

USS Gerald R. Ford: US Navy Completes Final Onboard Weapons Elevator

The U.S. Navy tested and certified the last of 11 Advanced Weapons Elevators on aircraft carrier Gerald R. Ford, after that system threw a wrench into final construction, testing and training of the first-in-class ship.

The weapons elevators transport massive munitions from the depths of the ship up to the hangar bay and to the flight deck, where fighter jets can be armed before missions. AWE is one of 23 brand-new technologies developed for the Ford-class carriers, several of which lagged in development or saw delays during testing — ultimately pushing the ship's planned maiden deployment from 2018 to the currently projected late 2022. AWE was the last of these new technologies to be fixed. To avoid further delays, the Navy allowed the crew and air wing to start training on the ship in spring 2020, conducting post-delivery tests and trials and eventually conducting shock trials over the summer of 2021. Throughout this time, contractors have worked on the elevators both while the ship was in port and while it was operating at sea, completing one elevator after the next and turning them over to the crew to begin using in operations.

The final elevator was turned over to the crew on 22 DEC, according to a Navy news release. “This is a significant milestone for the Navy, ship, and her crew,” Rear Adm. James Downey, Program Executive Officer for Aircraft Carriers, said in the statement. “With completion of this final AWE, we now have the entire system to operate and train with.” He also praised the “hundreds of craftsmen, technicians and engineers, working around the clock — through multiple underway and holiday periods — to get these advanced systems online and operational.” Still, the elevators have been a headache for the Navy for years now.

The first was turned over to the ship crew in January 2019, after the Navy realized its original design for the elevators, which operate via electromagnetic motors rather than hydraulics, was flawed. Navy leaders have explained since that each of the 11 had to be designed and programmed separately, rather than having one design that worked for all 11 locations. That same month, in January 2019, then-Navy Secretary Richard Spencer announced he'd told then-President Donald Trump that if the weapons elevators aren't functioning by midsummer, Trump should fire him. But within months, Spencer had to admit that the weapons elevators would not be finished until the end of 2021 or maybe 2022, which he blamed on Huntington Ingalls Industries for a lack of adequate communication.

At one point in 2020, the Navy was pushing to complete all the elevators by mid-2021 ahead of shock trials, which also did not pan out. Sen. Jim Inhofe, the top Republican on the Senate Armed Services Committee, told Defense News in a statement he had been tracking the elevator issue closely for the last three years and that, while recognizing the effort of the contractors to get the work done, this work shouldn't still be taking place four and a half years after the carrier was commissioned into the fleet.

“Based on the contract signed by the Navy and shipbuilder in 2008, the Ford should have been delivered in September 2015 at a cost of \$10.5 billion. What actually happened is ship construction was not completed until yesterday — six years late and \$2.8 billion over budget,” he said. “The burden of this six-year delay has been borne by the other 10 aircraft carriers in our

fleet deploying longer and more often, as well as gaps in carrier presence when no carrier could deploy, at a time when naval presence and capability could not be more critical for our national security.” Noting that annual defense bills in recent years have included several measures aimed at improving lead ship performance, he said the Navy needed to do better going forward, especially in light of a growing Chinese naval fleet.

To help mitigate some of the delay caused by the elevator and other new technology snags, the Navy, Huntington Ingalls Industries and their team of contractors also advanced some work planned to take place during the ongoing six-month Planned Incremental Availability, which began in August after the shock trials. Instead, they started that effort alongside the elevator work while the crew was conducting its trials. Some of this work included installing the latest versions of computers and combat systems, which is typically done as late as possible in the new ship construction and testing process so that the latest and greatest can be installed ahead of a maiden deployment.

Program and ship officials told reporters pulling up this work would ensure the PIA stayed on schedule despite the elevator work stretching into that maintenance availability, taking place at HII’s Newport News Shipbuilding in Virginia. The PIA is expected to wrap up in the spring, according to the news release, at which time the crew can enter basic-phase training ahead of its first deployment cycle.