

NAVAL AVIATION NEWS

THE FLAGSHIP PUBLICATION OF NAVAL AVIATION SINCE 1917

SUMMER 2023

CELEBRATING 50 YEARS OF **WOMEN IN NAVAL AVIATION**

WHAT'S INSIDE

- ▶ A-TIC Lab Simulates Deployed Situations
- ▶ USS Truman Hits PIA Milestone
- ▶ Aviation Boatswain's Mate University Created



NAVAL AVIATION NEWS

SUMMER 2023

VOLUME 105, No. 3

DEPARTMENTS

FEATURES

- 4 Airscoop
- 17 Grampaw Pettibone
- 18 **NAS Pax River Air Traffic Control Makes History with All-Women Air Traffic Control Crew**

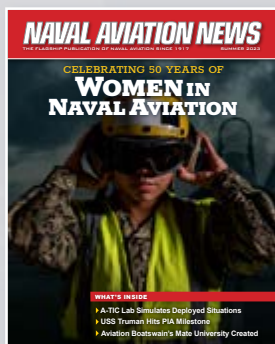
SPECIAL SECTION

22 **CELEBRATING 50 YEARS OF WOMEN IN NAVAL AVIATION**

- 34 **Wreck Site Identified as WWII Carrier USS Ommaney Bay**
- 36 **Team Provides Aviation-Focused, Maritime-Facing Support to NAVSUP WSS Enterprise**
- 38 **USS Harry S. Truman Reaches 50 Percent Completion of PIA**
- 40 **Aviation Boatswains's Mate (Handling) University Refreshes, Refines Skills for Safer Flight Deck**
- 42 **The Global Reach of "The Lone Star Express"**
- 44 **A-TIC Lab Presents Ship-Based Experience in Training Environment**
- 46 **FRCE Engine Inspection Training Key to Aircraft Safety**
- 49 **FRCE Ground Support Shop Equips Aircraft Lines for Success**
- 51 **FRCE Marks First with Adoption of Battery-Powered Ground Power Units**
- 53 **FRCE Delivers Final Harrier Trainer to Marine Squadron**
- 55 **FRCSW Pitches in to Complete a Speedy In-Service Repair to P-8 Poseidon**
- 56 **FRCSW Receives Chief of Naval Operations Aviation Safety Award**
- 58 Professional Reading

ALSO IN THIS ISSUE

ON THE COVER



On the Cover: Aviation Boatswain's Mate (Handling) 2nd Class Jynishia Wilson poses for a photo onboard Naval Air Facility (NAF) Atsugi, Japan, Feb. 15, 2022. NAF Atsugi supports the combat readiness of Commander, Fleet Air Western Pacific, Commander, Carrier Air Wing (CVW) 5, Helicopter Maritime Strike Squadron (HSM) 51 and 23 other tenant commands, and provides logistic support, coordination and services to units assigned to the Western Pacific. (U.S. Navy photo illustration by Fred Flerlage; imagery by MCS2 Rafael Avelar and U.S. Marine Corps photo by Cpl. Calah Thompson).

In this issue of Naval Aviation News, we continue our salute to 50 years of women in Naval Aviation. In this issue, we highlight some of the women who support Naval Aviation in other ways, starting on page 22. Meanwhile at Naval Air Warfare Center Aircraft Division in Lakehurst, New Jersey, a lab is helping engineers recreate conditions aboard aircraft carriers to better coordinate operations before deployment. Read about their efforts beginning on page 44. On page 40, read about efforts to reduce

"crunches," or aircraft running into objects or other aircraft while being towed. Naval Air Force Atlantic has creating a new course, Aviation Boatswain's Mate (Handling) University, to address these issues on the flight line and how to reduce incidents. And on page 34, read how Naval History and Heritage Command recently confirmed the identity of a wreck site as USS Ommaney Bay (CVE 79), a World War II-era aircraft carrier that was sunk in the Sulu Sea after being hit and eventually mortally wounded by a twin-engine Japanese suicide plane on Jan. 4, 1945.

The U.S. Navy's Oldest Periodical, Established 1917

Director, Air Warfare

Rear Adm. Michael Donnelly, USN

Editor in Chief

David Byrd, Naval Air Systems Command

Editorial Board

Rita Boland, Naval Aviation Enterprise

FORCM Jimmy Hailey, USN, Naval Air Force Atlantic

Stan Coerr, Headquarters, Marine Corps

Cmdr. Zachary Harrell, USN, Naval Air Forces

Marcia Hart, Naval Air Systems Command

Richard Holcomb, Air Warfare N98

Naval Aviation News Staff

Fred Flerlage, Art Director, Naval Air Systems Command

Rob Perry, Staff Writer/Editor, Naval Air Systems Command

Contributing Editors

Melissa A. Johnson, Naval Air Systems Command

Columnists

Cmdr. Peter Mersky, USNR (Ret.), Book Review Editor

Cmdr. Bryan Dickerson, USN (Ret.), Contributing Editor

Subscriptions

Due to issues beyond our control, Naval Aviation News is ceasing the publication of our print product and focusing on the development of a full digital experience for readers. Please visit our website <https://navalaviationnews.navylive.dodlive.mil> to track our digital migration process and download archive copies of the publication.

Current subscribers will be contacted by the U.S. Government Printing Office with details regarding refunds for the remainder of their 2022 subscription. Questions regarding refunds should be directed to contactcenter@gpo.gov. Official subscriptions to military and government agencies will also discontinue.

Submission Guidelines

Commands may send news and announcements such as awards, rescues, milestones and other achievements to navy_nannews@navy.mil. Approved photos of Naval Aviation-oriented activities are always welcome. For longer feature articles, contact the editor in advance. Military contributors should forward articles about their commands only after internal security review and with command approval. For more information, contact us at navy_nannews@navy.mil.

Naval Aviation News (USPS 323-310; ISSN 0028-1417) is published quarterly for the Chief of Naval Operations by the Naval Air Systems Command. The Secretary of the Navy has determined that this publication is necessary in the transaction of business required by law. The use of a name of any specific manufacturer, commercial product, commodity or service in this publication does not imply endorsement by the Navy. Any opinions herein are those of the authors, and do not necessarily represent the views of Naval Aviation News, the Department of the Navy or the Department of Defense.

Approved for public release: SPR No. 2023-659

NAVAIR Public Release Distribution Statement A – “Approved for public release; distribution is unlimited”

SEND YOUR FEEDBACK TO: navy_nannews@us.navy.mil

Airscoop

Compiled by Rob Perry

Unique NC-20G Delivered, Will Serve Unique Mission

POINT MUGU, Calif.—Air Test and Evaluation Squadron (VX) 30, the “Bloodhounds” based at Naval Base Ventura County, Point Mugu, California, took possession May 31 of a distinct airframe, the Navy’s one-of-a-kind NC-20G. On the surface, the twin engine jet looks similar to other Gulfstream IVs, designed for airlift and logistics support of personnel, senior leadership and dignitaries; but the Bloodhound’s new bird, BH 500, has undergone substantial modifications to complete their Cast Glance (CG) mission.

Currently performed by a specially modified P-3C AIP+ Orion, BH 300, the CG role is unique to VX-30, Point Mugu and the Navy worldwide. Depending on the duration of its assigned mission, the CG Orion’s crew consists of two to four pilots, up to two Flight Engineers (FEs), one Naval Flight Officer (NFO), observers, as well as a team of government civilian range support personnel. Using distinctive camera and tracking equipment, BH 300 collects vital test data in support of various agencies that include NASA, DoD, Missile Defense Agency (MDA), as well as private sector customers at various locations across the globe.

However, with the fleet P-3 sundowning and standup of the P-8 Poseidon, Orion airframes and parts are quickly becoming a rarity; BH 300 was originally accepted by the Navy on July 14, 1987, making increased maintenance man-hours an inevitability. Furthermore, the maritime patrol community’s cancellation of the P-3 training pipeline at Patrol Squadron (VP) 30 Pro’s Nest Fleet Replacement Squadron (FRS) means that trained and proficient Orion aircrew will also become a scarce commodity. These



U.S. Navy photo by Lt. Josh Almada

factors necessitate the procurement and utilization of a dedicated special mission airframe capable of reliable worldwide deployment. VX-30 will fly its NC-20G to meet this challenge.

Originally established as Naval Weapons Test Squadron Point Mugu in 1995, the command was re-designated VX-30 in 2002. As a part of Naval Test Wing Pacific, VX-30's mission is to support and conduct test, evaluation and fleet operations in the Point Mugu Sea Range that encompasses more than 30,000 square miles of sea and airspace just off the Southern California coastline. The unit's NC-20G will complement this mission well.

Using civilian contract maintenance professionals and flown with a truncated crew of two pilots, one NFO, one observer and range support team, BH 500 will quickly be put to good use. Working with Naval Test Wing Pacific and Gulfstream Aerospace Corporation, the Bloodhounds have stood up a team dedicated to handling the acceptance and integration of a new airframe to their existing stable of Lockheed P-3C Orions, Lockheed

KC-130T Hercules and Northrup-Grumman E-2D Advanced Hawkeyes. This entails the creation of the squadron's own NATOPS qualification syllabus to train active duty aviators, liaising with NAVFAC and Naval Base Ventura County for hangar renovation and the activation of a new site, and operations scheduling with customers eager to utilize the output of the NC-20G's capabilities.

"The airplane flies how you would expect a luxury passenger airplane to handle," said Lt. Cmdr. Spencer Smith, a 2021 U.S. Naval Test Pilot School graduate and one of the Bloodhounds' first pilots to qualify on the airframe. "It has positive stability and smooth, damped control responses for maximum cabin comfort during maneuvering. The airplane also comes with multiple redundancies and safety features to include ADS-B [Automatic Dependent Surveillance-Broadcast], GPWS [Ground Proximity Warning System], TCAS [Traffic Collision Avoidance System], artificial stall warning and stick pusher, and weather radar. While these characteristics were not necessarily

intended for our operational needs at VX-30, the handling qualities and features will have a profound effect on our flight test support capabilities at high altitudes."

The airframe has a 78-foot wingspan, two Rolls-Royce Mk611-8 engines with a guaranteed minimum rating of 13,850 pounds of thrust, 5,000-plus nautical mile range, a 45,000-foot ceiling, and a standard cruise speed of .80M. A typical mission flight can reach up to seven hours in duration. Most flights are conducted from VX-30's home field of Point Mugu but detachments will take the squadron's new aircraft throughout the Pacific as well as across the continent and abroad. Detachments can yield up to 30 hours of flight time in relatively short windows, and there are always several on the books. VX-30's NC-20G is a welcome addition to the West Coast test community and will be a valuable asset for Research, Development, Test, and Evaluation for decades to come.

Written by Lt. Cmdr. Alexander "Roadtrip" Buschor, Air Test and Evaluation Squadron 30. 🛩️



BH 500 arrives at Naval Base Ventura County, Point Mugu, California.



The Marine Corps' first C-40A aircraft, assigned to Marine Transport Squadron (VMR) 1, Marine Air Group 41, 4th Marine Air Wing, Marine Forces Reserve, arrives at Naval Air Station Joint Reserve Base Fort Worth, Texas, May 19.

U.S. Marine Corps photo by Lance Cpl. Ashley Corbo

Tactical Airlift Program Delivers C-40A to Marine Corps

PATUXENT RIVER, Md. — On May 19 the Tactical Airlift Program Office delivered the first of two C-40A aircraft to Marine Transport Squadron (VMR) 1, Marine Aircraft Group (MAG) 41, in Fort Worth, Texas.

“Delivery of this aircraft meets a critical Marine Corps requirement for organic long-range logistical airlift capability,” said Col. Steve Puckett, program manager. “These aircraft have been specially equipped for agile tasking and can be reconfigured on the spot to carry Marines, cargo or a combination of both.”

Acquired from the secondary market, both C-40A aircraft are uniquely configured for the Marine Corps. The Marine Corps version of the C-40A aircraft features a palletized seating design and a Federal Aviation Administration-approved “Combi” Soft Barrier allowing the aircraft to carry passengers and cargo together. The aircraft

also features new engines, winglets, added power systems for electronic flight bags and the latest in LED lighting.

“This is a great accomplishment for our C-40 team,” said Jim Thompson, Fixed Wing/Operational Support Aircraft deputy program manager. “As with most aircraft acquisition efforts, there were challenges, but I am proud of the accomplishment of our small team. Their hard work, devotion and patience have contributed to, and permitted the delivery of, a critical asset to the Marines.”

The C-40A “Clipper,” a derivative of the Boeing 737-700C commercial airliner, has been used by the U.S. Navy since 2001. The Marine Corps C-40A aircraft replaced the venerable C-9B aircraft, which was retired in 2018 after 44 years of service. The second Marine C-40A aircraft is scheduled to deliver in early fall 2023.

From the Tactical Airlift Program Office. 🦅

Marines Receive First MQ-9 Reaper Under Latest Procurement Contract

PATUXENT RIVER, Md. —The Marine Corps has received nine of 20 MQ-9 Reapers, delivered under a joint contract with the Air Force as well as production transfers from the Air Force. The Navy’s Multi-Mission Tactical Unmanned Air System Program Office at Naval Air Station Patuxent River, Maryland, leveraged the Air Force’s Agile Reaper Enterprise Solution (ARES), an Indefinite Delivery, Indefinite Quantity (IDIQ) type contract, to procure Air Force MQ-9 Reaper aircraft, associated spares, and support equipment for the Marine Corps.

The Air Force has enabled the Marine Corps to move fast, standing up the Medium Altitude Long Endurance portion of the Marine Air Ground Task Force (MAGTF) Uncrewed Expeditionary (MUX) family of systems, a

key component of Marine Corps Force Design 2030.

“The U.S. Air Force has been a great partner and a major enabler in the Marine Corps’ pursuit to acquire group 5 UAS,” said Lt. Col. Leigh Irwin, Marine Corps MQ-9 program director. “Group 5 UAS will give the Marines the ability to conduct ISR [intelligence, surveillance and reconnaissance] and network extensions in support of the MAGTF in support of stand-in forces and the Joint Force.”

Marine Unmanned Aerial Vehicle Squadron (VMU)-1 in Yuma, Arizona, will utilize this

system for operational missions overseas, she said.

The MQ-9 Reaper is filling an immediate need for a long-range, long-endurance, land-based Group 5 UAS to conduct ISR and data relay in the Indo-Pacific Command area of responsibility.

Currently, the Marine Corps has operational MQ-9A systems to support a wide range of operations such as coastal and border surveillance, weapons tracking, embargo enforcement, humanitarian assistance /disaster relief, peacekeeping and counter-narcotic operations.

From the Multi-Mission Tactical Unmanned Air System Program Office. 🦅



U.S. Marine Corps photo



Photo courtesy of Northrop Grumman Corp

Members of the U.S. Navy and Northrop Grumman Corp. in Lake Charles, Louisiana, with the first E-6B Mercury upgraded by Northrop Grumman under the new Integrated Modification and Maintenance Contract. They include Vice Adm. Carl Chebi, commander of Naval Air Systems Command, and Capt. Adam Scott, program manager for the Airborne Strategic Command, Control and Communications Program Office.

Navy Accepts Upgraded E-6B Mercury, Delivering Enhanced Capabilities to the Fleet

LAKE CHARLES, La. —The U.S. Navy in June accepted the first E-6B Mercury upgraded by Northrop Grumman Corp. in Lake Charles, Louisiana, delivering enhanced airborne strategic communication capabilities to the warfighter.

The upgrade enhances strategic communications capabilities for the nation's senior leadership.

Northrop Grumman Corp. conducted the upgrades over the last year at its Aircraft Maintenance and Fabrication Center at Lake Charles. Under its Integrated Maintenance and Modification Contract (IMMC) with the Navy, it will overhaul multiple E-6B Mercury aircraft by 2027. The \$111 million contract provides six major modifications—called Block II—to improve the aircrafts' command, control and communications functions connecting the National Command Authority with U.S. strategic and non-strategic forces.

Block II will ensure the E-6B can successfully execute its mission for years to come. Upgrades to the second aircraft are already underway.

"The delivery of the first IMMC aircraft is a monumental achievement," said Bob Stailey, the E-6B deputy program manager for the Airborne Strategic Command, Control and Communications Program Office, which awarded and manages the maintenance contract. "We are delivering enhanced capabilities to the fleet quicker and ensuring they have the tools to successfully execute this critical mission for years to come."

Working with the Navy, Northrop Grumman is getting closer to the contract's required turnaround time of six months by implementing process improvements that span engineering, scheduling, management and production. This is the first time a

single company is responsible for the entire installation, reducing bureaucracy and improving speed.

"An incredible amount of work went into this aircraft, which can now perform its nuclear deterrence mission better than ever," said Capt. Adam Scott, program manager. "During the past year, the team that fielded this capability worked tirelessly to implement improvements to deliver the Block II capability with urgency."

Pilots from Strategic Communications Wing One (SCW-1) picked up the plane on June 6 and flew it home to Tinker Air Force Base, Oklahoma.

The E-6B Mercury is a communications relay and strategic airborne command post aircraft. It executes the Take Charge and Move Out (TACAMO) mission, connecting the nation's senior leadership with naval ballistic missile forces during times of crisis, and the Airborne Command Post mission, which facilitates the launch of U.S. land-based intercontinental ballistic missiles using an airborne launch control system.

It is flown by Navy Fleet Air Reconnaissance Squadrons 3 and 4 under SCW-1 out of Tinker Air Force Base.

The Airborne Strategic Command, Control and Communications Program Office is an acquisition command with the mission of delivering and supporting survivable, reliable and enduring airborne command, control and communications for the president, Secretary of Defense and U.S. Strategic Command. The program's vision is to provide national security and deterrence through assured airborne strategic communications.

Written by Kathy Hieatt, public affairs officer for Airborne Strategic Command, Control and Communications Program Office. ✈️

Electronic Attack Systems Program Using Digital Twins to Impact Naval Aviation

PATUXENT RIVER, Md.—Naval Air Systems Command's Airborne Electronic Attack Systems Program Office is turning to digital technology to improve readiness, explore new capabilities and expedite training.

The program office is in the early stages of using digital twins, which are virtual models designed to reflect a physical object accurately. It has developed digital twin technology with an industry partner for the past six months.

The program office selected the pod interface unit on the ALQ-99 Tactical Jamming System (TJS), first used in the 1970s, as the initial capability on which to test the new technology. The jamming system is unique as an older technology that converts analog signals to digital signals. By using an older system, the team members can test the bounds of their creativity and exploration.

"We wanted to prove to ourselves we could take an existing piece of hardware and develop a digital twin that would be useful," said Capt. David Rueter, program manager. "We picked something fairly easy as a starting point."

Digital twin technology can enable the sustainment, upgrade and evolution of systems over time.

"From a capability perspective, if I have a digital model of a system that requires improved processing, I can now figure out what that upgrade is and test it out digitally before I even purchase new hardware," Rueter said.

The commercial industry has used digital twin technology for some time. For example, many new cell phones were developed digitally in a lab before consumers could purchase them.

"There are multiple uses for digital twins, including designing, troubleshooting, simulating and enhancing. Digital twins replicate the real-world performance and have a huge

utility," said Chief Engineer Christie Agamaite, who leads the program office's digital twin efforts.

She explained how a digital twin can aid in troubleshooting.

"There is a plethora of signals from a platform and an integrated system; if you are using a digital twin, you can vary those signals at myriad different rates and see the resultant behaviors in real-time," she said. "The resultant behaviors are where we find the problems."


The digital twin approach provides the Naval Aviation Enterprise with increased resiliency, efficiency, adaptability and autonomy to accelerate learning on old and new systems.

Rear Adm. John Lemmon spearheaded the idea of using digital twin technology during his tenure as Commander of Naval Air Warfare Center Aircraft Division (NAWCAD). This initiative invested in workforce development to apply "Get Real, Get Better" principles to utilize technology to benefit the warfighter.

Now, according to Rueter, the program office is providing subject matter experts to build the twin. It hopes to boost readiness as the NAWCAD workforce learns from this endeavor.

The potential future benefits of digital twinning expand to more capabilities. For example, digital twin provides massive learning potential to work with Airborne Electronic Attack systems.

