Flying Machines – Asia/Pacific Campaign

Note: This narrative includes elements from the original OLLI Course – *Wild Blue Yonder* (also known as *War in the Skies: Europe 1939-45* outside Tampa, FL) – which deals with World War II in Europe. Many planes used in the European Theater also saw service in the Pacific or Indian Ocean Theaters. Almost all were US designed and manufactured and were likely modified to meet the very different needs of the war against Japan.

Only the Japanese Zero (more accurately, the Mitsubishi A6M) appeared in the *Wild Blue Yonder* version of this document – and that only for reference. It is dealt with at greater length here, as it represents both the early triumphs and the later disasters suffered by the two Japanese Air Forces. But nearly 20 Allied aircraft are discussed here that saw little or no service in Europe. This reflects not only the very different nature of the air war in the Pacific – but also the extensive role played by aircraft carriers and carrier-launched aircraft in the War against the Rising Sun.

Introduction

The combat aircraft of the mid-20th century – and specifically during WWII – represent a truly breathtaking display of engineering, design and manufacturing capability. And, as with navigating, communicating, detecting and so many other aspects of combat, all of this was done without any of the things we take for granted today: automated design and manufacture, computerized machine tools, etc. This was pure craftmanship and hands-on manufacturing. The B25, famous for the Doolittle raid and only a medium bomber still had over 150,000 design drawings.

Japanese imperial designs in China brought war to Asia years before the European conflict began, and air power played a role – particularly once the Second Sino-Japanese war began in 1937. For this and other reasons, Japan was ahead of the US both in warplane quality and quantity when Pearl Harbor was attacked in 1941. Several additional factors complicate the assembly of a list of aircraft to discuss.

The first is the very clear divergence between the Japanese Army and Navy, which impacted Japanese policy, war making and – by extension – aircraft design and development. Indeed, there were two distinct Japanese air forces – the IJNAF and the IJAAF (Imperial Japanese Naval Air Force and Imperial Japanese Army Air Force) – throughout the war. As a result, there were "land based" and "carrier based" versions of many Japanese aircraft. And aircraft NEVER flown off carriers were still part of the IJNAF just as they were in the US Navy. This includes seaplanes and float planes.

On the Allied side (which in the Pacific largely meant the US – despite the very real contributions of the Royal Australian and Royal New Zealand air forces in the first year of the war) the confusion comes due to the different military branches using the planes. The USAAF (the Air Force was still the ARMY Air Force in WWII), the Marines, the Navy and the Coast Guard all used airplanes in the Asia/Pacific theater and in some cases they referred to the same – or essentially the same – airplane under a different name. (For example: A Navy PBJ was a B25 North American Mitchell, although it might have undergone numerous modifications suitable for its missions.)

Secondly, there were far more differences in the way war was waged in the Pacific as opposed to Europe (or North Africa) than there were similarities. The vast expanses of open water and the vast distances in

the theater generally made for a VERY different combat scenario. The P38 Lightning played an effective role in the European Theater and, indeed, scored the first 8th Air Force "kill" of a Luftwaffe plane. But it was ADORED in the Pacific for not only its long range, but also the fact that it was a FIGHTER with TWO ENGINES. This greatly improved its survivability it a theater with long distances between airfields – much of it over water.

Finally, there was the very nature of the Asia/Pacific theater. Once built, most of the airfields used by German and Allied air forces remained in use throughout the war. Close air support fields might move with the evolution of the battlefield, but the scores of bases built in England and Germany were used throughout the war.

In the Asia/Pacific theater, airfields themselves were chess pieces, just as were the ships, armies and air squadrons. Capturing, or building, airfields was a key to success – whether at sea or on the land. Many airfields were primitive and aircraft that could use such facilities were prized. Indeed, planes designed for carrier use were sometimes preferred for the more forward air bases because of the heavy landing gear they required for carrier operations. That said, both the US and Japanese Navies were loath to lend out carrier planes for non-carrier duties and in one episode nearly a third of Navy planes trying to land at Guadalcanal could never be flown again due to the condition of the runway.

There were HUNDREDS of variations on the aircraft discussed here, and hundreds more prototypes that never got off the drawing board. Generally, aircraft in this list were selected because they played at least some role in the Asia/Pacific conflict and at least 1000 of them were produced. There are a couple of exceptions, most notably the TBD Devastator. Only 130 of these torpedo bombers were produced, it was obsolete when the US entered the war, it was a disaster in combat and – with all of that – played a critical role in what is considered one of the decisive battles in history!

As a reminder (for those who read the *Wild Blue Yonder* narrative on planes) once we get beyond numbers you can count on one hand – number of engines, crew, etc. – ALL numbers are approximations. Many of these planes went through DOZENS of revisions, upgrades, modifications and were often built across multiple factories or even countries. Things like altitude, speed, range, weight, etc. are all estimates subject to the specific aircraft model and the flying conditions at the time.

Aircraft Types

The scope of the Asia/Pacific theater also means that the number of aircraft types used is larger than in the European Theater. Types where the name is underlined are specific to the Asia/Pacific theater.

Fighters

Most fighters in WWII were single engine, single crew planes built for speed and maneuverability. The fighter as an aircraft class CERTAINLY evolved more in the Asia/Pacific theater than any other aircraft type. This is PARTICULARLY true for carrier launched aircraft.

The early US Air Corps referred to fighter squadrons as technically "Pursuit" units, hence the "P-" in US Fighter designations.

The use of F for US fighters did not occur until after the war, except in the Navy. It should also be noted that as the war progressed, US fighters in particular served also as close air support and precision bombing units. Indeed, the P47 Thunderbolt had a larger bomb load than any of the so-called "light bombers" and almost as much as a B25 Medium Bomber.

Multi-Role

The concept of a single aircraft that could perform various tasks – bombing, fighting other aircraft, dropping torpedoes, etc. – dominated German aircraft development for most of the war. Japan, facing many of the same challenges in resources, production capacity and MONEY, was building multi-role aircraft from well before Pearl Harbor.

Planes also evolved INTO multi-role use as the generals and flyers figured out what worked and didn't. The US A20 Havoc – a combination light to medium bomber or ground support aircraft – evolved into a strafer and commerce raider in the Pacific. The B25, famous as the Doolittle Raid plane, underwent an even more radical evolution. In the Pacific, while dogfights, air-to-air combat and – ultimately – strategic bombing played a role just as they had in Europe, for much of the war aircraft were simply a means of projecting power over long distances. Multi-role aircraft were a key part of the air war in such circumstances.

Light Bombers

With the growth and evolution of fighter aircraft, the concept of a "Light Bomber" was practically obsolete when the war began. But early in the war, these planes played a significant role until their vulnerabilities were exposed.

Medium Bombers

While medium bombers played a significant role in Europe, it was in the Pacific that they came into their own. They could fly off shorter runways. They had smaller crews. They were cheaper. And they could be modified to almost any purpose.

As the war progressed, the USAAF developed an improved understanding of where and when to use medium bombers. Like fighters, they could conduct low level missions when the weather kept the "heavies" on the ground. The Japanese never produced anything bigger than a medium – but its G3M Nell and G4M Betty wreaked havoc on the Allies early in the war and remained in use throughout.

Heavy Bombers

The "heavies" – along with the fighters – are the legendary planes of the war in Europe, but assumptions about how they could be used collapsed under the realities of the Asia/Pacific theater. The B17 – a mainstay of the air campaign against Germany – was phased out of use in the Pacific by September of 1943 in favor of the longer-legged B24. And even it could not reach Japan from anywhere within Allied control until the last months of the war. Only the arrival of the B29 in the summer of 1944 brought Japan within range, and it took months more before the Allies figured out how to effectively use it.

Again, note that bomb load was a function of mission distance. A B17 could carry 8000 LB, but for long missions the 4500 number listed is more appropriate.

For a number of reasons, Japan never produced a heavy bomber. Early in the war, the medium bombers it had developed – particularly the Mitsubishi GM3 and GM4 – were all they needed for their territorial ambitions. Both Japanese air forces used the notion of "out ranging" the enemy, and virtually all of their aircraft traded armor and survivability to achieve range, speed and maneuverability. In the long run, this proved a poor decision. But until US industrial and engineering superiority was reflected in combat this fact was not immediately clear.

Seaplanes

Seaplanes played a role in aviation from the earliest days. The Schneider Trophy, competed for from the post WWI days until the early '30s was a seaplane competition won by Doolittle in 1925. But it was dominated by Europeans – particularly "Supermarine", the company that created the immortal Spitfire, famed for its role in the Battle of Britain.

In a conflict waged largely over water, the seaplane played an important role. It removed the problem of the "airfield" because it didn't NEED an airfield. On the other side of the ledger, the "floats" – pontoons or other flotation devices that would allow the plane to land and take off from a water surface - limited the performance of "float planes." Unlike wheels, pontoons could not be retracted into either wings or fuselage. So. seaplanes, by definition, were slow and clumsy in the air.

But they also brought an important dimension to the Asia/Pacific battlefield. Early in the war, pontoon aircraft conducted raids on important US targets because there were no other aircraft to oppose them. Later, and more importantly, they allowed the US to dramatically out-perform the Japanese in air/sea rescue, reflecting the recognition on the Allied side that the pilots and crew were MORE VALUABLE than the planes they flew.

The comparison between numbers of US fliers rescued at sea and those from Japan was simply mind-boggling. This reflects the larger difference in cultural perspectives. But the seaplane played an importing – and evolving – role as the war progressed.

Reconnaissance

Reconnaissance was one of the first uses of aircraft in war – going back to balloons used during the US Civil war. But the scope of the Asia/Pacific combat theater gave even greater importance to reconnaissance by air and some aircraft were either designed specifically for this purpose or adapted from planes originally designed for other missions. The twin fuselage P38 Lightning was particularly favored for reconnaissance in both the European and Asia/Pacific theaters due to its impressive range and the B24 Liberator – with even greater range – was also adapted for to photo-recon missions.

Photo-reconnaissance was in its infancy during World War II – especially when compared with the level and sophistication of reconnaissance developed during the cold war and after. Both sides were regularly FAR OFF in their estimates of enemy strength on islands from the Solomons all the way to Okinawa. But as the war progressed and US aviation and carrier resources expanded, airborne reconnaissance

combined with improving radar capability allowed enemy aircraft to be engaged 100 miles or more from the ships they were sent to locate and attack.

Torpedo Bomber

The Allies and Japanese powers both designed aircraft specifically for the delivery of torpedoes from aircraft.

At the beginning of the war, the Japanese were well ahead of the US in torpedo development – having perfected a "long lance" torpedo with a range approaching 12 miles. These caused real havoc in the Allied fleet supporting the Marines on Guadalcanal. US battleships were lined up, making them easy targets at Pearl Harbor because US Navy brass believed the harbor was too shallow to allow torpedo attack. The Japanese solved this problem with the simple expedient of adding a wooden attachment to the torpedoes to keep them from diving too deep. As the war progressed, the Japanese also had numerous successful torpedo attacks using medium bombers to drop torpedoes.

Ultimately, the US had more success delivering torpedoes from submarines than from aircraft. While efforts to use the F6F Hellcat as a torpedo bomber were attempted, Hellcats never carried torpedoes into combat. This task fell largely to the TBD and TBM, the main US torpedo bombers for much of the war. These were basically the same plane, TBD – for "Torpedo Bomber Douglas" – referring to the planes actually built by Douglass Aircraft while "TBM" was used for those built under license by General Motors.

Ultimately, the improving technologies in both aircraft and torpedoes rendered the dedicated torpedo bomber as much of a relic as the battleship. Midway proved them virtually helpless against fighters – a lesson that took a while to sink in. But the same engagement also etched their legacy into history, if only at an appalling loss.

Trainer

Only one plane fits in this category, but it is there simply to point out the essential reality of air combat. No pilots, no airplanes. And training pilots – and fliers generally – was a huge challenge on both sides. At the beginning of the war, Japan was well ahead of the US in almost everything – training included.

