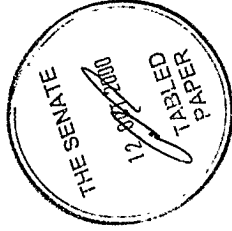


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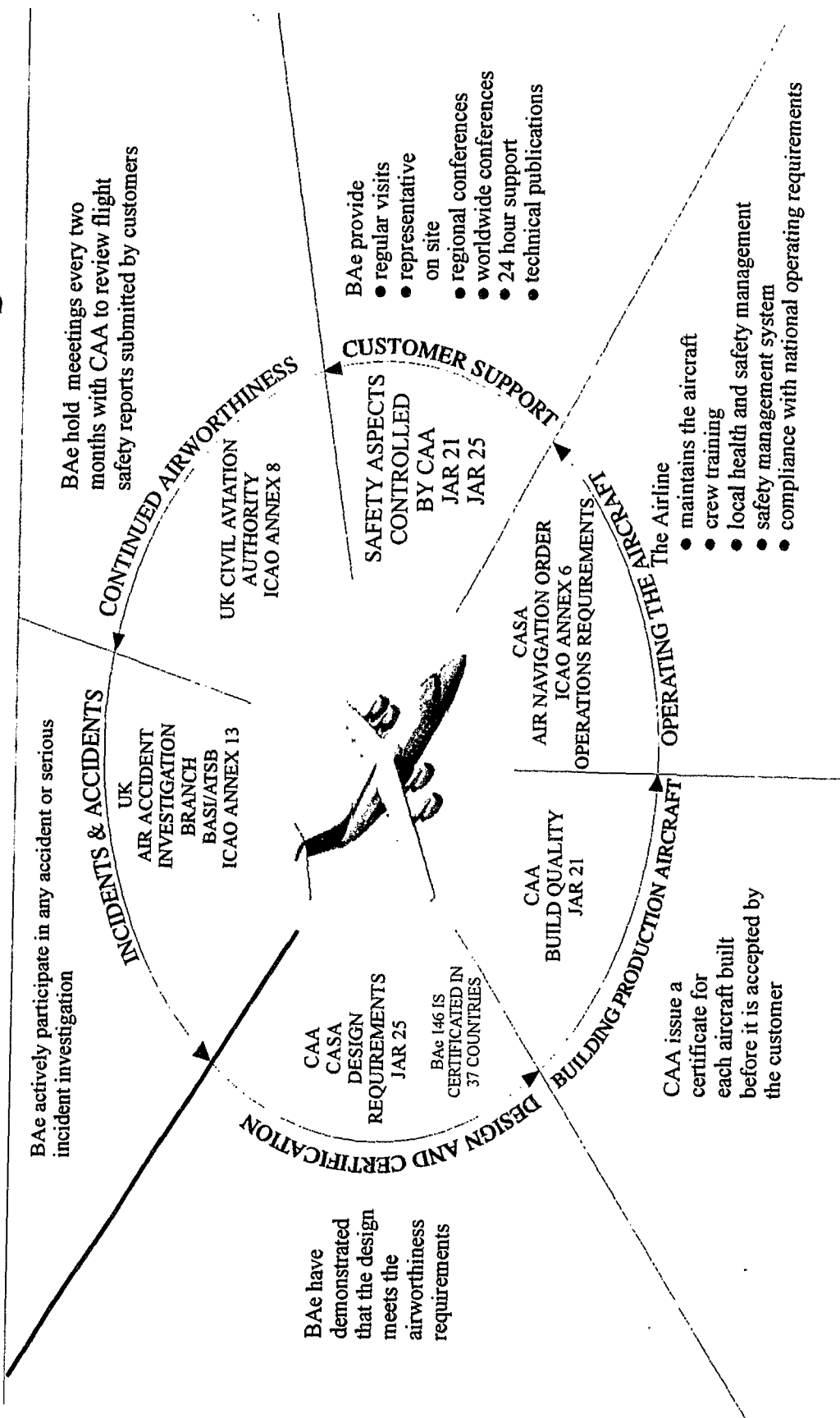
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BRITISH AEROSPACE

