

Congress of the United States

Washington, DC 20515

November 25, 2024

The Honorable Lloyd J. Austin III
Secretary of Defense
U.S. Department of Defense
1000 Defense Pentagon
Washington, DC 20301-1000

Dear Secretary Austin,

We write to express our concern regarding the Air Force's decision to resume deployment of the full fleet of Bell Boeing V-22 Ospreys, especially given the spike in grave safety issues over the past few years that include the need to address mechanical issues at the center of many of the aircraft's past crashes.¹ After reviewing thousands of pages of accident reports, the *Associated Press* found that "the top three most serious types of incidents rose 46% between 2019 and 2023."² Aircraft problems usually level off after a few years, but V-22 incidents have spiked in the last 5 years even though "the number of hours flown have dropped."³ The *Associated Press* also found most of these incidents were "tied to the aircraft's design" raising questions about the need for a design change. Manufacturers have not commented on these questions, and the Marines have seemed to dismiss them, highlighting the commitment to flying the aircraft through 2050.⁴ Given the current concerns about the safety of the V-22, the aircraft should be grounded, and should not be deployed again until the platform's significant deficiencies are fully addressed.

Recent Fatal V-22 Crashes and Investigations

Two recent safety reports from the Air Force's investigations into the November crash found the latest crash was the result of "a long list of institutional and manufacturing issues" and that the airworthiness process for the aircraft should be overhauled.⁵ The report's recommendation is the latest for the V-22 which has been involved in 21 major accidents since 1992 resulting in 64

¹ Breaking Defense, "Air Force special ops CV-22 Ospreys could be ready to deploy in weeks, commander says," Valerie Insinna, September 18, 2024, <https://breakingdefense.com/2024/09/air-force-special-ops-cv-22-ospreys-could-be-ready-to-deploy-in-weeks-commander-says/>; Military.com, "Air Force Ospreys Set to Again Deploy Abroad After Deadly Crash, But Concerns Linger on Mechanical Issues," Thomas Novelly, September 18, 2024, <https://www.military.com/daily-news/2024/09/18/air-force-will-start-deploying-ospreys-within-weeks-after-safety-checks-triggered-deadly-japan-crash.html>.

² Associated Press, "The Osprey's safety issues spiked over five years and caused deaths. Pilots still want to fly it," Tara Copp, Kevin Vineys, and Aaron M. Kessler, November 19, 2024, <https://apnews.com/osprey-safety-issues-000001932652dd90adb7bf5b58fc0000>.

³ *Id.*

⁴ *Id.*

⁵ Aviation Week, "U.S. Air Force Is Considering V-22 Airworthiness Overhaul," Brian Everstine, September 12, 2024, <https://aviationweek.com/defense/budget-policy-operations/us-air-force-considering-v-22-airworthiness-overhaul>.

deaths.⁶ Just last year, Marine Corps Captain Ross A. Reynolds from Leominster, Massachusetts was piloting a V-22 when it crashed near Norway, killing Captain Reynolds and three other Marines onboard.⁷ The most recent crash, off the coast of Japan last November, killed eight service members, including Staff Sergeant Jacob Galliher – a young father from Pittsfield, Massachusetts.⁸

We have questions about the conclusions of the public Accident Investigation Board (AIB) report, which, at least in part, blames the crew. According to the report, “by a preponderance of the evidence, the mishap was caused by a catastrophic failure of the left-hand Proprotor Gearbox that created a rapidly cascading failure of the MA’s drive system.”⁹ However, the report also found that “by the preponderance of evidence, Mishap Pilot’s (MP) decisions were causal, as they prolonged the mishap sequence and removed any consideration of an earlier landing at a different divert location.”¹⁰ We have questions and concerns about this conclusion of the AIB report. Members of the V-22 community have reported that those lights were “considered common” and “just part of the aircraft’s operation” due to the frequency with which they turned on during a flight.¹¹ The Air Force has to use the V-22’s interim power when in helicopter mode to surge power even though Bell Textron and Boeing – the builders of the aircraft – had cautioned against it because if they “don’t use it, [they] won’t have the power to land.”¹² The reality for pilots is that they have to push the aircraft to its limits to stay safe.

The V-22 Program Suffered Systemic Safety Problems

The real root causes of the most recent crash and others appear to be program failures that led to critical safety lapses. The AIB report and reports of an internal Safety Investigation Board (SIB) report that was obtained by *Aviation Week Network* (but has not been publicly released) confirm that V-22 safety problems have been known by at least one of the services for years.¹³ Both the AIB report and accounts of the SIB report indicate that they found the latest V-22 crash in

⁶ Associated Press, “The Osprey’s safety issues spiked over five years and caused deaths. Pilots still want to fly it,” Tara Copp, Kevin Vineys, and Aaron M. Kessler, November 19, 2024, <https://apnews.com/osprey-safety-issues-000001932652dd90adb7bf5b58fc0000>.

