



CIVIL AVIATION  
ADMINISTRATION OF CHINA

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# ADVISORY CIRCULAR

No. : AC-21-01

Date: Feb. 4, 1993

## DETECTING AND REPORTING SUSPECTED UNAPPROVED PARTS

AIRCRAFT AIRWORTHINESS DEPARTMENT

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# DETECTING AND REPORTING SUSPECTED UNAPPROVED PARTS

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## 1. GENERAL

### 1.1 PURPOSE

This advisory circular (AC) provides guidance and requirements to the aviation community for detecting and reporting suspected unapproved aircraft parts to help them in correctly identifying unapproved aircraft parts and taking corrective actions. The Form AAC-118(2/93), Suspected Unapproved Parts Notification, is included, which provides a standardized method of reporting suspected unapproved parts to the airworthiness authority.

### 1.2 Authority

This AC is established under the chinese civil aviation regulations, " Certification Procedure for Civil Aviation Products and Parts " (CCAR- 21) and " Certification of Maintenance Organizations for Civil Aircraft ".

### 1.3 Reserved.

### 1.4 Relevant documentation

CCAR-21, " Certification Procedure for Civil Aviation Products and Parts " .

CCAR-145, " Certification of Maintenance Organization for Civil Aircraft " .

AC-21-02, " Eligibility, Quality, and Identification of Approved Replacement Parts " .

## 1.5 Scope

This AC is applicable to any person (an user of owner and/or maintenance organization of aircraft, or a manufacturer of aviation products) who concerned with installation of aviation parts. It may also be used as a guidance by the aviation industry or maintenance organizations in improving their existing quality control system or their ability to identify the unapproved aviation parts.

## 1.6 Background and Description

The airworthy of an aviation product is to ensure the product conforms to approved or validated design and in a condition for safe operation. In order for the product to continue to be airworthy, any replacement or modification parts installed in aircraft must also conform to an approved type design.

1.6.2 CCAR-21 Subpart H requires that materials, parts and appliances must be approved or validated

- (1) Under a Part Manufacturer Approval (CCAR-PMA);
- (2) Under an TSO Authorization (CCAR-TSOA);
- (3) In conjunction with the type certification for aviation products to which they installed;
- (4) Under approvals as imported materials, parts and appliances when applicable;
- (5) In any other manner approved by the CAAC.

The CCAR concerning each of these production approvals require the holder to establish and maintain a quality control or fabrication inspection system (depending upon type of production approval) that ensures that each part produced presented for approval conforms to its approved or validated type design and is in a condition for safe

operation .

Note: Parts used in a one-only Supplemental Type Certificate modification may be produced under the requirements for Supplemental Type Certificate in CCAR-21 Subpart C.

1. 6. 3 The airworthiness of an aviation product containing parts not produced in accordance with the above requirements (unapproved part) are in question because the parts type design and quality are unknown. Identification of unapproved parts is often difficult due to the similarity of unapproved parts characteristics to those of approved parts.

1. 6. 4 Reports of suspected unapproved parts may originate from various sources such as: audits to manufacturer, user, or maintenance organization, facility surveillance, letters or telephone calls, public inquiries, accident or incident investigations, service difficulty reports, etc.

1. 6. 5 AC-21-02, Eligibility, Quality and Identification of Approved Aviation Replacement Parts, provides guidance and information regarding eligibility and traceability of aviation parts and materials to be installed on type certificated/validated products.

## 2. Definition

### 2. 1 Unapproved Parts

A part, component or material in any of the following conditions:

2. 1. 1 Not compliance with the approved procedures described in CCAR-21 Subpart H.

2. 1. 2 Not compliance with the maintenance work criteria set forth in CCAR-145.

2. 1. 3 Not conform to the approved or validated type design.

2. 1. 4 Not conform to the CAAC-AAD validated industry or national

specifications.

Note: Unapproved parts include, but not limited to:

(1) "Counterfeit" or fraudulently marked parts, components or materials:

(2) Parts shipped directly to users by a manufacturer, who does not hold a production approval for the part or parts shipped directly to users by supplier or distributor who does not get the authority from the holder of a production approval for the part (e.g., production overruns); and

(3) Parts that have been repaired or maintained and returned to service by persons or facilities not authorized under CCAR-145.

## 2.2 Reporter

Any person who submits a Suspected Unapproved Part Notification form to the CAAC-AAD or calls the CAAC-AAD to provide information concerning a suspected unapproved part.

