

**GOVERNMENT OF INDIA**

**DIRECTORIATE GENERAL OF CIVIL AVIATION**

**NEW DELHI**



**FINAL INVESTIGATION REPORT**

**GROUND INCIDENT BETWEEN SEJ123, B738, VTSGV AND IGO769,A320, VTINT AT IGI  
AIRPORT, NEW DELHI**

**OFFICE OF DIRECTOR OF AIR SAFETY (NORTHERN REGION), GOVERNMENT OF INDIA,  
SAFDARJUNG AIRPORT, NEW DELHI-110003**

## FOREWORD

This document has been prepared based on the evidences available during the investigation. The investigation has been carried out in accordance with ANNEX 13 to the convention on International Civil Aviation and under Rule 13(1) of the Aircraft (Investigation of Accident and Incidents), Rules 2012.

The investigation is conducted not to apportion blame or to assess individual or collective responsibility. The sole objective is to draw the cause of incident so that it can be rectified and no such incidents happen in future.

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## General Information

1	Aircraft 1	Type	B738
		Model	
		Nationality	Indian
		Call sign & Registration	SEJ123, VTSGV
	Owner	Spice Jet Airlines	
2	Aircraft 2	Type	A320
		Model	
		Nationality	Indian
		Call sign & Registration	IGO769, VTINT
	Owner	Indigo Airlines	
3	Date & time of occurrence	27 December 2016, 0159 UTC	
4	Departure and Destination of SEJ123	Delhi (VIDP) to Shamshabad (VOHS)	
5	Departure and Destination of IGO769	Lucknow (VILK) to Delhi (VIDP)	
6	Geographical location of site	28°34'07" N 077°06'43"E	
7	Type of operation	Scheduled operators	
8	Type of occurrence	Ground Incident	
9	Phase of operation	Taxi to parking bays	
10	Persons on board	N/A	
11	ATS unit	Delhi Ground	

### Synopsis:

On 27/12/2016 at 0159 UTC, Low Visibility Procedure (LVP) was enforced with visibility below 50meters thus Low visibility take off (LVTO) was suspended. An arriving aircraft IGO769, A320, Lucknow to Delhi landed in Delhi on Runway 28 at 0144 UTC and vacated via Taxiway D1, on D1 it was changed to ground controller at 0149 UTC. Further taxi was given by Ground controller as taxi via D1-D-E2 hold short of A lane. Another departing aircraft, SEJ123, B738, Delhi to Shamshabad, was holding at holding point Runway 28 on 'E', since it was holding for a long time crew decided to go back to bay for refuelling because weather was not improving. Crew asked for follow me jeep at 0146 UTC but it was not available for more than 10 min thus the crew decided to go on its own. Ground controller in co-ordination with tower controller gave the taxi which was opposite to the flow (taxi via B-C hold short of E2).When SEJ123 reached short of E2 0159 UTC, she asked for further taxi and the third controller gave taxi as 'continue taxi to parking bay 130 via E'.As SEJ123 turned left on E2 it came in close proximity with IGO769 which was taxiing on Taxiway E2.The separation between them reduced and became around 30 meter which was abeam B2.Both the aircrafts were not able to taxi thus they were towed to their bays.

## **1.FACTUAL INFORMATION**

### **1.1 History of incidence:**

- a. On 27/12/2016, the visibility at IGI Airport was very less (less than 50 meter) and the Low Visibility procedures were enforced and takeoff was not permissible.
- b. Arriving aircraft IGO769 landed runway 28, and vacated via taxiway D1. After changing it to ground, the ground controller gave taxi clearance as 'taxi via D- E2 hold short of A lane'.
- c. Since the visibility was very low and LVTO (Low visibility takeoff) was suspended, The departing aircraft SEJ123, which was waiting for the weather to be clear asked to go back to the bay for refueling.
- d. In coordination of ground and tower controller SEJ123 was given taxi as E- runway 28- C, but later on the request of SEJ123 crew it was revised to B- hold short of C. Further taxi was given by ground controller.
- e. Since all the aircraft were waiting for the weather updates they were continuously asking the ground controller about the weather updates. The traffic was building up because of the LVP.
- f. Ground controller gave taxi clearance to SEJ123 as taxi and hold short of taxiway 'E2'.After reaching short of E2, SEJ123 requested for further taxi and the third controller gave 'continue taxi to parking bay 130 via E'.
- g. SEJ123 turned left and came on taxiway E2, abeam B2, SEJ123 and IGO769 came face to face and cannot take any turn as the distance between the two were approximately 30 meters.
- h. To resolve the traffic both the aircrafts were towed to their respective bays.

