



DOUGLAS DB-7s in FRENCH SERVICE

By J. CUNY

One of GB 1/54 "Bearn" Squadron DB-7s over Bourg-sur-Gironde, Winter 1944-45
(Photo - E. C. Armees Terre 1009 FR 6)

INTRODUCTION - This article brings to the Journal the fifth in the series of works on American Aircraft in French service, beginning in Volume 10, by Author J. Cuny. Previously there were "Martin 167", "Curtiss Hawk 75", "Curtiss P-40", and Douglas "Dauntless". (Editor)

During the late nineteen-thirties, it became necessary to re-equip French Air Forces, "Armee de l'Air" and "Aeronovale" with modern weapons in the build-up of the arms race with Germany. French industry appeared unable to assume sufficient production quantities and rates, therefore a purchasing commission was sent to the United States to select promising American machines. The Commission showed much interest in the Douglas (Northrop) model 7B new attack bomber.

The next month the French Air Force ordered 105 DB-7s, an order that was later increased to 380.

First DB-7 flew at El Segundo on 17 August, 1939. The initial hundred were completed at the same year end, a delivery rate that would appear astonishing today. Squadron use, in France, was delayed by various factors. As for other United States military planes there was a war embargo. The French and British navies were just reorganising sea traffic to cope with the submarine threat. North-African "production lines", organised to de-crate and equip shipped airframes were new and suffered difficult manpower problems.

Actual DB-7 delivery to squadrons was slower than its competitor, the Martin 167; only sixty-four Douglas bombers are said to have reached first-line units by the date of 1940's great offensive (10th May), and only three squadrons became operational before the Armistice (25th June), compared with five Martin units.

Most sources indicate the number of delivered airplanes as 108. (1) Actually that doesn't mean that No. 108 was the last, since No. 133 is known to have served as late as 1944, along with No. 129. Undelivered French machines were diverted to Great Britain, and were named Havoc or Boston in R.A.F. service.

Only Twin-Wasp (R-1830 SC3G) - powered planes reached Armee de l'Air. Cyclone-powered DB-7s were officially delivered from the Douglas Production line but never appeared in France or North Africa.

French official designation was DB-7-BE. This proved the type was intended to be used as a general purpose level-bomber, and not as a "cooperation", low-level weapon, contrasted with Martin 167 which had been designated 167-A3. It is noticeable, too, that squadrons receiving DB-7s were "Groupes de Bombardement", or GB, and those using Martins were GR, or "Groupes de Reconnaissance".

French Air Force DB-7s received standard French equipment, metrically calibrated instruments (but feet graduated altimeters) and standard French inverted sense throttle control levers, i.e. the throttle was pulled to the rear to increase engine rpm, opposite to U. S. usage. The gunner could use rudimentary (and removable) flying control for emergency purposes, not entirely satisfactory.

The forward armament comprised four fixed machine guns in nose sides (7.5mm F.N. built Brownings). They were rarely if ever used because of strong vibrations they provoked in aircraft glass parts. Two of the same caliber flexible weapons permitted rear defense (MAC 32 guns, of which one fired through the belly tunnel). Maximum bombs load was 800 Kg (1800 lbs.) carried internally (four 200 kg). Projecting wing racks were never used. The bombsight was, normally a French Bronzavia periscope equipment

(2)



The first DB-7 crashed in the parking lot at North American Aviation's plant at (then) Mines Field, now Los Angeles International Airport. The pilot, Johnny Cable, parachuted from the plane but at an altitude too low, and was killed. The incident evoked a controversy that went all the way to the White House, as related by Gen. "Hap" Arnold. (Photo - James J. Sloan Collection)

The prototype DB-7 figured in an incident that had political ramifications in the Lend-Lease program, and got General Arnold in hot water with President Roosevelt and Secretary of the Treasury Morgenthau. On 23 January 1939, Douglas Test Pilot Johnny Cable was performing right-hand engine-feathered tests, when, in making a right turn, the

airplane fell into a flat spin and crashed. French Purchasing Committee member M. Chemidlin, a passenger, was injured. General Arnold's error was in letting himself be questioned by the Senate Armed Services Committee on it. As a result, he found himself left out of White House Conferences for nearly a year. (3)



French DB-7s- were in zinc-chromate primer color at point of delivery, with French stripes on rudder.



Two-color brown green camouflage was applied at once. (E.C.Armees, 1. #C.T.Air 12478, r.-12900)

Below - June 1940 field operational maintenance was primitive. These are Groupements No. 1 & 2 aircraft, Martin 167 in foreground. (Photo - Etablissement Cinematographique des Armees C.T. Air 12902)





DB-7 No. 92, No. 9 of 2nd Esc., GB 1/19, over Algeria, Winter 1940-41. Short white fuselage band at that time. (Photo - Col. Deleuze) At right is DB-7 No. 12 with long fuselage band. "U-2" under wing was



pre-war identification system, only very early DB-7s received. Stencilled on right side nose was "Le Payeaux" This was machine used by 1st Esc. of GB 1/19. (Photo - Col. Deleuze).

FRANCE OPERATIONS, 1940:

French Air Command intended to re-equip ten squadrons with U. S. built bombers, five with Martin 167s and five with DB-7s. On 10 May 1940 all Douglas flying "Escadrilles" were still in conversion stage in North Africa. Only three could be sent hastily to France at the end of May. These were GB I/19, II/19 and II/61, which formed "Groupelement No. 2" and did their first sorties on May 31st. Two other units never became operational: GB I/32 and II/32.

Before the French collapse and subsequent Armistice in June only some seventy sorties were done, all on German targets. Losses were eight or nine planes:

Date	No. Planes	Location	No. Lost
5-31	12	St. Quentin Region	4
6- 5	12	Somme River Frontline	1
6	5*	Meaulte Air Base	0
7	8	Roye Region	1
8	12**	Aisne River Bridges	1 ***
10	5	Montmirail	1
11	10	Chateau-Thierry Region	1
			(damaged)

** Probably more.
 ** Including Grt. No. 1 Martin 167's
 Either DB-7 or Martin 167

In a preceding article by this author concerning Martin 167's there was a similar sortie list. Comparison permits appreciation of the far less

important action of DB-7s. Some 200 delivered 167s did some 400 sorties. Some 100 DB-7s did some 70 sorties!

Targets were troops and panzer concentrations, supply convoys and depots, bridges or vulnerable points in roads. Attacks on a limited scale permitted us to obtain only negligible results and losses were relatively high, higher than Martin 167 losses but lower than LeO 45s or Breguet 693s. They were mainly credited to German unexpected fire density and accuracy . . . and to unprotected fuel tanks!

All flyable DB-7s were ordered to retreat to North Africa, several days before the Armistice. By 25 June 1940 very few, if any, Douglas bombers remained in France.

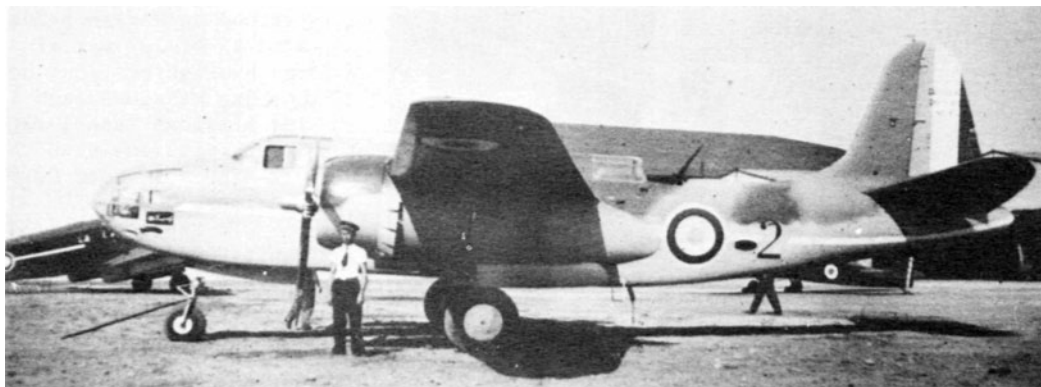
VICHY PERIOD: 1940-42.

Eighty or ninety available planes permitted maintaining only four squadrons, which were based in Morocco or Algeria:

GB I/32 at Casablanca (Morocco)
 II/32 at Agadir (Morocco)
 I/19 at Blida (Algeria)
 II/61 at Blida (Algeria)

GB I/19 had been initially disbanded, and II/19 maintained. When the enemy Armistice Commission wanted the later unit suppressed the French High Command created a new I/19 by simple number change. The new unit even kept its precedent insignias! The French Navy (Aeronavale), which adopted Martin 167, never used Douglas DB-7s.

