The Supplier

C.A.S.E. INCORPORATED

COORDINATING AGENCY FOR SUPPLIER EVALUATION

DECEMBER 2016

Evolution

Robert Radawiec Jr.
C.A.S.E. 1A Level III

The organization is in the midst of change. This change is not due to regulations or industry modifications, rather attrition of contributors. Over the past few years several individuals have either moved on to new ventures, or retired taking several years of experience and knowledge with them. While each individual contributed differently, all played major roles in what we call C.A.S.E. today.

Some of the individuals you may know that have departed are Bill Mato (Level IV), Randy Berkbigler (A&C Chair), John Bruce (Level IV), Francisco Henao (Secretary/Vice S&P Chair), John Healy (Database Chair), Floyd Estes (Level III), and Marla Brown (Level III) January 2017. While this may not be all the individuals, the overall experience in the auditing alone of the above surpasses 100 years, not to mention their significant contributions to the

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The Importance of Repair Manual Revisions

Ray Nelson
C.A.S.E. Database Chair, 1A Level III

It was a rainy overcast morning on February 8, 1976 as Mercer Airlines Flight 901 a Douglas DC-6/YC-112A, (N901MA) was cleared to make a rolling takeoff run on runway 15 at Hollywood-Burbank Airport – present day Bob Hope Airport – bound for Ontario, California. As the pilot advanced the throttles, the CVR recorded the flight engineer stating, "Look at that warning light on No. 3." There was no verbal response-from any other crewmember. The aircraft accelerated normally to V1 and V2, was rotated, and lifted off without difficulty. Shortly after the captain called for gear and flaps up, a loud noise was heard and the flight engineer announced that they had lost the No. 3 engine. Ground witnesses saw a flash of fire, black smoke, flying objects from the No. 3 engine, ***and the No. 3 engine separated from the aircraft.***

As can be imagined, the flight crew struggled to maintain control of the aircraft which was difficult given the aerodynamic drag of approximately 36 sq. feet of a flat firewall. This necessitated the throttles of the three remaining engines to remain at takeoff settings to achieve at best a very minimal climb. The captain requested an immediate return to the airport and was cleared for runway 07.

As the flight was on final for the runway, the flight crew ran through the safety checklist and as the power was reduced to METO the crew noticed the No. 2 propeller reverse light was illuminated. The captain called for gear down and full flaps. As the approach continued, the first officer called out the airspeeds and, after reporting 115 knots, he said, "You got it made."

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organization. As we wish the best for everyone, we can't neglect the gaps that have been left by their departures.

These gaps while somewhat saddening are also opportunities. Opportunities for new members and upcoming auditors to contribute to the organization going forward. Some notable contributors are Bud Morris ACS vice chair, Matt Terrill, the new Audit and Compliance chair, Ray Nelson new Database chair, , and the new committee Maintenance Technical chaired by Jon Frisbee. Vern Ashlock joined the Level IV team and several new auditors achieved their 1A Level III ratings. We applaud all mentioned and those not, but still have the need for individual contributors.

Remember the organization is only as strong as the individuals contributing and sustaining it. Contributions, regardless of size are necessary to the vitality of the organization. Please take the time to contribute, the organizations future relies on it. ■

Top Ten OSHA Violations 2016

Bud Morris
C.A.S.E. Training Chair, 1A Level III

As Auditors We Audit to the C.A.S.E 1A standard. The Standard may not directly include OSHA requirements, but as Auditors when conducting our audit, we are looking at SAFETY.

So I thought it might be interesting for some to know what the Top Ten OSHA Violations of 2016 were. Here is the list.

1. Fall Protection: 6929 citations (OSHA Regulation 1926.501)
2. Hazard Communications (HAZCOM): 5,677 citations (OSHA Regulation 1910.1200)
3. Scaffolding: 3906 citations (OSHA Regulation 1926.451)
4. Respiratory Protection: 3585 citations (OSHA Regulation 1910.134)
5. Lockout/Tag-out: 3414 citations (OSHA Regulation 1910.147)
6. Powered Industrial Trucks: 2860 citations (OSHA Regulation 1910.178)
7. Ladders: 2639 citations (OSHA Regulation 1926.1053)
8. Machine Guarding: 2451 citations (OSHA Regulation 1910.212)
9. Electrical – Wiring Methods: 1940 citations (OSHA Regulation 1910.305)
10. Electrical – General Requirements: 1704 citations (OSHA Regulation 1910.305)

All employers must follow either the Federal OSHA Laws or the Federal OSHA approved state plan. The state plans must be at least equal to, or more restrictive than the Federal OSHA Law requirements. There are 21 states that have their own Federal OSHA approved state plan and the remaining are charged with following the Federal OSHA Laws.

