

Statistics from "Flight Journal" magazine

#### THE COST of DOING BUSINESS

The staggering cost of war

#### THE PRICE OF VICTORY

B-17 \$204,370

P-40 \$44,892

B-24 \$215,516

P-47 \$85,578

B-25 \$142,194

P-51 \$51,572

B-26 \$192,426

C-47 \$88,574

B-29 \$605,360

PT-17 \$15,052

P-38 \$97,147

AT-6 \$22,952

#### ON AVERAGE

6600 American service men died per  
Month, during WWII about 220 a day.

#### PLANES A DAY WORLDWIDE

From Germany/Poland Sept. 1, 1939  
ending Sept. 2, 1945. Japan surrender.  
2,433 days.

From 1942 onward, America averaged  
170 planes a day.

Nation Aircraft Average

USA 276,400 113

S Union 137,200 56

G Britain 108,500 45

Germany 109,000 45

Japan 76,300 31

How Many is a 1,000 planes.

B-17 production (12,731) wingtip to

Wingtip would extend 250 miles.

1,000 B-17's carried 2.5 million

gallons of high octane fuel. Lifting

10,000 airmen to deliver 2,000 tons

of bombs.

#### THE NUMBERS GAME

9.7 billion gallons of gasoline  
consumed, 1942-1945.

107.8 million hours flown,  
1943-1945.

459.7 billion rounds of aircraft ammo  
fired overseas, 1942-1945.

7.9 million bombs dropped overseas,  
1943-1945  
2.3 million combat sorties, 1941-1945  
One sortie = one takeoff.  
299,230 aircraft accepted, 1940-1945.  
808,471 aircraft engines accepted, 1940-1945.  
799,972 propellers accepted, 1940-1945.

#### WWII MOST PRODUCED COMBAT AIRCRAFT

Il-2 Stormovik 36,183  
Yak 1, 3, 7, 9 31,000 +  
Bf 109 30,480  
Fw 190 29,001  
Spit/Seafire 20,351  
B-24/PB4Y 18,482  
Thunderbolt 15,686  
Mustang 15,875  
Ju 88 15,000  
Hurricane 14,533  
P-40 13,738  
B-17 12,731  
Corsair 12,571  
Hellcat 12,275  
Pe-2 11,400  
P-38 10,037  
Zero 10,449  
B-25 9,984  
LaGG-5 9,920  
Avenger 9,837  
P-39 9,584  
Oscar 5,919  
Mosquito 7,780  
Lancaster 7,377  
He 111 6,508  
Halifax 6,176  
Bf 110 6,150  
LaGG-7 5,753  
B-29 3,970  
Stirling 2,383

#### Sources:

Rene Francillon, Japanese Aircraft of the Pacific war; Cajus Bekker,  
The Luftwaffe Diaries; Ray Wagner, American Combat Planes; Wikipedia.

#### BALL PARK AVERAGE

Chief of Staff to General, "Hmmm; 331 men killed, and 308 aircraft destroyed. That's 11 people and 10 planes per day."

"Uh, yes, sir, It's still the ballpark average." I'd like to see an improvement in bomber losses, those really add up.

"Were working on it, General, But it's sad to think that 10 young men alive today will be dead tomorrow."

"You know that's the price of doing business, now then what about the overseas and combat losses?"

According to the AAF Statistical Digest, in less than four years (December 1941 August 1945), the U. S. Army Air

Forces lost 14,903 pilots, aircrew and assorted personnel plus 13,873 airplanes --- inside the continental United States. They were the result of 52,651 aircraft accidents (6,039 involving fatalities) in 45 months.

Think about those numbers. They average 1,170 aircraft accidents per month---- nearly 40 a day.(Less than one accident in four resulted in totaled aircraft, however.)

Those colossal losses cost the Axis powers nothing; not as much as one 7.7 mm bullet.

It gets worse

Almost 1,000 Army planes disappeared en route from the U. S. to foreign climes. But an eye watering 43,581 aircraft were lost overseas including 22,948 on combat missions (18,418 against the Western Axis) and 20,633 attributed to non-combat causes overseas.

In August 1943 when 60 B-17's were shot down among 376. That was a 16 percent loss rate meant 600 empty bunks in England that night In 1942-1943 it was statistically impossible for bomber crews to complete a 25-mission tour in Europe.

Pacific theatre losses were far less (4,530 in combat) owing to smaller forces committed. The worst B-29 mission, against Tokyo on May 25, 1945, cost 26 Superfortress, 5.6 percent of the 464 dispatched from the Marianas.

On average, 6,600 American servicemen died per month during WWII, about 220 a day. At end of war, over 40,000 airmen were killed in combat theatres and another 18,000 wounded. Some 12,000 missing men were declared dead, included a number "liberated" by the Soviets but never returned. More than 41,000 were captured, half of the 5,400 held by the Japanese died in captivity, compared with one-tenth in German hands. Total combat casualties were pegged at 121,867.

The US manpower made up the deficit. The AAF's peak strength was reached in 1944 with 2,372,000 personnel, nearly twice the previous year's figure.

