 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) under Part 4.
- Standard parts are not required to be produced under an Approved Production Inspection System, therefore it is incumbent upon the installer (and the producer) to determine that the part conforms.
 - The part must be identified as part of the approved type design or found to be acceptable for installation under Part 4.
- 3) **Counterfeit Part.** 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.
- 4) **Distributors.** Brokers, dealers, resellers, or other persons or agencies engaged in the sale of parts for installation in TC aircraft, aircraft engines, propellers, and in appliances.
- 5) **Part(s) Not Acceptable For Installation.** A part which is not acceptable for installation on an TC product. (Parts that are determined to be “approved parts” but are awaiting maintenance, have not yet been shown to be acceptable).
- 6) **Product.** An aircraft, aircraft engine, or propeller, as defined in Part 1 of the PCARs.
- 7) **Production Approval Holder (PAH).** The holder of a PC, APIS, PMA, or TSO Authorization who controls the design and quality of a product or part thereof.
- 8) **Reporter.** Any person who furnishes information regarding a SUP.
- 9) **Standard Part.**
- (a) A part manufactured in complete compliance with an established industry or government specification which includes design, manufacturing, test and acceptance criteria, and uniform identification requirements; or
- The organizations listed may publish one or both types of specifications.
 - CAAP will publicize determinations of parts which demonstrate conformity based solely on meeting performance criteria.
- (b) For a type of part which the CAAP has found demonstrates conformity based solely on meeting performance criteria, is in complete compliance with an established industry or government specification which contains performance criteria, test and acceptance criteria, and uniform identification requirements.
- The specification must include all information necessary to produce and conform the part, and be published so that any party may manufacture the part.
- 10) **Supplier.** Any person who furnishes aircraft parts or related services at any tier to the producer of a product or part thereof.

- 11) **Suspected Unapproved Part (SUP).** A part, component, or material that is suspected of not meeting the requirements of an “approved part.” A part that, for any reason, may not be “approved.”

An “approved part” which is used in an incorrect application should be addressed as a potential violation of PCAR Part 5, however it is not considered reportable as a SUP.

- ◆ Reasons may include findings such as a different finish, size, color, improper (or lack of) identification, incomplete or altered paperwork.

- 12) **Unapproved Part.** A part that does not meet the requirements of an “approved part” (refer to definition of “Approved Parts”). This term also includes parts which have been improperly returned to service (contrary to PCAR Parts 5 or 8) and/or parts which may fall under one or more of the following categories—

- (a) Parts shipped directly to the user by a manufacturer, supplier, or distributor, where the parts were not produced under the authority of (and in accordance with an CAA production approval for the part, such as production overruns where the parts did not pass through an approved quality system.

This includes parts shipped to an end user by a PAH’s supplier who does not have direct ship authority from the PAH.

- (b) New parts which have passed through a Production Approval Holder’s (PAH) quality system which are found not to conform to the approved design/data.

Parts damaged due to shipping or warranty issues are not required to be reported as SUP.

- (c) Parts that have been maintained, rebuilt, altered, overhauled, or approved for return to service by persons or facilities not authorized to perform such services under Parts 5 and/or 6.

- (d) Parts that have been maintained, rebuilt, altered, overhauled, or approved for return to service which are subsequently found not to conform to approved data.

- This would include parts produced by an owner/operator for the purpose of maintaining or altering their own product, which have been approved for return to service, and found not to conform to approved data.
- This does not include parts currently in the inspection or repair process, such as, parts removed for maintenance.
- Parts in this status may be considered not acceptable for installation.

- (e) Counterfeit parts.

- B. The following definitions apply to this advisory circular—

- 1) **AD** – Airworthiness Directive
- 2) **AMO** – Approved Maintenance Organization
- 3) **CofA** – Certificate of Airworthiness
- 4) **CofR** – Certificate of Registration
- 5) **ICAO** – International Civil Aviation Organization
- 6) **PAH** – Production Approval Holder
- 7) **PC** – Production Certificate
- 8) **PMA** – Part Manufacturer Approval
- 9) **STC** – Aircraft Supplemental Type Certificate
- 10) **SUP** – Suspected Unapproved Part

11) TC – Aircraft Type Certificate

SECTION 2 DISCUSSION OF APPLICABLE REGULATIONS

- A. A basic outline of the regulations may provide the necessary foundation to determine if a part should be suspect.
- B. The following overview illustrates the relationships between aircraft certification, airworthiness certificate issuance, and continued airworthiness.