Furthermore, Agamaite explains that "digital twins can benefit maintainers. By building a virtual model of a capability and using virtual reality goggles, technicians can touch and feel the system virtually. This will quickly increase the learning curve by starting the training earlier. It puts you virtually in the world before you get the hardware in your hands."

From Naval Aviation Enterprise Communications. 



A Navy EA-18G Growler aircraft assigned to Electronic Attack Squadron (VAQ) 131 at Naval Air Station Whidbey Island, Washington, takes off at Nellis Air Force Base, Nevada.

U.S. Air Force photo by Airman 1st Class Dwane R. Young



U.S. Navy photo by MC3 Joseph Calabrese

An F/A-18E Super Hornet launches from the flight deck of the aircraft carrier USS Nimitz (CVN 68).

Navy Fields New LVC Training System Enhancing Readiness, Affordability

PATUXENT RIVER, Md.—The Naval Aviation Training Systems and Ranges and the F/A-18 and EA-18G program offices are fielding a sophisticated Live Virtual Constructive (LVC) training system that has the potential to revolutionize the way the Navy trains, leading to greater readiness and significant cost savings.

The LVC training, commonly referred to as Link Inject-to-Live (LITL), injects high fidelity simulated air-to-air and surface-to-air targets into the F/A-18E/F and EA-18G weapon systems and is projected to save the Navy millions of dollars annually.

“The Link Inject-to-Live trainer enhances the F/A-18 and EA-18G training capability by enabling them with the ability to train against realistic air and surface threats,” said Capt. Kevin McGee, Naval Aviation Training Systems and Ranges program manager. “The capabilities LITL brings for both

deployed and home station operations are quite impressive.”

The training system is cost-conscious and portable. This results in extremely dynamic and complex training scenarios that can be presented to deployed aviators, while reducing the administrative burden and cost of traveling to detachment sites for red air adversary support, which also reduces fuel and maintenance costs.

“In Naval Aviation, we train like we fight, and Link Inject-to-Live makes training more realistic and easier, so it’s a win all around,” said Cmdr. Sarah Abbott, F/A-18E/F deputy program manager. “This capability is a game changer.”

The two program offices fielded LITL aboard aircraft carriers in support of deployed units, granting squadrons the ability to continue weapons and tactics training at sea. LITL is not limited by weather conditions and relieves squadrons from using live aircraft as

adversaries while increasing sortie and training event completion.

In 2022, LITL was used for hundreds of events and thousands of sorties, which is an increase in sortie utilization from 2021. This increase is directly related to the fleet adding LITL events due to the significant increase in training fidelity provided by the system.

“The future use cases for LITL are really exciting,” said Chuck Terry, Aviation Training LVC and Strategy Department team lead. “We are currently testing connections to other platform simulators that will facilitate integrated training that will accelerate air-to-air training.”

The LITL program has the potential to provide significant positive impacts to training, paving the way for considerable changes to training syllabi.

From the Naval Aviation Training Systems and Ranges and the F/A-18 and EA-18G program offices. 🦅



U.S. Navy photo

The U.S. and Australia have continued their 100-year partnership to advance readiness in the operationally-critical Indo-Pacific region by completing the first-ever periodic maintenance interval on a U.S. Navy MH-60R Seahawk in Australia.

U.S., Australian Navy Partnership Proves Maintenance, Readiness; Wins Awards

PATUXENT RIVER, Md. —For the first time, the U.S. and Royal Australian navies have successfully demonstrated a periodic maintenance interval (PMI) on a U.S. Navy MH-60R Seahawk in Australia. The milestone demonstrates both countries' commitment to advancing military readiness in the Indo-Pacific region.

H-60 Multi-Mission Helicopter Program Office's Special Projects Team developed a unique, and expedited, acquisition strategy leveraging U.S. and Australian "mateship" to complete the first-ever U.S. Navy aviation Maintenance Repair and Overhaul (MRO) in the Indo-Pacific region. An essential piece to readiness is the ability to address emergent MRO requirements outside of normal domestic sites. Broadening the MH-60R MRO facilities and infrastructure around the globe, specifically in today's world climate, allows for a wider maintenance reach in time of conflict while increasing cooperation with allies. This century-long alliance remains advantageous in this region.

"Demonstrating successful PMI on a U.S. Navy MH-60R in Australia is a testament to our two nation's shared trust and commitments in our century-long partnership with the Royal Australian Navy," said Capt. William Hargreaves, program manager. "Achieving this maintenance event expands our aircraft's footprint ensuring the fleet is ready to fight tonight."

U.S. and Australian forces have fought together in every significant conflict since World War I. Showcasing the allegiance and confidence between these allies by entering into an agreement for maintenance and inspection further deepens the "mateship" connection.

Twelve years ago, the program office and Royal Australian Navy's were further united in a foreign military sale for MH-60 Romeo helicopters.

Sikorsky Aircraft Australia Limited (SAAL), a subcontractor to Lockheed Martin Rotary Mission Systems, began the PMI in late-October 2022 in Australia, and finished two months under the projected 10-month timeline. PMI on the MH-60R included material acceptance and inspection, repairs, and an aircraft functional check flight. The U.S. Navy will conduct post-PMI flight checks upon arrival at Helicopter Maritime Strike Squadron (HSM) 41, the U.S. Navy's West Coast Fleet Replacement Squadron (FRS) in San Diego, California.

"The principal aim of this activity was to demonstrate to the U.S. the capability of Australian industry and the pathway available to perform maintenance, repair and overhaul of this helicopter in our region," said Commodore Darren Rae, Royal Australian Navy Director General Navy Aviation, Aircrew Training and Commons. "This demonstration of Australian industry's support to U.S. Navy helicopter maintenance is a hallmark for the steady progress being made in the U.S.-Australian Alliance."

Strengthening the U.S.' partnerships and ensuring a free and open Indo-Pacific region is critical to the nation's security and to its allies; partnerships like this help defend common interests.

"We have made strides in this PMI demonstration," Hargreaves said. "We now have the ability to rapidly address emergent MRO requirements, if necessary, outside of standard activity sites during contingency operations."

The successful PMI, deeply rooted in innovative acquisition strategies and contract execution, also hailed a Naval Air Systems Command (NAVAIR) Commander's Award in May 2023 and an Australian Day Honours Award in January 2023.

The NAVAIR Commander's Awards recognize outstanding teams and individuals across NAVAIR who have demonstrated

creativity, agility and accountability in delivering the capability the fleet needs, on time.

Hargreaves recognized his team's achievement and went on to say "winning the NAVAIR Commanders Award for this effort truly validated the team's efforts to further strengthen ties between the two countries and entrusting them to complete the PMI as if on U.S. soil."

Similarly, and in recognition of the significance of this milestone, Australia's former MH-60R Seahawk Romeo Helicopter Assurance Program Co-Lead, Commander Andrew Newman, was presented an Australia Day Honours Award in January 2023 of a Conspicuous Service Cross for

his outstanding achievements and devotion to pursuing this activity.

The H-60 Multi-Mission Helicopter Program Office provides full-spectrum, world-wide support for the U.S. Navy's and international partners' MH-60R and MH-60S helicopters and user communities. The MH-60R Seahawk is the U.S. Navy's essential submarine hunter and anti-surface warfare helicopter enabling anti-submarine and surface warfare.

Additional PMIs in Australia are possible. Once the aircraft has returned to the U.S., the Navy will review all after actions for future potential contract agreements.

From the H-60 Multi-Mission Helicopter Program Office. 🦋

Navy to Field New Hearing Protection Helmet to Improve Safety, Readiness

PATUXENT RIVER, Md.—The Naval Aircrew Systems Program Office is using data collected during recent fleet assessments to refine the HGU-99/P Hearing Protection Helmet (HPH) which is intended for flight deck crew exposed to extreme noise environments.

Depending on where they work on the flight deck, many flight deck crew operate under extreme noise conditions which has the potential to challenge their communication, effectiveness and flight operations tempo. The new HPH provides three layers of hearing protection, impact head protection and electronic "hear-through" to restore auditory situational awareness. The refined helmet is designed to improve crew communication, personal protection and reduce hearing loss from prolonged exposure to extreme noise, one of the Navy's top safety concerns.

"The HPH provides improved impact protection and increased hearing protection for flight deck crew working on the areas of the deck that are the loudest. Based on the data collected from our fleet assessments, we have been able to further refine the communication capabilities, which will enhance operations tempo on the deck," said Capt. Carey Castelein, program manager.

The program office utilized fleet



An Aviation Boatswain's Mate (Handling) aboard an aircraft carrier wears the new HPH on the flight line during a recent fleet assessment.

U.S. Navy photo

assessments to incorporate the data collected from verification and qualification tests such as equipment compatibility, speech intelligibility and face-to-face communication in proximity to jet noise to select the new HPH solution.

The HPH is compatible with external communication systems and all variants include the face-to-face "hear through" electronic communication system and use the same battery, improving compatibility. The communication system for each variant is based on noise level and communication need in proximity to jet noise, with a sound-powered phone system for the highest noise areas, boom or cup microphone for

medium noise attenuation, and face-to-face only for lowest of the extreme noise areas.

"Thorough research, test and fleet assessments allowed our team to determine the best possible solution for improved extreme noise hearing protection, communication capability and head protection, taking into account performance and user feedback," said Kimberly Gould, HPH team lead.

The program office started fleet assessments of the HPH in 2020 and production in limited quantities to support operational test and evaluation began in June.

From the Naval Aircrew Systems Program Office. 🦋

USS George Washington Flight Deck Certified

NORFOLK, Va. —The Nimitz-class aircraft carrier USS George Washington (CVN 73) and embarked Carrier Air Wing (CVW) 1 returned to Naval Station Norfolk, Virginia, June 30, after completing flight deck certification (FDC).

FDC is a key milestone for the George Washington's return to operation at sea, and also marked the first time the ship and CVW-1 aircraft and personnel integrated and operated together since the ship completed Refueling Complex Overhaul.

"As always, I am incredibly proud of our USS George Washington warfighters, and the incredible support from the Carrier Air Wing One team," said Capt. Brent C. Gaut, commanding officer of USS George Washington. "When you look back at what we have accomplished over the past week, meeting momentous milestone after milestone, from fuel certification, flight deck certification, to our first underway replenishment in six years, our team continues to demonstrate our extraordinary grit and determination in meeting and exceeding the mark as we take our place as our great nation's premier CVN asset."

FDC is required for the carrier to embark aircraft and is designed to provide operational continuity and proficiency training for carrier crews. During FDC, the carrier is evaluated

on its ability to launch and recover aircraft in a safe manner in both day and night time operations.

During the three-day evolution, George Washington conducted 247 day and night catapult launches and arrested landings, simulated emergencies, night taxi drills and hangar bay aircraft spotting drills. Prior to integrated operations with the air wing, an inspection team from Commander, Naval Air Forces Atlantic (CNAL), visited George Washington to evaluate air department's ability to respond to flight deck casualties and firefighting. The ship also achieved fuel system certification and conducted carrier qualifications in support of CVW-1.

"I am beyond proud of the teamwork and operational tenacity demonstrated by the ship's crew and Carrier Air Wing One," said Cmdr. Stephen Lamoure, the ship's Air Boss. "The integrated team effort contributed to the amazing success of this mission. Their technical expertise, attention to detail, and hard work resulted in a phenomenal example of what is possible. This was a fantastic opportunity for the Air Wing and the George Washington Air Department to test our newest systems and capabilities as we prepare this mighty aircraft carrier for future overseas operations."



U.S. Navy photo by MCSM August Y. Clawson

An EA-18G Growler assigned to Electronic Attack Squadron (VAQ) 144 lands on the flight deck of the Nimitz-class aircraft carrier USS George Washington (CVN 73) while underway in the Atlantic Ocean June 26. George Washington is underway conducting flight deck certification, an evaluation of the ships' proficiency to safely launch and recover aircraft.

With the flight deck certified, air wing pilots completed a series of additional carrier qualifications and proficiency designed to ready the squadrons and carrier for future operations.

“Flight deck certification was our first opportunity for the air wing and the ship team to work together in support of the ship’s fundamental mission, launching and recovering aircraft at sea,” said Capt. Brad Converse, commander of CVW-1. “It

was an honor to have CVW-1 land the first jets on USS George Washington in six years.”

George Washington is scheduled for additional under-ways in the coming months in preparation for its homeport change and follow-on tasking as a Forward Deployed Naval Force asset in U.S. Pacific Fleet.

Written by Lt. Cmdr. Patricia Kreuzberger, public affairs officer for USS George Washington. 🦋

Navy Awards Launch and Recovery System Contract for Fourth Ford-Class Aircraft Carrier



U.S. Navy photo

An F/A-18F Super Hornet from Strike Fighter Squadron (VFA) 213 launches off of the flight deck of aircraft carrier USS Gerald R. Ford (CVN 78) using the Electromagnetic Aircraft Launching System (EMALS), March 10.

PATUXENT RIVER, Md. —The U.S. Navy awarded General Atomics a \$1.204-billion contract modification June 7 to build the Electromagnetic Aircraft Launch System (EMALS) and Advanced Arresting Gear (AAG) for the future USS Doris Miller (CVN 81).

The contract includes AAG and EMALS production, shipset deliveries, engineering change orders, production incorporation of obsolescence mitigations, program support, installation

and certification support for CVN-81 through 2032.

Capt. Mike Kline, program manager for the Aircraft Launch and Recovery Equipment Program Office, said the contract award is an important evolution in the future of launch and recovery for naval warfare.

“As the fourth Ford-class aircraft carrier to enter the fleet, CVN-81 can lean on [USS Gerald R. Ford] CVN 78’s experience, and the lessons learned

while advancing EMALS and AAG for the next generation of Sailors,” he said.

EMALS and AAG certification on USS John F. Kennedy (CVN 79) is currently underway, and system production on USS Enterprise (CVN 80) is near completion. Production work for EMALS and AAG on the CVN 81 will begin immediately, with support planned through 2032.

From the Aircraft Launch and Recovery Equipment Program Office. 🦋

CVW-17, Four Squadrons Return Home After Seven-Month Deployment

NAS LEMOORE, Calif. — Naval Air Station Lemoore, California, announced the return of Carrier Air Wing (CVW) 17 and Strike Fighter Squadrons (VFA) 22, VFA-94, VFA-137 and VFA-146 in June after a nearly seven-month deployment to the Western Pacific with USS Nimitz (CVN-68) Carrier Strike Group (CSG) 11.

CVW-17, nicknamed “Team Quicksand,” and the four squadrons that are attached to it have been away from their home base of Naval Air Station Lemoore since Dec. 5, 2022. During their deployment, they have been engaged by U.S. Seventh Fleet to defend U.S., allied and partner interests in the U.S. Naval Forces Indo-Pacific area of operations.

The air group that would come to be known as CVW-17 was created during World War II on April 1, 1944, in Atlantic City, New Jersey. CVW-17 is currently composed of VFA-22, VFA-94 VFA-137 and VFA-146 flying the F/A-18E/F Super Hornet; Airborne Command and Control Squadron (VAW) 116 flying the E-2C Hawkeye; Electronic Attack Squadron (VAQ) 139 flying the E/A-18G Growler; Helicopter Sea Combat Squadron (HSC) 6 flying the MH-60S Seahawk; and Helicopter Maritime Strike Squadron (HSM) 73 flying the MH-60R Seahawk.

VFA-22, or the “Fighting Redcocks,” was originally commissioned as Fighter Squadron 63 at Naval Air Station Norfolk, Virginia, in July 1948, but was re-designated Attack

Squadron 22 in July 1959. VFA-22 operates the F/A-18 Super Hornet, which is one of the Navy’s newest and most lethal strike-fighter aircraft.

VFA-94, also known as the “Mighty Shrikes,” was commissioned in 1952 and nicknamed after a small carnivorous bird of prey that impales its victim on sharp thorns. The Mighty Shrikes began flying the F4U Corsair, but now operates the F/A-18 Super Hornet.

VFA-137, or the “Kestrels,” was established in 1985 and is named after the native North American Falcon. It, too, operates the F/A-18 Super Hornet. VFA-137 joined CVW-17 in the spring of 2019.

VFA-146, or the “Blue Diamonds,” was established in 1956. The squadron’s original nickname was the “Blacktails,” which was derived from its assigned color as the sixth squadron of the air group, but just a few years later, the squadron adopted its current nickname. VFA-146 also operates the F/A-18E Super Hornet, one of the most advanced fighter aircraft in the world.

All four squadrons’ capabilities and versatility make them critical assets to the Navy’s mission, and their dedication and commitment to excellence continue to inspire and motivate future generations of naval aviators.

Written by Jessica Nilsson, public affairs specialist with Naval Air Station Lemoore, California. 🇺🇸



U.S. Navy photos by Jessica Nilsson

Strike Fighter Squadron 22 (VFA-22), or the “Fighting Redcocks,” arrives home to Naval Air Station Lemoore, California, after a 7-month-long deployment to the Western Pacific.



U.S. Navy photo by Michael A Furlano

An E-2D flown without a dome or pylon.

In a Navy First, E-2D Flown Without Rotodome

CORONADO, Calif. —A pilot from Fleet Readiness Center Southwest (FRCSW) recently performed a first in Navy history when he flew an E-2D Advanced Hawkeye without the rotodome attached June 20.

Cmdr. Matthew Ostrye was dispatched to Fallon, Nevada, in order to ferry the E-2D aircraft assigned to Airborne Command and Control Squadron (VAW) 113 to Naval Air Station North Island, California. Ferrying of aircraft in order to enact repairs is a normal occurrence for FRCSW's personnel, but this time was different. The E-2 was to be flown with-

out a rotodome, the large circular "top" to the aircraft. This was the first time an E-2D was flown without a dome or pylon and was completed only because of the combined efforts of FRCSW, VAW-113 and Airborne Command and Control Logistics Wing and the E-2/C-2 Airborne Command and Control Systems Program Office.

The dome for this aircraft was damaged in a hailstorm and will require dismantling and shipping before repairs can take place. VAW-113 has a pending need for this aircraft thus the E-2 was flown

to FRCSW where a dome swap could be completed allowing the aircraft to be combat ready in time to meet VAW-113's requirement.

This effort is an example of how a combined effort between multiple Navy commands leads to success and allows FRCSW to continue to provide the men and women of the Navy and Marine Corps with the tools necessary to ensure freedom across the globe.

Written by Michael A Furlano, public affairs specialist with Fleet Readiness Center Southwest. 🇺🇸

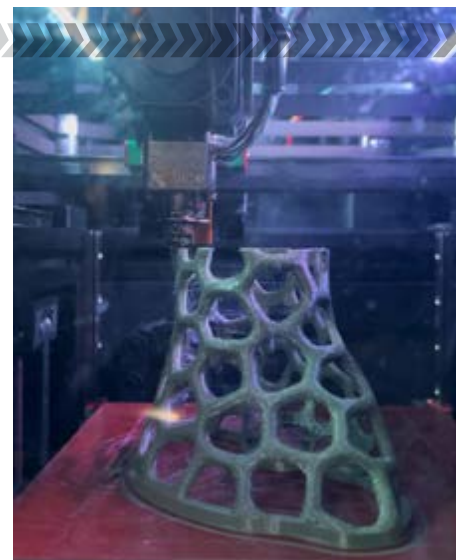


U.S. Navy photo by Maria Rachel Melchor

Domeless E-2D.



Marine Corps Lt. Col. Michael Radigan checks on the 3D printing of a medical cast aboard an MV-22 Osprey from Marine Medium Tiltrotor Squadron (VMM) 164 during a training flight.



CAMRE Helps Marines Take 3D Printing to New Heights

MONTEREY, Calif. —The Consortium for Additive Manufacturing Research and Education (CAMRE) at the Naval Postgraduate School (NPS) in Monterey, California, achieved the first successful demonstration of in-flight 3D printing aboard a Marine Corps MV-22 Osprey tiltrotor aircraft on June 21 in Southern California.

CAMRE's operational demonstration, which involved the printing of a medical cast aboard an airborne Osprey, was part of larger-scale exercise support provided by CAMRE and the Marine Innovation Unit (MIU) to forces participating in an integrated training exercise (ITX) at Marine Corps Air Ground Combat Center Twentynine Palms, California, from June 10 to 22.

