Need for the Exchange of Safety Information

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SESSION TWO

NEED FOR THE EXCHANGE OF SAFETY INFORMATION*

BY HAROLD CAPLAN†

I. INTRODUCTION

I HAVE NEVER come across anyone who seriously doubts the need for more effective exchange of aviation safety information arising out of aircraft accidents and incidents. For those who wish to have definitions of words like "accident" or "incident" and "aviation safety information," I have included some suggestions in Appendix B (adapted from ICAO papers' and United Kingdom legislation'). If the need is generally regarded as self-evident, what is the point of yet another paper on the subject? My only justification is that incidents which are probably avoidable still occur and recur (See Appendix A. All the examples are relatively recent). I do not know or suggest that vital information is deliberately withheld or ignored by the conscious policy of any organisation or individual—very often people simply do not recognise the significance of information that has come to them. The result is an "information gap" which, although it is usually not severe in the case of major recorded accidents, is believed to be most serious and dangerous in relation to incidents, many of which are unrecorded anywhere. I cannot prove how many accidents or incidents could have been avoided if there had been more effective dissemination and use of prior knowledge. I only know that the problem still exists.

Appendix A summarizes three unpublished and two published reports of accidents or incidents. They illustrate the ugly tips of great icebergs of unused information which may continue to kill and injure innocent crews and passengers. The task of workers in this field is to chart the course of the biggest known bergs and to melt some of the smaller. I doubt whether human nature will eliminate the icebergs altogether, but in the name of humanity and the future of air transport renewed efforts must be made and sustained.

Selection always seems invidious, and by choosing the few in Appendix A I intend no criticism of those who have been named in the published reports. For example, the two aircraft firms involved, Douglas and British Aircraft Corporation, have built some of the world's best aircraft and both have set very high standards in the education of their staff and aircraft and aircraft operators by disseminating vital information freely

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* The views expressed in this paper are entirely personal and must not be attributed to my employers or to insurers generally.
2 Civil Aviation Regulations, 1(1)(d) Investigation of Accidents (1951).
and promptly. BAC, in particular, made an outstanding effort in promptly
giving the whole world (including other manufacturers) full details of
its sad experience with the T-tail of the BAC 1-11 prototypes. It can even
be argued that in a more ideal world their experiences might have been
avoidable. The point is that the experiences have now been shared to the
fullest extent possible. We will never know how many lives have been saved
by this exchange. In one sense it can be said that all accidents are attributed
to human failures: what is a so-called “Act of God” but an event which
current science does not regard as foreseeable, or one which is so rare that
economically acceptable safeguards are not at present available? So long as
aircraft are designed, built, operated, controlled and maintained by human
beings, information gaps will occur from time to time both nationally and
internationally. Improved qualifying education and career-long training for
all concerned is probably the only sound general answer, but there are
specific problems which require closer examination.

The most comprehensive modern surveys that I know of dealing with
the problems of disseminating aviation safety information are those of
Hugh Gordon-Burge® and Bob Gray. I draw freely and gratefully from
their ideas and information in what follows although neither of them is
responsible for what I say. In the process of obtaining, analyzing and
disseminating vital information, several problems have been identified:

1. The reluctance of those who have made any error to reveal it
to others for a variety of reasons.

2. The difficulty that many people have in recognising that they
are in possession of vital information.

3. The analytical and managerial problems of deciding what les-
sons can be learned from a specific accident or incident (This is a
vast set of problems which go far beyond the rectification of specific
defects).

4. Determining the most effective method of communication and
translation into educational and training techniques.

5. Legal and other inhibiting influences on the prompt dissemina-
tion of data which has survived processes (1) through (4).

6. The ability of recipients to store, retrieve and use effectively
the data which has survived processes (1) through (5).