## 2.3 Production Overruns

Parts produced by a manufacturer in addition to those authorized by the production certificate holder.

## 2.4 Airworthiness Authorities

They are the Aircraft Airworthiness Department, the Aircraft Airworthiness Center, the District Aircraft Airworthiness Divisions, and the Aircraft Certification Centers under the CAAC.

## 3. Detection of Unapproved Parts

### 3.1 Procurement Control

A procedure to prevent procurement of unapproved parts should be established prior to purchase parts and materials for installation in type certificated products. This procedure should include the following as a

minimun :

3. 1. 1 Methods to establish qualified suppliers to ensure they are authorized to produce or distribute parts they supply.

3. 1. 2 Criteria to identify and screen potential unapproved parts suppliers. The criteria should include the following consideration :

(1)The quoted price or the price advertised in trade magazines in significantly lower than the price quoted other suppliers of the same part.

(2)A delivery schedule that is significantly shorter than that of other suppliers of the same part when existing stocks are exhausted.

(3)The inability of a supplier to provide drawings, specifications, or analytical and testing data demonstrating the conformity of the parts supplied.

(4) The inability of a supplier to provide evidences of airworthiness approval.

### 3. 2 Supplier Product Acceptance

Procedures should be established to identify and screen potential unapproved parts provided by suppliers and prevent acceptance of the unapproved parts. These procedures should include the followings :

3. 2. 1 A procedure for receiving inspection activities that would help to detect unapproved parts. This procedure should include the following indicators :

(1)A visual inspection to determine if the product container is marked with another supplier's name, is unmarked, or damaged.

(2)A cross check of the purchase order with the delivery receipt for proper part number or component log history card.

(3)A means of ensuring that shelf has not expired.

(4) A means of verifying that part identification requirements have been met (e.g. serial number stamped over, label is improper or missing, vibro-etch or serial numbers located at other than the normal location).

(5) A means of determining evidence of visual defects or abnormalities (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).

(6) A sampling plan that is adjusted (tightened or loosened) to match individual part types and quantities, i.e., bolts, nuts, or other standard hardware packaged in large quantities in a single container.

3.2.2 Supplier audits. Procedures should be established to conduct audits of suppliers on a scheduled basis, to ensure that suppliers have established and continue to maintain the quality system specified in purchase order. The following are examples of subsystems that should be included in an audit program.

(1) Design Data Control (as applicable).

(2) Supplier Control.

(3) Material Handling/Control.

(4) Manufacturing/Assembly Control.

(5) Tool and Gauge Control.

(6) Tests and Inspections.

(7) Records.

Note: Additional information and guidance may be obtained from AP-21-04R2, Production Certification and Surveillance Procedures.

#### 4. Reporting Procedures

4.1 Form AAC-118 (2/93) should be used for recording and

analysing the information of suspected unapproved parts. When a suspected unapproved part is discovered, Form AAC-118(2/93) should be completed and forward immediately to Civil Aviation Administration of China, Aircraft Airworthiness Department (CAAC-AAD) to the address:

155 Dong Si Street-West

Beijing, 100710

4.2 In addition, suspected unapproved parts may also be reported by telephone No.64012233 ext. to the CAAC-AAD.

4.3 Although submission of the reporter's name in the form is strictly voluntary, it is a helpful information for the airworthiness authority to determine and verify facts and follow-up with the reporter during the course of the investigation. It should be noted that the identity of the reporter may be kept confidential on request.

4.4 Ensuring the safety of civil aviation, safe guarding the public interest and promoting the development of the civil aviation is our purpose of the airworthiness certification. In order to eliminate any potential unsafety, it is the responsibility and duty for each citizen to report an unapproved part.

#### 5. Investigation, Notification and Actions

5.1 The airworthiness authority will take necessary investigation immediately according to the information provided upon the reception of a reporting on suspected unapproved parts.

5.2 A notice or emergency notice will be delivered to relevant organizations in and out of the country according to the investigation result, and proper actions will be taken (such as issue an AD) by the airworthiness authority.



5.3 Any Person or organization who purchase or sells unapproved parts will be dealt with under State Council Issued Peoples Republic of China Regulations for Airworthiness of Civil Aircraft, and No. CAAC(1989)114 document, Provisional Penalizing Regulations for Airworthiness of Civil Aircraft according to the seriousness of his (or her) case. Those person whose case is serious enough to be considered have committed a crime, will be found out his (or her) criminal responsibilities by the appropriate juridical departments.

6. Right to Interpret

The CAAC-AAD is responsible for the interpretation of this AC.

