THE SUPPLIER

A SUPPLIER OF NEWS AND INFORMATION

CASE AIR CARRIER SECTION

COORDINATING AGENCY FOR SUPPLIER EVALUATION Volume 2 Number 2 September 24, 1992

CHAIRMAN'S CORNER

Scott Bussell, CO

We do it every day. We use many different means at our disposal to do it. We are talking about communication. Something we forget to do at times when we get too busy. There are several issues that keep coming up at every meeting and conference we have that point to a lack of communication.

Auditors are conducting audits that have been assigned to other carriers. This is usually not a problem if the assigned air carrier is notified; most often he is not. Why doesn't the auditor contact the carrier that has the audit assignment? There may be a variety of reasons, the auditor neglected to check the audit allocation list, the auditor never received a copy of all the air carriers assigned audits or he figures the carriers will get the transmittal any way. Whatever the reason it all boils down to a lack of communication. This lack of communication tarnishes our reputation when we call a vendor to schedule an audit only to find out he just had one.

Audits are not being done by the due date indicated on the allocation list. Some of this may have been caused by the lack of written procedures or a misunderstanding regarding the due dates. Some carriers viewed this as a target date and not an actual due date. In some cases the vendor could not accommodate an audit in the month the audit was due. In these cases some auditors have not informed the carriers of the scheduling conflict. If the auditors don't have the audit list available from the allocation meeting they won't know which carriers needed the audits. Once again, a breakdown in communication.

I understand how these things can happen with everything we are all involved in, both internally and in C.A.S.E., but we are all professionals and as professionals, we can't let these breakdowns happen. If this was an audit, these would be audit findings. What is your corrective action going to be?

NO MORE "TRUST ME"...

Ed. Note: This article appeared in the May Issue of "The Hotline" which is The Aeronautical Repair Station Association Publication.

To assure the parts being used in our repairs are approved, members of the Association have been asking their suppliers to certify that the parts being shipped comply with Part 21 of the Federal Aviation Regulations (FARs). Requesting this information discloses that several major manufacturers are unable to confirm that some of their assemblies, and therefore their piece parts, have Federal Aviation Administration production authority. We are also aware that when some manufacturers have Parts Manufacturing Approvals (PMAs), they do not comply with CFR 14 Part 45.15 by marking their parts "FAA-PMA" or list the appropriate installation information with the parts shipped.

There are several ways a component manufacturer may be authorized to produce and sell replacement assemblies and parts directly to the aviation community. The production certificate holder may authorize drop shipments under their production approval. This authorization should be in writing and available to the customer. The article manufactured may be produced under a Technical Standard Order (TSO). The articles produced under this authority must be marked in accordance with CFR 14 Part 21.607(d). Assemblies and parts may also be produced and sold under Parts Manufacturer Approval authority. The regulations do not require manufacturers to supply proof of their production authorization when shipping a replacement part or assembly. This loophole is being addressed by the Aviation Rulemaking Advisory Council Recordkeeping working group. Until the regulations require this information , it is strongly suggested that all repair stations require suppliers to provide such information with every shipment of parts. That the parts are being ordered and shipped from an "OEM" does not guarantee that FAA production authority has been issued. The only "OEM" under the FARs is a manufacturer that has been issued FAA-approved production authority.

The association is working closely with th FAA, the manufacturers and other trad associations to resolve this critical issue an will keep members appraised of any and al developments.

TRAVEL TIP

Gene Swan, QX

Those of us who travel are familiar with th Official Airline Guide (OAG), the bible o airline schedules. But did you know the sam information in the book (and much more) i available on line over your computer? Th OAG Electronic Edition can give you up t the minute information on flight schedule fares, hotels and rates, weather, the list goe on.

The cost is a bargain compared to the pape edition. Initial start up costs $25.00 and tha entitles you to 15 days of unlimited fre access. After that you are charged 47 cents minute, there are no other charges. You ar given a directory of local numbers to acces the system anywhere in the world. M monthly bill has averaged around $7.00 an that is handling travel planning for the entir Maintenance Department here at Horizon Ai

If you have the computer, modem, an software to access the Data Center you ca also access the electronic OAG. If you woul like to give it a try call 1-800-323-4000.

FALL CONFERENCE

The fall 1992 C.A.S.E. Conference will be hel at the Atlanta Hilton in Atlanta, Georgia o October 5 - 8, 1992. The hotel is located i downtown Atlanta at 255 Courtland Stree Transportation from the airport to th downtown hilton is provided by Airpo Shuttle located outside the baggage claim are at a rate of $8 one way and $14 round trip.

PROCUREMENT SOURCES

Scott Bussell, CO

In line with the "Hotline" article regarding parts certifications and repair stations is another problem that has surfaced recently. Repair Stations are buying parts from surplus parts dealers or other repair stations for use in component overhauls and repairs. This may or may not be a problem depending on the documentation received with the parts. There are several things we as auditors can do to make sure these parts do not become a problem in our components.

