

THE

# MOBILITY

THE MAGAZINE OF AIR MOBILITY COMMAND | FALL 2017

FORUM

## Mobility Guardian:

Air Mobility Command's Premier Mobility Exercise

### Mission Hacking Lessons Learned

Your Fall  
Protection  
Worked ....

**Now What?**

Look Up! It's ...

**Something BIG!**

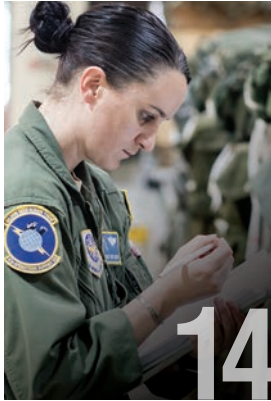
**Brig. Gen. Oliver Discusses the Future of  
AMC's Global Air Mobility Support System**



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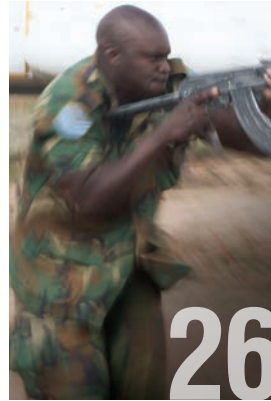
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Airmen from the 621st Contingency Response Wing, Travis AFB, Calif., perform a high altitude low opening jump during exercise Mobility Guardian while flying over Washington.

USAF photo by SrA Clayton Cupit

Volume 26, No. 3  
Fall 2017

### AIR MOBILITY COMMAND

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The Mobility Forum (TMF) is published four times a year by the Director of Safety, Air Mobility Command, Scott AFB, IL. The contents are informative and not regulatory or directive. Viewpoints expressed are those of the authors and do not necessarily reflect the policy of AMC, USAF, or any DoD agency.

Contributions: Please email articles and photos to [info@schatzpublishing.com](mailto:info@schatzpublishing.com), fax to (580) 628-2011, or mail to Schatz Publishing, 11950 W. Highland Ave., Blackwell, OK 74631. For questions call (580) 628-4607. The editors reserve the right to make editorial changes to manuscripts.

 denotes digitally enhanced photo.

Subscriptions:  U.S. Government Printing Office: 2015-545-114. For sale by the superintendent of Documents, U.S. Government Printing Office. Internet: [bookstore.gpo.gov](http://bookstore.gpo.gov). Phone: toll free (866) 512-1800; DC area (202) 512-1800. Fax: (202) 512-2104. Mail: Stop IDCC, Washington, DC 20402-0001.

AMC RP 91-2. Dist: X

ISSN 1067-8999

Visit [www.themobilityforum.net](http://www.themobilityforum.net), or find the most current edition on AMC's home page: [www.amc.af.mil/](http://www.amc.af.mil/).

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# BRIG. GEN. HAWKINS ON ENHANCED MOBILITY LOGISTICS

BY MS. KIM BRUMLEY, STAFF WRITER

You may have heard the term *Aerial Port of the Future*. What does it mean? More specifically, how will it change the way we work?

Former AMC A4 Brig. Gen. Stacey Hawkins—Director of Logistics, Engineering and Force Protection at Headquarters AMC, Scott Air Force Base—believes the future of air mobility involves more than just adding aircraft.

“We must incorporate technology into our work processes,” he says. “For example, the Tunner loader is 20 years old, and we use a 463L pallet system that dates back to the 1960s. For the Aerial Port of the Future, we must evaluate all tasks and figure out new solutions—things like wireless headsets that allow load teams to speak to each other, automated cargo check in, or a loader that will drive itself to and from the aircraft.”

Gen. Hawkins adds that a more automated flight line (often called an

*autonomous flight line*) at major mobility hubs will increase efficiency and expediency. It will also decrease manual labor, allowing Airmen to do more with less. Improvements might include devices that record where cargo is loaded to help balance loads safely.

“Automated loaders will reduce the number of personnel required, so we can handle more aircraft simultaneously,” he explains. “Plus, reduced ground times will keep aircraft in the air longer.”

Partner agencies will play a key role in keeping Airmen safe on the job at the Aerial Port of the Future, adds Gen. Hawkins.

“We will continue to rely on experts at agencies like the Air Force Research Lab, the Navy Research Lab, the Air Force Life Cycle Management Center and the 711th Human Performance Wing at Wright-Patterson Air Force Base to develop or capitalize on automation that improves efficiency and accuracy while reducing injuries.”

A team of scientists and Senior Executive Service officials from Headquarters AMC, Scott AFB, IL., observe daily aerial port-wide operations and procedures of the 436th Aerial Port Squadron on Dover Air Force Base, Del. The two-day study, called “Aerial Port of the Future” included live demonstrations of the cargo terminal, cargo yard, passenger terminal, fleet building and cargo loading/off-loading on the flight line. Dover’s Super Port has been chosen by AMC as a model for all other aerial ports in the Air Force. (E)

USAF photo by Roland Balik

## FLEET MANAGEMENT

Another important facet of the future is adopting a deliberate *fleet management* approach, which will maximize the health and service life of the mobility aircraft fleet. Gen. Hawkins says after assessing fleet usage, fiscal environment and modernization efforts, AMC recognized a need to maximize C-17 service life. Historical data indicated rotating aircraft would yield benefits, so AMC worked with partners to develop an enterprise fleet management approach. For example, a high operational tempo or extremely high-stress flight profile induces



accelerated wear and tear, which adversely affects the lifespan of aircraft at some bases. Through continuous monitoring of stress accumulation on the aircraft and routine rotation of aircraft between high and low tempo bases, AMC can effectively extend the fleet service life without major service life extension investments.

“The AMC Aviation Vehicle Distribution Officer, the C-17 Weapons System Management Team and the Aircraft Structural Integrity Program Team identify aircraft with the most wear and tear in the fleet and rotate them to locations that will not incur damage to the aircraft at the same rate,” he continues. “In particular, Altus Air Force Base puts the most wear and tear on a C-17 structure because of training missions, so we rotate aircraft in and out of there to prevent them from prematurely reaching retirement.”

Using this concept, AMC determined that more than two dozen C-17s would reach their service life by 2040. Extending fleet management across the entire enterprise might extend

## ... Airmen can help AMC to continuously improve mobility logistics by staying involved.

that an additional 10 to 20 years. Gen. Hawkins adds that applying this approach to other aircraft will require evaluating numerous airframe specific factors. The new KC-46 will be managed as a fleet and will have a rotation plan to spread out things like flying hour accrual, corrosion and landing and takeoff cycles.

### PREDICTIVE MAINTENANCE

Figuring out the wear and repair cycles of aircraft components involves *predictive maintenance*—letting *big data* indicate what maintenance to perform and the optimal time to perform it rather than waiting for a problem to occur. Big data refers to the massive amount of information available from computers and sensors on aircraft.

“We have more data than we know what to do with currently,” explains Gen. Hawkins. “Industry experts are trying to understand what that data says about the condition of the aircraft. When they figure out how to

analyze it in a way that helps predict failure, essentially looking for signs of operational degradation, they can create automation that flags those indicators for maintainers. That data can eventually anticipate when an aircraft may break or maintenance procedures are required. Proactive fixes will increase aircraft availability to the warfighter.”

He adds that the information could eventually steer not only predictive maintenance, but also product design improvements.

### HOW YOU CAN HELP

In closing, Gen. Hawkins says Airmen can help AMC to continuously improve mobility logistics by staying involved. For Aerial Port of the Future inputs, please contact the HQ AMC Air Transportation Division lead, Mr. Steven Rustin, at 618-229-4593. Rustin and his team are always willing to listen and ready to receive new ideas for improving aerial port operations. Maintainers interested in shaping the future of enterprise fleet management and predictive maintenance should continue carefully documenting activities in maintenance information systems and using existing tools (such as AFTO Form 22s, -6 reviews and comprehensive deficiency reports) when parts fail prematurely. These tools provide valuable information that can improve future procedures, processes and component reliability.

Enhanced mobility logistics are on the horizon, and together we will get there! 🇺🇸

Airmen from the 6th Airlift Squadron and the 305th Aerial Port Squadron load a Humvee onto a C-17 Globemaster III at Joint Base McGuire-Dix-Lakehurst, N.J.

Photo by Airman 1st Class Zachary Martyn





# EC/CV Brig. Gen. Oliver Discusses the Future of AMC's Global Air Mobility Support System

BY MS. KIM BRUMLEY, STAFF WRITER



**I**s the term *posture review* new to you? Don't worry. Brig. Gen. Stephen W. Oliver, Jr., Vice Commander of the U.S. Air Force Expeditionary Center (EC) at Joint Base McGuire-Dix-Lakehurst, New Jersey, was kind enough to provide a definition and some insight. For the sake of this article, a posture review is where a command looks at the status of certain items in a system to figure out where it needs to be in the future and what kind of changes will help it reach that goal.

First, a short explanation of another term you may have heard: *global air mobility support system*.

"To provide Rapid Global Mobility, the airlift fleet and the air refueling fleet are two essential components or two legs of a stool," said Oliver.

"The third essential leg of the stool is AMC's global air mobility support system, and it consists of two interrelated capabilities."

He explained the first capability is AMC's fixed *en route* system.


"Similar to the presence of FedEx cargo terminals at major international airports—which marry surface and air transportation networks to move packages and cargo—we have a permanent global presence at more than 30 key locations around the world, large and small, from Europe to the Middle East and all throughout the Pacific. The difference is that FedEx just moves cargo, whereas we move cargo and military passengers. That's the fixed *en route*—locations that are there every day in host nations around the world."

The second capability is AMC's *contingency response forces*.

"We used to refer to this capability as the mobile *en route*, which we used when AMC sent aircraft to or through a location without a fixed *en route* presence," Oliver continued. "Today our contingency response forces, primarily based in New Jersey and California, go forward, sometimes on very short notice, to open and operate air bases that can receive, off-load or on-load and service our airlift and tanker aircraft where we don't have a regular presence. AMC also accesses some contingency response capability from the Air National Guard and Air Force Reserve."

He adds that the two capabilities of the global air mobility support system—combined with AMC's air refueling and





A KC-10 Extender moves in to be refueled by another KC-10, both crewed by members of the 78th Air Refueling Squadron, 514th Air Mobility Wing, over the Atlantic Ocean July 15, 2017.

USAF photo by MSgt. Mark C. Olsen

airlift aircraft, crews and maintainers—give the Air Force and U.S. military truly unique *global reach* ... the ability to access and/or project power to every nation on earth within hours.

When asked whether newer aircraft, such as the C-5M Super Galaxy and KC-46 Pegasus, might change the fixed number of en route locations in the future. Gen. Oliver explained that it is not necessarily the number of locations we have; it is how those locations are *postured*.

“At most of the EC’s fixed en route locations, maintainers are qualified for C-17 and C-5 maintenance,” said Oliver. “Because the C-5M flies higher, farther and faster, it doesn’t need to stop at en route locations where its predecessor C-5 A and B model airplanes did. So we may have en route units where our Airmen can service a C-5 but now they never see one. In our current posture review, we are analyzing 618th Air Operations Center data to determine the en route locations where it now stops most regularly based on the M-model’s new operational capabilities, and we will concentrate C-5 capable maintainers in those places. We also must consider the most beneficial places to posture maintenance at fixed en route locations for the new KC-46A Pegasus, even though we don’t have the aircraft yet.”

Similarly, the posture review looks at what adjustments to make based on what has changed the last few decades. For example, Gen. Oliver said the contingency response force has a small but focused maintenance capability. Yet when they go to open airfields in austere locations, they most often see C-130 Hercules and C-17 Globemasters instead of C-5 Galaxies, so maybe we should consider changing C-5 maintenance capability in the contingency response forces to a C-130 capability, since that is what they predominantly service operationally.

“Also, in the EC enterprise, our requirements are defined by the warfighter—AMC is under the combatant command of U.S. Transportation Command,” he said. “We are talking with them and the other combatant commands about what they need our fixed en route and contingency response enterprises to look like 5 or 10 years from now.”

He added that some ability to anticipate that demand ahead of time comes from previous planning and studies, as well as current initiatives like the posture review.


“We want to improve and be more efficient, but we need lead time to make significant adjustments to our posture,” he continued. “We have smart Airmen

that are flexible and innovative—they can and do adapt to changes to make the enterprise work every day—but we don’t want to miss something we should have anticipated in order to meet combatant commander war and contingency plan requirements.”

