= Lockheed Martin VH @-@ 71 Kestrel =

The Lockheed Martin VH @-@ 71 Kestrel is a variant of the AgustaWestland AW101 (formerly EH101) built to replace the United States Marine Corps ' Marine One U.S. Presidential transport fleet . It was developed and built by the Lockheed Martin ? led " US101 Team " of Lockheed Martin Systems Integration ? Owego (LMSI) , AgustaWestland and Bell Helicopter .

In February 2009 , President Barack Obama asked Secretary of Defense Robert Gates about placing the project on hold or canceling it because of its high cost : over $ 13 billion for the planned 28 helicopters . In June 2009 , the U.S. Navy terminated the contract after spending about $ 4 @.@ 4 billion and taking delivery of nine VH @-@ 71s .

The helicopters were then sold to Canada for $ 164 million for use as spare parts for its fleet of AgustaWestland CH @-@ 149 Cormorant search @-@ and @-@ rescue helicopters .

= = Development = =

= = = US101 and VXX competition = = =

The AgustaWestland AW101 , first designated as EH101 , was originally developed and produced by EH Industries , a joint venture between the British Westland Helicopters and Italian Agusta companies ; Westland merged with Agusta in 2001 . On 23 July 2002 , Lockheed Martin and AgustaWestland signed a 10 @-@ year agreement to jointly market , produce and support a medium @-@ lift helicopter , an AW101 derivative designated US101 , in the United States . The companies envisaged the aircraft performing three major roles ; U.S. Air Force combat search and rescue , U.S. Coast Guard search and rescue , and U.S. Marine Corps executive transport .

On 15 May 2003 , AgustaWestland signed an agreement with Bell Helicopter to undertake final assembly of the US101 in the U.S. Under the pact , AgustaWestland would produce the main rotor blades and main fuselage sections at its Yeovil , UK , facility . The company would produce other components , including the gearbox , at its Cascina Costa , Italy facility . This represents a work share of 36 % . The remaining 64 % work share is split between Lockheed Martin (31 %) and Bell Helicopter (27 %) and others (6 %) .

On 18 December 2003 , the United States Department of Defense issued a Request for Proposals (RFP) to supply 23 helicopters to replace the 11 VH @-@ 3Ds and 8 VH @-@ 60Ns of the Marine Corps ' HMX @-@ 1 squadron , which performs the role of Presidential helicopter transportation . This requirement was given the designation of VXX , or the Presidential Helicopter Replacement Program . Two companies , AgustaWestland and Sikorsky Aircraft responded to the VXX RFP .

Sikorsky had proposed the VH @-@ 92 , a variant of the H @-@ 92 Superhawk , in partnership with FlightSafety International , L @-@ 3 Communications , Northrop Grumman , Rockwell Collins , Vought Aircraft Industries , and GE @-@ Aviation . On 28 January 2005 , the Department of Defense announced that it had selected the US101 as the winner . It has been speculated that the US101 's three engines had been a decisive factor over the rivaling twin @-@ engined VH @-@ 92 . The US101 team was awarded a US $ 1 @.@ 7 billion contract for the System Development and Demonstration phase . In July 2005 , the US101 was given the designation VH @-@ 71 Kestrel .

= = = Program problems and delays = = =

Delays and engineering issues plagued the VH @-@ 71 's development . By 2007 , the estimated cost of developing and modifying the aircraft had risen by 40 % to $ 2 @.@ 4 billion and had passed the $ 4 @.@ 2 billion expected for the production of the fleet . In March 2008 , the program cost had risen and was projected to cost a total $ 11 @.@ 2 billion , or about $ 400 million per helicopter .

During dialogue over the CSAR @-@ X (in which the EH101 was LMSI 's offering) , the Air Force Source Selection Authority (SSA) stated the program 's performance had been " unsatisfactory " . In March 2007 , a Government Accountability Office (GAO) report , upholding Sikorsky and

Lockheed 's protests against Boeing 's HH @-@ 47 , mentioned " LMSI had received a little confidence rating for past performance due to unsatisfactory performance under its current contract for the VH @-@ 71 Presidential helicopter , which was evaluated as the most highly relevant to this procurement . " The SSA stated that LMSI had " show [n] that it could not reliably meet important schedule requirements and had difficulty in systems engineering flow @-@ downs to their subcontractors . " Lockheed responded that government insistence on extensive modifications , unanticipated in the RFP , as the source of cost overruns . A GAO report in 2011 concluded that the VH @-@ 71 's development was not allowed flexibility or trade @-@ offs considered by the customer .

