

Air India jet crashed after fuel cut-off: report

AAIB report says fuel switches shifted to 'cut-off' three seconds after aircraft became airborne

One pilot asked the other why did he cut off fuel. The other pilot responded that he did not do so

AAIB report does not recommend any actions for either Boeing 787-8 aircraft or GE GENx-1B engine

Jagriti Chandra
NEW DELHI

The fuel control switches of the Air India flight that crashed in Ahmedabad last month shifted or "transitioned" to the cut-off position three seconds after the aircraft became airborne, says the preliminary investigation report on the accident. Later, there was a loss of engine thrust and both engines shut down, precipitating the crash of the Boeing 787-8 aircraft which killed at least 260 people, including 19 on the ground, it said.

The fuel cut-off switches of both the engines "transitioned from RUN to CUTOFF position one after another with a time gap of 01 sec", said the report submitted by the Aircraft Accident Investigation Bureau late on Friday night.

Rise & fall

Timeline of the AI-171 crash in Ahmedabad on June 12, as per the preliminary report released by the AAIB

1 The U.S. Federal Aviation Administration Issued **Special Airworthiness Information Bulletin (SAIB)** in 2018, regarding the potential disengagement of the fuel control switch locking feature

2 The suggested checks were not carried out by Air India as the SAIB was advisory and not mandatory

180 knots
maximum recorded
speed of the
aircraft during
the crash

1.38.39 p.m.: Aircraft lifts off from Runway 23

1.38.42 p.m.: Fuel cut-off switches for both engines transitioned from RUN to CUTOFF within an interval of 1 second

One of the pilots heard asking the other why did he cut off [the fuel supply]. The other pilot responded that he did not do so

1.38.52 p.m. - 1:38:54 p.m.: Both fuel cutoff switches moved back to

their original RUN position

1:39:05 p.m.: Mayday call issued from the cockpit before radio silence. ATC notices aircraft crashing



1.39.11p.m.: Black box stops recording



Fuel switches regulate the flow of fuel into an aircraft's engines. They are generally guarded with brackets to prevent accidental movements and there is a procedure in place for its usage, says veteran pilot. The switches have to be first pulled up before changing their position

This switch movement occurred at 1.38.42 p.m., exactly three seconds after the plane achieved lift-off.

The report does not mention whether the movement of switches was inadvertent or deliberate.

However, it notes that, at the time the switches "transitioned" from "run" to "cut-off" position, the cockpit voice recording showed that "one of the pilots is heard asking the other why did he cut-off. The

other pilot responded that he did not do so."

The report does not mention whether the first officer or the pilot-in-command posed the question; nor does it include the full transcript of the conversa-

tion between the pilots captured in the cockpit voice recording.

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Report points to human intervention as cause of crash

Capt. A. Ranganathan

The preliminary report on the tragic fatal crash of Air India's London flight (flight no. AI 171) soon after taking off from Ahmedabad on June 12 was submitted late on Friday night.

Did the Aircraft Accident Investigation Bureau (AAIB) release it voluntarily or under intense international pressure?

The report has given details, but there are several issues that are not covered.

For the past one month, the electronic media had been full of YouTube narratives painting the Boeing

787-8 Dreamliner, the type of the aircraft that crashed, with a black brush.

But the aircraft is safe, and several other factors could have caused the crash.

When authorities appointed a Director-General of Police in the inquiry committee and threw in a sabotage angle, it harked back to several cases of pilot suicide events. The preliminary report, with several shortcomings, does give an indication in that direction.

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Air India jet crashed after fuel cut-off: report

“Until the investigation explains how a supposedly locked fuel switch could have moved to CUTOFF and provides a detailed sequence of failure messages and aircraft response, the full truth remains elusive,” says Amit Singh, an aviation safety expert and founder of the Safety Matters NGO.

