TWENTY-FIFTH REPORT

PUBLIC ACCOUNTS COMMITTEE
(1991-92)

(TENTH LOK SABHA)

DEVELOPMENT AND PRODUCTION
OF A TRAINER AIRCRAFT

MINISTRY OF DEFENCE

सत्यमेव जयते

Presented to Lok Sabha on 30.4.1992
Laid in Rajya Sabha on 30.4.1992

LOK SABHA SECRETARIAT
NEW DELHI

April, 1992/Vaisakha, 1914 (Saka)

PAC No. 1337

Price: Rs. 11.00

Published Under Rule 382 of the Rules of Procedure in Lok Sabha (Seventh Edition) and Printed by Manager, P.L. Unit, Govt. of India Press, Minto Road, New Delhi.

CONTENTS

		Page
COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE		(iii)
INTRODUCTION		(v)
REPORT		1
APPENDIX I	Audit Para 2 of the Report of the Comptroller and Auditor General of India for the year ended 31 March, 1990, No. 9 of 1991, Union Government (Defence Services—Air Force & Navy)	20
APPENDIX II	Conclusions and Recommendations	24
	Part II**	
	Minutes of the Sittings of Public Accounts Committee held on:	
	19.2.1992	
	23.4.1992	

** Not printed (one cyclostyled copy laid on the Table of the House and five copies placed in Parliament Library).

PUBLIC ACCOUNTS COMMITTEE
(1991-92)

CHAIRMAN

Shri Atal Bihari Vajpayee

MEMBERS

Lok Sabha

2. Shri Girdhari Lal Bhargava
3. Shri Nirmal Kanti Chatterjee
4. Shri Z. M. Kahandole
5. Shri Vilas Muttemwar
6. Shri D.K. Naikar
7. Shri Arvind Netam
8. Shri Kashiram Rana
9. Shri R. Surender Reddy
10. Shri Amar Roypradhan
11. Shrimati Krishna Sahi
12. Shri Pratap Singh
13. Shri N. Sundararaj
14. Kumari Uma Bharati
15. Prof. (Dr.) S.P. Yadav

Rajya Sabha

16. Shri R.K. Dhawan
17. Shri Dipen Ghosh
18. Shri H. Hanumanthappa
19. Shri J.P. Javali
20. Shri Murasoli Maran
21. Shri Vishvjit P. Singh
22. Shri Ish Dutt Yadav

SECRETARIAT

1. Shri G.L. Batra — *Additional Secretary*
2. Shri S.C. Gupta — *Joint Secretary*
3. Smt. Ganga Murthy — *Deputy Secretary*
4. Shri K.C. Shekhar — *Under Secretary*

INTRODUCTION

I, the Chairman of the Public Accounts Committee do present on their behalf this Twenty-Fifth Report on Paragraph 2 of the Report of the Comptroller and Auditor General of India for the year ended 31 March, 1990, No. 9 of 1991, Union Government — Defence Services (Air Force & Navy) relating to Development and production of a trainer aircraft.

2. The Report of the Comptroller and Auditor General of India for the year ended 31 March, 1990, No. 9 of 1991, Union Government — Defence Services (Air Force & Navy) was laid on the Table of the House on 26 July, 1991.

3. Inspite of the fact that in a meeting held in November, 1979, Air Headquarters had stated that aircraft 'A' should be phased out starting from 1985 as the aircraft would not have adequate survivability in the future tactical environment, Government sanctioned in April 1980, procurement of 12 trainer aircraft from the HAL at a cost of Rs. 1 crore each without doing any serious review. The necessary order was placed on HAL in August, 1980. The Committee have been distressed over the fact that the Ministry of Defence did not seriously review at that stage the need for trainer aircraft 'A' in the light of the Air Headquarters aforesaid views pertaining to the phasing out of aircraft 'A'.

