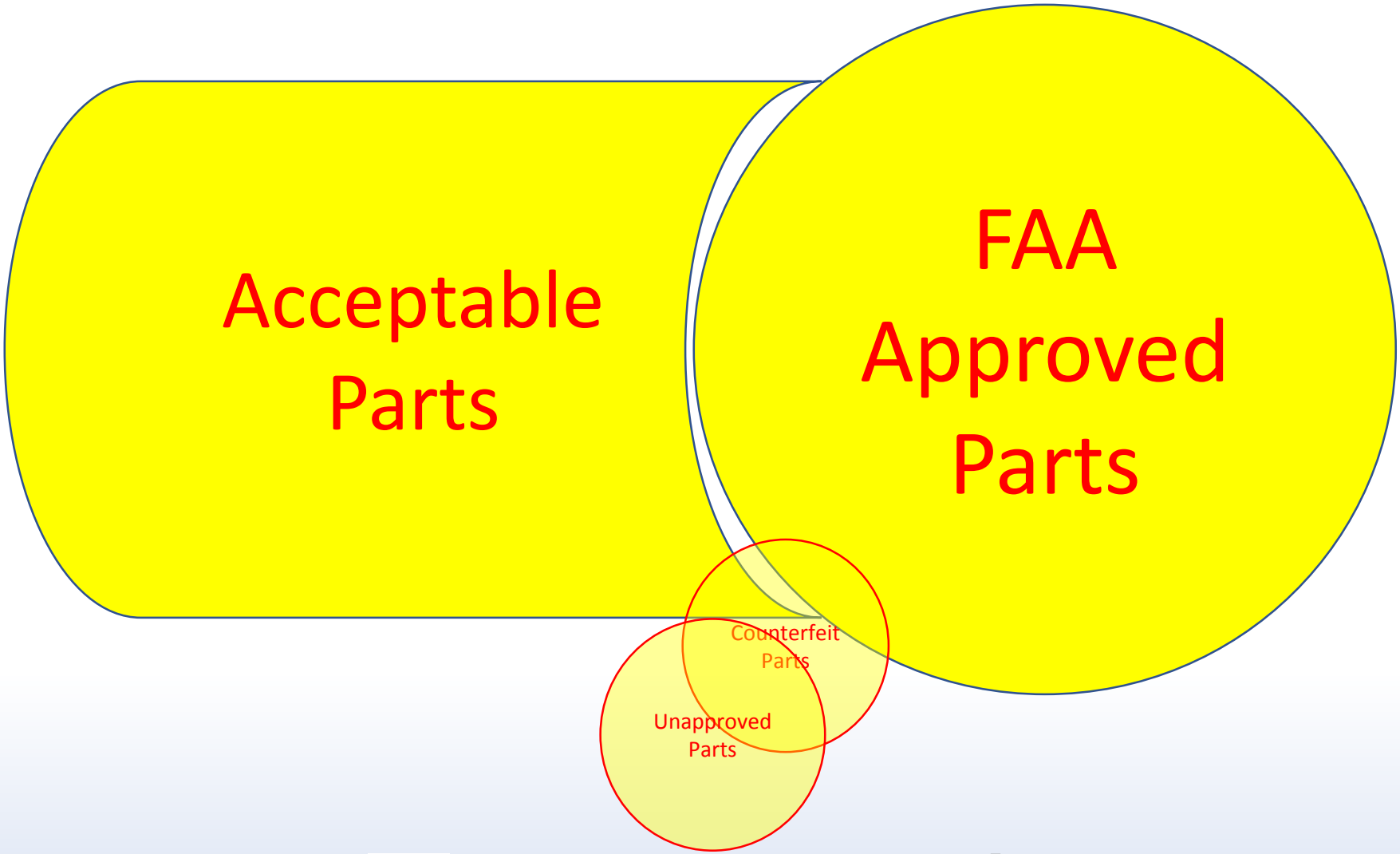
Approved Parts, Unapproved Parts, and Counterfeit Parts