So what happens after the global air mobility support system posture review is complete? Gen. Oliver anticipates the review will take four to six months. After that, recommendations will be taken to the EC Commander, the 18th Air Force commander and ultimately the AMC commander for decisions.

In closing, Gen. Oliver had high praise for AMC personnel around the world.

“The global air mobility support system, our airlift and our tanker fleets make us global,” he said. “We like to say EC Airmen put the *rapid* in “*rapid global mobility*.” The Airmen of the enterprise are dedicated—pushing airplanes every day into and out of far-flung places around the world. It is amazing what they can do, and it is a testament to the leaders they are, along with their innovative spirit and pride.”

Watch for subsequent updates on the posture review, which will be critical to shaping AMC’s roadmap for the future. 



# 18<sup>th</sup> Air Force Welcomes New Commander

BY MSGT. THOMAS J. DOSCHER, 18 AF

Lt. Gen. Giovanni Tuck assumed command of 18th Air Force during a ceremony on June 1, 2017.

Tuck succeeds Lt. Gen. Sam Cox, who led the country's largest numbered air force since October 2015 and retired from the Air Force in June 2017.

As 18 AF Commander, Tuck will lead Air Mobility Command's operational mission as Air Forces Transportation, the air component of U.S. Transportation Command. He is responsible for the command's world-wide operational mission of providing rapid global mobility and sustainment for America's armed forces through airlift, aerial refueling, aeromedical evacuation and contingency response. Additionally, Tuck also commands Task Force 294, which oversees Air Force tanker operations in support of U.S. Strategic Command.

Tuck said he is looking forward to working with the professionals of 18 AF.

"We're going to focus on speed," Tuck said. "We're going to focus on safety and on the culture of safety. And we're going to focus on success, not in the way we would describe it, but in the way our customers and the people we work with grade what we do."

A command pilot with more than 4,800 hours in 11 aircraft, Tuck comes to 18 AF from USTRANSCOM where he served as the director of operations and plans. As director, he was responsible for directing the deployment of forces and distribution of supplies and equipment for humanitarian,



Gen. Carlton D. Everhart II, AMC commander, passes the 18th Air Force guidon to Lt. Gen. Giovanni Tuck, the new 18th Air Force Commander, during a change of command ceremony at the Scott Event Center, Scott AFB, IL., June 1, 2017.

USAF photo by MSGT. Thomas J. Doscher


peacetime and wartime operations for the Department of Defense.

Gen. Carlton D. Everhart II, Air Mobility Command commander, said Tuck is the right Airman at the right place at the right time.

"He's an exceptional leader and aviator who knows the business from the tactical to the strategic," Everhart said. "We need him at the controls of a critically important mission with global requirements and impact. He is the right leader for the job."

Tuck promised the Airmen of 18th Air Force he would give them his very best.

"He's an exceptional leader and aviator who knows the business from the tactical to the strategic."

"I'm going to give you everything I've got and leave nothing on the table," he said. "We're going to look at every opportunity that's laid before us and every challenge that we have and turn them into excellence and success." 






Col. Brandon R. Hileman

## AMC Safety Welcomes New Director



Air Mobility Command welcomed Col. Brandon R. Hileman as Director of Safety at Scott AFB in Illinois. His previous assignment was Vice Commander of the 86th Airlift Wing at Ramstein Air Base, Germany. The 86th AW conducts Europe's only airlift, airdrop and aeromedical evacuation flying operations; it also provides rapid air mobility and expeditionary combat support for military operations.


Col. Hileman is well-versed in AMC's mission. After receiving his commission from the United States Air Force Academy in 1993, his operational assignments have included aircraft performance engineer, test engineer and C-130 instructor pilot and flight examiner. He has commanded an Air Mobility Squadron and served as Deputy Commander, 317th Airlift Group at Dyess AFB. He is a senior pilot with more than 2,600 flying hours in the T-37, T-1, C-37A and C-130E/H/J. Welcome back to AMC, sir! 

## AMC WINS PRESTIGIOUS FOULOIS AWARD *for* BEST FLIGHT SAFETY PROGRAM

Air Mobility Command was recently awarded the Major General Benjamin D. Foulois Memorial Award presented by the Daedalians National Organization. The Chief of Staff of the Air Force selected AMC for the award for having achieved the best flying safety record and aviation safety programs during the award period.

This Daedalians organization recognizes flight safety in all areas of military aviation. The group's objectives include encouraging and recognizing flight safety and weapons development, as well as recognizing exceptional performance by military aviators.

The award's first recipient was named in 1938. It is now presented annually at the Daedalian National Convention. AMC won the award as recently as 2011, as well as in other prior years.

"This award belongs to all AMC Airmen, as it shows their commitment to the success of our proactive safety programs," Lt. Col. Jason P. Pavelschak, Chief, AMC Flight Safety said of the honor. "Nice job, everyone!" 



Gen. Carlton Everhart presented the Benjamin D. Foulois Memorial award to AMC/SEF and A3 OpsRAMS. Pictured above left to right is Gen. Everhart, Lt. Col. Jason Pavelschak, Mr. Steve Panger, Lt. Col. Chris DeWinne, Mr. Kevin Sluss, Col. Mike Seiler and Mr. Tim Grosz.

The Order of Daedalians presents the Foulois Award annually to the Air Force Major Command that achieved the best flying safety record as determined by the Air Force Chief of Staff.





Raven 22 crew, left to right: 1st Lt. Seth Bracken, pilot; TSgt. Michael Jeffries, loadmaster; Lt. Col. Mark Oberson, pilot; and TSgt. William Gilmer, loadmaster.

## WELL DONE!

# 19 AW, Raven 22 Crew Safely Handles the Unexpected

Events often occur that crews must handle. Other times, several events happen in rapid succession—and crews have to handle those, too!

Such was the case in January 2017 when the crew of Raven 22 was flying in the number two position of a three-ship formation. The pilots that day, Lt. Col. Mark Oberson and 1st Lt. Seth Bracken, were accompanied by two loadmasters, TSgt. William Gilmer and TSgt. Michael Jeffries, all stationed at 61 AS, Little Rock Air Force Base, Ark.

The C-130J crew was set to attempt a heavy equipment airdrop on Blackjack Drop Zone near Little Rock Air Force Base. During the release point sequence, a malfunction occurred that resulted in the failure of the airdrop cargo to exit the aircraft.

As the aircrew executed the malfunction checklist, a second malfunction occurred—one that is much less common—when

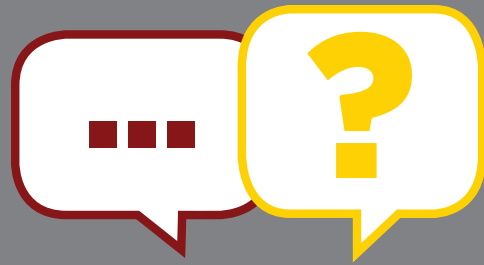
the extraction parachute unexpectedly deployed and fully inflated while being towed behind the aircraft. Having a deployed parachute attached to your aircraft while flying in formation presents a host of issues, one of which is obviously the unsafe condition due to excessive drag.

The aircrew reacted quickly to resolve these dual malfunctions and displayed exceptional crew resource management to secure the cargo, cut the extraction parachute away and restore the aircraft to a safe flying condition. The safety and risk management contributions that day reflect great credit on the crew of Raven 22, Air Mobility Command and the United States Air Force.

On behalf of the 19 AW/SE Office, congratulations to the crew of Raven 22 on your outstanding mishap prevention efforts. Working as a team, you brought this emergency to a safe conclusion, returning the plane and crew to fight again another day. 🇺🇸



# Mission Hacking Lessons Learned



BY MR. WARREN THOMAS,  
AMC/A3TO

**A**s I thumbed through Aviation Safety Action Program 2429 (*Mission, Cultural, and Leadership Pressure to Accomplish the Mission*), it brought back many unpleasant “been there, done that” memories from my 30-year C-130 flying career. Even though AMC proactive safety programs attempt to preclude “learning the hard way scenarios,” they will continue to occur as long as newly trained crews enter AMC, fly C-130s for a few years and then move on to other assignments.

One of the hardest lessons for newer crew members to learn is when and how to question decisions of senior ranking mission planners or formation leaders when pressure to complete the mission suddenly puts them into a compromising position. For example, it may be when they are in a large Instrument Meteorological Conditions/Station Keeping Equipment formation flight in mountainous terrain and half or more of the formation, for whatever reason, breaks out of formation in a panic, clawing for safe altitudes while fearing mid-air collisions or crashing into a mountain. My epiphany occurred in 1978 during a nine-ship IMC formation flight in the mountains of Idaho, where only the three element leads made it across the drop zone, and the other six wingmen exited the formation in terror when the SKE failed.

This seems to happen every few years at nearly every C-130 base, and it will continue as long as new flying personnel arrive, fly and then depart for other assignments. The main problem is that as a squadron renews itself with new crew that have never experienced the

terror associated with survival-driven exodus out of a large formation, the unit as a whole becomes unaware of the dangers associated with overzealous decision-making or overwhelming pressure to accomplish the mission. Thus, the vicious cycle repeats itself.

How can we prevent this? We invented “Timeout” and “Why are We Doing This?” and “This is Stupid” statements to give crew members a voice when weather elements, pressing safety limits or other foolish behaviors rear their ugly heads on the flight deck. But how often are these tools used anymore? In fact, they should also be used on the ground, especially during mission planning, briefing and weather go/no go decisions. Unfortunately, a scared s\*\*\*less corporate memory among crews is short within a flying squadron, but there is plenty of “deference to authority” to go around.

I’m certainly not advocating aircrew mutiny or disrespect toward leadership. But when you approach the ragged edge of safety and your life is on the line, you owe it to yourself, your family and AMC to question dubious decisions and foster public discussion that just might encourage others to speak up. Isn’t that what “Timeout” and “This is Stupid” are about?

I sometimes think there should be additional CRM barriers to communication invented to take up where co-pilot syndrome and halo effect fall short. Again, we are to believe these barriers are for use in the aircraft only. Instead, we need to incorporate new communication barriers for the mission planning, briefing and weather decision portions of the mission to protect ourselves against excessive mission hacking and extreme outside pressures to launch,

as these may lead to foolish decisions. Historically, young crew members are reluctant to question higher ranking and more experienced members (and even more hesitant to question squadron and wing leadership), even when safety may be compromised and lives are placed in jeopardy.

I have been involved with CRM since the mid-’80s and remained an integral part of AMC’s 2007 transition from 4th Generation CRM to the aviation industry standard 6th Generation CRM and Threat and Error Management. This was a timely transition for AMC personnel to improve their threat and error management skills and match their training standards and flight procedures with the FAA and commercial aviation.

However, we can never lose sight of the basics of airmanship and flight discipline, and—most importantly—the basic tenets and communication philosophies of CRM. Whether it is communication within the aircraft, communication before the mission launches or communication during the post-flight debriefing, it is vitally important to keep the lines of two-way communication open regardless of rank, crew position or experience level. This is the hardest lesson to learn and the hardest to forget once a bad decision turns a nightmare into reality.

Never forget the basic barriers to communication or the tools you have to break the chain of events leading to the next mishap. It may be an event with your name written on it. You owe it to your family and your AMC family to speak up. Perform a corporate reality check and throw a “Timeout” or “Why are We Doing This?” or “This is Stupid” before someone gets hurt. Always remember the obvious: the life you save may be your own! 🛩️



# The Importance of Pilot Monitoring Duties

BY MAJ. JOSHUA MILLER,  
AMC FLIGHT SAFETY

*"Hindsight is a wonderful thing but foresight is better, especially when it comes to saving life, or some pain."*

— William Blake;  
renowned artist,  
poet and writer



1st Lt. Chaz Crone, a KC-135 Stratotanker co-pilot from MacDill AFB, Fla., checks his instruments and surroundings shortly before landing after a refueling mission at Nellis AFB, Nev.

USAF photo by TSgt. David Salanitri

In an era of proactive safety, many advances in aviation culture help limit mishaps. Currently, programs such as Line Operations Safety Audit (LOSA), Aviation ORM, Military Flight Operations Quality Assurance (MFOQA) and the Aviation Safety Action Program (ASAP) bolster proactive safety in AMC. These programs have helped and will continue to help prevent mishaps; however, continuous efforts that promote more effective pilot monitoring can also bolster safe AMC flight operations. Many recent incidents indicate pilot monitoring (PM) skills are often overlooked in post-flight debrief. To spread awareness on this area of crew resource management (CRM), this article will cover efforts of the Federal Aviation Administration (FAA) and organizations within AMC to prevent mishaps.