Regional Aircraft

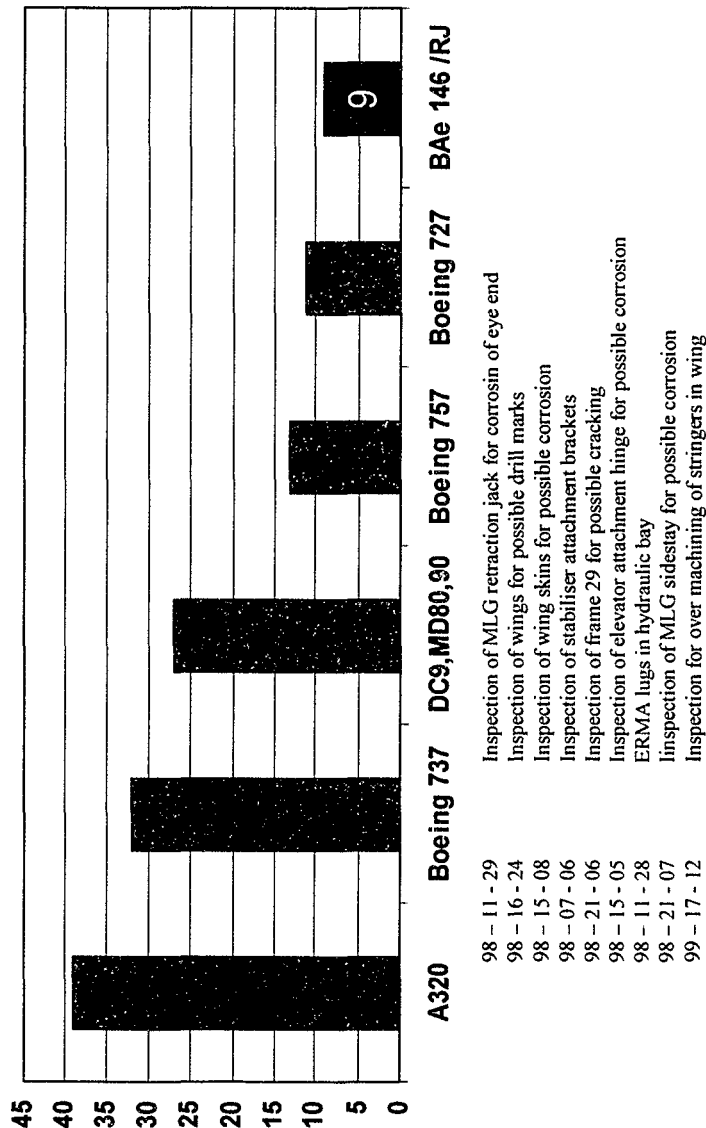
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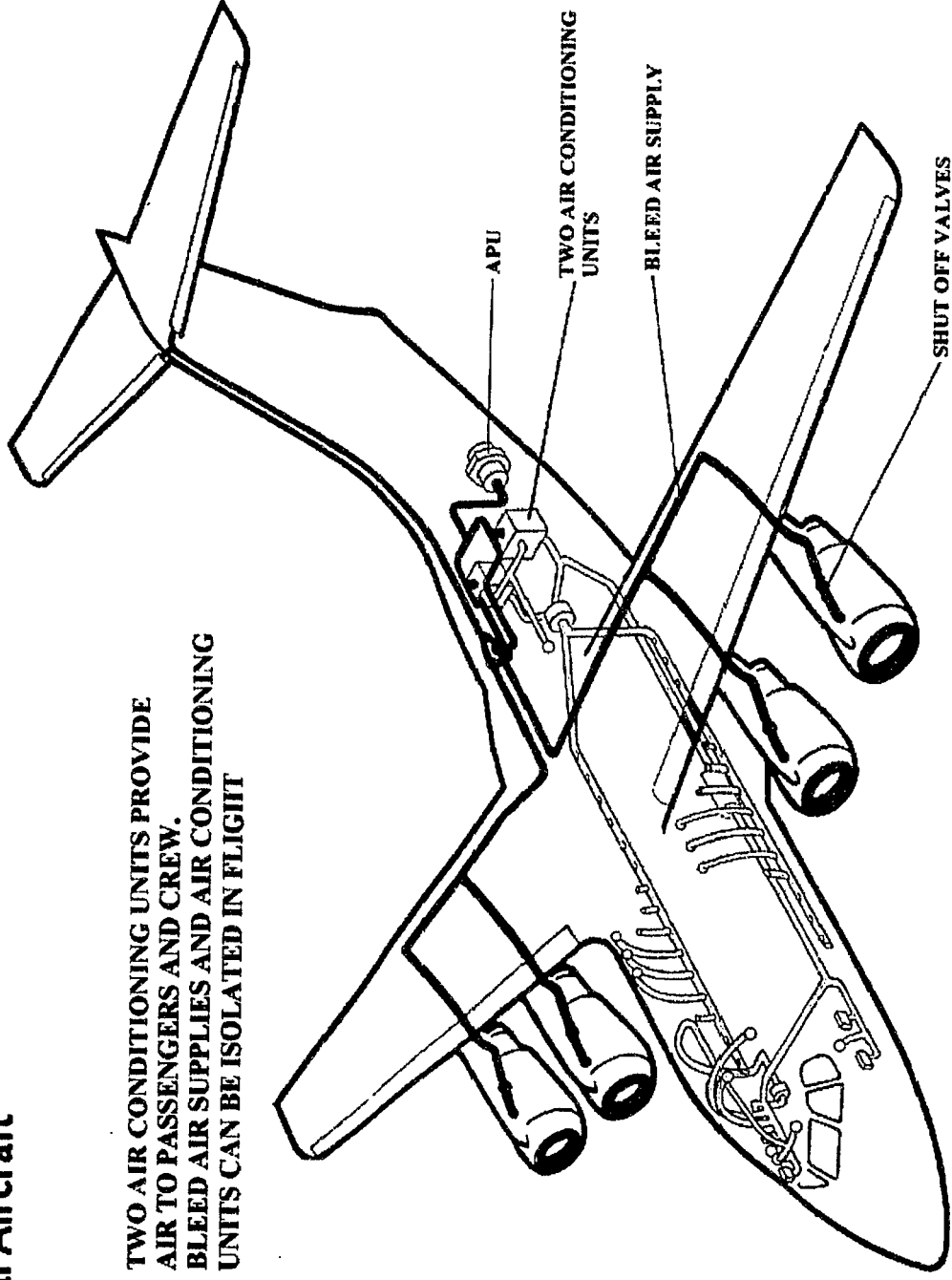
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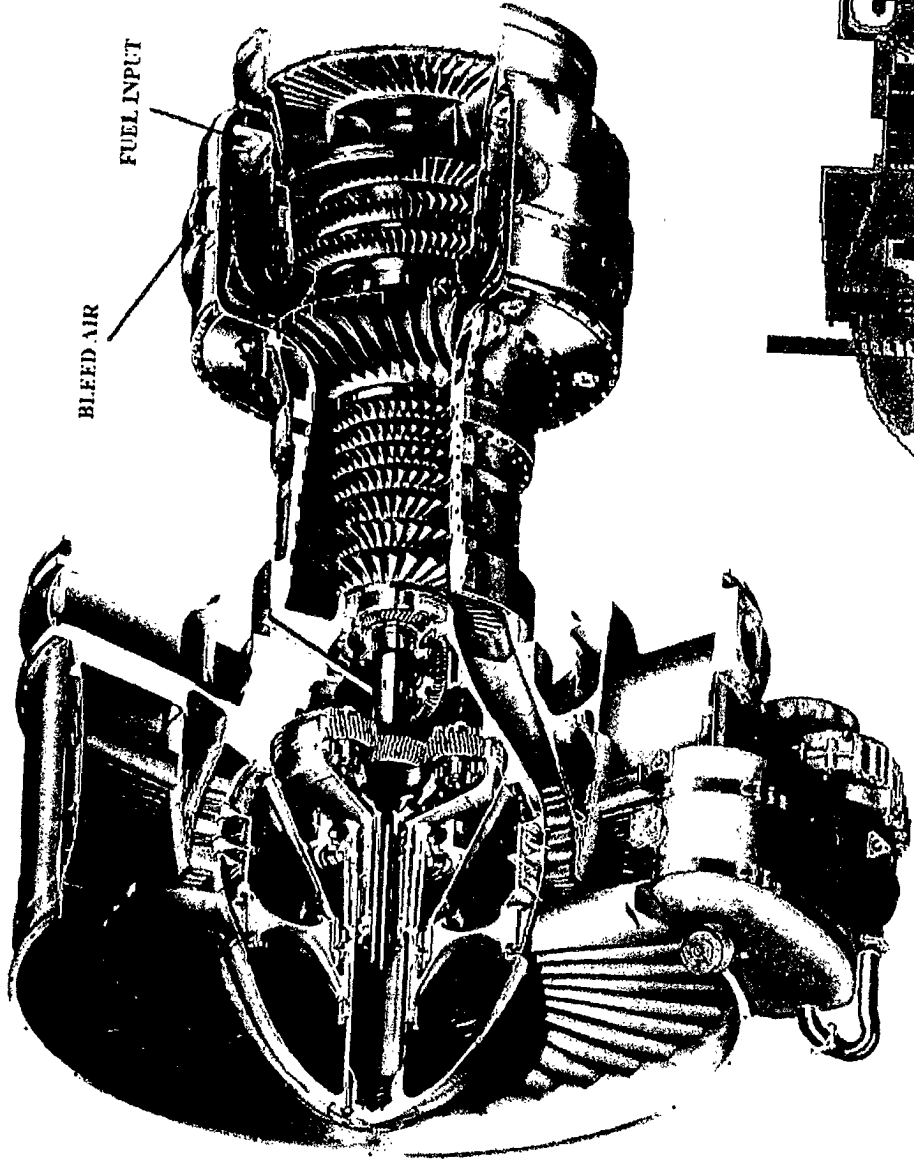
BAe 146 Cabin Air Quality

FAA Airworthiness Directives 1998 - 1999



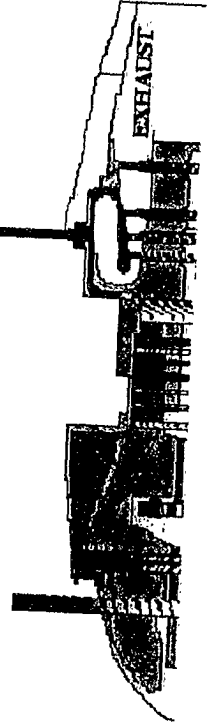
TWO AIR CONDITIONING UNITS PROVIDE
AIR TO PASSENGERS AND CREW.
BLEED AIR SUPPLIES AND AIR CONDITIONING
UNITS CAN BE ISOLATED IN FLIGHT





