

Report to the Congress of the United States on the V-22 Osprey Aircraft

Prepared for Members and Committees of Congress

Often, when Googling V-22 Osprey news one can find some really compelling readings. Report to the United States Congress on V-22 Osprey Aircraft turned out to be one like that.



The full document can be downloaded here:

<https://www.documentcloud.org/documents/26098570-crsv22ospreyreport/>

A really important report, greatly determining the fate of these tiltrotors for many years to come. It contains a background, proposes objectives, research and production tasks, and (last but not least) is suggesting assignments of huge funds.

Critical Bias

The report - although seems to be correct concerning data - feels somewhat unfair to these tiltrotors by emphasizing accident statistics over the unique capabilities, and the exceptional military importance of their availability. One can remember, it is not the first time the V-22 is getting this kind of unfriendly treatment. Authors actually implying no less than the total discontinuation of these tiltrotors.

Luckily, many within both the military and aviation know that the V-22 Ospreys are important. Unlike some other mayor weapon systems, they can make the difference between defeat and victory. And between war and peace.

An Amendment to the Upgrades

Of course they, the tiltrotors must be kept. Which doesn't mean their long due improvements can be further delayed.

It was shown in some of the last posts (e.g. here: [Discussing-V-22-Osprey-with-Google-AI](#)) that V-22s in helicopter mode fly with established VRS on their proprotors – regularly, by design. Many experts know that flying with VRS can potentially cause crash. Attached is a short summary table.

Flying with VRS can potentially cause crash (V-22, MV-75)		
	Airplane mode (Cruising flight)	Helicopter mode (Hover, vertical takeoff/landing, low speed)
Directly		Blade stall of the proprotor(s) increases, then becomes overwhelming on the blades, which makes partial VRS of the proprotors grow further, and reach near 100%. Thrust generated by the proprotor(s) goes down to zero. Such event may happen as a result of either an unfavorable atmospheric turbulence (strong wind gusts etc.), or that of the proximity of some terrain object (wall, building, obstacle etc.), which unfavorably influences/redirects downwash. These incidents happen in a seemingly random order.
Indirectly	In VRS proprotors work with heavy blade stall, and at an extremely low efficiency. Lost (unused) engine power escapes in the form of noise, heat, and (mainly) turbulent air, and vibrations. Vibrations, as a rule cause damage to practically every part of the aircraft, but they mainly attack parts of the drive chain. (Gearbox, gears, input quill etc.) Material fatigue happens, which (after some time) causes cracks and fracture of mechanical units. These breakdowns happen in a seemingly random order.	(Same as in airplane mode.)

https://stallfreepropellers.com/wp-content/uploads/2025/09/Flying-with-VRS_01.png

Considering the above it seems reasonable, maybe, to add one more item to the list in the **Report**, under the title **V-22 Upgrade Plans**, which could fundamentally manage the VRS issue. (BTW an issue for both the V-22 and the MV-75!)

The amendment wording could be like this:

“Prototyping a new proprotor with blades upgraded to adaptive technology”

To support readers the expected positive effects of the upgrade, in summary, are listed in the attachment:

<https://stallfreepropellers.com/wp-content/uploads/2025/09/Merits-of-the-adaptive-rotor-blades.pdf>

The proposed amendment would in no way limit freedom of the decision makers. On the contrary. It is just adding another option to save the tiltrotors. Shall those need anything of the kind.

26 September 2025

Budapest