

## LANDING BY THE NUMBERS!

By Robin Anderson, Captain, retired.

After some four years with Trek Airways on the Vickers Viking and Douglas DC-4 to Dusseldorf in West Germany, I had come back from flying with Jack Malloch's Air Trans Africa in Salisbury to re-join what was now called Luxair, on the Boeing 707 A model turbojet, in 1971.

Having been a DC-4 captain and flown transonic jets in the Korean War of 1953, I was converted by Captain 'Toddy' Bain, retired training captain on the 707 with SAA and was soon flying as senior first officer on the big Boeing. I became quite friendly with him, as we had met in 1960 when he flew a chartered SAA Skymaster on Trek's behalf after losing one of our own, ZS-CIG, to an engine fire at Asyut, an hour South of Cairo on Saturday, 3<sup>rd</sup> September of that year. Incidentally I was First Officer on that close encounter and was still limping from a stitched kneecap when boarding the SAA DC-4 only to become aware of Piet Pienaar taking a Trek Viking out on his initial unannounced command, after we had both recently been checked out by training captain Corneels Balt for that position.

Piet later flew the major Rentmeester executives and Trek shareholders and company executives in a Beechcraft Duke, into the top of a mountain on which I was supervising the working of my D9 Caterpillar bulldozer one night, next to the Sappi Pulp and Paper Mill West of Nelspruit. My cousin's husband, CEO of one of the Rentmeester insurance company's subsidiaries, Wispeco, was sitting next to him! All perished on impact!

Toddy also knew some of the WWII pilots that had come from my home town of Adelaide, E.P., such as Bill Marais and Rudolph van der Nest.

He flew Marauders in that conflict.

I was a supernumery crew member appointed to pay the Bills en route to and from Europe. This was a boon to me as the aircraft commanders normally carried out this function with Trek; and made a pretty packet out of buying foreign currency as far afield as London, U.K., at a large discount! This time it really paid me to do a quick return flight from Dusseldorf to Heathrow, just for this purpose.

Captain Toddy let me fly their DC-4 from Cairo to Nice on the French Riviera, Northbound, and the landing there was a disappointingly firm one!

Little did I know then, that that was what he advocated on the B707, so as to not waste runway and also have the tyres positively penetrate any pooled water on a runway surface, and thereby obviate facilitating aquaplaning!

On the 5<sup>th</sup> of June, 1973, I had about 399 flying hours on the B-707 early one dark morning coming into Bangkok from the Seychelles with Toddy and decided to use a mode of blind landing that he had gleaned from a Boeing factory test pilot when fetching another new 707 from Seattle; that this accomplished pilot had perfected and called, 'Landing by the Numbers'. This was because it had been prompted by landing accurately in very bad visibility of which there was a surfeit in that area, with good outcomes by most pilots; no matter how nervous some became when close to the ground!

The then main tarmac Instrument runway at Bangkok had been pounded at the ILS touchdown point, about 1500 feet in from the end, into a deep two foot depression with the far surface lifted up into a wave of sorts, that could see your aircraft being flung back into the air with a horrible crunch as the oleos bottomed out, spoiling any attempt at a smooth touchdown and bad for the aircraft and passengers!

'Landing by the numbers' did cause one to actually touchdown just beyond this ILS touchdown point, but gave a consistent ground contact as we were almost always very close to the same landing weight, as Luxair was always full ! By doing this I had hoped to overfly this unseen hazard caused by unstable ground conditions in this swampy area.

This constant result I had become aware of when practising this technique in good visibility.

The procedure was to descend on the ILS Glideslope, usually around a 3 degree angle, as normal and at 80 feet above the QNH – runway height above sea level, - as given by the current air pressure from the Control Tower on receiving your landing clearance, one would 'Kill the descent' by rotating smoothly on the IVSI – Instant Vertical Speed Indicator – to zero descent, then close the power levers to flight idle.

Then holding that attitude, count, "One thousand and one, One thousand and two, One thousand and three." If the main wheels had not touched down by then, ease the control column smoothly forward until touchdown was achieved. This method worked well even if you could not see the actual surface, and as long as you kept the ILS runway direction needle centred, you were in a good slightly nose up attitude for making an acceptable landing using the pre-calculated final approach speed for actual landing weight.

Adjustments in the 80 foot height were to be made according to this approach speed varying any large amount above or below one's usual B707 approach speed, after a long haul flight.

