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BY JASON DICKSTEIN
AEA GENERAL COUNSEL

Impending Parts Rules from U.S., EASA Could Impact Repair Stations

The long-awaited revision to the FAA's manufacturing rules (Part 21) now is slated for release in August, according to FAA sources. Given the many delays encountered in the release of this new regulation, the industry can assume this estimated release date is little more than a target; however, when the new Part 21 rules finally are released, the industry needs to be prepared to comply with the changes.

during maintenance as the fabricated parts are not considered to be offered "for sale" because of the service nature of the transaction.

Although such fabricated parts are not subject to the specific protections of Part 21, the airworthiness regulations still apply to them because of the performance standards found in Part 43. This is because 14 CFR, Section 43.13 requires the parts return to the aircraft, engine or propeller in a condi-

"finished" in the course of maintenance (usually pursuant to maintenance manual instructions). A repair station also can fabricate parts to support a unique maintenance activity.

The proposed changes to Part 21, as published in the NPRM, would remove the "for-sale" caveat from the scope of limitations of the FAA's manufacturing jurisdiction, thus requiring maintenance-fabricated parts to be created under the existing manufacturing rules. Something as simple as a doubler would have to be fabricated under a FAA production approval, such as a parts manufacturer approval. This would make maintenance of some older, out-of-production types, as well as certain maintenance operations in which fabrication of non-complex parts is the norm, impossible to perform in an economical fashion.

The AEA asked the FAA to return the proposed standards for regulating manufacturing to the existing standards, which create an exception for parts not specifically made "for sale for installation in a type-certificated product." This standard currently supports fabrication in the course of maintenance, and it also permits repair stations to rely on parts made for other industries (like certain light bulbs, common hard-

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Following the October 2006 issuance of a new Part 21 notice of proposed rulemaking, many in the industry, including the AEA, sent comments to the FAA on various aspects of the proposed rule.

One concern expressed in the comments from the AEA was that the new Part 21 rules would adversely impact fabrication in the course of maintenance. Under the current regulations (and case law interpreting the regulations), a maintenance provider can fabricate parts intended to be consumed

tion at least equal to the original type-certificated condition (or to a properly altered condition, such as a condition reflected by a supplemental type certificate). The performance standards apply to the parts at the time they are installed.

Circumstances in which a repair station might fabricate parts include those where the maintenance manual directs them to do so; when no alternative part is reasonably available (because of age or short supply); or when parts left unfinished by the manufacturer are

ware and other “commercial parts”).

In each case, the burden rests with the repair station to confirm airworthiness in the particular installation, but this is a much more reasonable burden for the general aviation market than the burden of proof associated with application for a production approval.

Another aspect of the Part 21 NPRM causing industry concern is that the rule would contain an overly limiting definition of the term “commercial parts.” Within the aviation industry, the term “commercial parts” has come to refer to any item going on an aircraft not manufactured specifically for the purposes of being used on an aircraft. For example, carpeting or fabric used in the cabin of an aircraft could be a “commercial part,” and the repair station would be responsible for ensuring these parts meet the applicable requirements of the regulations (such as burn tests) before being installed.

The FAA’s proposed definition of “commercial parts” would impose a burden on manufacturers to define, by manufacturer and part number, the commercial parts for an aircraft while permitting the remainder of the industry no opportunity to amend such a list. This would be devastating for older types no longer actively supported by the manufacturers, and it also would adversely affect types in active use because of the near-impossible burden in a modern manufacturing environment of maintaining an accurate and up-to-date public list of commercial vendors for commercial parts.

While the new Part 21 rules doubtlessly will contain many changes the industry will have to adjust to, we have great confidence the FAA, given industry’s comments, will give serious consideration to these concerns when creating the final rule, and we are optimistic the rule change will be a positive one overall.

EASA Replacement Parts Guidance

The European Aviation Safety Agency recently released a preliminary regulatory impact assessment titled “Replacement Parts.” In this RIA, EASA reviewed the existing EASA regulations in EASA Part 21 pertaining to replacement parts and compared these regulations with the current U.S. Federal Aviation Regulations applying to PMA parts.

EASA always has taken the position it is possible to independently manufacture replacement parts under EASA regulations. EASA Part 21 allows the design of replacement parts to be approved as either a minor change or as a supplemental type certificate, but the existing provisions are not used in this way.

Unlike the FAA’s PMA regulations, the EASA replacement parts regulations require a direct link between the TC holder and the manufacturer of replacement parts for applicants proposing major design changes, and consider all replacement parts designed by someone other than the TC holder to be a change in the design, even if the replacement part is identical to the original.

Historically, EASA has talked about the need to recertify the entire product in the context of the approval for the replacement part, which would require testing and certification of features affected by the new part and for which adequate testing data already exists in the type design.

This approach has had a chilling impact on would-be independent replacement parts manufacturers that find the FAA’s PMA system better focused on the airworthiness standards directly applying to the part and the systems it is likely to affect.

According to the RIA, EASA considered, but ultimately rejected, the idea of changing its replacement part regulations to more closely mirror the FAA’s PMA regulations. EASA continues to believe those FAA rules are not perfect.

Instead, EASA has committed to better publicizing the existing replacement parts regulations and developing guidance material on how the existing regulations in EASA Part 21 can be used to design and produce replacement parts.

If EASA is serious about fostering a replacement parts industry in Europe, such guidance material must focus the testing and approval process on those engineering and compliance issues not already confirmed in the type design. Essentially, it needs to recognize the laws of physics do not change merely because the name of the manufacturer changes.

EASA’s commitment to generating more use of its replacement parts regulations means the European community could become a source of replacement parts similar to the PMA industry in the U.S. This could have a positive effect on the availability of parts as well as on the availability of reliability solutions where OEM parts have experienced failures.

Replacement parts are very important to the avionics community. For operators and repair stations based in Europe, buying a replacement or modification part produced under a production approval issued by a European civil aviation authority instead of a FAA-approved PMA part might become an especially attractive option.

This is not the only important opportunity for Europeans under this new paradigm. Many repair stations in the U.S. have found the data they develop to support field approvals and other maintenance-related data approvals can serve as the core of a data set, which ultimately supports application for production authority. This effective use of generated data is the process causing many U.S. repair stations to get into the PMA manufacturing business.

Repair stations subject to European regulations might want to watch EASA carefully over the coming year to see what sort of guidance it issues concerning replacement parts fabrication. □