I hope to make a limited contribution on problems (1) and (5) above.
Everyone concerned with the design, manufacture, operation and main-
tenance of aircraft and air navigation services is well aware of the import-
ance of aviation safety. In some organizations this means that because
everyone is assumed to be concerned with it there may be no one person
or department exclusively devoted to safety problems. In 1968, it should
be axiomatic in air transportation that each participating organization
should recognize and assign specific safety responsibilities to key individuals

® Gordon-Burge, Practical & Legal Problems of Disseminating Air Safety Information—Part I,
71 J. ROYAL AER. SOCIETY 683, 773-81 (1967).
4 Exchange of Information, Paper delivered to the Flight Safety Foundation Seminar on Air
and departments—from board room to drawing board and cockpit. There is no unique solution; it can be called safety systems analysis and control, risk control or management, operational airworthiness, or whatever. I call such people air safety workers, and my remarks are addressed mainly to them.

The tools for evaluating air safety performance vary considerably; so far, the best combination seems that of the FAA’s performance and reliability index of 12 factors. The problem which faces air safety workers is common in a century exploding with scientific and technological data. It is the problem of how to handle the exponential mountain of information which exists in everyday air transport design and operations. Information today can be recorded, stored, analyzed, and retrieved far better by electronic than human means; however, the inputs are still human and the outputs have to be used by human beings. I offer no solutions to the search for an idealized symbiosis of man and machine in safety data processing. That is a job for other experts contributing to this Symposium, but I suspect that each phase, from design through operation, needs separate and lifelong treatment.

II. Points for Air Safety Workers

"One owes respect to the living; but to the dead one owes nothing but the truth."  
Voltaire

To those who have in their hands accurate information which could be used by other air safety workers and are frightened of possible legal consequences if they pass on the information, I would say: Forget your fears and pass the word along. Apply scientific and not legal tests to the information you have, such as:

1. Is it accurate?
2. Can you prove it?
3. Have you ruthlessly excised premature or unfounded speculations?
4. Do you know what parts would be valuable to other air safety workers?
5. Is it expressed clearly, concisely and unambiguously?
6. Do you know who can be trusted to use it confidentially for the purposes of air safety?
7. Would confidential circulation to other trusted air safety workers be consistent with your employer’s policy, i.e., ensure that trade or defense secrets are not involved?

If you have positive affirmative answers to all these questions, then please transmit the vital data.

It is important for air safety workers to understand the type of advice they may receive if they consult with lawyers engaged to prosecute or defend the interests of their employers. Such lawyers

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5 "On doit des regards aux vivants; on ne doit aux morts que la verite" [Lettres sur Oedipe, i].
have a duty to do everything legally possible to assist their clients—they do not have a brief to act in favour of some abstract principle of air safety. Therefore, when consulted, they must issue warnings about the possible effects of a particular statement on ultimate legal liability.

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It certainly is possible (and it may even be perfectly proper) for defence lawyers to inhibit the free exchange of aviation safety information—but there is a great deal of information which can and should be circulated promptly to interested parties provided the material is scientifically valid.

I know of no circumstances in which the confidential communication of scientifically valid facts to those who have a need for such information should give rise to legal difficulties provided that no trade or national secrets are involved. Quite the opposite, those who have information vital to air safety may find that they have a positive practical, moral, and legal duty to pass that information to those who need the information. Fortunately, there are already many enlightened lawyers advising leading companies along these lines. For example, aircraft manufacturers recognize this duty in their system of worldwide alerts using the most rapid means of written communication possible. To be silent in such circumstances may very well amount to legal negligence. It might be called the “tort of silence.”

Those who claim commercial or national secrets as a reason for withholding or delaying the transmission of data of air safety significance assume a tremendous responsibility on behalf of the travelling public and airmen generally. I would like to suggest that each nation and each commercial organization should review these matters annually and see whether more information can be released on humanitarian grounds than is suppressed or delayed on security grounds. Once information reaches designers and manufacturers I have the impression that generally it is swiftly used and recirculated to all those with a “need to know.” But this depends on incoming information, and this is where I hear the most frequent complaints on both sides of the Atlantic. For example, there is little doubt, in my mind, that more non-Americans could usefully copy the FAA system of compulsory Mechanical Reliability Reports and Mechanical Interruption Summary Reports. Australia has had a good system of compulsory accident and incident reporting for over 20 years. Of course there is a great deal of voluntary reporting by the airlines, but this is by no means universal or comprehensive as the examples in Appendix A indicate.

