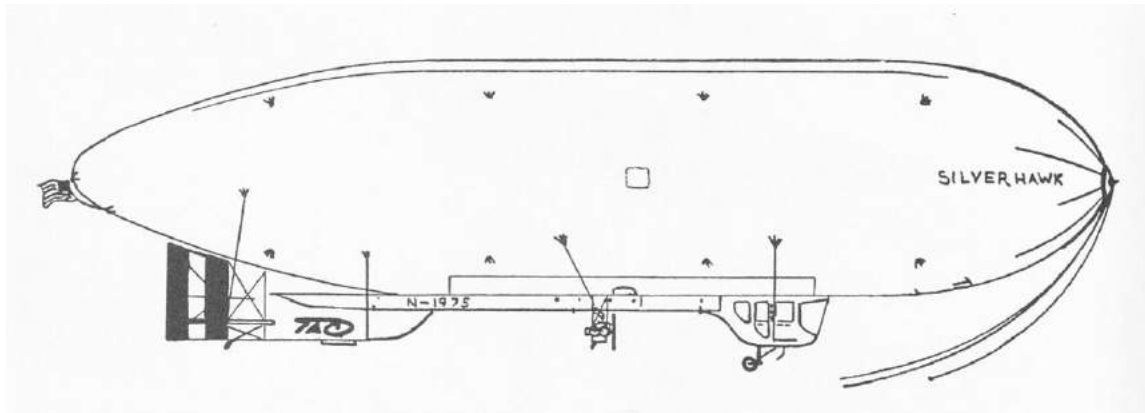


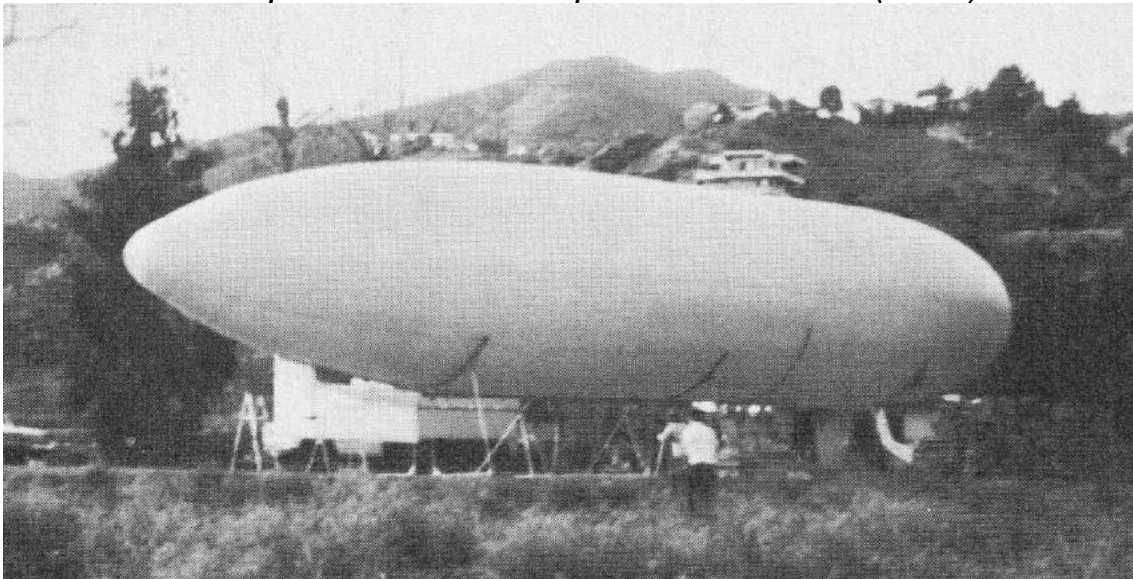
Tucker Airship Company - TX-1 Silver Hawk

Peter Lobner, updated 12 February 2022

In the mid-1970s, Curtis E. Tucker founded the Tucker Airship Company in Los Angeles, CA and designed and built a small, semi-rigid airship known as the Tucker TX-1 Silver Hawk. This low cost airship was intended as an experimental vehicle to test lighter-than-air (LTA) vehicle designs, materials and ground handling concepts. It also could be used as an LTA trainer or for various scientific, military and industrial applications.

