

November 18, 2025

The Honorable Pete Hegseth
Secretary of Defense
U.S. Department of Defense
1000 Defense Pentagon
Washington, D.C., 20301-1000

Dear Secretary Hegseth,

I write in regard to concerns over new Department of Defense (DoD) data obtained by my office revealing that the rate of severe military aviation mishaps increased rapidly between 2020 and 2024.¹ These data raise questions about DoD's ability to prevent accidents and protect servicemembers and the national security threats posed by these failures.

Specifically, these data show that:

- There were a total of 4,820 aviation mishaps in this four-and-a-half year period — including 222 Class A mishaps, the most serious incidents.²
- The rate of these Class A mishaps increased rapidly over this time period, from 1.30 mishaps per 100,000 flight hours in 2020 to 2.02 mishaps per 100,000 flight hours in 2024.³
- In total, these mishaps cost the military \$9.4 billion and killed 90 service members. In just the first half of 2024, 25 service members and DoD civilian employees were killed and 14 aircraft were destroyed.⁴

These data reveal that DoD must make additional efforts to improve aviation safety, and that Congress must act — including by passing my National Defense Authorization Act provision that improves transparency and provides additional information on these incidents to Congress and the public.

Increasing Rates of Aircraft Mishaps in All Four Service Branches

Each of the military services tracks their aviation mishap rates — defined as any mishap causing injury or damage to property, per 100,000 flight hours — placing them in different severity

¹ On file with the Office of Senator Elizabeth Warren.

² *Id.*

³ *Id.*

⁴ *Id.*

categories from A to E.⁵ Class A mishaps are the most serious, resulting in damage of at least \$2.5 million, destroyed aircraft, or fatalities or permanent total disabilities.⁶

In 2024, I asked DoD to provide a detailed breakdown of mishaps in the military by service class and aircraft type.⁷ DoD, in response to my request, provided this data covering the period from October 2019 through July 2024.⁸ This data showed that there were a total of 4,820 aviation mishaps during this time period and revealed an increase in the rate of Class A mishaps in all the military services.⁹

The data show that there was a total of 4,820 mishaps, including 222 Class A mishaps from 2020 through 2024.¹⁰ These mishaps killed 90 service members and DoD civilian employees, destroyed 89 aircraft, and cost DoD \$9.4 billion.¹¹

Overall, among all service branches there was a total Class A mishap rate of 1.30 per 100,000 flight hours in FY2020, which increased to 1.48 in FY2023, and 2.02 in FY2024.¹² This was a 36% increase in the Class A mishap rate from 2023 to 2024, and a 55% increase from 2020 through 2024.¹³

Among the service branches, the Marine Corps had the highest average of Class A mishap rates from FY2020 to FY2024.¹⁴ For the Marines, there were 1.33 Class A mishaps per 100,000 flight hours in FY2020, 2.89 Class A mishaps per 100,000 flight hours in FY2023, and 3.91 Class A mishaps per 100,000 flight hours in FY2024.¹⁵ This was a 35% increase from 2023 to 2024, and a 194% increase from 2020 to 2024.¹⁶

Table 1 contains the full Class A mishap data for all four service branches.

⁵ United States Naval Safety Command, “Current Mishap Definitions,” <https://navalsafetycommand.navy.mil/Reporting-Investigations/Current-Mishap-Definitions/>.

⁶ *Id.*

⁷ Letter from Senator Elizabeth Warren, Senator Edward Markey, and Representative Richard Neal to Secretary of Defense Lloyd J. Austin, July 18, 2024, https://www.warren.senate.gov/imo/media/doc/final_-_warren_markey_neal_letter_to_dod_re_follow-up_on_v-22_safety_issues_and_aircraft_mishaps.pdf.

⁸ On file with Office of Senator Elizabeth Warren.

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

Table 1.

