Takeoff from a taxiway, Airbus A340-300, B-18805, January 25, 2002

Micro-summary: **This A340 took off from a taxiway.**

Event Date: **2002-01-25 at 0243 AST**

Investigative Body: **National Transportation Safety Board (NTSB), USA**

Investigative Body's Web Site: **http://www.ntsb.gov/**

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National Transportation Safety Board

FACTUAL REPORT AVIATION

NTSB ID: ANC02IA011	Aircraft Registration Number: B-18805
Occurrence Date: 01/25/2002	Most Critical Injury: None
Occurrence Type: Incident	Investigated By: NTSB

Location/Time

Nearest City/Place	State	Zip Code	Local Time	Time Zone	
ANCHORAGE	AK	99502	0243	AST	

Airport Proximity: On Airport	Distance From Landing Facility:	Direction From Airport:

Aircraft Information Summary

Aircraft Manufacturer	Model/Series	Type of Aircraft
Airbus Industrie	A-340-300	Airplane

Sightseeing Flight: No Air Medical Transport Flight: No

Narrative

Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

HISTORY OF FLIGHT

On January 25, 2002, at 0243 Alaska standard time, an Airbus Industrie A-340-300 airplane, Taiwanese registration B-18805, was cleared for takeoff on runway 32 from the Ted Stevens Anchorage International Airport, Anchorage, Alaska. The airplane, call sign Dynasty 011, subsequently departed from a taxiway. The airplane was being operated as an instrument flight rules (IFR) scheduled international passenger flight under Title 14, CFR Part 129, when the incident occurred. The airplane was operated as Flight 011, by China Airlines, Taiwan. The 3 cockpit crew members, 12 cabin crew members, and 237 passengers, were not injured. The airplane was not damaged. Dark night visual meteorological conditions prevailed. An IFR flight plan was filed from Anchorage to the Chiang Kai-Shek International Airport, Taipei, Taiwan.

The incident airplane was parked at the Anchorage International Airport's north terminal, gate N4. At 0221, the first officer of Dynasty 011 contacted Anchorage Air Traffic Control Tower (ATCT) clearance delivery and stated: "Dynasty 011 heavy, clearance, flight level 320 to Taipei, information Juliet, Bay N4." The clearance delivery controller stated: "Dynasty 011 Heavy, cleared to the Taipei Airport via Anchorage Three Departure, then as filed. Climb and maintain flight level 200, departure frequency will be 118.6, squawk 4032."

At 0224, the first officer contacted ground control, advising the controller that they were ready for their push-back from gate N4. The ground controller responded by stating: "Dynasty 011 heavy, Anchorage ground, good morning sir, push back is approved, plan runway 32 for departure." The first officer acknowledged the clearance by stating: "runway 32, Dynasty 011."

At 0232, the first officer of Dynasty 011 contacted the Anchorage ATCT local controller, advising that they were ready for taxi. The local controller responded by stating: "Dynasty 011 heavy, taxi runway 32 at Kilo, taxi via Mike, Romeo, Kilo." The incident airplane then began to taxi away from the N4 gate, turning south on taxiway Romeo. The airplane proceeded southbound on taxiway Romeo, and made a right turn from Romeo onto taxiway Kilo.

The incident airplane was cleared for takeoff on runway 32 by the ATCT local controller at 0240:06, as the airplane was southbound on taxiway Romeo, preparing to turn right onto taxiway Kilo. The controller stated: "Dynasty 011 heavy, wind 360 at seven, runway 32 at Kilo, cleared for takeoff." The first officer responded by stating: "Cleared for takeoff, 32, Kilo, Dynasty 011 heavy."

A review of the airplane's flight data recorder (FDR) information provided by the Aviation Safety Council of Taiwan (ASC), disclosed that at 0240:06, the airplane was taxiing at 8 knots on a 141 degree heading. The FDR data indicated that at 0241, the airplane began a right turn to a heading of 244 degrees, and came to a stop at 0241:58. The airplane stopped on taxiway Kilo at the hold line, east of the extended portion of runway 32. The airplane was expected by the ATCT local

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controller to continue west on Kilo into the extended portion of runway 32, and then turn right (north) onto the approach end of runway 32. Instead, at 0242:10, the airplane began accelerating west on taxiway Kilo.