⁷ U.S. Marine Corps, “2nd MAW Releases Command Investigation Into the MV-22B Osprey Crash in Norway on March 18, 2022,” 1st Lt. Greg Kosiras, 2nd Marine Aircraft Wing, August 15, 2022, <https://www.2ndmaw.marines.mil/News/Article-View/Article/3127405/2nd-maw-releases-command-investigation-into-the-mv-22b-osprey-crash-in-norway-o/>.

⁸ CBS News, “Massachusetts native Jacob Galliher killed in crash of U.S. military Osprey aircraft off Japan,” Mike Toole, December 2, 2023, <https://www.cbsnews.com/boston/news/jacob-galliher-u-s-military-osprey-aircraft-crash-death-japan-pittsfield-massachusetts/>.

⁹ U.S. Air Force, Aircraft Accident Investigation Board Report, June 6, 2024, p. 3, <https://www.afjag.af.mil/LinkClick.aspx?fileticket=ENTTeS2T9go%3d&portalid=77>.

¹⁰ *Id.*

¹¹ Military.com, “Flaw in Osprey Gears Was Known a Decade Prior to Deadly Japan Crash, Internal Report Shows,” Konstantin Toropin and Thomas Novelty, August 21, 2024, <https://www.military.com/daily-news/2024/08/21/flaw-osprey-gears-was-known-decade-prior-deadly-japan-crash-internal-report-shows.html>.

¹² Associated Press, “The Osprey’s safety issues spiked over five years and caused deaths. Pilots still want to fly it,” Tara Copp, Kevin Vineys, and Aaron M. Kessler, November 19, 2024, <https://apnews.com/osprey-safety-issues-000001932652dd90adb7bf5b58fc0000>.

¹³ Aviation Week, “U.S. Air Force Is Considering V-22 Airworthiness Overhaul,” Brian Everstine, September 12, 2024, <https://aviationweek.com/defense/budget-policy-operations/us-air-force-considering-v-22-airworthiness-overhaul>.

November of 2023 was due to “fracturing of a single gear... which caused other failures in the proprotor gearbox.”¹⁴ The *Associated Press* found critical components “are wearing out faster than expected” pushing maintainers to replace parts more often.¹⁵ The transmission, for example, had to be replaced a total of 609 times in the past 10 years.¹⁶

Naval Air Systems Command (NAVAIR), which oversees the V-22 program, has struggled to address the root causes of V-22 crashes. DoD knew about manufacturing problems and gear failures since 2006 but “never required manufacturing or acquisition changes for the components.”¹⁷ The gear that failed in the November crash was “similar to those on seven previous failures,” but in those cases, the crew was able to land before the gear failed completely.¹⁸ The first warning signs came in 2001 when the Government Accountability Office revealed the Pentagon allowed Bell Textron and Boeing to deliver the aircraft “without fully identifying all the ways the aircraft could run into trouble.”¹⁹ In 2014, Bell Textron and Boeing “sent a formal risk assessment titled ‘Gear Metal Raw Material Impurities,’” to NAVAIR.²⁰ The SIB reportedly found that NAVAIR “did not fully process the assessment to determine whether the risks it outlined would just be accepted by the military or somehow mitigated,” and explained that “it is not clear... why that did not occur.”²¹

After previous crashes, NAVAIR tried to mitigate risk and institute corrective action at the manufacturing level for alloys made by Universal Stainless but failed. The SIB reportedly found “NAVAIR implemented contractual financial withholds in hope[s that] the contractor [for the gearbox] would correct deficiencies in the [alloy] processing that had resulted in previous gear failures.”²² Those withholds failed to solve the problem, since “Air Force investigators found that ‘there have continued to be inclusion failures in [alloy], suggesting contractual financial withholds did not prompt corrective actions.’”²³ Troublingly, Universal Stainless has made “a

¹⁴ Military.com, “Flaw in Osprey Gears Was Known a Decade Prior to Deadly Japan Crash, Internal Report Shows,” Konstantin Toropin and Thomas Novelty, August 21, 2024, <https://www.military.com/daily-news/2024/08/21/flaw-osprey-gears-was-known-decade-prior-deadly-japan-crash-internal-report-shows.html>.

¹⁵ Associated Press, “The Osprey’s safety issues spiked over five years and caused deaths. Pilots still want to fly it,” Tara Copp, Kevin Vineys, and Aaron M. Kessler, November 19, 2024, <https://apnews.com/osprey-safety-issues-000001932652dd90adb7bf5b58fc0000>.

