

THE WORST LANDING I EVER MADE



What would you do if you suddenly lost aileron control? Glider pilot **Tracey Tabart** found out the hard way.

Stephan Tophoven

I was on tow in my Grob 103 Acro glider and happily climbing through 3500 ft. I was effortlessly keeping position behind the tug plane, when suddenly the feel of the control stick changed.

I moved it from side to side but there was no resistance and no response from the aircraft. I still had control of the elevators but the ailerons had gone slack.

Unable to maintain position behind the tow-plane, I released and the glider began a slow roll to the left. I pulled back on the stick to raise the nose and reduce speed but it was a waste of time; the aircraft was about to enter a spiral dive.

I applied right rudder and was relieved to see the secondary roll effect of that control bring us back to wings level. I had to decide whether my passenger and I were going to take the parachute option or stay and sort it out. I decided to hang

around for the ride.

At first I thought the quick release couplings might have come undone, but what was the chance of that happening to both at the same time?

Eight months of working on Grobs suddenly paid off. In my mind's eye I could see the whole layout of linkages in the control box behind my head.

Releasing my shoulder harness, I turned and reached to unlatch the control box hatch door. I reached into the box and grasped the main aileron push-rod control linkage. To my great relief, I found I could control the ailerons from there.

But I needed to find out what state the front-seat controls were in.

"We have a slight loss of control here," I remarked to my front-seat passenger, trying to sound nonchalant. "Could you see what aileron control you have?"

The stick flopped from side to side.

"Er, very little," he responded apprehensively.

"Don't worry. I've got control in the back here."

I practised turns with the limited height I had left. One hand was holding the stick and one hand was through the back hatch clutching the push-rod cable. It was like riding a bicycle with your hands crossed on the handlebars.

I decided on a precautionary high circuit at 2,200 ft and wondered how I was going to free up a hand to operate the airbrakes.

There was nothing for it; I set up a long final and let go of the stick to pull on the airbrake lever. The aircraft pitched forward into a steep dive.

Adjusting the trim nearly caused a stall at 300 ft.

I moved the trim lever forward while

holding the stick in the crook of my arm and the airbrake in my hand. Not surprisingly, this ended in the worst landing I have ever made.

Later, it occurred to me that I could have told the passenger to move the blue lever to operate the airbrake for me.

ANALYSIS:

Phil Astley

Credit to the pilot for recounting a story with lessons for all aviators. The incident could have ended with worse consequences than a rough landing. The pilot should be pleased that he managed to remain calm and apply his knowledge of the aircraft's systems to carry out an approach and landing that he and his passenger were able to walk away from.

There are several issues here, not least the circumstances that led to the aileron push-rod failing in the first place. The author does not indicate the reasons for the failure, so I won't comment on it except to say that I trust it was properly investigated and reported, and that suitable defences were put in place to avoid a recurrence.

The flying operations and human

factors aspects of this flight are interesting. After recognising a problem with the flight controls, the pilot made an early decision to separate from the tow aircraft. Once clear of the tow, it became obvious that although the ailerons were not functioning, the other controls were unaffected.

Wings were returned to level flight using the secondary effect of rudder and the pilot decided to remain with the aircraft. He does not say what influenced this decision, but I assume he considered the flight time available (altitude remaining), the controllability of the glider, the suitability of the available landing areas, and the safety of the front-seat passenger.

In the pilot's favour was his detailed knowledge of the aircraft's systems and his ability to visualise the glider's flight control systems. He was able to access the aileron control rods and an additional means of maintaining control.

Throughout these activities the pilot maintained a high level of situation awareness, communicated with and reassured his passenger, and planned a safe course of action to land.

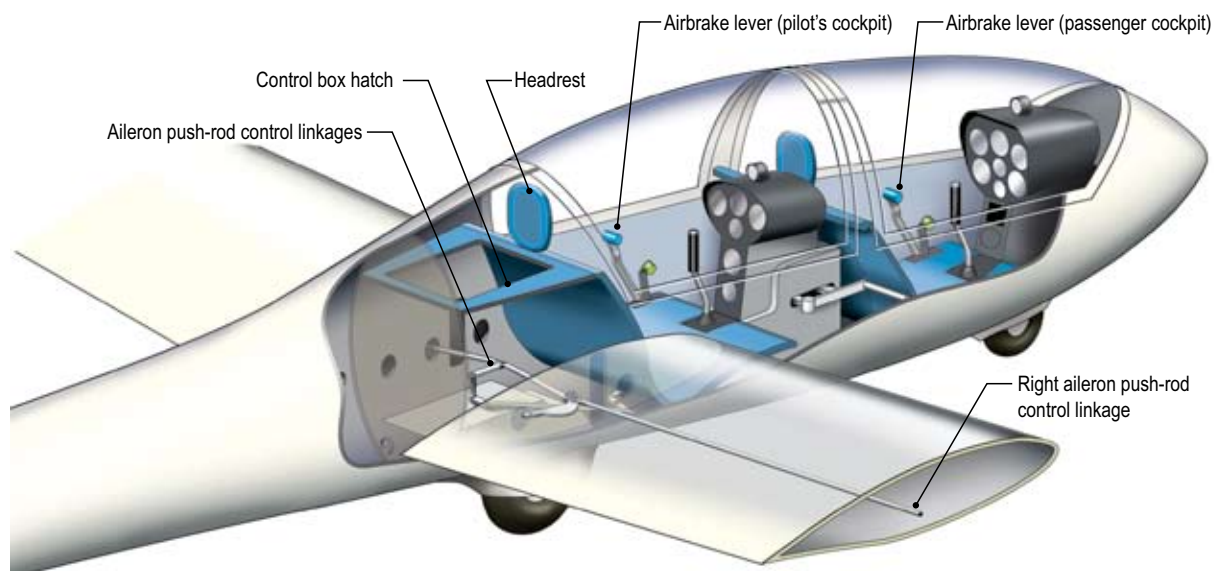
During the descent, control techniques were refined, although the author acknowledges with hindsight that the

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front-seat passenger was a valuable but neglected resource who could have been directed to operate the airbrakes from the front. This would have removed a significant burden from the pilot, and greatly increased his chances of executing a safe and smooth landing.

Crew resource management might include asking a passenger to look up an aerodrome in ERSA, to seek navigational assistance from ATC, or radio for technical advice from a LAME on the ground. If it reduces your workload or helps you make a more informed decision, don't be afraid to mobilise your passengers in an emergency.

It may have been the pilot's worst landing but, as the adage says, “Any landing you walk away from is a good one.”



Simplified artist's impression of the Grob 103. Not to be used for maintenance or training purposes.