The departure roll was noticed by the ATCT local controller at 0242:45, when he stated to the north radar approach controller: "No, he's goin on the wrong..." The north radar controller, who noticed the departure on his radar screen, and the airport surface detection equipment (ASDE), replied: "He's on a taxiway." A radio call to the crew to abort the takeoff was not made by either controller, but the airport's emergency phone to the fire department was activated.

After lift-off at 0243, the airplane crew stated: "Tower, Dynasty 011 heavy airborne." The local controller replied: "Dynasty 011 heavy roger, fly heading 240." The crew acknowledged the magnetic heading assignment.

The ATCT controller cancelled the airport fire department's response, but contacted Anchorage Airport operations personnel (Airport 10) who examined taxiway Kilo for any evidence of airplane damage. None was found. Main landing gear tire impressions were found in a snow berm at the west end of taxiway Kilo. The available taxiway distance from Romeo to the end of Kilo is about 6,800 feet.

The airplane proceeded to Taipei and landed without incident.

PERSONNEL INFORMATION

The Government of Taiwan's Aviation Safety Council of Taiwan (ASC), and Taiwan's Civil Aeronautics Administration (CAA), were notified of the incident. ASC and CAA investigators interviewed the flight crew in Taiwan. During the interview, the airplane crewmembers stated that the captain conducted the taxi from the north terminal to taxiway Kilo. All three crew members utilized an airport configuration diagram of the Anchorage International Airport published by Jeppesen Sanderson Inc., as a guide as they taxied for takeoff.

Crew Information

The captain (crew member 1, CM-1) held an airline transport pilot certificate issued by Taiwan. He occupied the left seat. The incident flight was the captain's first trip from Anchorage. It was the first time he flew with the first officer. He had flown with the reserve captain on numerous occasions.

The captain's training at China Airlines, for operations into Anchorage, was received during A-340 simulator training July 27 to 31, 2001.

During an interview in Taiwan with a representative from the ASC, the captain reported that he taxied the airplane, and was the non-flying pilot for this flight. The captain reported that as the airplane was turning onto taxiway Kilo, he noticed bright centerline lights and blue edge lights. He then requested the "before takeoff checklist." The captain did not see any runway threshold markings, or a runway number, but he did not think it was unusual since he believed the threshold for runway 32 was further ahead. The captain reported that the centerline lights were very bright, and he believed that it indicated an active runway. He said that he did not check the heading indicator. The captain recalled seeing an airport runway sign with "K." Other information on the sign was not recalled. The captain noted that his navigational display was set on the 10 nautical mile range in the arc mode.

The first officer (crew member 2, CM-2) held an airline transport pilot certificate issued by Taiwan. He occupied the right seat. The incident flight was the first officer's third trip from Anchorage.

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His training at China Airlines, for operations into Anchorage, was received during A-340 simulator training October 13 to 17, 2001, and during an airport route briefing on October 31, 2001.

The first officer was the flying pilot for this segment of the flight. During an interview in Taiwan with the ASC representative, the first officer said that as the airplane was turning from taxiway Romeo, onto taxiway Kilo, he was performing the "before takeoff" checklist. Following his completion of the checklist, the captain stated, "You have control." The first officer estimated the time between the completion of the checklist, and his taking control, was about 3 to 4 seconds. He noted that the airplane was aligned with bright centerline lights that started some distance from the airplane. He did not recall seeing edge lights. He said he thought the airplane only turned about 100 degrees (Romeo to Kilo), but when he saw the bright centerline lights, he believed he was on runway 32. The first officer then initiated the takeoff. He said he did not check the heading indicator. His navigational display was set on the 10 nautical mile range in the arc mode.