But once engaged, the quality of the US educational system, its ability to train vast numbers of pilots, gunners, bombardiers and navigators was a major factor in turning the tide of war in the Pacific. Training aircraft played an essential role in this turnabout and one, in particular, deserves mention for this success.

It also bears mentioning, again, that the US understood the concept of "human resources" to a far greater extent than Japan ever did. With the possible exception of the totally green fliers sent into battle by Japan late in the war – many on Kamikazes – every flier was worth more than the plane he flew in. From the earliest days of the war, the US developed and improved systems for locating and rescuing downed fliers. Over 50% of downed US fliers were eventually rescued – many by aircraft and units specifically developed for the purpose. Among the Japanese air forces, the number of rescued fliers were a tiny fraction of this number. Dying for the Emperor was considered an honorable end, regardless of its impact on the war effort.

Transport

The use of airplanes for transport was nothing new by the outbreak of WWII, bit the Asia/Pacific theater expanded the importance of air transport in ways never imagined before the war. The distances and the remoteness of some of the combat areas and the constant movement from island to island across hundreds of miles of ocean made airplanes the essential delivery vehicle. As one old China warrior remarked, “If it got here, someone flew it in.” This remained true in the CBI theater until the war ended – and beyond.

Only two aircraft in our list are classified as “transport” but both played a huge role in the war. Many other planes – especially the B24 Liberator – were adapted as transport aircraft and the difficulties they often faced in getting essential supplies to “the front” were as daunting as anything faced by combat aircraft. And, as with the combat aircraft, losses of aircraft and fliers owed as much to weather, navigation and “operational” factors as to direct attack by Japanese air or anti-aircraft weapons.

The Spec Images

Each plane that follows includes a yellow “spec sheet” showing basic information, weight, wingspan, etc. These come from a related project that grew out of the development of this course. Some information is either not relevant for the plane in question (e.g. Bomb Load) or is not available. Cost figures for foreign planes are almost impossible due to a variety of factors including inflation and exchange rates. Hopefully that source data will improve with time.

Index of Aircraft **Page**

Fighters

The Mitsubishi A6M – AKA "The Zero"

WW II Aircraft

Referred to As:	A6M	Nickname:	Zero		
Built By:	Mitsubushi	Country:	Japan	Designation:	F
Made In:	Multiple	Length:	30 FT	Wingspan:	39 FT
Empty #:	3704	Loaded #:	6164	Ord Load #:	130
Crew:	1	Range:	1160	Notes:	2 7.7MM, 2 20MM MG
Max SPD:	331	Cruising:	207		
Ceiling:	33000				
# Built:	10939	Prototype:	1939	Engines:	1
Cost:	0	Service:	1940	Cylinders:	14
Theaters:	PAC			Displ:	0

Configuration:	Radial
Cooling:	Air
Horsepower:	940

The "Zero" was one of the definitive aircraft of the war. From before Pearl Harbor – and well into 1942 – it out-performed all Allied aircraft sent up against it and struck terror into rookie pilots flying for the US, New Zealand and Australian air forces. It was more than a match for the Curtiss P40 Warhawks sent up against it in the Pacific theater – at least in one-to-one dogfighting. Its range of over 1000 miles was half again that of the P40. It had the tightest turning radius of any plane until the P51 appeared in late 1943.

But these performance features came at a cost. The Zeroes' speed and maneuverability were possible because of its light weight. But – unlike ALL US fighters – it had virtually NO armor. A single round from the machine guns in Allied airplanes could destroy a Zero – while US planes routinely landed with 100 bullet holes in them. This meant that US heavy bombers could – indeed – protect themselves from Japanese fighters with an effectiveness only dreamed of against more study German fighters. And once Allied fighters perfected combat methods that blunted the Zeroes' advantage in climbing and pure speed, scores between them and the Japanese fighters began to even out. The appearance of the F6F Hellcat – which could match or outmatch the Zero in any performance category, weighed 2 ½ times as much and could absorb more punishment than a Zero could dish out – rendered the once-feared fighter to the same obsolescence it had once exposed in the early Allied fighters.

The P40 Warhawk

WW II Aircraft

Referred to As:	P40	Nickname:	Warhawk		
Built By:	Curtiss	Country:	USA	Designation:	F
Made In:	Buffalo	Length:	37 FT	Wingspan:	32 FT
Empty #:	5922	Loaded #:	8515	Ord Load #:	2000
Crew:	1	Range:	716	Notes:	6 .50 CAL MG
Max SPD:	334	Cruising:	308		
Ceiling:	29100				
# Built:	13738	Prototype:	1938	Engines:	1
Cost:	53000	Service:	1939	Cylinders:	12
Theaters:	All			Displ:	0

Configuration:	V
Cooling:	Liquid
Horsepower:	1240

The P40 (often better known as the “Flying Tiger” for its service in Asia and the Pacific) saw limited action in the European theater - mainly in North Africa and Italy – but it was a mainstay of Allied air presence in the early years of the Asia/Pacific war.

It won an indelible name for itself in China with Claire Chennault’s American Volunteer Group. Improved tactics also made it competitive against even the redoubtable A6M Zero after the first onslaughts taught Allied fliers the lessons required to fight effectively against its foe.

More advanced aircraft eventually supplanted the P40 in the later years of the war, but its place in history – and in legend – cannot be denied.

The P51 Mustang

WW II Aircraft

Referred to As:	P51			Nickname:	Mustang		
Built By:	N. American	Country:	USA	Designation:	F		
Made In:	California & Elsewh	Length:	32 FT	Wingspan:	38 FT		
Empty #:	7365	Loaded #:	12100	Ord Load #:	1000		
Crew:	1	Range:	1650	Notes:	6 .50 Cal MG		
Max SPD:	440	Cruising:	362				
Ceiling:	41900						
# Built:	15000	Prototype:	1940	Engines:	1	Configuration:	V
Cost:	40000	Service:	1942	Cylinders:	12	Cooling:	Liquid
Theaters:	All			Displ:	0	Horsepower:	1720

The P51 was so pivotal over the skies of Europe in 1944-45 that its use in the Asia/Pacific theater was limited to the late months of the war. As a ground-based aircraft, its utility in a theater where so much of the air combat involved carrier-launched planes was limited. But it did perform good service in China and also as a fighter escort for B29s bombing Japan later in the war.

The P51 holds a special place in the history of the Air War in Europe and remains a legendary aircraft for that service – and its long post-war record as a high-performance single engine propeller plane. (It was still setting records in 2013.) By the time it appeared in the Pacific, however, the issue had long been decided.

The P47 Thunderbolt

WW II Aircraft

Referred to As:	P47	Nickname:	Thunderbolt		
Built By:	Republic	Country:	USA	Designation:	F
Made In:	Long Island	Length:	39 FT	Wingspan:	41 FT
Empty #:	10000	Loaded #:	17500	Ord Load #:	2500
Crew:	1	Range:	1030	Notes:	8 .50 Cal MG
Max SPD:	426	Cruising:	290		
Ceiling:	42000				
# Built:	15636	Prototype:	1941	Engines:	1
Cost:	85000	Service:	1942	Cylinders:	18
Theaters:	All			Displ:	0

Configuration:	Radial
Cooling:	Air
Horsepower:	2000

The P47 Thunderbolt (or “Jug” as the pilots called her) was one of the more remarkable – if not one of the truly great – airplanes of the war. Like almost all of the Allied ground-based planes of the war, it was designed mainly for the European theater where it earned its reputation in many roles. But P47s did serve in the Pacific theater – although with nothing like the importance or impact it earned in the skies over Europe. The preference among Pacific USAAF fighter pilots for the P38 Lightning meant that there was only one USAAF fighter group in the Pacific theater for most of the war.

Multi-Role

P38 Lightning

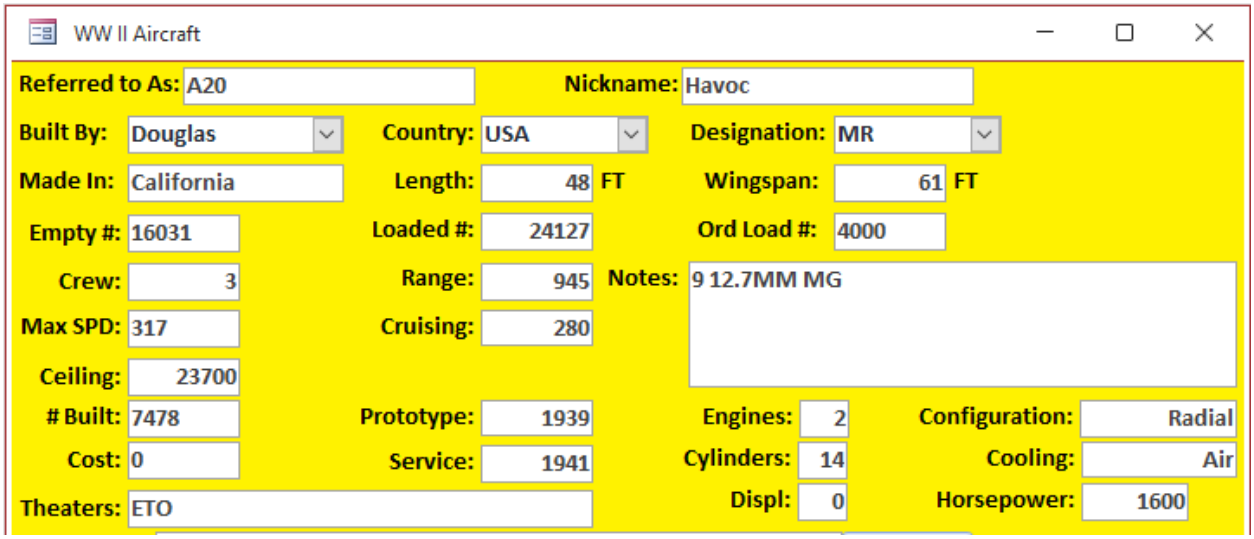
WW II Aircraft

Referred to As:	P38			Nickname:	Lightning		
Built By:	Lockheed	Country:	USA	Designation:	MR		
Made In:	Californina	Length:	38 FT	Wingspan:	52 FT		
Empty #:	12800	Loaded #:	21600	Ord Load #:	3000		
Crew:	1	Range:	1300	Notes:	Multiple Configs		
Max SPD:	414	Cruising:	275				
Ceiling:	44000						
# Built:	10037	Prototype:	1939	Engines:	2	Configuration:	V
Cost:	120000	Service:	1941	Cylinders:	12	Cooling:	Liquid
Theaters:	All			Displ:	0	Horsepower:	1600

The P38 was an unconventional fighter design, and it rapidly evolved into a multi-purpose aircraft. It performed admirably in Europe, winning the first American kill of a Luftwaffe plane (flying out of Iceland), and was also effective in reconnaissance, close air support and tactical bombing missions against bridges, rail and battlefield targets.

But the plane was BELOVED in the Pacific. It had an ordnance load that exceeded the light bombers – and equaled the B25. The huge expanses of open water made a second engine a huge advantage. Based on decrypted Japanese signals, a squadron of P38s was sent to shoot down Admiral Yamamoto at extreme range. Their success secured the legend of the plane.

Douglas A20 Havoc



By comparison with later designs, the A20 was a bit of a dinosaur. That said, given the maxim “one plane is better than no planes” it gave a good accounting of itself on many fronts.

The A20 carried a respectable bomb load, but its low speed and short ranged limited its effectiveness as a strategic weapon once the more advanced bombers began to appear. But in the first years of the war, it was one of the few US combat aircraft available in quantity – even though most were sold to the RAF until 1941. Its role in the Pacific was limited to the early days, when the Allies had few aircraft.

In the Pacific, the A20 required modification to be used effectively in the theater, but by transforming it into a ground attack plane and marine commerce raider the USAAF turned it into one of the more effective offensive weapons of the war.

