

# yesterday's wings

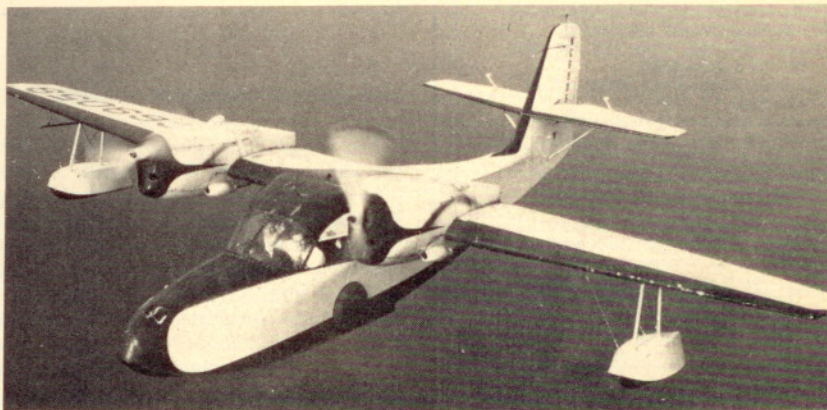
# The Grumman Widgeon

by PETER M. BOWERS / AOPA 54408

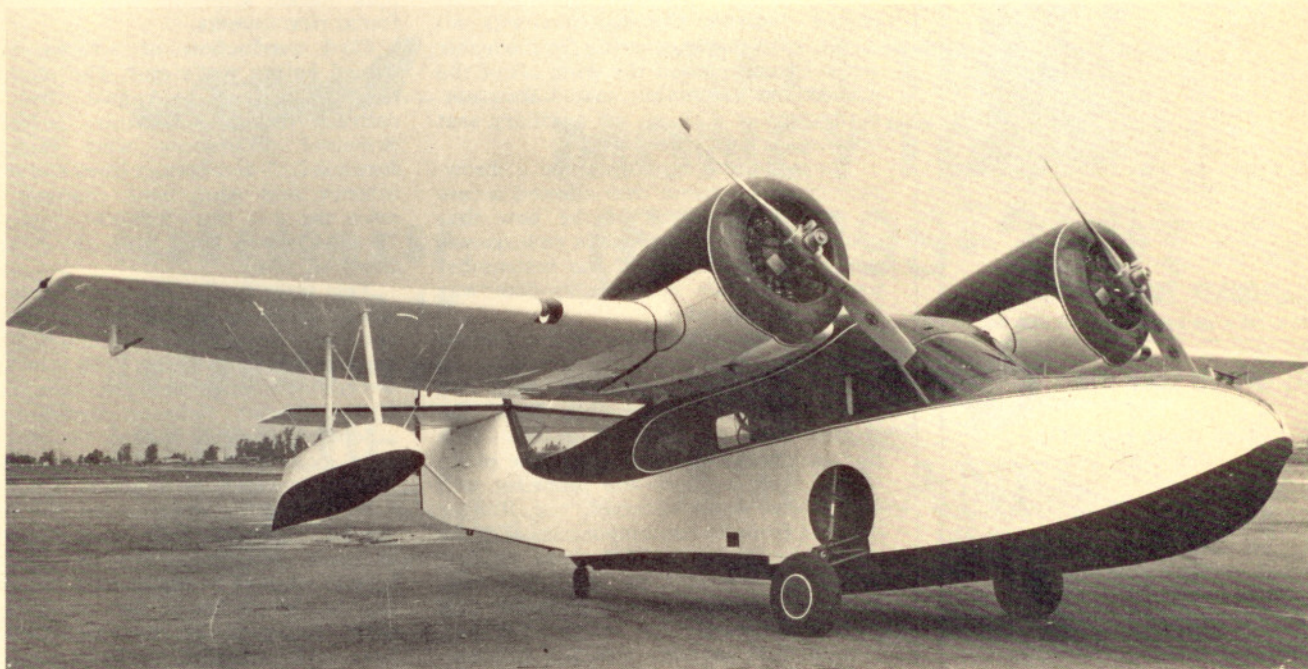
■ A pre-World War II airplane design that went out of production in 1949 should certainly qualify as an antique. In the case of the Grumman G-44 Widgeon, however, the label simply doesn't stick. This long-lived amphibian is still carried in the current issue of Jane's *All The World's Aircraft* along with the very latest models, although not under the Grumman name.

