FEDERAL AVIATION ADMINISTRATION
SAFETY TEAM

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Nuts And Bolts - A Newsletter Written By Mechanics For Mechanics

Another Year Gone And I Still Have I'ma Gonnas

Inside this issue:

LET'S NOT MEET BY ACCIDENT

It seams like the older I get time passes by faster and faster. In my mind I just wrote this holiday season article a few months ago. That was issue 08-04 titled "Do You Believe in Santa Claus". In reality, that was a year ago. In my mind I am still learning how to be an FAA Inspector but in reality I'm turning the corner on 20 years and starting to think about retirement. I'm pretty sure that the stars have gotten into some kind of weird alignment that has made the calendar run faster, because it's almost the end of the year again and I still have a lot to do that I thought would have been completed by now.

Am I a victim of some of the Dirty Dozen? Perhaps, stress, pressure, complacency, distraction, resources, or lack of assertiveness. Or am I just a poor manager of my time? Probably some of all of those and a big dose of procrastination. Mr. Webster defines procrastinate as "to put off doing something unpleasant or burdensome until a future time" I define it as I'ma Gonna, it means the same thing.

The point is that another year has come and gone, and in spite of all of the things that were accomplished this year, there is still work to be done.

Some of my I'ma Gonna tasks are: build a new really cool power point presentation on human factors using all the new neat stuff available and show it to everyone in my area, take a technical course or two on state of the art aircraft and/or avionics, attend a training course on light sport aircraft and earn my Light Sport Repairman certificate with a maintenance rating. (that would be sweet), build that storage building in the back yard for my wife, take better care of myself (this means lose some of my bad habits, another wife thing).

Wow, I've got a lot to do, one of these days.

Now do you guys see my problem?

Unfortunately, I don't think I'm the only mechanic out there with a case of the "I'ma Gonna's" You know what I'm talking about, one of these days I'ma Gonna do this and I'ma Gonna do that. Well. I have a plan. Why don't we set a dead line for our I'ma Gonnas and quit procrastinating. This could be the year to get it done. I'm not much on New Years resolutions so I'm going to commit to it now before the new year. Here we go: I'ma Gonna learn all that there is to learn about Light Sport aircraft maintenance and then share it and best practices with mechanics and EAA members in my area of responsibility. I'm doing this because our data shows accidents in light sport and amateur built aircraft are on the rise nationally and reducing accidents is what the FAASTeam is all about. This does not mean that you have heard the last of "Failure to Follow Procedures", that subject is still an issue. Wow, I feel better already.

OK you're turn. I'm sure there are some I'ma Gonnas in your life but if your in denial, let me help.

Based on the fact that our technology is constantly changing how about getting yourself up to speed. How long has it been since you had formal technical training? Why don't you get enrolled in a course on composite repairs, or a particular airframe that you maintain, or light sport aircraft, or human factors, or any management and/or professionalism courses. You could sign up for a professional magazine or newsletter. You can take courses on line such as on faasafety.gov. Why don't you get some training that would benefit your career and then take advantage of the Bill O'Brien AMT awards program on faasafety.gov. Make this the year that you are going to obtain that additional mechanic rating or an Inspection Authorization.

The most valuable tool in the box is a well informed, trained, and current Mechanic.

The Airworthiness FAASTeam is proud of each and every one of you guys for supporting safety and professionalism in aviation maintenance. We hope you and your families enjoyed a wonderful holiday season and a safe and profitable new year.

Now quit procrastinating, This is the year, Grab a pen and get your I'ma Gonna list done.

Author: Mike Jordan - Editor

Burned by Fatigue?

By Dr. Katrina Avers and Erica Hauck

The old adage says "If you play with fire, you're gonna get burned." A mechanic surveyed by the FAA describes the aviation maintenance approach to playing with fire:

> *"I have been a lead mechanic for over 25 years for the airlines. Have I ever worked tired when I shouldn't have or seen others who worked tired when they shouldn't have? Yes. Do other mechanics, leads, and management know about it? Yes. Have mistakes been made due to fatigue? Yes."*

Fatigue – a feeling of tiredness, exhaustion, or lack of energy – has been repeatedly identified as a dangerous contributor to aviation maintenance errors – errors that have lead to incidents, accidents, and loss of life.

