

ATC # 575
(6-25-35)
WACO, MODEL CUC.

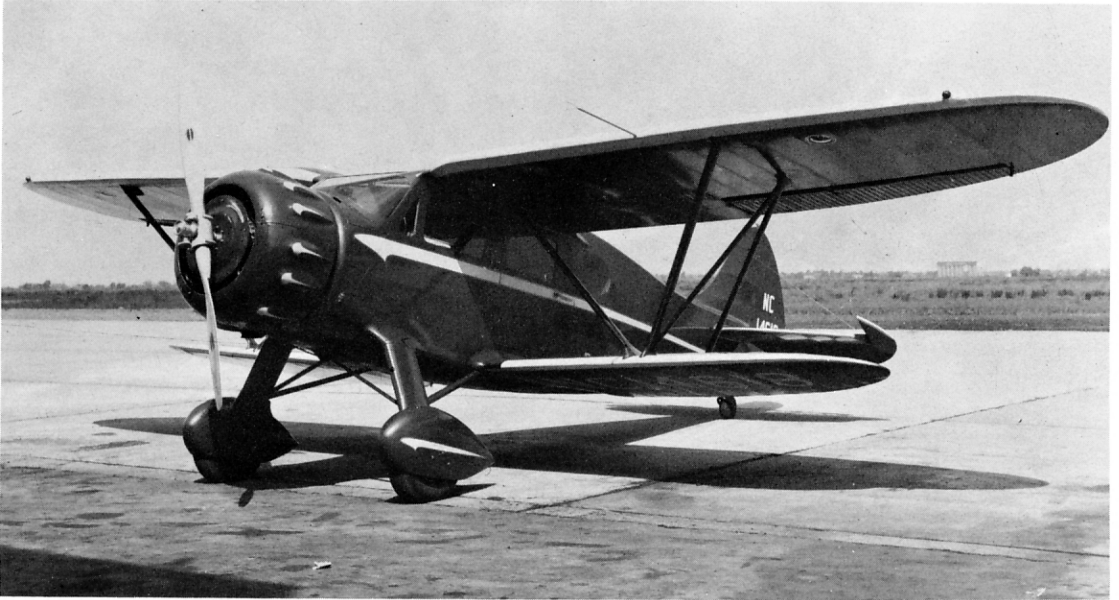


Fig. 269. The Waco CUC with 250 h.p. Wright engine.

A full-figured and rather curvacious machine, the Waco model CUC was perhaps the "grand dame" of the "Custom Cabin" lineup for the 1935 season. Spurred on by the relentless obligation of leadership, Waco Aircraft offered the Model CUC as part of a line of custom airplanes that perhaps excelled all previous attainment in an airplane of this type. The CUC was a custom-built airplane manufactured to the tastes and dictates of each individual customer; each airplane was written up thoroughly beforehand to specify any custom interior treatment, the exterior finish, or addition of mechanical equipment, and no work was even started until a substantial deposit was received to make the order binding. The purpose for this was two-fold; the customer was assured the airplane would be built absolutely to his liking, and Waco Aircraft was in turn assured that all the time and effort spent on a job was destined to be appreciated by a proud and well-pleased owner. As a consequence, the roster of CUC owners were generally wealthy and a cross-section of the biggest names in business; those not used directly in the pursuit of business matters were private airplanes used in an occasional escape from the pressures of business. Afforded the best of care and usually pampered, the various CUC were certainly worth more than a casual glance and

were usually surrounded by a ring of admirers wherever they went. Most of the CUC were kept by owners for years of service, and those that were not kept were most always traded in for a newer "Waco".

The Waco model CUC was a custom-built cabin biplane with seating arranged for 4 or 5. Of the 3 "Custom Cabin" models (UOC-YOC CUC) for 1935 the CUC was naturally the more elegant. Customers that specified installation of the more expensive "Wright" engine in their "Custom" airplane would hardly be expected to economize on interior trappings or gadgetry, therefore, the CUC was always more plush and more completely equipped. The CUC that were "involved in business" were most always equipped with radio sets, night-flying equipment, and fancy custom colors; the "controllable propeller" which converted engine horsepower into more efficient performance was another extra that was quite popular. The CUC owned by sportsmen were naturally "show-off" airplanes, so most were brilliantly colored and stuffed to the doors with elegance. As powered with the 7 cyl. Wright R-760-E engine rated 250 h.p. the CUC gave good account of itself with a performance that was rather outstanding and often led to owner-boasting. With introduction of the improved R-760-E1 engine, which was

