

The XPB2M-1/-1R, *aka* the Martin Mars



BY MIKE BRODERICK
Helicopter Engine Repair
Overhaul Services

OK, class – let’s start the day with a bit of

a riddle. Who was conceived on January 1, 1939, born on August 22, 1940, and on September 27, 1941 – before taking her first step – weighed 75,573 lbs., was 38 feet tall, 117 feet 3 inches long, with a span of 200 feet, and at the ripe old age of one year, one month and two days was known as the “Old Lady?” Give up? Want a hint? She eventually had four sisters. Another hint? OK, there are only two remaining of the original five siblings. That help? No? OK – how ‘bout their dad’s name was Martin and their maiden name is Mars.

There you go – you got it. We are talking about the mighty Martin Mars flying boat. And, as I am sure you have figured out by now, the Martin Mars is going to be the subject of our studies for the next couple of lessons.

Do you know why she was conceived, or do you have any idea what the builders originally had in mind for the Martin Mars, aka XPB2M-1/-1R? Do you know what the two remaining sisters are doing for a living right now? Well very briefly, as we will be discussing their current employment in detail later, these two ladies have been in the firefighting business since 1960, operating out of the picturesque Sproat Lake near Port Alberni, BC, Canada. The Hawaii and the Philippine aircraft have participated in the control and termination of over 4,000 wild fires, dropping an impressive 7,200 gallons of water per aircraft for each sortie flown. Not bad for a couple of old birds who by all rights should have retired long ago. And these are just a few of the topics we will cover over the next few lessons.

But, before we do an exposé on the mighty Martin Mars sisters Hawaii and Philippine, have you ever

wondered why we refer to aircraft or boats, as “she?” Me too, so I looked it up and you know what I found? Nothing definitive. However, the general consensus from my research is that we, the male of our species, have always been intrigued by the physical beauty and metaphysical mystery of the female of the species. Duh, ya think? So as an ultimate compliment to the esthetic beauty of an aircraft in flight or the appealing sight of a boat gracefully slicing through the water, we anthropomorphize (you remember what that means right?) these inanimate objects into a female. From a male perspective, kind of makes sense doesn't it?

Oh yeah, one more thing. You should know about my sources for this article. I was given a book, *The Mighty Martin Mars*, which is a historic anthology about this venerable aircraft written by Wayne Coulson and Steve Ginter and published by Coulson Flying Tankers, a division of Coulson Airplane Ltd. The Coulson Group is the owner of the two remaining Martin Mars aircraft in service, the Hawaii and Philippine Mars. It's a great book and was very helpful for my research. Also, I interviewed and received anecdotal information from Wayne Coulson, the President and CEO of the Coulson Group of Companies, and Roy Copeland, Director of Aircraft Maintenance/Chief Flight Engineer for the Hawaii and Philippine Mars. Their input has been invaluable in my research and I appreciate the time given me over the phone and via email. Heck, I could write an article on these two gentlemen based upon their aviation background alone. So now that I have offered you a couple of informative hors d'oeuvres and given proper recognition to my resources, what'ya say we start our excursion at the beginning – the conception and the birth of XPB2M-1/-1R.

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In 1935 a Request for Proposal (RFP) from the US Navy for a long-range, maritime reconnaissance bomber that would be managed by a crew of 11 aviators was presented to four aircraft manufacturers: Consolidated, Boeing, Vought-Sikorsky and the Glenn L. Martin Aircraft Company. After due consideration, on August 23, 1938, Martin received the contract for the long-range bomber, and thus began the saga of the mighty Martin Mars, known officially as XPB2M-1. On January 1, 1939 contract number 62482 was signed. The keel for this patrol bomber was laid on August 22 1940 and the aircraft that became known as the “Old Lady” to all who were instrumental in her construction was rolled from the hangar on September 27, 1941.



On November 5th the completed XPB2M-1 was moved to the seaplane ramp at Middle River, Maryland, and launched. During the next month while other equipment was being fitted, the engine and systems tests also took place. One month to the day after her launch during an engine test the right inboard engine’s propeller did not respond to the “reverse-pitch” directive from the cockpit flight controls, which caused the prop to transition into flat pitch instead. The engine and propeller oversped, which caused the engine to catch fire. To exacerbate an already serious situation, a propeller blade was released from the hub and penetrated the fuselage, just missing the flight engineer in the cockpit. The aircraft was freed from its mooring and was subsequently run aground to save it. The engine burned free, fell from its wing pod

where the fire was eventually extinguished. Thirty days later the aircraft was repaired and towed to the seaplane ramp for final testing. Now, that is an example of some real dedication by the mechanics and engineers whose resolve was not going to let something like an engine fire and prop failure stop them from getting this aircraft in the air.