In the maintenance hangar, fatigue is often battled with a continuous supply of coffee and a pair of toothpicks to keep the eyes pried open. Do these kinds of efforts contribute to a healthy lifestyle, high quality work, or safety in the skies? The answer is …NO. Science tells us that individuals working more than 17 hrs straight begin to make decisions and perform like an individual that is considered legally drunk (.05-.10 BAC). What does this mean? It means the aviation industry needs to change its approach to managing fatigue in the maintenance environment.

To avoid getting burned by fatigue, regulators, operators, and labor must take a shared responsibility and implement science-based preventive action. The FAA has sponsored a multidisciplinary work group that includes representatives from industry, labor, research, and government to do just that. The goal of the work group is to identify the real-life issues (e.g., economy, pay, family life) surrounding fatigue and develop a practical, scientifically-based approach to managing fatigue risk in the maintenance environment.

With these goals in mind, the work group is planning to develop a fatigue risk management system (FRMS) that has the flexibility to be a win-win for everyone involved. Ultimately, fatigue management can improve quality of life, quality of services, and overall aviation safety. For a FRMS to work, everyone (top leadership, middle management, and mechanics) must be on board and doing their part.

Accident Case Study
A Tragic Case of Failure To Follow Procedures

HISTORY OF FLIGHT

On September 1, 2008, about 1206 eastern daylight time, a Convair CV-580 airplane, operated by a Supplemental Air Carrier in the Midwest, was destroyed when it impacted terrain as it was attempting to return to the Airport. The captain, first officer, and a company pilot sitting in the observer seat received fatal injuries. This was a Part 91 post maintenance check flight. Visual meteorological conditions prevailed at the time of the accident. An (IFR) flight plan was filed.

The accident flight was the first flight following a maintenance Phase 1 and Phase 2 check, which included flight control cable rigging as part of the check. The flight was also intended to provide cockpit familiarization for the first officer and the observer, and a training flight for the first officer.

The flight contacted air traffic control at 1139 for its IFR clearance. At 1147, the flight was cleared to taxi. At 1200, the flight received its takeoff clearance, and the airplane started its takeoff roll about 1203.

About one minute later at 1204, the flight contacted ATC and stated that it needed to return to the airport. It was cleared to land on runway 5L. ATC asked the flight if it needed equipment and the flight responded, "Negative."

Radar track data indicated that about 1204, the airplane was mid-downwind for runway 5L about 900 feet above ground level with a 171-knot ground speed. When the airplane was approximately turning to the base leg, it was about 187 feet agl on a southerly heading with a 196-knot ground speed. About 1206, the airplane impacted a cornfield about one mile southwest of the approach end of runway 5L.

PERSONNEL INFORMATION

The captain was an airline transport pilot with a total flight time of 16,087 hours. He had flown 170 hours in the Convair (CV) 580 in the last 90 days. He held airplane type ratings in the following aircraft: Boeing B-727, CV-340, -440, and -580's, Grumman G-100, Lockhead L-382, and IA-1125. He had completed the 6-month proficiency check in the CV-580 on May 17, 2008. On July 16, 2008, the captain was designated by the Federal Aviation Administration (FAA) as a CV-580 Check Airman for employees of the company.

The first officer was an airline transport pilot with a total flight time of 19,285 hours. He held airplane type ratings in the following aircraft: Boeing B-727, CV-240, -340, and -440's, McDonnell Douglas DC-4, -7 and -8's, and Lockhead L-1011's.

The observer pilot on the flight was a commercial pilot with a total flight time of 498 hours. He also held an Airframe and Powerplant (A&P) certificate and a Flight Engineer certificate.

The first officer and the observer pilot were going through the Initial New Hire training program. As of August 30, both had completed 28.5 hours of aircraft systems training which required a total of 63 hours for completion.

Accident Case Study - Continued

AIRCRAFT INFORMATION

The airplane was a Convair CV-580, manufactured in 1956 as a 56-seat passenger airplane that was converted to a cargo airplane. The airplane was modified by Supplemental Type Certificate (STC) SA4-1100 with the addition of the two Allison 501-D13D turboprop engines that each produced 3,800 shaft horsepower. The airplane had a maximum gross weight of 58,156 pounds. The last phase inspection was conducted on August 18, 2008. The total airframe time was 71,990.4 hours. The accident flight was the first flight after the phase inspection was completed.

