**B-25 Mitchell**

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*"B-25" redirects here. For British World War II-era fighter plane, see* [*Blackburn Roc*](http://en.wikipedia.org/wiki/Blackburn_Roc)*.*

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| **B-25 Mitchell** |
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| North American B-25 Mitchell |
| **Role** | [Medium bomber](http://en.wikipedia.org/wiki/Medium_bomber) |
| **Manufacturer** | [North American Aviation](http://en.wikipedia.org/wiki/North_American_Aviation) |
| **First flight** | 19 August 1940 |
| **Introduction** | 1941 |
| **Retired** | 1979 (Indonesia) |
| **Primary users** | [United States Army Air Forces](http://en.wikipedia.org/wiki/United_States_Army_Air_Forces)[Royal Canadian Air Force](http://en.wikipedia.org/wiki/Royal_Canadian_Air_Force)[Royal Air Force](http://en.wikipedia.org/wiki/Royal_Air_Force)[Soviet Air Force](http://en.wikipedia.org/wiki/Soviet_Air_Force) |
| **Number built** | 9,984 |
| **Developed from** | [XB-21](http://en.wikipedia.org/wiki/North_American_XB-21) |
| **Developed into** | [North American XB-28](http://en.wikipedia.org/wiki/North_American_XB-28) |

The **North American B-25 Mitchell** was an American twin-engine [medium bomber](http://en.wikipedia.org/wiki/Medium_bomber) manufactured by [North American Aviation](http://en.wikipedia.org/wiki/North_American_Aviation). It was used by many [Allied](http://en.wikipedia.org/wiki/Allies_of_World_War_II) air forces, in every theater of World War II, as well as many other air forces after the war ended, and saw service across four decades.

The B-25 was named in honor of General [Billy Mitchell](http://en.wikipedia.org/wiki/Billy_Mitchell), a pioneer of U.S. military aviation. The B-25 is the only American military aircraft named after a specific person. By the end of its production, nearly 10,000 B-25s in numerous models had been built. These included a few limited variations, such as the [United States Navy](http://en.wikipedia.org/wiki/United_States_Navy)'s and [Marine Corps'](http://en.wikipedia.org/wiki/United_States_Marine_Corps) PBJ-1 patrol bomber and the [United States Army Air Forces](http://en.wikipedia.org/wiki/United_States_Army_Air_Forces)' F-10 [photo reconnaissance](http://en.wikipedia.org/wiki/Reconnaissance) aircraft.

**Design and development**

Flight Performance School also included work in evaluating the performance of this B-25 Mitchell medium bomber

The B-25 was a descendant of the earlier [XB-21](http://en.wikipedia.org/wiki/North_American_XB-21) (North American-39) project of the mid-[1930s](http://en.wikipedia.org/wiki/List_of_years_in_aviation#1930s_in_aviation). Experience gained in developing that aircraft was eventually used by North American in designing the B-25 (called the NA-40 by the company). One NA-40 was built, with several modifications later being done to test a number of potential improvements. These improvements included [Wright R-2600](http://en.wikipedia.org/wiki/Wright_R-2600) [radial engines](http://en.wikipedia.org/wiki/Radial_engine), which would become standard on the later B-25.

In 1939, the modified and improved NA-40B was submitted to the [United States Army Air Corps](http://en.wikipedia.org/wiki/United_States_Army_Air_Corps) for evaluation. This aircraft was originally intended to be an attack bomber for export to the United Kingdom and France, both of which had a pressing requirement for such aircraft in the early stages of World War II. However, those countries changed their minds, opting instead for the also-new [Douglas](http://en.wikipedia.org/wiki/Douglas_Aircraft_Company) DB-7 (later to be used by the US as the [A-20 Havoc](http://en.wikipedia.org/wiki/A-20_Havoc)). Despite this loss of sales, the NA-40B re-entered the spotlight when the Army Air Corps evaluated it for use as a medium bomber. Unfortunately, the NA-40B was destroyed in a crash on 11 April 1939. Nonetheless, the type was ordered into production, along with the Army's other new medium bomber, the [Martin](http://en.wikipedia.org/wiki/Glenn_L._Martin_Company) [B-26 Marauder](http://en.wikipedia.org/wiki/B-26_Marauder).

**Early production**

Mitchell production in Kansas City in 1942

An improvement of the NA-40B, dubbed the **NA-62**, was the basis for the first actual B-25. Due to the pressing need for medium bombers by the Army, no experimental or service-test versions were built. Any necessary modifications were made during production runs, or to existing aircraft at field modification centers around the world.

A significant change in the early days of B-25 production was a re-design of the wing. In the first nine aircraft, a constant-[dihedral](http://en.wikipedia.org/wiki/Dihedral_%28aircraft%29) wing was used, in which the wing had a consistent, straight, slight upward angle from the fuselage to the wing tip. This design caused stability problems, and as a result, the dihedral angle was nullified on the outboard wing sections, giving the B-25 its slightly [gull wing](http://en.wikipedia.org/wiki/Gull_wing) configuration. Less noticeable changes during this period included an increase in the size of the tail fins and a decrease in their inward cant.

