

APPENDIX: V

DOCUMENT NUMBER: NTSB Record 8

DATE OF DOCUMENT: April 3-4, 1997

TOTAL NUMBER OF PAGES: 05

TOTAL NUMBER OF PAGES WITHHELD ENTIRELY: 05

TOTAL NUMBER OF REDACTED PAGES: 0

DESCRIPTION OF DOCUMENT: 3 Graphs and 2 Charts Depicting  
the Lift Coefficient, Pitching Moment Coefficient, and the  
Drag Coefficient of Boeing Model 747 aircraft

The NTSB received this document from the Boeing Company Air Safety Investigation Team, which is part of its Commercial Airplane Group (CAG/ASI). The document, which was voluntarily tendered by CAG/ASI to the NTSB, was intended to provide data to the NTSB investigative team concerning the lift, pitch and drag characteristics of a Boeing Model 747 aircraft. Lift, pitch and drag are characteristics by which flight may be analyzed. The lift, pitch moment and drag coefficient data concerning Boeing Model 747 aircraft, which are considered by Boeing to be commercial and confidential information, were needed by the NTSB investigative team to analyze the possible flight path responses of the accident aircraft following a catastrophic event, such as the loss of the forward section of the

aircraft. Boeing marked the four pages of this document as "Boeing Proprietary" and "Preliminary." The document, in addition to the confidential, commercial information concerning the lift, pitch moment and drag coefficients of Boeing Model 747 aircraft, also contained information identifying a professional staff member of Boeing who was involved in the preparation of the document and who is knowledgeable concerning the Boeing confidential, commercial information contained in the document. By virtue of the application of exemptions (b) (4) and (b) (6) to the Freedom of Information Act (FOIA), this document was withheld in its entirety.

The data contained in this document, while similar to that found in NTSB Record No. 6, involve the addition of another dimension of commercial and confidential data with the inclusion of drag coefficient for the Boeing Model 747 aircraft. The lift and drag coefficient data in this document entail further work and analysis by Boeing's professional personnel beyond that which was reported to the NTSB in NTSB Record No. 6.

NTSB Record No. 4, the fax cover sheet employed with this document (NTSB Record No. 8), stated that the fax consisted of the cover sheet (NTSB Record No. 4) and six additional pages. This document contains only five pages because the

sixth page was previously released by the NTSB to plaintiff, without redaction, in response to plaintiff's prior FOIA requests.

The information concerning the lift coefficient, pitch moment coefficient and drag coefficient of the accident aircraft and its aircraft type, in baseline configuration and configuration without the forward section of the aircraft, is considered by Boeing to be commercial information, the release of which would disclose to the public, including the competitors of Boeing, operational information regarding the Boeing fleet of 747 aircraft. The lift, pitch moment and drag coefficient data contained in this document are employed by Boeing to optimize the performance of its aircraft, which, as a fundamental activity of any aircraft manufacturer, requires innumerable staff-hours and other resources. It is the understanding of the NTSB that the information contained in this document is not of the type that is customarily released by Boeing to the public. Further, as Boeing states in its submitter letter (Exhibit II-10), these data form part of a "...training simulator database that was developed at a considerable expense by Boeing. If a competitor were to obtain this information through a public release, without

having to go to the effort and expense Boeing did, Boeing could be competitively harmed." (Letter of M. Henry (Hank) Halle, dated March 13, 2001, Exhibit II-10.) Thus, according to Boeing, the release of this information under the FOIA would permit a competitor to acquire this valuable and highly sensitive engineering data without requiring the competitor to expend the time and money that Boeing invested in developing the data. Given the voluntary provision of these commercial and confidential data in this document to the NTSB by Boeing, the fact that the data are not customarily released to the public by Boeing, and the fact that the data were not identified by the NTSB as commercial information that, for the protection of public safety, was required to be published in a report or the public docket of the NTSB, the data contained in this record were found to be confidential and exempt from release under the FOIA and were withheld pursuant to exemption (b)(4).

As a further consideration, public disclosure of the withheld technical data, to the extent that it may cause substantial harm to Boeing's competitive position, would also be likely to make Boeing reluctant to share its commercial and proprietary technical data with the NTSB in the future, which would impair the NTSB's ability to have

direct access to the technical data that is required for proper analysis and investigation in aviation accidents. Restriction of access to these data would significantly impair the NTSB's ability to complete its accident investigation work. As an example of the cooperation of Boeing, the NTSB was able to incorporate certain of Boeing's proprietary engineering data into the NTSB program to simulate the flight path of the main wreckage of TWA flight 800 after separation of the forward fuselage. The results of this simulation are included in the Main Wreckage Flight Path Study, which is a publicly available document, accessible through the NTSB's web page at [www.nts.gov](http://www.nts.gov).