From the citations listed, you will see that when we are auditing we are looking to ensure individuals are wearing the proper fall arrest protection gear, and if this gear is in serviceable condition. We are looking at containers to ensure that they are properly labeled for identification of the contents, including the MSDS labels. We look for defects in the equipment (tugs, sky-lifts, boom-trucks, etc.). We even look at the ladders and grinders to ensure they are safe to be used with proper guards protecting the individual workers. This is not all we look at but we play an important role. Remember, SAFETY is everyone's concern.■

C.A.S.E. Website Updates

Dave Allison
C.A.S.E. M&P Chair, 1A Level IV

The Membership and Promotions committee is now coordinating updates and changes to the C.A.S.E. website. If there are any suggestion and/or changes please contact Dave Allison.

As a reminder each committee should periodically review their respective links to ensure data is current.

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Calendar of Events 2017

Winter Training Sessions

Charlotte, NC

January 23rd to January 26th

Monday-Thursday

Spring Meeting

San Diego, CA

April 18th to April 20th

Tuesday-Thursday

La Jolla Hotel: Book by March 8th

Summer Training Session

Charlotte, NC

July 17th to July 20th

Monday-Thursday

Sheraton Charlotte Airport Hotel: book by June 7th

Fall Meeting

Reno, NV

October 3rd to October 5th

Tuesday-Thursday

Peppermill Resort: book by September 1st

Importance of Repair Manual Revision - Continued from page 1

The aircraft touched down near the end of runway 07; the captain called for flap retraction and "gate" (reverse pitch). The engine sounds increased, and the first officer advised the captain that the propellers were not going into reverse and to use the brakes. As the engine sound decreased, the captain replied there was no braking action. The first officer said, "Get your air--get your air." The captain replied, "I'm doing it!" Maximum power was then applied; the aircraft again took off, and cleared the blast fence at the end of the runway by approximately 30 feet. The captain called for gear and flaps up. The first officer advised that the flaps were up as he positioned the gear handle to "up." Ground witnesses saw the aircraft begin a slow, climbing turn to the right.

The crew advised the Hollywood-Burbank Tower that they had no brakes and that they were proceeding to the Van Nuys Airport, 6 miles to the west. The crew then saw that the No. 2 oil pressure was low and that there was no BMEP indication. Attempts to feather the No. 2 propeller were not successful, and the No. 2 engine stopped with the propeller blades at a positive, low pitch angle.

What the flight crew did not know was the No. 1 propeller blade of the No. 3 engine failed nearly 43 inches from the blade tip. The loss of this portion of the propeller blade resulted in an imbalance that instantly tore the No. 3 engine from the aircraft. The failed blade traversed the fuselage and severed several lines such as the nose gear actuation line (hydraulic), engine manifold pressure line (pneumatic), emergency airbrake (pneumatic), and the propeller control (electric). Ultimately the flight crew lost propeller control, including reversing, and the loss of hydraulic and emergency airbrakes. The propeller blade then exited the left side of the fuselage and penetrated the right inboard side of the No. 2 engine. As the blade penetrated the No. 2 engine's front accessory case, it caused the No. 2 propeller's alternator to separate and the drive gears of the oil scavenge pump to disengage. When the front accessory case was penetrated engine oil was lost in about 4 minutes. The lack of oil prevented lubrication of the engine components, and the engine failed shortly after the crew abandoned the attempted emergency landing at the Hollywood-Burbank Airport.

The separation of the No. 2 propeller junction box caused the propeller to remain fixed in pitch, regardless of any action the crew could take. This fixed pitch resulted in an additional drag component on the aircraft when the No. 2 engine failed and stopped rotating.

Even with all the best efforts of the crew, the cards were stacked against the DC6 and it was soon very apparent a landing at Van Nuys Airport was not possible. The crew elected to land at a golf course and did manage to maintain control of the aircraft upon touchdown. Unfortunately, the DC6 hit a partially constructed building on the golf course and the flight crew was killed. The follow-up investigation by the National Transportation Safety Board revealed the failure of the propeller blade resulted from a fatigue crack which originated in the leading edge under the deicer boot. The last overhaul of the failed propeller blade occurred 6 months earlier.