BLEED AIR IS TAKEN FROM
THE ENGINE COMPRESSOR
STAGE BEFORE THE FUEL
IS INJECTED INTO THE
COMBUSTION CHAMBER

To Air Conditioning Units

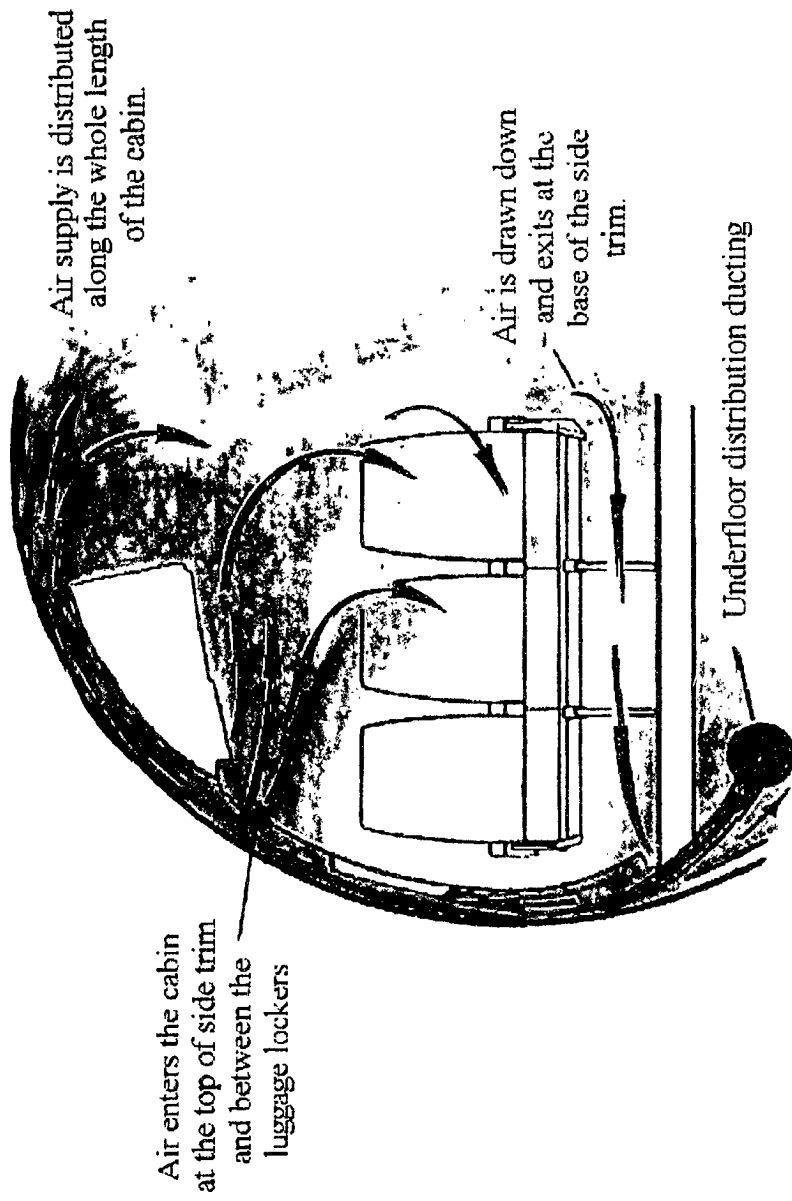




BRITISH AEROSPACE

Regional Aircraft

**AUSTRALIAN SENATE
INQUIRY 1999**

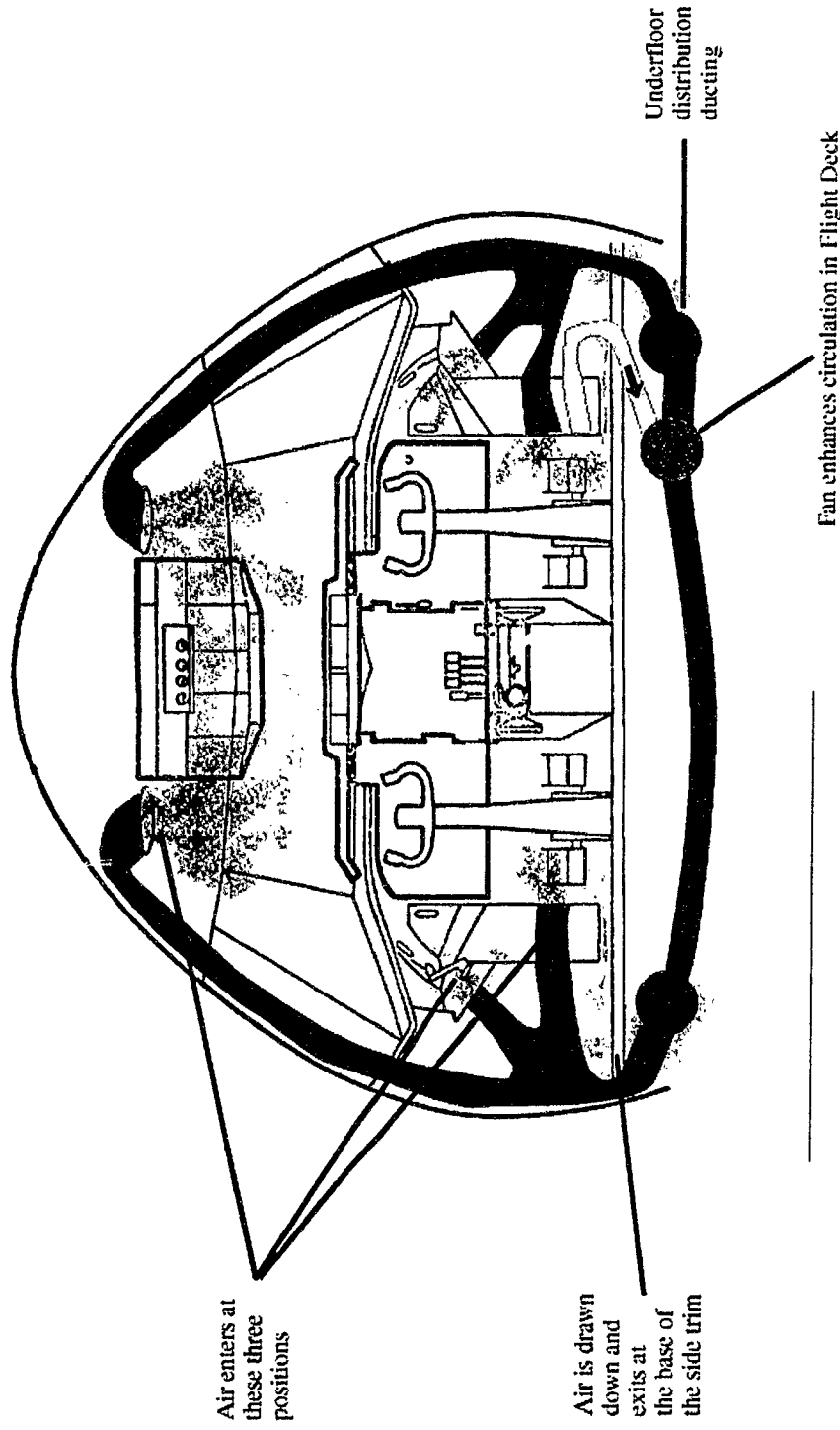




BRITISH AEROSPACE

