



NTSB National Transportation Safety Board

Office of Aviation Safety

Operational Factors

Crash of Cessna 550

Tim Sorensen

Operations Group Chairman



Photo Copyright © PHF Picone

AVIATION PHOTOGRAPHY

Captain

- Hired by Marlin Air February 2005
- Properly certificated and rated to act as pilot-in-command
- Flight time:
 - 300 hours Citation
 - 14,000 hours total
- Served as company chief pilot and check airman

Captain's Deficiencies

- Prior certificate revocation
- Three checkride failures
- Irregularities in recent checkride reports
- Failure to comply with procedures and regulations

First Officer

- Hired 3 days before the accident
- Previously employed by operator
- Properly certificated to act as second-in-command
- Flight time:
 - 420 hours Citation
 - 9,200 hours total
- Expressed investment interest in the company

First Officer's Deficiencies

- Left Marlin Air in 2002 after failing to upgrade to captain
- Pilot's comments about deficiencies
 - Unable to fly stabilized approaches
 - Selected wrong switches
 - Confusion regarding radios
- Prior accident
 - Pilot induced electrical failure
 - Improper emergency gear extension

Crew Resource Management / Decisionmaking

- Casual, undisciplined environment
- Haphazard, confused troubleshooting
- Improper actions and lack of crew coordination
 - Uncommanded trim input (first officer)
 - Airspeed control (captain)
 - Relinquished control of airplane (captain)

Autopilot Interface



- Autopilot / yaw damper systems
 - Identical push-button switches
 - Out of pilot's direct line of sight
 - Prone to inadvertent activation

Human/Airplane Systems Interactions

- Human factors issues observed
 - Circuit breaker identification
 - Trim control sensitivity
 - Trim motion salience
- Need to monitor safety critical systems throughout life cycle of airplane



NTSB