

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

WASHINGTON, DC 20591-0004

AERONAUTICAL REPAIR STATION)
ASSOCIATION)

Complainant)

vs.)

Rolls-Royce Corporation)

Respondent)

Docket No. _____

PART 13 FORMAL COMPLAINT

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PART 13 FORMAL COMPLAINT

I. INTRODUCTION

Pursuant to 14 C.F.R. § 13.5 of the Federal Aviation Regulations¹ (FARs), Complainant, the Aeronautical Repair Station Association (“Complainant”, “ARSA” or “Association”), respectfully submits this Formal Complaint to the Administrator on behalf of its member, Helicopter Engine Repair Overhaul Services, Inc. (H.E.R.O.S.).

Complainant alleges that Rolls-Royce Corporation (Rolls-Royce), a type certificate holder under § 21.29, through its related entity Rolls Royce North America, violated § 21.50(b) by refusing to make Instructions for Continued Airworthiness (ICA) available to persons required to comply with those instructions when performing maintenance on articles for which Rolls-Royce holds the design approval.

Complainant requests that the FAA institute an investigation and issue an order finding that Rolls-Royce is in violation of § 21.50(b). The information and Items of Proof (IOP) submitted herein will enable the FAA to expeditiously conclude an informal investigation as contemplated by §13.5(i). Should the Administrator believe that additional information is necessary to make a final determination,

¹ All regulatory citations are to Title 14, Parts 1 through 199 of the Code of Federal Regulations (C.F.R.) unless otherwise noted.

ARSA urges the Administrator to issue an order of investigation in accordance with Part 13, Subpart F.

ARSA represents the interests of aircraft maintenance and alteration facilities before the Federal Aviation Administration (FAA), the National Transportation Safety Board (NTSB), other federal agencies, and National Aviation Authorities (NAA) around the world. Its members perform maintenance and alterations on behalf of U.S. and foreign air carriers, as well as other aircraft owners and operators. In addition, the Association's membership includes companies that distribute parts to international civil aviation businesses, as well as air carriers and manufacturers. Through its publications, training activities and annual repair symposium, ARSA educates the aviation design, production and maintenance industries on domestic and international regulatory requirements.

H.E.R.O.S. is a Part 145 certificated repair station located in California. It holds limited powerplant and accessory ratings, as well as non-destructive testing and specialized services ratings (IOP 2 & 3). H.E.R.O.S. is a member of ARSA, and requested our assistance in filing this complaint after Rolls-Royce refused numerous requests for the ICA that are the subject of this complaint.

Respondent Rolls-Royce is the holder of Type Certificate (TC) No. E4CE (IOP 1). The TC covers various Model 250 engines. This Complaint focuses on Models 250-C20S, 250-C20R/1, 250-C20R/2, 250-C20R, 250-C20R/4, and 250-C20W. Respondent's address, as noted on the TC, is:

Rolls-Royce Corporation
P.O. Box 420
Indianapolis, Indiana 46206-0420

II. FACTS

Rolls-Royce holds the type certificate for the Model 250 engine. Rolls-Royce applied for the type certificate for engine Models 250-C20S, 250-C20R/1, 250-C20R/2, 250-C20R, 250-C20R/4, and 250-C20W after January 28, 1981 (see IOP 1).

H.E.R.O.S. is an appropriately rated FAA-certificated Part 145 repair station (see IOP 2) that performs maintenance on the Rolls-Royce Model 250 series engine (see IOP 3).

On May 28, 2002, in a letter to Tim McGrath, Director, Commercial Aftermarket Business-Helicopters, H.E.R.O.S. requested maintenance manuals for the Model 250-C20 series engines, a series of engines on which H.E.R.O.S. performs

maintenance pursuant to Part 43 (see IOP 4). The information requested included “[d]etails of fits and clearances relevant to overhaul; details of repair methods...; and instructions for testing after overhaul.” Pursuant to §§ 21.50(b), 33.4 and Appendix A to Part 33 (A33), this information, currently included in a Rolls-Royce document entitled Parts Modification Instructions (PMI), is a required aspect of the ICA for the 250-C20 series engines. After receiving no response from Rolls-Royce, H.E.R.O.S. sent an identical request for this information on June 6, 2002, (see IOP 5).

On June 21, 2002, Mr. McGrath sent a letter to H.E.R.O.S. denying its request for maintenance manuals, stating “PMI’s are not necessary for continued airworthiness....PMI’s are Rolls-Royce proprietary documents which...are only disclosed to Rolls-Royce approved Authorized Maintenance Center (AMC’s) with fully executed non-disclosure agreements.” (see IOP 6).

In March of 2003, H.E.R.O.S. requested the overhaul instructions for Model 250 Series III & IV Bleed Valves. The Commercial Engine Bulletin (CEB) H.E.R.O.S. had received for the Bleed Valves did not contain rework and re-identification instructions needed to perform maintenance. Rolls-Royce denied this request on April 2, 2003, stating that they “provide the information necessary for continued airworthiness. This is accomplished... by specifying the replacement part number bleed valve required to return the engine to airworthy status. There is no requirement for Rolls-Royce to provide rework and reidentification instructions for engine components as part of the instructions for continued airworthiness” (see IOP 7).