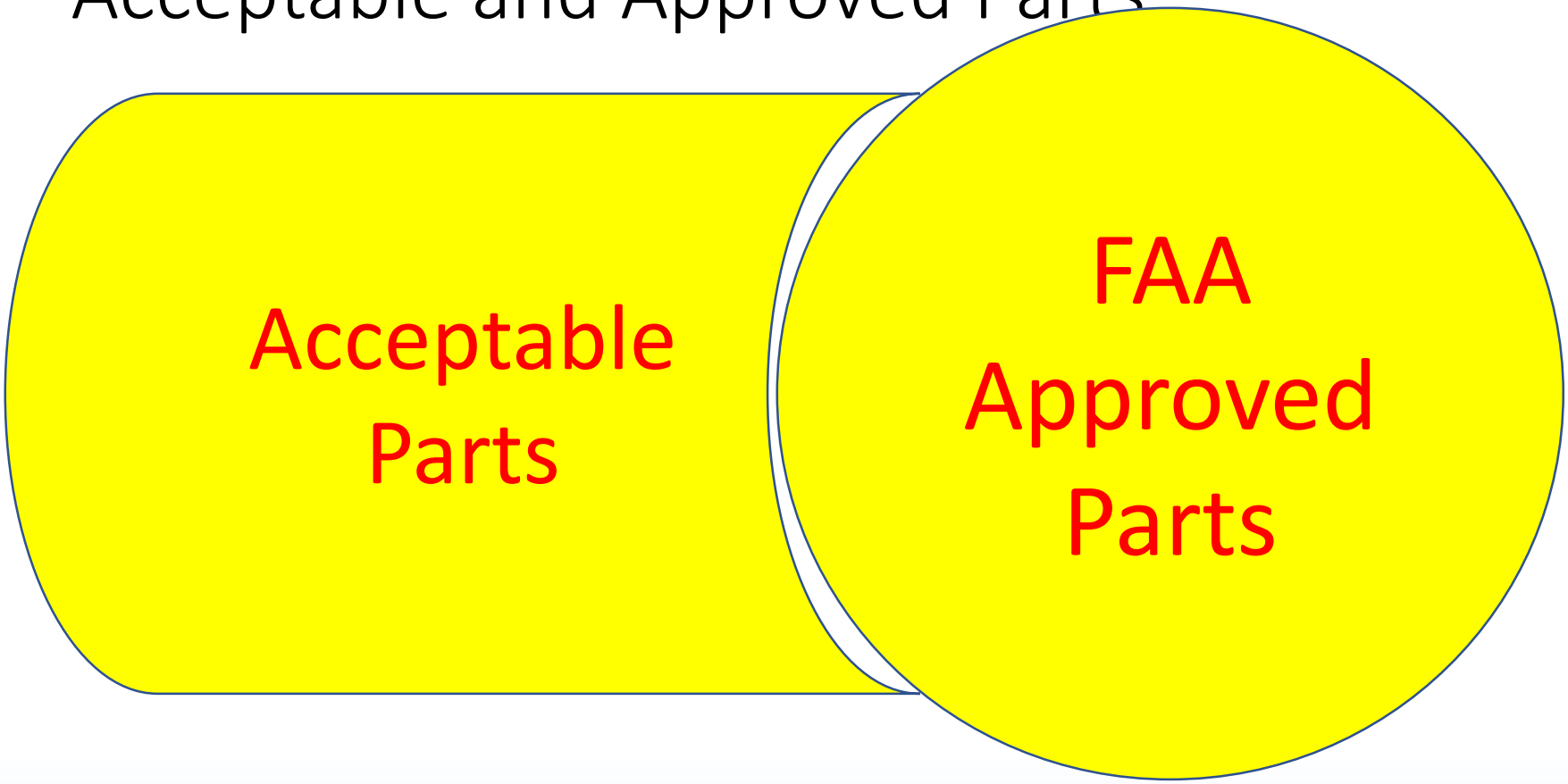
Outline

- Parts Categories: Acceptable, Approved, Unapproved, Counterfeit
  - What is an approved part?
  - What is an unapproved part?
  - What is a counterfeit part?
- Practical Tips for Identifying Unapproved Parts in Your Receiving Inspection Program

