Lockheed Martin Meets 2018 F-35 Production Target with 91 Aircraft Deliveries

FORT WORTH, Texas – Lockheed Martin delivered the 91st F-35 aircraft for the year, meeting the joint government and industry delivery target for 2018 and demonstrating the F-35 enterprise's ability to ramp to full-rate production, the company announced Dec. 20

The 91 deliveries in 2018 represent nearly a 40 percent increase from 2017 and about a 100 percent production increase compared to 2016. Next year, Lockheed Martin is set to deliver more than 130 F-35s representing yet another 40 percent increase in production.

"This milestone demonstrates the F-35 enterprise is prepared for full rate production and ready to deliver on increasing demand from our customers worldwide," said Greg Ulmer, Lockheed Martin vice president and general manager of the F-35 program. "Year-over-year, we have increased production, lowered costs, reduced build time, and improved quality and on-time deliveries. Today, the F-35 is the most capable fighter jet in the world, and we're delivering more aircraft per year than any other fighter on the market at equal to or less cost."

The 91st aircraft is a U.S. Marine Corps F-35B, to be delivered to Marine Corps Air Station Beaufort, South Carolina. In 2018, deliveries included 54 F-35s for the United States, 21 for international partner nations, and 16 for Foreign Military Sales customers.

To date, more than 355 F-35s have been delivered and are now operating from 16 bases worldwide. More than 730 pilots and over 6,700 maintainers are trained, and the F-35 fleet has

surpassed more than 175,000 cumulative flight hours. Ten nations are flying the F-35, seven countries have F-35s operating from a base on their home soil, four services have declared initial operating capability, and two services have announced their F-35s have been used in combat operations.

Campbell Returns Following Counter-Narcotics Patrol

BOSTON – The crew of Coast Guard Cutter Campbell returned to Kittery, Maine, on Dec. 18 following a three-month counter narcotics patrol in the eastern Pacific Ocean, the 5th Coast Guard District said in a release.

During the patrol, the crew of the Campbell seized approximately 5,300 kilograms of cocaine with an estimated value of $159 million and detained six suspected smugglers.

“Campbell’s crew demonstrated unwavering dedication and operational excellence during the 90-day deployment in the eastern Pacific Ocean,” said Cmdr. Mark McDonnell, commanding officer of Campbell. “We enjoyed strong support from our international and interagency partners, helping us thwart criminal networks’ illicit operations in the Western Hemisphere.”

The Campbell crew also located and rescued a sea turtle that had become entangled in a net. During the deployment, the crew of Campbell navigated 20,849 nautical miles.

Campbell is a 270-foot medium-endurance cutter with a crew of 106 and has been homeported in Kittery since 2003.

Thetis Crew Returns to Key West After 90-Day Patrol

KEY WEST, Fla. — The crew of the Coast Guard Cutter Thetis returned to its homeport after a 90-day patrol in support of Operations Southeast Watch and Unified Resolve in the Caribbean Sea in support of alien migrant interdiction operations, the 7th Coast Guard District said in a Dec. 19 release.

The Thetis crew, along with other Coast Guard units, worked alongside the Puerto Rico Joint Forces of Rapid Action to interdict and repatriate 219 migrants from the Dominican Republic and Haiti attempting to illegally enter the United States. While off the coast of Haiti, the cutter crew rescued six Jamaicans who were stranded at sea for three days with little food and water.

“The crew of the Thetis worked with the Haitian Coast Guard and National Police, the Dominican Republic Navy, the Cuban Border Guard, and the Royal Bahamas Defence Force as well as key United States agencies including the U.S. Citizenship and Immigration Service, strengthening our domestic and international partnerships,” said Cmdr. Randall Chong, commanding officer of Thetis. “I’m very proud of my crew for our continued contributions to stopping the flow of illegal migrants while rescuing those without basic survival equipment who were found drifting in the ocean for several days.”

Adm. Karl Schultz, commandant of the Coast Guard and Master Chief Petty Officer Jason Vanderhaden, master chief petty officer of the Coast Guard, joined the crew for a Thanksgiving meal in Guantanamo Bay, Cuba, where they expressed gratitude

for crew’s sacrifices made while underway during patrol. The commandant specially recognized several crewmembers for their commitment to excellence and for exemplifying his guiding principles: ready, relevant and responsive.

The cutter Thetis is a 270-foot Famous-class cutter, homeported in Key West and has a crew of 100.

Students Vie for Autonomous Maritime System Dominance

ARLINGTON, Va. — Fifteen teams from three continents met on the beaches of Honolulu last week for the 2018 Maritime RobotX Challenge. The week-long biennial autonomous maritime system competition — co-sponsored by the Office of Naval Research (ONR), the Association of Unmanned Vehicles International Foundation and NAVATEK, a Hawaii-based company that designs ships, small crafts and other amphibious vehicles — wrapped up Dec. 15.