The reserve captain, (crew member 3, CM-3) held an airline transport pilot certificate issued by Taiwan, and was a China Airlines check airman. He occupied the cockpit jump seat, centered in the cockpit behind the pedestal. The incident flight was the reserve captain's second trip from Anchorage.

The reserve captain's training at China Airlines, for operations into Anchorage, was received during A-340 simulator training October 13 to 17, 2001, and during an airport route briefing on September 21, 2001.

Prior to the flight from Anchorage, the reserve captain conducted a route check with the captain on the flight from Taipei to New York. During an interview in Taiwan with the ASC representative, the reserve captain said he assisted the crew with airfield orientation during the taxi, and would call out the name of taxiway locations. He said he recalled seeing a sign for taxiway Kilo, and told the captain that the first right turn was taxiway Kilo. The Anchorage ATCT issued the takeoff clearance and he then focused his attention on the actions of the first officer. He said he stopped monitoring the taxi route. When the reserve captain glanced back outside the airplane, he noticed bright centerline lights. The reserve captain commented that he observed the centerline lights on taxiway Kilo on a previous trip to Anchorage and described them as green. On the incident flight, the reserve captain described the centerline lights as white.

Company Information

China Airlines holds a U.S. operating certificate issued under CFR Part 129 (Foreign Air Carrier) regulations.

According to China Airlines personnel, flight crewmembers receive training about airport configurations during simulator training for the airport, by reviewing airport diagrams, or during flights as pilots (accompanied by an instructor pilot) to international destinations.

Chapter 6.3, "Pushback and Taxi," of the China Airlines Procedures and Techniques manual for the Airbus airplane states, in part: "F. Normally, CM1 will taxi the aircraft. Both CM1 and CM2 should have the taxi chart available and in view at all times. The flight crew should exercise vigilance, and always orient the aircraft's position and direction with the taxi chart. G. Flight crewmembers must work as a team during taxi, particularly at unfamiliar airports or in conditions of low visibility. If any doubt exists as to aircraft position or taxi clearances, the aircraft should be brought to a stop and ATC assistance should be requested. Request 'progressive taxi instructions' if necessary."

In the China Airlines aircraft operating manual for the Airbus A-340 airplane fleet, under Normal Procedures, Taxi and Takeoff, the Takeoff Briefing items include a review of taxi routes, and

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takeoff runway. If CM-2 is the flying pilot, CM-1 will transfer control of the airplane to CM-2, and then announce "Takeoff." The takeoff procedure includes a scan of the Primary Flight Display/Navigational Display (PFD/ND) to check the Flight Management Guidance System Position update and ensure the airplane is on the runway centerline.

The aircraft operating manual for the Airbus did not contain a checklist requirement for the crew to verbalize and verify the runway in use before takeoff.

The aircraft operating manual for China Airlines Boeing 747-200 airplane fleet, under Normal Procedures, Taxi and Takeoff, has a section that reviews taxi routes, and the runway for departure. The procedure states, in part: "1. Before enter the runway: To corroborate the following required visual reference is established: the designation of the takeoff runway. 2. After enter the runway: Make sure active runway marking are being checked as follows: threshold marking; runway designation marking by calling out the runway number; verify runway in use by localizer bearing or GPS coordinates; runway centerline marking; runway touchdown zone markings and fixed distance markings; runway lighting systems are as illuminated as expected."

As a result of this incident, China Airlines revised the Airbus aircraft operating manual to include verbalization and verification of the runway in use.

AIRCRAFT INFORMATION

The cockpit display for the Airbus A340 has electronic generated displays. The selection of the navigation display (ND) depicts the airplane's position as a yellow airplane symbol. Runways are displayed as white symbols. In the arc mode, the heading of the airplane is displayed along a rotating arc near the top of the navigational display. The minimum scale of the display is 10 miles. The airplane symbol remains the same size at all range settings. The runway symbol gets progressively smaller as the range increases. The relationship of the airplane's position (yellow) to a runway (white) will move in the display as the airplane moves on the ground to provide the pilot with a view of how the airplane is oriented to a runway.