### **1.2 Injuries to the personal: NIL**

**1.3 Damage to the aircraft:** No damage to arriving and departing aircraft.

**1.4 Other damages:** Nil

**1.5 Personal information:** Not applicable

**1.6 ATC Controller:** Ground middle controller-Assistant Manager (ATM)

Third controller- Manager (ATM)

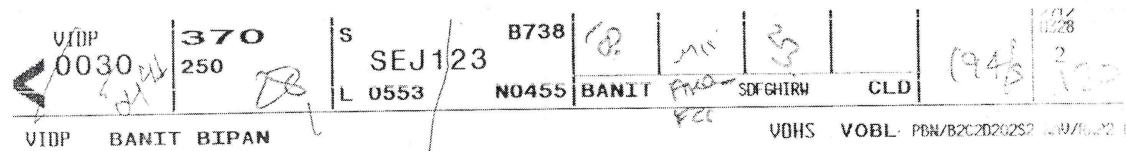
**1.7 Metrological information:** Low visibility procedure (LVP) was enforced. Wind 260 degree/03 Knots and visibility below 50m.

**1.8 Aids to Navigation:** The arriving aircraft utilizes the Instrument Landing System of Delhi Airport on RWY28.

### 1.9 Communication:

#### As per ATC tape transcript:

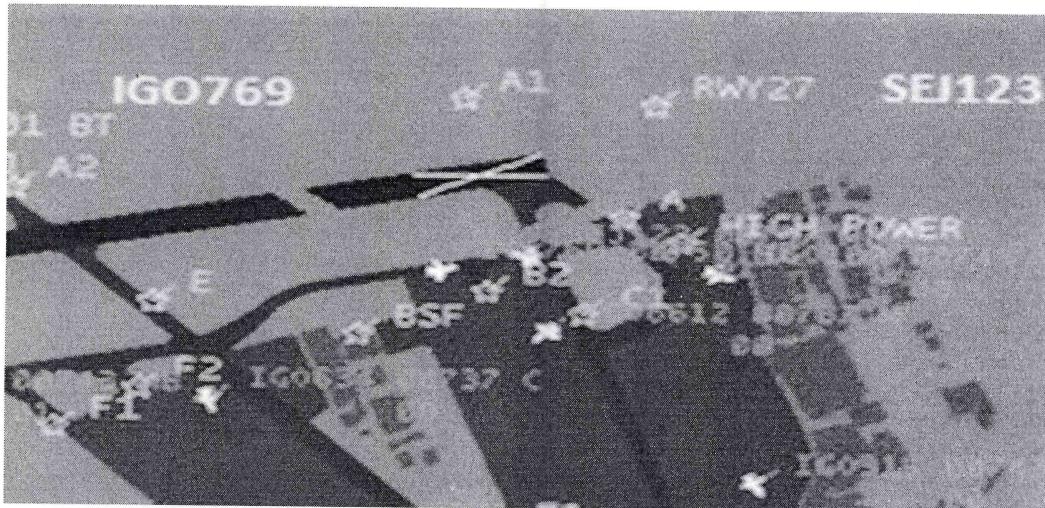
- IGO769 landed on Runway 28 and vacated via taxiway D1. On D1 IGO769 came in contact with Ground controller.
- Controller gave further taxi via D1-D-E2 hold short of 'A' lane. Since the visibility was not good so IGO769 was continuously asking its position while taxing.
- Visibility was less than 50m thus departures were suspended and all the aircrafts were waiting for weather to improve.
- SEJ123 was holding at holding point Runway 28 on taxiway B for about 0130hrs but due to fuel shortage she asked to return to bay and asked for follow me service.

