OEM vs PAH: A Review

What you need to know before you buy the part!
Why should we care?

- Many customers demand 8130-3 tags for every part they purchase.

- There is confusion as to which parts are eligible for domestic or export 8130-3 tags.

- There is confusion related to the significance of the country where the part was actually produced versus the country where the airworthiness production approval resides (e.g. Mexico vs USA).

- It helps to recognize OEM parts from SUPs.

A Typical Query…

I have a NEW part traced to the OEM.
It is made in the United States.
My customer needs an 8130-3.
From the Inquirer's POV

1) It’s new:
   – It works
   – It’s worth more than a used one

2) It’s traced to the OEM:
   – It’s “Back-to-Birth”
   – You can’t get better than this!

3) It’s made in the United States:
   – All parts made in the USA are FAA Approved

4) My customer needs an 8130-3:
   – It is eligible for an 8130-3

Let’s Compare Perception with the Facts
(1) It’s new!

<table>
<thead>
<tr>
<th>Perception</th>
<th>Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>● It works.</td>
<td>● It might work. It might not.</td>
</tr>
<tr>
<td>● It’s worth more</td>
<td>– Broken?</td>
</tr>
<tr>
<td>than a used one.</td>
<td>– Workmanship?</td>
</tr>
<tr>
<td></td>
<td>– Preservation?</td>
</tr>
<tr>
<td></td>
<td>– AD compliance status?</td>
</tr>
<tr>
<td></td>
<td>● The part’s value ($) is simply not relevant.</td>
</tr>
</tbody>
</table>
Let’s Compare Perception with the Facts
(2) It’s traced to the OEM

<table>
<thead>
<tr>
<th>Perception</th>
<th>Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>● It’s “Back-to-Birth”!</td>
<td>● It might be an aircraft part. It might not. (PAH is unknown)</td>
</tr>
<tr>
<td></td>
<td>● The mfg. name is not yet known.</td>
</tr>
<tr>
<td></td>
<td>● Does the mfg. hold FAA Production Approval for this PN? (TC; PC; PMA; TSOA)</td>
</tr>
<tr>
<td>● You can’t get better than this!</td>
<td>● Simply not relevant.</td>
</tr>
</tbody>
</table>

Let’s Compare Perception with the Facts
(3) It’s made in the United States

<table>
<thead>
<tr>
<th>Perception</th>
<th>Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>● All parts made in the USA are FAA Approved</td>
<td>● Most parts made in the United States are not FAA Approved</td>
</tr>
<tr>
<td></td>
<td>● The country where the part is fabricated has no relevant WRT/ FAA Production Approval</td>
</tr>
</tbody>
</table>
Let’s Compare Perception with the Facts
(4) My customer needs an 8130-3

<table>
<thead>
<tr>
<th>Perception</th>
<th>Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>• It is eligible for an 8130-3.</td>
<td>• The determinant for 8130-3 issuance is independent from customer needs.</td>
</tr>
</tbody>
</table>

FAR PART 1

Definition:

“PERSON means an individual, firm, partnership, corporation, company, association, joint-stock association, or governmental entity. It includes a trustee, receiver, assignee, or similar representative of any of them.”
What is an FAA Production Approval?

To answer this let’s first understand…

...what an FAA Approved Part is.

FAA Approved Parts:

- Parts which have been manufactured under Title 14 CFR Part 21.

- Parts that display evidence of FAA approval, verifying their eligibility for installation.
14 CFR Part 21
Certification Procedures for
Products and Parts

§ 21.8 Approval of articles

• If an article is required to be approved under this chapter, 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.
§ 21.9 Replacement and modification articles

- (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;
  - (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.

- (b) Except as provided in paragraphs (a)(1) through (a)(2) of this section, a person who produces a replacement or modification article for sale may not represent that part as suitable for installation on a type-certificated product.

- (c) Except as provided in paragraphs (a)(1) through (a)(2) of this section, a person may not sell or represent an article as suitable for installation on an aircraft type-certificated under §§ 21.25(a)(2) or 21.27 unless that article:
  - (1) Was declared surplus by the U.S. Armed Forces; and
  - (2) Was intended for use on that aircraft model by the U.S. Armed Forces.
Let’s see how an FAA Approved Part is born…

What PAH’s do that OEMs do not

- DESIGN THE PART
- SUBMIT DESIGN TO FAA
- FAA GRANTS CERTIFICATE (TYPE, STC, DESIGN)
- BUILD PROTOTYPE
- FAA INSPECTS PART & FACILITY
- FAA GRANTS PRODUCTION CERTIFICATE (PC; PMA; TSOA)
Who is an FAA Approved Production Approval Holder?

… any person who is granted FAA production approval and who manufactures parts in accordance with the FAA Production Approval;

… and who is referred to as a… “PAH”.

Let’s see who this is...

SO, WHO IS AN FAA APPROVED SOURCE?

14 CFR PART 21 CERTIFICATION PROCEDURES FOR PRODUCTS AND PARTS defines production approval methods for aircraft parts:

- TC - TYPE CERTIFICATE (INCLUDING STC’S)
- PC - PRODUCTION CERTIFICATE
- TSOA - TECHNICAL STANDARD ORDER AUTHORIZATION
- PMA - PARTS MANUFACTURER APPROVAL
- OWNER/OPERATOR PRODUCED PARTS (for their own aircraft)
- PARTS FABRICATED DURING MAINTENANCE (but never for sale!)

