

SAFETY FIRST

A WORD, TO THE OTHER GUY

Reprinted from the May-June, 1958, Issue of HOT AIR

by the late DR. J. B. SAWYER

One of the major dangers in aircraft flight is power failure during take-off. Use of maximum power to overcome inertia and attain flying speed makes sudden failure more likely than at any other one time. This is doubly true of our sailplane flying, where the rapid acceleration puts a maximum strain on the tow rope and hooks and, in addition, involves dependence upon the tow plane and its power plant. Careful pre-flight planning of emergency procedures in event of power failure during take-off should precede each flight.

The all too frequent accidents occurring during this state attest to the general lack of sufficient training and planning to cope with this emergency. The pilot has but a few seconds, at most, to make a decision and he *must* be prepared in advance in order to choose and follow a safe procedure.

There is no such thing as a "natural born pilot" and we were not designed for the machine. Our natural reactions for self-preservation may not lead us to do the proper maneuver at the proper time, but quite the opposite. Unless training and experience overcome our natural instincts, we can be overwhelmed by a sudden emergency. It is easy to sit in the hangar lounge and condemn the pilot who tried the deadly 180° turn back after engine failure, then stalled and spun in. Don't forget, however, that he knew better *if* he had had time to think. Sudden power loss at 200 feet, a frantic check of fuel valves, throttle, carburetor heat, mixture control, instruments, and switches, while precious seconds pass and airspeed drops. Then a look ahead at power lines, fences, or a rough field; the remembrance of a smooth paved runway behind, and the uncontrollable desire to reach certain safety. The panicky urge to turn back is obeyed. Halfway around the nose begins to drop and the turn is frighteningly slow as time seems to stop; back on the stick to hold that nose up, give it more rudder. The inside wing begins to drop so pick it up with the aileron. That,

wiser pilots, ends the flight.

The odds are more in our favor in our sailplanes, and sailplanes are more forgiving than a heavy plane. The same problems exist, however, and the same results occur if the panic button is pushed due to unpreparedness. From the time the take-off roll begins until well up into the air, you, the pilot, must have a course of action planned in case the tow fails. You must be conscious of the tow plane's progress and note any signs of trouble in slow acceleration or climb. The tow pilot will not have time to waggle his wings if he loses his engine at low altitude; he should, and will, drop the rope and you are on your own. Keep your eye on the rope, so you will know immediately if it releases or breaks, and pull your own release to free the remaining rope.

When failure occurs on take-off roll, stop as soon as possible if the tow plane stays on the ground. The tow pilot might be stopping to avoid an obstruction or landing craft that you do not see. Once you are airborne, you must decide when you have passed the "point of no return" for a landing straight ahead on the runway itself. Remember that it is possible to drop and stop very quickly with use of full spoilers, brakes, and skid. Every second of delay or hesitation in applying spoilers and dropping the nose will cost 60 or 70 feet of runway. The sooner you can contact the ground, where brake and skid are effective, the less runway you will need for a safe stop. Don't float it on, get on the ground and stay there. If the fence looms up too fast, don't be afraid to hit for the tall grass alongside the runway, it will slow you down sooner and a groundloop seldom does serious damage. Stick full forward will increase the skid friction.

Once the point is passed where you can land straight ahead on the field itself, a rapidly changing situation develops. Obstructions at the end of the field can be cleared if it is too late to land at the end of the runway, and willing hands will help you return the ship from the field dead ahead. If high enough to at-

tempt a turn, drop the nose and MAINTAIN ADEQUATE AIR-SPEED, remembering that the stalling speed goes up sharply in a tight turn. If a 180° turn begins to appear at all doubtful, level out and land straight ahead next door and don't worry about the crosswind. DON'T spin in to the safety of your own field. If you complete a 180° turn successfully but are not lined up with the runway, don't dig a wing tip into the ground trying to line up and cartwheel up the strip; land in the rough if necessary.

If I have drawn a rather grim picture of the dangers of leaving terra firma, I apologize. I won't give any examples to illustrate the grimmer side but will be glad to recount same to doubting Thomases. Most pilots are quite aware of all aspects of the problem and have planned well to avoid the pitfalls mentioned. I am actually writing these words only to again remind myself of things I might forget in a pinch. I realize as well as you, dear reader and pilot, that these simple words are not aimed at you.

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AMERICANS IN GERMANY

T/Sgt. Kenneth Bickel of the USAF 586th Support Sq. has written to say that he and three other U. S. servicemen have recently earned their German L-1 ratings while flying in the German-American Soaring Club at Traben-Trarbach. The other three were T/Sgt. Harry Reymenandt and S/Sgt. Bill Payne of the 7425th Installation Sq. and A/2c Dave Rydenski of the 450th Tactical Missile Sq. At the same time, he thanked the founder of the Club, Capt. Thomas D. Greenwood, now stationed at George AFB, Victorville, Calif., for the gift of a subscription to SOARING magazine he had made to the Club.