



Australian Government

Australian Transport Safety Bureau

Flight path infringement involving a Cessna 172M, VH-EJM and a vehicle

Townsville Airport, Queensland on 10 September 2015

ATSB Transport Safety Report
Aviation Occurrence Investigation
AO-2015-122
Final – 28 January 2016

Released in accordance with section 25 of the *Transport Safety Investigation Act 2003*

Publishing information

Published by: Australian Transport Safety Bureau
Postal address: PO Box 967, Civic Square ACT 2608
Office: 62 Northbourne Avenue Canberra, Australian Capital Territory 2601
Telephone: 1800 020 616, from overseas +61 2 6257 4150 (24 hours)
Accident and incident notification: 1800 011 034 (24 hours)
Facsimile: 02 6247 3117, from overseas +61 2 6247 3117
Email: atsbinfo@atsb.gov.au
Internet: www.atsb.gov.au

© Commonwealth of Australia 2016



Ownership of intellectual property rights in this publication

Unless otherwise noted, copyright (and any other intellectual property rights, if any) in this publication is owned by the Commonwealth of Australia.

Creative Commons licence

With the exception of the Coat of Arms, ATSB logo, and photos and graphics in which a third party holds copyright, this publication is licensed under a Creative Commons Attribution 3.0 Australia licence.

Creative Commons Attribution 3.0 Australia Licence is a standard form license agreement that allows you to copy, distribute, transmit and adapt this publication provided that you attribute the work.

The ATSB's preference is that you attribute this publication (and any material sourced from it) using the following wording: *Source:* Australian Transport Safety Bureau

Copyright in material obtained from other agencies, private individuals or organisations, belongs to those agencies, individuals or organisations. Where you want to use their material you will need to contact them directly.

Addendum

Page	Change	Date

Flight path infringement involving a Cessna 172M, VH-EJM and a vehicle

What happened

On 10 September 2015, at about 0930 Eastern Standard Time (EST), an instructor and student pilot of a Cessna 172M aircraft, registered VH-EJM (EJM), were conducting circuits at Townsville Airport, Queensland.

The student was flying the aircraft and on mid-final for a touch-and-go landing on runway 07, when the instructor noticed a truck on the perimeter road, near the threshold to runway 07. The truck had not held at the stop sign. The stop sign required all vehicles to stop, look for aircraft, and not proceed unless there was no aircraft landing (Figure 1).

Shortly after the instructor sighted the truck, the Townsville Tower air traffic controller advised the pilots of EJM that there was a truck on the perimeter road. The instructor acknowledged the controller and they proceeded with the landing.

The aircraft conducted a touch-and-go and continued with several more circuits without incident.

Figure 1: Townsville airport perimeter road near runway 07



Source: Google earth, modified by the ATSB

Instructor and aircraft operator comments

The instructor commented that another vehicle on the perimeter road, ahead of the truck, also did not stop at the stop sign.

The operator reported this could potentially have been a more serious issue if the student pilot was conducting their first solo flight, as there would be greater risk that the student might get low on the approach and might not see the truck.

Department of Defence investigation

The Department of Defence conducted an investigation into the serious incident. They determined that a contractor, driving a truck on the western perimeter road, failed to stop at the stop sign near the threshold of runway 07. VH-EJM missed the top of the truck by about 4 to 5 metres and the aircraft landed without incident.

The Department of Defence also conducted a subsequent investigation into an incident where a contractor driving a truck on the western perimeter road failed to stop at the stop sign near the threshold of runway 07. The pilot of a Cessna C172RG aircraft that was on short final, saw the truck coming towards their approach path and informed air traffic control. Air traffic control acknowledged the transmission. The truck stopped almost directly under the path of the arriving aircraft and the aircraft landed without incident.

The investigation determined that the stop signs located on the perimeter road on approach to runway 07 provided drivers with clear direction to stop, observe and give way to approaching aircraft. The failure of the drivers of the vehicles in these incidents to observe those protocols created the potential for a collision between the vehicle and the aircraft.

Safety action

Whether or not the ATSB identifies safety issues in the course of an investigation, relevant organisations may proactively initiate safety action in order to reduce their safety risk. The ATSB has been advised of the following proactive safety action in response to this occurrence.

Department of Defence

As a result of this occurrence, the airport operator has advised the ATSB that they are taking the following safety actions:

- briefing material for contractors has been updated placing greater emphasis on safety around runways.
- flashing lights have been installed on the stop signs, for the under-run service road, to improve observation of the sign by drivers.

ATSB comment

At the time of writing this report, two other similar events occurred on 8 and 10 December 2015. The occurrences were subsequent to the update of briefing material for contractors and the installation of flashing lights on the stop signs. The Department of Defence are conducting a review of their safety actions to see if there are any other options to prevent a re-occurrence.

Safety message

The International Civil Aviation Organization (ICAO) has identified runway safety as one of its priorities and has been working with countries and aviation organisations globally to reduce runway safety accidents. ICAO has developed a runway safety [website](#), which offers a range of information and products to assist the aviation community to improve runway safety.

In addition, ICAO has published a [Manual on the Prevention of Runway Incursions Doc 9870 AN/463](#), available from the ICAO website. The manual includes information on the prevention of runway incursions. The manual discusses that deficiencies in design, training, technology, procedures, regulations and human performance can result in a system break down and safety being compromised. A pilot, as part of the last line of defence, cannot assume that anyone will do the right thing, like the driver of the truck stopping at the stop sign, and they need to be prepared to re-evaluate the planned flight.

Additional information on runway safety is also available from the Airservices Australia webpage [Runway safety](#).

In addition, Airservices Australia has published a guide for airside drivers, [The Airside Drivers Guide to Runway Safety](#), which focuses on four aspects of operating safely on an aerodrome:

1. planning your aerodrome operation
2. aerodrome procedures
3. communications
4. aerodrome markings, signs and lights.

General details

Occurrence details

Date and time:	10 September 2015 – 0930 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Runway events – other	
Location:	Townsville Airport, Queensland	
	Latitude: 19° 15.15' S	Longitude: 146° 45.92' E

Aircraft details

Manufacturer and model:	Cessna 172M	
Registration:	VH-EJM	
Serial number:	17262423	
Type of operation:	Flight training – training dual	
Persons on board:	Crew – 2	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to operations involving the travelling public.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.