An examination of the Phase 1 and Phase 2 cards used to conduct the phase inspection completed on August 18, 2008, revealed that the inspector's block on numerous checks were not signed off by the Required Inspection Item (RII) inspector. The RII inspector did not sign the Phase 2, card 55-04, item 59a, 59b, 59c, and 59d. Item 59b states, "Connect elevator servo trim tab cables and rig in accordance with Allison Convair M/M, section 8, figure 8.2.108 and 8.2.108A." The item had been signed off by the mechanic, but not by the RII inspector. The Phase 2 card also contained a NOTE, which stated in bold type, "A complete inspection of all elevator controls must be accomplished and signed off by an RII qualified inspector and a logbook entry made to this effect." The RII inspector block was not signed off.

The examination of the airplane's logbook indicated that the aircraft was released for flight on August 8, 2008. The discrepancy side of the logbook page listed, "AT-23's as required." (AT-23 cards are discrepancy cards used during aircraft maintenance.) The corrective action side of the form stated, "Complied with all AT-23's as required." On July 25, 2008, an AT-23 card, control number 10544, indicated that the right hand horizontal elevator was removed and reinstalled in accordance with the maintenance manual 27-30-0 to facilitate other maintenance. The AT-23 card, control number 10544, had both the mechanic's and the RII's signature.

The airplane was not flown on August 8, 2008, and did not fly until the accident flight on September 1, 2008. The airplane's logbook indicated that that there were no discrepancies entered into the logbook from August 8 - September 1, 2008, that specifically identified that the elevator trim system had received maintenance or needed to be checked prior to flight. The airplane received a service check on September 1, 2008, and was released for flight.

Accident Case Study - Continued

FLIGHT RECORDERS

The Cockpit Voice Recorder (CVR) and Flight Data Recorder (FDR) were retrieved from the tail section of the wreckage and were sent to the National Transportation Safety Board's (NTSB) Vehicle Recorder Division for inspection.

The FDR was downloaded and approximately 4 hours of data was transcribed. A review of the data showed that the accident flight was not recorded by the FDR. The accident airplane was equipped with a switch in the cockpit to provide power to the FDR. Selection of the FDR switch was a checklist item that required the pilots to select the FDR switch to ON. The CVR tape indicated that the pilots skipped over the checklist item that called for the FDR switch to be selected to the ON position. The CVR recording indicated that there was no discussion between the pilots concerning the FDR switch, whether it should be in the ON or OFF position. The panel that contained the FDR switch was not located in the wreckage.

The CVR recorded 33-minutes, 11-seconds of useable audio information. The recording and prepared transcript began at 1132:47 and covered the preflight, taxi, takeoff, and accident events. The recording and transcript ended at 1205:58. The CVR indicated that during the conversations recorded by the CVR, the pilots did not discuss any special or extra requirements to conduct flight control checks as a result of the maintenance performed on the elevator and rudder.

From 11:33:03 to 12:00:47, the captain, first officer, and the observer were going through the cockpit checklists in preparation for takeoff. As they went through the checklist, the captain pointed out to the first officer and observer where particular gauges, switches, or instruments were located in the cockpit. At 12:00:47, the tower cleared the airplane for takeoff. The CVR indicated that the airplane was taxied onto the runway and the flight crew did power checks of the engines prior to takeoff. At 12:03:18, the first officer transmitted to tower that the airplane was commencing its takeoff roll.

The CVR indicated that the duration of the accident flight from the time of the takeoff roll until the sound of impact was about 2 minutes 40 seconds. During the accident flight, neither the captain nor the first officer called for the landing gear to be raised, the flaps to be retracted, or the power levers to be reduced from full power. From the time the first officer called "rotate" until the impact, the captain repeated the word "pull" about 27 times. The CVR indicated that the cockpit area microphone recorded a "sound similar to trim wheel motion" four times. When the observer pilot asked, "Come back on the trim?" at 12:04:39, the captain responded, "There's nothing anymore on the trim."

The CVR transcript recorded the following:

At 12:03:52, Hot-2 [first officer's microphone] recorded, "rotate."
At 112:03:52, Hot-1 [captain's microphone] recorded, "ohh yeah."
At 12:03:55, CAM [cockpit area microphone] recorded, "Sound similar to trim wheel motion."
At 12:03:55, Hot-1 recorded, "oh # [expletive]."

At 12:03:58, Hot-1 recorded, "oh yah yah yah. Pull pull pull."
At 12:03:58, Hot-2 recorded, " [unintelligible word]."**
At 12:03:58, CAM recorded, "sound similar to trim wheel motion."
At 12:04:02, Hot-1 recorded, "pull."
At 12:04:03, CAM recorded, "sound similar to trim wheel motion."

