Other Similar Incident Reports (OSI)

Air Data Research provides professional aviation mishap investigators with aircraft service history information from the most complete collection of aviation mishap and service history information on earth. Aviation manufacturers, underwriters, and law firms around the world have relied on us for accurate and complete aircraft accident, incident, and malfunction information since 1991.

We have found that selection of OSI is best done by persons most familiar with a given occurrence. Usually, this person is an investigator or reconstructionist who has studied the subject mishap extensively and this person is likely to connect various data points that others might miss. Air Data Research uses their experience in searching raw OSI to select a broad subset of occurrence reports for review by the designated investigator.

Many objections to the use of similar incident report are bogus in that they are based on incorrect information or understanding as to the source and processing of these reports. We solicit user input so that we can insure that these valuable data sources are available to all who need them.

Users of OSI are encouraged to submit Air Data Research any motions in limine, testimony and any other material bearing on the admissibility of OSI to allow us to verify the accuracy of any factual information.

We recommend that any NTSB factual data that is intended to be admitted in judicial proceedings be printed from the NTSB website and that NTSB opinion data not be included. See below.

Users of OSI data are reminded that a single report of a given type has minimal value. Confidence in a type of report can only come by analysis of multiple mishap and mechanical difficulty reports. Consideration should be given to the type of aircraft, typical mission and reporting frequency. Trends and patterns in the data are more reliable than individual reports.

1. Source and authenticity of OSI information

- **a.** Service Difficulty Reports are submitted by individuals, operators, US regulators and foreign regulatory agencies (Canada & Australia)
- **b.** Mishap reports are prepared by government employees
- **c.** Reporting is mandated by statute and agency regulations.
- d. Mechanical difficulty reports (MDR) - Service Difficulty Report - (SDR)
    - i. FAA Service Difficulty Reporting database online
    - ii. Air carrier reporting 14 CFR 121.703, 135.415
    - iii. Repair station reporting 14 CFR 145.63
    - iv. General aviation reporting is voluntary
    - v. FAA Order 8010.2, Flight Standards Service Difficulty Program
    - vi. FAA Advisory Circular AC 20-109A Service Difficulty Program
    - vii. FAA Form 8010-4 Malfunction or Defect Report
    - viii. FAA Form 8070-1 Service Difficulty Report
    - ix. Title VI of the Federal Aviation Act
    - x. The Flight Standards Service Difficulty Program objective is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products, through the collection of Service Difficulty and Malfunction or Defect Reports; their consolidation

and collation in a common data bank; analysis of that data; and the rapid dissemination of trends, problems, and alert information to the appropriate segments of the aviation community and the FAA
The program provides the Flight Standards Service with reliability and airworthiness statistical data necessary to the planning, direction, control and evaluation of certain assigned programs through multiple methods of specialized data retrieval.
Forward to FAA Order 8010.2, Flight Standards Service Difficulty Program, 1978.

xi. Mechanical Interruption Report - MIS 14 CFR 121.705
    1. No searchable database

xii. Reporting of failures, malfunctions, and defects by Type Certificate holders - 14 CFR 21.3
    1. No searchable database
    2. Reports are usually verbal to avoid creating a paper trail.

e. Mishap reports
    i. Federal Aviation Administration
        1. FAA Aviation Safety Information database
        2. FAA Order 8020.11C - Aircraft Accident and Incident Notification, Investigation, and Reporting
        3. FAA accident/incident reports include most mishaps investigated by NTSB plus many incidents not investigated by NTSB.
        4. FAA definition of incident is not precise.
        5. FAA accident/incident database (<2008) contains causal information not derived from NTSB data.
        6. The FAA is, by law, a party to all NTSB investigations and prepares their own report of investigation.
            a. The FAA report of investigation may become the source data used by the NTSB in preparing a delegated or limited report.
            b. Not uncommonly, the FAA and NTSB reports may differ significantly.
        7. **The FAA report of investigation should be requested under FOIA as soon as possible after the occurrence.**