DB-7 No. 7, No. 2 of 2nd Esc., GB I/32, at Casablanca Airfield, 1941. (Photo - Foullerg)





CROMAGNON, of GB 11/32 at Agadir, Morocco in late 1940. Responsibility for prehistoric nickname is unknown, as is the airplane number and person. The protruding head of the Bronzavia bombsight is under the glass nose. (Photo - Cuny). Above is DB-7 No. 129 of "Beam" squadron at Bordeaux-Merignac Base, late 1944, probably the most publicized of the Free French aircraft. (Photo - E.C.A. 5687)

In November 1942, the French Air Force Command (and crews) were somewhat reluctant to operate against "invading" Allied Forces. Bomb-laden GB I/32 DB-7s take-off was held up by delayed orders on Casablanca Airfield. As a result, airplanes were surprised during taxiing by strafing Wildcats. The unit was obliterated and suffered heavy crew losses. During subsequent three combat days only one plane of I/32 could do a reconnaissance sortie! Other DB-7-equipped units did not suffer the same fate, but they were not very active. A "massive" attack on U. S. Navy units supporting the Morocco landings was projected for November 10 but was cancelled. The second Morocco-based unit (GB II/32, at Agadir) had left its threatened coastal base before attack by U. S. Naval aircraft.

FRANCE RESUMES WAR: 1943-45

DB-7 squadrons were progressively disbanded or re-equipped. GB I/19 and I/32 became Martin B-26 Marauder equipped units operating over Italy, France and Germany, becoming known as Groupes "Gascogne" and "Bourgogne"

Surviving machines were relegated to training

GB 1/32 DB-7 near Moroccan coast, 1941. (Photo-ECA)



or fast liaison roles. A number were used in training bomber pilots and navigators, in Moroccan or Algerian School bases.

But neither DB-7 nor its Martin competitor careers were definitely restricted to such secondary roles. During 1944 it appeared necessary to give air support to French national territory powerful guerilla actions ("Forces Francaises de l'Interieur"). Units were hurriedly created to provide fast ammunition and medical supply and, as soon as possible to give even more direct help by reconnaissance, bombing and strafing of enemy columns and garrisons.

Actually the available DB-7s and Martin 167s could only be used as bombers or reco aircraft after the remaining German troops had been isolated in a number of coastal strong points. Re-equipment of the airplanes with bombsights and racks, re-supply from North Africa of stocked bombs and fuses, or adaptation of modern weapons and projectiles were necessary logistic actions which somewhat delayed real military action.

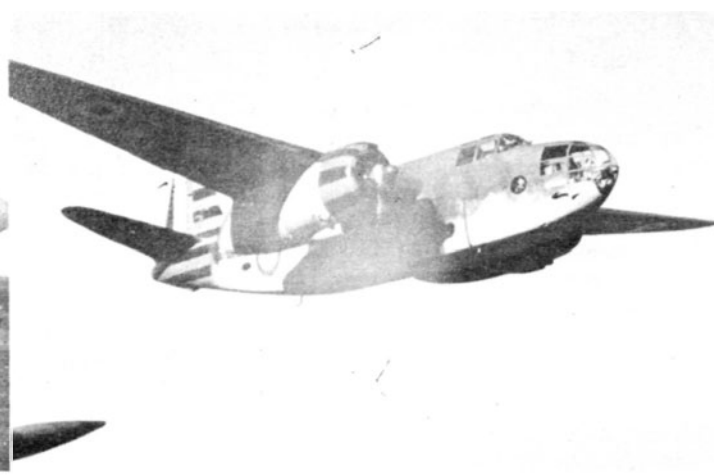
One especially created Martin 167 and Douglas DB-7 unit was GB I/34 "Bearn", of which six planes (three of each type) landed at Toulouse on 26 August, 1944 and which launched its first bombing attack against Royan target (a naval battery) on October 28, with three DB-7s. The squadron possessed half a dozen of each type bomber, forming two "escadrilles", and a single captured Me-110. Before GB I/34 returned to North Africa, to become trained on Martin B-26s (March, 1945) it had flown a total of 127 war missions over targets unprotected by fighters, but heavily defended by flak; 62 bombing missions (and 1 reco) with DB-7s, 56 bombing missions (and 1 reco) with Martin 167s, and 3 reco missions with the lone Me 110. (4)

The most used DB-7 was No. 129, with twenty missions.

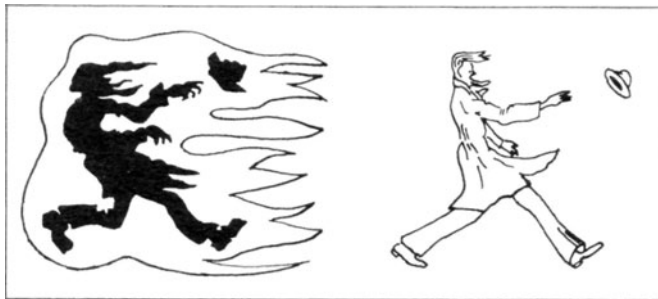
To replace GB I/34 there was another "Opportunity" unit, GB I/31, which had been created to operate captured or French built Ju-88s. Three still flyable DB-7s were transferred to this "Aunis" squadron, (5), together with four surviving I/34 Martins. Together with Ju 88s (often in mixed formations) the old U. S.-built bombers did bombing



Left - GB 1/34 "Bearn" DB-7 Ho. 89 at Bourges Air Base, Oct. 1944. Right - GB 1/19 DB-7 No. 40 with "Vichy Stripes" and short white fuselage white band, Mid-1942.



Left - GB 1/34 "Bearn" DB-7 Ho. 89 at Bourges Air Base, Oct. 1944. Right - GB 1/19 DB-7 No. 40 with "Vichy Stripes" and short white fuselage white band, Mid-1942.



Left - Insignia of the WW I SAL 18 Escadrille as precedent unit of "Beam" 1/34 2nd Esc. Right - the 1939-40 insignia of 1/34, however, the author states no proof exists of its use in 1944-45, but that if an insignia was used it was the older, more aesthetic form. (Ed. drawings by J. Cuny)

sorties during March and April 1945. Both types flew eighty-seven sorties during this limited time.

This limited scale war over the Atlantic Coast can appear as ridiculous to the reader who thinks of the enormous Allied Air effort over Germany during the same period. Actually such units as GB I/34 or I/31 were permitted to forget such besieged German Forces, and to commit over Germany, the best trained crews, and their action was useful in preparing the 1945 Spring French land forces assault. One such mission as the first one (October 28) provoked a spectacular bursting of one of Royan's important ammunition depots.

GRUPE "LORRAINE" ORIGIN.

GB I/120 was created during late 1941 with various nationality crews, including survivors of Free French GB I, which had operated over Ethiopia and which was still a Free French Unit.(6) French North Africa Forces were then under Vichy control.

The new squadron was trained and equipped as an R.A.F. unit, became No. 342 squadron of this arm and was operational during the Second Libyan Campaign from November 1941, flying Blenheims. It became known, as other Free French units (and later all Free French units in the R.A.F.) under a Province name, "Lorraine". Such a regional choice appears to have been dictated by two reasons. Lorraine was one of both French provinces constantly claimed by Germans as a Third Reich part (Alsace was the other and had given its name to a very early Free French Fighter squadron).

Further, Lorraine had been an important base region of many old famous French bombing units

(notice high number of Lorraine crosses, or Folkloric hats, in F.A.F. units insignias).

GB I/20 Squadron comprised two escadrilles (flights) which received the two main Lorraine Cities names; Metz and Nancy. Motto was chosen: "Nous re-viendrons" - "We shall come back".

The Commanding Officer, Colonel Pijaud, was among the crews of eight planes shot down during the unit's 247 sorties in Lybia.(7) Middle East operations ended during 1942-43 with less-exciting ferrying and Coastal Command missions from Egypt and Syria Bases. At the beginning of 1943 Blenheim IVs (and some Vs) were left in Syria; the crews moved to Great Britain.

In England GB I/20 received Douglas Boston III bombers to become part of the 137th Wing of Bomber Command. This Wing comprised two British Squadrons, Nos. 88 and 226. After operational training from West-Raynham Base the unit moved to Sculthorpe and later to Hartford Bridge (now known as Blackbushe, near London). The commanding officer was Colonel de Rancourt at this time.

Its first mission was an attack on a power station near Rouen by three Bostons on 12 June, 1943. During the Summer and Autumn its targets were usually such stations, railway junctions and yards, and enemy airfields. Probably the most famous mission of this period was the attack on Chevilly-Larue thermal power station, three miles South East of Paris. Twelve Bostons zero-level bombed the station and put it out of service. Two planes were shot down by light anti-aircraft fire. The results were important from the material standpoint; never again could the German use electrical energy normally furnished by Chevilly station to South-West France Railways.

Psychologically it was of great importance. A shot-down Boston crashed in the Seine River and was seen by many persons. The Germans attempted to push public opinion against "de Gaulle bandits" but undoubtedly the propaganda results were in favor of the Free French. They existed, they attacked audaciously and they had not killed French civilians.

On 8 November, 1943 Bostons bombed a new type of target, at Mimoyecques. It was said to be a "No-Ball" station. Now anybody knew what a threat for England was the V-1 site organization. For several months (November '43 - March '44) "Lorraine" squadron, and many other Allied tactical bombing units, gave priority to such targets. More than twenty different sites received GB I/20 congratulations. Frequently Bostons returned to an insufficiently damaged previous target. Such returns were frequently more dangerous than the preceding visit.