Thirty seconds later, one of the pilots transmitted “MAYDAY MAYDAY MAYDAY” – the distress signal used to indicate a life-threatening emergency. The air traffic control officer enquired about the call sign to identify the flight, but did not get any response. Seconds later, however, he observed the aircraft crashing outside the airport boundary at 01.39 p.m.

U.S. advisory

U.S. aviation regulator Federal Aviation Administration (FAA) had issued an advisory on December 17, 2018, regarding the potential disengagement of the fuel control switch locking feature for the Boeing 787-8. However, the report says that Air India did not carry out the suggested inspections as the FAA bulletin was only an advisory and did not mandate action.

Having scrutinised the maintenance records, the AAIB found that no defects in the fuel control switch of this aircraft had been reported after 2023, when the throttle control module of the cockpit control panel was last replaced on this aircraft.

Subsequently, after a gap of 10 to 12 seconds, the switches moved back to their original “run” position at 1.38.52 and 1.38.54 seconds. After the fuel supply was switched back on, one of the engines progressed to recovery and stopped decelerating, but deceleration on the second engine was not arrested. The black box stopped recording data 17 seconds later at 1.39.11 p.m.

As per the report, the pilot-in-command, Captain Sumeet Sabharwal, was monitoring the flight, while first officer Clive Kundar was the one flying the aircraft.

No immediate action recommendations

On the basis of its findings, the AAIB report does not recommend any actions for either the Boeing 787-8 aircraft or the GE GENx-1B engine installed on the aircraft involved in the crash.

A preliminary report does not typically reveal the cause of an accident, but instead provides the details of the flight involved in the accident. International norms require that such a report is submitted within 30 days of a crash.

The report raises more questions than it answers, says aviation safety expert

The interim probe report into the Air India crash lacks technical transparency, says Amit Singh; he notes the report fails to recommend inspections or corrective action despite proof of possible disengagement of fuel control switch locking feature

INTERVIEW

Amit Singh

Jagriti Chandra

The interim probe report into the Air India crash possibly raises more questions than it answers. Aviation safety expert Amit Singh, who has flown the Boeing 777 aircraft, and is the founder of the NGO Safety Matters, says the report lacks technical transparency, and by omitting recommendations on necessary inspections and immediate corrective steps, fails to show the urgency warranted by a catastrophic event such as the June 12 crash.

What are the key highlights of the probe report?

The report begins by highlighting a 2018 FAA Special Airworthiness Information Bulletin (SAIB) regarding the potential disengage-

ment of the fuel control switch locking feature. Air India had not inspected their fleet regarding this. The mechanical failure in the fuel control switch mechanism could have allowed the switches to move directly, bypassing the safety feature. This possibly resulted in cutting off fuel supply to the two engines, and their subsequent shutdown, resulting in the crash.

The second important aspect of the report is to determine at what stage the engines stopped producing the thrust, which eventually led to the accident. The report states that the aircraft got airborne at 1.38.39 p.m. and attained a maximum speed of 180 knots at 1.38.42 p.m., following which the two fuel control switches moved to the 'cut-off' position. The report further down states that the Ram Air Turbine, which is a backup power source that activates after a double engine failure, was deployed during initial climb, immediately after



take-off. For the RAT to deploy, both engines have to stop. Therefore, we can deduce that the engines stopped just before lift-off. However, the fuel control switches were moved to shut-off much later.

What do we need to know to understand whether this was human action or inadvertent?

We will need to know specifically what the exact cockpit actions and switch movement logs were. We also need the full transcript of the cockpit voice recording.

Information is also needed on whether the locking mechanisms on fuel switches were installed or disabled. Also, if there were any uncommanded system inputs or failures.

Compared with other high-profile preliminary reports, such as the 33-page Ethiopian Airlines ET 302 (737 MAX) report, the AI 171 report is notably brief and lacking in technical transparency. The ET 302 report included extensive data traces, CVR excerpts, checklists, and manufacturer bulletins, enabling stakeholders worldwide to act swiftly. In contrast, the AI 171 report reads more like a narrative than a technical investigation and fails to offer the clarity and urgency warranted by such a catastrophic event.

