

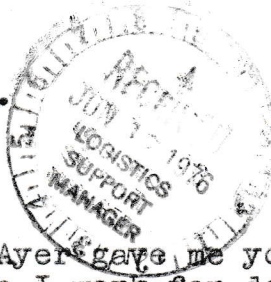
C. T. AND S. J. BISHOP

TEL: BISHOP'S STORTFORD 812198
STD CODE 0279

LYNDHURST
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9th June 1976.

Jim Miller.
Mc Donald Douglas.
Tulsa International Airport.
Tulsa.
Ok. U.S.A.



Dear Jim.

Bob Kremer of Pan Ayer gave me your name. Bob is an old friend, Aviation Traders who I work for do a lot of work for Pan Ayer.

I am actually writing to ask if you can assist me on something that happened over thirty years ago. I am writing a history of the Boeing Flying Fortress (B-17) and I dare say you will wonder what this has to do with Tulsa.

Well Douglas Tulsa was a modification centre in those days and many B-17s passed through for modification before being sent overseas to combat units.

Of particular interest to me are the YB-40s which were a heavily armed version of the B-17 and which were modified at Tulsa in early 1943.

What I am trying to find out and would be grateful if you could assist me is.

1. Is there an archives section at Tulsa where details of the work done in those far off days is kept and do they have a historian or ~~libra~~ librarian who deals in this.
2. Do you know of any old employees who were ~~were~~ at Douglas in those days who might be willing to correspond and help my research.

I hope I am not asking to much but if I could get an initial contact I could take it from there and hopefully get more information on this interesting aspect of the United States World War Two effort.

Thanking you in anticipation.

Kind Regards,


Cliff Bishop.

13 July 1976

Mr. C. T. Bishop
"Lynhurst"
Station Road.
Elsenham,
Bishops Stortford,
Herts CM22 6LG
England

Dear Mr. Bishop:

Mr. Jim Miller forwarded me your letter of June 9th. In regard to your question concerning a recorded history of the B-17 here during the 1940's I am unaware of anything on this subject in our archives, that we can now furnish you.

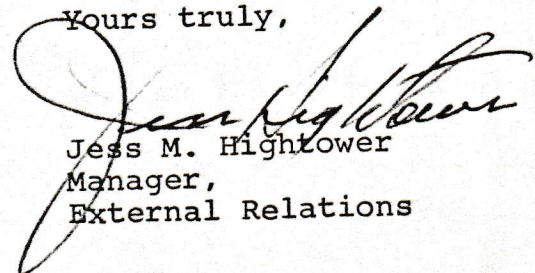
However, you may be surprised, and pleased to learn that the gentleman responsible for direction of the Douglas modification center during this period still lives in Tulsa. He has recently retired.

My suggestion is that you contact him, Mr. A. P. McCulloch, 6711 East 32nd Place, Tulsa, Oklahoma, 74135, with any suggestions, or questions you might have. We would assist him in reproducing written material, or photographs that he might have, if he so chose, for your history.

Another gentleman that could possibly have some information on this specific period is Mr. Harry Gann. He is manager, Aircraft Information Commercial Marketing, at our Douglas Aircraft Company division, 3855 Lakewood Blvd., Long Beach, California 90801. Mr. Gann is a noted aviation historian.

We wish you well with your historical project, and hope you are successful in your search for the information you seek.

Yours truly,



Jess M. Highower
Manager,
External Relations

JMH:mm

cc: Harry Gann
A. P. McCulloch
J. E. Miller

1 September 1976

C. T. Bishop
"Lyndhurst"
Station Road
Elsenham
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Dear Mr. Bishop,

I received your letter requesting information on the modification of B-17 Flying Fortresses. During the war we modified B-17's at the rate of 105 a month which modification consisted of installation of tail turret, revision of the oxygen system from low pressure to high pressure and the installation of ASQ-13 Friend or Foe Radar plus the updating of the aircraft's communications system.

The original modification was started by Lockheed Vega. While it was still in the Engineering stages the Pentagon decided to move the program to Douglas - Tulsa, as Lockheed were dragging their feet.

The modification of the 17's to YB-40 was very extensive. Starting in the nose of the aircraft we installed cheek guns on the right and left hand sides, nose turret, 5/16" flack plate under the floor and 1/2" homogeneous armour plate on the forward bulkhead. In the cockpit we installed two enclosures made out of 1/2" homogeneous armour plate that gave the pilot and co-pilot protection in all directions except forward. 5/16" flack plate was installed under the cockpit floor. Both right and left hand leading edges were removed and 1/2" homogeneous armour plate was installed to protect fuel cells and oil tanks. The bomb bay was revised for the storage of additional 50 caliber machine gun ammunition and flack plate was installed on bomb bay doors.

In the waist section of the aircraft we stripped the radio compartment and installed an Emerson turret in this area through the top of the fuselage. Radio equipment that was removed from this area was reinstalled on the left hand side of the waist section. The waist windows were staggered, left hand being moved aft approximately two feet and the right hand moved forward approximately two feet. At the waist windows there were twin 50 caliber machine guns installed with hydromatic boosts for more responsive action from the guns. Under the floors of the waist section 5/16" flack plate was installed. There were two tracks carrying 50 caliber

machine gun ammunition installed on the left hand side of the aircraft from the waist section to the tail turret. These tracks contained 500 rounds of ammunition before any reloading was required for tail turret.

This gives the major portion of the modification of these aircraft; communication system was updated, oxygen system revised to high pressure. When the aircraft was fully loaded with ammunition and fuel it was approximately 5,000 pounds overweight from the recommended gross weight of B-17's. This overweight condition had no detrimental effect on the flying characteristics of the aircraft but required a little longer runway on takeoffs.

The first of the YB-40's was flown to Eglin Field to check out the systems and make charts of the aircraft's fire pattern, which was the best of any aircraft at that time. All guns on the aircraft with the exception of the Turret on top of the fuselage were checked out on the ground in Eglin's fire pits. During the first flight when the turret on top of the fuselage was fired, the muzzle blast from the guns deteriorated a large portion of the upper fuselage skin and had to be replaced with heavier gauge.

The next flight of the aircraft I personally will never forget. We were flying at 8,000 feet and the pilot turned the controls over to the co-pilot and started toward the waist section when the airplane went into a flat spin. How the pilot ever forged his way back to the cockpit is beyond me, as all the occupants in the waist section were on the floor and unable to get up. The pilot and co-pilot overcame the flat spin at 800 feet. During that short period of time I surveyed my entire lifetime and expected to meet my maker any minute.

I hope that the information contained in this letter is of some help to you in writing your history of the B-17's.

Respectfully yours,



Arthur P. McCulloch, Manager
Douglas Modification Center
(Retired)

cc: Harry Gann
J. E. Miller
J. M. Hightower