



The Case For Single-Engine IFR

An AOPA member contends that accidents directly traceable to instrument flying in one-engine aircraft are practically nonexistent. Utility of his lightplane is increased about 50% by going IFR when necessary

EDITOR'S NOTE: *Is it safe to fly on instruments in a single-engine plane? One of the more widely discussed aspects of general aviation, the subject got a thorough going-over one night at AOPA's Plantation Party at St. Petersburg, Fla., last October. A group of AOPA members got into the discussion one evening after dinner, with some interesting comments and conclusions. One member was particularly articulate on the subject. He owns a single-engine airplane and flies it IFR whenever the occasion demands, within his own self-imposed limitations. The PILOT asked him to put his thoughts on paper for the benefit of other AOPA members. He did, and this enlightening and thoughtful article resulted.*

The subject of single-engine IFR is one of the oldest, yet most vigorous, subjects of discussion among pilots, particularly among those sitting around an airport on a rainy day, grounded. I've been a party to a lot of it, having been on both sides of the fence. Actually, like almost everything else in life, the answer is neither black nor white.

While I can't speak for your attitude toward all this, I suspect you're basically like I am: you have a fairly strong desire to live. And I don't think either of us is so egomaniacal as to want to sacrifice his life on the altar of bravery — if single-engine IFR can be called bravery. Speaking for myself, I have a strong liking for inhaling and exhaling regularly, and I like to eat, drink and make merry. None of this would I sacrifice for the dubious enjoyment of playing Super-

man for a few fleeting moments.

So I too have been well aware of this subject for a long time. And I looked and studied and questioned and argued over a long period of time. The answer I came up with is the one that still applies: nearly all of this is pure superstition. Pilots quite normally take strong sides. One who has been flying twins much of his adult life wouldn't think of single-engine IFR. Others have been doing it for years, with no trouble.

The best way to turn superstition to fact is to expose it to a cold, analytical study. I've tried this, off and on, several times over several years. I tried it again a few weeks ago. The answer today is exactly the same as it has been over the years: there is no significant evidence that single-engine IFR is any more hazardous than twin-engine IFR. I asked a couple of the sharpest accident investigators and analysts over at CAB — the agency primarily concerned with all accidents—to look into the subject for me. The conclusion is the same: statistically, it's just as safe to fly IFR on one engine as it is on two.

They told me that there *are* a few accidents each year involving truly IFR operations. But even here, they attach no significance to the number of engines involved. The twins are just as bad as the singles.

Of course, you have to be quite clear and specific on the subject. They (and I) are only saying this as regards flights deliberately undertaken IFR, by properly equipped aircraft, and instrument-rated pilots.

I suspect that there are strong

overtones of "bad-weather" accidents involved in this discussion, and the superstition that brings it about. There are far too many bad-weather accidents, and the majority involve single-engine aircraft — simply because there are a lot more of them, and more inexperienced people are flying them. But a bad-weather accident, in IFR weather if you will, is *not* — repeat *NOT* — a single-engine IFR accident.

The CAB is not the only one that debunks this belief. The insurance companies do, too. There are no such restrictions on single-engine aircraft they insure, and the only restrictions I've ever seen along these lines have merely had to do with the fact that the pilot should be properly qualified.

Single-engine — or twin-engine — IFR cannot be, by its very nature, the kind of carefree, lackadaisical operation that a sunny-day VFR flight is. The mere process of getting ready for it, then doing it, just about converts the pilot to a professional. I've said many times that the pilot who gets *and uses* an instrument rating is automatically a professional pilot today, no matter what pilot rating he holds.

By and large, therefore, this kind of pilot fits a different mold from that of the typical single-engine private pilot. Just to get the rating he must be considerably more proficient, more knowledgeable, and more careful. He makes damned few careless mistakes. He picks his weather and circumstances with great care;

(Continued on page 51)

Single-Engine IFR

(Continued from page 30)

there's no "to hell with it" attitude that you so often find among other inexperienced — or experienced for that matter — VFR pilots.

The IFR pilot quickly and vividly sets minimums for himself; at least I've never met one who didn't.