What are the chances of the two switches moving or transitioning by themselves?

Such a possibility is ex-

tremely unlikely unless one of the following occurred.

The locking feature on the fuel switches was disengaged as given in the FAA SAIB of 2018, or there was a faulty installation of the lock on the fuel switch that allowed unintended movement, cutting off fuel supply to the engine.

Other possibilities include vibration experienced by the quadrant or levers due to the uneven runway surface. Or if there were any uncommanded system inputs or failures, that is, one where there was no input from the pilots.

What do you make of the Boeing advisory and Air India's failure to take corrective action?

It reflects a serious lapse in safety oversight. SAIB NM-18-33 warned of exactly this failure mode, but there's no evidence that Air India acted. A corrective action may have prevented this crash.

Expert panel decides to propose two-language policy in Karnataka

Jayanth R.
BENGALURU

Amidst heated debates over whether Karnataka should also ditch the three-language policy in education and opt for a two-language one, like what Maharashtra did recently and Tamil Nadu has been doing for decades, the State Education Policy (SEP) Commission has in its report recommended a two-language policy, multiple sources confirmed to *The Hindu*.

The commission is expected to submit its report to the State government by the end of July.

It may be recalled that Chief Minister Siddaramaiah had also recently ex-



Purushottam Bilimale

pressed support for a two-language policy. The Karnataka Development Authority (KDA) had also demanded it.

The commission has reportedly comprehensively discussed the pressure and effects on children owing

to the three-language policy, the number of students failing in the third language – Hindi – in the SSLC exam and the fact that the third language or regional languages are not considered for board examinations in central board schools, before finalising the two-language policy recommendation.

Purushottam Bilimale, chairman, Kannada Development Authority (KDA), has said that the State government should also show commitment like Tamil Nadu and Maharashtra governments on the implementation of the two-language policy.

He further said that since the language policy played an important role in

the education system, the authority would wait for the SEP Commission's report and then take an appropriate decision.

Private schools' stand

Private school organisations such as the Associated Management of Primary and Secondary Schools in Karnataka (KAMS) have opposed the two-language policy in the State education system.

"The government should not abandon the three-language policy. There should be an opportunity to learn a third language in schools. But there should not be an imposition of Hindi," said Shashikumar D., general secretary, KAMS.

'Enrolment nearly done in third phase trials for India's first dengue vaccine'

Bindu Shajan Perappadan
NEW DELHI

Following an announcement by the Indian Council of Medical Research (ICMR) and Panacea Biotec Ltd. to initiate third phase trials, about 8,000 of the targeted 10,000 participants have enrolled in the third phase of clinical trials for a dengue vaccine in India, Manoj Murhekar, Director, National Institute of Epidemiology, ICMR, Chennai, told *The Hindu*.

The trial will be rolled out at 20 centres across the country, Dr. Murhekar said.

"In India, all four serotypes of the dengue virus are known to circulate or co-circulate in many regions, so it's vital to ensure that we have an effective vaccine that achieves good efficacy for all four serotypes," he added.

The trial is primarily funded by ICMR, with partial support from Panacea Biotec. Participants will be followed up for two years under projects spread across various centres, including Chennai, Pune, Hyderabad, and Delhi.



High hopes: The tetravalent dengue vaccine strain has shown promising results in preclinical and clinical trials. FILE PHOTO

There is currently no antiviral treatment or licensed vaccine for dengue in India.

Landmark trial

"This landmark trial will evaluate the efficacy of India's indigenous tetravalent dengue vaccine, Den-giAll, developed by Panacea Biotec. The first participant in this trial was vaccinated last year at Pandit Bhagwat Dayal Sharma Post Graduate Institute of Medical Sciences, Rohtak," a release issued by the Union Health Ministry said.

The tetravalent dengue vaccine strain (TV003/

TV005) originally developed by the National Institutes of Health, the U.S., has shown promising results in preclinical and clinical trials worldwide.