On December 23, when Lorraine resumed its unsuccessful attack on Mesnil-Allard V-l site it lost three Bostons, one shot down, two severely damaged and destroyed during landing.

From March, 1944 to D-Day, 137th Wing participated in massive Allied Air preparation for the projected Normandy landing. Main targets now were communications sensitive points, mainly railways (Courcelles, Creil, Charleroi, Cambrai, Mantes. . .) and enemy aviation bases (Lille, Chievres. . .).

During March, 1944 Colonel de Rancourt was replaced as commanding officer by Lt. Colonel Gorri (exact name: Fourquet (8)).

NORMANDY OPERATIONS, FROM D-DAY.

No. 342 Squadron laid a smoke screen June 6 at dawn, in front of U. S. landing forces along the Cotentin peninsula from St. Marcouf Island to Barfleur point. No. 88 squadron did a similar job in front of British units. Each unit lost one of its twelve aircraft used on this famous occasion.

From D-Day GB I/20 planes were operated on land forces support missions. Among the most noticeable, ten Bostons attacked German land units trying to retreat from Falaise-Argentan "pocket" on the night of August 4-5. Action was done at tree-top level and was costly; four planes were shot down, a fifth crash-landed at Arromanches and sixteen men were killed.

The most famous of these was a non-commissioned officer, Chef Ricardou, who had fought in the Foreign Legion during the 1940 Norwegian Campaign. After joining the Free French forces he had lost a leg in Lybia, again fighting in the Foreign Legion (Bir-Hackeim defense). He wanted to fly as a gunner when unable to fight as an infantryman and the August 4 sortie was his fiftieth.

Boston IIIs were progressively replaced by IVs and frontline moved to North East. During September, 1944, "Lorraine" operated over Northern France, Belgium and Holland. Examples:

17th September - Air Support of U. S. 101st Airborne division, landed to seize Nijmegen bridge (Operation "Market").

25th September - Attack of enemy 88mm Flak weapons, to support British and Polish paratroops withdrawal from Arnhem.

With the front line moving East it became necessary to change its base of operations from England to the Continent. GB I/20 came to France, on Vitry en Artois airfield. Its Motto could not be changed. It became "Nous y sommes" (Here we are).(9)

END OF WORLD WAR II.

GB I/20 Squadron remained operational over Belgium-Low Countries - North West Germany area. Its new Commanding Officer, replacing Lt. Col. Fourquet, was Cdt. Soufflet. (HP)

Sorties were flown to support British and Canadian land armies (450 sorties from Vitry en Artois, during October 1944 - February 1945 period). Most noteworthy was that of Christmas, 1944. This day "Lorraine" participated in massive annihilation of Von Arnim's panzers of the Ardennes sector, as did all available Allied Air units. Target for the Bostons was enemy armor at Houffalize, northeast of Bastogne.

A new move of 342 happened during February, 1945, when the unit moved to Gilze-Rijen. At this time it was partially re-equipping with Mitchell IIIs (B-25J) and one escadrille flew with the North American Bombers, from March 1945, but at VE Day (May 8) the other escadrille was still equipped with Bostons.

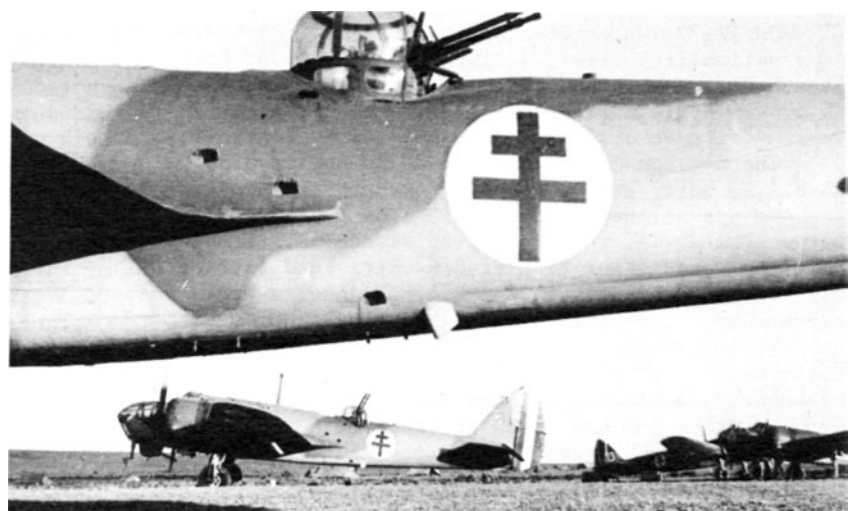
"Lorraine" had supported the British at the Rhine River crossing on March 23 and its last target had been Itzehoe bridge (Hambourg area) attacked by twelve planes, on May 2, 1945.

After VE day lend-leased airplanes were returned to the United States. The unit was officially transferred to the French Air Force at the end of 1945. It re-equipped with 'Mosquito PR XVI's and has not since used any United States-built aircraft.

"LORRAINE" SQUADRON FAME

At the end of WWII Groupe "Lorraine" was one of the best known French Air Force units. It had

Left - GB 1/34 also used Martin 167s with DB-7s. Shown here is No. 75 in Winter 1944-45. (Photo - E.C. Armees Tene 10097 R11). Below - Before moving to England and receiving Bostons, the "Lorraine" squadron, based in Syria in early 1943, used Bristol Blenheims with chin turret. (Photo - E. C. Armees CT Air 11877)



received (as a unit) that most rare French WWII medal, the "Croix de la Liberation", with following text: "Veteran of Free French Air Units, famous squadron which fought gloriously for the honor and liberation of France, at price of heavy losses.

"Operational in separate escadrilles as early as November, 1940, in Gabon, at Koufra, in Tchad, in Abissinia, later in Lybia and Europe. Under the successive commands of Colonels Corniglion-Molinier Pijaud, killed in Aerial combat, de Sainte-Pereuse, de Rancourt, Gori-Fourquet, and Commandant Soufflet, this squadron destroyed hundreds of various targets, launching 2,660 tons of bombs and shooting down two enemy fighters during 3,059 war sorties.

"Based in England for two years it did numerous important and dangerous missions, either at tree-top level or at altitude.

"On 6th June 1944 it masked Allied landings on Normandy Coast by smoke screen laying. Later it constantly harassed German troops, day and night, during France Campaign. It has lost 108 crewmen, in fact more than two times its normal strength." Paris, 28th May 1945. (signed) deGaulle.

GB I/20 "Lorraine" received seven citations during the war. That was a French Air Force record; the most famous fighter squadrons, Free French "Alsace" and "Normandie-Niemen", received six each.

SOME CREW'S OPINIONS ON DB-7s and BOSTONS.

Hastily trained DB-7 crews of 1940 had not sufficient time to give a good account of their machine's quality. There is no doubt as to this fact; initially the French pilots preferred the more "orthodox" Martin 167, popularly known as the "Glenn". (See JAAHS)

Tricycle undercarriage was, then, a novelty which surprised pilots. In fact, the DB-7 tricycle u/c was the first in French Air Services. This author could find no trace of complaint on this subject, nor of any peculiar shortcoming in the DB-7. There were "fans" of each type, apparently corresponding to the plane type flown (as it is well-known, "the plane I'm flying is the best. . .").

If we search we can discover minor superiorities in favor of any type. The Douglas product, when its pilot was more familiar with tricycle undercarriage was undoubtedly safer to take off and land, even on



Left - Lt. Gatissou, Pilot, and Gen. Vallin, Free French Air Force Commander, who flew on several missions in "Lorraine" aircraft. In foreground, Lt. Col. de Rancourt, "Lorraine" CO., GB 1/20. (Cuny)

WWII runways. It was probably hampered by insufficient power and some directional instability (proven by later factory-made rudder changes) but its "all circumstances" maneuverability was superior.

Martin 167s ferrying range was exceptional, and probably provoked the choice of this type for colonial and naval use, but basic design superior versatility of DB-7 could not be fully appreciated by the French Air Force, because of the small numbers in service.

In both types there were equipment location mistakes but certainly more important in the Douglas Two examples: 1. Both had emergency flying controls They were at rear gunner post on the DB-7, probably impossible to ever use. In the Martin glassed-nose they could be used. 2. Location of the undercarriage retraction lever, on DB-7 was unsafely close to a similar lever used to open bomb-doors.

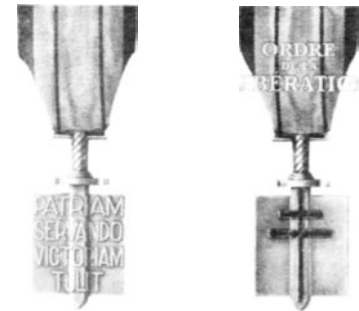
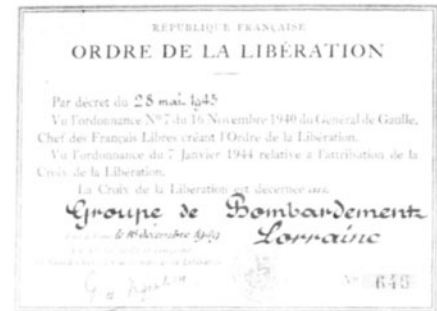
In fact, it is very difficult to explain why DB-7s suffered higher losses than parallelly used Martin 167s during May-June 1940 operations. Perhaps sorties number was too small to be really

Boston IIIs OA-T (BZ 196) and OA-C (BZ 332). BAYEUX and VILLE de CHERBOURG show missions performed on right side nose. Left - Lt. Gatissou; right - Lt. Allegreat with Intelligence Officer "Jeanette". (Photos - Cuny)





Above - Wing Commander Fourquet (Gorri) DFC, and Sq. Ldr. Soufflet with air and ground crews just arrived in France, 1944. (Photo - Imperial War Museum CL 1463). Right - The Order of Liberation.



significant.

