Aviation Human Factors Industry News

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From the sands of Kitty Hawk, the tradition lives on.

Hello all' From the sands of Kitty Hawk, the tradition lives on.

To subscribe send an email to: <u>rhughes@humanfactorsedu.com</u> In this weeks edition of Aviation Human Factors Industry News you will read the following stories:

Human Factors

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Human Factors

Proud Members of the "DIRTY DOZEN"

Aviation Maintenance Technician Handbook. remember this book?! When did you last take a look at this handbook? Most of us working in aviation have been involved in aircraft maintenance for a long, long time and once we received our airframe and power plant license we never opened this book again. The FAA has added a chapter to this book, Chapter 14, Human Factors. You can view this handbook on the FAA website and you owe it to yourself to take a new look at it, read the chapter on human factors and see if you recognize any of the topics discussed, especially the section on The Dirty Dozen.

Factor Number One: Lack of Communication

Probably the most important and key human

The Dirty Dozen - Aviation Errors Lack of Communication - A lack of clear direct state ments and good, active listening skills. Complacency - Self-satisfaction accompanied by a loss of awareness of the potential dangers Lack of Knowledge - Lack of experience or training in the task at hand Distraction - Drawing one's attention away from a task. Lack of Teamwork - Lack of working together to achieve a common goal Fatigue - Weariness from labor or exertion, nervous exhaustion or the temporary loss of power to respond Lack of Resources - Failure to use or acquire the appropriate tools, equipment, information and procedures for the task at hand · Pressure - Pushing for something in spite of opposing odds, creating a sense of urgency or haste Lack of Assertiveness - A lack of positive communication of one's ideas, wants and needs Stress - Mental, emotional or physical tension, strain, or distress Lack of Awareness - Failure to be alert or vigilant in observing Norms - Commonly accepted practices where assumptions are made that the course of action or procedure is correct based on history without re-validating or verifying the current procedure

factor in incorrect or faulty maintenance is the Lack of Communication. As maintainers we communicate with many people daily, (i.e. crew chiefs, supervisors, stores personnel, etc.). Each exchange holds the potential for misunderstanding or omission. But communication between the aircraft maintenance technicians may be the MOST important of all. Lack of communication between technicians could lead to a maintenance error and result in in an aircraft accident. This is especially true during procedures where more than one technician performs the work on an aircraft. It is critical that accurate and complete information be exchanged to ensure that all work is completed without any step being omitted.

Knowledge and speculation about a task must be clarified and not confused. Each step of the maintenance procedure must be performed according to approved instructions as though only a single technician did the work.

http://www.faa.gov/regulations_policies/handbooks_manuals/aircraft/media/ AMT Handbook Addendum Human Factors.pdf

NTSB blames bad workmanship for hole in 737

A National

Transportation Safety Board report released Friday blamed bad workmanship for a 2011 incident when a five-footlong hole ripped open in the roof of a Boeing 737-300 during a Southwest Airlines flight.

When the jet was assembled 15 years



earlier, the drilling of the rivet holes along one side of the fuselage skin panel that tore away "showed a lack of attention to detail and extremely poor manufacturing technique," the report concluded.

The work also "was not in accordance with Boeing specifications or standard manufacturing practices."

The NTSB said evidence indicates the hidden cracks emanating from the rivet holes had been slowly growing with each take-off and landing, and had started "approximately when the airplane entered service" in 1996. But the safety agency's report suggests this may have been a one-off error by a mechanic.

Boeing pointed to the NTSB finding that subsequent inspections of other 737s found no similar damage in the same fuselage panel joints.

The NTSB concluded that therefore it's "unlikely that there was a systemic QA (quality assurance) error at the Boeing facilities."

The report reveals that a panel above the one that ripped away was replaced at some late stage of the assembly process and that the join between these two panels -- three rows of rivet holes along the overlap -- showed serious discrepancies, including non-circular holes, double-drilled holes, gaps between the rivets and the holes, and metal burrs protruding from under the rivets.