This successful test of in-flight additive manufacturing represents a capability which could prove vital for rapid response during any contested logistics scenario.

"We are in a unique position to rapidly support the joint force and accelerate the adoption of advanced manufacturing," said Chris Curran, program manager at CAMRE. "This is just one of many events we are committing resources to where we share our research and deliver equipment and know-how to service members."

CAMRE worked in collaboration with

the MIU and Marine Aircraft Group (MAG) 39 from Marine Corps Air Station Camp Pendleton, California, to set up the demonstration. The flight was conducted with the support of Marines and aircraft from the "Knightriders" of Marine Medium Tiltrotor Squadron (VMM) 164, commanded by Lt. Col. Casey Nelson.

The printer utilized in the demonstration, the Advanced Manufacturing Operational System (AMOS), was developed by Spencer Koroly, an engineer at Naval Information Warfare Center (NIWC) Pacific in San Diego, California. AMOS is renowned for its speed, reliability and expeditionary ruggedness when benchmarked to comparable systems.

"I see this as revolutionary, being able to print on the move," Koroly said. "Nothing is more expeditionary than printing medical devices and swarm robotics in the back of an aircraft."

During the test, the team began with a 3D scan of a Marine's arm, which was used to create a drawing of a medical cast assisted by generative design software. The cast itself was then printed while the Osprey was engaged in multiple ground and flight modes, including taxi, takeoff and in-flight maneuvers.

"We are just scratching the surface

on the capabilities that will come from being able to 3D print in flight," said Lt. Col. Michael Radigan, who serves as a liaison to NPS from the MIU. "Dozens of printers being installed in a modular fashion aboard aircraft brings the ability for mobile production at a scale we have not experienced before."

As part of the ITX, CAMRE brought together operating forces from Marine Forces Reserve, I Marine Expeditionary Force (MEF) and 3rd Marine Aircraft Wing to demonstrate a distributed manufacturing model in a contested logistics environment.

CAMRE's airborne 3D printing demonstration builds upon past successful operational demonstrations with the fleet, including the first deployment of a 3D liquid metal printer aboard USS Essex (LHD 2) during the Rim of the Pacific (RIMPAC) exercise in 2022.

The mission of CAMRE is to deliver immediate results to the warfighter, with a focus on accelerating expeditionary and domestic advanced manufacturing capabilities for the joint force. CAMRE proliferates new capabilities, delivering education and certifications to increase the talent pool for the joint force and validating concepts through operational exercises.

From the Naval Postgraduate School, Monterey, California. 🦋

Grampaw Pettibone

Gramps from Yesteryear: Spring 2013

Illustration by

Ted Wilbur

A Takeoff After Burn

A low-time Hornet pilot was on a cross-country flight returning to the squadron. When starting the engines, the pilot noted the left engine's oil pressure was lower than the right's, but still within limits. After selecting maximum power for takeoff, the pilot again noted the left engine oil pressure was within limits, but 25 psi lower than the pressure on the right. During the takeoff roll, at approximately 80 knots, the pilot heard and felt a loud bang followed almost immediately by an "Engine Right" aural warning and an "R ENG STALL" caution on the digital display indicator. The pilot immediately aborted the takeoff and shut down the left engine. It was not determined if the left engine was shut down by mistake or intentionally based on the previously noted oil pressure differences.

A couple of seconds after securing the left engine, the pilot received an "Engine Fire, Right" aural warning and "Right Engine Fire" light. With the aircraft still rolling, the pilot began the engine fire procedures by shutting down the right engine and pressing the "Fire" light, which shut off fuel to the engine and armed the fire extinguishing system. Because both engines

*That bear
needs
bradin' in!*

were shut down, the jet's onboard oxygen generating system ceased producing oxygen and the pilot was forced to remove his oxygen mask. At the same time, the aircraft lost normal braking and the pilot was forced to switch to emergency brakes. Once his mask was removed and the brakes switched to emergency, the pilot restarted the engine fire procedure from the beginning. By repeating the first few steps, and pushing the "Fire" light a second time, he reopened the fuel valve and disabled the fire extinguishing system. The pilot brought the plane to a stop, secured the battery, and, noticing the aft portion of the aircraft was on fire, unstrapped and egressed the aircraft. The base fire truck was at the aircraft approximately 30 seconds after it came to a stop

and quickly extinguished the fire.

The subsequent investigation

revealed that the right engine suffered severe internal damage and seized. The resultant torque caused twisting damage and a split in both the engine casing near the low-pressure turbine, and another split at the oil cooler that caused the fuel leak and fire. The fire extinguishing system was examined and operated normally, but was not activated during the mishap. In addition, the engine fuel valve was in the open position, allowing a significant amount of fuel to leak from the damaged right engine, exacerbating the fire. 🐻

Grampaw Pettibone says...

Holy snakes in the cockpit! This kid found himself faced with multiple goings on, none of them from Gramps' "fun" category. Now the most important thing is he got out ok and unharmed, but let's take a minute—in the cool comfort of a rocker in the shade on Gramps' front porch—and peel this onion back a little. Them instructors bang a lot of info into your noggin when you're learning to drive a new piece of metal, and every type of flying machine has its own buttons and levers to learn. But kids, some things transcend systems and procedures, and they teach you them things starting day one of flight school.

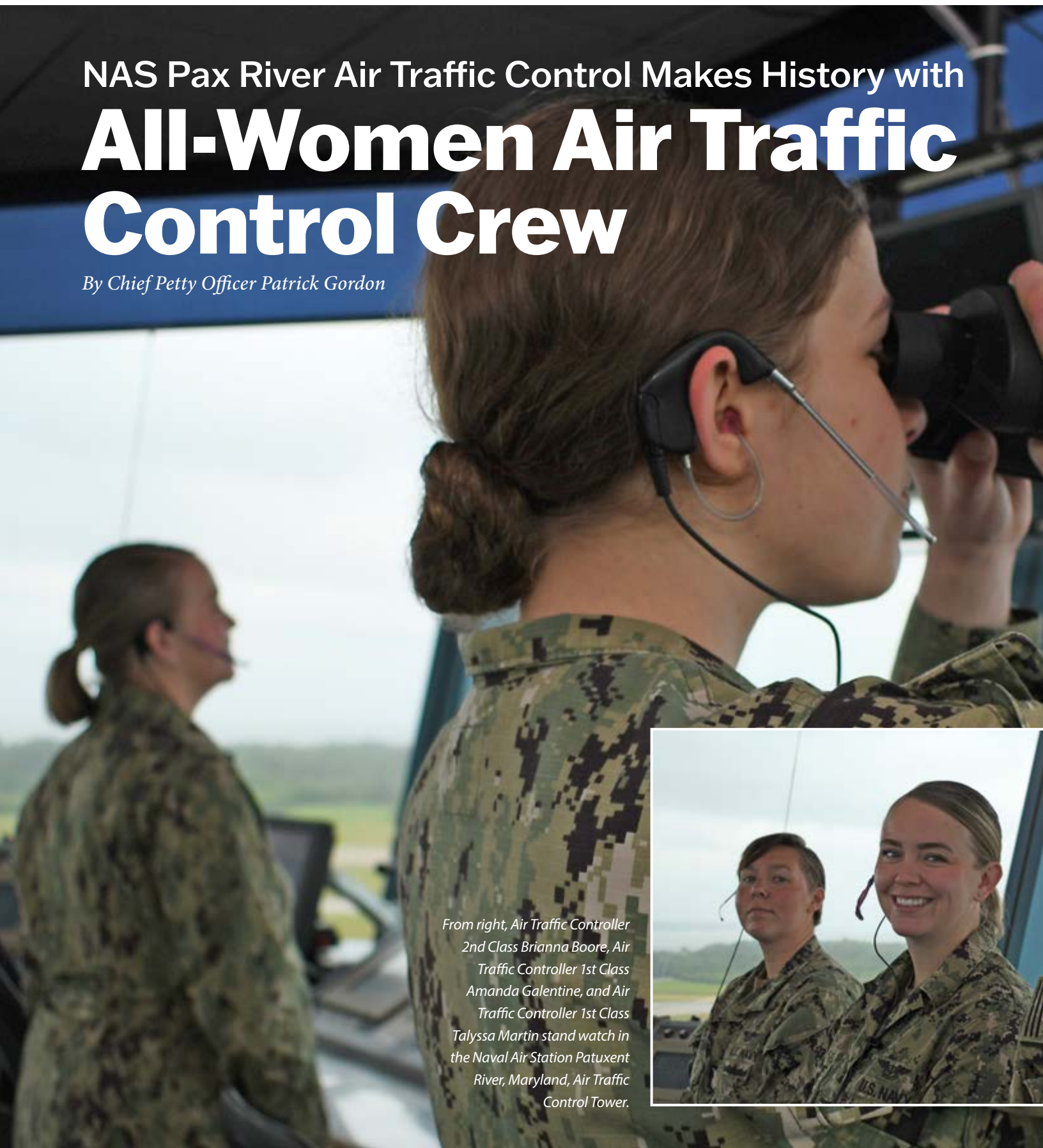
The first one we all know, so let's all say it together: Aviate, Navigate, Communicate. Were he to do it again, Gramps bets dollars to doughnuts that this young 'un would prefer to have stopped the jet and then gone back to taking care of all the brokenness the jet was throwing at him. Trundling down the runway with a buckin' beast ain't a good time to be fiddlin' with your mask and switching to emergency braking. And while I applaud him for bein' methodical and restarting the engine fire procedures from the beginning, there is a gotcha there that got him. He undid the good stuff that he did the first time through and made the fire worse. Fires are scary enough when you ain't going anywhere, why try dealing with one while scootin' down the runway? Remember, as good as them firefighters are they ain't trained to hit a moving target. So get that machine stopped and then handle the situation at hand.

Let's gather 'round kids and learn a bit of what this fellah learned the hard way. *Rushing a procedure during an emergency often leads to mistakes and omission of critical items. Take your time—be expeditious, but DON'T RUSH! Doing it right will take a couple of extra seconds; most of the time, you have a couple to spare.* 🐻



NAS Pax River Air Traffic Control Makes History with **All-Women Air Traffic Control Crew**

By Chief Petty Officer Patrick Gordon



From right, Air Traffic Controller 2nd Class Brianna Boore, Air Traffic Controller 1st Class Amanda Galentine, and Air Traffic Controller 1st Class Talyssa Martin stand watch in the Naval Air Station Patuxent River, Maryland, Air Traffic Control Tower.

U.S. Navy photos by CPO Patrick Gordon



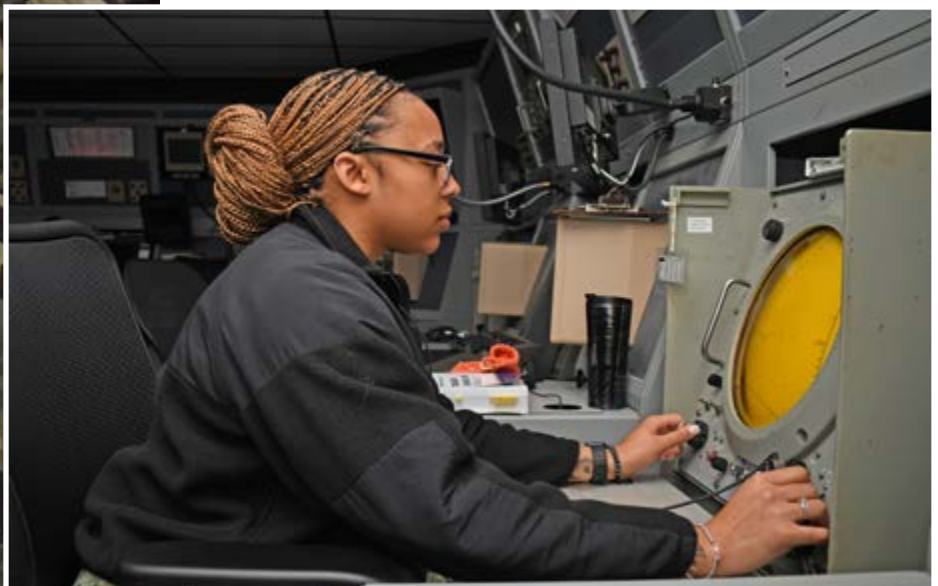
On May 30, for the first time in Naval Air Station Patuxent River's 80-year history, its Air Traffic Control Facility (ATCF) was completely staffed by women. The Air Traffic Controllers (ACs) served in nine watch stations between the NAS Pax River Air Traffic Control Tower, Radar Operations and Flight Planning.

NAS Patuxent River, Maryland is a Class IV Facility and is considered one of the most complex ATCFs in the Navy's AC community. The NAS Pax River control tower works in excess of 40,000 flight operations per year, and its radar operations control over 6,000-square-miles of airspace, including the Special Use Airspace complex, and provides approach control service to 14 additional airports.

"We call getting fully qualified at Pax equivalent to earning your Ph. D. in Air Traffic Control," said ACC Kristen Costlow, NAS Patuxent River Air Traffic Control Training Chief. "In order to become fully qualified here at Pax, you have to go through a rigorous training pipeline of 14 air traffic control qualifications. On average, it takes three years to obtain designation as a Facility Watch Supervisor, which is the highest qualification you can obtain after completing the prior 13 qualifications."

NAS Patuxent River had previously marked a similar milestone in 2018 with an all-women Air Traffic Control qualified tower crew, but this was the first time in the station's history that all positions on the air traffic control watch were staffed entirely by women Sailors.

"When I checked in to Pax in February 2018, the women controllers on board made history by having enough qualified women to staff the entire control tower," Costlow said. "Now, in 2023, we can run the entire facility by ourselves, 100-percent female. A class IV



Air Traffic Controller 2nd Class Tieraney Edmond stands Final Control Watch in the NAS Patuxent River Radar Room.



Air Traffic Controller 1st Class Talyssa Martin talks to pilots in the air from the NAS Patuxent River Air Traffic Control Tower.



Air Traffic Controller 1st Class Erica Headrick stands Sector Control watch in the NAS Patuxent River Radar room.

U.S. Navy photos by CPO Patrick Gordon



From left, Air Traffic Controller 1st Class Erica Headrick, Chief Air Traffic Controller Kristen Costlow, Air Traffic Controller 2nd Class Syrenia Cuevas, Air Traffic Controller 2nd Class Tieraney Edmond, and Air Traffic Controller 1st Class Kristy Lescrynski pose for a photo in the NAS Patuxent River Radar room.



Air Traffic Controller 2nd Class Autumn Rauen answers the phone during Flight Planning Supervisor/Dispatch watch in the NAS Patuxent River Air Operations Building.

facility. The most complex facility and aggressive air traffic control training pipeline in the Navy. This goes beyond us being proud of ourselves for standing out in a male-dominant rating. This sets the example for their daughters, sisters and future women that aspire to join the Navy. We have 70 controllers on board, 13 of them are female. The ability to fully staff the ATCF with all women is truly a historical milestone for NAS Pax.”

While all the Pax River ACs are extremely focused on their demanding jobs in Air Traffic Control, they did pause briefly to remark on the gravity of the occasion. Twelve stories up in the Pax River Air Traffic Control Tower, Tower Supervisor and Local Controller AC1 Amanda Galentine, Ground Controller AC1 Talyssa Martin and Flight Data Operator AC2 Brianna Boore made note of the occasion in between flights.

“It’s pretty cool; you don’t see this very often at many facilities,” Galentine said. “My Senior Chief at my last shore facility—I really look up to her and she’s one of my mentors—I think she’d be especially pleased to know that this happened. She’s a Master Chief now, so it’s not only nice to see a female leader, she helped me grow into the person and leader I am today. So to be standing here with these other professional women ACs is awesome.”

Across the street from the tower in the Air Operations building, Flight Planning Supervisor/Dispatch-AC2 Autumn Rauen, in between phone calls remarked on the impact this will have on future ACs.

“I think this will be particularly impactful on new airmen coming in, both men and women, seeing that women are capable of doing these kinds of jobs and not just relegated to the background,” Rauen said. “It’s good to have all these quals to show the people who still say that women can’t do certain things.”

Up in the radar room, Costlow and her crew of Approach Controller AC1 Kristy Lescrynski, Sector Controller AC1 Erica Headrick, Clearance Delivery AC2 Syrenia Cuevas, and Final Controller AC2 Tieraney Edmond diligently tracked aircraft, pausing only to take a photo and to offer a few words.

“This speaks volumes of the hard work these women have put in to their professional development and dedication to the team by earning qualifications in record time,” Costlow said. “You’re looking at some trailblazers in the Air Traffic Control community.”

Later in the day the remaining ACs on watch were visited by Capt. Derrick Kingsley, NAS Patuxent River commanding officer, who presented command coins to the all-women crew and offered words of encouragement.

“In the 26 years I’ve been in the Navy I haven’t seen too many milestones like this, and I’m pleased it happened on my air station,” Kingsley said. “When I first joined the Navy, women were just beginning to fill roles in combat commands, now you all have played a part in the Navy’s history too. I’m damn proud to be your skipper.”

Chief Petty Officer Patrick Gordon is a public affairs officer with the Navy Office of Information, Media Content Operations-Navy Reserve Component, at Naval Air Station Patuxent River, Maryland. 🦅

A woman in a military flight suit and helmet, adjusting her goggles. The background is a cloudy sky with a faint silhouette of an aircraft.

CELEBRATING 50 YEARS OF **WOMEN IN NAVAL AVIATION**

Compiled by David Byrd

*Aviation Boatswain's Mate (Handling)
2nd Class Jynishia Wilson poses for a
photo onboard Naval Air Facility (NAF)
Atsugi, Japan, Feb. 15.*



Long before the Wright brothers powered their way into the skies of North Carolina in 1903, or Eugene Ely showed seven years later that an airplane could indeed take off from a ship, Navy women served in the nation's wars. During the Revolutionary War, women sailed on ships of the Pennsylvania Navy, and Maryland's warship *Defence* included Mary Pricely as a nurse. Mary Allen and Mary Marshall filled a similar role aboard the USS *United States* during the War of 1812. Women aided naval operations during the Civil War as lighthouse operators. The Navy established its Hospital Corps—first proposed 85 years before—during the Spanish-American War of 1898, using mostly male nurses, although four female students from Johns Hopkins University, and six more from the Daughters of the American Revolution nurses' register volunteered and served. Compelled by legislation, the Navy created a female nurses' corps in 1908; at the eve of U.S. entrance into World War I, their high performance led to their stationing at naval hospitals inside the country as well as overseas.

While the fastest growing segment of naval power in World War I was the flying corps, the 11,000 women that served for the Navy were only permitted in Naval Coastal Defense Reserve. That restriction would be eliminated in World War II.


Almost eight months after Pearl Harbor and the U.S. entry into World War II, President Franklin Roosevelt signed Public Law 689 establishing the

Women's Reserve as a distinct branch of the Naval Reserve. Unlike WWI, the Women Accepted for Volunteer Emergency Service, or WAVES, could serve as officers. Thirty-eight unique ratings, or occupational fields, were available to officer and enlisted

WAVES; most served in clerical, health care or storekeeper positions. Enlisted WAVES performed duties as machinist mates, parachute riggers, metalsmiths, aerographers mates and even pigeon trainers. In total, of the more than 100,000 WAVES that served in WWII, 23,000 executed aviation-related duties.

The Women's Armed Services Act of 1948 provided women the opportunity to serve as permanent members of the Army, Navy, Marine Corps and Air Force—albeit in limited-duty status. Navy women served during both the Korean War and Vietnam War eras in a number of roles. In 1972, Chief of Naval Operations

Adm. Elmo Zumalt issued Z-Gram 116, the first salvo of equality that would increase opportunities for women in the service, eventually leading to women serving aboard ships, attending ROTC and the U.S. Naval Academy, becoming line flag officers and aviators.

The following vignettes feature the unsung heroes of Naval Aviation—the support team. 