"Lorraine" crews did not know the interim A-20 versions. When they received Bostons they were 1600 HP engine-powered machines. This "Boston" III maneuverability was immediately very much liked. That and its high speed were important security factors to avoid enemy fighter interception and Flak dangers in such exciting low-level flying.

Boston IIIs were becoming obsolescent for such missions in the Spring of 1944, in the face of increasing German Flak power. Better armed and armored Boston IVs showed marked improvement, thanks to additional protective equipment, a dorsal powered turret and .50 caliber guns.

Navigators preferred roomier forward post, better visibility and improved Mk XIV bombsight of later version (they never used the U. S. Norden), but pilots missed the Boston III's marked agility, of which a part had been lost on IVs.

Actually the Boston IVs were quickly superseded by Mitchells and J. Lambermont wrote on both types (in "Lorraine Squadron" book): "The Boston might be compared to a top-class sport car. . .

Mitchell was as comfortable as a large limousine.."

DB-7s CAMOUFLAGE AND MARKINGS

On most of 1940 French combat planes, including U. S. built machines, a three-tone camouflage was used on upper and vertical surfaces (grey/brown or sand/brown/green combinations were both used, slight dominance of the first). No standard patch scheme appears to have existed. Undersurfaces were painted light (duck-egg) blue or light grey. Separation line was irregular and low.

During the Vichy period many of the North-Africa based planes received more appropriate grey-brown combinations and the separation line with under surfaces light tone was situated at about half of fuselage height (and frequently confused with 1940-42 white band).

During the period 1943-45, DB-7s received a

grey/green upper coat with light grey undersurfaces and high separation line.

For all aircraft the national insignias were standard French roundels and rudder stripes (azure blue/white/red, blue ever at center or forward positions). Roundels were directly applied on camouflage during 1940 Campaign. From July 1940, to avoid confusion with British (hostile) machines fuselage roundels of all planes were painted inside a white circle, merging with a long horizontal band; this, on DB-7s began at nose windows and ended at Fuselage rear position light.

At 1941 end, engine cowlings and tail surfaces (including tailplane) received yellow/red longitudinal bands. Many military planes, including Douglas and Martin bombers, received wings oblique thin tricolor bands (used initially only on civilian aircraft of this time). During 1942 the fuselage roundels and white band were suppressed.

After resuming of the war by all French Empire Armed Forces, the DB-7s lost their specifically Vichy markings. Simple roundels were again used on fuselage as on top and underside of wings. With the exception of the latter position they were now thinly outlined in yellow.

As on all French aircraft sent to France after D-Day and during liberation of the country, the 1944 GBI/34 DB-7s received "invasion stripes" painted on fuselage and wings. They were relatively thinner than the 6th June original Allied bands. They disappeared during February-March, 1945.(11)

From 1940 to 1942 squadrons apparently used only numbers to identify individual planes. As often at this time the squadron's relative position of characters permitted (or rendered easier) the "escadrilles" identification. Usually only two places were retained for this number: On rear fuselage sides, aft of roundel, or on fin sides (characters style varied too, with unit - Angular, Russian type. . .).

BOSTON'S CAMOUFLAGE AND MARKINGS.

Boston IIIs had British standard camouflage scheme (medium grey/green) on upper and vertical surfaces, light grey below. Boston IVs had either the same R.A.F. camouflage or U. S. light olive-drab finish.

Initially, on IIIs, British R.A.F. style national markings were used, with inverted color order (blue at center of roundel). During 1944 these gave place to real French insignias (larger white in roundels, stripes on rudder) but the dark British blue was still used in place of French azure blue. There were interim combinations (French proportion roundels but R.A.F. type fin stripes, etc.).

The Free French emblem (white "Lorraine Cross" on blue/red shield) was always painted on both nose sides. Individual airplane names (even town names) were written in white on the right side, together with the airplane's sorties marks (bombs), yellow or white for day sorties, red for night sorties. These were in large variety and each crew adopted a different bomb distribution, as shown by the illustrations with this article. The two most important Lorraine Province town names (Nancy and Metz) were on the two escadrilles commander's airplanes. Sometimes (rarely) the Province Arms (silver birds on yellow and red shield) were painted on the fin.

Squadron No. 342 code letters (OA. . .) were painted dull red. As on all R.A.F. Bostons, the relatively short rear fuselage section obliged them to separate the squadron letters (always on rear fuselage) from individual plane letter (always on nose). Sometimes the same color vertical band indicated propellers danger. On later machines (Boston IVs and Mitchells) individual letters were half-outlined in white to give relief impressions.

D-Day planes (IIIs and IVs) received "invasion stripes" on wings and fuselage. (12) Fuselage was initially completely circled by bands but the upper part of those was later covered, as were the upper surface of wing's bands because they were too conspicuous for enemy fighters during low level raids. Perhaps some airplanes directly received only half of bands. Squadron letters OA were never hidden by bands, but R.A.F. serial was frequently partially covered. (All French airplanes were of BZ batches). Late Boston IVs nose sides showed stencilled U. S. serial and service indications.

DOUGLAS DB-7s AND FRENCH BOSTON INSIGNIA.

GB I/19: 1st Esc. (in WW I, F 121) Black owl,

GB II/32: 3rd Esc. (WW I: Br 201) Alsace folkloric cap (large ribbon) black on blue oval. 4th Esc. (WW I: Br 219) White cog wheel on red shield. Black eagle. (3rd and 4th escadrilles were frequently referred to as 1st and 2nd of Escadre second squadron. It would have been possible, too, to write "3rd and 4th of II/19. In fact this prewar system was progressively forgotten more than officially suppressed).

GB II/61: (No WWI ref) Orange and black winged sphinx, yellow moon crescent. 4th Esc. (WW I: Esc. 548) Blue masked "tarqui" head (Saharian desert tribesman) on equilateral brown triangle.

GB I/20: "Lorraine": Province Arms, three silver heraldic birds on oblique red band; gold (yellow) shield.

"Forces Aeriennes Francaises Libres" (FAFL - Free French Air Force): White, angular type, "Lorraine Cross" on blue/red (diagonally separated) shield. Normal dress metal insignia comprised gold wings on shield sides. On planes (Bostons, Blenheims, Spitfires) shield was thinly outlined.

GB I/34: "Beam". Province Arms, two red cows on gold shield. 2nd Esc. (WWI: SAL 18). Black man losing his hat in a strong wind, on a white ground. (Both insignias, and the Martin 167s other esc. insignia, were probably never painted on any plane, but they were certainly used on pennants, and as clothes emblems.)

GB I/31: "Aunis". Province Arms, gold crowned partridge, on red shield (same remark as for I/34 insignias).

GB I/34 AIRPLANES, 1944-45 ATLANTIC CAMPAIGN.

Douglas DB-7s: No. 18, 45, 63, 69, 89 and 129. There was no loss. No. 45 doesn't seem to have been used as a bomber, and No. 69 perhaps did only one sortie. Were used by second escadrille.

Some "Lorraine" Squadron Boston Serials:
(Squadron Letters OA)

Boston IIIs:

BZ 302:B	BZ 275:S	BZ 196:T	BZ 261:U
BZ 314:S	BZ 259:S	BZ 290:S	BZ 305:S
BZ 332:C	BZ 349:S	BZ 301:S	BZ 312:E

Boston IVs:

BZ 443:B	BZ	B :
BZ 538:B	BZ 450:C	BZ 451:S
BZ 424 :X	BZ 544:X	BZ 439
	427	446:(Probably E.)

ACKNOWLEDGEMENT

Thanks to those persons who assisted by releasing photos or information: Historical Section of French Air Force (S.H.A.A.), French Army Photo Service (E.C.A.), Col. Deleuze and Furet, MM. Boubel, Doussinet, Draper, Desmaret, Houilly, Mutin, Riviere, Ropollo, Cne. Youtchenko.

