

**FINAL INVESTIGATION REPORT ON GROUND INCIDENT TO M/S  
ALLIANCE AIR ATR 42-320 AIRCRAFT VT-ABO WITH JET AIRWAYS  
PASSENGER COACH ON 22.12.2015 AT KOLKATA AIRPORT**

|    |                           |  |  |
|----|---------------------------|--|--|
|    | Aircraft                  | Type   | ATR 42-320                                     |
|    |                           | Registration   | VT-ABO   |
|    |                           | Owner  | ABRIC Leasing Ltd. 1, STOKES Place,<br>IRELAND |
|    |                           | Operator   | Airline Allied Services Ltd., New Delhi        |
|    | Passenger<br>Coach        | Type   | TATA BUS                                       |
|    |                           | Registration   | WB -25E-3746                                   |
|    |                           | Owner/Operator   | Jet Airways India Ltd.                         |
| 2  | Aircraft                  | PIC  | N/A  |
|    |                           | Extent of Injuries   | N/A  |
|    | Passenger<br>Coach        | Driver   | Holder of valid ADP.                           |
|    |                           | Validity of ADP  | Valid up to 02.12.2016                         |
|    |                           | Extent of Injuries   | Nil  |
| 3  | Crew on board             | N/A  |  |
| 4  | Extent of Injuries        | N/A  |  |
| 5  | No. of Passengers         | N/A  |  |
| 6  | Injuries to Passengers    | N/A  |  |
| 7  | Place of Incident         | Aircraft Parking Bay No. 32, NSCBI<br>Airport Kolkata – 52 |  |
| 8  | Date & Time of Incident   | 22.12.2015; 0530 Hrs IST approx.                           |  |
| 9  | Last Point of Departure   | N/A  |  |
| 10 | Point of Intended Landing | N/A  |  |
| 11 | Type of Operation         | N/A  |  |
| 12 | Phase of Operation        | N/A  |  |
| 13 | Type of Incident          | Ground Incident  |  |

## **Synopsis:**

On 22.12.2015 Alliance Air ATR 42-320 aircraft VT-ABO which was scheduled to operate flight 9I-9737 at 0800 hrs IST was parked at Bay No. 32 at NSCBI Airport Kolkata. Jet Airways passenger coach WB-25E-3746 carrying its crew member to operate flight 9W-2881 at 0610 Hrs IST, crashed into the Starboard Main Landing Gear area of parked ATR aircraft VT-ABO at 0530 Hrs IST approx.

The aircraft and the coach got damaged; however no person received any injuries. There was no evidence of fire.

The Director General Civil Aviation ordered the investigation by appointing Inquiry Officer under Rule 13 (i) of the Aircraft Rules 2012 vide Order No. AV.15024/14/2015-AS dated 30.12.2015.

Investigation revealed that the Ground incident occurred due to Involuntary dozing of the Coach Driver while driving on the apron.

## **1. FACTUAL INFORMATION :**

### **1.1 History of Flight:**

1.1.1 Alliance Air ATR 42-320 aircraft VT-ABO was parked at Bay No. 32 at NSCBI Airport Kolkata and scheduled to operate flight 9I-9737 in the sector CCU-IXS at 0800 hours IST on 22.12.2015. Jet Airways passenger coach WB-25E-3746 operated by the Driver with a valid ADP was assigned to carrying two of its Cabin Crew Members from the Terminal Building to Bay No.22 to operate Jet Airways flight 9W-2881 scheduled to depart at 0610 Hrs IST. The Passenger coach deviated from vehicular lane and crashed into the Starboard Side Main Landing Gear area of parked ATR aircraft VT-ABO in Bay No. 32. The Cabin Crew members and the Driver on board the passenger coach disembarked immediately from the right side of the coach as the coach was stuck under the starboard wing/engine. The impact was strong and it damaged the starboard undercarriage, starboard engine exhaust and the wing inboard trailing edge. The passenger coach also sustained damages. There were no injuries to the persons in the coach and no evidence of fire was observed.

1.1.2 The involved driver was subjected to Breath Analyzer examination to establish him being under influence of alcohol while driving the coach. The driver was not under influence of alcohol at the time of incident.

1.1.3 The driver of Jet Airways coach WB-25E-3746, reported for duty on 21.12.2015 on night shift i.e. from 2230 hrs to 0600 hrs morning of the next day. After assuming the duty at 2230 hrs he remained on wheels of the coach till 0030 hrs. He had a sleep, subsequently for approx 3 hrs before he again got up at 0330 hrs on 22.12.2015 to cater the operational needs of early morning arrivals and departures. He picked up two cabin crew to take them to Bay No. 22. As he stated, while driving close to Bay No. 32, he dozed off, lost the control and before he could realize he had impacted with the aircraft parked in Bay 32.

