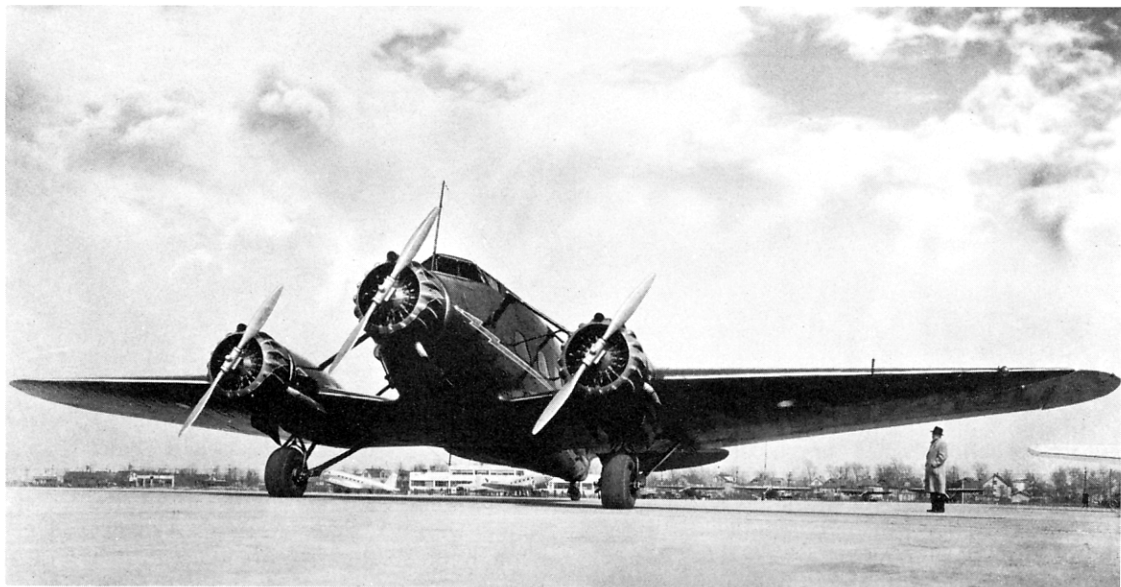


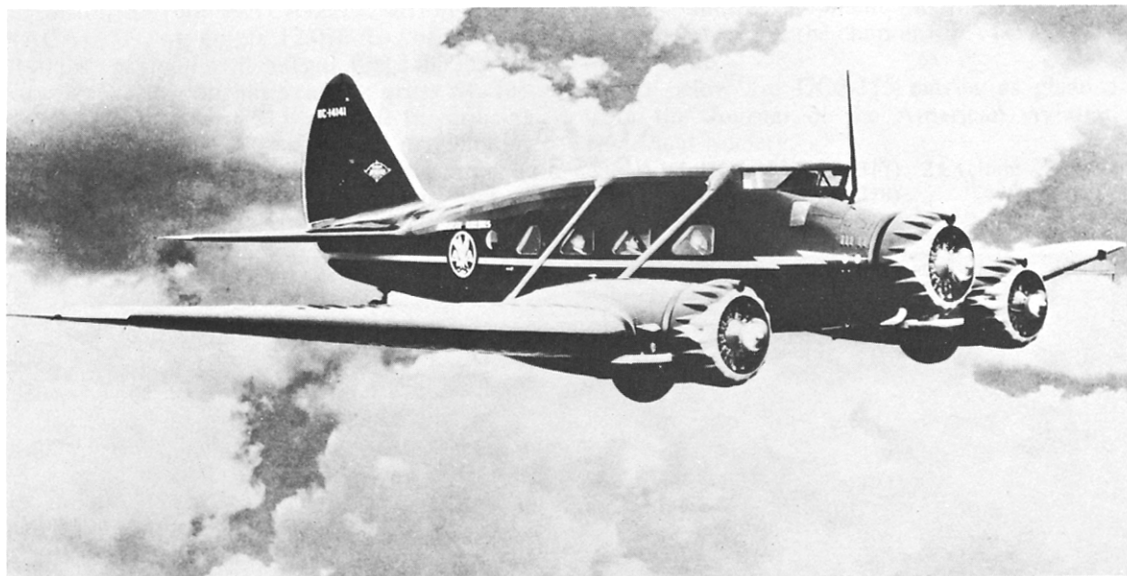
ATC # 556  
(9-25-34)  
STINSON, MODEL A.



