Bell V-280 Valor Receives High Marks During Low-Speed Agility Testing

The Bell V-280 Valor in action. Bell Helicopter

FORT WORTH, Texas – The Bell V-280 Valor recently completed flight demonstrations ahead of schedule of its low-speed agility key performance parameter in the U.S. Army-led Joint Multi-Role Technology Demonstrator (JMR TD) program, Bell Helicopter announced.

The V-280 Valor, which the U.S. Marine Corps is monitoring for possible use as well, has demonstrated in flight testing that it has the raw control power in pitch, roll and yaw maneuvers to meet the Army's Level 1 handling qualities requirements, which is the highest performance standard for agility.

> *"This latest flight milestone proves that the V-280 Valor tilt-rotor delivers first-rate handling for pilots during low-speed maneuvers without sacrificing speed, range or payload. …"*
>
> *Ryan Ehinger, V-280 program manager at Bell*

This flight testing validates Bell's engineering models and development processes to design, build and test an aircraft on an aggressive development schedule that meets Army performance requirements.

"This latest flight milestone proves that the V-280 Valor tilt-rotor delivers first-rate handling for pilots during low-speed maneuvers without sacrificing speed, range or payload that the military needs for multidomain operations," said Ryan Ehinger, the V-280 program manager at Bell.

Flight testing of the V-280 Valor.
For pilots, this achievement provides additional proof that the V-280 will have unprecedented agility on the objective (at the “X”) for operational effectiveness, according to the Bell release. The aircraft’s digital flight controls and performance-driven design increases mission effectiveness by providing a high level of agility, reducing pilot workload and enhancing flight safety.

As the JMR TD period of performance winds down, Bell and Team Valor continue to expand the flight envelope and demonstrate new capabilities to prove the V-280 Valor’s key technologies and reduce the risk for future vertical lift programs.

The latest flight statistics for the V-280 include:
• Forward flight over 300 knots true airspeed.
• More than 110 hours of flight and over 225 rotor-turn hours.
• Greater than 50-degree banked turns.
• 4,500-feet-per-minute rate of climb and sustained flight at an altitude of 11,500 feet.
• Single flight ferry of more than 370 miles.
• Demonstrated Level 1 low-speed agility with fly-by-wire controls.
• In-flight transitions between cruise mode and vertical takeoff and landing.

Marine AV-8B Harrier Attack Jet Crashes Near Cherry Point; Pilot Ejects Safely

An AV-8B Harrier similar to the one out of Marine Corps

Station Cherry Point, North Carolina, that went down May 20. The pilot ejected safely. No injuries were reported on the ground. U.S. Marine Corps/Cpl. Matthew Teutsch

ARLINGTON, Va. – An AV-8B Harrier II based at Marine Corps Air Station Cherry Point, North Carolina, crashed May 20 near Cherry Branch, according to May 20 and May 21 releases from 2nd Marine Aircraft Wing Strategic Communications. The pilot ejected safely.

The Harrier II pilot was transported to Carolina East Medical Center in New Bern for evaluation and was released with no injuries, the May 21 release said. There are no reports of civilian casualties or property damage.

Personnel from 2nd Marine Aircraft Wing responded to the scene and assisted local authorities, who had responded first.

The pilot was assigned to Marine Attack Squadron 542, a unit of the 2nd Marine Aircraft Wing. Cherry Point is home of three Marine attack squadrons and one Marine attack training squadron, all of which fly the Harrier II.

The aircraft is cordoned off at the crash site and an emergency reclamation team is onsite and beginning recovery operations.

The Marines of VMA-542 "are working closely with the Marines of Aircraft Rescue and Fire Fighting, Explosive Ordnance Disposal and both military and local authorities," the May 21 release said. "The scene has been

deemed safe and secure by all parties involved, but recovery personnel are still implementing environmental and personal protective measures.”

“I would like to start by thanking the Craven County sheriff’s office and the community for their ongoing support,” said Maj. Gen. Karsten Heckl, commanding general of 2nd Marine Aircraft Wing.

“On days like this, our dedication to duty is reaffirmed, and we are reminded how proud we are to call Havelock our home. Thankfully, there were no serious injuries. The safety of our Marines and the local community is of the utmost importance to us, and we are extremely grateful that everyone who was involved is OK.”