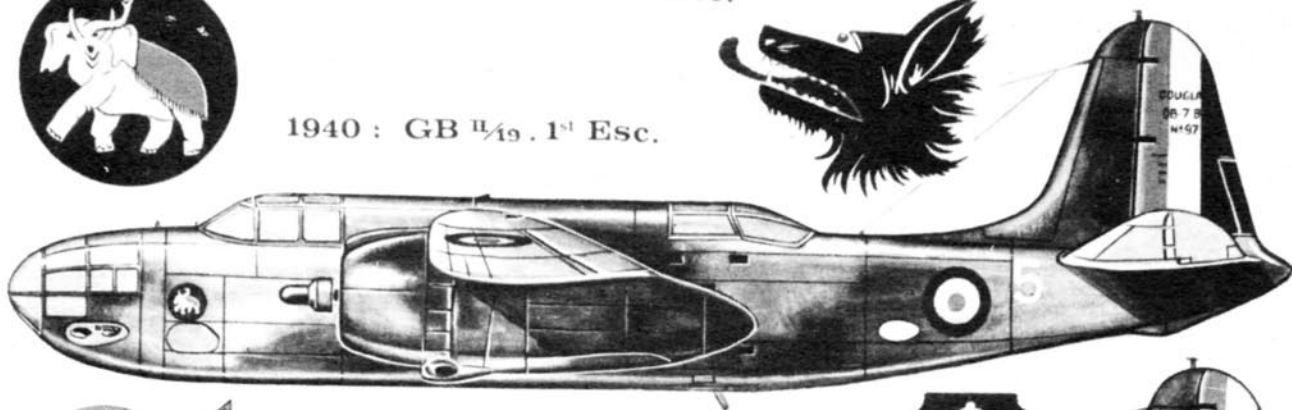
REFERENCES

(1) Some sources give 64 DB-7s and 189 Martin 167s accepted by F.A.F. on June 20, 1940. (Ref. "Air Pictorial", May, 1963). The author believes the DB-7 number was somewhat higher. If we admit to Air Pictorial's number as that of airplanes accepted after rebuilding (from shipped crated machines) and if we subtract War losses, 8 or 9 airplanes, the remaining

2nd Esc.

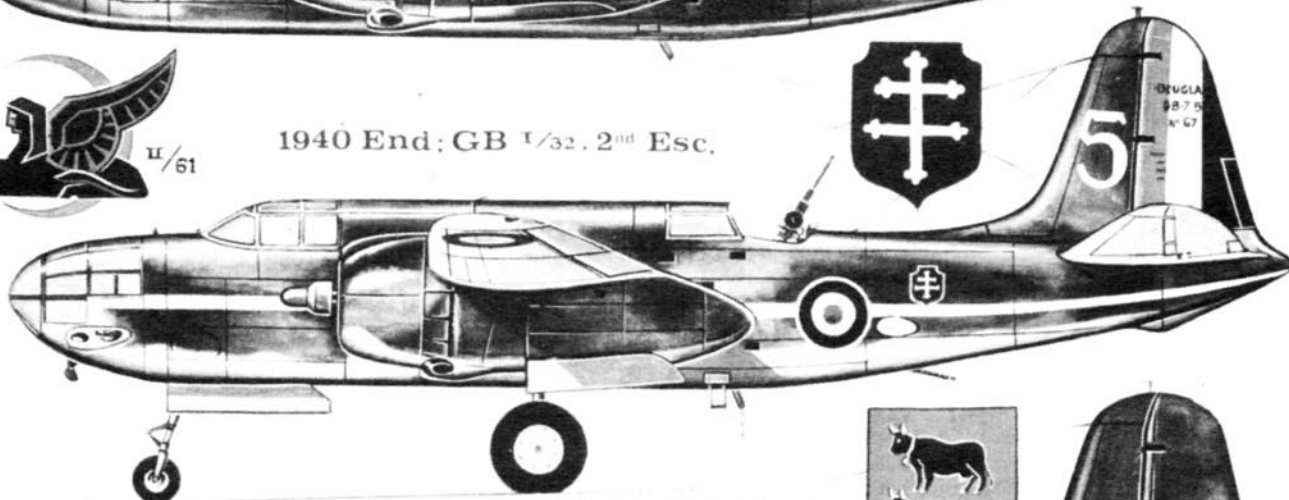


1940 : GB II/49. 1st Esc.

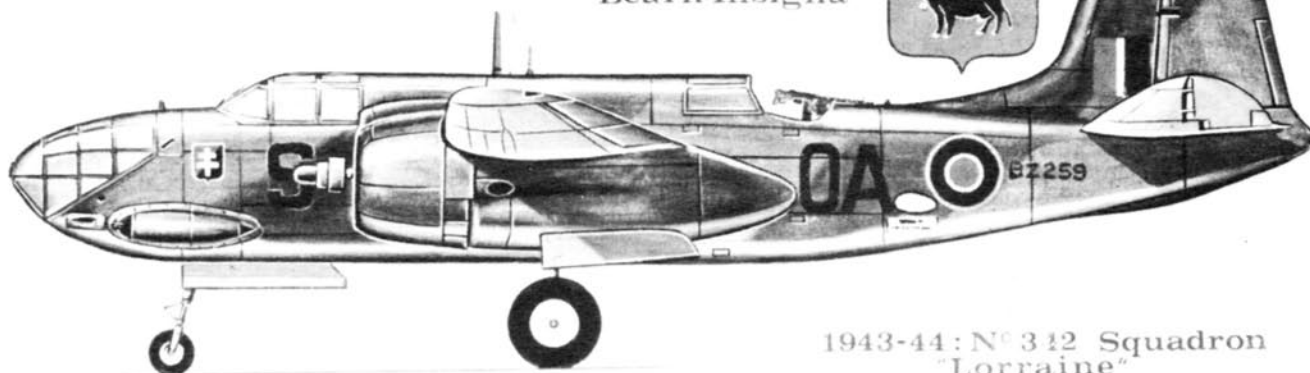


II/61

1940 End : GB I/32. 2nd Esc.



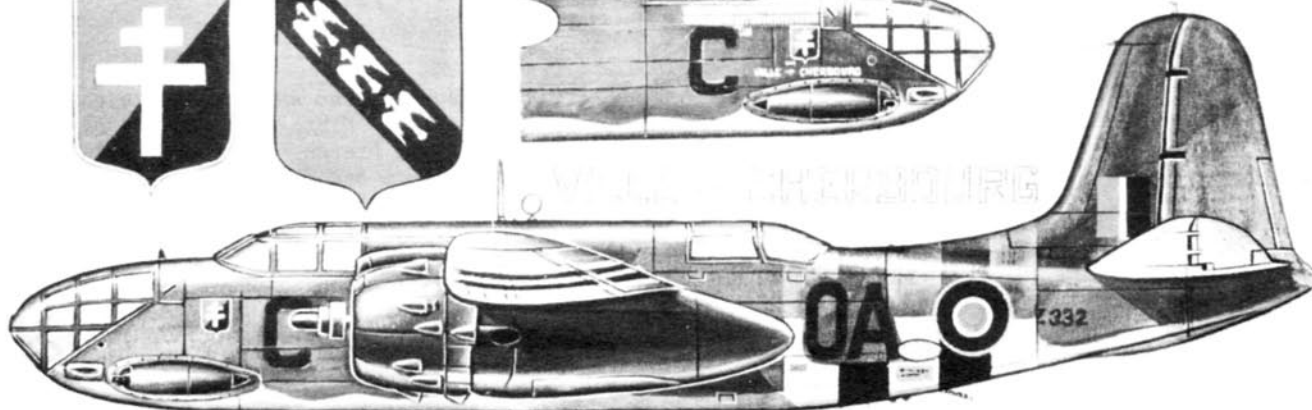
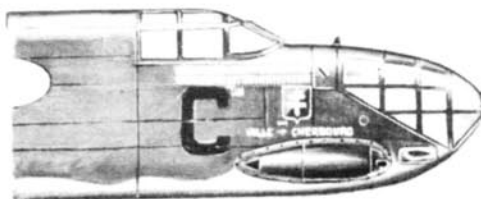
Bearn Insigna



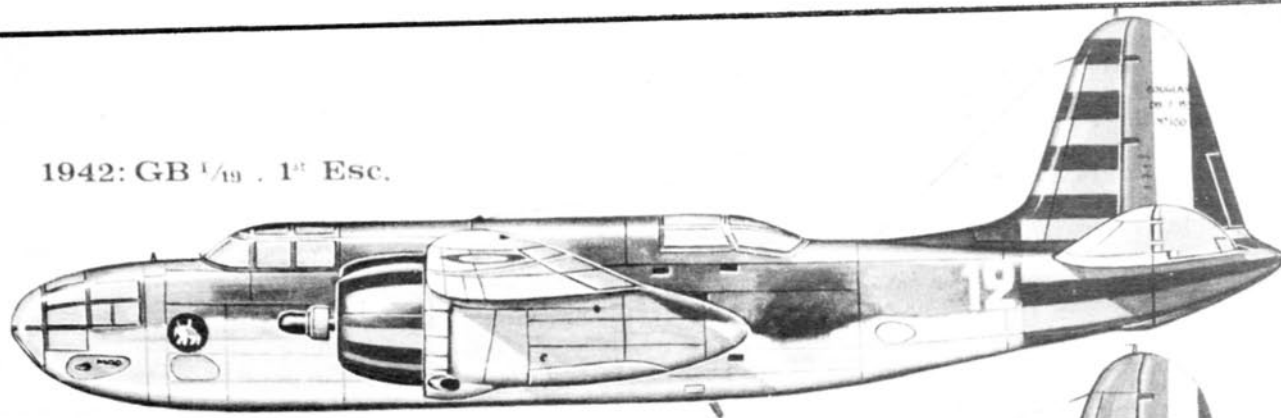
1943-44 : N° 312 Squadron
"Lorraine"
Boston III's

F.A.F.L.