"The crown skin panel and the upper left fuselage panel were misaligned, so most of the lower rivet row holes were mis-drilled," the report states.

At the time, the inflight incident raised concern that aging jets might be more susceptible to metal fatigue cracking sooner in their life cycle than previously believed. Hans Weber, an aviation technical expert, president of Tecop International in San Diego, said the NTSB analysis dispels that concern.

"The workmanship was just terrible," Weber said. "This has nothing to do with a typical fatigue fracture due to aging."

"I'm relieved that it's not because of some aging process we didn't understand," he added.

Weber said that the developing cracks in the jet that ripped open would not have been visible during standard maintenance checks for a jet that was considered roughly mid-life, at 15 years old and less than 40,000 take-off-and landing cycles.

He said the cracks formed in an area -- on the inside of the overlapping skin panels and along the lower row of rivets -- that was hidden from view and is normally not highly stressed.

The NTSB investigation was hampered by the fact that at the time Boeing retained its manufacturing records for only six years after assembly.

As a result, it could not be determined whether the poor job of installing the replacement skin panel, and the subsequent quality checks, occurred during the initial fuselage assembly at Boeing's plant in Wichita, Kan. -- now Spirit AeroSystems -- or during final assembly in Renton.



FatigueNewsletter.aspx

Citation Crash "Unsurvivable"

A Cessna Citation 525A (CJ2) that crashed into a hangar at Santa Monica Airport at 6:20 p.m. on Sunday was engulfed in flames by the time emergency crews arrived, Santa Monica Fire Department Capt. John Nevandro told reporters on the scene. The crash was "unsurvivable," he said. "The building actually collapsed and wrapped itself around the



plane," he said, making it impossible for rescuers to reach the cabin. Local news reports said the airplane had landed normally when a tire blew out and the jet veered off the right side of the runway and into the hangar. Shortly afterward, witnesses said, there were flames and then several large explosions. The jet had departed from Hailey, Idaho, close to Sun Valley, but it is not yet clear how many passengers were on board or who was flying the airplane. The airplane can seat up to eight, including the pilot.

There may have been other airplanes and equipment in the hangar that contributed to feeding the fire, according to the local CBS affiliate. The jet was manufactured in 2003 and is registered to an address in Malibu. The NTSB is investigating.

SAFE Wants Pilot Experience Data Collected

The Society of Aviation and Flight Educators (SAFE) says the FAA should be looking in pilots' logbooks to help it curtail the GA accident rate. The organization told a recent meeting on the FAA's data collection process that the agency should "start collecting information on pilot recurrent safety training in addition to the data it already collects on airports, aircraft and aircraft activity," SAFE said in a news release. "Everyone in the industry knows the importance of recurrent training for aviation safety," said SAFE Executive Director Doug Stewart. "But there is almost no data on pilot recent experience, time in type of aircraft or the kind of training being used."Stewart said that as part of its work on the FAA Loss-of-Control workgroup, his group has noticed that "pilot error" accidents are rarely backed up with documentation on the pilot's



currency and recency. "That's why we're asking the FAA to start gathering such data," Stewart said. "It would help immensely in determining why these kinds of accidents keep occurring." Most loss-of-control accidents are fatal.

Helicopter pilot dies after accident while giving rides at Pa. fair

A helicopter pilot is dead after officials say he walked into the aircraft's spinning rotor while giving rides at Pennsylvania's largest fair.

Organizers say 69-year-old Carl Enlow died after being hit by the rotor Friday night at the Bloomsburg Fair. The fair's superintendent of police and parking says the helicopter was refueling when Enlow went back to speak to the pilot who relieved him. Bill Barratt says Enlow's hat blew off his head and he was struck by the rotor when he reached for it.



Barratt says Enlow was an experience pilot had been flown helicopters in the military.

Montour County Coroner Scott Lynn tells the Bloomsburg Press-Enterprise the Birdsboro man's death is under investigation.