A total of 6,608 B-25s were built at North American's [Fairfax Airport](http://en.wikipedia.org/wiki/Fairfax_Airport) plant in [Kansas City, Kansas](http://en.wikipedia.org/wiki/Kansas_City%2C_Kansas).

A descendant of the B-25 was the [North American XB-28](http://en.wikipedia.org/wiki/North_American_XB-28), meant to be a high-altitude version of the B-25. Despite this premise, the actual aircraft bore little resemblance to the Mitchell. It had much more in common with the [B-26 Marauder](http://en.wikipedia.org/wiki/B-26_Marauder).

**Operational history**

Lt. Peddy and crew, showing how many people were required to keep a B-25 flying

[Doolittle Raid](http://en.wikipedia.org/wiki/Doolittle_Raid) B-25Bs aboard USS *Hornet*

A B-25C being refueled

B-25 of 13th Squadron, 3rd Bomb Group, on low-level "[skip-bombing](http://en.wikipedia.org/wiki/Skip_bombing)" mission in New Guinea

B-25G Mitchell from the [AAF Tactical Center](http://en.wikipedia.org/wiki/Army_Air_Force_School_of_Applied_Tactics), [Orlando AAB](http://en.wikipedia.org/wiki/Orlando_Executive_Airport), Florida, 17 April 1944

Closeup of an early model B-25 [gun pod](http://en.wikipedia.org/wiki/Gun_pod)

The B-25 first gained fame as the bomber used in the 18 April 1942 [Doolittle Raid](http://en.wikipedia.org/wiki/Doolittle_Raid), in which 16 B-25Bs led by the legendary [Lieutenant Colonel](http://en.wikipedia.org/wiki/Lieutenant_colonel_%28United_States%29) [Jimmy Doolittle](http://en.wikipedia.org/wiki/Jimmy_Doolittle), attacked mainland Japan four months after the bombing of Pearl Harbor. The mission gave a much-needed lift in spirits to the Americans, and alarmed the Japanese who had believed their home islands were inviolable by enemy troops. While the amount of actual damage done was relatively minor, it forced the Japanese to divert troops for the home defense for the remainder of the war.

The raiders took off from the carrier [USS *Hornet*](http://en.wikipedia.org/wiki/USS_Hornet_%28CV-8%29) and successfully bombed Tokyo and four other Japanese cities without loss. However, 15 subsequently crash-landed *en route* to recovery fields in Eastern China. These losses were the result of the task force being spotted by Japanese fishing vessels forcing the bombers to take off 170 mi (270 km) early, fuel exhaustion, stormy nighttime conditions with zero visibility, and lack of electronic homing aids at the recovery bases. Only one landed intact; it came down in the [Soviet Union](http://en.wikipedia.org/wiki/Soviet_Union), where its five-man crew was interned and the aircraft confiscated. Of the 80 aircrew, 69 survived their historic mission and eventually made it back to American lines.

Following a number of additional modifications, including the addition of [Plexiglas](http://en.wikipedia.org/wiki/Plexiglas) windows for the navigator and radio operator, heavier nose armament, and [deicing](http://en.wikipedia.org/wiki/Deicing) and anti-icing equipment, the **B-25C** was released to the Army. This was the second mass-produced version of the Mitchell, the first being the lightly-armed B-25B used by the Doolittle Raiders. The B-25C and **B-25D** differed only in location of manufacture: -Cs at [Inglewood, California](http://en.wikipedia.org/wiki/Inglewood%2C_California), -Ds at [Kansas City, Kansas](http://en.wikipedia.org/wiki/Kansas_City%2C_Kansas). A total of 3,915 B-25Cs and -Ds were built by North American during World War II.

