Allied Air Supremacy During Operation Overlord (ID 16MI4561)

In the early hours of Tuesday, June 6, 1944, a young American soldier's gaze fixes on a solid red light at the front of his C-47. German flak pounds the dark sky as the transport aircraft shakes with each explosion. The light flashed green as the young soldier prepared for the fight of his life. Hours later another soldier looks over at the queasy faces of his comrades. The rough seas spray chilly English Channel water into his Higgins Boat; he begins to hear the *pst pst pst* as German machine gun rounds impact the water around his landing craft. The soldiers take a deep breath as the ramp drops. Scenes like these played out all across the Normandy beaches and countryside on June 6th; however, these soldiers would never have set foot in France had it not been for the heroic efforts of Allied pilots and their crews. These airmen took the fight to the Nazis by bombing defenses and infrastructure, keeping the skies clear, and facilitating the landing of Allied paratroopers and glider troopers.

The seeds for Allied liberation of occupied Europe were planted at the Tehran Conference in 1943. At the Tehran Conference, the Allies set the date for the long-awaited invasion of France.[1] The invasion scheduled for early summer 1944, codenamed Operation Overlord, had the goal of establishing a beachhead in northern France that would facilitate further landings of Allied armies.[2] The plan called for six Allied divisions to land at five beachheads with three airborne and glider divisions landing just behind the beaches.[3] The American beachheads were codenamed Utah and Omaha, the British named Gold and Sword, and the Canadian beach was called Juno.[4] From these landing points the liberation of Europe would begin. The battle to

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[1] United States Department of State, "The Tehran Conference, 1943," Office of the Historian, accessed March 31, 2024, https://history.state.gov/milestones/1937-1945/tehran-conf.
[2] "Outline of Operation Overlord," https://history.army.mil/documents/WWII/g4-OL/g4-ol.htm.
[3] Army of the United States of America, "D-Day June 6,1944," Army, accessed April 1, 2024, https://www.army.mil/d-day/history.html#:~:text=Six%20divisions%20were%20to%20land,way%20through%20the%20beach%20defenses.
[4] "D-day the Beaches," infographic, PDF.

liberate Europe required complete air dominance by the Allies. To achieve this monumental task, over 14,000 Allied aircraft would assemble throughout the United Kingdom.[5] The mission these aircraft flew during and in the weeks leading up to D-day would be vital. Allied Expeditionary Air Forces paved the way for the landings by disrupting Nazi infrastructure, providing close air support, maintaining air superiority, and landing the airborne divisions.

In the weeks leading up to Operation Overlord, the B-17 "Flying Fortresses" of the 8th Air Force began an intense bombing against Nazi infrastructure and industry. B-17s formed the backbone of the American strategic bombing core. B-17s could fly 2,000 miles and accurately drop 6,000 pounds of bombs; while carrying a strong defense of 13 .50 cal machine guns.[6] By 1944 B-17s had been flying daylight strategic bombing missions over Nazi Germany for two years with success.[7] Critical to their success was the Box Formation.[8]

The Box Formation contained a bomber wing further subdivided into groups, squadrons, and elements.[9] A wing contained three groups of 36 B-17s, one leading, another above and to the right, and finally a third below and to the left.[10] Each group contained three twelve-bomber squadrons flying in a diamond shape with one leading, one top right, another bottom left, and a final one in the rear.[11] A squadron contained four elements; each with three planes flying in a wedge all at the same elevation.[12] The Box Formation afforded maximum protection from enemy fighters as it created a three-dimensional field of fire. This allowed B-17s to play to their strength

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[5] Silvano Wueschner, "Key to success: Allied airpower at Normandy," Maxwell Air Force Base, last modified May 29, 2019, https://www.maxwell.af.mil/News/Display/Article/1859844/key-to-success-allied-airpower-at-normandy/.
[6] "Boeing B-17 Flying Fortress," National WW2 Museum, last modified May 19, 2020, accessed April 11, 2024, https://www.nationalww2museum.org/war/articles/boeing-b-17-flying-fortress.
[7] Defense Media Activity, "Eighth Air Force History," 8th Air Force, https://www.8af.af.mil/About-Us/Fact-Sheets/Display/Article/333794/eighth-air-force-history/.
[8] Defense Media Activity, "D-day," National Museum of the United States Air Force, accessed April 11, 2024, https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Fact-Sheets/Display/Article/196162/d-day/#:~:text=The%20first%20Allied%20amphibious%20troops,were%20sighted%20the%20first%20day.
[9] Wally Blackwell, "398th Bomb Group Combat Formations," #98th Bomb Group Memorial Association, last modified December 2003, https://www.398th.org/Research/8th_AF_Formations_Description.html.
[10] Blackwell, "398th Bomb," #98th Bomb Group Memorial Association.
[11] Blackwell, "398th Bomb," #98th Bomb Group Memorial Association.
[12] Blackwell, "398th Bomb," #98th Bomb Group Memorial Association.

and unleash their plentiful machine guns to protect each other and overwhelm attacking fighters with a sheer volume of rounds. The Box Formation was useful in destroying badly needed German Fighters and optimizing bomber missions efficiency.

