

AIR FACTS



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Twenty-five Cents

*Here's a four-place that it's mighty
easy to get enthusiastic about.*

THE CESSNA 170

By
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THE Cessna 170 is one of the most pleasant airplanes to fly and ride in that you can imagine. It represents one of the best combinations yet of the three basic ingredients which private owners want: good flight characteristics, comfort, and performance.

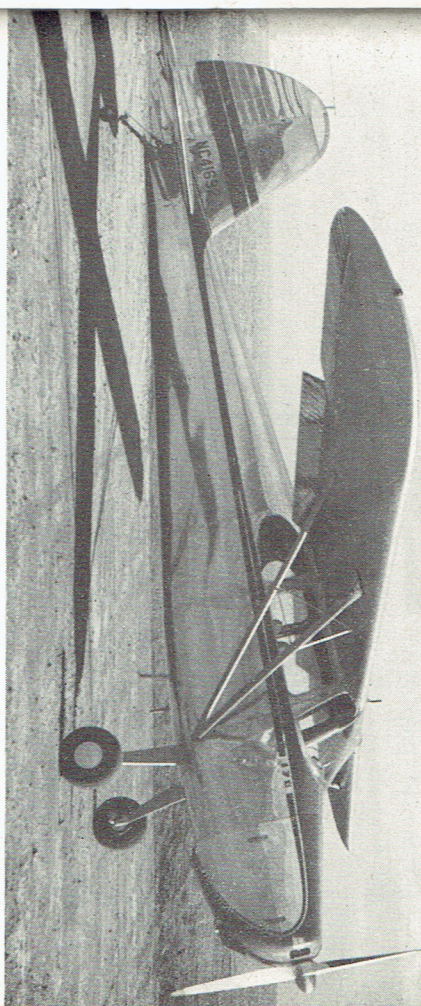
If you go out to fly one parked among a group of 140's you may not spot it at first. But finally you see it. Nose a little longer, and sharper, just a little taller, just a little longer. But as you get closer it begins to grow, until up close it impresses you as a rather large airplane.

That impression is heightened when you open the wide door, for the cabin is a roomy one, and trimmed with the same neatness as the 140. There are doors on both sides, and both front seats slide back on a track. It is easy to get into, and after you do and pull your seat forward until it is latched in the most appropriate notch for your leg length, there's plenty of room for the passenger to pass between the back of your seat and

the rear of the wide door. The rear seat is several inches wider than a 140 and its removable back has the same adjustment for angle that the 140 has. The baggage compartment is larger than the 140's and is behind the rear seat with shelf above. It will hold 3 large suitcases, the shelf two. Seated in the front or rear, you will find more than adequate head room and leg room as well.

Firing up a 170 will be a cinch for a 140 owner, for everything is exactly the same and in the same place. Even the instrument panel is the same except for two or three inches more of it on each side.

As you taxi out, however, you find even better over the nose visibility, and on rough ground soon find that the gear appears softer than in the 140. Actually it is the 140 gear, but with the additional weight rides better. It is not overloaded, though, for what happened was that they went overboard slightly on the 140 gear as a hedge against any possible field troubles and realize now that it



THE CESSNA 170, 4-place, 145 h.p. Continental 6, is priced at \$5475.00, has a sec-level gross load top of over 140, cruises over 120 at low altitude, and sets new standards in flight characteristics and comfort.

can be lightened somewhat as it minute margin, cruising at 2400 will be at some later date.

The only noteworthy difference between the 140 and 170 cockpit is in finding that you have more gas in the right wing than in the left. The label on the gas valve says there's 23 gallons in the right wing, 10.5 on the left, but that marking has more to do with what you can take out of the tanks in a steep climb. The right tank holds actually 25 gallons and the left 12½, the right wing containing two 140 tanks and the left one one. So you have, for cruising and landing purposes 37½ gallons, or four hours with about a thirty

The only thing worth particular mention in preparation for take-off is to set the trim tab indicator correctly for the load you have. This is because the stick forces are fairly high and if you trim for a speed much below or much above what you want to climb at you'll have to push or pull on the wheel rather firmly to get or hold the speed you want unless you re-trim in the climb. Actually, that's what you are probably going to do anyhow, so it is good right off to start thinking of the airplane as a trim-tab airplane, and that you're going to use that tab a lot in flying it.

