

Newspaper Article on B-24 Ditching in James River

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(No photographs in article)

B- 24 “Ditched” to Experiment on Structures

James River Test Designed to Save Lives and Future

By Raymond Long

Research designed to save lives lost in the ditching of military planes, conducted by the National Advisory Committee for Aeronautics in connection with the army air forces and the bureau of aeronautics of the navy reached a concrete stage at 12:30 p.m. yesterday when two volunteer army air force officers ditched a B-24 Liberator in the James River a few miles north of Newport News.

The Liberator, a veteran of many combat missions overseas, was specially prepared for the experiment, the first voluntary ditching of an army plane.

Handling the controls of the large bomber was Major Julian A. Harvey of the AAF proving grounds and serving as co-pilot was Col. Carl F. Greene of Langley Field, liaison for the army with the Langley Memorial laboratories of the NACA.

The bomber made several dry runs before it came in at 100 miles per hour for the ditching in the calm waters parallel to the James River Bridge while several ranking navy and army officers crowded rails of a fleet of army craft lining the course. Official cameras recorded the ditching for a minute study.

Tail Strikes First

With her four motors throttled back and landing wheels up, the bomber was skillfully set down on the water, the tail end of the fuselage striking first. The bomber, which as the “Ellen Mae” served well the army air forces before being consigned to the advancement of aviation research, set up a thick enveloping spray as the nose of the ship struck the water. Planing for a few feet, the ship “porpoised” and buried the nose, wings and motors deep. The deceleration was terrific and it seemed minutes before the nose reappeared in the matter of a few seconds. The impact broke loose the nose, the break coming about six feet to the rear of the pilot’s compartment at the leading edge of the bomb bay doors, but the fuselage was not severed.

As the mist cleared, a figure emerged from the escape hatch in the compartment but not before at least a minute and a half had elapsed. Another anxious wait and the second flyer came in view as the two received an ovation from the witnesses.

Army officials and NACA engineers pointed out that the test was made on a modified plane, that is, the bomb bay doors were removed and the entire under nose and bottom of the fuselage was reinforced with steel plating, one-eighth of an inch in thickness. The experiment dealt mainly with configuration.

Flyers Unhurt

Unhurt and apparently none the worse for their quick ducking, the men climbed aboard one of the several small vessels that rushed to the bomber as it came to a rest. Col. Greene pointed out that the impact was strong and that even the reinforcement did not come through without material damage. From the point of touching the river to the place where the broken ship halted, the distance was estimated at from 150 to 200 yards.

The actual test was the outgrowth of studies of ditchings over a period of about a year, Henry J. E. Reid, engineer in charge of the NACA laboratory said, which, according to the army, has resulted in many casualties in the European theater of operations. Results of the test and experiments to follow are expected to be available for improvement of aircraft operating over long stretches of water in the Pacific zones.

The Liberator carried special equipment to test stresses and weak points and much of the reinforcement was of a temporary nature which, if satisfactory, will be used to guide future designs, Reid declared.

Col. Greene, a veteran of many years in the air forces and who is credited with much outstanding work in designing pressurized cabins such as the B-29 Superfortress has, emphasized that the ditching did not constitute an unrelated experiment but was a planned connecting link between the extensive series of model tests conducted in the laboratories at the NACA and the measures proposed for rendering service airplane safer for landing in water.

Many Models Tested

Factual reports on involuntary ditchings have been carefully analyzed and an extensive laboratory program was undertaken at the NACA for the army and the navy. Employed were scale models of nearly a dozen service type aircraft and actual landings were simulated. Data from the tests were computed and it became necessary to obtain definite proof between the relationship of the test data and behavior of full-sized airplanes. This could only be accomplished, Col. Greene said, by reproducing all the actual conditions --- weight, speed, and configuration, that is, actually carrying out an observed and recorded ditching of an airplane.

The AAF made available three “war weary” four-motored liberators for the project, the planes having been returned to the United States after their period of usefulness had run out and were to be salvaged.

Research findings on model tests and results of the landing must of the necessity, remain information of a confidential military value, but the NACA pointed out that undoubtedly the findings in the corrective steps to be taken eventually will be made available to all aircraft constructors and operators of commercial lines. It was pointed out that the entire program is being watched not only by military and navy air arms but also by operators of commercial aircraft engaged in over-water flying. Land based aircraft, being used more and more for long over water routes must be constructed to survive emergency landings and the early study will prove invaluable in development of inherent structural systems.

Tests to Continue

Although the tests or to continue with actual landings, future experiments depend on assimilation of the facts learned yesterday and their incorporation in the remaining two planes to be ditched. No definite date has been set for the next water-landing tests.

Damage to the plane seemed extensive yesterday, although it was rigged with floatation inside the cabin to prevent its sinking. Both sides of the fuselage near the pilots were torn and bent and the covering skin near the tail gun position was wrinkled as crepe paper. While the cabin was cleaved back of the pilots, it remained joined at the top of the fuselage and did not completely part. Under surfaces of the twin tails of the Liberator were bent and broke in and the wing flaps, lowered as Major Harvey came in for a landing to reduce speed, were broken but not lost.

A navy barge derrick salvaged the plane and returned it to Langley Field for further study.

Major Harvey handled the plane as if he were a veteran at ditching, bringing the large ship in with the least possible error. As the Liberator broke the surface, the left wing dipped, swinging the ship slightly.

Col. Greene has served in the regular army air force since 1916 and is widely known throughout the AAF and the aeronautical industry for many contributions. Recipient of the Collier trophy for the AAF due to his pioneering efforts in pressurized cabins, he holds the Distinguished Flying Cross for his meritorious research in flight.

Major Harvey is a native of Scarsdale, New York, and recently returned from the European theater of operations where he completed more than 30 bombing raids over Germany. He was among the first B-24 pilots to arrive in England in 1942 and has been awarded the Distinguished Flying Cross and the Air Medal with four Oak Leaf clusters.

