Lockheed

Lockheed Corporation



Fate Merged with Martin Marietta

Successor Lockheed Martin

Founded <u>1912</u> **Defunct** 1995

Location Calabasas, California

Lockheed Corporation (originally Loughead Aircraft Manufacturing Company) was an <u>American</u> aerospace company originally founded in <u>1912</u> which merged with <u>Martin Marietta</u> in <u>1995</u> to form **Lockheed Martin**.

History

Origins

The **Alco Hydro-Aeroplane Company** was established in 1912 by the brothers <u>Allan</u> and <u>Malcolm Loughead</u>. This company was renamed the **Loughead Aircraft Manufacturing Company** and located in <u>Santa Barbara</u>, <u>California</u>.

In <u>1926</u>, following the failure of Loughead, Allan Loughead formed the **Lockheed Aircraft Company** (the spelling was changed to match its phonetic pronunciation) in <u>Hollywood, California</u>. In <u>1929</u> Lockheed sold out to <u>Detroit Aircraft Corporation</u>.

The <u>Great Depression</u> ruined the aircraft market, and Detroit Aircraft went bankrupt. A group of investors headed by brothers Robert and Courtland Gross bought the company out of receivership in <u>1932</u>. The syndicate bought the company for a mere \$40,000. Ironically, Allan Loughead himself had planned to bid for his own company, but had raised "only" \$50,000, which he felt was too small a sum for a serious bid.

In <u>1934</u>, <u>Robert E. Gross</u> was named chairman of the new company, the **Lockheed Corporation**, which was headquartered at the <u>airport</u> in <u>Burbank, California</u>. The company remained there for many years before moving to <u>Calabasas, California</u>.

The first successful construction that was built in any number (141 aircraft) was the <u>Vega</u>, best known for its use to several first- and record setting flights by, amongst others, <u>Amelia Earhart</u>, <u>Wiley Post</u> and <u>George Hubert Wilkins</u>

In the 1930s, Lockheed spent \$139,400 to develop the <u>L-10 Electra</u>, a small twin-engine transport. The company sold 40 in the first year of production. <u>Amelia Earheart</u> and her navigator, <u>Fred Noonan</u>, flew this plane on their failed attempt to circumnavigate the world in <u>1937</u>. The Electra also formed the basis for the <u>Hudson</u> bomber, which was supplied to both the British <u>Royal Air Force</u> and the United States military before and during <u>World War II</u>. Its primary role was submarine hunting.

Production during World War II

At the beginning of World War II, Lockheed — under the guidance of Clarence (Kelly) Johnson, one of the best known American aircraft designers — answered a specification for an interceptor by submitting the P-38 Lightning fighter plane, a somewhat unorthodox twin-engine, twin-boom design. The P-38 was the only U.S. fighter design to be built for the entire duration of the war. It filled ground attack, air-to-air, and even strategic bombing roles in all theatres of the war. The P-38 was responsible for shooting down more Japanese aircraft than any other type during the war; it also participated in the famous mission to kill Japanese Admiral Isoroku Yamamoto, the mastermind of the Pearl Harbor attack. Also under Johnson, Lockheed developed a larger, less-successful version of the P-38.



The <u>Lockheed Constellation</u> was developed during <u>World War II</u> and served as both a civilian airliner and a military transport.

All told, Lockheed and its subsidiary <u>Vega</u> produced 19,278 aircraft during World War II, representing 6% of those produced in the war. This included 2,600 <u>Venturas</u>, 2,750 <u>B-17 Flying Fortresses</u> (built under license for <u>Boeing</u>), 2,900 Hudsons, and 9,000 Lightnings. [1]

Postwar production

During World War II, Lockheed, in cooperation with <u>Trans-World Airlines</u> (TWA), had developed the L049 <u>Constellation</u>, a radical new airliner capable of flying 43 passengers between <u>New York</u> and <u>London</u> at a speed of 300 mph in 13 hours. Once the Constellation (affectionately called "Connie") went into the production, the military received the first production models. After the war, the airlines received their original orders of Constellations. This gave Lockheed more than a year's head-start over other aircraft manufacturers in what was easily foreseen as the post-war modernisation of civilian air travel. The Constellations performance set new standards which did in fact transform the civilian transportation market, but its signature tri-tail was the result of many of their initial customers not having hangars tall enough for a more conventional tail.

Lockheed produced a larger transport, the double-decked <u>R6V Constitution</u>, which was intended to make the Constellation obsolete. However, the design proved underpowered, and only two prototypes were ever built.

Skunk Works

Main article: Skunk works



The <u>Lockheed U-2</u>, which first flew in 1955, provided much needed intelligence on Soviet bloc countries.