First there is a recommendation coming out of the Level III-IV Auditors meeting to add a requirement to the 1-A Standard for all vendors to maintain a list of their suppliers. This list could then be perused to check for surplus parts sources.

If the vendor is buying surplus parts we should check to see what type of documentation he requires the surplus dealer or repair station to produce. Does he require documentation back to the OEM or an airline? Also check to see what special procedures he has in place to check these parts during receiving inspections. Does the vendor tell his customers that he is buying surplus parts for use in their components? Has the customer given his approval for these parts to be used in his components? This could be a very sensitive issue if the source of the part is a surplus dealer or repair station who has been disapproved for use by your airline.

AUDIT TIPS

Donald P. Wood, FM

What do the terms "corrective action", "root cause" and "recurrence control" mean when you request corrective action as a result of an audit finding. The corrective action can only become part of the system if management and operating personnel fully understand the role of corrective action and recurrence control.

While it would appear to be obvious that corrective action should relate to the noted defect, numerous examples can be given where that is not the case. In establishing the root cause and extent of the corrective action required, the recorded defect needs to be clearly understood. The corrective actions taken should address the discrepancies, not superficially treat a defect or indulge in mere window dressing.

Prompt and effective corrective action of findings has a direct association with cost effectiveness. Eliminating or minimizing defects improves productivity and directly benefits the quality control program. The heart of productivity is elimination of wasted effort. All preventable rework or scrap is "wasted effort" spelled out in lost dollars and /or cost increase to products. Once an error has been made, regardless of reason, common sense should dictate full attention to determining the root cause and eliminating the opportunity for repeating that error and thus compounding the cost.

The best measure of corrective action effectiveness is the non-recurrence of the defect. The best assurance that corrective action will be effective is to establish closed-loop, auditable, and documented statements. An effective Corrective Action System is also dedicated to the earliest possible detection of defects; and, following a realistic appraisal of the root cause, effecting prompt and effective corrective action to prevent recurrence.

The following Corrective Action Statements are actual examples submitted as responses to a Corrective Action Request.

PAPERWORK

Event

Non-compliance with a procedural requirement.

Defect

Form number XXX was not completed and distributed as required.

Cause

The form is no longer used since a new method is employed.

Corrective Action

ACCEPTABLE

A request for procedure change, reference IL#XXX-XX dated ______ (copy attached) has been sent to Systems & Procedures, D/112. Release of the revised procedure is expected by (date). In the interim, existing forms have been discarded.

NOT ACCEPTABLE

A procedure change was requested and should be released by 1-12-77.

NOT ACCEPTABLE

The responsible department was requested to obtain a change to the procedure.

COMMENT

Some situations call for up-dating the procedure system. Acceptable responses must include documentation showing initiation of the revision action. Follow-up on promised future corrective action is accomplished by the corrective action statement initiator in order to close the loop.

SYSTEM

Event

During an area survey, a chemical solution bottle was found to be unidentified.

Defect

No container or shelf-life identification.

Cause

Label had never been applied or had been removed by handling.

ACCEPTABLE

Leadman XX-XXX was assigned responsibility to check all containers weekly within his area for proper identification. An area check revealed no other labeling defects. The container involved is now identified.

NOT ACCEPTABLE

The container was properly identified.

COMMENT

Action taken must include correction of the cause as well as correction of the defect.

PURCHASED PARTS/LABOR

Event

Supplier failed to process parts to an approved sub-contractor.

Defect

Aluminum castings - Anodize finish not accomplished by a company approved source supplier certification incorrect.

Cause

Supplier had obtained a better cost for anodizing from an outside sub-contractor and failed to require finishing by a controlled/approved source.

Corrective Action

ACCEPTABLE

Supplier reviewed the internal sub-contract controls and found that no system existed for review of finish requirements. A Quality Planning Checkpoint has been added to a

Planning Checkpoint has been added to all future sub-contract orders to assure issuance to qualified/approved sources only.

NOT ACCEPTABLE

Future buys will be sent to approved anodize finishers only.

COMMENT

Responses from outside functions must follow the same guidelines for acceptance as do in-house responses. Identification of supplier personnel responsible for defects is not required.

Note: Areas to be considered when requesting corrective action.

Step 1: What immediate actions are needed?
- Effect of defect on Safety? Reliability?
- Previously accepted hardware OK?
- Reinspect/retest previous hardware?
- Stop production?

Step 2: What coordination is required?

- Could defect be incurred in other areas?
- Are business system deficiencies involved?
- If purchased parts, impact on other programs?
- Which responsible functions should be notified?
- Is earlier detection possible?