4. The first prototype of the trainer aircraft 'A', which was due in December 1980, was actually flown in September, 1982 with a delay of about two years. Unfortunately this prototype crashed in December, 1982. Chief of the Air Staff informed the Committee during evidence that aircraft 'A' were in service by the time the first prototype of the trainer aircraft crashed. According to him, at that time aircraft 'A' was found to be unsuitable for the operational conversion unit role. Inspite of the fact that after the crash of the first prototype in December, 1982, it was established that the trainer aircraft 'A' was not fit for Operational Conversion Unit, no further review of the need for the trainer aircraft was conducted even at that stage. The Committee have strongly disapproved of this failure on the part of the Ministry.

5. At the meeting held in March, 1983 IAF while recommending for shortclosure of the development project had added that though there would be infructuous expenditure in foreclosing the trainer aircraft project, the overall savings in men and material would be of a substantial higher order which could not be ignored. The Committee have been distressed to find that such a categorical assertion by the IAF, the user of the trainer aircraft, for the foreclosure of the trainer project at that stage, was lightly brushed aside. The Committee have felt that if the trainer project had been foreclosed at that stage, sizeable expenditure incurred on the Project subsequently, would have been saved. The Committee have expressed their strong displeasure in this regard.

6. The Committee have been deeply concerned to find that the inordinate delay in the development and production of a trainer aircraft resulted in enormous increase in costs. While the cost of development increased from Rs. 4.16 crores to Rs. 14.42 crores, the cost of production of two trainer aircraft went up to Rs. 4.42 crores from Rs. 1 crore each. Further, the redundant material due to the foreclosure of the project has been of the order of Rs. 19.18 crores, out of which HAL could so far utilise material worth Rs. 82 lakhs only. What is all the more distressing is the fact that the two trainer aircraft which were produced by HAL after strenuous efforts of more than 12 years were phased out on 31 March, 1991 alongwith aircraft 'A' fighters on expiry of their UE and would be disposed of as per existing procedure. In the opinion of the Committee this clearly proves that the entire expenditure of about Rs. 37 crores incurred on this project has turned out to be entirely infructuous apart from the manhours expended on the project that could have been deployed more productively elsewhere. The Committee have strongly recommended that Government should draw suitable lessons from the sad experience in this case and take all corrective steps with a view to obviate the chances of such recurrences in future.

7. The Committee (1991-92) examined Audit Paragraph 2 at their sitting held on 19 February, 1992. The Committee considered and finalised the Report at their sitting held on 23 April, 1992. Minutes of the sittings form Part II* of the Report.

8. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in thick type in the body of the Report and have also been reproduced in a consolidated form in Appendix II of the Report.

9. The Committee would also like to express their thanks to the Officers of the Ministry of Defence for the cooperation extended to them in giving information to the Committee.

10. The Committee place on record their appreciation of the assistance rendered to them in the matter by the Office of the Comptroller and Auditor General of India.

NEW DELHI;
April 24, 1992

Vaisakha 4. 1914 (Saka)

ATAL BIHARI VAJPAYEE,

Chairman,
Public Accounts Committee.

---

* Not printed (one cyclostyled copy laid on the Table of the House and five copies placed in Parliament Library).

REPORT

The Report is based on Paragraph 2 of the Report of the Comptroller and Auditor General of India for the year ended 31st March 1990 - No. 9 of 1991, Union Government (Defence Services—Air Force & Navy) relating to development and production of a trainer aircraft, which is appended as Appendix I.

Introductory

1.2 Aircraft 'A' to be designed and developed by M/s. HAL was expected to be inducted into Squadron service by the end 1976 and was expected to be in service for a period of 15 years.

1.3 Since imparting training on a type trainer is considered to be the most economical method, Air Headquarters felt the necessity of a 'Specific to type trainer' for Gnat aircraft/aircraft A. To meet the IAF's requirements, the possibility of acquiring Gnat trainer aircraft from UK was examined but the proposal was dropped as it was found that limited commonality existed between Gnat aircraft and its trainer. Besides, the entire expenditure on the procurement of Gnat trainer aircraft would have been in Foreign Exchange.

