



**KOMITE NASIONAL KESELAMATAN TRANSPORTASI
REPUBLIC OF INDONESIA**

SHORT SUMMARY REPORT

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Serious Incident Investigation Short Summary Report

Perkasa Flying School

Piper PA-28 Warrior; PK-PBO

Nusawiru Airport, Pangandaran

Republic of Indonesia

24 January 2017

2018

This short summary report was produced by the Komite Nasional Keselamatan Transportasi (KNKT), Transportation Building, 3rd Floor, Jalan Medan Merdeka Timur No. 5 Jakarta 10110, Indonesia.

The short summary report was published based on KNKT Manual which applied for the serious incident involving aircraft maximum mass below 2,250 kg. The short summary report contains the compilation of factual information, safety actions and safety message.

The report is based upon the investigation carried out by the KNKT in accordance with Annex 13 to the Convention on International Civil Aviation, the Indonesian Aviation Act (UU No. 1/2009) and Government Regulation (PP No. 62/2013).

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Jakarta, May 2018
**KOMITE NASIONAL
KESELAMATAN TRANSPORTASI
Chairman**



SOERJANTO TJAHHJONO

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1 FACTUAL INFORMATION

On Tuesday, 24 January 2017 a Piper PA-28 Warrior aircraft registered PK-PBO was being operated by student pilot of Perkasa Flying School on solo flight training area exercise.

The aircraft experienced abnormal runway contact and stop on the right runway shoulder approximately 1,000 meters from the beginning of runway 07 of Nusawiru airport (WICN) Pangandaran, West Java.

The investigation is based on the data collected on site, interview with the student pilot and radio communication record.

At approximately 0630 LT (2330 UTC¹), student pilot attended morning briefing at Perkasa Flying School flight operation office, prior to perform solo flight exercise to Pangan training area.

At 0001 UTC, the student pilot requested departure clearance to the Nusawiru Aerodrome Flight Information Service (AFIS) officer. Pangan training area was not available at that time as it was occupied by another aircraft and the student pilot advised by AFIS officer to standby.

At 0154 UTC, the student pilot requested clearance for engine start and departure clearance to Nusawiru AFIS controller to conduct solo exercise at the Pangan training area. At the same time there was parachute jumping exercise near Nusawiru area and the student pilot advised by AFIS officer to wait for approximately 15 minutes.

At 0231 UTC, PK-PBO departed and conducted the solo flight exercise in Pangan area.

Approximately 45 minutes after performing the solo flight exercise the student pilot requested to AFIS officer to return to Nusawiru. The AFIS officer advised to return to Nusawiru via point Batu Hiu with altitude of 1,500 feet then joint left downwind runway 07. The flight exercise until final approach was uneventful.

The approach was normal and the AFIS controller reported that the wind was calm. While over the threshold and the throttle being closed, the student pilot experienced wind with unclear direction. The aircraft contacted to the runway and bounced five times. After the fifth bounce, the aircraft landed and the student pilot advised by the AFIS officer to taxi in via taxiway B. To be able to proceed to taxiway B, the student pilot required to make 180° turn using rudder with no success due to the nose wheel exited the runway and the aircraft was stuck on the grass. The AFIS controller advised the student pilot to shut down the engine and wait for towing assistance.

The runway was closed for approximately seven minutes for aircraft recovery process. The student pilot was not injured.

¹ The 24-hours clock in Universal Time Coordinated (UTC) is used in this report to describe the local time as specific events occurred. Local time is UTC+7 hours.

The damages to the aircraft were found as follow:

- a. The lower engine cowling scratch;
- b. The nose landing gear bent and the shimmy damper slightly displaced backward;
- c. Both propeller tips bent approximately 10 centimeters from the tips;
- d. Left and right engine lower struts bent;
- e. The fan blower deformed;
- f. The fuel pump deformed and leak.