Medium Bombers

B25 North American Mitchell

WW II Aircraft

Referred to As:	B25	Nickname:	Mitchell		
Built By:	N. American	Country:	USA	Designation:	MB
Made In:	California	Length:	52 FT	Wingspan:	68 FT
Empty #:	19480	Loaded #:	35000	Ord Load #:	3000
Crew:	5	Range:	1350	Notes:	<=18 .50 Cal MG, 75MM
Max SPD:	272	Cruising:	230		
Ceiling:	24200				
# Built:	9816	Prototype:	1939	Engines:	2
Cost:	122000	Service:	1942	Cylinders:	14
Theaters:	All			Displ:	0

Configuration:	Radial
Cooling:	Air
Horsepower:	1700

The B25 will always be remembered for the 16 of them that raided Japan off the deck of the Hornet in 1942. This “pin prick” had is greatest impact as a propaganda victory for the US, which had suffered 5 months of setbacks since the attack on Pearl Harbor.

The B25 saw action in virtually every theater of the war. While it was the quintessential Medium Bomber, in the Pacific some B25s were converted to strafing platforms. No bombs, just a lot of machine guns. This weaponry was particularly suitable in a war over airfields and the planes parked on them.

Like so many US planes, it had a legendary capacity to take punishment. As in Europe, this made it a popular aircraft among pilots and crews. B25’s configured especially for the Navy & Marines were called PBJs. (Patrol Bomber, with J designating the manufacturer North American.)

B26 Marauder

WW II Aircraft

Referred to As:	B26			Nickname:	Maurader		
Built By:	Martin	Country:	USA	Designation:	MB		
Made In:	Baltimore/Omaha	Length:	52 FT	Wingspan:	68 FT		
Empty #:	19480	Loaded #:	35000	Ord Load #:	4000		
Crew:	7	Range:	1150	Notes:	11 .50 CAL MG		
Max SPD:	287	Cruising:	216				
Ceiling:	21000						
# Built:	5288	Prototype:	1940	Engines:	2	Configuration:	Radial
Cost:	103000	Service:	1941	Cylinders:	18	Cooling:	Air
Theaters:	All			Displ:	0	Horsepower:	2200

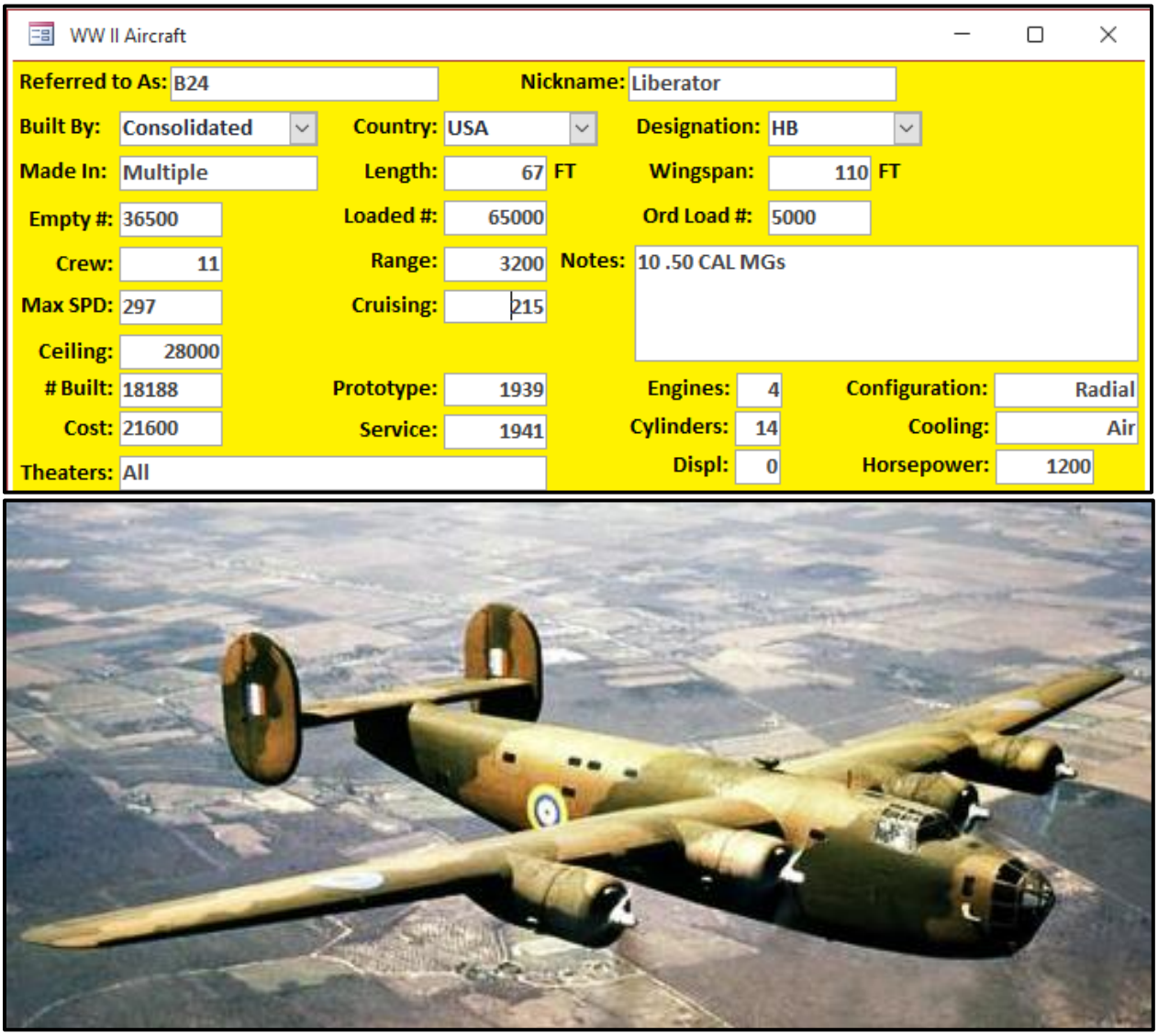
The B26 has one of the more interesting histories of any WWII plane. Its design gave it truly advanced performance – rather like a fighter with a medium bomber's load capacity. But this performance came at a cost. The plane was VERY hard to fly – particularly at landing and takeoff – where the speeds required were nearly half again those of similar planes. The sobriquet "Widowmaker" was applied in the early days, as was the saying "One a day in Tampa Bay." Flying training missions out of McDill Field (now McDill AFG – home of CENTCOM) seventeen B26s ditched in Tampa Bay during May 1942.

A combination of design improvements and better training turned the B26 into one of the most effective medium bombers of the war. Its capacity for high-speed, low-level precision bombing made it a deadly weapon in attacks on bridges in Italy and France, but while it was used in the Pacific early in the war (it was one of the few planes we had) the B25 and A20 ended up as the main 2 engine planes used.

Future President Lyndon B. Johnson barely escaped death on a B26 mission over New Guinea early in the war. And the plane he was originally slated to ride on was shot down with all crew lost on the same mission.

Heavy Bombers

B24 Liberator



Fliers loved the Flying Fortress. Generals loved the Liberator. It was much harder to fly and – according to Luftwaffe pilots – easier to shoot down. The vulnerable point was where the wings joined the fuselage.

But the Liberator had "longer legs", was slightly faster carrying similar loads and was particularly effective over water. The Fortresses delivered more bombs over Europe than the B24s, but the Liberators played a major role in the Battle of the Atlantic – where their long range and flexibility helped turn the tide.

Nearly half again as many Liberators were produced as B17s, in part reflecting its range – which made it more suitable for missions in the Asia/Pacific theater. No B17s flew combat missions in the Asia/Pacific theater after September 1943, while the Liberators remained in use until the end of the war.

B17 Flying Fortress

WW II Aircraft

Referred to As:	B17			Nickname:	Flying Fortress		
Built By:	Boeing	Country:	USA	Designation:	HB		
Made In:	Multiple	Length:	75 FT	Wingspan:	104 FT		
Empty #:	36145	Loaded #:	65000	Ord Load #:	4500		
Crew:	10	Range:	2000	Notes:	<= 13 .50 Cal MG		
Max SPD:	287	Cruising:	182				
Ceiling:	35600						
# Built:	12731	Prototype:	1936	Engines:	4	Configuration:	Radial
Cost:	204000	Service:	1938	Cylinders:	9	Cooling:	Air
Theaters:	All			Displ:	0	Horsepower:	750

For a plane with the incomparable lore that now surrounds the B17, it barely made it into combat.

The B17 prototype electrified the world when it flew from San Diego to Dayton, Ohio in 1935 at an average speed of 235 MPH. This kind of performance was unheard of at the time – particularly for a four-engine plane of this size. (Germans would call B17s “Four Motors.”)

The B17 legend was built flying over Europe. There were some B17s in the Pacific at the outbreak of the war and they were used sporadically until September 1943. By that time they had been phased out by B24s, which were more suitable for the long distances flown by combat planes in the Pacific.

B29 Superfortress

WW II Aircraft

Referred to As:	B29	Nickname:	Superfortress		
Built By:	Boeing	Country:	USA	Designation:	HB
Made In:	Seattle	Length:	99 FT	Wingspan:	141 FT
Empty #:	74500	Loaded #:	133500	Ord Load #:	20000
Crew:	11	Range:	3250	Notes:	10 .50 CAL, 1 20 MM MG
Max SPD:	357	Cruising:	220		
Ceiling:	31850				
# Built:	3970	Prototype:	1942	Engines:	4
Cost:	750000	Service:	1944	Cylinders:	18
Theaters:	PAC			Displ:	0

Configuration:	Radial		
Cooling:	Air		
Horsepower:	2200		

While the P40 did see some limited action in the European Theater – mainly in N. Africa and Italy – the B29 never flew a mission in Europe. But its role in the overall air power competition, and in the evolution of strategic bombing doctrine, requires its inclusion in this list.

The development of the 2 main US Heavy Bombers (B17 & B24) along with the introduction of the Avro Lancaster in the RAF led to a belief that a "super-heavy" bomber – with longer range and greater load capacity – would eventually be needed. This was especially in the Pacific theater where targets might be thousands of miles across the ocean. And when development began, no one knew how long it would take to subdue Japan.

Early development was plagued by engine problems – which were never completely solved. The engines were double layer radial – one circle of cylinders in front of the other. This made keeping the rear circle cool problematic and they were, as a result, prone to fire.

The B29 was a gigantic leap forward from its predecessors in design, range, ordnance load and speed. It was the first fully pressurized heavy bomber. Since crew occupied the spaces in front AND BEHIND the bomb bay (which had to be exposed to the outside atmosphere) a pressurized crawl space connected the crew areas. Defensive weapons were now fired from a centralized targeting mechanism – a precursor to today's highly automated fire control systems. And, of course, it is the plane that delivered both the Hiroshima and Nagasaki atomic bombs – which no earlier heavy bomber could have done.

But the most astonishing – and significant – thing about the B29 was its cost. At $750,000 per bomber produced, it was more than twice as expensive as the B17. Indeed, the total of nearly $3 Billion dollars spent on its development and production is around TWICE that of the Manhattan Project – which created the bombs themselves.

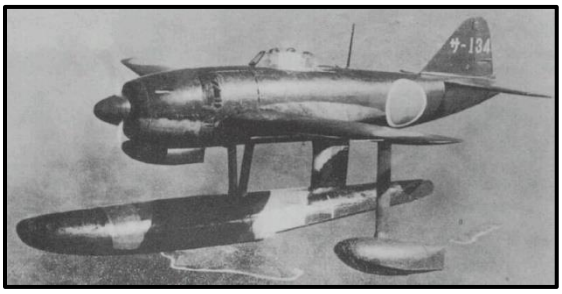
The B29 speaks to American industry. US industrial resources were so vast that the most expensive military project in history could be undertaken – not just by the nation – but by the SAME COMPANY that was pouring out 16 B17s A DAY. But there is no denying that the B29 was rushed into production and rushed into operation and its early operational record reflects that haste. Ultimately, however, it became decisive when the Allies finally captured islands within range of the Japanese homeland. In addition to the two atomic bombs, B29s also delivered millions of incendiaries in fire bombings across the length and breadth of Japan. Less know is the B29s role in delivering mines into Japanese shipping lanes – an effort that ultimately proved to be the single most effective campaign in terms of assets expended for enemy losses caused.