Finally, in a letter dated September 27, 2005, H.E.R.O.S. requested airworthiness data for specific part numbers from the Vice President and General Counsel of Rolls-Royce North America, Mr. Thomas P. Dale. This letter requested “the inspection criteria, flow and target data, tolerances, fits and clearances, and all other overhaul data for the Oil Piccolo Tube, parts # 23038221, 23065827 and 23034102, the Gearbox Cover Assembly, part #23037418, and the Gearbox Housing Assembly, part #6877181 used on Rolls-Royce engine Models 250-C20S, 250-C20R/1, 250-C20R/2, 250-C20R, 250-C20R/4, and 250-C20W” (see IOP 8).

W. Eric Pedersen, vice present and legal counsel of Rolls-Royce, responded in a letter dated October 16, 2005. In his letter, Mr. Pedersen denied H.E.R.O.S.’ request for ICA for all relevant part numbers (see IOP 9). Specifically, Rolls-Royce stated, “Rolls-Royce has developed some more complex and critical repair procedures for these components that it makes available only to AMC’s with which Rolls-Royce has business arrangements and oversight capability. The procedures are proprietary” (see IOP 9).

III. ANALYSIS

A. ICA Regulatory Framework

Since 1941, the federal government has required that manufacturers of civil aviation products prepare instructions relating to the installation, operation, servicing, and maintenance of those products. In the case of aircraft engines, the rules specifically required that the design approval holder make the manuals available to persons performing maintenance under the applicable regulations.² Additionally, Technical Standard Orders (TSOs) have also required development and dissemination of maintenance information. Between 1941 and 1980 (when the current version of § 21.50(b) was adopted), the FAA and its predecessor agency consistently required the holders of design approvals for aircraft, aircraft engines, propellers and appliances to prepare instructions for performing maintenance.

In 1980, the FAA adopted the current version of § 21.50(b), which requires all design approval holders to provide ICA for the type certificates or supplemental type certificates for which they made application after January 28, 1981.

Based on the events described above, Complainant respectfully submits that Rolls-Royce, by not providing this certificated and appropriately rated repair station with the complete ICA for the Model 250 engine, including overhaul information for the Oil Piccolo tube, part number 23038221, 23065827, and 23034102; the Gearbox Cover Assembly, part number 23037418; and the Gearbox Housing Assembly, part number 6877181, has violated § 21.50(b).

1. Section 21.50(b)

As the design approval holder for the Model 250 engine, the FARs required that Rolls-Royce prepare and submit ICA as part of the type certification process. The FARs also require that Rolls-Royce distribute and maintain those ICA subsequent to certification. Section 21.50(b) contains the current legal requirement for establishing and distributing ICA, as follows:

[t]he holder of a design approval, including either the type certificate or supplemental type certificate for an aircraft, aircraft engine, or propeller for which application was made after January 28, 1981, shall furnish at least one set of complete Instructions for Continued Airworthiness, prepared in accordance with §§ 23.1529, 25.1529, 27.1529, 29.1529, 31.82, 33.4, or 35.4 of this chapter, or as specified in the applicable airworthiness criteria for special classes of aircraft defined in § 21.17(b), as applicable, to the owner of each type of

² See Parts 6, 7, 13 and 14 of the Civil Air Regulations (CARs) and corresponding Parts of the recodified FAR.

aircraft, aircraft engine, or propeller upon its delivery, or upon issuance of the first standard airworthiness certificate for the affected aircraft, whichever occurs later, and thereafter make those instructions available to any other person required by this chapter to comply with any of the terms of these instructions. In addition, changes to the Instructions for Continued Airworthiness shall be made available to any person required by this chapter to comply with any of those instructions.

This is the primary regulation that requires Rolls-Royce, as a type certificate holder, to prepare Instructions for Continued Airworthiness for its aircraft engine, and make them available to any person required by the regulations to comply with these instructions.

Notwithstanding the clear language of § 21.50(b), the FAA has been slow in enforcing the design approval holder's obligation to make ICA available to maintenance providers. On the other hand, the agency has vigilantly enforced the requirement that those performing maintenance do so in accordance with the ICA. In ARSA's view, this "double standard" of enforcement exists because the FAA's two primary safety oversight organizations, the Aircraft Certification Service (design and production) and the Flight Standards Service (operations and maintenance), have not developed a standard and uniform FAA policy. This is particularly unfortunate at a time when the agency has encouraged certificate holders to use a coordinated systems approach, complete with risk analysis, in managing their daily operations. Systems safety concepts are grounded in the fundamental belief that accidents and other safety lapses can be minimized by identifying and addressing "precursors" before they become full-blown safety problems.

In a policy statement issued on July 12, 2005, the FAA discussed the shared responsibility of Design Approval Holders (DAHs) and operators in achieving safety objectives. The FAA recognizes that to achieve safety goals in an increasingly complex industry "we need to facilitate more effective communication of safety information between DAHs and operators." Specifically, the policy seeks to "build[s] on current regulations (14 C.F.R. §21.50 and §21.99) that require DAHs to "make available" certain service information that is necessary to maintain the airworthiness of airplanes" (IOP 19). Clearly, this policy reinforces the regulatory requirement of DAHs to provide airworthiness information, including ICA, to operators and those that maintain owner/operator aircraft.