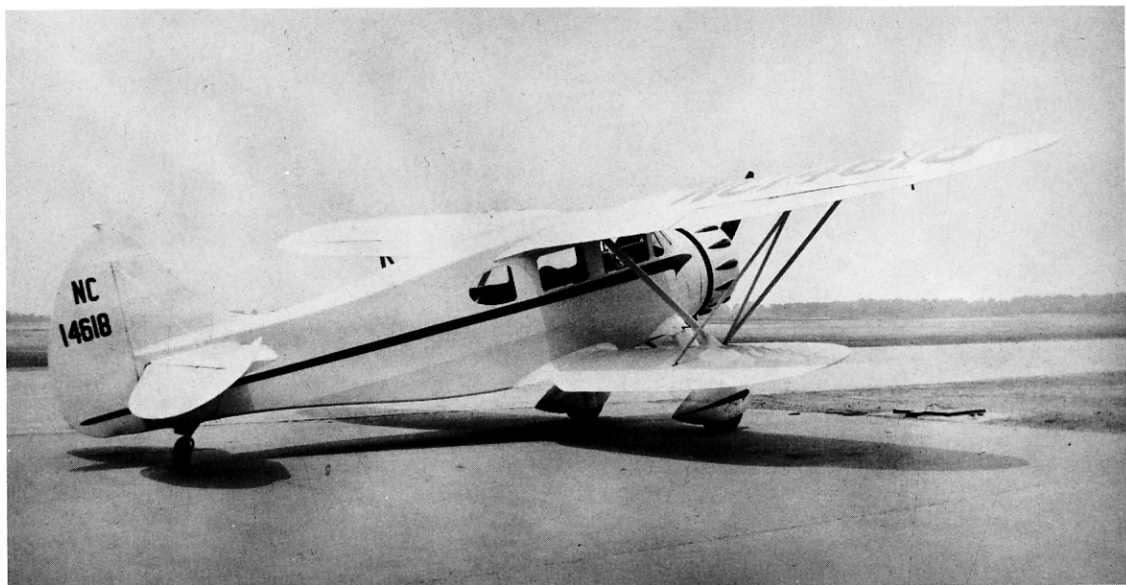


Fig. 270. CUC series were top of "Custom" line for 1935.

rated 285 h.p., several CUC owners swapped engines for a performance that was even that much better. The designation used for the 285 h.p. version was CUC-1. Flight characteristics of the CUC were pleasant, reliability was a taken-for-granted feature, and pride of ownership was just something that developed by association. The type certificate number for the Model CUC was issued 6-25-35 and some 30 or more examples of this model were manufactured by the Waco Aircraft Co. at Troy, Ohio.

Listed below are specifications and performance data for the Waco model CUC as powered with 250 h.p. Wright R-760-E engine; length overall 25'3"; height overall 8'3"; wing span upper 35'0"; wing span lower 24'6"; wing chord upper 72"; wing chord lower 48"; wing area upper 165.6 sq. ft.; wing area lower 73.2 sq. ft.; total wing area 238.8 sq. ft.; airfoil Clark Y; wt. empty 2017 lbs.; useful load 1183 lbs.; payload with 70 gal. fuel 556 lbs. (3 pass. & 46 lbs. baggage); gross wt. 3200 lbs.; max. speed 162 at 1000 ft.; cruising speed (.80 power) 145 at 1000 ft.; landing speed (no flaps) 55; climb 850 ft. first min. at sea level; ser. ceiling 16,500 ft.; gas cap. normal 70 gal.; gas cap. max. 95 gal.; oil cap. 5-7 gal.; cruising range (.80 power) at 16 gal. per hour 570 miles; price \$8400. at factory field.

The model CUC-1 with R-760-E1 engine rated 285 h.p. using Hamilton-Standard controllable propeller was identical to that above, except as follows; wt. empty 2076 lbs.; useful load 1274 lbs.; payload with 70 gal. fuel 647 lbs. (3 pass. & 137 lbs. baggage); gross wt. 3350 lbs.; max. speed 168 at 1000 ft.; cruising speed (.80 power) 160 at 6000 ft.; cruising speed 150 at 1000 ft.; landing speed (no flaps) 58; climb 900

ft. first min. at sea level; service ceiling 17,000 ft.; gas cap. normal 70 gal.; gas cap. max. 95 gal.; oil cap. 5-7 gal.; cruising range (.80 power) at 18 gal. per hour 540 miles; price \$8975. at factory field. A few examples were converted to models CUC-2 with Wright R-760-E2 engine rated 320 h.p.; the performance was improved accordingly.