At 12:04:04, Hot-3 [observer], "want me to help."
At 12:04:05, Hot-1 recorded, "pull."
At 12:04:08, Hot-1 recorded, "let's go *. We have to go back. Pull pull."

Accident Case Study - Continued

At 12:04:10, Hot-2 recorded, "okay."
At 12:04:11, Hot-? recorded, "sound of heaving breathing."
At 12:04:13, RDO-2 [first officer's radio transmission] recorded, "and Tahoma five eight seven's got to come back."
At 12:04:16, Hot-1 recorded, "pull."
At 12:04:17, TWR [tower] stated, "five eight seven right or left traffic?"
At 12:04:19, RDO-2 recorded, "left traffic Tahoma five eighty seven."
At 12:04:21, TWR stated, "alrighty."
At 12:04:23, Hot-1 recorded, "pull."
At 12:04:23, Hot-? recorded, *
At 12:04:29, Hot-? recorded, "sound of heavy breathing."
At 12:04:32, Hot-1 recorded, "pull."
At 12:04:33, Hot-1 recorded, "pull."
At 12:04:34, Hot-1 recorded, "pull."
At 12:04:37, Hot-1 recorded, "pull."
At 12:04:38, Hot-2 recorded, "pulling."
At 12:04:39, Hot-3 recorded, "come back on the trim?"
At 12:04:40, CAM recorded, "sound similar to the trim wheel motion."
At 12:04:41, Hot-1 recorded, "there's nothing anymore on the trim."
At 12:04:44, Hot-? recorded, "sound of heavy breathing."
At 12:04:78, Hot-1 recorded, "pull..pull you pull two pull."
At 12:04:49, TWR stated, "Tahoma five eighty seven check wheels down the wind's zero seven zero at four and cleared to land."
At 12:04:54, RDO-2 recorded, "clear to land Tahoma five eighty seven."
At 12:04:55, Hot-? recorded, "sound of heavy breathing."
At 12:04:59, TWR stated, "need any equipment or anything?"
At 12:05:00, Hot-1 recorded, "no-no."
At 12:05:01, RDO-2 recorded, "uh negative."
At 12:05:03, TWR stated, "okay."
At 12:05:04, Hot-1 recorded, "pull."
At 12:05:10, Hot-? recorded, "sound of heavy breathing."
At 12:05:15, Hot-1 recorded, "pull."
At 12:05:16, Hot-2 recorded, "sound of grunt."
At 12:05:18, Hot-1 recorded, "let's go on the left side."
At 12:05:21, Hot-1 recorded, "pull."
At 12:05:23, Hot-3 recorded, "I got it I'm pulling."
At 12:05:24, Hot-1 recorded, "pull..left left left."

At 12:05:29, Hot-1 recorded, "pull."
At 12:05:31, Hot-1, recorded, "sound of heavy breathing."
At 12:05:32, Hot-2 recorded, "sound of grunt."
At 12:05:38, Hot-2 recorded, "sound of grunt."
At 12:05:38, Hot-1 recorded, "pull."
At 12:05:39, Hot-2 recorded, "Jesus."
At 12:05:42, Hot-1 recorded, "pull."
At 12:05:45, Hot-1 recorded, "pull."
At 12:05:46, Hot-1 recorded, "pull."
At 12:05:47, Hot-2 recorded, "sound of grunt."
At 12:05:48, Hot-1 recorded, "sound of grunt."

Accident Case Study - Continued

At 12:05:50, Hot-1 recorded, "pull pull."
At 12:05:53, Hot-1 recorded, "sound of screaming."
At 12:05:58, Hot-3 recorded, "God help us."
At 12:05:58, CAM recorded, "sound of impact."
At 12:05:58: End of recording.

The NTSB's Vehicle Recorder Division conducted a Sound Spectrum Study. The study attempted to determine the take-off power setting of the engines as well as any subsequent power changes prior to impact. The data indicated that until 12:05:45, the engines likely operated at or near their maximum power output. At 12:05:45 and for the last 15 seconds of the flight, the increased noise levels obscured blade passage harmonics so the engine power trends could not be determined.

WRECKAGE AND IMPACT INFORMATION

The airplane had impacted the terrain on a southerly heading. The cut through the high corn made by the airplane's landing gear, fuselage, and wings indicated that it was in a slight right wing down attitude on a glide path of about 10 degrees at impact. The initial contact with the corn revealed three parallel cuts consistent with the landing gear being in the down position. Both left and right propeller gearboxes separated from the engines and were found near the initial impact point. All four blades from both propeller assemblies were separated from the hubs and were found throughout the wreckage path. Both propeller hubs were located about 1,250 feet from the initial impact point, the furthest wreckage found in the debris field. The main wreckage was found about 825 feet from the initial impact point.