Panacea Biotec, one of three Indian companies to receive the strain, is at the most advanced stage of developing a vaccine.

The company has worked extensively on these strains to develop a full-fledged vaccine formulation and holds a process patent for this work. The first and second phases of the clinical trials of Indian vaccine formulations were completed in 2018-19,

yielding promising results.

Dengue is a major public health concern in India, which ranks among the top 30 countries with the highest incidence of the disease. The global incidence of dengue has been steadily increasing over the past two decades, with more than 129 countries reporting dengue viral disease by the end of 2023, according to the World Health Organization (WHO).

In India, approximately 75-80% of infections are asymptomatic, yet these individuals can still transmit the infection through the bite of Aedes mosquitoes. Among the 20-25% of cases where symptoms are clinically apparent, children are at a significantly higher risk of hospitalisation and mortality. In adults, the disease can escalate into severe conditions, including the dengue hemorrhagic fever and dengue shock syndrome.

The dengue virus has four serotypes, 1-4, with low cross-protection against each other, which means people can experience repeated infections.

Hasina's daughter on leave from WHO amid legal woes in Dhaka

Bindu Shajan Perappadan
NEW DELHI

Saima Wazed, South-East Asian Regional Director of the World Health Organization (WHO), has proceeded on indefinite leave from Friday, the global health body's spokesperson confirmed to *The Hindu* on Saturday in an email response.

The move came in the wake of Bangladesh's Anti-Corruption Commission filing cases against Ms. Wazed on charges of fraud, forgery, and abuse of power.

Ms. Wazed is the daughter of former Bangla-



Saima Wazed

desh Prime Minister Sheikh Hasina, who fled the country in August 2024.

The WHO did not explain why Ms. Wazed, who took office for a five-year term in February 2024, had proceeded on leave.

Catharina Boehme, Assistant Director-General of External Relations and Governance at WHO, is currently serving as officer in-charge in Ms. Wazed place.

Questions raised

Ms. Wazed's appointment as Regional Director has also come under question, amid allegations of having used her mother's influence to campaign for the post, and of providing false information on her academic record, allegedly violating Sections 468 (forgery for the purpose of cheating) and 471 (forging a document) of the Bangladesh Penal Code.

US communication structure at Qatar air base hit in Iranian attack, satellite images show

JON GAMBRELL

DUBAI, JULY 12

AN IRANIAN attack on an air base in Qatar that's key to the US military hit a geodesic dome housing equipment used by the Americans for secure communications, satellite images analyzed Friday by The Associated Press show.

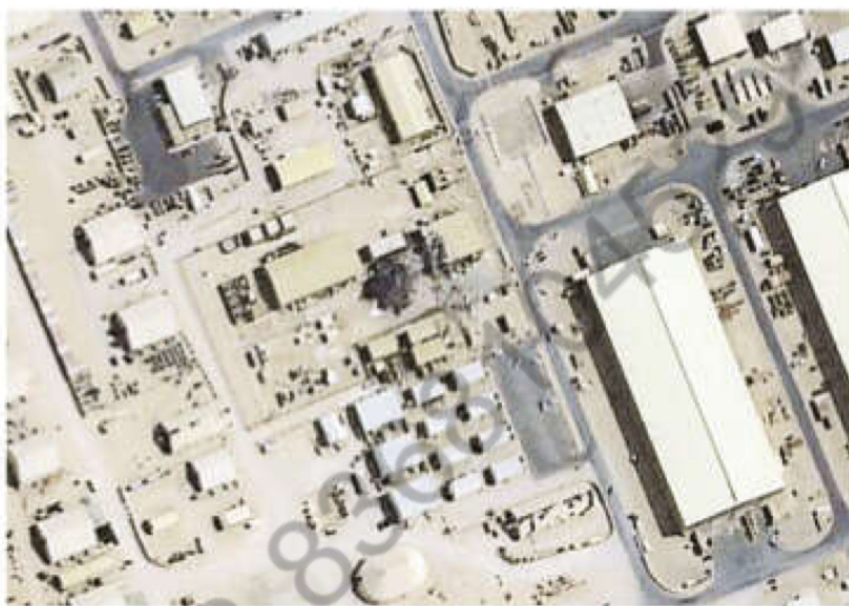
Hours after the publication of this AP report, Pentagon spokesperson Sean Parnell acknowledged that an Iranian ballistic missile had hit the dome. Qatar did not respond to requests for comment about the damage.