Step 3: What caused the defect? (Root Cause)

- Workmanship error?
- Work instruction inadequate/incorrect?
- Machine/equipment malfunction?
- Drawing/specification problem?
- Documentation?
- Procedural or training inadequacy?

Step 4: How to disposition the defect?

- Recalibrate?
- Rework to drawing?
- Reinspect/retest?
- Change entry?

Step 5: What is the corrective action?

- What?
- Why?
- How
- Who?
- When?

Follow-up on any future action due date.

An effective corrective action system is one which promptly corrects "root causes" of defects, thereby minimizing occurrence; improves hardware/software quality; saves money, maintains schedules. To do less than our best is just poor business practice.

I realize that some of the members are aware of the statements and examples given, but possibly there are a few of us that need to be reminded again.

APPROVED TOOLING AND TEST EQUIPMENT

Reed Kloetzer, CO

Currently the CASE 1-A Standard does not address the use of manufacturer recommended tooling. There is a recommendation pending from the Level III-IV Auditors meeting to add this to the 1-A Standard. FAR 43.13 (a) states "If special equipment or test apparatus is recommended by the manufacturer involved, he must use that equipment or apparatus or its equivalent acceptable to the administrator."

Those vendors with a class rating or limited rating are also required by FAR 145.47 (d) to "Choose suitable tools and equipment for the functions named in Appendix A to this part, as appropriate to each of his ratings, using those the manufacturer of the article involved recommends for maintaining or altering that article or their equivalent."

When inspecting a vendor's tooling, do not limit yourself to only those tools requiring routine calibration. Review all tooling possible against the tool and test equipment requirements of the manufacturers overhaul manuals. The use of non-equivalent tooling or test equipment can, in some cases, have a dramatic effect on the serviceability of a part. Remember, because equipment appears to perform a function, does not make that it equivalent to the manufacturers recommended tooling.

Manufacturers recommended tooling and test equipment is often very expensive to procure and drawings for them are often impossible to acquire. This does not allow the vendor to utilize tooling of his own design or tooling acquired from other sources without being able to prove equivalence to the manufacturers recommended tooling. Proof of such equivalency can come in several forms including, tool manufacturer drawings on file, component manufacturer letters indicating tool equivalency or an acceptable engineering evaluation. Keep in mind all equivalent tooling must also be acceptable to the administrator [Ref: 43.13 (a)]. Ask the vendor if his FAA Inspector is aware of and has accepted his use of equivalent tooling. It is the vendor's responsibility to be able to show equivalency for all tooling utilized that is other than that recommended by the manufacturer.

Quality workmanship always requires the proper tool to do the job - no exceptions!

AIR CARRIER Q.A. PROGRAMS

Dennis Emmons, DOD

We thought we would take a stab at expounding on one of our DOD Commercial Air Carrier Quality and Safety Requirements (or standards) in each newsletter. A DOD requirement close to everyone in C.A.S.E. and one that gets much attention is Quality Assurance. There are so many different facets, definitions and procedures making up Quality Assurance that it is difficult to identify the contents of "the" model Quality Assurance program, but there are a couple of things that all quality carriers have in common. First, they develop a method (or methods) to continuously analyze the effectiveness of the company's maintenance activities and programs. Accomplishing this analysis varies from carrier to carrier, but the common focus at the quality carrier begins with a commitment to exceed normally accepted practices. In other words, management has developed methods and procedures which result in maintenance practices that exceed the FAA or manufacturer's standards. The Quality Assurance program, in turn, measures maintenance effectiveness against the company's established standards rather than against the FAA legal standards. Someone once said "being legal and being safe are not the same." Certainly that philosophy is true where aviation is concerned. Meeting the FARs may make you legal but wont necessarily make you safe. There are a number of functions through which carriers assure maintenance quality and you know them all - internal/external audit findings, inspection results, tool calibration programs, reliability reports, real time review of maintenance actions, component tear-down results, the list goes on. (NOTE: As a customer, the DOD requires evidence of a continuing analysis or quality assurance program regardless of carrier size, type of certificate, etc.; again, the concern is on safety rather than legality.) Once the decision is made on the review methods, then you have to decide who accomplishes the review and what you do with the results. This becomes the second factor in a model program. It's not enough to just collect data or have programs that analyze maintenance actions, you have to find the right people to look at the facts and those people need the empowerment to deal with any problem they find. The quality carrier not only eliminates the symptom of a problem but the root cause as well. Most everyone accepts the premise that aircraft accidents happen. What no one in aviation

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will ever accept is an accident without appropriate learning or systemic corrective action. The same holds true with Quality Assurance - deficiencies will be found but with appropriate corrective action and education of the work force, quality can be assured. Corrective action and work force education are parts three and four of a model program.