ATTACHMENT 1

Form AAC- 118 (2 / 93), " Suspected Unapproved Parts Notification " .

ATTACHMENT 1

**SUSPECTED UNAPPROVED PARTS NOTIFICATION**

1. Date:		2. Nomenclature:	
3. Part No.:		4. Serial No.:	
5. Next Assembly Name & No.:	6. Quantity:	7. Make/Model:	
8. Part Manufacturer/Distributor.			
Name: _____			
Street: _____		City: _____	
State/Country: _____		Zip: _____	
9. Description of Complaint:			
10. Date Suspected Unapproved Part Discovered:			
11. Location Where Part was Discovered:			
Name: _____			
Street: _____		City: _____	
State/Country: _____		Zip: _____	
Check One That Applies:			
<input type="checkbox"/> Manufacturer		<input type="checkbox"/> Supplier	
<input type="checkbox"/> Distributor		<input type="checkbox"/> Repair Station	
<input type="checkbox"/> Other _____			
12. Reporters Name:			
Name: _____		Telephone No.: _____	
Street: _____		City: _____	
State/Country: _____		Zip: _____	
13. <input type="checkbox"/> Check here if you wish your identity to be kept confidential			

AAC-118(2/93)

## ATTACHMENT 1

## SUSPECTED UNAPPROVED PARTS NOTIFICATION

1. Date: November 22, 1991		2. Nomenclature: Support Assembly	
3. Part No.: 644179		4. Serial No.: 8120	
5. Next Assembly Name & No.: Housing assembly, P/N 614113	6. Quantity: 16	7. Make/Model: Boeing 727	
8. Part Manufacturer/Distributor. Name: <u>Amhurst Parts Manufacturers</u> Street: <u>795 Richard Road</u> City: <u>Boston</u> State/Country: <u>Massachusetts</u> Zip: <u>02190</u>			
9. Description of Complaint: During installation of a support assembly P/W 644179 onto the housing assembly P/N 614113, it was noted that the support assembly looked and weighed different than usual. An analysis of the parts by Acme Testing Company revealed the assemblies are dimensionally correct, however, the material used was incorrect. The material used would crack under prolonged stress and vibration.  The 16 assemblies were purchased from Jones Parts Distributorship, 122 Smith Road, Boston, MA 02170 on September 15, 1991. (See attached invoices)			
10. Date Suspected Unapproved Part Discovered: November, 1991			
11. Location Where Part was Discovered: Name: <u>Logan Repair Center, Building 101</u> Street: <u>Logan Airport</u> City: <u>Boston</u> State/Country: <u>Massachusetts</u> Zip: <u>02190</u>  Check One That Applies: <input type="checkbox"/> Manufacturer <input type="checkbox"/> Supplier <input type="checkbox"/> Distributor <input type="checkbox"/> Repair Station <input type="checkbox"/> Other _____			
12. Reporters Name: Name: <u>Mr. John T. Smith</u> Telephone No.: <u>617 555-0202</u> Street: <u>P.O. Box 661</u> City: <u>Boston</u> State/Country: <u>Massachusetts</u> Zip: <u>01291</u>			
13. <input type="checkbox"/> Check here if you wish your identity to be kept confidential			

AAC-118(2/93)

Form AAC-118(2/93) Instruction

1. Date notification is submitted.
2. Identify the name of the suspected unapproved part.
3. Part number, or any other number on part.
4. Serial number of part.
5. List next higher assembly that suspected unapproved part is assembled into (i.e., fuel pump, engine, landing gear) and list part number if known.
6. Quantity of suspected unapproved parts found or identified.
7. Make and model number of the aircrafts or related suspected unapproved part is applicable to.
8. Enter identification of the commercial source of the suspected unapproved part. If part is identified with part manufacturer or distributor marking, please enter.
9. Describe any pertinent facts relating to the suspected unapproved part and identify where part may be inspected (provide photos, invoices, ect., if available).
10. Date suspected unapproved part was discovered.
11. Locations where suspected unapproved part was discovered (Air Carrier, Manufacturer or Distributor name and address in full). Check block that best describes facility. If "other" is selected, please specify.
12. Reporter, s name and address in full. This information may be used by the airworthiness authorities only to obtain additional information, if warranted.
13. Check this box if your identity to be kept confidential.

Completed form should be forwarded to :

Civil Aviation Administration of China

Aircraft Airworthiness Department  
155 Dong Si Street-West  
Beijing, 100710  
P. R. China