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Vår ref: JBS/JK

Deres ref:

Oslo, 21. januar 2020

## **Safety concerns regarding Mixed Fleet Flying (MFF)**

Norsk Flygerforbund (NF) is one of 25 unions within the Norwegian Confederation of Trade Unions (LO). NF represents some 1300 pilots from all different sectors of aviation and many different airlines. This inquiry, highlights our concerns regarding some aspects of the planned implementation of Mixed Fleet Flying (MFF) in Scandinavian Airlines (SAS).

Our concern is based on a.o. worries from members, around the planned implementation of MFF in SAS daily operations. The following has been considered by our Flight Safety Committee experts, and we hereby ask the competent authority to address our concerns, facts and to clarify which countermeasures or planned mitigation to be performed before allowing MFF to be implemented by SAS.

We have been informed that the dialogue between SAS management and the local union reps around the planned implementation of MFF has not been constructive in any way or form. This obviously raises concerns around several flight safety aspects. The International Federation of Airline Pilots Association (IFALPA), being our global umbrella organization for more than 100 000 pilots is does not support flight operations requiring Mixed Fleet Flying (MFF). The reason being that such operations presents the pilot with variations in both flight characteristics, cockpit layout, technology and procedures. Maintaining a high level of pilot competency under such circumstances becomes very challenging and can for this reason put an undesirable strain on the margin of safety. (ref Documentation enclosed). It is therefore necessary to bring our concerns around the planned implementation of MFF in SAS to the Swedish CAA, being the operational regulatory agency having oversight with SAS operations.

As we understand Mixed Fleet Flying (MFF) in SAS could involve the Airbus 320-family (with variations), Airbus 330, Airbus 340 and Airbus 350. SAS is already performing MFF between A330 and A340.

A320/A330/A340 are designed in the same century. However, the A350 is a quite different aircraft and is therefore judged by IFALPA to have major differences to the above mentioned Airbus types. When different versions of older widebodies, and different versions of A320's, are mixed in daily operation, it could in our view complicate matters to a point where flight safety will be threatened.

There is already several different system variances between the A320 series (WX radars, FMS, engine types, etc.). This will again add to even more slightly different systems of the A330. In our view this raises several safety concerns. SAS already has A319, A320, A321 equipped with CFM engines, A321 IAE engines, A320 NEOs. etc. For a line pilot it will be very challenging to be introduced to the A330 and A350 in combination with different modifications across the range of A 320 models.

The A320/A330 (DA) is reportedly quite similar when considering cockpit layout only. There are however considerable, differences regarding type of operation, weight, performance and behavior, wingspan etc. This again creates considerable safety concerns when "going from small to big - flaring too late" and "going from big to small - flaring too high". Aside from the hard landing aspect, another concern is flying an A320 (SA) on a short icy Scandinavian runway constantly focusing on "where am I now" and flaring too early. If precautions are not taken, the risk of RWY excursion may definitely be a factor. For some pilots the added complexity of keeping up with several types will also be a burden - even though MFF might (or might not\*) be on a voluntary basis. (\*complexity of seniority system). From a commercial point of view there might be some scheduling benefits, but we find no operational, health or safety benefits from a pilot or human factors point of view.

As MFF operations in our view gives multiple added safety concerns a thorough process by the regulating authorities is therefore needed to ascertain that all relevant safety implications of introducing MFF in SAS operation is addressed. For this reason we request the Joint Operations Evaluation Board (JOEB), to answer the following questions:

- Do SAS have explicit consent introducing MFF by the regulatory authorities, and will adequate supervision of MFF be ensured both by operator and authorities in compliance with both regulatory and IFALPA recommendations?
- What risk analysis has been considered both by SAS and the regulatory authorities to map and quantify additional risks associated with MFF and what appropriate mitigations will be introduced to reduce risk to an acceptable level? E.g. flight characteristics, differences in procedures, type and complexity of operation/recency (Northern Norway/Spitsbergen-operations, winter ops) category of aerodrome, crew composition, fatigue, experience level and training etc.
- Management of Change (MOC) is a best practice used to ensure that safety, health, and environmental risks and hazards are properly controlled when an organization makes changes to their facilities, operations, or personnel. We are informed of a meeting between SAS and HSE-representatives (verneombud) where a Risk Assessment was mentioned. SAS would however not share the presentation for the representatives to study.
- Will the Scandinavian CAAs ensure that this Risk Assessment is unbiased?
- Based on the different types: Is documentation and manuals aligned for MFF and what type of additional training is planned for MFF operation?
- How many proficiency checks are planned?
- What minimum experience level on type or position is planned for MFF pilots?
- How many total hours, and how many hours in relevant crew position?
- What number of sectors/hours is planned after ILC on type before commencement of MFF?

- Recency on t/o and landings as PF? Are extensions allowed?
- Can a pilot have flight with more than only one type during one flight duty period?
- Will A330 and A350 be regarded as the same type in SAS?
- Do SAS have a hard rule rostering policy in place for MFF operation to avoid two pilots together with limited experience?
- How will Standby duty be solved for pilots flying MFF?
- Is absence from each airplane type calculated separately?
- What if the recency has been exceeded with one type only?
- Will MFF pilots have a right to limit amount of long DA/longhaul flights. How will there be assured that there are enough DA flights for recency requirements?
- Will there be a limitation on the number of two-pilot operations, both in duty time and FDP?
- Will there be a minimum time off before changing between each aircraft type?

Added to this, we are also concerned about the amount of training given when converting to Airbus in SAS. The present level of training consists of only one week of self-study for the technical course and is in our view this is perceived as a bare minimum. A classroom day where Airbus philosophy and areas that needs thorough attention and understanding is emphasized, should as a minimum be added to these conversion courses.

Yours Sincerely,

Jo Bjørn Skatvald (Sign)  
Vice President  
Flight Safety Director

John Kristoffersen (Sign)  
Director  
Section for Human Performance (HUPER)

**Documentation:**

[IFALPA Position Paper on MFF](#)

This document and related questions are also inspired by our sister organization; Vereniging Nederlandse Verkeersvliegers (VNV) - organizing Dutch airline pilots.

VNV Position Paper 13/01

[VNV's position on Mixed Fleet Flying \(MFF\)](#)

"Crew Qualification and Operation on more than one Type or Variant (CQOTV)".

Based on IFALPA and ECA policy, EASA legislation, ICAO guidelines and

Research. European regulations regarding Mixed Fleet Flying are stated in EASA

OR.FC.140 / 240 and AMC1 OR.OPS.155.FC.

## References

1. FAA Advisory Circular 120-53A
2. EASA EU Ops 1,980
3. EASA, EU965 / 2012 OPS
4. EASA AMC1 OR.OPS.155.FC
5. IFALPA Annex 6 Aircraft Operations 9.7.1 CQOTV
6. Mixed Fleet Flying between Two Commercial Aircraft Types: An Empirical Evaluation of the role of Negative Transfer, Beth Lyall, Research Integrations, Inc., Christopher D. Wickens, University of Illinois
7. Braune, R. (1989). The common / same type rating: Human Factors and other issues. Anaheim, CA SAE
8. COUNCIL DIRECTIVE 2000/79/EC article 2: