

Alpha

aviation, inc.

1500 E. Main Street
Owatonna, MN 55060
1-800-653-5112

March 18, 2022

To: _____

We appreciate your interest in fabricating the needed modification parts to accomplish the installation of STC SA330GL – 9cf Baggage Compartment – as Owner Produced Parts; per FAA Part 21, 303, (b), 2.

Your inability to source the required parts is understandable due to them being unavailable in the aftermarket or salvaged.

To accomplish the installation and properly document your efforts the following tasks will be required.

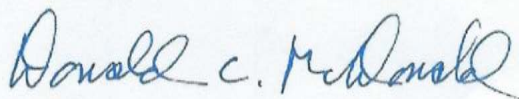
Your written installation authorization for STC SA330GL and approved design data will be provided by Alpha Aviation, Inc at the time of your STC purchase. The airframe specific authorization will appear on your invoice, and this will be needed at final inspection for preparation of FAA form 337 and IA approval.

The drawing for each individual part is provided and the purchaser is responsible to assure that each part is produced using the correct material and the complete part is produced within stated tolerances.

The design data in the form of FAA approved drawings is provided for your one-time use (Non-Transferable) and becomes part of the aircraft's permanent records.

We trust this information will aid your completing the required FAA Form 337.

Sincerely,



Donald C. McDonald
President



1.800.653.5112

cs@alphaaviation.com

Owner Produced Parts

Sometimes the FAA Regulations can be your friend.

Such as in the case where the required parts to accomplish a needed repair or alteration are out of production or unavailable in the aftermarket or salvage.

FAA Regulation Part 21. 303, (b), 2;

Clearly Allows - "Parts produced by an Owner or Operator for maintaining or altering their own product"

This regulation has been in force for many years, and is commonly used in the airline industry and by Certified Repair Stations to maintain their fleets and customer aircraft.

As this regulation bares on light general aviation aircraft, it may be the way of the future as the factory support for older aircraft becomes harder to obtain and more expensive.

When applied to light general aviation, it allows the owner, operator to produce the parts necessary for the repair and alteration of their aircraft with the aid of others through the owner, operators participation in the process.

The option for Owner Produced Parts is attractive when the part in question is a non-critical and non-complex component that can be produced using accepted aviation methods and materials.

We have attached 3 documents in support of the use of the Owner Produced Parts option when the needed parts are simple, unavailable or unaffordable.

Resource 1 -

Copy of FAA regulation Part 21. 303, (b), 2

Resource 2 -

Copy of FAA Office of Chief Counsel - Definition of "Owner Produce Part"
Dated 8/5/1993

Resource 3 -

Copy of the article "Owner Produce Parts" authored by Mike Busch.
This article covers in detail the part production, Inspection and sign off of Owner Produced Parts. *Used by permission of Mike Busch*

Federal Aviation Administration, DOT

§ 21.303

§ 21.303 Replacement and modification parts.

(a) Except as provided in paragraph (b) of this section, no person may produce a modification or replacement part for sale for installation on a type certificated product unless it is produced pursuant to a Parts Manufacturer Approval issued under this subpart.

(b) This section does not apply to the following:

- (1) Parts produced under a type or production certificate.
- (2) Parts produced by an owner or operator for maintaining or altering his own product.
- (3) Parts produced under an FAA Technical Standard Order.
- (4) Standard parts (such as bolts and nuts) conforming to established industry or U.S. specifications.

(c) An application for a Parts Manufacturer Approval is made to the Manager of the Aircraft Certification Office for the geographic area in which the manufacturing facility is located and must include the following:

- (1) The identity of the product on which the part is to be installed.
- (2) The name and address of the manufacturing facilities at which these parts are to be manufactured.
- (3) The design of the part, which consists of—
 - (i) Drawings and specifications necessary to show the configuration of the part; and
 - (ii) Information on dimensions, materials, and processes necessary to define the structural strength of the part.
- (4) Test reports and computations necessary to show that the design of the part meets the airworthiness requirements of the Federal Aviation Regulations applicable to the product on which the part is to be installed, unless the applicant shows that the design of the part is identical to the design of a part that is covered under a type certificate. If the design of the part was obtained by a licensing agreement, evidence of that agreement must be furnished.

(d) An applicant is entitled to a Parts Manufacturer Approval for a replacement or modification part if—

- (1) The Administrator finds, upon examination of the design and after com-

pleting all tests and inspections, that the design meets the airworthiness requirements of the Federal Aviation Regulations applicable to the product on which the part is to be installed; and

(2) He submits a statement certifying that he has established the fabrication inspection system required by paragraph (h) of this section.

(e) Each applicant for a Parts Manufacturer Approval must allow the Administrator to make any inspection or test necessary to determine compliance with the applicable Federal Aviation Regulations. However, unless otherwise authorized by the Administrator—

(1) No part may be presented to the Administrator for an inspection or test unless compliance with paragraphs (f)(2) through (4) of this section has been shown for that part; and

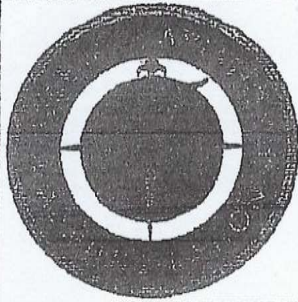
(2) No change may be made to a part between the time that compliance with paragraphs (f)(2) through (4) of this section is shown for that part and the time that the part is presented to the Administrator for the inspection or test.

(f) Each applicant for a Parts Manufacturer Approval must make all inspections and tests necessary to determine—

- (1) Compliance with the applicable airworthiness requirements;
- (2) That materials conform to the specifications in the design;
- (3) That the part conforms to the drawings in the design; and
- (4) That the fabrication processes, construction, and assembly conform to those specified in the design.

(g) The Administrator does not issue a Parts Manufacturer Approval if the manufacturing facilities for the part are located outside of the United States, unless the Administrator finds that the location of the manufacturing facilities places no burden on the FAA in administering applicable airworthiness requirements.

(h) Each holder of a Parts Manufacturer Approval shall establish and maintain a fabrication inspection system that ensures that each completed part conforms to its design data and is safe for installation on applicable type



Federal Aviation Administration
Office of the Chief Counsel
Regulations Division, AGC-200
202 267-8495

FACSIMILE TRANSMITTAL SHEET

TO:

Michael Truffer

FROM:

Nancy Molitor, Senior Program
Analyst

COMPANY:

[Redacted]

DATE

06/01/2006 03:07:55 PM

FAX NUMBER:

[Redacted]

TOTAL NO. OF PAGES INCLUDING COVER

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PHONE NUMBER:

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SENDER'S PHONE NUMBER.

202 267-8495

RE:

FOIA REQUEST 2006-2057

YOUR REFERENCE NUMBER.

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| <input type="checkbox"/> URGENT | <input checked="" type="checkbox"/> FOR REVIEW | <input type="checkbox"/> PLEASE COMMENT | <input type="checkbox"/> PLEASE REPLY | <input type="checkbox"/> PLEASE RECYCLE |
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NOTES/COMMENTS:

This fax replies to your FOIA Request letter (FOIA No. 2006-2057) requesting a copy of an FAA document dated August 5, 1993, regarding "Definition of Owner-Produced Part". The August 5, 1993, document is attached to this fax. Please call me if you have any trouble with the transmission of this fax. Nancy Molitor

AUG 5 1993

INFORMATION: Definition of "Owner
Produced Part," FAR 21.303(b)(2)

Assistant Chief Counsel for Regulations,
AGC-200

Manager, General Aviation and Commercial
Branch, AFS-340

This responds to your memorandum, dated April 8 to Senior Attorney Mardi Thompson, in which you asked for a definition of "owner [or operator] produced part," as described in Federal Aviation Regulations (FAR) Section 21.303(b)(2). You asked several questions in your memorandum. We answer your questions in the order you asked them. Attachment A provides a background foundation for our answers. The answers should frame a workable definition of how to determine if the exception in FAR 21.303(b)(2) applies.