In truth, I only knew we had touched down when the nose stopped descending, from the instruments!

There was no screeching of tyres or feel of making contact! Immediately I flicked up the Spoiler lever – These were short retractable surfaces on the wings that reduced the lift and in the air were called Speed Brakes, that caused some vibration on the descent, – and began pulling full reverse, backing off somewhat so as not to over boost the engines.

Before I could test the brakes Toddy harshly depressed them and violently swung LX-LGW to the right onto the first high-speed exit, exclaiming, "Where are you going to?!"

That must have woken up any late sleepers, for sure!

I continued the reverse application down to 80 knots, when he indicated I should taxi to dispersal, which I did, without a word further being said.

After some pleasant days in the five star Siam Intercontinental hotel, built in modern Pagoda fashion and taking in the very fascinating indigenous articles on sale, picturesque markets and unique architecture of this Capital City, that had never seen the likes of 'Colonialists'; we then departed for Hong Kong, with Toddy flying.

Unusually, we came in to the old Kai Tak airport between Lantau Island and the mainland onto the concrete runway built out into the harbour approach area. The third pilot was in the right-hand seat and I was not on intercom but could plainly see myriad sheets of standing water glinting in the sunlight from a recent shower, lying on the uneven surface of this, later, also to be re-placed airport!

Trying to duplicate my last touchdown in Bangkok, we landed quite far in and Toddy just made a gesture of using reverse thrust before backing it off, altogether! The anti-skid was soon releasing and braking in sequence with the patches of standing water, and we were not slowing down very well!

With runway end in sight I shouted, "FULL REVERSE!", and he reacted instantly by again initiating reverse spool up of the engines. As we got closer to the turning dumbbell at the end we saw a British Airways B-747 waiting at the opposite side for take-off, and still pulling reverse, we swung into a left 180 degree turn under the wide-eyed faces of its crew!

Finally we were down to a fast taxi speed and backtracked the runway to proceed to the last exit we had missed coming in. Again 'silence was golden', and the matter was never discussed at any level, by me.

It was at a time when aviation fuel was rationed in Europe that one of our Boeing flights into Luxembourg had had to divert to Brussels Main because of very low visibility in an early morning winter landing, that I was at the controls on take-off for Libreville in West Africa. Capt 'Peet' Vosloo was doing the radio communication with departure control as we climbed out in IFR conditions and the After Take-off check list had been completed when the Flight Engineer on the panel said we had experienced hydraulic failure. He then called control for us to proceed to the beacon used to position for dumping overweight fuel down to maximum landing weight for a return to Brussels airport. I cut in on the crew intercom, saying, "We are clean and fuel is rationed – that could be a very expensive deal for Luxair; what with Hotels, transport, repairs and replacement fuel etc., - Why don't we call Capt Cecil Snelgar, a director, via the SAA high frequency radio and get his O.K. to overfly Libreville and Land at Luanda where SAA has engineers stationed, who can fix our hydraulics, en route? "Of course, that is best he said ", and cancelled his request to control.

This was successfully done via the 'Springbok' radio link to Cecil and the flight continued at altitude to Angolan air space. Because the landing gear would have to be manually winched down for landing Peet asked if I minded him doing the landing and I said, "Not at all".

In range I called Luanda and explained our predicament, and they cleared us for descent and contact with Approach Control. In putting Approach in the picture I then made sure he was aware that we were operating on minimum fuel and asked if they would close the airport to further movements, once we had completed extending our landing gear until we had landed? This the Portuguese operator could not understand, and I repeated that there were no other alternates near enough for us to land at, should an accident immobilise any other aircraft or vehicle near or on the crossing of the two main runways needed for our landing ! Eventually even when talking to Luanda Tower for landing clearance, he too could not follow my urgent request, and we had to accept this as the gear was now down and locked with three green lights.

In the event the landing was un-eventful and the SAA engineers had been informed and were awaiting our arrival and soon had the hydraulic leak fixed and the reservoir replenished.

At a de-briefing with the M.D. of Luxair later, he decried the necessity of requiring the airport to be closed as one could always use the cross runway, wind permitting, if nothing happened on the runways prior to lining up for landing that could cause an obstruction of note!

It was edifying to note that no thought was given to the fact that had I kept quiet out of Brussels, Luxair would have faced an unwarranted bill many times over the total recompense I had received over the full nine years I had flawlessly flown for him; without question!