2. Part 33 Appendix A

Part 33 contains the airworthiness standards for aircraft engines. One of those standards, § 33.4, requires an applicant for an aircraft engine type certificate to prepare ICA in accordance with Appendix A. The appendix sets guidelines for

the content and details what the design approval holder must include in the ICA. Appendix A33.1(b) states, "The Instructions for Continued Airworthiness for each engine must include the Instructions for Continued Airworthiness for all engine parts." Section A33.3(b) also requires that ICA include:

(1) **Disassembly information**, including the order and method of disassembly for overhaul; (2) **cleaning and inspection instructions** that cover the materials and apparatus to be used and methods and precautions to be taken during overhaul. Methods of overhaul inspection must also be included. (3) **Details of all fits and clearances** relevant to overhaul. (4) **Details of repair methods for worn or otherwise substandard parts and accessories** along with the information necessary to determine when replacement is necessary (5) the **order and method of assembly** at overhaul (6) instructions for testing after overhaul (7) **instructions for storage** preparation, including any storage limits (8) a **list of tools needed** for overhaul. (emphasis added.)

As the appendix outlines, the ICA must contain *details* for performance of overhaul, including specific information regarding repair methods, fits and clearances, and inspections. On several occasions, H.E.R.O.S.' requested from Rolls-Royce the detailed maintenance and overhaul information Appendix A explicitly requires (see IOPs 4, 5 & 8). In violation of §§ 21.50(b), 33.4 and Part 33, Appendix A, Rolls-Royce consistently denied these requests (see IOPs 6, 7 & 9).

B. Repair Stations Must Comply with the ICA Requirements

H.E.R.O.S. is a Part 145 certificated repair station rated to perform maintenance, preventive maintenance and alterations on the Rolls-Royce Oil Piccolo Tube, Gearbox Housing Assembly, and Gearbox Cover Assembly. Section 145.109(d)(2) requires H.E.R.O.S. to obtain and keep current the ICA for these articles. In addition, § 43.13(a) generally requires that H.E.R.O.S. perform the maintenance, preventive maintenance or alterations of these items in accordance with the current ICA.

As used in § 21.50(b), Part 145 repair stations qualify as "other persons" required to comply with the regulations. An FAA legal interpretation regarding ICA requirements, commonly known as the "Whitlow Letter," supports this reading of the regulation (see IOP 11). The letter concluded that FAA certificated repair stations are "other persons required by [Chapter I of Title 14 of the CFR] to comply with any of the terms of the instructions." The letter correctly observed that, though § 21.50(b) did not "technically" require the aircraft manufacturer to provide accessory ICA (because the design approval holder filed its application for the BAe-146's type certificate prior to January 28, 1981), such a refusal was "**puzzling, at best, and, at worst, [was] an artificial obstacle to ensuring that**

each BAe-146 airplane is maintained in an airworthy condition.” (emphasis added).

In contrast to the BAe-146, Rolls-Royce filed its applications for the Model 250-C20 series engines after January 28, 1981, the date specified in § 21.50(b). In addition, the FARs and their predecessors, the Civil Aviation Regulations (CARs), have required maintenance manuals for aircraft engines since 1941. As a result, Rolls Royce’s refusal is not only an artificial barrier to performing airworthy maintenance, but is also a violation of the plain language of the pertinent FARs.

1. Current Part 145

Part 145 requires that H.E.R.O.S. possess ICA both at the time of certification and at the time maintenance is performed (see §§ 145.51(b), 145.109(d)(2), and 145.211(c)). This makes it a “party required to comply with these regulations” as set forth in § 21.50(b).

Section 145.51(b) provides, in part, “The equipment, personnel, **technical data**, and housing and facilities required for the certificate and rating, or for an additional rating must be in place for inspection at the time of certification or rating approval by the FAA” (emphasis added). Section 145.109(d) further specifies that data “required for the performance of maintenance, preventive maintenance, or alterations under [a] repair station[’s] certificate and operations specifications” includes ICA. In addition, § 145.211(c) requires that a repair station include in its quality control manual the manufacturer’s inspection standards and any related data the manufacturer specifies, information which is most appropriately found in the ICA.

Based on the requirements identified above, Part 145’s regulatory scheme requires a repair station to possess the current ICA appropriate for their rating both at the time of certification and at the time the repair station performs the work. In addition, it requires repair stations to integrate the ICA into their manuals and procedures and ensure repair station personnel follow them when performing work. In short, the FAA has made the possession of current ICA a condition of obtaining a repair station certificate.

Thus, to create harmony within the FARs and avoid what the Whitlow Letter refers to as an “artificial obstacle” to airworthy maintenance, one must recognize that § 21.50(b) and the related regulations require design approval holders to make ICA available to repair stations. This technical information is not currently included in the ICA Rolls-Royce has provided repair stations such as H.E.R.O.S.; however, it is being provided to Rolls Royce’s Authorized Maintenance Centers.

Section 145.109(d) mandates that documents and data must be current and accessible when repair station personnel perform the relevant work. This

includes Instructions for Continued Airworthiness, Maintenance Manuals, and Overhaul Manuals.