The FAA World of Parts



Let's Start By Discussing Acceptable and Approved Parts



General Rule of Aircraft Parts Manufacturing

- Generally, parts manufacturers need government approval to produce aircraft parts in most jurisdictions
  - Hence the term: “approved parts”
  - As with all general rules, there are (many) exceptions

FAA Definition of “Approved”

- FAA: *Approved* means:
  - Approved by the FAA or
  - Approved by any person to whom the FAA has delegated its authority in the matter concerned, or
  - Approved under the provisions of a bilateral agreement between the United States and a foreign country or jurisdiction

What About Aircraft Parts Under the European Rules?

- FAA: *Approved* means:
  - Approved by the FAA or
  - Approved by any person to whom the FAA has delegated its authority in the matter concerned, or
  - Approved under the provisions of a bilateral agreement between the United States and a foreign country or jurisdiction
- EASA: Requires that installers only receive new parts that meet documentation requirements
  - EASA Form 1 can generally only be obtained for PAH parts
  - European Union signs bilateral agreements to accept foreign certificates, like the 8130-3
  - Tight documentation standards are meant to provide an airworthy system that relies on documentation for proof
  - The basic requirements for design approval and production approval are analogous to those of the FAA

What are Approved Parts?

- Generally, this means that the part has been produced under government approved systems:
  - Design Approval
    - Applicant demonstrates to the government that the design meets all government requirements including airworthiness requirements
  - Production Approval
    - Applicant demonstrates to the government that the production quality assurance system will effectively produce products and/or parts that meet the requirements of the approved design

Approved Parts:
FAA Regulatory Standards

- 14 C.F.R. § 21.9 (a) If a person knows, or should know, that a replacement or modification article is reasonably likely to be installed on a type-certificated product, the person may not produce that article unless it is—

  (1) Produced under a type certificate;

  (2) Produced under an FAA production approval;

  PC, PMA or TSOA

  (3) A standard part (such as a nut or bolt) manufactured in compliance with a government or established industry specification;

  (4) A commercial part as defined in §21.1 of this part;

  (5) Produced by an owner or operator for maintaining or altering that owner or operator's product; or

  (6) Fabricated by an appropriately rated certificate holder with a quality system, and consumed in the repair or alteration of a product or article in accordance with part 43 of this chapter; or

  (7) Produced in any other manner approved by the FAA.

Categories of Approved Parts

- Type Certificate (TC) Only Parts
  - When a TC has been issued but no production approval exists
    - The United States permits TC holders to ship parts under the existing quality system
  - When the production approval is issued, the holder must analyze all changes to the production quality system
    - The holder must identify each part that could have been affected by a change to the production quality system between (1) the time of production and (2) the time the production quality system was approved in the production approval
    - All affected parts must be recalled for remedy

* = TC-only parts may not be acceptable in other countries
Check the specific agreement!

Categories of Approved Parts

- Production Certificate (PC)*
- Certifies that the production quality assurance system will effectively assure that each part released from the system will meet the requirements of the approved design
- May be used for a complete Type Certificate product (aircraft, engine, propeller) or for the component parts

* = Parts acceptable in other countries under most US bilateral agreements

Categories of Approved Parts

- Parts Manufacturer Approval (PMA)*
  - Used to approve for replacement and modification aircraft parts
  - A hybrid approval in that both design and production are approved in a single document
  - Generally cannot be transferred, because production approval cannot be transferred

* = Parts acceptable in other countries under most US bilateral agreements

Categories of Approved Parts

- Technical Standard Order Authorization (TSOA)*
  - The government issues a Technical Standard Order (TSO)
    - The TSO sets performance standards
  - The applicant demonstrates compliance to the standards found in the TSO
  - US, EU and Canada harmonized their TSOs
  - US, EU and Canada have changed from a TSOA validation model to a mutual acceptance model!

* = Parts acceptable in other countries under most US bilateral agreements

Categories of Approved Parts Those Accepted under a BASA

- Bilateral Airworthiness Safety Agreements (BASA)
  - US treats as “approved” all parts produced under non-US approval, but accepted under a BASA

- Robert Sprayberry from the FAA will address BASAs, and the current status of US BASAs, this week in Thursday’s webinar!!