Like ONR’s other sponsored robotic events — RoboBoat and RoboSub — this competition is designed to foster student interest in autonomous systems.

“This event rounds out the trifecta of maritime robotics competitions that ONR supports,” said Kelly Cooper, a program officer in ONR’s Ocean Battlespace Sensing Department and RobotX judge. “Each of these events is designed to build upon skills learned in previous competitions, and participation in all can help build a solid foundation of engineering skills.”

Using a common boat platform called the Wave Adaptive Modular Vessel (WAM-V) surface craft, all teams must outfit their

vessel with propulsion, sensor and control systems. These systems must be programmed to recognize and compute various data, to help the WAM-V make decisions autonomously as it traverses a course of seven increasingly difficult, maritime-related tasks.

“Besides having to accomplish a series of seven tasks without human interference, the vessels also have to deal with environmental issues like wind, rain and sun glare,” said Cooper. “Being in an open maritime environment like the North Pacific Ocean provides teams with more challenges than just what is laid out on paper in the mission requirements.”

The vessels – without human or computer interaction – had to demonstrate navigation and control; obstacle avoidance; location and sequence; identification and docking; detection and delivery; underwater recovery; and situational awareness.

Teams also needed to create a website and video, write a technical design paper outlining their work and give a presentation.

Each task tested students’ mechanical, electrical, computer and systems engineering skills – as well as their presentation prowess and teamwork – while competing for cash prizes totaling nearly $100,000 (which go directly to the school, usually to a robotic club or program).

“RobotX brings together the international student engineering community to showcase their know-how and help find new solutions to autonomous challenges faced by industry and the military,” said Cooper. “In fact, they are truly helping to advance autonomous maritime technology through their fresh ideas.”

National University of Singapore took this year’s top prize, while Australia’s Queensland University of Technology and Embry-Riddle Aeronautical University placed second and third, respectively.

U.S. teams included: Florida Atlantic University, Georgia Institute of Technology, Old Dominion University, University of Florida, University of Hawaii at Manoa, and University of Michigan.

International teams included: Australia's University of Newcastle and University of Sydney, China's Harbin Engineering University, Japan's Osaka Prefecture University, Singapore's Nanyang Technological University, and Taiwan's National Chiao Tung University.

CNO: U.S. 2nd, 3rd Fleets to Become Expeditionary

ARLINGTON, Va. – Two of the Navy's U.S.-based numbered fleets will become expeditionary, backed up at home by their respective training carrier strike groups (CSGs), the Chief of Naval Operations (CNO) Adm. John Richardson aid. The move is a reflection on the need to increase the agility of naval forces in a return of an era of peer competitors.

The initiative is one of the CNO's goals in an updated version, 2.0, of his document "A Design for Maritime Security.

"Commander, 2nd Fleet (C2F) and Commander, 3rd Fleet (C3F) will be expeditionary: they will have the capability to command and control their forces while deployed forward," the CNO said in the document.

U.S. 2nd Fleet, established in August to operate in the North Atlantic Ocean, is expected to reach full operational capability in 2019.

As a backstop for sustaining training of the fleet's units in their at-home cycles, the fleets' respective carrier strike group staffs in charge of fleet work-ups will be charged with building up deploying forces while the fleet staffs are deployed.

"In order to retain the capability for force generation while C2F and/or C3F are deployed, Carrier Strike Group (CSG)-4 and CSG-15 will develop the capability and capacity to generate forces, reporting directly to Commander, Fleet Forces Command, and Commander, Pacific Fleet, respectively," the document said.

CNO's Revised 'Design for Maintaining Maritime Security' Pushes Columbia SSBN Schedule

ARLINGTON, Va. — The chief of naval operations (CNO) is pushing to accelerate the development of the Navy's next-generation ballistic-missile submarine (SSBN) so that it is ready to deploy "as quickly as possible." He also is pushing the more rapid acquisition timeline of new ships, aircraft, weapons, and networks.

In the new "Version 2.0" of his "A Design for Maintaining Maritime Superiority" strategy document, Adm. John M. Richardson emphasized the Navy's No. 1 acquisition priority, the Columbia-class SSBN, as necessary to sustain the nation's nuclear strategic deterrent force.

Richardson stated his goal is to “be ready to deploy USS Columbia (SSBN 826) as quickly as possible – beating the current schedule – in order to preserve our ability to defeat the threat. Refresh and fortify the nuclear command and control system. Develop the nuclear capabilities directed in the Nuclear Posture Review.”

Construction of the first Columbia-class SSGN is scheduled to begin by 2021, with strategic certification expected in 2026, the first patrol in 2031 and complete replacement of the Ohio class by 2039. The tight schedule for the new submarine is dictated by the need for a seamless phase-out of the 14 Ohio-class SSBNs as they reach the end of their 42-year service lives and the nuclear deterrent patrols are assumed by the Columbia class.

With the new era of peer competition in the maritime arena, Richardson also is calling for rapidly acquiring other key platforms and payloads, as listed in the document.

Ships:

■ Award the Future Frigate contract in 2020 to deliver as soon as possible (ASAP).

■ Award the Large Surface Combatant contract in 2023 to deliver ASAP.

■ Award the Large Unmanned Surface Vehicle contract in 2023 to deliver ASAP.

■ Award the Future Small Auxiliary contract in 2023 to deliver ASAP.

■ Award the Future Large Auxiliary contract in 2023 to deliver ASAP.

Underwater Unmanned Vehicles:

Contract for and field the family of Underwater Unmanned

Vehicles (Orca, Snakehead, Razorback, Knifefish) ASAP, and no later than (NLT) 2025.

Unmanned Aerial Vehicles, Aircraft, Weapons:

■ Reach MQ-25 first flight in 2021 and initial operating capability ASAP.

■ Reach MQ-4C Triton initial operating capability in 2021.

■ By the end of 2019, identify requirements across the family of systems to replace the F/A-18E/F and EA-18G by 2030.

■ Develop and field an offensive hypersonic weapon by 2025.

■ Develop and field the family of laser weapons (low-power lasers, high-power lasers, Surface Navy Laser Weapons System) beginning in 2019 and NLT 2025.

Networks:

Improve the performance of our current enterprise networks in 2019. Modernize these networks under the NGEN-R contract.

MBDA's Sea Venom-ANL Missile Marks Further Trials Milestone

PARIS — MBDA's Sea Venom-ANL anti-ship missile has successfully conducted a further firing trial, passing a significant new milestone for the Anglo-French cooperation program, the company said in a Dec. 12 release.

Conducted on Nov. 14 from a Direction Générale de l'Armement

(DGA) Dauphin test helicopter at the DGA Missile testing range of Ile du Levant range, the trial was the final development firing for the missile prior to the start of qualification trials in 2019.

This latest trial highlighted Sea Venom-ANL's lock-on-before-launch (LOBL) capabilities, with images from the missile's infrared seeker being used by the operator to designate the target prior to launch.

"This latest successful trial is a great milestone for the program, which will provide a major increase in the naval strike capabilities of our armed forces," said Frank Bastart, MBDA's head of the Sea Venom-ANL program. "Throughout the trials campaign we have continued to push the system and its operating modes to its limits. The success of these tests is testament to the unrivalled performance of the Sea Venom-ANL missile."

Sea Venom-ANL is capable of being launched from a wide range of platforms and will be used on the U.K. Royal Navy's AW159 Wildcat and French Navy future HIL (Hélicoptère Interarmées Léger) helicopters. This 120-kilogram sea-skimming missile is designed to enable navies to deal with a range of threats including fast moving patrol boats, corvettes and coastal targets.

The missile is capable of being fired in both LOBL and lock-on-after-launch modes, with a two-way datalink and imaging seeker giving the operator the ability to monitor the engagement, perform aim point refinement, select a new target, or abort the mission if necessary.

The missile is being developed under a unique joint program launched at the 2010 Lancaster House Summit, that is the first to take full advantage of consolidated centers of excellence created within the Anglo-French missile industry under the "One Complex Weapons" initiative.

Northrop Grumman Demonstrates AQS-24B at Autonomous Warrior 2018

ANNAPOLIS, Md. and JERVIS BAY, Australia – The Northrop Grumman Corp. AQS-24B mine-hunting system demonstrated the benefits of performing mine warfare from a high-speed, unmanned surface vessel (USV) at the Royal Australian Navy-sponsored Autonomous Warrior 2018 exercise in Jervis Bay, the company said in a Dec. 17 release.

The AQS-24B detects mines at nearly twice the towing speed of any other mine hunting system on the market, significantly improving the area coverage rate.

The Northrop Grumman remote-controlled Mine Hunting Unmanned (MHU) Surface Vessel, with the AQS-24B mine-hunting sensor, demonstrated a safe standoff mine-hunting and undersea surveillance capability targeted at addressing three key aspects of the mine warfare challenge: reducing the mine clearance timeline; accurate detection, localization, classification and identification of undersea objects of interest; and improving crew safety by keeping the sailor out of the minefield.