In December 2007 , DoD officials met with the White House Military Office to discuss the program 's future ; the Pentagon had apparently wanted to terminate the VH @-@ 71 due to setbacks , budget issues , and design problems . The White House overruled a decision to cancel ; the program was effectively placed on hold while options were considered . In July 2008 , the VH @-@ 71A (also called Increment 1) was to reach operating capability in 2010 . The second phase of the development , VH @-@ 71B (Increment 2) was expected to start entering service in 2017 .

In October 2008 , while commenting on defense programs likely to be cut following the change in government , John Young , the Undersecretary of Defense for Acquisition , Technology and Logistics , stated that the VH @-@ 71 " is very high on that list " . The rising cost of VH @-@ 71 program contrasted poorly with President Barack Obama 's stance on curbing government spending ; during a White House gathering in February 2009 President Obama commented that the procurement process had " gone amok and we are going to have to fix it . " He additionally stated that " The helicopter I have now seems perfectly adequate to me . " In March 2009 the projected total cost for the planned 28 VH @-@ 71s was over $ 13 billion . On 6 April 2009 the proposed Defense budget announced by Defense Secretary Robert Gates had not included funding for the VH @-@ 71 . On 1 June 2009 , the U.S. Navy announced that the contract was officially canceled , and that remaining funds were to be reinvested in upgrades to the existing fleet of VH @-@ 3D and VH @-@ 60N helicopters . Nine VH @-@ 71s had been completed at time of the cancellation .

The aircraft 's cancellation provoked commentators to speak out about its impact on future acquisition contracts with European businesses . The failure by the U.S. Department of Defense acquisition process as demonstrated by the VH @-@ 71 may scare away potential partners . Around March 2009 , a coalition of lawmakers encouraged the Administration to continue a variation of the VH @-@ 71 program . A letter issued by several members of Congress urged the President to support a VH @-@ 71 program . On 22 July 2009 , the House Appropriations Committee approved $ 485 million to make five VH @-@ 71As operational .

= = = Options and restructuring = = =

The Congressional Research Service (CRS) estimated that shutting down VH @-@ 71 production , upgrading the existing fleet , and later implementing a successor program would cost $ 14 ? $ 21 billion . It was reported not only that a new fleet would not be available until 2024 (at which point the existing helicopters would have remained in service while being over 50 years old) , but that terminating the existing program would waste more than $ 3 billion in sunk VH @-@ 71 costs . Following the President ? s decision to terminate the program a variety of law makers , think tanks and media outlets publicly concluded it would be more cost effective and less time consuming to continue with a variation of the existing VH @-@ 71 program .

In 2009 , the CRS proposed four options : Option 1 was to continue the VH @-@ 71 program with Increment I and II versions ; the additional cost was estimated at $ 10 billion and the entry into service date was 2019 . Option 2 was to restructure the program to provide 23 Increment I aircraft ; at an additional cost of $ 6 @.@ 4 billion and would be operational by 2012 . Option 3 was a restructure to provide 19 Increment I aircraft to replace the current fleet ; the additional cost for this option was estimated at $ 5 @.@ 6 billion and the entry into service by 2012 . The last option was to upgrade and extend life of current fleet at a cost of $ 1 @.@ 4 billion ; however this would not meet the standards required for future presidential helicopters , and would require replacement sooner .

In addition to the cost of a new procurement program , industry officials stated that to merely extend the operating life of the current fleet is a risky choice because it is both less secure and costly to maintain . Lawmakers from both sides of the aisle , including Senator Chuck Schumer (D @-@ NY) and Representative Roscoe Bartlett (R @-@ MD) have been outspoken critics of the Pentagon in the matter ? Bartlett recently claiming that " they had this conversation outside the partnership and we regret that . " Loren Thompson , an analyst for the Lexington Institute , stated " I do not believe that the story of VH @-@ 71 is over ... Secretary Gates has not made a convincing case for terminating the program , and there is no alternative helicopter that can satisfy range and payload requirements while still landing on the White House lawn . "