Ethel Pearson, left, and Doris Miller pose in front of an aircraft at Floyd Bennet Airfield, New York, on July 22, 1944. Both women were members of Women Accepted for Volunteer Emergency Service (WAVES), which allowed women to enlist in certain aspects of Navy services. Pearson was the great aunt of Naval Aviator Cmdr. Sarah Abbott (featured in last quarter's Naval Aviation News). Abbott's grandmother, Julia Papai, was also a WAVE.

Photo courtesy of Cmdr. Sarah Abbott



CELEBRATING 50 YEARS OF WOMEN IN NAVAL AVIATION

Cpl. Chloe Aldrich

Security Chief, Marine Aviation Logistics Squadron (MALS) 36

"I decided to join the military out of an aspiration from my father. I chose Naval Aviation specifically because I enjoy the exhilaration of aircraft, and it is rewarding to be a part of our airborne battle force.

"One day after returning from Underwater Egress training in Hawaii, I was flown with my peers to a remote field op. Having the opportunity to be in the field with my Marines and subordinates was not only an adventure, but it was a great honor to be promoted [to Corporal] by my command in this manner. I will forever hold that with me.

"The biggest struggle I've found was being myself. It can become difficult to implement your own values when so many others try to carve theirs into you. I've been graced with great knowledge from those before and beside me, but I've learned that the biggest step you can make for yourself is to be true to who you are. I have participated in [everything] I can get my hands on to be a better version of myself.

"I think women create the element of diversity and a different perspective. Where a woman may express grace, a man may express strength, and both may co-exist in harmony. Both benefit from each other's perspective. ✈️



U.S. Marine Corps photo

Sgt. Lukrecia Alonso Mobile Facilities Maintenance Technician, MALS-24



U.S. Marine Corps photo

"I wanted to be the first generation in my family to join the U.S. military and to set an example for future generations. As a young girl, my favorite thing to do was watch airplanes fly; I would go to every airshow that I knew of. It did not matter whether I was watching military aircraft or commercial aircraft. From then on, I instantly knew I wanted to work on or as close as possible to airplanes.

"There was a point in my career where I did not want to stay in the military because I felt like it was not letting me be the person I used to be before joining. Throughout the years I've learned that the strict rules and regulations only made me better as a person and as a leader.

"One of the greatest challenges I have experienced throughout my career was deploying to the East for seven months. Being away that long was stressful for my husband because he was alone with my 3-year-old son who was constantly asking for me.

"The inspiration comes from within, having a career within Naval Aviation has brought opportunities to enhance my career while the experiences have also made me into a more knowledgeable leader." ✈️



Lt. Cmdr. Amanda Lippert

Aeromedical Safety Officer, Naval Test Wing Atlantic

“My career started the way a lot of people’s careers do. I was in college and it was getting pensive... it kind of started with a very vanilla goal to do the initial contract and see what it’s and then get money for college, and never really intended to kind of fall in love with it the way I did. Here I am 23 years later.

“As an Aerospace Physiologist, it’s been a pretty diverse career path. I served a lot of it with the Marine Corps and got to be a part of that journey as the Marines were declaring IOC [initial operational capability] for F-35B Lightning II and standing up their very first squadron out in Yuma, Arizona.



U.S. Navy photo by Steven Keys

“I was selected to be the first fellow at NASA. And for that fellowship, I was studying human performance in extreme environments. So, they kind of let me run with scissors a little bit and figure out what projects would be best for me to study, how I could leverage what I know already from Naval Aviation to support NASA and its missions but then also, more importantly, learn how NASA does things differently and bring that back to Naval Aviation at the end of the two-year fellowship.

“I am a huge proponent of just having a diverse population, whether that looks like women or whether it looks like others; it’s good to have different approaches and different perspectives and thought processes. The more the more diversity that you have, the better, in my opinion.” 🦋



Cpl. Juliana Carda

Air Traffic Control, Marine Aircraft Group (MAG) 13, 3rd Marine Air Wing (MAW)

“I decided to join the military right out of high school, I didn’t know what I wanted to do. I also wanted a little bit of experience and to get out of my hometown.

“The person who inspired me the most to seek a career in Naval Aviation would be my dad. He started working on his pilot’s license right when I was about to join the Marine Corps and it inspired me to learn more and choose a career that would challenge me.

“I am currently qualified on radar flight data, final control and approach high. A moment that really stands out for me is getting qualified on approach high; it’s just an accomplishment that sometimes you’re unsure that you’re going to get and it’s nice to see that when you put in the work you get the outcome you were hoping for. The greatest part about being ATC is that you really do make a difference and it’s rewarding to feel that way.

“Advice I have for the next generation in Naval Aviation is that it is what you make it. You will have good and bad days but, at the end of the day, it’s very rewarding when you put in the work and get the outcome you wanted.” 🦋



U.S. Marine Corps photo

CELEBRATING 50 YEARS OF WOMEN IN NAVAL AVIATION



U.S. Marine Corps photo

Sgt. Jocelyn Cerrato

Aviation Supply, MALS-24

"I was inspired to pursue a career in Naval Aviation by my dad who also served at a Marine Aviation Logistics Squadron. Though he did not work directly with aircraft, he always carried the upmost pride in his job and being a part of aviation.

"I joined the military because like many people, I came from a small town and wanted more than what it had to offer. When I was child, my parents would take us to air shows where I fell in love with the idea of being part of the aviation community in the military.

"The greatest part about being in Aviation Supply is watching our aircraft depart the flight line safely and successfully, knowing as a team in Aviation Supply, we helped make that happen. Another cool aspect is seeing our Marine Corps aircraft in movies and how they play an important role even behind the scenes. This really opens the big picture behind aviation importance.

"A major highlight in my career would be my deployment to Okinawa, Japan. This being my first deployment, I learned and explored so many new opportunities within my profession. This deployment had one of the biggest impacts in showing me the big picture behind each vital role we play in the aviation community individually and as a team.

"My advice for the next generation interested in Naval Aviation

would be to always remember why you started that career. It's easy for things to become repetitive and seemingly old, but never forget why you started, and always remember your importance to the overall mission both individually and as a team.

"Women in the aviation community bring inspiration and confidence to other females by showing that as a female, you really can do anything you put your mind to." 🦋

Gunnery Sgt. Stephanie Guebara

Audit Branch Staff Non-Commissioned Officer-in-Charge, MALS-24

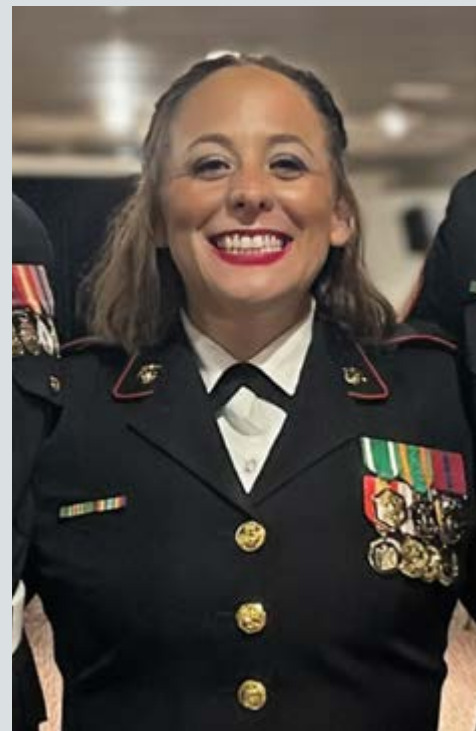
"I chose the Marine Corps because I knew college was not right for me at that time in my life. I chose Naval Aviation because my recruiter was an Aviation Supply Marine, and hearing his stories made me want to make my own. He told me how supply was a tight-knit community, and I have always appreciated people taking care of other people.

"The greatest part about being an Aviation Supply Marine is seeing how we directly affect the flight line.

"The highlight of my 18 years in the Marine Corps so far was being able to compete in the Combat Shooting matches in 2016. I was the only female to compete on Marine Corps Base Hawaii, and they asked me to shoot in the championship match in Quantico, Virginia, in May 2016. I was the only female to compete there as well. It was amazing to be outside of my comfort zone.

"Sometimes I find myself being an amazing Marine, taking care of business at work, taking care of my Marines and Sailors, but my family takes the back burner. Then other times, I find myself being an amazing mom, but the Marine side is lacking. What it really takes to be able to balance both worlds is a great support system.

"Women bring balance to the aviation community. As women in the Marine Corps, we bring a different aspect to how to approach situations and how to get the job done. We think outside the box and bring a different flair to the community." 🦋



U.S. Marine Corps photo



Lt. Nidia Ortizmadrigal

Aviation Maintenance Duty Officer,
Commander, Naval Air Systems Command

"I'm originally from Nicaragua. I came to the United States in 2000, but I joined the Navy 2004. I definitely did not know much English. And definitely I learned a lot in the Navy. I had great peers that helped me throughout my career with that, and I also was able to gain my citizenship when I was in the Navy. So, to me, the Navy has helped me a lot.

"I have done seven deployments. I love to travel, and I have visited so many different places. So to me, that is a huge highlight because that was something that I was not going to be able to get if I just got a different job. And as an enlisted, as a maintainer, my biggest highlight there was that when I was able to actually fix the aircraft and see it actually fly, it was really rewarding. As an officer, being able to take care of my sailors and work together with other enlisted sailors, and that to me is really rewarding, it's one of the biggest highlights for me to be able to help.

"Women bring a different perspective, different view. I don't want to compare, but we definitely bring a perspective where we tend to think about everything else that is around the issue or the matter at hand. We don't just think black and white. We think about everybody else and everything around us." 🌟



U.S. Navy photo by Steven Kays



U.S. Marine Corps photo

Staff Sgt. Miriam Khattab

Aviation Supply, Wing Aviation Supply
Management Advisory Team, 1st MAW

"I decided to join the Marine Corps on March 7, 2016, in Brooklyn, New York. I went from being a little girl scared to be anywhere near an aircraft to a Marine that was intrigued in all aspects of one.

"After becoming an Aviation Marine, I have learned so much about the importance of different types of aircraft and our role in keeping the parts for the aircraft on order and in perfect condition in order to complete the mission. I truly love what I do and am excited to continue this journey in the Aviation Supply community.

"An important moment that stands out to me is one conversation that would change my outlook on my Marine Corps career. I had a conversation with my Chief Warrant Officer in 2019 about my goals in the Marine Corps and how I would be able to achieve them. That conversation put into perspective that I would be better suited to achieve all of my goals if I were a Chief Warrant Officer myself. From that moment, I have strived to pursue the Warrant Officer route

CELEBRATING 50 YEARS OF WOMEN IN NAVAL AVIATION

to make an impact for the Aviation Supply Marines on a greater scale.

“Women in the aviation community have proven to be as resilient as men. From 1993 when the first female Marine aviator Karen Fuller Brannen became a strike fighter pilot, she proved that women can achieve the tasks that were only required of men in the aviation community. Today, women

show a great amount of strength, control, and attention to detail. Women serve proficiently and capably in their field to proudly represent the Marine Corps.

“My advice for the next generation interested in a career in Naval Aviation is to always make sure that at the end of the day you know you did your best. It is your name that you are working for and you create your own reputation.” ✈️

Staff Sgt. Shannon Kunz

UH-1Y Crew Chief, Quality Assurance Representative/Night Systems

Instructor, Marine Light Attack Helicopter Squadron (HMLA) 167, MAG-29



“I knew I was going to join the Marine Corps since I was in the sixth grade. I will forever be grateful to my recruiter for suggesting an aircrew contract. At the time, I had no idea what I was signing up for, but looking back, I wouldn’t change a thing. If you had told high-school me that I would be instructing junior Marines in a helicopter at night on night-vision goggles while they are shooting a .50-caliber machine gun, I would not have believed you.

“I have been stationed in every Marine Aircraft Wing in the Marine Corps and have been lucky enough to see how the Marine Corps operates on the West Coast, East Coast and in Hawaii. I’ve been able to deploy twice for 11th Marine Expeditionary Unit and a Marine Rotational Force Darwin. To get where I am today has taken a lot of hard work, dedication and love of the Corps.” ✈️

Capt. Deserine Price-Jordan NAVAIR Commanding Officer

“I started off as an enlisted in 1986. My recruiter at the time was saying, ‘Hey, you qualify for this particular job as an air traffic controller.’ I had never heard of it. Well, once I did some research, I realized how exciting that position was and I immediately signed up for it, went to the air traffic control school, and I started my career as an air traffic controller.

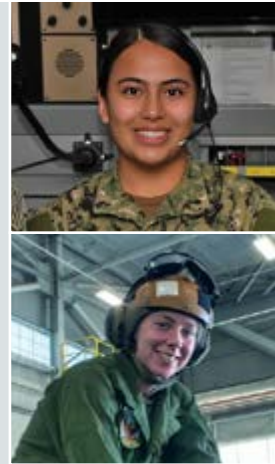
“I became the first female to be commanding officer of NAVAIR, as well as the first African-American to be promoted to captain in our community. So I had great mentors to help me and guide me through that career path.

“Some of the challenges that the enlisted face, officers oftentimes cannot relate. But because I came through those



U.S. Navy photo by Steven Kays

U.S. Navy photo by Steven Kays



struggles as an E-3, an E-4, being a single parent, you know, or the challenges with childcare. You know, the challenges of just trying to make ends meet was completely different at the deckplate level, at the enlisted level, than it is at the officer level. So I bring that in there.

"I think since aviation ever started, women have played a significant role in that. We continue

to make all kinds of contributions and we see that women in Naval Aviation, whether or not you're the pilot, the NFO, the ground pounder fixing the aircraft or the logbook keeper, whatever it is. We bring those contributions just like our male counterparts. We bring so much to Naval Aviation to help keep it going and help to meet the mission and be ready for combat." 🇺🇸



U.S. Marine Corps photo

Sgt. Doraly Tara

Aviation Ordnance, MALS-24

"The greatest part about being an aviation ordnance-man is the comradery. Ordnance is a tight knitted family that looks out for our own and takes care of each other.

"I've always strived to make myself someone dependable and to better myself by taking on responsibilities, completing courses and getting qualifications that are important to meet the mission. With the opportunity for training and mentoring, I believe I can get further and achieve more.

"Women establish a diverse environment by incorporating different leadership styles through a different mindset into the aviation community.

"It is important to inspire and encourage the next generation to pursue a career in Aviation because what you pass on to them is what they will continue to pass onto others. If you inspire them to be a great leader they will continue to take care of our community." 🇺🇸

CELEBRATING 50 YEARS OF WOMEN IN NAVAL AVIATION



U.S. Marine Corps photo

Lt. Reece “Vamp” McKenzie

Flight Surgeon, Marine Medium Tiltrotor Squadron (VMM) 261 MAG-26; Department Head, Primary Care Clinic

“My grandmother instilled in me a strong sense of determination and the belief that you are able to achieve anything and every-

thing that you set your mind to if you are willing to put in the work.

“I wanted to challenge myself, serve my country, and be a part of a team that is dedicated to making a difference in the world. I was drawn to Naval Aviation because of its rich history and tradition and the unique challenges and opportunities it presents, from flying off aircraft carriers to operating advanced weapons systems and engaging in complex missions around the world.

“As physicians, naval flight surgeons, specifically those entrusted with the care of Marines, have the best of both worlds. We oversee the medical care of a close-knit group of motivated men and women and the leadership of corpsmen whose real-time decision making could mean life or death on the battlefield while also having the pleasure of being a contributing part of the ‘Ready Room’ and participating in flights, mission planning and other operationally relevant tasking. There is never a dull day.

“As a woman of color, diversity has always been important to me, and I feel that all forms of diversity are essential. In the male-dominated field of aviation, women bring diversity of thought, of experience and of skill. We bring a fresh approach to problem-solving and decision-making, which can and has led to new innovations and safer practices in the industry. We drive progress and break down barriers, making the aviation community more diverse, inclusive and welcoming for all.” 🦅



U.S. Marine Corps photo

Chief Warrant Officer Ashley Milner

Aviation Supply Warrant Officer,
MALS-24, 1 MAW

“I enlisted in the Marine Corps because I did not have many opportunities if I didn’t leave home and I had a strong desire to do more with my life. I was pursuing a career path that aligned with my goals outside the military, which was accounting specifically. Luckily for me, the Aviation Supply specialty has several accounting and auditing facets to it.

“The greatest part about my job is getting to teach and train both junior Marines and leadership about Aviation Logistics and its application in real-world situations. It is a true privilege to watch your Marines develop into technically proficient and effective leaders within the community.

“Focusing on myself instead of what others thought of me was more important. Unfortunately, it had a lot to do with my gender above all else, but I can also say that the Marine Corps has made



significant shifts to correct these cultural issues in our ranks over my career's time.

"I cannot speak for all women in the Aviation community and can only speak of my own experiences. Just like not all men are alike, the same can be said of women. I have worked hard my entire career to see Marines as genderless, not male Marines and female Marines but just Marines. With that said, my attention to detail and ability to formulate and execute plans has significantly led to improvements in the units I have worked in. I have had the pleasure of leading Marines differently than some of my peers because of the compassion I am

willing to display to them on a regular basis. The achievements I have made in my career have shown Marines around me that you can be a good Marine, and a good parent, and a good member of society.

"Not everyone can be a pilot and fly the aircraft, and it takes a lot of expertise to maintain and sustain those aircraft both in garrison and deployed." 🦋



U.S. Navy photo by Steven Kays

Capt. Laura Schuessler

Head, Aerospace Engineering Duty Officers and Maintenance Duty Officers Placement, Naval Air Station Patuxent River, Maryland

"When I was young—and by young, I mean eighth grade—I decided I was going to the Naval Academy. My dad had been an engineer at NASA, working on Voyager One and Voyager Two, and Cassini. So I'd been around that kind of thing. I grew up in the area, kind of a local girl in that area. You know, a local girl does well and wants to go to the school seven miles away.

"In command, the favorite moment was realizing that we were getting capability out to a joint response. So it was an urgent need and making sure that knowing that in this case it was another service not the Navy, but the Army, making sure that they had capability and the Air Force as well, so they could go do their mission—and protecting them, knowing that they were getting—that they might be getting fired at.

And knowing that was really cool, knowing that we were delivering that capability super-fast.

"I enjoy this work, but being one of the few women going through, whatever you do, good or bad, is going to get recognized. We teach a lot of our O-6s as you progress up in your ranks, more and more people are going to recognize you. But for the women, we're recognized nearly right away.

"I think some of the experiences that we've been through, through our careers, be that in an engineering field or a logistics or flying in the Navy, or working on an aircraft, or being a mom at home or helping in the community, we just—it's not to say that the men don't—but we have a different look upon that, and that's the value of what we're going to bring to the table." 🦋

CELEBRATING 50 YEARS OF WOMEN IN NAVAL AVIATION



Staff Sgt. Allison Richardson

Senior NCO, Maintenance Administration, Marine Heavy Helicopter Squadron (HMH) 464

"I decided to join the military because I wanted to follow in my family's footsteps and serve my country. I have three brothers who served in the Marine Corps, one grandfather who served in the Navy, and another grandfather who served in the Army; out of all of them I am the only one to go into the aviation. The aviation side of the Marine Corps always interested me, and I wanted to pursue a career in a field that I would love.

"One of the challenges I have faced throughout my career is being a single mom in the military all while having a successful career. Being in the Marine Corps means at times you will have to be away from your family and there are sacrifices you must be willing to make. At the end of the day, I remind myself that I am doing this for my daughter to set the example for her as a woman and to provide for her to set her up for the future.

"Having a support system around you plays a key role; knowing you have people there for you throughout your career will truly will help you get through." 🦋

Cpl. Phoenix Silva Garcia

CH-53 Avionics Technician, MAG-29, Marine Heavy Helicopter Training Squadron (HMHT) 302

"Although my father envisioned a different path for me, he was my greatest inspiration in pursuing the Marine Corps and Naval Aviation. Many men in my family have served in different sectors of Naval Aviation and, while I was in my last year of high school, I realized my family's ties to the military and the community it provided us would be ending. I didn't want the tradition of Naval Aviation service to end, so I took it upon myself to be the first woman in my family to earn the title of Marine and pursue a military career.

"I grew up on Marine Corps Air Station Miramar, California, and remember when my father would bring me to work with him if he had to work weekends. I would spend

time with the Marines within the offices of the Marine Aviation Logistics Squadron (MALS) and accompany my father to the different squadrons and warehouses, and get to know the Marines there as well.