Regional Aircraft

**AUSTRALIAN SENATE
INQUIRY 1999**



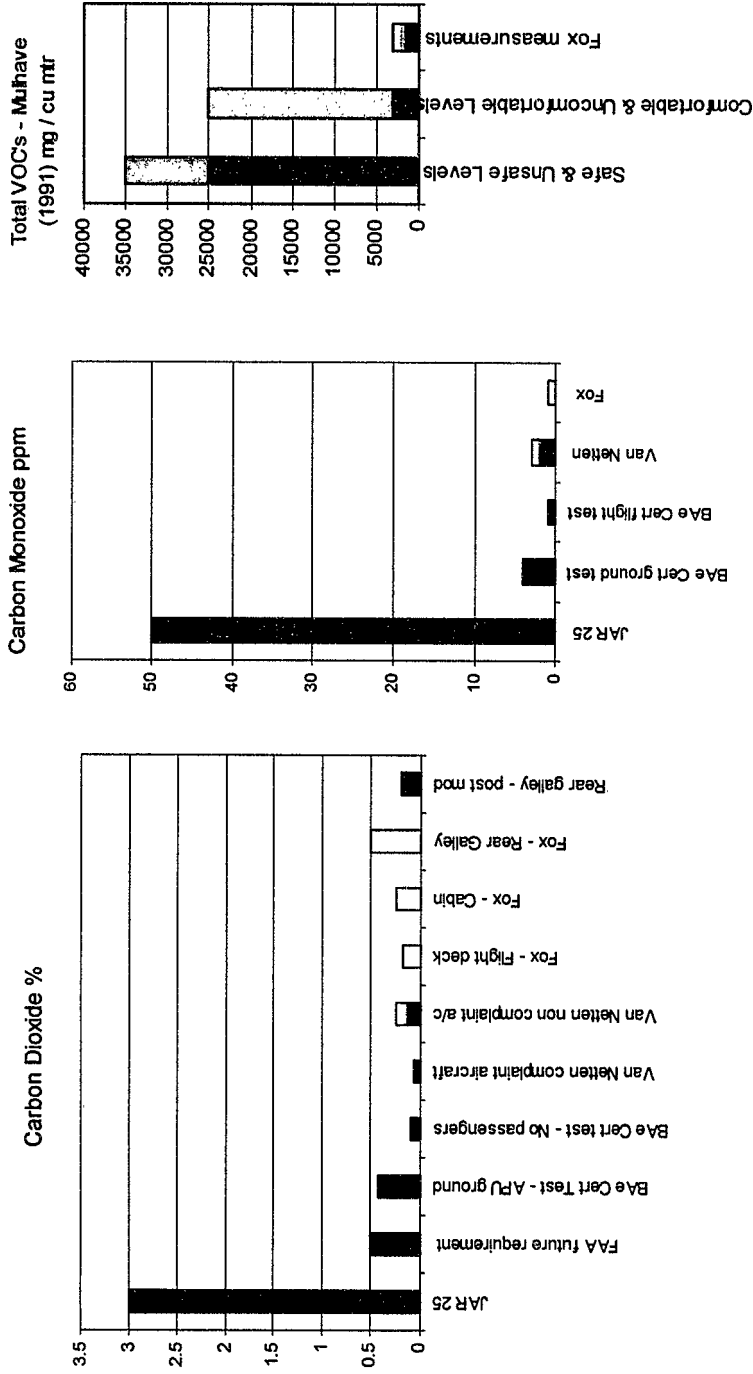
PRINCIPLE OF FLIGHT DECK VENTILATION

Australian Senate Inquiry 1999

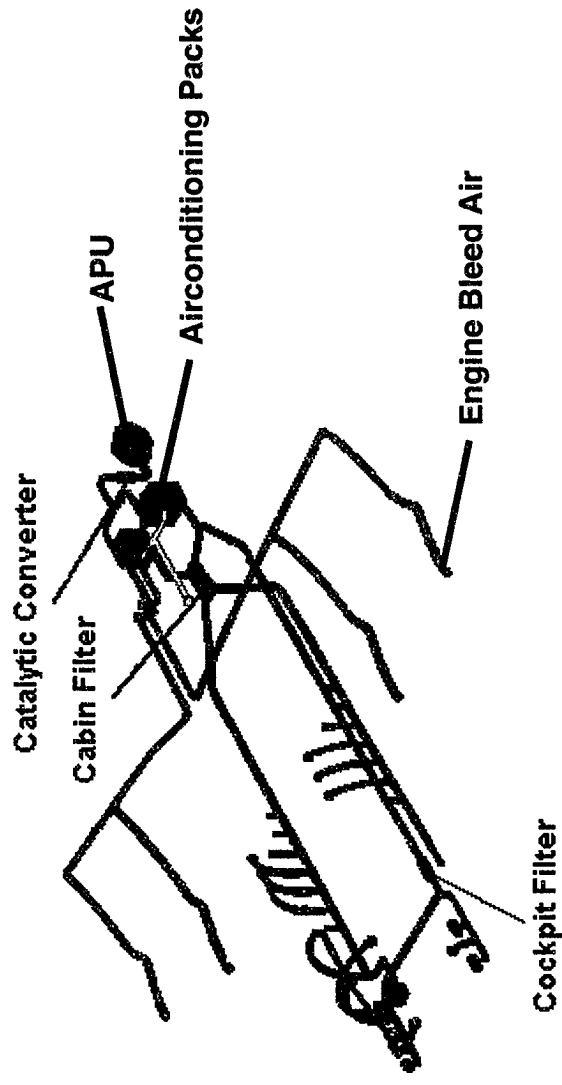


BAe 146 Cabin Air Quality

Contamination levels have been proved to be very good compared to published Requirements



