

VH-92A[®] Patriot[®] Presidential Helicopter



The VH-92A began supporting White House Military Office (WHMO) tasking in FY23. DOT&E published an FOT&E report in January 2023 that assessed the VH-92A as operationally effective and suitable for all missions. The Navy is working to upgrade the Mission Communication System (MCS) to further improve performance and capability. VH-92A[®] and Patriot[®] are registered trademarks of the Department of the Navy.

SYSTEM DESCRIPTION

The VH-92A is a four-bladed, dual-piloted, twin-engine helicopter based on the Sikorsky S-92A medium lift helicopter. VH-92A

replaces the legacy fleet of VH-3D and VH-60N aircraft flown by Marine Helicopter Squadron One (HMX-1) to perform the Presidential Transport mission. The VH-92A is transportable via a single Air Force C-17 cargo aircraft to worldwide locations. The

aircraft is equipped with the MCS that can provide simultaneous line-of-sight and beyond-line-of-sight, non-secure and secure, voice and data communications to the passengers to carry out senior leader duties. MCS performance is critical to mission success.

MISSION

HMX-1 will use the VH-92A aircraft to conduct administrative lift and contingency operation missions intended to provide pre-planned and unscheduled transport of the President of the United States, cabinet members, heads-of-state and other parties as directed by the WHMO. HMX-1 will operate the VH-92A from the White House South Lawn, commercial airports, military airfields, Navy ships, and austere sites throughout the world.

Additional missions include transportation within the National Capital Region for the Vice President of the United States and visiting heads-of-state.

PROGRAM

VH-92A is an Acquisition Category IC program. The Navy procured 23 aircraft: 21 operational aircraft and 2 dedicated engineering development model test aircraft. The program acquisition strategy does not require a full-rate production decision. The U.S. Marine Corps declared initial operational capability for the VH-92A in December 2021, and the VH-92A is now supporting the WHMO Transition Plan assigned tasking. The WHMO Transition Plan stipulates an event-driven, multi-phased approach to replace legacy helicopters with the VH-92A. DOT&E published an FOT&E report in January 2023, based upon FOT&E completed in 4QFY22, that assesses effectiveness, suitability and cyber survivability, and verifies the correction of

deficiencies identified during IOT&E conducted in FY21. The Navy has yet to schedule any additional FOT&E to test planned future capability upgrades.

» MAJOR CONTRACTOR

- Sikorsky Aircraft Corporation, a subsidiary of Lockheed Martin Corporation – Stratford, Connecticut

TEST ADEQUACY

HMX-1, under the auspices of Navy's Operational Test and Evaluation Force (OPTEVFOR), completed a first period of FOT&E and verification of correction of deficiencies in September 2022. Operational testing, conducted in accordance with a DOT&E-approved test plan and observed by DOT&E representatives, was adequate to evaluate effectiveness and suitability. HMX-1 flew nearly 40 flight hours in the National Capitol Region assessing the contingency mission and verifying the correction of deficiencies. DOT&E observed a developmental test cyber event to verify correction of deficiencies identified during IOT&E conducted in FY21. DOT&E published the results of this testing in the January 2023 FOT&E report.

PERFORMANCE

» EFFECTIVENESS

VH-92A is operationally effective for all operations. During IOT&E, VH-92A demonstrated

it is operationally effective for administrative lift missions, and during FOT&E, DOT&E determined that VH-92A is also operationally effective for contingency operations missions. Performance of VH-92A voice communications, the primary means of contingency mission communications, improved significantly from IOT&E. MCS supported high call connection rates across all required voice communication pathways, but user experiences for additional off-board data services do not support fast and reliable data exchanges. Incremental improvements to the MCS are a U.S. Marine Corps and WHMO priority.

» SUITABILITY

VH-92A is operationally suitable. Improved MCS stability, modifications to the rear air-stair door actuators and increased spare parts availability have improved the aircraft's reliability and availability, and reduced maintenance times as compared to IOT&E. MCS improvements have decreased communications system operator workload. The logistics supportability concept has sufficient breadth and depth of spare parts to support HMX-1 operations. VH-92A maintenance hours per flight hour (MH/FH) are less than the legacy aircraft, and MH/FH decreased by almost 50 percent from IOT&E to FOT&E. The VH-92A remains a maintenance-intensive aircraft. Maintenance inspections account for the majority of maintenance hours.

» **SURVIVABILITY**

DOT&E's assessment of the VH-92A's cyber survivability is detailed in the classified annex to the January 2023 FOT&E report.

RECOMMENDATIONS

The Navy should:

1. Continue to improve user experiences with additional off-board data services and conduct an additional period of FOT&E to assess future MCS upgrades.
2. Continue to investigate options to improve MH/FH.
3. Address the cyber survivability recommendations from the classified annex to the January 2023 FOT&E report.

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