Although the B-25 was originally designed to bomb from medium altitudes in level flight, it was used frequently in the [Southwest Pacific theater](http://en.wikipedia.org/wiki/South_West_Pacific_theatre_of_World_War_II) (SWPA) on treetop-level [strafing](http://en.wikipedia.org/wiki/Strafing) and parafrag (parachute-retarded fragmentation bombs) missions against Japanese airfields in [New Guinea](http://en.wikipedia.org/wiki/New_Guinea) and the [Philippines](http://en.wikipedia.org/wiki/Philippines). These heavily-armed Mitchells, field-modified at [Townsville, Australia](http://en.wikipedia.org/wiki/Townsville%2C_Australia), by [Major](http://en.wikipedia.org/wiki/Major) [Paul I. "Pappy" Gunn](http://en.wikipedia.org/wiki/Paul_I._%22Pappy%22_Gunn) and North American tech rep Jack Fox, were also used on strafing and skip-bombing missions against Japanese shipping trying to re-supply their land-based armies. Under the leadership of [Lieutenant General](http://en.wikipedia.org/wiki/Lieutenant_General) [George C. Kenney](http://en.wikipedia.org/wiki/George_C._Kenney), B-25s of the [Fifth](http://en.wikipedia.org/wiki/Fifth_Air_Force) and [Thirteenth Air Forces](http://en.wikipedia.org/wiki/Thirteenth_Air_Force) devastated Japanese targets in the SWPA from 1942 to 1945, and played a significant role in pushing the Japanese back to their home islands. B-25s were also used with devastating effect in the [Central Pacific](http://en.wikipedia.org/wiki/Pacific_Ocean_Areas_%28command%29), [Alaska](http://en.wikipedia.org/wiki/Battle_of_the_Aleutian_Islands), [North Africa](http://en.wikipedia.org/wiki/North_African_campaign), [Mediterranean](http://en.wikipedia.org/wiki/Battle_of_the_Mediterranean) and [China-Burma-India](http://en.wikipedia.org/wiki/South-East_Asian_theatre_of_World_War_II) (CBI) theaters.

Because of the urgent need for hard-hitting strafe aircraft, a version dubbed the **B-25G** was developed, in which the standard-length transparent nose and the bombardier were replaced by a shorter solid nose containing two fixed .50 in (12.7 mm) [machine guns](http://en.wikipedia.org/wiki/Machine_gun) and a 75 mm (2.95 in) M4 cannon, one of the largest weapons fitted to an aircraft, similar to the experimental British [Mosquito Mk. XVIII](http://en.wikipedia.org/wiki/De_Havilland_Mosquito), and German [Ju 88P](http://en.wikipedia.org/wiki/Junkers_Ju_88) heavy cannon carrying aircraft. The cannon was manually loaded and serviced by the navigator, who was able to perform these operations without leaving his crew station just behind the pilot. This was possible due to the shorter nose of the G-model and the length of the M4, which allowed the breech to extend into the navigator's compartment.

The B-25G's successor, the **B-25H**, had even more firepower. The M4 gun was replaced by the lighter [T13E1](http://en.wikipedia.org/wiki/75_mm_gun_%28US%29#T13E1_.2F_M5), designed specifically for the aircraft. The 75 mm (2.95 in) gun fired at a muzzle velocity of 2,362 [ft/s](http://en.wikipedia.org/wiki/Feet_per_second) (about 720 [m/s](http://en.wikipedia.org/wiki/Metre_per_second)). Due to its low rate of fire (approximately four rounds could be fired in a single [strafing](http://en.wikipedia.org/wiki/Strafing) run) and relative ineffectiveness against ground targets, as well as substantial recoil, the 75 mm (2.95 in) gun was sometimes removed from both G and H models and replaced with two additional .50 in (12.7 mm) machine guns as a field modification. The -H also mounted four fixed forward-firing .50  (12.7 mm) machine guns in the nose, four more fixed ones in forward-firing cheek blisters, two more in the top turret, one each in a pair of new waist positions, and a final pair in a new tail gunner's position. Company promotional material bragged the B-25H could "bring to bear 10 machine guns coming and four going, in addition to the 75 mm cannon, a brace of eight [rockets](http://en.wikipedia.org/w/index.php?title=Unguided_rocket&action=edit&redlink=1) and 3,000 lb. (1,360 kg) of bombs."

The B-25H also featured a redesigned cockpit area, with the top turret moved forward to the navigator's compartment (thus requiring the addition of the waist and tail gun positions), and a heavily modified cockpit designed to be operated by a single pilot, the co-pilot's station and controls deleted, and the seat cut down and used by the navigator/cannoneer, the radio operator being moved to the aft compartment, operating the waist guns. A total of 1,400 B-25Gs and B-25Hs were built.

The final version of the Mitchell, the **B-25J**, looked much like the earlier B, C and D, having reverted to the longer nose. The less-than-successful 75 mm (2.95 in) cannon was deleted on the J model. Instead, 800 of this version were built with a solid nose containing eight .50  (12.7 mm) machine guns, while other J-models featured the earlier "greenhouse" style nose containing the bombardier's position. Regardless of the nose style used, all J-models also included two .50 in (12.7 mm) guns in a "fuselage package" located directly under the pilot's station, and two more such guns in an identical package just under the co-pilot's compartment. The solid-nose B-25J variant carried an impressive total of 18 .50 in (12.7 mm) guns: eight in the nose, four in under-cockpit packages, two in an upper turret, two in the waist, and a pair in the tail. No other bomber of World War II carried as many guns. However, the first 555 B-25Js (the B-25J-1-NC production block) were delivered without the fuselage package guns, because it was discovered muzzle blast from these guns was causing severe stress in the fuselage; this was cured with heavier fuselage skin patches, while later production runs returned these guns, they were often removed as a field modification for the same reason. In all, 4,318 B-25Js were built.