The Widgeon is another of those unique and durable classics that is in a class by itself and is in little danger of being forced out of business by late-model competition. The Widgeons operating today are mostly working airplanes, not the pampered pets of hobbyists/antiquers as are so many of their contemporaries.

The pedigree of the airplane is im-

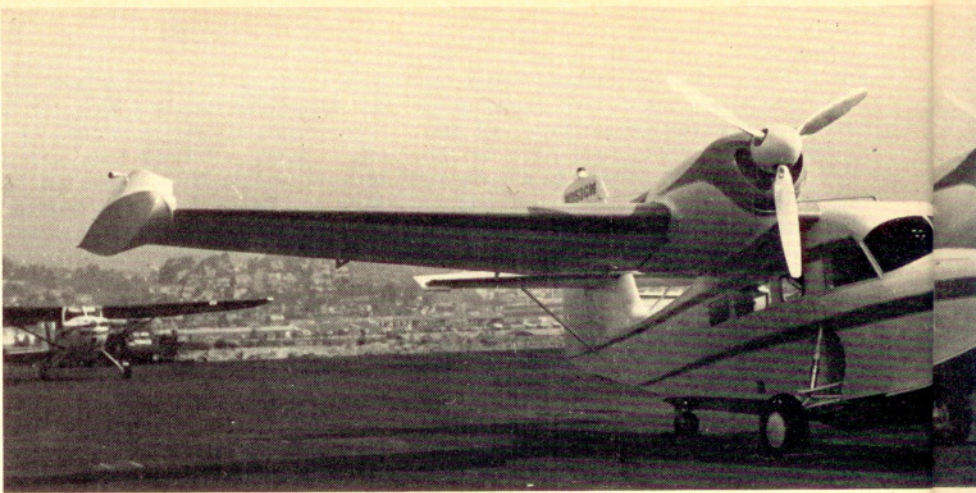


The author flies a Grumman Widgeon for his multi-engine sea check in 1950. Kurtzer Flying Service of Seattle has operated this same inverted-Ranger-powered model for nearly 30 years. Photo by Victor D. Seely.



Early replacements for the Widgeon's original Ranger engines were 300-hp Lycoming R-680 radials that imparted a top-heavy look. Some favored three-blade propellers of reduced diameter to minimize the spray problem.





A representative McKinnon Super Widgeon conversion with flat-six Lycoming engines, three-blade propellers, and individually retractable wingtip floats.

#### THE GRUMMAN WIDGEON *continued*

pressive. LeRoy Grumman, who had been production manager for the famous Loening Aeronautical Engineering Co. and an expert on amphibians since the Loening appeared in 1923, left that firm when it merged with Curtiss-Wright and formed his own company at Bethpage, L. I., in 1930. For several years, production was exclusively military, but in 1937 the firm introduced a twin-engine, six-place amphibian marketed as the Grumman G-21 Goose. This quickly achieved a wide civil and military market.

The Widgeon, first flown in June 1940, was essentially a scaled-down Goose seating four to five and using 200-hp Ranger 6-440C-5 inverted, air-cooled engines. Construction was all metal, with fabric covering for moveable control surfaces and the wing aft of the main spar. The cabin seated four normally with a fifth on an auxiliary seat behind the left wheel well.

The pilot and copilot shared a throw-over control column that allowed access to an anchor hatch in the bow that could be reached through a passageway under the right side of the instrument panel. The main cabin entry door was behind the left wing.

It was the availability of the Ranger engine that had made the concept of a scaled-down Goose workable, with two unique features responsible. First, the engine was an inverted in-line. This put the thrust line well above the plane of the wing to keep the propeller well above the water. Second, the Ranger differed from its contemporaries of equal power by being a high-speed engine, delivering its 200 hp at 2,450 rpm through a small-diameter propeller that further increased the water clearance. Normal fuel capacity was 108 gallons.

The Widgeon went into production under Approved Type Certificate A-734 in February, 1941, and 37 were completed with a \$25,000 price tag before

the factory turned exclusively to military production in 1942. The Widgeon remained in production, however. Actually, the U.S. Coast Guard was the first service customer, having bought eight in 1941 under the naval designation of J4F-1 and following up with another 17 in 1942. The Navy ordered 130 very similar J4F-2s in 1942 in addition to acquiring some from civil owners.