Manned Aviation Class ‘A’ Mishaps (Flight, Flight Related, & Ground Operations) FY 2020 – FY2024 (through July 31) per 100k flight hours					
Fiscal Year	Air Force	Marine Corps	Navy	Army	All DoD
2020	1.72	1.33	1.12	0.76	1.30
2021	1.14	0.41	1.25	0.99	1.08
2022	1.51	3.51	1.98	0.99	1.64
2023	1.79	2.89	0.91	1.21	1.48
2024	1.90	3.91	1.76	2.02	2.02

A more recent series of tragic accidents indicate ongoing readiness and safety risks for military aircraft and the service members flying them. In September 2025, an Army MH-60 helicopter crashed in Washington state and killed four service members.¹⁷ On October 26, 2025, an MH-60R crashed in the South China Sea, and 30 minutes later, an F/A-18F assigned to the same aircraft carrier also crashed in the South China Sea.¹⁸ While these crashes are still under investigation, I am concerned about their implications for safety and readiness — and that some recent crashes may have been caused by known safety risks.

In April 2024, Lockheed Martin issued a notice for the F-35 Lightning II warning that the failure to act on a “Weight on Wheels” sensor faulting “can cause erratic flying qualities making it difficult for the pilot to maintain control of the aircraft.”¹⁹ In January 2025, an F-35 crashed at Eielson Air Force Base, causing the pilot to eject from the aircraft and sustain minor injuries.²⁰ A July Accident Investigation Board (AIB) report revealed the crash was caused in part by a landing gear failure due to “hydraulic fluid contaminated with water that froze.”²¹ The frozen water caused the Weight on Wheels sensors to indicate that the aircraft was on the ground while it was airborne — making the jet uncontrollable.²² According to the report, the pilot was also on the phone with engineers from Lockheed Martin for almost one hour before attempting two landings and subsequently ejecting.²³

¹⁷ Military Times, “Four soldiers killed in Washington state helicopter crash, Army says,” Martha Bellisle, September 19, 2025, <https://www.militarytimes.com/news/your-military/2025/09/19/four-soldiers-killed-in-washington-state-helicopter-crash-army-says/>.

¹⁸ Navy Times, “Navy helicopter, jet crash in South China Sea in separate incidents,” Beth Sullivan, October 26, 2025, <https://www.navytimes.com/news/your-navy/2025/10/27/navy-helicopter-jet-crash-in-south-china-sea-in-separate-incidents/>.

¹⁹ United States Air Force, “United States Air Force Aircraft Accident Investigation Board Report, F-35A, T/N 19-5535,” July 8, 2025, pg. 24, https://www.pacaf.af.mil/Portals/6/documents/3_AIB%20Report.pdf?ver=z-QJgIR9Qm7slupMlo6zeA%3d%3d.

²⁰ Military.com, “F-35 Pilot Was on Phone for Nearly an Hour with Engineers Before Ejection and Fiery Crash,” Thomas Novelty, August 27, 2025, <https://www.military.com/daily-news/2025/08/27/f-35-pilot-was-phone-nearly-hour-engineers-ejection-and-fiery-crash.html>.

²¹ United States Air Force, “United States Air Force Aircraft Accident Investigation Board Report, F-35A, T/N 19-5535,” July 8, 2025, https://www.pacaf.af.mil/Portals/6/documents/3_AIB%20Report.pdf?ver=z-QJgIR9Qm7slupMlo6zeA%3d%3d.

²² *Id.*

²³ *Id.*

Aircraft Mishaps Endanger Servicemembers and Waste Taxpayer Dollars

The increasing rate of aircraft mishaps imposes a heavy toll on service members, the military budget, and military readiness — and appears to be part of a longer-term trend. In 2018, the Navy found Class C mishaps in naval aviation had doubled in the past decade,²⁴ and the Air Force’s overall aviation mishap rate also hit a seven-year high that year.²⁵ In 2023, former Marine Corps Acting Commandant General Eric Smith ordered all Marine units to discuss their “culture of safety” after a series of tragic mishaps.²⁶ The previous year, 48 Marines died in mishaps.²⁷ In FY2023, 18 service members and DoD civilians died in aviation mishaps.²⁸ In July 2024, Air Force Chief of Staff General David Allvin revealed the Air Force lost 47 airmen and \$1.5 billion in weapon systems through preventable mishaps in just one year.²⁹ This loss of life due to mishaps poses an unacceptable risk to service members, their families, and military readiness.

