

Clutter in the Cockpit

The cockpit is not known for its spaciousness, and can soon be filled with charts, headsets, knee boards, calculators, sunglasses and pens. Such loose items can, and do, cause serious accidents.

In January 2012, an Aerostar Yak-52 was carrying out an aerobatic flight at Feilding when – after a loop and stall turn – the pilot, at about 3000 ft, made a slow roll.

On roll out, the aircraft went into a steep dive – 45 to 50 degrees – from which the pilot did not recover. The aircraft crashed and the pilot was killed.

Accident investigators discovered that a screwdriver had been left in the fuselage. It is believed that it restricted elevator control, which did not allow sufficient nose up authority.

The screwdriver showed signs of moisture damage which led the investigators to conclude that it had remained undetected in the rear-most section of the fuselage for some time.

To help reduce the danger of this, the latest version of Yak-52 aircraft now has two Perspex® windows, either side of the aircraft, to allow pilots to inspect the interior during their preflight checks.

Bob Feasey, Hawker Pacific Ohakea, explains the tool control policy their engineers use.

“At the end of each job, the engineer must check in all tools and equipment used and check their surrounding area. The area is then checked by a coordinator.”

Aerobatic pilots spend time checking and rechecking the cockpit and personal clothing for any loose objects that may fly around the cockpit when performing aerobatic manoeuvres.

But even normally secured objects can become dangerous.

Jeanette Lusty, aerobatic pilot and CAA’s team leader of recreational aviation says she was once involved in an incident in an Air Tourer.

“I was performing aerobatics with another pilot when a ‘lockup’ occurred. That’s where the aircraft has been set up

wrongly for the particular manoeuvre, and the aeroplane ends up in a vertical position where no air movement is reacting on any surfaces of the aircraft. The pilot must neutralise the controls and wait to see if the aircraft will fall backwards or forwards. This particular aircraft did such a violent slap forward that it pulled the axe out of its secured moorings and struck the pilot in the back of the head. It also pulled the ELT connection completely out of its socket.”

Fortunately, the aircraft was stabilised and landed safely.

In 2009, a helicopter pilot reported to the CAA that, prior to taking off from Wanaka, he had loaded and secured a chilly bin on to a passenger seat, using a standard seat belt. During the flight to a private airfield, the chilly bin shook loose and moved, obstructing the helicopter’s cyclic controls.

The pilot struggled to maintain control and attempted to make an emergency landing, but eventually crashed and rolled the aircraft.

Steve Kern, CAA’s manager of heli ops, says even seemingly insignificant objects can be lethally dangerous.

“Any object loose in the cockpit has the potential to become a missile. Make sure everything is sufficiently secured before takeoff.”

In October 2015, in Afghanistan, a USAF Hercules took off on a routine night flight from Jalalabad to Bagram.

After becoming airborne, the aircraft adopted an increasingly steep climb angle. After reaching approximately 700 feet AGL, the aircraft stalled and descended rapidly before hitting the ground inside the aerodrome.

The aircraft was destroyed, and all 11 occupants were killed. Three Afghan military personnel were also killed when the aerodrome guard tower was hit by the aircraft.

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The official investigation found the pilot had placed a hard-shell night vision goggles case forward of the yoke, to keep the aircraft's elevator in an 'up' position to accommodate loading operations of tall cargo.

In the 50 minutes that followed, prior to takeoff, neither the pilot nor co-pilot removed the case.

Incorrectly stowed items also had a direct impact in February 2014 when an Airbus A330 was flying from RAF Brize Norton to Camp Bastion in Afghanistan.

The aircraft was cruising at 33,000 ft when it suddenly pitched nose down. The aircraft continued like this for 33 seconds, losing 4400 ft in height, before the aircraft's self-protection measures initiated a recovery. A number of passengers and crew were injured during the dive.

A British Military Aviation Authority inquiry established that the pitch down command resulted from a digital SLR camera being placed directly behind the sidestick in the space between the sidestick and the captain's left armrest.

When the captain's seat was moved forward, the camera became jammed between the front of the armrest and the rear base of the sidestick causing the aircraft to dive.

The CAA's Training and Standards Development Officer, David Harrison, says pilots must remember the importance of 'full and free movement'.

"During that final check before takeoff, get your knee board, clipboard and other paraphernalia around you, as you would have them during the flight. Then check for full, free and correct movement of the controls.

"If something untoward then happens during the flight, you've done what you can to ensure it doesn't interfere."

CAA's Principal Aviation Examiner, Bill McGregor, emphasises the importance of checking for loose and random items.

"It's well worth taking the extra time to have a look around for unsecured or poorly stowed items. And fixing them. Obviously it will make the cockpit a safer environment but it will also prevent even a small, relatively harmless item suddenly coming loose and giving the pilot a nasty scare."

Bill says the pilot carrying out a postflight has a role to play as well.

"Make sure you take away all your own equipment, possessions and litter. Don't rely on the next pilot to check." ■



Safety investigators looking into a fatal crash in 2012 concluded that this screwdriver had remained in the rear-most section of the fuselage for some time.