The B-25 was a safe and forgiving aircraft to fly. With an engine out, 60° banking turns into the dead engine were possible, and control could be easily maintained down to 145 [mph](http://en.wikipedia.org/wiki/Miles_per_hour) (230 [km/h](http://en.wikipedia.org/wiki/Kilometres_per_hour)). However, the pilot had to remember to maintain engine-out directional control at low speeds after takeoff with rudder - if this was attempted with ailerons, the aircraft would snap out of control. The tricycle landing gear made for excellent visibility while taxiing. The only significant complaint about the B-25 was the extremely high noise level produced by its engines; as a result, many pilots eventually suffered from various degrees of [hearing loss](http://en.wikipedia.org/wiki/Hearing_loss). The high noise level was due to design and space restrictions in the engine cowlings which resulted in the exhaust "stacks" protruding directly from the cowling ring and partly covered by a small triangular fairing. This directed exhaust and noise directly at the pilot and crew compartments. Crew members and operators on the airshow circuit frequently comment that "the B-25 is the fastest way to turn aviation fuel directly into noise". Many B-25's now in civilian ownership have been modified with exhaust rings that direct the exhaust through the outboard bottom section of the cowling.

The Mitchell was also an amazingly sturdy aircraft and could withstand tremendous punishment. One well-known B-25C of the [321st Bomb Group](http://en.wikipedia.org/wiki/321st_Bombardment_Group) was nicknamed "Patches" because its crew chief painted all the aircraft's [flak](http://en.wikipedia.org/wiki/Flak) hole patches with high-visibility [zinc chromate](http://en.wikipedia.org/wiki/Zinc_chromate) paint. By the end of the war, this aircraft had completed over 300 missions, was belly-landed six times and sported over 400 patched holes. The airframe was so bent, straight-and-level flight required 8° of left [aileron](http://en.wikipedia.org/wiki/Aileron) trim and 6° of right rudder, causing the aircraft to "crab" sideways across the sky.

An interesting characteristic of the B-25 was its ability to extend range by using one-quarter wing flap settings. Since the aircraft normally cruised in a slightly nose-high attitude, about 40 gal (150 l) of fuel was below the fuel pickup point and thus unavailable for use. The flaps-down setting gave the aircraft a more level flight attitude, which resulted in this fuel becoming available, thus slightly extending the aircraft's range.

By the time a separate [United States Air Force](http://en.wikipedia.org/wiki/United_States_Air_Force) was established in 1947, most B-25s had been consigned to long-term storage. However, a select number continued in service through the late 1940s and 1950s in a variety of training, reconnaissance and support roles. Its principal use during this period was for undergraduate training of multi-engine aircraft pilots slated for reciprocating engine or turboprop cargo, aerial refueling or reconnaissance aircraft. Still others were assigned to units of the [Air National Guard](http://en.wikipedia.org/wiki/Air_National_Guard) in training roles in support of [F-89 Scorpion](http://en.wikipedia.org/wiki/F-89_Scorpion) and [F-94 Starfire](http://en.wikipedia.org/wiki/F-94_Starfire) operations. [TB-25J-25-NC Mitchell](http://en.wikipedia.org/wiki/B-25_Mitchell), *44-30854*, the last B-25 in the USAF inventory, assigned at [March AFB](http://en.wikipedia.org/wiki/March_AFB), California as of March 1960, was flown to [Eglin AFB](http://en.wikipedia.org/wiki/Eglin_AFB), Florida, from [Turner Air Force Base](http://en.wikipedia.org/wiki/Turner_Air_Force_Base), Georgia, on 21 May 1960, the last flight by a USAF B-25, and presented by Brig. Gen. A. J. Russell, Commander of [SAC](http://en.wikipedia.org/wiki/Strategic_Air_Command)'s 822nd Air Division at Turner AFB, to the Air Proving Ground Center Commander, Brig. Gen. Robert H. Warren, who in turn presented the bomber to [Valparaiso, Florida](http://en.wikipedia.org/wiki/Valparaiso%2C_Florida) Mayor Randall Roberts on behalf of the Niceville-Valparaiso Chamber of Commerce. Four of the original Tokyo Raiders were present for the ceremony, Col. Davy Jones, Col. Jack Simms, Lt. Col. Joseph Manske, and retired Master Sgt. Edwin W. Horton. It was donated back to the [Air Force Armament Museum](http://en.wikipedia.org/wiki/Air_Force_Armament_Museum) circa 1974 and marked as Doolittle's *40-2344*.

Today, many B-25s are kept in airworthy condition by air museums and collectors.