The Iranian attack otherwise did little damage — likely because of the fact that the US evacuated its aircraft from the base, which is home to the forward headquarters of the US military's Central Command, before the attack.

Trump also has said that Iran signaled when and how it would retaliate, allowing American and Qatari air defense to be ready for the attack, which briefly disrupted air travel in the Middle East, but otherwise didn't tip over into the regional war long feared by analysts.

Satellite images from Planet Labs PBC show the geodesic dome visible at the Al Udeid Air Base on the morning of June 23, just hours before the attack.

The US Air Force's 379th Air Expeditionary Wing, which operates out of the base, announced in 2016 the installation of the \$15 million piece of equip-



A satellite image from Planet Labs PBC shows damage after an Iranian attack at the Al Udeid Air Base outside Doha. AP

EXPLAINED

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Modernised enterprise terminal

THE MODERNISED Enterprise Terminal (MET) is a next-generation military satellite communications system developed for the US Army. It replaces aging ground terminals with advanced units that support simultaneous X- and Ka-band connectivity, ensuring secure, high-bandwidth global communication.

ment, known as a modernized enterprise terminal. Photos

show a satellite dish inside of the dome, known as a radome.

Images taken June 25 and every day subsequently show the dome is gone, with some damage visible on a nearby building. The rest of the base appears largely untouched in the images.

In a statement, Parnell said the missile strike “did minimal damage to equipment and structures on the base.”

“Al Udeid Air Base remains fully operational and capable of conducting its mission, alongside our Qatari partners, to provide security and stability in the region,” he added.

The London-based satellite news channel Iran International first reported on the damage, citing satellite photos taken by a different provider. **AP**

Trump announces 30% tariff on Mexico and EU from August 1

Agence France-Presse

WASHINGTON

U.S. President Donald Trump on Saturday targeted Mexico and the European Union with steep 30% tariffs, dramatically raising the stakes in already tense negotiations with two of the largest U.S. trading partners.

Both sets of duties would take effect on August 1, Mr. Trump said in formal letters posted to his Truth Social platform. The President cited Mexico's role in illicit drugs flowing into the U.S. and a trade imbalance with the EU as meriting the tariff threat.

The EU swiftly slammed the announcement, warning that it would disrupt supply chains, but insisted it would continue talks on a deal ahead of the deadline. Meanwhile, Mexico called the new move an unfair deal.

Since returning to the presidency in January, Mr. Trump has unleashed sweeping tariffs on allies and competitors alike. But his administration is coming under pressure to secure deals with trading partners after promising a flurry of agreements. So far, the U.S. has only unveiled two pacts, with Britain and Vietnam, along-



Donald Trump

side temporarily lower tit-for-tat duties with China.

The fresh duties for Mexico announced by Mr. Trump would be higher than the 25% levy he imposed on Mexican goods earlier this year, although products entering the U.S. under the U.S.-Mexico-Canada Agreement (USMCA) are exempted. "Mexico has been helping me secure the border, BUT, what Mexico has done, is not enough," Mr. Trump said in his letter to Mexican President Claudia Sheinbaum.

"Starting August 1, 2025, we will charge Mexico a Tariff of 30% on Mexican products sent into the U.S."

The EU tariff is also markedly steeper than the 20% levy Mr. Trump unveiled in April, as negotiations with the bloc continue.

Erdogan hails disarmament of Kurdish PKK militants

Agence France-Presse

ISTANBUL

Turkish President Recep Tayyip Erdogan on Saturday hailed start of a disarmament process by militant Kurdish separatists as the end of a "painful chapter" in Türkiye's troubled history.