In 1960 a small group of IATA airlines (prodded by George Wansbeek of KLM and that indefatigable enthusiast, the late John Gibbs of BEA) commenced an exchange of safety information. There are now over 60 participants, but, with the sole exception of the Flight Safety Foundation,

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6 J. R. Ass. S. 783-84 (1967).
9 G. Wansbeek, Airline Safety, Presented to the Third Int’l Conference of the Int’l Federation
their reports had officially been confined to named individuals in participating airlines. The IATA exchange is a desirable and, so far as it goes, a successful experiment. I am convinced it should and it could be extended so as to include more airlines and the manufacturers.

III. POINTS FOR LAWYERS

"Where no counsel is, the people fall; but in the multitude of counselors there is safety."

11 Proverbs 14

The laws of most civilized countries include systems of compensation for injury or death based to a large extent on concepts of a legal duty of care, or in some cases, a liability without fault, as in the famous Montreal intercarrier agreement of May, 1966. I can see no objection, in principle, to the development of what is sometimes called "enterprise liability" if that is the conscious decision of a nation's legislators. It may lead to a new class of torts based on the enterprises concerned, e.g., the tort of public transport. Under this theory, if you are injured while on public transport, the transport enterprise is automatically liable whether it be a plane, ship, train, bus, or cab. The development of products liability in the United States has already generated what is virtually the "tort of manufacture" in several strict liability states. Will we see the "tort of living" developed? No matter what the legal theories are, no one can seriously object so long as there is adequate means for all the "enterprises" to bear their fair share of the burden, i.e., manufacturers and air traffic control agencies must be included as well as aircraft operators. Whether this is achieved by the exercise of rights or recourse or by specific agreements before or after accidents have occurred, is an open field for study and discussion. But it is quite clear that while "absolute" or "enterprise" liability might limit passenger litigation to questions of damages, there is no prospect whatsoever of eliminating litigation (except by agreement) between carrier and manufacturer or between carrier and any party who might be responsible. Therefore, "absolute" or "enterprise" liability (whatever benefits it might bring to passengers) is not, by itself, the ultimate answer for those who believe that litigation should somehow be eliminated or minimized.

"Absolute" or "enterprise" liability merely ensures that rightly or wrong-ly the enterprise bears the full cost of enterprise accidents. From this it is sometimes argued that liability to pay compensation is therefore an economic incentive to improve safety of operations. This might be true if liability to pay compensation was the sole or major economic penalty arising from accidents. It is not. The enterprise (airline, manufacturer or traffic control agency) hazards the whole of its future if it continues to use unreliable or unsafe methods, personnel or equipment. This is the real spur to aviation safety, and compensation for death or injury is only part of the economic penalty of accidents.

E.g., Boeing (as quoted supra note 9) and United Air Lines according to C. F. McErlean in an address to the Soc'y of Air Safety Investigators, 10 Nov. 1966.
I therefore suggest it is wholly unrealistic to place considerations of legal liability for compensation on some higher financial or moral plane than the whole future of the enterprise and those who work in it. There are enough reasons for the highest possible professional standards at all levels in the interests of business efficiency, and personal and public safety without invoking the spectre of lawsuits. For these reasons I cannot accept the arguments of those who claim that the request for compensation also serves some direct part of the cause of air safety. Nor do I accept the arguments of any who might be tempted to suggest that in the interests of a particular lawsuit, scientifically valid data should be withheld, or delayed in transmission to those who need the information for air safety purposes.

