



Admittedly, the Champ didn't attempt to climb the tall ones, but traversed the mountainous areas without too much difficulty.

# Over Mountain And Plain In The 'Cheap' Champ

First production model of new \$4,995 two-cylinder plane ferried from Wisconsin to West Coast. 'Growing pains' in evidence during 39-hour 3,000-mile flight, but pilots see future for this fun machine

by DON DOWNIE /AOPA 188441

Photos by Ruth and Dana Downie and Tom Roberts



**EDITOR'S NOTE:** Since the initial announcement of the \$4,995 "cheap" Champ, Bellanca has received more than 20,000 written inquiries about the "new" Bellanca 7ACA. Ever since Mike Dewey (AOPA 255296), Citabria's dealer for the Los Angeles trade area, placed his order for the first production Champ, AOPA's Western Editor Don Downie has been "champing at the throttle" to ferry out the first new "two-banger." The cross-country delivery flight finally evolved as a two-plane trip to shoot color motion picture footage. The flight team included Tom Roberts, half-owner of a 1946 Aeronca Champ, and copilots Ruth and Dana Downie. The escorting camera plane was a 150 hp Citabria, also for Mike Dewey.

■ Like the five- or 10-cent cigar, what aviation needs today is a good, inexpensive fun machine. Bellanca has developed such a package for "under \$5,000." It's a modern, Franklin-powered version of the venerable Aeronca Champ. Seven thousand Champs were produced between 1946 and 1948. Research indicates that nearly 3,000 are still registered and most of these are flying.

The new "cheap" Champ—and there's nothing cheap about it except the bare-bones price—is almost identical with the 25-year-old model. Major differences aft of the firewall include a Whitman-type spring steel landing gear that greatly improves ground handling characteristics over the older, spongy, narrow oleo gear. Covering is now "lifetime" Dacron. The trim tab has been moved from the ceiling to just below the throttle like the Citabria's and the seats are, if anything, even more comfortable than the Citabria's.

Ventilation is solved simply by two sliding panels that form the left window. We had all the air we wanted even in the warmest weather. Two rotatable airscoops added to ventilation. In addition, that open window gets away from reflections when you want to take pictures.

However, it's up front where the basic differences are found. The new powerplant is a two-cylinder 60 hp Franklin 2A-120, a 137-pound, 117-cubic-inch engine that uses many parts from the six-cylinder Franklin 6A-350 series. The 137-pound weight includes all electrical accessories for an "add-on" building-block package.

V. J. "Vince" Mecca, Franklin's sales manager, explained that "it would be an oversimplification to indicate that the 2A-120 is simply one-third of the 6A-350 series. It does use many of the 6A-350 parts: connecting rods, pistons and piston pins, cylinder, valve and valve spring arrangement. However, the crankcase, crankshaft and accessory end of the engine, as well as the ignition sys-

The \$4,995 Bellanca 7ACA obtained the best performance out of its two-cylinder Franklin engine over the plains of the Midwest. The Downies, Ruth and Don, were at the controls when this picture was made.



tem, were developed specifically for this installation."

If you plan a full electrical system at some later date, you pay an extra \$250 for a 2A-120-A engine with modifications on the case to accept an accessory drive. For another \$250, you get an alternator, starter, battery and lights. Wires for the lights are standard equipment.

It would be a minor understatement to say that our leisurely 39-hour delivery flight of the first production *Champ*, N9135L, was routine. The first handful of any new airplane, car, motorbike or exercising machine can be expected to have some growing pains and N9135L didn't disappoint us. However, most of the problems that we encountered were either one-of-a-kind (a stuck exhaust valve), developmental headaches with a "fix" already in progress (the crankcase oil frothed, overheated and lost pressure) or were the "adventures" that go along with an austere economy package with no electrical system (it's an option) where you stand out in front and pull the prop for starting.

Yes, there was a certain challenge in bringing the first production *Champ* to the West Coast. Ours was strictly stock; that means you have a tachometer, oil temp and pressure gauges, primer, air-speed indicator, compass, fuel float gauge (J-3 *Cub* type) and an insensitive, single-needle altimeter.

There was no electrical system, no starter, no radio and no lights. However, cross-country flights without these latter-day refinements were common not too many years ago. So, our delivery was an interesting comparison with those earlier lightplane flights just before and after World War II.

It was with a feeling of having been there before that I signed for the *Champ*, helped Tom Roberts (AOPA 298474) put all the heavy baggage in the 150 hp *Citabria*, N9151L, and joined my patient copilot (Mrs. D.) in the revitalized "two-banger." Daughter Dana flew "shot-gun" with Tom.

