

This document is a translation made by SHK of the original response in Swedish to the safety recommendation. In case of discrepancies between this translation and the Swedish original text, the Swedish text shall prevail in the interpretation of the response.

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Introduction

In its final report, the Swedish Accident Investigation Authority (SHK) has issued four safety recommendations. SHK recommends the Swedish Armed Forces (FM) to consult with the armed forces of Finland and Norway in order to respond to these recommendations. The following response contains the measures taken and planned by FM. In respect to the consultation, the Inspector Flight Safety (FSI) will conduct this at an upcoming meeting with his Finnish and Norwegian counterparts.

As mentioned in the report, the Military Aviation Safety Inspectorate (FLYGI) carried out an inspection during an ongoing exercise and FM has also conducted its own investigation of the incident. Based on these investigations, certain measures have already been taken in preparation of two upcoming exercises where similar incidents could possibly occur: Trident Juncture 18 (TRJE18) and the Arctic Challenge Exercise 19 (ACE19).

In preparation of TRJE18, the Swedish Air Force Chief of Staff (FVC) has given clear instructions to those planning the exercise in regard to the conditions that are to be met in order to carry out the exercise in Swedish airspace:

- The air exercise must be in accordance with Swedish Rules of Military Aviation/Rules of the air (RML-T) and Manuals for Flight/Ground Control Interception (GCI) Operations.
- A Training Order is mandatory and has to be approved by the Swedish Air Force Chief of Staff or whom he designates.
- The Training Order must contain and describe:
 - o How Swedish Air Force representative will be appointed as “Red Card Holder”.
 - o How Swedish GCI participation is taken care of (GCI participation is mandatory to meet the regulations regarding cooperation with Air Traffic Service (ATS))
 - o That aircraft crews and GCI personnel will be briefed by a Swedish GCI and pilot representative regarding “Flying in Sweden FIR”.
- Flight safety reports during the exercise should be sent to flightsafety@mil.se for knowledge.

In addition, there is work under way to more clearly organise the participation of responsible parties in the planning of major exercises in order to influence exercise regulations at an early stage.

Recommendation RM 2018:02 R1

Examine the need of clarifying the term SA (Situation Awareness) in the exercise rules contexts in which the term is used.

Measures taken:

None.

Planned measures:

Efforts are under way to update the governing document for Management of Flight Operations (FOM-A) Fighter Aircraft, Chapter 9, Aerial Combat. This work includes defining the term SA. The document will also describe under which potential circumstances SA may be used as a separation method. It will also clarify for future exercises in Swedish airspace that it is the Swedish definition and control that apply to all participants, unless they are already subject to more restrictive rules.

Timeframe:

Quarter 3 2018.

Responsibility of:

Head of Flight Operations (CF)

Recommendation RM 2018:02 R2

Examine the need to address risks regarding administrative flight phases in connection with exercises and operations.

Measures taken:

Already in preparation of this autumn's TRJE18 exercise, the responsibility for separation of military units has been divided between mission control and the commanders in a different way than during ACE 17. Air combat control will essentially be responsible for separation during approach and return as well as during all steps carried out inside the defined restriction area (R area), but outside the engagement area. There will of course be an Airspace Control Order (ACO) as the basis of all actions within the exercise area. As each formation enters the engagement area, the commander or the formation leader assumes responsibility for separation.

Planned measures:

To regulate the methodology described above within operational control.

Timeframe:

Quarter 3 2018

Responsibility of:

Head of Mission Control (CS)

Recommendation RM 2018:02 R3

Examine the need to conduct a simulation in order to validate the separation plan before the exercise.

Measures taken:

For a number of years, national aerial exercises have been simulated using a combat command centre simulator (StricS). The aim is to verify airspace, method and workload of operators. These simulations are now being introduced in the preparations of TREJ18 and are planned to be implemented for ACE 19 as well.

Planned measures:

FM is looking into the possibility of also simulating traffic flows according to the applicable ACO and Air Tasking Order (ATO) hours before the actual exercise. The purpose of this would be to verify the defined plan in terms of separation and other aspects that are critical to flight safety.

Timeframe:

Quarter 4 2018.

Responsibility of:

CS

Recommendation RM 2018:021 R4

Evaluate the need and the possibilities to share recognized air picture with more participating units.

Measures taken:

NIL

Planned measures:

FM intends to examine the possibility of sharing positioning information to an even greater extent (both digitally and verbally¹) in such a way that flight safety can be increased without compromising the objectives of the exercise.

Timeframe:

Quarter 4 2018

Responsibility of:

CS

¹ Review possibilities of developing the elevator call method in order to improve situation awareness.