We answer your questions as follows:

First question: Does the owner have to manufacture the part himself, in order for the part to be considered an "owner produced" part? Answer: No. An owner would be considered a producer of a part if the owner participated in controlling the design, manufacture, or quality of the part. We would look at many factors in determining whether a person participated in controlling the design, manufacture, or quality of a part. The following would tend to indicate that a person produced a part:

1. The owner provided the manufacturer with design or performance data from which to manufacture the part. (This may occur, for instance, where a person provided a part to the manufacturer and asked that the part be duplicated.)
2. The owner provided the manufacturer with materials from which to manufacture the part.
3. The owner provided the manufacturer with fabrication processes or assembly methods to be used in the manufacture of the part.
4. The owner provided the manufacturer with quality control procedures to be used in the manufacture of the part.
5. The owner supervised the manufacturer of the part.

We would not construe the ordering of a part, standing alone, as participating in controlling the design, manufacture, or quality of a part.

Second question: Can the owner contract for the manufacture of the part, and still have a part that is considered an "owner produced" part? Answer: Yes, in certain circumstances. The owner would still be considered a producer of the part if he participated in controlling the design, manufacture, or quality control of the part. Note that, as explained in Attachment A, the person with whom the owner contracted would also be a "producer."

Third question: Can the owner (merely) supervise or assume responsibility for a mechanic manufacturing the part for the owner, and still have a part that is considered an "owner produced" part? Answer: Yes, with respect to supervision. Owner supervision would indicate that the owner participated in controlling the design, manufacture, or quality of the part. A common example would be where an air carrier mechanic manufactured a part for installation on the air carrier's aircraft; the part produced would be owner or operator produced. We are not sure what you meant by the owner "assuming responsibility" for manufacture of a part. If your reference was to something other than participating in controlling the design, manufacture, or quality control of the part, our opinion is that the owner probably would not be determined to have produced the part.

Fourth question: Can an owner contract with a non-certificated individual to manufacture a part for use on the owner's aircraft, and still have a part that is considered an "owner produced" part? Answer: Yes, in certain circumstances. If the owner participated in controlling the design, manufacture, or quality of the part, the part would be considered to be produced by the owner. However, as explained in Attachment A, the non-certificated person would also be considered a "producer."

Fifth question: If a mechanic manufactured parts (e.g., wing ribs) for an owner, and the parts were associated with a repair the mechanic was performing, would manufacture of the parts be considered maintenance associated with the repair, or production of a part by the owner for maintaining the owner's aircraft? Answer: It could be one or the other; in neither case, however, would there necessarily be an FAR violation. If it was concluded that the owner participated in controlling the design, manufacture, or quality of the part, he would be a producer, and the exception in FAR 21.303(b)(2) would apply. Therefore, the mechanic would not be in violation of 21.303(a).

If it was concluded that the mechanic produced the part for the purpose of effectuating the repair, the question would remain whether the mechanic would be in violation of 21.303(a). We submit that the mechanic would not be in violation of 21.303(a), because, as explained in Attachment A, the mechanic did not produce the part for sale for installation on a type certificated product.

We hope the above answers respond to your needs. For further discussion, please telephone Carey Terasaki, AGC-210, at (202) 267-8018.

Donald P. Byrne

Attachment

Attachment A

Background

Section 21.303(a) of the Federal Aviation Regulations (FAR) states:

Except as provided in paragraph (b) of this section, no person may produce a modification or replacement part for sale for installation on a type certificated product unless it is produced pursuant to a Parts Manufacturer Approval issued under this subpart.

Section 21.303(a) appears to contemplate that more than one person can "produce" a modification or replacement part. We base this observation on the following:

1. The regulation proscribes certain behavior unless the part is produced pursuant to a PMA; it does not specifically state that each person who is producing the part must hold a PMA. In fact, prior to Amendment 21-41, FAR 21.303(a) prohibited each person producing a replacement or modification part for sale for installation on a type certificated product from doing so without holding a PMA. In Amendment 21-41, the FAA amended 21.303(a) to allow a PMA holder to contract with a subcontractor or supplier to manufacture a modification or replacement part under the holder's PMA. That amendment recognized that more than one person can participate in the production of a part.
2. The only meaningful interpretation of FAR 21.303(b)(2) accommodates the view that a modification or replacement part can be "produced" by more than one person. Section 21.303(b)(2) excepts from the PMA requirement of 21.303(a) "[p]arts produced by an owner or operator for maintaining or altering his own product." If the 21.303(b)(2) exception were to apply only when the owner or operator produces the part, it would only except from 21.303(a) the production of a part produced by the owner or operator for sale to himself. This result would be illogical. Thus, 21.303(b)(2) must be interpreted as addressing the situation where a part is produced by an owner (or operator) and also is produced by another person.

As noted above, prior to Amendment 21-41, FAR 21.303(a) prohibited each person producing a replacement or modification part for sale for installation on a type certificated product from doing so without holding a PMA. In Amendment 21-41, the FAA amended FAR 21.303(a) to allow a PMA holder to contract with a subcontractor or supplier to manufacture a modification or replacement part under the holder's PMA. In that amendment, the FAA recognized that a modification or replacement part can conform to the approved design data and be safe for installation on a type certificated product, as long as the part is produced under an approved fabrication inspection system (FIS).

Amendment 21-41 did not specifically address who "should have held the PMA" where the part was produced in the absence of a PMA. However, any interpretation of FAR 21.303(a) should be consistent with the focus in that amendment on the establishment and maintenance of the FIS; therefore, we submit that 21.303(a) creates liability for production of a modification or replacement part for sale for installation on a type certificated product for each person who:

1. Participates in controlling the design, manufacture, or quality of the part.
2. And does so with the intent that the part be sold for installation on a type certificated product.

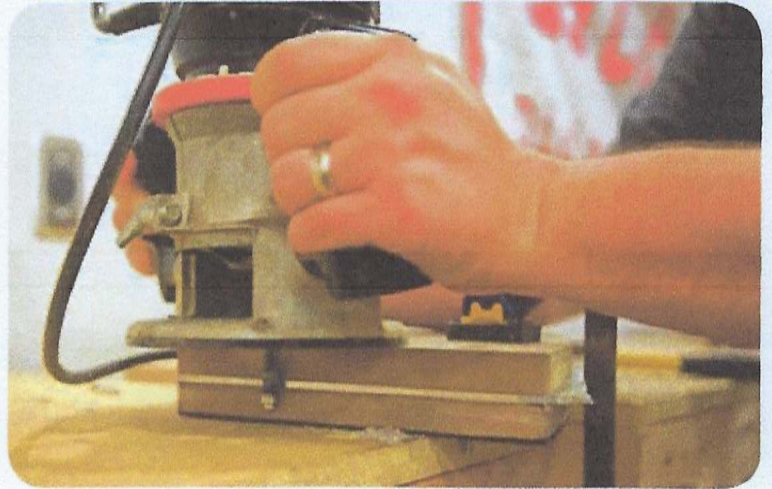
We would look at many factors in determining whether a person participated in controlling the design, manufacture, or quality of a part. The following would tend to indicate that a person participated in controlling the design, manufacture, or quality of a part (i.e., "produced" the part):

1. The person provided the manufacturer with design or performance data from which to manufacture the part. (This may occur, for instance, where a person provided a part to a manufacturer and asked that the part be duplicated.)
2. The person provided the manufacturer with materials from which to manufacture the part.
3. The person provided the manufacturer with fabrication processes or assembly methods to be used in the manufacture of the part.
4. The person provided the manufacturer with quality control procedures to be used in the manufacture of the part.
5. The person supervised the manufacturer of the part.

We would not construe the ordering of a part, standing alone, as participating in controlling the design, manufacture, or quality of a part.

One other issue needs to be addressed. Section 21.303(a) prohibits a person from producing a part for sale for installation on a type certificated product when the part is not produced pursuant to a PMA. The general intent of the proscription in FAR 21.303(a) is to prevent the introduction of an unapproved part into the aviation stream of commerce, where it could be subsequently installed on a type certificated product(s). The terms of 21.303(a), including "for sale," are defined in that context.

Notwithstanding that repair stations and mechanics bill their customers for parts, along with the labor of installing the parts, these entities produce the parts for the purpose of accomplishing maintenance on products, limited to those products brought in by their customers. As described in Order No. 8000.50, a repair station may produce a replacement or modification part, under FAR Parts 43 and 145, for an STC modification or a field-approved repair or alteration, given certain circumstances that assure quality control of the part produced. Compliance with Part 43 gives the assurances of the quality control for a part produced by a Part 65 mechanic. In addition, compliance with the maintenance recordkeeping requirements memorializes the circumstances of production and installation of the part. Accordingly, the objectives of Subpart K are achieved when a part is produced by a repair station or mechanic for installation on a customer's product: the installed part is introduced into the aviation stream of commerce with the necessary evidence of the part's suitability. Thus, one can conclude, as a matter of law, that a repair station or mechanic has not produced the above-described part "for sale" for installation on a type certificated product, as defined in the context of 21.303(a).



Owner-Produced Parts

Replacement parts you can make yourself for certificated aircraft

BY MIKE BUSCH

THE 1960s AND 1970s were the biggest years for production of piston GA airplanes. By the peak production year of 1979, manufacturers like Beech, Cessna, Mooney, Piper, and others were pushing new airplanes out the door as fast as they could, and owners were snapping up all they could produce. This came to a crashing halt in the early '80s, when the effects of a double-dip recession were magnified by passage of massive tax reforms that eliminated financial incentives to buy new airplanes. Piston GA manufacturing all but ceased, and it has never really recovered.

It's no surprise, then, that most of the piston GA aircraft flying today are between 30 and 50 years old. Keeping these aircraft flying is becoming more challenging every year, particularly with respect to finding replacement parts. Some manufacturers—notably Cessna—continue to do a far better job of keeping replacement parts available for these out-of-production aircraft than we have any right to expect. Other manufacturers don't support their legacy aircraft nearly as well. Many parts are becoming breathtakingly expensive, and some are simply unobtainable at any price.

For those parts that are available from the manufacturer, pricing seems to invert the normal laws of supply and demand. Parts that deteriorate or wear out quickly and need to be replaced frequently are often priced reasonably (at least by aircraft standards), but parts that need replacement only rarely can cost a king's ransom. The cost of parts is often a function of how many are produced. If a manufacturer sells only one or two of a particular part in a year, the cost of keeping that part in production can easily get out of hand.

ALTERNATIVES TO OEM PARTS

The cost of high-volume replacement parts is kept within reason by competition from third-party sources that manufacture replacement parts under an FAA parts manufacturer approval (PMA). A company other than the manufacturer that wants to make and sell replacement parts for installation on certificated aircraft must apply to the FAA for permission to do so, and convince the FAA that its parts are equivalent in form, fit, and function to the original equipment manufacturer (OEM) parts they replace. It must also show that its specifications and quality-control procedures will ensure that the parts it produces are of quality at least equal to the OEM parts. The FAA will then issue the company a PMA authorizing it to enter the replacement parts business. Such PMA parts are often less expensive than those from the factory, and generally they're every bit as good as—and sometimes better than—OEM parts.

Generally, companies will only go through the expense and hassle of applying for a PMA for parts that are in reasonably

high demand. If you need an often-replaced part like a seat track, flap roller, fuel bladder, or wheel fairing, you often have PMA alternatives to buying a part from Beech, Cessna, or Piper.

On the other hand, if you need a new wing rib, elevator trailing edge, or cowl flap, the OEM is likely the only source—if indeed the part you need is available at all. If it is, be prepared for serious sticker shock.

Sometimes your best bet may be to find a used serviceable part from a salvage yard. Generally, salvage yards will sell you parts in “as removed” condition for about 50 percent of what a new part costs from the OEM. When the part arrives, you and your mechanic should inspect it to ensure that it is airworthy. If you find the part unsatisfactory, any reputable salvage yard will allow you to return it for a full refund.

Without such a provision, an aircraft needing a replacement part not available from the manufacturer, a PMA supplier, or a salvage yard would be permanently grounded.

THE OWNER-PRODUCED ALTERNATIVE

But there may be yet another alternative: Fabricate the part yourself, or hire someone to fabricate it for you.

In light of the FAA’s emphasis on ensuring that only fully documented approved parts be used, and its stepped-up enforcement actions against purveyors of unapproved aircraft parts, it might seem counter-intuitive that it would allow an aircraft owner to produce repair parts for his own aircraft. But that’s indeed the case, and it’s a lucky thing, too. Without such a provision, an aircraft needing a replacement part not available from the manufacturer, a PMA supplier, or a salvage yard would be permanently grounded. That’s why the FAA made provisions for an owner to produce his own repair parts as “the source of last resort.”

The rules that govern owner-produced parts are a bit cryptic and often poorly understood. Before you try to take advantage of them, you’d better be sure that you and your mechanic understand them.

WHAT THE REGS SAY...

Part 21 of the FARs contains the rules for certification of products (aircraft, engines, propellers, and appliances) and parts. The key regulation concerning repair parts is Section 21.303:

MIKE BUSCH

SECTION 21.303

REPLACEMENT AND MODIFICATION PARTS

- (a) Except as provided in paragraph (b) of this section, no person may produce a modification or replacement part for sale for installation on a type-certificated product unless it is produced pursuant to a Parts Manufacturer Approval issued under this subpart.
- (b) This section does not apply to the following:
 - (1) Parts produced under a type or production certificate.
 - (2) Parts produced by an owner or operator for maintaining or altering his own product.
 - (3) Parts produced under an FAA Technical Standard Order.
 - (4) Standard parts (such as bolts and nuts) conforming to established industry or U.S. specifications.

So parts sold for installation on a certificated aircraft, engine, propeller, or appliance must be either an OEM part produced under a type certificate or production certificate or a non-OEM part produced under a PMA or TSO. There are two exceptions: “standard parts” and “owner-produced parts.”

The FAA has traditionally interpreted “standard parts” to mean fasteners and other parts meeting National Aerospace Standards (NAS), Air Force-Navy Aeronautical Standard (AN), Society of Automotive Engineers (SAE), SAE Aerospace Standard (AS), and Military Standard (MS). On March 5, 1997, the FAA published a Notice of Interpretation in the *Federal Register* that broadened the definition of “standard parts” to include standard electronic parts such as resistors, capacitors, diodes, transistors, and non-programmable integrated circuits. Prior to 1997, it was technically illegal to replace a burned-out panel light rheostat or dimming transistor with one purchased at your local Radio Shack—now it’s officially kosher.

The meaning of “owner-produced parts” was rather murky until April 5, 1993, when Donald P. Byrne, the FAA’s assistant chief counsel for regulations, issued a memorandum defining the term “owner (or operator) produced part” as used in FAR 21.303(b)(2). Byrne’s memo clarifies the FAA’s interpretation of the owner-produced parts exception, and as you’ll see, that interpretation is surprisingly generous and liberal.

...AND WHAT THEY MEAN

Byrne explained that it is not necessary for the owner to actually manufacture the part himself for the part to be considered an “owner-produced part.” The owner may contract with a mechanic, a repair station, or even a non-certificated individual or firm (e.g., a machine shop) to manufacture the part for him, provided that the owner “participated in controlling the design, manufacture or quality of the part.” The FAA deems the part to be owner-produced if the owner does any of the following things:

- Provides the manufacturer with design or performance data from which to manufacture the part—this test would be met if the owner provides the manufacturer with the old part and asks that it be duplicated; or
- Provides materials to make the part; or
- Provides fabrication processes or assembly methods to be used in making the part; or
- Provides quality control procedures to be used in making the part; or
- Supervises the manufacture of the part.

In short, a part whose manufacture is contracted by the aircraft owner will qualify as “owner-produced” if the owner participates in the production of the part in any meaningful way at all.

THE MECHANIC’S ROLE

Interestingly, while FAR 21.303 authorizes an owner or operator to produce repair parts for his own aircraft, it does not

authorize an A&P mechanic to produce parts for use in a repair. Except for certain special situations involving STCs or major repairs or alterations made under an FAA field approval, an A&P is allowed to maintain, repair, and modify parts, but not to make a new replacement part.

But, an owner or operator may contract with a mechanic (or non-mechanic) to produce a repair part for the owner, and that part will be considered an "owner-produced part" under FAR 21.303 so long as the owner "participates in controlling the design, manufacture or quality of the part" by providing the specifications or materials or supervising the manufacture of the part.

While only the owner or operator is allowed to produce an "owner-produced part," it typically requires an A&P mechanic or certified repair station to install the part on the aircraft, determine that the resulting repair is airworthy, and approve the aircraft for return to service.

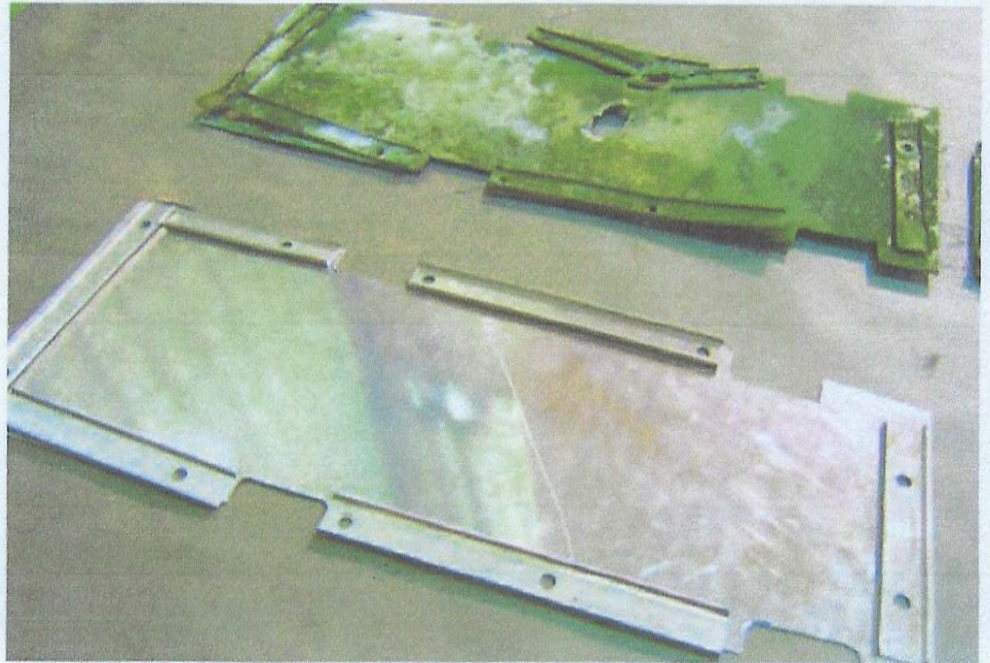
The bottom line is that the use of the "owner-produced part" provision typically requires teamwork between the owner and mechanic. It makes no sense for an owner to produce a repair part for his aircraft unless he's sure that his mechanic is willing to install it and sign off the repair as airworthy. The best way for the owner to ensure that his mechanic will consider the owner-produced part airworthy is to enlist his mechanic's help in producing the part.

