

RECORD VERSION

**STATEMENT BY
BRIGADIER GENERAL DAVID J. FRANCIS
COMMANDING GENERAL,
UNITED STATES ARMY COMBAT READINESS CENTER**

BEFORE THE

**SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES
COMMITTEE ON ARMED SERVICES
UNITED STATES OF HOUSE REPRESENTATIVES**

SECOND SESSION, 115TH CONGRESS

**ON DEPARTMENT OF DEFENSE AVIATION SAFETY MISHAP REVIEW AND OVERSIGHT
PROCESS**

JUNE 13, 2018

**NOT FOR PUBLICATION UNTIL RELEASED BY THE
COMMITTEE ON ARMED SERVICES**

**STATEMENT BY
BRIGIADIER GENERAL DAVID J. FRANCIS
COMMANDING GENERAL
U.S. ARMY COMBAT READINESS CENTER**

Chairman Turner, Ranking Member Tsongas, and fellow distinguished Members of the Tactical Air and Land Forces Subcommittee, I sincerely appreciate the opportunity to appear before you to discuss Army Aviation Safety. I am honored to represent the Army's leadership, and the Soldiers and Civilians of the Army and Army Aviation, serving our Nation around the world as we discuss this critical topic.

Army Aviation Mishap Rates

The United States Army maintains the world's largest, most modernized, and well-trained aviation force of its kind that provides an asymmetric advantage to the Joint Force. Military aviation is an inherently dangerous business, and we continue to make strides to reduce mishaps. Army aviation Class A mishap rates have steadily declined over the course of the last 35 years with noticeable anomalies associated with major combat deployments. In FY07, during the surge in Iraq, the Army's manned Class A Flight mishap rate was 2.39 per 100,000 flying hours. In the ten years that followed the rate has been reduced to a low in FY16 of 0.87 with a ten year average of 1.33. FY17 ended with a rate of 0.99 and the current rate for FY18 is 0.93. The mishap rates from FY16 to FY18 YTD constitute the lowest three-year period in the last 35 years. Despite this improvement, the Army is committed to aggressively driving our mishap rates down. The single most important thing we can do to reduce Aviation mishaps is continue to train in the most demanding conditions as we prepare to fight and win against peer and near-peer adversaries.

The Army continually assesses Class A, B, and C mishaps to identify trends we can target for loss prevention. The Class B and C mishap totals and rates for FY17 and FY18 are below ten year averages but remain relatively consistent over the last five years. Analysis of these mishaps indicate that the causal factors mirror those of our Class A mishaps. While most mishaps are the result of a series of events, roughly 80% of all Class A through C mishaps involve human factors as the leading or latent (underlying) causal factors contributing to the mishap. The leading causal factors are performance based and judgment errors; while

individual training, experience level, supervision, planning, and crew and team training represent the predominant underlying causal factors.

The Army's Aviation force faces unique challenges as we prepare for Large Scale Combat Operations against a peer or near-peer adversary. Large Scale Combat Operations demand a different training approach to reach collective level proficiency. Doctrine, tactics, techniques, and procedures are different compared to those used for training and conducting counter-insurgency operations like those in Iraq and Afghanistan. The anti-access area denial capabilities of our peer and near-peer adversaries will drive our rotary wing forces much closer to the ground. These capabilities include the multi-domain, contested environment of early warning, cyber, space, electronic warfare, integrated air defense systems and sophisticated reconnaissance and security tied to precision long range fires. We need to train at terrain flight altitude profiles to counter the potential threat and avoid the sharp increase in mishaps we suffered during the initial stages of previous conflicts. Aggressive, realistic training in the most demanding mode of flight is the best way to mitigate a rise in mishaps associated with Large Scale Combat Operations. However, current demands on the force have 84% of active duty Army Aviation units committed to training for, deploying to, executing, or recovering from mission support requirements. This operational tempo challenges our ability to achieve collective level training standards above the platoon level. Large Scale Combat Operations will require companies and battalions to operate as integrated teams. If we do not train for those operations we will significantly increase the risks associated with those operations in combat. At the current pace we run the risk of repeating the spike in aviation mishaps we experienced in previous major operations.

Army leadership is working diligently to prevent future mishaps. Army Aviation's Executive Leadership convenes weekly to discuss actions across the Doctrine, Organization, Training, Material, Leadership and Education, Personnel, Facilities and Policy (DOTMLPF-P) spectrum. In addition to continuous aircraft modernization, other initiatives include the development of low altitude emergency procedures Training Support Packages (TSP), development of changes to instructor pilot training courses, re-assessing and evaluating instructor pilot experience levels and prerequisites for becoming an instructor pilot, and development of a standardized Aviation "Battle Book" for the entire Aviation force. Additionally, the U.S. Army Combat Readiness Center (USACRC) is conducting vignette-based training with every Aviation element across all three components, drawing lessons learned from Class C mishaps and other "near-miss" incidents. These vignettes poignantly illuminate the leading and

underlying human factors that can lead to many of our most catastrophic events. The USACRC is also developing and fielding improved information management systems that capture near-miss reporting for more ready access and dissemination to the field.