The AQS-24B system includes the world's first combined operational High-Speed Synthetic Aperture Sonar and an optical laser line scan sensor, which provides complete coverage out to maximum range on a single pass. The real-time analysis capability demonstrated how unmanned systems can augment manned mine warfare operations.

"The demonstration highlighted Northrop Grumman's leading role

in proving the operational utility of unmanned maritime systems in the mine warfare domain," said Alan Lytle, vice president, undersea systems, Northrop Grumman. "At operational speeds significantly higher than other mine-hunting systems on the market, the USV/AQS-24B combination successfully completed a number of scenarios and challenges that were set by the Royal Australian Navy's exercise command task group."

The MHU was outfitted with L3 ASV's "ASView" unmanned control system. The system provided the capability to control the vessel from a remote location with minimal human oversight. ASView's situational awareness displays provided the remote captain full control and awareness to safely execute dynamic demands of mine warfare missions.

"L3 ASV is excited to be supporting Northrop Grumman's mine-hunting system with our unmanned surface vehicle technology," said Larry Karl, vice president and general manager, L3 ASV. "This operation has demonstrated the flexibility of the system which will enable it to support future mine hunting and defense applications."

Rite-Solutions Awarded Navy Combat Systems Engineering Services Contract

MIDDLETOWN, R.I. – Rite-Solutions has won a five-year, $20.3 million contract with the Naval Undersea Warfare Center Division Newport (NUWCDIVNPT). The company will provide engineering, technical expertise, and program services including hardware and software engineering, systems engineering, system integration and test, fleet support, and

lab support for Submarine Combat Control Systems.

In addition, Rite-Solutions will support the advanced development of new capabilities for these systems.

“For the U.S. submarine force and select allies, we will be studying new concepts and requirements, and supporting the development for these future systems as well upgrades and modifications for current systems in the fleet,” said Ken Haner, senior vice president and director of engineering services at Rite-Solutions.

This award comes on the heels of several other Navy contract and task awards to Rite-Solutions supporting the Navy’s efforts in undersea warfare (USW).

“We are extremely pleased to be able to support NUWCDIVNPT USW Combat Systems Department as they continue to improve our nation’s undersea warfare capabilities,” said Mike Coffey, executive vice president and general manager at Rite-Solutions. “This award recognizes the value of Rite-Solutions’ unique blend of small business agility and responsiveness, and large business quality and reliability.”

Next-Generation Frigate Contract Awarded to ASC Shipbuilding Under BAE Australia

ADELAIDE, Australia – BAE Systems Australia’s new subsidiary ASC Shipbuilding has been awarded a contract by the Australian

government that provides the framework for the design and build of nine Hunter-class frigates for the Royal Australian Navy, BAE said in a Dec. 14 release.

The Australian government and ASC Shipbuilding signed the contract after ASC Shipbuilding structurally separated from ASC Pty. Ltd. and was acquired by BAE Systems.

Work has already begun to mobilize the Hunter-class Frigate Program, and the head contract incorporates detailed scope for the design and engineering work necessary to allow prototyping to commence in 2020, and to ensure steel is cut on the first ship in Adelaide in 2022. The scopes for the build of the ships are to be agreed and added to the head contract in due course.

The Hunter program provides a strong foundation for a continuous naval shipbuilding endeavor in Australia, creating and sustaining more than 5,000 jobs across BAE Systems and the wider Australian defense supply chain over the life of the program.

In addition to 1,000 apprentices and graduate roles that will be created throughout the program’s life, job opportunities will include engineers and project managers, specialists in steel work, mechanical, electrical and technical trades and many other professions.

“I am delighted that we are embarking on the biggest surface ship project in the nation’s defense history,” BAE Systems Australia Chief Executive Gabby Costigan said. “Being awarded this contract demonstrates the confidence the Australian Government has in the combined capability of our employees across BAE Systems Australia and our new team at ASC Shipbuilding.

“The Hunter-class frigates will be built in South Australia by an Australian workforce, using suppliers from across the country, which will see Australian defense industry develop

and sustain a world-class, sovereign naval shipbuilding capability.

“We are extremely proud to have been chosen to design and manufacture a formidable fleet of frigates that will give the Royal Australian Navy an essential next generation capability that will be critical in helping protect the nation for decades to come.”

The Hunter-class frigate is based on BAE Systems’ Type 26 frigate, one of the world’s most advanced anti-submarine warships, which the company is currently constructing in Glasgow for the Royal Navy.

BAE Systems through ASC Shipbuilding will deliver a highly capable and versatile multimission frigate designed to support anti-submarine warfare, air defense and general-purpose operations anywhere on the world’s oceans.