The take-off run develops very little in the way of torque, and best practice seems to be that if you're on a runway you just let it fly off three-point. It is not stalling off in doing this as the ship sits on the ground with the wing at considerably less than a stall angle. On a rough field, best practice seems to be to lift the tail just enough to get the tail wheel off the ground and then let it run in that attitude.

A clam digger flying at Wichita forgets the elevation there, which is 1369, so with four aboard it didn't seem to exactly hop right off. All in all, however, it is airborne with only a medium length

of run as airplanes fly out there. It isn't necessary, but it seems worth while to hold this one down just a little after breaking ground to let that propeller get to winding until you have about 70. At this speed it will hold a steady 600 to 700 f.p.m. which gives a very good angle of climb at that speed. As mentioned, you'll probably find that as your speed increases later in the climb you'll want to reach over and give the trim wheel a slight shove forward.

Then as you level off, you might as well start trimming nose down, otherwise the back pressure on the stick will build up rapidly due to the airplane's wanting to nose back up to the climb speed for which it was trimmed.

Levelled off, trimmed and turning 2400, with the nose riding well down, you find the airspeed sitting right in the middle between 120 and 125, even though you're then 2500' above sea level at close to standard temperature. Cessna's "over" figure on this airplane is 120. It's easy enough to get an airspeed to indicate 120, but you can bet this airplane does it, and that's the speed at which cross country flying starts making about 50% more sense.

The next thing you're likely to notice is the low noise level and

OVER THE NOSE visibility on the ground is like this in the CESSNA 170, and is all that one could ask for. The 140's in the background are in five-a-day production, and initial 170 production is now two-a-day.

how free of vibration the ship is. You aren't long concluding that here's an airplane in which you could ride all day without getting bushed. Now what pleasure is an airplane if it isn't like that?

They get it in the 170 by using mufflers, the same soundproofing methods as in the 140; by the fact the 6 cylinder, fast-turning engine is smooth to start with and the

fact that it is cradle-mounted on four large Lord rubber shock mounts. This is one of the most important things about the 170, for the older you get the longer it takes to revive after a ride in a

ship that has too much noise and vibration, until finally when you get old enough to have the money to buy an airplane you're not re-viving until after a night's sleep.

As far as the 170 is concerned, that's all over the dam, and it's going to sell many an airplane for them.

From this point you're ready to consider flight characteristics, but already you've been unable to avoid getting some sort of impression of them. For instance, even though the flight was in rough air, you couldn't help but be aware of the fact that the ship had mighty little