Aviation Mishap Governance, Investigation and Review

The Army takes every mishap seriously. Though mishaps are stratified based on severity, the Army investigates all mishaps in accordance with Title 10, U.S. Code, Department of Defense Instruction (DoDI) 6055.07, Army Regulation (AR) 385-10, and Department of the Army Pamphlet (DA PAM) 385-40, in order to prevent future mishaps. AR 385-10 requires immediate notification to the USACRC of Class A-C aviation mishaps. The USACRC receives and analyzes these initial notifications to determine investigation requirements and notify senior leaders as appropriate. As part of this process, the information available for the mishap is recorded in the Army Safety Management Information System (ASMIS) and initial electronic notifications of serious mishaps are forwarded to senior leaders, including the Vice Chief of Staff of the Army (VCSA), Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health (DASA-ESOH), and the Department of Defense Deputy Assistant Secretary of Defense, Environment, Safety and Occupational Health.

Less severe mishaps, those that do not involve permanent injury or damage over \$500K, are investigated in the field by locally assigned officers or safety specialists using abbreviated reporting requirements. For Class A and B mishaps, the Army utilizes formal Investigation Boards. The USACRC deploys teams to lead Centralized Accident Investigations for the most serious mishaps. The Commanding General (CG), USACRC, after consultation with the General Officer leadership of the mishap unit, makes the final decision on whether to deploy a team based on the initial report of the mishap and the resources available at the time. Any specific areas to be investigated outside of the requirements of AR 385-10 or DA PAM 385-40 are also covered in this consultation. The CG, USACRC also informs the VCSA of his decision. If the USACRC does not deploy a team to lead the investigation, the responsibility for the investigation is returned to the General Courts Martial Convening Authority (GCMCA) to appoint a board to investigate the mishap ensuring that the members of the board are impartial, not from the mishap unit, and meet the requirements of AR 385-10.

Regardless of the composition of the investigative board, or whether a USACRC team leads the investigation, we utilize a deliberate and methodical process to answer three fundamental questions: what happened, why it happened, and what to do about it. The formal process for answering these questions is broken into five phases. Phase one is the organization phase, which comprises the assembly and formal appointment of the Board. Board composition varies, depending on the nature and degree of severity of the mishap (aviation vs. ground mishap, the type of equipment involved, the degree of injury suffered or fatalities involved, etc.). The Board is organized into three teams to ensure a comprehensive perspective: the Board leadership, a Human Factors team, and a Materiel Factors team. The second phase is the data collection phase, during which the Board collects data and evidence from all available/applicable sources, including the mishap site, risk assessments, equipment maintenance, training and medical records, and unit orders and policies, in order to gain an accurate understanding of the personnel, equipment, and environment surrounding the mishap. The third phase is the analysis phase, during which the Board examines all collected data and develops an understanding of what happened and how the information collected is relative to the cause of the mishap. During the fourth phase, the deliberation phase, the Board identifies and assesses the active failure(s) and latent condition(s) that contributed to the mishap, thereby answering why it happened. The Board develops Contributing findings (directly leading to the mishap) and Present but Not Contributing findings (those not directly leading to the mishap but if not corrected, could result in future mishaps). The most important output from the deliberations phase are the recommendations, which are directed at three Army echelons: 1) to the mishap unit, 2) to that unit's higher headquarters, and 3) to Army Commands (ACOM). These recommendations determine what actions the Army will take to address the mishap. During the final phase, the Board completes the field report and outbriefs their findings and recommendations to the convening authority (usually the first general officer in the chain-of-command with GCMCA).

AR 385-10 requires that the board complete the investigative report within 90 days of the mishap, to include staffing through the mishap chain of command from battalion to ACOM level. During this endorsement process, commanders at every level are expected to answer all recommendations not already acted upon earlier in the investigation process. The investigation is complete when all findings are closed with action and the ACOM commander signs the final report. Once the final report is signed by the convening authority and subsequent commanders up to the ACOM level, the USACRC enters all information from the report into the ASMIS database to complete the record. Final reports are maintained at the USACRC and available for analysis and

research. Multiple agencies across the Army use the ASMIS database for research and analysis, and the USACRC continually reviews the data for emerging trends. The Army shares data with the other services and with the Office of the Secretary of Defense (OSD) through data pushes, such as to Force Risk Reduction (FR2) in accordance with the current memorandum of understanding, and with pulls to support any follow on requests.

Of note, the mishap unit typically conducts a separate legal investigation concurrent with the AR 385-10 mandated safety investigation. Using AR 27-20 or AR 15-6 as the governing document, the purpose of the legal investigation is to preserve all available evidence for use in litigation, claims, disciplinary action, or adverse administrative actions. All factual information gathered by the safety investigation board is shared with the legal investigation, and all information gathered by the legal investigation is releasable to the safety investigation board.