Conceived in March 1944 by General Eisenhower, The Transportation Plan was an operation designed to limit the Luftwaffe's effectiveness and hamper German Army Group B, under the command of renowned Field Marshal Erwin Rommel, from reinforcing the beachheads.[13] B-17s primarily bombed marshaling yards and railways in Northern France, Belgium, and Northern Germany.[14] These operations contributed significantly to the slowed German response to Normandy, as the extensive damage to the railways slowed troop movements and the resupply of German units.

The Transportation Plan forced the Nazis to redeploy 44 Fighter Gruppe (German Air Force units of roughly 27-36 aircraft) from France back to northern Germany to defend against the bombing campaign.[15] This major redeployment of German fighters severely weakened the German defenses around Normandy as without those much-needed fighters the Allies and their B-17s were able to bomb Nazi infrastructure and defenses in France with little resistance, severely weakening the Normandy section of the Atlantic Wall.

For Operation Overlord to succeed, paratroopers were needed to land behind German lines in significant numbers to knockout defense and secure vital roads. Operation Overlord called for the 82nd and 101st Airborne Divisions to land behind Utah Beach and take the road at Sainte-Mère-Eglise. The British 6th Airborne landed east of Sword Beach to knock out the Merville artillery battery which overlooked the westernmost beachhead.[16] The enormous task of

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[13] Silvano Wueschner, "The 'Transportation Plan': Preparing for the Normandy Invasion," Maxwell Air Force Base, last modified March 25, 2019, https://www.maxwell.af.mil/News/Display/Article/1794792/the-transportation-plan-preparing-for-the-normandy-invasion/.
[14] United States Air Force, *Leaping the Atlantic Wall*, by Edward Russell, [Page #], 1999, https://media.defense.gov/2010/Sep/28/2001330148/-1/-1/0/leaping_the_atlantic_wall.pdf.
[15] Gaul, "GAf (German."
[16] Imperial War Museum, "How D-Day Was Fought From The Air," Imperial War Museum, accessed April 2, 2024, https://www.iwm.org.uk/history/how-d-day-was-fought-from-the-air.

safely landing the airborne unit would fall to C-47 “Dakota”, Horsa glider, and Waco glider pilots.

The airborne divisions were primarily transported by Douglas C-47 aircraft with a capacity of roughly 22 paratroopers.[17] The gliders were pulled by C-47s and held 25 soldiers and critically heavy equipment that the C-47s could parachute down.[18] C-47 played a significant role because they pulled the gliders from England to the Normandy countryside. This allowed for rapid deployment as once the glider was released the C-47 could return to its base refuel and fly paratroopers into combat. By using C-47s to tow the gliders, more soldiers could be brought to the battlefield; eliminating the need for dedicated towing aircraft. C-47s could change their roles between tow planes and transports and ease logistical problems by only having to maintain one aircraft.

Horsa and Waco gliders allowed for heavy equipment to be deployed with the glider infantry units. Paratroopers in the 1940s were limited in what weapons they could bring to battle. The typical American squad serving in the 82nd or 101st airborne divisions would bring their rifles, light machine guns, grenades, and 60mm mortars all other equipment had to be dropped separately.[19] Gliders allowed airborne units to bring Jeeps and anti-tank guns which drastically increased their effectiveness in combat.[20] With more equipment, the glider infantry were able to launch more effective offensive actions against German defenders.

Gliders' main advantage over traditional parachute drops was that gliders brought squad-sized elements to the battlefield together; eliminating the need for soldiers to spend

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[17] . Defense Media Activity, "Douglas C-47D Skytrain," National Museum of the United States Air Force, accessed April 3, 2024, https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Fact-Sheets/Display/Article/196271/douglas-c-47d-skytrain/#:~:text=A%20C%2D47%20could%20carry,Airlift%20and%20other%20peacetime%20activities.

[18] De Havilland Aircraft Museum, "AIRSPEED AS.51 & 58 HORSA GLIDER," De Havilland Aircraft Museum, accessed April 3, 2024, https://www.dehavillandmuseum.co.uk/aircraft/airspeed-as-51-58-horsa-glider/.

[19] *FIELD SERVICE REGULATIONS*, May 22, 1941, https://cgsc.contentdm.oclc.org/digital/collection/p4013coll9/id/978/.

[20] De Havilland Aircraft Museum, "AIRSPEED AS.51," De Havilland Aircraft Museum.

precious time re-grouping.[21] While paratrooper drops could scatter over miles, gliders could be piloted to land close to each other. By landing on the battlefield, pre-organized and in significant numbers, glider infantry could immediately go on the offensive and capitalize on their greatest weapon; surprise.

