

SUMMARY IN ENGLISH

On the morning of 23 August 2021, a serious incident occurred involving a ground vehicle and a Cessna 208B at Arvidsjaur Airport. When the ground vehicle was on the runway, the air traffic controller gave an instruction to the pilot in the Cessna to taxi and then clearance for take-off. The lateral distance between the Cessna and the ground vehicle during take-off has been estimated at 11 metres and, hence the risk of a collision was high.

The driver of the ground vehicle had been given permission by the air traffic controller to enter the runway to carry out a routine runway inspection and bird control. At the same time, the pilot in the Cessna was preparing for take-off. The air trafik controller gave the pilot clearance for take-off.

After the runway inspection and bird control were completed, the driver turned back across the runway and when passing the center line, he discovered the aircraft approaching. The driver continued out to the southern edge of the runway. The Cessna pilot noticed no obstacles during the initial take-off, but when the aircraft lifted, he discovered the vehicle on his right. The air traffic controller became aware of the situation after the aircraft passed the vehicle. While giving this clearance the air traffic controller was engaged in reading up on the new codes for reporting surface conditions that were recently implemented. This resulted in the Flight Progress Board not being checked prior to giving the take-off clearance.

The visibility was good and there were no obstacles that made it difficult for those involved to be seen from the tower. The runway was flat and without a slope, which meant that there was no visibility barrier over the length of the runway.

The Sterile concept was known and had been applied by the Arvidsjaur air traffic control.

The markings and warning lights of the vehicle met the applicable requirements. However, the intensity of the warning light was limited.

The radio communication was carried out using two different frequencies one for air traffic control and one for ground communication. The air traffic controller communicated with the pilot using the frequency and with the driver of the ground vehicle using the frequency for ground communication. The air traffic controller was the only one listening to both frequencies. Monitoring of the tower air traffic frequency by the driver could have improved the driver's perception of the current situation.

The serious incident was caused by the fact that the necessary checks to ensure that the runway was clear were not fully carried out before giving the take-off clearance. A contributing factor to the incident was that the warning light on the ground vehicle had a limited light intensity, which is judged to have reduced the chance of detection of the vehicle on the runway from the tower and from the aircraft's take-off position.

SAFETY RECOMMENDATIONS

The Swedish Transport Agency is recommended to:

- Investigate the need to implement *Sterile concept* in the national ATS-regulation (TSFS 2019: 126). (RL 2022: 01 R1)
- Follow up how adequate situational awareness for relevant ground staff is achieved, for example by monitoring the tower air traffic frequency frequency, at Swedish airports. (RL 2022: 01 R2)