

WORLD WAR II PHOTO PAGE

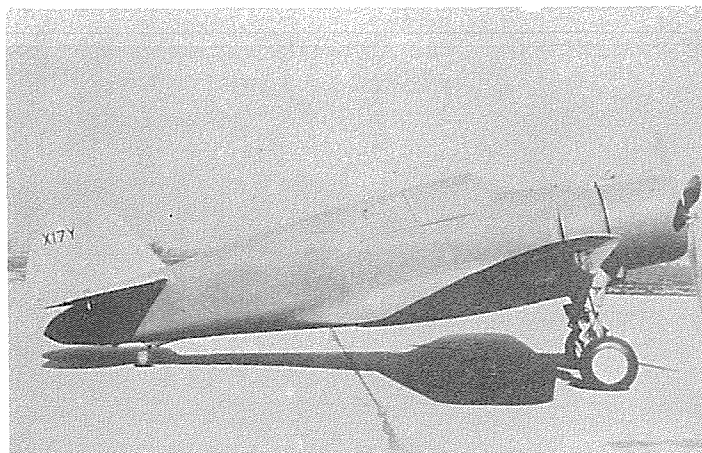
by

Gerald H. Balzer

Prelude to the P-40

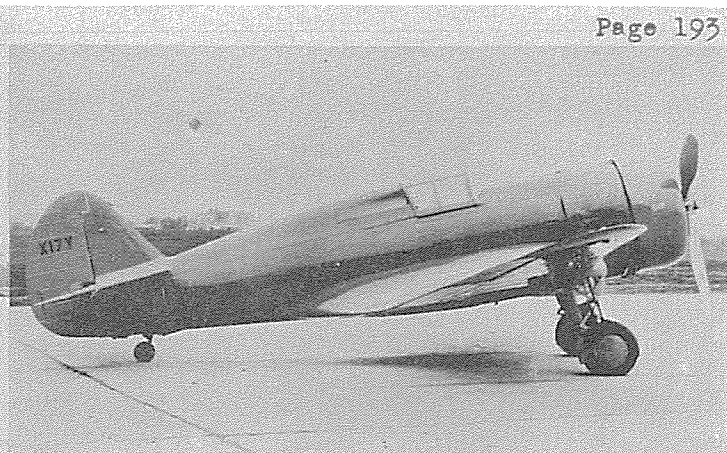
In 1935 the Curtiss Aeroplane and Motor Company under the design supervision of Donald R. Berlin developed the Curtiss Hawk 75. This airplane was the progenitor of the P-40 series of aircraft which in turn was to become one of the most controversial aircraft to see extensive combat duty in World War II.

1. The Curtiss Hawk 75 in its original configuration was powered by a twin row Wright R-1810 and claimed a guaranteed top speed of 300 MPH at optimum altitude.
2. The original airframe was subsequently modified to carry a single row Wright Cyclone R-1820-G2 of 1000 rated H.P. It was redesignated as the Curtiss Hawk 75A and became the prototype P-36.
3. The P-36 (formerly designated Y1P-36) was the first production configuration of the Hawk 75A. Three aircraft were produced in 1937. Power was supplied by a Pratt & Whitney R-1830-13 of 1050 H.P.
4. The P-36A represented the largest single order for the P-36 type. Of an order of 210 aircraft, 177 were completed as P-36A, 31 completed as P-36C, 1 completed as P-36B, and 1 completed as the XP-40.
5. The basic design of the P-36 was re-worked to carry an Allison V-1710-11 engine with a turbo-supercharger and designated the XP-37. Design problems arising from the length of the in-line engine, supercharger and other required equipment, in conjunction with weight and balance requirements, dictated the extreme aft placement of the pilot. The XP-37 was in its time (1937-1938) the fastest airplane in the United States Army Air Corps (approximately 340 MPH at optimum altitude).
6. The YP-37 was similar to the XP-37 with the exception of the V-1710-21 engine, a new supercharger, and a modified cooling system. These modifications increased the gross weight by 525 pounds and reduced the maximum speed approximately 10 MPH.
7. The XP-40 (original configuration) was in reality the 10th P-36A airframe modified to take the Allison V-1710-19 engine of 1160 H.P. The coolant radiator was located aft of the wing on the underside of the fuselage with the coolant lines located under the wing root fairings.
8. The XP-40 underwent several modifications, primarily in the cooling system, before reaching the configuration shown. The aft ventral radiator was moved up forward and consisted of a small circular radiator core housed in a small airscoop. This was then modified to a larger rectangular radiator core housed in the airscoop as shown.