Fatigue cited after ATR freighter's near stall

UK investigators looking into the near-stall of an ATR 42-300 on approach to Glasgow believe that fatigue might have played a role.

As the Air Contractors freighter was vectored for the runway 23 approach, it was operating with a level of ice protection which required higher speeds because the stall alert threshold was lower.With the ice protection engaged the approach speed required was 114kt. The captain did not state whether this speed, or the non-icing speed of 99kt, would be used for the approach.



The inquiry says several items were omitted from the Glasgow approach briefing, and that the captain was not operating the aircraft in line with company procedures.

During the approach the ATR - flying at around 140kt, with flaps at 15° - leveled at 2,000ft and the engine torque was reduced to 3%. Neither pilot mentioned the declining airspeed as the autopilot gradually pitched the aircraft nose-up in order to maintain 2,000ft.

The aircraft was 6.5nm from the runway when a stall alarm sounded and the stick-shaker activated. It had pitched up to an angle of attack of 11.2° and its airspeed had fallen to 111kt.

To recover from the near-stall the captain pitched the aircraft down and pushed the throttles almost to full power. As the ATR descended, and then climbed, the airspeed - which had declined to 104kt - rose to 174kt, exceeding the limit for the flap setting.

During the renewed descent to Glasgow the airspeed again reduced to 111kt and the angle of attack verged on the stall alert threshold, before the aircraft subsequently landed without further incident.

The Air Accidents Investigation Branch says the captain had been performing his first night-flying duty following a period of normal night sleep, and the incident occurred nearly 24h after the end of his last proper sleep.

He had also driven 2h 45min to his base before flying duty, it adds: "Consequently, knowingly or not, he may have been tired or fatigued."

Cockpit-voice recorder data revealed the captain yawning during the flight, as well as during the previous Paris-Newcastle sector. Standard calls and responses were not always correctly performed and a sterile cockpit environment was not maintained below 10,000ft.

In its analysis of the 22 February 2012 flight, the AAIB also notes that the captain's manner during his responses to the first officer's monitoring calls was "likely to have discouraged further input" at a point when effective communication was necessary.

Guilty Plea in Oregon in 2008 Fatal Copter Crash

An Oregon man has pleaded guilty to fraud in connection with the deadliest helicopter crash involving working firefighters in U.S. history.

Levi Phillips, 46, of Grants Pass faces up to 20 years in prison when he is sentenced. As part of a plea deal, he agreed to testify against another



man, 42-year-old Steven Metheny of Central Point.Phillips was the director of maintenance for Carson Helicopters Inc., reporting directly to Metheny, a former vice president.

Prosecutors say that when the U.S. Forest Service solicited bids for helicopters to be used in firefighting operations, Metheny submitted proposals with altered performance charts and falsified weight and balance records. Then, after winning the \$20 million contract, the incorrect information was given to pilots who had to calculate the maximum payload capacity during firefighting operations.

The Aug. 5, 2008, crash near Weaverville, Calif., killed the pilot, a Forest Service safety inspector and seven firefighters with Grayback Forestry of Merlin. The copilot and three firefighters were hurt. Witnesses said the helicopter took off more slowly than normal before clipping trees and then crashing into a hillside.

A National Transportation Safety Board investigation showed the Sikorsky S-61N helicopter weighed more than 19,000 pounds when pilots tried to take off from a mountaintop clearing during the Iron 44 wildfire in Shasta-Trinity National Forest. If Forest Service guidelines had been followed, investigators said, the weight shouldn't have exceeded 15,840 pounds.

Phillips pleaded guilty Monday guilty in U.S. District Court in Medford to a single charge of defrauding the Forest Service. The plea was first reported by the Mail Tribune newspaper.

Metheny remains charged with 22 counts of mail and wire fraud, making false statements to the Forest Service, endangering the safety of aircraft in flight, and theft from an interstate shipment.