IS THE PART AIRWORTHY?

If the owner-produced part is to be used to effect a major repair—a wing spar or primary control surface or landing gear strut, for example—then the repair must be inspected and signed off by an A&P with inspection authorization (IA) and documented on FAA Form 337.

In completing the Form 337, the A&P/IA must certify that the owner-produced part conforms to FAA-approved data. As a general rule, this means either the owner-produced part was made from a manufacturer-approved drawing, or it was made by duplicating an existing approved part and therefore all materials and dimensions can be determined from the existing part. If the A&P/IA has any doubts about whether or not the part conforms to approved data, he may choose to ask the local flight standards district office for a field approval of the repair (which could delay return of the aircraft to service) or require that a designated engineering representative be hired to generate the necessary approved data.

If the owner-produced part is to be used for an ordinary "non-major" repair—replacing a damaged wing rib or fairing or interior trim part, for example—then the part can be approved and the repair signed



The FAA has made provisions for an owner to produce his own repair parts if the parts are not otherwise available from the manufacturer, a PMA supplier, or salvage yard, but before you go ahead and start cranking out pieces, be sure you and your mechanic understand the regs.

off by any A&P (not necessarily an IA), and just an ordinary logbook entry is required. However, the mechanic still needs to ensure that the owner-produced part conforms to the aircraft type design, which may be easy or difficult depending on what kind of part is involved.

In all cases, the mechanic must also ensure that the repair is made (to quote FAR 43.13) “in such a manner and us[ing] materials of such a 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 aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness).”

Presumably if the owner works with the mechanic to produce the part, the mechanic will be satisfied that the part conforms to and the repair meets the “at least equal to the original” requirement of FAR 43.13.

SIGNING OFF THE REPAIR

Although it’s seldom done, the best and safest way to document a repair involving an owner-produced part (and ensure that the feds are happy) is to make two separate entries in the aircraft maintenance records—one by the owner who produced the part, and one by the mechanic who installed it and approved the aircraft for return to service.

The owner should make and sign a logbook entry that identifies the part as an owner-produced repair part under FAR 21.303(b)(2), describes the approved data used in manufacturing the part (generally either a manufacturer-supplied drawing or duplication of an existing approved part), and explains the owner’s participation in controlling the design, manufacture, or quality of the part (e.g., furnished materials or supervised the manufacture). The owner must sign and date the logbook entry.

The mechanic should then document the repair work and approve the aircraft for return to service with a normal logbook entry made in accordance with FAR 43.9. The mechanic’s entry can state that he helped manufacture the owner-produced part, but should clearly state that the owner supervised the manufacture, furnished the materials, or otherwise participated in controlling the design, manufacture, or quality of the part.

When the paperwork is complete, it should be obvious to anyone reading the logbook that the owner was responsible for producing the part and ensuring its conformity to the aircraft’s type design, and the mechanic was responsible for installing the part, making any other necessary repairs, and approving the aircraft for return to service.

With this sort of owner/mechanic teamwork, almost anything is possible. *EAA*

Mike Busch, EAA 740170, was the 2008 National Aviation Maintenance Technician of the Year and has been a pilot for 44 years, logging more than 7,000 hours. He’s a CFI and A&P-IA. E-mail him at mike.busch@savvyaviator.com. Mike also hosts free monthly online presentations as part of EAA’s webinar series on the first Wednesday of each month. For a schedule visit www.EAA.org/webinars.