The <u>Lockheed SR-71</u> was remarkably advanced for its time and remains unsurpassed in many areas of performance.



The Lockheed C-130 Hercules serves as the primary tactical transport for military forces worldwide.

In <u>1943</u>, Lockheed began, in secrecy, development of a new jet fighter at its Burbank facility. This fighter, the <u>P-80 Shooting Star</u>, became the first American jet fighter to score a kill. It also recorded the first jet-to-jet aerial kill, downing a <u>MiG-15</u> in Korea, although by this time the F-80 (as it came to be known in June 1948) was already considered obsolete. [2]

Starting with the P-80, Lockheed's secret development work was conducted by its Advanced Development Division, more commonly known as the <u>Skunk Works</u>. This organization has become famous and has spawned many successful Lockheed designs, including the <u>U-2</u> (late 1950s), <u>SR-71 Blackbird</u> (1962) and <u>F-117 Nighthawk</u> stealth fighter (1970s). The Skunk Works often created high quality designs in a short time and sometimes with limited resources. Today the generic term "skunk works" implies a place for the development of secret projects.

Projects during the Cold War

In <u>1954</u>, the <u>C-130 Hercules</u>, a durable four-engined transport, flew for the first time. The type remains in production in 2007.

In 1956, Lockheed received a contract for the development of the <u>Polaris</u> Submarine Launched Ballistic Missile (<u>SLBM</u>), this would be followed by the Poseidon and Trident nuclear missiles.

During the 1960s, Lockheed began development for two large aircraft: the <u>C-5 Galaxy</u> military transport and the <u>L-1011 TriStar wide-body</u> civil airliner. Both projects encountered delays and cost overruns. The C-5 was built to unclear initial requirements and suffered from structural weaknesses,

which Lockheed was forced to correct with its own money. The Tristar competed for the same market as the <u>Douglas DC-10</u>; delays in <u>Rolls-Royce</u> engine development caused the Tristar to fall behind the DC-10. Both the C-5 and L-1011 projects caused Lockheed to lose money during the 1970s.

Other Lockheed designs included the <u>F-104 Starfighter</u> (late 1950s), the world's first Mach 2 fighter plane; jet transport; and the <u>C-141 Starlifter</u> and four-engined jet transports.

Lockheed bribery scandals

Main article: Lockheed bribery scandals

The Lockheed bribery scandals encompassed a series of illegal <u>bribes</u> and contributions made by Lockheed officials from the late 1950s to the 1970s. In late 1975 and early 1976, a sub-committee of the <u>U.S. Senate</u> led by Senator <u>Frank Church</u> concluded that members of the Lockheed board had paid members of friendly governments to guarantee contracts for military aircraft^[3]. In 1976, it was publicly revealed that Lockheed had paid \$22 million in bribes to foreign officials^[4] in the process of negotiating the sale of aircraft including the F-104 Starfighter, the so-called "Deal of the Century".

The scandal caused considerable political controversy in <u>West Germany</u>, the <u>Netherlands</u> and <u>Japan</u>. In the U.S. the scandal nearly led to the ailing corporation's downfall, as it was already struggling due to the commercial failure of the L-1011 airliner.

Timeline



The logo of the Lockheed Corporation, ca. 1930.

- 1912: The Alco Hydro-Aeroplane Company established.
- 1916: Company renamed Lougheed Aircraft Manufacturing Company.
- 1926: Lockheed Aircraft Company formed.
- 1929: Lockheed becomes a division of Detroit Aircraft.
- 1932: Robert and Courtland Gross take control of company after the bankruptcy of Detroit Aircraft. Company renamed Lockheed Aircraft Corporation, recognizing the company's reorganization under a board of directors.
- 1943: Lockheed's Skunk Works founded in Burbank, California.
- <u>1954</u>: First flight of the <u>C-130 Hercules</u>.
- 1954: Maiden flight of the U-2.
- 1976: The <u>Lockheed bribery scandals</u>.
- 1977: Company renamed Lockheed Corporation, to reflect non-aviation activities of the company.
- 1985: Acquires Metier Management Systems.
- 1986: Acquires Sanders Associates electronics of Nashua, New Hampshire.
- 1991: Lockheed, General Dynamics and Boeing begin development of the F-22 Raptor.
- 1993: Acquires General Dynamics' Fort Worth aircraft division, builder of the F-16 Fighting Falcon.
- 1995: Lockheed Corporation merges with Martin Marietta to form Lockheed Martin.

Divisions

Lockheed's operations were divided between several groups and divisions, many of which continue to operate within Lockheed Martin. [5]

] Aeronautical Systems Group

- Lockheed-California Company (CALAC), Burbank, California.
- Lockheed-Georgia Company (GELAC), Marietta, Georgia.
- Lockheed Advanced Aeronautics Company, <u>Saugus</u>, <u>California</u>.
- Lockheed Aircraft Service Company (LAS), Ontario, California.
- Lockheed Air Terminal, Inc. (LAT), Burbank, California, now <u>Bob Hope Airport</u> and owned by the Burbank-Glendale-Pasadena Airport Authority.

Missiles, Space, and Electronics Systems Group

- Lockheed Missiles & Space Company, Inc., Sunnyvale, California.
- Lockheed Space Operations Company, <u>Titusville</u>, <u>Florida</u>.
- Lockheed Engineering and Management Services Company, Inc., Houston, Texas.
- Lockheed Electronics Company, Inc., Plainfield, New Jersey.

Marine Systems Group

- Lockheed Shipbuilding Company, Seattle, Washington.
- Lockport Marine Company, Portland, Oregon.
- Advanced Marine Systems, <u>Santa Clara, California</u>.

Information Systems Group

- Datacom Systems Corporation, Teaneck, New Jersey.
- CADAM Inc., Burbank, California,
- Lockheed Data Plan, Inc., Los Gatos, California.
- DIALOG Information Services, Inc., Palo Alto, California.
- Metier Management Systems, London, England.
- Integrated Systems and Solutions, Gaithersburg, MD.

Product list



Lockheed's most advanced airliner, the L-1011 Tristar



Lockheed Trident II missile, introduced in 1990.



Lockheed's advanced upper rocket stage, the <u>Agena</u>. Main article: List of Lockheed aircraft

A partial listing of aircraft and other vehicles produced by Lockheed.

Airliners and civil transports

- Lockheed Vega
- Lockheed L-10 Electra
- Lockheed Model 12 Electra Junior
- Lockheed Model 14 Super Electra
- Lockheed Lodestar
- · Lockheed Constellation, famous airliner
- Lockheed Saturn
- L-188 Electra
- Lockheed JetStar, business jet
- <u>L-1011 TriStar</u>, <u>wide-body</u> airliner

] Military transports

- C-64/C-121, military transport version of the Constellation
- Lockheed R6V Constitution, large transport aircraft
- C-130 Hercules, medium combat transport (AC-130 gunship) (other variants)
- <u>C-141 Starlifter</u>, long-range jet transport
- C-5 Galaxy, heavy transport

Fighters

- P-38 Lightning, twin-engine counter-rotating propeller fighter
- P-80 Shooting Star, the United States Air Force's first operational jet fighter
- T-33 Shooting Star, trainer jet

- <u>F-94 Starfire</u>, all-weather fighter
- F-104 Starfighter, multi-mission fighter, the "missile with a man in it"
- <u>F-117 Nighthawk</u>, stealth fighter
- F-22 Raptor, air superiority stealth fighter

Patrol and reconnaissance

- Lockheed Hudson, maritime patrol/bomber
- PV-1 Ventura and PV-2 Harpoon, Maritime patrol/bomber
- P2V Neptune, maritime patrol
- P-3 Orion, ASW patrol
- Lockheed U-2, reconnaissance (TR-1)
- SR-71 Blackbird, reconnaissance (A-12) (M-21) (YF-12)
- S-3 Viking, patrol/attack
- YO-3A Quiet Star

Helicopters

- CL-475
- CL-595 (Model 286), Rigid-rotor helicopter
- XH-51A/B, composite thrust helicopter testbed aircraft modified from the CL-595
- AH-56A Cheyenne, prototype composite thrust attack helicopter

Missiles

- Polaris
- Poseidon
- Trident

Space technology

- X-7
- X-17
- X-24C
- Corona
- Agena
- Apollo Launch Escape System
- Hubble Space Telescope

Sea vessels

Sea Shadow

References

- 1. ^ TIME, January 14, 1946.
- 2. http://home.att.net/~jbaugher1/p80_12.html
- 3. FJS (German language)
- 4. ^ Time magazine
- 5. Francillon, René J. Lockheed Aircraft since 1913. Annapolis: Naval Institute Press, 1987, pp. 47-49.

Further reading

• Boyne, Walter J. *Beyond the Horizons: The Lockheed Story.* New York: St. Martin's Press, 1998. <u>ISBN 0-312-19237-1</u>.

See also

- Vega Aircraft Corporation
- Lockheed Brothers from PBS
- Lockheed Martin
- The Jetmakers
- Kakuei Tanaka a political biography of modern Japan: Chapter 4 The Lockheed Scandal. The Kodama organization, a Yakuza gang, got mixed up in this scandal.

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