A Portland jury ruled last year that a problem with an engine was responsible for the crash. Jurors reached their verdict after the pilot who survived and the widow of the one who was killed sued General Electric for \$177 million, alleging the company knew the engines it made for the Sikorsky S-61N helicopter had a design flaw.

Metheny's trial is scheduled to start March 4. His attorney, Steven L. Myers, said Tuesday they will "aggressively defend the case." The attorney said he's going through thousands of pages of discovery in a case made more complex by the length of time between the crash and the criminal charges.

Myers said he was aware that Phillips has agreed to testify against his client.

"It's going to be interesting to see exactly what he says, given that we have a plethora of depositions where he's denied the allegations that sort of comprise the charges against him," Myers said. "He's been under oath before, and I'm not sure what he's going to say now."

Relatives of the victims were glad to see someone accept responsibility.

Nina Charlson's 25-year old son, Scott Charlson, was one of the firefighters killed. Charlson told the Mail Tribune she is grateful that Phillips, who created the false charts, admitted his part in the scheme.

"Our one big hope is that this changes things," Charlson said. "We don't want history to repeat itself — the mess that greed has caused."

Pilot error caused Caribbean Airline crash, GCAA

Director General of the Guyana Civil Aviation Authority (GCAA), Zulfikar Mohammed says pilot error led to the July 30, 2011 crash of a Caribbean Airlines flight.

According to Mohammed the report on the mishap will be studied and released by Transport Minister Robeson Benn. On Thursday, the GCAA boss explained that the report would say exactly what happened and emphasize several areas for safety. "They will tell you what actions should be taken in terms of improving safety, preventing accidents of this sort from happening again," he said.



Mohammed's explanation followed confirmation by Presidential Advisor on Governance, Gail Teixeira earlier Thursday of what had been known hours after the crash -- the pilot engaged in a "long-landing" on the CJIA runway that prevented him from stopping the Boeing 737-800 before it could have ran off the 7,400-long runway half way over a ravine. The plane cracked in half.

The GCAA-led probe received support from the United States' National Transportation Safety Board (NTSB), the Caribbean Aviation Safety and Security Oversight (CASSOS), Caribbean Airlines, Trinidad and Tobago's Civil Aviation Authority and Boeing Aircraft Company.

In July, eight Guyanese passengers filed lawsuits claiming a total of GUY\$8 million associated with alleged negligent operation of Caribbean Airlines Flight # BW52.

How Long Have People Been Working Shiftwork?

Shiftworkers have existed since ancient times, among them the watchmen of ancient kingdoms and the military. We can trace modern-day shiftwork to the late 1800s, when the invention of the lightbulb and the increased costs of fixed assets and startup time in steel mills, iron foundries, and textile mills compelled a transition to "nonstop production."

Initial schedules split the workforce into a day crew and a night crew that typically rotated every two weeks. The first crew would work 13 straight days (12-hour shifts) followed by a continuous 24-hour shift. This exhausting day was immediately followed by 13 straight night shifts, with one day off at the end before starting this work pattern again.

This back-breaking schedule resulted in high rates of workplace accidents and injuries. But with no federal overtime, OSHA requirements, workers' compensation, or third-party liability, employers had little incentive to consider human design limitations when running these 24/7 operations.



Union pressure to limit the workday to eight hours began as early as 1866, culminating in the violent and unsuccessful riots in Haymarket Square, Chicago, in 1886. Little progress was made until 1933, when Congress enacted the National Industrial Recovery Act, which included provisions for minimum wages, maximum work hours, and collective bargaining. This act was soon repealed, but the Wagner Act replaced it.

As part of these new regulations, employers were mandated to pay time-and-ahalf in overtime wages for any work in excess of a weekly level of 40 hours. This spurred the change to an eight-hour workday, with the traditional day, evening, and nightshifts becoming commonplace.