The cause of the incident is still under investigation.

According to one source, the Marine Corps AV-8B fleet has lost 104 aircraft (36%) of its aircraft in mishaps over the service life of the jet. An additional 13 were combat losses – either shot down, destroyed in a ground attack or damaged by enemy fire and not repaired. The Marine Corps plans to keep the Harrier II in service until 2028.

Navy, Boeing Studying Block II Version of EA-18G Growler Electronic Attack Aircraft

An EA-18G Growler launches from the flight deck of the aircraft carrier USS John C. Stennis (CVN 74). U.S. Navy/Mass Communication Specialist 3rd Class Grant G. Grady

ARLINGTON, Va. – Boeing is in the wrap-up stages of a trade study and architecture assessment of an upgrade – called Block II – to the Navy's EA-18G Growler electronic attack aircraft. The upgrade is an effort to enable the EA-18G to keep up with the dynamic electronic warfare threats.

"It makes sense that we would take something that was designed in the '90s and now enhance it to be relevant for decades to come," said Jennifer Tebo, Boeing's director of development for the F/A-18 and EA-18G, speaking to reporters May 7 at the Navy League's Sea-Air-Space exposition.

> *"It makes sense that we would take something that was designed in the '90s and now enhance it to be relevant for decades to come."*
>
> *Jennifer Tebo, Boeing director of development for the F/A-18 and EA-18G*

“The current thinking on that is that it is a retrofit program,” Tebo said. “There is no official new-build Growler Block II. We will continue to work with the Navy to determine what those needs are, how we might incorporate them into a new build. We’re thinking of a retrofit program that would deliver capability in the 2025 timeframe. We’ve already starting work in earnest and early this year got initial funding from the Navy to start moving to the [System Functional Requirements] phase by the end of this year to deliver that capability on time.”

Tebo said that the Growler Block II enhancements will include some of the upgrades of the Super Hornet Block III program, plus “enhanced sensitivity through the modernization of the sensors on the platform. … It’s about adaptive and distributive processing, having big computers to process and be able to react to the threats that are out there today and into the future.”

“It’s also about enhancing the crew-vehicle interface,” Tebo added. “As the Growler crews get more and more information into the cockpit, they’re going to need a way to reduce the workload to be able to digest and use it effectively. All of that is accomplished through software-defined radios that are enabled through a flexible and adaptable hardware architecture.”

Tebo said the

infrastructure and the architecture will “allow us to continually evolve capability as the threat dynamic changes. The life of the Growler is very, very long. We’re setting this up for the Navy to be able to continue add capability rapidly to the Growler.

“It’s been a joint effort and it will evolve as we pin down the requirements,” she said.

She confirmed that the Next-Generation Jammer and the mid-band and low-band jammers “are considered part of the future of the Growler and Growler Block II.”

Boeing’s concept of Block II includes the conformal fuel tanks being included in the Super Hornet Block III, but “the Navy will have to decide,” she said.

Also to be decided is whether the Growler will go through a service life-extension program. The Super Hornet fleet is going through a service-life extension from 6,000 flight hours to 10,000 hours.

“That is to be decided,” Tebo said. “The Growler has a 7,500-hour service life compared to 6,000-hour life of the Super Hornet. [The Growler] has not finished its service-life assessment program yet.”

RE2 Robotics Receives $3 Million to Develop Dexterous Underwater Robotic Hand for U.S. Navy

RE2 Robotics, developer of human-like robotic manipulator arms, has a new deal with the Office of Naval Research to develop an underwater robotic hand. RE2 Robotics

PITTSBURGH – RE2 Robotics, developer of human-like robotic manipulator arms, has received $3 million from the Office of Naval Research to develop a dexterous, underwater robotic hand with tactile feedback, the company said in a release.

The program, called Strong Tactile mARitime hand for Feeling, Inspecting, Sensing and Handing (STARFISH), will create an advanced end-effector for mine countermeasures and explosive ordnance disposal for expeditionary forces.

> *RE2 Robotics has received $3 million in funding from the Office of Naval Research to develop a dexterous, underwater robotic hand with tactile feedback. @USNavyResearch #robotics #Pittsburgh #Roboburgh https://t.co/H6BeLhB3GS pic.twitter.com/YYEEn53N26*
>
> *— RE2 Robotics (@re2robotics) May 20, 2019*

Using next-generation tactile sensing technology and a multifinger, electromechanical design, STARFISH will allow operators to locate, identify and neutralize hidden and visible explosive threats on land and underwater. STARFISH-enabled manipulators will be deployed on both ground-base and underwater robotic system to defeat explosive threats.

