

## The Mayday/Air Crash Investigation/Air Disasters Pack

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*Note to reader and players: this pack is about plane accidents and incidents that have been featured on the show Mayday, aka Air Crash Investigation, aka Air Disasters. Only accidents and incidents with no deaths can be answers (although there may be crashes with deaths mentioned in the question), and no terrorist incidents are in this pack.*

1. This flight was flying in a communication dead zone over the Bering Strait when the incident happened on October 9<sup>th</sup>, 2002. The pilots flying at the time were Junior Captain Frank Geib and First Officer David Smith. That incident was a lower rudder hardover caused by a broken control module. This flight was flown on the first Boeing 747-400 ever built, which may have contributed to the metal fatigue that broke the lower rudder control module. For 10 points, name this flight, a flight going from Detroit to Tokyo Narita, which was diverted to Anchorage after over two hours of counteracting the lower rudder left hardover with full upper rudder to the right, right ailerons, and asymmetric thrust.

ANSWER: Northwest Airlines Flight 85 [do not prompt on an answer with “Delta” and scold them for trying to be a smartass]

2. A few days after this flight occurred, the plane took off from the Michoud (“mee-chood”) Assembly Facility to its original destination airport. This flight was on the airline’s newest plane, a Boeing 737-300, and was a flight from Belize City to New Orleans. This flight’s crew fell victim to an intense thunderstorm with hail, causing both engines to fail, exposing a design flaw with the engines. They later became completely inoperable after a “hot start” overheated them. This flight was famously captained by Carlos Dardano, a captain that lost an eye via a bullet from a guerilla fighter 6 years earlier and managed to keep his pilot’s license via a special exemption. For 10 points, name this flight operated by an El Salvador airline, which managed to land safely onto a levee without any engines.

ANSWER: TACA Flight 110 [begrudgingly accept “TACA Airlines Flight 110”; do not prompt on an answer with “Avianca El Salvador” and scold them for trying to be a smartass]

3. This flight had Patrick Harten as the air traffic controller at take-off. This was the first officer’s first assignment as pilot flying in the aircraft type this flight was done on, which was an Airbus A320. The QRH checklist for the type of incident this flight encountered was criticized for being too long for the conditions this flight encountered. The pilot’s action to start the APU early was considered one of the life-saving choices the crew made. This

flight, which was a flight from LaGuardia to Charlotte, was only in the air for 5 minutes and reached a maximum altitude of around 3000 feet before a bird strike resulted in dual engine failure over New York City. The crew, which consisted of First Officer Jeff Skiles (“sky-els”) and Captain Chesley Sullenberger, received international fame when, for 10 points, they piloted this flight to a remarkable safe water landing on the Hudson River.

ANSWER: US Airways Flight 1549 [accept Cactus 1549; prompt on USAir 1549; do not accept an answer with “American” and scold them for trying to be a smartass; prompt on “Miracle on the Hudson” before Hudson River is mentioned]

4. This flight was on a BAC One-Eleven, which was going from Birmingham, England to Malaga, Spain on June 10<sup>th</sup>, 1990. Tim Lancaster was the captain on this flight, who had a close relationship with the flight crew except the co-pilot, Alastair Atchison, who was a new face. Due to the incident, this flight was diverted to Southampton. Despite the captain suffering from extreme conditions, he survived the incident, returning to the captain seat only 5 months later. For 10 points, name this flight, where an improperly installed windscreen blew out, causing the captain to be partially sucked out of the plane.

ANSWER: British Airways Flight 5390 [accept Speedbird 5390; prompt on British 5390; do not accept British Airlines]

5. This flight was forced to return to its take-off airport after this flight’s incident happened 4 minutes after take-off. Due to the numerous complex ECAM issues experienced from the incident, it took almost 2 hours from the incident to land at the airport, Singapore Changi Airport. Those ECAM messages were dealt with by first officer Matt Hicks, who took 55 minutes to deal with all 58 ECAM messages. Second officer, Mark Johnson, made a visual inspection through a passenger window, and saw puncture holes through the left wing, while check captain David Evans assisted in calculating landing speeds. For 10 points, name this flight, a flight captained by Richard de Crespigny (“KREP-nee”) in 2010, where an Airbus A380’s engine 2 exploded over Batam Island due to an oil fire stemming from a broken oil stub pipe.

ANSWER: Qantas Flight 32

6. This flight was the first ever hull loss of the aircraft type this flight was flown on. First Officer, John Coward, was the pilot flying when this flight’s accident happened, while Captain Peter Burkill made a last-second decision that saved many lives. That action was raising the flaps from 30 to 25. Despite the evidence available, the investigation took over a year, as the cause was no longer at the crash site. This flight overflew cold air over

Siberia in 2008, causing ice crystals to form in the fuel. For 10 points, name this flight on a Boeing 777, which crash landed short of the runway at London Heathrow Airport due to double engine failure stemming from those ice crystals, which became sticky and restricted fuel flow.