Application of takeoff power will produce a primary flight display (PFD) that pictorially centers the airplane symbol on the runway symbol at the threshold, if the airplane is aligned with a runway. If not aligned, the airplane orientation and the runway orientation will remain unchanged.

China Airlines provided data about the incident airplane. The takeoff gross weight was 571,505 pounds. The takeoff distance was calculated as 7,746 feet. The accelerate-stop distance was calculated as 9,007 feet. The takeoff speeds were: V1, 141 knots; VR, 150 knots; V2, 157 knots.

METEOROLOGICAL INFORMATION

At 0253, an Aviation Routine Weather Report (METAR) at Anchorage was reporting in part: Wind, 030 degrees (true) at 5 knots; visibility, 10 statute miles; clouds and sky condition, clear; temperature, 3 degrees F; dew point, -13 degrees F; altimeter, 29.91 inHg.

The natural ambient light condition at the airport consisted of a dark night without any moon illumination. No meteorological obstructions to visibility were present.

COMMUNICATIONS

Review of the air to ground radio communications tapes maintained by the FAA at the Anchorage International Airport ATCT facility, revealed that the airplane crew successfully communicated with the positions of clearance delivery and local control. Timing of the takeoff clearance issued by the ATCT local controller, indicated that it was given as the crew was on taxiway Romeo, preparing to turn right onto taxiway Kilo.

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The incident airplane crew did not utilize a radio operator. All on-ground communications were conducted with CM-2.

A transcript of the air to ground communications between the flight crew and the Anchorage ATCT is included in the public docket for this investigation.

AERODROME AND GROUND FACILITIES

The Ted Stevens Anchorage International Airport is owned and operated by the State of Alaska, Department of Transportation. The published elevation of the airport is 152 feet mean sea level. The airport is a 14 CFR 139, Index E facility.

The airport is equipped with two parallel hard-surfaced runways on a 060 to 240 degree magnetic orientation, and a single hard-surfaced runway on a 140 to 320 degree magnetic orientation. Runway 32 is 150 feet wide, and is equipped with high intensity runway and centerline lights. The intensity of runway lighting is variable through five settings.

The north airline terminal, from which the airplane began its taxi for takeoff, is situated east of taxiway Romeo, about one-half mile north of taxiway Kilo.

Taxiway Romeo is 80 feet wide, and parallels runway 32, about 540 feet east of the runway. It is equipped with blue taxiway edge lights, and green centerline lights. The in-ground centerline light fixtures on taxiway Romeo, manufactured by Honeywell, consist of two opposing green lenses, each powered by a 48 watt halogen bulb. The taxiway has yellow edge stripes and a yellow centerline stripe.

Taxiway Kilo is 75 feet wide, and parallels runway 6L/24R, about 480 feet north of the runway. It is equipped with blue taxiway edge lights, and green centerline lights. The in-ground centerline light fixtures on taxiway Kilo, manufactured by Crouse Hinds, consist of a single bi-directional green lens, powered by a single 65 watt halogen bulb. Green in-ground taxiway centerline light fixtures do not extend through the extended portion of runway 32. The taxiway has yellow edge stripes and a yellow centerline stripe.

Illumination of taxiway Romeo and Kilo edge lights is either on or off.

The intensity of illumination of taxiway Romeo and Kilo centerline lights is variable through three settings as part of the Anchorage airport's low visibility taxi routes when the runway visual range (RVR) is less than 1,200 feet. The only color of the centerline lighting is green.

The intersection of taxiway Kilo and Romeo has a yellow centerline stripe in the radius of the turn from Romeo to Kilo. The radius of the curve is about 150 feet. There are no centerline lights along the radius of the turn.

ATCT personnel reported that there were no difficulties with the runway and taxiway lighting systems prior to, or at the time of the incident. ATCT personnel indicated the taxiway centerline lights for taxiways Romeo and Kilo were set on the standard (level 1) intensity level at the time of the incident.