2. Part 43 Requirement to Use ICA

In addition to *possessing* the ICA at the time of certification, maintenance providers must *use* the ICA when performing maintenance, preventive maintenance and alteration on civil aviation articles pursuant to §43.13 of the FAR. That rule states that those who perform maintenance on engines, or appliances, shall use “the methods, techniques, and practices prescribed in the current manufacturer’s maintenance manual or Instructions for Continued Airworthiness prepared by its manufacturer, or other methods techniques, and practices acceptable to the Administrator.” 14 C.F.R. § 43.13(a).

In addition, maintenance providers are required to “do that work in such a manner...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...qualities affecting airworthiness).” 14 C.F.R. § 43.13(b).

The ICA required under § 43.13(a) are necessary for H.E.R.O.S. to perform maintenance in an airworthy manner. ICA contain information relating to the inspection, fits, and clearances, as well as information necessary for overhaul. Without the ICA, a repair station must forego doing that work or develop its own, non-standard maintenance procedures.

3. FAA Legal Interpretation: The Whitlow Letter

On December 13, 1999, the FAA’s deputy chief counsel issued the Whitlow Letter, a legal interpretation related to the issues raised in this Complaint (IOP 11). The Whitlow Letter related to a dispute in which GE Accessory Services-Grand Prairie, Inc. (GE-Grand Prairie) protested British Aerospace PLC’s (BAe) refusal to provide ICA for various airframe accessories installed on the BAe-146 airplane.

The Whitlow Letter describes the essential elements of a § 21.50(b) violation. First, the subject accessories must be part of the approved type design, and not added by someone other than the design approval holder pursuant to a Supplemental Type Certificate. Since the Oil Piccolo Tube, Gearbox Cover Assembly, and Gearbox Housing Assembly, are part of the Rolls-Royce Model 250 engine, they are part of the type design.

Second, the repair station requesting the ICA must possess the appropriate certificated ratings to perform maintenance on the articles for which it is requesting the ICA. As discussed in Section II, H.E.R.O.S. holds an FAA Part

145 certificate and the ratings required to perform maintenance on the parts in question as well as the entire Model 250 engine. Therefore, according to the elements set forth in the Whitlow Letter, § 21.50(b) requires Rolls-Royce to provide H.E.R.O.S. with the ICA for the requested Rolls-Royce accessories.

C. Rolls-Royce Must Furnish H.E.R.O.S. with ICA

Section 21.50(b) requires that the holder of a design approval, for which it made application after January 28, 1981 must furnish ICA, including the ICA for accessories installed in the engine. Based on the evidence presented herein, Rolls-Royce meets the criteria of § 21.50(b), thereby requiring it to provide H.E.R.O.S. with ICA.

1. Rolls-Royce Holds the Design Approval for the Model 250 Engine

Rolls-Royce holds TC No. E4CE, which includes the Models 250-C20S, 250-C20R/1, 250-C20R/2, 250-C20R, 250-C20R/4, and 250-C20W series of engines (see IOP 1 at pages 1 and 13). Sections 21.50(b), 33.4 and Part 33, Appendix A, therefore, clearly cover these series of engines. As a result, Rolls-Royce meets the first criteria for providing ICA.

2. Rolls-Royce Made its Application for Models 250-C20S, 250-C20R/1, 250-C20R/2, 250-C20R, 250-C20R/4, and 250-C20W TC after January 28, 1981

Rolls-Royce applied for the TC for Models 250-C20S, 250-C20R/1, 250-C20R/2, 250-C20R, 250-C20R/4, and 250-C20W after January 28, 1981 (See IOP 1). Therefore, these models meet the second criteria cited in § 21.50(b).

3. The Oil Piccolo, Gearbox Cover Assembly and Gearbox Housing Assembly are Accessories that are Part of the Model 250 Engines and Subject to the ICA Requirements

Part 33, Appendix A, paragraph 33.1(b) directs that the ICA for each engine must include the ICA for all aircraft engine parts. In the present case, Rolls-Royce must provide the ICA for the Oil Piccolo, Gearbox Cover Assembly and Gearbox Housing Assembly, as these are parts of the Model 250 type certificated engines.

Under § 1.1, an "Aircraft Engine" is "an engine that is used or intended to be used for propelling aircraft. It includes turbosuperchargers, appurtenances, and **accessories** necessary for its functioning, but does not include propellers" (emphasis added). Thus, the accessories referenced in this complaint, Oil Piccolo Tube, parts # 23038221, 23065827 and 23034102, the Gearbox Cover Assembly, part #23037418, and the Gearbox Housing Assembly, part #6877181 are part of an aircraft engine within the meaning of 14 CFR § 1.1.

As parts of the aircraft engine under § 1.1, Rolls-Royce has a regulatory obligation to provide the ICA for the Oil Piccolo, Gearbox Cover and Housing Assemblies. Section A33.1(b) requires that ICA be available, "for all engine parts." In addition, if a parts manufacturer fails to provide the ICA, then A33.1(b) requires that the higher level ICA "must include the information essential to the continued airworthiness of the engine." The ICA are required not just for the completed type certificated product, but also for each part included in the engine. As a result, whether as separate ICA or as a portion of the ICA for the overall engine, Rolls-Royce must provide H.E.R.O.S. the ICA for the parts referenced in this complaint.