**Empire State Building incident**

On Saturday, 28 July 1945, at 0940 (while flying in thick fog), a USAAF B-25D crashed into the north side of the [Empire State Building](http://en.wikipedia.org/wiki/Empire_State_Building), hitting between the 79th and 80th floor. Fourteen people were killed — 11 in the building, along with [Colonel](http://en.wikipedia.org/wiki/Colonel_%28United_States%29) [William Smith](http://en.wikipedia.org/wiki/William_F._Smith_%28US_Army_Air_Corps%29) and the other two occupants of the bomber. [Betty Lou Oliver](http://en.wikipedia.org/wiki/Betty_Lou_Oliver), an elevator attendant, survived the impact and a subsequent uncontrolled descent with the elevator. It was partly because of this incident that towers 1 and 2 of the [World Trade Center](http://en.wikipedia.org/wiki/World_Trade_Center) were designed to withstand the impact of a [Boeing 707](http://en.wikipedia.org/wiki/Boeing_707) aircraft.

**Variants**

B-25C Mitchell

USAAF B-25C/D. Note the early radar fitted to the nose

B-25J

B-25J warbird

B-25J N345BG '44-86777'

B-25

The first version of the B-25 delivered. No [prototypes](http://en.wikipedia.org/wiki/Prototype) were ordered. The first nine aircraft were built with constant [dihedral](http://en.wikipedia.org/wiki/Dihedral_%28aircraft%29) angle. Due to low stability, the wing was redesigned so that the dihedral was eliminated on the outboard section. (Number made: 24.)

B-25A

Version of the B-25 modified to make it combat ready; additions included [self-sealing fuel tanks](http://en.wikipedia.org/wiki/Self-sealing_fuel_tank), crew armor, and an improved tail gunner station. No changes were made in the armament. Re-designated obsolete (**RB-25A** designation) in 1942. (Number made: 40.)

B-25B

Rear turret deleted; manned dorsal and remotely-operated ventral turrets added, each with a pair of .50 in (12.7 mm) [machine guns](http://en.wikipedia.org/wiki/Machine_gun). The ventral turret was retractable, but the increased drag still reduced the cruise speed by 30 mph (48 km/h). 23 were delivered to the RAF as the **Mitchell Mk I**. [The Doolittle Raiders](http://en.wikipedia.org/wiki/Doolittle_Raid) flew B-25Bs on their famous mission. (Number made: 120.)

B-25C

Improved version of the B-25B: powerplants upgraded from [Wright R-2600](http://en.wikipedia.org/wiki/Wright_R-2600)-9 radials to R-2600-13s; de-icing and anti-icing equipment added; the navigator received a sighting blister; nose armament was increased to two .50 in (12.7 mm) machine guns, one fixed and one flexible. The B-25C model was the first mass-produced B-25 version; it was also used in the United Kingdom (as the Mitchell II), in Canada, China, the Netherlands, and the Soviet Union. First mass-produced B-25 model. (Number made: 1,625.)

ZB-25C

B-25D

Identical to the B-25C, the only difference was that the B-25D was made in [Kansas City, Kansas](http://en.wikipedia.org/wiki/Kansas_City%2C_Kansas), whereas the B-25C was made in [Inglewood, California](http://en.wikipedia.org/wiki/Inglewood%2C_California). First flew on 3 January 1942. (Number made: 2,290.)

ZB-25D

XB-25E

Single B-25C modified to test de-icing and anti-icing equipment that circulated exhaust from the engines in chambers in the leading and trailing edges and empennage. The aircraft was tested for almost two years, beginning in 1942; while the system proved extremely effective, no production models were built that used it prior to the end of World War II. Many prop aircraft today use the XB-25E system. (Number made: 1, converted.)

ZXB-25E

XB-25F-A

Modified B-25C that tested the use of insulated electrical de-icing coils mounted inside the wing and empennage leading edges as a de-icing system. The hot air de-icing system tested on the XB-25E was more practical. (Number made: 1, converted.)

XB-25G

Modified B-25C in which the transparent nose was replaced by a solid one carrying two fixed .50 in (12.7 mm) machine guns and a 75 mm (2.95 in) M4 cannon, then the largest weapon ever carried on an American bomber. (Number made: 1, converted.)

B-25G

To satisfy the dire need for ground-attack and strafing aircraft, the B-25G was made following the success of the prototype XB-25G. The production model featured increased armor and a greater fuel supply than the XB-25G. One B-25G was passed to the British, who gave it the name **Mitchell II** that had been used for the B-25C. (Number made: 420.)

B-25H

B-25H *Barbie III* taxiing at [Centennial Airport](http://en.wikipedia.org/wiki/Centennial_Airport), Colorado

An improved version of the B-25G. It featured two additional fixed .50 in (12.7 mm) machine guns in the nose and four in fuselage-mounted pods; the heavy M4 cannon was replaced by a lighter 75 mm (2.95 in) T13E1. (Number made: 1,000; number left flying in the world: 1.)

