Minnesota-Made Gliders: The First Stealth Combat Aircraft

By Jim Johns

In 1919, the Treaty of Versailles came down heavily on Germany's ability to manufacture anything that could be construed as military, especially its powered aircraft, forcing Germany to perfect the development of the glider for military purposes. But the idea of employing a glider for combat was Hitler's. He recognized that the disadvantage of airborne units is that by the time they hit the ground they could be spread out over a large area and needed time to reorganize. Gliders, on the other hand, could drop in silently behind enemy lines at roughly the same time and place to unload troops and supplies—the first truly stealth aircraft.

The world soon witnessed German glider perfection when the virtually impregnable Belgian fortress Eben Emael was taken. The fort, built in the 1930s, was a series of underground tunnels and well-built defenses. German staff officers had estimated it would take 600 crack troops a month to break in, but on May 10, 1940, ten gliders carrying only 78 troops (eight per glider) landed on top of the it, unseen and unheard. The fort was taken before the Belgians knew what was happening.

A year later Germany invaded the British-held island of Crete in the Mediterranean using a combination of airborne and glider-borne troops. Using 500 planes and 74 gliders, they dropped 13,000 troops on the island. Although Crete was captured, the invasion was costly for the Germans, who lost 5,000 (over a third) killed or wounded. One mistake had been its broad daylight operation where their approach was seen by the British. Hitler decided then and there never to use gliders for major operations again.
But American military planners didn’t know this. All they knew was that German glider operations had been successful at Eben Emal and again at Crete with lightly armed airborne troops. The U.S. hadn’t even thought about gliders for assault purposes, and now it was desperate to catch up.

Waco, a light plane manufacturer, created the winning design for a glider that could carry a two-man crew plus 13 combat soldiers, or a combination of troops, jeep or 37mm anti-tank gun. A request for manufacturing bids was sent to the aircraft industry, but the “big boys” in the industry wanted nothing to do with stone-age wooden airplanes. They were engrossed in light weight alloys, maneuverability, high performance engines and speed—and besides, they were already behind in their production goals anyway. Thanks, but no thanks.

So the government turned elsewhere for production. Soon glider contracts were let out to Cessna, Timm, and Ford, which had built the famous Trimotor.

Three St. Paul attorneys took notice. Although they had absolutely no aviation experience, they spotted an opportunity and decided to go into the glider business. In February 1942 they incorporated the Northwestern Aeronautical Corporation and partnered with the DePonti Aviation Company at Wold-Chamberlain, an aircraft overhaul and repair facility, and the Villauine Box and Lumber Company, an old, established manufacturer of wood trusses and specialized wood products in West St. Paul. The overall operation would be run by John Parker, who knew something about aviation and had connections in Washington with the Army and Navy. He secured for Northwestern a contract for 30 gliders that was quickly increased to 300. Now remember: the aircraft industry had already drained the workforce of experienced help, so Northwestern had to hire people who knew little or nothing about building planes. Some of their early employees included a writer, two orchestra leaders, a chiropractor, violin maker, bond salesman, music teacher, bank president, palm reader, a maker of coffins, and several cabinet makers. To this personnel mix they added 70,000 parts per aircraft.

The glider to be built was the 15-place Model CG-4. It had a wingspan of 83.6 feet and a length of 48 feet. The plywood floor could carry 4,060 pounds, 620 pounds more than the glider’s empty weight. The nose section swung upward, creating a 70- x 60-inch opening for the cargo. DePonti opened an all-welding operation for the steel tubular fuselages on the 5300 block of Lyndale just north of the Boulevard Theatre. The rest was wood and Villauine built the heavy duty floors, wings and tail sections. Then everything was shipped by flatbed truck to Wold-Chamberlain. Besides DePonti’s main hangar on 34th Avenue, they had three smaller hangars just south of it. In one, the components, fuselages, wings, and tail surfaces were covered in fabric. In the next, they were doped and painted, and in the third they were assembled and pushed out the door to be towed away by aircraft or shipped by rail to the coasts for movement overseas. Under separate contract, Villauine built huge crates to ship them in.

Northwestern employed over 2,000, working around the clock at an average of $31 per week, and there were 50 subcontractors making parts that employed another 2,000.

America’s first actual glider operation of the war was a disaster. As part of the invasion of Sicily in July 1943, 144 gliders left North Africa in late afternoon and were towed across the Mediterranean. They arrived at dark and were released too soon over the water. Most crashed into the sea. Of those that made it to Sicily,
most were shot down by the U.S. Navy, which thought the American gliders were German. Only a dozen U.S. gliders actually landed. With 20,000 Allied casualties in the Sicilian campaign, the question was “was it worth it?” General Eisenhower, the overall commander, didn’t think so and thought glider operations should be discontinued.