Lessons Learned

If the safety investigation board discovers a critical hazard to operations, the board president immediately reports the hazard to the USACRC and appropriate agencies. For example, if the investigation reveals a materiel failure, the USACRC and investigation board will immediately consult with the appropriate Program Executive Office, Product Manager, and Army Materiel Command (AMC) to remedy the issue. As a case in point, while investigating an AH-64D mishap, the board discovered a probable failure of the main rotor system blade retention yoke (“strap pack”) and retention nut. The board immediately alerted the probable materiel failure to the USACRC and the Aviation and Missile Command (AMCOM), AMC’s aviation materiel proponent. AMCOM immediately assembled expertise from across the enterprise to study and assess the probable materiel failure. They then issued a Safety of Flight Message to the Army and all other AH-64 users requiring immediate and follow-on inspections for all main rotor strap packs and retention nuts. A similar process occurred when a UH-60L tail rotor blade disbonded, causing the aircraft to crash. AMCOM immediately issued a Safety of Flight Message requiring maintenance inspections of the tail rotor and a mandatory review of tail rotor malfunction emergency procedures training. As a final example, less than 72 hours after a recent AH-64E mishap, the Chief of Staff of the Army hosted a worldwide VTC with all AH-64 equipped Aviation commands across all three components, demonstrating Army Senior Leader commitment to loss prevention.

The USACRC manages less urgent recommendations that require Army action through the Army Recommendation Tracking System (RTS). These recommendations address shortcomings across the DOTMLPF-P and include changes to Army policy, institutional training, technical manuals, and materiel. The USACRC communicates recommendations to the appropriate ACOM for action, captured in RTS, and closes the action when the ACOM commander implements the recommendations. The CG, USACRC is the authority to close a recommendation.

Beyond RTS, the USACRC and Army disseminate lessons derived from mishap findings and recommendations in a variety of ways:

- The CG, USACRC communicates mishap analyses across the force through “Safety Six Sends” messages to brigade commanders.
- The USACRC posts one-page executive summaries of Class A accidents containing safety privileged information to the Army Center for Lessons Learned (CALL) website.
- The U.S. Army Aviation Center of Excellence addresses any immediate action changes to procedures, standards, and leader and individual training issues by issuing “STANSGRAMS” to all active and reserve component Aviation units.
- The USACRC enters safety reports into ASMIS, which are then available to any individual who has safety responsibilities and requests access.
- The USACRC posts Centralized Accident Investigation results to ASMIS within two weeks of completion of the field investigation.
- The USACRC disseminates lessons learned Army-wide on its website and electronic publications — Knowledge Magazine and FlightFax Newsletter.
- The CG, USACRC briefs all Aviation pre-command courses, which include all company, battalion, and brigade commanders, command sergeants major, and command chief warrant officers, to share lessons learned from mishaps and other analyses.
- The CG, USACRC alerts brigade commanders when any of their battalions score in the bottom 50% of the Army Readiness Assessment Program (ARAP) survey. Every Army battalion executes the ARAP survey in accordance with AR 385-10. ARAP informs incoming commanders of their units’ safety climate.
- The CG, USACRC authors a monthly article in the Army Aviation Association of America magazine which concentrates on trends and emerging issues.

Interaction at the Joint and OSD Level

While mishap investigation and reporting is a service specific requirement, the Army actively participates in joint and OSD efforts. The Joint Services Safety Council (JSSC), composed of the commanders of each service's safety organizations, meets semi-annually in person to share information, discuss trends and lessons learned, and share prevention programs. The JSSC and its subordinate working groups convene as needed when emerging issues require. The Services share mishap data and coordinate on concerns involving like systems or similar hazards. Program managers communicate materiel issues across the services through safety channels. The USACRC staff participates in numerous joint and OSD working groups and supports FR2 with data and analysis as requested. The USACRC interfaces with the Defense Safety Oversight Council (D-SOC) via the Safety and Occupational Health Integrating Committee (SOHIC), which convenes monthly and is co-chaired by OUSD P&R and OUSD EI&E. This forum provides for collaboration and coordination across the Services.

Finally, the Army routinely participates in information sharing with OSD through the preparation of data or briefings for senior Defense officials. Most recently, the CG, USACRC briefed the Assistant Secretary of Defense for Energy, Installations and Environment and the Deputy Assistant Secretary of Defense, Environment, Safety and Occupational Health on an in-depth study of Class C Aviation mishaps.

Conclusion

The Army's efforts to reduce Aviation mishaps to the low levels we see today is an ongoing process. We must train to the highest standards in the most demanding conditions to meet future threats, while systematically drawing from and disseminating lessons learned. We also must remain aware of and mitigate the inherent risk in Aviation operations, but we cannot be risk averse — or we will pay the price in our next conflict.

Mr. Chairman and distinguished members of this subcommittee, thank you for your continued strong support for the Army's Soldiers, Civilians and families.