Aircraft mishaps also cost the government billions of dollars. From FY2013 – FY2020, aviation mishaps cost the government a whopping \$11.6 billion.³⁰ The cost of Class A mishaps rose significantly from FY2022 to FY2023, as Class A mishaps cost the government \$1.6 billion in FY2022, and \$2.9 billion in FY2023.³¹ In just the first half of 2024, Class A mishaps already cost the government \$1.7 billion.³² Even a single crash or mishap can be incredibly expensive for the government. For instance, in 2022, a B-2 Spirit crashed at Whiteman Air Force Base and caused almost \$300 million worth of damage.³³ So far this year, the Navy has lost four F/A-18Fs to mishaps.³⁴ One F/A-18F costs the government approximately \$60 million.³⁵ The waste of taxpayer dollars due to increasing mishap rates also poses a threat to our military’s readiness and budget.

²⁴ Navy Times, “Naval aviation plagued by ‘disturbing’ trend of ground mishaps,” Mark D. Faram, May 3, 2018, <https://www.navytimes.com/news/your-navy/2018/05/03/naval-aviation-plagued-by-disturbing-trend-of-ground-mishaps/>.

²⁵ Air Force Times, “Air Force aviation accidents reach seven-year high as low-level mishaps soar,” Stephen Losey, April 8, 2018, <https://www.airforcetimes.com/news/your-air-force/2018/04/08/air-force-aviation-accidents-reach-seven-year-high-as-low-level-mishaps-soar/>.

²⁶ Marine Times, “Top Marine orders ‘culture of safety’ review after deadly crashes,” Irene Loewenson, August 31, 2023, <https://www.marinecorpstimes.com/news/your-marine-corps/2023/08/31/top-marine-orders-culture-of-safety-review-after-deadly-crashes/>.

²⁷ *Id.*

²⁸ On file with the Office of Senator Elizabeth Warren.

²⁹ Military.com, “Air Force to Put renewed Emphasis on Safety and Uniform Standards,” Thomas Novelty, January 10, 2025, <https://www.military.com/daily-news/2025/01/10/air-forces-top-uniformed-leader-calls-renewed-enforcement-of-safety-uniform-standards.html>.

³⁰ United States Naval Institute, “Report of National Commission on Military Aviation Safety on Aviation Mishaps from 2013 to 2020,” December 3, 2020, <https://news.usni.org/2020/12/03/report-of-national-commission-on-military-aviation-safety-on-aviation-mishaps-from-2013-to-2020>.

³¹ On file with Office of Senator Elizabeth Warren.

³² *Id.*

³³ Military.com, “Report: Landing Gear Mishap Caused B-2 Bomber to Crash, Catch on Fire in 2022 Incident,” Thomas Novelty, August 7, 2025, <https://www.military.com/daily-news/2025/08/07/report-landing-gear-mishap-caused-b-2-bomber-crash-catch-fire-2022-incident.html>.

³⁴ Business Insider, “A US Navy Super Hornet and Sea Hawk from the same aircraft carrier crashed 30 minutes apart in the South China Sea,” Mathew Loh, October 27, 2025, <https://www.businessinsider.com/us-navy-super-hornet-sea-hawk-south-china-sea-crash-2025-10>.

³⁵ *Id.*

As DoD spends billions of dollars each year on weapons systems,³⁶ it is DoD's job to ensure that those systems work and that there are plans and measures in place to keep service members safe.

