

Headquarters U.S. Air Force

Integrity - Service - Excellence

Air Force Safety Investigation Process

**Year of the Air Force
Family**



**Major Brian T. Musselman
AF/SEI
15 Dec 09**



- **Levels of investigation**
- **Safety investigation versus legal investigation**
- **Phases of investigation**



AIR FORCE SAFETY





Levels of Investigation

■ **Class A**

- **Cost totaling \$2,000,000 or more**
- **Fatality or permanent total disability**
- **Destruction of DoD aircraft**

■ **Class B**

- **Cost totaling \$500,000 or more**
- **A permanent partial disability**
- **Inpatient hospitalization of three or more personnel**



Two Investigations

- **DoDI 6055.07, *Accident Investigations, Reporting and Record Keeping***
 - **Safety Investigation Board; a privileged report**
 - **Accident Investigation Board; publicly releasable report**



Seven Phases of Investigation

- Prepare
- Respond and Collect
- Analyze
- Conclusions
- Products
- Validation
- Corrective Action





-
- **Mishap Response Plan**
 - **Interim Safety Board; preserve evidence and gather factual data**
 - **Custody of wreckage and evidence**
 - **Impound servicing equipment and records**
 - **Fluid and oxygen samples from equipment**
 - **Obtain data sources (CVR, Radar, Tower transcripts)**
 - **Toxicology tests on all aviators & select ground support**
 - **72-hour and 14-day history**
 - **Photograph and video**
 - **Interviews/witness statements**



Respond and Collect

- **Safety Investigation Board designated on orders**
 - **Board President**
 - **Investigating Officer**
 - **Pilot Member**
 - **Maintenance Member**
 - **Medical Member**
 - **Safety Representative**
 - **Aircrew Flight Equipment**







-
- **Operations**
 - **Organization/Supervision**
 - **Conditions of Aviator and Environment**
 - **Aviator Actions**

 - **Maintenance/Logistics**
 - **System – Area – Component**
 - **Engine/Hydraulics/Fuel/Electrical/Flight Controls**
 - **Fire**

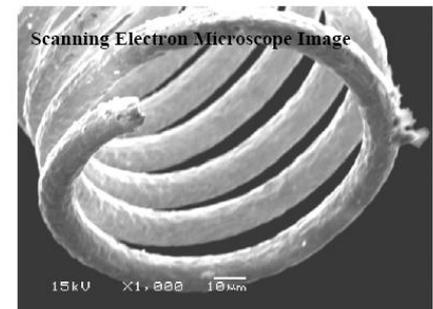
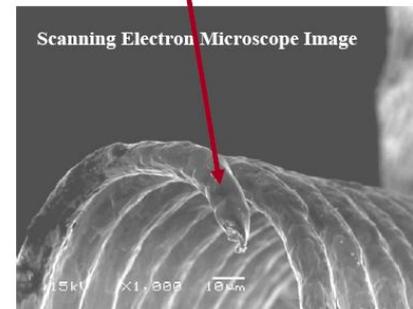
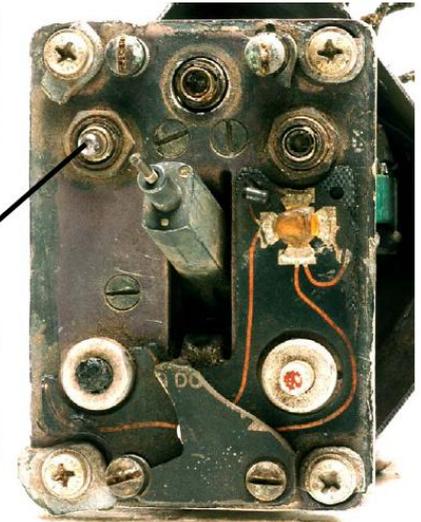
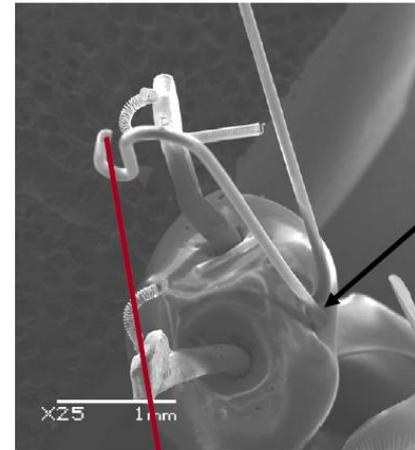
 - **Includes Human Factors**