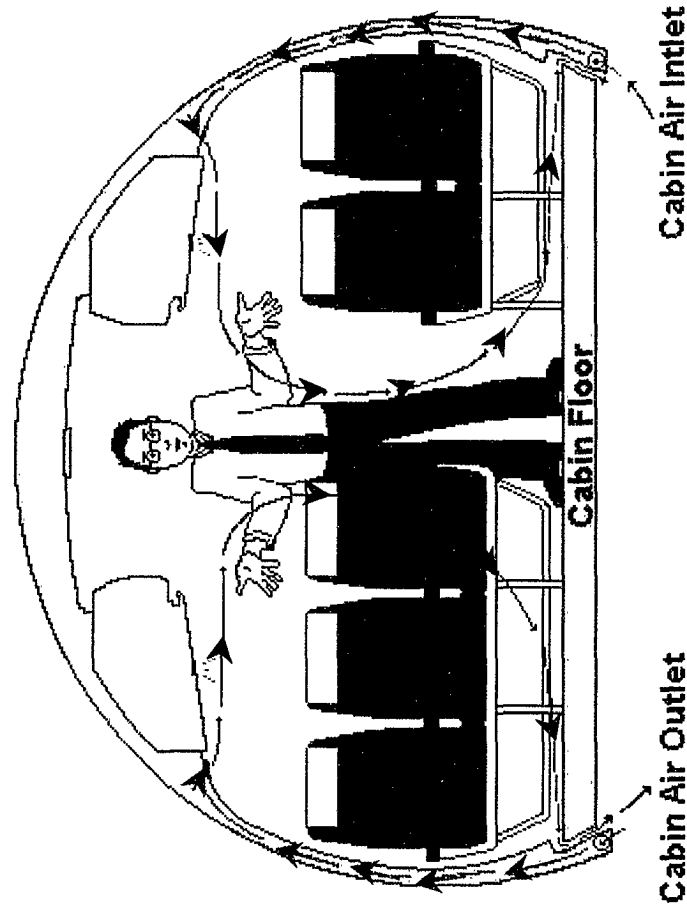
Airconditioning System



ANSETT AUSTRALIA



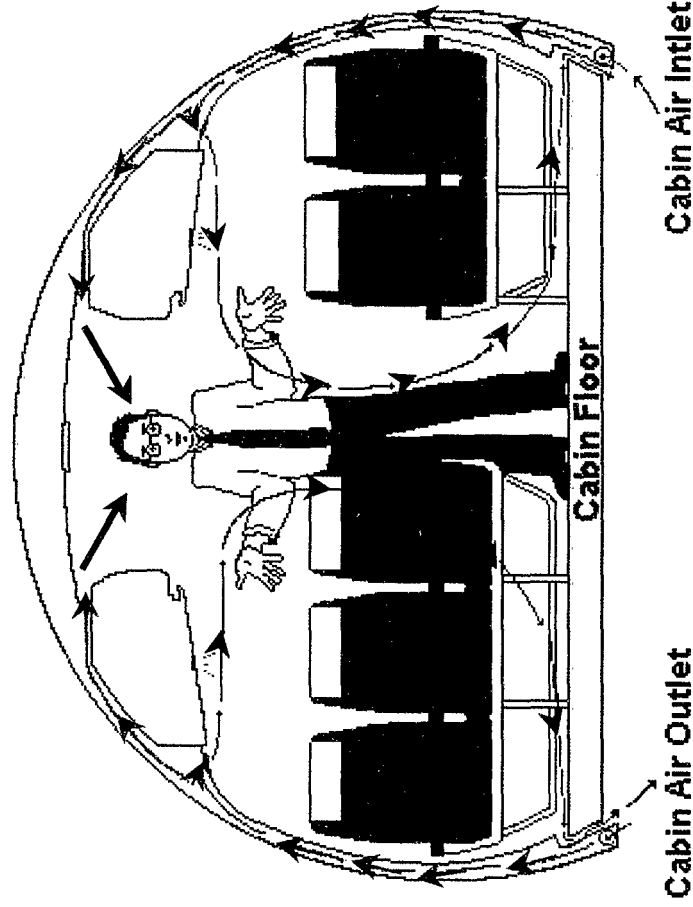
Airflow Before Modifications



ANSETTAUSTRALIA

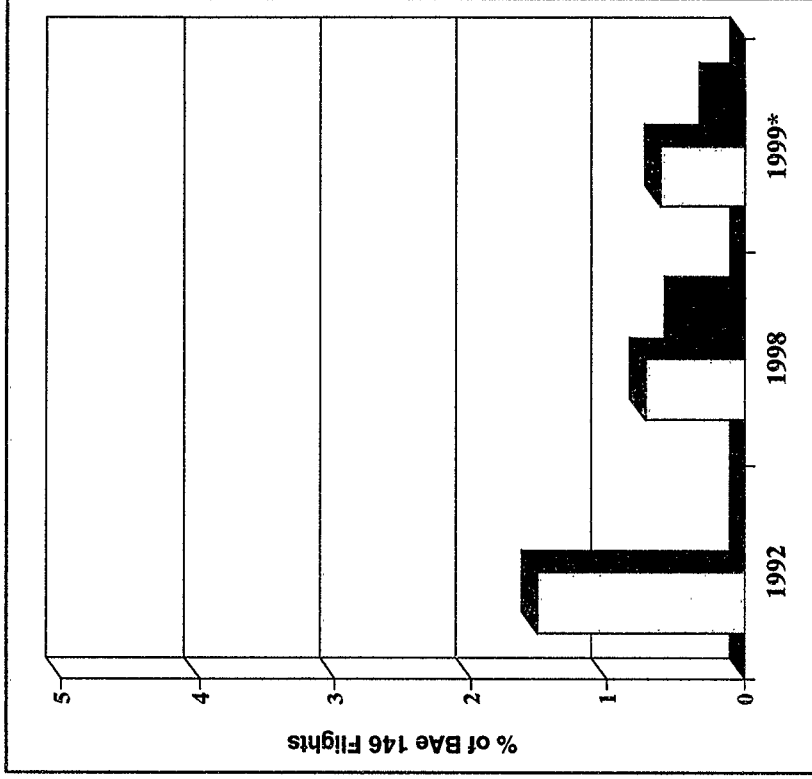
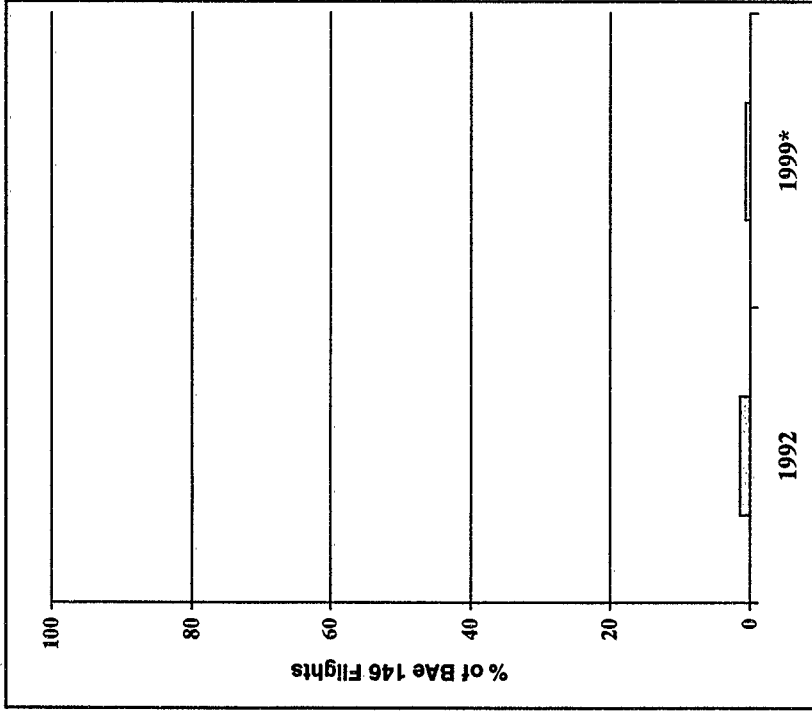


Airflow After Modifications



ANSETT AUSTRALIA

Odour Event Reduction



☐ Engineering Log
 ☒ Cabin Crew Reports

* Six months to June 1999



ANSETT AUSTRALIA

Compensation Court of New South Wales

Matter No. 19652 of 1995

Alysia Chew

v

Eastwest Airlines Ltd

and

Ansett Australia Ltd

28 April 1999

JUDGMENT

MORAN J:

1. The applicant in these proceedings, who is now aged 31, was employed by the respondent as a flight attendant. Firstly, she was employed by Ansett Australia Ltd from about 1990, and in January 1992, when Ansett took over Eastwest Airlines Ltd, she was employed by Eastwest Airlines for about eight months, but even during that time there were occasions when she was required to work for Ansett. After that eight months, she was back in the employ of Ansett Australia Ltd and she continued in that employment for some time, but last worked for them on or about 30 October 1993.
2. Her claim before the Court is for weekly compensation for incapacity since that date to date and continuing plus s60 expenses. Her case is that between January 1992 and 30 October 1993, she was exposed to fumes, toxic substances and other irritants whilst carrying out her duties as a flight attendant in aircraft known as BAe 146. The applicant alleges that the fumes within the aircraft cabin to which she was exposed contained mobile jet oil 2 which, in turn, contained the toxic substance known as triorthocresyl phosphate ("TOCP"). The applicant alleges that TOCP as a toxic substance caused damage to the applicant's physiology which gave rise to the applicant's chronic ongoing symptoms and disabilities diagnosed by her doctors as "Multiple Chemical Sensitivity" ("MCS"). Alternatively the applicant alleges her symptoms and incapacity have resulted from aggravation of a condition of glandular fever or a viral infection described as an Epstein Barr virus; that the

aggravation occurred over the period January 1992 until October 1993 and the effects of that aggravation are still present.

3. The nature of her injury is set out in paragraph 5 of the Application for Determination as follows:-

Headaches, sore throat, eye condition, nausea, breathing difficulties, chest tightness, fatigue, low white blood cell count, skin rash, sensitivity to petro-chemical substances, enlarged glands, sinusitis, recurrent pharyngitis, lethargy, post-viral syndrome precipitated by fume exposure, permanent reaction to chemical exposure.

4. She described the smell in the cabin of the plane as something which smelt like a combination of dirty socks and vomit. She described a procedure which pilots perform what is called a burn pack. This occurs when on the ground with the engines running and whilst there are no passengers on board but usually with all the crew on board. She said that the smell and fumes were worse when this burn pack was carried out. Also, she said, that the fumes and smell continued at this level when the plane was taking off and up to the time of levelling out, which can be up to twenty minutes each flight. Similarly, it occurred when the plane was descending. She said that previously she had been employed on larger aircraft, whereas, the BAe146 was mostly used on shorter trips. She said that on many occasions she would be employed on, for instance, four trips a day to Coolangatta, on busy times could be five or six, so that these experiences that she suffered of fumes and smoke and bad smell would occur when taking off and again when landing, i.e. on those occasions at least eight times a day. She said that she started to experience symptoms of difficulty breathing, sinus problems, coughing, headaches and swollen glands. She gave evidence of complaints from passengers and also other staff. The applicant said that she continued working from January 1992 until October 1993 and she continued to have the symptoms which I have described. On one occasion of June 1992, she found it necessary to go to Dr Tan, whose clinical notes are before me as Exhibit P. Dr. Tan reported on 22 June 1992 that the applicant was a flight attendant with Eastwest Airlines, and today she presented with a history of feeling ill of yesterday when she was flying symptoms of giddiness, vomiting, difficulty breathing, sort chest, sinus, sore throat and that morning she had coughed up phlegm and it looks like it had red, green, yellow bits through it. She said in this report that Alysia was worried about the effects the particular aircraft had on her health and that the other flight attendants had similar symptoms. The doctor gave her a few days off work and she returned to work.