On D-Day all Allied aircraft were painted with the familiar white and black stripes to make sure that there was no repeat of mistaken identity, but gliders were never as effective as hoped. Throughout the European campaign, open fields where American and British gliders might land were booby-trapped, adding credence to the nickname given to gliders as “flying coffins.” Of the 500 CG-4 gliders used the night before D-Day for bringing in troops behind enemy lines, only 13 landed intact.

There was an old saying that to face an enemy in combat was hazardous, even in a tank. But to go into combat in an unarmed, canvas covered, engineless contraption and then try to land in pitch blackness on a field that quite probably had been booby-trapped was next to insanity. But no one ever asked for a transfer out, and of the pilots, if they survived, their standing orders were to get back to friendly lines so they could do it again. It is little wonder many chose to stay with the front line infantry soldiers they had just delivered, where the survival rate was much higher.

Of the almost 14,000 CG-4 gliders built around the country, Northwestern Aeronautical ended up building 1,509 of them at $24,000 apiece. Only Ford built more. As a matter of fact, only three American aircraft were built in greater quantity than the gliders: the B-24, P47 and P51.

Northwestern also built the prototype for the huge CG-13, which doubled the capacity of the CG-4, and eventually built another 49 of them. They built two experimental CG-4s with engines so that gliders wouldn’t be dependent upon being towed, but that idea—pardon the expression—never took off.

Today, there is no trace of the Twin Cities legacy of glider production, save the relocated Villaume Industries, and at best it is only rumored that it actually happened. But now you know.

First Annual Membership Open House

The museum’s first annual Membership Open House was conducted on August 2, 2008 at Camp Ripley. Open House activities consisted of update briefings by the Adjutant General, Post Commander, the Museum Director and Curator as well as tours of the Environmental Center, simulator hands-on demonstrations and the museum. 58 members or guests attended the event which resulted in 18 new memberships, 4 new Life memberships, and 1 new Sustaining member. Attendees were highly satisfied with the program and recommended the program be conducted annually at Camp Ripley.
Contributions Honor Roll (June 16 – September 30, 2008)

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Make checks payable to: Minnesota Military Museum
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Gifts are deductible for income tax purposes
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The museum gratefully acknowledges donations of artifacts from the following:
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Artifact Donations (June 16-Sept. 30, 2008)

Uniforms: Belt; USA uniform blouse, wool; USMC uniform blouse, green wool; USMC uniform blouse, dress blue; USN uniform blouse, blue; Uniform jacket, WAC; Blouse, WAC (2); Cap, overseas (3); Cap, garrison (9); Cap, service (4); Coat, USN wool; Coat, USA; Gloves; Hat cover, USMC blue; Hat, USN (6); Jacket, Eisenhower (3); Jacket, USMC camo; Jacket, USN foul weather; Jacket, field (desert); Shirt, USN (7); Shirt, USA LS dress; Shirt, USMC LS (3); Skirt, WAC; Tie (4); Trousers, USN (3); Trousers, USA green; Trousers, USA, gabardine; Trousers, USMC green wool; Trousers, USMC tan; Trousers, USMC dress blue; Vest, USN.

Equipment: Bag, duffle; Bag, sleeping WWII wool; Binoculars, Japanese; Canteen, WWI; Cover, Kevlar helmet; Flak jacket; Goggles, protective; Haversack, M-1910.

Miscellaneous: Books; Buttons, USMC uniform; C-rations; Coin collection; Collar brass; Chevrons (2); Currency, Vietnamese; DVD set; Flag, Nazi; Flag, Vietnamese (2); Kit, sewing; Lapel pins; Letters; Lighters, souvenir (3); Magazines; Maps; Medallions, commemorative (3); Medals; Mug; Newspapers; Patches; uniform; Patches, pocket (4); Photos; Pillow top, souvenir; Postcards; Purse, WAC; Ribbons; Scrapbooks (2); Ship’s log book; Trunk, medical military (2).

Weapons and Related Items: Vietcong crossbow; Fuze, German artillery.

