

# Occurrence Report

B7873

<b>State reporting</b>	Taiwan Island	<b>Date entered</b>	2012/3/1
<b>Reporting org.</b>	Taiwan (ASC)	<b>Report last modified</b>	2014/7/9 PM 04:52:30
<b>State file number</b>	ASC-AAR-00-11-001	<b>Report status</b>	Closed

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**Headline** Cabin Explosion and Fire during landing roll at Hua-Lien airport, Uni Air B7873, MD-90-30

<b>Occurrence class</b>	Accident	<b>Occurrence category</b>	SEC: Security related F-NI: Fire/smoke (non-impact)
<b>Local date</b>	1999/8/24 PM 12:36:00	<b>UTC date</b>	1999/8/24 AM 04:36:00
<b>State/area of occurrence</b>	Taiwan Island	<b>Latitude of occ</b>	24:01 North
<b>Location of occ</b>	RCYU Airport	<b>Longitude of occ</b>	121:37 East

## Aircraft Involved

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<b>Manufacturer/model</b>	MCDONNELL-DOUGLAS - MD90-30	<b>Aircraft registration</b>	B-17912
<b>Call sign</b>	GLORY	<b>Operator</b>	Taiwan - Uni Air - (to be coded)
<b>Flight phase</b>	Landing		

**TAIWAN ISLAND, ASC-AAR-00-11-001****Filing information**

<b>Headline</b>	Cabin Explosion and Fire during landing roll at Hua-Lien airport, Uni Air B7873, MD-90-30		
<b>State reporting</b>	Taiwan Island	<b>Date entered</b>	2012/3/1
<b>State file number</b>	ASC-AAR-00-11-001	<b>Reporting org.</b>	Taiwan (ASC)

**When**

<b>Local date</b>	1999/8/24 PM 12:36:00	<b>UTC date</b>	1999/8/24 AM 04:36:00
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**Where**

<b>State/area of occurrence</b>	Taiwan Island	<b>Latitude of occ</b>	24:01 North
<b>Location of occ</b>	RCYU Airport	<b>Longitude of occ</b>	121:37 East

**Classification**

<b>Occurrence class</b>	Accident	<b>Occurrence category</b>	SEC: Security related F-NI: Fire/smoke (non-impact)
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**Severity**

<b>Damage aircraft</b>	Destroyed	<b>Damage aerodrome</b>	None
<b>Third party damage</b>	No	<b>Injury level</b>	Fatal

**Injury totals**

	Fatal	Serious	Minor	None	Unknown	Total
<b>Total on ground</b>	0	0	0	0	0	0
<b>Total on aircraft</b>	1	13	14	68	0	96
<b>Grand total</b>	1	13	14	68	0	96

**ATM relation**

<b>ATM contribution</b>	None	<b>Effect on ATM service</b>	No effect
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**NARRATIVE (ENGLISH)**

At 12:36 on August 24 1999, local time (04:36 UTC), UNI AIR Flight No. 873 (serving Taipei - Hualien) had just landed and was rolling on Runway 21 at the Hualien Airport, when a explosion was heard in the front section of the passenger cabin, followed by smoke and then fire. The pilot immediately braked, brought the aircraft to a stop on the runway. Then, after lowering the passenger evacuation slides and initiating an emergency passenger evacuation, the pilot proceeded to call the tower for help. Upon receiving this call, fire squads at both the Hualien Airport and the Air Force Wing rushed to the scene to extinguish the fire. The fire was eventually put out at 13:45. While the upper part of the fuselage was completely destroyed, 90 passengers plus the crew of 6 was safely evacuated. Casualties included 14 seriously wounded passengers and another 14 that suffered minor injuries.

Most of the wounded passengers suffered burns. Fragments produced by the explosion struck 1 passenger. Probable cause to the accident A flammable

liquid (gasoline) inside bleach and softener bottles and sealed with silicone was carried on board the aircraft. A combustible vapor formed as the leaking

gasoline filled the stowage bin, and the impact of the landing aircraft created a short in a battery. The short ignited the gasoline vapor and created the

**NARRATIVE (ENGLISH)**

explosion. Contributing factors to the accident 1. The Civil Aeronautical Administration Organic Regulations and its operational bylaws fail to designate any entity as responsible for hazardous materials. 2. The Aviation Police fail to properly recruit and train personnel, to include preparing training materials and evaluating training performance. Some new recruits were found to have not received any formal security check training, but instead were following instructions from senior inspectors. Consequently, new inspectors cannot be relied upon to identify hazardous materials. 3. The detectors and inspectors failed to detect the hazardous materials. The detectors used by the Aviation Police did not detect the banned motorcycle batteries, nor did security inspectors detect the liquid bleach, a banned corrosive substance.

