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Investigation report on Incident of AIRPROX between IGO2306 and IGO273J at Delhi Approach on 10.05.2024

DIRECTORATE GENERAL OF CIVIL AVIATION
GOVERNMENT OF INDIA
NEW DELHI-110003

FOREWORD

This investigation is performed in accordance with The Aircraft (Investigation of Accidents and Incidents), Rules 2017. The sole objective of this investigation is to prevent aircraft accidents and incidents. It is not the purpose of this investigation to apportion blame or liability.

This document has been prepared based upon the evidence collected during the investigation, opinions obtained from experts. Consequently, the use of this report for any purpose other than the prevention of future accidents or incidents could lead to erroneous interpretations.

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ABBREVIATIONS

ATC	Air Traffic Control
Hrs	Hours
IMD	India Meteorological Department
IST	Indian Standard Time
Kts	Knots
Operator	AOP holder of the incident aircraft
ATPL	Airline Transport Pilot Licence
PIC	Pilot in Command
UTC	Coordinated Universal Time
QNH	Pressure Setting to Indicate Elevation of Landing Aerodrome
RWY	Runway
RT	Receiver-Transmitter (Radiotelephony)
STAR	Standard Terminal Arrival Route
APAA	Approach Controller
TRA	Traffic collision Resolution Advisory
MET	Meteorological Office
VHF	Very high frequency

Investigation report on Incident of AIRPROX between IGO2306 and IGO273J in Delhi Approach on 10.05.2024

GENERAL INFORMATIONS

a) Aircraft	Type: A320-214, Nationality: Malta, Registration: 9H-SLE Call sign: IGO2306	Type: A320-251N, Nationality: Indian, Registration: VT-IQY Call sign: IGO273J
b)Operator	M/s Inter Globe Enterprises Pvt. Ltd (Indigo)	M/s Inter Globe Enterprises Pvt. Ltd (Indigo)
c) Pilot in Command	License: ATPL, Nationality: Ukraine, Extent of Injury: Nil	License: ATPL, Nationality: Indian, Extent of Injury: Nil
d) First Officer	License: ATPL, Nationality: Namibia, Extent of Injury: Nil	License: CPL, Nationality: Indian, Extent of Injury: Nil
e) No. of Cabin Crew	04, Extent of Injury: Nil	04, Extent of Injury: Nil
f) No. of Passengers	168, Extent of Injury: Nil	177, Extent of Injury: Nil
g) Date and Time of Incident	10th May, 2024, 12:35 UTC	10th May, 2024, 12:35 UTC
h) Last Point of Departure	Agartala	Patna
i) Point of Intended Landing	Delhi	Delhi
j) Place of Incident	Delhi	Delhi
k) Phase of Operation	Approach	Approach
l) Type of Incident	AIRPROX (Infringement of Separation Minima)	AIRPROX (Infringement of Separation Minima)

(All timings in the report are in UTC, unless otherwise specified)

SYNOPSIS:

On 10th May, 2024, M/s Indigo's A320 aircraft 9H-SLE was operating a scheduled flight IGO2306 from Agartala to Delhi. Both the flight crew were ATPL holder. There were 174 persons on board the aircraft including operating crew. The Pilot-in-Command (PIC) was the pilot flying and First Officer (FO) was the pilot monitoring. M/s Indigo's A320 aircraft VT-IQY was operating a scheduled flight IGO273J from Patna to Delhi. PIC was ATPL holder and FO was CPL holder. There were 183 persons on board the aircraft including operating crew.

There was air traffic congestion in Delhi Terminal Airspace and several aircraft were holding. M/s Indigo flights IGO273J and IGO2306 were following STAR JAL 6F for Runway 10, descending to FL160 and FL180, respectively. IGO273J was instructed to descend to FL150, which was correctly acknowledged by the flight crew. The APAA controller later instructed IGO273J to descend to FL140 and IGO2306 to descend to FL160.The instruction was correctly read back by the crew of both aircraft. Subsequently, the APAA controller instructed IGO2306 to descend further to FL150 and instructed both aircraft to execute a right orbit to consume the delay.

At 12:35 UTC, the APAA controller instructed IGO273J to descend to FL130. However, IGO273J did not read back the instruction. Instead, IGO2306 acknowledged the transmission intended for IGO273J and commenced the descent. At 12:35:32 UTC, a separation breach occurred between IGO2306 and IGO273J, and Automation System generated Current Conflict Alert. Additionally, a TCAS RA Alert was generated between the two aircraft at 12:36:23 UTC. By 12:36:36 UTC, standard separation between IGO2306 and IGO273J was restored.

DGCA instituted the investigation of the incident by appointing an Investigator-in charge under Rule 13(1) of the Aircraft (Investigation of Accidents and Incidents) Rules, 2017.

The investigation concluded that unauthorized descent initiated by IGO2306 resulted into breach of separation (twice) between IGO2306 and IGO273J. The failure of the APAA controller to notice the read back of the instruction by the unintended aircraft (IGO2306) was the contributory factor.