“The development of STARFISH takes underwater robotic technology to the next level by providing operators with the ability to ‘feel’ and sense the environment around them while remaining at a safe distance,” said Jorgen Pedersen, president and CEO of RE2. “The use of advanced tactile sensing and intelligent grasping will improve operational performance by removing operators from dangerous areas and allowing them to quickly and accurately respond to explosive threats.”

> *“The development of STARFISH takes underwater robotic technology to the next level by providing operators with the ability to ‘feel’ and sense the environment around them while remaining at a safe distance.”*
>
> *Jorgen Pedersen, president and CEO of RE2*

RE2 will work with researchers at UCLA and the University of Washington to develop the hand, which will use state-of-the-art tactile skin and sensorized fingertips that are capable of sensing normal and shear forces. Operators will command the hand using information provided by external sensing, such as cameras, sonar or LIDAR, which will then be processed

with
machine-learning algorithms to assist the operator in manipulating the object.

“Tactile sensing at the end effector can provide a wealth
of information about the environment to a robotic system and its operator,”
said Dr. Andrew Mor, RE2’s principal investigator. “Using a rich network of
sensing, machine learning and assisted manipulation, STARFISH will be able to
perceive and then share its interpretation of the environment with the
operator, allowing naval expeditionary forces to manipulate and control the
robot at human speed.”

Coast Guard Cutter Resolute Returns Home From 60-Day Deployment

The Coast Guard Cutter Resolute. U.S. Coast Guard/Public Affairs Spc. Kathy Yonce
ST. PETERSBURG, Fla. – The crew of
Coast Guard Cutter Resolute (WMEC-620) returned home on May 19 following a
60-day patrol in the eastern Pacific Ocean, the Coast Guard 7th District said
in a release.

Upon getting underway, Resolute

patrolled south to the Panama Canal, transiting the 51-mile canal and passing through three separate locks over the course of 10 hours to reach the Gulf of Panama and the Pacific Ocean. After reaching the Pacific, Resolute transitioned to conducting law-enforcement operations in support of the Joint Interagency Task Force South counter-drug mission under the tactical command of the 11th Coast Guard District.

Resolute embarked an aviation detachment from the Coast Guard helicopter interdiction tactical squadron to assist with counter-drug missions. With the aid of the aviation detachment, Resolute interdicted seven suspected drug-smuggling vessels, seizing or disrupting over 4,000 kilograms of cocaine, worth an estimated $129 million in street value. Additionally, Resolute detained 23 suspected narcotics traffickers and ensured they received proper care and proper disposition to various agencies.

Resolute’s cases ranged from high-speed interdictions of go-fast vessels to fishing vessels concealing contraband in hidden compartments. Many of these cases lasted more than 20 consecutive hours and some required detailed operational planning and partnership with additional assets, including Canadian navy and Central American coast guard assets.

This patrol was one of Resolute’s most successful counterdrug patrols in recent years. Resolute

disrupted transnational criminal organizations through the interdiction and apprehension of seven separate vessels, ensuring more than $130 million of illegal narcotics were seized prior to making it to the United States.

Resolute is a 210-foot Reliance class cutter and has a crew of 78. The cutter was commissioned in 1966 and has been homeported in San Francisco, California, Astoria, Oregon, and now St. Petersburg. Resolute has a decorated past, including patrols in both the Atlantic and Pacific oceans, participating in the cleanup of the Exxon Valdez disaster in Alaska, the response to the Deepwater Horizon oil spill and the search-and-rescue efforts for the El Faro. The ship's recent patrols have focused on law-enforcement missions of drug-and-migrant interdiction.

Boeing Garners Second U.S. Navy Contract for F/A-18 Service Life Modification

An F/A-18F Super Hornet launches off the flight deck of the aircraft carrier USS Abraham Lincoln (CVN 72). Boeing has received a one-year contract, with an option for a second year, to continue modernizing the F/A-18. U.S. Navy/Mass

Communication Specialist 3rd Class Jeff Sherman

ST. LOUIS –

Boeing has received a one-year contract to continue modernizing the U.S. Navy's F/A-18 fleet under the Service Life Modification (SLM) program, the company said in a May 17 release.