The “Old Lady” made her maiden flight on June 23, 1942 after the original 2,000-HP engines and wooden propellers were replaced with Wright R3350 18-cylinder engines, which produced 2,200 HP, and 16-foot 6-inch Hamilton Standard three-bladed metal props. Martin continued testing the aircraft until November 1942. During at least two of the flight tests, the “Old Lady” muscled 30,000 lbs. (the designed payload) into the air with ease.

The final company flights took place over two days – October 4th and 5th – covering 4,600 miles in 32 hours and 17 minutes. The “Old Lady” was ready to begin her career as a Naval Aviatrix four-engine bomber. However, before she would drop one bomb on the enemy, the Navy changed its mind on the job classification for the XPB2M-1. They now figured that a four-engine Maritime Reconnaissance Bomber was considered to be too slow and vulnerable. So the Old lady was returned to Martin Aircraft Company for modification into a Maritime Cargo and Troop Transportation Aircraft. Thus, XPBM2M-1 – at the ripe old age of two – went through an aircraft version of a major body nip and tuck. All the armament was removed, decks reinforced, hatches added and/or existing hatches enlarged, and cargo loading equipment

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installed. On October 8, 1943, the new version of XPB2M-1 was changed to XPB2M-1R, and Air Transport Squadron Eight (VR-8) at Patuxent River, Maryland, was established as the home for the now non-combatant XPB2M-1R whose stated mission was four-engine seaplane training. Also, as an extension of this role, transport operations between Naval Air Station (NAS) Patuxent River ("Pax" River) and NAS Bermuda were conducted. On November 30, 1943 just three days after being "officially" accepted into VR-8, Lieutenant Commander (LTCDR) W.E. Coney flew from "Pax" River with a crew of 16 and 13,500 lbs. of cargo, landing in Natal, Brazil, 28 hours, 25 minutes later (a non-stop flight of 4,375 miles).

In January 1944, the Old Lady was assigned to the Pacific Naval Air Transport Service (NATS) squadron VR-2 at NAS Alameda, California. During her time with VR-2, the XPB2M-1R completed 78 round trips between San Francisco Bay and Honolulu before being retired 14 months later. But during the 14 months, she racked up quite a service record. Capable of carrying 150 men, she transported over 3 million pounds of supplies and personnel; this included 120 cargo-tons of whole blood in a single month during the fight for Iwo Jima. At that time, the 4,700 mile round trip to and from Hawaii was the longest scheduled non-stop route in the world. On her first flight the "Old Lady" completed the flight in 27 hours and 26 minutes, carrying a 20,500-lb. cargo load. Based upon the "Old Lady's" successful performance, the Navy wanted more of these aircraft, and placed an order for an additional 20 of Mr. Martin's maritime cargo and troop transportation aircraft. The new and improved versions were designated JRM-1. The contract was issued in January 1945. But because the war was winding down the contract was reduced to six aircraft. The six JRM-1's were to be specifically built for and assigned to NATS Squadron 2, to be used exclusively on its Alameda to Honolulu route. The first of the six (BuNo 76819) the "Hawaii Mars" was completed in late June 1945, test flown several times before being christened, and launched on July 27, 1945.

Wait, didn't I say at the beginning of today's lesson that the Hawaii Mars had four siblings? I wonder what happened. Six were for sure built; five of the model JRM-1 and one JRM-2. OK, so what happened, and what modifications were made to change the designation to JRM-2? Ah, very good questions, and they will all be answered in Part 2 of The XPB2M-1/-1R. In our next lesson we will learn about the rest of the brood and where they are today. We will learn the fate of the first Hawaii Mars, which will lead us to Part 3, when the Mars goes through another career change.

So until next time, remember: even the best pilot can't fly until you, the technician, says the aircraft is safe to fly.

MIKE BRODERICK is Vice President of Business Development at Helicopter Engine Repair Overhaul Services (HEROS). Over the past 35 years, he has served as a shop technician, engine shop supervisor, Engine Program Director, Director of Maintenance, Director of Operations, and owner of a Rolls-Royce engine overhaul and MD Helicopter component overhaul shop. He is a certified A&P, and holds a Bachelor of Science degree in Aviation Administration. As well, Mike has been appointed as an FAA representative for the FAA Safety Team (FAAST) and is a member of the HAI Tech Committee. Mike is a regular contributor to Air Maintenance Update. ■

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