ANSWER: British Airways Flight 38 [accept Speedbird 38; prompt on British 38; do not accept British Airlines]

7. This flight's 100% survival rate was aided by the incline it crashed into, allowing the fuel to flow away from the burning plane. This flight's crash was the most serious incident in the history of Denver International Airport. Captain David Butler was the pilot flying, and he ended up being the most injured person on this flight. Despite reports of crosswinds being within take-off limits, this flight battled major crosswinds, originating from the Rockies, reaching speeds up to 45 knots, causing the captain to question the usability of his rudder. For 10 points, name this flight, occurring in December 2008, where a Boeing 737 veered off the left side of the runway during take-off after the captain let his foot off the rudder due to the near impossibility of anyone having experience for such high strength crosswinds.

ANSWER: Continental Airlines Flight 1404 [do not prompt on an answer with "United" and scold them for trying to be a smartass]

8. This flight has one of the few recorded instances of ball lightning, happening in 2014. This flight was scheduled to fly from Aberdeen to Sumburgh on the Shetland Islands. Right when this flight was abandoning its approach, the plane, a Saab 2000, was struck by lightning, where the crew believed that their autopilot disconnected, due to prior training on the Saab 340. They then reported flight control issues before going into a nosedive. For 10 points, name this flight, where the plane's unique autopilot didn't disconnect as the crew thought, even when they made inputs that would disconnect autopilots in any other type of airplane, and only disconnected when a computer glitch occurred in an air data computer, allowing the pilots to regain control just 7 seconds before it would've hit the North Sea.

ANSWER: Loganair Flight 6780 [begrudgingly prompt on "flybe Flight 6780", but call them out for being a showoff when they actually answer correctly]

9. This flight suffered an incident while on approach to land in Richmond, Virginia on June 9th, 1996. This flight was spared from a crash due to its higher speed compared to two previous fatal accidents on the same type of plane, and this flight being spared allowed the NTSB to have a living pilot, Brian Bishop, to interview about the control issues. The dual servo valve in the rudder's Power Control Unit (PCU) was a suspect in all three accidents, but only extreme tests done during this accident's investigation proved that the valve can not only jam the rudder, but reverse the rudder inputs on a

Boeing 737. For 10 points, name this flight, whose investigation helped solve the crashes of USAir Flight 427 and United Airlines Flight 585, the latter of which had the longest aviation investigation ever, at 10 years.  
ANSWER: Eastwind Airlines Flight 517 [accept Stinger 517]

10. The lack of deaths from this accident flight is attributed to all 309 people getting out of the plane within 90 seconds, before the plane, an Airbus A340, was entirely consumed by fire. Alain Rosaye was the captain of this flight, while Frederic Naud was the First Officer and in control of the plane until the moment it crashed. This flight attempted to land in very poor weather, and, combined with errors made by the flight crew that include landing on the middle of the runway instead of the beginning and not deploying the thrust reversers until 17 seconds after they touched down. For 10 points, name this flight, occurring on August 2nd, 2005, which overran Toronto Pearson's Runway 24L into the Etobicoke ("eh-TOH-bee-koh") Creek ravine, and may have inspired the writer into being interested in plane crashes.

ANSWER: Air France Flight 358

11. This flight was the first major airline incident of 1985 to not have a fatality, happening on February 19<sup>th</sup>. After engine 4 lost thrust, the flight engineer did not close the bleed air valve and, after declaring it flamed out, the captain requested a restart of the engine at 41,000 feet, 11,000 feet over the recommended maximum altitude for engine restarts. The way the captain, Min-Yuan Ho, mishandled the situation is partially blamed on jet lag, as he crossed 18 time zones in just 6 days. For 10 points, name this flight, where, after an uncontrolled 30,000-foot descent through thick clouds, and after the Boeing 747SP lost bits of its horizontal stabilizer, including the left elevator, and some of its landing gear doors, landed safely at San Francisco Airport after the crew regained control.

ANSWER: China Airlines Flight 006 [accept Dynasty 006; prompt on an answer with "China Air"; do not accept an answer with "Air China", one that only has "China", nor one with "Taiwan"]

12. This flight was the airline's first hull loss since 2002, happening on August 20th, 2007. Maintenance done on the plane during a special work order to make a downstop assembly more secure by tightening a nut with thread hardener inadvertently allowed a washer to fall off during the maintenance, due to the tough visual circumstances. The downstop fell off during this flight, puncturing the fuel tank when the slats were retracted after landing. Unusually, the fire on this flight only started after it parked at Naha airport, when the fuel leak stopped being sprayed from the engine exhaust, and landed onto the hot tailpipe. For 10 points, name this flight,

whose fire and explosion went viral when a witness from the Naha airport terminal filmed it on his camera.