Many lawyers possess an all-consuming zeal to rectify wrongs, assist their clients and to serve their nation. In all humility, I venture to suggest that in the field of aviation safety, there are probably no more than two proper objects for that zeal. They are as follows:

1. to facilitate the free flow of vital information from those who have it to those who need it; and

2. to assist investigatory and air safety agencies and objectives.

I hope these objectives can be maintained distinct in every possible way from the lawful and important business of securing just compensation and recovery of damages for clients and the defence of such claims. The evidence is that undue and mistaken concern with liability lawsuits is inhibiting the free exchange of aviation safety information.\(^{11}\)

As Charles F. McErlean (Executive Vice President and General Manager of United Airlines) said at the 20th Annual International Air Safety Seminar of Flight Safety Foundation:

The most important inhibition to the exchange of full and complete information is the fear of being found liable in damages. If we could find a way to put that fear to rest, a good part of the battle would be won. I don't discount the importance of other matters, but I believe if we can find a solution to the greatest fear, we might find solutions to the lesser, or find a way to tolerate them.

Lawyers attending this Symposium or reading its papers can, by their own efforts, materially improve the atmosphere in which solutions can be found and fears put to rest.

IV. SOME COMMON OBJECTIVES

Improving the atmosphere includes creating a working environment in which all employed in the manufacturing and operating side of air transport can admit that they are still fallible human beings whose port can aspire to the highest professional standards and paradoxically at errors and mistaken judgments must be reviewed openly and corrected from time to time. This high degree of care and trust cannot flourish in fear of reprisals which may take many forms, such as:

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(1) disciplinary action by superiors;
(2) prosecution for violations of regulations; and
(3) exposure to liability lawsuits and the rigours of giving testimony.

Of course, incompetent men should either have defects in their competence remedied or be removed from a position where their incompetence has serious results. This is piously easy to state but difficult to implement. Hence, disciplinary action must always be an important element of control, probably the only important one in the long run when administered by an employer using modern methods of employee selection and training, labour relations, information handling, investigation and research facilities and management techniques. In short, the competent competitive organization may be a better self-regulator than any external system of controls. For example, I do not doubt the value and purpose of the world's leading airworthiness authorities, but I also do not doubt that Boeing, if left to itself, would continue to build safe and economical airplanes. The role of the regulatory authorities is to supply and enforce objectively established minimum standards, but every objective standard is based on a compromise between idealism and economics.

To enforce these standards I suggest that the regulatory authorities do not need to turn the control of air safety into an abstruse, over elaborate department of the criminal law. There is clearly a need for published minimum standards relating to design, manufacture, repair, overhaul, maintenance and operation of aircraft, airports and air navigation facilities. In the public interest, those who engage in any of these activities must be licensed or approved by independent regulatory authorities. But I suggest that the only essential powers that the regulatory authorities need are these powers:

1. establish and publish minimum standards;
2. issue, suspend and withdraw licences subject to a right of appeal to the courts or an independent tribunal;
3. order remedial education and training where necessary; and
4. obtain facts necessary for their functions.

In other words it is time that professional commercial airmen were accorded the respect and trust appropriate to design engineers and others who are assumed to be capable of carrying out their professional duties without being hounded as petty criminals.

Item (4) is not confined to the right to obtain documents and interview witnesses; it includes access to research and information facilities and it can include the task of investigating any accident involving death or injury. The investigation of all other accidents or incidents could very well be delegated to a separate air safety bureau within the legally-privileged framework referred to in Stage Two below and in Appendix B.

I might dramatize the difference by naming my approach the "Tutorial System" as distinct from the "Criminal System." I suggest it gives rise to new questions of who is fit to be tutor? Who knows what to teach and
how? So long as the subject is air safety and not “how to run your business” I think this may be more fruitful than the present Police v. Delinquents attitude which is generated by the “Criminal System.”

This would only be Stage One of a reformatory process. Stage Two would be the creation of a legally-privileged framework within which accidents (not involving death or injury) and incidents can be investigated and the useful results disseminated to the air safety community (which includes the regulatory authorities) without fear of the material being used or disclosed in civil or criminal proceedings. The means whereby this can be achieved will be different in each country.