The losses were huge---and they were----so were production totals. From 1941 through 1945, American industry delivered more than 276,000 military aircraft. That number was enough not only for U S Army, Navy and Marine Corps but for allies as diverse as Britain, Australia, China and Russia. In fact, from 1943 onward, America produced more planes than Britain and Russia put combined, and more than Germany and Japan together from 1941 - ` 45.

However our enemies took massive losses. Through much of 1944, the Luftwaffe sustained uncontrolled hemorrhaging, reaching 25 percent aircrew and 40 planes a month. And in late 1944 into 1945, nearly half the pilots in Japanese squadrons had flown fewer than 200 hours. The disparity of two years before had been completely reversed.

Experience Level:

Uncle Sam sent many of his sons to war with absolute minimum of training. Some fighter pilots entered combat in 1942 with less than one hour in their assigned aircraft.

The 357th Fighter Group (alter known as The Oxford Boys) went to England in late 1943 having trained on P-39's. The group never saw a Mustang until shortly before its first combat mission. A high-time P-51 pilot had 30 hours in type. Many had fewer than five hours. Some had one hour.

With arrival of new aircraft, many combat units transitioned in combat. The attitude was, "They all have a stick and a throttle. Go fly `em." When the famed 4th Fighter Group converted from P-47's to P-51's in February 1944, there was no time to stand down for an orderly transition. The Group commander, Col. Donald Blakeslee, said, "You can learn to fly `51's on the way to the target. (Note: Gone West HNL QB Brewster Morgan (Morgan's Corner up in

Nuuanu off of Old Pali Road) a Honolulu boy and a member of the 4th Fighter Group, told me that they actually did stand down one day to transition from the P47 to the P51. They were pissed that the old groups still had the P47 [Brewster was with the Eagle Squadron in the Spitfire.....later in the P47 when the US got into it in '42] and the newer groups coming over from the US all had P51s. Blakeslee finally convinced AF to let them convert by standing down just one day. An interesting side note.....Brewster was shot down over France in '44 and became a POW.....his roommate?.....Douglas Bader.....top English ace with two wooden legs...Bader lost one of his legs when he bailed out and was captured.....the Germans asked the Brits to send him another leg.....which they did....BD).

A future P-47 ace said, "I was sent to England to die." He was not alone. Some fighter pilots tucked their wheels in the well on their first combat mission with one previous flight in the aircraft. Meanwhile, many bomber crews were still learning their trade: of Jimmy Doolittle's 15 pilots on the April 1942 Tokyo raid, only five had won their wings before 1941. All but one of the 16 copilots were less than a year out of flight school.

In WWII flying safety took a back seat to combat. The AAF's worst accident rate was recorded by the A-36 Invader version of the P-51: a staggering 274 per 100,000 flying hours. Next worst were the P-39 at 245 and the P-40 at 188; and the P-38 at 139. All were Allison powered.

Bomber wrecks were fewer but more expensive. The B-17 and B-24 averaged 30 and 35 accidents per 100,000 flight hours, respectively---a horrific figure considering that from 1980 to 2000 the Air Force's major mishap rate was less than 2.

The B-29 was even worse at 40; the world's most sophisticated, most capable and most expensive bomber was too urgently needed to stand down for mere safety reasons. The AAF set a reasonably high standard for B-29 pilots, but the desired figures were seldom attained. The original cadre of the 58th Bomb Wing was to have 400 hours of multi-engine time, but there was not enough experienced pilots to meet the criterion. Only ten percent had overseas experience. (Conversely, when a \$2.1 billion B-2 crashed in 2008, the Air Force initiated a two-month "safety pause" rather than declare a "stand down," let alone grounding.

The B-29 was no better for maintenance. Though the R3350 was known as a complicated, troublesome power-plant, no more than half the mechanics had previous experience with the Duplex Cyclone. But they made it work.

Navigators:

Perhaps the greatest unsung success story of AAF training was Navigators. The Army graduated some 50,000 during the War. And many had never flown out of sight of land before leaving "Uncle Sugar" for a war zone. Yet the huge majority found their way across oceans and continents without getting lost or running out of fuel---a stirring tribute to the AAF's educational establishments.

Cadet to Colonel:

It was possible for a flying cadet at the time of Pearl Harbor to finish the war with eagles on his shoulders. That was the record of John D. Landers, a 21 year old Texan who was commissioned a second lieutenant on December 12, 1941. He joined his combat squadron with 209 hours total flight time, including 2 ½ in P-40's. He finished the war as a full colonel commanding an 8th Air Force Group---at age 24.

As the training pipeline filled up, however those low figures became exceptions. By early 1944, the average AAF fighter pilot entering combat had logged at least 450 hours, usually including 250 hours in training. At the same time, many captains and first lieutenants claimed over 600 hours.

FACT:

At its height in mid-1944, the Army Air Forces had 2.6 million people and nearly 80,000 aircraft of all types. Today

the U. S. Air Force employs 327,000 active personnel (plus 170,000 civilians) with 5,500+ manned and perhaps 200 unmanned aircraft. The 2009 figures represent about 12 percent of the manpower and 7 percent of the airplanes of the WWII peak.

IN SUMMATION:

Whether there will ever be another war is doubtful, as fighters and bombers have given way to helicopters and remotely controlled drones over Afghanistan and Iraq. But within living memory, men left the earth in 1,000-plane formations and fought major battles five miles high, leaving a legacy that remains timeless.