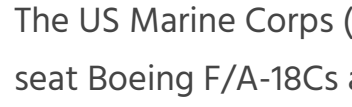


## Fixed-Wing

# USMC upgrading one-third of F/A-18 Hornets to serve until 2030 or later

By Jan Tegler | 11 June 2024



The US Marine Corps (USMC) is now half complete with a modernisation programme for its single-seat Boeing F/A-18Cs and two-seat F/A-18Ds, an effort to boost the ageing jets' capabilities as the service faces delayed deliveries of new Lockheed Martin F-35s.

USMC Lieutenant Colonel Joshua Wort says the project has reached its halfway point, adding that the Hornets are receiving greatly enhanced sensor and communications capabilities, bringing their performance closer to that of the newer F/A-18E/F Super Hornet and endowing the types with greater commonality.



Source: Lance Corporal David Getz/US Marine Corps

A USMC Boeing F/A-18D Hornet with Marine Fighter Attack Squadron 232 takes off from Andersen AFB in Guam on 19 February 2024

The upgrades include a version of Raytheon Technologies' APG-79 active electronically scanned array (AESA) radar, which is already in service on US Navy Super Hornets and EA-18G Growler electronic attack fighters. The Hornets are also getting Integrated Defensive Electronic Countermeasures, GPS anti-jamming capabilities and other avionics hardware and software improvements.

A number of Hornets with the full complement of upgrades are already flying in both deployed and US-based squadrons, says Wort, who is integrated product team lead for US Naval Air Systems Command's F/A-18 and EA-18G programme office.

Pilots transitioning to the modernised C and D models immediately notice the improvements.

"Game-changing" is the phrase that most-frequently comes back from the fleet pilots," Wort says. "They're still working in the same cockpit but the radar in particular is a quantum leap forward for the Hornet."

Launched in 2019, the modernisation effort is funded through 2029 with a selection of upgrades that will enable the USMC's 30-year-old Hornets to serve as the "primary bridging platform to the F-35B/C", according to the service's fiscal year 2025 budget request.

The USMC has 179 F/A-18C and D Hornets, though not all will be fully modernised.

Only aircraft with the most flying life remaining and the right "prerequisite technical directives" are candidates for modernisation, Wort says, explaining that the Marine Corps purchased just 51 AESA radars – enough for about one-third of the fleet. Those radars are the central element of the upgrades.

"We've done a little bit of economy with the net buy of the radars and we've aligned that with our sundown plan," he says. "Our plan for the Hornet is to maximise the return on investment for each radar we purchase by moving radars through our population as we retire airframes and sundown [the] squadron."

Along with the upgrade package, the USMC has separately been conducting comprehensive airframe inspections at navy depots to extend the service lives of individual Hornets – which have logged an average of about 8,000 flying hours – to 10,000h.

The Pentagon expects to keep operating the upgraded Hornets through at least 2030, retiring jets as F-35s come online.



Source: Sergeant Jose Angeles/US Marine Corps

The USMC has 179 F/A-18C and D fighters, including this C model, pictured at Andersen AFB in Guam on 21 May 2024 and assigned to the Marine All-Weather Fighter Attack Squadron 224

But that plan has become increasingly uncertain due to delays by Lockheed in delivering F-35s.

"On paper, 2030 is the year for Hornet sundown," Wort says. "But obviously a lot can change in five or six years. We need to be postured to flex as required."

The F-35 delays stem from ongoing instability of a software update called Technical Refresh-3 (TR-3), which underpins the fifth-generation fighter's Block 4 sensor, networking and weapons upgrades.

TR-3 problems have already held up deliveries of F-35s, including the B and C models that the USMC is acquiring, for one year, potentially derailing the service's plan to have a full complement of the aircraft by 2030. Such a scenario could force the Marine Corps to fly its Hornets even longer.

But the USMC says the service's F-35 transition plan includes the flexibility to adapt to aircraft delivery delays.

"While current TR-3 aircraft delivery delays are being mitigated across the F-35 fleet, they are not expected to cause any delay to the overall transition completion timeline. The Marine Corps remains committed to a programme of record of 420 aircraft and a full active-component [tactical air] transition on schedule," it says.

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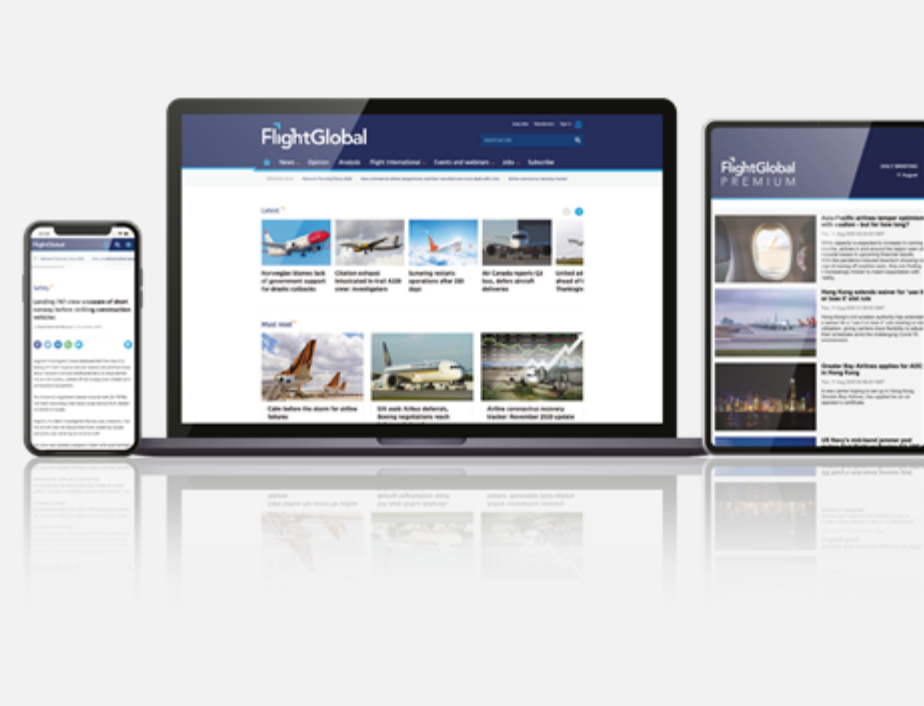


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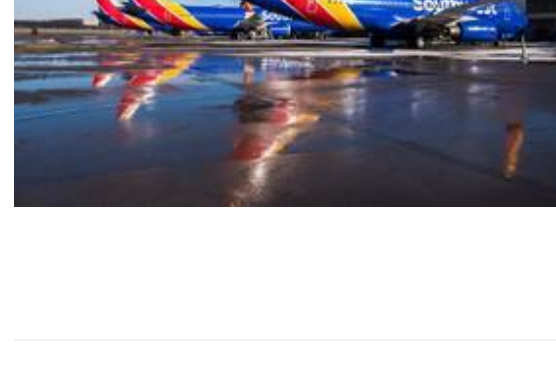
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