Categories of Approved Parts
In any other manner …

- 14 C.F.R. § 21.8 If an article is required to be approved [under the FAA's regulations], it may be approved—
  - (a) Under a PMA; *
  - (b) Under a TSO; *
  - (c) In conjunction with type certification procedures for a product; or
  - *(d) In any other manner approved by the FAA.*

* = Parts acceptable in other countries under most US bilateral agreements

Acceptable Parts: Standard Parts

- Manufactured to
  - U.S. Government Standard (e.g. mil spec), or
  - Industry Standard
    - Industry standard-setting body
    - Published / available to the public
    - Proprietary standards generally excluded
- Different from EASA definition
  - EASA accepts manufacturer's standards published in the type design

Acceptable Parts: Owner-Produced Parts

- FAA Interpretation explains what this means
- Owner-operator of the aircraft on which the parts will be installed must be involved in at least one of the following:
  - Design of the parts (e.g. designs come from the air carrier's engineering department), or
  - Quality of the parts (e.g. someone else designs the part but the air carrier designs and controls the in-process and final tests and inspections)

Acceptable Parts: FAA Maintenance-Produced Parts

- Parts produced to be consumed during a maintenance or alteration activity
  - Must be a source working under FAA Part 43
- FAA AC 43-18 recommends practices:
  - Have a fabrication inspection system to ensure quality
  - Mark parts to indicate their source
  - Issue maintenance instructions if the maintenance system changes
- FAA 14 C.F.R. 21.9 requires the fabricator to produce the parts under a quality system
  - Codifying the AC 43-18 recommendation

Acceptable Parts: Commercial Parts

- Historically, this term was used to describe parts that were excluded from FAA oversight because they were not specifically manufactured with the intent they be installed in aircraft (before the 2011 rule change)
  - E.g. certain light bulbs, proprietary fasteners, proprietary seals, coatings, bearings, etc.

- This is no longer the definition!