In summary, our model Quality Assurance program consists of four parts: Management insistence on high standards of productivity, effective methods to analyze the results of maintenance efforts, the right people to implement systemic corrective actions and attack the cause of any problem, and finally, feedback to the work force.

We don't pretend to be experts here at the DOD Air Carrier Survey and Analysis Office, but we do see a lot of different quality assurance programs. If you want to talk Quality Assurance, call us at (618) 256-4801.

Q & A

Q. Is an A&P mechanic signing a material certification form exercising the privileges of his certificate?

A. Generally speaking when you are looking at a material certification from a surplus parts dealer the answer would be "no". Is a signature of an A&P mechanic better than that of an individual who does not posses the background and training an A&P has? Without a doubt, but what are the implications of the mechanic's signature and certificate number on the material certification? Are they trying to show that the part was looked at by someone with knowledge in aviation parts or is the dealer trying to make you feel warm and fuzzy because he has an A&P signing his material certification?

Either way when a mechanic signs a material certification and shows his certificate number he/she is implying that he is exercising the privileges of his certificate. In order for him to do that he must have performed some type of maintenance. Most of these mechanics are acting as inspectors, conducting visual inspections of the parts being sold. The maintenance performed in this case would be "Inspection" as listed under the definition of "maintenance" in CFR 14 Part 1. This inspection would be in reality a part conformity to type design if done properly. To exercise the privilege of his/her certificate the mechanic must comply with CFR 14 Part 43. They must make a record of the inspection in a maintenance record in accordance with FAR 43.9. They must also use the current manufacturer's manual, drawing or specification used to conduct the inspection to comply with FAR 43.13. Most, if not all, surplus parts dealers are not on revision service for the manuals needed to do a part conformity. The same holds true for the maintenance record; it's not being done.

The mechanic's A&P certificate carries with it certain privileges and responsibilities. When a document is signed using that certificate number there is an implication that certain criteria have been met and certain privileges are being exercised.

Q. What is the difference between approved data and acceptable data?

A. In the FAR's you will see reference made to acceptable and approved data. The difference is this:

Acceptable data is used for all maintenance except major repairs or major alterations.

Examples of acceptable data are:

Manufacturer's maintenance manuals (airframe & engine).
Manufacturer's service bulletins.
AC 43.13.1A & .2A
121/135 Operator's manual.

Approved data is used for major repairs and major alterations.

Examples of approved data are:

Type Certificate Data & Specification Sheets.
Supplemental Type Certificates.
Airworthiness Directives.
Appliance manufacturer's manuals.
Designated Engineering Representative's Data.
Designated Alteration Station's Data.

One thing to be remembered when auditing, the Approved Data must be referenced on the maintenance release or work order when a major repair or alteration is accomplished.

NO ASSEMBLY REQUIRED

This is the third edition of *"The Supplier"* but we are still having a problem getting articles and subject matter for the newsletter. In the past we have asked auditors, representatives and committees to submit articles, questions or comments for the newsletter. Some people have responded but the vast majority have not. Even if it's only a one liner or an entire article send it in. If you don't want your name to be used that's ok too. We don't profess to be expert writers and we don't expect you to be either. The idea is to share information and ideas about auditing techniques, C.A.S.E. or industry news. Articles can be sent to any committee member listed in 9-1-1 of the P&P manual. If your having trouble getting your idea down on paper give us a call and we'll try to help. So the next time your sitting in an airport or on a plane just jot down whatever comes to mind. When we get together at meetings and conferences we are always exchanging ideas and information, just write those down so they can be shared with everyone.

ACTION ITEMS

Several transmittals have been sent to the Data Center to list manufacturer's in the Register using the codes MFR and MFM. While these codes do appear in the P&P they are not yet active because there is no standard for auditing these vendors. The 1-A Standard is not intended for use at a manufacturer's facility that does not posses a repair station certificate.

Vendors that have been deleted from the register as the result of an on site audit cannot be added back to the register based on corrective action alone. Once a vendor has been deleted another on site audit must be conducted before the vendor can be relisted in the Register.

Ask a repair station what their warranty or rework percentage is. Anything over 5% should be investigated to determine the cause. Ask why it happened and what was done to correct the problem?

NEW MEMBERS JOIN C.A.S.E. AIR CARRIER SECTION

Since the spring conference we have added fifteen new members. Saudi Arabian and American International Airways have moved from associate to sustaining members. The following are the new members as of this printing:

Associate Members

ABX Air Inc.
Air Canada
Air France
British Airways
Cathay Pacific Airways Ltd.
El Al Israel Airlines Ltd.
Malaysia Airlines
Midwest Express Airlines
Qantas Airways Ltd.

Sustaining Members

Comair, Inc.
Express One International
Henson Aviation
Reevealeution Airways
United Express/Atlantic Coast
US Air Shuttle