RAISING THE ALARM ACCIDENTALLY

Emergency locator transmitters (ELTs) inadvertently activating are an ongoing problem in the aircraft maintenance sector.

Photo courtesy of Primary Avionics.

First, a personal story

// By CAA Aviation Safety Advisor (and former 14,000-hour agricultural pilot) Mark Houston

Some years ago, I was charged with delivering my usual aircraft to a 'north of the South' maintenance workshop for overhaul.

After handing over my aircraft I was directed towards my temporary replacement machine – a PL-12 Airtruk, being reassembled after maintenance – which I'd never flown before.

I noticed the emergency locator transmitter had been fitted high in the rear of the fuselage pod, and the aerial was attached just above it on the upper surface. It was a known ELT and I checked that it was set to 'off' while the machine was in the workshop.

After reviewing the flight manual, talking to another pilot who'd flown the PL-12, and passing a test with him about the systems and speeds, I was ready to fly.

My preflight check was probably the most comprehensive I've ever carried out, and included the ELT, which had been switched to auto when 'Chiefy' – the chief engineer – had been conducting ground running and other checks.

After I got it started and spent some time taxiing around the aerodrome and conducting high speed taxi runs, I ran through the flight manual checklist, then lined up on the active strip.

Off I went, and it was different and a little confusing, but it had delightful handling and was stable.

I landed and taxiied back, to be met by Chiefy, who advised that the ELT had activated on take-off, and continued for the whole 30-minute flight, which left most of the aviation-related folk around the place very grumpy with me. (These were the days when having a VHF radio in an agricultural aircraft was deemed useless and not cost-effective, so we didn't have them, including in this PL-12.)

If I'd had a radio, I would have completed a check on 121.5 for inadvertent ELT activation (IELTA) before departure.

Chiefy said that it looked like that ELT was "stuffed", so he quickly found me a new one, fitted it, tested it, taxiied it, and pronounced it fit for flight. I also conducted a successful ELT-test circuit.

I filled up with fuel, got my bag in the back, glared at the new ELT – willing it to behave – climbed up the side of the machine, and with a cheery wave, blasted off for the journey south.

I went around the Kaikouras and spent a few minutes watching the whales, before tracking to Rangiora and West Melton, where I was to have role equipment fitted at another maintenance shop.

When I landed at West Melton, the chief engineer there gave me a curt hand signal to stop and turn off the engine.

Just as the engine clamour died down, I was startled to see and hear an RNZAF Friendship at a very low level, passing directly over the PL-12.

Second Chiefy yelled at me, "Don't touch a bloody thing, and climb down!"

He told me that the ELT had activated just after getting airborne and stayed that way for the hour and a half flight to West Melton!

The RNZAF had spent considerable time and money in tracking me down and confirming that the ELT was actually moving.

Their flypast was, therefore, not a welcome, but rather a statement. And the lovely chap at the Rescue Coordination Centre was also less than conciliatory.

He understood, however, that it was inadvertent, as acknowledged by Second Chiefy (he'd sighted the ELT switched to auto).

We later conducted an air test with Second Chiefy in the rear fuselage pod, with a hand-held VHF to monitor the ELT, and make appropriate switch changes as required.

After the flight, he said the ELT and its cradle were physically moving in sympathy with aircraft vibration and buffeting airflow. It activated after power was reduced after take-off, and the airspeed leaped from 70 to 80 knots.

The ELT was relocated, and a test flight was found to be satisfactory.

Considering the involvement of RCCNZ and RNZAF, I also purchased a VHF hand-held radio and monitored the ELT and other air traffic until the aircraft operator relented, and fitted a VHF in the aircraft.

Moral of the story

Just because you can't see it, don't forget the ELT. Check its functionality when you're going flying and when you get back.

It's a fantastic tool in your safety toolbox, so make sure it's going to operate when you most need it. »

Photo courtesy of RCCNZ.

// In action after an activation is (from left) former RCCNZ Watch Leader Ramon Davis, Senior Search and Rescue Officer Conrad Reynecke, and Search and Rescue Officer Dougal Cockrell.

Activation in workshops

Adam 'Sammy' Seumanutafa, from Primary Avionics, says their workshop sees inadvertent activations relatively often, usually when an aircraft comes in for its regular inspections.

"The ELTs are often installed in hard-to-reach places, so if they're accidentally activated, it can take some time to access the ELT to switch it off."

Sammy says, in a recent event he noticed the ELT had been removed from its cradle on a helicopter in for repairs.

"It was dangling by its electrical connections. Disconnecting the ELT and storing it safely would have been a much better option, considering how easy it is to do.

"If the connections had given way overnight and the ELT dropped and activated, who would be the person getting the phone call?"

The person at RCCNZ, that's who

Every year, countless inadvertent activations mean the RCCNZ is alerted to get out and rescue aviation participants who don't actually need rescuing.

"RCCNZ Project Lead Rodney Bracefield describes the first 19 days of October 2022.

"We've had 17 inadvertent activations – nine during maintenance, two on US aircraft in McMurdo Sound (Antarctica), two Australian-coded ELTs, two in Papua New Guinea, one in Canada, and a discarded Warbird 121.5 MHz ELT eventually found in a rubbish bin at Ardmore. We've had three genuine aircraft accident activations!"

(These activations, genuine and inadvertent, were among 67 total beacon alerts – aviation and non-aviation – for the same period.)

Rodney says that to try to prevent unnecessary rescue callouts, it's important to leave your aircraft maintenance, checks, and repairs to the professionals.

"If you're an aircraft maintainer or engineer, check AIP GEN 3.6 - 14 (6.4 *ELT Testing*) and make sure you have access to the ELT before you do any testing, so you can readily deactivate it, if it goes off.

"If you're doing any modifications or repairs, it's always best to disconnect the ELT before starting work.

"Also, make sure your receiver is set to the 121.5MHz frequency (the guard frequency) so you can be made aware if your ELT does activate accidentally."

Rodney says that inadvertent activation of ELTs is a mostly avoidable occurrence.

"But the false alarms continuing to plague RCCNZ every year waste valuable time, money, and people-power.

"Take the time to check your ELT is disconnected before carrying out any work and let RCCNZ save the people out there who really need saving."

Comments or queries?
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