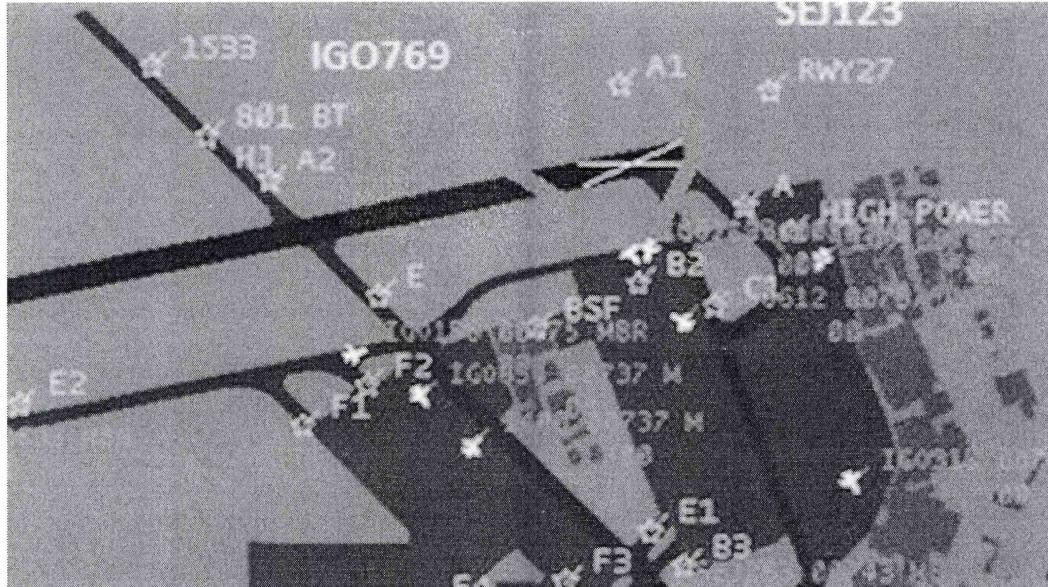
A handwritten flight strip for flight SEJ123. It shows the aircraft's call sign, registration number L 0553, and various flight levels (370, 250, 0030). It also includes notes from controllers and other aircraft positions like B738, N0455, BANIT, SDFGHIRH, CLD, VOHS, and VOBL. There are also handwritten numbers like 0143, 2, and 3.

A handwritten flight strip for flight IGO769. It shows the aircraft's call sign, registration number S 3364, and various flight levels (280, 0144). It includes notes from controllers and other aircraft positions like A320, N0427, SDE1FGHT, and VIDL. There are also handwritten numbers like 0140, 2, and 3.

- At 0150 UTC, ATC called "Follow me 1" to report short of RWY28 on E. Meanwhile IGO769 was asked to continue straight on E2.
- At 0154 UTC again follow me was called and follow me replied as approaching shortly, after which follow me didn't come in contact.
- SEJ123 asked to taxi to bay on its own as visibility improved slightly but she asked to enter runway and vacate via taxiway F.
- In coordination with ground controller, tower controller gave opposite taxi via runway 28-E and vacate via taxiway C, which was opposite to the traffic flow. Flow of traffic during LVP is published in AIP 43 of 2012 (enclosed in ANNEXURE 7)

- i. Further SEJ123 was asked to taxi via B, which was approved by tower controller as there was no traffic on taxiway B.
- j. On taxiway B, SEJ123 came in contact with ground controller, and was asked to taxi via B-C hold short of Taxiway E2. SEJ123 on reaching short of taxiway E2, asked for further taxi.
- k. By this time visibility at RWY 29 improved slightly so the departures which were holding for a long time for RWY 28 asked taxi for RWY29, due to which traffic started building on ground middle. Thus another controller (third controller) came to help ground controller who was checking the readability on another position.
- l. SEJ123 on reaching short of taxiway E2 requested for further taxi, and third controller abruptly gave taxi to SEJ123 as 'taxi to stand 130 via E', which was an incomplete instruction.
- m. SEJ123 turned left to join E2 and came face to face with IGO769 which was taxing on taxiway E2 for A lane.





### **1.10 Aerodrome Information:**

Delhi Airport is having three runways which are used as three runway operations. Elevation of the runway is 777ft coordinates  $28^{\circ}34'07''$  N  $077^{\circ}06'43''$ S. There is 24hrs operation with met information throughout. IFR/VFR both the traffic is permitted.

To avoid the congestion and confusion of routing during Low visibility procedure a standard routing is defined for each CAT III runway (i.e. RWY28, RWY29 and RWY11). Which is unidirectional and is published in AIP 43 of 2012. Taxiways are illuminated by taxi lighting whose intensity can be controlled by Tower position and Dial position.

**1.11 Flight recorders:** Not applicable.

**1.12 Wreckage and impact information:** Not applicable.

**1.13 Medical and Pathological information:** Not applicable

**1.14 Fire:** No fire involved

**1.15 Survival Aspects:** No loss

**1.16 Test and Research:** Not applicable

**1.17 Organizational and management information:** DIAL was having 06 Follow me vehicles to cater Air Traffic movements of 235759 in 2008-09 number of Follow me vehicles

were increased to 09 cater Air Traffic movements of 379778 in 2016-17. Air Traffic services were being provided by M/s AAI as per AIP 43 of 2012 in Low Visibility conditions. AIP 43 provides traffic flow management guidance of aircrafts to ATC at IGI Airport.