B-25J

The last production model of the B-25, often called a cross between the B-25C and the B-25H. It had a transparent nose, but many of the delivered aircraft were modified to have a solid nose. Most of its 14–18 machine guns were forward-facing for strafing missions. 316 were delivered to the [Royal Air Force](http://en.wikipedia.org/wiki/Royal_Air_Force) as the **Mitchell III**. (Number made: 4,318.)

CB-25J

Utility transport version.

VB-25J

A number of B-25s were converted for use as staff and VIP transports. [Henry H. Arnold](http://en.wikipedia.org/wiki/Henry_H._Arnold) and [Dwight D. Eisenhower](http://en.wikipedia.org/wiki/Dwight_D._Eisenhower) both used converted B-25Js as their personal transports.

**Trainer Variants**

Most models of the B-25 were used at some point as training aircraft.

TB-25D

Originally designated **AT-24A** (Advanced Trainer, Model 24, Version A). Trainer modification of B-25D. In total, 60 AT-24s were built.

TB-25G

Originally designated **AT-24B**. Trainer modification of B-25G.

TB-25C

Originally designated **AT-24C**. Trainer modification of B-25C.

TB-25J

Originally designated AT-24D. Trainer modification of B-25J. Another 600 B-25Js were modified after the war.

TB-25K

Hughes E1 fire-control radar trainer (Hughes). (Number made: 117.)

TB-25L

Hayes pilot-trainer conversion. (Number made: 90.)

TB-25M

Hughes E5 fire-control radar trainer. (Number made: 40.)

TB-25N

Hayes navigator-trainer conversion. (Number made: 47.)

**U.S. Navy / U.S. Marine Corps variants**

A PBJ-1H of VMB-613.

Two PBJ-1Js on Mindanao,1945.

PBJ-1C

Similar to the B-25C for the US Navy; often fitted with airborne search radar and used in the anti-submarine role.

PBJ-1D

Similar to the B-25D for the US Navy and US Marine Corps. Differed in having a single .50 in (12.7 mm) machine gun in the tail turret and beam gun positions similar to the B-25H. Often fitted with airborne search radar and used in the anti-submarine role.

PBJ-1G

US Navy/US Marine Corps designation for the B-25G

PBJ-1H

US Navy/US Marine Corps designation for the B-25H

PBJ-1J

US Navy designation for the B-25J-NC (Blocks -1 through -35) with improvements in radio and other equipment. Often fitted with "package guns" and wingtip search radar for the anti-shipping/anti-submarine role.

**Operators**

B-25 Mitchell bombers from [No. 18 (NEI) Squadron RAAF](http://en.wikipedia.org/wiki/No._18_%28Netherlands_East_Indies%29_Squadron_RAAF) on a training flight near [Canberra](http://en.wikipedia.org/wiki/Canberra) in 1942

B-25J in 98 RAF Squadron markings

 [Australia](http://en.wikipedia.org/wiki/Australia)

* [Royal Australian Air Force](http://en.wikipedia.org/wiki/Royal_Australian_Air_Force)
	+ [No. 2 Squadron RAAF](http://en.wikipedia.org/wiki/No._2_Squadron_RAAF)

 [Biafra](http://en.wikipedia.org/wiki/Biafra)

* [Biafran Air Force](http://en.wikipedia.org/wiki/Biafran_Air_Force) operated two aircraft.

 [Bolivia](http://en.wikipedia.org/wiki/Bolivia)

 [Brazil](http://en.wikipedia.org/wiki/Brazil)

* [Brazilian Air Force](http://en.wikipedia.org/wiki/Brazilian_Air_Force) (75 units)

 [Canada](http://en.wikipedia.org/wiki/Canada)

* [Royal Canadian Air Force](http://en.wikipedia.org/wiki/Royal_Canadian_Air_Force) - bomber, light transport, training aircraft, "special" mission roles

 [China](http://en.wikipedia.org/wiki/Republic_of_China)

 [People's Republic of China](http://en.wikipedia.org/wiki/People%27s_Republic_of_China)

* [People's Liberation Army Air Force](http://en.wikipedia.org/wiki/People%27s_Liberation_Army_Air_Force) operated captured Nationalist Chinese aircraft.

 [Chile](http://en.wikipedia.org/wiki/Chile)

 [Colombia](http://en.wikipedia.org/wiki/Colombia)

 [Cuba](http://en.wikipedia.org/wiki/Cuba)

 [Dominican Republic](http://en.wikipedia.org/wiki/Dominican_Republic)

 [France](http://en.wikipedia.org/wiki/France)

 [Indonesia](http://en.wikipedia.org/wiki/Indonesia)

* [Indonesian Air Force](http://en.wikipedia.org/wiki/Indonesian_Air_Force) received some B-25 Mitchells from Netherlands, the last example retired in 1979.

