OFFICIAL SUMMARY OF CHARACTERISTICS

AIRPLANE

Manufacturer: CURTISS-WRIGHT, Type: P-40, Model: P-40


Crew: ONE, Wing Loading: 28.8 lb./sq. ft., Power Loading: 4.22 lb./bhp, Design Altitude: 15,000 ft.

Wing Area: 136 sq. ft., Span: 37 ft. 5 1/2 in., MAC: 81.4 in., Aspect Ratio: 5.9, Airfoil: T-2209

Wing Type: LOW-NONFLAP, High Lift Devices: SPLITTER, Landing Gear Type: RETRACT

ENGINES

Number: ONE, Mfr.: ALLISON, Spec. No.: 126-D, Type: V-1710, Model: V-1710-33

No. Cyl.: 12, Supercharger Blower Ratios: 8.77:1, Turbo Type: NONE

Prop. Gear Ratio: 2.0:1, Compression Ratio: 6.5:1, Cooling: LIQUID

Carburetor Type: BENDIX-STR. PT-1361, Setting: A.G. No. 110, Fuel: 100 octane

Intake Type: RUNNING, Exhaust Type: SHORT STACKS

Rating:

Altitude ft.: 10,000, Power hp.: 425, Speed r. p. m.: 1429, Man. Pr. in. Hg.: 5.0, Time Limit minutes: -

Take-off S. L.: 10,000, Speed r. p. m.: 1425, Man. Pr. in. Hg.: 5.0, Time Limit minutes: -

Normal S. L.: 900, Speed r. p. m.: 2400, Man. Pr. in. Hg.: 5.0, Time Limit minutes: -

Normal 1,000 ft.: 1000, Speed r. p. m.: 2400, Man. Pr. in. Hg.: 5.0, Time Limit minutes: -

Military 1,500 ft.: 1500, Speed r. p. m.: 3500, Man. Pr. in. Hg.: 5.0, Time Limit minutes: -

Blower Ratio: - F/A 1.0

Mixture: A.U.G.

PROPELLERS

Number: ONE, Mfr.: CURTISS, Type: CONSTANT SPEED, Rotation: R.H.

Diameter: 11 ft. 0 in., No. of Blades: 3, Type Control: AUTO-SELECT, Setting: 5°-90°

Blade Dwg. No.: 614, Hub Dwg. No.: C-53L5-S-01

Clearances:

Ground: 0.5 in. from fuselage, between disks

Weight each: 348 lb.

WEIGHTS AND BALANCE

Design Useful load: 1408 lb.
Crew @ 200 lb. each: 220 lb.
Fuel @ 6.0 lb./gal.: 1200 lb.
Oil @ 7.5 lb./gal.: 60 lb.
Armament & Bombs: 370 lb.
Misc. Equipment: 200 lb.

Weight Empty: 5374 lb.
Design Gross Weight: 6782 lb.

Balance with Design Useful Load—c. g. 30% MAC
Safe Limits of c. g. 14% MAC to 42% MAC

Normal Fuel: 120 gal.
Max. Fuel: 181 gal.
Normal Bombs: 225 lb.
Max. Bombs: 370 lb.
OFFICIAL PERFORMANCE SUMMARY

Model .................................. Date of issue ..................................

1. Level Flight Speeds at Design Altitude of 15,000 ft. with Design Gross Weight of 6,787 lb.
   * Maximum Speed 357 m. p. h. at 29,600 r. p. m. with 121 b. h. p. (111.4% rated)
   High Speed 331 m. p. h. at 26,600 r. p. m. with 94.6 b. h. p. (114% rated)
   Operating Speed 315 m. p. h. at 22,800 r. p. m. with 77.5 b. h. p. (116% rated)
   Cruising Speed 304 m. p. h. at 22,800 r. p. m. with 69 b. h. p. (112% rated)

2. Optimum Range and Endurance with 120 gal. fuel and ........................ lb. bombs.
   At High Speed 410 miles at 3.32 mi./gal. or 1.21 hrs. at 111.6 gal/hr. (s. f. c. 42)
   At Operating Speed 637 miles at 3.29 mi./gal. or 1.20 hrs. at 111.6 gal/hr. (s. f. c. 43)
   At Cruising Speed 147 miles at 3.30 mi./gal. or 1.33 hrs. at 111.6 gal/hr. (s. f. c. 41)

3. Practical Range and Endurance with 120 gal. fuel and ........................ lb. bombs.
   At Operating Speed 507 miles at 4.28 mi./gal. or 1.18 hrs. at 111.5 gal/hr. (s. f. c. 60)
   At Cruising Speed 518 miles at 4.31 mi./gal. or 1.30 hrs. at 111.5 gal/hr. (s. f. c. 13)

4. Climb Data with Gross Weight of 6,787 lb.
   Standard Altitude ft. 0 5,000 10,000 15,000 20,000 25,000 30,000
   Climbing Speed m. p. h. 121 142 152 162 172 183
   Engine Speed r. p. m. 3,800 3,800 3,800 3,800 3,800
   Total Power b. h. p. 164 169 171 173 173 173
   Maximum Rate f. p. m. 308 330 360 360 360
   Minimum Time min. 1.6 3.2 5.3 7.2 10.3


6. Take-off and Landing Distances—To Clear 50 ft. Obstacle at Sea Level (no wind).
   Take-off 124 ft. at 90.6 m. p. h. 15 deg. flap. Gr. Wt. 1635 lb. Ground run 121 ft.
   Land 147 ft. at 80.4 m. p. h. E.P. deg. flap. Gr. Wt. 1635 lb. Ground run 147 ft.

7. References and Remarks:
   The above performance summary is based on M.P. from Flying Branch 327,W.P.HQ.N-1078-4,
   dated May 3, 1940.
   * Temporary restrictions on engine operation prohibit the attainment of these values
   ** Values based on sp. fuel cons. obtained from engine type.