1.0 FACTUAL INFORMATION

1.1 HISTORY OF THE FLIGHT:

On 10th May, 2024 M/s Indigo A320 aircraft 9H-SLE was operating a scheduled flight IGO2306 from Agartala to Delhi and M/s Indigo A320 aircraft, VT-IQY, was operating flight IGO273J from Patna to Delhi. There was traffic congestion in Delhi Terminal Airspace and aircraft were holding. IGO273J and IGO2306, both were following STAR JAL 6F for RWY 10. IGO237J was descending to FL160 and IGO2306 was descending to FL180. IGO273J came in contact with APAA while at FL160. The APAA controller instructed it to maintain FL160 and minimum clean speed. IGO273J read back the instruction. Further, IGO273J was instructed to descend to FL150, the same was read back by the crew. After a while, IGO2306 also came in contact with APAA while at FL170. At that time IGO273J was maintaining FL150 with 1.7 Nm ahead of IGO2306. The APAA controller instructed IGO273J to descend to FL140 and IGO2306 to descend to FL160. Both aircraft read back the instruction. The APAA controller gave further descent to IGO2306 to FL150, IGO2306 read back the instruction. At that time IGO273J was maintaining FL140. Subsequently, APAA Controller instructed both aircraft to make one right orbit to consume delay.

At 12:35 UTC, APAA Controller instructed IGO273J to descend to FL130. IGO273J didn't read back the instruction, instead IGO2306 captured this transmission and read back the instruction and commenced descend from FL150. The APAA controller also could not detect that the descend instruction meant for IGO273J has been read back by IGO2306. Thereafter, the controller got occupied in handling other traffic. At 12:35:25, Level bust Alert (LB) appeared in the data Block of both IGO273J & IGO2306 **(Fig 1)**.

Fig 1: Level bust Alert (LB) appeared at 12:35:25 UTC

At time 12:35:33 UTC, Separation Breach between IGO2306 and IGO273J occurred and Automation System generated Current Conflict Alert **(Fig 2)**.

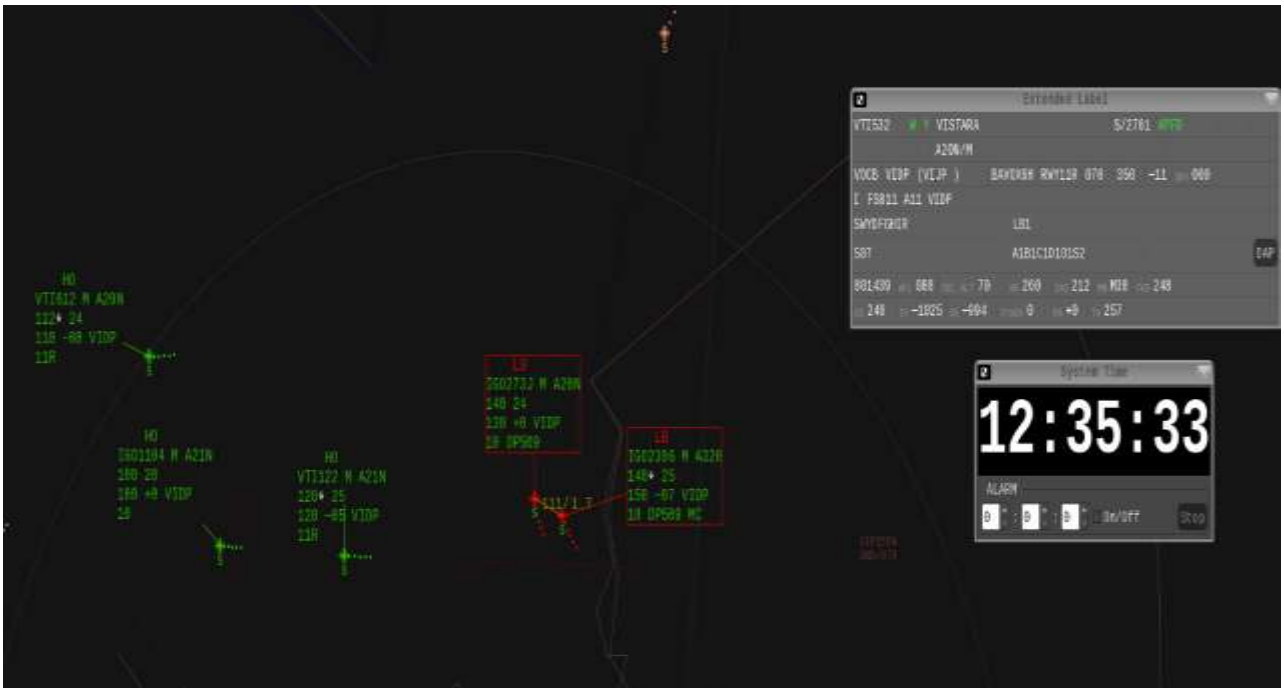

Fig 2: Current Conflict Alert appeared at 12:35:33 UTC

The APAA Controller immediately instructed IGO2306 to maintain FL150, while it was passing FL148. The APAA Controller also immediately instructed IGO273J to descend to FL130. But none of the aircraft read back the instructions. APAA Controller further instructed IGO2306 to maintain FL145 multiple times, which was not read back by the crew. IGO273J was still maintaining FL140 and IGO2306 continued its descent. IGO273J reported that an aircraft 400 feet above, was in the descending phase. The APAA controller responded affirmatively and again instructed IGO2306 to maintain FL145 but IGO2306 didn't respond. The APAA Controller instructed IGO273J to descend to FL130, and IGO273J read back the instructions. Meanwhile IGO2306 continued to descend up to FL143. The APAA Controller again instructed IGO2306 to maintain FL145. This time IGO2306 read back the instruction and stopped descending at FL143. At time 12:36:23 UTC, TCAS RA Alert appeared in the data block of IGO2306 and IGO273J **(Fig 3).**