5. The exposure to smoke smell and fumes continued. In December 1992 she consulted doctors when glands in her neck and under arms were very swollen. She had tests for glandular fever and had bed rest for about four weeks during her annual leave. The results from the tests came through in January 1993 confirming that she had glandular fever or Epstein Barr virus. The applicant resumed for normal duties early in 1993 on the same planes. She said in evidence (p. 5 on 11.3.98) that she developed a rash over her body, her skin on her face and neck were starting to burn and she was getting rashes on her legs, but mainly her face and around her mouth, eyes and neck.
6. In October 1993 she had a multi-day trip to Hobart. On the return trip to Sydney during the safety feature demonstration (p.6) smoke started to come through the cabin. She described the smoke as grey to black and from row three she couldn't see "the last probably three to four rows of passengers and I alerted the purser who alerted the captain and we actually thought there was a fire in the rear toilet." It transpired there was no fire in the toilet. The applicant described the passengers discomfort. The pilot ventilated the cabin but it was still very hazy. The applicant said her eyes were stinging and a passenger in the third row at the back was very distressed "she was gaging." She said that during the flight to Sydney the smoke didn't clear, it was very hazy. Her description of the events on that day were supported by another employer of Ansett, Magda Cotton.
7. The applicant said (p.7) that when she got off the plane in Sydney she was feeling very ill. She went home and went to bed. Three days later she consulted Dr. Brazier of Cammeray. She said she has not worked for the airlines since.
8. She later came under the care of Dr. Fluhrer and Dr. Donohue. She has undergone many tests. In late 1996 she was referred for tests by Dr. Little in Victoria where she was admitted to Ainsley Hospital for eight to nine weeks. Before going to Victoria the applicant said she had done some part-time casual work as a sales assistant at a store which sold women's clothing. She said she was unable to continue because of an increase in symptoms which she related to the smells of the building and travelling to and from work by public transport. She enrolled in a course to learn acting at the Ensemble Theatre in 1996 and again in 1997 for about 10 hours a week. However, she said she was getting very bad giddy spells and headaches and feeling nauseous. She said that if she goes to a shopping mall it makes her sick.p.11 (11.3.98)

Exposure to Smoke and Fumes

Counsel for the respondent in written submissions pars 4(a),(b),(c) and (d) stated:-

4. *The Respondent makes the general submissions (which are developed below) as follows:*

(a) *there is relatively little dispute that from time to time the Applicant in the course of her employment with the Respondents was exposed to fumes vapours or smoke (hereafter referred to as "fumes") of varying character and varying composition during the period about January 1992 to October 1993;*

(b) *as to the various composition of the fumes to which the Applicant was exposed even if those fumes contained mobile jet oil 2 those fumes did not contain any TOCP and (other than a transient irritant effect) the presence of mobile jet oil 2 in the fumes, if any, did not give rise to any damage to the physiology of the Applicant;*

(c) *the Applicant had a pre-existing condition in the form of the Epstein Barr virus, glandular fever or some other similar viral condition which rendered the Applicant unusually susceptible to exposure to fumes such as those which were from time to time present in the aircraft in which the Applicant worked; and*

(d) *by reason of the Applicant's pre-existing condition exposure to the fumes from time to time resulted in an aggravation, acceleration or exacerbation of the Applicant's pre-existing condition by reason of the Applicant's unusual susceptibility and that aggravation, acceleration or exacerbation of the Applicant's pre-existing condition is a compensable "injury" within the meaning of the Workers Compensation Act 1987 (NSW)."*

9. The respondent called Mr. R.J. Cain, an aircraft engineer on 14 December last. Since 1990 he has been responsible for the day to day operation of BAe 146 aircraft. He produced a summary of pilots' reports relating to the smell from Aee 146 aircraft for calendar years 1992 and 1993 which became Exhibit 5 and a summary of fume reports from 23 March 1996 to 11 February 1992 which became Exhibit 6. Mr. Cain said at p 11.2:-

A. There were 2 smell committees; originally, I think it was early '91 and nearly went for, I think about 12 months, as part of a project team meeting looking at the whole aircraft. Then, when the problem became back again, shall I say, we then started back in 1996 I think it was.

He said he was aware that other countries are having to face the same problem - airlines in Canada, Europe and England. At page 7.9 he was asked:-

Q. Were there some changes made to these aircraft with a view to attacking the smell program"

And at 8.1:-

Yes, there was. In October '92 we introduced a filtration system which we put a filter in the cockpit air supply and the cabin air supply and we also put some filters near the air-conditioning packs that trap any oil that may come from a failure into the aircraft and filter the air..

Under cross-examination at page 9.6:-

Q. Now, the problem with the BAe 146 has been an ongoing problem so far as the smells are concerned. A. Yes. Q. Not just in the presence of smells, but in the actual occurrence of symptoms by persons, that is the case. A. Yes, yes. Q. And it has not been rectified by the filtration system that was brought in. A. The filtration was never to rectify the problem, it was to provide some relief to the problem. Q.. So at least intention-wise, the intention has been since the end of 1992 for the problem not to cause as severe a reaction as it had been before. A. The problems all along is to prevent any occurrence on the aircraft. Q. Still, though, these aircraft are having reports made about them on a regular basis. A. Yes they are. Q. How many reports were made in say 1996, 1997, 1998. A. Not as - I can't accurately give you a figure, but not as many. We did get, I think it was about 128 or something like that. The figure came up again, but it does vary.

He agreed under cross-examination at pages 12, 13 and 14 that in addition to the pilots reports of fumes there were reports from flight attendants. He said there were 25 per cent more reports from the pilot than there were from flight attendant reports.

10. The applicant's evidence of her exposure to smoke and fumes is supported by the evidence of Mr. Cain and the respondents records. Ms Magda Cotton gave evidence on 14 December last (p.3) in relation to the incident in October 1993 at Hobart when the plane stopped after taxiing along the tarmac, so that the doors of the cabin could be opened to let out the smoke coming from the air-conditioning ducts.
11. The principal medical witnesses in support of the applicant's case were Dr. Mark Donohue, a general practitioner, without specialist qualifications, who has taken a great interest in environmental medicine, Dr. Joachim Fluher, a general practitioner with similar interests to Dr. Donohue, Dr. C.H. Little, a specialist physician from Victoria and Dr. D. Wakefield, Professor of pathology and Director of Immunology and Immunopathology, Eastern Area Health Service.
12. Dr. Donohue gave evidence before me on 12 March and 27 July 1998. His reports (Exhibit C) had attached to them copies of papers he had presented in 1995 and 1996 concerning Multiple Chemical Sensitivities and Chronic Fatigue Syndrome (CFS) with extracts from a

British CFS report of a joint working group of the Royal Colleges of Physicians, Psychiatrists and General Practitioners (October 1996) and other papers.

13. Dr. Donohue considered that the applicant suffers from three different conditions as a result of her work as a Flight Attendant with Ansett and Eastwest Airlines between 1990 and 1993:-

- (a) Multiple Chemical Sensitivities (MCS)
- (b) Chronic Fatigue Syndrome (CFS) as a direct consequence of the health problems caused by the (MCS)
- (c) Solvent or other chemical toxicity following exposure in the work place.