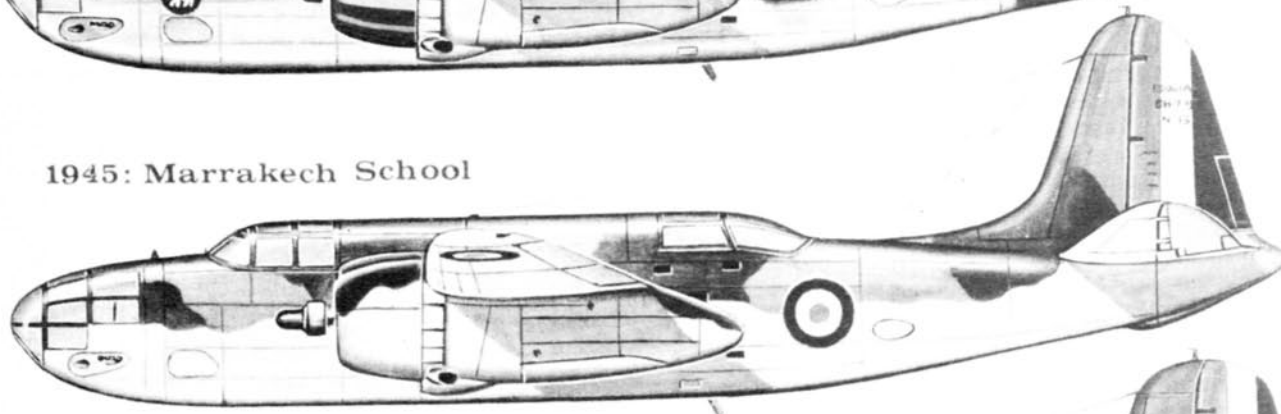
Lorraine"



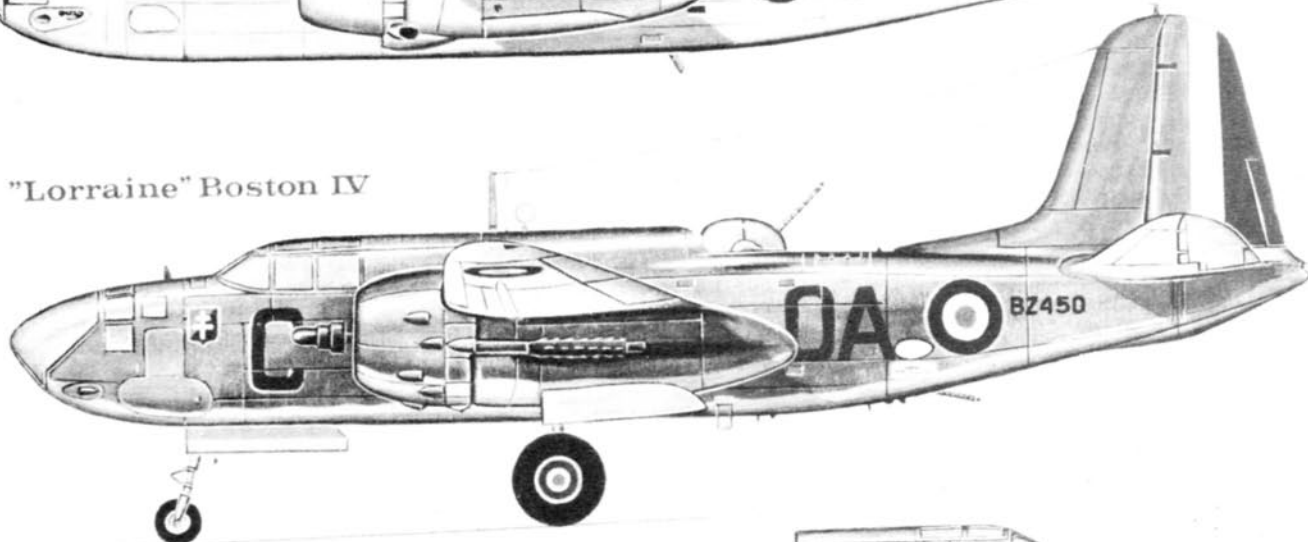
1942: GB I/19, 1st Esc.



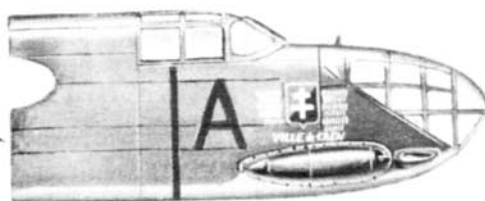
1945: Marrakech School



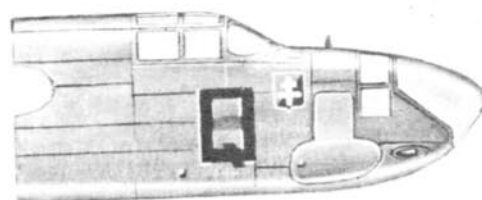
"Lorraine" Boston IV



I/19

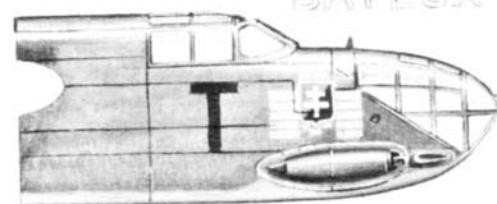


VILLE & CARR

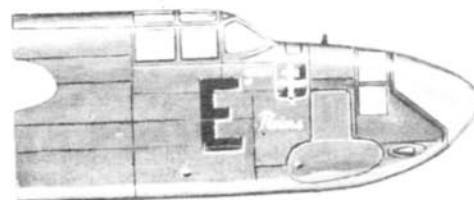


Lorraine Bostons : 1944

II/32



BAYEUX



Palms

J-086

55-56 DB-7s would have never permitted maintaining four squadrons, each with 12-13 nominal first-line strength. That would have eliminated second-line reserve possibility. If only 64 machines were delivered how can the relatively high numbers be explained? There were No. 129 and 133 in use. Crating, loading and shipping hazards were not sufficient to justify intermediary numbers, and small numbers were delivered. Author flew on No. 13 aircraft.

(2) French Armament. French weapons were currently used on French Air Force 1939-40 U. S.-built planes. Their designation is frequently given in this series of articles by this author so it is probably interesting to give some details on arms which were not so well known as similar category, British or U. S. equipment. Three types of machine-guns were used. The standard cartridge was the French 7.5mm, model 1929 (rimless).

The "Darne" gun was perhaps the cheapest weapon ever built anywhere before WW II, (it cost twenty-eight U. S. dollars during 1931). It was gas operated and fired some 1,700 rounds per minute. The quality was so bad (Spanish War proved extreme jamming facility) that Air Force and Navy replaced it as soon as possible. Probably none was ever used on DB-7s. Some were used as movable rear defense weapon on Chance Vought V-156 dive bombers (SB2-U).

MAC 32 and 34 guns were developments of the well-known "Model 24-29" Chatellerault infantry light machine-gun. There were, too, special fortress and tank weapon, very similar, the MAC 31. It was gas-operated and its theoretical rate of fire was 1600 rpm; 1300 was the practical rate. It was notably inferior to the Browning in some respects (maintenance) and showed an important shortcoming; it could be fed only by drum magazines which meant limited fire time, either as fixed weapon (300 rounds drum) or flexible (100 or 150). It was certainly used on most of the DB-7s, perhaps on all for rear defense. (Author still remembers well the spare drum installation in rear cockpit.)

Browning F.N. was license-built in Belgium, modified to French specifications. It used French ammunition, and gas operation was provided to supplement and reinforce the Browning short recoil action. France production was anticipated but never materialized. It was only used as a fixed weapon on the Curtiss Hawk 75, DB-7, Martin 167, since belt feeding was a desirable feature for wings installation.

No heavy machine-gun was available in French Air Force. French designed planes received fixed or flexible 20mm cannon armament. When supplemented by twin MAC 32s the hydraulically-powered cannon of the LeO 451 gave to this bomber the most powerful rear armament in the world.

Current French bombs were 10, 50, 100 and 200 kg projectiles. During the 1940 Campaign, 10 and 50 kg bombs were probably the most used types, even on DB-7s and Martin 167s, to attack German troops and Panzers. Bomb racks were French Alkan equipment.

During 1944-45 operations DB-7s received either 200 kg or U. S. 500 lb projectiles. Four bombs were standard load then. German origin bombs may have been used too, but there is no evidence of such fact, in spite of the importance of seized enemy ammunition stocks.

The most modern French bombsight of 1940 was a Bronzavia D 30 periscopic device. By today's standards it was a modern sight, with orders automatically transmitted to pilot through a PDI (Pilot

Direction Indicator). Periscopic design rendered it precious for installation in small sized bomb-aimer compartment of several modern aircraft but older crews judged it to be too big and complicated when compared to preceding ancient-style sights, and all bombardiers disliked its limited view angle. It is noticeable that a Unit Commander of 1940-41 GB I/19 prohibited use of this sight as being "too complicated for not better results . . .". The Bronzavia D-30 sight can be easily identified, on DB-7 photos, because of its periscope head protruding below nose.