The name of a Boeing employee identified in this document was withheld pursuant to exemption (b)(4). This information involving the identity of a professional employee, voluntarily submitted by Boeing, is considered by Boeing, along with its data, to be commercial in nature and to reveal commercial operations, which from Boeing's perspective, makes the withheld employee information confidential in nature.

Boeing's employees, including the engineers and technical staff in CAG/ASI and the individual named in this document,

are vital to the design, manufacture, sale and support of commercial aircraft, which are a primary product of the company. Boeing invests a great deal of time, money and other resources educating and training its personnel in order to develop their skills and usefulness to Boeing's commercial operations. Boeing engineers and technical staff in their daily work routinely create, have access to, and use Boeing proprietary information that is commercially valuable to Boeing. Further, they routinely access and use the proprietary information of Boeing's suppliers and customers, which information was provided to Boeing by its suppliers and customers with the expectation that it would be held confidential. Use and disclosure of proprietary information, whether that of Boeing, a supplier or customer, is restricted by agreements between Boeing and its employees, suppliers, and customers. Boeing has policies and procedures to prevent disclosure of proprietary information, which is not customarily made available to the public. Disclosure of the withheld information concerning the Boeing employee named in this document would identify a professional staff member of Boeing that is involved in the technical and professional activities of CAG/ASI, which would link a particular employee with particularized commercial operations of

Boeing. Additionally, it would identify and disclose the identity of an employee of Boeing that is in possession of and familiar with the proprietary information of Boeing and its suppliers and customers. Boeing therefore has a commercial interest in withholding from disclosure the identifying information concerning this employee and the link to the proprietary information he or she has created, accessed, or used in the course of his or her employment.

As a normal business practice to prevent burdensome or improper contact between Boeing's employees and third parties who might have an interest that would prove to be adverse to Boeing's business, Boeing generally does not release direct contact information for its employees. If the withheld information concerning the employee named in this document was released, the name and contact information for an employee who has access to or knowledge of Boeing's commercially valuable proprietary data would be available to the public in general and to Boeing's competitors in particular. Armed with the basic knowledge of the employee's knowledge, skills, and responsibilities, Boeing's competitors could attempt to hire this individual away from Boeing or otherwise seek to gain information from him or her. In short, public disclosure of the withheld information, to the extent that it may cause substantial

harm to Boeing's competitive position, would also be likely to impair the NTSB's ability to have direct access and information concerning the professional and technical staff of Boeing. If, as a result of disclosure of identifying information concerning its employee, the employee was subject to burdensome or improper contact, it would be more difficult and expensive for Boeing to offer its most experienced and knowledgeable employees to support NTSB investigations. Loss of the investigative asset that the Boeing employees represent would significantly impair the NTSB's ability to complete its accident investigation work. For Boeing, loss of a member of its highly skilled workforce would have a detrimental effect on Boeing's ability to compete in a very demanding global marketplace.

The name of the employee of Boeing named in this document was also withheld pursuant to exemption (b)(6). This individual is not a government employee; rather, he or she is an employee of a private corporation. Given the commercial value of the information that is in the possession of this individual and the curiosity that has arisen surrounding the accident investigation of the crash of TWA Flight 800, release of the name of this Boeing employee would permit the invasion of the employee's



personal privacy and would make him or her subject to unwanted and possibly unmanageable contact from a host of individuals unknown to him or her. It is clear, therefore, that the employee of Boeing has a privacy interest in his/her name and in the non-disclosure of his/her name.

Taking into consideration the public interest in the disclosure of the material withheld under (b)(6), as public interest is defined in the FOIA, it does not appear that the withheld information is of the type in which there is a public interest or, if an interest exists, it is minimal. That is, the name of this Boeing employee does not shed light on the agency's performance of its statutory duties. Thus, it appears that there is little to no public interest in the disclosure of this information and that the Boeing employee's right to privacy outweighs any such interest. The disclosure of the information, without revealing information concerning how the NTSB performs its statutory duties, would constitute a clearly unwarranted invasion of the personal privacy of this Boeing employee.