1.1.4 Both the Jet Airways cabin crew members on board the incident coach couldn't notice anything till the vehicle banged with the aircraft and they fell from their seat as they were seated in the bus facing rearward. They didn't receive any injuries and immediately after that came out and took other vehicle to operate the scheduled flight.

1.1.5 Senior Security Agent of Air India was deployed on 22.12.2015 to guard the Alliance Air Aircraft VT-ABO at bay no.32. He stated that at around 0525 hrs he noticed a Jet Airways passenger coach was approaching towards the aircraft with a very high speed. The attempts made by him to stop the coach by waving the hand were in vain as the bus rammed into starboard side of the aircraft. He also mentioned that it was dark around the aircraft at the time of the incident.

**1.2 Injuries to Person:** There were no injuries reported to the persons in the coach or any person on the ground.

**1.3 Damage to Aircraft and Passenger Coach:**

1.3.1 The aircraft sustained minor damage. The details of the damage to the aircraft is appended below:

- a) No.4 Tyre burst & No.3 deflated with heavy cut mark.
- b) No.4 Wheel Hub assy. Broken.
- c) RH side Landing gear Ole bent.
- d) RH Landing gear front fitting assy. top & bottom portion material damaged.
- e) RH side Engine wing box damaged.
- f) RH side Engine Tail pipe with exhaust tail cone damaged.

1.3.2 The damage details of the Jet Airways passenger coach WB-25E-3746 is as appended below:

Front FRP Flap, Front Face Marcopolo Logo And Dome, Front Windshield Glass With SRMC Print, Destination Board Glass, Sealant Rtv, Front Internal Finish Rubber, Head Lamp Set RHD LH Co driver side, Front Turn Signal Lamp LH, Height Marker Light Front, Microphone, Front Fog Lamp 24V, Fog Lamp

Support Plate II, rain gutter aluminium profile 3 mtr, door glass assembly, Wiper Blade Assembly LH/RH- RHD / LHD, Wiper Link Mechanism Assembly.

**1.4 Other Damages: NIL**

**1.5 Personnel Information:**

1.5.1 There was no flight crew member involved in the incident.

1.5.2 The involved driver of M/s Jet Airways coach WB-25E-3746 has been working with M/S Jai Santhoshi Maa Constructions (JSMC) since last 10 years who is a service provider for Jet Airways at Kolkata. He had been working with M/s Jet Airways for all these years as driver. He held valid Airport Driving Permit on the day of incident.

1.5.3 His duty roster from 01.12.2015 was scrutinized to ascertain whether he was fatigued due excessive duties. The scrutiny revealed that:

| Sl. No. | Date       | Shift       | Duty |      |
|---------|------------|-------------|------|------|
|         |            |             | From | To   |
| 1       | 01.12.2015 | NIGHT       | 2200 | 0600 |
| 2       | 02.12.2015 | NIGHT       | 2200 | 0600 |
| 3       | 03.12.2015 | NIGHT       | 2200 | 0600 |
| 4       | 04.12.2015 | NOT ON DUTY |      |      |
| 5       | 05.12.2015 | NIGHT       | 2200 | 0600 |
| 6       | 06.12.2015 | NIGHT       | 2200 | 0600 |
| 7       | 07.12.2015 | NIGHT       | 2200 | 0600 |
| 8       | 08.12.2015 | MORNING     | 0630 | 1430 |
| 9       | 09.12.2015 | MORNING     | 0630 | 1430 |
| 10      | 10.12.2015 | MORNING     | 0630 | 1430 |
| 11      | 11.12.2015 | NOT ON DUTY |      |      |
| 12      | 12.12.2015 | MORNING     | 0630 | 1430 |
| 13      | 13.12.2015 | NIGHT       | 2200 | 0600 |
| 14      | 14.12.2015 | MORNING     | 0630 | 1430 |
| 15      | 15.12.2015 | MORNING     | 0630 | 1430 |
| 16      | 16.12.2015 | NOT ON DUTY |      |      |
| 17      | 17.12.2015 | MORNING     | 0630 | 1430 |
| 18      | 18.12.2015 | NOT ON DUTY |      |      |
| 19      | 19.12.2015 | MORNING     | 0630 | 1430 |
| 20      | 20.12.2015 | NIGHT       | 2200 | 0600 |
| 21      | 21.12.2015 | NIGHT       | 2200 | 0600 |

## 1.6 Aircraft and Passenger Coach Information:

1.6.1 ATR 42-320 aircraft VT-ABO has been manufactured by ATR, France in 1995. The aircraft bearing serial number 406 has been duly registered in the register of India with effect 13.12.2012 and allotted with registration certificate no. 3679/2 in category 'A'.

