Detecting and Reporting Suspected Unapproved Parts

Comments on the Draft Advisory Circulator 21-29 published at http://www.faa.gov/aircraft/draft_docs/ac/ and http://www.faa.gov/aircraft/draft_docs/media/AC-21-29D.pdf.

Submitted to the Federal Aviation Administration via email at Joseph.palmisano@faa.gov

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Submitted to the Federal Aviation Administration via email at Joseph.palmisano@faa.gov

September 28, 2015

Mr. Joseph Palmisano
Federal Aviation Administration
Aircraft Certification Service, Production Certification Section, AIR-112
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Dear Mr. Palmisano:

Please accept these comments in response to Detecting and Reporting Suspected Unapproved Parts, Draft Advisory Circular 21-29D, which was published for public comment at http://www.faa.gov/aircraft/draft_docs/ac/. The comment period for the draft AC ends September 28, 2015.

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Who is ASA?

Founded in 1993, ASA represents the aviation parts distribution industry, and has become known as an organization that fights for safety in the aviation marketplace.

ASA and ASA's members are committed to safety and seek to give input to the Department of Transportation, the Federal Aviation Administration, and other federal and international government agencies and regulators, regarding government policies so that the aviation industry and the government can work collaboratively to create the best possible guidance for the industry, aircraft operators, and the flying public.

ASA is an active participant in efforts to increase and support reliability and safety in the aerospace supply chain. ASA is the database manager for the FAA's AC 00-56 Voluntary Industry Distributor Accreditation Program. Further, ASA has a number of programs designed to support aviation safety, like the ASA-100 accreditation program which is coordinated with FAA AC 00-56B. ASA works with the FAA and other non-US regulatory authorities to develop and maintain programs designed to support aviation safety as it relates to distribution, maintenance and installation of aircraft parts.

ASA has over 570 members. ASA's members purchase and distribute aircraft parts around the world and therefore play a vital role in ensuring the integrity of the aviation parts supply chain; many ASA members also produce or repair aircraft parts. ASA's members are committed to the detection and reporting of suspected unapproved parts and regularly work with the FAA on SUPs-related matters.

ASA's members are typically small businesses. Most of them employ between 2 and 20 employees.

Comments

Paragraph 5.1 Supplier Evaluations Could Cause Confusion

Issue

Advisory Circular 21-29 addresses the detection and reporting of Suspected Unapproved Parts (SUPs). The inclusion of production approval holder (PAH) supplier evaluation requirements could cause confusion.

Analysis

AC 21-29 addresses identification and reporting of SUPs. This is an important aspect of ensuring the airworthiness of parts in the supply chain, and many elements are considered by those parties seeking to detect SUPs. The inclusion of PAH supplier evaluation considerations is out of place and adds potential sources of confusion to the guidance.

Paragraph 5.1 explains that Part 21 requires that a PAH's quality system provide means of ensuring supplier-produced components and services conform to FAA-approved design data. Although this is correct, this PAH-specific guidance is out of place in this AC for two reasons.

First, a PAH is a person who not only holds a production certificate, but also controls the design and quality of a product or part. The PAH is therefore in a position to identify any non-conforming materials, parts, or subassemblies prior to their incorporation into a completed airworthy part. Being in such a position allows the PAH to ensure quality of the parts it produces under its PC and identify any part that does not conform to the approved design prior to the completed part entering the supply chain. This mechanism, although important, is out of place in guidance related to the detection of SUPs and is better addressed by the PAH's quality system and through guidance such as AC 21-43.

Second, the inclusion of supplier evaluation procedures could cause confusion among a significant percentage of the parties to whom AC 21-29 is intended to apply. These parties are typically third-party distributors and purchasers of aircraft parts to with the PAH supplier evaluation requirements do not apply. These parties may read paragraph 5.1 as requiring them to undertake evaluations and selections of other suppliers, which is unnecessary for third-party purchasers of completed parts. This would draw important quality resources away from the actual detection and reporting of SUPs.

Paragraph 5.1.1 acknowledges that the supplier evaluation function is not required for repair stations and non-PAH facilities. This indicates that the preceding paragraph (5.1) is unnecessary in serving the goals of AC 21-29, because the reader of the guidance will either be a person to whom the supplier evaluation requirements do not apply (e.g., a repair station or independent distributor), or a person to whom the requirement does apply (e.g., a PAH) in which case the requirement is already addressed through Part 21, AC 21-43, and the PAH's quality system.