*Fig. 199. Stinson "Model A" with 3 Lycoming 260 h.p. engines.*

The tri-motored Stinson "Model A" of 1934, as "America's fastest and most economical Tri-Motor", had the three-engined transport field all to itself, but found itself competing also with the Boeing 247 and the Douglas DC-2. At about only half the cost the "Model A" was a cheap airliner that could just about match the speed and comfort of the 247 and the DC-2, and yet beat the pants off them in short-field operation. For the "Stinson A" it was a simple chore to drop in at the smaller airfields every few hundred miles, or even less, to drop off or pick up a passenger or two. The new low-winged Stinson "Tri-Motor" was master of the short high-speed runs at low altitude where less capacity was more suitable. Announced in Nov. of 1933 the rather unusual "Model A" was rolled out and flown on its maiden flight by Ralph DeVore of American Airlines on April 27 of 1934; by August of that year the "A" was being readied for production. The "Stinson A" was proudly displayed at the Detroit Air Show for 1935 and the plant was already working on a batch of 15 airplanes ordered by American Airlines, but delivery was delayed for several months by requested changes. In the meantime, the first production "Model A" was delivered to Delta Air Lines which inaugurated service from Dallas to Tyler, Shreveport, Monroe, Jackson, Meridian, Birmingham, and Atlanta in July of

1935; this a route with 8 stops across 5 southern states. The second batch of 5 airplanes went to Central Airlines which offered Stinson "Tri-Motor" service between Detroit and Washington, D.C. with stops at Cleveland, Akron, and Pittsburgh. Late in 1935 the American Airlines was operating a route from Detroit to Chicago which included 5 stops across the breadth of Michigan; the "Model A" was good at this type of service. When their Wash., D.C. to Chicago run lost some traffic American Airlines replaced the Douglas DC-2 on this route with a more practical "Stinson A". In April of 1936 the first of 4 "Model A" were delivered to the Airlines of Australia, Ltd. for a route from Sydney to Brisbane; the "A" was ideal for the primitive airstrips of Australia. Two of the Australian "Model A" had crashed because of cyclone and fog, and the remaining 2 were converted into a twin-engined configuration in 1943 using two 450 h.p. "Wasp" engines. A few examples of the "Model A" were sold to China; Walter J. Carr, noted flier and aircraft designer, delivered an example to a Chinese transport company in 1936 and remained to train native personnel to operate and maintain the airplane. Four of the "Model A" were delivered as plush executive-transports in the field of business. The tri-motored "A", made obsolete by new-generation "twins" was phased



*Fig. 200. "Stinson A" was America's fastest and most economical "tri-motor".*

out of production by 1937 and most were retired from airline service by 1938. Surviving examples slipped off into Mexico and the far north where they served well for at least another decade.

The Stinson tri-motored "Model A" was a low-winged transport monoplane with seating arranged for 1 or 2 pilots, 8 passengers, and a stewardess. Fat and contoured to rounded lines the "Model A" was short-coupled and wide-bodied with an interior that placed passengers in a friendly cluster, attended by a comely stewardess, instead of stringing them out into long rows. The executive model had plush over-stuffed chairs, a sofa, a table, and numerous other provisions for creature comforts. The Model A managed to look like a Stinson, but its wing of double taper in planform and in thickness, and its monospar construction was

rather unique. Robert W. Ayer designed it this way and his preliminary performance calculations were substantiated in the wind-tunnel by Prof. Peter Altman. Ayer was given some mighty tough requirements to meet in his design, but the Model A fulfilled his promises and then some. As powered with three 9 cyl. Lycoming R-680-5 engines rated 260 h.p. each at 2300 r.p.m. the Model A was a deft airplane for its size and it scooted along at a pretty fast clip. Fully-loaded take-offs required less than 800 ft., climb was nearly 1000 f.p.m., and landing runs averaged 600 ft.; it was this kind of performance that made it so popular in the boondocks of the U.S.A. The story goes that designer Bob Ayer would take the "A" off from the factory's 1200 ft. strip, clear an imaginary obstacle in less than 800 ft., chop the throttles to



*Fig. 201. The unique "Model A" was the best and the last "tri-motor" by Stinson.*



*Fig. 202. Tri-motored "Model A" prototype high over Detroit.*

land, and then brake to a stop in the remaining 400 ft. This was even before its maiden flight! In every-day service the Model A was dependable, very stable, quiet, and comfortable; pilots enjoyed flying it. Power reserve allowed it to climb out after take-off on 2 engines, and to maintain at least 8000 ft. altitude on any 2 engines. Stinson had built some wonderful tri-motored airplanes, the Model A was no doubt the best, and it was also the last. The type certificate number for the Model A was issued 9-25-34 and some 35 examples of this model were manufactured by the Stinson Aircraft Corp. at Wayne, Mich. Robert W. Ayer was chief engineer of the transport division.