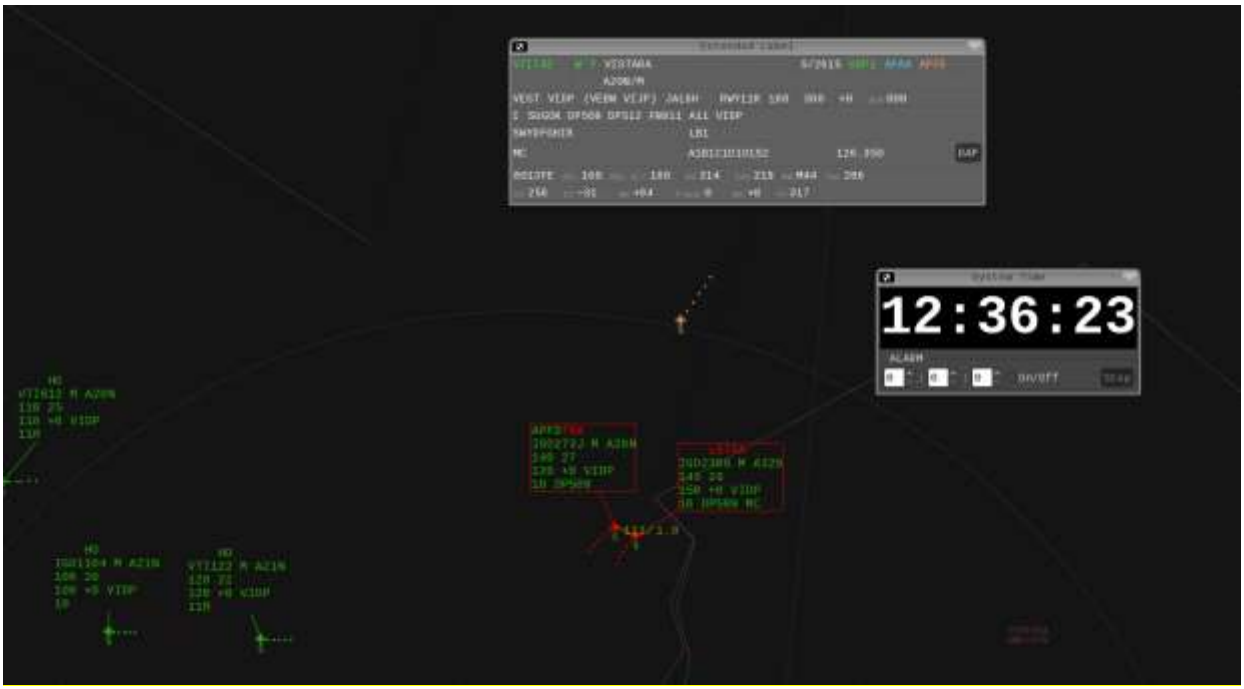

Fig 3: TCAS RA Alert appeared at 12:36:23 UTC

Later, APAA Controller instructed IGO273J to descend to FL120 but IGO273J didn't read back. IGO2306 reported getting TCAS RA, APAA Controller acknowledged. IGO2306 was observed commencing climb from FL143 and IGO273J commenced descent from FL140. At 12:36:36 UTC, Standard separation between IGO273J and IGO2306 restored and at 12:36:57 UTC, Current Conflict Alert disappeared from Automation System **(Fig 4)**.

Fig 4: Current Conflict Alert disappeared at 12:36:57 UTC

The APAA Controller advised IGO273J to report clear of conflict, IGO273J acknowledged. IGO273J was observed maintaining FL138 and IGO2306 was observed climbing to FL150. At 12:37:05 UTC, IGO273J reported clear of conflict and maintaining FL138. The APAA Controller instructed IGO273J to fly HDG 260, IGO273J read back the instruction. The APAA controller instructed IGO2306 to Fly HDG 270. Meanwhile IGO2306 was observed descending to FL148 again. Automation System generated Predicted Conflict Warning **(Fig 5).**

Fig 5: Predicted Conflict Warning appeared at 12:37:21 UTC

IGO273J confirmed with APAA whether to maintain F140 but APAA Controller was busy handling other traffic, IGO273J commenced climb. At that time IGO2306 was maintaining FL147. Separation breach occurred and Automation System again generated Current Conflict Alert at 12:38:11 UTC **(Fig 6).**

Fig 6: Current Conflict Alert appeared at 12:38:11 UTC

APAA Controller instructed IGO273J to descend to FL120, the same was read back by the crew. APAA Controller instructed IGO2306 again to maintain FL150 and the crew acknowledged the same. At 12:38:48 UTC, Standard separation between IGO273J and IGO2306 restored and Current Conflict Alert disappeared from Automation System at 12:38:51 UTC **(Fig 7)**.