The $164 million contract for fiscal 2019, which also includes a one-year option for 2020, funds the standup of a second SLM line in San Antonio, Texas, complementary to the line established last year in St. Louis.

> *"The [SLM] program is making great strides as we've already inducted seven Super Hornets into the program and will deliver the first jet back to the Navy later this year."*
>
> *Dave Sallenbach, the program's director at Boeing*

"The Service Life Modification program is making great strides as we've already inducted seven Super Hornets into the program and will deliver the first jet back to the Navy later this year," said Dave Sallenbach, the program's director. "This program is crucial in helping the Navy with its readiness challenges and will continue to grow each year with the number of jets we induct."

The San Antonio SLM line is scheduled to receive its first Super Hornet in June and a total of 23 Super Hornets over the course of this contract. The U.S. Navy fleet consists of more than 550 Super Hornets.

The SLM program extends the life of existing Super Hornets from 6,000 to 10,000 flight hours.

In the early 2020s, Boeing is scheduled to begin installing initial updates to the aircraft that will convert existing Block II Super Hornets to a new Block III configuration.

The Block III conversion will include enhanced network capability, longer range with conformal fuel tanks, an advanced cockpit system, signature improvements and an enhanced communications system. The updates are expected to keep the F/A-18 in active service for decades to come.

Romanian Navy Chief Warns of ‘New Iron Curtain’

U.S. Navy Quartermaster 3rd Class Kendal Honeycut stands watch as the amphibious dock landing ship USS Fort McHenry (LSD 43) departs Constanta, Romania, after a port visit. U.S. Navy/Mass Communication Specialist 3rd Class Chris Roys

According to Vice Adm. Alexandru Mîrşu, chief of the Romanian naval forces staff, efforts to improve security and stability in the Black Sea region have

taken a step back, thanks to the aggressive activities of the Russian Federation.

The Black Sea region includes three NATO allies in Romania, Bulgaria and Turkey along with Russia, Ukraine and Georgia, with access governed by the Montreux Convention of 1936.

After the Cold War, Mîrşu said the region enjoyed a relatively calm security environment until the Russians illegally occupied and annexed the Crimea region of Ukraine in 2014. There had been some successful post-Cold War initiatives adopted by the Black Sea nations to maintain common security and stability, including the Black Sea Naval Force (BLACKSEAFOR), Black Sea Harmony and the Confidence and Security Building Measures (CSBM).

> *"We represent a NATO presence. Our activity is not provocative and is conducted in such a way as there could not be any misinterpretation."*
>
> *Vice Adm. Alexandru Mîrşu, chief of the Romanian naval forces staff*

Until 2014, BLACKSEAFOR proved to be successful in bringing the Black Sea nations to the table and having operational successes to improve interoperability among those countries, Mîrşu said. Black Sea Harmony facilitated information-sharing among the littoral countries and included coast guards and border police

as well as navies. Today, only Romania and Turkey participate. The CSBM was an agreed upon document that addressed cooperation in the naval field – contacts and invitations to naval bases, exchange of naval information and annual naval exercises.

However, CSBM is now only a “theoretical paper,” Mîrşu said at the Navy League’s Sea-Air-Space exposition in National Harbor, Md.

Since its occupation and annexation of Crimea, Russia has continued to behave aggressively toward NATO navies operating in the Black Sea. The Russian Black Sea fleet has grown its capabilities with new ships and submarines in just the past four years and has added such new weapons as Kalibr-missile carrying platforms.

Mîrşu said the 2016 Kerch Strait incident – when the Russian coast guard prevented three Ukrainian navy vessels from entering the Sea of Azoz and then fired upon and seized the vessels in international waters – was “an open, aggressive attack upon the Ukrainian’s navy ships” and “demonstrates that the will of the Russians is actually to re-establish a new Iron Curtain into the Black Sea. And not only into the Black Sea but actually in the whole of Europe,” he said.

Last November, a Russian SU-27 fighter conducted a provocative and unsafe maneuver when it pulled

directly in front of a U.S. Navy EP-3 Aries II plane operating in international airspace over the Black Sea. The Russian fighter kicked in the afterburner as it departed, buffeting the U.S. plane.

