

FLYING THE SHEAR LINE

By Billy Hill

Forecasts from the previous two days seem to indicate that one of our New Mexico shear lines would be present which generally form parallel to either the Monzano or the Sangre de Christo Mountains and at times, even both. Although the shear was not consistent for the entire duration of the flight, it was present (along with strong lift and well spaced Cu's) enough to allow for extended flight without being encumbered with the need to circle very much.

This begs the questions, how does one fly without circling (on this day my percentage of time spent making circles was 7.14 percent) and how does one maximize cruise flight (one leg of over two hours without stopping to climb)? My achieved L/D for the flight was 174 to 1

On a typical spring/summer/fall soaring day out of Moriarty, one can expect to climb to altitudes very close to class "A" airspace (18,000 MSL.) With that in mind, we should remember that true airspeed increases at about two percent per thousand. So for example at a mean cruising altitude of fifteen thousand feet, eighty knots indicated airspeed gives us a true airspeed of one hundred and four knots.

I released that day in lift that averaged a thousand feet per minute and took me to about seventeen thousand feet MSL. I recall thinking to my self, "this is going to be a very good day to fly."

So, the secret to averaging a speed of just over one hundred sixty three KMPH as I did on this day is to stay high (by flying a bit slower) and not stopping to climb any more than absolutely necessary.

This was a far cry from my very first cross country attempt which was made during the mid sixties...in a 19 to 1 L/D SGU-2-22...in southern Alabama...with cloud bases at twenty-five hundred feet AGL. I did manage to fly twenty five miles before landing in a trailer park.

I've spent most of my fifty years of flying either chopping (flying aircraft with propellers) or puréeing (flying aircraft with jet engines) my way through the air.

Flying professionally (currently a Lear 31) is very linear in nature whereas flying a sailplane is ethereal. Because I do both I find that my flying is balanced between flying in a precise structured manner or flying intuitively in harmony with the atmosphere rather than in spite of it. Even while flying professionally, I've found opportunities to apply my soaring/glider knowledge.

During the course of my flying career I've had very few days which I would categorize as boring. There has always been something new to see or to learn about flying regardless of what I might be using as a means of conveyance.

On the day in question, I made my first stop at about the Santa Fe Ski Area which got me back up to just under eighteen thousand feet which in turn allowed me to proceed for another half and hour before seeing that the conditions ahead and mountains below dictated another climb in order to reconnect with the shear line.

From this point I was able to continue north to the first turn point and then south to Socorro, NM where I reversed course along the shear line.

Although I would certainly consider this day's flight as one of the more memorable ones I've made, it's safe to say that I've had great number of flights that I remember fondly none the least is one a day I spent a few hours flying with a bald eagle on a ridge in

Wenatchee Washington. Then there was a not-so-fondly remembered first contest day a number of years ago when I had a mid-air with another sailplane. That's one I'm not likely to forget.

My next climb came when I was assured by another of the local pilots that a "boomer" was awaiting me just west of the north end of the Sandia Mountains. He was right and for a short while I saw one thousand eight hundred feet per minute rate of climb. Because the day looked as though conditions to the south were no longer as good as they had been and because my friend, I chose to make one more series of circles in order to come home in proper fashion. Clearly I did not need that thermal for final glide and in hind sight, should have flown further north before returning to Moriarty. Had I done that, I'm sure I could have netted another hundred or so kilometers but the other side of that coin is that doing so would have slowed down my average speed.

As you might imagine, this flight has wetted my appetite for a declared 1000KM task and so I'm looking forward to next year's soaring season. In the mean time, I'll keep working on my cross country skills while flying in our seasonal mountain wave.

Carpe Diem!