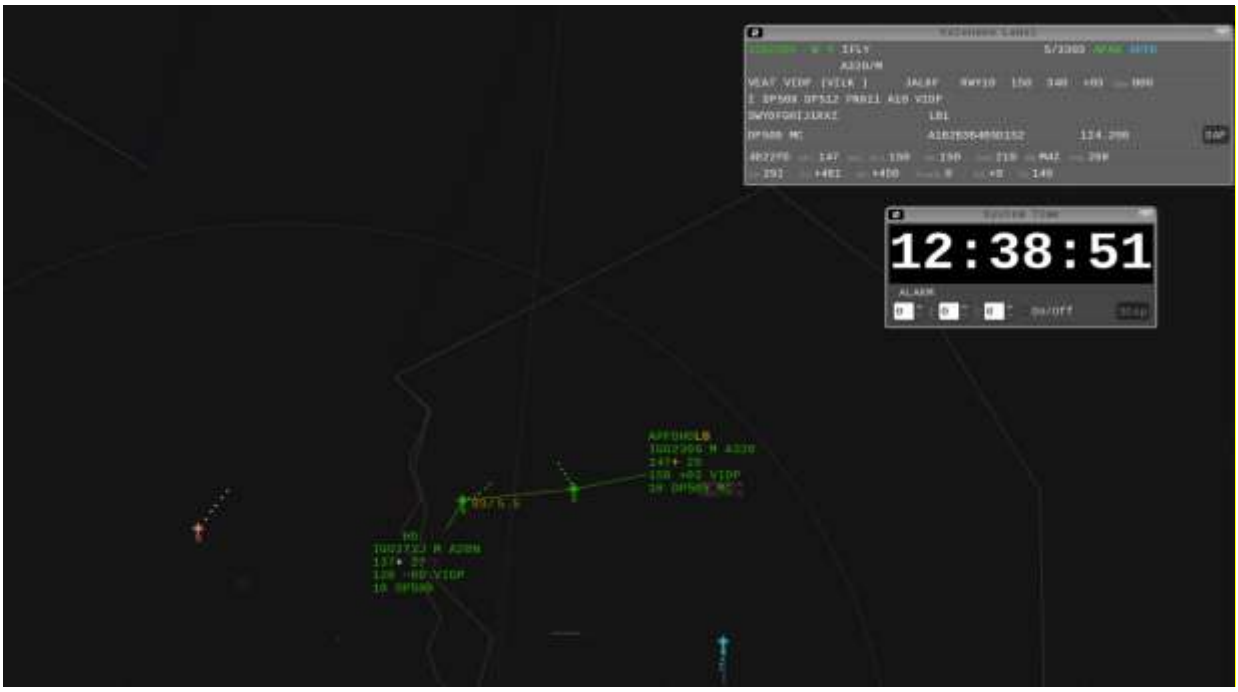

Fig 7: Current Conflict Alert disappeared at 12:38:51 UTC

The minimum lateral Separation was 0.8 NM while the vertical separation was 600 feet and the minimum vertical separation was 300 feet while the lateral separation was 1.0 NM.

The prescribed separation standards for this airspace was 1,000 feet vertically and 5.0 NM laterally.

1.2 INJURIES TO PERSONS:

Injuries		Crew	Passengers	Others
Fatal		00	00	00
Serious		00	00	00
~~Minor~~/None	IGO2306	06	168	
	IGO273J	06	177	

1.3 DAMAGES TO THE AIRCRAFT: There was no damage to any of the aircraft**.**

1.4 OTHER DAMAGE: NIL

1.5 PERSONNEL INFORMATION

1.5.1 Pilot-In-Command (PIC):

	IGO2306	**IGO273J**
Age	46 Y	59 Y
ATPL issued on	13.07.2023	10/07/2007
ATPL valid till	NA	09/07/2035
FRTOL issued on	NA	18/11/2017
FRTOL valid till	NA	07/06/2030
Medical Assessment done on	28.05.2024	23/10/2024
Medical Assessment due on	21.06.2025	03/11/2025
Total Flying Hours	NA	19456: 57
Hours flown as PIC on type (in last one year)	587:39	802:23
Hours flown in last 30 days	70:21	83:19
Hours flown in last 7 days	14:02	20:15
Hours flown in last 24 hours	03:10	07:43

1.5.2 First Officer:

	IGO2306	**IGO273J**
Age	42 Y	35 Y
ATPL/CPL issued on	28.01.2008	09/09/2023
CPL valid till	NA	08/09/2028
FRTOL issued on	NA	05/08/2016
FRTOL valid till	NA	04/08/2026
Medical Assessment done on	09.10.2023	31/03/2025
Medical Assessment due on	28.09.2024	10/04/2026
Total Flying Hours	NA	3220: 42
Hours flown as on type(in last one year)	197:54	790:26
Hours flown in last 30 days	42:12	79:43
Hours flown in last 7 days	22:12	17:35
Hours flown in last 24 hours	08:23	07:43

