UPDATE: AIRASIA QZ8501 CRASH

Component Failure and Crew Action, Not Weather, Found to Have Caused Crash

Immediately following the crash, severe weather in the area was believed to have been the cause of the loss of control of the plane. However, recovery of the "black box" and a subsequent investigation have found that it was a component failure and the crew’s response to the upset condition, that resulted in the crash and that weather was not responsible.

“It’s a series of technical failures, but it’s the pilot response that leads to the plane crashing.”
- Richard Quest, CNN’s aviation correspondent

<table>
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<th>Problem</th>
<th>What did it happen?</th>
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<td>Step 1</td>
<td>Immediate following the crash, severe weather in the area was believed to have been the cause of the loss of control of the plane. However, recovery of the &quot;black box&quot; and a subsequent investigation have found that it was a component failure and the crew’s response to the upset condition, that resulted in the crash and that weather was not responsible.</td>
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<td>Step 2</td>
<td>Considered &quot;It’s a series of technical failures, but it’s the pilot response that leads to the plane crashing.&quot;</td>
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<td>Step 3</td>
<td>Attempt to reset the system</td>
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The 162 deaths (all on board) resulted from the plane’s rapid (20,000 feet per minute) plunge into the sea. According to the investigation, the crash resulted from an upset/stall condition AND the crew’s inability to recover from that condition. Because both of these causes resulted in the crash, they are both connected to the effect (crash) and separated with an “AND”.

Safety Goal Impacted
Property/Equipment Goal Impacted

The lack of crew training on upset conditions is also believed to have contributed to the crash. In addition, for at least some time prior to the crash, the pilot and co-pilot were working against each other by pushing their control sticks in opposite directions. The pilot was heard on the voice recorder calling for them to “pull down”, although “pulling” is used to bring the plane up.

The only recommendation that has so far been released is for commercial pilots to undergo flight simulator training for this type of emergency situation. AirAsia has already done so. The company, as well as the aviation industry as a whole, will hopefully look at the conclusions of the investigation report with a very critical eye towards improving safety.

The plane was being manually controlled because the autopilot and autothrust were disengaged. These systems were disengaged when a circuit breaker was reset (removed and replaced) to attempt to reset the system after a computer system failure (indicated by four alarms that sounded in the cockpit). While this is sometimes done on the ground, it should not be done in the air because it disengages the autopilot and autothrust systems. However, the crew had inadequate upset recovery training. According to the manual from the manufacturer the aircraft is designed to prevent it from becoming upset and therefore training is not necessary. The decision to manually place the plane in a steep climb is believed to have been an attempt to get out of the poor weather. Just prior to the crash, the less experienced co-pilot was at the controls.

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