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Standard Operating Procedures Effectiveness and Adherence

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Disclaimer

This document has been compiled by members of the aviation industry to provide guidance for air operators and other stakeholders on Standard Operating Procedures (SOPs) in order to reduce the risk of Loss of Control In-flight (LOC-I) accidents. It is not intended to supersede or replace existing materials produced by the National Regulator or in ICAO SARPs. The distribution or publication of this document does not prejudice the National Regulator's ability to enforce existing National regulations. To the extent of any inconsistency between this document and the National/International regulations, standards, recommendations or advisory publications, the content of the National/International regulations, standards, recommendations and advisory publications shall prevail.

Regional Safety Advisory

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STANDARD OPERATING PROCEDURES EFFECTIVENESS AND ADHERENCE

1. Introduction

- 1.1 The purpose of this RASG-MID Safety Advisory (SA) is to ensure that all airline operators publish and enforce clear, concise and accurate flight crew Standard Operating Procedures (SOPs) to reduce the risk of LOC-I accidents.
- 1.2 In a Commercial Aviation Safety Team (CAST) study of 18 LOC-I accidents and incidents, insufficient adherence to SOPs was a factor in 15 events.
- 1.3 The Commercial Aviation Safety Team (CAST) was founded in 1998 with a goal to reduce the commercial aviation fatality rate in the United States by 80 percent by 2007. To achieve this goal, the CAST developed and started implementing a comprehensive Safety Enhancement Plan. By 2007, CAST was able to report that, by implementing the most promising safety enhancements, the fatality rate of commercial air travel in the United States was reduced by 83 percent. CAST continues to develop, evaluate and add Safety Enhancements to the CAST Plan for continuing accident rate reduction.

2. DESCRIPTION

- 2.1 Many aviation safety organizations including the FAA have recently reaffirmed the importance of SOPs. For many years the National Transportation Safety Board (NTSB) has identified deficiencies in standard operating procedures as contributing causal factors in aviation accidents. Among the most commonly cited deficiencies involving flight crews has been **their non-compliance** with established procedures; another has been the **non-existence of established procedures** in some manuals used by flight crews.
- 2.2 In general, effective SOPs are the product of healthy collaboration among managers and flight operations people, including flight crews. A safety culture promoting continuous feedback from flight crews and others, and continuous revision by the collaborators distinguishes effective SOPs at airlines.
- 2.3 To improve flight crew adherence to SOPs and reduce the risk of lost awareness of airplane state, airline operators should:
 - 1. Review, and update as needed, current SOPs for consistency with the manufacturers recommendations, focusing on completeness for all phases of flights and improved awareness and response during operations that are more prone to issues that result in high fatality risk (e.g. rushed and/or un-stabilized approaches, go-arounds, transfer of control, automation interaction, pilot flying/pilot monitoring duties).

- 2. Consult with manufacturers to check that SOPs are consistent with current manufacturer recommendations with regards to LOC-I
- 3. Review SOPs for compatibility with the most current ATC procedures, paying attention to airports where data show higher rates of un-stabilized approach or excessive bank angles.
- 4. Develop training programs to provide pilots with rationale for SOPs, focusing on those with lower adherence rates.
- 5. Airlines/operators and regulators should ensure that their training/standardization and monitoring programs emphasize the importance of adherence to SOPs and identify the rationale behind those procedures.
- 6. Airlines/operators should implement Flight Operational Quality Assurance (FOQA) programs to identify systemic procedural deviations and unsafe trend.
- 7. Airlines/operators incorporate processes to periodically review and update SOPs, other policies, and training based on results of monitoring programs for SOP adherence.
- 2.4 This Safety Advisory identifies the above broad topics that should be addressed in Standard Operating Procedures effectiveness and adherence. Only a specific air operator and the respective airplane manufacturer know what is best for particular circumstances.

References:

FAA Advisory Circular (AC) 120–71A, Standard Operating Procedures for Flight Deck Crewmembers CAST Plan (located on Skybrary: http://www.skybrary.aero/index.php/Portal:CAST_SE_Plan) CAST Safety Enhancement (SE) 2 — Standard Operating Procedures CAST SE 11 – Crew Resource Management Training CAST SE 26 – Policies and Procedures - Standard Operating Procedures (SOPs)

CAST SE 60 – Pilot Training – One Project: SOPs, CRM

FAA Order 7110.65, Air Traffic Control