Minnesota Military Museum’s Mission Statement

The Minnesota Military Museum exists to serve the general public as well as military personnel. It provides education and training, enhances public understanding of how armed conflicts and military institutions have shaped our state and national experience, and functions as a major repository in Minnesota for historical military artifacts and records. In particular, the Museum seeks to document, preserve and depict the stories and contributions of Minnesotans who served in all branches of service or on the homefront--in time of peace and war--from Minnesota’s early frontier years to the present.
Curator Notes
By Doug Bekke

In October I visited France and Germany for the first time in 30 years. As in my past visits I spent much of my time touring WWI and WWII battlefields and museums. As was the case 30 years ago, I was again extremely impressed by the quality of the museum exhibits. Unlike too many American museums, most European museums place a heavy emphasis on the high quality presentation of artifacts to assist in telling their stories.

Artifacts are physical remnants of the past. Through them we can touch something from the past and gain an understanding of the physical realities of the past. Disappointingly, about 40 years ago a new trend in American museums de-emphasized the presentation of artifacts in favor of extensive oversize texts and video presentations. While electronic devices and extensive texts can add important dimensions to an exhibit, museums are about artifacts as well as education. Videos can be watched at home, books can be read at home. Uniquely, artifacts present a real, physical connection with the past, and people come to museums to see them.

Many years ago on my first visit to the Minnesota Military Museum, I was very glad to see that the museum chose to present history through excellent, aesthetically pleasing exhibits, with clear, concise texts and a heavy presentation of artifacts.

Recently construction was started on new exhibit space in what was the old museum library. Discussions are currently underway on how to best utilize this space. It is my intention that whatever future exhibits go into this space they will be filled with the artifacts of those who served Minnesota and the nation through their military service.

What's New?
Building Site for Future New Military Museum Established

Due to Federal regulations banning new construction within the Camp Ripley airfield flight path where our present museum is located, the Post Commander and the Adjutant General have recently designated a large parcel of land for a future new museum site. The site is in Area 11 immediately south of Post Headquarters.

During our recent membership open house, Life members Dan Ojeda, Jr. and Mr. and Mrs. Cliff Peet became founding members of our new building fund by each making a significant contribution toward the fund.

Action was taken at our recent Board of Directors meeting to establish a Building Planning Committee to work with professionals concerning the planning for a future new museum building and fundraising campaign. Stay tuned.
News About the Board of Directors

Raymond Lunde, Corcoran, stepped down from the board of directors last summer after 19 years on the board. Ray served for six years as vice president for finance and, for the past five years, as president. He expresses his special thanks to all members and organizations that have supported the museum, and we in turn express our deep appreciation to Ray, whose contributions over the years have been enormous.

Jack Johnson, Stillwater, vice president for personnel, has been elected president to serve out the remainder of Ray's term. Jack has been on the board for 26 years and served previously as president and as vice president for programs.

Ray Lunde and Jim Bennett, Richfield, who left the board earlier this year, have been appointed as directors emeritus.

Gratitude goes to Dirk Gasterland of LaCrosse, treasurer, and Gary LeBlanc of Royalton, legislative liaison, who have both stepped down from the board. Their work in the financial arena has been especially beneficial. Many thanks, Dirk and Gary!

We are pleased to announce two new board members, Jon Stratte of Stillwater and Al Zdon of Moundsview. Welcome, Jon and Al!

What's New?

Museum to Receive Two Grants from the Katherine B. Andersen Fund of the St. Paul Foundation

One grant of $3,000 has been received as a result of 100 percent participation by the Board of Directors who contributed $4,060 in unrestricted donations for museum operations.

Additionally, because the museum raised over $7,000 in unrestricted contributions from individuals and groups it became eligible for a $7,000 matching challenge grant.

Did You Know?

By 1943, the U.S. was producing, on average, one new ship per day to support the Allied war effort.
Membership Application for the Military Historical Society of Minnesota
Yes, I want to preserve Minnesota's military history for future generations!

Name: __________________________ Phone: __________________________
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__ Life ($350+) (or 4 X $90)

All memberships are annual except Life, Organization and Corporate Memberships. Contributors of $350 or more will be recognized on a plaque in the museum lobby.

Enclosed is my tax-deductible check for $ ______ made payable to the Minnesota Military Museum.

Please mail to: Military Historical Society of Minnesota, c/o Minnesota Military Museum, Camp Ripley, 15000 Hwy. 115, Little Falls MN 56345-4173.
Phone: 320-632-7374 E-mail: mnmuseum@brainerd.net

Allies is published for the members and friends of the Military Historical Society of Minnesota.

LTC (Bvt.) (Ret.) Jack Johnson, President
COL (Ret.) David L. Hanson, Executive Director
MAJ (Ret.) Doug Bekke, Curator
SSG (Ret.) Leland P. Smith, Archivist
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