1.5.3 Air Traffic Controller:

Nationality	Indian
Age	43
License	Air Traffic Controller
Date of Issue	04/11/2019
Station	IGI Airport, New Delhi
Unit/Ratings	AERODROME CONTROL APPROACH CONTROL PROCEDURAL APPROACH CONTROL SURVEILLANCE
Date of Medical Exam & Validity	DATE OF EXAMINATION : 25/12/2023 VALIDITY: 08/01/2026
English Proficiency Level	5 (FIVE) VALIDITY TILL 23/02/2028

1.6 AIRCRAFT INFORMATION:

Details of the involved aircraft operating flight IGO2306:

Aircraft Registration	9H-SLE	VT-IQY
Type of Aircraft	A320-214	A320-251N
Certificate of Airworthiness issue date	24 MAY 2021,	23-02-2024
Category	Large Aeroplanes	Large Aeroplanes
Sub Division	Passenger	Passenger
Certificate of Registration	Nr. 1011	5793
Operator	M/s InterGlobe Enterprises Pvt. Ltd	M/s InterGlobe Enterprises Pvt. Ltd
Maximum All Up Weight authorized	77,000 kg	79000kg
Last Major inspection was carried out	31 OCT 2022.	22 June 2025

1.7 METEOROLOGICAL INFORMATION:

1.7.1 Met report for Delhi airport is appended below:

METAR VIDP 101400Z 10007KT 3500 HZ FEW035 FEW040CB SCT100 35/19 Q1005 NOSIG=
METAR VIDP 101330Z 09007KT 3500 HZ FEW035 FEW040CB SCT100 35/19 Q1005 NOSIG=
METAR VIDP 101300Z 10007KT 3500 HZ SCT035 FEW040CB SCT100 36/19 Q1005 NOSIG=
METAR VIDP 101230Z 09009KT 3500 HZ FEW035 FEW040CB SCT100 36/19 Q1004 NOSIG=
METAR VIDP 101200Z 09007KT 4000 HZ FEW035 FEW040CB SCT100 36/18 Q1004 NOSIG=

The Meteorological report indicates that there was weather around Delhi Airport with presence of cumulonimbus clouds at 4000feet.

1.8 AIDS TO NAVIGATION:

The aerodrome is equipped with aids like DVOR, DME, ILS, and ADS-B surveillance for navigation. All facilities were serviceable at the time of incident. Navigational aids onboard the aircraft were also serviceable.

1.9 COMMUNICATION:

At the time of incident both the aircraft were in contact with Delhi Approach Control on frequency 126.35 MHz. There was two-way communication between the aircraft and ATC. Following is the relevant transcript of the communication held between the ATC and the aircraft (IGO273J & IGO2306) at Delhi Approach on frequency 126.35 MHz.

TIME (HHMMSS)	UNIT	TRANSMISSIONS
122350-122402	IG0273J	RADAR IFLY TWO SEVEN THREE JULIETT NAMASKAR
	RADAR	NAMASKAR IFLY TWO SEVEN THREE JULIETT DESCEND TO FLIGHT... CORRECTION MAINTAIN FLIGHT LEVEL ONE SIX ZERO AND MINIMUM CLEAN SPEED
	IG0273J	WE ARE MINIMUM CLEAN LEVEL ONE SIX ZERO IFLY TWO SEVEN THREE JULIET
122705-122708	RADAR	VISTARA CORRECTION IFLY TWO SEVEN THREE JULIETT DESCEND TO FLIGHT LEVEL ONE FIVE ZERO
122709-122711	IG0273J	ONE FIVE ZERO IFLY TWO SEVEN THREE JULIETT
122815-122820	IG02306	AND RADAR IFLY TWO THREE ZERO SIX GOOD AFTERNOON DESCENDING TO FLIGHT LEVEL ONE EIGHT ZERO
122912-122917	IG02306	UNCLEAR... IFLY TWO THREE ZERO SIX GOOD EVENING DESCENDING TO FLIGHT LEVEL ONE SEVEN ZERO
123026-123032	RADAR	IFLY TWO SEVEN THREE JULIET DESCEND TO FLIGHT LEVEL ONE FOUR ZERO
	IG0273J	ONE FOUR ZERO FLY TWO SEVEN THREE JULIETT
123032-123037	RADAR	TWO THREE ZERO SIX DESCEND TO FLIGHT LEVEL ONE SIX ZERO
	IG02306	DESCEND TO FLIGHT LEVEL ONE SIX ZERO, IFLY TWO THREE ZERO SIX
123316-123322	RADAR	TWO THREE ZERO SIX DESCEND TO FLIGHT LEVEL ONE FIVE ZERO
	IG02306	DESCEND TO FLIGHT LEVEL ONE FIVE ZERO IFLY TWO THREE ZERO SIX
123417-123420	RADAR	IFLY TWO SEVEN THREE JULIETT ONE RIGHT ORBIT
123421-123424	IG0273J	ONE RIGHT ORBIT IFLY TWO SEVEN THREE JULIETT
123424-123426	RADAR	IFLY TWO THREE ZERO SIX ONE RIGHT ORBIT
123429-123433	RADAR	TWO THREE ZERO SIX ONE RIGHT ORBIT
	IG02306	ONE RIGHT ORBIT TWO THREE ZERO SIX
123503-123507	RADAR	IFLY TWO SEVEN THREE JULIETT DESCEND TO FLIGHT LEVEL ONE THREE ZERO
123507-123510	IG02306	DESCEND TO FLIGHT LEVEL ONE THREE ZERO IFLY TWO THREE ZERO SIX
123534-123538	RADAR	IFLY TWO THREE ZERO SIX MAINTAIN FLIGHT LEVEL ONE FIVE ZERO MAINTAIN ONE FIVE ZERO SIR
123539-123541	RADAR	IFLY TWO SEVEN THREE JULIETT DESCEND ONE THREE ZERO NOW
123542-123547	RADAR	IFLY TWO THREE ZERO SIX MAINTAIN MAINTAIN LEVEL ONE FOUR FIVE
	IG02306	IFLY TWO THREE ZERO SIX
	RADAR	MAINTAIN ONE FOUR FIVE
123548-123551	RADAR	IFLY TWO THREE ZERO SIX MAINTAIN ONE FOUR FIVE
123551-123557	IG02306	SIR IN THE ORBIT THERE IS AN AIRCRAFT FOUR HUNDRED FEET DESCENDING
	RADAR	AFFIRM SIR IFLY TWO THREE ZERO SIX MAINTAIN ONE FOUR FIVE
123558-123600	RADAR	IFLY TWO SEVEN THREE JULIETT DESCEND ONE THREE ZERO
123602	UNKNOWN	UNCLEAR
123605-123606	RADAR	AFFIRM DESCEND ONE THREE ZERO
123610-123614	RADAR	IFLY TWO THREE ZERO SIX MAINTAIN ONE FOUR FIVE
	IG02306	UNCLEAR.. ONE FOUR FIVE
123618-123622	IG02306	AND TCAS RA FOR TWO THREE ZERO SIX