Kawanishi N1K/NIK-J

WW II Aircraft

Referred to As:	NK1/NK1J	Nickname:	Rex/George		
Built By:	Kawanishi	Country:	Japan	Designation:	F
Made In:	Hyodo Japan	Length:	29 FT	Wingspan:	39 FT
Empty #:	6387	Loaded #:	8598	Ord Load #:	550
Crew:	1	Range:	670	Notes:	4 20MM
Max SPD:	355	Cruising:	390		
Ceiling:	39400				
# Built:	3000	Prototype:	1942	Engines:	1
		Service:	1943	Cylinders:	18
Theaters:	PAC				

Configuration:	Radial
Cooling:	Air
Horsepower:	1975

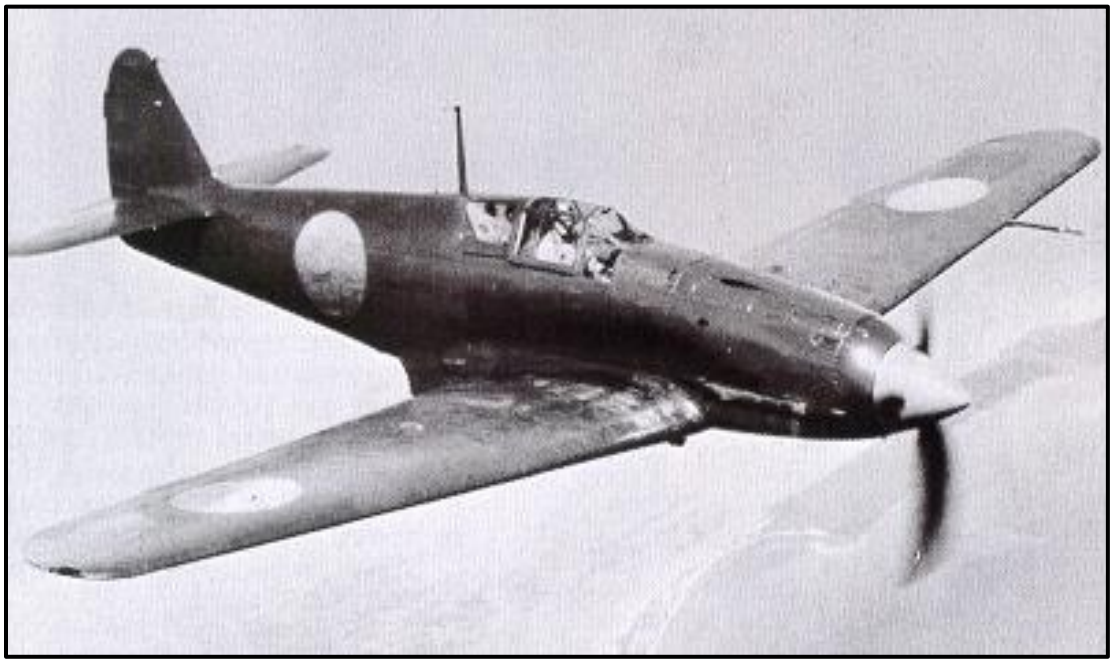


The NK1 series is emblematic of the problems facing Japanese aircraft manufactures during the war. The NK1 started out life as a float plane – reflecting the extensive Japanese empire, much of it over water or islands without airfields. As the war progressed, the need for float planes diminished and the need for defensive fighter aircraft increased. Later versions of the NKI – as shown at right – proved formidable opponents against American F6F Hellcats and F4U Corsairs. By that time, however, Japan's problem was not aircraft but pilots, as the NK1 – like many later production Japanese aircraft – was too much for most of the pilots who flew it.

Kawasaki KI-61

WW II Aircraft

Referred to As:	KI61 Hein (Flying Swallow)			Nickname:	Tony		
Built By:	Kawasaki	Country:	Japan	Designation:	F		
Made In:	Akashi	Length:	29 FT	Wingspan:	39 FT		
Empty #:	5798	Loaded #:	7650	Ord Load #:	550		
Crew:	1	Range:	360	Notes:	2 20MM, 2 .50 Cal		
Max SPD:	360	Cruising:	300				
Ceiling:	38100						
# Built:	3078	Prototype:	1941	Engines:	1	Configuration:	In Line
		Service:	1942	Cylinders:	12	Cooling:	Liquid
Theaters:	PAC					Horsepower:	1159



Only liquid cooled in line V produced by Japan. US thought it was a 109. This was a high performing plane that proved Kurt Tank's notions. In the harsh combat conditions of SE Asia and the Pacific, it was a nightmare to keep operational. 18/30 sent from Truk to Rabaul lost in transit. High incidence of non-combat losses. But when it DID work, Allied pilots hated it and recognized it as a high-performance aircraft.

Nakajima KI43 Oscar (Hayabusa)

WW II Aircraft

Referred to As:	KI43			Nickname:	Oscar (Hayabusa)		
Built By:	Nakajima	Country:	Japan	Designation:	F		
Made In:	Tokyo	Length:	29 FT	Wingspan:	36 FT		
Empty #:	4211	Loaded #:	5710	Ord Load #:	550		
Crew:	1	Range:	1090	Notes:	2-3 7.7 MM. 20MM Later		
Max SPD:	330	Cruising:	270				
Ceiling:	36700						
# Built:	5919	Prototype:	1941	Engines:	1	Configuration:	Radial
		Service:	1941	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	1300

A fighter that was often mistaken for the A6M Zero, the Oscar – called Hyabusa (Peregrine Falcon) by the Japanese – saw significant use early in the war. And while the Zero is by far the more famous plane, it is generally considered a “Navy” aircraft while the Oscar was an “Army” plane – and the most widely used Army fighter of the war.

Like the Zero, the Oscar enjoyed early success against weak – or no – opposition. But it lacked armor, self-sealing fuel tanks and other protective features that were standard on later Japanese aircraft and on all but the earliest Allied aircraft.

Nakajima KI84 Frank

WW II Aircraft

Referred to As:	KI84	Nickname:	Frank		
Built By:	Nakajima	Country:	Japan	Designation:	F
Made In:	Tokyo	Length:	33 FT	Wingspan:	37 FT
Empty #:	5864	Loaded #:	7940	Ord Load #:	550
Crew:	1	Range:	1347	Notes:	2 12.7/2 20MM
Max SPD:	427	Cruising:	350		
Ceiling:	38799				
# Built:	3514	Prototype:	1943	Engines:	1
		Service:	1944	Cylinders:	18
Theaters:	PAC				

Configuration:	Radial
Cooling:	Air
Horsepower:	2041

The KI84 Frank – called the Hayate ("Gale") by the Japanese – was Japan's fastest fighter of the war. Unfortunately for Japan, by the time it was released in 1944 Japan was already strapped for both pilots and the high-octane fuel required by the Frank and other late-war Japanese aircraft designs.

The plane had a temperamental engine that required constant attention, and pilots learned to land the plane with care due to an under-engineered landing gear. But when operating at design level and flown by a talented pilot it was one of Japan's most formidable fighters and one of the few that could reach B29s at maximum altitude.

Nakajima KI27 Nate

WW II Aircraft

Referred to As:	KI27	Nickname:	Nate		
Built By:	Nakajima	Country:	Japan	Designation:	F
Made In:	Tokyo	Length:	25 FT	Wingspan:	37 FT
Empty #:	2447	Loaded #:	3946	Ord Load #:	55
Crew:	1	Range:	390	Notes:	2 7.7MM MG
Max SPD:	290	Cruising:	220		
Ceiling:	16000				
# Built:	3368	Prototype:	1936	Engines:	1
		Service:	1937	Cylinders:	9
Theaters:	PAC				

Configuration:	Radial
Cooling:	Air
Horsepower:	710

As suggested by the picture quality, the Nate played its main role before WWII was actually engaged in earnest with the Pearl Harbor invasion. They were already proven inferior to even early Soviet aircraft late in the China campaign. Despite their increasing obsolescence, Nate's were still around in 1945 to be loaded with explosives for use as Kamikazes.

Mitsubishi G4M Betty

WW II Aircraft

Referred to As:	G4M			Nickname:	Betty		
Built By:	Mitsubishi	Country:	Japan	Designation:	MB		
Made In:	Tokyo	Length:	65 FT	Wingspan:	82 FT		
Empty #:	14861	Loaded #:	20944	Ord Load #:	1900		
Crew:	7	Range:	1772	Notes:	1 20MM, 4 7.7 MM		
Max SPD:	266	Cruising:	196				
Ceiling:	0						
# Built:	2435	Prototype:	1939	Engines:	2	Configuration:	Radial
		Service:	1941	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	1530

With the A6M Zero (also manufactured by Mitsubishi) the G4M Betty medium bomber was Japan's most consequential airplane of the war. A descendent of the G3M Nell which had preceded it, the G4M was Japan's quintessential "Medium Bomber" – akin to the USA's B25 North American Mitchell and Germany's JU88 Wonder Bomber. The G4M won its longer range (nearly 1800 miles, half-again that of the other two planes) at the cost of lower bomb load and lighter armor.

The G4M was everywhere during the war, played a key role in combat from the campaigns in Malaya and the DEI to Okinawa and was the plane on which Admiral Yamamoto was caught and shot down by US 5th Air Force P38s.

Mitsubishi KI51 Sonia

WW II Aircraft

Referred to As:	KI51			Nickname:	Sonia		
Built By:	Mitsubishi	Country:	Japan	Designation:	LB		
Made In:	Tokyo	Length:	30 FT	Wingspan:	40 FT		
Empty #:	4129	Loaded #:	6169	Ord Load #:	440		
Crew:	2	Range:	660	Notes:	3 7.7 or later MGs		
Max SPD:	263	Cruising:	200				
Ceiling:	27130						
# Built:	2385	Prototype:	1939	Engines:	1	Configuration:	Radial
		Service:	1940	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	910

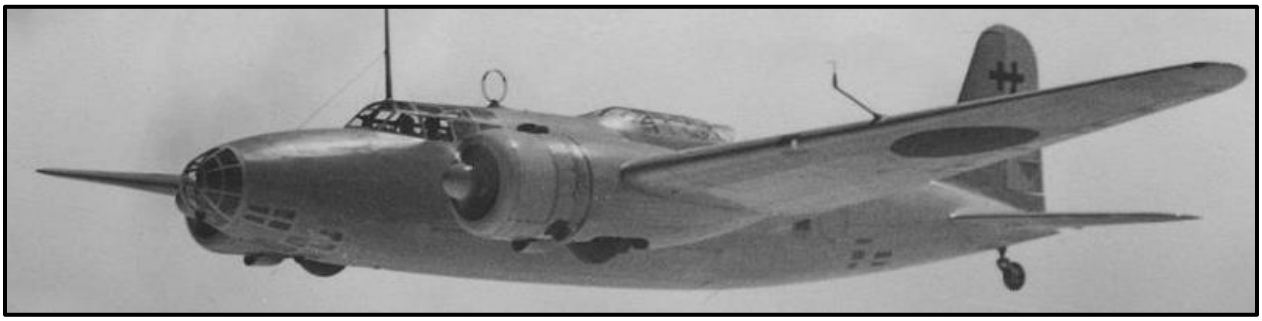
The Sonia was a light/dive bomber. It saw its most effective action early in the war. Too slow to compete with Allied aircraft, it was deployed as a ground support aircraft in the CBI theater and – like many other older Japanese planes (and eventually all of them) – ultimately as a Kamikaze.

The plane has two interesting distinctions. A Sonia was shot down by Charles Lindberg, flying in the Pacific as a civilian. He is the only US Civilian to shoot down an enemy plane in combat. A Sonia also recorded the last sinking of a US ship – the submarine Bullhead – on the day of the Hiroshima bombing.