ANSWER: China Airlines Flight 120 [accept Dynasty 120; prompt on an answer with “China Air”; do not accept an answer with “Air China”, one that only has “China”, nor one with “Taiwan”]

13. The captain of this flight described the tricky landing at Jakarta as “a bit like negotiating one’s way up a badger’s arse”, as the windscreen was damaged. The incident this flight ended up in began just after the captain, Eric Moody, went to the toilet, when St. Elmo’s Fire appeared on the windscreen and over the wings of the Boeing 747, despite the fact that there were no thunder clouds nearby. All of the problems of this flight and the St. Elmo’s Fire was caused by a volcanic cloud that erupted from Mount Galunggung that night. For 10 points, name this flight, going from London to Auckland via Bombay, Kuala Lumpur, Perth, and Melbourne, where all four engines failed over the Indian Ocean in 1982 during the Kuala Lumpur-Perth leg, and were eventually restarted by the efforts of first officer Roger Greaves and flight engineer Barry Townley-Freeman.

ANSWER: British Airways Flight 9 [accept Speedbird 9; prompt on British 9; do not accept British Airlines]

14. *Note to players: the Mayday episode on this accident hasn’t been released in English yet, but the writer thought it was so interesting, he watched the Quebec French version that was released (with English subtitles).*

The ultimate cause of this flight’s accident, which was on an Airbus A319, going from Chongqing to Lhasa on May 14th, 2018, was a result of moisture getting into the terminal block, responsible for heating the windshield. The corrosion caused the system to overheat, expanding the air between the windshield panes to the point of cracking. When this flight suffered a decompression, the cockpit door slammed open, hitting the circuit breaker panel to the point where it popped a few circuit breakers, making the landing harder. This flight also couldn’t descend to a breathable altitude immediately, as they were over the Tibetan Plateau, which has an average height above the normal breathable altitude. Due to the awkward position of his oxygen mask, the captain of this flight was not able to put it on during the emergency. For 10 points, name this flight, where the windshield exploded, partially sucking out first officer Xu Ruichen, who managed to get himself back inside the plane after a minute, and where captain Liu Chuanjian managed to land the plane safely in Chengdu airport, running on pure adrenaline to avoid suffering from hypoxia.

ANSWER: Sichuan Airlines Flight 8633

15. Between this flight's most severe events and its emergency landing at Learmonth airport, captain Kevin Sullivan quipped to his flight crew, "Looks like I picked a bad day to give up sniffing glue", a line from the movie "Airplane!" to reduce stress in the cockpit. One of this flight's air data inertial reference units (aka ADIRU) inputted two swapped pairs of values for altitude and angle of attack, misleading the computers into thinking the plane was pitched up 50 degrees. Similar computer issues of two other flights off the coast of western Australia briefly led the investigators to suspect that interference from a naval communication station caused the swaps, but was later ruled out. For 10 points, name this flight, where the computer bug made the Airbus A330 pitch down suddenly twice in a few minutes, injuring a third of the plane.

ANSWER: Qantas Flight 72

16. When this flight encountered its problems in the air two days after Christmas in 1991, off-duty captain Per Holmberg went into the cockpit via the open cockpit door, which was left opened intentionally by the on-duty captain before take-off, and helped out in the emergency. Despite what is told on Mayday, this flight was on an MD-81, a modernized DC-9. This flight began its accident sequence when clear ice, undetected by deicers on the ground, broke off the wing and got sucked into the engine just after take-off from Stockholm Arlanda Airport. It turned into a full-blown emergency when, after captain Stefan Rasmussen throttled down the right engine on the advice of first officer Ulf Cedermark, an automatic system on the MD-81, unknown to the entire airline, pushed the engines to full power, causing the engines to destroy themselves. For 10 points, name this flight, which managed to glide to a crash landing onto a field in Gottröra after hitting trees, and is considered a miracle for not having any deaths.

ANSWER: Scandinavian Airlines System Denmark-Norway-Sweden Flight 751 [accept SAS 751; prompt on "Scandinavian Flight 751"; do not accept "Scandinavian Airways" or the like]

17. The chain of events that resulted in this flight's accident started with a broken fuel-quantity indicator sensor, when, combined with other misunderstandings, left the flight crew with no on-board fuel gauges in 1983. This flight was forced to land at a decommissioned air base, which is where the first officer, Maurice Quintal, once served at, rather than at Winnipeg. This flight, done on a new Boeing 767, actually landed on a dragstrip that one of the runways had been converted to. The captain of this flight, Bob Pearson, was a glider pilot, and used his glider skills to land the plane safely in Gimli, which included doing a forward slip (described on the show Mayday as a sideslip). For 10 points, name this flight, which ran out of fuel over central Canada due to the fuelers and pilots mistakenly

using imperial, which was used on most of the airline's planes, instead of metric, which was used on new planes from the airline, and whose landing animation from Mayday was also overlaid with Initial D - Deja Vu in a meme video.