The aircraft VT-ABO was parked at Bay No. 32 at NSCBI Airport Kolkata and was scheduled to operate flight 9I-9737 on the sector CCU-IXS at 0800 hours IST on 22.12.2015.

1.6.2 The Passenger Coach Registration No. WB 25E 3746 is manufactured by TATA Motors specifically to be used as Tarmac Coaches by Jet Airways. The manufacturer has also issued a certificate as "the max speed of this bus is locked to 30 KMPH".

## 1.7 Meteorological Information:

The incident took place at approx 0530 Hrs IST on 22.12.2015. The meteorology (Met) report issued at Kolkata at 0500 Hrs, 0530 Hrs and 0600 Hrs on 22.12.2015 is appended below:

| Time     | Visibility | Wind     |
|----------|------------|----------|
| 0500 Hrs | 1600 m     | Calm     |
| 0530 Hrs | 1600 m     | 06003 KT |
| 0600 Hrs | 1600 m     | 04006 KT |

1.8 Aids to navigation: Not applicable.

1.9 Communication: Not applicable.

1.10 Aerodrome Information: The Jet Airways passenger coach picked up two cabin crew to take them to Bay No. 22. It had to maneuver to left after crossing the Bay 32 to reach bay No.22. There is a dedicated Vehicular lane made to ply the vehicle to serve all the Bays. Sufficient number of high masts is positioned to ensure proper lighting around the bay for night operation.

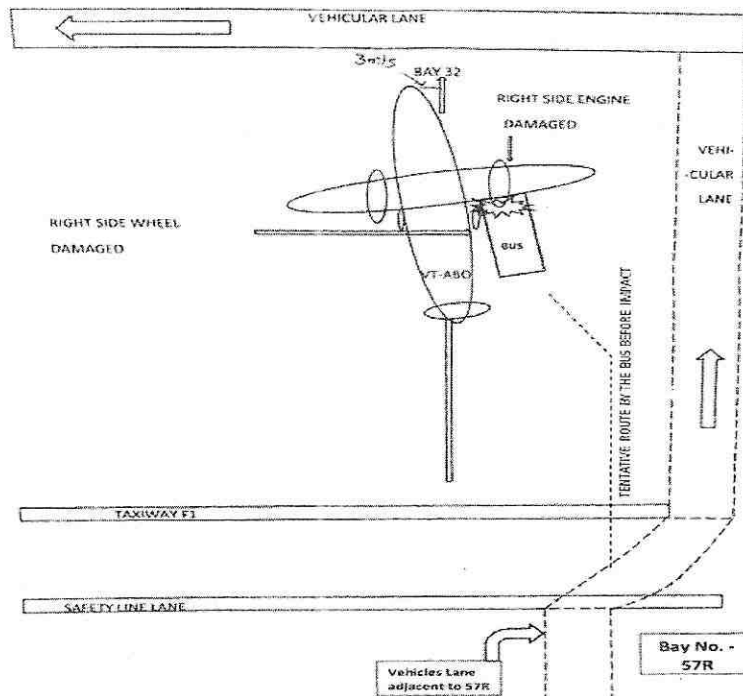
The Apron Log Book was scrutinized and observed that the Duty Apron Manager along with the Electrical personal carried out joint inspection of operational area at 2245 hrs/0005 hrs on 21/22.12.2015 (Prior to the incident) wherein un-serviceability of other high masts were recorded but no record of un-serviceability of high masts near bay No. 32 was available.

A surprise joint Night Inspection of the apron area at Kolkata Airport was also conducted on 16.01.2016 from approx 2330 hrs to check adequacy of the apron lighting. The Team of joint inspection included the representatives of all airlines, AAI and Officers of Dte of Air Safety, Kolkata. During inspection the lighting at the apron was found satisfactory.

The area around the Bay 32 was under constant surveillance by a CCTV installed above Bay 56 L. The CCTV footage of the incident was scrutinized and observed that:

- a) The recording was not very clear probably because of the distant location of the bay from the CCTV.
- b) The Passenger coach had enough strong headlights to see anything ahead.
- c) The coach was seen following vehicular lane initially for very short span. It turned left before the designated turn close to Bay 32 and travelled straight. Suddenly it was observed taking sharp left turn and hitting the aircraft.
- d) It was also observed that the driver tried to reverse the vehicle subsequent to the impact but he could not succeed.