The switches for the variety of airport lighting are on a control panel in the ATCT cab. The lighting status of each segment of the airplane surface is not electronically recorded. The status of the airport lighting is recorded in a hand-written log each evening by the airport operations personnel. The log did not reflect any deficiencies in Romeo, Kilo, or runway 32 lighting.

The intersection of Kilo and the extended portion of runway 32 has a yellow centerline stripe in

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the radius of the turn from Kilo onto the extended centerline of runway 32. The radius of the curve is about 250 feet. There are no centerline lights along the radius of the turn.

A yellow painted hold-short line, with in-ground yellow hold-line lighting, and wig-wag warning lights, is located on taxiway Kilo, 250 feet east of the centerline of runway 32. This hold-short line protects the extended portion of runway 32. An airport sign, indicating taxiway Kilo/runway 32, is located to the left of the hold-short line.

The airport is served by a Terminal Radar Service Area and the tower cab is equipped with a BRITE radar repeater display and airport surface detection equipment (ASDE). This display of the airplane's position on the airplane surface is installed in the ATCT cab, and the Anchorage TRACON facility. Both are located in the ATCT building.

The runway 32 threshold, with its threshold markings, displaced threshold arrow markings, and runway number, is about 190 feet north of the centerline of taxiway Kilo. The runway has 200 feet of available pavement at the north end of the runway (the displaced threshold of runway 14), providing a landing distance available (LDA) of 10,694 feet. The runway has 888 feet of available pavement at the south end of the runway, providing for an accelerate-stop distance available (ASDA), and a takeoff run available (TORA) of 11,584 feet for the runway 32 extension. In addition, it has a 1,000 foot clearway at the north end of the runway providing for a takeoff distance available (TODA) of 12,584 feet for use by operators that allow the use of clearway distances in their takeoff calculations.

The 888 feet of extension at the south end of runway 32 runs northbound from the south edge of runway 06L, through taxiway Kilo, to the runway threshold, north of Kilo. The FAA's airport/facility directory, Alaska Supplement, states, in part: "Runway 32 extended departures from runway 06L intersection available on request at pushback/engine start."

The TORA, TODA, ASDA, and LDA authorized for runway 14 are all 10,496 feet. Aircraft using runway 14 are not authorized to use the extended portions of runway 32 pavement.

An NTSB air traffic control specialist, Washington, D.C., conducted interviews with the FAA's Anchorage Airport ATCT personnel. According to the NTSB specialist, the local controller indicated that he cleared the incident airplane for takeoff when the airplane was on taxiway Romeo, about the Lima intersection. The local controller observed the airplane turn onto taxiway Kilo, but then he turned away and went toward the rear of the control tower cab. He then heard a different engine noise than normal for a runway 32 departure. When the local controller observed the incident airplane accelerating on taxiway Kilo, he did not call for a abort because he felt it was too late, and did not want to add additional stress to the pilots. He indicated that he felt the airplane was going to crash.

The NTSB specialist noted that use of the runway 32 extension places heavy jet aircraft on a portion of runway 06L, creating an intersection at runway 32 and 06L. Runway 06L/24R has yellow painted hold-short stripes before and after the runway 32 extension area. ATCT personnel also stated that aircraft may be placed into position and hold on runway 06L, for the runway 32 extension, at night. The NTSB specialist noted that the Anchorage Airport does not have procedures for intersection takeoffs, and the FAA prohibits the holding of aircraft at an intersection at night. The airport does not have procedures for land-and-hold-short operations (LAHSO). See the Air Traffic Control Group report included in the public docket for this investigation for details.

FLIGHT RECORDERS

Flight data recorder information from the incident airplane was retrieved by China Airlines. ASC personnel utilized the data to develop an approximate position on the Anchorage airport as the airplane taxied and departed. The FDR data indicated the takeoff clearance was given to the crew

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as the airplane was on taxiway Romeo.

The cockpit voice recorder was unusable in the investigation as it only records 30 minutes of data, and is then overwritten.

