

NTSB: Planes should have technologies so they can be found

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In this March 28, 2014 file photo, reporters are seated at a table with a sample flight recorder at the National Transportation Safety Board (NTSB) Vehicle Recorder Laboratory in Washington. US accident investigators recommended Thursday that all airliners making long flights over water be able to broadcast their location minute by minute via satellite transmitters that can identify a crash site. (AP Photo/Charles Dharapak, File)

Responding to recent incidents in which airliners vanished, U.S. accident investigators recommended Thursday that all passenger planes making

long flights over water carry improved technology that will allow them to be found more readily in the event of a crash.

Prompted in part by the disappearance of Malaysia Airlines flight 370 and its 239 passengers and crew last March, the National Transportation Safety Board said one way that could be accomplished is with tamper-resistant transmitters that send a plane's location minute by minute via satellite.

It also asked that the government require that planes carry low-frequency underwater beacons whose signals are more easily detected by search vessels. And it wants them to have longer-lasting batteries that can function for at least 90 days after a crash, instead of the 30 days currently required.

The board also asked the government to require that planes be equipped with cockpit video recorders, and that all of the planes' recorders—including the flight data and voice recorders known as "black boxes"—be designed so they cannot be disabled by the flight crew.

But even with such technologies, black boxes trapped under thousands of feet of water can be difficult to find and retrieve. The board suggested that black boxes could be made ejectable, so they would float on the surface with a locator beacon.

Another possibility would be to require that planes, just before crashing, transmit crucial data, including airspeed, altitude, pitch and whether the engines were operating. Joe Kolly, NTSB's director of research and engineering, said it is possible to automatically send such information if something potentially catastrophic goes wrong with the plane.

While the board said the technology is available, cost may be a barrier to its recommendations. Missing planes are rare, and none of the recent

ocean crashes in which planes were hard to find involved U.S. airliners. The Federal Aviation Administration often has a hard time justifying new regulations unless it can show that the value of saved lives outweighs the cost to the industry.

The board's recommendations also far exceed industry-backed recommendations that are expected to be debated next month at a meeting of the International Civil Aviation Organization, a United Nations agency, in Montreal.

Many airliners already have flight-tracking devices. The Malaysia Airlines Boeing 777, which remains missing, was equipped with a digital data-link system that can be configured to automatically report aircraft position periodically to a ground station via satellite. But the airline wasn't paying for that service when the plane disappeared. Still, the equipment was emitting a signal that should have allowed authorities to track the plane's flight path until it suddenly stopped, raising suspicion that it was deliberately tampered with.

Air France Flight 447, which crashed into the Atlantic Ocean on June 1, 2009, killing 228 passengers and crew, also had such a system, and it was in use. However, it was configured to report the plane's position once every 10 minutes. Given the plane's speed and altitude, this resulted in a search area of 40 nautical miles from its last reported position.

"Such a large area made the search much more challenging," the board said in a letter to the FAA. If the plane had reported its position every minute, the search area could have been reduced to a 6-nautical-mile radius, which is the board's aim.

Even though some Flight 447 wreckage was discovered within days, it took nearly two years before Flight 447's black boxes were recovered. In 2011, Air France modified its data-link communications systems on

certain long-haul planes to report their position every minute.

Other options include systems that continually broadcast their identification, current position, altitude and speed to air traffic controllers and other aircraft using satellite links. The FAA has required that all U.S. airliners be equipped with such systems by 2020 as it transitions from a radar-based air traffic control system to one based on satellite technology, although some airlines have complained that they need more time.

NTSB recommended 15 years ago that the FAA require video cameras in cockpits, citing a series of incidents in which images of cockpit controls or pilot actions might have clarified events leading to a crash. Industry officials opposed the recorders at the time, saying they cost too much and weighed too much, while pilot unions said they violated pilots' privacy.

However, as recorder technology has improved, the weight and cost of the equipment has come down, Kolly noted. And society in general is becoming more accustomed to having activities monitored by recorders, he said.

But Air Line Pilots Association President Tim Canoll said the union remains opposed to video cameras, explaining that the cameras could be misused and the money would be better spent elsewhere.

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