"There's a certain nostalgia in "propping" an airplane after so many years of pushing the button and letting the

electrical system do the work. The factory checkout crew in Osceola, Wis., explained that "the Franklin floods easily. If it doesn't fire after about the third propping, you'd better cut the mag switches and clear the engine with the throttle open."

This was one of the reasons that Roberts and I traded airplanes every couple of hops. Tom supplied the manpower for starting the first hop to Bellanca's *Viking* factory in Alexandria, Minn., and we taxied out in a strong surface wind to the far end of the sod Runway 4-22 for takeoff to the South.

It's almost predictable with any No. 1 production airplane that both airframe and engine manuals are still at the printers. The first *Champ* was no exception. Red-line for the Franklin "two-banger" was marked at 3,200 rpm but there wasn't a "book" to list static rpm for the various propellers. "Our bird" had a 34-inch (cruise) prop—that's inches of "bite" per revolution—which put top performance at the high-speed end of the dial. Since this delivery, Bellanca's flying director of marketing

and sales, Mr. D. E. "Doug" McConnell (AOPA 228880), has advised that a 32-inch pitch prop will be standard on all *Champs*.

Runup on the new *Champ* doesn't amount to much. You check the mags for not more than a 250 rpm drop with a 75 rpm difference at 2,500 rpm. This higher-than-usual mag drop is normal for all Franklin engines because of the spark plug location. A carb heat check shows only a slight drop in rpm but should be on your must-do list. At two stops en route, Kalispell, Mont., and Crescent City, Calif., the Franklin iced up just after starting but cleared up easily with full carb heat.

Our initial takeoff from Osceola was much more interesting than what I would have preferred. With no "book" to indicate static rpm, we really didn't have any reference of what to expect. By the time the next covey of *Champs* is delivered, this package of powerplant and airframe paperwork will be complete.

The sod runway was rough following rains, with tall grass that had been cut

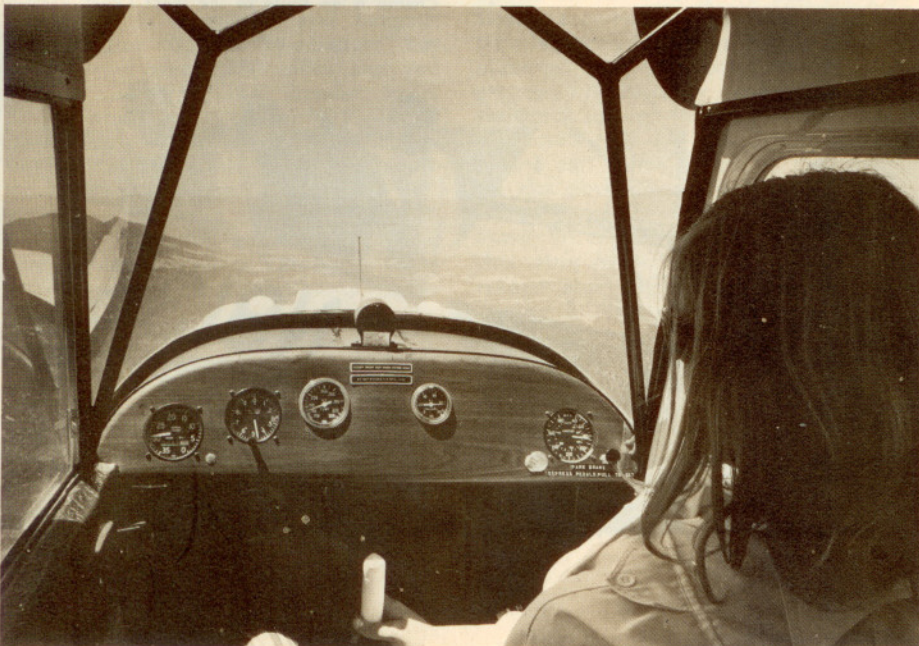


Author Downie seems to be amazed at what he finds under the *Champ's* cowling. The "two-banger" drew a lot of attention from flight-line kibitzers. Such expressions as "Where is the engine?" and "My lawn mower has a larger engine than that" were common.

but not yet raked. We picked up a prodigious amount of grass cuttings on the tailwheel, lower stabilizer wires and smallish 500x5 (600x6 optional) main wheels. Acceleration was anything but spectacular as we finally pried the tailwheel out of the grass and putt-putted over the three-foot fence at the south end of the field with just a bit to spare.