ANSWER: Air Canada Flight 143 [accept Gimli Glider before the mention of Winnipeg, prompt in between Winnipeg and Gimli]

18. This flight underwent a troublesome maintenance in Lisbon before finally being cleared to return to its home base on November 11th, 2018. After take-off, the crew had so much trouble with the controls, that they asked for directions to the sea to make sure they could avoid hitting people on the ground. The aerobatic manoeuvres this flight went through were so extreme that the plane, an Embraer ERJ-190, was considered a write-off after it landed. The crew, consisting of captain Vyacheslav Aushev, first officer Bauyrzhan Karasholakov, and another first officer Sergey Sokolov, managed to figure out why this flight was behaving the way it was after an hour of uncontrollable flight, and managed to somewhat have enough control to attempt landing at Beja Airbase, where there was better weather. For 10 points, name this flight, originally heading to Almaty, where the aileron cables were installed incorrectly due to confusing instructions, causing them to be reversed, and still managed to land safely at Beja after three landing attempts, and over 2 hours of brutal flight conditions.

ANSWER: Air Astana Flight 1388 [accept Astanaline 1388]

19. This flight is noteworthy in terms of being covered by Mayday, in that it was the first accident the show covered that had no fatalities. The first signs of the problems this flight encountered were two warnings about the oil, where it had a low temperature, yet a high pressure, leading them to think that their computer sensors were faulty. Unknown to the crew, an incorrect hydraulic pipe was installed on the Airbus A330 5 days before this flight, causing it to rub onto a fuel line until it ruptured over the Atlantic on August 24th, 2001. This flight later ran out of fuel because the crew responded to a fuel imbalance alert by opening the crossfeed valve, not realizing that there was a fuel leak. For 10 points, name this flight, the longest glide ever done on a passenger aircraft at 120 kilometres for 19 minutes, where captain Robert Piché and first officer Dirk de Jager managed to land this flight safely at Lajes Airport in the Azores.

ANSWER: Air Transat Flight 236 [accept Azores Glider before Atlantic, else prompt until Lajes]

20. This flight was en route to Hong Kong from Surabaya on an Airbus A330 on April 13th, 2010, when the plane experienced an engine stall on the

second engine, then on the first engine, forcing the plane to essentially glide for a short while, before captain Malcolm Waters managed to regain thrust from engine 1. The cause of the engine problems was fuel contamination from the fuel in Surabaya, where saltwater damaged the fuel filters on the fueling trucks, causing particles of superabsorbent polymer to get into the fuel, jamming the fuel valves closed on engine 2, and open on engine 1. For 10 points, name this flight, which was forced to land with one engine at 74% power and 230 knots, 100 knots over normal landing speed, nearly running off the runway at Hong Kong airport.

ANSWER: Cathay Pacific Flight 780

21. The first officer of this flight, Gary Lintner, called the plane “stronger than 10 acres of garlic”, which was a Lockheed L-188 Electra. The flight crew initially noticed a buzzing noise from the engine 4 propeller, which prompted flight engineer Moose Laurin and flight attendant Wendy Kroon (who would later marry) to observe the propeller detach, and slice the bottom of the plane, causing the throttle cables to be stuck at full power, and the manual control cables to be pinched between floor beams. For 10 points, name this flight, captained by James Gibson, where after flying for 4 hours towards Anchorage from Cold Bay for a very long runway using the autopilot controls, this flight’s crew inadvertently sawed through the floor beams with the manual control cables via brute force, allowing for enough control to safely land the plane.

ANSWER: Reeve Aleutian Airways Flight 8

22. This flight happened on just the 5th plane of its type ever built. A weird piece of evidence from this flight’s accident was a coffin in a field near Windsor, Ontario. The way the FAA and the plane’s manufacturer responded to this accident were so inadequate that an accident less than 2 years later, which was caused by the exact same problems, became the deadliest aviation accident in history at the time in 1974. Captain Bryce McCormick managed to control the barely controllable plane with the engines, both for aiding in turning and controlling his rate of descent when landing at Detroit. For 10 points, name this flight, the first accident of a DC-10, where its infamous rear cargo door fell off in 1972, resulting in the floor collapsing and ripping some of the control cables, due to design flaws known to McDonnell Douglas before the plane was even built.

ANSWER: American Airlines Flight 96