Definition: Commercial Part

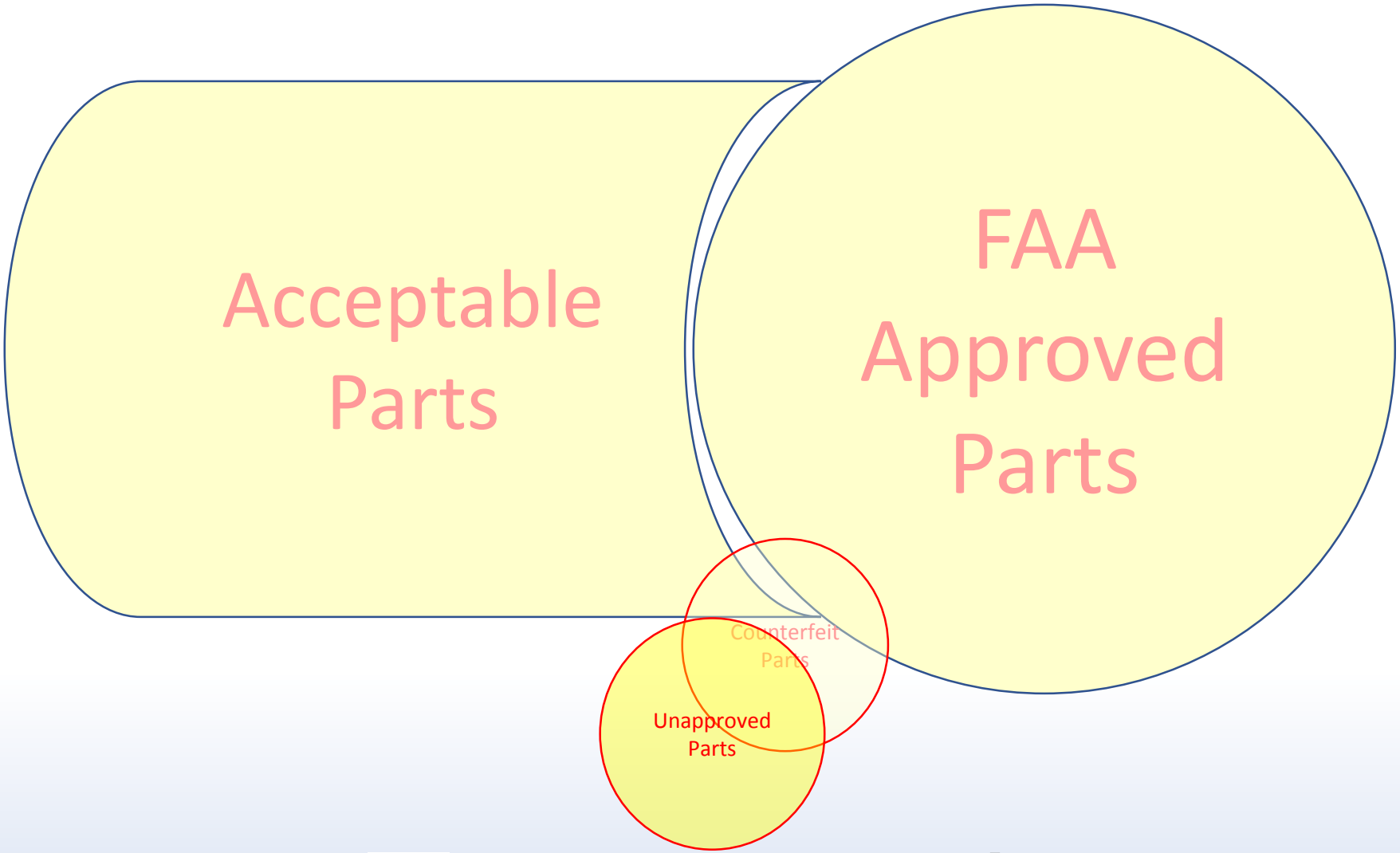
- *Commercial part* means an article that is listed on an FAA-approved Commercial Parts List included in a design approval holder's Instructions for Continued Airworthiness required by § 21.50

14 C.F.R § 21.1(b)(3) (*became effective 2011*)

Commercial Parts

- Since 2011, Design Approval Holders have had the privilege of naming commercial parts
  - The list would be approved by the FAA
  - The list would become part of the ICAs
- Parts that are not listed by manufacturer and nomenclature in a special list found in the instructions for continued airworthiness are no longer “commercial parts”
  - The FAA has approved very few of these lists
  - Thus, most parts are NOT commercial parts

What About Unapproved Parts?



Unapproved Parts

What Are Unapproved Parts?

- Aircraft parts made in violation of 14 C.F.R. §§ 21.8 and/or 21.9

- If a part does not violate regulatory requirements, then the FAA will not pursue a SUP investigation

- Prior definitions were more nebulous and those have been removed from the FAA system