At the seminar referred to above, Mr. McErlean provided one of the key suggestions:

[G]rant a privilege for the exchange of information in the interest of accident prevention to those who have a need to know.

This was followed up by Bob Gray in the same panel session, stating:

[I]t is my suggestion that the industry proceed to seek legislation that would:

(1) grant immunity and confidentiality to voluntary reports of air safety incidents; and

(2) establish an organization—preferably a fully independent NTSB—with no connection in the regulatory or enforcement, to receive, analyze and disseminate air safety information on a need-to-know basis.

In Project Scan, in which the FAA asked the Flight Safety Foundation to act as confidential recipient for near-miss reports, 2,500 reports were received in the first week.

These . . . did not happen that week; they had been withheld over a period of several years because pilots were afraid to tell the FAA about them.

In relation to Bob Gray’s first suggestion as applied to near-misses the CAB tried it in 195612 and the FAA is doing so again in 1968.13

Other experiences in the United States Air Force (USAF) and in the United States Navy (USN) where confidential reporting is encouraged and protected are generally believed to be successful. It is too often assumed that these methods cannot be translated into civilian life. Why not? The answer to this question is probably the most important single topic which can be studied by lawyers and law makers concerned with air safety in every country. There are those participating in this Symposium who can say, far better than I could, whether the experiences of the USAF, USN, CAB and FAA can be used to justify a civilian extension of privileged reporting.

I suggest that this is a topic which merits serious study in the leading air transport nations and in the international agencies. To provide a focus for such study I submit in Appendix B a draft of how this may be promoted using the basic machinery of the Chicago Convention. It should

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be emphasized that while this system contemplates the creation of a worldwide national and international system for the dissemination of safety information free from the risk of civil or criminal proceedings, the ultimate objective is prompt general publication of all useful information wherever possible. The methods for providing privileged channels of communication may be quite different in each country.

V. Conclusion

I have to confess that my suggestions are not popular in the United Kingdom. But I would have no objection if this Symposium and its aftermath led to private organizations and federal agencies in the United States taking my ideas to pieces and reassembling the useful parts in a form fit for digestion in ICAO. If this could be done it would be a measure of great progress towards the objectives which are common to air safety workers everywhere, and are shared with manufacturers, operators, regulatory agencies, and even plaintiff’s lawyers—namely the reduction of aviation accidents.

APPENDIX A

Examples of Accidents which Might have been Avoided

1. Explanation

This Appendix is a small selection of examples illustrating accidents or incidents which might have been avoided if there had been a better exchange, understanding and use of vital information. So far as is possible, all identifying particulars have been removed from those examples which have NOT been the subject of official reports available to the general public.

2. Unpublished

a. Wing structure of a prototype military jet was destroyed by fire caused by the ignition of fuel which accumulated in the space between jet pipe and shroud as a result of reverse airflow during shutdown and relight tests. It was subsequently discovered that there had been a similar occurrence in a civil jet using a similar engine installation, but in this case disaster was avoided because the fire was seen from the cabin before it reached unmanageable proportions.

b. Major failures of piston engines were reported, diagnosed and treated by the engine designers and operators as spark plug malfunctions. Subsequent investigations revealed that there had been a series of ignition harness failures which had not been reported to the engine designers because the aircraft operators thought that they were caused by vibration and were unconnected with the engine failures.

c. The probable cause of a fatal accident to a medium-sized piston aircraft is believed to have been loss of control due to a rearward movement of the center of gravity arising from unsuspected and unprotected undersurface icing of wings, horizontal stabilizers, and elevators when added to a rearward alteration to the center of gravity caused by aircraft modification.