On 19 December 2009 , President Obama signed a joint House and Senate Defense Appropriation Bill for FY 2010 , which includes $ 130 million funding for the Marine One program : $ 100 million to recoup technologies developed under the VH @-@ 71 Kestrel program , and $ 30 million for the Navy 's initial studies on a new VH @-@ XX program . In February 2010 , the Navy issued a request for information to the aviation industry . In April 2010 , Lockheed Martin announced they would team with Sikorsky in offering the Sikorsky S @-@ 92 instead of the VH @-@ 71 . In June 2010 , Boeing announced it was considering a U.S.-built licensed version of the AgustaWestland AW101 for the renewed VXX program as well as the Bell @-@ Boeing V @-@ 22 Osprey and Boeing CH @-@ 47 Chinook .

In June 2011 , nine VH @-@ 71s were purchased for $ 164 million by Canada for use as spare parts for its fleet of AgustaWestland CH @-@ 149 Cormorant search and rescue helicopter , which is also based upon the AW101 . The transferred VH @-@ 71s were stripped of sensitive parts , a total of seven remained in an airworthy condition . In 2013 , media reports stated Canada is studying whether up to four of the VH @-@ 71s can be certified for operational use ; manufacturer AgustaWestland has openly stated their support for the regeneration initiative .

= = Testing = =

The first test VH @-@ 71A , Test Vehicle # 2 (TV @-@ 2) , made its initial flight on 3 July 2007 at AgustaWestland 's facility in Yeovil in the UK . Lockheed Martin also used an EH101 , designated TV @-@ 1 , for initial testing in the United States ; these tests included landing on the lawn of the White House .

The first production VH @-@ 71A , Pilot Production # 1 (PP @-@ 1) , made its maiden flight on 22 September 2008 from Yeovil . The US Air Force transported the helicopter in a C @-@ 17 Globemaster III to Naval Air Station Patuxent River , Maryland for further testing . The first production VH @-@ 71 joined the test program at NAS Patuxent River , beginning ground testing in early December 2008 .

= = Variants = =

VH @-@ 71A

The initial production VH @-@ 71 aircraft or Increment one of the presidential helicopter replacement program , designed to meet an urgent need for new helicopters .

VH @-@ 71B

Increment two was to provide 23 operational helicopters with increased range , and upgraded navigation and communications systems that fulfill White House requirements to maintain continuity of government and allow the president to carry out the duties of the office .

= = = Other competitions = = =

The US101 is also competing for two USAF contracts , the 141 @-@ aircraft Combat Search and Rescue Replacement (CSAR @-@ X) project (originally won by the Boeing HH @-@ 47 on 10 November 2006 , but now subject to a second procurement competition) , and the 70 @-@ aircraft Common Vertical Lift Support Program (CVLSP) .

= = Operators = =

United States of America
United States Marine Corps (proposed)
HMX @-@ 1 's Marine One fleet

= = Specifications (VH @-@ 71) = =

Specifications with an asterisk (*) next to them are specifically for the VH @-@ 71 . All others are for AW101 .
Data from Jane 's All The World 's Aircraft 2003 ? 2004 , others
General characteristics
Crew : 4
Capacity : 14 seated troops *
Length : 64 ft 1 in (19 @.@ 53 m)
Rotor diameter : 61 ft (18 @.@ 59 m)
Height : 21 ft 8 ¾ in (6 @.@ 62 m)
Disc area : 2 @,@ 992 @.@ 5 ft ² (271 @.@ 51 m ²)
Empty weight : 23 @,@ 149 lb (10 @,@ 500 kg)
Max takeoff weight : 34 @,@ 392 lb (15 @,@ 600 kg)
Powerplant : 3 × General Electric CT7 @-@ 8E turboshafts , 2 @,@ 520 shp (1 @,@ 879 kW) (take @-@ off power) each
Performance
Never exceed speed : 167 knots (192 mph , 309 km / h)
Cruise speed : 150 knots (167 mph , 278 km / h)
Range : 863 mi (1 @,@ 389 km)
Service ceiling : 15 @,@ 010 ft (4 @,@ 575 m)
Rate of climb : 2 @,@ 010 ft / min (10 @.@ 2 m / s)
Disc loading : 11 @.@ 0 lb / ft ² (53 @.@ 8 kg / m ²)
Power / mass : 0 @.@ 174 shp / lb (0 @.@ 2849 kW / kg)