ii. National Transportation Safety Board
    1. Report types - NTSB Aviation accident/incident database
        a. Preliminary reports
        b. Factual reports (including material in docket file)
        c. Probable cause reports (not admissible)
        d. Bluecover (Major) mishap reports
        e. Safety recommendations
        f. NTSB investigation codes in NTSB file numbers.
            i. F - field investigation conducted by NTSB
            ii. L - limited investigation delegated to FAA
            iii. C - data collection investigation prepared from information submitted by operator.
            iv. Other codes for government agencies and foreign investigations
            v. 3 character code for region/office - 2 digit fiscal year - 1 alpha character from above list - A for aviation - 3 character sequential number repeats each fiscal year
    2. References:
        a. Independent Safety Board Act of 1974
        b. Notification and Reporting of Aircraft Accidents or incidents 49 CFR 830.1
        c. Accident/Incident Investigation procedures 49 CFR 831.1
        d. Testimony of Board Employees 49 CFR 835.1
        e. Discovery and use of cockpit and surface vehicle recordings and transcripts 49 U.S. Code § 1154 -
        f. NTSB docket files
iii. Non-US - accidents, incidents
    1. Aviation mishap investigation is prescribed by Annex 13 To the Convention on International Civil Aviation, to which the U.S. is a signatory. NTSB may be a party if aircraft is US registered/manufactured, etc.
iv. U.S. Military aviation mishap data
    1. US Army Aviation mishap database includes mechanical difficulty reports as well as reports involving loss of life, injury or property damage in excess of certain limits.
    2. Databases of US Navy and US Air Force contain little information useful to civilian investigators.

f. Airworthiness Directives (AD's)
    i. Airworthiness directives are issued when an unsafe condition exists in the product; and the condition is likely to exist or develop in other products of the same type design. 14 CFR 39.5
        1. SDR's and mishap records are principal justification for issuance of AD's as shown in AD docket files. See Regulations.gov for recent dockets.
        2. AD's often incorporate and mandate compliance with manufacturers service information.
g. Special Airworthiness Information Bulletins (SAIB)
h. Special Alerts for Operators (SAFO)
i. FAA AC 43-16A, Alerts (No longer published)
j. FAA/NASA Aviation Safety Reporting System (ASRS)
k. NTSB Publications and Studies

2. AUTHENTICITY OF REPORTS - SUBMISSION OF FALSE REPORTS

a. Penalties for making false report or government record
18 U.S. Code § 1001 - Statements or entries generally
   i. Except as otherwise provided in this section, whoever, in any matter within the jurisdiction of the executive, legislative, or judicial branch of the Government of the United States, knowingly and willfully—
   - falsifies, conceals, or covers up by any trick, scheme, or device a material fact;
   - makes any materially false, fictitious, or fraudulent statement or representation; or
   - makes or uses any false writing or document knowing the same to contain any materially false, fictitious, or fraudulent statement or entry;
   shall be fined under this title, imprisoned not more than 5 years or, if the offense involves international or domestic terrorism (as defined in section 2331), imprisoned not more than 8 years, or both. If the matter relates to an offense under chapter 109A, 109B, 110, or 117, or section 1591, then the term of imprisonment imposed under this section shall be not more than 8 years.
   ii. *Brogan v. United States*, 396 U.S. 64, 72 (1969)

b. Experienced researchers can easily spot inaccurate/false reports.
   i. Safety pyramid ratio of accident/incident/mechanical malfunctions adjusted by product
   ii. No new ways to break aircraft - if it hasn't happened before it is unlikely to happen, now.
   iii. Trends and patterns are more reliable than a single report.