Approximately the forward 10 feet of the airplane, which included the cockpit, separated from the fuselage. It came to rest on the right side of the airplane and was consumed by post impact fire. The fuselage was partially consumed by fire just forward of the vertical stabilizer between Fuselage Station (FS) 623.00 and FS 798. The left wing had separated from the fuselage and was about 50 feet from the fuselage. It was partially consumed by fire, and fragments of the wing were found in the debris field. The right wing had separated from the fuselage. Part of the wing came to rest under the cockpit section, and was consumed by fire. Sections of the lower right wing were found in the debris field. Both engines had separated from the wings and were found with the main wreckage. A ground fire had consumed a swath of corn along the debris field.

Accident Case Study - Continued

The elevator pitch control system was inspected. The cockpit and pedestal, upon which the elevator trim was mounted, was destroyed. The trim wheels were still connected to the axle, which was broken and torn from the structure. The elevator trim indicator was not visible nor was the trim drum or forward cables. The elevator trim cables were still routed through the floor beam fairlead holes to the empennage where they were attached to the elevator trim jack drum in the right horizontal stabilizer. The aft turnbuckles were intact, joined to both cables and lockwired. Although the pulleys and rubber fairleads were consumed by fire, the cables were still captured in location by their individual fairlead holes. The inboard cable at the FS 798 floor beam exited through the fuselage lower fairlead hole at FS 850 to the lower side of the elevator trim jack drum.

The Allison Maintenance Manual 1CC2-1, 8-2 page 18, Figure 8.2.108, indicated that the elevator trim inboard cable at the FS 798 floor beam, when correctly installed, exited through the fuselage upper fairlead hole at FS 850 to the top of the elevator trim jack drum. The inspection of the elevator pitch control system revealed no anomalies except the reversed elevator trim cables aft of FS 798.

ADDITIONAL INFORMATION

A maintenance technician briefed the pilot on the maintenance that had been accomplished on the airplane prior to the flight on September 1, 2008. The maintenance technician reported that he briefed the pilot on the following maintenance actions:

1. Both propellers were off the aircraft.
2. The propeller gearbox for the number one engine was split for level one inspection.
3. The number one engine turbine was removed and some new parts were installed.
4. The right main gear shock strut was replaced.
5. The nose gear was split and resealed.
6. A full gear swing was completed.
7. Both elevators and rudder were removed and replaced.
8. The right horizontal stabilizer was removed and all items were inspected and reinstalled.
9. All empennage flight control cables were disconnected and reconnected, rigged and checked.

The operator's Vice-President of Maintenance reported that in accordance with the companies Maintenance Manual, the removal and reinstallation of the propellers was the only item that required a test flight after maintenance.

The on-site inspection of the accident airplane revealed that the elevator trim cables were reversed. As a result, when the pilot applied nose-up trim, the elevator trim system actually applied nose-down trim.