Mr. Erdogan told a meeting of his ruling AKP party in Ankara that the more than 40-year-old "scourge of terrorism" for which the Kurdistan Workers' Party – or PKK – was responsible is on its way to ending.

Mr. Erdogan's remarks came a day after male and female members of the PKK in northern Iraq cast rifles and machine guns into a large cauldron where they were set on fire. The symbolic move was seen as the first step toward a promised disarmament as part of a peace process aimed at ending four decades of hostilities.

The move came after PKK leader Abdullah Ocalan, who has been imprisoned on an island near Istanbul since 1999, urged his group in February to convene a congress and formally disband and disarm. In May, the PKK announced that it would do so.

Six killed as Russia fires 597 drones, 26 long-range missiles towards Ukraine

Agence France-Presse

KYIV

Russia fired more than 620 drones and long-range missiles overnight killing six persons, Ukraine said on Saturday, calling for fresh sanctions on Moscow to halt its record barrages.

Kyiv and Moscow have stepped up aerial strikes over recent months and U.S.-led ceasefire talks aimed at pausing the over three-year war have stalled.

"Twenty-six cruise missiles and 597 attack drones were launched, of which more than half were 'Shaheds'," Ukrainian President Volodymyr Zelenskyy said, referring to Iranian-made drones.

The Ukrainian air force said it had downed 319 Shahed drones and 25 missiles, adding that one missile and about 20 drones hit "five locations".

Mr. Zelenskyy said the strikes had killed at least two persons and wounded 20 in Chernivtsy in the



Salvation effort: Firefighters are seen next to a burnt-out car following a Russian strike in the western Ukrainian city of Lviv. AFP

west, far from the front lines of the east and south. 12 persons were wounded in Lviv, also in the west, while in the east, two persons died in Dnipropetrovsk and three were wounded in Kharkiv. Russia also "dropped two guided aerial bombs on the homes of civilians" in the northeastern Sumy region killing two.

The Russian Defence Ministry said it had targeted companies in Ukraine's military-industrial complex in Lviv, Kharkiv and

Lutsk and a military aerodrome.

U.S. special envoy Keith Kellogg is due on Monday to begin his latest visit to Ukraine. U.S. President Donald Trump also said he would make a "major statement... on Russia" on Monday.

On Friday, the Kremlin restated its opposition to a European peacekeeping force in Ukraine, after French President Emmanuel Macron said Kyiv's allies had a plan "ready to go... after a ceasefire".

Russia warns Seoul, U.S. and Japan not to target North Korea

Associated Press

SEOUL

Russia's Foreign Minister on Saturday warned the U.S., South Korea and Japan against forming a security partnership targeting North Korea as he visited his country's ally for talks on further solidifying their booming military and other cooperation.

Russian Minister Sergey Lavrov spoke at North Korea's eastern Wonsan city, where he met the country's leader, Kim Jong-un, and conveyed greetings from President Vladimir Putin.

Relations between Russia and North Korea have been flourishing recently, with North Korea supplying troops to support Russia's war against Ukraine in return for military and economic assistance. That has raised concerns among South Korea, the U.S. and others that Russia might also transfer to North Korea sensitive technologies that can increase the danger of its nuclear and missile

Russia Foreign Minister Sergey Lavrov visits North Korea, meets its leader Kim Jong-un

programmes.

Speaking with reporters after a meeting with his North Korean counterpart Choe Son Hui, Mr. Lavrov accused the U.S., South Korea and Japan of what he called their military buildups around North Korea.

"We warn against exploiting these ties to build alliances directed against anyone, including North Korea and, of course, Russia," he said.

Expanding drills

The U.S., South Korea and Japan have been expanding or restoring their trilateral military exercises in response to North Korea's advancing nuclear program. On Friday, the three countries held a joint air drill involving U.S. nuclear-capable bombers near the Korean Peninsula.