TESTS AND RESEARCH

The NTSB IIC, FAA, ASC, and CAA personnel conducted an examination of the taxi route along taxiways Romeo and Kilo to runway 32, and an examination of taxiway Kilo from runway 32 to the west end of Kilo. An examination during the daylight revealed that yellow taxiway centerline striping was provided around the intersections of taxiway Romeo, Kilo and runway 32. During the site survey, some reflective material of each taxiway centerline marking was indistinct, missing, or obscured by patches of ice. Airport signage was present and visible.

An examination during night revealed that no centerline lighting is present on the radius turn from Romeo to Kilo, or on the radius turn from Kilo to the approach end of runway 32. No centerline light fixtures extend through the extended portion of runway 32. Airport signage was present, visible, and lighted.

A night taxi simulation was conducted utilizing a China Airlines A-340 airplane. The taxi simulation revealed that taxiway lighting and signage were visible from the cockpit. FAA personnel in the Anchorage ATCT cab were asked to adjust the taxiway lighting intensity on taxiways Romeo and Kilo. ATCT personnel were initially uncertain that the centerline intensity could be varied. After confirmation that the intensity could be adjusted, different taxiway centerline light intensity settings on Romeo and Kilo were distinguishable from the cockpit.

Runway 32 lights were visible out the right cockpit window while taxiing south on Romeo. The center seat position of the A-340 (CM3) provided a clear view of the cockpit panel display and the runway environment. The navigational display scale at 10 NM displayed compass headings, and a white runway symbol. Application of takeoff power at Kilo did not align the aircraft symbol with the runway 32 symbol.

ADDITIONAL INFORMATION

Foreign air carriers are issued operation specifications by the FAA. Foreign air carrier operations specifications are approved by the civil aviation authority in the respective country of origin. U.S. oversight of China Airlines by the FAA is the responsibility of the San Francisco International Field Office (IFO), and by the geographic unit of local Flight Standards District Offices (FSDO), where China Airlines flights arrive and depart. The FAA's Anchorage FSDO is responsible for local oversight of China Airlines flights into Anchorage.

Recommended airport marking and lighting standards are contained in publications from the International Civil Aviation Organization (ICAO), Annex 14, and the FAA's Advisory Circulars AC 150/5340 and AC 150/5345 series. The FAA's AC 120-57A publication contains recommend standards for the development of an airport Surface Movement Guidance and Control System (SMGCS) plan which includes low visibility taxi routes.

ICAO and FAA recommend that taxiway centerline lighting on straight portions should not exceed a spacing of 30 meters (100 feet). ICAO recommends that spacing on curved portions with a radius of less than 400 meters (1,200 feet), should not exceed 7.5 meters (25 feet). FAA recommends that spacing on curved portions with a radius less than 399 feet, should not exceed 25 feet for operations when the runway visual range (RVR) is 1,200 feet and above, and 12.5 feet for operations when the RVR is less than 1,200 feet.

The FAA recommends that taxiway centerline lighting continue across a runway for operations below

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600 feet RVR if they are installed on a designated low visibility route. They are recommended to continue across a runway for operations below 1,200 feet RVR where the taxiway is an often used route.

Under the rules established by ICAO, Annex 13, an Accredited Representative from the Aviation Safety Council (ASC) of Taiwan, participated in the incident investigation. The ASC representative was assisted by personnel from the Civil Aeronautics Administration (CAA) of Taiwan, and personnel from China Airlines.

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Landing Facility/Approach Information

Airport Name	Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
ANCHORAGE INTERNATIONAL	PANC	152 Ft. MSL			

Runway Surface Type: Asphalt

Runway Surface Condition: Dry

Type Instrument Approach: NONE

VFR Approach/Landing: None

Aircraft Information

Aircraft Manufacturer	Model/Series	Serial Number
Airbus Industrie	A-340-300	415

Airworthiness Certificate(s): Transport

Landing Gear Type: Retractable - Tricycle

Homebuilt Aircraft?	Number of Seats:	Certified Max Gross Wt.	Number of Engines:
No	276	606265 LBS	4