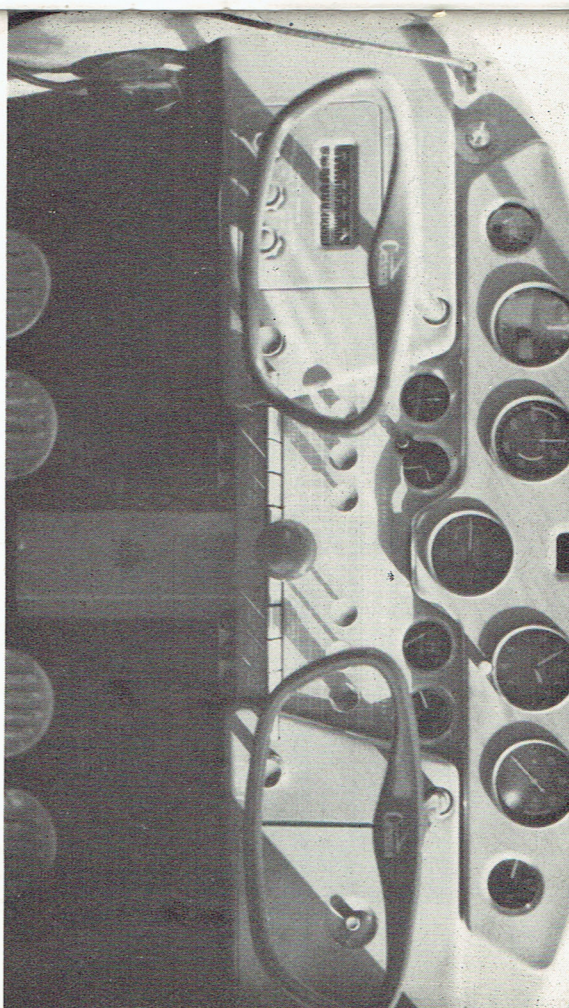
roll to it and had pronounced longitudinal and directional stability. It is characteristically one of those airplanes that if you put it in some attitude it tends to stay there. All this comes from the fact the ship has an extra long tail and in addition quite generous tail surfaces: together they do for it just what the feathers on an arrow do—a swift, steady flight. If the tail were shorter or the tail surfaces smaller the airplane would screw along in rough air with the same mixture of roll, pitch, and yaw that we've seen so long that it has come to be accepted as an inherent characteristic of airplanes, when actually it isn't at all.

In bringing the airplane in you don't want to close the throttle in the usual manner because the airplane will want strongly to nose down as necessary to hold its cruising trim speed. So what you do is take off a little throttle, trim back a little, then a little more throttle off, more trim, until you've gotten down to about 70 in three slices of throttle-trim. In the process you'll have noticed that you need to allow a little more than usual for slowing down anyhow.

At 70 the airplane has quite a gliding radius, and holds its speed closely. Your tendency on the first shot will probably be to put the

flaps down a little late. They are not quite as powerful as you might expect. When they are first put down the airplane tends to nose up slightly for a second and then goes back to its trim speed. At any rate, flaps down and around 65, the descent isn't exactly flat but on the other hand it isn't quite what you usually expect out of full flaps. It may be that you'll see a mild amount of slipping with these for short landings over obstructions. It slips nicely and just a little of that maneuver does quite a bit in steepening the descent. Or it could be that the ship was just flown on one of those days when airplanes don't seem to want to come down. There are such. A PT-19 doesn't glide far, flaps down, and there was a fellow shooting landings with one at the same time who didn't seem to be coming down normally either.

But to make the landing—you can get out a lot of "A's" to put in your log book. It's just one of those airplanes that you flare, then get the tail down some without any gain in altitude, and after that it almost lands itself. You find yourself putting on just the slightest back pressure just before it touches. If you try to make any more work than that out of the landing you tend to land slightly



THE 170 instrument panel, with upper section shock mounted, is identical to the 140's, except for several extra inches at each side. Primary group, GE radio, dual brakes, cabin heater, McCauley propeller, clock, and landing light are extra equipment running around \$725.00 factory installed.

tail first.

Flying the airplane solo, is, of course, giving it a 510 lb. break and it practically takes to the air from a standing start. At 70 the rate of climb is from 1,000 to 1,200 f.p.m. and seems as if you're going practically straight up.

When you trim to cruise, light this way, and watch the airspeed you begin to wonder if this is one of those airplanes which flies maybe just a few miles an hour faster loaded than light. There have been a few. It is caused by the fact that the fuselage is best into the relative wind when the wing is at

the angle of attack that goes with a full load. Lightly loaded the fuselage is moving along slightly nose down compared to the full attitude. As far as the 170 is concerned this could be only whimsy, but at any rate at 2,400 it seemed much more inclined to indicate 120 instead of the 122½ it showed with a full load.

Climbing on up for some stalls your already favorable impression of this airplane is going way on up too. In the power stall, with cruising trim, the main indication is the considerable pull it takes on the wheel to achieve a stall, the ex-