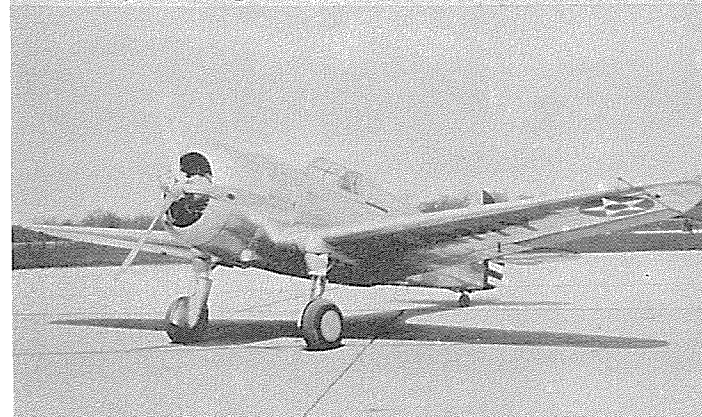
"Hawk 75" (Original)

P.M.Bowers



"Hawk 75" (Modified)

Bowers



P-36

USAAC-Balzer



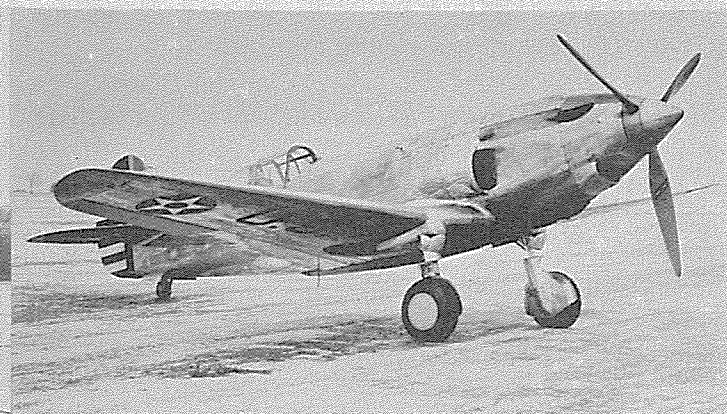
P-36A

Curtiss-Balzer



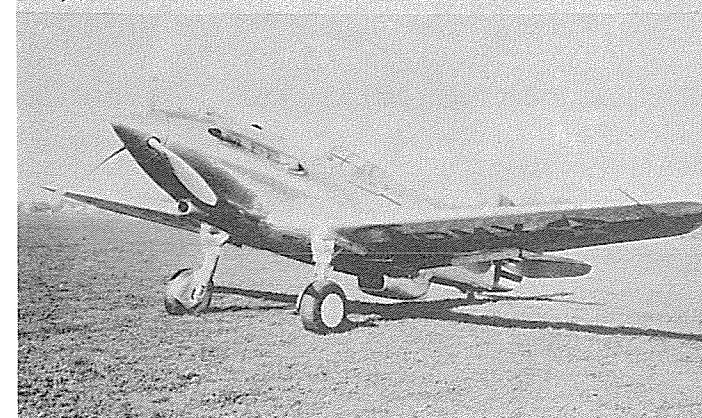
XP-37

USAAC-Balzer



YP-37

Curtiss-Balzer



XP-40 (Original)

USAAC-Balzer



XP-40 (Final modification)

Curtiss-Canary