



National Transportation Safety Board Aviation Incident Final Report

Location:	Chicago, IL	Incident Number:	OPS09IA006B
Date & Time:	06/01/2009, 1216 CDT	Registration:	
Aircraft:	BOEING 767	Aircraft Damage:	None
Defining Event:	Near midair/TCAS alert/loss of separation	Injuries:	214 None
Flight Conducted Under:			

Analysis

While on approach to Chicago-O'Hare International Airport, American Airlines flight 879 (AAL 879) was being radar-vectored to the final approach course for runway 28 and American Airlines flight 93 (AAL 93) was on a straight-in approach to runway 27L. Both aircraft were under control of Chicago Terminal Radar Approach Control. Because of an air traffic control oversight, AAL 879 overshot the final approach course for runway 28 and continued northbound, conflicting with AAL 93 on the runway 27L final. According to preliminary Federal Aviation Administration data, lateral separation decreased to 0.35 nautical mile and vertical separation was 0 feet before the conflict was resolved. There were no injuries or damage reported as a result of the incident, which occurred in visual meteorological conditions, with 10 statute miles of visibility and a 5500-foot ceiling.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: The Chicago TRACON West Arrival controller's omission of a required clearance, resulting in AAL 879 overshooting the final for runway 28 and losing separation with AAL 93.

Findings

Personnel issues	Issuing instructions - ATC personnel (Cause)
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Factual Information

On June 1, 2009, at 1216 central daylight time, an operational error occurred at Chicago Terminal Radar Approach Control when American Airlines flight 879 (AAL879), a Boeing MD-82, and American Airlines flight 93 (AAL93), a Boeing 767, passed within 0.35 nautical miles at 3400 feet while on approach to O'Hare International Airport (ORD), Chicago, Illinois. AAL93 was a scheduled passenger flight from Dublin, Ireland, to ORD, carrying 12 crew and 202 passengers. AAL879 was a scheduled passenger flight between St. Louis and ORD, carrying 5 crew and 105 passengers. There was no damage reported to either aircraft, and no injuries to any of the occupants. Following the incident, both aircraft continued to ORD and landed normally. There was no investigation of the event until the Federal Aviation Administration (FAA) received a complaint from the pilot of AAL93 two days after it occurred. The FAA's investigation revealed that the incident was an operational error by air traffic control that resulted in loss of separation between the two aircraft.

AAL93 was in communication with the Center Arrivals controller, on an extended straight-in approach to runway 27L at ORD. The aircraft was initially cleared for an Instrument Landing System (ILS) approach, but was eventually cleared for a visual approach following this incident. AAL879 was in communication with the West Arrivals controller, and was being vectored from a left downwind to the final approach course for runway 28 at ORD. At 1713:36, the West controller advised AAL879 of preceding traffic at 10 o'clock and three miles turning toward the airport, and instructed the crew to fly heading 350. The crew reported the traffic in sight and acknowledged the heading. At 1715:35, the West controller instructed an uninvolved aircraft to descend to 4000 feet, and a pilot responded, "blocked." The controller repeated the instruction, and the pilot acknowledged. At 1715:47, the crew of AAL879 asked, "AAL cleared [for] the visual?" The West controller responded, "AAL879 is cleared for the visual approach to 28, and the tower's... uh 120... are you turning uh left to 250 and descend to 2500." At 1716:00, AAL879 responded, "uh 250 and down to 25." At 1716:30, the West controller again cleared AAL879 for a visual approach to 28 and instructed the crew to contact the tower.

Meanwhile, the Center Arrival controller was handling arrival aircraft inbound to runway 27L, including AAL93. At 1715:44, the pilot of AAL93 transmitted, "American we're going to be reacting to a super 80." The Center controller did not understand the transmission and asked, "Who was that again?" AAL93 transmitted, "American uh 93 we got a super 88 crossing our flight path right now on 27L. The Center controller responded, "American 93 heavy roger he's doing a visual to 28. Maintain visual separation with him, but if you need to turn right you can." At 1716:03, the pilot responded, "We're going to have to – he's uh on our centerline." At 1716:13, the controller asked, "AAL93 heavy do you see the airport?" The pilot replied, "yeah – airport in sight – he's uh clear." The Center controller issued a visual approach clearance for runway 27L. At 1716:39, the controller instructed AAL93 to contact the tower. There was no further discussion of the incident on the frequency.

In a written statement provided to the Safety Board by American Airlines, the captain of AAL93 reported, "...[the first officer] sighted traffic at 10 o'clock slightly low who was headed northbound and appeared at the time to be on base leg in closed traffic for runway 28. Not being on the same frequency and not given a traffic alert from our controller we continued our approach to 27L. [The first officer] (FO) called traffic in sight and I then queried our controller regarding the intentions of the S-80, who appeared to have overshot runway 28. From the Captain's perspective, with wings level on a northerly heading, I felt the S-80 might be lining

up on our runway instead. With the S-80's nose still bore sighted at us, at approximately 3500 ft I instructed the FO to turn away to the right to give us some breathing room. About this time we received an [resolution alert] (RA) from [the] traffic collision avoidance system] to climb. The FO stated he felt very uncomfortable to go belly up to the S-80 but stopped his descent while jinking to the right. Roughly co-altitude and a half mile away the S-80 commenced a hard descending turn back to the south complex. Once separation was attained and the S-80 well below and behind us, we maneuvered back onto runway 27L centerline, dirtied up and continued approach and landing. My main concern obviously was the potential midair due to lack of separation while maneuvering to an RA. However other concerns from our end, include the possible missed communication from ATC or lack thereof, and/or confusion on whether the S-80 was cleared to the wrong runway or might have mistaken our runway for his. Thank God for all concerned that the ASAP program is back so we can put this incident in the proper forum to have it resolved and the equipment on board these days is capable of saving lives when an irregularity like this, although seldom, can happen!!"

The captain of AAL879 reported, "We were being vectored for the LOC/Visual approach to runway 28 at ORD in clear weather. Our last clearance was to fly heading 330 degrees at 4,000 feet, 180 knots. We were not given an intercept heading, nor were we cleared for a visual approach. As we approached the localizer I directed the FO to ask for an intercept turn and/or approach clearance. He was unable to do so immediately as there was a good deal of congestion on the frequency. He was able to query Approach as we were passing through the localizer on the previously assigned 330 degree heading. Approach responded with an immediate turn to 250 degrees and descent to 2,500 feet. As I began the turn and descent we received an RA requiring an increased descent rate. I increased both the descent rate and bank angle and the RA ceased. As we re-intercepted the localizer from the north approach cleared us for the visual approach and handed us off to tower. The rest of the flight was uneventful.

When interviewed, the West Arrival controller stated that he had been on position for approximately 45 minutes. The airport was in a west configuration, using visual approaches to runways 28, 27L, and 27R. In that configuration, the West Arrival controller was required to clear successive arrival traffic to visually follow preceding traffic to runway 28. When AAL879 was on left base for the runway, the WA controller pointed out the traffic for AAL879 to follow and the pilot reported the aircraft in sight. Normal practice would have been to clear AAL879 for the visual approach at that time, but the WA controller did not do so. He could not recall any specific distractions that may have caused him to omit the required clearance. He first realized that something may have gone wrong when AAL879 asked if they were cleared for the visual approach. The WA controller thought that the pilot was simply confirming a previously issued visual approach clearance. He cleared AAL879 for the visual approach, but then realized that something was wrong as he noticed that the aircraft was continuing north past the runway 28 final approach course. He instructed the pilot to turn to heading 250 and descend to 2500 feet to get away from AAL93.

The Center Arrival controller was responsible for AAL93. He stated that he did not hear the first transmission from AAL93 asking about the traffic. He responded to the transmission by asking who called, and was looking for a strip on AAL93 when he noticed the conflicting aircraft. The pilot of AAL93 stated that there was an MD80 on his [approach] centerline. The Center Arrival controller told AAL93 that the other aircraft was on a visual for the parallel runway and that he (AAL93) could turn right as necessary to avoid AAL879.

After that instruction, the Center Arrival controller stated that it looked like AAL93 deviated a little to the right. Because the aircraft was then off the ILS and there was no conflicting traffic on the 27R final, the Center Arrival controller cleared AAL93 for a visual approach to 27L.

When asked whether he thought a safety alert was necessary, the Center Arrival controller stated that AAL93 had reported the other aircraft in sight and that a safety alert was not necessary.

When asked why he did not report the event, the Center Arrival controller stated that he assumed the event was being handled. He stated that "...everybody saw it" and thought that the supervisor would handle it. However, he did not directly observe the supervisor's actions during the event.

When the incident occurred, the front line manager was monitoring the operation from the supervisory radar position. She noticed AAL879 was not turning toward the airport. The field of the data block indicated that AAL879 had been cleared for a visual approach, so she assumed that the aircraft had crossed through the final approach course. She went to the West Arrival approach controller's position. When she got there, she heard the controller turning AAL879 on a 250 heading back toward the airport and reissuing the visual approach clearance. AAL879 was diverging from AAL93. At that point, she assumed everything was okay and returned to the supervisory scope. Her assessment was that the incident resulted from an overshoot by an aircraft previously cleared for a visual approach. She took no further action.

History of Flight

Approach-IFR final approach	Near midair/TCAS alert/loss of separation (Defining event)
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Aircraft and Owner/Operator Information

Aircraft Manufacturer:	BOEING	Registration:	
Model/Series:	767	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	
Landing Gear Type:	Tricycle	Seats:	
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2
Airframe Total Time:		Engine Manufacturer:	
ELT:	Not installed	Engine Model/Series:	
Registered Owner:		Rated Power:	
Operator:		Air Carrier Operating Certificate:	Flag carrier (121)

Meteorological Information and Flight Plan

Observation Facility, Elevation:	ORD, 672 ft msl	Observation Time:	1151 CDT
Distance from Accident Site:	8 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	90°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Few / 5000 ft agl	Temperature/Dew Point:	22° C / 16° C
Lowest Ceiling:	Broken / 20000 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	12 knots, 230°	Visibility (RVR):	
Altimeter Setting:	29.83 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Dublin (EIDW)	Type of Flight Plan Filed:	IFR
Destination:	Chicago, IL (ORD)	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	Air Traffic Control; Class B

Airport Information

Airport:	Chicago O'Hare International (ORD)	Runway Surface Type:	
Airport Elevation:	672 ft	Runway Surface Condition:	
Runway Used:		IFR Approach:	ILS; Visual
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	12 None	Aircraft Damage:	None
Passenger Injuries:	202 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	214 None		

Administrative Information

Investigator In Charge (IIC):	Scott J Dunham	Adopted Date:	03/03/2010
Additional Participating Persons:			
Publish Date:	03/03/2010		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=73960		

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