The approximate lay out of the Bay 32, the vehicular lane and the tentative deviated path followed by the passenger bus (based on the video footage) is depicted below:



1.11 Flight Recorders: Not applicable.

1.12 Wreckage and impact information:

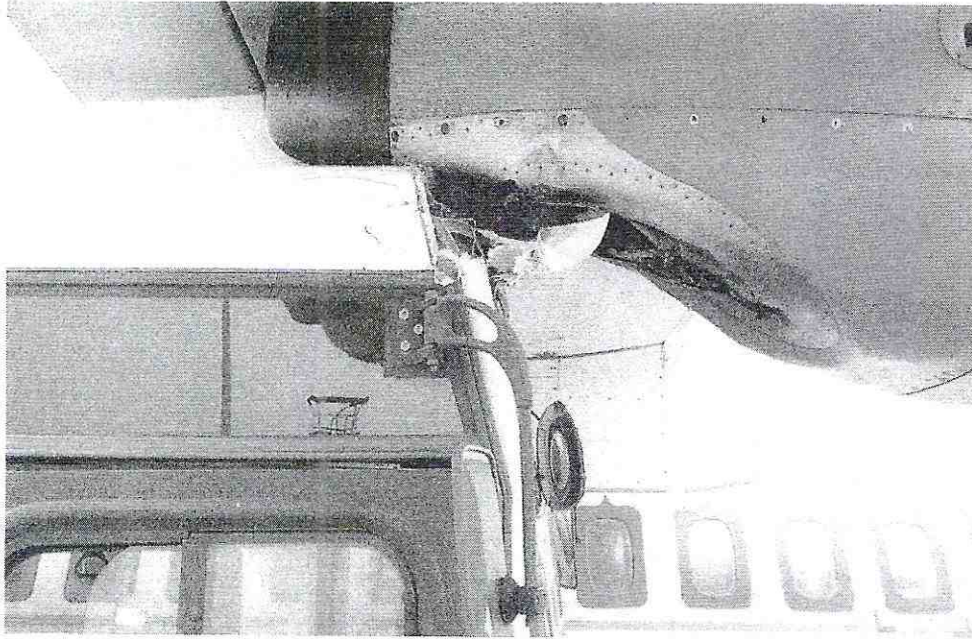
The details of the damage caused due to impact, as captured in photographs are appended below:



*Fig 1: Jet Airways Coach Rammed Into Alliance Air ATR-42, VT-ABO*



*Fig 2: Starboard Landing Gear Damaged*



*Fig 3: Starboard Engine Tail Portion Damaged*



*Fig 4: Both Main Landing Gear Tyres of Starboard Side Deflated*

**1.13 Medical and Pathological information:**

Post incident, Jet Airways coach driver was subjected to Breath analyser (BA) test to examine whether he was under influence of alcohol while driving. The BA test report was negative.



**1.14 Fire:** No evidence of fire.

**1.15 Survival aspects:**

There were no injuries to the persons in the coach or any personal on the ground.

**1.16 Tests and research:**

The vehicle was subjected to post incident examination to look for any mechanical failure causing the incident. The examination revealed that the vehicle was in good condition at the time of the incident and its maintenance aspect was not the contributory factor of the incident.

**1.17 Organizational and management information:**

NSCBI Airport at Kolkata is owned and operated by Airports Authority of India, New Delhi. They maintain Apron discipline by:

- a) Restricting the number of vehicle to minimum required level.
- b) Ensuring proper training to the new applicant for ADP and refresher to the applicants for renewal of ADP.
- c) On a regular basis compliance of the apron discipline is monitored by Apron Manager. The penalty is imposed on the persons involved in violations e.g Rash driving, Vehicles parking in No-Parking area, Not following Vehicular Lane, Vehicles without Anti Collision Lights, Use of Mobile phones while driving on apron area, not wearing of Ramp Jacket while on Apron etc.

**1.18 Additional information:** NIL.

**1.19 Useful or effective investigation technique:** Not Applicable.

**2. ANALYSIS :**

**a) Speed of the Passenger Coach:**

Passenger Coach Registration No WB 25E 3746 is manufactured by TATA Motors specifically to be used as Tarmac Coaches by Jet Airways. The max speed of this bus is locked to 30 KMPH at the manufacturing level. Post incident examination of the bus did not reveal any mechanical failure.