The documents from the propeller overhaul facility indicated that the No. 3 propeller had been inspected magnetically (Magnaflux), but the specific parts inspected were not listed. Interviews with the overhaul facility's management personnel and the magnetic inspection facility's personnel established that the blades had been magnetically inspected, but that the rubber deicing boots, which cover about 45 inches of the inboard portion of the 75-inch blades' leading edge, had not been removed from the blades during the inspection. Repair station personnel stated the rubber boots usually were not removed from the blades if the heating elements checked out electrically and if the rubber material had not been damaged or frayed.

Publication 5-3B3-550, dated March 1, 1962, is Curtiss-Wright's most recent overhaul manual for C332-S propellers. Part 3B3 of the manual pertains to the overhaul of the blades in general. Chapter 63.2, dated September 1, 1957, together with Model Difference Sheet 63.2-4MDS, dated November 1, 1964, describe the method to be used when magnetically inspecting the steel blades on the propeller. The instruction required that all steel blades be inspected over the entire external surface. ***The propeller overhaul facility did not have a copy of Chapter 63.2 or 63.2-4MDS in its library.***

Mercer Airlines had the most recent propeller manual in its library; however, ***they had not determined which manuals or procedures were being used by the overhaul facility.***

Thank goodness we are now in an age of electric manuals so it's much easier to validate revision status. But we must continue to do our due diligence when reviewing repair packages and performing in-process work to ensure the manual called out by the air carrier is used by the repair provider to repair their material. ■

Treasurer's Forum

Michael Goering
C.A.S.E. Treasurer, 1A Level III

An invoice for 2017 Annual Membership dues will be arriving in the Company Representatives Email box soon. Invoices are scheduled to be distributed at the beginning of January and will be due by January 31, 2017.

There are three ways to make payment:

1. Send a check made out to "C.A.S.E., Inc." and send to the address below:

   Michael Goering
   C.A.S.E., Inc. Treasurer
   8606 E. Mulberry
   Wichita, KS 67226

   (Preferred Method)

Please remember to note the invoice number on your check

2. Wire transfer. In this case the bank will charge C.A.S.E. a fee when making a wire transfer so an additional $25.00 will need to be added to your payment. Also, you will need to contact me for additional bank information when making a wire transfer.
3. PayPal. By accessing the C.A.S.E. website, www.caseinc.org, a link is posted under the "Air Carriers" button or "Repair Stations" button.

Membership dues are $ 1,400.00 for Air Carrier Members and $1,000.00 for Repair Station Members and are good for 12 months (January 1, 2017 through December 31, 2017)

If you have any questions, Michael can be reached by the following:

(734) 644-1149 cell
mgoering@kalittaair.com

Please note: If you do not receive an invoice by January 15th, please contact Michael. ■

Part Segregation & Protection

Bud Morris
C.A.S.E. ACS Vice Chair, 1A Level III

The parts room should be separate from the maintenance shop work environment. 14CFR Part 145 requires that repair stations protect parts from contamination. Each repair station must provide adequate space to segregate articles and materials stocked for installation from those articles undergoing maintenance, preventive maintenance, or alterations.

Proper protection also applies to the work being accomplished in the maintenance shop. Each repair station must provide sufficient work space and areas for the proper segregation and protection of articles during all maintenance, preventive maintenance, or alterations.

It is important to cover opened areas of aircraft, engines, and components. The same holds true when using portable drills, grinders, and sanders. Machining tools such as drill presses, grinders and stationary sanders should be located in a back shop area if possible to reduce the possibility of contamination. ■

DID YOU KNOW –

ELEANOR ROOSEVELT HAD HER OWN .22 REVOLVER SO SHE COULD TRAVEL ALONE WHEN SHE PLEASED? [DID YOU KNOW BLOG]

MAINTENANCE TECHNICAL IS A NEW STANDING COMMITTEE WITHIN THE ACS FOCUSED ON THE 1A STANDARD?

DID YOU KNOW YOU HAVE A 16.67% CHANCE ROLLING A 7 WITH TWO STANDARD DICE, WHICH IS THE HIGHEST OF ANY COMBINATION? [WIZARD OF ODDS]

Vendor Surveys

Bud Morris
C.A.S.E. ACS vice Chair, 1A Level III

This year our customer satisfaction surveys revealed that we have continued to improve with this year 2016 being better than the last year.

