Safety recommendation no. 566

Date of the publication	22.12.2020
Number of the final report	2370
Safety deficit	The safety investigation revealed that the staff of the Federal Office of Civil Aviation were often unable to identify the safety-related problems during audits and inspections of the air operator and the maintenance organisations. With regards to supervision of technical aspects, a lack of technical and methodological expertise in such historic aircraft played a major role in this. This led to a certain dependence on the know-how of the staff employed by the maintenance organisations under supervision. With regards to supervision in the field of operations, the inspectors no doubt had the expertise, they acted however insufficiently critical towards the air operator's pilots. As a result, the activities of these companies were not effectively supervised.
Safety recommendation	The Federal Office of Civil Aviation should acquire the necessary technical and methodological expertise for the supervision of historic aircraft or make it available from an independent party. Furthermore, it should ensure that supervision is exercised in an effective manner.
Addressees	BAZL Bundesamt für Zivilluftfahrt; BAZL Bundesamt für Zivilluftfahrt
Stage of the implementation	Partially implemented. The FOCA is in partial agreement with Safety Recommendation SE 566. The FOCA, specifically its Aircraft Safety Division, has already taken some measures. Further measures are planned to cover the various aspects of SE 566. These will involve a series of milestones (implementation plan). Measures already taken: • The management system process for certification of historic aircraft was already adapted following SE 506. Thereafter, applications to register aircraft in the special category 'Historic' underwent an internal risk analysis. In preliminary clarifications relating to aircraft type and the corresponding serial number and to aircraft operation, the requirements and conditions for mitigating risks could be checked in a standardised manner. However, these measures have not yet been applied in practice as no 'distinctive' aircraft have been entered in the Swiss Aircraft Register since. Meanwhile, the traffic certification process for historic aircraft is being revised. Individual risk analysis will be replaced by legislative measures, that is to say abstract and risk-based norms (cf. SE 561). Furthermore, the traffic approval process will be mapped much more comprehensively in the new management system, showing all interdependencies and detailed process steps. • Changes to the section portfolio. Oversight of the Swiss Aircraft Register is currently organised into two sections. The Airworthiness Section Zurich (STLZ) is responsible for all complex aircraft and commercially operated aircraft (AOC operators). The Airworthiness Section Bern (STLB) is responsible for all non-complex aircraft, all

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helicopters and special category aircraft (incl. historic aircraft). Since the JU-52 was used commercially, oversight was conducted by inspectors from STLZ. Changes have been made since to the section task portfolios. Although there will no longer be any non-EASA aircraft that can be operated commercially (AOC), it makes sense to exploit synergies and combine different disciplines and specialisations. In future, both airworthiness sections will cooperate on the oversight of historic aircraft (non-EASA), which under the EASA definition belong to the category 'complex aircraft'.

Medium- and longer-term measures:
Various approaches to improving oversight and making it more effective are being reviewed. Working groups have been formed and have started work in the following areas:
a) Method review of airworthiness check by aircraft inspectors. How can direct oversight of historic aircraft be exercised more effectively? Broad consideration of all aspects incl. timing, planning, methodology, organisation, the administrative and technical scope of the check, etc. (lead: STLB/STLZ).
b) The inspectors conducting checks could be deployed on a 'rotation principle' in order to prevent audits and inspections from being one-sided and routine. Aircraft should be double-checked by a fresh pair of eyes and a second opinion given. However, this principle should not only apply to historic aviation oversight (lead: STOZ).
c) Work is also being done on an RPBO method (Risk and Performance Based Oversight), with which oversight is shaped by considerations of stakeholder risk and performance in the longer term. The FOCA has already introduced this method in various supervisory areas, although it has only been possible to implement it in a rudimentary fashion, since the introduction and implementation of this method is highly dependent on the establishment of IT tools. In the meantime, the Aircraft Safety Division is examining an interim solution, in particular looking at how findings from the oversight of organisations can be increasingly and systematically incorporated into the oversight of aircraft and vice versa. Combined oversight (organisation and aeronautical equipment) is also being considered (lead: STOB).
d) Review of the competences (competence matrix) of the inspectors involved in historic aviation oversight (organisations and aircraft) and determination of any initial training and further training requirements (lead: STSS).
e) Plans to conduct an independent expert assessment of the effectiveness of the FOCA's oversight activities in historic aviation were already in place in 2019. It was not possible to implement them owing to the coronavirus pandemic and the restrictions and measures imposed in response to it. The assessment will take place in due course (the exact start date depends on known external factors). The findings and results should/could be taken into account in the above concepts (a-d) (lead: division management).
f) The FOCA internal quality monitoring system is limited to the aviation areas regulated by EASA in accordance with the corresponding EASA requirement. The scope exempted by EASA (in particular non-EASA aircraft) is not currently covered by the monitoring system. Integration is being considered (lead: division management).
g) Furthermore, cooperation with suitable associations and also aviation authorities (in particular AustroControl) is being examined with the aim of exploiting synergies and competencies (lead: division management).

Timing/outlook in relation to the medium- and long-term measures: some of the analyses and concepts mentioned have already been

	commissioned or launched. Concrete results are not expected until mid-2022 at the earliest. Some aspects will relate to the drafting of legislation, which is also already under way (cf. SE 561), and some to SE 565 in the case of matters pertaining to several divisions. It is thus expected that the new legal bases will come into full force and the new oversight concepts will be implemented some time after mid-2023.
Investigation report concerning the safety recommendation	Final report Schlussbericht Rapport final Rapporto finale

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