Our rpm was 2,700 at 65 mph and the rate of climb was not even in the

The "cheap" *Champ's* instrument panel contains a tachometer, oil temperature and pressure gauges, primer and a single-needle altimeter. Dana Downie, at the stick, leaned aside while Tom Roberts took this in-flight picture.





ballpark with the specifications of 400 fpm. Nearly 15 hours later, at Cut Bank, Mont., we found a Franklin-engine mechanic, who adjusted an exhaust valve that wasn't closing completely, and picked up a most welcome 200 rpm. However, this situation is a one-of-a-kind malfunction that would not be expected to happen except on a reproduction engine.

It's 135 air miles from Osceola to Alexandria, but our route stayed with main roads and we logged 2:05. Later, after the valve was adjusted, we were able to cruise an honest 80-82 mph with two aboard and the allowable 40 pounds of baggage. The plane took 9½ gallons of 100 octane and no oil at Alexandria. That's respectably close to the 4.0 gph listed in the manual and a sure-fire way to beat the FAA user charges. Those economy fuel chits made us smile all the way across country.

The new *Champ* is designed for short-range fun flying and not as a cross-country campaigner. Few trainers or agricultural planes carry more than three hours' total fuel. The *Champ's* 13-gallon tank is located almost in the pilot's lap—solo front seat only—so you're going to see many new, little airports on a delivery flight. Since Franklin's new powerplant thrives only on 100 octane, a copy of AOPA's latest Airport Directory (commercial "plug") is as essential as a current set of sectional charts with a backup of state road maps. The proposed single grade of av/fuel will someday make this type of flying a bit less complex. We dubbed the AOPA Directory "the wish book" and perused it nightly in motels in conjunction with charts scattered all over the floor.

When we turned off the switches at Jamestown, N.D., the Franklin refused to quit. A mixture control was an option on the No. 1 production airplane but, perhaps as a result of our trip, it is now standard equipment. When you can't shut the engine down with the switches and have no idle cutoff, you turn the fuel shutoff valve, located by the pilot's

left knee, and the engine eventually starves itself to death. We had vibrated a ground wire loose on the left mag. It was fixed by Dean Johnson of Comet Air Service in no more than two minutes. Later in the trip, after landing at Florence, Ore., the other mag ground wire was broken. Since this time, the factory has "changed to braided wire with improved attach-lug support."

These broken grounding wires served to update our procedure to assume that any propeller is "hot" at any time you may want to pull it through, regardless of what the switches may say.

Without radios in either aircraft, we picked our way into smaller no-tower airports and began running the 150 hp *Citabria* on 100 octane. An aluminum dime-store funnel and a short piece of rubber hose were added to the *Champ's* baggage compartment along with a gallon can. Thus we could land on almost any pea-patch airport, drain fuel from the 39½-gallon tanks of the *Citabria* and top-off the *Champ* at airports where 100 octane was not available or where the operator was "out flying, back at 3 p.m."

An additional use for the funnel and hose was to add oil, a pint at a time, to the engine. One refinement not included on this first engine was a wingnut on the oil-filler cap, though one shows on the Franklin factory photographs. It took a rag, some profanity and usually a set of pipe pliers to get the oil cap loose on the hot engine. Then the little hole in the top of the Fiberglas cowling was just big enough for the end of an oil spout to enter. The compounding problem was a 2½-inch gap—give or take a little—between cowling and oil inlet. After pouring much of our first can of added oil over the top of the engine, we devised the funnel-and-hose routine and had no more problems.

We toured the colorful Fort Peck reservoir and powerplant in northern Montana. Corps of Engineers Area Manager Don C. Beckman, a former B-29 pilot, took us back to his sod airport and propped an airplane for the first time in several years. Tom and Dana flew this leg and waddled out across the rough turf where chuckholes were large

enough to trap the 500x5 tires. It was get-out-and-push for Tom while Dana handled the throttle.

Our last stop before tackling the Rocky Mountains was at Cut Bank, Mont. The man behind the gas pumps was Ray Wilson, helicopter pilot and mechanic who is more at home in the Arctic than in the civilization of Cut Bank. Wilson inspected the "two-banger" with the avid interest we found at almost every airport where the distinctive putt-putt sound emptied every hangar within earshot. When I mentioned that there seemed to be a difference in pressure between the two compression pulls when propping, Wilson commented that he had spent a considerable time with Bell helicopters powered with Franklin engines. He pulled the *Champ's* prop through a couple of times and said, "Shucks, that's easy to fix. You have an exhaust valve sticking open on the No. 1 cylinder (left side as seen from the cockpit). It took Wilson less than 15 minutes to take off the Fiberglas cowling, remove the rocker box cover and confirm that there was zero clearance on the exhaust valve. He opened up the clearance to the 0.040-inch recommended by the Franklin manual in his files and "viola!" an extra 200 rpm for the climb over Marias Pass, altitude 5,216, and in the bottom of the deep middle fork of the Flathead River just south of Glacier National Park.