14. Dr. Fluher (Exhibit N) diagnosed the applicant as suffering from Chemical Hypersensitivity following toxic chemical exposure and that this also led her suffering additionally from Chronic Fatigue Syndrome with an abnormal immune system response.

15. Dr. Little (Exhibit K) diagnosed Chronic Fatigue Syndrome following numerous tests. He considered that her major problem to be that of chemical sensitivity. He reported (p.4) adverse reactions to chemicals are the basis for her symptoms which could be categorised as CFS and at page 5:-

On the basis of these points I would consider that her exposure to chemicals as a flight attendant has played at least a contributory role to her becoming chemically sensitive. It is important to appreciate that amongst exposed personnel there will be some variation in vulnerability based on genetic and other factors.

16. Dr. Wakefield examined the applicant on 15 March 1994 and again on 24 July 1998. His report of 10 March 1997 is Exhibit J. He gave evidence before me on 16 December 1998. In his report he said the applicant's condition was consistent with a post viral fatigue syndrome and that the exposure of the fumes in the cabin aggravated her symptoms and led to a relapse in her fatigue. At page 2:-

Thus I do not think the initiating factor in this woman's illness was exposure to the fumes, but rather that such exposure led to an exacerbation of her symptoms. The mechanism for this is not clear, although it has been proposed that subjects may develop a chemical sensitivity as a result of some conditioned response.

2. It is my opinion that the condition from which Miss Chew suffered falls within the extended definition of an injury under the Workers Compensation Act namely, that her exposure to the fumes in the aircraft cabin led to an aggravation, acceleration and exacerbation with deterioration of her disease (postviral fatigue) and that employment was a contributing factor to this aggravation, acceleration, exacerbation and deterioration.

3. It is my opinion that Miss Chew's condition would preclude her from continuing with her pre-injury employment duties as a flight attendant on aircrafts where she will be exposed to petro-chemical fumes such as those emanating from synthetic oils used on aircrafts. Such exposure would continue to lead to an exacerbation of her fatigue like state. The best management of such response is to avoid the factors that led to an exacerbation of his condition.

In his evidence pages 2 and 3:-

Apart from the symptoms that flow from aggravation and exacerbation of the disease, she has a constellation of symptoms which a number of people place in the category of chronic fatigue syndrome and multiple chemical sensitivity, and obviously there are views on both sides of the fence, are you aware of that. A. Sure, yes. Q. your own position. A. My own position is as a scientist. I want to see the evidence before I make a decision as to which way we should go in this. I think we recognise that people do have a syndrome in which they either have chronic fatigue or they have reactions to chemicals. We don't understand it, and there's a lot of, I think, unscientific speculative ideas floating around, but as a scientist I am interested in trying to sort out what is fact and what is fiction. Q. So, do you have a preferred position at the moment. A. I think my preferred position on chronic fatigue syndrome is reflected in our research and that is what we are interested in is post infection fatigue and we are involved in a long term study looking at people who have had documented, well documented infections who then get protracted illness, and what we are interested in is showing that the causal agent persists, namely the virus, or in the case of "Q" fever, one of our other interests, the bacteria persists and causes ongoing disability and we are interested in the mechanism. There is evidence that this may be due to immune stimulation and products released by immune cells. Q. You are content from the number of case studies you have seen, that the condition exists, its full mechanism, is still not fully proven scientifically. A. I don't think there's any doubt that people have this condition, but there are aspects to it that are more controversial.

He agreed that there were two sides in that argument and I could say that the jury was still out on that one.

17. The applicant also called Assoc. Professor C. Winder whose reports are Exhibit H. He gave evidence on 28 July 1998. He is an Associate professor in Chemical Safety and head of the Department of Safety Science at the University of NSW. He is also a Consultant in Chemical Safety Aust. Tox CCS. In his opinion the applicant has developed:-

multiple chemical sensitivity. This condition was induced by the poor working conditions that Ms Chew worked in, most specifically working as a flight attendant on aircraft in which the engines or associated equipment leaked contaminants in to the passenger compartment.

18. There was some criticism of his evidence by counsel for the respondent in his written submissions and his submissions to the Court, in particular, that Professor Winder in his evidence did not consider the issue of the extent and amount of exposure, but predetermined that there had been a harmful exposure, and that I should discount his evidence accordingly and I agree with the submissions put to me by counsel for the respondent.
19. I note that in another case, Campbell CJ, in *Wignall v Department of Education unreported 12 June 1998*, a chemistry teacher at a public school who came in contact with formaldehyde in laboratory work in quite a small room, made an award in favour of the applicant. He preferred the evidence of Professor Winder to the respondent's doctors in that case. However, each case depends on its own facts, in the *Wignall* case the insurer of the respondent had paid the claim for more than a year and then disputed that there was any liability for further weekly payments.
20. The respondent called Dr. George Crank with qualifications M.Sc. (Organic Chemistry) Ph.D. (Organic Chemistry). He is Director, Centre for Chemical analysis UNSW, and Visiting Fellow School of Chemistry UNSW. Before he retired he was Associate Professor of Organic Chemistry at UNSW. His report became Exhibit 7 and he gave evidence before me on 15th and 16th December 1998. He considered 3 reports from Dr. V. Vasak relating to tests carried out in 1992 Exhibit 9 (Part 9), and by Allied Signal Aerospace in November 1997 and medical reports from Dr. Donohue, Dr. Lee, Dr. Wakefield, Professor Phoon and Associate Professor Winder. He said that although the Mobil jet Oil 2 contains a toxic substance known as TOCP, the TOCP in the jet oil was as low as 0.03 per cent. Professor Crank gave evidence that when taking into account the air in the cabin of the aeroplane constituted 60 per cent fresh air and 40 per cent recirculated air, there was no toxicity in the fumes coming into the cabin. I accept the opinion of Dr. Crank.
21. The respondent's medical evidence included Dr. R. Loblay and Dr. P. Carroll who were two of the six doctors who signed a consensus statement (Exhibit 9 Part 12) which included:-

The panel finds that the low levels of detected exposure to all the measured chemical contaminants are not a threat to the health of aircrew or passengers. In particular

these pose no carcinogenic, mutagenic, teratogenic or cumulative toxicological hazard.

Contaminant levels were found to be well below the internationally accepted occupational health standards and cannot precipitate any chronic disorders.

The possibility that these odour exposure events could cause flight crew incapacitation was considered. All the measured levels were hundreds to thousands of times below those levels known to cause acute neurotoxic sequelae. The standard Smoke Removal Procedures were considered to provide a large margin of safety.

Dr. Julian Lee Thoracic Physician in a report dated 9 December 1998 would not accept Multiple Sensitivity Syndrome as a recognised medical illness. He referred to the document entitled Position Paper M.C.S. Syndrome Impairment and Disability Issues (Exhibit 9 Part 14) prepared by American Academy of Disability Evaluating Physicians which supported his views.

22. Dr. P. Carroll gave evidence before me on 16 December 1998. He is a Specialist Physician practising in Queensland with degrees from Oxford and Harvard specialising in internal medicine and toxicology. His report was marked (Exhibit 9 Part 18). He would not accept the concept of M.S.C. and also referred to the United States report mentioned in the previous paragraph and said that "where non clinicians support the claim they do so in contradiction to all published literature by scientific organisations.
23. Dr. R. Loblay is a specialist Physician and Senior Lecturer in immunology at University of Sydney. His report dated 10 December 1998 is marked Exhibit 9 Part 16. He gave evidence before me on 15 December 1998. Under the heading Medical advice on page 5 of his report he said:-

Unfortunately Ms Chew fell into the hands of a group of "alternative" practitioners who, more likely than not, have added an iatrogenic factor to her ongoing disability. Drs Fluhrer, Collison, Donohoe and Little are all adherents of the "Clinical Ecology" school of thought concerning "Multiple Chemical Sensitivity". There is evidence in the medical literature than an individual's belief about the nature of an odour (e.g. that it is potentially harmful), based on what they are told by an authority figure, can modify their subsequent degree of sensitivity. To her credit, Ms Chew chose to ignore some of the more extreme recommendations that were made to her.

