

SUMMARY IN ENGLISH

On April 5, 2023, three SK 60 military training aircraft participated in a two-on-one manoeuvring air combat exercise. The aircraft were operated by the GTU¹ squadron at Swedish Air Force Flight School at Malmen in Linköping. The goal of the exercise was to provide students training in air combat manoeuvres while changing roles, between defensive and offensive, under dynamic conditions and under high G load. The exercise was led by the instructors in the two-ship who were both newly trained GTU flight instructors from the 2022 instructor training course (FIK).

During one of the contacts during the exercise, in connection with a turn reversal, the pilot in the defensive aircraft failed to re-establish visual contact with the other two aircraft. At about 50 metres away, the pilot finally spotted the target aircraft and made an evasive manoeuvre to the right to avoid a mid-air collision. The pilot in the offensive aircraft had simultaneously discovered that there was also a risk of collision between him and the defensive aircraft. The pilot of the offensive aircraft executed therefore a steep evasive manoeuvre downwards and a collision was avoided.

The air combat exercise that was carried out was complex and made high demands on the instructor in terms of advanced flying and the need to maintain safe separation while communicating with the student onboard. This likely affected the instructors visual search pattern in a way that delayed the detection of the target aircraft and delayed sending the Blind/No-joy call.

The sustained and strained situation in the Flight School and the subsequent long-term absence due to work environment factors, indicates an organization under stress and with a lack of resources. This, together with the large number of new postings of GTU-instructors in the fall of 2022 and the consequence of having large relative number of inexperienced GTU instructors, has led to a heavy burden on the training organization. These factors have likely affected the instructors' ability to carry out the demanding flight instruction task and had a direct impact on their working conditions.

The causes for the serious incident were:

The instructor responsible for separation misjudged his position in relation to the other two aircraft, which caused difficulties in re-establishing visual contact. The instructor's focus on teaching the student onboard likely led to a delay in the “Blind/no-joy” call. This resulted in a near mid-air collision.

Contributing factors are:

- The instructor's limited experience in training students on the SK 60.
- The high degree of difficulty of the exercise in relation to the experience of the newly trained instructor.
- Different manoeuvring characteristics of the SK 60 in air combat compared to the JAS 39.

Underlying factors at system level are assessed to be:

¹ GTU – Basic Tactical Training.

- The strained work situation with a number of long-term absentees and rehabilitation treatment measures taken at the Flight School, which has affected the working environment for the instructors at GTU.
- The pilot shortage in the Air Force which has resulted in an urgent need for new GTU-instructors, affected the selection process for new GTU instructors, the implementation of the FIK training course and resulted in an overall lower level of experience among the instructors at GTU.

Safety recommendations

In light of the measures, planned and implemented, by the Armed Forces, as well as the fact that the last GTU training will be carried out from autumn 2023 to spring 2024, SHK refrains from making safety recommendations in this investigation.