Engine Type:	Engine Manufacturer:	Model/Series:	Rated Power:
Turbo Fan	General Electric	CFM56-5C4	34000 LBS

- Aircraft Inspection Information

Type of Last Inspection	Date of Last Inspection	Time Since Last Inspection	Airframe Total Time
Continuous Airworthiness		Hours	2321 Hours

- Emergency Locator Transmitter (ELT) Information

ELT Installed?	ELT Operated?	ELT Aided in Locating Accident Site?
Yes	No	No

Owner/Operator Information

Registered Aircraft Owner	Street Address	City	State	Zip Code
GOLDEN DRAGON LIMITED	P.O. BOX 265GT	GEORGETOWN		

Operator of Aircraft	Street Address	City	State	Zip Code
CHINA AIRLINES LTD.	131 NANKING E. ROAD, SEC. 3	TAIPEI		

Operator Does Business As:

Operator Designator Code: SAJF

- Type of U.S. Certificate(s) Held:

Air Carrier Operating Certificate(s): Foreign Operation

Operating Certificate:

Operator Certificate:

Regulation Flight Conducted Under: Part 129: Foreign

Type of Flight Operation Conducted: Scheduled; International; Passenger Only

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First Pilot Information

Name	City	State	Date of Birth	Age
On File	On File			55

Sex: M | Seat Occupied: Left | Principal Profession: Civilian Pilot | Certificate Number: On File

Certificate(s): Airline Transport

Airplane Rating(s): Multi-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): None

Type Rating/Endorsement for Accident/Incident Aircraft? Yes | Current Biennial Flight Review? 01/2002

Medical Cert.: Class 1 | Medical Cert. Status: Valid Medical--w/ waivers/lim. | Date of Last Medical Exam: 09/2001

- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Mult-Engine	Night	Instrument Actual	Instrument Simulated	Rotorcraft	Glider	Lighter Than Air
Total Time	13635	419								
Pilot In Command(PIC)										
Instructor										
Last 90 Days										
Last 30 Days										
Last 24 Hours										

Seatbelt Used? Yes | Shoulder Harness Used? Yes | Toxicology Performed? No | Second Pilot? Yes

Flight Plan/Itinerary

Type of Flight Plan Filed: IFR

Departure Point	State	Airport Identifier	Departure Time	Time Zone
Same as Accident/Incident Location		PANC	0243	AST

Destination	State	Airport Identifier
TAIPEI		RCTP

Type of Clearance: IFR

Type of Airspace: Class C

Weather Information

Source of Briefing: Company

Method of Briefing: In Person

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Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
PANC	0253	AST	152 Ft. MSL	NM	Deg. Mag.

Sky/Lowest Cloud Condition: Clear Ft. AGL

Condition of Light: Night/Dark

Lowest Ceiling: None Ft. AGL

Visibility: 10 SM

Altimeter: 29.91 "Hg

Temperature: -16 °C

Dew Point: -25 °C

Wind Direction: 7

Density Altitude: Ft.

Wind Speed: 5

Gusts:

Weather Condtions at Accident Site: Visual Conditions

Visibility (RVR): Ft.

Visibility (RVV) SM

Intensity of Precipitation:

Restrictions to Visibility: None

Type of Precipitation: None

Accident Information

Aircraft Damage: None

Aircraft Fire: None

Aircraft Explosion None

Classification: Foreign Registered/U.S. Soil

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants				12	12
Other Crew				1	1
Passengers				237	237
- TOTAL ABOARD -				252	252
Other Ground					
- GRAND TOTAL -				252	252

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Administrative Information

Investigator-In-Charge (IIC)

SCOTT ERICKSON

Additional Persons Participating in This Accident/Incident Investigation:

THOMAS WANG
INVESTIGATOR, FLIGHT SAFETY DIVISION
AVIATION SAFETY COUNCIL, TAIWAN
16TH FLOOR, 99 FU-HSING NORTH ROAD
TAIPEI, TAIWAN, 105

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