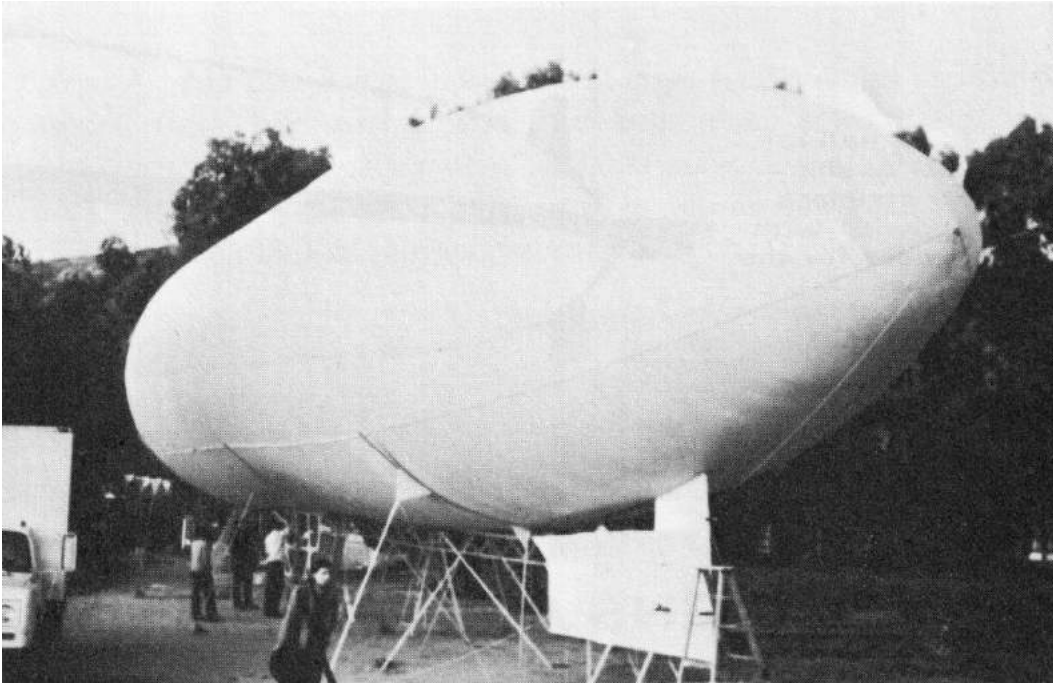


Prototype of the Tucker TX-1. Note the midships engine with tractor propeller supported by the wooden keel beam and cables from the envelope. Source: "Airships for the Future" (1976)

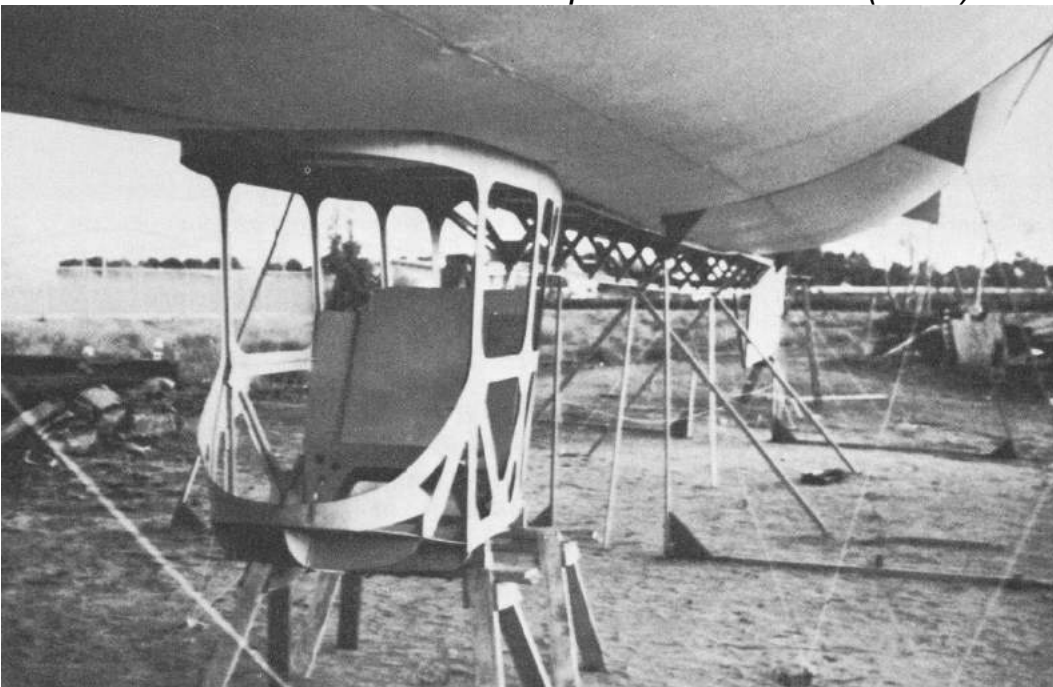


Stern quarter view of TX-1 under construction with gondola attached. Source: "Airships for the Future" (1976)

The design featured a triangular wooden keel beam and a wooden gondola structure made of plywood and aircraft-grade spruce. The airship and rigid structures were designed to be easily disassembled for storage or transportation in a single trailer.



