- The certificate holder has written procedures available to the pilot to evaluate the work performed.

9. Manufacturer may inspect and rebuild any item it has manufactured.

Section 43.5—Approval for return to service after maintenance, preventive maintenance, rebuilding, and alterations

Approving an aircraft component for return to service after maintenance, preventive maintenance, rebuilding, or alteration must be done by creating an appropriate maintenance record entry as required by either 14 CFR part 43, section 43.9 or 43.11. This may include the use of FAA Form 337, Major Repair and Alteration, if the maintenance action was a major repair or a major alteration. Whenever a maintenance action is being planned, it is critical that the technician understands exactly:

1. What he/she is going to do.
2. How that work is classified by the FAA.
3. What type of documentation is required to support this activity.

First consider whether this a repair or an alteration. This should be a relatively simply decision since a repair basically returns the aircraft to its previous or unaltered condition (i.e., replacing magnetos, an exhaust system, tires, or brakes). Even replacing an entire engine (although it is a big job) is still a repair if it is the one properly specified for that aircraft. An alteration on the other hand, always changes or modifies the aircraft from its previous state (i.e., installing winglets, new avionics, or an engine that is not listed in the aircraft TCDS).

The second question to consider is whether or not the work that to be performed constitutes a major or a minor maintenance action. A "major" action is typically one that might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness and that are not done according to accepted practices or cannot be done by elementary operations. This is a much more complex question, but it is extremely important as it drives the final question concerning the substantiating documentation. Please refer to 14 CFR part 1 and part 43, appendix A, for additional clarification and examples.

The third question deals with the type of documentation required to substantiate the work performed. Minor repairs and alterations need only to refer to "acceptable" data, such as manufacturers' maintenance manuals or AC 43.13-1. The maintenance action can simply be recorded in the maintenance record as a logbook entry. Major repairs and alterations require "approved data." Some examples of approved data are AD notes, STCs, TCDS, DER-specific delegations, and FAA-approved manufacturer Service Bulletins (SB).

Sometimes the repair or alteration being performed does not have previously-approved data. In that case, the technician may request that the FAA accomplish a "Field Approval." In this procedure, the technician completes the front side of Form 337 through block 6 (leaving block 3 open for later FAA approval) and then indicates in block 8 on the back what work is to be done and what the substantiating reference data is. Form 337 is then submitted to the local FAA FSDO office for review and approval by an ASI. If necessary, this ASI may seek input from other ASIs or FAA specialists to assist in the review of the data. If the data is found to comply with FAA regulations, the ASI enters one of the following statements in block 3, depending on whether the ASI has performed a review of the data only or has physically inspected the aircraft:

- "The technical data identified herein has been found to comply with applicable airworthiness requirements and is hereby approved for use only on the above described aircraft, subject to conformity inspection by a person authorized in 14 CFR part 43, section 43.7."

  or

- "The alteration or repair identified herein complies with the applicable airworthiness requirements and is approved for use only on the above described aircraft, subject to conformity inspection by a person authorized in 14 CFR part 43, section 43.7."

Section 43.7—Persons authorized to approve aircraft, airframes, aircraft engines, propellers, appliances, or component parts for return to service after maintenance, preventive maintenance, rebuilding, or alteration

There are seven different persons listed in this section who may sign RTS documentation:

1. Certificated mechanic or holder of an inspection authorization (IA)
2. Holder of a repair station certificate
3. Manufacturer
4. Holder of an air carrier certificate
5. Certificated private pilot
6. Repairman certificated with a maintenance rating for light sport aircraft (LSA) only