Actually, the whole instrument-rating business has the reverse English on it: lots of guys who have instrument ratings legally simply won't use them, largely because they know they have trouble coping with The System. So they get the rating, either for its prestige or as a safety device — in case they accidentally get caught on instruments while flying VFR — and never use it again.

All of this leads to the key item in this area: what happens if the single-engine quits? This is admittedly a frightening thing to contemplate — and herein lies the heart of the problem: such a possibility is frightening, therefore it should never be risked. Theoretically, this is true, but it's only theoretical.

Speaking practically and factually, what does the record show? Engine failures under deliberate, premeditated IFR are statistically almost nonexistent. I can only remember one case, and even that was due (as I recall it) to the pilot's deliberately continuing IFR into known icing conditions which iced up his engine and cut off the air to the carburetor. As I recall it, he descended dead stick on instruments all the way down to warmer air, where I think he managed to get the engine started again.

This man, incidentally, is one of those rare exceptions among single-engine-IFR pilots I know who seems to regularly stick his neck out. One of the more hair-raising tales of this kind I read not long ago was his account of a night flight, on instruments, in thunderstorms in a single-engine airplane. He seems to have no compunctions about this, something I know is not true of the vast majority of pilots in this category.

Unlike the engines of years ago, our present-day engines very rarely quit. Even the number of engine failures that do take place usually turn out to be other types of failures that have nothing to do with the structure of the engine: fuel starvation, icing, etc. Actual structural failures in these engines are quite unusual these days — so unusual, in fact, that they are well within the bounds of acceptability when considering all the risks involved in single-engine IFR.

The pilot who flies single-engine IFR usually does it in his own airplane — and he takes first-class care of it and its equipment, just because of the kind of flying he's doing. He is prudent in many other ways; as I've already indicated, he has his own limits. Most of them that I know, for example, have the same iron-clad rule I have: no IFR when icing or thunderstorms are known

or forecast for the route to be flown. No IFR at night.

Now that I've bent your ear excessively on the generalities behind this particular superstition, I have only these remaining comments:

Single-engine IFR is more widely practiced today than ever before. FAA traffic control people regard such operations as a matter of normal routine. It is *not* an occasional exhibitionist, trying to demonstrate his bravery to someone.

This type of IFR operation is showing a pronounced increase in daily general aviation activities.

At your recent St. Petersburg Plantation Party the majority of your members who indicated they have instrument ratings were flying single-engine

aircraft.

The majority of AOPA members who took the 360° Rating training — which is the first four hours toward an instrument rating — flew single-engine aircraft. Of those to whom I put the question, the great majority expressed the intention to go ahead to their complete rating.

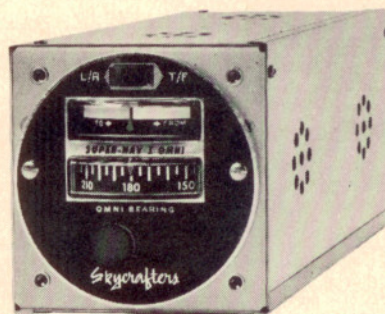
The willingness and capability to fly IFR on one engine is the only practical means of getting the degree of utility out of a present-day aircraft to warrant its high cost. Except for the low-cost used airplane for casual fair-weather flying, the present-day general aviation airplane is moving fairly rapidly toward an increasing all-weather capability — not in the airline sense of the term, but definitely in a manner that

Highest Quality NAV-COM

AT A REASONABLE COST!
COMPACT AND LIGHTWEIGHT TOO!

The NEW Skycrafters
SUPER-NAV 1 OMNI
SIZE 3 1/4" x 3 1/4" x 6"
Fits standard instrument cut out
WEIGHT - Less than two pounds
ACCURACY - two degrees

\$259.95



Financing now
Available
under AOPA
finance plan!
Ask for details



The IMPROVED Skycrafters **VHF SUPERPHONE**.
Features increased sensitivity, plus improved noise limiter
and greater reliability. F.C.C. type accepted .005 tolerance.

\$316.50

PRICE: SUPERPHONE with 2 transmitting crystals* \$316.50
SUPERPHONE with 11 transmitting crystals* (new VFR group) \$384.00
SUPER-NAV 1 OMNI \$259.95

* Complete with Transistor Power Supply, Cables, Antenna, Headphone and Microphone Jacks: Total weight: 5 lbs. (incl. transistor power supply). Size: 3 3/8" high, 5 1/2" wide, 7 3/4" deep. Additional crystals \$7.50 each.