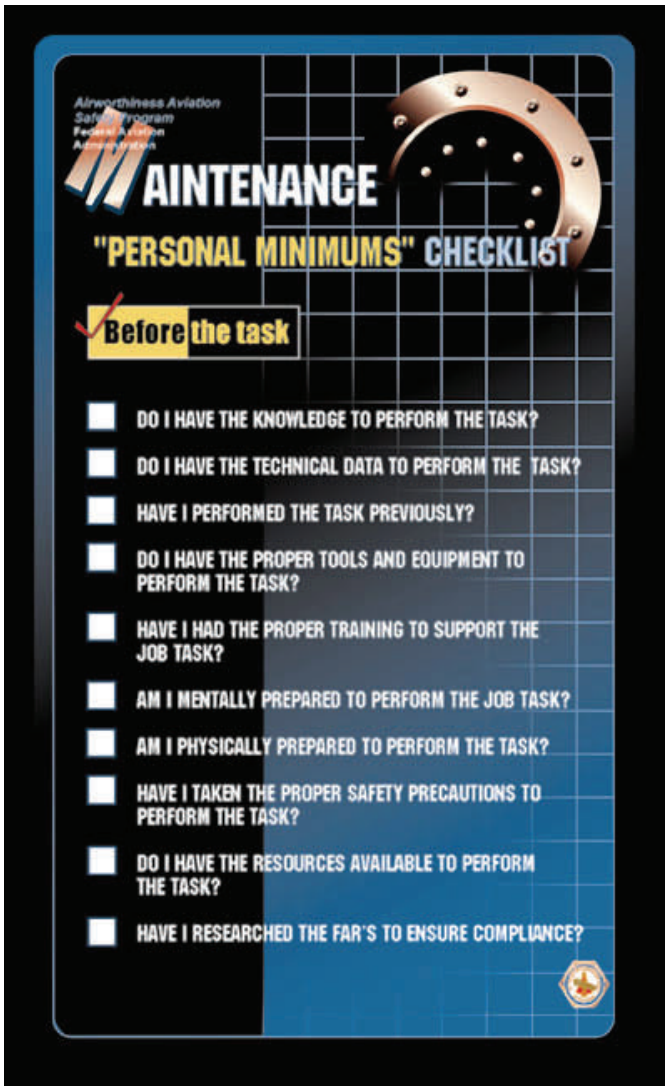
Accident Case Study - Continued

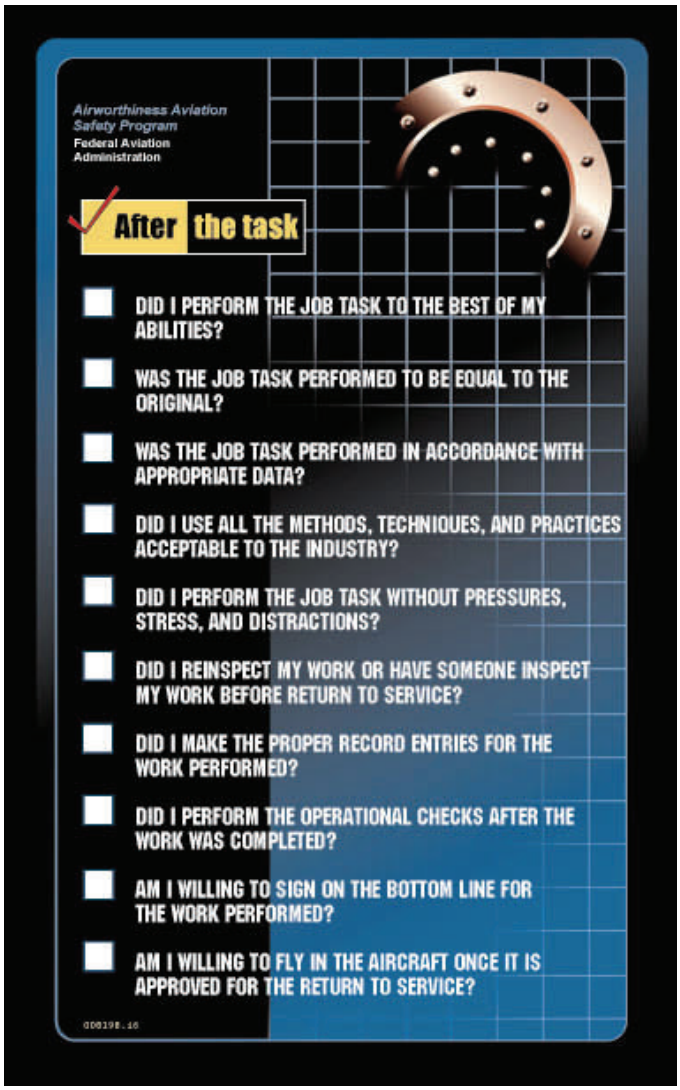
The FAA determined there were four persons involved in this tragic accident that were in violation of Federal Aviation Regulations, the company and three mechanics.

The companies Air Carrier certificate was revoked. One Mechanic received a 60 day suspension of his Mechanic certificate for improper maintenance record entries. One Mechanic received a 60 day suspension of his Mechanic certificate for improper maintenance performed. One Mechanics certificate was revoked for falsification.

This was a classic case of Failure to Follow Procedures and even though the details of why this tragic mistake was made are not known to me, I am sure the details are text book example of at least several of the Dirty Dozen. I hope that you will read this case study several times and commit it to memory. I sometimes hear mechanics complain because they are tired of hearing about the dirty dozen and the "Personal Minimums" checklist however, if the mechanics in this case had read and complied with the "Personal Minimums" Checklist the chain of events could have been broken and everyone could have gone home for dinner that night. Need I say more. As a reminder the checklist's are attached below.