Unknown to the aircraft designers there had been numerous complaints of handling the aircraft in icing conditions. Subsequent investigations showed that one tenth of an inch of glaze ice over the undersurfaces would result in a one inch rearward movement of the center of gravity.
3. Published

a. Takeoff accident of DC-7C at Douala 4 March 1962 at night killing 10 crewmen and 101 passengers. According to the United Kingdom Government's translation of the report of the Federal Republic of Cameroun Commission of Inquiry [CAP 202 HMSO January 1964] the takeoff ground roll was abnormally long and took approximately 7,874 feet (2,400 metres) instead of 4,922 feet (1,500 metres). The aircraft struck trees at a height of 72 feet and a distance of 16,075 feet from the beginning of takeoff. All engines were under power and from the evidence of propeller damage the Commission thought that the speed at impact was 170 knots EAS, with gear up and flaps retracted or very nearly so.

Although the Commission could not determine the causes of the accident with "absolute certainty" and was unable to eliminate "an instrument failure as a possible cause," the Commission considered that there was:

Evidence to show that an elevator spring-tab mechanism may have been jammed before impact. This jamming would have resulted in abnormal elevator control forces during the take-off. Flight tests have shown this to be consistent with a prolonged take-off run and a risk of losing height during flap retraction.

The Commission drew attention to the takeoff of another DC-7C on 7 April 1961 at Buenos Aires which had been abandoned at V2 and attributed by that operator to jamming of the spring-tab mechanism. It was said that a number of DC-7C aircraft showed marks of friction in the spring-tab mechanism similar to that found in the Douala accident. Following the Buenos Aires incident, Douglas issued a report which, according to the Commission:

was so drafted that it minimized both the possible consequences and the nature of the incident and did not attract sufficient notice from the users.

Nevertheless, several DC-7C operators evidently put into operation a modification to the mechanism which was not made the subject of a manufacturer's service bulletin until after the Commission had made representations to "the Douglas Corporation and the official American, British and French services." It stated:

The Commission considered it regrettable that the constructor did not design a modification to the elevator spring-tab control mechanism . . . immediately after the [Buenos Aires] incident. . . .

In addition to recommendations concerning the training of flight crew and the improvement of various airport services, the Commission stated:

The Commission recommends the systematic study, by operators, constructors and official services, of all incidents reported during operations, in particular those which might have led to an accident or have provided an explanation of an accident of which the investigation is in progress or even completed.

Finally the Commission drew attention to the following:

Similarities between the Douala accident and other previous accidents to DC-6 and DC-7 aircraft during the same flight phase, in particular at Orly, Shannon & Bordeaux.

Surprisingly, the Commission only recommended "the Irish, Italian and Netherlands authorities as recipients of its report!"

b. In-flight fire in Viscount 832 on 22 September 1966 in Queensland killing 4 crewmen and 20 passengers. The published report of 4 October 1967 on this accident (by the Chairman of the Board of Accident Inquiry appointed by the Minister of State for Civil Aviation of the Commonwealth of Australia) suggests many failures of communication. The summary of principal conclusions includes:

20. The crash of the aircraft followed the failure in an upward direction of the port wing
between No. 1 and No. 2 engines. . . . when the aircraft was at a height of 3,500 feet to 4,000 feet above ground level.

21. The port wing failed as a result of a weakening of the main spar due to a fire in No. 2 cell of No. 2 fuel tank.

22. The fire originated in the No. 2 cabin blower and travelled through the rear of No. 2 engine nacelle and port wheel bay to the fuel tank.

23. The fire in No. 2 cabin blower was initiated as a result of a rotor break-up.

It is not possible on the evidence to determine what was the cause of the rotor break-up.

Investigation of the accident revealed three previous incidents unknown to the airline or Australian government all of which involved fires associated with cabin blower failures—two in Canada and one in the West Indies.

Extracts from "Observations and Recommendations" of the Australian Board of Inquiry were as follows:

1. The evidence indicates the need for the continuous maintenance of the utmost accuracy in manuals issued by manufacturers of aircraft and components and in sketches and drawings included therein. It has been necessary unfortunately to take note of a number of inadequacies and inaccuracies in the overhaul manual issued by [the cabin blower manufacturers]. . . .