PAH’s
Not PAH’s
TC - TYPE CERTIFICATE

- A CERTIFICATE ISSUED BY THE FAA THAT APPROVES A DESIGN FOR AN AIRCRAFT, ENGINE, OR PROPELLER (ref. FAR 21, Subpart B)
PC - PRODUCTION CERTIFICATE

- A CERTIFICATE ISSUED BY THE FAA AUTHORIZING THE PRODUCTION OF A TYPE CERTIFICATED PRODUCT (ref. FAR 21, Subpart G)
TSOA - TECHNICAL STANDARD ORDER AUTHORIZATION

- An FAA design and production approval issued to a manufacturer which has been found to meet a specific TSO.

- TSO - an Order issued by the FAA which is a minimum performance standard for a specified article used on civil aircraft.

(ref. FAR Part 21, Subpart O)
PMA - PARTS MANUFACTURER APPROVAL

- An approval issued by the FAA to produce a modification or replacement part for sale for installation on a Type Certificated product (Ref. FAR Part 21, subpart K)

OWNER/OPERATOR PRODUCED PARTS –
Are not eligible for an 8130-3

- Parts fabricated in which the owner or operator participated in controlling the design, manufacturer, and/or quality of the part; and

- Parts fabricated using methods and procedures acceptable to the FAA.
PARTS FABRICATED DURING MAINTENANCE –
Are not eligible for an 8130-3

- Are internally consumed during maintenance operations as defined in FAR 43; and

- Are not fabricated with the intention of being sold as a stand alone aircraft part.

FCAA - FOREIGN CIVIL AVIATION AUTHORITY APPROVAL –
Are not eligible for an 8130-3

- May be manufactured in foreign countries and supplied to U.S. Certificated operators for use on their aircraft as long as the parts are certified by the foreign civil aviation authority with whom the U.S. Maintains a Bilateral Airworthiness Agreement (BAA).

- Must also comply with all applicable FAR’S and airworthiness directives.
  (ref. Far Part 21, Subpart N)
An approved part for sale ... is any part manufactured by one of these FAA Approved sources:

- TC - (INCLUDING STC’S)
- PC
- TSOA
- PMA
- OWNER/OPERATOR PRODUCED PARTS
- PARTS FABRICATED DURING MAINTENANCE
- FCAA production parts

But not eligible for DAR 8130-3s

So, who then is an OEM? Let’s see how this works...
Aviation Supply Chain

Tier 1 – FAA-PAH
Aircraft/ Engine/ Propeller/ Article Manufacture
(TC; PC, PMA, TSOA)

Tier 2
Integrators / Source Control / Software Dev. / Major Assemblies

Tier 3
Integrators / Source Control / Specialty Electronics / Wiring / Components

Tier 4 - Make to Print / Machine Shops / Processors

Tier 5 - Distributors (Fasteners, Raw Materials, Commodities, Adhesives, Special Materials)

Tier 6 - Raw Materials (Castings, Forgings, Sheet, etc)

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Operator

Tier 2-6 – OEMs

OEM A
Production Certificate
OEM B

FAA

PAH Holder

Part A & B

INDUSTRY
Don’t get confused!!!

- An Authorized Distributor is not the same as an OEM who has been granted Direct Ship Authority from the PAH!!!

- An authorized distributorship is merely a marketing agreement between an OEM and a company designed to increase sales, usually by offering a discount off of list-price to that company.
Typical Scenario Quiz
Which are eligible for 8130-3 tags?

<table>
<thead>
<tr>
<th>PAH to...</th>
<th>OEM to...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You</td>
<td>1. You</td>
</tr>
<tr>
<td>2. Airline to you</td>
<td>2. Airline to you</td>
</tr>
<tr>
<td>3. Repair Station</td>
<td>3. Repair Station</td>
</tr>
<tr>
<td>4. Distributor to you</td>
<td>4. Distributor to you</td>
</tr>
</tbody>
</table>

Yes!  No!

Remember this!...

If an OEM holds an FAA Production Approval for the part you are purchasing, then they are a PAH!
Within the United States

Within the Americas

Boeing 747 Speaker

Mexico OEM

Boeing PN “Made in Mexico”

OEM PN “Made in Mexico”

You
The following are listed in AC 20-62 as FAA Acceptable sources for aircraft parts:

- FAR 121 AIR CARRIER
- FAR 135 AIR CARRIER
- FAR 127 ROTORCRAFT
- FAR 129 Foreign air carrier
- FAR 145 Repair station
Part Identification
Let’s look at an FAA-TSO part...

- P/N; S/N
- MFG
- TSO Markings
- Insp. Stamps
- Mod Status

Let’s look at FAA-PMA Markings...
FAA-PMA TAG

- PART & INST. CONFORMITY
- RETURN TO SERVICE:
  - Far 43.9 Repair Station
  - Other CAA RTS (e.g. EASA members)
- DOMESTIC AIRWORTHINESS
- EXPORT
Can you find the C of C?

LET’S RECAP…

An approved part is any part manufactured by one of these FAA Approved sources:

- TC - TYPE CERTIFICATE (INCLUDING STC’S)
- PC - PRODUCTION CERTIFICATE
- TSOA - TECHNICAL STANDARD ORDER AUTHORIZATION
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PAH’s

Not PAH’s
More Examples, if we have time....