Ruthie and I hogged the *Champ* early the next morning and admired the tall timber, white water, snowcapped peaks and midsummer icy lakes from 8,500 feet between East Glacier Park and Kalispell.

We had deliberately chosen the northern route because of its spectacular scenery and cooler density altitude airports.

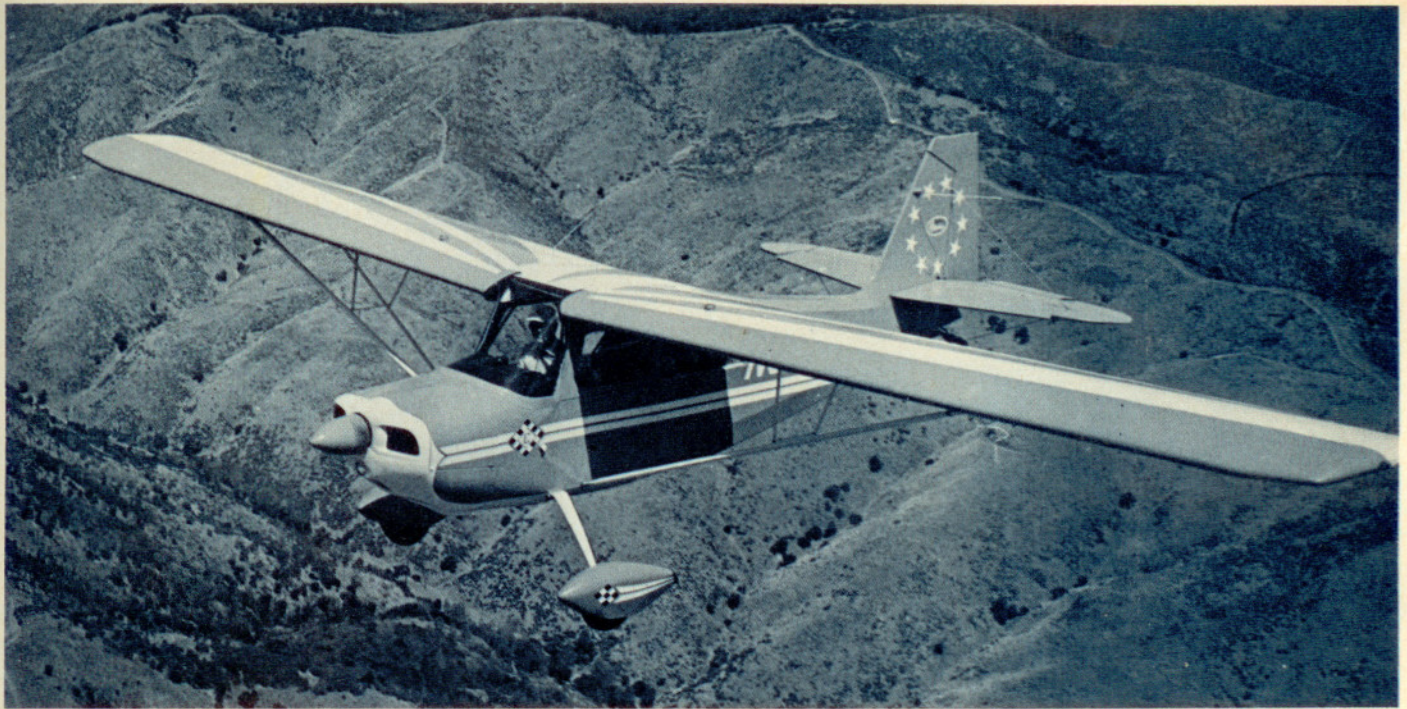
Our off-and-on formation flight down the Pacific Coast was delayed by predictable morning ground fog. However, we cut around the Siskiyou Range under an overcast between Eureka and Ukiah, crossed over the Golden Gate Bridge and went downhill all the way to Santa

Because of frothing from the oil pan, the lubricant was measured with great care; 1½ quarts of lubricant were used.



The Downies, Ruth, Don and Dana, and Tom Roberts study charts while the two-cylinder *Champ* is en route to the West Coast.





This 150 hp Citabria escorted the Champ on the cross-country flight. Aerial views of the \$4,995 Champ were taken from this plane.