(3) Arnold, Henry H., Global Mission. New York: Harper & Brothers. p. 186.

(4) In his early article devoted to Martin 167 (see AAHS JOURNAL, Spring, 1966) the author stated that these airplanes were used as transport and reco machines, leaving to DB-7s all bombing work. That was not true. Actually DB-7s received priority order to be re-equipped as active bombers, but Martins intervened. The first 167 1944 mission as bomber was December 13.

A lone captured Me 110-C was so used by the French Air Force, quickly the lack of spares, in spite of some cannibalisation attempts on destroyed or on other French Bases machines, prohibited its current use. From December 1944 most of the strategic reco work over Atlantic German strongpoints was done by U. S. Mustangs or Lightnings. Tactical sorties were done by French Squadron 3/33, flying Fieseler Storch (French-built as Morane MS 500's) and even 1939 vintage Potez 631s.

(5) GB I/31 Aunis was probably the lone Allied squadron ever created during WW II, specifically to use operationally captured enemy warplanes. Its long-forgotten story will appear later in the AAHS JOURNAL

(6) JAAHS, Vol. 10, No. 1, Spring, 1966, p. 34. "Martin 167 in French Service."

(7) Colonel Pijaud was shot down on December 20, 1941. He was badly burned and blinded but escaped from an Italian prisoner camp, together with several British officers. They spent four hideous days in the desert, without food and water, before joining an Australian motorized patrol. Colonel Pijaud died in Alexandria Hospital, 10 January 1942.

(8) General Fourquet later became a French Air Force Commander.

(9) This motto change is generally forgotten by non-French authors. Most of the books give only the second text (which was officialised in the R.A.F.), thus losing its real sense (and humor).

(10) Commandant Soufflet had left France on 18 June 1940 to join General de Gaulle, with a Simoun light-plane. He was among the men who landed at Dakar to persuade French West Africa to rally to the Free French movement (July 1940). This attempt failed and the men were taken prisoners by Vichy forces. Cdt. Soufflet was condemned to prison. He was sufficiently lucky to be out of prison when the Germans occupied the south of France (Vichy territory), in November 1941. He escaped and went, for the second time, to England in 1943.

Among the crewmen of 1944 "Lorraine", a navigator attained some political notoriety afterward. Mr. Mendes-France was French prime-minister during the 1954-55 period (end of French Viet-Nam War).

(11) Some collectors possess a photo showing an A-20G with name on the nose: "La France Libre". U. S. and French national flags were painted beneath the wings and the airplane had received "Invasion Stripes" helping to date this document. Actually, this author is convinced, this Havoc was



Boston IV, (BZ 446 probably) landing in France for first time, 1944. (Photo - Imperial War Museum CL1467)



Bostons of "Lorraine" with B-25 Mitchells of same unit just arrived, 1945. (Photo - E.C. Armees)

U. S.-manned. All specific "Lorraine" markings were absent - Free French "Lorraine Cross", city name - there were no rudder national stripes (standard Boston IV use); and the aircraft name itself would have been slightly different. (We suppose the plane would have been named "France Libre" without article "La"). Of course this peculiar machine is interesting and author would be glad if any AAHS member could help him to identify it.

(12) There was an extraordinary miscellany of planes flown by the French with invasion stripes, during 1944-45. There were Martin 167s, LeO 20s and 45s, Potez 25s, Dewoitine 520s, Bloch 174s and 200s, S.O. 90, Curtiss H-75, Ju 88s, Douglas A-24s, Vought Fi 156s . . . It is to be noted that apparently these stripes protected ex-enemy or unknown types from Allied fire. At one occasion (December, 1944) there was an interception of DB-7s and Martin 167s by Dewoitine D 520s, but this mistake didn't end tragically.

DB-7 PHOTO ESSAY

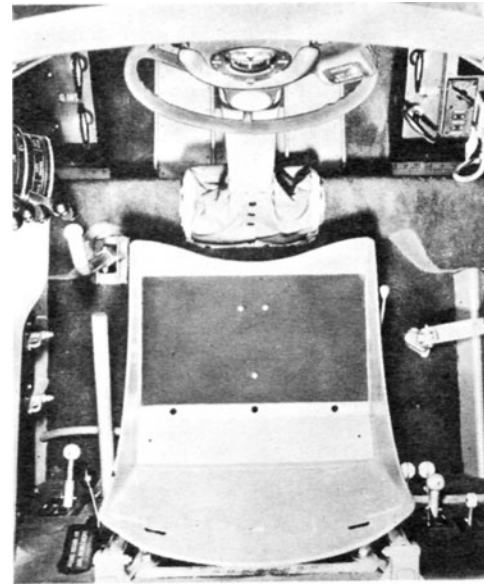
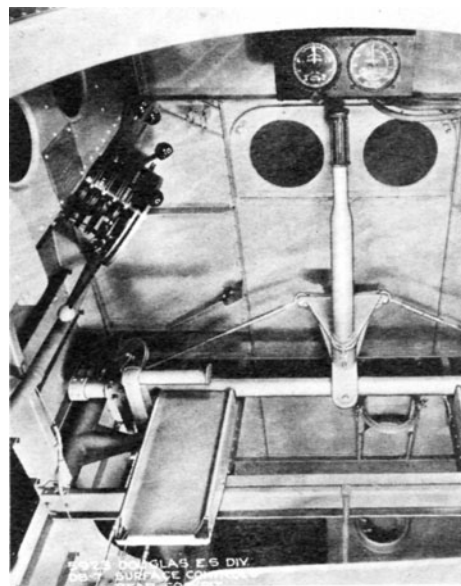
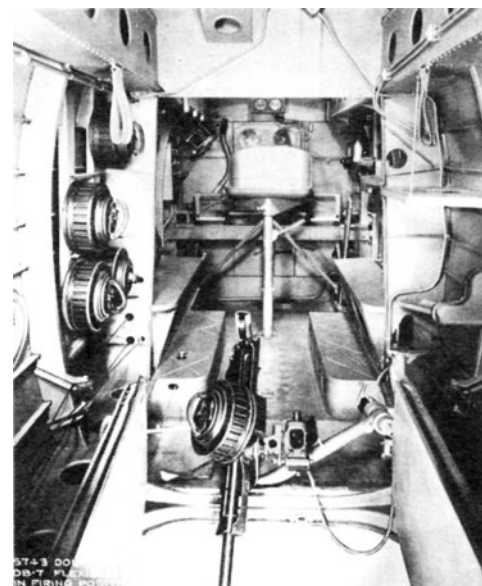
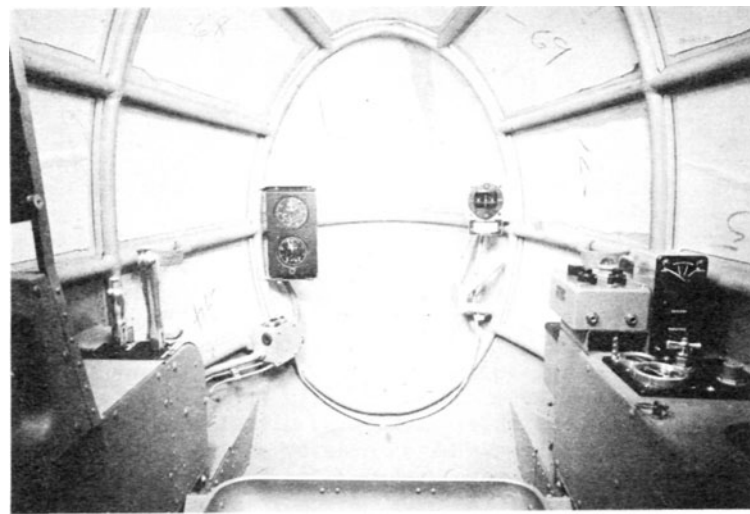
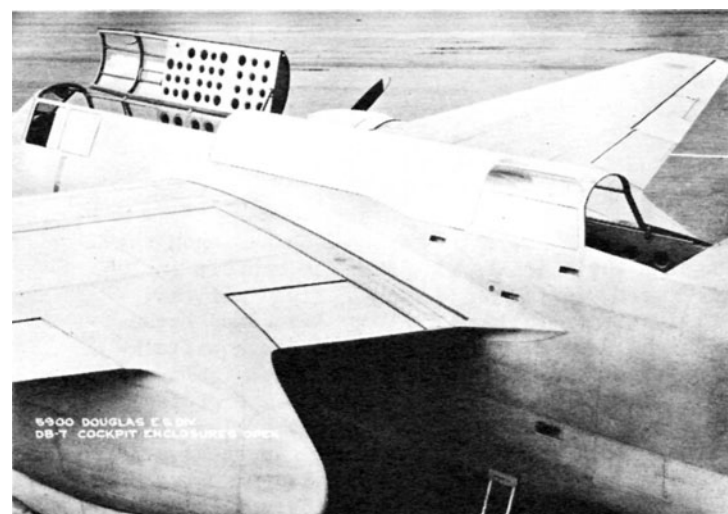
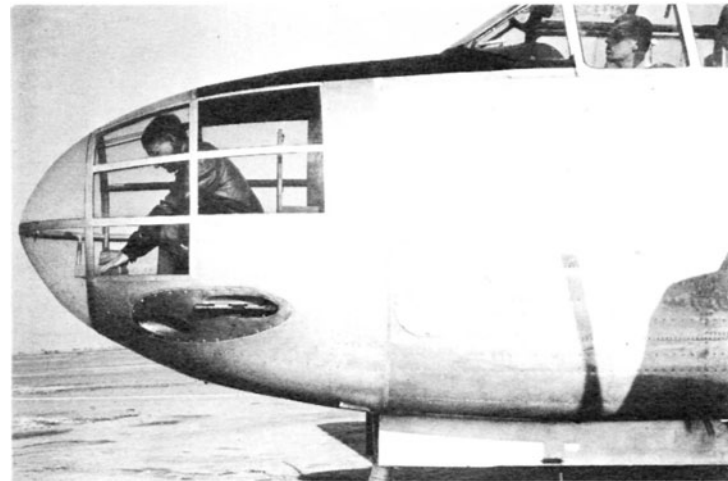
The Douglas Aircraft Company launched upon the design of the Model 7A as a private venture in 1936 while there was yet no clearly defined military specification. In 1937 the Army Air Corps requested designs from U.S. manufacturers for an attack-bomber as a result of intelligence from Spain and China. The 7B was Douglas' response. Prototype airplanes were requested and by October 1938 the 7B was test flown for the first time. As the impending war rushed upon Europe, consideration was given to it by a French purchasing commission. The crash of the prototype is noted on Page 2, but very shortly the French had ordered 100, and the first flight of the DB-7 was made on 17 August 1939, only a few days prior to the opening of WWII. In the following, Harry S. Gann, of Market Data Center, McDonnell-Douglas Corp., has provided some interesting photographs of the prototype and the No. 1 airplane.