Mitsubishi KI21 Sally

WW II Aircraft

Referred to As:	KI21			Nickname:	Sally		
Built By:	Mitsubishi	Country:	Japan	Designation:	MB		
Made In:	Tokyo	Length:	53 FT	Wingspan:	74 FT		
Empty #:	13382	Loaded #:	23369	Ord Load #:	2200		
Crew:	5	Range:	1700	Notes:	5 7.7/1 12.7 MG		
Max SPD:	301	Cruising:	240				
Ceiling:	33000						
# Built:	2064	Prototype:	1936	Engines:	2	Configuration:	Radial
		Service:	1938	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	1500



It's instructive that the Sally was built by Mitsubishi in response to a government request for a "Heavy Bomber." Its bomb load was only 2200 pounds, and this only in later models. This would have classed it as a medium bomber in the US Air Force.

The Sally played most of its role in Japan's early campaigns in China and Southeast Asia. While it flew missions to the end of the war, its later impact was slight. Also instructive is the fact that Allied fliers originally named the plane "Jane" – but changed it to Sally when MacArthur objected because Jane was his wife's name!

Yokosuka D4Y Judy

WW II Aircraft

Referred to As:	D4Y			Nickname:	Judy		
Built By:	Yokosuka	Country:	Japan	Designation:	MR		
Made In:	Yokosuka	Length:	35 FT	Wingspan:	38 FT		
Empty #:	5379	Loaded #:	9370	Ord Load #:	1100		
Crew:	2	Range:	910	Notes:	3 7+MM MG		
Max SPD:	340	Cruising:	290				
Ceiling:	35100						
# Built:	2038	Prototype:	1940	Engines:	1	Configuration:	In Line
		Service:	1942	Cylinders:	12	Cooling:	Liquid
Theaters:	PAC					Horsepower:	1400

While not released until 1942, the Judy was a late 1930s design and this was reflected in its performance. Like most Japanese planes, early versions lacked any armor or self-sealing fuel tanks.

Designed as a dive bomber, the Judy proved just as useful as a reconnaissance aircraft and in night fighting.

The plane was a carrier based aircraft, and despite its defensive vulnerability it is credited with an important hit on the USS Franklin aircraft carrier and also actually SUNK the USS Princeton. At the same time, it was 6 Judys that were shot down by Alex Vraciu in 8 minutes at the Marianas Turkey Shoot. The plane was not competitive against top line Allied fighters.

Kawasaki KI48 Lily

WW II Aircraft

Referred to As:	KI48			Nickname:	Lily		
Built By:	Kawasaki	Country:	Japan	Designation:	LB		
Made In:	Tokyo	Length:	42 FT	Wingspan:	57 FT		
Empty #:	10031	Loaded #:	14881	Ord Load #:	1764		
Crew:	4	Range:	1500	Notes:	3 7.7 MM MG		
Max SPD:	314	Cruising:	280				
Ceiling:	33100						
# Built:	1997	Prototype:	1940	Engines:	2	Configuration:	Radial
		Service:	1941	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	1130

A “Light Bomber”, the Lily shared the same shortcomings of many other early Japanese designs: Poor armor, lack of self-sealing fuel tanks and generally poor performance against the more advanced Allied aircraft that appeared by 1943. The plane saw action in all of the early Japanese theaters – China, Southeast Asia, Malaya, Burma and the Dutch East Indies. As with almost all Japanese aircraft, there were still some around to join in the Kamikaze raids in the last year of the war.

Mitsubishi KI46 Dinah

WW II Aircraft

Referred to As:	KI46	Nickname:	Dinah		
Built By:	Mitsubishi	Country:	Japan	Designation:	REC
Made In:	Tokyo	Length:	38 FT	Wingspan:	46 FT
Empty #:	7194	Loaded #:	12787	Ord Load #:	0
Crew:	2	Range:	1540	Notes:	
Max SPD:	375	Cruising:	250		
Ceiling:	35170				
# Built:	1742	Prototype:	1939	Engines:	2
		Service:	1971	Cylinders:	14
Theaters:	PAC				

Configuration:	Radial
Cooling:	Air
Horsepower:	1050

The Dinah is something of a curiosity in that it was specifically designed as a reconnaissance aircraft. It saw use in the early theaters of the war, but – like so many early Japanese designs – proved no match for US Hellcats and Mustangs in the later years of the war. Like virtually all Japanese aircraft, those that survived until 1944 were eventually pressed into use a Kamikazes.

Aichi D3A Val

WW II Aircraft

Referred to As:	D3A			Nickname:	Val		
Built By:	Aichi	Country:	Japan	Designation:	LB		
Made In:	Nagoya	Length:	33 FT	Wingspan:	47 FT		
Empty #:	5666	Loaded #:	8378	Ord Load #:	810		
Crew:	2	Range:	840	Notes:	3 7.7 MM MG		
Max SPD:	270	Cruising:	240				
Ceiling:	34400						
# Built:	1495	Prototype:	1938	Engines:	1	Configuration:	Radial
		Service:	1940	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	1300

The D3A Val was Japan's primary carrier-based dive bomber and participated in virtually every battle in which the Imperial Japanese Naval Air Force was engaged – beginning with Pearl Harbor. It was an early design, as reflected by the non-retractable landing gear and relatively short range. It was slow by the standards of more recent Japanese and US designs and was no match for US fighters, but despite its limitations it accounted for more US ships sunk than any other Japanese aircraft.

Kawasaki KI45 Nick

WW II Aircraft

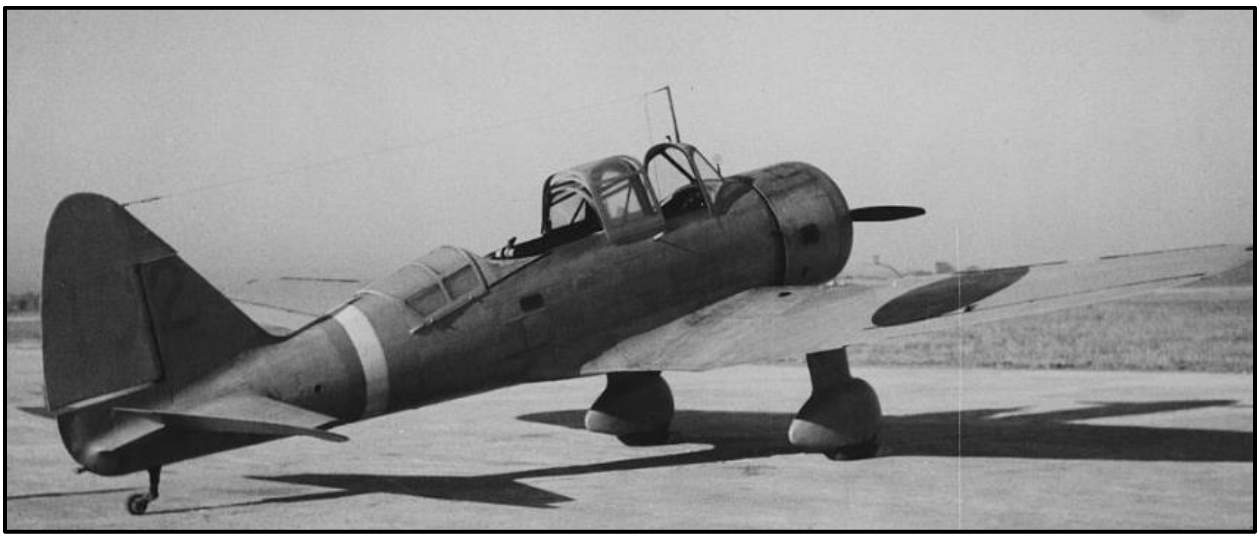
Referred to As:	KI45	Nickname:	Nick				
Built By:	Kawasaki	Country:	Japan	Designation:	MR		
Made In:	Tokyo	Length:	36 FT	Wingspan:	49 FT		
Empty #:	8818	Loaded #:	19445	Ord Load #:	0		
Crew:	2	Range:	1200	Notes:	1 37MM, 1 20MM, 1 7.92MM		
Max SPD:	340	Cruising:	290				
Ceiling:	33000						
# Built:	1701	Prototype:	1939	Engines:	2	Configuration:	Radial
		Service:	1971	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	1050

Like many other “heavy fighters” the KI45 Nick proved to be a poor competitor for even the earliest single-engine fighters. As such, it was eventually relegated to use as a night fighter and interceptor plane – targeted to roles where it was less likely to encounter enemy aircraft. Even the earliest P40 fighters flown by Allied troops in Southeast Asia found the Nick to be easy prey. The plane was eventually converted to carry a 37MM anti-tank gun, which was devastating against enemy planes but required manual loading which limited its effectiveness. That and the plane’s lack of any radar capability brought an end to its widespread use.

Tachikawa KI36 Ida

WW II Aircraft

Referred to As:	KI36			Nickname:	Ida		
Built By:	Tachikawa	Country:	Japan	Designation:	MR		
Made In:	Tokyo	Length:	26 FT	Wingspan:	39 FT		
Empty #:	2749	Loaded #:	3660	Ord Load #:	772		
Crew:	2	Range:	767	Notes:	2 7.7 MM MG		
Max SPD:	216	Cruising:	146				
Ceiling:	26740						
# Built:	1334	Prototype:	1939	Engines:	1	Configuration:	Radial
		Service:	1939	Cylinders:	9	Cooling:	Air
Theaters:	PAC					Horsepower:	510

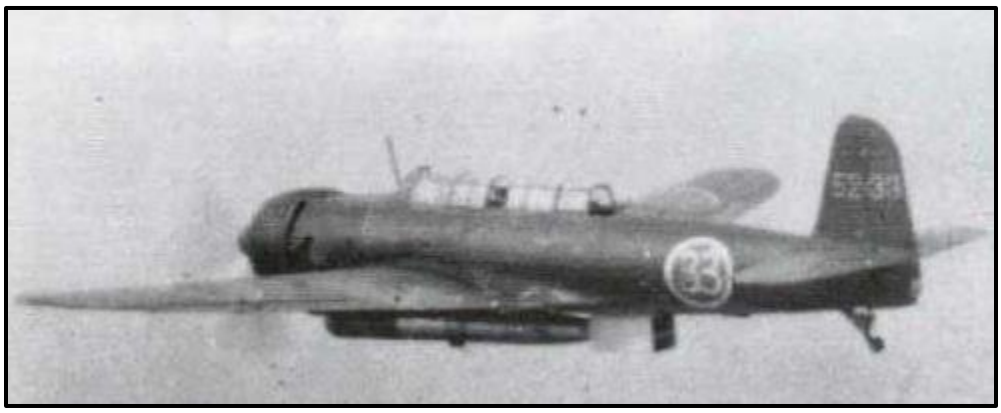


The KI36 Ida was another early Japanese plane design that could not cut it against even the earliest Allied opposition. The plane was under-powered, poorly armed with 7.7 MM machine guns (basically 30 Caliber against the US 50 Caliber guns). For these reasons it was quickly relegated to battle areas like China and Southeast Asia where it was less likely to encounter stout fighter opposition. It was called an “Army Cooperation Aircraft” by the Japanese, since they never could figure out what to do with it.