	RADAR	ROGER SIR
123644-123647	RADAR	IFLY TWO SEVEN THREE JULIETT REPORT WHEN CLEAR OF CONFLICT
123650-123650	IG0273J	WILL CALL YOU SIR
123701-123704	IG0273J	CLEAR OF CONFLICT SIR WE ARE MAINTAINING ONE THREE EIGHT NOW TCAS RA
123705-123708	RADAR	ROGER SIR IFLY TWO SEVEN THREE JULIETT FLY HEADING TWO SIX ZERO
123709-123711	IG0273J	TWO SIX ZERO IFLY TWO SEVEN THREE
123711-123713	RADAR	IFLY TWO THREE ZERO SIX FLY HEADING TWO SEVEN ZERO
123715-123721	RADAR	IFLY TWO THREE ZERO SIX MAINTAIN LEVEL ONE FIVE ZERO
	IG02306	ONE FIVE ZERO IFLY TWO THREE ZERO SIX
123721-123729	IG0273J	SAY AGAIN THE HEADING FOR IFLY TWO SEVEN THREE
	RADAR	HEADING TWO SEVEN ZERO
	IG0273J	HEADING TWO SEVEN ZERO
123732-123738	IG0273J	AND IFLY TWO SEVEN THREE JULIETT IF YOU COULD FILE A REPORT FOR TCAS RA
	RADAR	AFFIRM SIR WILL FILE
123739-123742	IG0273J	AND IT WAS NOT OUR FAULT SIR
	RADAR	ROGER
123747-123752	IG0273J	CONFIRM IFLY TWO SEVEN THREE JULIETT TO MAINTAIN LEVEL ONE FOUR ZERO
123803-123806	IG02306	CONFIRM WE HAVE TO MAINTAIN FLIGHT LEVEL ONE FIVE ZERO NOW
123811-123814	RADAR	IFLY TWO SEVEN THREE JULIETT DESCEND ONE TWO ZERO
123815-123817	IG0273J	DESCEND ONE TWO ONE TWO ZERO TWO SEVEN THREE JULIETT
123820-123822	RADAR	IFLY TWO SEVEN JULIETT DO NOT CLIMB DESCEND TO ONE TWO ZERO NOW SIR
123823-123825	RADAR	IFLY TWO THREE ZERO SIX MAINTAIN ONE FIVE ZERO
123825-123839	IG02306	UNCLEAR.. MAINTAIN FLIGHT LEVEL ONE FIVE ZERO TWO THREE ZERO SIX CONFIRM
	RADAR	AFFIRM MAINTAIN ONE FIVE ZERO SIR
	IG02306	WILCO
	RADAR	TWO THREE ZERO SIX TURN RIGHT HEADING AA.. IFLY TWO THREE ZERO SIX CONFIRM LEVEL SIR
123841-123847	RADAR	IFLY TWO THREE ZERO SIX CONFIRM LEVEL
	IG02306	WE ARE ON CLIMB TO FLIGHT LEVEL ONE FIVE ZERO JUST CONFIRM WE HAVE TO MAINTAIN HEADING ONE FIVE ZERO AS WELL
123848-123858	RADAR	CONFIRM LEVEL SIR CONFIRM LEVEL SIR
	IG02306	WE ARE CLIMBING TO FLIGHT LEVEL ONE FIVE ZERO PASSING ONE FOUR EIGHT
	RADAR	IFLY TWO THREE ZERO SIX TURN RIGHT HEADING TWO SEVEN ZERO
123859-123902	IG02306	RIGHT HEADING TWO SEVEN ZERO IFLY TWO THREE ZERO SIX
123931-123933	RADAR	IFLY TWO THREE ZERO SIX RIGHT HEADING TWO EIGHT ZERO
124054-124056	RADAR	IFLY TWO SEVEN THREE JULIETT MAINTAIN HEADING
124057-124101	IG0273J	MAINTAIN HEADING IFLY TWO SEVEN THREE JULIETT
124132-124139	RADAR	IFLY TWO THREE ZERO SIX RADAR DESCEND TO FLIGHT LEVEL ONE THREE ZERO
	IG02306	DESCEND TO FLIGHT LEVEL ONE THREE ZERO IFLY TWO THREE ZERO SIX
124229-124233	RADAR	IFLY TWO SEVEN THREE GOLF DESCEND TO FLIGHT LEVEL ONE HUNDRED
124234-124241	IG0273J	CONFIRM IFLY TWO SEVEN THREE JULIETT