From the history, she has a tendency to food intolerances. It is quite common for this to go hand-in-hand with increased sensitivity to irritant smells and fumes. I believe it is inappropriate to use the term "Multiple Chemical Sensitivity" to describe this. It is a sensory phenomenon, rather than a "disease" process, and a diagnostic label of

this kind creates quite the wrong impression in the mind of the patient. There is an emerging international consensus that this term should be abandoned altogether. Unfortunately, clinical ecologists have a vested interest in promoting it's continued use.

On the final page of his report he said that the tests referred to in Dr. Donohue's report had not diagnostic validity. He also considered that the applicant more probably than not was suffering from a viral infection as I have described, either Epstein Barr or Glandular Fever. He said that he was in general agreement with Dr. Wakefield that her viral condition had been aggravated by exposure to fumes. He agreed that on the history, although most people would have recovered quickly from the effects of the fumes from the jet engines, the applicant was a susceptible person and he also agreed that the aggravation to which I have just referred more probably than not, still persists.

24. The applicant puts her case in the alternative so I do not think it necessary for me to decide whether or not a diagnosis of multiple chemical sensitivity is appropriate in this case. I must say at the outset though that there certainly is a weight of medical evidence in this case against such a label, in particular from Dr. Lobley, Dr. Carroll, Dr. Julian Lee, Dr. Pryor and others.
25. I prefer the evidence given by the respondent's doctors, in particular, Dr Carroll and Professor Lobley, that the diagnosis of multiple chemical sensitivity is wrong and that the applicant is suffering from an aggravation of glandular fever or Epstein Barr virus.
26. The next issue I need deal with then is the question of incapacity and whether that incapacity still persists. Dr Lobley made concessions in cross-examination to which I have already referred, I am aware that there are many other doctors in the case, particularly in the respondents' case, whose views are that this cabin exposure of fumes by the applicant more probably than not resulted a short period of symptoms which would have quickly recovered. But, as I said earlier, the applicant was suffering from a pre-existing condition of glandular fever or the other viral problem. That was established on the medical evidence in or about December 1992, and the results of the tests came through in early January 1993.
27. She has undergone many tests. On one occasion, she was referred to a Dr Little in Victoria and he arranged for her to be in hospital for about eight weeks. That was in an attempt to ascertain a diagnosis of what was wrong with the applicant. As Mr Beauchamp said in his address, the applicant was prepared to undergo these tests and all the other tests and that

she has been involved in a lot of medical examinations. He says, "why would she do so if she was not well?" Dr Lobley had no reason to disbelieve the applicant and he considered that she was not fit for her pre-injury work as an air hostess, and when further questioned, agreed that she should not return to that occupation.

28. That brings me to the further claim made by the applicant through her counsel, Mr Beauchamp, that I should apply s47 of the Workers Compensation Act which reads:

A worker, who, as a result of injury, is unable without substantial risk of further injury, to engage in employment of a certain kind because of the nature of that employment, shall be deemed to be incapacitated for employment of that kind.

29. That is what the applicant's doctors say, and that is what Dr Lobley says, and I accept their evidence. There certainly is evidence of a long period of total incapacity. But at some stage the applicant became capable of performing some type of selected work away from chemicals or other triggering mechanisms referred to in the evidence. The applicant said that she had no problems with articles such as hair spray and car fumes, car exhausts etc, before this period of employment with the respondents, but since then everything has changed.
30. She gave evidence on 11 March last year to the effect that she did not go out much, she did not like crowded shopping centres, et cetera, that she had fatigue symptoms most of the time; but a video taken of her shopping the day before showed that she was able to drive her car to Turramurra where she had some singing lessons and then go shopping at Lane Cove and Chatswood, that she had spent some time at the David Jones perfumery department. She gave evidence that she had problems coping with perfumes in her evidence.
31. There was some inconsistency in what happened that day and what was shown on the video and the applicant's evidence. There was also another video of the applicant spending some time in a restaurant. She said that (depending on the environment) going out and spending a long time in restaurants had caused her problems, but the video showed that she behaved no different to anyone else at that occasion. The fact that the applicant was able to go shopping and go to restaurants does not mean that she had recovered from the effects of her exposure during the course of her employment with the respondent. It simply assisted me in interpreting the medical evidence, the history she has given to the doctors, what she can do and what she cannot do. At some stage, there was an improvement in her condition. She did attempt work as is set out in the wage schedule in 1995, where for three days in June 1995

she had four hours a day working as a shop assistant and before that in 1995, she earned \$200, and apart from \$100 a week on two occasions in 1996, she had earned over three months approximately \$99 a week from 18 December 1995 to March 1996.

32. It seems to me on the medical evidence that despite those small earnings mainly in 1995 and 1996, the applicant was virtually totally incapacitated for work in the limited avenues of employment open to her away from the environmental irritants.
33. The applicant gave evidence that she had experience as an architectural draftsman. That she had attended acting lessons at the Ensemble Theatre some time - I gather it was in 1996 or thereabouts, and was still interested in that line of work. She does have a capacity to earn, the problem is she needs to be away from any environment where she would suffer further exacerbation of her condition. Those environments mean that on one hand that she is better off away from Sydney and living in the country or working at home rather than travelling to and fro because of the way that car and other vehicle exhaust fumes are considered detrimental to her.
34. The best I can do on the medical evidence is that since 1 January 1998, the applicant has been able to earn in some suitable employment or business, approximately \$350 per week.
35. The parties have now agreed on comparable earnings which I will make Exhibit X, agreed wage schedule. It is agreed that from 1 July 1997 to 30 June 1998, the applicant would probably have earned, had she not been injured, \$850 per week, and from 1 July 1998 to date, \$900 per week. First of all, the applicant has no dependants so that her rate of compensation is for a worker without dependants, I determine the proper amount to award to the applicant, pursuant to s40 of the Act, having regard to the difference between what I found she is able to earn and what she would probably have earned, to be the maximum rate of compensation payable for a single person as from 1 January 1998.
36. For those reasons, I make the following findings:
37. I find that the applicant suffered injury arising out of and in the course of her employment with the respondents from January 1992 to 30 October 1993.
38. I find that s47 of the Act applies and that the applicant, as a result of the injury, is unable without substantial risk of further injury to engage in employment of a certain kind because

of the nature of that employment shall be deemed to be incapacitated for her employment at that kind.

39. As a result of the said injury the applicant was totally incapacitated for work from 31 October 1993 to 31 December 1997 and partially incapacitated for work from 1 January 1998 to date and continuing.
40. I find the current weekly wage rate to be \$605 per week.
41. I make an award
42. Under s36 at the rate of \$605 per week from 31 October 1993 to 30 April 1994.
43. Under s37 the sum of \$248.50 per week from 1 May 1994 as adjusted to 31 December 1997.
44. Under s40 of the Act, at the rate of \$255.50 per week, as adjusted from 1 January 1998 to date and continuing.
45. I make an award in favour of the applicant for s60 expenses and I award interest on the whole of the arrears of weekly payments from 31 October 1993 to date at 3 per cent per annum.
46. I order the respondent to pay the applicant's costs.
47. I order that counsel's fees be allowed at a full brief on hearing basis, rather than a refresher, having regard to the complexity of the matter and the amount of evidence involved, for each hearing day from 11 March 1998 to date.
48. I also certify for three additional conferences for counsel at \$310 each, and a fee for an advice on evidence.

MR G B Beauchamp of counsel instructed by Jones & Staff appeared on behalf of the applicant. Mr. W. P. Kearns of counsel and with him Mr. E.G. Romanuk of counsel instructed by Gillis Delaney Brown appeared on behalf of the first and second respondent.