Paula, Calif., with two fuel stops.

We made a couple of circuits in formation above the pattern before landing at Santa Paula. As we taxied up in front of Mike Dewey's flight office, almost every "antiquer" and "homebuilder" evacuated his hangar to inspect and admire the new "two-banger."

Every time we landed—at all 28 stops in 39 hours' flying time—there were comments and some laughter when the cowl came open. "I've got a bigger engine in my lawn mower (or air conditioner)." . . . "That engine looks like it should be on a charm bracelet." . . . "I have a watch spring that's bigger." . . . or "Where's the rest of the engine?" We'd answer with a more-or-less straight face, "Go around to the back of the airplane and you'll find it." And some really went back to look!

It isn't SOP (Standard Operating Procedure) to "wring out" a brand-new airplane with a copilot and baggage aboard. After all, that "two-banger" has to take you over 2,500 miles and you treat it with great TLC (tender, lovin' care). Thus, it wasn't until N9135L had been delivered and signed off that we went up to try spins. Yes, they're approved in the *Champ*.

Before the week was over, N9135L had been displayed before many thousands at an Air Fair at Van Nuys. Later it became the first "new *Champ*" to go to Alaska.

We did have one consistent problem with the two-cylinder engine that should be remedied by Franklin before this material appears in print. The original half-dozen first production engines had a somewhat disconcerting habit of oil frothing as the timing gears dipped into the 2½-quart crankcase with an "egg beater" effect. Once air gets into the oil,

it froths, gets hot and the pressure drops. Osceola factory representatives warned us of this tendency before delivery.

"Just throttle back, drop the nose for cooling and this condition will clear up shortly," they explained.

There's a sure set of sweaty palms when that oil-pressure needle begins to wigwag like a metronome. The pine trees or redwoods, depending on where you are, seem to reach out for your tail-wheel with ever-lovin' arms. After a telephone call to Bellanca Engineer Larry Nelson, we kept the oil level to a minimum 1½ quarts, and that's just a drop on the bottom of the dipstick.

At press time, V. J. Mecca of the Franklin Engine Company advised that "We've worked around the clock on the various problems you experienced with the engine oil system, and it looks as though a relatively simple baffle will take care of the foaming and oil-pressure fluctuation."

An oil cooler was not listed as an option on the *Champ* we delivered, but Bellanca considers this feature "an outstanding consideration to offer for hot climates. An oil cooler would allow greater oil capacity and reduce any tendency toward foaming or frothing."

There's only one very minor modification I can think of aft of the firewall on the new *Champ*. The ring around the fuel cap of N9135L was painted red (and 80/87-octane is tinted red). If this ring were painted the 100/130-octane blue, there'd be less chance of getting a load of too-low octane fuel. Doug McConnell says that you'll see this paint change on subsequent models.

The new pilot's manual will also remind users that the float-on-the-end-of-a-wire fuel gauge system, similar to the early *Cubs* and *Ercoupes*, should be covered with a tin can or similar container if the ship is going to stay out in the rain. Otherwise water slides down the

wire and through the small hole into the fuel tank.

An accurate check of total cost per mile is not available because of some refueling done by the gallon-can route. However, if you consider the top full-rich fuel consumption at 4 gph (the factory says 3.7 with a mixture control) and 100 octane @ 55 cents per gallon, you're talking about \$85.80, including user charges, for a trip of nearly 3,000 miles. Predictable headwinds on a west-bound flight cut into total speed efficiency, but direct costs, including a couple of pints of oil, were less than 4½ cents per mile or about \$2 per flying hour for two people. Is there another Scotchman in the crowd?

One of the challenging problems facing the pilot of a no-starter *Champ* on a cross-country trip is how to get it going again after refueling. Many FBOs, particularly in larger cities, will not permit their line boys to prop an airplane, even a "taildragger." However, the nose-high attitude of a taildragger makes it inherently much safer to prop than most tri-gear craft because the prop is higher off the ground and you're pulling yourself away from, rather than into, "the fan."

In commenting on our interesting delivery flight, McConnell said, "I expect that you have given the *Champ* the most severe testing, going over mountains and over an extended distance, that will be demanded of the plane for years to come."

If you're the kind of a person who goes for trail bikes, dune buggies, surfing or soaring—things that take you away from today's push-button world—you'll like the bare-bones, prop-it-by-hand *Champ*. Put Bellanca's new *Champ* on an out-of-town grass flight strip, far from the congestion of town or control tower and you'll have a flying fun-machine that people can afford to buy and fly. □