DoD's Tools to Improve Aviation Safety and Reduce Mishap Rates

In 2018, in response to concerns about military aviation safety, Congress created the National Commission on Military Aviation Safety to study and address these concerns.³⁷ The commission reported on a number of causes for the broad safety problems, including that "aviation and maintenance and experience, the key to doing a job safely and efficiently, is declining."³⁸ It also found that on top of aircrew and maintainer experience gaps, some aircrews are experiencing physiological episodes, which puts their performance and safety at risk, when the aircraft's systems fail.³⁹

In response to these findings, the commission recommended a dedicated focus on combatting safety challenges in weapons systems, leading to Congress's creation of the Joint Safety Council in 2022 to further address safety challenges.⁴⁰

However, I am still concerned that the Joint Safety Council may not have the tools and authorities necessary to prevent future accidents. In particular, one key failure is the lack of transparency regarding accident investigation reports. After any aviation accident, the military services Accident Investigation Boards (AIBs) and safety investigation boards (SIBs) to investigate the accident and write a report that reveals information about the accident.⁴¹ AIB reports are used to identify the fault of an accident while SIB reports identify root factors and safety issues that contributed to the accident.⁴² While AIB reports are typically made public, SIB reports are not made available to the public or Congress.⁴³

This failure to share even basic information from SIBs with Congress undermines Congress's ability to conduct oversight and ensure that problems that caused or contributed to the recent crashes have been fixed. To address this, I secured a provision in the Senate version of the FY2026 National Defense Authorization Act (NDAA) that requires the Joint Safety Council to provide Congress the executive summaries of SIBs conducted over the past three years and any

³⁶ Peter G. Peterson Foundation, "Budget Basics: National Defense," <https://www.pgpf.org/article/budget-explainer-national-defense/>; United States Department of Defense, "Senior Officials Outline President's Proposed FY26 Defense Budget," Matthew Olay, June 26, 2025, <https://www.war.gov/News/News-Stories/Article/article/4227847/senior-officials-outline-presidents-proposed-fy26-defense-budget/>.

³⁷ United States Naval Institute, "Report of National Commission on Military Aviation Safety on Aviation Mishaps from 2013 to 2020," December 3, 2020, <https://news.usni.org/2020/12/03/report-of-national-commission-on-military-aviation-safety-on-aviation-mishaps-from-2013-to-2020>.

³⁸ *Id.* pg. 8.

³⁹ *Id.*

⁴⁰ United States Department of Defense, "Defense Department Hosts First Joint Safety Council," press release, August 30, 2022, <https://www.defense.gov/News/Releases/Release/Article/3143863/defense-department-hosts-first-joint-safety-council/>.

⁴¹ United States Air Force, Air Combat Command, "Air Force Safety and Accident Board Investigations," January 22, 2019, https://www.acc.af.mil/Portals/92/Docs/Fact%20Sheets%20-%202020%20Update/SafetyAccidentBoardInvestigation_Formatted.pdf.

⁴² *Id.*

⁴³ *Id.*

corrective actions that were taken.⁴⁴ The amendment, if it is adopted in the final version of the law, would help Congress in its oversight role of preventing accidents.

Questions

In the face of increasing rates of costly and deadly aviation mishaps, it is critical that Congress and DoD take all necessary action to address this problem. In order to assess whether additional legislation to prevent weapon mishaps is necessary, and to assist me in fulfilling our legislative duties as members of the Senate Armed Services Committee, I seek more information on DoD's plan to prevent military aircraft mishaps. I ask that you provide answers to the following questions no later than December 2, 2025:

1. DoD provided me with data on aviation mishaps in the military from October 2019 - July 2024 with detailed breakdowns by class and aircraft type. Please provide the information detailed below from August 2024 to the present, broken out by year and as follows:
 - a. Mishaps, fatalities, destroyed aircraft, and estimated costs across DoD for Class A, Class B, and Class C of mishap classifications.
 - b. Breakdown of Class A mishap rates between DoD, Army, Air Force, Navy, and Marine Corps.
 - c. Breakdown of the number of Class A mishaps by the top ten most used aircraft types and rate of Class A mishaps per 100k hours of flight.
 - d. Flight, flight-related, and ground mishaps by Class types.
2. Please provide the information detailed below from 2020 to 2025.
 - a. Mishaps, fatalities, destroyed aircraft, and estimated costs across each service for each aircraft.
3. What is DoD's plan to identify and address aircraft training deficiencies in the services?
 - a. Do trainings for the same aircraft and weapons systems differ across the Army, Navy, Air Force, and Marine Corps?
4. What is DoD's plan to identify and address aircraft maintenance deficiencies in the services?
5. What is DoD's plan to identify and address aircraft design flaws?
 - a. Is DoD aware of instances where aircraft programs knew about certain design flaws in their aircraft, but failed to take corrective action?
 - b. How is DoD holding contractors accountable for design flaws?