"Mentoring and teaching Marines how to become Avionicsmen and well-rounded individuals has been my greatest privilege and it's what drives my passion for this career.

"One of my biggest challenges I've faced so far is struggling at times to practice my trade as often as I'd like. I am involved in color guard, serve on the NCO Counsel, and work as the Single Marine Program representative for my squadron.



U.S. Marine Corps photo

At times, these commitments take me outside of the work center causing me to miss a less-frequent maintenance action, thus, losing that opportunity for hands-on learning.

“Women benefit the Aviation community by bringing a different approach to problem solving. May it be due to cultural factors or traditional roles, we have been raised to pursue issues calmly and with a unique sense of perspective. Traditionally women have held teaching roles in our society and tend to share what we’ve learned openly while displaying patience when it’s needed most. 🇺🇸



Sgt. Crystal Thung

Air Traffic Controller, MAG-13, 3rd MAW

“I decided to join the military for a new experience and to push myself out of my comfort zone. It was something I always thought about doing but never really thought I would do.

“My parents were both born outside of the country and English was their second language. They have made many sacrifices to allow me and my sister the opportunity to thrive and do what they couldn’t. Growing up, making them proud has been a driving factor for me to always do my best at everything. Now that I’m older, of course, I still want to make them proud, but I also want to make myself proud, too.

“Being an air traffic controller is rewarding in the sense that I am positively impacting the safety and mission success of pilots, for both civilian and military. At first it was not a job I knew much about, but the more I learned and progressed in my career, the more I realized the importance of aviation safety.

“I could never imagine myself leading people, but now it’s one of my favorite things. It’s rewarding to see the Marines under my charge succeed.

“I believe it’s more about the work you put in, not what a man can do that a women can’t or vice versa.” 🇺🇸



U.S. Marine Corps photo

WRECK SITE IDENTIFIED AS WWII CARRIER USS OMMANEY BAY

By Petty Officer 1st Class Abigayle Lutz

Naval History and Heritage Command (NHHC) confirmed July 10 the identity of a wreck site as USS Ommaney Bay (CVE 79), a World War II-era aircraft carrier that was sunk in the Sulu Sea after being hit and mortally wounded by a twin-engine Japanese suicide plane on Jan. 4, 1945.

USS Ommaney Bay (CVE 79) at Manus, Admiralty Islands, prior to entering floating drydock, Nov. 22, 1944.

U.S. Navy photos courtesy of the Naval History and Heritage Command

NHHC's Underwater Archaeology Branch (UAB) used a combination of survey information provided by the Sea Scan Survey team and video footage provided by the DPT Scuba dive team, to confirm the identity of Ommaney Bay. This information correlated with location data for the wreck site provided to NHHC in 2019 by Vulcan, LLC (formerly Vulcan, Inc.).

"Ommaney Bay is the final resting place of American Sailors who made

the ultimate sacrifice in defense of their country," said NHHC Director Rear Adm. (ret.) Samuel J. Cox. "It is with sincere gratitude that I thank the Sea Scan Survey team: Mick Stefurak, Neil "Snake" Krumbeck and Joe Brothers for confirming the location of this wreck site. We would also like to thank the team of Australian divers from DPT Scuba: David Tipping, Chris McCran, Aimee McCran, Samir Alhafith, Heeman Lee and John Wooden for their

deep diving expertise and assistance identifying the Ommaney Bay. This discovery allows the families of those lost some amount of closure and gives us all another chance to remember and honor their service to our nation."

The Japanese kamikaze crashed into Ommaney Bay's starboard side, releasing two bombs and causing severe damage. A series of explosions were caused by one of the bombs that entered the flight deck and detonated below, among the fully-gassed



Above, USS Ommaney Bay (CVE 79) burning in the Sulu Sea, off Luzon, on Jan. 4, 1945, during the Lingayen Operation after being hit by a Kamikaze. A destroyer is standing by with fire hoses ready.

Below, a series of explosions were caused by bombs from the Kamikaze entering and detonating below the flight deck among the fully-gassed aircraft in the forward third of the hanger deck.



aircraft in the forward third of the hanger deck. The second bomb exploded close to the starboard side after rupturing the fire main on the second deck and passing through the hanger deck.

The order to abandon ship was given as the possibility of stored torpedo warheads exploding at any moment increased. A total of 95 Sailors were lost, including two personnel from an assisting destroyer who were killed when the torpedo warheads on Ommaney Bay finally went off.

Ommaney Bay received two battle stars for her World War II service.

The wreck of Ommaney Bay is a U.S. sunken military craft protected by U.S. law and under the jurisdiction of the Department of the Navy. While non-intrusive activities, such as remote sensing documentation, on U.S. Navy sunken military craft are allowed, any activity that may result in the disturbance of a sunken military craft must be coordinated with NHHHC and, if appropriate, authorized

About the NHHHC UAB

The NHHHC UAB is responsible for setting policy and managing the U.S. Navy's nearly 3,000 shipwrecks and over 15,000 aircraft wrecks. They hold maritime archaeological and conservation expertise and are equipped to conduct research on sunken military craft; manage a conservation and curation facility that stabilizes, analyzes and houses a collection of artifacts recovered from sunken military craft; and engage in an expansive array of public outreach efforts, including partnering with the diving community.

NHHHC, located at the Washington Navy Yard, Washington, D.C., is responsible for preserving, analyzing and disseminating U.S. naval history and heritage. It provides the knowledge foundation for the Navy by maintaining historically relevant resources and products that reflect the Navy's unique and enduring contributions through our nation's history and supports the fleet by assisting with and delivering professional research, analysis and interpretive services. NHHHC comprises many activities, including the Navy Department Library, the Navy Operational Archives, the Navy art and artifact collections, underwater archeology, Navy histories, 10 museums, USS Constitution repair facility and the historic ship Nautilus. 🐙

through a relevant permitting program. Most importantly, the wreck represents the final resting place of Sailors who gave their lives in defense of the nation and should be respected by all parties as a war grave. For more information on Ommaney Bay, go to https://www.history.navy.mil/research/histories/ship-histories/danfs/o/ommaney_bay.html

Petty Officer 1st Class Abigayle Lutz is a mass communications specialist with Naval History and Heritage Command. 🐙

Team Provides Aviation-Focused, Maritime-

By Asya Parker

The Naval Supply Systems Command Weapon Systems Support's (NAVSUP WSS) Aviation Support Equipment (SE) Integrated Weapon Support Team (IWST) is what the Navy refers to as a "super-IWST" when it comes to logistical support. Uniquely positioned, the Support Equipment IWST provides support across the maritime, aviation and expeditionary domains, leveraging a comprehensive global organic and commercial industrial base to "keep 'em flying."

The landscape of the Aviation Support Equipment IWST contains a broad customer base which spans operations across the entire product life cycle, a life cycle that begins with research and development and ends with disposal. This landscape supports 6,659 total systems, fixed wing and rotary aircraft, various platforms of air-capable ships, and 20 Program Offices—three of which are unique to SE IWST. These unique programs include Naval Aircrew Systems, Aircraft Launch and Recovery

Equipment and Common Aviation Support Equipment program offices.

Utilizing a top-down approach, the Aviation Support Equipment IWST is a complex organization comprised of five unique teams, each managing diverse business lines. These five teams encompass Automated Test Equipment (ATE), Common Support Equipment (CSE), Peculiar Support Equipment (PSE), Aviation Life Support Systems (ALSS), Aircraft Launch and Recovery Equipment (ALRE), Interim Support, and Technical

Support. These teams manage 21,000 national stock numbers (NSNs), or items, which makes up 23 percent of the NAVSUP WSS's aviation supply chain, and their portfolio continues to grow.

"We are a unique IWST in the aviation world because our work expands past the aviation-centric business parameters. Where most of the command remains focused on non-mission capable supply/partial mission capable supply and funding aviation procurements, the SE team also tracks casualty reports (CASREPs) and other procurements covered under OPN-8 budget lines, which adds the surface Type Commands (TYCOMs) and program offices to our customer base," said Lt. Cmdr. Dessi Rabell, NAVSUP WSS Aviation Support Equipment IWST Director.

A typical day within Aviation SE IWST is not so typical, as each day faces a new set of challenges.

"When it comes to daily business in the Aviation SE IWST world, there really isn't a typical day because there are some unique challenges that we face," Rabell said. "While we have our regularly scheduled daily and weekly drumbeats to cover basic business, our mission is to look past the daily business and instead focus on how we can make things better. Something that we always say within the support equipment realm is to start with 'why.' Why are we doing something? Is there a better way to do it? Does the process need to change?"

"We have the privilege to work with 20 different program offices across the spectrum, which is a different dynamic compared to a standard Type/Model/Series IWST. While that is sometimes challenging, it also gives us an opportunity to build partnerships and leverage from each other to see how we can make things better," Rabell said.

The Aviation Support Equipment



U.S. Navy photo by MC2 Caitlin Flynn

Navy Sailors disassemble a constant runout valve for maintenance aboard aircraft carrier USS Nimitz (CVN 68).

-Facing Support to NAVSUP WSS Enterprise

IWST has an ever-growing portfolio with no endpoint in sight. New systems are constantly being added to the growing list of NSNs. New generations of equipment are being received, causing an overlap with legacy systems before those legacy systems are fielded out. While the SE planners across CSE/PSE/ALRE branches support fielded systems, all new systems coming to life fall on the shoulders of the small group of Logistics Elements Managers (LEMs) who make up the Interim Support branch. It is the LEMs who lay the solid foundation for life cycle sustainment success, currently supporting 51 active and 89 pending new systems.

“The LEMs are critically important because they bring in any new or modified systems and provide Interim Supply Support from Initial Operational Capability (IOC) to Material Support Date (MSD). From the Baseline Assessment Memorandum (BAM) budget reviews for APN-6/OPN-8, to spares procurement, repairs initiation and allowance determination, the LEMs initialize all the support that SE planners will need to properly take over system management at MSD. With the vast amount of throughput, the entire team is very heavily involved in making sure the process happens right,” Rabell said.

Another aspect that makes the Aviation Support Equipment IWST unique, is the heavy reliance on the support of the technical branch, which is comprised of equipment specialists.

“Just by the virtue and size of our portfolio, our equipment specialists have a very high and challenging workload, often processing over 1,000 Design Change Notices (DCNs) annually,” Rabell said.

The primary mission of equipment specialists is to ensure all Navy and DOD files, regardless of cognizant agency, reflect proper Naval Air Systems Com-

mand and Naval Sea Systems Command approved configuration, sources and usage data. Examples of “daily business” for equipment specialists include provisioning, procurement support, configuration management, data integrity, market research and quality assurance. Equipment specialists can be referred to as the command sustainer, supporting all codes through all acquisition phases.

As NAVSUP WSS continues to operate as arguably the most important piece of the Navy’s logistical puzzle, Aviation SE IWST is an essential piece to that puzzle which completes the picture. From test benches on CVNs, to lifesaving and crew survival equipment (survival radios/oxygen generating systems/mission-configurable life rafts), to laser-focused efforts to “make Ford ready,” the Aviation SE IWST continues to align with mission partners in driving and strengthening

cost-wise and agile supply chains across the Naval Aviation Enterprise.

“If you look at anything we do in Aviation SE IWST, nothing is in isolation. We support every Type/Model/Series, we support the equipment that’s needed to launch and recover aircraft, and we work across all the program offices,” Rabell said. “I will use one of my favorite quotes from a former NAVSUP WSS Commander, who often reminds us that ‘relationships build readiness.’ With the vast amount of customers we sustain, and the vast amount of stakeholders that we interact with, investing in and building good relationships is what makes the business successful. If we don’t have those relationships across the entire enterprise, we would not be able to do our job properly.”

Asya Parker is a public affairs specialist with Naval Supply Systems Command Weapon Systems Support. ✈️



Sailors conduct catapult maintenance on the flight deck aboard aircraft carrier USS George H. W. Bush (CVN 77).

U.S. Navy photo by Mass Communication Specialist Seaman Bayley McMichael

USS Harry S. Truman Reaches 50 Percent Completion of PIA

By Petty Officer 3rd Class Christopher Suarez

The Navy announced the Nimitz-class aircraft carrier USS Harry S. Truman (CVN 75) reached 50 percent completion June 15 of its Planned Incremental Availability (PIA) at Norfolk Naval Shipyard (NNSY), Virginia. A significant milestone during the maintenance period, Truman and NNSY crews continue working together tirelessly to complete ship-wide upgrades, modernization and major maintenance projects to return the ship to sea.

As Sailors, shipyard workers and contractors step aboard every morning, they recognize the importance of their part in achieving success.

“The success of our planned incremental availability hinges on the collective efforts of every individual involved,” said Capt. Gavin Duff, commanding officer of Harry S. Truman. “It is the culmination of hard work, teamwork and a shared vision to enhance Truman’s readiness and capabilities.”

On average, Nimitz-class aircraft carriers have 16 scheduled shipyard visits throughout their roughly 50-year life cycle, including 12 PIAs, three dry-docking planned incremental availabilities (DPIA), and one Refueling Complex Overhaul (RCOH). This PIA focuses on significant structural repair and preservation work, including tanks, voids, weapons elevators, aviation engine hatch safety station modification and airplane crane, and a combat systems’ CANES upgrade that improves communication connectivity and integration of systems onboard Truman.

The upgrades extend beyond essential systems and equipment. The focus on substantial work to enhance berthing spaces, ship-wide facilities such as gyms, laundry areas and entertainment spaces and the foundation for Wi-Fi capabilities underscores the commitment to improving the quality of life for the crew. Recognizing the physical and mental well-being of the Sailors as crucial factors in mission success, the ship’s force and shipyard personnel have worked diligently to create an environment that promotes comfort and relaxation during their demanding deployments.

“It is important that I come in and focus on the task at hand so when the Sailors are out at sea, the crew is able to live in a comfortable and safe environment,” said Demie De La Cruz, an NNSY employee.

“Stressing habitability on this aspect gives all Truman Sailors one less thing to worry about and allows them to focus during their daily missions.”

Productivity remains a top priority for the ship’s force and NNSY personnel. Whether one belongs to a PIA team or is a shipyard worker, the common goal is to keep work progressing.

Walking through the various spaces of the ship during the PIA, one can witness the extensive maintenance and upgrade work undertaken.

“You walk on the brows, and every day you see maintenance being completed or started,” said Fireman Austin Krug, a member of the tank and void team. “It shows not only that everyone’s really pushing to get the ship out on time, but it also show how small upgrades like new mattresses, new furniture and even televisions are accounted for to make our time on here enjoyable.”

Amid countless tasks happening simultaneously, it can be challenging to comprehend one’s role. However, as the maintenance period progresses, the hard work and progress begin to bear fruit.

“It’s difficult to understand your role when a million things are happening at once,” said Seaman Hector Maldonado, a member of the berthing rehabilitation team. “This was especially true at the beginning of the maintenance period; however, five months into the process, you start to see all the hard work and progress come to fruition. It gives me and many of the shipyard workers pride in seeing our labor highlighted, praised and appreciated.”

From the very beginning of the maintenance period, collaboration and unity have been key guiding principles.

“My belief from day one of this maintenance period was that if Truman and all of us as ship-

yard personnel can plan together, work together and correct the work together, there is nothing that we won’t be able to accomplish,” said Nashawn Holliman, an NNSY employee. “You hear the commanding officer constantly talk about first-time quality; we take that to heart and apply it to all the maintenance that we do.”

The planned availability cycle has witnessed significant milestones and critical projects. Noteworthy among these are the mast preservation and the oily waste system, both of which have been successfully addressed during the maintenance period. The mast preservation ensures the structural integrity of the ship’s mast, crucial for optimal performance and safety. The oily waste system

upgrade enhances environmental stewardship and compliance with strict regulations, reflecting Harry S. Truman’s commitment to sustainability.

Drawing from the lessons learned from other aircraft carriers, Truman’s crew and NNSY have continuously strived for excellence. By

incorporating best practices and leveraging their collective expertise, they have overcome challenges and maximized efficiency. These lessons have been invaluable in streamlining processes, minimizing downtime and ensuring the highest standards of quality.

Throughout this endeavor, the cohesion between the ship’s force and the Norfolk Naval Shipyard workforce has been nothing short of remarkable. It is a testament to shared dedication and unwavering commitment to their respective roles.

“Everyone plays an important role; we’re able to come in every morning and do what’s asked of us,” said Petty Officer 1st Class Emily Flowers, the berthing rehabilitation team lead. “If everyone else does the same, we’ll continue progressing towards Truman’s modernization and mission-readiness.”

Petty Officer 3rd Class Christopher Suarez is a public affairs specialist with USS Harry S. Truman Public Affairs. 🐦

“Throughout this endeavor, the cohesion between the ship’s force and the Norfolk Naval Shipyard workforce has been nothing short of remarkable. It is a testament to shared dedication and unwavering commitment to their respective roles.”

Aircraft carrier USS Harry S. Truman (CVN 75) arrives at Norfolk Naval Shipyard in Portsmouth, Va., Dec. 7, 2022, in advance of its scheduled planned incremental availability.

U.S. Navy photo by Shelby West

Aviation Boatswain's Mate (Handling) University

Refreshes, Refines Skills for Safer Flight Deck

By Mass Communication Specialist 2nd Class Tatyana Freeman

The flight deck of a nuclear-powered aircraft carrier is a fast-paced and complex place, especially when operating at sea. It takes only seconds for a multi-million dollar aircraft to “crunch” into another one and render both unable to fly. This miscalculation of movement and split-second mistake made by personnel working on the flight deck create huge complications for operational units that provide forward presence around the globe.

Rear Adm. John Meier, commander, Naval Air Force Atlantic (AIRLANT), believes the unfortunate mistakes made on the flight deck can be mitigated through more rigorous

personnel working on a ship's flight deck or flight line tow a \$100-\$200 million aircraft into something else. The worst of these types of events occur when one aircraft is towed into another one, and then a squadron or unit is down two of their aircraft. Mission

“Last year we had a significant number of crunches throughout the fleet,” Meier said. “A-B-H-U is our approach to that. It's basically our ground school for aircraft handling.”

ABHU, or Aviation Boatswain's Mate



U.S. Navy photos by MC2 Tatyana Freeman



Rear Adm. John Meier observes and speaks to Sailors assigned to the Nimitz-class aircraft carrier USS Harry S. Truman (CVN 75) during the Aviation Boatswain's Mate (Handling) University course of instruction June 9.

training in the classroom and hands-on experiences on the flight line. From his perspective, the Naval Aviation community has a duty and obligation to train and prepare Sailors who will, or who presently, work and manage day-to-day operations on a flight deck.

“The vast majority of reportable safety incidents we have in Naval Aviation are ‘crunches,’” Meier said. “This is when

and readiness are automatically impacted in a blink of an eye.”

Due to these incidents mostly resulting from human error, Meier is working with his team at AIRLANT to take necessary steps toward making Naval Aviation safer by trying to stop problems before they happen, and to close out the most preventable mistakes in order to keep Navy aircraft where they belong: in the air.

(Handling) University, is a new course that Aviation Boatswain's Mates (Handling) (ABH) within AIRLANT's claimancy can now take part in to refresh their skills, or acquire more knowledge in an area they may be unfamiliar with due to ship maintenance periods or their assigned job position within their shops. The first ABHU participants, from USS Harry S. Truman (CVN 75)

and USS Dwight D. Eisenhower (CVN 69), graduated from the course on Naval Station Norfolk, Virginia, on June 2. The second class of Sailors comprised of participants from Harry S. Truman graduated June 9.

ABHs supervise the movement, spotting and securing of aircraft and equipment ashore and afloat and provide crash rescue, firefighting, crash removal and damage control duties in connection with the launch and recovery of aircraft.

“It’s a basic ABH course with a lot of extra reps [repetitions] and sets that they can use to practice in between being underway, so they can get extra proficient for when they go out to sea,” said Senior Chief Aviation Boatswain’s Mate (Handling) Maurk Burks, a Sailor

and three that are hands-on moving training aircraft. For ships entering advanced and integrated phases, the course is three days: one classroom and two hands-on. The course is for ships that are out of the shipyard and have operated, or are preparing to operate, at sea in preparation for exercises and an upcoming deployment.