For the purpose of simplifying this illustration, references herein pertain to aircraft that have been issued a Standard Certificate of Airworthiness.

2.1 ORIGINAL AIRCRAFT & COMPONENT CERTIFICATE

- A. PCAR Part 5 defines the procedural requirements for the issuance of TCs and changes to those certificates, PCs, Airworthiness Certificates, and the requirements for approval of certain materials, parts, processes, and appliances.
- B. PCAR Part 5 prescribes the requirements for identification of aircraft, aircraft engines and propellers that are manufactured under the terms of a type or production certificate; identification of certain replacement and modified parts produced for installation on TC products; and nationality and registration marking of Philippine-registered aircraft.
- C. Aircraft manufactured under a TC or PC are eligible for a Standard Airworthiness Certificate. This section further provides other circumstances in which a Standard Airworthiness Certificate may be issued to an aircraft that is proven to conform to a type design approved under a TC or STC.
- D. As stated on the Standard Airworthiness Certificate, this airworthiness certificate is effective as long as the maintenance, preventive maintenance, and modifications are performed in accordance with the regulations.

2.2 CONTINUING AIRWORTHINESS OF AIRCRAFT

- A. PCAR Part 5 contains regulations for maintenance, preventive maintenance, rebuilding, and modification.
- B. In accordance with the general performance rules in PCAR Part 5, the person performing maintenance, preventive maintenance, or modification shall use the—
 - 1) Methods, techniques and practices prescribed in the current manufacturer's maintenance manual, or
 - 2) Instructions for Continued Airworthiness (IFCA) prepared by its manufacturer; or
 - 3) Other methods, techniques, and practices acceptable to the CAAP.
- C. In accordance with PCAR Part 5, the work shall be done in such a manner, using material of such 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—
 - 1) Aerodynamic function,
 - 2) Structural strength,

The tools, equipment, and test apparatus necessary to assure completion of the work in accordance with accepted industry standards shall be used, and special equipment or test apparatus recommended by the manufacturer (or an equivalent acceptable to the CAAP) shall also be used.

- 3) Resistance to vibration and deterioration, and
- 4) Other qualities affecting airworthiness).

2.3 OPERATIONS OF AIRCRAFT

This regulation includes the owner/operator's responsibilities to maintain the aircraft in an airworthy condition, have it maintained and inspected in accordance with PCAR Part 5, and ensure record entries are made approving the aircraft for return to service.

SECTION 3 DETECTION

- A. The airworthiness of aeronautical products would be in question if the design and quality of the parts are unknown. Positive identification of unapproved parts can be difficult if the parts display characteristics similar to that of an "approved part."
- B. The following guidelines offer a means by which "approved parts" (and their sources) may be assessed.

3.1 ESTABLISHED PROCUREMENT PROCESS

- A. A procedure to ensure the procurement of "approved" parts should be established prior to purchasing parts and material for installation in TC products.
- B. This procedure should include the following as a minimum—
 - 1) Methods of identifying distributors and/or suppliers who have a documentation system, and receiving inspection system which ensures the traceability of their parts to an approved source.
 - 2) Methods of screening unfamiliar distributors and/or suppliers to determine if the parts present a potential risk of being "unapproved." The following are situations which may raise questions—
 - (a) A quoted or advertised price which is significantly lower than the price quoted by other distributors and/or suppliers of the same part.
 - (b) A delivery schedule which is significantly shorter than that of other distributors and/or suppliers (when the stock of a like item is exhausted).
 - (c) Sales quotes or discussions from unidentified distributors which create the perception that an unlimited supply of parts, components, or material are available to the end user.
 - (d) A distributor and/or supplier's inability to provide substantiating documentation that the part was produced pursuant to a National civil aviation authority approval; or inspected, repaired, overhauled, preserved or modified in accordance with the regulations.

To assist in alleviating issues regarding "lack of documentation" and improve "traceability," the Airline Suppliers Association maintains a listing of participants in a voluntary program on the Internet at the following address:
<http://www.airlinesuppliers.com>.