BACKED BY SKYCRAFTERS EXCLUSIVE "DOUBLE WARRANTY PLAN"

TRANSMITTER FEATURES

- 24 Channels; plug-in crystals.
- 2-watts, max. power output.
- Frequency range: 117.9 thru 128.0 (5 MC. spread)
- Complete Interphone System, separate level control.
- F.C.C. type accepted .005 tolerance.

RECEIVER FEATURES

- Tunes 108-128 MC.
- Effective noise limiter.
- Whistle-stop tuning.
- Simultaneous loudspeaker (3 watts) and headphone (600 OHM) output.
- Lighted dials for night flying.

Skycrafters

EXPORT REPRESENTATIVES Allied International Corp., 230 Park Ave., New York

1365 Gladys Ave. Long Beach, California

Circle no. 66 on reader service card

will make flying in borderline VFR, or good IFR, a regular practice. In my own case alone — with a relatively low-cost airplane — my ability to use my airplane reliably leaped by as much as 50%, once I was able to accept a little IFR here and there.

The twin, even the cheapest and lightest, will always be in the minority, if for no other reason than basic economics. People like you and I simply can't afford them. I'm sure that, if money was no object, we'd both like a twin — but not just any twin, because there are light twins that actually

aren't twins when it comes to single-engine performance. Individuals who can afford twins can afford to choose the other side of this superstition; the same is even truer of corporation twins. In the latter case, their professional pilots invariably scare their employers into twins. In my opinion, the only real case for the twins, other than the points I've already made, is that they should be mandatory for regularly flying IFR to airline minimums, for "big" instrument weather, and for night flying.

Those of us who fly "little" instrument weather (no icing, no thunderstorms, no very low ceilings) have a hell of a time logging any substantial amount of instrument time during a year. Five minutes climbing out of a low ceiling into the sunshine on top, and you're usually through with IFR for the day. Or a five-minute letdown into a good ceiling below for landing. As a matter of fact, I've only had my instrument rating since 1958. I use it whenever and wherever it will serve me, within my limitations. Yet, as of Nov. 15, 1961, I only have 166 hours of total actual instrument time—and this includes all my dual instruction before getting the rating.

One final point: single-engine IFR is not only here to stay, it is the current state of the art, so to speak. Many pilots are doing it now, soberly and deliberately; they are *not* cowboys. They are pilots and owners taking those steps

that are necessary today to just buying and owning a contemporary single-engine airplane that costs anywhere from \$15,000 to \$35,000 when fully equipped. More and more of these owners are going into this activity. I know that AOPA has constantly, over the years, recognized that this was the next logical step, and has followed the policy of emphasizing this to FAA so that they can better design their traffic control system to accommodate these users. Fortunately, their representations on this subject have been borne out by the facts.

How well I still remember the large group of airline pilots, not too many years ago, who flatly refused to learn instrument flying at all, contending that "seat of the pants" flying had been good enough for them all those years, and by God they weren't going in for any of that newfangled stuff. As I remember it, the company actually had to fire several of them. And I remember talking with the country's No. 1 or No. 2 airline captain many years ago about a new airliner he had just test-flown for the first time. He commented at some length about the "flapping wings" in rough air, and allowed as how the damned thing was downright dangerous, and he'd be damned if he'd fly such a flimsy newfangled machine.

That was back in the early 1940's, and the airplane was the first DC-3!

END



STITS PROPELLER SPINNER
F. A. A. APPROVED

For all light aircraft using fixed pitch props on horizontal opposed engines up to 175 HP. Aerodynamic contour increases prop hub efficiency, proven in thousands of hours service to decrease oil & cyl. head temp. Size 8" diam. x 11 1/2" long. Installation kit includes

all parts and complete detailed illustration mounting instructions. EACH PREPAID \$25.00

Stits Aircraft, P.O. Box 3084P, Riverside, California.

Circle no. 70 on reader service card

THE PLACE TO STOP
RALEIGH-DURHAM
NORTH CAROLINA

Circle no. 60 on reader service card