“What we’re here to develop is a relentless and flawless execution of the basics,” Burks said. “So, basically, Sailors who are relentless in executing the basic responsibilities of their jobs aboard aircraft carriers.”

ABHs often work outdoors on the flight decks of various platforms in all climates, and the rate is largely considered a fast-paced and often hazardous job.

By making the basics fresh and striving for perfection in any way possible, AIRLANT strives to minimize the number of preventable mishaps when it comes to aircraft, and, ultimately, make Naval Aviation safer every day.

“ABHU is just one of many initiatives to get ahead of a problem and to stop preventable mistakes from happening on our flight decks,” Meier said. “It starts with our people and ensuring that our Sailors have the training and means to be successful within their rate and to put safety first.”

Commander, Naval Air Force Atlantic (COMNAVAIRLANT) is responsible for seven nuclear-powered aircraft carriers, 54 aircraft squadrons, 1,200 aircraft and 52,000 officers, enlisted and civilian personnel based



Rear Adm. John Meier congratulates Sailors assigned to the Nimitz-class aircraft carrier USS Harry S. Truman (CVN 75) following their completion of the second Aviation Boatswain’s Mate (Handling) University course of instruction on June 9.

assigned to AIRLANT and one of the instructors of ABHU.

The course length is set to meet the needs of the students based on how far along their ship is during their maintenance phase, which is part of the five-phased Optimized Fleet Response Plan (OFRP). If the ship is in the shipyard or beginning their maintenance phase, the course is five days: two classroom

“During this course, I was able to work on some basics that I haven’t been able to work on for a while,” said Aviation Boatswain’s Mate (Handling) 3rd Class Ramon Antonio Reyes, assigned to Eisenhower and one of the first ABHU graduates. Reyes emphasized that the course allowed him and his classmates to slow down, get back to basics, build on knowledge and to improve within their rate.

on the East Coast of the United States. It provides combat ready, sustainable naval air forces with the right personnel, properly trained and equipped, with a focus on readiness, operational excellence, interoperability, safety and efficient resourcing.

Mass Communication Specialist 2nd Class Tatyana Freeman is with Commander, Naval Air Force Atlantic. 🇺🇸



The Global Reach of “THE LONE STAR

By Sandy Owens

Dotted along the flight line at Naval Air Station (NAS) Joint Reserve Base (JRB) Fort Worth, Texas, are three C-40A Clippers, specialized Boeing 737-700s with cargo doors. These aircraft belong to a mainstay on the flight line known as Fleet Logistics Support Squadron (VR) 59, or “The Lone Star Express.” Housed under Commander, Fleet Logistics Support Wing, VR-59 is one of 11 logistics squadrons across the United States.

These reserve units are comprised of both full-time Training and Administration of the Reserve (TAR) and part-time Selected Reserve (SELRES) Sailors.

VR-59’s primary mission is to provide safe, timely, interoperable worldwide logistics. Through the execution of this mission, VR-59 along with the ten other squadrons across the country, saved taxpayers over a billion dollars last Fiscal Year (FY). VR-59’s mission is critical to the success of the Navy and its joint partners, enabling agile and rapid response to global contingencies. In addition to providing logistical support, they also transport personnel, and equipment including senior military officials, Congressional delegates and other dignitaries.

The SELRES Sailors at VR-59 are a shining example of the expertise, dedication and readiness that “The Lone Star Express” brings to the fight. One thing separating VR-59 from a typical reserve command is its operational active-duty support mission that requires SELRES to balance civilian work life with military reserve life.

“VR-59 has a peacetime benefit with a wartime use, which means we must be ready 24/7, 365 days a year,” said Cmdr. Daniel Bradley, Commanding Officer of VR-59. “In order to support



One of VR-59's C-40A Clippers at NAS JRB Fort Worth, Texas, undergoing some maintenance. The maintenance crew keeps the aircraft ready to provide logistical support around the world.

U.S. Navy photo by Sandy Owens

EXPRESS”

the mission, we have an organization of dedicated full-time and traditional reservists. For many, a lot of their daily life is a balance between full-time civilian jobs, family and VR-59. At VR-59 the commitment of our part-time reservists is well beyond that of the traditional two weeks a year, one weekend a month.”

According to Lt. Cmdr. Kyle Vannatta, VR-59 SELRES Operations Officer, “In FY 2022, VR-59 aircrew operated three C-40A aircraft contributing to Navy-Unique Fleet Essential Airlift assets flying 25,205 hours, transporting 96,105 passengers, and delivering 18,818,066 pounds of cargo, at a cost avoidance of \$1.14 billion.”

In addition to providing cost-effective transport services, VR-59 contributed significantly to the pandemic response by transporting essential supplies and personnel.

“In 2020 [VR-59] had a very special mission as the world contended with COVID-19. The unit was detached to Guam to support the transportation of over 10,000 testing kits from the USS Theodore Roosevelt (CVN 71) to laboratories in South Korea,” Vannatta said. “That same year, VR-59 flew 2,700 Navy

Boot Camp graduates to their accession training and fleet concentration areas allowing the fleet’s training and deployment cycles to continue uninterrupted.”

Furthermore, in 2021 VR-59 operated in unison with VR-57 and VR-51 in support of Operation Allies Refuge. This critical humanitarian mission operated around-the-clock and provided safe transport for over 120,000 civilian and military personnel out of Afghanistan.

“VR-59 stands ready to answer the call of some of the most critical, yet nearly unreported U.S. Navy and Marine Corps fleet readiness support missions,” Vannatta said. “To summarize the important role VR-59 serves in the U.S. Navy, in the words of General John J. Pershing, ‘Infantry wins battles, logistics win wars.’”

“The Lone Star Express” has a long history of excellence and their commitment to providing safe and timely logistical support benefits the entire nation.

Sandy Owens is a communications specialist with Naval Air Station Joint Reserve Base Fort Worth, Texas. 🦅

A-TIC Lab Presents Ship-Based Experience in Training Environment

By Adam Hochron

During flight operations on an aircraft carrier, everything from the lighting to the readability of the monitors to the size of the work center matters, with no room for error. The Aircraft Launch and Recovery Equipment (ALRE) Technology Integration Center (A-TIC) at Naval Air Warfare Center Aircraft Division (NAWCAD) Lakehurst, New Jersey, is the only lab with ALRE shipboard representative equipment, including replica workspaces and shipboard Delta power.

These capabilities allow the engineers at NAWCAD Lakehurst to address technical and human factor considerations before installing the equipment on a ship. The lab also plays a pivotal role by recreating in-service issues reported by the fleet during deployments. In fact, every ALRE system must be qualified in the ATIC lab with production-level ALRE systems before installation on an aircraft carrier.

Established in 2019, the lab's personnel evaluate how everything from technology to new capabilities will fit in the ship's most critical and tightly cramped spaces. The lab recreates various work centers with several connected rooms, including Air Operations, Carrier Control Approach, Flight Deck Control and Primary Flight Control. These spaces all include production-level ALRE systems, including Aviation Data Management and Control System (ADMACS), Landing Signal Officer Display System (LSODS), Improved Fresnel Lens Optical Landing System (IFLOLS), Integrated Launch and Recovery Television Surveillance (ILARTS) and MORIAH Wind System, as well as a fiber connection to the Electromagnetic Aircraft Launch System (EMALS) and Advanced Arresting Gear (AAG) test sites.

"We're finding new uses all the time. Just having this kind of space we never had before, we're able to do things cheaper, faster, and get things out to the fleet quicker because we can do the work here," said Bob Meseroll, branch head for software and system-level test engineering. "The goal is to have as much as we can from the ALRE perspective fully verified and ready to go by the time we do the install on the ship."

Part of integrating the technology into the new ships and updating older ships is keeping the systems safe from cyber and physical threats. Meseroll said with patches constantly being developed for new threats, his team is running periodic tests to ensure that critical system updates do not negatively impact required system functionality.

Mechanical engineer Chris Brocco said staff can do human factor testing for everything from the video displays to the chairs and computer equipment. The lab staff also installed a pole similar to one found on a ship, presenting the real-life obstacle for the Sailors who need to see the various screens in the room.


The lab also has large video screens that replicate the windows of primary flight control on a ship. Brocco said this allows them to do simulations for various aircraft. Having the ability to replicate "real life" situations from the lab, he said, is beneficial for the people using the system on an actual ship or training before going out to sea.

"It's nice to see what you do here out there on the ship to see who's actually going to use it, see the Sailors that have to actually sit at the workstations and look at the MORIAH displays and to actually understand what they need to do every single day and hopefully make their lives a little bit easier," Brocco said. "You can get lost just doing drawings and everything here when you're building whatever. But to see it on the ship and know the Sailors actually use it is a much different thing."

Another critical component of A-TIC is its cyber unit. Thanks to the lab's addition of the Joint Mission Environment Test Capability Multiple Independent Levels of Security Network (JMN), the lab can connect ALRE and Support Equipment systems at Lakehurst to DoD locations nationwide, allowing for various tests without losing equipment or personnel. Last year, the lab was used for the joint cyber test event USS Secure 22-3, allowing for direct communication between the Aviation Land and Launch Enclave at Lakehurst and the SY-1 Radar System at Naval Air Station Patuxent River, Maryland. The technology has also been used to train pentesters, or penetration testers, and the cyber security workforce at Lakehurst.

Key customers for the lab include the Aircraft Launch and Recovery Equipment Program Office, the Naval Air Traffic Management Systems Program Office, the Unmanned Carrier Aviation Program Office and Tactical Afloat Networks.

A-TIC was designed and built by Brocco and Michael Rosso and eventually handed over to the Prototype, Manufacturing and Test Department. Under the direction of SE & ALRE Test & Evaluation Division Head Robert DiGirolamo, the lab is also guided by Meseroll and lab manager Gene Rossi. They work closely with the Lakehurst ALRE programs to address all their testing, training and troubleshooting needs.

Adam Hochron is a communications specialist with Naval Air Warfare Center Aircraft Division, Lakehurst, New Jersey. 



Kenny Beverly, right, and Matt Kasperavicius are part of the team from the Aircraft Launch and Recovery Equipment Technology Integration Center at Naval Air Warfare Center Aircraft Division Lakehurst, New Jersey. The lab provides Sailors and scientists an environment to recreate the technology and overall environment on an aircraft carrier and helps protect the fleet from cyber and physical threats.



The Aircraft Launch and Recovery Equipment Technology Integration Center at Naval Air Warfare Center Aircraft Division Lakehurst, New Jersey, provides Sailors and scientists an environment to recreate the technology and overall environment seen on an aircraft carrier. The lab also has a digital component used to keep ships safe from cyber threats in addition to physical threats.



U.S. Navy photo

Marine Corps Sgt. Eric Andrekopoulos, assigned to Marine Attack Squadron (VMA) 223, participates in a practical exercise March 6 as part of the F402 Engine Tier 5 Remote Visual Inspection (RVI) Inspector Rating certification course at Fleet Readiness Center East.

FRCE Engine Inspection Training Key to Aircraft Safety

Training developed and conducted at Fleet Readiness Center East (FRCE) has made a real-world impact on flight line readiness. The training provides the Marine Corps with the capabilities to bolster the number of mission-capable AV-8B Harriers while ensuring aircraft safety, and is now being applied to next-generation aircraft including the F-35 Lightning II.

The AV-8B Remote Visual Inspection (RVI) program trains and certifies Marines maintaining the AV-8B Harrier to successfully perform digital borescope processes on the Harrier's F402 engine using RVI borescope equipment. These borescopes allow for the inspection of components in remote, hard-to-reach areas, such as the inside of an aircraft engine.

Since kicking off in 2015, the AV-8B RVI program has trained and graduated a total of 315 personnel including Marines, civilian aircraft maintainers and engineers.

"The skills demonstrated by program graduates are credited with successfully facilitating more than 60 on-wing repair and recoveries, which negated the need to remove the engine and increased mission readiness by reducing turnaround time," said Terry Gerber, the AV-8B RVI Program developer and manager who serves with AV-8B Fleet Support Team (FST) In-Service Engineering.

The AV-8B FST oversees the RVI training program at FRCE, which offers courses in which students can become certified

as RVI technicians and progress to higher levels of certification such as inspectors. The most recent course offering is the F402 Remote Visual Inspection Technology Tier-6 Shadow Borescope Technology & Low Pressure Compressor Processes training course which launched in October of last year.

"I've been a part of the Harrier community for some time now," said Chris Gosnell, the AV-8B FST propulsion team lead. "Looking at the caliber of training that this delivers, I think it's something that any type, model or series of aircraft should have in place. It's recognized in terms of the enhanced safety it brings to our program. It is sending highly trained Marines back to the fleet and adds incredible value and quality to the AV-8 community."

Gerber said the training courses are just one element of the extensive AV-8B RVI program. In addition to developing a standardized training and certification program, the team created the standards and procedures used to guide the use of RVI borescopes and equipment in the fleet, developing a comprehensive RVI Standard Process Manual.



“This has been a massive undertaking,” Gerber said. “The FST worked with a range of entities to make this happen including the program office, elements throughout FRC East, Marine units, as well as the manufacturer and civilian contractors. The Center for Naval Aviation Technical Training, Naval Air Warfare Center Aircraft Division and Naval Air Technical Data and Engineering Service Command (NATEC) Detachment Cherry Point played a big role as well.

“Championing and achieving an enterprise-wide change in mindset and technical processes is never easy,” he said. “You certainly can’t do it alone.”

This immense effort centered on the proper use of the borescope, a fairly small tool used to look for even smaller traces of damage. Gerber said RVI borescopes are utilized by technicians and inspectors at the organizational, intermediate and depot maintenance levels. The devices are particularly useful in inspecting damage caused by foreign objects and debris.

Borescopes can significantly improve serviceability assessments which determine if an engine needs repair as well as the level of necessary repair. Borescopes help units maintain combat readiness by expediting the return to service of engine assets, but only if used correctly.

Carl Irvin, an F402 engine equipment specialist supervisor with NATEC Detachment Cherry Point, serves as the lead examiner for the RVI training. He has worked with the Harrier for nearly four decades and is no stranger to using a borescope.

Irvin said borescope measurements can be impacted by a wide range of factors such as the distance or angle of engine blades from the borescope. If procedures and processes differ from unit to unit, this could lead to different interpretations of borescope imagery.

“If the damage you were looking at is actually larger than what you thought, it impacts the safety of the engine and the aircraft,” Irvin said. “If the damage is actually smaller than you thought it was, you’ll be pulling an engine for no reason.”

Pulling an engine from service due to an incorrect borescope reading has impacts on a unit’s flight line readiness. The AV-8B RVI program tackled this issue by standardizing the entire process and creating an RVI Standard Process Manual that encompassed all procedures, from start to finish, for performing effective RVI inspection of the Harrier’s F402 engine.

Gerber described the process as challenging, citing a lack of detailed manuals and instructional materials related to borescope inspection throughout the aviation world.

“We had to develop our RVI manual from scratch,” Gerber said. “There was not any equivalent fielded in the Department of Defense or the civilian sector that we could identify. We looked hard but none were found with the level of rigor and detail we were looking for. It had to be right. In the RVI business, the smallest of details have a profound influence on the ultimate outcome.”



Marines assigned to Marine Attack Squadron (VMA) 223 engage in classroom discussion March 6 during the F402 Engine Tier 5 Remote Visual Inspection (RVI) Inspector Rating certification course at Fleet Readiness Center East.

Gerber described the development of the manual, as well as of the training regimen and technical data products now utilized in the program, as a collaborative process driven by interviews that FST engineers held with fleet maintainers and depot artisans, maintenance supervisors and leadership.

According to Irvin, the painstaking research and data analysis performed during the AV-8B RVI program’s development have resulted in comprehensive procedures and instructions now standardized across the Harrier enterprise.

“There is a lot of science involved in it now,” Irvin said. “The manual the FST has written tells you exactly how far the borescope is from that blade. There is a standard across the board and everybody involved knows what they’re looking at.”

In addition to creating the RVI training manual, Gerber said the team put a great deal of effort into developing training aids for the program. He describes the training as consisting of 20 percent academic instruction and 80 percent hands-on practical exercises. Training classrooms are equipped with actual F402 engines that students must inspect using the same borescopes and equipment that are now standardized in the fleet. He said the emphasis is on realism and the aim is to ensure the standardization of technical processes across the enterprise.

“The equipment used in our training environment is comprised of the exact instruments, equipment and tooling the

inspector will be required to work with in the field,” Gerber said. “The only details we don’t include in our training environment are the noise, movement of the aircraft and the less than hospitable environmental conditions they might encounter in the field.”

In the past, Gerber said the qualification process to make serviceability assessments was very subjective and varied widely between units and activities. He said the institution of the AV-8B RVI training and certification program put into effect much needed qualification standards.

“Today, everyone operates from the same script, and everyone engaging in RVI inspection or serviceability assessment must follow the same processes,” Gerber said. “Each individual goes through the same rigorous, standardized training requirements before they can do the job. With this program, we’ve standardized not just the certification process, but all technical processes, procedures, equipment and policies across the Harrier enterprise.”

Since the introduction of standardized borescope inspection training and certification requirements, Gerber said the program has essentially eliminated disagreements between organizational, intermediate and depot maintenance levels in the identification and classification of serviceable versus unserviceable damage to the F402 engine.

Irvin credited these successes to the FST’s efforts in standing up the RVI program as well as the cooperation between the many organizations involved. He also cited the Marines who graduate from RVI training as a crucial factor in the program’s success.

“The FST did the hard work, they wrote the book,” Irvin

said. “That was step one. The last part is with the warfighter. They come to learn and digest everything. Then they go put everything to use in the fleet and keep their pilots in the air.”

In addition to the five main RVI training courses offered at FRCE, there are wide range of additional training and support services on hand, ranging from basic borescope systems and RVI equipment familiarization to RVI equipment and technical procedure proof of concept vetting. To meet the specific needs of individual units, the program even offers borescope user training tailored to the unique needs of the customer.

The course offerings now extend beyond the realm of the Harrier’s F402 engine. Gerber said the team also supports the F-35 Lightning II by offering on-location basic borescope system and inspection skills development training for the aircraft’s F135 engine at five sites. At some point in the future, the program is investigating the feasibility of supporting additional courses for the F-35B Lightning II lift fan.

“We can take the lessons we’ve learned and everything we’ve built in support of the AV-8B and utilize it in support of aircraft like the F-35,” Gerber said. “The goal is to grow in scope and technical capability and pursue championed RVI training services for fifth and sixth generation aircraft propulsion systems and subsystems.”

Gerber said the RVI training team is currently pursuing endorsement and formal recondition by the American Society for Nondestructive Testing for the RVI training program. The team also has its sights set on earning endorsement as a Department of Defense Center of Excellence for Remote Visual Inspection Technology. 🇺🇸

*Marine Corps
Lance Cpl. Jesus
Hernandez, assigned
to Marine Attack
Squadron (VMA)
223, participates in
a practical exercise
March 6 as part of
the F402 Engine
Tier 5 Tier 5 Remote
Visual Inspection
(RVI) Inspector Rating
certification course
at Fleet Readiness
Center East.*



U.S. Navy photo



Michael Lyon, equipment and facility services specialist at Fleet Readiness Center East (FRCE), schedules ground support equipment for preventive maintenance in the Ground Support Branch. Ground support mechanics at FRCE are responsible for maintaining more than 2,000 pieces of support equipment used to support aircraft maintenance, repair and overhaul operations at the depot. These items can include aircraft work stands, electric carts, diesel forklifts, and other transportation and test equipment.



Beary Spear, powered support systems mechanic in the Fleet Readiness Center East (FRCE) ground support shop, drains fluid from an aircraft jack. This year, mechanics in the Ground Support Branch are scheduled to perform more than 5,000 preventive maintenance operations on more than 2,000 items of equipment. Mechanics check bearings, change fluids and perform other maintenance operations, as well as any necessary repairs to safety stands, powered test and transportation equipment and electric carts.