In view of the above the condition of the coach and the chances of over speed are ruled out to be a contributory factor of incident. The examination revealed that the vehicle was in good condition at the time of the incident and its maintenance aspect was not the contributory factor of the incident.

**b) Drunken Driving:**

The involved driver was subjected to Breath Analyser examination to establish him being under influence of alcohol while driving the coach. The BA test report was negative; suggesting that he was not under influence of alcohol at the time of incident.

In view of the above driving in the drunken state is not considered the contributory factor to the incident.

**c) Improper Lighting of Bay No 32 and around:**

Immediately after the incident, inputs were received that the area around Bay No. 32 was not lit properly and the high mast located nearby were not functional. Subsequently AAI has submitted explanation on the matter clarifying that both the mast near Bay 32 was serviceable. The same has been also observed during night joint inspection wherein representative of airline operator was also present.

In view of the above, reported visibility and presence of powerful head light of the bus itself, improper lighting around Bay No.32 is ruled out to be the contributory factor of incident.

**d) Fatigue of the Driver:**

The drivers of Jet Airways coach WB-25E-3746 possess valid Airport Driving Permit on the day of incident. He reported for duty on 21.12.2015 on night shift i.e. from 2230 hrs to 0600 hrs morning of the next day. After assuming the duty at 2230 hrs he remained on wheels of the coach till 0030 hrs. He had a break of the duty for aprox 3 hrs before resuming the duty at 0330 hrs on 22.12.2015 to cater the operational needs of early morning arrivals and departures.

The scrutiny of the duty roaster in respect of the involved driver revealed that he was deputed continuously for Night duties at a stretch for three nights and a couple of times he also continued subsequent morning duties.

The above deliberations reveal that the driver was not fatigued on the day of the occurrence; however Jet Airways should be advised to discontinue the roistering of drivers continuously in the Night duty for several nights and also not to be roasted in two consecutive shifts.

**e) Circumstances Leading to the Incident:**

Alliance Air ATR 42-320 aircraft VT-ABO was parked at Bay No. 32 and scheduled to operate flight 9I-9737 in the sector CCU-IXS at 0800 hours IST on 22.12.2015. The involved driver of Jet Airways passenger coach WB-25E-3746 was assigned to transport two of its Cabin Crew Members from the Terminal Building to Bay No.22 to operate Jet Airways flight 9W-2881 scheduled to depart at 0610 Hrs IST.

While he was driving close to Bay No. 32, during negotiating a turn, he dozed off, lost control on the wheel and deviated from vehicular lane. Before he could realise he had impacted the aircraft parked in Bay 32.

**3 CONCLUSION:**

**3.1 Findings:**

- 3.1.1. Alliance Air ATR 42-320 aircraft VT-ABO was parked at Bay No. 32 at Kolkata airport and scheduled to operate flight 9I-9737 in the sector CCU-IXS at 0800 hours IST on 22.12.2015.
- 3.1.2. At approx 0530 hrs IST Jet Airways passenger coach WB-25E-3746 was assigned to carry two of its Cabin Crew Members from Terminal Building to Bay No.22 to operate Jet Airways flight 9W-2881.
- 3.1.3. While he was driving close to Bay No. 32, during negotiating a turn, he dozed off, lost control on the wheel and deviated from vehicular lane. Before he could realise he had impacted the aircraft parked in Bay 32.
- 3.1.4. The involved driver was subjected to Breath Analyser examination and found not drunken while driving the coach.
- 3.1.5. The condition of the coach and the chances of over speed are ruled out to be a contributory factor of incident.
- 3.1.6. Improper lighting around Bay No.32 is ruled out to be the contributory factor of incident.
- 3.1.7. Excessive duty on the day of incident or the fatigue due to excessive duty to the involved driver is ruled out as the factor of the incident.
- 3.1.8. The driver was rostered for continuous Night Duties for several successive nights and subsequent morning shifts a couple of times.
- 3.1.9. Sudden dozing while driving close to Bay No. 32, during negotiating a turn led to loss of control on the wheel and deviated from vehicular lane and collision with the aircraft parked in Bay 32.

### 3.2 Probable Cause

Involuntary dozing of the Driver while driving on the apron has resulted into collision of coach with the aircraft.

#### 4. RECOMMENDATIONS:

- 4.1 Aerodrome Operator may be advised to include this incident as a case study to be briefed to the applicants seeking Airside Driving Permits.
- 4.2 Airlines may review their policy on rostering the equipment Operators/Drivers for performing duties on consecutive nights.

28.01.2016  
Kolkata.

  
(Sanit Kumar)  
Dy Director Air Safety  
Inquiry Officer