

## 4. Conclusion

Based on our investigation reports on accidents (three cases) mentioned in this digest and other small aeroplane accidents investigated/made public, we summarized how these accidents and serious incidents occurred, and what are the lessons which will help prevent recurrence are as follows.

### How “small aeroplane accidents and serious incidents” occurred

#### ◆ Breakdown of operation phase

##### Nearly 90% of accidents and incidents occur during landing or cruising phase

By the operation phase at the time of the accidents and serious incidents, the number of accidents during landing phase was 39 (52.7%), during cruising phase 25 (33.8%), take-off phase 5 (6.8%) and others. Accidents and serious incidents landing and cruising phase account for nearly 90%.

#### ◆ Breakdown of flight purposes

##### Leisure, training and familiarity flights account for approx. 70%

By the flight purpose, the number of leisure flights was 21 (28.4%), familiarity flights 16 (21.6%), flight training 15 (20.3%) and others. These three categories account for approx. 70%.

#### ◆ Breakdown of cause categories

##### Approx. 80% of accidents and incidents are caused by human factors

The number of accidents and serious incidents caused by human factors was 38 (51.4%) while human and environmental factors 18 (24.3%), human and mechanical factors 5 (6.7%) and others. Approximately 80% accounts for “human factors or combination of multiple factors involving human factors”.

### Lessons from accident investigation

#### ◆ About meteorological information and VFR

Lesson (1) Whether a PIC will commence flying should be carefully decided based on meteorological information before flying VFR.

Lesson (2) A PIC even with onboard GPS or other navigation devices, should not fly into clouds on its path under VFR. Under the situation where continued VFR flight is impossible, he should take actions such as returning to the departed airport at an early stage or changing flight rules to IFR.

#### ◆ About flight training

Lesson (3) For flight training, it is necessary to develop teaching techniques to have student pilots acquire proper flare height and touchdown attitude, and share them among instructors.

Lesson (4) Appropriate training should be given to student pilots to give them decisiveness to execute a go-around without delay through classroom and in flight training to counter the unexpected sink after passing over the runway threshold or bouncing after the touchdown.

### A word from Director for Analysis, Recommendation and Opinion

A lot of accidents involving small aeroplanes are caused by human factors, such as not sufficiently confirming necessary information, etc., inappropriate flight operation, misjudgments, forgetting or assuming something. In addition, it can be said that because a lot of PICs choose to fly VFR without depending on instruments, they are always required to try not to fly into an airspace with a bad visibility condition and to prepare measures for that.

Whether you fly a small aeroplane for leisure and do not routinely fly one or you routinely fly one for business, please go back to basics each time you fly, and continuously develop yourself for improved safety awareness through training and seminars. I believe if each one of you will do these it will lead to the prevention of a lot of accidents and serious incidents.



#### Your comments are most welcome

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