⁴⁴ United States Senator Elizabeth Warren, "Warren Secures Wins on Right to Repair, Service Member Safety, Military Housing, Transparency at Defense Department in Senate Version of FY 2026 Defense Policy Bill," press release, July 11, 2025, <https://www.warren.senate.gov/newsroom/press-releases/warren-secures-wins-on-right-to-repair-service-member-safety-military-housing-transparency-at-defense-department-in-senate-version-of-fy-2026-defense-policy-bill>.

6. The National Commission on Military Aviation Safety report found that “maintenance experience, one key to doing a job safely and efficiently, is declining.”⁴⁵ It also found “shortcomings in initial training, follow-on training, and personnel management of... maintainers.”⁴⁶
 - a. How is maintainer experience currently being measured?
 - b. What have maintainer experience levels been over the past six years?
 - c. How is maintainer training currently being measured?
 - d. Were maintainers subject to a Reduction In Force over the past six years?
 - e. How has training new maintainers improved over the past six years?
 - f. What methods has DoD used to increase the retention of maintainers over the past six years?
 - g. What methods has DoD used to increase its workforce of maintainers over the past six years?
7. The National Commission on Military Aviation Safety report found that “aviation... experience, another key to doing a job safely and efficiently, is declining.”⁴⁷ It also found “shortcomings in initial training, follow-on training, and personnel management of aircrews.”⁴⁸
 - a. How is aircrew experience currently being measured?
 - b. What have aircrew experience levels been over the past six years?
 - c. How is aircrew training currently being measured?
 - d. How many hours a week do aircrews currently conduct high-level training?
 - e. Were aircrews subject to a Reduction In Force over the past six years?
 - f. How has training new aircrews improved over the past six years?
 - g. What methods has DoD used to increase the retention of aircrews over the past six years?
 - h. What methods has DoD used to increase its workforce of aircrews over the past six years?
8. The National Commission on Military Aviation Safety report found that DoD “lacks sufficient data collection methods and analysis capabilities to reduce risks and improve safety.”⁴⁹
 - a. What data collection methods does DoD use for calculating its mishap rates?
 - b. What steps has DoD taken to improve data collection methods of mishap rates over the past six years?
9. The National Commission on Military Aviation Safety report found that the military services lack standardized procedures and a consistent process in mishap reporting.⁵⁰
 - a. Do the services have a standardized procedure for mishap reporting?

⁴⁵ National Commission on Military Aviation Safety, “Report to the President and the Congress of the United States,” December 1, 2020, <https://news.usni.org/2020/12/03/report-of-national-commission-on-military-aviation-safety-on-aviation-mishaps-from-2013-to-2020>.

⁴⁶ *Id.*

⁴⁷ *Id.*

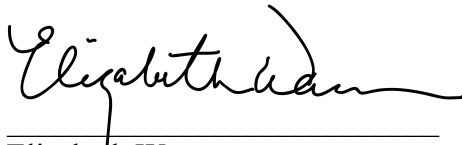
⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.*

- b. What is DoD's standardized procedure for mishap reporting across all the services?
 - c. What steps has DoD taken to implement a standardized procedure for mishap reporting across all the services?
10. The National Commission on Military Aviation Safety report found that improved pilot monitoring could help DoD better understand, and reduce unexplained pilot psychological episodes.⁵¹
- a. Has pilot monitoring improved?
 - b. What steps has DoD taken to improve pilot monitoring?
 - c. How is pilot monitoring currently being measured?

Sincerely,



Elizabeth Warren
United States Senator

⁵¹ *Id.*