 - **Video reconstruction of mishap**



■ Technical Assistance

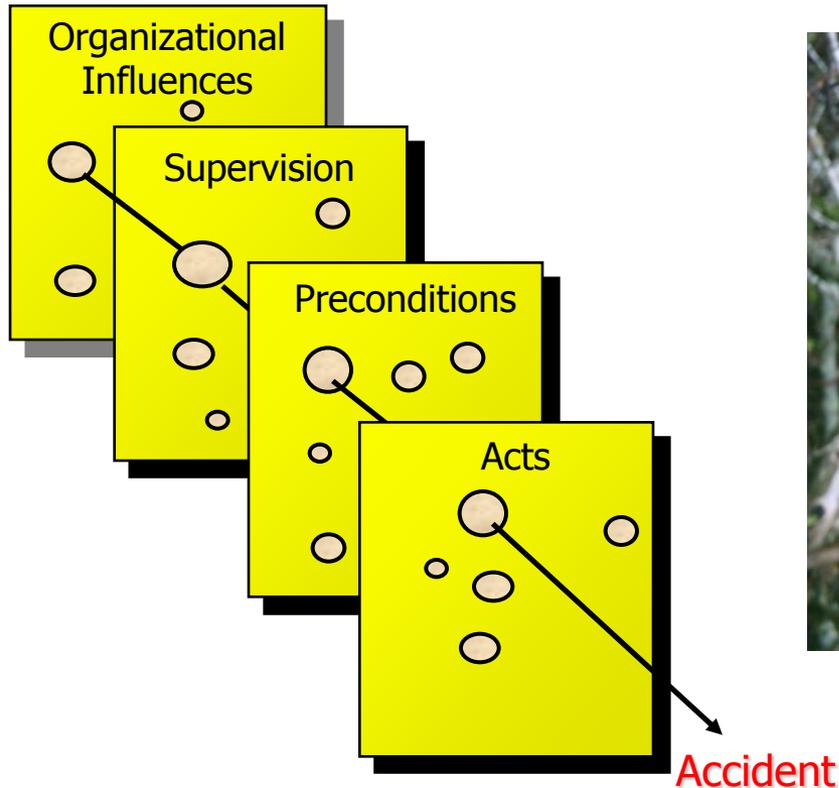
- Human Factors
- Engines
- Fire Patterns
- Aircrew Flight Equipment
- Weather
- Engineers





- What we know – What we think we know –
What we need to know

- List of Whys





■ Factors

- Any unusual, out-of-the-ordinary, or deficient action or condition discovered in the course of a mishap investigation, which in the SIB's opinion contributed to the eventual outcome

■ Findings

- Sequence of events; conclusion of the Safety Board based on: weight of evidence, professional knowledge, and best judgment

■ Recommendations

- Feasible and effective solutions to eliminate hazards, or if the hazard cannot be eliminated, to mitigate the hazard's potential consequences
-



- **Non Factors Worthy of Discussion (NFWD)**
 - **Did not contribute to the mishap, but could contribute to future mishaps and/or which warrant command attention**
- **Other Findings of Significance**
 - **Formulated from NFWD**
- **Other Recommendations of Significance**
 - **Recommendations resulting from OFS**



- **Formal Briefing**
 - No prior screening
 - Fatalities briefed to CSAF & SECAF
- **Final Message**
- **Formal Report**
- **Air Force Safety Review**
- **Air Force Safety Automated System (AFSAS)**

**USAF
CLASS A FLIGHT MISHAP**



Date

Location

COPY X of XX



Corrective Actions

- Mishap Review Panel to follow up on recommendations
 - Every 6-months
- Recommendation Closure
 - Managed to completion
 - 6-month status updates





...Is NO Accident!