The construction details and general arrangement of the model CUC was typical to that of the models UOC and YOC as described here in this volume. The fuselage front of the CUC, being otherwise similar, was modified to mount the 7 cyl. Wright engine, and because of extra weight, the nose was shortened by several inches. The interior was normally upholstered in rich Broadcloth fabrics, but real leather was optional. The unusually large baggage compartment was loaded from the outside, but luggage was accessible even in flight; baggage allowance was governed only by permissible weight rather than by available space—it was that big. The landing gear of 87 in. tread was fitted with 8.50x-10 wheels and tires; wheels were usually encased in metal wheel pants. The wing roots were faired gently into the fuselage junction by metal wing fillets; the landing gear and wing strut junctions were faired with metal cuffs. Metal-framed ailerons were covered with corrugated dural sheet; one aileron had adjustable tab for lateral trim. Drag flaps, in underside of upper wing, were inset from the trailing edge and spanned the space from aileron to fuselage; numerous hand-holes were provided in the wings for adjustment or inspection. A throw-over control wheel provided dual controls, but a Y-type column with 2 wheels was optional. Front seats were adjustable to fit stature of various pilots. A



Fig. 271. Waco CUC-1 with 285 h.p. Wright engine.

Curtiss-Reed metal propeller, electric engine starter, generator, battery, wheel brakes, tail wheel, navigation lights, unusually complete instrument panel, fuel gauges, fire extinguisher, assist ropes, ash trays, cabin heat & ventilation, first-aid kit, tool kit, and log books were standard equipment. Generally speaking, hardly any model CUC left the factory with just standard equipment, being variously equipped with a radio set, bonding & shielding, landing lights, parachute flares, latest navigational aids, extra engine instruments, extra fuel capacity, wheel pants, and custom color schemes. Installation of the Hamilton Standard controllable propeller permitted gross weight increase to 3350 lbs. The next Waco development was the "armed" Model D as described in the chapter for ATC # 581 of this volume.

Listed below are CUC and CUC-1 entries as verified by company records:

NC-14618:	CUC-1	(# 4242)	Wright 285.
-14623:	"	(# 4247)	"
-14626:	"	(# 4248)	"
-14625:	CUC	(# 4249)	Wright 250.
-14679:	CUC-1	(# 4277)	Wright 285.
-14688:	"	(# 4284)	"
-14685:	"	(# 4285)	"
-15203:	"	(# 4286)	"
-15205:	"	(# 4290)	"
-15210:	"	(# 4298)	"
-15216:	"	(# 4300)	"
-15211:	"	(# 4301)	"
-15213:	"	(# 4302)	"
	: CUC	(# 4303)	Wright 250.
PH-VDL:	"	(# 4304)	"

-15220:	CUC-1	(# 4309)	Wright 285.
-15222:	CUC	(# 4311)	Wright 250.
-15223:	CUC-1	(# 4312)	Wright 285.
-15227:	"	(# 4313)	"
-15224:	"	(# 4314)	"
-15228:	"	(# 4316)	"
-15233:	"	(# 4318)	"
-15230:	"	(# 4319)	"
-15240:	"	(# 4322)	"
-15238:	"	(# 4323)	"
-15237:	"	(# 4324)	"
-15244:	"	(# 4327)	"
-15248:	"	(# 4330)	"
-15703:	"	(# 4334)	"
-15702:	"	(# 4335)	"

Serial # 4242 later modified to model CUC-2 with 320 h.p. Wright R-760-E2 engine; ser. # 4247 del. to Standard Oil Co. of Ohio (SOHIO); ser. # 4248 del. to Packard Motor Car Co.—was first as model YOC; ser. # 4284 del. to Henry King of Hollywood; ser. # 4298 first as model YOC; ser. # 4300 del. to Leland Hayward of Hollywood; ser. # 4300 later as model YOC-1; ser. # 4301 later modified to model YOC-1 with 285 h.p. Jacobs L-5 engine; ser. # 4302 as X-15213 was test-bed for 320 h.p. Wright R-760-E2 engine; ser. # 4303 del. to Johannesburg, So. Africa; ser. # 4304 del. to Holland; ser. # 4312 del. to Gar Wood, famous speed-boat king; ser. # 4313 was model YOC at one time; ser. # 4322 del. to Victor Fleming of Hollywood; ser. # 4327 and 4330 later modified to model YOC-1; ser. # 4335 del. to Howard Hawks of Hollywood; one CUC impressed into USAAF service as UC-72F during 1942; this approval expired 9-30-39.