¹⁶ *Id.*

¹⁷ Aviation Week, “U.S. Air Force Is Considering V-22 Airworthiness Overhaul,” Brian Everstine, September 12, 2024, <https://aviationweek.com/defense/budget-policy-operations/us-air-force-considering-v-22-airworthiness-overhaul>.

¹⁸ Military.com, “Flaw in Osprey Gears Was Known a Decade Prior to Deadly Japan Crash, Internal Report Shows,” Konstantin Toropin and Thomas Novelty, August 21, 2024, <https://www.military.com/daily-news/2024/08/21/flaw-osprey-gears-was-known-decade-prior-deadly-japan-crash-internal-report-shows.html>.

¹⁹ Associated Press, “The Osprey’s safety issues spiked over five years and caused deaths. Pilots still want to fly it,” Tara Copp, Kevin Vineys, and Aaron M. Kessler, November 19, 2024, <https://apnews.com/osprey-safety-issues-000001932652dd90adb7bf5b58fc0000>.

²⁰ Military.com, “Flaw in Osprey Gears Was Known a Decade Prior to Deadly Japan Crash, Internal Report Shows,” Konstantin Toropin and Thomas Novelty, August 21, 2024, <https://www.military.com/daily-news/2024/08/21/flaw-osprey-gears-was-known-decade-prior-deadly-japan-crash-internal-report-shows.html>.

²¹ *Id.*

²² *Id.*

²³ *Id.*

significant proportion’ of the alloy used in the Osprey gearboxes that are now under scrutiny,” including the alloy in the V-22 that crashed in November.²⁴

The SIB reportedly also found significant communication gaps exacerbated the risks to service members, including “failing to share safety information adequately.”²⁵ That failure created a “lack of comprehensive awareness of [risks] and limit[ed] opportunities to impose mitigation measures at the service or unit level.”²⁶ To combat that risk, the SIB reportedly recommended that the Air Force get the “final say on the [aircraft] type’s airworthiness” by updating the agreement between the Air Force and NAVAIR on the V-22.²⁷ Specifically, it is reported to have recommended that NAVAIR conform to the Air Force’s “own safety and mishap prevention guidelines” and obtain the Air Force’s “technical Airworthiness Authority approval.”²⁸ These new standards could help mitigate risk by providing secondary warning indications in the cockpit. The SIB reportedly identified the Vibration, Structure Life and Engine Diagnostic System, which monitors the gearbox for vibrations, as a key component that if designed more adequately could provide “real-time vibration indications to aircrew.”²⁹ That immediate information “could accelerate precautionary landing conditions” by allowing a pilot to understand when a warning becomes an emergency and by giving the pilot more time to react.³⁰

As the Marine Corps studies whether to “significantly modernize” the V-22 or “begin the process to move forward,” the aircraft’s flawed design and crew’s safety need to be the deciding factors. Slight modifications are unlikely to fix all the V-22 safety concerns that arise from its operation but it could help in the interim.³¹ A major upgrade would need to happen to address several of the design choices that affect the current model’s safety record.³² From the proprietors to the entire engine and even the “vertical rotation [which] is at the core of what makes the Osprey complex” continue to be causes of the volatility in the aircraft’s safety.³³

The Air Force’s Troubling Use of Non-Disclosure Agreements

We are also deeply troubled that the Air Force may be increasing aircraft safety risk by “requiring some maintainers sign non-disclosure agreements [(NDAs)] in order to receive information about crashes and mishaps.”³⁴ While we support expanding maintainers’ access to

²⁴ *Id.*

²⁵ Aviation Week, “U.S. Air Force Is Considering V-22 Airworthiness Overhaul,” Brian Everstine, September 12, 2024, <https://aviationweek.com/defense/budget-policy-operations/us-air-force-considering-v-22-airworthiness-overhaul>.

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

³¹ Associated Press, “The Osprey’s safety issues spiked over five years and caused deaths. Pilots still want to fly it,” Tara Copp, Kevin Vineys, and Aaron M. Kessler, November 19, 2024, <https://apnews.com/osprey-safety-issues-000001932652dd90adb7bf5b58fc0000>.

³² *Id.*

³³ *Id.*

³⁴ Military.com, “To See Crash Info, Air Force Maintainers Must Now Sign Non-Disclosure Agreements,” Thomas Novelty, October 15, 2024, <https://www.military.com/daily-news/2024/10/15/air-force-requires-maintainers-sign-non-disclosure-agreements-learning-about-crashes.html>.

receive privileged safety training and regular safety briefings, we are concerned that NDAs will undermine congressional oversight, accountability, and transparency necessary to address deficiencies that put service members' lives at risk. NDAs may also hinder the government's ability to hold contractors accountable. An outside expert has already found the policy to be "heavy-handed," "part of a pattern of excess secrecy," and "an effort to intimidate the people the services need to function properly."³⁵

Conclusion and Questions

The V-22 should not resume full operations until the safety board's recommendations are implemented, and service members and their families can be confident the platform is safe to fly. In October, a V-22 hit the ground in a flight accident with 16 passengers on board, leading Japan to ground its entire fleet for over two weeks highlighting the reoccurring accidents and the need to prioritize safety.³⁶ While we understand it is the Air Force's practice to keep SIB reports confidential, the past failures of this program, its continuous cause for concern, and the lives lost – as well as the fact that members of the press have already obtained the report – merit the public release of this report to restore service members' trust in this program.

