

## SECTION I: SE OVERVIEW

Study Topic  
Overview  
Summary

CAST chartered the Airplane State Awareness (ASA) Joint Safety Analysis Team (JSAT) in August 2010 and the ASA Joint Safety Implementation Team (JSIT) in 2012 as a follow-on activity to the previous Loss of Control (LOC) JSAT in 2000. Historically, Loss of Control-Inflight (LOC-I) has been, and continues to be, one of the largest categories of commercial aviation fatal accidents. Loss of ASA is a subset of LOC-I accidents and incidents, defined as events in which the flightcrew lost awareness of the airplane's attitude or energy state. Between 2001 and 2010, half of all LOC-I accidents involved loss of ASA. The ASA JSIT recommended, and CAST adopted, 19 ASA SEs, 5 of which focus on air carrier training.

The ASA JSAT's study of 18 LOC accidents and incidents concluded that in several of the events the flightcrew did not respond to situations in accordance with how they had been trained. In some of these events, a review of the accident report indicated proficiency issues with the pilot even after checking and qualification, particularly when training had been provided by an external training organization.

## SE Objective

CAST recommends air carriers improve flightcrew proficiency in handling issues that can lead to loss of ASA by verifying and validating the quality of training provided to flightcrews, with emphasis on externally provided training. This should include examining both the content and conduct of training. Training verification and validation should include improving surveillance of and communication with third-party training providers.

Primary Risks  
Mitigated

Loss of Control-Inflight (LOC-I)

Action	Organization(s)	Strategy	Description	Due Date
Action 1	Air Carriers	Research	Implement processes to ensure the quality of flightcrew training is verified and validated.	02/28/2017
<p>Comments: CAST closed this action based on survey results from air carrier industry associations.</p>				

See section II of this SE for detailed action descriptions.

References: The detailed analysis in the ASA JSAT Final Report (June 5, 2015) and the ASA JSIT Final Report (December 31, 2014) is available through CAST.

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*SE 195 consists of one action, which this section lays out in detail.*

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Implement processes to verify and validate quality of flightcrew training

#### SECTION III: SUPPLEMENTAL INFORMATION

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*This section contains the following additional information that may be of interest to implementers:*

- Source Study
- Related Initiatives
- Total Cost / Resource Overview

#### SECTION IV: REVISION LOG

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*This section provides a history of revisions to this SE.*

## SECTION II: DETAILED ACTION INFORMATION

## Action 1: Implement processes to verify and validate quality of flightcrew training

Primary  
Implementer

Air Carriers

Action Objective

Air carriers should implement processes that ensure the quality of flightcrew training is verified and validated, with emphasis on externally provided training.

Action Timeline

Flow Time: 42 months

o 18 months to implement validation processes

o 42 months for air carriers to perform initial observation/validation visits to third-party training organizations

Due Date: 02/28/2017

Timeline/Flow for  
Future Adopters

TBD

CAST Lead

Regional Airline Association (RAA)

#	Organization(s)	Detailed Steps
1a	Air Carrier Industry Assns.	Communicate with members, explaining the analysis undertaken by CAST regarding loss of ASA, the role of ineffective training, and the purpose of the CAST SE.  <i>Complete.</i>
1b	Air Carriers	Implement a process to ensure the flightcrew training program, including any externally provided training, is consistent with current air carrier and manufacturer policy and procedures.  <i>Complete.</i>
1c	Air Carriers	Implement a process to validate the qualification and currency of trainers, including third-party training providers.  <i>Complete.</i>
1d	Air Carriers	Validate contractor training by periodically observing training and/or checking events and auditing records to ensure consistency of flightcrew training and pilot proficiency.  <i>Complete.</i>
1e	Air Carriers	Air carrier actions are complete when the air carrier has— a. Completed review of its training. b. Implemented processes to assess trainer currency and qualification. c. Made an initial observation/validation visit to any third-party training organizations it uses, as applicable.  <i>Complete.</i>
1f	Air Carrier Industry Assns.	Track implementation of member air carriers, and report progress and completion to CAST.  <i>Reported to JIMDAT and CAST in February 2017.</i>

Notes

Note: See section III for detailed costs and resources.



## SECTION III: SUPPLEMENTAL INFORMATION

Source Study	ASA Joint Safety Analysis Team (JSAT) Final Report (June 5, 2014) ASA Joint Safety Implementation Team (JSIT) Final Report (December 31, 2014)
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Related Initiatives	Related FAA Guidance and Policy: <ul style="list-style-type: none"> <li>FAA Information for Operators (InFO) 13003, Contract Instructor and Contract Check Airman Initial Training Program Records</li> <li>FAA Order 8900.1, vol. 3, ch. 54, sec. 5, para. 3–4413A, Air Operators, regarding Title 14, Code of Federal Regulations part 142 training centers</li> </ul>
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Total Cost	\$4,100,000 Note: For labor, 1 Full Time Equivalent (FTE) = \$250,000
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Action 1	\$4,100,000	15.2 FTE	\$300,000 travel expenses
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	Organization	Resources Needed
Direct Resource Overview – Government	N/A	N/A

	Organization	Resources Needed
Direct Resource Overview – Industry	Air Carrier Industry Assns.	<ul style="list-style-type: none"> <li>Action 1: 0.4 FTE (assumes 0.10–0.15 FTE to track implementation and coordinate with CAST).</li> </ul> <p><i>Note: 55 air carriers are represented by three CAST-member air carrier industry associations:</i></p> <ul style="list-style-type: none"> <li><i>Airlines for America (A4A),</i></li> <li><i>Regional Airline Association (RAA), and</i></li> <li><i>National Air Carrier Association (NACA).</i></li> </ul>
	Air Carriers	<ul style="list-style-type: none"> <li>Action 1:           <ul style="list-style-type: none"> <li>2.8 FTE to assess each air carrier program and validate qualification and currency of trainers (assumes 55 air carriers at 0.05 FTE per carrier).</li> <li>12.0 FTE and \$300,000 travel costs for annual observation/validation visits (assumes 20 air carriers use third-party training providers, @ 0.05 FTE per carrier per year; \$1,500 travel expenses per carrier per year).</li> </ul> </li> </ul>

Indirect Resource Overview	The organizations identified in this section are not expected to incur direct costs associated with implementing this SE, but they may incur indirect costs within their normal line of work.				
	<table border="1"> <thead> <tr> <th>Organization</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table>	Organization	Description	N/A	N/A
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N/A	N/A				



## SECTION IV: REVISION LOG

*Major revisions (whole numbers) represent CAST-approved changes to SE language. Minor revisions (decimals) represent minor changes to target dates or completion notes that do not affect implementer actions.*

Revision	Date	Description
1.0	09/17/2018	New SE format. Content reorganized and terminology updated. No substantive changes.
0.1	02/02/2017	Action 1 closed.
Original	08/01/2013	CAST adopted SE 195.