Listed below are specifications and performance data for the Stinson "Model A" as powered with 3 Lycoming R-680-5 engines rated 260 h.p. each; length overall 36'10"; height overall 11'6"; wing span 60'0"; max. wing chord 134"; wing chord at tip 67"; total wing area (incl. fuselage section) 500 sq. ft.; airfoil "2R-18/10"; wt. empty 7200 lbs.; useful load 3000 lbs.; payload with 140 gal. fuel, 1 pilot, & stewardess 1780 lbs. (8 pass. & 420 lbs. baggage); payload with 160 gal. fuel, & 2 pilots 1610 lbs. (8 pass. & 250 lbs. baggage); gross wt. 10,200 lbs.; max. speed 180 at sea level; cruising speed (.75 power) 163 at 5000 ft.; cruising speed (1950 r.p.m.) 170 at 7000 ft.; landing (stall) speed (with flaps) 63; climb 980 ft. first min. at sea level; ser. ceiling 17,000 ft.; gas cap. normal 160 gal.; gas cap. max. 220 gal.; oil cap. 12-15 gal.; cruising range (.75 power) at 42 gal. per hour 490 miles; ser. ceiling on 2 engines 8400 ft.;

price \$37,500. at factory field.

The fuselage framework was built up of welded C/M steel tubing, contoured to a rounded shape with formers and fairing strips, then fabric covered; the forward section was covered in dural metal panels. The cabin was sound-proofed, ventilated, and equipped with cabin heaters; all windows were of shatter-proof glass. Passengers were seated 3 across, with large entry door to the rear on right side. A large baggage bin of 41 cu. ft. capacity with allowance for 500 lbs. was located behind the passenger section, and so was the lavatory; a 15 cu. ft. baggage or mail bin with allowance for 150 lbs. was available in each engine nacelle, or each of these compartments could be used for 30 gal. extra fuel. The unusual tapered wing was a sesqui-spar design built up of welded C/M steel tubing with a girder-type spar beam and truss-type wing ribs; the metal-covered center-section (C/S) was integral to lower fuselage and braced to top of fuselage with parallel struts. The fabric covered outer wing panels were fastened to stub-end of the C/S. Outboard engine nacelles were mounted to the C/S and the landing gear of 17 ft. tread retracted up and forward into underside of these nacelles. Goodyear 35x15-6 airwheels were fitted with vacuum-boosted hydraulic brakes; the swiveling tail wheel was 12x5-3 with heavy duty tire. An 80 gal. fuel tank was mounted in the C/S, each side of the fuselage; an extra 30 gal. tank could be mounted in each wing-mounted engine nacelle. Trailing edge wing flaps were mounted across span of the C/S; both landing gear and wing flaps were electrical-

ly operated with provision for hand operation in emergency. The fabric covered tail group was built up of welded C/M steel tubing; rudder and elevators were fitted with trimming tabs. All movable controls were aerodynamically balanced. Lycoming-Smith or Hamilton-Standard controllable propellers, 3 electric engine starters, battery, generator, cabin heater, drinking water Thermos, fire extinguisher, toilet compartment, landing lights, navigation lights, parachute flares, bonding & shielding, two-way radio, wheel fenders, and first-aid kit were standard equipment. Extra fuel cap., custom "Club" interior, custom colors, and wing de-icers optional. The next Stinson development was the "Reliant" model SR-6 as described in the chapter for ATC # 580 of this volume.

Listed below is a partial listing of Model A entries as compiled from various sources:

NC-14141:	Model A	(# 9100)	3 Lycoming 260.
-14597:	"	(# 9101)	3 Lycoming 245.
-14598:	"	(# 9102)	3 Lycoming 260.
:	"	(# 9103)	"
-14566:	"	(# 9104)	3 Lycoming 245.
:	"	(# 9105)	"
-15106:	"	(# 9106)	3 Lycoming 260.
-15107:	"	(# 9107)	"

-15108:	"	(# 9108)	"
-15109:	"	(# 9109)	"
-15110:	"	(# 9110)	"
:	"	(# 9111)	"
:	"	(# 9112)	"
-15153:	"	(# 9113)	3 Lycoming 260.
-15154:	"	(# 9114)	"
-15155:	"	(# 9115)	"
-15156:	"	(# 9116)	"
-15157:	"	(# 9117)	"
-15158:	"	(# 9118)	"
-15159:	"	(# 9119)	"
-15160:	"	(# 9120)	"
-15161:	"	(# 9121)	"
-15162:	"	(# 9122)	"
-15163:	"	(# 9123)	"
-15164:	"	(# 9124)	"
-15165:	"	(# 9125)	"
VH-UHH:	"	(# 9126)	"
:	"	(# 9127)	"
VH-UKK:	"	(# 9128)	"
-16110:	"	(# 9129)	"
VH-UYY:	"	(# 9130)	"

This approval for ser. # 9102 and up; ser. # 9101, 9104 were "Club" models; no listing for ser. # 9103, 9105, 9111, 9112, nor any beyond ser. # 9130; approval expired 9-30-39.