Recently the FAA released an Advisory Circular highlighting the need for increased emphasis on PM skills

due to repeated weak areas of CRM. The circular states, "several studies of crew performance, incidents, and accidents have identified inadequate monitoring and cross-checking as vulnerabilities for aviation safety." The AMC Operations Risk Assessment and Management System (Ops RAMS) branch also identified PM as a weakness through programs such as LOSA and ASAP. In response, the Ops RAMS team formulated a Pilot Monitoring Working Group to help identify and correct PM shortfalls.

FAA Advisory Circular AC 120-71B, *Pilot Monitoring*, released in January 2017, identifies effective monitoring and the challenges presented to the PM. According to the circular, a pilot is effectively monitoring if he or she is:

1. Following SOPs consistently;
2. Clearly communicating deviations to other crew members;



3. Effectively managing distractions;
  4. Remaining vigilant;
  5. Advising the Pilot Flying (PF) if the flight guidance modes or aircraft actions do not agree with expected or desired actions and intervening if necessary;
  6. Continuously comparing known pitch/power settings to current flightpath performance; and
  7. Considering that the primary flight displays (PFD), navigation displays (ND), and other sources of information (for example, electronic flight bag (EFB)), might be displaying incorrect information and always on the lookout for other evidence that confirms or disconfirms the information the displays are providing.
- (FAA AC 120-71B)
3. **Design of SOPs.** SOPs may fail to explicitly address monitoring tasks.\*
  4. **Pilots' Inadequate Mental Model of Autoflight System Modes.** Pilots may not have a complete or accurate understanding of all functions and behaviors of the autoflight system. Some aspects of automated systems for flightpath management are not well matched to human information processing characteristics.
  5. **Training.** Training may overlook the importance of monitoring and how to do it effectively. Lack of emphasis on monitoring may occur in training and evaluation.\*\*
  6. **Pilot Performance.** High workload, distraction, and inattention can all lead to monitoring errors.
- (FAA AC 120-71B)

Unfortunately, some operators think the PM role is passive and that only the PF role is active. Sure, the PF is “actively” flying, but the other pilot must *actively* monitor. If done correctly, the PM and the PF jobs should be equally engaging.

Many hazardous attitudes can obstruct a PM, and cockpit personalities can sway a PM's effectiveness. The FAA identified challenges that PM's are certain to face. They include:

1. **Time Pressure.** Time pressure can exacerbate high workload and increase errors. It can also lead to rushing and “looking without seeing.”
2. **Lack of Feedback to Pilots when Monitoring Lapses Occur.** Pilots are often unaware that monitoring performance has decreased.

The PM's role is much more than just making verbal checklist responses and advisory calls. The PMWG standardized the PM role as “primarily responsible to *actively monitor* the aircraft's current/projected flight path and energy state, intervening if necessary.” Timely intervention from an active PM could be the key to preventing the next mishap. All aircraft commanders, instructors and evaluators should promote a climate that encourages PM intervention.

The PM must be empowered to challenge a safety of flight issue, no matter the rank or experience of the PF. There must be leadership in the cockpit! Knowing hazardous attitudes and harnessing the courage to call “GO AROUND” is an underdeveloped skill to a fledgling aviator. A PM should be confidently able to “effectively identify

The AMC Supplement to AFI 11-290 defines Threat and Error Management as a “systems approach that builds multiple layers of defense logically designed to identify, prevent and trap threats and/or mitigate inevitable threats, errors, and undesired aircraft states.”

threats and mitigate errors in aviation operations” per AFI 11-290, *Cockpit/Crew Resource Management Program*.

Finally, aircraft commanders should empower all who occupy the flight deck or headset to say something in an effort to prevent a mishap. Just because personnel do not have a set of controls in front of them does not mean they are irrelevant. **A true leader will shape the cockpit climate and gain full utility from all who are involved in flight path management.**

Fortunately, the PMWG, led by AMC's Ops RAMS team, is gradually clearing the murky role of the PM. This previously neglected area of CRM is gaining momentum in both the training and evaluation realms. AMC Safety has made great strides over the last decade in the area of proactive flight safety—a culture change facilitated by the people behind successful programs such as LOSA, AvORM, MFOQA, ASAP, and now the PMWG. Capitalizing on effective pilot monitoring is a powerful step toward future mishap prevention. 🛩️

\*An effort is underway by the Ops RAMS team to ensure AMC flying publications explicitly address PM tasks.

\*\*The Ops RAMS team has completed initiatives in updating evaluation publications (AFI 11-2C-XX V2) with detailed PM requirements and is currently implementing training publication updates.





# Mobility Airmen Ingenuity Quickly Reopens Rota Airfield

BY AIR FORCE EXPEDITIONARY CENTER PUBLIC AFFAIRS

**A**irmen assigned to the 725th Air Mobility Squadron quickly and safely responded to a C-5 Galaxy landing incident on May 23, 2017, at Naval Station Rota, Spain, assuring minimal disruption to the airfield's operations in support of Rapid Global Mobility.

During approach, the C-5's nose landing gear would not descend. The aircrew was able to land safely. However, after the crew and passengers were off the plane, the large aircraft remained stuck on the runway, essentially shutting it down on a day when more than double the average air traffic was transiting Rota and several critically important missions hung in the balance.

"There were a handful of jets on the ramp that were presidential support missions departing the next day," said Col. Eric Hook, 521st Air Mobility Operations Group commander. "It was absolutely crucial to reopen the runway. Not only to support the presidential mission, but also aircraft, cargo and passengers transiting to European Command, Central Command and even down to Africa Command."

While the cause of the incident is still under investigation, the team from the 725th had the diverse experience and training necessary to respond. Airmen assigned to Naval Station Rota consistently work with joint and coalition partners, which allowed them to collaborate for the situation.

"We had just table topped this [type of scenario] with our Navy counterparts about a month before, so we knew what roles we would all have in an aircraft recovery, along with what equipment we had," said MSgt. Kory Newgard, a production superintendent for 725 AMS. "They were super responsive and supportive throughout the event."

With time ticking, Marcus Carrion, 725 AMS technical advisor, assembled a team of maintainers based on areas of special expertise to remove the aircraft from the runway.

That team included MSgt. Michael Bartlett, a 725 AMS production superintendent, who reviewed the technical manuals and suggested they use a process called kneeling. Kneeling uses hydraulics and the aircraft's weight to raise or lower the body, tail or—in this case—the nose of the C-5. Using this method saved up to 12 hours from the usual expected recovery time that day.

"One of the most important things to do during a situation like this is be very decisive. If not, you burn up a lot of time, and that's one thing we didn't have," said Carrion. "The success of this whole recovery was because of that kneeling procedure and our team members who carried it out flawlessly."

While time was of the essence, safety was a top concern for the team.

"This team did a great job of making safety a top priority and making the recovery happen in a short time," said Newgard. "They put Rota on the map for having some top-notch maintainers."

While some focused on removing the C-5 from the runway, others focused on continuing the daily mission. The squadron relies on experience and training to expeditiously transport mission-essential equipment and personnel to combatant commanders worldwide.

Because of the teamwork, the safety focus and the dedication to excellence displayed by the Mobility Airmen, the airfield returned to a mission capable status in just 12 hours.

"They had the right maintainers to go out and take care of that jet," said Hook, the group commander. "They were able to get it safe and secure and in a configuration where they could lower the gear and tow it off of the runway in an incredibly short amount of time."

Hook said the team demonstrated the passion en route Airmen have to work safely and quickly, while minimizing downtime on airfields and enabling AMC aircraft to rapidly deliver cargo and personnel to combatant commanders worldwide.


"I'm extremely proud of what the men and women here in the fixed en route do," said Hook. "The Air Mobility system continues to move along and through our locations to benefit the joint warfighter downrange, and it's because of our Mobility Airmen." 

Photo: A C-5M Super Galaxy, operated by the C-5M Formal Training Unit, approaches runway 01-19 for landing at Dover AFB, Del.

USAF photo by SrA Zachary Cacia



# Look Up! It's ... Something BIG!

BY MS. ARYN KITCHELL,  
STAFF WRITER



SSgt. Cody Barry, 43d Operations Support Squadron (right), provides guidance to Army riggers from the 151st Quartermaster Company after inspecting parachutes on heavy equipment at the Army's Heavy Drop Rigging Facility near Pope Field, N.C. Barry, a joint airdrop inspector, worked with fellow 43d OSS inspectors to ensure more than 200 tons of cargo were ready for airdrop from Air Force C-17s and C-130s flying out of Pope Field during a large package joint training exercise.

USAF photo by Marc Barnes

**W**hat is the most unusual thing you can imagine being put onto a plane? One loadmaster from the 43d Operations Support Squadron at Pope Army Airfield describes a bizarre item that probably did not make your list: a TEREX container hauler.

"That's a gigantic crane weighing over 100,000 pounds; it has locks that hold onto the corners of 54-foot shipping containers," explains TSgt. Joseph Berglund, 43 OSS Joint Airdrop Inspection NCOIC and loadmaster by trade. As one of the Airmen at Pope responsible for cargo being secured safely inside aircraft, he adds that not knowing what to expect each day—certainly on days with a load like that—keeps his job interesting.

"We deal with the airdrop transportation part of a delivery—not with a conventional aircraft landing on an airstrip," he explains. "We prepare for the safe aerial delivery, or airdrop, of cargo to the war fighter without having to land the aircraft. A load is pulled out or gravity pulled, and then cargo parachutes keep it stable and/or slow the descent to the ground."

There is no room for error, and checklists are obviously involved each step of the way. Berglund cites the example of a unit showing up at a heavy airdrop facility with a piece of equipment—be it a Humvee, Howitzer, field artillery piece, road grater, bulldozer or something else. Members of the Quartermaster Company, sometimes called red hats, are responsible for the preparation of equipment to be

airdropped. They conduct a "shop final" inspection to ensure quality control and quality assurance.

"That's where we come in as a joint airdrop inspector," he says. "We make sure the shop final was completed in accordance with their standard operating procedures or with the DD Form 1748 Joint Airdrop Inspection Record Series form that's required. We also make sure it is safe to fly for the crew."

It is a critical role with the potential for disaster if not executed properly.

"A coworker once found an extraction parachute jettison device that was not seated properly into the latch. Gone unnoticed, it could have damaged aircraft and killed crew—easily it would have been a Class A



mishap. Heavy equipment that is going to get pulled out of an aircraft by a parachute must be hooked up properly and must be in the center of balance of the aircraft.”

Job security is high for Berglund, as nothing drops out of an Air Force plane from Pope without an inspection. Serving there also means a lot of interaction with other units and services. In addition to cargo, the Air Force also works with the Army at Pope Field taking care of their airborne requirements for jumps—moving soldiers who will parachute in at a location. Each branch may have slightly different regulations, procedures, etc., but Berglund says personnel there find common ground and make it work.

“Branches support each other and work together to achieve mission and safety purposes,” he explains. “Last

year, we inspected over 2,000 items, totaling more than 14 million pounds. We are the busiest and most complex joint airdrop inspection shop in Air Mobility Command. You have to be extremely detail oriented. We’re talking about cotton webbing, which is just a quarter inch thick, that breaks at 80 pounds, but it’s holding two pieces of metal together to secure a line that’s holding parachutes. If we miss that, if it’s not tied correctly, it could inadvertently break open or come loose and then we end up with a chute that doesn’t deploy right.”

The 43 OSS is part of the Air Force’s 43d Air Mobility Operations Group, which provides 24/7 operational and training mission support for visiting Air Mobility Command aircraft and crews, for the 82nd Airborne Division and other Army units at Pope Field, and for joint special forces units at Fort Bragg. 🇺🇸

## CREATING A CRITICAL BALANCE

Extensive coordination goes into planning any AMC flight, especially when transporting both people and supplies. Responsible for properly loading, securing, and escorting cargo and passengers, Aircraft Loadmasters custom load aircraft before any flight. From calculating proper weight distribution to providing for passenger comfort throughout the flight, these specialists ensure everything and everyone is safe and secure on flights all over the world. For more information, go to [www.airforce.com/careers/detail/aircraft-loadmaster](http://www.airforce.com/careers/detail/aircraft-loadmaster).

## SO YOU WANT TO BE A LOADMASTER

<http://airforcelive.dodlive.mil/2015/06/so-you-want-to-be-a-loadmaster>



Photo above: SSgt. Casey Jackson, a 43d Operations Support Squadron joint airdrop inspector, inspects straps on a container delivery system while conducting an inspection of cargo at the Army’s Heavy Drop Rigging Facility near Pope Field, N.C.