4. FAA Legal Interpretation: Order 8110.54

FAA Order 8110.54, issued on July 1, 2005, reinforces the fact that design approval holders must provide ICA, including overhaul information, to properly rated repairs stations under § 21.50(b) (IOP 13). The opinion sets forth four conditions that, if met, require a design approval holder to make ICA available to the repair station. Those conditions are set forth in *italics* below, with the relevant facts in **bold**.

1. *Application for the latest related type certificate (original, amended or supplemental) was made after January 28, 1981.*

Rolls Royce applied for the type certificate for the Model 250-C20S type certificate on December 30, 1983. It applied for the type certificates for the Models 250-C20R/1, 250-C20R/2, 250-C20R, 250-C20R/4, and 250-C20W after 1983, specifically applying for the 250-C20W on April 20, 1990.

2. *The latest related certification basis includes § 21.50 as amended 09/11/80 or later (and § 33.4 as applicable), i.e., the certificate holder was required to develop (furnish) ICA as part of the certification process.*

The certification basis for the Model 250 engines encompasses § 21.50(b) and Part 33, Amendments 33-7 through 33-13 and Part 33, Appendix A which was added by Amendment 33-9 September 11, 1980 (IOP 1).

3. *The requester (repair station) of the ICA is currently rated for the product/part and is required by Chapter 1 of 14 CFR to comply with the ICA for the product/part.*

H.E.R.O.S. is rated to perform maintenance on the specified Rolls-Royce accessories. As discussed above, in performing work on these accessories, H.E.R.O.S. is required under Chapter 1 of 14 C.F.R. to comply with the ICA for these parts. Specifically, §§ 43.13 and 145.109(d) require that H.E.R.O.S. possess and use the ICA in performing maintenance,

preventive maintenance and alterations on the Oil Piccolo, Gearbox Cover Assembly and Gearbox Housing Assembly.

4. If the requested ICA data are a CMM or specific repair information, the design approval holder must refer to the CMM or repair information in higher-level ICA (airplane, engine, or propeller ICA) as the source of information for continued airworthiness actions.

It is our understanding that the manual H.E.R.O.S. receives from Rolls-Royce contains a statement, in lieu of overhaul information, that parts should be “removed and sent to a Rolls-Royce Authorized Maintenance Center” for repair. Rather than provide the necessary instructions for overhaul of the engine parts in question, Rolls-Royce requires repair stations send it to a facility authorized by Rolls-Royce for the appropriate repair. This practice is clearly contrary to the requirements set forth in §21.50(b), Part 33 Appendix A, and Order 8110.54.

D. Required Content: Instructions for Continued Airworthiness (ICA)

Engine ICA must contain all appropriate instructions essential to the continued airworthiness of the engine. The ICA required by Part 33 contain two parts, the Engine Maintenance Manual, which H.E.R.O.S. receives, and the Engine Overhaul Manual, which Rolls-Royce provides, but which does not include the required information.

1. Meaning of Airworthiness

Under the Federal Aviation Act,³ the FAA must oversee the design, production, operations and maintenance of civil aviation products and other articles.⁴ The FAA accomplishes its statutory responsibility through a comprehensive regulatory system that covers each person engaged in these activities.⁵ Although the rules vary depending on the specific FAA certificate or approval obtained, the concept of airworthiness applies equally to all regulated persons. Each entity functions as part of an integrated civil aviation system that maintains safety at each stage of an article’s “regulatory life.”

Designed articles must meet the applicable airworthiness standards (including the ICA requirements) contained in Parts 23, 25, 27, 29, 31, 33 and 35 of the

³ 49 U.S.C. § 44701 *et seq.*

⁴ The term “article” when used in this Complaint shall have the same meaning as in the new section 145.3 (66 FR 41088, August 6, 2001). It includes aircraft, airframe, aircraft engine, propeller, appliance or accessory part.

⁵ The term “person” is defined in Part 1 to mean “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.”

FAR. Each article, produced in conformity with its approved design, must also be in condition for safe operation when it leaves the control of the design approval holder or production approval holder.

Similarly, the FAR require that parties operating aircraft do so in an airworthy manner. The regulations, guidance material, and enforcement cases make it abundantly clear that this only occurs when owner/operators or the maintenance providers working in their behalf, perform maintenance, preventive maintenance and alterations in an airworthy manner.

The “airworthiness” requirement stems from 49 U.S.C. § 44704(d) of the Federal Aviation Act, which states, “[t]he Administrator shall issue an airworthiness certificate when the Administrator finds that the aircraft conforms to its type certificate and, after inspection, is in condition for safe operation.”

Case law has further clarified the standard for determining airworthiness. The Administrator has consistently held that an “aircraft is airworthy when: 1) it conforms to its type design or supplemental type design and to any applicable airworthiness directives, **and** 2) is in a condition for safe operation.” In the Matter of Watts Agricultural Aviation, FAA Order No. 91-8, at 17 (April 11, 1988, citing the Federal Aviation Act of 1958, as amended, 49 USC App. 1423 (c)) (IOP 11). Moreover, as the 10th Circuit Court of Appeals made clear in Morton v. Dow, “[a]irworthiness is not synonymous with flyability. An aircraft that does not conform to its type certificate is unairworthy, even if it may be in condition for safe operation.” 525 F.2d 1302, 1307 (10th Cir. 1975) (emphasis added).