FRCE Ground Support Shop Equips Aircraft Lines for Success

A small team of mechanics at Fleet Readiness Center East (FRCE) keeps the production lines rolling at the aircraft maintenance, repair and overhaul facility. FRCE's Ground Support Branch repairs and maintains the vital ground support equipment used to move aircraft, transport parts, test systems and perform other critical functions that support aircraft production efforts at the depot.

FRCE's Ground Support Branch is responsible for maintaining and repairing more than 2,000 items of ground support equipment necessary for operations for FRCE's main facility at Marine Corps Air Station (MCAS) Cherry Point, North Carolina, and detachments located at MCAS New River, the North Carolina Global TransPark in Kinston, and MCAS Beaufort, South Carolina.

Dependable ground support equipment is a key factor in successful aircraft maintenance efforts, said Don McLean, overhaul and repair supervisor on FRCE's V-22 Osprey production line.

"Work platforms and stands allow us to do our

jobs safely, and we need test equipment to perform functional tests on aircraft," McLean said. "We can't do what we do without the equipment and the support we get from the Ground Support Branch."

Ensuring the equipment remains functional keeps the shop busy. This year alone, the Ground Support Branch is scheduled to perform more than 5,000 preventive maintenance operations to keep the depot's ground support equipment in working order.

"In this shop, there's a lot of variety in the equipment we service. We maintain air conditioning equipment, diesel and gas engines, generators, forklifts, carts used to transport parts throughout the facility, aircraft maintenance tools and test



U.S. Navy photo

Chase Becton, powered support systems mechanic in the Fleet Readiness Center East (FRCE) ground support shop, performs preventive maintenance on a hydraulic test stand.

equipment—you name it,” said Tim Washburn, ground support supervisor at FRCE. “The common factor is that all this equipment is essential for aircraft maintenance operations.”

The small shop is staffed during all shifts at the facility to ensure that equipment is ready for production work. One mechanic travels between FRCE’s detachments each week to avoid transporting equipment to Cherry Point for servicing.

“We provide regular on-site support to ensure the work continues,” Washburn said. “If our mechanic can fix a problem there without sending the equipment back to FRC East at Cherry Point, it saves time and keeps the equipment in service.”

The shop also provides cranes and operators to FRCE and its detachments, to lift aircraft for transport or remove large components from aircraft. Two mechanics maintain all the straps and slings used for lifting operations.

“We are responsible for equipment used in most shops within the depot,” Washburn said. “If work slows down in one shop, it affects the entire production line.”

FRCE’s Facility and Plant Maintenance Services Division is responsible for keeping track of when equipment is due for preventive maintenance. Equipment is scheduled on a yearly basis, but some-

times that plan has to shift to avoid backlogs in the ground support shop.

“We have to ensure that our preventive maintenance doesn’t create bottlenecks in production,” said Michael Lyon, equipment and facility services specialist. “That’s why we have to be flexible and move schedules around to balance maintenance with workload requirements.”

The addition of next-generation aircraft, like the F-35 Lightning II and the CH-53K King Stallion, to the depot’s workload creates new challenges for support equipment maintainers. Most of the support equipment for these platforms is specific to the aircraft and is provided by the aircraft manufacturer. Equipment that requires major repairs will be sent to the manufacturer, but the ground support team will be instrumental in providing preventive maintenance to this technically advanced equipment. This means that mechanics need to be trained and licensed to maintain these new support items.

“We’ll get new gear that doesn’t exist anywhere else on the base, and we have to send people out to learn to use that gear,” said Marshel Patterson, F-35 logistics manager at FRCE. “They receive training with the Marines that can provide on-the-job training, then teach everyone else to use the equipment.”

New platforms like the CH-53K will also bring new support equipment challenges to the shop, because the support equipment that fits the CH-53E will not fit the larger K model.

“We were told to look at it like a completely different aircraft,” said David Thorpe, H-53 Branch head at FRCE. “It’s a completely different beast than the last generation, and it will bring new challenges to support.”

Support equipment mechanics in FRCE’s Ground Support Branch are looking forward to the opportunity to support the new technologies, according to Clinton Hall, lead mechanic for F-35 ground support equipment at FRCE.

“Since I started in ground support, the job has gotten more technical, more focused on electronics,” Hall said. “I really enjoy the challenge of learning to troubleshoot a new system. For a ground support mechanic, there’s nothing better than putting your hands on the equipment, figuring out what’s wrong and fixing it. When I find a new problem and can solve it so the equipment works like it’s supposed to, I really feel like I accomplished something. I played a part in supporting the fleet.” 🦅

FRCE Marks First with Adoption of Battery-Powered Ground Power Units

Fleet Readiness Center East's (FRCE) UH-1N Huey production line is swapping out diesel-powered ground power units (GPU) for a sustainable alternative with the recent purchase of battery-powered GPUs, becoming the first adapter of this technology within the Naval Aviation community.

According to Allen Broadway, FRCE's UH-1N branch head, the battery-powered GPUs minimize energy consumption, increase efficiency and enhance workplace safety.

"Our main focus was on the safety and environmental aspects," Broadway said. "Using the new battery pack, you are reducing noise hazards. Because it's so portable, you're reducing the possibilities of strains and injuries, as well as trip hazards. All this leads to a safer workplace for our people. It also allows us to reduce environmental footprint and fuel consumption. You're not burning diesel. There are no fumes or emissions. You're cutting costs. It's a win for us across the board."

The UH-1N line operates out of the North Carolina Global TransPark in Kinston. There, the team performs maintenance, repair and overhaul operations for the UH-1N helicopters flown by the Air Force.

Prior to the arrival of the battery-powered GPUs, the UH-1N line relied on the NC-10C Mobile Electric Power Plant, a trailer-mounted, self-contained power plant, to supply electrical power for servicing, starting and testing the helicopters. The NC-10C, used throughout the Naval Aviation community, uses diesel fuel to generate electricity.

"When you look at the environmental impact, this is our way of going from a gas guzzler to electric," said Matthew Pitts, the UH-1N deputy branch head and test pilot.

According to Pitts, the UH-1N line began using two Tesla TI3000 GPU-24 battery packs in the spring.

"They are a self-contained unit that can do everything that the NC-10 does,



U.S. Navy photo

Sean Maher, an aircraft electrician on Fleet Readiness Center East's (FRCE) UH-1N production line, connects a battery-powered ground power unit (GPU) while conducting checks on a UH-1N helicopter. FRCE's UH-1N production line is swapping out diesel-powered GPUs for battery-powered GPUs, becoming the first adapter of this technology within the Naval Aviation community.

but with a footprint of a large carry-on bag," Pitts said. "They produce no noise and no emissions. They work like an external battery pack for your phone and even plug into an ordinary wall socket. There's no special outlet required."

The battery-powered GPUs weigh in at 127 pounds, compared to the NC-10C's weight of more than 6,500 pounds when carrying the diesel fuel necessary to generate power.

"It came in a really big box," said Gabriel Rodriguez, a plane captain on the UH-1N line. "But, when we opened it, it was just this little thing inside. It's much

easier on us, as far as ergonomics go, to move this around."

Pitts cited that small size as a key factor in the UH-1N line's decision to adopt the technology.

"One important aspect of this is minimizing our footprint," Pitts said. "You're taking a large entity, the NC-10, and you're reducing that to the size of a carry-on bag. You're reducing the costs and time associated with moving, maintaining and using that asset."

Sean Maher, an aircraft electrician on the UH-1N line, said the portability and simplicity of the battery-powered GPUs

have already made a positive impact on production.

“We do a lot of operational and functional checks which require battery inverter power,” Maher said. “The helicopter battery itself can’t sustain the amount of checks we do. So we have to have some sort of additional power source to continue our checks without having to stop what we’re doing. That used to mean calling transportation and getting an NC-10 delivered.

“With these, it just takes a minute or two to roll it over to the aircraft and we’re hooked up for power,” he said. “Hooking it up is quick and easy. As far as maintenance, we’ve had no trouble with them and we’ve put them through the wringer. With the NC-10, we’d have to call ground support equipment if it needed to be fixed. We don’t have to worry about any of that with these.”

The battery-powered GPUs are also making a positive impact outside of the UH-1N line’s operations at Kinston. Broadway said their use drives down costs related to the support and maintenance of the NC-10Cs.

“These free up our ground support equipment folks from having to do preventative maintenance and things of that nature on the NC-10s,” Broadway said. “It also reduces the costs related to ordering parts and materials to maintain and repair the NC-10s.”

Unlike a diesel-powered generator, the battery-powered GPUs emit zero

emissions. Broadway said this results in reduced energy consumption.

“If you crank an NC-10 indoors, you have to open up the hangar doors,” Broadway said. “That means increased utility costs and wasted energy, especially when it’s cold outside.”

The battery-powered GPUs also contribute to the comfort level on the shop floor in regards to noise levels. Pitts recounted the first time the team used the battery-powered GPUs; he described being almost startled by the complete lack of noise that accompanied it.

“The first time that we connected it to the aircraft, it was just kind of funny because we were all expecting some kind of a big, climactic moment,” Pitts said.

“Silence is what we heard. It was like, that’s it—silence. It was so quiet that it was almost a surreal.”

Pitts said the battery-powered GPU’s silent operation belies the impressive benefits the technology has brought to the depot, benefits he said can be shared throughout the enterprise.

“We are setting new standards to drive down production costs, reduce our environmental impact and ultimately be a safer line,” Pitts said. “Once the depot proves that we’re leading the way with this, I can see this getting pushed out into fleet. Imagine the savings and the reduced environmental footprint that we could have throughout the Navy and Marine Corps.” ✈

Matthew Pitts, left, the UH-1N deputy branch head and test pilot at Fleet Readiness Center East (FRCE), and Gabriel Rodriguez, a UH-1N plane captain, utilize a battery-powered ground power unit (GPU) while conducting checks on a UH-1N helicopter. FRCE’s UH-1N production line is swapping out diesel-powered GPUs for battery-powered GPUs, becoming the first adapter of this technology within the Naval Aviation community.



U.S. Navy photo



U.S. Navy photo

Aircraft maintenance professionals on the Fleet Readiness Center East (FRCE) Harrier production line prepare to reattach the wing to the last TAV-8B Harrier trainer to be completed at the facility.

FRCE Delivers Final Harrier Trainer to Marine Squadron

Fleet Readiness Center East (FRCE) has reached another milestone toward the drawing down of its AV-8B Harrier program, with the completion of its last TAV-8B trainer aircraft. The two-seater trainer was delivered May 11 to Marine Attack Squadron (VMA) 223, located at Cherry Point, North Carolina.

The Marine Corps is moving to replace the Harrier with the short takeoff-vertical landing F-35B Lightning II by 2027, which means FRCE's AV-8 program will soon transition to supporting other platforms.

Many of the aircraft maintenance professionals on FRCE's Harrier program have spent a significant part of their careers repairing and maintaining AV-8 aircraft—noting it is tough to see another piece of the program's workload come to an end.

"I've been at FRC East for almost 32 years, and this aircraft is almost 35 years old, which means it was flying before I came here," said Jeff Broughton, AV-8 planner at FRCE. "I've spent 20 years on this program, so you can imagine how many times I've seen this aircraft come through for Planned Main-

tenance Interval (PMI) events. I worked on it once while I was a mechanic and twice while I was a planner, so you get to know the history of the aircraft each time it comes through."

Broughton said the Harrier program has established an impressive record of working under budget and ahead of schedule, and its final TAV-8B is no exception. According to Broughton, FRCE's total combined work on this particular aircraft over the years was estimated to take nearly 11,000 work hours, but a tally of all the work actually completed on the aircraft came in at only 8,100 hours. Even on its last trip through the depot, it was delivered back to the fleet eight days early.

"Our FRCE AV-8 team prides itself on being ahead of schedule and under budget most of the



U.S. Navy photo

The last TAV-8B Harrier trainer to be completed by Fleet Readiness Center East (FRCE) is wheeled into the AV-8 hangar before it is delivered to Marine Attack Squadron (VMA) 223 at Cherry Point. FRCE's Harrier production line is expected to induct three more AV-8s before the program ends in 2025.

time,” Broughton said. “We might be considered out of sight, out of mind as a sundowning program, but the team is proud of being good stewards of the customer’s money and being on or ahead of schedule to keep the customer happy.”

With three more scheduled PMI inductions over the next year and a half, the AV-8 team will be disassembling, inspecting, repairing, reassembling and testing those aircraft. They are dismantling retired aircraft and removing good parts to be refurbished and returned to the supply system to be used on the aircraft remaining in the fleet. Artisans also continue to support the Marines with onsite in-service repairs.

Currently, FRCE’s AV-8 program is scheduled to complete its final aircraft in September 2025. By that point, the personnel assigned to that team will be pursuing the next steps in their careers.

“We have a highly experienced team here, and many of them have been on this program for a long time,” said Mike Stewart, AV-8 shop supervisor at FRCE. “They are extremely knowledgeable and can handle any issues with the AV-8.”

Many will go on to support growing and incoming workload, such as the F-35, CH-53K King

Stallion and C-130 Hercules platforms. Stewart said these programs will benefit from the quality work and strong customer relationships formed by the AV-8 team, especially as the Marine Corps’ former AV-8 squadrons have transitioned to flying the F-35.

“We have spent years building a good foundation with the AV-8 community, and now they will be our future customers with the F-35,” Stewart said. “The program may be ending, but we’ve paved a clear path for future endeavors with the customer for a long time to come.”

As a long-time member of the AV-8 team, both as a Marine and later as a civilian artisan at FRCE, F-35 and AV-8 Branch Head Ike Rettenmair, said he is proud of what the Harrier program has accomplished and looks forward to what lies ahead for the fleet.

“You always hate to see a platform sundown, but technology is changing, our threats are changing, and it is time to move to the F-35 and the capability it will bring to the warfighter,” Rettenmair said. “FRCE will continue to support team Harrier as we have always done, until the final Harrier lands on the runway, regardless of when that will be.” 🦅



FRCSE Pitches in to Complete a Speedy In-Service Repair to P-8 Poseidon

The Navy P-8A Poseidon is a multi-mission, militarized Boeing 737 behemoth. It conducts maritime patrol and reconnaissance, long-range anti-submarine and anti-surface warfare, search and rescue, and intelligence missions.

Clearly, the P-8A and the aircrew who fly it play a vital role in supporting the Navy's mission.

And that's precisely why Fleet Readiness Center Southeast (FRCSE) and more than half a dozen other commands jumped into action to conduct an In-Service Repair (ISR) on a P-8A assigned to Patrol Squadron (VP) 16. VP-16, also known as the War Eagles, is a patrol squadron based out of Naval Air Station (NAS) Jacksonville, Florida, currently deployed to Kadena Air Base in Okinawa, Japan.

"This is a perfect example of FRCSE rallying to get a job done quickly without sacrificing safety or quality," said FRCSE's

Commanding Officer Capt. Al Palmer. "Despite a challenging repair, the collaboration with Commander, Patrol and Reconnaissance Wing 11 (CPRW-11) and Maritime Patrol and Reconnaissance Aircraft (MPRA) program office led to a tremendous effort from all involved. From artisans to engineers and logisticians, the ISR process took just 12 days to complete. The quick turnaround allowed VP-16 to safely return to business with one of their most critical assets."

Before landing, the P-8A aircrew observed that the two left main landing gear tires had blown. The aircraft safely landed but incurred damage due to the tire failure.

"The pilot did an amazing job setting the aircraft down, but damage was still incurred from the tires coming apart," said Steven Faulk, FRCSE's P-8A Fleet Support Team (FST) Lead. "Once we understood what was required to get this aircraft operational, we had to decide on the best location for repairs—Kadena, a commercial MRO [Maintenance, Repair, and Overhaul] or back home."

Instead of wasting time shipping or locating parts, CPRW-11, Faulk and the team realized the necessary resources could be acquired at NAS Jacksonville, returning the aircraft to full mission capable status quickly and efficiently.



U.S. Navy photo by Lt. Cmdr. Alan Johnson

A P-8A Poseidon aircraft assigned to the "War Eagles" of Patrol Squadron (VP) 16 conducts night operations at Clark Air Base, Philippines.

However, that course of action didn't come without complications. Many Naval Air Systems Command (NAVAIR) functional standards had to be met to ensure the aircraft was ready to fly, but once the plane was deemed safe for flight by Commander, Naval Air Force Atlantic, it was wheels up.

Upon arrival at NAS Jacksonville, it was all hands on deck.

"Certainly dozens of experts from FRCSE, like planner and estimators, engineers, artisans and various other support personnel played an integral role in getting this jet airworthy, but from start to finish, it was a collaborative effort involving many organizations," Faulk said.

"During repairs, the plane was housed in VP-30's hangar, VP-45 donated parts and maintenance personnel, VP-8 supplied additional maintenance folks, Special Projects Patrol Squadron (VPU) 2 did the functional check flight and VP-62 flew the plane back to Kadena—just to name a few," he said. "Everyone involved treated this repair as a top priority, sacrificing their manpower and parts, and the results speak to that monumental effort."

An ISR is an unscheduled repair in the field, and the scope of work varies greatly. This ISR was particularly complicated—involving over 20 major components ranging from landing gear to flight controls, structural panels and more. Each part was removed, assessed, repaired or replaced and finally re-installed. An undertaking of this size would usually take months, but the team strategized, advanced and overcame, getting it back to the warfighter in record time.

"The entire process was a culminated team effort with several squadrons pitching in manpower, components, hangar bay space and more during the repair," said CPRW-11 Wing Maintenance Officer, Cmdr. Jonathan Taylor. "The NAS Jacksonville flight line stepped up tremendously." 🦅

FRCSW Receives Chief of Naval Operations Aviation Safety Award

Since the 1950s, the Naval Aviation Safety Program has been enhancing the safety of aviation officers through risk assessment, investigation and reporting of hazardous events. The Aviation Safety Program at Fleet Readiness Center Southwest (FRCSW) takes these safety tenants to heart. The command knows just how important each employee is at every level of the operation and makes every effort to ensure their ongoing safety.

In recognition of FRCSW's consistent and effective airborne operations, FRCSW was recently selected to receive a Chief of Naval Operations (CNO) Aviation Safety Award for Fiscal Year 2022. The CNO Aviation Safety Award is given annually to Navy and Marine Corps aviation units operating under Navy's chain of command. The award recognizes operational excellence, exemplary safety contributions and a command's ability to further the Naval Aviation Safety Program. In addition to an outstanding safety record, commands and ships selected must have aggressive aviation safety programs that contribute new ideas in mishap prevention for the general benefit of Naval Aviation.

Along with her team, FRCSW Naval Flight Officer Lt. Erica Sciscoe plays a pivotal role in leading a robust aviation safety program. In addition to her flight operation duties, Sciscoe has been the safety program manager at FRCSW for over two years. The significant success, which led to the command earning the CNO safety award, can be attributed to the consistent meetings with aircrew, officers, and executive leadership run by Sciscoe where aviation concerns, risk management, flying specifics, crew currency requirements and human factors are discussed. These meetings also keep the command updated on applicable changes in safety and ensures dissemination of necessary information. When there is a mishap or notably hazardous event, Sciscoe creates a report

in Risk Management Information, which is a centralized information hub for safety data available to all safety representatives.

"I found that discussing mishaps from the fleet and determining how they relate to flying and operations here has been one of the more unique and beneficial additions to the program. The quality and experience levels of the pilots, aircrew and maintainers here also play a huge part," Sciscoe said.

When asked about the success of the safety program and the command's selection as the winner of the CNO Aviation Safety Award, Sciscoe said, "The entire safety team works constantly to ensure safety is the priority of every evolution, no matter how small or routine that evolution may be. They truly have their 'finger on the pulse' of internal and external directives, updates and procedures. We have a good balance between what each of us adds to this program. Our success is most definitely a team effort and winning this award has proven that our team is doing the right thing. The quality and experience levels of the pilots, aircrew and maintainers here also play a huge part in our success; and having the support and trust of Capt. [Marc] Farnsworth (FRCSW Commanding Officer) and Capt. [Luis] Rivera (FRCSW Executive Officer) in making decisions about the aircraft enhances that success as well."