Paragraph 5.1.1 does reference useful guidance in the form of ACs 20-154 and 20-62, but both pieces of guidance function independently and do not contribute to the guidance on detecting and reporting SUPs.

Recommendation

We recommend the omission of paragraphs 5.1 and 5.1.1 because they are not specifically necessary for the detection, identification, and reporting of SUPs and could lead to confusion. If necessary, cross references to ACs 21-43, 20-154, and 20-62 should be used.

Paragraph 5.2.1 Should Reference FAA AC 00-56

Issue

Paragraph 5.2.1 states that a procurement procedure should have methods to identify distributors and suppliers with a documentation system to ensure traceability to an approved source, but fails to refer to AC 00-56.

Analysis

Paragraph 5.2.1 articulates the first step in a procurement process intended to detect and identify, and report if necessary, suspected unapproved parts. The paragraph explains that a person purchasing aircraft parts should have in place methods of identifying distributors and suppliers who have a documentation and receiving inspection system the ensures traceability to an FAA-approved source.

One such method would be to rely on distributors accredited under AC 00-56. Distributors accredited under AC 00-56 must meet certain minimum quality standards that exceed that required by the Federal Aviation Regulations, undergo regular audits, and are listed in a continuously updated database of accredited distributors for ease of reference.

AC 00-56 accredited distributors must have quality systems that ensure parts documentation accurately reflects industry safety requirements. This documentation also helps in the detection of SUPs. AC 00-56 accredited distributors must have a receiving inspection process that confirms parts are accompanied by traceability documentation to a source, a procedure for removing and quarantining suspect or nonconforming material identified during receiving, and processes for maintaining documentation.

Although not every purchaser will obtain parts from an AC 00-56 accredited distributor, the AC 00-56 database is an effective way to identify distributors who have the required documentation systems in place.

Recommendation

We recommend inserting the following sentence in paragraph 5.2.1: *One such acceptable method is use of the FAA AC 00-56 database, which compiles a list of accredited distributors whose traceability meets minimum standards described in that Advisory Circulator.*

Paragraph 5.2.2 presents a bulleted list of questionable fact patters that may raise questions, however many of these bullets simply reflect the distribution industry business model

Issue

Paragraph 5.2.2 states the procurement process must have methods for screening unfamiliar distributors or suppliers to determine if the parts present a potential risk of being unapproved. The paragraph then presents a bulleted list of fact red flags that may raise questions; however in many cases these red flags actually reflect the business model of the aviation distribution community.

Analysis

The fact patterns given in the bulleted list do describe methods for screening unfamiliar distributors or suppliers, but rather describe a series of "questionable" situations. However, the situations described often illustrate the very benefits offered by the aviation distribution community.

The list is neither exhaustive nor conclusive, and the questionable fact patterns can easily be resolved by sound screening methods and due diligence. Rather than present as questionable the practices that are actually benefits of the aviation distribution community, the guidance should focus on suggesting screening methods and avoid condemning situations which in many cases go to the very essence of the benefit offered by third-party aviation parts distributors and suppliers.

Significantly Lower Prices

The first bullet suggests that a quoted or advertised price that is significantly lower than that quoted by other distributors or suppliers is a red flag. Although this may sometimes be the case, a significantly lower price is not dispositive of the approval status of a part.

In many cases, a significantly lower price may reflect the actual business model of a distributor. Frequently, distributors purchase aircraft parts for mere cents on the dollar. These parts may be surplus parts or parts in need of repair. The parts may also be parts that were installed on a product or appliance when an unrelated part was damaged, rendering the product or appliance un-airworthy. The undamaged parts may then be sold to a distributor at a steeply discounted rate because they are more difficult to sell. In the case of life-limited parts, these parts may also reflect significantly fewer cycles than might otherwise be expected in a used part.

The distributor purchases these parts and takes the necessary steps to verify or return the parts to an airworthy condition. In some cases a part may be beyond economic repair or unable to be returned to an airworthy condition. In these instances the distributor takes a loss and scraps the part. In other cases the distributor is able to have the parts returned to an airworthy condition and obtains an 8130-3 tag. The distributor may then sell the airworthy parts at tens of cents on the dollar.