Douglas Model 7B prototype ready for first flight, which was made on 26 October 1938. After this flight the tail modifications were made. At right,

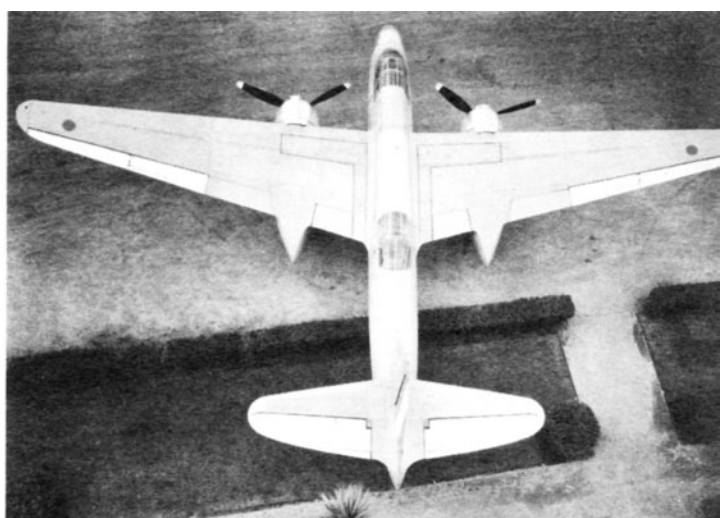
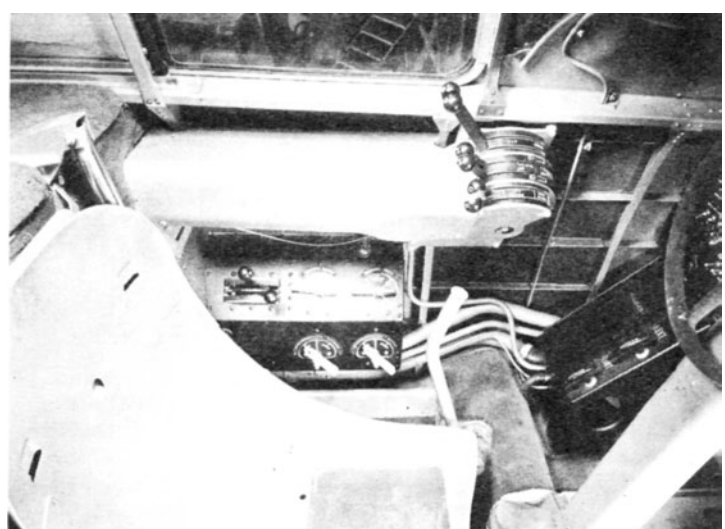
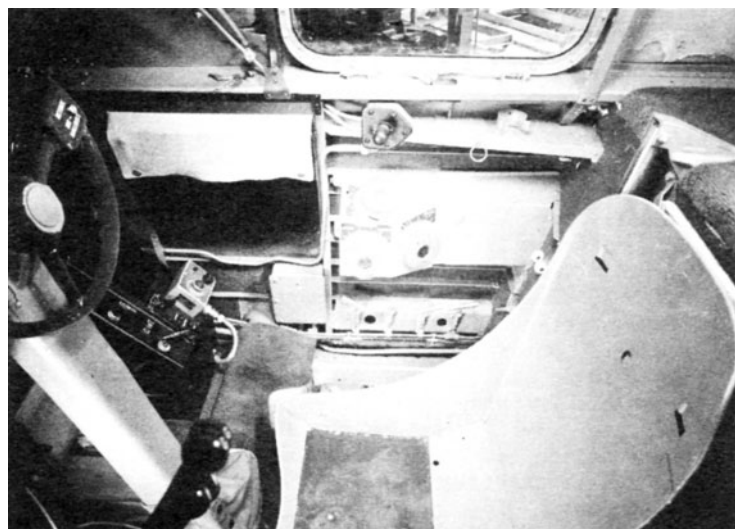
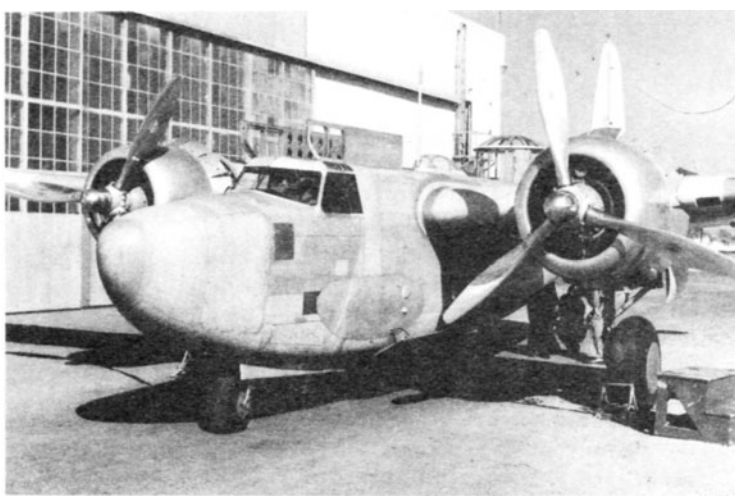


the alternate nose configuration, the "B" nose, was installed, machine-gun packages added. In DB-7 the guns were moved inside the fuselage. (Photo-Douglas)



A - The DB-7 No. 1 nose. Access to guns through external door fitted with Dzus fasteners. B - Bombardier's compartment, bomb-sight not shown. C - Rear gunner's hatch cover slid forward and inside. D - Protective paper on plexiglas nose was left in place for this picture, eliminating distracting external scenery. Bombardier's instrumentation was simple, instrument faces calibrated in French. E - This photo retouched for handbook purposes,

shows gunner's joystick in stowed position. Lower gun doors opened inward. F - Closer view of gunner's flight controls, joystick in operating position. G - Direct upper view of pilot's compartment, throttles and mixture controls at left. These photos were made at the Douglas El Segundo Division in late 1939, some of them on the flight line at Mines Field, now Los Angeles International Airport. (All photos courtesy of Douglas Aircraft Co.)



H - The prototype DB-7 had split doors for pilot exit, plexiglas fairing behind antenna mast, bird-cage gunner's canopy. Bellcrank for bomb-bay doors extended outward at lower corner of fuselage. I - DB-7 No. 1 bomb-bay doors had internal bellcrank mechanism. Expended gun cartridges fell out of rectangular chutes near forward corners of L.G. doors. J - Pilot's compartment, right side. The tee handles below elevator, rudder and aileron trim controls were for dumping of bombs. K - Pilot's compartment, left side. Fuel on-off valves directly

under engine control duct. L - The pilot's instrument panel. Gun charging handles were below at left and right. M - Top view of DB-7 No. 1. Control surfaces were fabric covered, painted aluminum pigment, thus contrasting with zinc chromate primer in this photo. First flight of the DB-7 production airplane was 17 August 1939. DB-7 B3 on rudder stood for Douglas Bomber Model 7 (the Douglas classification) and three-seat bomber (the French designation). Army Air Corps ordered A-20 version in 1939, obtained first acceptance November 1940.