But, we need to continue to improve in a couple of areas. One of these areas needing improvement can be simply improved by ensuring that we all provide the vendor with the current 1A Standard that we are auditing the vendor too. Another is to request copies of applicable manuals, certificates, and operations specifications in advance. We cannot perform a thorough audit if we have not reviewed the data and let's not forget to address the vendor appeal process even thou the auditee has no findings. With this all said, Thanks to all for their professionalism conducting their allocated audits on behalf of the C.A.S.E. organization.

Summary:

- Was the 1A Standard provided to you before the audit?
  - 164 YES **5 NO**
- Did the Auditor request copies of applicable manuals, certificates, and operations specification in advance of the audit?
  - 163 YES **6 NO**
- Was the Vendor appeal process clearly explained?
  - 160 YES **9 NO**

What Makes a Usable Part?

Bud Morris
C.A.S.E. ACS vice Chair, 1A Level III

A usable part is one that has been through at least one FAA-approved quality assurance process and has successfully passed the inspection criteria of that process.

As a maintenance organization, certified repair station, or individual contributor, you are responsible for ensuring that all parts installed during maintenance meet the certification requirements of 14CFR 21.303 "Replacement and modification parts." The following are the five possible certification methods for NEW parts:

- PMA – Parts Manufacturing Approval applies only to specific part numbers and is usually associated with an STC or a direct replacement (non-OEM) part.
- PAH – Parts manufactured under the production certificate or the holder of the type certificate for that aircraft.
- TSO – Technical Standard Order applies to a specific FAA approved design. The organization manufacturing the TSO parts must hold TSO authorization from the FAA.
- Standard parts – Parts that are manufactured in accordance with an industry recognized standard such as AN, NAS, MS hardware and certain nonprogrammable electronic devices.

Owner – produced parts – Parts produced by the aircraft owner (or agent) for a specific purpose and for the repair of his/her aircraft. It is important to point out that owner produced parts are not exempt from FAA approval for complex fabrication. Although 14CFR 21 addresses certification methods for new replacement parts, a certification method is also required for used parts. The certification of a used part is identified by its approval for return to service under 14CFR43.13 and 43.9. ■

Regulation Corner

Rules & Circulars

Robert Radawiec Jr.
C.A.S.E. 1A Level III

This section is developed to update members with regulatory guidance distributed this year potentially pertaining to the Quality Oversight and Auditor function.

Federal Aviation Administration

1. **RULE-14 CFR Parts 21 and 45 – Changes to Production Certificates and Approvals:**

a. SUMMARY: The amendment requires production approval holders to identify an accountable manager who is responsible for, and has authority over, their production operations and serves as the primary contact with the FAA; allows production approval holders to issue authorized release documents for aircraft engines, propellers, and articles; permits production certificate holders to manufacture and install interface components; requires production approval holders to ensure that each supplier- provided product, article, or service conforms to the production approval holder's requirements and establish a supplier-reporting process for products, articles, or services that have been released from or provided by the supplier and subsequently found not to conform to the production approval holder's requirements; removes the requirement that fixed-pitch wooden propellers be marked using an approved fireproof method; and changes the title of part 21 of title 14 of the Code of Federal Regulations.

2. **RULE-14 CFR Parts 121 and 135 – Air Carrier Contract Maintenance Requirements:**

a. SUMMARY: The Federal Aviation Administration (FAA) amends the maintenance regulations for domestic, flag, and supplemental operations, and for commuter and on-demand operations for aircraft type certificated with a passenger seating configuration of 10 seats or more (excluding any pilot seat). *Cont.*

a. *Continued*: The new rules require affected air carriers and operators to develop policies, procedures, methods, and instructions for performing contract maintenance that are acceptable to the FAA, and to include them in their maintenance manuals. The rules also require the air carriers and operators to provide a list to the FAA of all persons with whom they contract their maintenance.

5. **RULE-14 CFR Part 145 – Repair Stations:**
   a. SUMMARY: This change is for repair station rules to remove the requirement that a repair station with an airframe rating provide suitable permanent housing to enclose the largest type and model aircraft listed on its operations specifications. The FAA is also revising its general housing and facilities regulation to provide that a repair station's housing for its facilities, equipment, materials, and personnel must be consistent not only with its ratings, but also with its limitations to those ratings. Finally, the FAA is adding an additional general purpose limited rating to cover maintenance work not covered by the existing 12 limited rating categories.
6. **AC-21-29D: Detecting and Reporting Suspected Unapproved Parts:**
   a. SUMMARY: This advisory circular (AC) provides guidance to the aviation community for detecting suspected unapproved parts (SUP) and reporting them to the Federal Aviation Administration (FAA).
7. **AC-43-214A Repairs and Alterations to Composite and Bonded Aircraft Structure:**
   a. SUMMARY: The information in this AC is applicable to repairs and alterations of bonded and composite structures, whether it is a damaged part that can be removed from the airplane for repairs, or repairs and alterations on the aircraft itself.
8. **AC-120-78A- Electronic Signatures, Electronic Recordkeeping, and Electronic Manuals:**
   a. SUMMARY: This advisory circular (AC) provides “approval” or “acceptance” guidelines for electronic signature, electronic recordkeeping, and electronic manual systems/programs.