The Montreux Convention of 1936 only permits warships from non-Black Sea navies to operate in the Black Sea for 21 days. NATO's Standing Maritime Force deploys periodically to Black Sea, along with allies and partners to demonstrate cohesion and strength of the alliance and that the Black Sea is an international sea for the use of all. Several U.S. warships have been in the Black Sea this year.

"The Romanian navy joins those ships when they enter the Black Sea to show them that nobody is alone," Mîrşu said.

The Romanian navy has stepped up its game. It has a riverine force patrolling the Danube River, the longest river in Europe. It is acquiring new corvettes and modernizing its frigates. Romania has established a quasi-permanent presence at sea to send the message that they are patrolling the maritime domain so that the sea lines of communication are open and safe, Mîrşu said.

"We represent a NATO presence," Mîrşu said. "Our activity is not provocative and is conducted

in such a way as there could not be any misinterpretation.”

Mîrşu said the Black Sea remains “the soft underbelly of NATO’s southeastern flank.” The Russian attitude and posture in the Black Sea remains, and the Russian Federation has established a “new Iron Curtain” dividing the allies and the rest.

“Our response is our permanent presence,” Mîrşu said and that we will remain a reliable partner to our allies in the Black Sea and on the Danube and wherever we are needed. The Romanian navy will continue to be credible security provider – not security consumer – in our area of responsibilities.”

Contract Awarded to Sikorsky for 12 CH-53K Heavy-Lift Helos

A CH-53K King Stallion lifts a Joint Light Tactical Vehicle (JLTV) at Naval Air Station Patuxent River, Maryland. U.S. Marine Corps/Lance Cpl. Shannon Doherty

WASHINGTON – Naval Air Systems Command has awarded a $1.3 billion contract to Sikorsky for 12 U.S. Marine Corps CH-53K King Stallion helicopters, the command

said in a release.

“The Marine Corps is very appreciative of the efforts by the Navy and our industry partners to be able to award the LRIP 2/3 contract,” said Lt. Gen. Steven Rudder, deputy commandant for aviation. “This is a win for the Marine Corps and will secure the heavy-lift capability we need to meet future operational requirements and support the National Defense Strategy. I’m very confident in the success of the CH-53K program and look forward to fielding this critical capability.”

> *“This is a win for the Marine Corps and will secure the heavy-lift capability we need to meet future operational requirements and support the National Defense Strategy.”*
>
> *Lt. Gen. Steven Rudder, deputy commandant for aviation*

The Pentagon’s most powerful helicopter, the King Stallion is a new-build helicopter that will expand the fleet’s ability to move more material more rapidly throughout the area of responsibility using proven and mature technologies. The CH-53K is the only aircraft able to provide the Marines with the heavy-lift capability it needs to meet future operational requirements for the vertical-lift mission.

“This contract award reflects close cooperation and risk sharing between the government

and industry teams to deliver critical capabilities to the Marine Corps,”
said James Geurts, assistant secretary of the Navy for research, development
and acquisition. “Working with our industry partners, the team ensured
that solutions for technical challenges are incorporated into these production
aircraft.”

The CH-53K carries
triple the baseline CH-53E capability, having demonstrated the ability to lift nearly
14 tons at a mission radius of 110 nautical miles. The CH-53K has proven the
ability to lift up to 36,000 pounds via an external cargo hook.

Sikorsky is a Lockheed
Martin company based in Stratford, Connecticut.

Navy Secretary Says Maritime Logistical Force is Inadequate to Support the New National Defense Strategy

The Navy’s current and planned maritime logistical force “is inadequate” to support the new National Defense Strategy and major military
operations against China or Russia, and failure to correct that deficiency

“could cause the United States to lose a war,” an in-depth study by the Center for Strategic and Budgetary Assessment warned May 16.

Navy Secretary Richard V. Spencer praised the CSBA study and declare: “We really have to get after it.”

Addressing the CSBA forum that released the study, Spencer said:
“It is key that we focus on this now. Over the past two decades, our naval logistical enterprises have performed admirably in an environment of truly expanded responsibility and resources that were constrained. But the world has changed. The National Defense Strategy (NDS) recognized that and we have to stay ahead of it.”