3.2 RECOMMENDED PARTS ACCEPTANCE PROCEDURES

- A. Procedures should include a means of identifying SUP during the receiving inspection and prevent their acceptance.
- B. Suggested areas to be addressed include the following—

- 1) Confirm the packaging of the part identifies the supplier or distributor, and is free from modification 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., serial number stamped over, label or part/serial numbers improper or missing, vibro-etch or serial numbers located at 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 approved source.
- 6) The following are examples of positive forms of identification—
 - ◆ FAA Form 8130-3, Airworthiness Approval Tag.
 - ◆ Joint Aviation Authorities (JAA) Form One.
 - ◆ Maintenance records or release document with approval for return to service.
 - ◆ TSO markings.
 - ◆ PMA markings.
 - ◆ Shipping ticket / invoice from PAH.
 - ◆ Direct ship authority letter from PAH.
- 7) 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).
- 8) Conduct random sampling of standard hardware packaged in large quantities in a manner which corresponds to the type and quantity of the parts.
- 9) 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).

SECTION 4 REPORTING PROCEDURES

- A. Reports of SUP may originate from numerous sources such as incoming/receiving inspections, audits, facility surveillance, complaints, political inquiries, accident or incident investigations, or various service difficulty reports.
- B. It is CAAP's policy to encourage the disclosure of information regarding aviation safety. As it is recognized that reporters may be concerned with the potential repercussions of reporting the discovery of parts which are alleged to be unapproved, the term "suspected unapproved parts" is utilized in this AC and throughout the reporting form.

Although reports may be made anonymously, the submission of the reporter's name is requested to enable the FSIS to verify information, and provide confirmation and/or follow-up to the reporter.
- C. CAAP Form 525, Suspected Unapproved Parts Notification, includes instructions for completion, and identifies the information needed to initiate a SUP investigation. It is can also be obtained from the CAAP

- D. If a reporter is not willing or able to complete the CAAP form they may report a SUP by calling the CAAP Flight Standards Inspectorate Service.

When reporting by telephone, refer to CAAP Form 525 as the required information (from the caller) will be transcribed onto this form.

- 1) Record the date the suspect part was discovered.
- 2) Provide the part name (i.e., nut, bolt, blade) or description of the suspected unapproved part.
- 3) Provide the part number or identification number on the part.
- 4) Provide the serial number of the part, if applicable.
- 5) Provide the quantity of suspect parts.
- 6) Provide the assembly name and assembly number (where the part was or could be installed).
 - ◆ Example -Part Name: BOLT
 - ◆ Part Number: PN 12345
 - ◆ Assembly Name: Main Landing Gear
 - ◆ Assembly Number: PN PG12389
- 7) Identify what type of aircraft the part was (or could be) installed on.
- 8) Provide the complete name and address of the company or person(s) who last supplied or repaired the suspect part.
- 9) Provide a brief description of the suspect part (discoloration, suspect marking, different material, etc.).
 - ◆ Provide a narrative stating why you feel the part is not approved.
 - ◆ Provide as much detail as necessary to enable an inspector to determine the status of the part.
- 10) Provide the complete name and address of company (or person) where the suspect part was found.
- 11) Check the appropriate block to reflect the affiliation of the person/company who discovered the part.
- 12) Record the date the Form 525 is being completed and submitted.
- 13) Provide the name, address and phone number of the person who is reporting the suspect part. This information is necessary in case the CAAP needs to get in touch with the reporter for more information.
- 14) Check or leave unchecked the blocks regarding-
 - ◆ If you want your name to remain confidential, please check that block.
 - ◆ If you do not wish to receive a letter acknowledging receipt of the Form 525 by the CAAP, please check that block
 - ◆ If you have provided additional information, photos, parts listing, etc., please check this block.
- 15) Forward the completed CAAP Form 525, Suspected Unapproved Parts Notification to CAAP.

● Please do not provide a PO Box address unless this is all you have.
 ● Check the appropriate box to designate the type of company.
 ● Please provide the certificate number in the space provided, if known..

End of Advisory Circular



RAMON S. GUTIERREZ

Director General

Date of Issue : **23 September 2011**

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