Note: Not all changes were listed in this document. For the entire listing, reference the FAA website at http://www.faa.gov/regulations_policies/faa_regulations/.

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Above: Mike Teague visiting Normandy and Omaha Beach.
Below: Campfire unwinding with his favorite cocktail
Side: A contraption Mike calls "Max" & "Kitty"

Meet the Level IV

Robert Radawiec Jr.
C.A.S.E. 1A Level III

Within C.A.S.E there is a group of individuals, six to be exact that have made an extra commitment in becoming Level IV auditors for the organization. Level IV's take on a significant amount of responsibility for the organization. Not only are these individual tasked with performing initial and recurrent evaluations of Level III auditors, they are also required to attend meetings and actively contribute to training sessions. When you add these contributions up, you understand why their time is so valuable.

This years the candidate was Mike Teague. I personally met Mike in 2007ish at one of the training sessions. After attending many of these sessions he also ended up doing my initial Level III checkride. Not to scare anyone but my flight delayed the night before so all the checkride interviewing had to be done on the ride to the audit, and after the audit. While he did let us eat a meal in between, the interview questioning went on until 1130PM in the lobby of hotel!

Mike Teague pictured above, is currently one of the Level IV auditors within the organization. He grew up dreaming about being a fighter pilot covering his bedroom ceiling in airplane models (mostly WWII era aircraft). He found out early that his eyesight prevented him from being a pilot so decided, "if couldn't fly'em, I'd fix'em". Soon after this realization he enlisted in the U.S. Marine Corps straight out of high school back in 19 wait for it….76.

While he didn't luck out with his vision, he sure did with his initial orders. Mike spent his first 4 years wrenching on the F-4 Phantom, not bad for kid out of school, but wait he also happened to be stationed in Hawaii, doing rotations throughout the far east, Japan, Philippines, Korea, Thailand and others. Pretty rough deal in your twenties….

Mike transferred to the reserves in 1980 while attending Portland Community College to obtain his A&P certificate. In the reserves he worked on the Bell UH-1N (Huey), and later the KC130. As a Flight Mechanic, he served our country during the first Gulf War. Towards the end of his service he was assigned to the QA shop as an inspector.

In 1991 Mike left the Marines to work as a helicopter technician then as a contractor for Horizon Air in 1993. Very shortly after, Horizon Air hired him full time as a Mechanic. After moving through the ranks, he landed in QA and achieved his Level II. Shortly after he was introduced to CASE and in 2003 achieved his level III under Mike Zikoski. Mike is carrying on a significant affiliation between Horizon Air & CASE that was started in 1989 with Gene Swan as the 1st Level III. In October of 2009, Mike was voted by the membership to become a Level IV.

Mike is not only one of our six Level IV's, but also the vice chair on the Audit and Compliance Committee since 2005, and a key contributor to training. His passion for mentoring is exuded during 1A & P&P training sessions. Although he thinks QA is viewed as a necessary evil, he has always enjoyed auditing. The ability to see the inner workings of components along with helping ensure safety and compliance keeps Mike enthusiastic about his work.

While Mike is dedicated to his career, he also maintains a life outside. When he's not auditing, giving checkrides or training, he's enjoys camping with his, "Secretary of War", a.k.a. beloved wife. The two of them with their 5th wheel have visited most of the western half of the U.S. and have plans for much more. Mike is a serious WWII "buff", and is heavily into HO model trains. He also adores visits from his grandkids that call him, "Papa Choo Choo".

Mike accredits his accolades to being with a supportive management team and company at Horizon Air, the C.A.S.E organization, and several individuals. His mentors include Bill Mato and Andy Monteith, to Ken Davis and George Worley. They also include every Level III he has audited with as he believes he has learned a little from everyone. When asked about his CASE affiliation and Level IV, he stated, "We truly have a great group of auditors who perform a demanding and critical function. It was an honor to be selected by the organization to be a Level IV. Now it's my pleasure being part of this process for others."

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