FINAL REPORT

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In accordance with the provisions of SI 205 of 1997, the Chief Inspector of Air Accidents, on 15 May 2008, appointed Mr. Frank Russell as the Investigator-in-Charge to carry out a Field Investigation into this Accident and prepare a Synoptic Report.

Aircraft Type and Registration:	Piper PA44-180, EI-SKR
No. and Type of Engines:	2 x Lycoming 0-360-EIA6D
Aircraft Serial Number:	44-7995008
Year of Manufacture:	1979
Date and Time (UTC):	15 May 2008 @ 09.23 hrs
Location:	Waterford Airport (EIWF)
Type of Flight:	Training
Persons on Board:	Crew - 2
Injuries:	Crew - Nil
Nature of Damage:	Substantial
Commander's Licence:	CPL
Commander's Details:	Male, aged 53 years
Commander's Flying Experience:	1,560 hours, of which 285 were on type
Notification Source:	ATC Waterford Airport
Information Source:	AAIU Accident Report Form submitted by Pilot. AAIU Field Investigation

SYNOPSIS

On returning from a navigation training exercise the Instructor asked the Student pilot to carry out a touch-and-go landing on Runway (RWY) 03. The approach with full flaps and landing was normal. On the ground roll prior to lift off the Student inadvertently raised the undercarriage. The aircraft settled fully on the ground and slid along for some distance before stopping. The crew shut down the aircraft and exited safely. There was no fire and no injuries.

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1. FACTUAL INFORMATION

1.1 History of the Flight

EI-SKR, a Piper Seminole with a crew of one Instructor and a Student pilot, having completed a navigation exercise to Cork and Kilkenny and some general handling, returned to Waterford Airport. Here, the Instructor asked the Student pilot to carry out a touch-and-go landing on RWY 03, before completing the training detail. He recalled that the wind was approximately 060/12 kts, in dry conditions. The Student made a good approach with the correct speed/gear/flap configuration. A normal landing followed in the touch down area. The Instructor noted that the flap lever was still deployed in the fully down position during the roll and he anticipated that the Student would routinely raise the flap and increase power in preparation for take-off. However, the Student reached for the gear lever instead, raised it and said, "gear up" before the Instructor could react and recover the situation. The aircraft collapsed back on the runway and slid along on its underside for about 230 metres, stopping just short of Taxiway Alpha (**Photo No. 1**). Both Instructor and Student evacuated the aircraft safely, having switched off the master switch, magnetos and the mixture control. There was no fire and the nearby Airport Fire Service was quickly on the scene. The airport was closed to operations until EI-SKR was removed from the runway to an adjacent hangar.

1.2 Additional Information

The aircraft was fitted with a Landing Gear Safety (squat) Switch. The squat switch is an electrical safety device which, when working properly, prevents an aircraft landing gear retracting when on the ground (see ***Note***). In March 2008, a routine 150-hour maintenance check was carried out at the Operator's maintenance facility. As part of this Inspection the aircraft was jacked up and gear retraction checks were carried out, to include confirmation of operation of the associated warning system. In May 2008, a 50-hour maintenance check was carried out on the warning system, as per the requirements of the Airplane Maintenance Manual. These checks showed that the warning system was serviceable prior to the accident, with no adverse reports by any operating crew immediately prior to the accident flight.

Following the accident, the maintenance facility carried out extensive checks on the warning system and no fault was found with any aspect of the system.

***Note**: The operation of the squat switch is predicated on the full weight of the aircraft being on the wheels, 'weight-on-wheels' as it is often referred to. In this condition it is impossible to retract the landing gear using the gear lever and all normal configuration warnings activate if such an attempt is made, thus confirming that the squat switch is serviceable. In the subject event the aircraft was rolling at speed prior to take-off, thus generating a degree of lift that allowed the aircraft to be "light" on the ground, thus deactivating the squat system.*

1.3 Damage

There was serious ground impact damage to the aircraft, including both propellers damaged beyond repair; both engines suffered shock loading and both flaps damaged beyond repair. In addition, various antennae and aircraft under surfaces were damaged due to the aircraft's sliding action on the ground.

Photo No.1: Showing aircraft on RWY 03 (Waterford ATC photo)

- END -