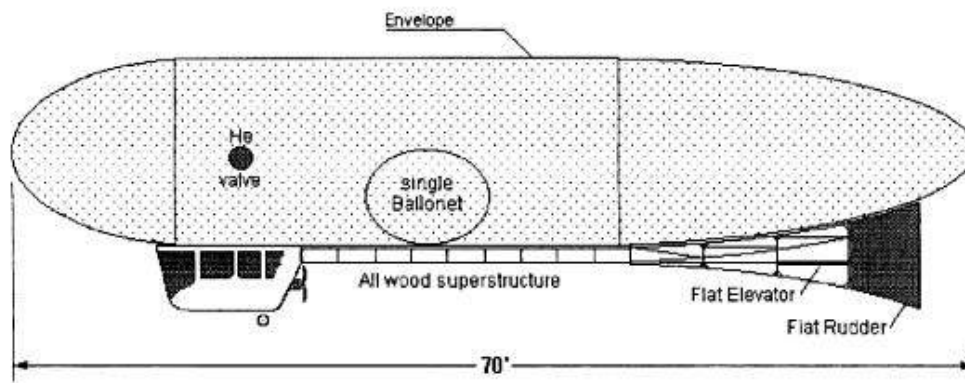
TX-1 under construction. Stern quarter view with ventral fin details above; bow quarter view with gondola and triangular keel beam details below. Source: "Airships for the Future" (1976)



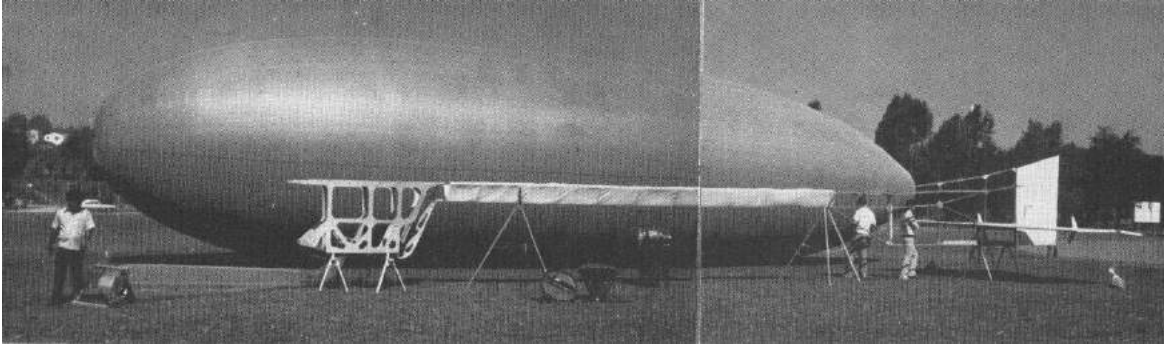
Only the TX-1 prototype was completed. Author Robert Recks described what appears to be a slightly smaller version that was intended for the homebuilt market.

General characteristics of the Tucker TX-1

Parameter	TX-1 prototype	Homebuilt version
Airship type	Semi-rigid	Semi-rigid
Length	91 ft (27.2 m)	70 ft (21.3 m)
Diameter	20 ft (6.1 m)	20 ft (6.1 m)
Height	26 ft (7.9 m) overall	25 ft (7.6 m) overall
Envelope volume	20,500 ft ³ (580 m ³)	14,000 ft ³ (396 m ³), with a single ballonnet
Lift gas	Helium or hydrogen	Helium
Maximum lift	1,400 lb (630 kg)	920 lb (419 kg), estimated
Empty weight		650 lb (294 kg)
Max gross weight		854 lb (387 kg)
Payload	750 lb (338 kg)	
Accommodations	1 x pilot and 1 x passenger	1 x pilot and 1 x passenger
Propulsion system	1 x McCulloch piston engine @ 90 shp (60 kW), mounted amidships, driving a tractor propeller	1 x McCulloch piston engine @ 90 shp (60 kW), mounted at the rear for the gondola, driving a 40 inch (1 m) pusher propeller
Speed, cruise	45 mph (72 kph)	50 mph (80.5 kph)
Speed, maximum	55 mph (88 kph)	
Altitude, cruise		3,000 ft (914 m) MSL
Fuel capacity	60 gallons (228 liters)	
Range	500 miles (805 km)	600 miles (966 km)
Endurance, cruise		12 hours



Tucker TX-1 homebuilt version. Note the engine with pusher propeller installed at the rear of the gondola. Source: Robert Recks (1997)



Tucker TX-1 envelope (background) and rigid keel, gondola and tailplane assembly (foreground). Source: Jane's (1977)

Tucker had announced plans to build airships up to 350 feet (106.7 m) in length after the TX-1 was tested. However, no production units were manufactured.

For more information

- William J. White, "Airships for the Future," pp. 126 - 127, Sterling Publishing Co., New York, ISBN 0-8069-0090-3, 1976
- Lord Ventry and Eugène Kolesnik, "Jane's Pocket Book of Airships," pp. 180 – 181, Collier Books, New York, Library of Congress Catalog Card Number 73-15287, 1977
- Robert Recks, "A Practical Guide to Building Small Gas Blimps," CreateSpace, ISBN 0-937568-28-7, 1977, Revised 1997:
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