

DEFENSE DEPARTMENT

EXCLUSIVE: Navy Reveals Proprotor Gearbox Fix Coming for Troubled Osprey Fleet





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Navy photo

NATIONAL HARBOR, Maryland — A fix for the V-22 Osprey's proprotor gearbox — the culprit behind a years-long series of fatal accidents and periodic groundings — will be in place by December, a senior Navy aviation leader told *National Defense*.

"We're going to get the proprotor gearbox 121 version that's going to have no limitations at all," Rear Adm. Douglas Verissimo, commander of Naval Air Force Atlantic, said in an exclusive interview on the sidelines of the Sea-Air-Space conference this week. "We should start seeing those in the fleet in December."

A Naval Air Systems Command spokesman on April 11 confirmed Verissimo's remarks but clarified that the new version of the Osprey's proprotor gearbox is known as the 123 version. The first V-22 to have the new gearbox installed will be delivered in December with further deliveries occurring through 2026, according to the spokesman. The V-22 Joint Program Office declined to offer further details.

Bell Boeing, the maker of the V-22, did not immediately respond to a request for comment on the 123 proprotor gearbox or what changes the new version incorporates.

However, the 2025 Marine Aviation Plan released in January outlines three improvements to the proprotor gearbox that likely account for some of the major changes in the 123 version.

They include the Osprey Drive System Safety and Health Instrumentation — ODSSHI pronounced "Odessey" — that "will install sensors in critical areas of the PRGB and drive train to provide vibration signature data that will allow maintenance to forecast the failure of parts and plan to remove those parts prior to failure," the plan said.

A more refined Triple-Melt steel "will be the source material for the internal components of the [gearbox] which will drastically reduce the likelihood of material defects in critical gears and bearings," the plan stated.

And lastly, the plan described a redesigned Input Quill Assembly that will reduce the incidence of the wear-out mode observed in previous IQA failures that led to aircraft hard clutch engagement occurrences.

Verissimo said that the retirement of the C-2A Greyhound — the aircraft the Navy's CMV-22B is replacing in the carrier onboard delivery mission — will take place as planned in September 2026.

"Yes, the C-2s are going to sundown," he affirmed. "We've got one more deployment to get our C-2s underway."

He added that the service has mitigations for the gearboxes CMV-22Bs currently fly with, referring to the Dec. 20 bulletin issued by Naval Air Systems Command directing V-22 operators to verify the accumulated flight hours on each of the proprotor gearboxes in their fleets.

This direction followed a November 2024 incident at Cannon Air Force Base in New Mexico wherein an Air Force CV-22 was forced to land immediately due to an "inclusion" – an impurity in the steel alloy its gears are made with which creates a weak point in the metal.

An inclusion-related gear failure was also identified as the cause of the November 2023 CV-22 crash off Yakushima Island, Japan, that killed all eight personnel aboard the aircraft.

Ospreys with proprotor gearboxes exceeding a predetermined number of flight hours were cleared to resume flight operations once verifications were completed under flight restrictions instituted in March 2024. Aircraft with gearbox flight hours below the threshold were subject to additional flight restrictions.

"The restrictions are for aircraft back at the beach until we get a few more hours on them with new gearboxes coming," Verissimo said, adding that the service has "a good map for supporting deployments with CMV-22Bs that are unrestricted" once version 123 proprotor gearboxes are installed.

"I have confidence for the folks flying those things," Verissimo said. "I have confidence for our ability, once they clear the hurdles that have been dictated by" Vice Adm. Carl Chebi, Naval Air Systems Command commander.

Verissimo's confidence is backed by comments in the Marine Aviation Plan which stated that the Marine Corps' version of the Osprey, the MV-22, maintains mishap rates on par with other Marine aviation assets.

The plan noted that as of Aug. 1, the MV-22's 10-year — 2014-2024 — Class A mishap rate is 3.15

per every 100,000 flights hours, lower than the Marine Corps average of 3.24.

"Once we get the new gearboxes, our focus is going to be on making sure we keep readiness available to keep carrier onboard delivery healthy for the warfighter," Verissimo said.

The CMV-22 "is our platform. It does a few things not as capably as the C-2, but it does many things much more capably," he said.

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Re: Navy Reveals Proprotor Gearbox Fix Coming for Troubled Osprey Fleet

The fact that the Admiral doesn't know the correct version isn't a real vote of confidence.

JDDrouin at 6:14 PM

Re: Navy Reveals Proprotor Gearbox Fix Coming for Troubled Osprey Fleet

An aircraft that has only 1 mode of operation in a single-engine failure is terrible! Namely, crashing and losing all souls onboard, should never have been acceptable.

Larry at 10:20 AM

👏 Re: Navy Reveals Proprotor Gearbox Fix Coming for Troubled Osprey Fleet

It's about time

Peter at 9:51 PM

🔊 Re: Navy Reveals Proprotor Gearbox Fix Coming for Troubled Osprey Fleet

Too bad our son's had to die to get their attention

Rose at 8:55 AM

Re: Navy Reveals Proprotor Gearbox Fix Coming for Troubled Osprey Fleet

Years too late- Moving at the speed of government, ugh.

Term Limits at 4:49 PM

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