Author: Mike Jordan - Editor Credits: NTSB on-line data base





CONSUMABLE MATERIAL SHELF LIFE LIMITS

By: Brian Douglas

Many sealants, adhesives and paints as well as various other chemicals have shelf life limits imposed by the manufacturer. Once the manufacturer imposed shelf life limit date has expired, these chemicals must be safely discarded. This concept applies to anyone who uses shelf life affected chemicals in the performance of maintenance, alterations, or preventive maintenance on aircraft, engines, propellers or appliances.

FAR 43.13 states:

Each person maintaining or altering, or performing preventive maintenance, shall do that work in such a manner and use materials of such a quality, 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 aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness).

As a Quality Assurance auditor for a major airline, I see many different techniques in use to comply with this regulation. Some are more effective than others but all have the same objective in mind, compliance with FAR 43.13. My experience has taught me that the most effective way to control shelf life is with what I like to call a "fully evolved" shelf life program. Before I explain the definition and practical application of my "fully evolved" shelf life control program concept, I must preface this with the understanding that I am not endorsing or disapproving the theory of evolution in the Darwinian sense, I am just using this concept to relay information.

Shelf life control starts with receiving a chemical into your inventory system. Once you determine that the chemical you received is affected by shelf life requirements imposed by the manufacturer, you should ensure that it is properly identified as such. Many of the companies that I visit have created a label unique to their operation for this purpose. When you reach this level of shelf life control, you are in the "monkey" phase of my shelf life evolutionary ladder. This phase is the foundation of what is to come in your production. If I visit a company where this stage of evolution is the only method of shelf life control that they currently have in place, then I feel pretty confident that I will find at least one chemical on the floor or in use

The next stage in the evolution of shelf life control is a method of tracking all chemicals affected by shelf life in a database that looks both forward and backwards in time and has the ability to alert the user of chemicals that are approaching the end of their shelf life or have already expired.

The next stage in the evolution of shelf life control is a method of tracking all chemicals affected by shelf life in a database that looks both forward and backwards in time and has the ability to alert the user of chemicals that are approaching the end of their shelf life or have already expired. This system is usually a spreadsheet or a calendar program on a computer with automatic alerts as to the shelf life expiration dates of all chemicals currently used in production. Most users of this system have an internal requirement that a designated person must review this database once a month to ensure that none of the automatic alerts are missed. I refer to this rung on the evolutionary ladder as the "Neanderthal" stage. This stage is a progression of the previous stage so obviously you must have already identified all of your shelf life affected chemicals through labeling before you can evolve to this stage. If I visit a company that is currently at this stage of evolution, my odds of finding chemicals on the floor or in use beyond their shelf life expiration date have dropped dramatically.

This leads us to the final stage of evolution, "human". A company at this stage has labeled all of the shelf life affected chemicals in their inventory. Created and is using a spreadsheet or calendar method to track and predict the number of chemicals that either have or will expire in a predetermined timeframe and is aware of the location of these chemicals. This stage requires chemical traceability. This means that when a technician takes a chemical from your stores area, you record both the name of the technician that took the chemical and what chemical he took or you know the location of the chemical i.e. "Rebuild Shop 2" after it is taken. This final stage of evolution allows the people responsible for shelf life control to not only know when a chemical will expire but the location of that chemical for retrieval or disposal verification. When I visit a company with a "fully evolved" shelf life program very rarely do I find chemicals on the floor or in use beyond their shelf life expiration date. Keep in mind that no program is perfect because all programs depend on people who are not perfect; however this level of shelf life control is very effective at ensuring regulatory compliance.

CALLING ALL MECHANICS

Keep Informed With

FAA'S AVIATION MAINTENANCE ALERTS

Aviation Maintenance Alerts (Advisory Circular 43.16A) provide a communication channel to share information on aviation service experiences. Prepared monthly, they are based on information FAA receives from people who operate and maintain civil aeronautical products.

The Alerts, which provide notice of conditions reported via a Malfunction or Defect Report or a Service Difficulty Report, help improve aeronautical product durability, reliability, and maintain safety.

