

The calculated V speeds with available conditions at Take-Off were V_1 - 153 Kts, V_r - 155 Kts, V_2 - 162 Kts.

The A-SMGCS replay of the flight was also carried out after the accident. The aircraft was observed departing from the bay 34 at 07:48:38UTC. The taxi clearance was received at 07:55:15 UTC and the aircraft taxied from the bay at 07:56:08 UTC. The aircraft taxied to Runway 23 via Taxiway R4, backtracked and lined up. The take-off clearance was issued at 08:07:33 UTC. The aircraft started rolling at 08:07:37 UTC.

As per the EAFR data, the aircraft crossed the take-off decision speed V_1 and achieved 153 kts IAS at 08:08:33 UTC. The V_r speed (155 kts) was achieved as per the EAFR at 08:08:35 UTC. The aircraft air/ground sensors transitioned to air mode, consistent with liftoff at 08:08:39 UTC.

The aircraft achieved the maximum recorded airspeed of 180 Knots IAS at about 08:08:42 UTC and immediately thereafter, the Engine 1 and Engine 2 fuel cutoff switches transitioned from RUN to CUTOFF position one after another with a time gap of 01 sec. The Engine N1 and N2 began to decrease from their take-off values as the fuel supply to the engines was cut off.

In the cockpit voice recording, one of the pilots is heard asking the other why did he cutoff. The other pilot responded that he did not do so.

The CCTV footage obtained from the airport showed Ram Air Turbine (RAT) getting deployed during the initial climb immediately after lift-off (*fig. 15*). No significant bird activity is observed in the vicinity of the flight path. The aircraft started to lose altitude before crossing the airport perimeter wall.



Figure 15 CCTV screenshot of RAT Deployment

As per the EAFR data both engines N2 values passed below minimum idle speed, and the RAT hydraulic pump began supplying hydraulic power at about 08:08:47 UTC.