In the 1960s, the 12-hour shift started to regain popularity, mostly for weekend work, as this allowed workers to enjoy more weekend time off. Some companies adopted 12-hour schedules for all shifts, a trend that continues to increase today due to the extra time off and the longer breaks provided by 12-hour shifts between the work blocks. In an 8-hour shift system, three crews are needed each day, with only one crew gaining time off. In a 12-hour system, two crews are needed while two crews are off work. This results in working 75% of the days on an 8-hour shift system, and 50% of the days in a 12-hour shift system.

Discover the Key Word in Accident Prevention

If you had to come up with a one word definition of safety, what would it be? Would you choose alertness, meaning always being ready for the unexpected? Would you pick skill being able to perform all tasks correctly? Or would you settle on experience, suggesting that people who are most familiar with the job are less likely to have accidents? Would you perhaps recommend cooperation, meaning that we have to work together to prevent accidents?



All of these are good choices. Certainly alertness, skill, experience, and cooperation all contribute to safety. But they all depend on another one word definition of safety perhaps the best definition of all, thinking. It's a well known fact that most accidents in the workplace, at home, and on the road, can be attributed to unsafe acts, and failure to think before acting is the cause of practically all accidents in this category

For example:

A mechanic performing a quick repair on a piece of machinery decides not to "lock out" the equipment because to do so would take longer than the repair. As a result, he loses a finger when the equipment is unexpectedly activated. This worker has not given enough thought to the purpose of the "lock out" procedure (to protect his hands, etc...) and has unnecessarily suffered the consequences.

A forklift driver, exercising legitimate right of way, is nevertheless injured in an accident. Why? Failure to think of all possibilities, including that another driver wouldn't play by the rules. Many accidents could be avoided by disciplining ourselves to think carefully about consequences before acting.

Goal: Zero highway deaths, NTSB chairman urges at Virginia Distracted Driving Summit in Henrico

The U.S. can reduce highway deaths to zero, says the chairman of the National Transportation Safety Board.

"It can be done," NTSB Chairman Deborah A.P. Hersman said recently at the Virginia Distracted Driving Summit. "All of these crashes are avoidable."

An estimated 34,080 people died in U.S. motor vehicle traffic crashes in 2012, according to the National Highway Traffic Safety Administration, an increase of 5.3 percent compared with the number of highway deaths in 2011. In Virginia last year, 775 people were killed and more than 67,000 were injured in highway accidents, the state Department of Motor Vehicles said.



The economic cost of traffic crashes statewide was an estimated \$3.3 billion in 2011, according to the National Safety Council.

"Human factors are a huge issue" in road crashes, Hersman said. "Most of these are (due to) choices or decisions that people make."

The U.S. airline industry's rigorous safety efforts point the way to reducing traffic deaths, she said. Though U.S. airlines made 9.4 million flights carrying more than 642 million passengers in 2012, no one died on a U.S. airliner last year.

"We've had more years with zero (airline) fatalities since I came on the board than years with fatalities," Hersman said.

The NTSB investigates every civil aviation accident in the U.S., as well as especially significant railroad, highway, marine and pipeline accidents.

Two problem areas in highway safety cry out for attention while also offering the prospect for significant improvements, Hersman said: drinking and driving, and distracted driving.

• Impaired driving is epidemic, the National Transportation Safety Board said.

"Every hour, one person is killed and 20 people are injured in crashes involving an alcohol-impaired driver," the safety agency said. "That adds up quickly to nearly 10,000 deaths and more than 173,000 injuries each year." In Virginia, DMV figures show, nearly a third of 2012's fatalities — 229 people — died in alcohol-related crashes, and more than 5,800 people suffered injuries in highway accidents involving alcohol.

• Though the actual number of fatalities due to distracted driving is uncertain, the National Highway Traffic Safety Administration put the toll at more than 3,300 for 2011.

"I think the number is underreported," Hersman said. "A lot of people don't survive to tell you what happens."

The NTSB has called for a ban on the non-emergency use of portable electronic devices, such as smartphones and laptop computers, while driving.