Nakajima B6N Jill

WW II Aircraft

Referred to As:	B6N			Nickname:	Jill		
Built By:	Nakajima	Country:	Japan	Designation:	TPB		
Made In:	Tokyo	Length:	49 FT	Wingspan:	36 FT		
Empty #:	6636	Loaded #:	12456	Ord Load #:	1760		
Crew:	3	Range:	1085	Notes:	2 7.7 MM MG		
Max SPD:	300	Cruising:	207				
Ceiling:	29660						
# Built:	1268	Prototype:	1941	Engines:	1	Configuration:	Radial
		Service:	1943	Cylinders:	15	Cooling:	Air
Theaters:	PAC					Horsepower:	1850



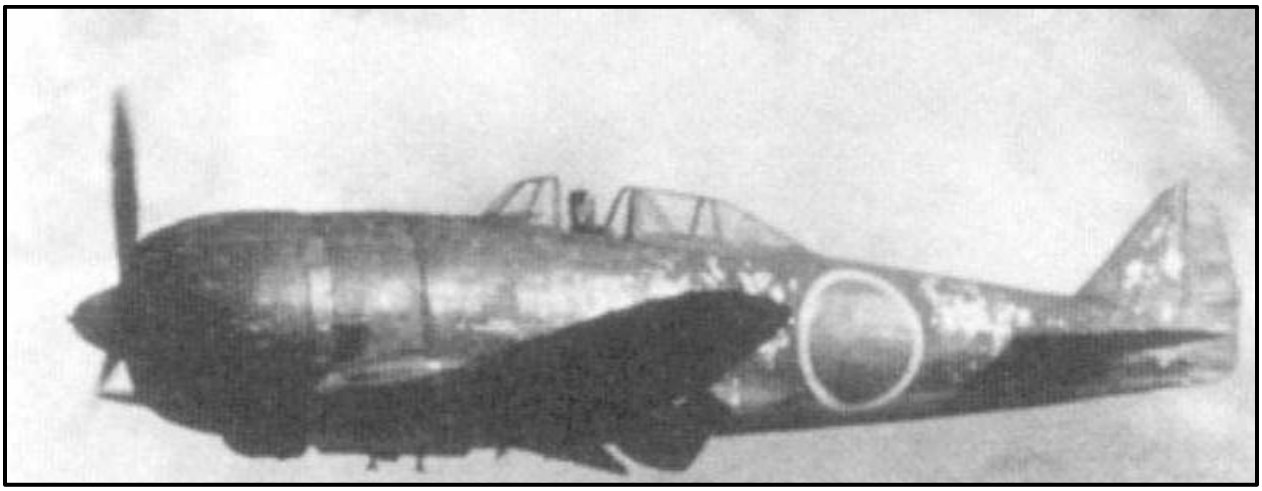
The B6N Jill was the successor to the B5N Kate as Japan's key carrier-based torpedo bomber. A late design, by the time it was introduced into combat in August 1943, Allied superiority in both planes and pilots gave it a harsh reception. Of 40 Jills sent to attack the Allied forces landing in Bougainville in November 1943, only 4 ultimately returned to base. Jills suffered even worse losses in the Marianas Turkey Shoot – the central tale in the Battle of the Philippine Sea.

And, again, the Jills that survived until the last year of the war were forced into service a Kamikazes.

Nakajima KI44 Tojo

WW II Aircraft

Referred to As:	KI44			Nickname:	Tojo		
Built By:	Nakajima	Country:	Japan	Designation:	F		
Made In:	Tokyo	Length:	29 FT	Wingspan:	31 FT		
Empty #:	4643	Loaded #:	6598	Ord Load #:	0		
Crew:	1	Range:	750	Notes:	4 12.7 MM MG		
Max SPD:	376	Cruising:	250				
Ceiling:	36700						
# Built:	1225	Prototype:	1940	Engines:	1	Configuration:	Radial
		Service:	1942	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	1519



As indicated by the poor quality of the photo, not a lot of KI44 Tojos were built (only 1225) and fewer still photographed. The Tojo was a transitional aircraft – better than earlier designs, but still not up to the task. It entered service in 1942 and was already on the way out by 1944 when supplanted by more advanced designs. Not a single example of this aircraft survives in a museum or landing ground today.

Nakajima K5N Kate

WW II Aircraft

Referred to As:	B5N	Nickname:	Kate				
Built By:	Nakajima	Country:	Japan	Designation:	TPB		
Made In:	Tokyo	Length:	34 FT	Wingspan:	51 FT		
Empty #:	5024	Loaded #:	9039	Ord Load #:	1760		
Crew:	3	Range:	608	Notes:	3 7.7 MM MG		
Max SPD:	235	Cruising:	161				
Ceiling:	27100						
# Built:	1149	Prototype:	1937	Engines:	1	Configuration:	Radial
		Service:	1938	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	1000

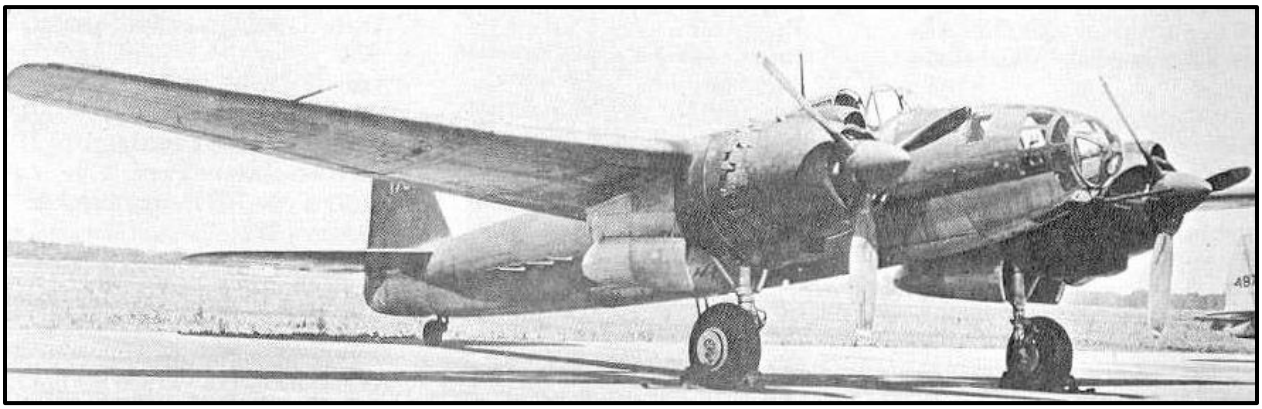
Over 10% of the B5N Kates produced by Japan (143 to be exact) participated in the raid on Pearl Harbor. The Kate was Japan's principal carrier-based torpedo bomber, and it proved its worth at Pearl. It also played key roles at Coral Sea, Midway and the Santa Cruz Islands near Guadalcanal.

The original Kate was introduced in 1938 and used as a land-based bomber in the war in China. It was eventually replaced by the B6N Jill, a transition that took too long for Japanese needs. Surviving aircraft were – as always – pressed into service as Kamikazes in the last months of the war.

Yokosuka P1Y1 Frances

WW II Aircraft

Referred to As:	P1Y1			Nickname:	Frances		
Built By:	Yokosuka	Country:	Japan	Designation:	MB		
Made In:	Yokosuka	Length:	66 FT	Wingspan:	49 FT		
Empty #:	16017	Loaded #:	29762	Ord Load #:	2205		
Crew:	3	Range:	3340	Notes:	1 20 MM/1 13 MM MG		
Max SPD:	340	Cruising:	230				
Ceiling:	30800						
# Built:	1102	Prototype:	1943	Engines:	2	Configuration:	Radial
		Service:	1944	Cylinders:	18	Cooling:	Air
Theaters:	PAC					Horsepower:	1825

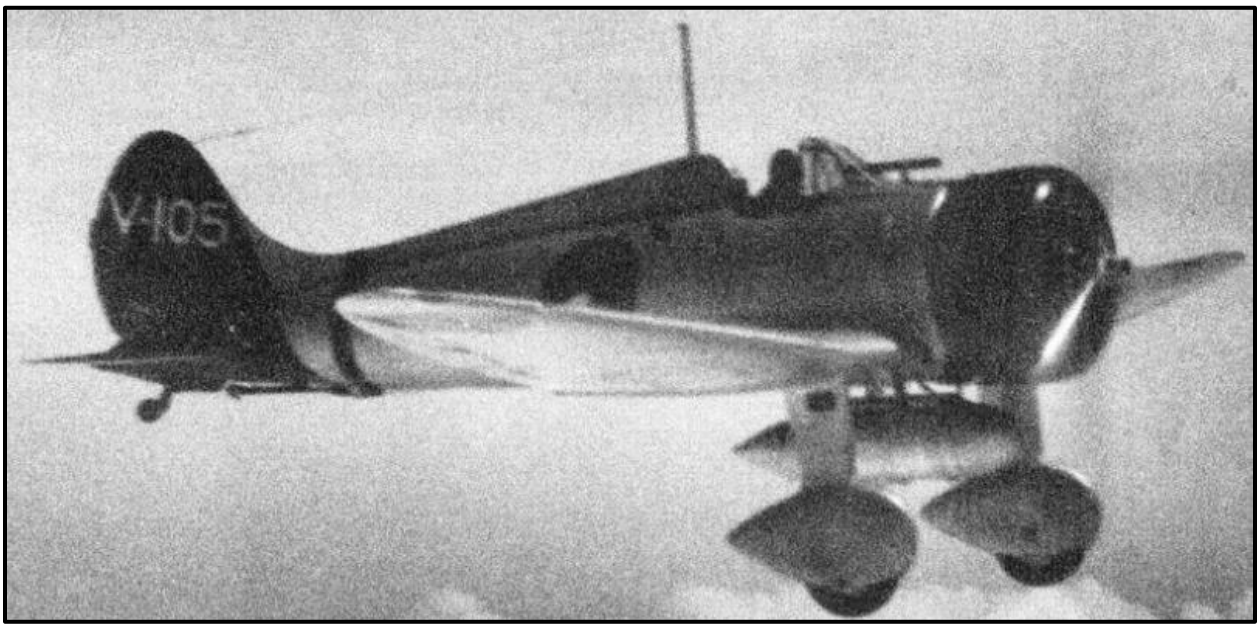


The P1Y1 Frances was a failed attempt to improve on the G4M Betty. The plane was supposed to have fighter speed, but medium bomber ordnance capacity. The attempt to create such an aircraft proved a challenge to every air force that attempted it. Like so many Japanese designs, it ended its operational life as a Kamikaze.

Mitsubishi A5M Claude

WW II Aircraft

Referred to As:	A5M			Nickname:	Claude		
Built By:	Mitsubishi	Country:	Japan	Designation:	F		
Made In:	Tokyo	Length:	25 FT	Wingspan:	36 FT		
Empty #:	2681	Loaded #:	3684	Ord Load #:	66		
Crew:	1	Range:	746	Notes:	1 7.7 MM MG		
Max SPD:	270	Cruising:	240				
Ceiling:	32200						
# Built:	1094	Prototype:	1935	Engines:	1	Configuration:	Radial
		Service:	1936	Cylinders:	9	Cooling:	Air
Theaters:	PAC					Horsepower:	710



The A5M Claude has the distinction of being the first “low wing” monoplane ship board fighter to enter active service. It was the precursor to the more famous A6M Zero, but racked up an impressive record against inferior planes in China in the late 1930s. The plane was normally flown with an open cockpit – as shown above – and the landing gear was not retractable. The Claude’s last combat action – aside from use as a Kamikaze – was at Coral Sea in May of 1942.

Mitsubishi G3M Nell

WW II Aircraft

Referred to As:	G3M			Nickname:	Nell		
Built By:	Mitsubishi	Country:	Japan	Designation:	MB		
Made In:	Tokyo	Length:	54 FT	Wingspan:	82 FT		
Empty #:	10946	Loaded #:	17637	Ord Load #:	1800		
Crew:	7	Range:	2700	Notes:	1 20MM/4 7.7 MM MG		
Max SPD:	233	Cruising:	170				
Ceiling:	30200						
# Built:	1048	Prototype:	1935	Engines:	2	Configuration:	Radial
		Service:	1945	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	1061

Like many Japanese aircraft, the G3M Nell was a great plane until it ran into effective opposition from either the ground or the air. Like the G4M, the next generation Japanese medium bomber, it had exceptional range – twice that of the American B25. But it lacked any armor or self-sealing fuel tanks, which rendered it vulnerable to both fighters and anti-aircraft fire.

The Nell played a major role in early Japanese successes in Malaya, including the sinking of the Prince of Wales and Repulse just days after Pearl Harbor. But the G4M became the preferred medium bomber and more than twice as many Bettys as Nells were ultimately produced.