Of the Navy total, 15 went to Britain under Lend-Lease, where they were known as the Grumman Gosling. The U.S. Army acquired 16 as the OA-14 for Observation Amphibian, but bought them from civil owners, not Grumman. Another military order was for 12 for the Portuguese Navy.

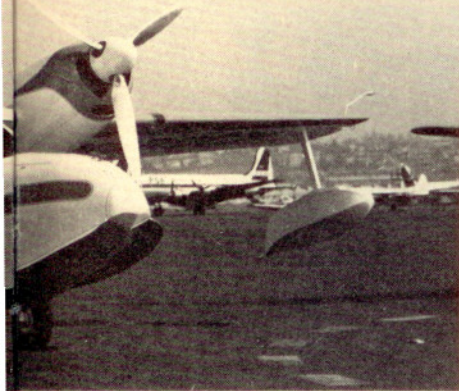
Most of the military versions, whether built new or drafted, came on the surplus market after the war and quickly found new owners.

Civil production at Grumman resumed before war's end. The prototype G-44A was flying in August, 1944, and deliveries began in February, 1945. The principal differences were improved forward hull and bottom lines and minor interior and equipment changes. The price tag was then \$30,000. A total of 75 G-44As was built, with the final delivery in 1949.

This wasn't quite the end of Widgeon production. The French Societe de Constructions Aero-Navales (S.C.A.N.) built approximately 40 from 1949 into 1952, the major change being installation of 200-hp French Salmson inverted V-8, air-cooled engines. Some 16 of these were exported to the U.S. and refitted with later American engines.

With no direct competition, the Widgeon had the small-twin amphibian field to itself. But eventually its orphaned prewar engines began to be a handicap. Starting in the 1950s, this problem was easily overcome by the substitution of later-model engines by firms that specialized in conversion work and were able to get supplemental type certificates for the engine changes and other update features. The work could be done





## THE GRUMMAN WIDGEON

### Specifications and Performance

	GRUMMAN G-44 WIDGEON	McKINNON SUPER WIDGEON
Engine	Ranger 6-440C5 200 hp @ 2,450 rpm	Lycoming GO 480B1D 270 hp @ 3,400 rpm
Span	40 ft	40 ft
Length	31 ft	31 ft
Wing Area	245 sq ft	254 sq ft
Passengers and crew	4-5	5-6
Empty weight	3,240 lb	—
Gross weight	4,525 lb	5,500 lb
Rate of climb	1,000 fpm	1,750 fpm
Maximum level speed	170 mph	190 mph
Cruise speed	135 mph @ 63% power	175 mph @ 70% power
Range	840 mi	1,000 mi (30 m.n. reserve)
Ceiling	15,600 ft	18,000 ft
Stall speed (flaps down)	58 mph	62 mph

in the originators' shops or the owners could buy kits and do their own.

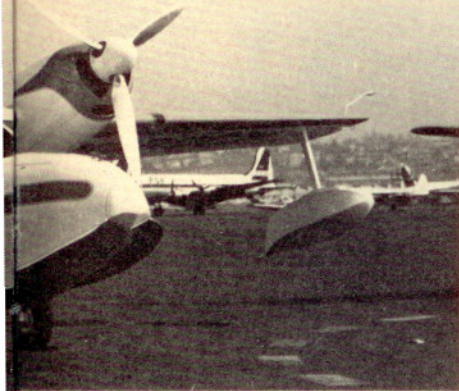
One early but effective change was the use of 300-hp war-surplus Lycoming R-680 radial engines with constant-speed propellers originated by Pacific Aircraft Engineering Corp. The most popular has been the later Super Widgeon developed by McKinnon Enterprises of Sandy, Ore., to use contemporary 260-hp Lycoming

GO-435C2Bs or 270-hp GO-480B1D flat-sixes in redesigned nacelles.

Some of the optional McKinnon modernization features go far beyond mere engine changes. There are new fuel systems holding 154 gallons, various interior and access improvements, and most noticeably, retractable wing floats. The \$55,000 starting price tag for the conversion alone, not including the pur-

chase of the airframe, is also a reflection of changing times and technology as well as a tribute to the durability and continuing popularity of the Grumman design.

Of 317 Widgeons built, including the French, 130 are still on the civil register. Of these, over 70 have been given varying degrees of the McKinnon conversions. □



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