The Virginia Tech Transportation Institute determined that 80 percent of all crashes involve a distracted driving incident within 3 seconds of the crash.

According to a study by the Virginia Tech group, text messaging doubled the risk of a crash or near-crash and resulted in drivers taking their eyes off the road for an average of 23 seconds.

Completing a phone call — reaching for a phone, looking up a contact and dialing the number — tripled the risk of a crash, Tech's Transportation Institute said. Even hands-free cellphone use involves distracting actions and greater crash risk.

About 300 people attended the event, organized by Drive Smart Virginia, a traffic safety advocacy organization, and held at the Westin Richmond hotel in Henrico County.

Hersman graduated from Virginia Tech and earned a master's degree from George Mason University. She holds a commercial driver's license as well as a motorcycle endorsement.

Poor Sleep Causes Discord in Romantic Relationships

New research out of the University of California Berkeley suggests that lack of sleep can contribute to relationship conflicts. Psychologists Amie Gordon and Serena Chen have discovered that people who have had a sleepless night are much more likely to lash out at their romantic partners over relationship tensions.



Previous studies have shown that poor sleep has a negative impact on romantic relationships, but the findings from this study shed light on how severely lack of sleep compromises couples' ability to avoid and manage conflict.

"Couples who fight more are less happy and less healthy," said Gordon, a doctoral student in psychology and lead author of the study published online in. Social Psychological and Personality Science. "Our research helps illuminate one factor that leads couples to engage in unnecessary and harmful conflict by showing that couples experience more frequent and severe conflicts after sleepless nights."

Researchers collected data on the sleep habits of more than 100 couples who had been together, on average, for nearly two years. They assessed participants for depression, anxiety, and other stressors in order to focus solely on the link between the couples' sleep quality and relationship conflicts.

In one experiment, 78 young adults in romantic relationships provided daily reports over a 2-week period about their sleep quality and relationship stresses. Overall, participants reported more discord with their partners on the days following a bad night's sleep.

"Even among relatively good sleepers, a poor night of sleep was associated with more conflict with their romantic partner the next day," said Chen.

In a second experiment, 71 couples rated how they had slept the previous night, and were then filmed discussing a source of conflict in their relationship. Each partner then rated their personal emotional interactions during the conflict conversation, as well as their partner's emotional interactions. They then assessed whether they resolved the disagreement.

The participants who had slept poorly reported feeling more negatively toward one another during the conflict discussion, according to observations and their reports.

Findings concluded that participants' conflict-resolution skills and ability to accurately gauge their partners' emotions suffered after a bad night's sleep.

http://spp.sagepub.com/

Insights on next generation managers

The face of managers in U.S. companies is changing rapidly, according to a study by Ernst & Young.

Members of the Gen Y "millennial" generation (defined by the study as ages 18 to 32) are getting promoted into management roles more quickly than any other generation today. The survey noted that of new managers (those who took on a formal leadership role in the last five years), 87% were Gen Y's with only 38% being Gen X's and 19% of the baby boomer generation.That makes sense, as about one-third of U.S. workers are Gen Y. In some industries, Gen Y workers make up an even greater portion of the workforce.



The study found that 68% of millennia's are perceived as "entitled" (they believe their excellence is a given

and are owed things from their organization). The same percentage of respondents see Gen Y players as primarily concerned about their own success and promotion in the organization.

These perceptions likely contribute to concerns that Gen Y players are difficult to work with (36% of respondents think that) and they lack relevant experience (noted by 59% of respondents).

Gen X players (ages 33 to 48) were perceived as the strongest managers by 70% of respondents. This generation was seen as demonstrating desired characteristics in seven out of 11 categories.

Gen Y managers are seen as the best inclusive leaders (effectively inspiring diverse groups of people), a skill that will see increasing relevance in the days to come.

How can organizations boost the effectiveness of the biggest portion of their leadership population, Gen Y managers?

Organizations must accept the reality of this generational shift. Expectations of the past (of baby boomer managers or even Gen X managers) will not apply to millennial managers.