   It is pertinent to add that adherence to these standards will be of little avail unless organizations using manufacturers manuals ensure that the manuals and revisions are made available to and are closely studied by those who are required to work in accordance therewith. They should first be scrutinized by persons competent to determine their significance and qualified to direct their appropriate distribution. A check by those responsible for supervision to ensure that such procedures are in fact being maintained in their own organization would be reassuring to the whole industry.

   The Board feels it timely that consideration be given to adopting such a standard for manufacturer's manuals for future types of regular public transport aircraft on the Australian register. It seems that A.T.A. Specification 100 is a suitable standard to adopt.

2. Where doubt is entertained by responsible representatives of an operator as to the accuracy of any drawing, whether it be an assembly or installation drawing or as to any method or procedure of overhaul or repair, it should be referred to the manufacturer for determination.

3. The safety and airworthiness of aircraft is dependent to a large degree on the maintenance of accurate technical operating records. During the course of the Inquiry it has been necessary to take note of discrepancies and inconsistencies in the records maintained by Ansett-A.N.A. in relation to overhaul, maintenance and inspection procedures. . . . I feel that a system of random checks might be adopted, including an occasional internal investigation based on an imaginary emergency involving an aircraft selected for this purpose.

4. The evidence in relation to the West Indian incident serves to emphasize the desirability of the utmost consultation between the subsidiaries or agents of manufacturers and their principals in relation to any unique or unusual incident which may be revealed. It is better that too much rather than too little information should be passed on in this way.

5. Particulars of modifications which vary a manufacturer's design of an aircraft component although made in accordance with airworthiness requirements should be notified to the manufacturers of that component.

6. The unusual, unexpected, unique incident or accident, whether the same appears to involve airworthiness or not, will at all times repay careful scrutiny. This is particularly so where fire is involved. Any such accident or incident should be reported to the manufacturer of the aircraft with sufficient information to enable the manufacturer to assess its significance. Unless a cause of such an event is apparent to the manufacturer, then from whatever source its information is derived it should seek to determine such cause requesting such further information as may be necessary for that purpose. In the case of a vendor component the manufacturer of such component should be notified.

9. It is a matter of the greatest concern that neither the Canadian or British West Indian occurrences of fires in cabin blowers were known in Australia until after the D.C.A. investigation into the loss of VH-RMI had commenced. Both fires caused considerable damage in the Zone 3 area and knowledge of the circumstances may have led to the introduction of modifications which would have precluded the VH-RMI accident.

Fire in an aircraft, whether in the air or on the ground, is an occurrence of the greatest potential danger and it is suggested that occurrences involving fire should at all times be the subject of investigation by appropriate airworthiness authorities and that their conclusions in relation thereto should be widely circulated. The matter appears to the Board to be of such significance as to call for action on the international level.

APPENDIX B

AN INTERNATIONAL SYSTEM TO PROTECT THE EXCHANGE OF AVIATION SAFETY INFORMATION
1. Draft 1—Proposed For Addition To The Chicago Convention—New Article 26A*

a. Each Contracting State undertakes to adopt all practicable measures within its territory to obtain, record, protect and disseminate information pertinent to the safety of aviation and to communicate such information to other Contracting States in conformity with such Standards as may be recommended or established from time to time pursuant to this Convention.

b. Each Contracting State undertakes to ensure that information obtained, recorded and disseminated as aforesaid shall, to the extent necessary for the purposes of safety of aviation, not be used or disclosed in civil or criminal proceedings by or on behalf of the State or any person or organisation therein, and shall not be used for any purposes inconsistent with this Convention.


Chapter 1—Definitions

Aeronautical Information Circular shall have such meaning as is assigned by Annex 15.

Aircraft Accident shall have such meaning as is assigned by Annex 13.

Aviation Safety Information. Information arising out of the investigation of aircraft accidents and incidents which may be used anywhere to prevent future accidents or incidents.

Incident. Any fortuitous or unexpected event by which the safety of an aircraft or any person is threatened.