The Transportation Plan targeting Nazi transportation infrastructure called not only for heavy B-17 bombers but also for the versatile P-51 "Mustangs" to serve as fighters and ground attack aircraft. P-51s were the perfect addition to the Transportation Plan as escorts for the strategic bombers with their high altitude ceiling of 42,000, a combat range of over 850 miles, and six .50 cal machine guns.[22] P-51s allowed the Eighth Air Force to take the fight to the German fighters instead of waiting for them to attack the cumbersome bomber formations.

Without the need for any refit, P-51s could transition to serve as fighter bombers and make use of their 1,000-pound bomb payload.[23] P-51s were a part of all aspects of the Transportation Plan from escorting the bombers of the Eighth Air Force on strategic bombing raids to serving as bombers themselves on tactical bombing missions with the Ninth Air Force.[24] The P-51 was the workhorse of the Transportation Plan.

Taking off in the early hours of June 6, P-51 pilots were given the immense responsibility of flying escort over landing beaches and preventing any German fighter from nearing the soldiers on the ground.[25] This mission was crucial to the success of Operation Overlord as the pilots had to remain vigilant for German aircraft. The pilots could only watch on from their

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[21] Timothy M. Clauss, *THE U.S. ARMY AIRBORNE DIVISION, 1942 TO 1945 CONCEPT, COMBAT, AND EVOLUTION*, [Page 50], December 16, 2011, https://apps.dtic.mil/sti/tr/pdf/ADA556168.pdf.
[22] Robert Courter, *How the Mustang trampled the Luftwaffe: the role of the P-51 in the def the defeat of the German air for eat of the German air force in W ce in World War Two*, [Page 35], 2008, accessed April 10, 2024, https://repository.lsu.edu/cgi/viewcontent.cgi?article=2218&context=gradschool_theses.
[23] "The North American P-51 Mustang: A 'Little Friend' with a Big Impact," National WWII Museum, last modified May 24, 2020, https://www.nationalww2museum.org/war/articles/north-american-p-51-mustang#:~:text=The%20P%2D51%20dominated%20air,pounds%20of%20bombs%20and%20rockets.
[24] United States Air Force, *Leaping the Atlantic*, [Page 8,12].
[25] Mark Stepelton, "Normandy Invasion with Captain Mark Stepelton," To Fly and Flight, accessed April 11, 2024, https://toflyandfight.com/normandy-invasion-with-captain-mark-stepelton/.

cockpits and trust the soldiers on the ground would achieve their objective; only by focusing on their job could the pilots help their comrades below. P-51's patrols over D-day were critical in dissuading any German air attacks and directly contributed to only three German aircraft being spotted over the Normandy landings on June 6th.[26]

D-day wouldn't have succeeded without each pilot, squadron, and air group doing their job. The B-17s wouldn't have been able to fly their strategic bombing missions without fighter cover from P-51s. P-51s wouldn't have been able to dominate the beaches over Normandy without the B-17s tying down the Luftwaffe fighters through constant bombing. The transport planes and gliders wouldn't have been able to complete their missions without the air superiority provided by the P-51s and the destruction of crucial Nazi defenses by the B-17s. However, neither the P-51s nor the B-17s could land the soldiers needed to topple the Nazis; only the gliders and transport planes could deliver the soldiers needed to begin the liberation of occupied Europe. P-51 "Mustangs", B-17's "Flying Fortresses", Horsa gliders, Waco gliders, and C-47 "Dakota" all played equally large roles in Operation Fortitude that no one aircraft could achieve alone.

The collaboration shown by the Allied Expeditionary Air Forces serves as a great example of what humanity can achieve when it's working together. D-day required teamwork and compromises to succeed. American, British, Canadian, and other allied nations all had to work together under a single unified command to win the air battle over Normandy. It would have been the easy thing for each of these nations to go off on their own. However, the Allied powers put their faith in each and the idea of freedom brought these countries together. No One person ever achieved anything great on their own; rather by working together, you will find that

[26] Defense Media Activity, "D-day," National Museum of the United States Air Force, accessed April 11, 2024, https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Fact-Sheets/Display/Article/196162/d-day/#:~:text=The%20first%20Allied%20amphibious%20troops,were%20sighted%20the%20first%20day.

anything is possible from liberating a continent to winning a state championship. Teamwork is the dream work.

D-day's air campaign was vital to Operation Overlord's success. Without it, D-day wouldn't be remembered for kickstarting the liberation of Western Europe, but rather a blood bath. Allied success in the skies meant D-day would succeed. From June 6 on the war's outcome was sealed. The soldiers that would land in Normandy throughout the summer of 1944 would be the ones to liberate millions, from the smiling Parisians to the emaciated prisons of Concentration Camps. As a Jew, I owe my existence to the millions of Allied men and women who fought back against Nazismn and its evil ideas. These brave soldiers, sailors, and airmen proved that liberty and freedom will always prevail. The world we live in today is better because of the sacrifices made by the "Greatest Generation" and we are forever indebted to them.

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