We also urge DoD to reconsider its policies to keep the entirety of SIB investigations from the public. Unlike AIBs, SIBs include recommendations to address the future safety of weapons programs. Failing to share that information with Congress harms congressional oversight and our ability to help protect service members from future mishaps and accidents.

Lastly, it is our understanding that the Air Force has opened an investigation into how the press obtained the SIB report. We urge any disciplinary action to take into account the compelling public interest benefits of the release of this information to protect the lives and safety of service members. To further that goal, Congress and the American people deserve complete answers on how DoD plans to ensure safety for the V-22 moving forward. Therefore, we request answers to the following questions by December 10, 2024:

1. Please provide a copy of the full SIB report.
2. Who is responsible for addressing deficiencies found in the AIB and SIB report?
3. The SIB report recommends an airworthiness overhaul by giving the Air Force more control over assessing V-22 safety.³⁷ What is the status of this recommendation?

³⁵*Id.*

³⁶ Stars and Stripes, "Pilot error' behind Japanese Osprey damage; tiltrotors resume flights," Brian McElhiney and Keishi Koja, November 14, 2014, https://www.stripes.com/theaters/asia_pacific/2024-11-14/japan-osprey-mishap-report-15843522.html.

³⁷ Aviation Week, "U.S. Air Force Is Considering V-22 Airworthiness Overhaul," Brian Everstine, September 12, 2024, <https://aviationweek.com/defense/budget-policy-operations/us-air-force-considering-v-22-airworthiness-overhaul>.

4. The SIB – and the AIB – report identified communication between the services on the V-22’s safety concerns as insufficient and inadequate.³⁸ How does DoD plan to increase communication and data sharing between services on the V-22?
5. When was NAVAIR first aware of the mechanical problems at the root of the V-22 crashes?
6. How did NAVAIR become aware of the mechanical problems at the root of the V-22 crashes?
7. How did NAVAIR respond once they became aware of the mechanical problems of the V-22?
8. How many times has the V-22 program withheld or threatened to withhold contract payments to address manufacturing issues or other safety concerns? Please provide a list of the amounts, instances, and dates.
9. How many times has NAVAIR tried to require manufacturing or acquisition changes for gears that were susceptible to failure? Please explain the reasoning behind each attempt and the outcome of those changes.
10. Have the V-22 contracts with the manufacturers been updated to reflect the SIB’s recommendations to address safety?
11. Please provide the full list of recommendations from the SIB.
12. Please describe where the Air Force is in the process of implementing the recommendations from the SIB.
13. Please provide the policy requiring Air Force maintainers to sign non-disclosure agreements.
14. Please provide a copy of the non-disclosure agreements Air Force maintainers are required to receive mishap information.
15. What percentage of Air Force maintainers have been asked to sign and have signed the new non-disclosure agreements?
16. How does the Air Force plan to train and brief maintainers who decide not to sign the non-discourse agreement that allows them to view critical mishap information?

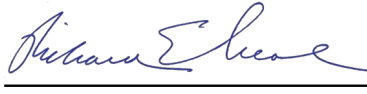
³⁸ U.S. Air Force, Aircraft Accident Investigation Board Report, June 6, 2024, p. 61, <https://www.afjag.af.mil/LinkClick.aspx?fileticket=ENTTeS2T9go%3d&portalid=77>; Aviation Week, “U.S. Air Force Is Considering V-22 Airworthiness Overhaul,” Brian Everstine, September 12, 2024, <https://aviationweek.com/defense/budget-policy-operations/us-air-force-considering-v-22-airworthiness-overhaul>.

17. What services have or are considering implementing a similar policy to the Air Force's that requires non-disclosure agreements for maintainers to receive critical mishap information?
18. The Marine Corps is considering whether to modernize or move forward to a next-generation assault aircraft. Will the results of the study be provided to Congress?
19. How is the Marine Corps weighing service member safety and cost in its study?

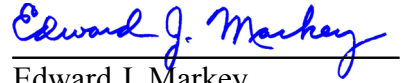
Sincerely,



Elizabeth Warren
United States Senator



Richard E. Neal
Member of Congress



Edward J. Markey
United States Senator