Photo right: TSgt. Joseph Berglund, 43d Operations Support Squadron, inspects parachute rigging on a Humvee in preparation for airdrop.

USAF photos by Marc Barnes





## Security Forces Phoenix Ravens:

# DO YOU HAVE WHAT IT TAKES?

BY MS. KIM BRUMLEY,  
STAFF WRITER

Air Mobility Command's Phoenix Raven program, implemented in 1997, consists of specially trained security forces that protect AMC aircraft, crews and cargo. Traveling in 3- to 6-man teams, they deter, detect and counter threats in theater support missions, contingencies, exercises and deployments around the world.

### REQUIREMENTS

Each Phoenix Raven candidate must:

- › Have a minimum of 18 months in service.
- › Have successfully completed 5-Level Career Development Course.
- › Have no medical profile precluding worldwide deployment.
- › Have not received Article 15 action during the current term of enlistment.



TSgt. Scott Benford, 421st Combat Training Squadron, Phoenix Raven Qualifications Course instructor, scowls toward the center of the "Redman" room prior to challenging candidates during the Redman training lesson at Joint Base McGuire-Dix-Lakehurst, N.J.

USAF photo by SSgt. Vernon Young Jr.

- › Have not been placed on the control roster or the subject of an unfavorable information file.
- › Have received a rating of "Exceeded some but not all expectations" or better on the last three Enlisted Performance Reports and no less than a 4 rating on older reports.
- › Not be on the AF weight management program or remedial fitness program.
- › Possess at least two years retainability in service after completion of training.
- › Possess at least a secret clearance or U.S. equivalent.
- › Complete the AF fitness assessment with a minimum of 90 percent overall.

### TRAINING

Once accepted, the three weeks of Phoenix Raven training is rigorous. Examples of course subjects include unarmed self-defense techniques, use-of-force scenarios, advanced firearms proficiency, anti-hijacking operations, embassy operations and more.

A typical day of a Raven when at home station includes focusing on





SrA Kristine Glenn, 421st Combat Training Squadron, Phoenix Raven Course instructor, leads Airmen during a physical training session in the first week of the Phoenix Raven Qualification Course at Joint Base McGuire-Dix-Lakehurst, N.J.

USAF photo by  
SSgt. Vernon Young Jr.

Photo below: MSgt. Ryan Fregon, 421st Combat Training Squadron, Phoenix Raven Course instructor, motivates an Airman to do more pushups during the Phoenix Raven Qualification Course.

USAF photo by  
SSgt. Vernon Young Jr.



Once accepted, the three weeks of Phoenix Raven training is **rigorous**.




training and preparing new Raven candidates for attending the Phoenix Raven Qualification Course. This entails 8- to 12-hour days that test participants physically and mentally to the point of exhaustion. This includes hand-to-hand combat techniques and scenarios utilizing the “Redman”—often considered the most grueling part of training—in which they perform proper baton strikes while fighting the Redman in order to gain compliance. This teaches recruits to protect themselves and subdue an attacker. Class sizes normally range from 30–40 students per class. On average, about 20

percent of students are removed from the course for either the PT test or the ASP/Redman training. Some students are also removed for medical reasons that occurred during the training.

### ASSIGNMENTS

Since its inception, more than 2,500 personnel have graduated, including Soldiers, Sailors and Marines. Foreign partners have also attended the training course. Besides active duty Airmen, the Air Force Reserve and Air National Guard also maintain Phoenix Raven personnel to support their significant contribution to global airlift missions.

Teams sometimes travel three weeks each month. They may be performing ground security, conducting airfield assessments or tackling other responsibilities to ensure the aircrew remains safe and the cargo is delivered without incident.

Phoenix Raven personnel have supported numerous operations and humanitarian relief missions since the program’s inception. Recent examples include 2016 hurricane relief efforts in Haiti and flood relief in South America. The program also supports logistical movements on a weekly basis for Operation Inherent Resolve in Iraq. 





An Airman from the 621st Contingency Response Wing, Travis AFB, Calif., performs a high altitude low opening jump during exercise Mobility Guardian while flying over Washington Aug. 7, 2017.

USAF photo by SrA Clayton Cupit

# Mobility Guardian:

Safe Execution of AMC’s Largest Ever Mobility Exercise

## WHAT

More than 650 international military personnel from nearly 30 partner nations and 3,000 U.S. military service members from the Active Duty, Guard, and Reserve, to include ACC assets, converged at Joint Base Lewis McChord from July 31 to August 11 for Mobility Guardian, the largest scale exercise that Air Mobility Command has ever undertaken.



“Our ability to move national power to any location is key to the security of the United States,” said Gen. Carlton D. Everhart II, Air Mobility Command commander. “Mobility Airmen are often the first to arrive and the last to depart. They provide continuous support to the joint warfighter. Simply put, success requires our Total Force team of mobility Airmen to work together with joint and international partners. Exercising our capabilities together is critical so when we are called upon, we can deliver quickly and precisely.”

## WHO

### INTERNATIONAL PARTICIPANTS



Participants worked alongside U.S. military members in fully integrated scenarios that measured AMC’s four core competencies.

### INTERNATIONAL OBSERVERS



Some nations acted as both observers and participants. Observing nations had the opportunity to pair with U.S. crew members and witness the air mobility process.





Senegal Air Force Capt. Balla Sarr, loadmaster and maintenance officer, observes airlift operations during Exercise Mobility Guardian.

USAF photo by Airman 1st Class Gracie I. Lee



An F-15E Strike Eagle receives fuel from a KC-135 Stratotanker from the 349th ARS, McConnell AFB, Kan. while flying over Yakima, Wash.

USAF photo by SrA Clayton Cupit

### AIRLIFT AND AIRDROP:

C-17s, C-130H/Js, A400Ms, and Casa 295s safely conducted 668 sorties during Mobility Guardian. Six hundred and twelve of those sorties were conducted in the first six flying days, logging over 1,100 flight hours. The airlift apparatus safely moved 3,676 passengers, 4,911 short tons of cargo and 243 aeromedical patients, and

dropped 356 jumpers, 299 Container Delivery System (CDS) bundles and 33 heavy equipment platforms without major incident. All of this was accomplished while performing tactical aircrew training for single nation formations, mixed nation and aircraft formations, and single ship missions with several notable firsts, to include: UK rigged CDS bundles dropped

from any C-17 and first time from a US C-130; Australian, New Zealand, and Canadian rigged CDS bundles dropped from a U.S. aircraft and rigging of Low Velocity chutes, and Australian and New Zealand CDS drops from Canadian C-130Js and French A400Ms.

### AERIAL REFUELING:

At Mobility Guardian, U.S. KC-135s

## WHERE



## WHY

“Mobility Guardian was about learning, discovery, and the opportunity to work as a part of a joint and coalition team,” said Gen. Everhart. “This exercise was an investment in ensuring our Airmen are prepared to succeed in the most challenging environments and deliver desired results across the globe.”

“I think [Mobility Guardian] was very beneficial because it was the first exercise in a long time where the sole focus was on the desired learning objectives of the Mobility forces across the spectrum: contingency response, aeromedical evacuation, air mobility liaison officers, air refueling, airlift, airdrop and much more. It was great for them [International Partners] to be able to see how we operate and for us to see how they operate. When the United States goes into combat, we go with our international partners, but we rarely get to train together. This was a great opportunity to integrate so when we go into combat, it's not the first time we've worked together; we already have some experience and understand each other's capabilities,” said Col. Johnny Lamontagne, U.S. Air Force, Mobility Guardian Combined Forces Air Component Commander.<sup>1</sup>

<sup>1</sup> McClellan, Erin. (2017, August 12). Mobility Guardian draws to an end. Retrieved from <http://www.amc.af.mil/News/Article-Display/Article/1276640/mobility-guardian-draws-to-an-end/>





U.S. Air Force Lt. Col. Catherine Bonhoff, 375th Aeromedical Evacuation Squadron, director of operations, talks with a simulated patient during Exercise Mobility Guardian.

USAF photo by SrA Ericka Engblom



An aircrew from 517 AS, Joint Base Elmendorf-Richardson, Alaska, conducts an air drop from a C-17 Globemaster III cargo aircraft in support of Exercise Mobility Guardian.

USAF Photo by TSgt. Gregory Brook

and KC-10s, as well as an Australian KC-30, off-loaded 1.2 million pounds of fuel on 90 sorties. One significant aerial refueling event was the safe accomplishment of the first ever refueling of a U.S. C-17 by an Australian KC-30. Tankers conducted aerial refueling sorties with both MAF and CAF aircraft to enable training for not only our cargo aircraft but also for the Blue and Red Air aircraft that were part of the tactical aircrew training. This training mirrored the current AFCENT AOR where an aircraft aerial refueling happens about once every five minutes. "Everything that Air Combat Command does, we do on the back of Mobility forces," said U.S. Air Force Gen. Mike Holmes, commander of ACC. "We're a global Air Force, and we're a global Air Force because we can pick up and move wherever we need to and know that we can be there quickly with everything we need to operate. Without AMC, we'd be a regional Air Force."

### AEROMEDICAL EVACUATION:

AE forces operate anywhere air operations occur in support of military


“  
Working with our  
international partners  
has expanded my  
global mindset.”

- Lt. Col. Catherine Bonhoff

operations, humanitarian assistance and disaster response. High-tech medicine, robust en route care and rapid medical evacuation has ensured our wounded warriors get the care they deserve and has enabled a 97 percent survival rate. At Mobility Guardian, two of the participating units were the 375th Aeromedical Evacuation Squadron, Scott Air Force Base, Illinois, and the 156th AES, Charlotte Air National Guard Base, Charlotte, North Carolina. Personnel prepared for real-world rapid global aeromedical evacuation that can mean the difference between life and death for those awaiting care. "Working with our international partners has expanded

my global mindset," said U.S. Air Force Lt. Col. Catherine Bonhoff, 375 AES director of operations. "It has allowed us to test what working with other nations would look like should we ever be needed in the case of a humanitarian event."

### MOBILITY SUPPORT:

"A lot of the maintainers, logisticians, and port guys just have not seen this amount of sorties and cargo being pushed in such a short amount of time," said U.S. Air Force Lt. Col. Tim Dodson, Mobility Guardian Joint Staff logistics director. "We were able to test our capabilities with that, and when you see the numbers, I think they did a really good job." There were 668 sorties with a mission capable rate for all MDS of 92.1 percent and a departure reliability rate of 96.6 percent, all executed safely and efficiently. On top of the previous cargo and airdrop numbers, the LRS also provided 3 million gallons of fuel while dealing with an unforeseen disruption of Joint Base Lewis-McChord's fuel supply due to a cut pipeline several miles from base. "A really good job" is an understatement. 





## Put Down Your %\*#@ Phone!

BY MR. MICHAEL FRANCIS,  
STAFF WRITER

Riding a motorcycle through traffic is like riding a horse through a herd of rushing cattle. Completely opposite from the motorcycle rider, the driver of four wheels is highly unlikely to be paying as much attention to the task at hand. When you're on a motorcycle, you have to watch out for every groove, crack and pothole in the road and constantly scan every other vehicle because we know all too well what could happen if anything goes wrong. We can't take a hand off the handlebars for more than a brief stretch, much less hold a phone in front of our eyes and steer down the road.

Automobiles have become so advanced that some are even parking themselves these days. We all have busy lives and are low on time to get everything done; it's understandable that we maximize to the fullest any time when we can remain productive. So why not use the time you have during the same old boring morning or evening commute to scroll through your favorite social media app to see what your friends are up to? Maybe someone had a baby, or someone famous died or your favorite team fired their coach. Driving is easy! And you're a pro at multitasking, so why not?

Recently I was at a red light—first in line with the front wheel of my motorcycle a few feet from the cross traffic speeding by as I waited my turn. The next thing I knew, the guy behind me had let his foot slip off the brake and his truck started creeping into the back of my bike. I felt my feet sliding on the concrete and turned around to see what was happening. I realized the driver was totally unaware that he was slowly pushing me into oncoming traffic. I honked my horn and banged my fist down on the hood of the truck, and the guy looked up from his phone and angrily asked me why I was hitting his truck. I got off my bike and told him what he was doing as other people were getting out of their cars to help. He was embarrassed and said he had to check his phone. Maybe he felt like that was necessary for whatever reason, but **nothing should be more important than paying attention to driving a vehicle.** I was lucky that day that there was only a little damage to my bike and none to me.

Not long after, in morning rush hour stop-and-go traffic, a car pulled up next to me and stopped inches away from my bike. The driver looked a bit surprised at how close he was to me when I put my hand on the hood of his car.