The FAA has established the ICA as a critical link in the airworthiness chain between the design and production rules, on the one hand, and the operating and maintenance rules on the other. As discussed above, the FAA requires an applicant to prepare ICA during certification, and upon certification, revise them as necessary to reflect operating experience. Most importantly, design approval holders must make the ICA available to owner/operators and maintenance providers. The ICA provide basic safety information that allows owner/operators or the person performing maintenance on their behalf to maintain and alter the article in accordance with instructions developed by those in the best position to provide them—the manufacturers of civil aviation articles.

Advisory Circular 33.4-1⁶ confirms the importance of ICA and recognizes that airworthiness is the link that keeps the safety chain together: “A new aircraft engine with an airworthiness approval tag...is viewed as airworthy, and... adherence to the ICA will play a key role in keeping that engine airworthy through its operational life, or in a state of ‘continued airworthiness’.” This principle applies equally to all civil aircraft, propellers, appliances and accessories.

⁶ Advisory Circular 33.4-1 contains guidance for preparing ICA for aircraft engines.

2. Engine Overhaul Instructions

Part 33, Appendix A, paragraph A33.3 provides that the ICA for a type certificated engine must contain an "Engine Overhaul Manual or Section." **Rolls-Royce, however, has removed overhaul information regarding the Oil Piccolo, Gearbox Cover Assembly and Gearbox Housing Assembly from its ICA for the Model 250 engine.**

Because Rolls-Royce has failed to include all of the required overhaul information in its ICA, it has failed to make complete Instructions for Continued Airworthiness available. As discussed above, these manuals and information are essential to the continued airworthiness of the engine.

3. Information contained in the Parts Modification Instructions (PMI) are required to be included in the ICA in accordance with Part 33, Appendix A

H.E.R.O.S. asserts that the information needed to perform an airworthy repair is included in the PMIs that Rolls-Royce produces. These PMIs include the details on fits and clearances, inspection criteria, and information on repairs that H.E.R.O.S. and other similarly situated repair stations require for performing maintenance. The PMIs are separate from the overhaul manuals, and Rolls-Royce only distributes them to Rolls-Royce preferred maintenance providers known as Authorized Maintenance Centers (AMC's). H.E.R.O.S. has requested copies of the information contained in the PMIs, under the assertion that they contain information necessary to perform maintenance in an airworthy manner and should therefore be included in the ICA (see IOP 8).

In its response, Rolls-Royce argued that the information requested was proprietary. Rolls-Royce further asserted that this data was not subject to the ICA regulations and therefore Rolls-Royce was permitted to limit dissemination of it to repair stations within its AMC network. In order to become an AMC, a repair station must agree to certain Roll-Royce-imposed conditions and pay annual fees in addition to the cost of the overhaul manual. H.E.R.O.S. is not a member of this maintenance network.

The failure of Rolls-Royce to provide required overhaul information to persons outside its AMC network creates a competitive disadvantage for H.E.R.O.S. and similarly situated repair stations. Rolls-Royce's refusal to meet its regulatory obligations under §§ 21.50(b), 33.4 and A33 forces H.E.R.O.S to find alternative and more costly means of compliance with §§ 43.13 and 145.109(d). H.E.R.O.S., therefore, obtains Designated Engineering Representative (DER) approval for the repairs it performs on these engines.

Rolls-Royce's claim that data necessary for the airworthy maintenance of its engine is proprietary and therefore protected from disclosure contravenes the

clear intent of §§ 21.50(b), 33.4 and Part 33, Appendix A. The FARs require that Rolls-Royce makes certain maintenance and overhaul information available to those persons required to comply with the regulations. Rolls-Royce, as a type certificate holder, must make available to an appropriately rated Part 145 repair station, the information necessary for overhaul and maintenance of the engine and all of its accessory parts. However, Rolls-Royce has repeatedly refused to make this critical information available to H.E.R.O.S. as § 21.50(b) and Part 33 require.

Rolls-Royce does provide critical overhaul information; however, it is only to AMC's with a Rolls-Royce licensing agreement. Providing information to select service centers while denying it to other appropriately rated Part 145 repair stations does not constitute compliance with § 21.50(b) and Part 33.

E. The Rolls-Royce PMI Are Essential to Continued Airworthiness

Overhaul information is necessary to maintain the airworthiness of an engine. The overhaul manuals Rolls-Royce provides to H.E.R.O.S. do not meet this minimum standard. Instead, it places the overhaul information essential to continued airworthiness in the PMI it exclusively distributes to its AMCs. In doing so, Rolls-Royce contradicts the FAA's policy, as illustrated by a series of enforcement actions that have held operators and repair stations accountable for not following the airworthiness requirements *found in the ICA* and for failing to perform airworthy repairs.