While the warfighter depends on FRCSW to provide them with the highest quality products and services,



U.S. Navy photo by Janina Lamoglia

At far right, Lt. Erica Sciscoe, a Naval Flight Officer and safety program manager with Fleet Readiness Center Southwest, poses with Cmdr. David Geleszynski, left, and Cmdr. Matt Ostrem.

it is imperative that the command runs the operation effectively and safely. The individuals that prioritize safety and ensure the program is running efficiently allow the workplace to continue without injury. FRCSW's safety program finished the fiscal year with zero mishaps, reducing costs,

improving productivity and further solidifying the command's reputation of excellence. A well-deserved recipient of the CNO Safety Aviation Award, the FRCSW safety program continues a more than 100-year culture in safety and consistently stays up to date on the latest safety reports enabling

continuous improvement across the command.

For the future of aviation safety, Sciscoe said, "brilliance in the basics will always be the critical foundation for a great safety program."

Written by Janina Lamoglia with Fleet Readiness Center Southwest. ✈️

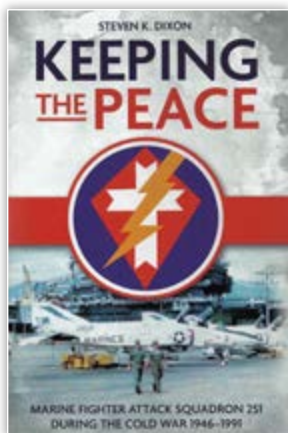
Professional Reading

By Cmdr. Peter Mersky, USNR (Ret.)



Photo courtesy of Maj. Michael Conley, USMC (Ret.)

Taken at Key West in 1972, VMFA-251 was transitioning from the single orange thunderbolt to the thunderbolt with the dark blue background. If not on hotpad duty, the squadron was doing air combat and tactics training. The dark blue/orange thunderbolt scheme on the tail could be seen for miles away.



Keeping the Peace, Marine Fighter Attack Squadron 251 During the Cold War 1946-1991

By Stephen K. Dixon, USA and the UK. 2023. 248 pp. Ill.

Most single-book histories of specific Marine aircraft squadrons have been published by the Marine Corps History Division at Quantico, Virginia. However, this account of the “Thunderbolts” comes from a commercial publisher in Great Britain and the U.S. Its author is a former enlisted

wanted to, or was directed to concentrate on new aircraft, but which the government still wanted to produce. Another example was the Grumman TBF Avenger torpedo bomber, which passed manufacture on to General Motors, normally an automobile and truck company, whose Avengers were subsequently designated TBMs, resulting in Corsair models becoming confusing.

Also, mention is made of the fighter carrying two 1,000-pound bombs on centerline racks, where fuel tanks were actually attached. The bombs were on wing stations.

After a lengthy period of settling in as a reserve squadron, flying borrowed Corsairs, then-Marine Fighter Squadron (VMF) 251 received Douglas AD Skyraiders, which were not usually flown by the Marines. Here, we encounter another error, or perhaps an indication of a lack of understanding when describing Marine Air Groups (MAGs) or Marine Air Wings (MAWs), when the correct terminology uses “aircraft.” Admittedly minor lapses in accuracy but nonetheless something normally left to a knowledgeable editor to correct.

member of the “elect shop” (sic). While certainly a welcome addition to literature of specific Marine Corps squadrons, the book is not without errors in both writing and terminology, mostly in need of a knowledgeable editor, which is a problem these days encountered when reading about military aviation.

For instance, on page 13, early in the text, the author notes the F4U-4D Corsair. There was no such designation and was most likely the FG-1D Corsair, built by Goodyear, a typical cross-manufacturing arrangement with another large company during World War II when the originating company either

Where most Marine Corps fixed-wing squadrons in Korea flew F4Us (as well as the AU-1 close air support variant of the Corsair), three Leatherneck squadrons flew jets—Grumman F9F Panthers, McDonnell F2H Banshees and Douglas F3D Skyknights. Only three flew different models of Skyraiders, including now-Marine Attack Squadron (VMA) 251, which had been changed from its original VMF fighter designation in April 1951. These Skyraider-equipped units flew several months of occasionally brief but intense missions later in the Korean War.

When a ceasefire finally stopped the fighting—there was never a treaty that formally ended the Korean War, a situation which remains to the current day—VMA-251 remained in place occasionally flying combat missions along the ceasefire line until 1955 when it returned to the States.

Up to this point in the book, the editing is very uneven, resulting in a cluttered, ill-managed narrative full of dates, brief actions and aircraft and pilot names that are hard to keep track of while reading. One person I know with direct personal knowledge of the time and, indeed, the F-4 Phantom in squadron service, compares the writing to being “something like a log.”

The squadron’s designation was eventually changed back to VMF-251 on April 20, 1957, as it entered the jet age when



Squadrons will sometimes make up a holiday greeting card featuring their current aircraft.

it started flying the North American FJ Fury, a navalized, but well-modified version of the highly successful F-86 Sabre, which had done so well in the Korean War.

It was a time of getting to know their new mount, fraught with mishaps—not accidents as the author refers to them. The Navy uses “mishaps” when referring to such events, a term I have never really had satisfactorily explained, even with 16 years at the Naval Safety Center. I think it had something to do with the feeling that “accident” had some link to human error, which is often the case, but which ignores the possibility of uncontrolled influence.

The squadron flew several models of the F-8 Crusader, while experiencing quite a few mishaps. Some involving the loss of both the aircraft and pilot. It was a difficult time for the Navy and Marine Corps, getting used to this world-beater high-performance jet fighter.

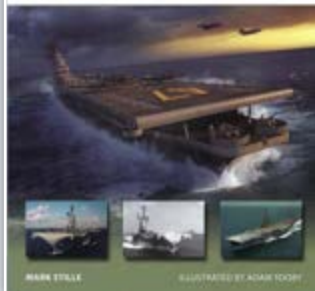
Dixon offers limited but basically detailed descriptions of the times and specific experiences of this hard-working unit of dedicated aviation Marines. 🛩️



Two squadrons are represented here, perhaps on the VMFA-321 line, at Andrews Air Force Base, Maryland.. Left to right, an F-4S of VMFA-251, then two F-4Js from VMFA-333. Note the “thunderbolt” and the three shamrocks, respectively.

Photo by Peter B. Mersky

ESSEX-CLASS AIRCRAFT CARRIERS 1945-91



Essex-Class Aircraft Carriers 1945-91

By Mark Stille
Osprey Publishing
UK. 2022.
48 pp. Ill.

No. 310 in Osprey's

New Vanguard Series, this short but interesting volume focuses on an important class of American aircraft carriers, many of which saw constant action during the Vietnam War, although most of these ships were begun or completed during World War II, and saw action at the end of the war as well as during the Korean War. The author is a retired U.S. Navy commander with a career in naval intelligence.

Most of the photo coverage is quite small and just doesn't show these colorful ships to good advantage, and less so their changing air wings that were taking the air Navy from the prop age to the jet age at the equally important political world in which they served, pitting the western world led by the U.S., against Asian and eastern Europe dictators that arose after the Pacific War.

This book still has a wealth of information, including what were the Essex-class carriers, each ship's history and various deployments, and the details of their modernization programs that in part saw particular Essexes undergo important additions to their general shape such as enclosed hurricane bows that added protection and increased survivability, and angled decks, which added launch and landing areas that were eventually so vital to the design of today's carriers.

Included graphics are excellent depictions of these carriers by artist Adam Tooby, including overviews of particular carriers, such as the name carrier of the class, the straight-deck Essex (CVA 9), the Antietam (CVA 36), the world's first carrier to operate with an angled deck, pioneered by the British, and the Oriskany (CV 34) during its late Vietnam period. These views show just how narrow, almost restrictive, were the newly incorporated angled decks that in some ways might have inhibited the free movement of the new jets that were quickly entering service. 🛩️

U.S. Navy photo



F4U-5N Corsairs of VC-3 return from a mission to the USS Boxer (CV 21) on Sept. 4, 1951. The carrier joined operations with Task Force 77 in March 1951 with the first Naval Air Reserve squadrons to fly strikes during the Korean War, most of which were strikes against Chinese ground forces along the 38th Parallel. This model of the long-lived Corsair was a night fighter and its missions were often after dark against enemy supply lines, truck convoys and trains, using napalm, various iron bombs and unguided rockets. Note the aircraft on the flight deck waiting to be launched on another mission. Just barely visible below Corsair No. 23, a helicopter hovers off the Boxer's port side to perform rescue duties.

Shown later in her career, while serving as an anti-submarine carrier, USS Intrepid (CVS 11) carries a full complement of S2F Trackers, multi-place AD Skyraiders and SH-3 helicopters. After decommissioning in 1974, the Intrepid was eventually moved to New York City where she has been a popular tourist attraction as a museum ship since 1982.



USS Hornet (CVS 12) also went through a series of redesignations (from originally CV 12 to CVA in October 1952, then to CVS in June 1958). Here, the carrier is shown in September 1962 as a CVS with S2F Trackers and SH-3 Sea King helicopters. Her angled flight deck is prominent.



U.S. Navy photo



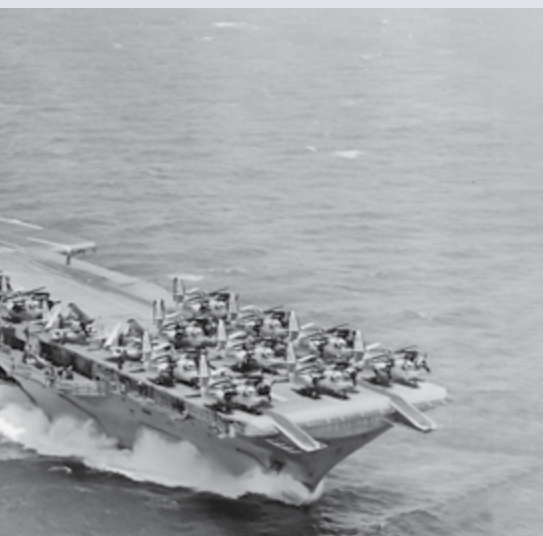
Photo courtesy of National Archives and Records Administration (NARA)

Another Corsair, this time a cannon-armed F4U-4 of Attack Squadron (VF) 113, "traps" aboard the USS Philippine Sea (CV 47) after a mission on Dec. 7, 1950, attacking targets in Korea during the Chinese offensive of November-December.



U.S. Navy photo

The class lead ship, USS Essex (CV 9), with aircraft of Carrier Air Wing (CVW) 10 on the flight deck and in the air, including AD Skyraiders, and new jets, F4D Skyrays, A4D Skyhawks, FJ Furys and F9F Cougars.



U.S. Navy photo



U.S. Navy photo by Photographer's Mate First Class F.L. Blai



U.S. Navy photo

A two-level perspective of operations aboard the Intrepid during its 1968 deployment shows a bombed-up "humped" A-4E of VA-106 getting attention on the flight deck. Below, crewmen push an A-4C of VA-36 off an elevator onto the hangar deck.

USS Oriskany (CVA 34) saw much action during Vietnam. In 1967, with CVW-16 aboard, the ship cruises the South China Sea, her flight deck is crowded with A-1 Skyraiders, A-4 Skyhawks and F-8 Crusaders. Note the lone Skyhawk on the carrier's bow elevator, aft of the hull number. During this deployment, 39 aircraft were lost, while VF-162's Lt. Richard Wyman used AIM-9D Sidewinders to down a MiG-17 in December in a swirling dogfight involving A-4s, other F-8s and very aggressive MiG pilots.

H6K "Mavis"/H8K "Emily" vs PB4Y-1/2 Liberator/Privateer, Pacific Theater 1943-45

By Edward M. Young, Osprey Publishing, 2023. 80 pp. Ill.



No.126 in Osprey's popular Duel series, this author's new book puts two highly-successful types of aircraft against each other. Little known in most accounts of the Pacific War, the two flying boats of the Imperial Navy (IJN) roamed the Pacific from the beginning of the war. They were virtually unchallenged until America's entry following the attack on Pearl Harbor on December 7, 1941, the Emily actually having made a few occasional long-distance

reconnaissance missions toward Pearl Harbor and Midway before detection and the subsequent attack and the four-day battle in June 1942, respectively, that resulted in the loss of four major Japanese aircraft carriers and many of their aircraft and combat-experienced crews.

Although not fighters, these aircraft did fight each other in several engagements that might be considered as such, result-

ing in the destruction of 15 Japanese flying boats without the loss of a single Liberator or Privateer. Actually, Navy and Air Force PB4Ys and B-24s shot down quite a few Japanese aircraft besides these specific flying boats, which is, after all, the particular focus of this new book.

More widely known for its role as a long-range heavy bomber in Europe and the less-publicized theaters such as the Aleutians and China-Burma-India (CBI), the Consolidated B-24 design competed for publicity with the better-known Boeing B-17 Flying Fortress, which fought in all of these areas and enjoyed more public recognition, perhaps simply because of its more attractive design, even though the Liberator/Privateer was built in far greater numbers than the Flying Fortress.

Nevertheless, and not to take anything away from the courageous and skilled crews of either American design, the Japanese were hard at work producing several waterborne aircraft well before World War II and continued flying them into the present era, not surprising when one considers Japan's existence as an island archipelago surrounded on all sides by the Pacific Ocean.

Photos courtesy of National Archives and Records Administration (NARA)



This H6K Type 97 Mavis carries small 132-pound bombs under its parasol wings in addition to several 7.9 mm machine guns in waits positions in the fuselage as well as a 20mm cannon in a tail turret. This large flying boat occasionally flew bombing missions.

With fire streaming from its starboard fuel tanks after being attacked by a VB-109 Liberator on May 7, 1944, this Mavis is headed for the ocean below. Without any gun blisters showing, this is probably an unarmed H6K4-L transport.





On July 2, 1944, this H8K Emily was attacked by a VB-115 PB4Y-1 Liberator. Armed with 7.9mm machine guns and 20mm cannon in a tail turret, the Emily was well-armed to defend itself. However, as one author has pointed out, the dorsal turret with its light machine gun is pointed away from the attacking American patrol bomber, perhaps indicating the Japanese gunner may have been incapacitated by an earlier attack.

Supported by the usual display of photographs and unusual specifically-commissioned graphics, author Edward Young's latest book for one of Osprey's popular series describes how the crews of these large, unlikely opposing aircraft sometimes found themselves in lumbering, turning almost-dogfights with their crews either desperately trying to escape each other's heavy machine-gun and cannon fire, or in turn, endeavoring to bring

those same dangerous weapons to bear against the other aircraft and bring it down.

It would appear the navalized Liberator, and its more specifically modified variant, the single-tailed Privateer, had the edge over the parasol-winged Mavis and the more-traditionally designed Emily, which many consider the best flying boat of the war on either side. ✈️

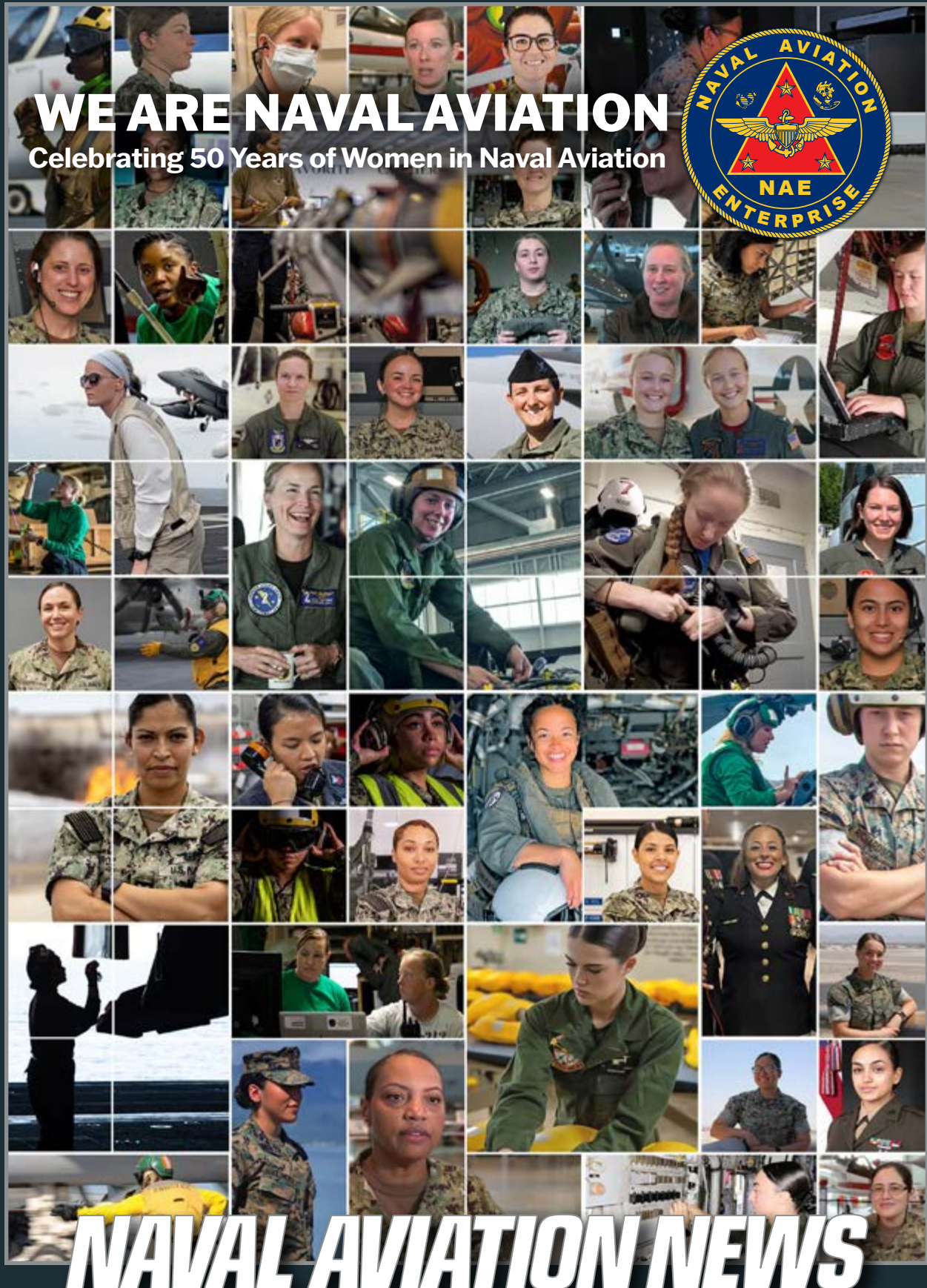


In another photo, this H8K, attacked by a VB-117 PB4Y-1 in September 1944 and appears to be heading for a crash landing in the water. The tally for American flying boat kills was five Mavis kills and 10 Emilys by nine VPB squadrons.



These two photos show the aircraft in good detail, while certainly alike in general outward appearance, there were differences, not the least of which was their respective tail sections—its towering vertical tail stood some 22 feet atop the rear fuselage. The top photo shows a PB4Y-1 Liberator (the Air Force's B-24D). The color shot shows a PB4Y-2 with its massive vertical tail. The PB4Y-1 began to reach Navy squadrons in August 1942, while the first Privateers entered squadrons in Europe by March 1944. Perhaps the most well-known PB4Y-1 pilot was Lt. Joseph P. Kennedy Jr., scion of a wealthy Massachusetts family, and older brother of then-Lt. jg. John F. Kennedy, who was serving in PT boats in the Pacific. Kennedy was with VB-110 in the U.K., when he was killed on Aug. 12, 1944. Soon after takeoff, Kennedy's aircraft, loaded with munitions, exploded in the air, killing Kennedy and his copilot Lt. Wilford J. Willy, who were the only crewmen on board. While Privateers served in several Navy squadrons following WWII, PB4Ys served in a variety of roles in the Navy and Coast Guard. The Privateers served primarily in the Pacific, but soon found a home in a few Navy Reserve squadrons, as well as several other countries, occasionally in wartime conditions such as France in South-east Asia or in the Algerian theater.





WE ARE NAVAL AVIATION

Celebrating 50 Years of Women in Naval Aviation



NAVAL AVIATION NEWS

NAVAIR Command Communications Department ■ 47123 Buse Road, Suite 547 ■ Patuxent River, MD 20670