North American T6 Texan

WW II Aircraft

Referred to As:	T6			Nickname:	Texan		
Built By:	North American	Country:	USA	Designation:	TR		
Made In:	Los Angeles	Length:	29 FT	Wingspan:	42 FT		
Empty #:	4158	Loaded #:	5617	Ord Load #:	0		
Crew:	2	Range:	730	Notes:	3 7.62 MM MGs		
Max SPD:	208	Cruising:	145				
Ceiling:	24200						
# Built:	15495	Prototype:	1935	Engines:	1	Configuration:	Radial
		Service:	1936	Cylinders:	9	Cooling:	Air
Theaters:	All					Horsepower:	600

While the North American Texan T6 was not a combat aircraft, it played a huge role in training the men who FLEW combat aircraft in the war. The Texan was THE training aircraft through the war and remained in service as a training plane in air forces across the planet until the 1970s. Known outside the US as the Harvard, the plane is still flown in air show groups in New Zealand and South Africa.

Chance Vought F4U Corsair

WW II Aircraft

Referred to As:	F4U			Nickname:	Corsair		
Built By:	Chance Vought	Country:	USA	Designation:	FB		
Made In:	Multiple	Length:	34 FT	Wingspan:	41 FT		
Empty #:	9205	Loaded #:	14533	Ord Load #:	4000		
Crew:	1	Range:	1005	Notes:	6 50 CAL/3 20 MM MG		
Max SPD:	446	Cruising:	214				
Ceiling:	41500						
# Built:	12571	Prototype:	1940	Engines:	1	Configuration:	Radial
		Service:	1942	Cylinders:	18	Cooling:	Air
Theaters:	PAC					Horsepower:	2380

Many fliers, both Japanese and American, considered the F4U Corsair to be the finest fighter of the entire war. Its performance characteristics were certainly the equal of any other fighter, but because of the long forward fuselage the plane proved difficult to operate on carrier decks for all but the best pilots. While the Corsair did see early deployment on carriers, it was eventually deployed entirely as a land-based plane flown by Marine pilots. In this service it racked up an impressive combat record.

Grumman F6F Hellcat

WW II Aircraft

Referred to As:	F6F	Nickname:	Hellcat		
Built By:	Grumman	Country:	USA	Designation:	F
Made In:	Bethpage	Length:	34 FT	Wingspan:	43 FT
Empty #:	9238	Loaded #:	15415	Ord Load #:	4000
Crew:	1	Range:	945	Notes:	6 50 CAL/2 20 MM MG. Rockets.
Max SPD:	391	Cruising:	280		
Ceiling:	37300				
# Built:	12275	Prototype:	1942	Engines:	1
		Service:	1943	Cylinders:	18
Theaters:	PAC				

Configuration:	Radial
Cooling:	Air
Horsepower:	2200

The Hellcat was one of a handful of planes that can truly be said to be decisive in the war and particularly in the Allied victory in the Pacific. The P51 – the other great American fighter of the war – saw much action in the Pacific, but its role there paled behind the role it played in the European Theater.

The Hellcat was a carrier-based fighter, and there was never a better one. Sporting the same vast Pratt and Whitney R-2800 “Double Wasp” engine used in the F4U Corsair and the P47 Thunderbolt, the Hellcat was best described one of its fliers: “You’ve got a plane that carries a 4000 LB bomb, and after it drops it, it becomes the best fighter plane in the world.” The Hellcat would become the heart of the “Big Blue Blanket” that rendered Task Force 38/50 invulnerable to any Japanese attack.

Grumman TBF/TBM Avenger

WW II Aircraft

Referred to As:	TBF/(TBM)	Nickname:	Avenger		
Built By:	Grumman	Country:	USA	Designation:	TPB
Made In:	Bethpage/Detroit	Length:	40 FT	Wingspan:	54 FT
Empty #:	12186	Loaded #:	15536	Ord Load #:	2000
Crew:	3	Range:	905	Notes:	1 50 CAL/2 30 CAL
Max SPD:	278	Cruising:	215		
Ceiling:	22600				
# Built:	9839	Prototype:	1941	Engines:	1
		Service:	1942	Cylinders:	14
Theaters:	PAC				

Configuration:	Radial
Cooling:	Air
Horsepower:	1700

Like many WWII aircraft – particularly American ones – the Avenger was built by multiple US companies. The "TBF" originals were built by Grumman in Bethpage, NY. The TBMs were built in Detroit by General Motors. They were essentially the same plane. Ironically, the original version – the TBF – was introduced on the afternoon of 7 December 1941. News of the Japanese attack on Pearl Harbor quickly ended all such public relations.

The Avenger had a spotty history. Torpedo bombing was a new science, and it took a while for the Americans to perfect it. The Avenger is noteworthy as the plane in which George H.W. Bush was shot down – and rescued. Other members of his squadron were – literally – eaten by the Japanese.

Bell P39 Aircobra

WW II Aircraft

Referred to As:	P39	Nickname:	Aircobra		
Built By:	Bell	Country:	USA	Designation:	F
Made In:	Buffalo	Length:	30 FT	Wingspan:	34 FT
Empty #:	6516	Loaded #:	8400	Ord Load #:	500
Crew:	1	Range:	525	Notes:	1 37MM/4 50CAL MG
Max SPD:	389	Cruising:	290		
Ceiling:	35000				
# Built:	9588	Prototype:	1938	Engines:	1
		Service:	1941	Cylinders:	12
Theaters:	All				

Configuration:	In Line
Cooling:	Liquid
Horsepower:	1200

One of the more curious of WWII aircraft, the P39 Aircobra had a unique mid-engine design, with the engine BEHIND the pilot seat. The propeller was driven by a long shaft, which was also configured with a 37MM cannon that fired through the nose of the propeller. Along with the P40, it made up the majority of the fighter aircraft available to the USAAF at the beginning of the war. But the plane only had a single-stage supercharger which made it a poor performer at altitude. For this reason, the majority of P39s were sent to the USSR where air combat took place at lower altitudes. The P39s flown by Soviet pilots claimed the most kills of any WWII fighter.

The Aircobra did see use early in the Pacific in the New Guinea and Guadalcanal campaigns, where it was used primarily in ground support and strafing Japanese troops and airfields. It was later supplanted by the more advanced P38 Lightning, P47 Thunderbolt and P51 Mustang.

Grumman F4F Wildcat

WW II Aircraft

Referred to As:	F4F	Nickname:	Wildcat		
Built By:	Grumman	Country:	USA	Designation:	F
Made In:	Buffalo/GM	Length:	29 FT	Wingspan:	38 FT
Empty #:	4907	Loaded #:	7423	Ord Load #:	200
Crew:	1	Range:	845	Notes:	4 50 CAL MG
Max SPD:	331	Cruising:	280		
Ceiling:	39500				
# Built:	7885	Prototype:	1937	Engines:	1
		Service:	1940	Cylinders:	14
Theaters:	PAC				

Configuration:	Radial
Cooling:	Air
Horsepower:	1200

The F4F Wildcat was the primary carrier-based fighter plane in the US Navy in the first year of the war and beyond. While it was out-performed by the Japanese Zero, US fliers developed battle techniques that enabled it to hold its own and it remained in production throughout the war because its replacement, the F6F Hellcat, was too large for use on the smaller escort carriers.

Both the F4U Corsair, mainly used by the USMC, and the Hellcat were better than the Wildcat in almost every respect. But much was learned from the Wildcat and those lessons were the groundwork for the later improved designs.

Curtiss-Wright SB2C Helldiver

WW II Aircraft

Referred to As:	A25			Nickname:	Shrike		
Built By:	Curtiss-Wright	Country:	USA	Designation:	LB		
Made In:	Parsippany	Length:	37 FT	Wingspan:	50 FT		
Empty #:	10547	Loaded #:	16616	Ord Load #:	3000		
Crew:	2	Range:	1165	Notes:	2 20MM, 2 30 Cal, 2 50 Cal		
Max SPD:	295	Cruising:	158				
Ceiling:	29100						
# Built:	7140	Prototype:	1940	Engines:	1	Configuration:	Radial
		Service:	1942	Cylinders:	14	Cooling:	Air
Theaters:	PAC					Horsepower:	1900

Perhaps no plane demonstrates the difficulties of mastering aircraft nomenclature than the Helldiver. It was also known as the “Shrike” (like famous German plane) and the A25 in its ground-based versions.

Despite the number produced, by most measures the Helldiver was generally considered a bust. It was difficult to fly, suffered numerous delays and performance issues and – in the end – couldn’t do anything better than Navy Hellcats or Marine Corsairs. And, unlike them, it also couldn’t defend itself.

The Helldiver reflected the great Latin phrase that embodies flight: *Ad astra per aspera*. This phrase is clumsily translated as “To the stars through difficulties.” I prefer the one at the site where Apollo 1 perished and took the lives of Gus Grissom, Ed White and Roger Chaffee. “A rough road leads to the stars.” A rough road led to quality aircraft, and – like many – the Helldiver never navigated it.

Douglas A24 SBD

WW II Aircraft

Referred to As:	A24			Nickname:	SBD		
Built By:	Douglas	Country:	USA	Designation:	TPB		
Made In:	El Segundo/Ok City	Length:	33 FT	Wingspan:	42 FT		
Empty #:	6404	Loaded #:	10700	Ord Load #:	2250		
Crew:	2	Range:	1115	Notes:	2 50 CAL/2 30 CAL MG		
Max SPD:	255	Cruising:	185				
Ceiling:	25530						
# Built:	5936	Prototype:	1940	Engines:	1	Configuration:	Radial
		Service:	1940	Cylinders:	9	Cooling:	Air
Theaters:	PAC					Horsepower:	1200

The Douglas SBD earned its eternal place in history as the carrier-based dive bomber that won the Battle of Midway. It had a lot of help! But it was the primary Navy dive bomber in the early years of the war.

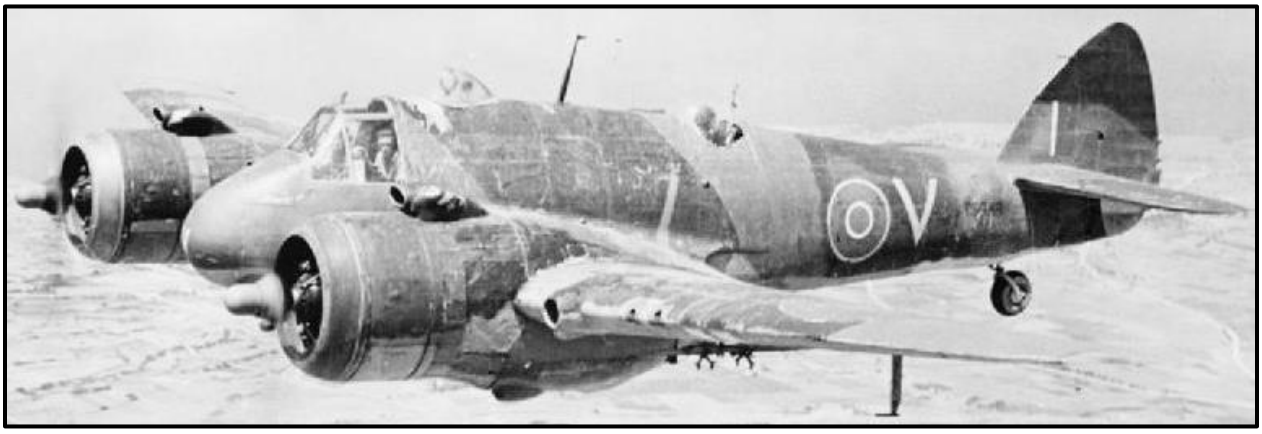
While later aircraft like the Hellcat outperformed the SBD as the war progressed, it remained a central airplane in the carrier war that eventually extended to the main islands of Japan. The SBD was well liked by those who flew it and was a reliable design that made it all the way through the war despite its early introduction to the battlefield.