1. Failure to Follow the Applicable Maintenance Manual

FAA and NTSB enforcement decisions establish that air carriers and maintenance providers violate § 43.13(a) when they fail to perform maintenance in accordance with the ICA, including overhaul manuals. As the agency is aware, most enforcement cases settle without an administrative hearing and therefore there is no reported decision. Nevertheless, such cases are a matter of public record and Complainant requests the FAA take administrative notice of their existence. Through these actions, the FAA and NTSB have clearly established that proper maintenance and alterations are so essential to continued airworthiness that those who fail to comply with their regulatory obligations face enforcement action.

Complainant believes that the reported enforcement cases discussed below are representative of the general enforcement cases on this topic.

In Administrator v. Aero Lectrics, Inc., 6 NTSB 1085, 1088 (1989) (IOP 13), the NTSB concluded that a repair station that failed to perform an overhaul for an air carrier in accordance with the accessory manufacturer's overhaul manual violated § 43.13(a). The Administrator noted:

The record establishes that respondent overhauled the blower without the aid of either an overhaul manual or such other technical data as would assure that the work would be correctly or properly accomplished.

* * * * *

A repair station such as respondent is permitted to do maintenance work based on technical data supplied by the operator usually in the form of the maintenance (or overhaul) manual.

Similarly, In the matter of Empire Airlines, Inc., FAA Order No. 2000-13, Docket No. CP98NM0011 (June 8, 2002) (IOP 14), an administrative law judge held that Empire violated § 43.13(a) when “the left engine mount of Empire’s Fairchild F-27F aircraft was repaired in a manner not specified by either the Fairchild Structural Repair Manual (SRM) or Overhaul Manual (OM).” The Fairchild overhaul and structural repair manuals permitted only two methods of repair for non-negligible damage to the engine mount, patching, and insertion. Further, the manuals stated that any damage in excess of the allowable limits for patching and insertion required replacement of the engine mount. Empire ignored the Fairchild manuals and performed a “sleeve” weld repair on the engine mount. The law judge stated that Empire was “obligated to follow the terms of governing manuals” and affirmed the civil penalty. The Administrator denied Empire’s appeal and affirmed the law judge’s decision. Id.

Furthermore, in Administrator v. Missouri Aerotech Industries, Inc., FAA Order No. EA-3999, Docket No. SE-13249 (October 15, 1993) (IOP 15), the Administrator appealed from the law judge’s decision not to revoke a repair station’s certificate when it consistently performed numerous repairs on navigational equipment without the benefit of the manufacturer’s manuals or other approved or acceptable data. In reversing the law judge’s decision and affirming the revocation of Respondent’s repair station certificate, the NTSB stated:

[W]e agree with the Administrator that the impact on aviation safety of such unauthorized repairs is not trivial. The reliability of a repair station’s work depends in large part upon its adherence to the approved techniques and procedures which are **set forth in published technical data**. Id. at page 12 (emphasis added).

Finally, in Administrator v. Alphin, 4 NTSB 23 at 26 (1984)(IOP17), the NTSB held that:

[T]he overhaul manual for this engine, in relevant part, specifies only a visual inspection of camshaft ‘journals for scoring, deformation and excessive wear’ and of ‘cam lobes for profile wear, scoring and pitting...and it does not, apparently for proprietary reasons, provide the information needed to do so. While we do not

take issue with the FAA inspector's opinion that a better overhaul might be accomplished if testing not dictated by the overhaul manual were undertaken, **the regulatory standard is not what an inspector believes should be done in connection with an overhaul, but, rather what the Administrator has specified, through approved overhaul manuals and other documents, must be done.** (emphasis added.)

The holding in this case demonstrates that under the FARs the ICA contains information essential to the continued airworthiness of the type certificated product.

The law is clear—a repair station must have current manufacturer's maintenance information at the time of certification and each time it performs work. In addition, maintenance must generally be performed in accordance with the methods, techniques and practices set forth in the pertinent manufacturer's maintenance or overhaul manual. This duty applies whether the article is an aircraft, aircraft engine, propeller, appliance, accessory, instrument, or a part thereof.

2. Operations with Improperly Repaired Engines

Operating an aircraft with a damaged or improperly repaired engine renders the aircraft unairworthy. Each of the operating rules found in Parts 91, 121, 125, and 135 prohibits such operation. Therefore, performing maintenance on all parts of the engine in accordance with the applicable overhaul manual is essential to the continued airworthiness of the aircraft.

In the Matter of Warbelow's Air Ventures, Inc., FAA Order No. 2000-3, Docket No. CP97AL0012 (February 3, 2000)(IOP 16), the FAA imposed a civil penalty on an air carrier for operating an unairworthy aircraft contrary to §§ 91.7(a) and 135.25(a)(2). Specifically, the two aircraft flew for almost 1,400 hours with improperly modified and repaired fuel pumps. In affirming the law judge's finding of unairworthy operation due to the fuel pumps being in an unsafe operating condition, the Administrator stated:

The Romec manual for the fuel pumps provides: '**Avoid application of excessive torque when tightening valve cover mounting screws. Tighten screws progressively to 29-31 lb.-in. torque.**' (emphasis in original). Rimer did not have a copy of the Romec manual when he modified the two fuel pumps. He did not know the proper torque values and did not use a torque wrench. It is undisputed that if the screws are not tightened properly the fuel pumps may leak, resulting in a fire hazard.