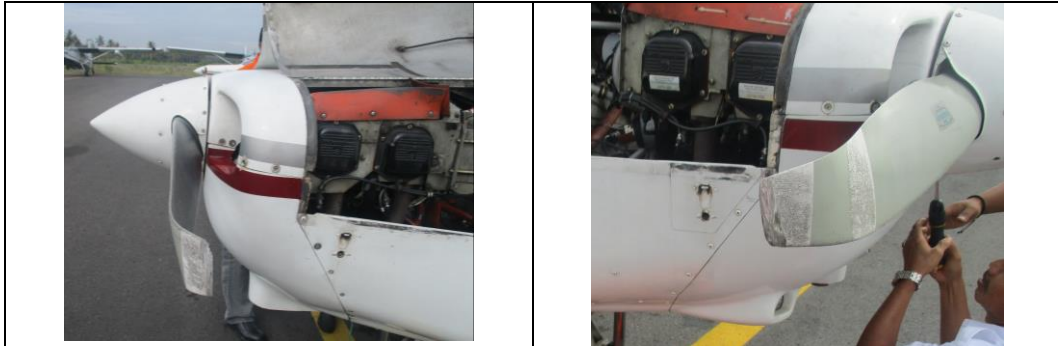


Figure 1: Left and right propeller tips



Figure 2: Left and right engine strut

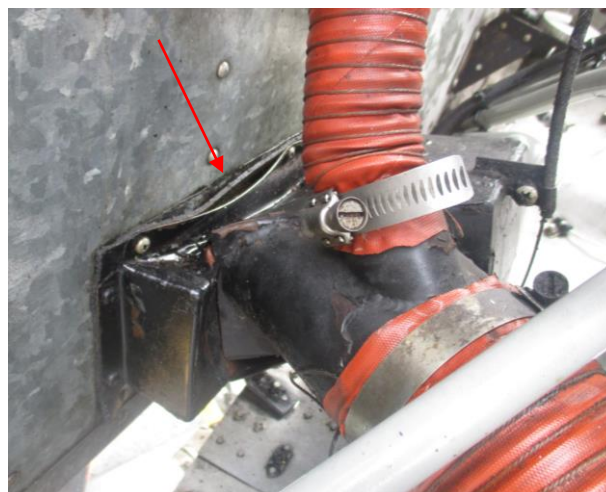


Figure 3: Fan blower deformation

The student pilot was 19 years old, joint to the flying school on 1 August 2016 and held the valid license. The medical certificate was second class medical certificate valid up to January 2017. The pilot experienced 16 hours on Piper Warrior II. The student pilot has been introduced to the bounce recovery during the training.

The bounce recovery as described in the ALAR briefing (https://flightsafety.org/files/alar_bn6-4-bounce.pdf) described as follow:

Bouncing and Bounce Recovery

Bouncing during a landing usually is the result of one or more of the following factors:

- *Loss of visual references;*
- *Excessive sink rate;*
- *Late flare initiation;*
- *Incorrect flare technique;*
- *Excessive airspeed; and/or,*
- *Power-on touchdown (preventing the automatic extension of ground spoilers, as applicable).*

The bounce-recovery technique varies with each aircraft type and with the height reached during the bounce.

Recovery from a Light Bounce (Five Feet or Less)

When a light bounce occurs, a typical recovery technique can be applied:

Maintain or regain a normal landing pitch attitude (do not increase pitch attitude, because this could lead to a tail strike);

- *Continue the landing;*
- *Use power as required to soften the second touchdown; and,*
- *Be aware of the increased landing distance.*

Recovery from a High Bounce (More Than Five Feet)

When a more severe bounce occurs, do not attempt to land, because the remaining runway may be insufficient for a safe landing.

The following go-around technique can be applied:

- *Maintain or establish a normal landing pitch attitude;*
- *Initiate a go-around by activating the go-around levers/switches and advancing the throttle levers to the go-around thrust position;*
- *Maintain the landing flaps configuration or set a different flaps configuration, as required by the aircraft operating manual (AOM)/quick reference handbook (QRH).*
- *Be prepared for a second touchdown;*

- *Be alert to apply forward pressure on the control column and reset the pitch trim as the engines spool up (particularly with underwing-mounted engines);*
- *When safely established in the go-around and when no risk remains of touchdown (steady positive rate of climb), follow normal go-around procedures; and,*
- *Reengage automation, as desired, to reduce workload.*

2 SAFETY MESSAGE

The bounce recovery as described in the ALAR briefing described several factors that may contribute to the bounce landing including incorrect flare technique. The evidence of propeller tips bent, lower engine cowl scratch and nose wheel damage, indicated that the aircraft had experienced nose wheel touch down with low nose attitude.

The aircraft bounce five times prior to safely land. This indicated that the first bounce was not properly recovered. The student pilot has been introduced to the bounce recovery, however during the serious incident flight, the student pilot unable to recover the bounce.

This incident highlights the in-correct flare technique led to the aircraft bounce and improper recovery. The flying school requires ensure adequate training and assessment for the ability of student pilot in handling the aircraft in normal and abnormal condition.

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