## **2.Analysis:**

- a. Ground incident happened on 27<sup>th</sup> December 2016 at time 0159 UTC. The visibility at IGI Airport was below 50m.
- b. Low visibility take off (LVTO) was suspended, thus there were no departures from runway and departing aircrafts was holding at holding point for approximately 0130 hrs. Aircrafts were calling at tower frequencies of any updates on visibility.
- c. In Delhi there are three positions where RVR instrument is installed on runway to determine the RVR's (Beginning, middle & end) of the runway, if anyone of the RVR reading is less than 125m the departures are suspended.
- d. IGO769 landed at 0144 UTC on RWY28 and vacated via taxiway D1, further taxi was given by ground controller as D-E2 hold short of 'A' lane, due to low visibility she was continuously asking its position. IGO769 asked to increase the intensity of the taxiway light but controller replied as it is maximum.
- e. SEJ123 was holding at holding point RWY28 for approximately 0130hrs and experienced a fuel shortage so she decided to taxi back to bay for refuelling, since visibility was below 50m she asked for follow me service.
- f. After some time visibility got improved and no follow me jeep arrived by that time so SEJ123 asked to taxi on its own.
- g. For every area a particular no. of follow me jeep is designated. At the time of incident VIP departure was being planned and one follow me jeep of domestic apron was designated for VIP flight. There is no separate follow me jeep for VIP movement.
- h. SEJ123 was given a taxi clearance which was opposite to the traffic flow in coordination with tower controller via B- C hold short of taxiway E2. When low visibility procedure (LVP) is enforced a particular flow of traffic is to be followed for each CAT III runway (i.e. RWY 28, RWY 29 and RWY 11) which is published in AIP 43 of 2012.
- i. Before any VIP movement all the frequencies are checked thus a separate controller (third controller) is designated to perform this.
- j. For some time visibility on RWY29 improved so the aircrafts which were holding for RWY28 asked to depart from RWY29, thus traffic on ground frequency increased.
- k. Due to congestion on ground middle frequency, third controller came to help the ground controller and gave instructions without taking the necessary briefing.
- l. SEJ123 on reaching short of taxiway E2 asked for further taxi. Third controller, who came to help ground controller abruptly gave incomplete taxi to bay 130 via taxiway E. From TWY C1 to TWY E there are two connecting routes one via RWY 27 and

another via TWY E2. SEJ123 on getting the instruction turned left on E2 without confirming the route.

- m. SEJ123 was monitoring the ground frequency but at that time there was no conversation with IGO769. Thus she was not aware of any opposite traffic on TWY E2 assuming this she turned left on taxiway E2 without confirming the route. Visibility was very low and there was no follow me to assist or cross check the route or to advice the opposite traffic. Follow me jeeps are equipped to monitor the frequencies of their area and can communicate with aircraft and tower.
- n. On turning left SEJ123 and IGO769 came face to face and the separation between the two became approximately 30m which was abeam B2 thus none of them could take a turn. To resolve the traffic they were towed to their respective bays.

### **3. Conclusion:**

#### **3.1 Findings:**

- a. LVTO was suspended thus departures were holding for the visibility to improve.
- b. SEJ123 was given taxi which was opposite to the traffic flow (not following standard routing).
- c. Incomplete taxi clearance was given to SEJ123 with no connecting route, due to which SEJ123 took the shortest route and turned left on E2, coming in close proximity with IGO769.
- d. Third controller gave instruction to SEJ123 without taking the proper briefing.
- e. Follow me jeep was not available to guide the aircraft as visibility was below 50m. Domestic area follow me was assigned to VIP aircraft.

#### **3.2 Probable Cause:**

- a. Taxi given to SEJ123 was not as per AIP supplement 43/2012 and was against the flow, which resulted in a ground incident.
- b. Lack of Coordination between the Ground controller and the third controller.

#### **3.3 Contributory Factor:**

- a. No separate jeep for VIP movement.
- b. Poor Visibility (Low Visibility Procedure was enforced)

### **4. Safety recommendations:**

- a. Appropriate training for the involved controllers.

b. DIAL may re assess the number of follow me vehicles requirements to cater increase in Air Traffic movements at Delhi Airport and may designate a dedicated vehicle for VIP Services.



(Kunj lata)  
Assistant Director (Ops)  
Inquiry officer

Date: 31/07/2017

Place: New Delhi