Recent alerts cover: • Main gear down-lock switch failures on a Piper PA-32R-301T

• Broken piston skirt on a Continental IO-470-VO engine

• Frayed aileron cables on a Cessna 421B

Check out *Aviation Maintenance Alerts* at:*http://www.faa.gov/aircraft/safety*

HAPPY NEW YEAR TO YOU AND YOURS FROM THE FAASTeam

FAA ISSUES NEW ADVISORY CIRCULAR FOR VINTAGE AIRCRAFT

The AC provides some relief for hard to find parts, and applies to all aircraft Type Certificated prior to January 1980

In a move intended to help keep vintage aircraft safely maintained, restored and flying, the FAA has issued new Advisory Circular AC 23-27, Parts and Materials Substitution for Vintage Aircraft, dated May 18, 2009. The AC, created by the FAA's Small Airplane Directorate in Kansas City, Missouri, was a joint effort by the FAA in consultation with industry representatives including EAA and EAA's Vintage Aircraft Association.

http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/list/AC%2023-27/$FILE/AC%2023-27.pdf

Attention Pilots, Mechanics, and Avionics Technicians:

The FAA Wants You!

Here is your opportunity to start a career in the exciting field of aviation safety. The FAA's Flight Standards Service is currently hiring aviation safety inspectors and is seeking individuals with strong aviation backgrounds in maintenance, operations, and avionics.

Starting salaries range from $40,949 to $77,194, plus locality pay. Benefits include federal retirement and tax-deferred retirement accounts and health insurance.

Qualifications vary depending on discipline. For details, please visit http://jobs.faa.gov/. Under "All Opportunities" you can search by job series 1825 or title containing "inspector."

Start your application today.

WHAT IS IT ?

We agree with the feedback received for "WHAT IS IT". The contributor said "the winner should receive a prize for his effort and a prize would keep the challenge competitive. A prize like a new Snap On torque wrench would be great". Prizes present a special problem for government employees and until we can figure that part out you will have to settle for having your name published. Your voice has been heard. We're working on it.

2010

09-03 Newsletter, "What Is It?" Winner

The first correct response to the 09-03 edition came from Mr. **John Mach**. John said "it is a Westland Lysander, first flown in 1936 and used by the Royal Air Force throughout World War II. John holds a Repairman Certificate.

The Lysander was a British army liaison aircraft produced by Westland Aircraft. It was used during WWII and was renowned for its ability to operate from small, unprepared airstrips. It was given the name of the Spartan General "Lysander."

WHAT IS IT?

If you know, be the first to send me an e-mail at "nutsandbolts@faasafety.gov". and we will publish it in the next issue and give you credit for your aviation savvy.

AIR NOTES

INTERNET SERVICE DIFFICULTY REPORTING (ISDR) WEB SITE

The Federal Aviation Administration (FAA) Internet Service Difficulty Reporting (ISDR) web site is the front-end for the Service Difficulty Reporting System (SDRS) database that is maintained by the Aviation Data Systems Branch, AFS-620, in Oklahoma City, Oklahoma. The ISDR web site supports the Flight Standards Service (AFS), Service Difficulty Program by providing the aviation community with a voluntary and electronic means to conveniently submit in-service reports of failures, malfunctions, or defects on aeronautical products. The objective of the Service Difficulty Program is to achieve prompt correction of conditions adversely affecting continued airworthiness of aeronautical products. To accomplish this, Malfunction or Defect Reports (M or Ds) or Service Difficulty Reports (SDRs) as they are commonly called, are collected, converted into a common SDR format, stored, and made available to the appropriate segments of the FAA, the aviation community, and the general public for review and analysis. SDR data is accessible through the "Query SDR data" feature on the ISDR web site at: http://av□info.faa.gov/isdr/. (cut and paste this web address)

The Bill O'Brian Aviation Maintenance Technician Awards Program is now On-Line. Go To "faasafety.gov"

FAASTeam "Nuts and Bolts" Newsletter Article Submissions

If you are interested in submitting an article please type your article using 10 point Times New Roman font in a word document. Articles should not exceed 800 words maximum. If pictures are submitted, please title by number to match required caption. Best would be to paste into word document with the captions printed. Limit pictures to reasonable quantity and size for article.

Your submission may be slightly modified to ensure correctness and due to space considerations. No major content change will be made without your notification. You are responsible for content and FAA assumes no liability and/or implied endorsements. Upon completion, please submit to Mike Jordan at nutsand-bolts@faasafety.gov

If you are interested in offering a suggestion for an article or if you have a question or issue that you would like clarification on in our "Ask The Feds" column, simply send us an e-mail with your suggestion or request at the address above, and include the form below.

Please submit the following information with your article, suggestion or request.

Your Name:		**Phone #:**	
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	YES	**NO**
Do you wish to have your article published:		
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I agree and attest to information provided		
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