In the matter of USAir, FAA Order No. 92-48, Docket No. CP91NM0183 (July 22, 1992) (IOP 18), the FAA found that USAir operated an unairworthy aircraft contrary to §121.153(a)(2). The aircraft had sustained damage to its nose gear water deflector during pushback from the gate. Because the aircraft no longer conformed to its type certificate, the Administrator affirmed the law judge's finding that the aircraft had been operated in an unairworthy manner.

It is the responsibility of those that design, produce, operate and maintain civil aircraft, to ensure airworthiness. Rolls-Royce's denial of H.E.R.O.S.' request for ICA is contrary to the regulatory obligations on which safety is based.

IV. CONCLUSION

For the reasons set forth above, Complainant requests that the FAA initiate an informal investigation and thereafter issue an order finding that Rolls-Royce is in violation of §§ 21.50(b), 33.4 and Part 33, Appendix A. The Complainant has provided the Administrator with the necessary IOPs establishing these violations.

If the FAA requires additional information to establish the violation, Complainant urges the Administrator to issue an order of investigation in accordance with Part 13, Subpart F. A formal investigation would allow the Administrator to name a Presiding Officer, issue subpoenas, take depositions, hold an evidentiary public hearing and issue a written report of the investigation.

Complainant urges the FAA to consider this Complaint in the broadest possible terms. In the Association's view, it would make little sense for the Administrator to issue a ruling favorable to H.E.R.O.S. without recognizing that the same issues apply throughout the aviation maintenance industry. Ultimately, Complainant requests that the Administrator enforce the ICA requirements against design approval holders as diligently as it enforces them against maintenance providers and operators.

V. LIST OF ITEMS OF PROOF (IOP)

- **IOP 1** – Rolls-Royce Type Certificate, No. E4CE, dated June 11, 2001
- **IOP 2** – H.E.R.O.S. Inc.'s repair station certificate, issued December 13, 1988
- **IOP 3** – H.E.R.O.S. Inc.'s ratings and operations specifications, effective July 2, 2004
- **IOP 4** – H.E.R.O.S., Inc. request to Rolls-Royce for ICA for the Model 250-C engine, dated May 28, 2002


- **IOP 5** – H.E.R.O.S. Inc. request to Rolls-Royce for ICA for the model 250-C, dated June 6, 2002
- **IOP 6** – Rolls-Royce response to H.E.R.O.S. denying the H.E.R.O.S. May 28 and June 6, 2002 request, dated June 21, 2002
- **IOP 7** – Rolls-Royce response to H.E.R.O.S. (referencing earlier correspondence) denying request for rework and re-identification instructions, dated April 2, 2003
- **IOP 8** – H.E.R.O.S., Inc. request to Rolls-Royce for ICA data for specific articles in the Model 250-C engine, identified by part numbers, dated September 28, 2005
- **IOP 9** – Rolls-Royce response to H.E.R.O.S. denying the September 28, 2005 request, dated October 14, 2005
- **IOP 10** – *In The Matter of Watts*, FAA Order No. 91-8 served April 11, 1988
- **IOP 11** – FAA legal interpretation, dated December 13, 1999 (Whitlow letter).
- **IOP 12** – Order 8110.54, issued July 1, 2005.
- **IOP 13** – *Administrator v. Aero Lectrics, Inc.*, 6 NTSB 1088 (1989).
- **IOP 14** – *In the matter of Empire Airlines, Inc.*, Docket No. CP98NM0011, FAA Order No. 2000-13 served June 8, 2000.
- **IOP 15** – *Administrator v. Missouri Aerotech Industries, Inc.*, Docket No. SE-13249, FAA Order No. EA-3999 served October 15, 1993.
- **IOP 16**– *In the Matter of Warbelow's Air Ventures, Inc.*, Docket No. CP97AL0012 FAA Order No. 2000-3 served February 3, 2000.
- **IOP 17** – *Administrator v. Alphin*, 4 NTSB 23 Order EA-2008 adopted May 31, 1984
- **IOP 18** – *In the Matter of USAir*, Docket No. CP91NM0183 FAA Order No. 92-48 served July 22, 1992.
- **IOP 19** – FAA policy statement, dated July 12, 2005, "Safety- A Shared Responsibility- New Direction for Addressing Airworthiness Issues for Transport Airplanes."

Respectfully submitted,



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November 23, 2005

CERTIFICATE OF SERVICE

I, Crystal Trayer, certify that on November 23, 2005, I caused the executed original and one copy of the foregoing Aeronautical Repair Station Association Part 13 Complaint on § 21.50(b) of the Federal Aviation Regulations to be delivered via hand delivery to:

Federal Aviation Administration
Office of the Chief Counsel
800 Independence Avenue, S.W.
Washington, D.C. 20591-0004
ATTN: Enforcement Docket AGC-10

I, Crystal Trayer, certify that on November 23, 2005, I caused one copy of the foregoing Aeronautical Repair Station Association Part 13 Complaint on § 21.50(b) of the Federal Aviation Regulations to be delivered via certified mail to:

W. Eric Pedersen
Vice President and Legal Counsel
Rolls-Royce Corporation
P.O. Box 420
Indianapolis, IN 46206-0420

Crystal Trayer

Signature