 [Mexico](http://en.wikipedia.org/wiki/Mexico)

 [Netherlands](http://en.wikipedia.org/wiki/Netherlands)

* [Royal Netherlands Air Force](http://en.wikipedia.org/wiki/Royal_Netherlands_Air_Force)
	+ [No. 18 (Netherlands East Indies) Squadron RAAF](http://en.wikipedia.org/wiki/No._18_%28Netherlands_East_Indies%29_Squadron_RAAF)
	+ [No. 119 (Netherlands East Indies) Squadron RAAF](http://en.wikipedia.org/wiki/No._119_%28Netherlands_East_Indies%29_Squadron_RAAF)
	+ [No. 320 Squadron RAF](http://en.wikipedia.org/wiki/No._320_Squadron_RAF)
* [Dutch Naval Aviation Service](http://en.wikipedia.org/wiki/Dutch_Naval_Aviation_Service)
	+ [No. 320 Squadron RAF](http://en.wikipedia.org/wiki/No._320_Squadron_RAF)
* [Royal Netherlands East Indies Army Air Force](http://en.wikipedia.org/wiki/Royal_Netherlands_East_Indies_Army_Air_Force) - Postwar

 [Peru](http://en.wikipedia.org/wiki/Peru)

 [Poland](http://en.wikipedia.org/wiki/Poland)

* [Polish Air Forces on exile in Great Britain](http://en.wikipedia.org/wiki/Polish_Air_Forces_in_France_and_Great_Britain)
	+ [No. 305 Polish Bomber Squadron](http://en.wikipedia.org/wiki/No._305_Polish_Bomber_Squadron)

 [Spanish State](http://en.wikipedia.org/wiki/Spanish_State)

* [Spanish Air Force](http://en.wikipedia.org/wiki/Spanish_Air_Force) former USAAF serial number 41-30338 interned in 1944 and operated between 1948–1956.

 [Soviet Union](http://en.wikipedia.org/wiki/Soviet_Union)

* [Soviet Air Force](http://en.wikipedia.org/wiki/Soviet_Air_Force) received a total of 866 B-25s (of types C/D/S/G/J).

 [United Kingdom](http://en.wikipedia.org/wiki/United_Kingdom)

* [Royal Air Force](http://en.wikipedia.org/wiki/Royal_Air_Force) received more than 900 aircraft.
	+ [No. 98 Squadron RAF](http://en.wikipedia.org/wiki/No._98_Squadron_RAF)
	+ [No. 180 Squadron RAF](http://en.wikipedia.org/w/index.php?title=No._180_Squadron_RAF&action=edit&redlink=1)
	+ [No. 226 Squadron RAF](http://en.wikipedia.org/w/index.php?title=No._226_Squadron_RAF&action=edit&redlink=1)
	+ [No. 342 Squadron RAF](http://en.wikipedia.org/wiki/No._342_Squadron_RAF)
	+ [No. 681 Squadron RAF](http://en.wikipedia.org/wiki/No._681_Squadron_RAF)
	+ [No. 684 Squadron RAF](http://en.wikipedia.org/wiki/No._684_Squadron_RAF)

 [United States](http://en.wikipedia.org/wiki/United_States)

* [United States Army Air Forces](http://en.wikipedia.org/wiki/United_States_Army_Air_Forces)
* [United States Navy](http://en.wikipedia.org/wiki/United_States_Navy)
* [United States Marine Corps](http://en.wikipedia.org/wiki/United_States_Marine_Corps)

 [Uruguay](http://en.wikipedia.org/wiki/Uruguay)

 [Venezuela](http://en.wikipedia.org/wiki/Venezuela)

**Survivors**

B-25D *Tondelayo*, registered N3476G and was serial number 44-28932.

Main article: [List of surviving B-25 Mitchells](http://en.wikipedia.org/wiki/List_of_surviving_B-25_Mitchells)

There are more than one hundred surviving B-25 Mitchells scattered over the world, mainly in the United States. Most of them are on static display in museums, but about 45 are still airworthy.

A significant number of these were brought together for just a single movie. [*Catch-22*](http://en.wikipedia.org/wiki/Catch-22_%28film%29) is a 1970 [war film](http://en.wikipedia.org/wiki/War_film) adapted from the [book of the same name](http://en.wikipedia.org/wiki/Catch-22) by [Joseph Heller](http://en.wikipedia.org/wiki/Joseph_Heller). When Catch-22 began preliminary production, Paramount made a decision to hire the [Tallmantz Aviation](http://en.wikipedia.org/wiki/Frank_Tallman) organization to obtain sufficient [B-25 Mitchell](http://en.wikipedia.org/wiki/B-25_Mitchell) bomber aircraft. Tallmantz president, [Frank G. Tallman](http://en.wikipedia.org/wiki/Frank_Tallman) ended up finding war-surplus aircraft, and eventually gathered not only pilots to fly the aircraft but also a ground support crew to maintain the fleet.