An effective leadership-development strategy requires four integrated systems: defining, training, mentoring and feedback.

Defining what a good job looks like is the foundational first step. Organizations must be specific in describing not only *what* effective leaders accomplish (meeting production quotas, boosting quality of products and services, etc.) but *how* they accomplish those goals (through partnering, listening, coaching, learning, etc., with direct reports).

Training closes gaps between current behaviors and desired behaviors. Skillbuilding sessions might be needed for goal-setting, teaching, listening, holding effective accountability conversations, and more.

Mentoring is a powerful means of building desired skills *and* of building the commitment in managers to change their behavior. Mentors can coach, prod and challenge, creating a safe environment for the manager's learning and refining of behaviors.

Feedback is, as Ken Blanchard says, the "breakfast of champions." In the absence of reliable data on how others perceive a manager, that manager can be convinced they are a terrific leader. Regular, consistent feedback on what direct reports experience in their partnership with their boss can help that manager evolve to more effective influencing.

http://www.ey.com/US/en/Issues/Talent-management/Talent-Survey-The-generational-management-shift

http://howwelead.org/2009/08/17/feedback-is-the-breakfast-of-champions/

Inspiration!

"The mediocre leader tells. The good leader explains. The superior leader demonstrates. The great leader inspires."

- Gary Patton

You care about me? Don't tell me, show me...

Com 1575, just visit iss an transferivinitizingspitter

Human Factors Industry News 19

Lt. Henry Lederer, an Atlantic Beach, L.I. resident who served as a fighter pilot during World War II and continued to teach pilots unit he was 90, died Sept. 22. He was 93 years old. I first met Henry when the SUNY Farmingdale Aviation Department co-hosted an aviation safety seminar with Air east, now Ventura....he was one of the speakers...when I learned he was a WWII fighter pilot I asked him what aircraft (P-51 or P-47) he preferred to fly. Henry answered my question extolling the virtues of the P-51 then paused and with a twinkle in his eye said, "If you wanted to come home alive from combat you preferred the P-47 Thunderbolt!" He was a guest speaker to my aviation history class numerous times. On one flight which was a "milk run" over France....what was supposed to be an easy mission the bombers he was escorting flew into unexpected flak (ant0aircraft fire) and began to explode....what was horrible was that the exploding bombers fell into the aircraft below them and brought them down...on another occasion he shared how he flew his aircraft beneath another P-47 and the "hail" of expended machine gun shell casings from the higher fighter damaged his aircraft....another time he shared how while in a screaming dive the P-47 he was flying would not pull out as be was approached sonic velocity...he said he had to put his feet on the instrument panel and pull with all of his strength to get the aircraft to recover...the aircraft pulled out of the dive....it was structurally damaged but he survived...during D-Day while flying tactical support missions his fighter took a hit in the engine and he flew over a tank battle between Allies and German forces before making an emergency crash landing....he said the British officer was miffed that he had to rescue...he also shared how while providing fighter escort for bombers over Germany how they were astonished to see German fighters streaking higher and faster than their P-51...when they returned to base to report this sighting they were puled into the briefing room and informed that intelligence knew about this new German fighter "jet" aircraft the ME-262...lastly Henry shared how at a business convention he met a man, his age with a German accent....when they spoke they realized that they had been adversaries in the skies over Europe and Henry gave him a bit of good ole USA fighter pilot trash talk...in essence telling his German fighter pilot counterpart that he and his comrades in the 361st Fighter Group (Yellowjackets) had kicked some Luftwaffe butt that day! Henry was a fine human being and I am very thankful to have known him and am also thanking for his service to our country and for sharing these stories with me and my students. You can read about Henry in Paul B. Cora's book, Yellowjackets! The 361st Fighter Group in World War II, see pages 14, 16-17, 44-45, 60-61, and 110. On page 16 there is a picture of him as an aviation cadet.

Finally, Mr. Lederer. Rest in Peace Henry.

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