	RADAR	IFLY TWO SEVEN THREE JULIETT AFFIRM DESCEND TO FLIGHT LEVEL ONE HUNDRED
	IG0273J	DESCEND LEVEL ONE HUNDRED IFLY TWO SEVEN THREE JULIETT
124350-124352	RADAR	IFLY TWO SEVEN THREE JULIETT CONTACT RADAR ONE TWO FOUR TWO
124353-124354	IG0273J	ONE TWO FOUR TWO
124434-124436	RADAR	IFLY TWO THREE ZERO SIX RADAR DESCEND TO FLIGHT LEVEL ONE TWO ZERO
124439-124443	IG02306	UNCLEAR.. IFLY TWO THREE ZERO SIX DESCEND TO FLIGHT LEVEL ONE TWO ZERO
	RADAR	AFFIRM
124529-124533	RADAR	'FLY TWO THREE NINE-R SIX TWO THREE ZERO SIX RADAR DESCEND TO FLIGHT LEVEL ONE ONE ZERO
124700-124703	RADAR	IFLY TWO THREE ZERO SIX RADAR DESCEND TO FLIGHT LEVEL ONE HUNDRED
124705-124708	IG02306	DESCEND FLIGHT LEVEL ONE HUNDRED IFLY TWO THREE ZERO SIX
124756-124759	RADAR	IFLY TWO THREE ZERO SIX RADAR MAKE ONE RIGHT ORBIT
124800-124804	IG02306	MAKE ONE RIGHT ORBIT IFLY TWO THREE ZERO SIX
124823-124825	RADAR	IFLY TWO THREE ZERO SIX ONE TWO FOUR TWO
124828-124830	RADAR	IFLY TWO THREE ZERO SIX RADAR ONE TWO FOUR TWO
124832-124835	IG02306	ONE TWO FOUR TWO IFLY TWO THREE ZERO SIX
124836-124837	RADAR	AFFIRM

The above tape transcript is specific to transmissions on VHF frequency 126.35 Mhz of APAA position from 12:23-12:49 UTC on 10.05.2024 based on transmission/ reception at controller position

1.10. AERODROME INFORMATION:

Airport Name	:	Indira Gandhi International Airport
ICAO Code	:	VIDP
Coordinates	:	283407N 0770644E, 117deg /321M / from Intersection RWY 09/27 and TWY E
Aerodrome Elevation	:	778 FT ft
Hours of Operation	:	24 hours
Fire Category	:	10

1.11 FLIGHT RECORDERS:

IGO2306 operated another flights from Delhi after the incident flight. The information of the incident flight was not available for analysis.

1.12 WRECKAGE & IMPACT INFORMATION:

The aircraft landed normally and did not sustain any damage.

1.13 MEDICAL AND PATHOLOGICAL INFORMATION:

The scrutiny of the preflight medical check for alcohol documents revealed that both crew members were not under the influence of alcohol.

1.14 FIRE: There was no fire at any stage.

1.15 SURVIVAL ASPECTS: The incident was survivable.

1.16 TESTS & RESEARCH: Not applicable.

1.17 ORGANIZATIONAL & MANAGEMENT INFORMATION:

InterGlobe Aviation Ltd (Indigo) is an Indian schedule airline based in Gurgaon, Haryana, India. It has a fleet of Airbus A320, A-320 Neo, A321 and ATR-72. The airline started its operation in the year 2006. The airline has approx 386 aircrafts in its fleet and operates to various domestic and international destinations.

1.18 ADDITIONAL INFORMATION:

The statement of the operating crew of involved flight IGO2306 is appended below:
PIC and FO stated that at the time of the event there was heavy traffic and RT congestion. The flight was cleared to descend from FL150 to FL130 and orbit right hand. PM queried the descent clearance due to the congestion and number of aircraft in the vicinity, and he could see traffic below also in a right turn. The rate of descent was below 1,000fpm. Passing FL144 ATC requested to stop descent at FL145. Crew levelled off at 14,330 ft – within 70ft. A TCAS TA was generated at this point. 16 seconds after the TA was generated a TCAS RA CLIMB was issued and was immediately followed.