**EVENTS****Explosion - passenger cabin , during Landing roll. {Aircraft - B-17912}**

Cargo security check : Not detected

*Aerodrome security staff., Human interface-training : Inadequate*

*Government - Civil Aviation Authority/Administration, Human interface-procedures : Lack of range/coverage*

Security equipment in general : Not detected; Limited

**Damage to aircraft , during Landing roll. {Occurrence}****Evacuation , during Landing roll. {Occurrence}****WEATHER****General weather conditions**

<b>Weather conditions</b>	VMC	<b>Light conditions</b>	Daylight
<b>Weather relevant</b>	No	<b>Wind speed</b>	5.832 kt
<b>Speed measured at</b>	Surface	<b>Visibility</b>	9999 m

**Clouds**

<b>Cloud amount</b>	Few clouds (1/8-2/8)	<b>Height of cloud base</b>	1640.42 ft
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**Temperature**

<b>Air temperature</b>	32 C	<b>Dew point</b>	25 C
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**Weather reports**

<b>METAR</b>	<b>Report validity</b>	<b>Content wx report</b>
	Valid	

**MCDONNELL-DOUGLAS - MD90-30, B-17912****Aircraft identification**

<b>Manufacturer/model</b>	MCDONNELL-DOUGLAS - MD90-30	<b>State of registry</b>	Taiwan Island
<b>Year built</b>	1996	<b>Aircraft registration</b>	B-17912
<b>Aircraft serial number</b>	53536	<b>Call sign</b>	GLORY
		<b>Flight number</b>	B7873

**Aircraft Operation**

<b>Operator</b>	Taiwan - Uni Air - (to be coded)	<b>Operation type</b>	Commercial Air Transport - Scheduled revenue ops - Domestic - Passenger
<b>Operator type</b>		<b>ICAO information</b>	

**Aircraft description**

<b>Aircraft category</b>	Fixed wing	<b>Wake turb. category</b>	Medium
<b>Propulsion type</b>	Turbofan	<b>Mass group</b>	27 001 to 272 000 Kg
<b>Number of engines</b>	2	<b>Maximum take-off mass</b>	75296 kg
<b>Landing gear type</b>	Tricycle, retractable	<b>GNSS installed</b>	
<b>EFIS</b>	Yes, full		

**Aircraft status**

<b>Total cycles a/c</b>	7736	<b>Maintenance docs.</b>	Current
<b>Aircraft total time</b>	4929 Hour(s)	<b>Airworthiness cert.</b>	Valid

**Fuel**

<b>Fuel type used</b>	Turbine engine fuel - Jet A-1 (F35 NATO)	<b>Recommended fuel type</b>	
<b>Fuel quantity on board</b>			

**HISTORY OF FLIGHT****Itinerary**

<b>Last departure point</b>	Taiwan - RCSS (TSA): Taipei/Songshan Airport - (to be coded)	<b>Flight phase</b>	Landing
<b>Planned destination</b>	Taiwan - RCYU (HUN): Hualien Airport - (to be coded)	<b>Duration of flight</b>	18 Minute(s)
		<b>Occ. on ground</b>	Yes

**ATS route**

<b>ATS route name</b>	b591	<b>SID route</b>	
<b>ATS route type</b>	RNAV	<b>STAR</b>	
<b>Relevant segment</b>			

**Speed and altitude at first event**

<b>Speed (first event)</b>	48.596 kt	<b>True airspeed</b>	
<b>Type of speed</b>	Indicated airspeed		

**Landing**

<b>Type of landing</b>	Regular landing	<b>Automatic landing</b>	
<b>Electronic landing aids</b>		<b>Landing location.</b>	

**Person at controls**

<b>Person at controls</b>	Pilot-in-command
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**INJURIES****Injuries**

	Fatal	Serious	Minor	None	Unknown	Total
Pilot	0	0	0	1	0	1
Co-pilot	0	0	0	1	0	1
Cabin crew	0	0	0	4	0	4
Other flight crew	0	0	0	0	0	0
Crew Total	0	0	0	6	0	6
Passengers	1	13	14	62	0	90
Other on Aircraft	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>13</b>	<b>14</b>	<b>68</b>	<b>0</b>	<b>96</b>

**Injury types**

	Fatal injuries	Non-fatal injuries	Unknown
Burns	1	15	0
Drowning	0		0
Fumes/gases	0	1	0
Impact	0	0	0
Shock exposure	0	0	0
Other reasons	0	2	0
Unknown	0	9	0