The 120-page CSBA report said that although the NDS said “resilient and agile logistics” was one of the eight capabilities that had to be strengthened to prepare for the return to great power competition, the Navy’s latest 30-year shipbuilding plan reduced the funding for maritime logistical forces and “further reduces the logistical forces as a proportion of the fleet.” It also noted that “decades of downsizing and consolidation” have left the maritime logistics forces “brittle” and contributed to the decline of the U.S. shipbuilding industry and the Merchant Marine,” which is expected to carry the bulk of military material and equipment for an overseas contingency.

“Failing to remedy this situation, when adversaries have U.S.

logistics networks in their crosshairs could cause the United States to lose a war and fail its allies and partners in their hour of need. An unsupported force may quickly become a defeated one," the report warned.

The report spelled out in detail the shortfalls in the size of the Navy logistical support fleet of oilers, supply and repair ships that would be necessary to support and sustain combat formations in a conflict in the western Pacific, and the even greater deficiencies in the Military Sealift Command's and Maritime Administration's fleets of aged ships that are approaching or already past a normal service life.

It also highlighted the risks that China's vastly expanded Navy and commercial fleet and its ability to interdict U.S. naval forces and forward support stations would pose to the ability to project and sustain power in a major conflict.

The report proposed major increases in the numbers and types of logistical ships, dramatic changes in operational formations and concepts of resupplying deployed Navy and Marine Corps forces. It estimated the cost of buying the additional and different ships and capabilities at $47.8 billion over 30 years, which it said would be $1.6 billion a years above what the Navy plans to spend on its maritime logistics capabilities.

Spencer noted that the weakness of the Navy's maritime logistics
was brought up by members of Congress during a visit to Capitol Hill the day
before. He said a member of the Senate Armed Service Committee who was
particularly strong on the issue told him the Navy was not funding what was
needed. "And I said, 'you're exactly right, and we have to get after this'."

He promised that the
audience was going to hear him and the new chief of naval operations "talking
about the battle. And it's not steaming to the battle. Our first battle is
getting off the pier. And we have to start addressing this in earnest."

Navy Mk38 Gun Systems Gaining Co-Axial Small-Caliber Machine Gun

An Mk38 MOD 2 25 mm machine gun fires during a live-fire exercise aboard the amphibious assault ship USS Boxer (LHD 4). The U.S. Navy is installing a co-axial 7.62 mm machine gun on the mounts of its Mk38 chain gun systems. U.S. Navy/Mass Communication Specialist Seaman Conor Minto)

ARLINGTON,
Va. – The Navy is installing a co-axial 7.62 mm machine gun on the mounts of

its Mk38 chain gun systems, a Northrop Grumman official said.

The Mk52 7.62 mm is gas-operated and uses recoil to eject spent cartridges and advance to the next round. A misfired round is safely ejected forward of the barrel as well, Jarrod Krull, communications manager for Northrop Grumman Armament Systems, said in an interview with *Seapower*.

The Mk38 Mod 2 gun mount includes an 25mm M242 Bushmaster rapid-fire cannon that fires an explosive round. The mount is automatic, gyro-stabilized and remotely operated, but retains the optional manual firing of the Mk38 Mod 1. The system has day and night sensors and a laser rangefinder.

The Mk52 7.62 mm is designed as a defense against small boats, aircraft and unmanned aerial vehicles for most U.S. surface warships and as a general-purpose gun for the Cyclone-class coastal patrol ships and Mk VI patrol boats.

Krull said the addition of the co-axial Mk52 machine gun gives the gunner another "right-sized" option for countering a small target, such as pirates or terrorists on jet skis.

The Mk52 is very durable, reliable and accurate," according to a Navy briefing slide.

Northrop

Grumman is installing the Mk52 guns in the Mk38 under an indefinite delivery/indefinite quantity contract.

The company also is offering the Navy another upgrade of the Mk38 by switching out the M242 Bushmaster cannon for a larger caliber weapon, the Mk44 30mm cannon, the same gun used as a close-in weapon on the San Antonio-class amphibious transport dock ship, the littoral combat ship's surface warfare module and the Zumwalt-class guided-missile destroyer. Another option is the stretch version of the Mk44, which would allow use of programmable ammunition, such has air-burst ammunition.

Krull said the Mk38 could even be up-gunned to a 40mm cannon.