1.19 USEFUL OR EFFECTIVE INVESTIGATION TECHNIQUES: Nil

2.0 ANALYSIS:

The flight IGO273J operating from Patna operated uneventfully till it came in contact with APAA controller at Delhi ATC while at FL160. The flight IGO2306 operating from Agartala

operated uneventfully till it came in contact with APAA controller at Delhi ATC while at FL170.

The Available evidences for airprox between IGO273J and IGO2306 e.g. ATC tape transcript, Radar Display snapshot, statements, report submitted by ATC have been analyzed and following has revealed:

While IGO273J established contact with APAA, the controller instructed it to maintain FL160 and minimum clean speed, which was correctly read back by the crew. IGO2306 then came in contact with APAA while at FL170. At that time, IGO273J was 1.7 NM ahead of IGO2306. The controller instructed IGO273J to descend to FL140 and IGO2306 to descend to FL150. Both instructions were correctly read back and complied by both the flight. Subsequently, the controller instructed both IGO273J and IGO2306 to make one right orbit.

The controller then instructed IGO273J to descend to FL130. However, IGO273J did not read back the instruction. Instead, IGO2306 captured this transmission, read back and began descending. The controller failed to notice the incorrect read back. After IGO2306 started descending from FL150, a Level Bust Alert appeared in the data blocks of both IGO273J and IGO2306 on the Radar Display. Shortly thereafter, the Automation System also generated a Current Conflict Alert between the two aircraft.

The APAA controller attempted to separate the traffic by issuing instructions but neither IGO2306 nor IGO273J responded. At this point, IGO273J was observed maintaining assigned FL140 while IGO2306 continued descending unauthorizedly. In order to avert ensuing the breach of standard separation, the APAA controller then instructed IGO273J to descend to FL130. The controller also instructed IGO2306 to maintain FL145, which was acknowledged. IGO2306 stopped its descent at FL143 and subsequently reported receiving a TCAS RA, which the controller also acknowledged.

Subsequently, in compliance of RA, IGO2306 was observed climbing from FL143, while IGO273J began descending from FL140. Standard separation between the two aircraft was restored, and the Current Conflict Alert disappeared from the Automation System i.e. Radar Display. IGO273J reported being clear of conflict and maintaining FL138. The APAA controller instructed IGO273J to fly heading 260 and IGO2306 to fly heading 270. However, IGO2306 was later observed descending to FL148 again, prompting the Automation System to generate a Predicted Conflict Warning.

The APAA controller instructed IGO2306 to maintain FL150, which was read back, but it was observed maintaining FL148. IGO273J confirmed with the APAA controller whether it should

maintain FL140, but the controller was busy managing other traffic. IGO273J then began climbing, while IGO2306 was observed maintaining FL147. This resulted in another separation breach and triggered a new Current Conflict Alert on the Automation System.

The APAA controller instructed IGO273J to descend to FL120 and IGO2306 to maintain FL150. Standard separation between the two aircraft was restored, and the Current Conflict Alert disappeared on the Automation System.

3.0 CONCLUSION:

3.1 FINDINGS:

3.1.1 The flight crew members were properly licensed and qualified to operate the flight.

3.1.2 The ATC controller was appropriately licensed and qualified for ATC duties.

3.1.3 At the time of the incident, traffic congestion in the Delhi terminal airspace led the ATCO to instruct both IGO273J and IGO2306 in holding patterns.

3.1.4 The APAA controller issued descent instructions to IGO273J, but the transmission intended for IGO273J was captured and executed by IGO2306.

3.1.5 The read back from the unintended aircraft i.e. IGO2306, went unnoticed by the APAA controller.

3.1.6 As soon as IGO2306 began its descent, a separation breach occurred due to the close proximity between IGO2306 and IGO273J.

3.1.7 The APAA controller repeatedly instructed IGO2306 to maintain FL150 and FL145, but it did not respond and continued its descent.

3.1.8 TCAS RA was triggered between IGO2306 and IGO273J. After following the RA, both aircraft were cleared of the conflict.

3.1.9 Despite being instructed to maintain FL150 and correctly read back, IGO2306 again began descending below FL150, resulting in a second separation breach between IGO2306 & IGO273J.

3.1.10 Subsequently, the controller instructed IGO273J to descend to FL120 and IGO2306 to maintain FL150. Standard separation between the two aircraft was restored and the Current Conflict Alert disappeared on the Automation System.

3.2 Probable Cause:

The investigation concluded that unauthorized descent initiated by IGO2306 resulted into breach of separation (twice) between IGO2306 and IGO273J. The failure of the APAA controller to notice the read back of the instruction by the unintended aircraft (IGO2306) was the contributory factor.

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4.0 Safety Recommendations:

NIL, in view of the corrective actions on the involved operating crew of IGO2306 and the involved approach controller have been already completed at the time of writing the report.

(Pawan Kumar)
Asst. Director of Operations
Member

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Dy. Director of Operations
Investigator-in –Charge

Place: Delhi
Date: 28.07.2025