FAA Order 8120.16A

Examples of Things that are NOT Unapproved Parts

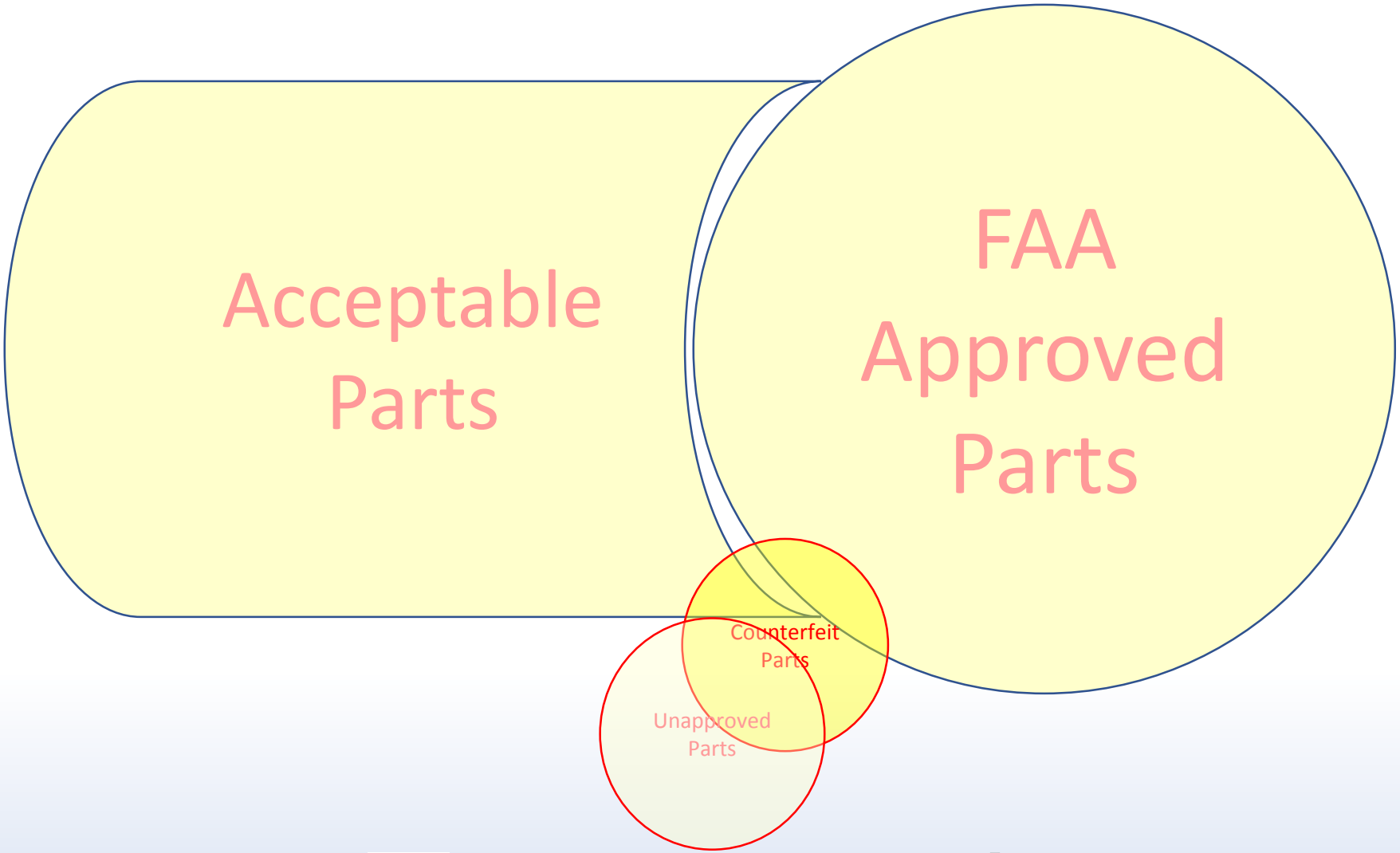
- The wrong part is received from a supplier
- A received part has a manufacturing defect (quality escape), and the manufacturer has acknowledged the error and is taking corrective action
- A part is damaged during maintenance or is installed incorrectly on the next higher assembly
- A standard part was received that is not included in the FAA accepted data in the TC specifications or approved drawings
- Reports concerning raw material deficiencies

FAA Order 8120.16A

Examples of Things that are Unapproved Parts

- Parts that have passed through a PAH's quality system which do not conform to the approved design/data;
  - NOTE: Parts damaged due to shipping or having warranty issues may not be airworthy but they should not be reported as a SUP
- Supplier-produced parts for an approved manufacturer that are shipped directly to end users without the PAH's authorization or separate PMA/TSOA;
- Parts offered as having been produced under an FAA production approval, where no such FAA approval was issued;
  - These may be counterfeit!
- Parts previously installed on, or manufactured for, military aircraft that have not been shown to conform to type design criteria as required by FAA regulations.

What About Counterfeit Parts?