These prices may be significantly below what other distributors (and especially OEMs) may quote or advertise, because the distributor has taken the time, investment, and risk of loss to offer airworthy parts at steeply reduced prices from the rest of the market. This low-pricing model is very common in the aviation distribution community.

Significantly Shortened Delivery Schedule

The second bullet suggests that a delivery schedule that is significantly shorter than other distributors or suppliers is a red flag. However, one of the key roles distributors play in the aviation supply chain is maintaining inventory on the shelf when OEMs and other suppliers may claim incredibly long lead times.

Maintaining an inventory of parts on the shelf when OEMs do not have parts available is the exact role distributors play in the aviation industry. One of the key reasons operators turn to third-party distributors is to source parts that the OEM may no longer support, for which the OEM claims an unreasonable lead time, or which are prohibitively expensive due to OEM-driven scarcity.

Aircraft are high-cost assets and must be in the air to drive revenue. It is therefore imperative for operators to keep their planes flying. Aircraft on ground (AOG) situations require rapid solutions, and in many cases this means a new (or used and authorized for return to service) part is required to return the aircraft to an airworthy condition. Operators do not have time to wait for manufacturers long lead times, which sometimes can extend for 90, 180, or even 270 days.

Distributors may obtain their inventory in any number of ways. Some may purchase from (or be an authorized distributor of) the OEM. Others may purchase surplus parts from parted-out retired aircraft. Still other distributors may have procured a part for one customer only to have the deal fall through, and now maintain the part in their inventory available to the next customer. Because of the myriad ways in which distributors acquire inventory, certain distributors may be able to respond within 24 hours to an AOG situation, while other distributors or the manufacturer may have significant lead times.

By maintaining otherwise hard to find parts on the shelf, distributors are able to respond to AOG situations and help operators keep their aircraft airworthy at reasonable prices and with reasonable lead times. The ability to respond quickly to a customer's need is not a red flag, but is rather the essence of the aviation distribution industry.

Traceability to Approved Design and Production Approval

The final bullet in the list under paragraph 5.2.2 presents two separate issues.

The first issue is quickly addressed: This bullet does not appear to be a red flag situation, and so was probably intended to be a paragraph following the bulleted list, and not actually a bullet itself. The bullet reads:

> Traceability to approved design and production approval should be requested by purchasers on their purchase orders for all parts intended for use on TC products.

This is clearly not a red flag, but rather an instruction to ensure traceability documentation and so more appropriately belongs in the form of a narrative paragraph or sentence following the bullet list.

The second issue is that the paragraph does not follow current industry practice. The instruction demands traceability to *approved design and production approval*. Traceability all the way back to the design and production approval is not in line with current industry practice. FAA AC 00-56 Voluntary Industry Distributor Accreditation Program, the guidance specifically applicable to the accreditation of the distribution community, defines traceability and includes the minimum traceability standards a distributor must satisfy to earn accreditation under AC 00-56. AC 00-56 defines "Traceability" as follows:

> Tracking parts, processes, and materials to *a source*. For an accredited distributor, traceability must meet the minimum standards found in the documentation matrix in Appendix 1. (emphasis added).

The documentation matrix describes the various minimum standard of traceability documentation necessary for different categories of parts. Although some requirements may ultimately result in a trace to the design and production approval, the documentation matrix does not require such traceability.

The industry standard for traceability documentation is traceability to a specific source. Very frequently this source will be the last operator on whose aircraft a part was installed. These operators do not typically have trace documentation back to the design and production approval. Such a requirement would therefore be virtually impossible in most cases for any used part, as the traceability trail would go cold at the last aircraft operator.

Additionally, over the past several decades, a series of FAA Chief Counsel's Opinion Letters have specifically stated that traceability back to the design and production approval are not required under the regulations.

The inclusion of a different requirement for traceability documentation—namely to the design and production approval—other than what is already required for accreditation in the distribution community could cause significant confusion as well as create a virtually impossible requirement based on current industry norms.

We recommend relying exclusively on the AC 00-56 guidance (referenced in the note to paragraph 5.2.2) and the AC 00-56 documentation matrix to establish the appropriate traceability documentation requirements for a particular category of parts.

