FINAL REPORT

AAIU Synoptic Report No: 2006-013
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In accordance with the provisions of SI 205 of 1997, the Chief Inspector of Accidents, on 24/05/05, appointed Mr. John Hughes as the Investigator-in-Charge to carry out a Field Investigation into this occurrence and prepare a Synoptic Report.

Aircraft Type and Registration:	Cessna 172 M, EI-BUA
No. and Type of Engines:	Lycoming L-36760-27A
Aircraft Serial Number:	17265451
Year of Manufacture:	1975
Date and Time (UTC):	23 May 2005 @ 10.30 hrs
Location:	RWY 25 at Weston Airport, Leixlip, Co. Kildare
Type of Flight:	Training
Persons on Board:	Crew - one Passengers - one
Injuries:	Crew - Nil Passengers - Nil
Nature of Damage:	Propeller sustained damage to both tips. Engine removal for shock test.
Commander's Licence:	UK CPL
Commander's Details:	Male, aged 28 years
Commander's Flying Experience:	750 hours of which 97 were on type
Information Source:	Airport Manager AAIU Field Investigation.

SYNOPSIS

The aircraft was hired out from the owner for a practice circuit detail. After a normal approach and touchdown on RWY 25, a gust of wind caused the nose of the aircraft to drop. The propeller struck the runway surface and both blade tips were damaged. There were no reported injuries and the pilot and his passenger exited the aircraft in the normal way.

1. FACTUAL INFORMATION

1.1 History of the Flight

The pupil, who was flying the aircraft (PF), was a PPL holder with a total of 120 flying hours and 5 hrs flying experience on the Cessna 150. He was being checked out to fly a Cessna 172 aircraft.

The pupil and his instructor took off on a "circuits" detail. The weather was gusty when the aircraft took off at 10.21 hrs. At 10.30 hrs the pupil made a normal approach to RWY 25, which was followed by a touchdown, which was also considered normal. On the roll out a gust of wind caused the left wing to rise and the nose of the aircraft to drop. The instructor took control and took immediate corrective action. Despite this, the propeller struck the runway surface. No one was injured and the runway surface was slightly damaged with propeller indentations along the centreline.

1.2 Meteorological Conditions

The forecast conditions given to the pilot by Met Eireann were as follows:

Wind:	225/20 G 30kt.
Visibility:	10 Km.
Significant Weather:	NIL.
Cloud:	SCT 1,600 ft
Temperature/Dew Point:	12/06

The actual conditions were:

Wind:	220/24 G 34
Visibility:	10 Km.
Significant Weather:	NIL
Cloud:	SCT 1,800 ft.
Temperature/Dew Point:	12/06.

3. Crosswind Landings

The manufacturer states that there is no crosswind limitation for the 172 M. The demonstrated crosswind is 15 knots. The following is from the Flight Manual relating to crosswinds:

"The maximum allowable crosswind velocity is dependent upon pilot capability as well as aircraft limitations. With average pilot technique, direct crosswinds of 15 knots can be handled with safety".

Generally the pilot will use minimum flap setting required for the field length and use a wing-low, crab or a combination method of drift correction and land in a nearly level altitude.

4. Pilots Comments

The instructor said afterwards that his flap setting was less than 20º. He assessed that the cause of the incident was due to low level turbulence and strong gusty wind conditions.

2. ANALYSIS

The forecast weather conditions obtained by the instructor prior to flight would indicate that the forecast crosswind element might exceed 15 kts. The actual conditions, obtained at 10.00 hrs, indicated a wind of 220/24 G 34, which at 30º left of runway heading would give a maximum crosswind gust of 17 kts. Whilst the crosswind might have been well within the capability of the instructor, it was not so for the pupil who at the time was being upgraded from a smaller Cessna 150 aircraft. Mindful of the prevailing crosswind conditions, it would have been prudent for the instructor to reiterate the cross wind landing and roll out technique to the student.

3. CONCLUSIONS

(a) Findings

1. Both propeller blades were damaged on landing.

2. The landing conducted by a pilot with no type experience, but under instruction, was attempted at, or slightly above, the aircrafts recommended cross wind limits.

(b) Cause

1. A gust of wind caused the left wing to rise, the nose to drop, and the propeller to impact the runway surface.

4. SAFETY RECOMMENDATIONS

This report does not sustain any Safety Recommendations.

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