What is Counterfeiting? [*as applicable to aircraft parts*]

Lanham Act

- The U.S. Trademark Law

- Unauthorized use in commerce of a trademark so as to cause
  - confusion,
  - mistake, or
  - deceit

- The consuming public is harmed by a lack of knowledge of the true source of a good
- FAA approval may not be dispositive of counterfeiting questions
- Remember: there are many other fraud laws and parts laws *in addition* to this law

Trademark Law

- Protects distinctive marks from use by others in commerce that leads to confusion, deception, or mistake
  - EXAMPLE: “palming off” something you created *as if it were* another manufacturer’s product

  Making an aircraft part and selling it as a Boeing aircraft part

  - EXAMPLE: “reverse palming off” another manufacturer’s product *as if it were* something that you created

  Buying an aircraft part from Boeing, removing the Boeing name, and selling it under your own name

  How can PAHs buy supplier parts and sell them as their own? The contracts can explicitly permit it!

Trademark Hypothetical

- OEM “X” sells a part described as 1526771
- Jason’s Aircraft Parts obtains U.S. Air Force source approval to create a replacement that has the part number J1526771.
- OEM “X” wants to know if this part from Jason’s Aircraft Parts is a counterfeit?

Several Legal Cases Have Addressed This Issue

- A single letter prefix or suffix that distinguishes OEM parts from aftermarket parts is inadequate
  - Could be confused for an OEM revision identifier
- Parts must be uniquely identified in a fashion that will make it possible to establish the source of such part even in the event of failure
- FAA Order 8110.42 permits multi-character prefixes and suffixes that identify source
  - So Jason1526771 might be an acceptable part number

Can a Part be Approved and *Also* Counterfeit?

- Yes

- There is at least one case where a manufacturer obtained FAA design and production approval

BUT

- The approved part number caused confusion with the OEM part

- The trial court found a Lanham Act violation and required the defendant to adopt a new part number, and apply to the FAA within 45 days for the change

See Whittaker Corp. v. Execuair Corp., 953 F.2d 510 (9th Cir. 1992)

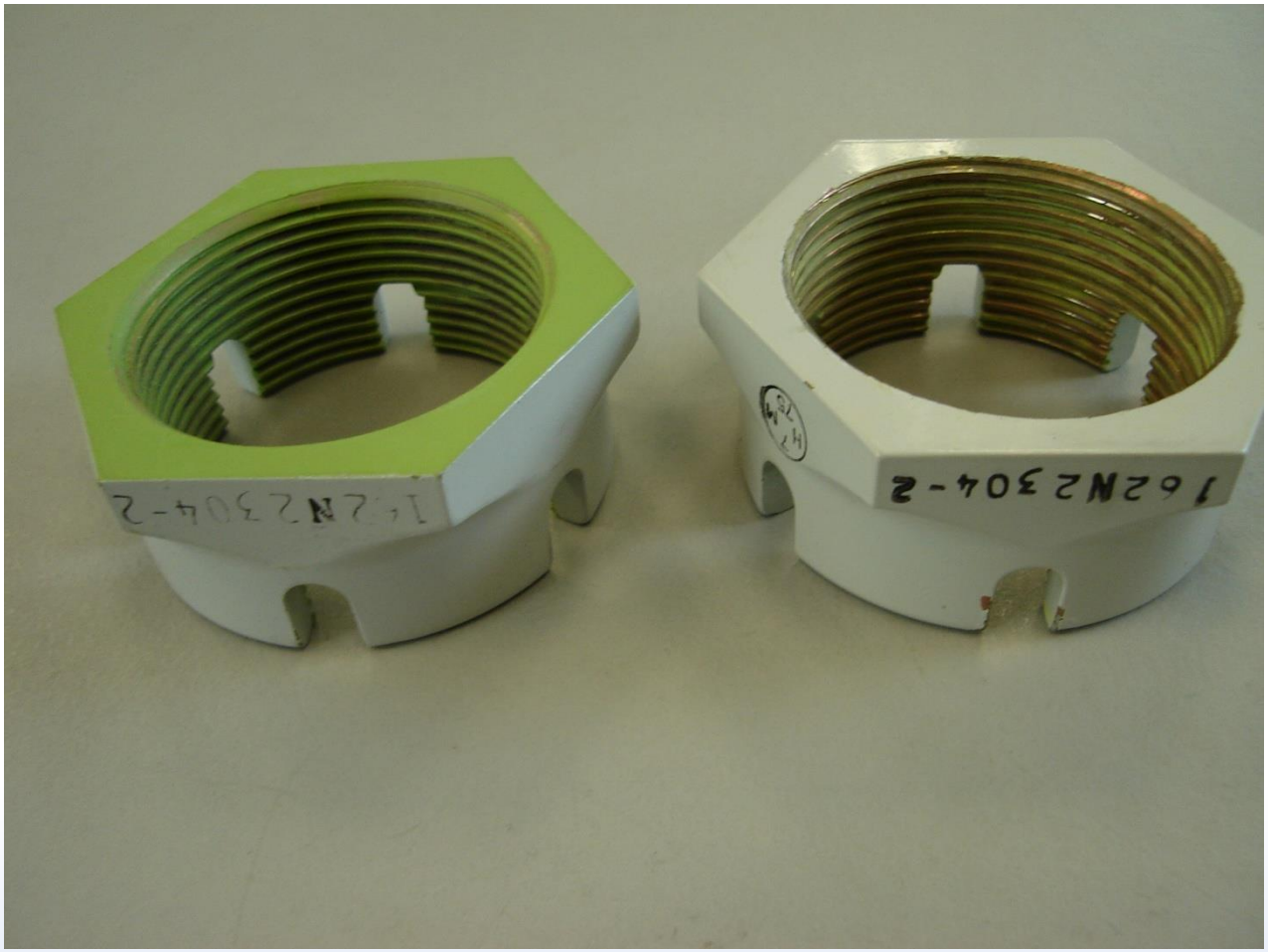
Tips for an Effective Program: Know your Suppliers