Those are not isolated incidents. At nearly every single stoplight, I see

someone looking at a phone. The numbers of people with one hand on the steering wheel and the other hand holding a phone in front of their face seems to be growing daily. Drivers can't hold a lane and are becoming increasingly reckless in their behavior.

When you stray out of your lane, other cars swerve away from you and make abrupt lane changes, sometimes changing multiple lanes at a time with huge blind spots because they aren't where they need to be. Highway exits are a danger, too, because people sometimes panic and change lanes without looking when they think they might miss their exit. Recently, I saw someone *back up* on the highway in rush hour traffic because she missed her turn! Sometimes it's just complete insanity and disregard for other people on the road.

As a motorcycle rider, I take all the precautions I can to stay safe, but what I fear most are drivers who are not doing everything they can to navigate their vehicle safely. I ask you to personally take responsibility for paying attention to your driving, and consider the dire consequences to those of us on two wheels when you don't. My life depends on you, so please don't be careless out there. We all share the same road. 🚔

### Maybe in the future all vehicles will be driverless, but until then:

- Watch for drivers who stray out of their lane.
- Do not ride in someone's blind spot.
- Pay extra attention when the road splits and near exits; these are areas where people tend to change lanes quickly.
- **Always** wear a helmet and proper gear.



# Changing Things Up to Keep Aircraft UP

BY MS. KIM BRUMLEY,  
STAFF WRITER

**O**n April 19, 2013, the crew of a fully loaded C-5 Galaxy taking off from the airfield at Rota Naval Station in Spain averted what could have been a deadly accident. It began when multiple bird strikes caused damage to two engines. During an emergency landing, multiple blown tires damaged three landing gear structures.

Quick thinking and exemplary teamwork by the crew saved the aircraft. It also saved lives both on board and on the ground, but the subsequent investigation revealed some serious areas of concern at Rota. One was a lack of airfield drainage. Existing ditches intended to drain water after rain, for example, instead caused significant ponding and erosion issues due to poor construction and/or lack of proper ditch maintenance.



*The Mobility Forum Staff Writer Kim Brumley holds a falcon at Rota Naval Station in Rota, Spain*



Another problem was the existence of excessive vegetative cover. Trees near the airfield harbored all sizes of birds, and each bird was a potential strike hazard. There was, it seems, an overall inadequate Bird/Wildlife Aircraft Strike Hazard program—evident from the limited mitigation measures and lack of team involvement. There was simply a general lack of BASH expertise.

Since the 2013 incident and resulting investigation, though, a Joint Statement of Understanding among services established control and operational responsibility of the airfield. This was critical because it defined the roles and responsibilities of all partners. Proactive involvement by key agencies—the U.S. Air Force, the U.S. Navy, and the host Spanish Navy—has helped the Naval Station at Rota greatly improve safety.

That agreement and the implementation of an active BASH program resulted in dramatic progress. Teams that include a falconer—as well as members of the U.S. Navy and Air Force, and Spanish personnel—regularly conduct patrols for wildlife hazards. On a recent visit there, I watched as the falconer conducted daily sweeps with one or more falcons. A BASH database is used to keep track of the sweeps conducted, and Rota completes Wildlife Hazard Assessments quarterly.

It was also important to remove nearby bird habitat. Over 1,400 eucalyptus trees were cleared from beside the runway after the 2013 incident. Removal of trees from the airfield area reduced bird strikes by 34 percent in 2016.

An airfield hydrology study completed in 2015 led to development of a master



The positive changes at Rota are thanks to the many personnel there—from top to bottom.

Also, key personnel assigned to other positions provide consistency with overall program execution.

Perhaps the most important response to the close call at Rota was development and implementation of a BASH program. Executing it successfully requires the understanding and cooperation of all involved parties and the day-to-day hard work of all personnel—from falconers to those who inspect and correct environmental conditions, such as drainage and vegetation.

Rota is living proof that changing things up—in a big way—helps keep aircraft in the air! 🇪🇸

drainage plan to eliminate standing water and improve erosion control. A \$1.3 million construction repair plan is on target for 2017 that should help minimize erosion. Additionally, personnel routinely inspect runways, and erosion and vegetation control measures occur as needed.

The positive changes at Rota are thanks to the many personnel there—from top to bottom. The expertise of the 725th Air Mobility Squadron, for example, was crucial for developing aviation mishap investigation courses.

#### TOP 10 AIR FORCE WILDLIFE STRIKES BY COST, FY1995 - FY2016 Filtered for One Type of Species Per Mishap

Species (Common Name)	Total Mishap Cost (excluding injury cost)	Total Mishap Cost with Injuries
Canadian Goose	\$81,232,397	\$93,812,397
Black Vulture	\$75,476,404	\$75,686,764
American White Pelican	\$41,746,777	\$41,760,459
Pink-footed Goose	\$40,522,092	\$43,262,092
Turkey Vulture	\$37,767,396	\$37,767,636
Mourning Dove	\$29,290,414	\$29,290,414
Spot-billed Duck	\$24,954,780	\$24,955,020
Red-tailed Hawk	\$17,039,479	\$17,039,479
Mallard	\$10,304,474	\$10,304,474
Snow Goose	\$9,400,918	\$9,400,918



# It Takes a Village

BY CAPT. CHAD VANDERHORST,  
ACC CTS/SE

***“Fire! Fire! Fire in the galley!”***

**T**he call rang out over the aircraft communication system as a six-foot inferno erupted from the highly pressurized liquid oxygen system during takeoff, engulfing the entire tail section in smoke and flames.

It was April 30, 2015, and I was the newly qualified aircraft commander of SNOOP 71, an RC-135V Rivet Joint departing from Offutt AFB, with 27 aircrew. Fourteen seconds after brake release, at approximately 50 knots, the crewmembers closest to the fire called out the emergency, and I immediately aborted the takeoff. Once stopped, I directed the crew to egress. The navigator installed the crew entry chute ladder, allowing all aircrew to exit in less than three minutes without injury. While I prioritized those potentially needing medical attention, the fire burned through the aircraft skin, and a 15-foot flame shot out of the tail. Three airfield fire trucks arrived on scene within 69 seconds. The fire eventually depleted the oxygen and went out. It caused over \$63 million in damages and resulted in a Class A mishap.

This event continues to offer lessons for all crewed aircraft. Although the Accident Investigation Board praised the crew's actions that day, the safety report highlighted areas for improvement. Most obvious: crew resource management (CRM). Individuals followed emergency procedures that day, but the

emergency callouts and ensuing interphone coordination attempts became muddled as excited aircrew tried to simultaneously communicate the severity of the situation. As a result, the flight deck was unable to decipher these initial callouts.

Another CRM critique was the early lack of communication among the crew. The flight deck did not know how the emergency procedure was progressing, highlighting the importance of constant communication. Generally, those farthest from the fire understood the least about the situation. In the cockpit, I only knew a fire existed and where; I determined the severity based solely on the crew's tone and inflection, and initiated egress based on that.

The tactical coordinator recognized the co-pilot and I were busy securing the aircraft and therefore remained quiet. As a result, I had no idea the status or spread of the fire. Also, most crew unplugged their headsets to egress, which quickly eroded CRM further. Ideally, the tactical coordinator and I should have coordinated more regarding the fire status. CRM is vital to sound decision-making, and communication between crewmembers needs to remain clear, concise and timely.

Now, let me tell my personal account of this mishap. I flew the takeoff that day. Once cleared, I verified no abnormal instrumentation indications and began my first departure as a newly qualified

aircraft commander. A few seconds later, I heard what sounded like loud voices over distress (“GUARD”) frequencies. I disregarded it initially to focus on the takeoff. Suddenly, I realized my crew was shouting “Fire!”

The airspeed read 50 knots, so I aborted the takeoff. I did not know the degree or size of the fire, but Airmen were yelling, adrenaline was pumping and training took over. After I stopped the jet, the co-pilot and I completed emergency checklists. We then waited while crew egressed via the crew entry chute. The last few had trouble seeing; their eyes were bloodshot, and they were coughing from smoke and fume exposure. Four crewmembers sought medical attention for these symptoms, but all egressed safely and without injury.

Today, people ask, “If you could do it again, would you abandon the aircraft?” The order to abandon the aircraft is a last resort to get the crew off the jet however possible. In some cases, it may be faster, but the ensuing chaos increased the possibility of injury. Since all aircrew escaped without injury via ground egress, I would do very little differently.

And people ask “what if” questions.

- What if the fire erupted just after takeoff?
- What if you had been at altitude?



**The reason there are 27 storytellers today instead of 27 corpses is due to the excellent training, discipline and teamwork embodied throughout the 55th Wing and not due to any one person.**

And honestly, this incident, although terrifying, was still just a low-speed abort. I think the proverb "it takes a village to raise a child" applies here. The reason there are 27 storytellers today instead of 27 corpses is due to the excellent training, discipline and teamwork embodied throughout the 55th Wing and not due to any one person. The true heroes that day were

those who went above the call of duty: my crew, especially CMSgt. Michael Rager, who made the initial callout and cleared the jet of personnel; the fire fighters; and my instructors over the years, especially Mr. Tony Belford, Mr. Mike Shannon, Mr. Scotty Dowell and Mr. Andy Bowder. I'm sure they would agree that none of us acts alone. Indeed, it truly takes a village. 🇺🇸

We can drive ourselves insane thinking about such scenarios; but as professionals, we should share, study and debrief our experiences to become better aviators. Right after takeoff, I would have pulled closed into the VFR pattern (or asked for short vectors if in the weather) and landed at my heavy gross weight. At altitude, I would have done an emergency descent as smoothly as possible (knowing my teammates in the back were without restraints fighting the fire) into the nearest, most suitable airfield.

Reflecting on this incident, I don't consider myself a hero. I'm just a pilot who did the job I was trained to do.



Photo above: External view of the fire damage looking into the aircraft.

Photo left: Internal view of the fire damage above the aircraft galley.

Photos by 55WG; used with permission

The mishap aircraft, RC-135V RIVET JOINT, parked on the runway after the fire had extinguished. Fire damage can be seen on the upper fuselage just above the USAF insignia.

Photo by 55WG; used with permission







SSgt. David Foreman, 305th Operation Support Squadron survival specialist stationed at Joint Base McGuire-Dix-Lakehurst, N.J., instructs Zambian Air Force Airmen during an 818th Mobility Support Advisory Squadron building partner capacity mission in Lusaka, Zambia.

USAF photo by TSgt. Gustavo Gonzalez

# MSAS Builds Partnerships, Capacity in Zambia

BY TSGT. GUSTAVO GONZALEZ,  
621ST CONTINGENCY RESPONSE  
WING PUBLIC AFFAIRS

Approximately 10 Airmen assigned to the 818th Mobility Support Advisory Squadron (MSAS) returned from a building partner capacity mission to Lusaka, Zambia May 29-June 9.

TSgt. Sarah Colwell, security forces air advisor assigned to the 818th Mobility Support Advisory Squadron stationed at Joint Base McGuire-Dix-Lakehurst, N.J., briefs Zambian Air Force Airmen about unexploded ordnance reports during a building partner capacity mission in Lusaka, Zambia.

USAF photo by TSgt. Gustavo Gonzalez





The MSAS conducted training for the Zambian Air Force (ZAF) in preparation for the nation's first humanitarian mission in support of the U.N. to South Sudan. This event marks the first deployment in the ZAF's history.

The MSAS trains, advises and assists partner nations in developing air mobility systems and processes, enabling nations to physically extend the reach of their governance and rapidly respond to contingencies. Additionally, MSAS helps strengthen international ties and promote interoperability.

For the ZAF, the training consisted of combat survival, night vision, aircrew flight equipment, command and control, airbase security, survival skills, intelligence and medical training. The first part of training involved three days of classwork before coming together for a day and testing it out during an exercise designed for hands-on training.

"We are here to assist, train and advise the ZAF on how to deploy as a unit," said U.S. Air Force Capt. Bree Lanz, Zambia Building Partner Capacity (BPC) mission commander assigned

to the 818 MSAS. "We are training and building their capacities to ensure a successful deployment."

According to ZAF Maj. Zacharia Mbewe, UH-1 Huey helicopter pilot, the MSAS training has been invaluable for the ZAF.

"This is the first time that we are deploying as a unit, so we need some experience on what to expect," Mbewe said. "From what we have learned, it has been priceless. It is necessary because we are going into an area that we really don't know. We've never really ever done this, and anything can happen. We can be attacked, and we must be ready for that."