**Autopsy**

Persons autopsied	None
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**AIRCRAFT RECORDINGS****Cockpit voice recorder**

<b>CVR location</b>	Rear fuselage	<b>CVR recovery</b>	Recovered
<b>CVR Recording medium</b>	Solid state	<b>Underwater locator (CVR)</b>	
<b>Number of channels</b>	4	<b>CVR Reason for data loss</b>	None/not applicable
<b>CVR Recording duration</b>	30 Minute(s)	<b>CVR Recording quality</b>	Good
<b>Hot microphone</b>	yes		

**Flight data recorder**

<b>FDR location</b>	Rear fuselage	<b>FDR recovery</b>	Recovered
<b>FDR Recording medium</b>	Solid state	<b>Underwater locator (FDR)</b>	
<b>Number of parameters</b>	140	<b>Reason for data loss</b>	
<b>FDR Recorder type</b>	Digital FDR	<b>FDR data recovery</b>	Completely recovered
		<b>FDR Data usefulness</b>	Useful

**FIRE****Fire start**

<b>Phase fire started</b>	During ground ops	<b>Ignition source of fire</b>	Explosives
<b>Initial location of fire</b>	Passenger cabin	<b>Fuel source</b>	Other

**Aerodrome Rescue Fire Service**

<b>Category published</b>	Cat 7: L 39-49m W 5m	<b>ARFS Time to alert</b>	
<b>Category provided</b>	Cat 7: L 39-49m W 5m	<b>ARFS Time intervention</b>	
<b>Availability ARFS</b>	Available	<b>Fire fighting effectiveness</b>	
<b>Extinguishing agent type</b>		<b>Reason ARFS ineffective</b>	
<b>Extinguishing agent quantity</b>			

**Dangerous goods**

<b>Dangereous goods involved</b>	Yes
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**FLIGHT CREW****PILOT-IN-COMMAND****Flight crew member**

<b>Age</b>	41 Year(s)	<b>Category</b>	Pilot-in-command
<b>Gender - Crew Member</b>	Male		

**Flight crew rest/duty**

<b>Duty last 24 hours</b>	3 Hour(s)	<b>Rest before duty</b>	13.5 Hour(s)
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**Flight crew experience**

	Last 24 hours	Last 90 days	Total
<b>This Aircraft type</b>	3 Hour(s)		1205 Hour(s)
<b>All types</b>	3 Hour(s)		6532 Hour(s)

**Flight crew licences**

License type	Ratings	Validity	Registry State issued	Instructor rating	Instrument rating
Aeroplane pilot - Airline transport pilot	Held required rating	Valid, no waivers	Yes	Yes	

**CO-PILOT****Flight crew member**

<b>Age</b>	35 Year(s)	<b>Category</b>	Co-pilot
<b>Gender - Crew Member</b>	Male		

**Flight crew rest/duty**

<b>Duty last 24 hours</b>	3 Hour(s)	<b>Rest before duty</b>	72 Hour(s)
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**Flight crew experience**

	Last 24 hours	Last 90 days	Total
<b>This Aircraft type</b>	3 Hour(s)		96 Hour(s)
<b>All types</b>	3 Hour(s)		5167 Hour(s)

**Flight crew licences**

License type	Ratings	Validity	Registry State issued	Instructor rating	Instrument rating
Aeroplane pilot - Airline transport pilot	Held required rating	Valid, no waivers	Yes		

**AERODROME****Aerodrome identification**

<b>Aerodrome type</b>	Land	<b>Aerodrome latitude</b>	24:01 North
<b>Location indicator</b>	Taiwan - RCYU (HUN): Hualien Airport - (to be coded)	<b>Aerodrome longitude</b>	121:37 East
<b>Aerodrome status</b>	Public aerodrome	<b>Elevation above MSL</b>	52.493 ft

**RECOMMENDATIONS****Recommendations**

<b>Recommendations</b>	Personnel - Study/review Procedures - Study/review Personnel - Management Procedures - Compliance Personnel - Training Other - Study/review Procedures - Inspection
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**MANAGEMENT****Occurrence report**

<b>Report identification</b>	B7873	<b>Report last modified</b>	2014/7/9 PM 04:52:30
<b>Report moderator</b>		<b>Report status</b>	Closed
<b>Report source</b>	Accident/Incident investigation	<b>Reporting form type</b>	ICAO - Final Report
<b>Date report created</b>	2012/3/1 PM 03:37:47		