- How does the business 'know' their suppliers
  - Programs like AS9100 help ensure adequate quality systems for manufacturers using 3rd party audit verification
  - Programs like FAA AC 00-56 help ensure adequate quality systems for distributors using 3rd party audit verification
    - https://aviationsuppliers.org/FAA-AC-00-56B
    - 782 companies participating in program

Tips for an Effective Program: Documented Receiving Inspection

- Develop and document a robust receiving inspection process
  - Clear written standards
  - Receiving inspector training
    - Make sure inspectors know what is acceptable
    - Make sure inspectors understand what is approved, so they can identify what is unapproved
    - Make sure inspectors know how to stop parts that are not acceptable
  - Closed loop process for investigating red flags
    - Don’t just assume every potential problem is an unapproved part – investigate and get the facts!

What Can Inspectors Find? Unusual Finish/No Inspection Stamp



Tips for a Receiving Inspection Look at the Parts

- The receiving inspectors should look at the packaging
  - Does it identify the source?
  - Is it free from alteration or damage?
- The receiving inspectors should look at the parts
  - Inspectors should look for visual discrepancies
    - Does it look like it typically looks?
    - Does it look like the part in the Illustrated Parts Catalog?
    - Verify that the identification on the part appears correct – look for:
      - Serial number stamped over;
      - Label or part/serial numbers improper or missing;
      - Vibro-peen on parts that are usually stamped or inked;
      - Part/serial numbers located at other than the normal location

Vibra-Peened Part Number

Different Finish; No Part

Tips for a Receiving Inspection Look at the Documents, Too

- Inspectors should read the documentation
  - Inspectors should identify and investigate incongruities
  - Problems can include
    - Evidence of white-out
    - Different fonts or type faces
    - Date discrepancies
- Problems? The telephone can be your best friend; but remember to follow-up with an email to create the “paper trail” for your communications
- Remember that if the 8130-3 is wrong, there are processes for correcting it!

No Documentation (OOP)

Documentation Review Tips

- Ensure the parts match the paperwork, e.g.:
  - Part number
  - Serial number
  - Nomenclature
  - Quantity
- Ensure the part that arrived matches the purchase order description
- Look at the signatures – do they appear to be electronically-signed and is this normal?

Questions?

Please feel free to ask questions

You can add your questions through the “attendee chat” function

If you think of questions later, then you can also email them to Jason@WashingtonAviation.com

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Robert Sprayberry, Federal Aviation Adminstration

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