3. ADMISSIBILITY OF NTSB DATA

a. 49 C.F.R. 835.2 Definitions.
Accident, for purposes of this part includes incident.
Board accident report means **the report containing the Board's determinations, including the probable cause of an accident, issued either as a narrative report or in a computer format (briefs of accidents).** Pursuant to section 701(e) of the Federal Aviation Act of 1958 (FA Act), and section 304(c) of the Independent Safety Board Act of 1974 (49 U.S.C. 1154(b)) (Safety Act), no part of a Board accident report may be admitted as evidence or used in any suit or action for damages growing out of any matter mentioned in such reports.
Factual accident report means **the report containing the results of the investigator's investigation of the accident. The Board does not object to, and there is no statutory bar to, admission in litigation of factual accident reports. In the case of a major investigation, group chairman factual reports are factual accident reports.**

b. "factual portions" of NTSB reports (but not an NTSB opinion or conclusion) are admissible and are considered public records under Fed R Evid 803(8), *Major v. CSX Transp*. 278 F. Supp. 2d 597 - DMD, 2003

c. *Williams v. Long* 585 F.Supp.2d 679 (2008) DMD holds that printouts from government websites are self-authenticating under Fed R. Evid 902(5) and also fall under the public reports hearsay exception under Fed R. Evid 803(8).

d. Copies to be admitted in to evidence should not contain probable cause or opinion data.
   i. NTSB factual reports may be obtained from the NTSB aviation database
      1. Print the "data summary" NOT the final report.
   ii. Factual reports are also available from General Microfilm which contracts with the NTSB to provide reports. http://www.general-microfilm.com/
      1. This company can prepare an NTSB blue ribbon.

iii. In addition to the factual report, the NTSB also maintains a docket file on each investigation. This includes other factual information such as photos, statements, etc. Docket files are available at this search page - https://ntsb.gov/investigations/SitePages/dms.aspx
    1. Good practice calls for a blue-ribbon copy for at least the subject mishap.
    2. Valuable demonstrative evidence may often be found in the docket files of similar mishaps.

e. Business records of Air Data Research
f. Government records are collected by statute.
g. Causal data may be relied upon by accident investigator/reconstructionest in formulating investigation plan or locating similar occurrence reports.
h. NTSB has exclusive access to wreckage and accident site - there is no alternate source of factual information by non-parties
i. Party system allows likely litigants immediate access to crash site and wreckage while denying access to injured parties.

4. USES OF MISHAP AND MECHANICAL DIFFICULTY REPORTS

a. Mishap and mechanical difficulty reports are available to the public.
    i. When the SDR program was first developed, the FAA distributed SDR's on microfiche or nine-track tape to major OEM's. This data is currently available to the public on the FAA's website.
b. Damage history research - Maintenance history of accident aircraft - Damage often not recorded in aircraft logs
    i. This service is available from most aircraft title services and associations.
c. Lessons learned from accident/incident investigation
d. Product improvements
    i. Service bulletins
    ii. FAA Special Airworthiness Information Bulletins - SAIB
    iii. FAA Special Alerts For Operators - SAFO
    iv. FAA Airworthiness directives
    v. NTSB Safety recommendations
e. Risk evaluation by underwriters
f. Mishap investigation aid - no new ways to break aircraft
g. FAA accident/incident reports are source data for NTSB delegated investigations
h. Accident, Incident and Mechanical Difficulty Reports are available to Type Certificate holders for product improvement.
i. Service Difficulty Reporting

5. RELEVENCE TO A SPECIFIC MODEL

a. Like character occurring under substantially the same circumstances and resulting from the same cause.
b. Type Certificate Data Sheets
c. Airworthiness directives
d. Similarity may be shown by causal factor determined by government agency or by similar accident sequence/scenerio.

6. ACCIDENT RATE INFORMATION

a. Air Data Research avoids disseminating any rate based analysis of mechanical difficulties or mishaps because this type of data is unreliable and often misused.
b. NTSB publishes various statistical analysis studies each year.
    i. No way to normalize various flight mission profiles
    ii. No exposure or valid flight hour data sources presented

iii. AOPA Nall report - AOPA has publicly disputed activity collection methodology.
iv. Database collection criteria may vary over time.

7. OTHER REFERENCES

a. FAA General Counsel Opinions

8. LAW REVIEW ARTICLES

a. Alice Chan, Trend Towards the Inadmissibility of NTSB final Reports
b. Jonathan R. Friedman and Matthew S. Knoop, A Wolf in Wolf's clothing -- Other Incident Evidence in Aviation Litigation
c. John D. Goetz and Dana Baiocco, The Significance of Other Accidents in Aviation Trials

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