According to U.S. Air Force SSgt. Evan Gohring, 818 MSAS command and control air advisor, the interactions with the ZAF Airmen have been an important part of the mission.

"Building partnerships is important because we make a lasting impact on these countries," Gohring said. "They get the training, but it's not only the training; we're building these relationships."

"I think the interaction with the MSAS has been very friendly and open," Mbewe added. "It's been easy to approach the air advisors, and I think that is very important." 



Photo above, top: a Zambian Air Force Airman uses a compass during survival training in Lusaka, Zambia.

Photo above, bottom: a Zambian Air Force Airman runs quickly and aims his weapon as he attempts to establish security during fly away security training in Lusaka, Zambia.

USAF photos by TSgt. Gustavo Gonzalez



Photo left: SSgt. Evan Gohring and TSgt. Kara Offner, 818th Mobility Support Advisory Squadron air advisors stationed at Joint Base McGuire-Dix-Lakehurst, N.J., brief Zambian Air Force Airmen on command post procedures during a building partner capacity mission in Lusaka, Zambia.

USAF photo by TSgt. Gustavo Gonzalez





KC-46A refueling operations developmental testing.

Photo by Paul Weatherman

# BREAKING NEWS! KC-46 Update

BY MS. RITA HESS, STAFF WRITER

**A**ir Mobility Command personnel everywhere are clamoring to catch a glimpse of the new KC-46A. Here is a quick refresher about where, when and why the new aircraft is expected to appear on the horizon.

## WHERE AND WHEN WILL WE SEE THE KC-46?

Between now and 2028, the Air Force expects to base KC-46As at one formal training unit and up to 10 main operating bases. In the continental United States, there will be at least two active duty-led operational wings and one formal training unit, up to four Air National Guard-led wings, and up to two Air Force Reserve-led wings. The overall KC-46 program is valued at more than \$30 billion, with the final amount depending on the options exercised.

Altus Air Force Base in Oklahoma is the chosen formal training unit and expects to begin receiving aircraft

in fiscal year 2018. McConnell Air Force Base, Kansas, will be the first active duty-led Pegasus main operating base and should begin receiving aircraft in fiscal year 2018, as well. Joint Base McGuire-Dix-Lakehurst and Travis AFB have been selected as the next active duty-led preferred alternative locations.

Pease Air National Guard Station in New Hampshire will be the first Air National Guard Base to host the KC-46A; its estimated arrival is fiscal year 2019. Seymour Johnson AFB in North Carolina is the preferred location for the first Reserve-led KC-46A. Additionally, the Air Force intends to base the Pegasus at up to two locations outside the continental United States.

The Air Force uses a standardized process to identify potential locations for all missions, and deciding where to base the KC-46A is no different. The assessment criteria

## ASSOCIATE UNIT TYPES

- **Classic Associate units** are those where the aircraft are assigned to the active component, and the reserve component provides some combination of embedded and additional manpower.
- **Active Associate units** are those where the aircraft are assigned to the reserve component, and the active component provides some manpower.
- **Air Reserve Component Associate units** are those where the aircraft are assigned to either the Air National Guard or the Air Force Reserve, and the other reserve component provides some combination of embedded and additional manpower.




include mission (e.g., proximity to air refueling receiver demand, airfield and airspace availability, fuels considerations); capacity (e.g., hangar, runway, ramp space and facilities considerations); environmental requirements; and cost factors.

The Air Force evaluates criteria prior to the next round of basing to ensure the criteria remains relevant; it expects the criteria to remain relatively consistent.

### WHY THE KC-46?

Over a period of 13 years, the Air Force has contracted for delivery of 179 of the aircraft and plans to replace some of its 400+ tanker aircraft with KC-46A Pegasus refuelers to meet long-term national security requirements. As new KC-46As are delivered, the Air Force plans to also grow its tanker fleet from

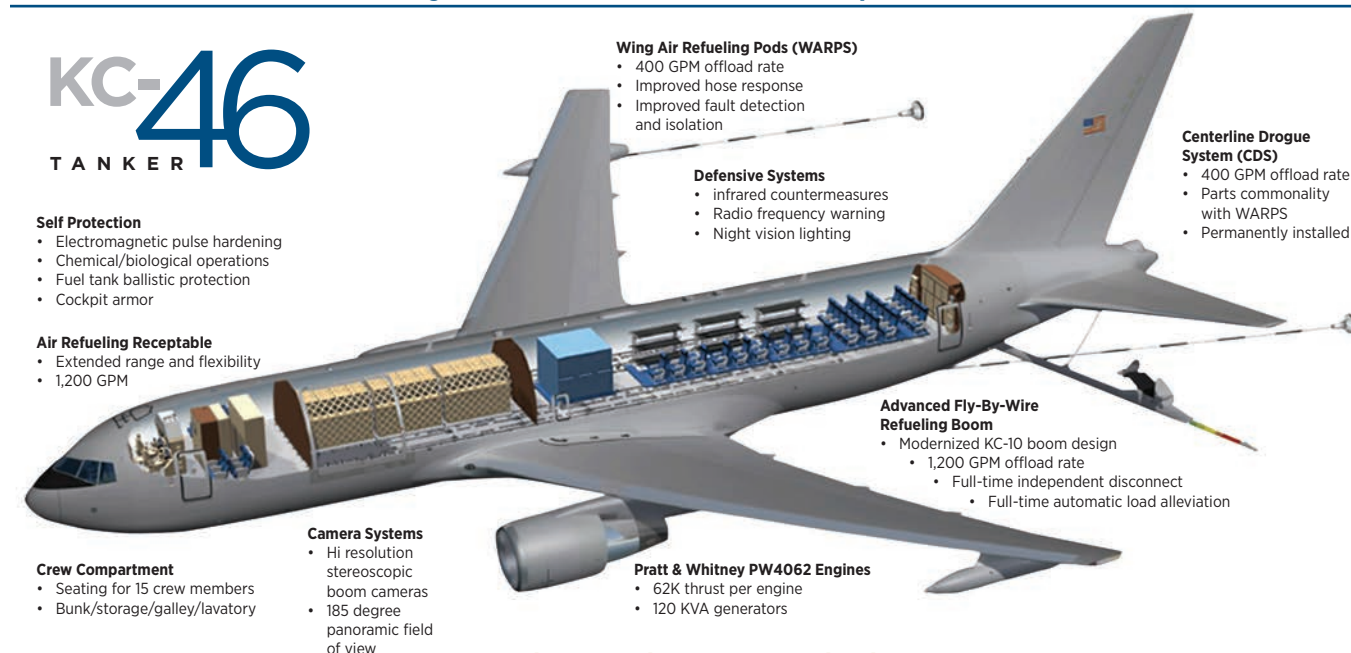
455 to 479 before going to a one-for-one replacement.

Tankers are, of course, the lifeblood of the Air Force's ability to respond to crises and contingencies; they will remain the backbone of the tanker enterprise for decades to come. And the KC-46 represents a commitment to U.S. air refueling capability and global reach that will ensure continued support to joint warfighters and humanitarian relief. It offers extended refueling capacity and range, improved efficiency and the ability to perform cargo and aeromedical evacuation. Additionally, the KC-46A is expected to produce better mission-capable rates and result in less maintenance downtime. With all these enhanced capabilities, the KC-46A Pegasus is the tanker of the future. 

### KC-46A PEGASUS CHARACTERISTICS INCLUDE:

- Improved efficiency
- Less maintenance downtime
- Enhanced navigation and communication
- Airlift capability on the entire main deck floor
- Improved force protection and survivability
- Increased cargo and aeromedical evacuation capabilities
- Multiple air refueling capabilities, including boom and drogue refueling on the same sortie

## Key Features and Capabilities



## Multi-role Capabilities

### Passenger Configuration

- FAA certified for 58 passengers; 114 for contingency operations
- C-17 palletized seating
- Palletized air transportable galley/lavatory
- Palletized passenger bags

### Passenger Configuration with Palletized Crew Bags and Air Transportable Galley/Lavatory



### Cargo Configuration

- Seamless integration with Defense Transportation System
- 18 463L pallets; 10 pallets centerline configuration
- Integrated roller system
- Compatible with all USAF loaders

### 18-Pallet Configuration



### 10-Pallet/Centerline Configuration

### Aeromedical Evacuation Configuration

- 54 patients with patient support pallets
- 24 litter / 30 ambulatory
- 6-patient integrated capability
- Onboard emergency oxygen & electrical power

### 54-Patient Configuration



<http://www.boeing.com/defense/kc-46a-pegasus-tanker/#/technical-specifications>



# SUICIDE: My Close Call

BY ANONYMOUS

Much of 2016 was foggy for me. It wasn't a weather phenomenon. It was a fog of depression, and I was so firmly in its grip that I contemplated suicide.

Does that make you uncomfortable? I have learned that conversations about suicide make some people squirm because they do not understand it or do not know what to say or do.

That, my friends, is part of the stigma. We—those of us who have been depressed—are afraid to talk to people. We are afraid you might judge us or think we are crazy. We do not want to burden you with our problems. We are afraid you will suggest we “snap out of it” or tell us how great our life is. We worry that if we confide in you, you might tell our boss or significant other. Maybe we are simply afraid you will not understand; and unless you have ever struggled with clinical depression, you probably won't.

See, it's not like feeling sad (or being “in a funk”). For me, it was like being in a black hole. It was dark and lonely. At times, it seemed I had been there forever. I didn't know how to get out. Each day felt hopeless and exhausting.

Of course, depression is different for everyone, and symptoms can vary in severity and duration. Some people are always fatigued; others

can't sleep. Some overeat; others lose their appetite. Some engage in reckless, dangerous or self-destructive behavior that is out of character or may simply not seem themselves—something is “off.”

But while depression can be different for everyone, certain signs can indicate a risk for suicide. Some signs (in no particular order) include:

1. **Relationship changes**, such as divorce, a breakup, or the death of a spouse.
2. Increased use of **drugs and/or alcohol**.
3. **Problems at work**, such as chronic absenteeism, irritability, or fatigue.
4. **Financial difficulty**, which can feel overwhelming.
5. **Stress**, which can be *post-traumatic stress disorder* (PTSD) but can also be caused by

According to Department of Defense data, **275** active duty service members committed suicide in 2015.

events other than deployment. Inappropriate anxiety, agitation, and frequent mood changes may be signs of stress.

6. **Social withdrawal**. Staying home can hide the fact that someone is struggling. Ignoring personal hygiene and/or appearance can be a sign, as well. For me, just getting out of bed was exhausting.
7. **Talking about death, dying, or suicide** can be a loud cry for help. This includes actions like giving away possessions or writing a will. (I was doing these things.) While you want to be supportive and non-judgmental if someone shares such secrets, this is generally a sign that the person needs intervention from a trained professional.

There is hope for clinical depression. Professionals successfully treat thousands of people each year, usually on an outpatient basis. Depression doesn't always lead to suicide, but it increases the risk if left untreated.





**... please pay attention to those around you:** loved ones, wingmen, friends and coworkers. Watch for changes in their behavior. If you see anything unusual or if things don't seem quite right, ask what is going on.

It was over. There were the initial panic responses ("Don't do this!" and "Answer your phone!") followed shortly by those resigned to what had happened.

I felt a kinship with him. He had served our country, but it was more than that—it was a bond of desperation. I knew exactly how he felt. The difference was in his parting words, he assured his loved ones that he was "now free from ... the pain and suffering." I wasn't free from those feelings, but I watched from afar and saw how many lives he changed when he ended his own. I got help the very next day.

If you are depressed or contemplating suicide, please reach out to someone.

To everyone reading this, please pay attention to those around you: loved ones, wingmen, friends and coworkers. Watch for changes in their behavior. If you see anything unusual or if things don't seem quite right, ask what is going on. If your suspicions


How close did I get? I was narrowing down which method to use. One was an intentional overdose on prescription pills; I counted them frequently to be sure I had enough. The other was carbon monoxide poisoning in the car in my garage because I could take my dogs with me.

I was also thinking about what I'd write in a letter for those left behind. Then an odd thing happened. Just weeks before Christmas, I saw someone else's suicide note on Facebook. I read, along with hundreds of other people, this young man's last words to his friends and family. He posted it and took his life.



are correct, respectfully encourage the person to get professional help.

Finally, if someone you know is in immediate danger of suicide—especially if he has or tries to get a weapon, pills, or anything else that might cause harm—do not leave him alone. Stay until you connect him or her with a support service, such as a base agency, chaplain, chain of command, mental health provider, or a military or veteran's clinic. You can also call 911 or the National Suicide Prevention Lifeline (800) 273-8255 (TALK).

Depression can be a tough adversary, but so can being a survivor and knowing you could have helped ... but didn't. 





# Your Fall Protection Worked ... Now What?

BY MSGT. BENJAMIN MAYHEW, 734 AMS

Every day, AMC Airmen risk fall hazards while completing tasks that support unique mission sets. Many of them use personal fall arrest system (PFAS) equipment, wearing a harness and anchored lanyard to prevent them from falling to the ground. Some Airmen think the worst thing they would suffer after successfully arresting a fall would be friends snapping embarrassing photos as they dangle in a harness and await rescue; however, this is not the case. Even after surviving the initial fall, the person faces grave hazards due to a condition known as *orthostatic intolerance* (also called suspension trauma or harness hang syndrome in this situation).

## UNDERSTANDING ORTHOSTATIC INTOLERANCE

Orthostatic intolerance, generally defined, is the development of serious medical symptoms while a victim is upright that can be relieved by placing the individual in a supine position (lying down). A familiar example is an Airman who faints because he stood at attention too long. In that instance, blood begins to pool in his legs, reducing the amount of blood flow available to carry oxygen to vital organs. The brain initiates a temporary loss of consciousness, causing the Airman to fall to the ground. This returns the body to a horizontal position, which normalizes blood flow. For Airmen using PFAS equipment, symptoms begin because victims are held upright as they hang in the harness.

## THE SCENARIO

As a technician works at an elevated height—say 65 feet above the ground when atop the tail of a C-5 Galaxy—a PFAS anchors him to the aircraft. If he falls from the aircraft, the free fall is six feet or less if the equipment was properly configured before the system arrests the fall. During the fall arrest, he experiences deceleration forces up to 1,800 pounds on his torso. The forces, combined with the force of gravity, will cause blood to start accumulating in his legs, reducing the amount of blood in circulation. As he continues to hang while awaiting rescue, harness leg straps act as tourniquets and blood continues to pool. This reduces the flow of oxygen to the brain, heart and other vital organs. It begins orthostatic intolerance, and the worker starts experiencing severe to extreme discomfort, along with some or all of the following symptoms.

- Poor concentration
- Trembling
- Dizziness

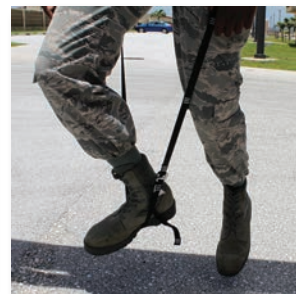
- Headache
- Sweating
- Nausea
- Fatigue
- Fainting

If not rescued promptly, serious outcomes can occur, including kidney failure and death. While understanding the medical consequences helps underscore the seriousness of the situation, it is even more important that personnel know how to alleviate the effects of this condition.

## MITIGATING THE EFFECTS

Knowing how to respond increases the likelihood of survival. The three primary ways to mitigate effects involve using equipment to assist in mitigation, training workers in mitigation techniques and executing a rescue plan quickly to recover a fallen worker.

**Equipment.** PFAS technology now commonly considers orthostatic intolerance factors during equipment design. A common PFAS accessory for



Trauma relief straps or “stirrups” allow a worker to relieve the pressure that harness leg straps can put on the femoral vein.



mitigating orthostatic intolerance effects is trauma relief straps. These “stirrups,” which are connected to the PFAS system, allow the worker to relieve pressure that the leg straps cause on the femoral vein. Recent design advancements include harness models that raise the upper legs to a horizontal position to promote blood flow. It has shown promise by significantly extending the amount of time before someone experiences the onset of symptoms.

### FOR MORE INFORMATION, SEE:


- Suspension Trauma/Orthostatic Intolerance at [www.osha.gov/dts/shib/shib032404.html](http://www.osha.gov/dts/shib/shib032404.html).
- Air Force Consolidated Occupational Safety Instruction (Air Force Instruction 91-203) at <http://bit.ly/1EjhwUt>.

**Worker Actions.** If a worker is conscious following fall arrest, several mitigation actions may delay severe orthostatic intolerance effects (see below).

**Rescue Planning.** While several of these may help mitigate severe orthostatic intolerance onset, the only way to remove the worker from harm’s way is to execute a rescue plan. Many organizations fall short in rescue planning; they perceive it as daunting or think it seems unlikely they will need to perform a rescue. But employers have an obligation, codified in federal regulations, to protect workers. The Occupational Safety and Health Administration requires employers to provide for “prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves” (OSHA 2011). The American National Standards Institute recommends that employers be able to retrieve a fall victim within six minutes.

### THE WAY FORWARD

Orthostatic intolerance caused by suspension trauma poses significant medical risks, but it is within our ability to alleviate those risks. The best steps we can take are comprehensive worker training and establishment of effective rescue plans. Workers must understand the grave hazards faced while suspended and awaiting rescue, as well as know how to mitigate those hazards. Supervisors and safety professionals must implement a verifiably effective rescue plan—and practice it periodically—to ensure the proficiency of those involved.

While it is often necessary to ask our personnel to assume reasonable risk to achieve organizational missions, we must ensure that ignorance about orthostatic intolerance and shortfalls in rescue planning do not combine to expose them to excessive risks. 

- **Front leg pulls:** Worker pulls one leg across the opposite leg and toward his waist to contract leg muscles to force blood upward into the body.



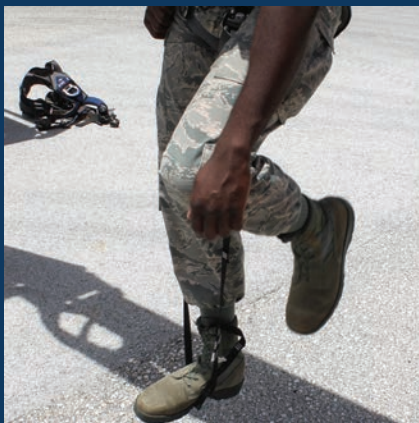
- **Rear leg pulls:** Worker reaches behind to pull pant cuff up toward his buttocks.



- **Toe kicks:** Worker kicks the legs forcibly, with toes pointed rigidly, to contract the muscles of the thigh, calf, and foot.



- **Bicycle:** Worker rotates the leg as though pedaling a bicycle.





# Does How You Get Your Kid to School Matter?

## *You Betcha!*



BY MR. MONTE NACE, STAFF WRITER

**G**etting children of any age to and from school can be a challenge, depending on whether or not you live on base, the size of your community, year-round weather conditions and so on.

Did you know that, in the short term, how they get to and from school could result in higher grades? In fact, the mode of transportation you choose may have lasting health, economic and environmental benefits for your child, as well. *How can that be?*

Let's assume you can choose from the following options: walking, riding a bicycle, riding a school bus and riding in a vehicle with a family member (or driver in a carpool). The two healthiest methods are walking and riding a bicycle. Kids need activities like these. In fact, the Centers for Disease Control and Prevention recommends that children and adolescents get 60 minutes (one hour) or more of physical activity each day. Most of that should be moderate aerobic activity, such as brisk walking. The CDC further

recommends vigorous aerobic activity, such as running, on at least three days per week.

Students who are physically active tend to have better grades, school attendance, cognitive performance (e.g., memory) and classroom behavior. While the fresh air and movement is undeniably great for them, the time spent with peers gives them opportunities to learn socialization skills, too, if they walk or ride in groups. Plus, it can give you a little piece of mind (the "safety in numbers" thing). Long term, they are more likely to become healthy and active adults.

Another bonus of walking or riding a bike is the reduced traffic congestion and improved air quality at school. Fewer cars clustered around the buildings make it safer for students who are walking, getting on or off a bus or looking for their designated ride. It also means less pollution for everyone, especially if cars are idling. Plus, walking or biking teaches children environmental citizenship. It shows

them that both are preferred alternatives to driving and a smart choice when feasible. Again, that mindset will stick with them into adulthood.

Of course, you can't just plop your kid on a bike, pat yourself on the back and call it a day. All children who ride to school need the right equipment and skills training. This includes investing in a properly fitting bike helmet and teaching your child how to fasten it correctly. Some state laws govern who must wear one, but it is a good idea for riders of any age in any locale to do so, as it can reduce the risk of a brain injury by 85 percent. When you ride with your child, it sets a great example if you wear one, too! The National Highway Traffic Safety Administration video at [www.youtube.com/watch?v=PkVeKrk-WOE](http://www.youtube.com/watch?v=PkVeKrk-WOE) has other safety tips, as well.

If your child isn't quite old enough to go it alone, consider starting a walk pool or bike pool with neighbors. Similar to carpooling, parents or caregivers take turns supervising a



group of children as they walk or ride bikes to and from school. If that is not an option, teach your child about the buddy system—walking or riding with one or more friends. Explain that even in groups, pedestrians and bicyclists must follow the rules (walk on the sidewalk, cross at crosswalks and obey traffic signals). Whether alone or with one or more kids, ensure your child knows what to do if in danger: yell and run to the nearest neighbor, a business or back to school.

Kids of all ages have cell phones these days, but that does not mean they use them safely. Regardless of how mature children seem, they should never look at a cell phone while walking or riding a bike. This is the equivalent of an adult driving while distracted. Again, set a good example for your children—they tend to imitate their parents!

Finally, explain to your child that adults **SHOULD** do certain things (drive the posted speed limit, stop for pedestrians, etc.), but some adults don't know the rules or don't follow them. As evidence of that, my friend wrote this on her Facebook page one day.

*On my way for morning coffee, I saw red and blue lights behind me! I didn't know why! I did not realize that on a four-lane road with a grass median, you have to stop for school buses when they are on the **OPPOSITE** side going the **OPPOSITE** direction! I was not speeding and not in a school zone – I just did not know I had to stop on a **FOUR-LANE** road! I got a \$500 ticket!*

The law may be different in your state, but this is a good example of someone who has driven for years but did not realize the particulars of a certain law. She paid a steep price for her mistake, but no parent had to bury a child. I include this example to show you the importance of telling your kids

to (1) leave their electronic devices in backpacks until they get home, and (2) watch for drivers who may not be paying attention or may not know the rules of the road.

I realize walking and biking may not be an option where you live. But if possible, let's work to make that next generation healthy. Someday, the tables will turn and they will be taking care of us.

No matter where you live or how your kids get to school and back, please have a safe and happy school year! 🍎



## THE MORE THEY BURN THE BETTER THEY LEARN



YOUR  
CHILD

AMOUNT OF  
ACTIVITY

VARIOUS  
ACTIVITIES

ACADEMIC  
ACHIEVEMENT

**Did you know that kids who are physically active get better grades?**

Research shows that students who earn mostly **A**s are almost twice as likely to get regular physical activity than students who receive mostly **D**s and **F**s.

Physical activity can help students focus, improve behavior and boost positive attitudes. Do what you can to help your child be physically active, be it running, biking or swimming. Any type of physical activity is good, and 60 minutes a day is best. Their grades will thank you!



SOURCES |

CDC. Physical Inactivity and Unhealthy Dietary Behaviors and Academic Achievement.

CDC. The association between school based physical activity, including physical education, and academic performance. Atlanta, GA: U.S. DHHS; 2010.

FOR MORE INFORMATION, VISIT  
[MakingHealthEasier.org/BurnToLearn](http://MakingHealthEasier.org/BurnToLearn)



# Innovative Training Solutions for Airmen

BY MS. KIM BRUMLEY,  
STAFF WRITER

**N**ecessity is the mother of invention. That quote, often attributed to ancient Greek philosopher Plato, simply means that people can be pretty darn creative when they have a need or a problem with no readily available solution. A modern example of this is happening at the 725th Air Mobility Squadron in Rota, Spain, with the help of contributors in Japan and Hawaii.

According to Mr. Marcus Carrion, Air Force Engineering & Technical Services at Naval Station Rota, Spain, ground trainers provide great hands-on training for tactile learners. However, scheduling an aircraft for 48-72 hours of down time is expensive and requires a lot of planning. Maintainers gain most of their knowledge by doing walk-arounds, on-the-job-training and asking questions, while simultaneously working aircraft that are on active missions. He did not feel that solution was ideal.

"I realized these maintainers lacked the visual and verbal cues a trainer can provide," he explained, "so I began creating videos by filming myself talking to the camera. In essence, I made first person teaching accessible any time without the need for aircraft on the ground when an Airman had the time to train."

Carrion and his fellow innovators have since honed the video product into an affordable online model that delivers virtual boots-on-the-ground digital training on demand. Maintenance

training videos are not a new concept, but the technology and one-on-one perspective are indeed new, and Airmen seem to like it.

"As we began beta testing, showing clips and ideas to our maintainers, they agreed they needed something like this," said Carrion. "Plus, new Airmen watching basic tasks performed in our videos were immediately confident they could perform the task shown. That was enough for us to continue pursuing the idea."

Carrion said potential users are AMC maintainers who must learn new airframes, noting especially en route maintainers with limited aircraft availability and maintenance touch time. In 2015, for example, 730 AMS at Yokota Airbase in Japan had 144 C-5 departures, with the average aircraft being on the ground less than 24 hours. Across AMC en routes, the statistics are similar.

The team used editing software that allows putting audio and video directly into the project, enabling incorporation of technical order changes over time. Carrion insisted the videos do not replace other methods of learning but serve as performance

support and visual aids when on-the-job training can't be accomplished.

"These videos, in conjunction with the C-5 and C-17 cockpit trainers we are building, will provide a means for us to train Airmen at any time," he said. There are 10 planned videos on various topics. Once complete, the team will try to incorporate them into the first 60 days of training for new Airmen. "Eventually," added Carrion, "we can create an enterprisewide platform that meets training requirements and can benefit AMC, the Air Force and the entire Department of Defense."

Initially, only Airmen at Rota will be able to watch videos from smartphones or tablets. A secure virtual platform to host the videos is almost complete, but there is not a definite launch date. 🇺🇸

## In addition to Mr. Carrion, other Airmen involved in creating the video training products include:

SSgt. David Peterson,  
725 AMS, NS Rota, Spain

Capt. Christopher Alfonso,  
730 AMS, Yokota AB, Japan

TSgt. Donald Cridlebaugh,  
735 AMS, Hickam AB, Hawaii

TSgt. Marcus Mimnagh,  
725 AMS, NS Rota, Spain



Screen capture from an introductory training video created by a team at 725 AMS in Rota, Spain, with the help of contributors in Japan and Hawaii.





# MISHAP-FREE FLYING HOUR MILESTONES

## 13,500 HOURS

### 317 AS, JB Charleston, SC

MSgt. Mark R. Corrigan

## 7,500 HOURS

### 96 AS, Minneapolis-St. Paul ARS, MN

Lt. Col. Michael R. Erickson

### 109 AW, Stratton ANGB, NY

Lt. Col. Thomas P. Esposito

Lt. Col. Stephen E. Yandiik

### 121 ARW, Rickenbacker IAP, OH

MSgt. Liberace Malbon

### 146 AW, Channel Islands ANG, CA

CMSgt. Steve B Vergel de Dios

## 6,500 HOURS

### 1 AS, JB Andrews, MD

MSgt. Joshua P. Erhard

MSgt. Jose M. Galvan

MSgt. Darren W. Jenkins

### 96 AS, Minneapolis-St. Paul ARS, MN

Lt. Col. Joseph A. Hollman

### 115 AS, Channel Islands ANG, CA

Lt. Col. Daniel S Pemberton

SMSgt. Philip Poulsen, Jr

MSgt. Arturo Jasso

## 5,000 HOURS

### JB Andrews – Presidential Airlift Squadron

Lt. Col. Hans K. Ellison

SMSgt. Nathan C. Brewer

### 1 AS, JB Andrews, MD

Lt. Col. Dick J. Blakemore

Lt. Col. Anthony J. Caparella

Lt. Col. Michael R. Freimarck

Lt. Col. Clinton N. Palmer

Lt. Col. Daniel J. Rebecky

Lt. Col. Aaron M. Pierce

SMSgt. Aaron M. Dudley

MSgt. Casey C. Patterson

### 61 AS, Little Rock AFB, AR

Maj. James P. Tuite

### 109 AW, Stratton ANGB, NY

Maj. Jeffrey R. Smith

MSgt. Randy G. Powell

### 115 AS, Channel Islands ANG, CA

Lt. Col. Keith Chikasawa

Lt. Col. William Green

SMSgt. Charles Watkins

### 121 ARW, Rickenbacker IAP, OH

Col. John Ehrhart

### 156 AS, Charlotte, NC

SMSgt. Jermaine Parker

### 165 AS, Louisville, KY

Lt. Col. Marc E. Hall

### 179 AW, Mansfield, OH

CMSgt. Todd Hunt

### 758 AS, Pittsburgh IAP, PA

SMSgt. Robert J. Mathe

## 3,500 HOURS

### JB Andrews – Presidential Airlift Squadron

MSgt. Elisa O. Villnave

TSgt. Brian P. Greene

### 1 AS, JB Andrews, MD

Lt. Col. Stephen E. Freedman

Lt. Col. Timothy K. Szeszulski

Maj. Christopher M. Langley

Maj. Donald F. Waugh

### 96 AS, Minneapolis - St. Paul ARS, MN

Maj. Jon M. Bergman

Maj. Matthew J. Crawford

Maj. Joshua A. Nelson

Maj. Brandon A. Schrader

### 109 AW, Stratton ANGB, NY

Maj. Nicholas J. Garren

MSgt. Paul D. Fobare

### 115 AS, Channel Islands ANG, CA

Lt. Col. Craig Barronton

Lt. Col. Steven Christiano

Lt. Col. Christopher Dougherty

Lt. Col. Mark Hutten

Lt. Col. Amar Liang

Lt. Col. Jared Miller

Lt. Col. Samuel Pupich

Lt. Col. Joseph Sanduk

Maj. Jose Ariza

Maj. Bradley Beachler

Maj. Chad Lunbeck

Maj. Patrick McBride

Maj. Matthew Ringlein

CMSgt. Ronald Nester Sr

SMSgt. William Whitlatch

MSgt. Paul Newton

MSgt. Christian Ring

MSgt. Barry Rutstein

### 121 ARW, Rickenbacker IAP, OH

Lt. Col. Todd Standifer

Maj. Daniel Vinson

### 146 AW, Channel Islands ANG, CA

Col. Bryan Allen

Col. Brian Kelly

Lt. Col. Andrew Miller

### 156 AS, Charlotte, NC

Col. Michael Geroch

MSgt. Robert B. Austin

MSgt. Kenneth C. Wells

### 179 AW, Mansfield, OH

MSgt. Matthew Isganitis



# MISHAP-FREE FLYING HOUR MILESTONES

## 2,500 HOURS

### JB Andrews – Presidential Airlift Squadron

SSgt. Shawna C. Rivas

### 1 AS, JB Andrews, MD

Maj. Gary M. Ruehs

MSgt. Carl W. Goke

MSgt. Jeffery C. Portemont

MSgt. Sybil E. Williams

SSgt. Erasmus A. Hartsfield

### 96 AS, Minneapolis-St. Paul ARS, MN

Capt. Ryan E. Leadens

### 109 AW, Stratton ANGB, NY

Maj. Ryan T. Giaconia

Capt. Richard J. Van Patten

TSgt. Michael R. Wallace

### 115 AS, Channel Islands ANG, CA

Lt. Col. Matthew Glynn

Lt. Col. Brian Hutten

Maj. Todd Morgan

Maj. Kelly Smith

Maj. Sheila Smith

Maj. Luke Trower

Capt. Jon-Mark Koetitz

Capt. Nathan Southwick

MSgt. Joseph Blomstrom

MSgt. Brian Miliefsky

MSgt. Michael-Edward Smith

TSgt. Steven Calaway

TSgt. James McGowan

### 121 ARW, Rickenbacker IAP, OH

Maj. Peter Wilson

Capt. Matthew Evans

Capt. Kevin Hogan

Capt. Bryan Tonnessen

### 156 AS, Charlotte, NC

Maj. Darrel G. Guy Jr.

TSgt. Matthew J. Lamonds

### 179 AW, Mansfield, OH

Maj. Eric O'Connor

Maj. James Law

Capt. Ronald Barr

Capt. Darryl Wilson

MSgt. David Cales

MSgt. Shawn Cavanaugh



A C-17 Globemaster III aircraft sits on the ramp at Joint Base Lewis-McChord, Wash., prior to take off during Exercise Mobility Guardian Aug. 2, 2017.

USAF photo by TSgt. Gregory Brook



## TO SUBMIT MISHAP-FREE FLYING HOUR MILESTONES:

Send your request to: [mobilityforum@us.af.mil](mailto:mobilityforum@us.af.mil)

HQ AMC/SEE, 618.229.0927 (DSN 779)

*Please submit as shown in the listings above  
(first name, last name, sorted alphabetically within rank).*



# QUICKSTOPPERS

## AvORM v3.2.0.


BY MR. KEVIN SLUSS, CSP,  
HQ AMC FLIGHT SAFETY

By the time you read this, those of you in mobility aviation will have access to version 3.2.0. of the Aviation Operational Risk Management (AvORM) software. This was released concurrently with Global Decision Support System (GDSS) version 3.2.0. and incorporates several user requested features to make it easier to get to AvORM from GDSS.

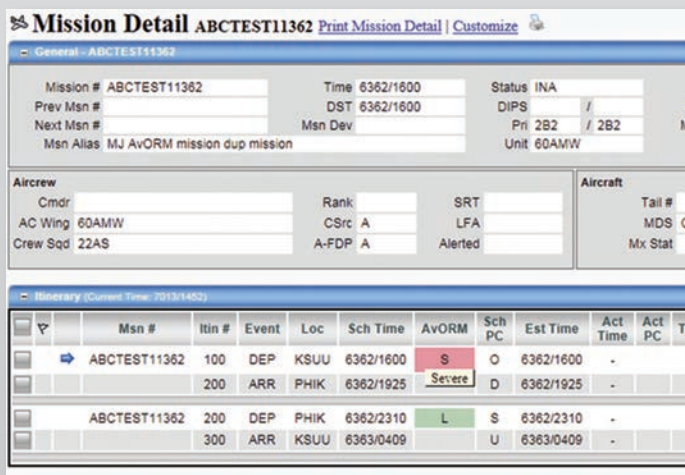
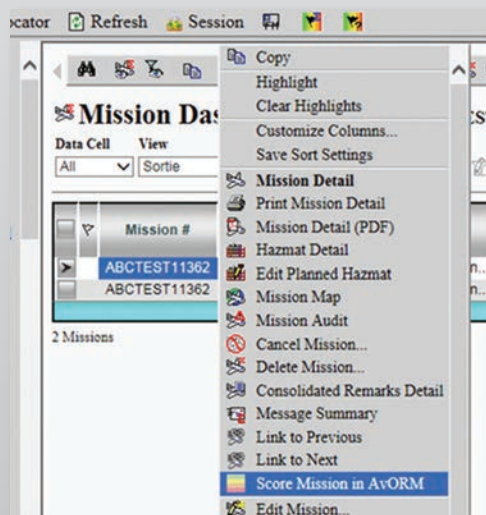
From the GDSS Mission Dashboard, you can now add the AvORM column. For missions with a scored AvORM, this column reflects the overall score with color code and letter (Low, Moderate, High, Severe). From Mission Detail, you can see the AvORM for each separate flight duty period.

Also, from GDSS, you can right click the mission number and select Score Mission in AvORM. This will take you to the AvORM Application Start Page and prefill the mission number.

One new operational feature permits the aircrew fatigue score to change the displayed mission effectiveness [fatigue] graph. For a particular flight duty period, fatigue score of Moderate will reduce the recovery curve for that period by 10 percent (48 minutes of a typical 8-hour recovery); High, 20 percent; and Severe, 30 percent. Aircrew inputs during missions will be retained to aid in post-mission analysis.

So now, it's time to gather inputs for the next software update. If you have an improvement idea, fill out AMC Form 901, which you can find on the AMC Flight Safety Page on the Air Force Portal or on e-publishing at <http://static.e-publishing.af.mil/production/1/amc/form/amc901/amc901.pdf>. Send it to [orm.amc.se@us.af.mil](mailto:orm.amc.se@us.af.mil). 

*Images below are from the test environment.*





# A DAY IN THE LIFE



SrA Kristine Glenn, 421st Combat Training Squadron, Phoenix Raven Course instructor, poses for a portrait wearing a Redman suit after a day of training with Phoenix Raven students. The intensive three-week, 12-hour-a-day course covers such subjects as cross-cultural awareness, legal considerations, embassy operations, airfield survey techniques, explosive ordnance awareness, aircraft searches and unarmed self-defense techniques. Students are exposed to more than 70 use-of-force scenarios where stress is simulated using role players. Training includes instruction and realistic practical exercises in antiterrorism/force protection, weapon system security, verbal judo, combatives, tactical baton employment and advanced firearms proficiency.

**USAF photo by SSgt. Vernon Young Jr.**