On 18 April 2010, 17 airworthy B-25s took off from the airfield behind the [National Museum of the United States Air Force](http://en.wikipedia.org/wiki/National_Museum_of_the_United_States_Air_Force) and flew over in formation to commemorate the 68th anniversary of the [Doolittle Raid](http://en.wikipedia.org/wiki/Doolittle_Raid). Four of the surviving members of the Raid were in attendance for the reunion; Cole, Griffin, Hite and Thatcher, although Hite departed before the flyover. [Secretary of the Air Force](http://en.wikipedia.org/wiki/Secretary_of_the_Air_Force) [Michael Donley](http://en.wikipedia.org/wiki/Michael_Donley), Commander of [Air Force Material Command](http://en.wikipedia.org/wiki/Air_Force_Material_Command) [General](http://en.wikipedia.org/wiki/General) [Donald Hoffman](http://en.wikipedia.org/wiki/Donald_Hoffman) and the Director of the National Museum of the United States Air Force [Major General](http://en.wikipedia.org/wiki/Major_General) (ret.) [Charles Metcalf](http://en.wikipedia.org/wiki/Charles_Metcalf) were there also.

**Specifications (B-25J)**

*Data from* *Jane's Fighting Aircraft of World War II*

**General characteristics**

* **Crew:** six (two pilots, navigator/bombardier, turret gunner/engineer, radio operator/waist gunner, tail gunner
* **Length:** 52 ft 11 in (16.1 m)
* [**Wingspan**](http://en.wikipedia.org/wiki/Wingspan)**:** 67 ft 6 in (20.6 m)
* **Height:** 17 ft 7 in (4.8 m)
* **Wing area:** 610 sq. ft (57 m²)
* [**Empty weight**](http://en.wikipedia.org/wiki/Manufacturer%27s_Weight_Empty)**:** 21,120 lb. (9,580 kg)
* **Loaded weight:** 33,510 lb. (15,200 kg)
* [**Max takeoff weight**](http://en.wikipedia.org/wiki/Maximum_Takeoff_Weight)**:** 41,800 lb. (19,000 kg)
* **Powerplant:** 2× [Wright R-2600](http://en.wikipedia.org/wiki/Wright_R-2600) "Cyclone" [radials](http://en.wikipedia.org/wiki/Radial_engine), 1,850 hp (1,380 kW) each

**Performance**

* [**Maximum speed**](http://en.wikipedia.org/wiki/V_speeds#Vno)**:** 275 mph (239 kn, 442 km/h)
* [**Cruise speed**](http://en.wikipedia.org/wiki/V_speeds#Vc)**:** 230 mph (200 kn, 370 km/h)
* [**Combat radius**](http://en.wikipedia.org/wiki/Combat_radius)**:** 1,350 mi (1,170 nm., 2,170 km)
* [**Ferry range**](http://en.wikipedia.org/wiki/Ferry_range)**:** 2,700 mi (2,300 nm., 4,300 km)
* [**Service ceiling**](http://en.wikipedia.org/wiki/Ceiling_%28aeronautics%29)**:** 25,000 ft (7,600 m)
* [**Rate of climb**](http://en.wikipedia.org/wiki/Rate_of_climb)**:** 790 ft/min (4 m/s)
* [**Wing loading**](http://en.wikipedia.org/wiki/Wing_loading)**:** 55 lb./ft² (270 kg/m²)
* [**Power/mass**](http://en.wikipedia.org/wiki/Power-to-weight_ratio)**:** 0.110 hp/lb. (182 W/kg)

**Armament**

* **Guns:** 12-18 × .50 in (12.7 mm) [machine guns](http://en.wikipedia.org/wiki/Browning_M2)
* [**Hardpoints**](http://en.wikipedia.org/wiki/Hardpoint)**:** 2,000 lb. (900 kg) ventral shackles to hold one external [Mark 13 torpedo](http://en.wikipedia.org/wiki/Mark_13_torpedo)
* **Rockets:** 3,000 lb. (1,360 kg) bombs + eight 5 in (130 mm) high velocity aircraft rockets (HVAR)
* **Bombs:** 6,000 lb. (2,700 kg)

**Notable appearances in media**

Main article: [Aircraft in fiction#B-25 Mitchell](http://en.wikipedia.org/wiki/Aircraft_in_fiction#B-25_Mitchell)

**See also**

|  |  |
| --- | --- |
|  | [***United States Air Force portal***](http://en.wikipedia.org/wiki/Portal%3AUnited_States_Air_Force) |

* [Ivor Parry Evans](http://en.wikipedia.org/wiki/Ivor_Parry_Evans) (B-25 use near Anzio, Italy, World War II)
* [The Ruptured Duck](http://en.wikipedia.org/wiki/The_Ruptured_Duck_%28B-25%29)

**Related development**

* [North American XB-21](http://en.wikipedia.org/wiki/North_American_XB-21)
* [North American XB-28](http://en.wikipedia.org/wiki/North_American_XB-28)

**Comparable aircraft**

* [B-26 Marauder](http://en.wikipedia.org/wiki/B-26_Marauder)