



# National Transportation Safety Board Aviation Accident Data Summary

<b>Location:</b>	Yuma, AZ	<b>Accident Number:</b>	DCA11MA039
<b>Date &amp; Time:</b>	04/01/2011, 1557 MST	<b>Registration:</b>	N632SW
<b>Aircraft:</b>	BOEING 737	<b>Injuries:</b>	1 Minor, 121 None
<b>Flight Conducted Under:</b>	Part 121: Air Carrier - Scheduled		

## Analysis

The Safety Board's full report is available at [http://www.ntsb.gov/investigations/reports\\_aviation.html](http://www.ntsb.gov/investigations/reports_aviation.html). The Aircraft Accident Brief number is NTSB/AAB-13/02.

On April 1, 2011, about 1558 mountain standard time (MST), a Boeing 737-3H4, N632SW, operating as Southwest Airlines flight 812 experienced a rapid decompression while climbing through flight level 340. The flight crew conducted an emergency descent and diverted to Yuma International Airport (NYL), Yuma, Arizona. Of the 5 crewmembers and 117 passengers on board, one crewmember and one nonrevenue off-duty airline employee passenger sustained minor injuries. The airplane sustained substantial damage; postaccident inspection revealed that a section of fuselage skin about 60 inches long by 8 inches wide had fractured and flapped open on the upper left side above the wing. The flight was conducted under the provisions of 14 Code of Federal Regulations (CFR) Part 121 as a regularly scheduled domestic passenger flight from Phoenix Sky Harbor International Airport, Phoenix, Arizona, to Sacramento International Airport, Sacramento, California.

## Flight Events

Enroute-climb to cruise - Aircraft structural failure

## Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the improper installation of the fuselage crown skin panel at the S-4L lap joint during the manufacturing process, which resulted in multiple site damage fatigue cracking and eventual failure of the lower skin panel. Contributing to the injuries was flight attendant A's incorrect assessment of his time of useful consciousness, which led to his failure to follow procedures requiring immediate donning of an oxygen mask when cabin pressure is lost.

## Findings

Aircraft-Aircraft structures-Fuselage-Fuselage main structure-Incorrect service/maintenance - C  
Personnel issues-Experience/knowledge-Knowledge-Knowledge of procedures-Cabin crew - F

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	BOEING	<b>Registration:</b>	N632SW
<b>Model/Series:</b>	737 300	<b>Engines:</b>	2 Turbo Fan
<b>Operator:</b>	SOUTHWEST AIRLINES CO	<b>Engine Manufacturer:</b>	CFM
<b>Air Carrier Operating Certificate:</b>	Flag carrier (121)	<b>Engine Model/Series:</b>	56
<b>Flight Conducted Under:</b>	Part 121: Air Carrier - Scheduled		

## Meteorological Information and Flight Plan

<b>Observation Facility, Elevation:</b>		<b>Weather Information Source:</b>	Unknown
<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Lowest Ceiling:</b>	
<b>Condition of Light:</b>	Day	<b>Wind Speed/Gusts, Direction:</b>	
<b>Temperature:</b>		<b>Visibility:</b>	
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Phoenix, AZ (PHX)	<b>Destination:</b>	Sacramento, CA (SMF)

## Airport Information

<b>Airport:</b>	Yuma International Airport (NYL)	<b>Runway Surface Type:</b>	N/A
<b>Runway Used:</b>	N/A	<b>Runway Surface Condition:</b>	Dry
<b>Runway Length/Width:</b>			

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor, 4 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	117 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None

## Administrative Information

<b>Investigator In Charge (IIC):</b>	William R English	<b>Adopted Date:</b>	02/26/2014
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=78737">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=78737</a>		

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