Type 156 Bristol Beaufighter

WW II Aircraft

Referred to As:	Type 156	Nickname:	Beaufighter		
Built By:	Bristol	Country:	USA	Designation:	F
Made In:	Bristol UK	Length:	58 FT	Wingspan:	41 FT
Empty #:	15592	Loaded #:	25400	Ord Load #:	500
Crew:	2	Range:	1750	Notes:	4 20 MM/7 30 CAL MG
Max SPD:	320	Cruising:	250		
Ceiling:	19000				
# Built:	5928	Prototype:	1939	Engines:	2
		Service:	1940	Cylinders:	14
Theaters:	All				

Configuration:	Radial	
Cooling:	Air	
Horsepower:	1600	



The Bristol Beaufighter pretty much symbolizes the state of Allied Air in the Asia/Pacific theater at the beginning of the war. Despite looking rather like a dinosaur compared to the sleeker US planes that eventually arrived, the Beaufighter actually gave good service in the early campaigns of the war, and proved particularly effective as a night fighter.

The Beaufighter was eventually supplanted by various superior US designs, but the aircraft remained in operational service until 1960.

Consolidated Catalina PBY

WW II Aircraft

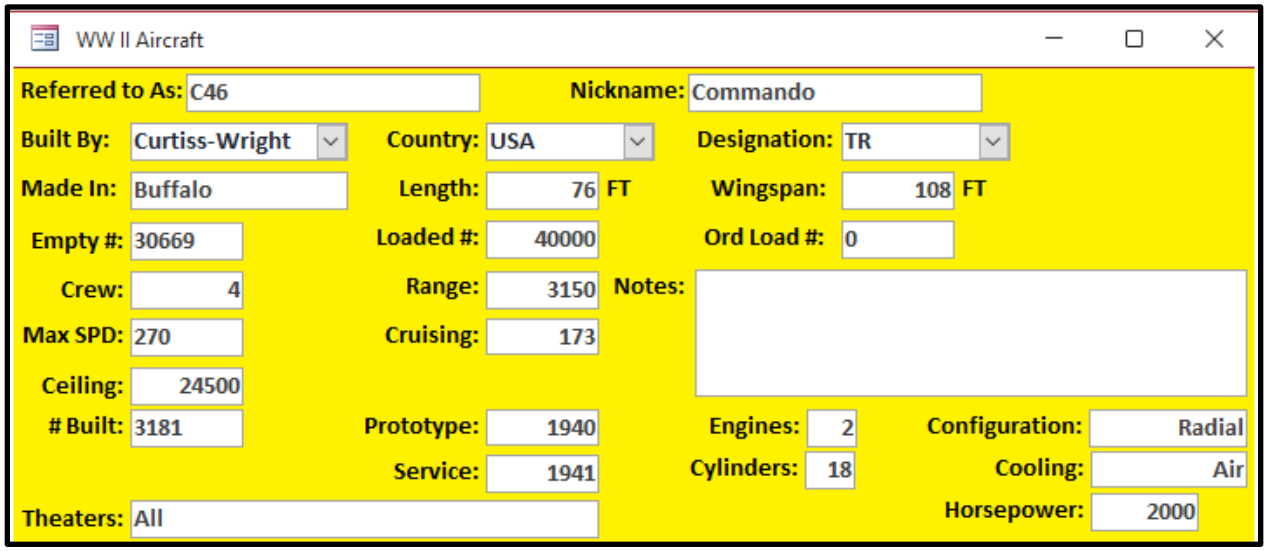
Referred to As:	PBY	Nickname:	Catalina		
Built By:	Consolidated	Country:	USA	Designation:	SP
Made In:	California & Elsewh	Length:	64 FT	Wingspan:	104 FT
Empty #:	20910	Loaded #:	35420	Ord Load #:	4000
Crew:	10	Range:	2520	Notes:	3 30 Cal MG/2 50 Cal MG
Max SPD:	196	Cruising:	125		
Ceiling:	15800				
# Built:	3308	Prototype:	1935	Engines:	2
		Service:	1936	Cylinders:	14
Theaters:	All				

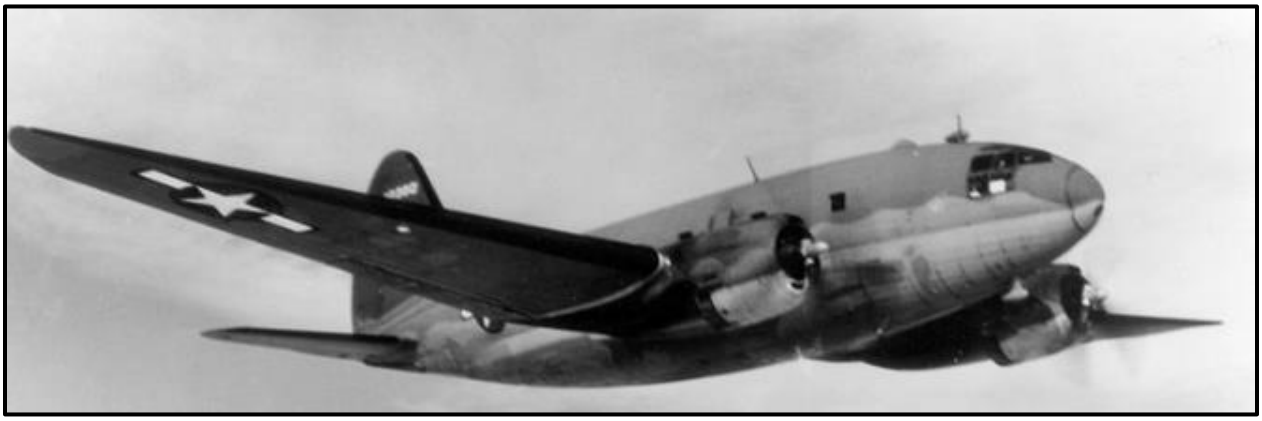
Configuration:	Radial
Cooling:	Air
Horsepower:	1200

If there was one WWII aircraft that deserved the term “beloved” the Catalina PBY was certainly it. Designed and built by the same company that provided the workhorse B24 Liberator, the “Flying Boat” Catalina served in countless rolls – mainly in the Asia Pacific Theater – but most famously as an Air/Sea Rescue plane.

The Catalina was simply the perfect plane for the Asia/Pacific theater. Modified, it could land on airstrips, but it was still basically a “flying boat.” It was most beloved for its role as an air-sea rescue plane, where its countless heroic rescues are legend. But it played a role from early in the war as one of the few planes that could traverse the vast distances of the Pacific with a way to land it things went wrong!

Curtiss-Wright C46 Commando





Called the RC5 by the Navy, the C46 Commander was another transport aircraft – adapted from a civilian airliner design. It saw service in both the European and Asia/Pacific theaters, but was never built in the numbers of the C47 Skytrain and so is less known.

Unlike the C47, which had an extensive period of usage in the post-war years, the C46 was mostly forgotten after the war, yet its rugged design and adaptability made it a popular aircraft for use in challenging environments in remote areas, particularly arctic regions. C46s remain in use today in limited roles.

Douglas A26 Invader

WW II Aircraft

Referred to As:	A26			Nickname:	Invader		
Built By:	Douglas	Country:	USA	Designation:	LB		
Made In:	El Segundo	Length:	50 FT	Wingspan:	70 FT		
Empty #:	22370	Loaded #:	27600	Ord Load #:	6000		
Crew:	3	Range:	1600	Notes:	Many Configurations		
Max SPD:	359	Cruising:	266				
Ceiling:	28500						
# Built:	2403	Prototype:	1942	Engines:	2	Configuration:	Radial
		Service:	1942	Cylinders:	18	Cooling:	Air
Theaters:	All					Horsepower:	2000

The A26 Invader was a “light bomber” – which still carried a heavier load than many mediums. Adding to the confusion is the fact that this plane was called the B26 for several years – confusing it with the better-known Martin B26 Marauder. The plane’s debut in the Pacific was not auspicious. The crew complained that the visibility made it ineffective in ground support or commerce raiding – the two things needed most. George Kenney refused the plane as “a replacement for anything.” The end of the war was in sight by the time the bugs were worked out and the Invader was phased out.

Aichi Kokuki E14A Jake

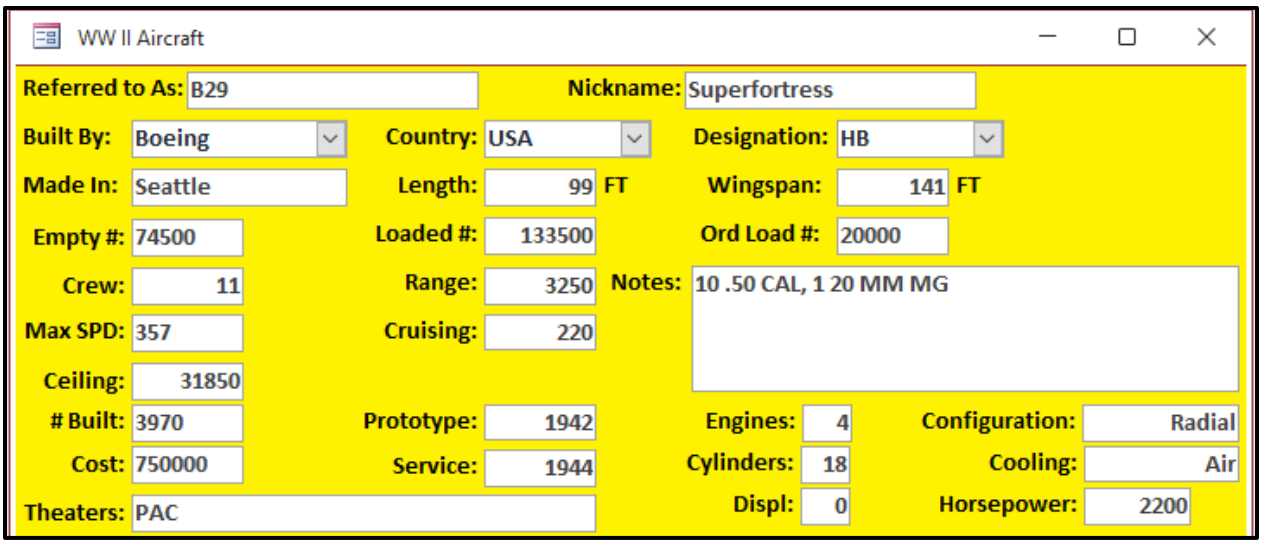
WW II Aircraft

Referred to As:	E13A	Nickname:	Jake		
Built By:	Aichi Kokuki KK	Country:	Japan	Designation:	SP
Made In:	Nagoya	Length:	37 FT	Wingspan:	48 FT
Empty #:	5825	Loaded #:	8025	Ord Load #:	550
Crew:	3	Range:	1300	Notes:	1/2 MGs At Most
Max SPD:	234	Cruising:	138		
Ceiling:	28640				
# Built:	1418	Prototype:	1939	Engines:	1
		Service:	1941	Cylinders:	14
Theaters:	PAC				

Configuration:	Radial
Cooling:	Air
Horsepower:	1060

The E13A Jake reflects both the nature of the Asia/Pacific theater (LOTS of water) and Japan's use of seaplanes and floatplanes to address the unavailability of airfields. The Jake was the most extensively used of any Japanese seaplane and was designed primarily as a reconnaissance aircraft, although it could carry a 250 LB bomb and engaged in combat in several of the earlier battles of the war. I also was used as a scout plane in the period leading up the to the Pearl Harbor attack.

Notes about the Data Display



The data displays for each aircraft come from a database designed to allow collection of data about planes, missions, losses, etc. It remains a work in progress.

As discussed elsewhere, numbers are all “range” rather than specific and many pieces of information are either not available, or will require additional research. Chief among these are cost – which is VERY difficult to find for non-US aircraft and engine displacement (the core measure of how “big” an engine is.)

The cylinder and horsepower numbers for the engines are PER ENGINE.