



Transport Accident
Investigation
Commission

Watchlist 2026

Technologies to track and to locate

What is the problem?

The operators of aircraft, ships and boats, and rail vehicles underuse currently available tracking and locating technologies.

Such technologies can reduce the risk of collisions, help ensure a lost vehicle and its occupants are found and therefore improve survival chances, and help us to learn what went wrong in order to improve safety.

What is the solution?

New Zealand's transport sector regulators should encourage people to use available tracking and location technologies and, where reasonable, require the operators of aviation, rail, and maritime vehicles to use available technologies.

Across the aviation, rail, and maritime transport modes, tracking and locating technologies offer ways to improve people's chances of avoiding or surviving an accident or incident and ensuring they can be found. Regulators and operators in all three modes have responded positively to recommendations from past Transport Accident Investigation Commission inquiries where life-saving tracking and locating technologies have been a factor. We continue to encourage the use of advanced tracking and locating devices, and for regulation in some circumstances.

How do tracking and locating devices aid safety?

Operators of fleets of all kinds use tracking technologies for many purposes including managing their fleets efficiently and providing better customer service. These technologies can also enhance transport safety; and locating devices can help survivability after an accident.

Aviation	Searchers for overdue aircraft can use information from flight tracking devices, emergency locator transmitters (ELTs), or personal locator beacons (PLBs) to be directed immediately to the general area of its last known location. If there are survivors, that can prove life-saving. ¹
Rail	Rail operators monitor and control trains in several ways to avoid collisions and enforce speed restrictions. A 'positive train control' system integrates these various technologies to monitor the location and movement of a train and stop it if necessary. ²
Maritime	Tracking and locating technologies such as Emergency Position Indicating Radio Beacons (EPIRBs) or Automatic Identification System (AIS) can help alert authorities to accidents at sea. Where vessels are fitted with these technologies, authorities can start the search for survivors earlier, potentially saving lives. ^{3,8}

What recommendations have we made?

We have previously made recommendations about tracking and locating technologies across all three modes and acknowledge the steps taken in response. The matter persists in our inquiries, however, and we continue to make related recommendations.

- In July 2023, we recommended that Maritime NZ require commercial vessels to be fitted with automatic identification system (AIS) or equivalent when carrying passengers outside inshore limits.⁴
- In February 2025, we recommended that Maritime NZ require crew of passenger vessels equipped with Category II EPIRBs (those that must be removed from a mounting bracket before being deployed) to also carry a personal locator beacon or similar device capable of transmitting a distress message, to increase timely notification of an emergency.⁵

Why is the Commission concerned?

Although positive steps have been taken to encourage the use of technologies to track and to locate, the safety issue remains evident to the Commission.

References to reports and recommendations

- ¹ AO-2011-003 *In-flight break-up ZK-HMU, Robinson R22, near Mount Aspiring, 27 April 2011*
[AO-2011-003 | TAIC](#)
AO-2013-003: *Robinson R66, ZK-IHU Mast bump and in-flight break-up, Kaweka Range, 9 March 2013*
[AO-2013-003 | TAIC](#)
AO-2014-006: *Robinson R44 II, ZK-HBQ, mast-bump and in-flight break-up, Kahurangi National Park, 7 October 2014*
[AO-2014-006 | TAIC](#)
AO-2019-003: *Diamond DA42 aeroplane ZK EAP, Controlled flight into terrain, Kaimanawa Range, near Taupō, 23 March 2019*
[AO-2019-003 | TAIC](#)
AO-2019-005: *BK117-C1, ZK-IMX Controlled Flight into Terrain (Water), Auckland Islands, 22 April 2019*
[AO-2019-005 | TAIC](#)
AO-2023-010: *Kawasaki BK117 B-2, ZK-HHJ Collision with terrain Mount Pirongia. 19 September 2023*
[AO-2023-010 | TAIC](#)
- ² RO-2007-108: *Express freight Train 720, track warrant overrun at Seddon, Main North Line, 12 May 2007*
[RO-2007-108 | TAIC](#)
RO-2019-107: *Passenger service SPAD and near collision, Wellington, 6 November 2019*
[RO-2019-107 | TAIC](#)
RO-2022-102: *L71 Mainline Shunt, derailment and subsequent rollover, Tamaki, 1 June 2022*
[RO-2022-102 | TAIC](#)
- ³ MO-2006-204: *Fishing vessel "Kotuku", capsized, Foveaux Strait, 13 May 2006*
[MO-2006-204 | TAIC](#)
MO-2012-201: *Fishing vessel "Easy Rider", capsize and foundering, Foveaux Strait, 15 March 2012*
[MO-2012-201 | TAIC](#)
- ⁴ MO-2022-201: *Charter fishing vessel Enchanter, Capsize, North Cape, New Zealand, 20 March 2022*
[MO-2022-201 | TAIC](#)
Safety recommendation 020/23 under consideration
- ⁵ MO-2022-206: *Charter fishing vessel, i-Catcher, Capsize, Goose Bay, New Zealand, 10 September 2022*
[MO-2022-201 | TAIC](#)
Safety recommendations 012/25 under consideration

This safety concern was first published as a Watchlist item in 2015.

Te Kōmihana Tirotiro Aituā Waka

Transport Accident Investigation Commission

www.taic.org.nz

The Transport Accident Investigation Commission is an independent Crown entity established to determine the circumstances and causes of accidents and incidents with a view to avoiding similar occurrences in the future rather than to ascribe blame to any person.