Recommendation

The purpose of paragraph 5.2.2 is to require methods for screening unfamiliar distributors and suppliers. However, rather than suggest methods to help with the screening process, the

paragraph provides a bullet list of "questionable" situations. The fact patterns that the bullet list asserts are red flags in many cases are actually standard aviation parts distribution practices and benefits.

We recommend eliminating the bulleted list of red flags, which in many cases should not be viewed as red flags, and instead replacing the list with guidance for screening unknown vendors as an entity, rather than focusing on discrete transactions.

The Red Flags Identified in Paragraph 5.2.2 can often be cleared through Due Diligence

Issue

The list of situations identified in paragraph 5.2.2 that may raise questions can often be resolved through ordinary due diligence. The guidance as written does not offer any suggestions that the situations as presented in many cases are standard industry practices that can be quickly resolved.

Analysis

Paragraph 5.2.2 and the bullet list of situations that could lead to questions appears to imply that such fact patterns will almost always lead to suspected unapproved parts. As discussed above, many of the fact patterns listed go to the very essence of the distributor business model. Without clarification, such language could cause confusion among aircraft parts purchasers and result in purchasers believing that many aircraft distributors are dealing in unapproved parts, simply because the parts distributors are offering are offered at reduced prices or are available on the shelf.

Although certain facts can indicate red flags when purchasing aircraft parts, a review of the part history, company history, traceability documentation, and use of an FAA designee can help to clear those red flags and confirm for the purchaser that the aircraft part is approved or can be returned to an airworthy condition.

More important than pricing or lead times in determining the status of a particular part is knowing the supplier. Paragraph 5.2.2 acknowledges this by requiring a set of methods to deal with unfamiliar suppliers; but the paragraph does not provide samples of methods for dealing with unfamiliar suppliers. Instead, it provides a list of questionable situations. Although such examples may be useful in very specific scenarios, they are not a substitute for a holistic system intended to screen suppliers and establish trusted relationships and confidence in part and documentation authenticity.

As we suggested above, rather than retain specific red flag fact patters, paragraph 5.2.2 should provide samples of methods for dealing with unfamiliar suppliers. However, if the bullet list is retained, the paragraph should make clear that the fact patterns due not result in *per se*

unapproved parts, but rather are mere indicators that additional due diligence may be necessary to clear the red flags.

Recommendation

If the bullet list of questionable fact patterns is retained, we suggest inserting a paragraph following the final bullet point explaining that red flag fact patterns can often be resolved through due diligence. We propose the following language:

> *This list is not conclusive and is not intended to imply that such situations will always lead to unapproved parts. In many cases a purchaser can confirm that the parts are approved parts or can be returned to an airworthy condition through ordinary due diligence.*

Paragraph 5.3.5 should reference FAA AC 00-56

Issue

Paragraph 5.3.5 discusses visual inspection of a part and supporting documentation and references AC 20-62. Distributors accredited under AC 00-56 are already competent in such inspections and so use of 00-56 distributors should be encouraged.

Analysis

Distributors accredited under AC 00-56 have a clear understanding of the requirements of AC 20-62. Accredited distributors also have receiving systems in place as part of a comprehensive quality assurance program. Purchasers of aircraft parts who do not have such a system in place are likely to be less competent in performing the necessary inspections and document review.

One option to solve the issue of competence among parts purchasers is to encourage those purchasers to rely on accredited distributors listed in the AC 00-56 database. Accredited distributors must have approved quality systems in place. Accredited distributors undergo regular surveillance audits from accreditation organizations that are themselves audited by the FAA. Finally, because accredited distributors deal in significant quantities of aircraft parts, both as buyer and seller, accredited distributors are uniquely positioned to have an optimal understanding of the parts approval and in identifying and detecting SUPs before they reach an operator.

Although performing inspections of parts and documentation upon receipt is an important element of SUP detection, purchasers of aircraft parts can benefit from relying on accredited distributors who are well-versed in SUPs detection and undergo regular auditing.

Recommendation

Include a reference to FAA AC 00-56 and encourage use of a 00-56 accredited distributor.

Conclusion

ASA looks forward to working with the FAA to continue to improve the detection and reporting of Suspected Unapproved Parts and aviation safety at large. Your consideration of these comments is greatly appreciated.

Respectfully Submitted,

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Aviation Suppliers Association