SAFEX. A notice containing aviation safety information, the timely knowledge of which is essential to the safety of aviation.

Class I distribution—Distribution by means of telecommunication.

Class II distribution—Distribution by means other than telecommunication.

SAFEX Authority. Person or organization authorized by the State to compile and issue SAFEX on behalf of the State and to disseminate any SAFEX within the State for the purposes of aviation safety.

Chapter 2—Applicability

These Standards and Recommended Practices are applicable on and after 1st January 1970, to the collection, protection and dissemination of information pertinent to the safety of international civil aviation.

Chapter 3—General

3.1. Responsibility and Functions.

Each Contracting State shall provide an organisation for the collection, protection and dissemination of aviation safety information.

Note: Such an organisation may be provided jointly by two or more States or by the delegation of authority to a non-governmental agency.

3.1.1. An aviation safety information organisation shall provide for the confidential collection, collation, analysis and editing of aviation safety information relating to all persons and organisations in the territory for which it has been made responsible by the State. An organization shall also provide for the dissemination of edited information in accordance with Appendix I.

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* This is a revised version of the draft published in Vol. 71 No. 683 (Page 785) of the Journal of the Royal Aeronautical Society (November 1967)—amended to make clearer in (a) the Contracting State’s obligation to arrange an information exchange nationally as well as internationally, and in (b) the safety purpose of privilege.

** Author’s note: this is a slightly revised edition of the Draft which appeared in the JRAeS (November 1967) loc. cit.
3.1.2. The protection afforded to aviation safety information shall include freedom to collect and disseminate such information in accordance with these Standards and Recommended Practices without fear of such information being used or disclosed in civil or criminal proceedings.

3.1.3. Aviation safety information collected in accordance with these Standards and Recommended Practices shall not be exchanged with another State or with another SAFEX authority until it has been analysed by the competent SAFEX authority and authorized for transmission in accordance with Appendix I.

3.2. Objective.

The objective of the system shall be the prompt dissemination of aviation safety information to all who can use such information for the purposes of preventing aircraft accidents and incidents.

Chapter 4—Implementation

4.1. Provided that the conditions of Chapter 3 are observed nothing herein shall prevent the publication of any SAFEX as part of a NOTAM or Aeronautical Information Circular in accordance with Annex 15, or publication by any other means.

4.2. Nothing herein shall prevent the exchange of aviation safety information direct between persons or organisations in the same State or in different States engaged in the design, manufacture and operation of aircraft and the conduct of work on or in or in relation to aircraft or air navigation services provided that unless such information is made publicly available it shall be communicated also to the competent SAFEX authority in the State of origin.

4.3. Each Contracting State shall have the responsibility of determining those persons or organisations authorized to receive those portions of any SAFEX which are intended for RESTRICTED circulation within the State for the purposes of aviation safety.

4.4. The competent SAFEX authority shall have the responsibility of determining whether a SAFEX should have Class I or Class II distribution.

4.5. Unless otherwise determined by the competent SAFEX authority the unclassified contents of each SAFEX shall receive prompt and unrestricted publication.

APPENDIX I

CONTENTS OF AVIATION SAFETY INFORMATION EXCHANGE NOTICE (SAFEX)

Each SAFEX shall contain the following information and shall be addressed to the competent SAFEX authority of each Contracting State for their confidential attention:

1. Name and address of agency authorized by the State to compile and issue SAFEX.
2. Date of issue.
3. Brief statement of circumstances giving rise to issue of SAFEX with sufficient particulars, where relevant, to identify type and model of aircraft or navigation facility involved.
4. Reference number and date of report upon which SAFEX is based and sufficient particulars to identify the agency making the report.
5. Reference number and date of report upon which SAFEX is based and sufficient particulars to identify the agency making the report.
6. Brief analysis of causes of aircraft accident or any incident giving rise to issue of SAFEX.
7. Summary of action taken within originating State.
8. Any request for advice or information.