1.4 Hunter trainer aircraft were utilised for training purposes in the Squadrons of aircraft 'A' in the absence of any other suitable trainer aircraft. The continued use of this aircraft for training pilots in the Squadrons of aircraft 'A' was not considered fully satisfactory, as Hunter aircraft was ageing and its serviceability was showing a downward trend. Therefore, Hunters were planned to be phase out by 1982-83. It was felt at that time that aircraft 'A' would be suitable for induction in the Operational Conversion Unit (OCU), provided trainer version was available.

1.5 Based on the long felt need of the IAF, the requirement for a specific to type trainer for aircraft was indicated by IAF in February 1975, based on which HAL prepared the feasibility report in June 1975 for the development of the trainer version of aircraft 'A'.

Approval of the proposal and grant of sanction

1.6 A proposal for the development of a trainer version of aircraft 'A' within a time frame of 54 months at an estimated cost of Rs. 4.16 crores, put up by Hindustan Aeronautics Limited (HAL) in June 1975, was approved by the Government in February 1976. In a meeting held in November 1979, Air Headquarters (HQ) has stated that aircraft 'A' should be phased out starting from 1985. Government sanctioned in April 1980, procurement of 12 trainer aircraft from the HAL at a cost of Rs. 1 crore each. The order was placed in August 1980. The aircraft were to be delivered at the rate of six each during 1982-83 and 1983-84.

1.7 However, HAL had indicated the following delivery scheduled for the supply of 12 aircraft:—

1982-83 - 2
1983-84 - 4
1984-85 - 6

1.8 The Committee enquired as to how cost of Rs. 1 crore per aircraft was initially worked out and whether HAL was associated with such an exercise. In a note, the Ministry of Defence Stated:—

"HAL had worked out a budgetary (estimate) cost of Rs. 1.07 crore per aircraft at 1979-80 price level assuming a total production of 24 aircraft. The budgetary cost worked out by HAL included the cost of engines and excluded profit. The Government sanctioned the procurement of 12 aircraft at a budgetary estimated cost of Rs. 1 crore each including profit. The engine was to be supplied by IAF. The final price was to be paid to HAL on the basis of fixed cost quotations."

Phasing out of Aircraft 'A'

1.9 The Air Headquarters has stated in a meeting held in the Ministry of Defence in November, 1979 that they would like to phase out the aircraft 'A' starting from 1985, as the aircraft would not have adequate survivability in the future tactical environment. The Committee desired to know the main considerations which weighed with the Government for sanctioning in April 1980, the procurement of 12 trainer aircraft in spite of the fact that the phasing out of aircraft 'A' was to commence with effect from 1985. In a note, the Ministry of Defence stated:—

"Though the IAF had indicated in the meeting held in November 1979 that they would like to phase out aircraft 'A' from 1985, no final decision regarding phasing out of aircraft 'A' had been taken at that time. The fact trainer aircraft would still be required was reiterated at the same meeting, though the quantity was agreed to be reduced. Even if the phasing out of aircraft 'A' were to start in 1985, it would have been completed only in the 90s. Moreover, the trainer aircraft was expected to be utilised in OCUs also and even if the fighter aircraft were withdrawn from service phased out, the trainer aircraft was expected to be put to appropriate use.

Though the initial requirement for the trainer aircraft had been worked out by IAF at 24, keeping in view the reduction in strength of aircraft 'A' Sqns from 8 to 4, the revised requirement was assessed at 16 in a meeting held in January 1980. In view of these facts, the Govt. sanctioned the procurement of 12 trainers with an option to order 4 trainer later, if required."

1.10 The Committee further enquired as to when the final decision for withdrawal of aircraft 'A' from the squadron service was taken. The Ministry of Defence have stated as follows:—

"The phasing out of aircraft 'A' was to commence at the end of 1986-87 and was to be completed by March 1991, as per the planned UE, reviewed and approved in 1985, it was decided in meeting held in the Ministry of Defence in April 1990 that aircraft 'A' would continue to be in squadron service till its UE was over. The aircraft 'A' was phased out, as planned."

1.11 The first prototype of the trainer aircraft, due in December 1980, was actually flown in September, 1982, but in crashed in December, 1982 after carrying out 14 sorties.

1.12 Refering to the above crash of December, 1982 the Committee enquired the reasons which has prompted the Air Headquarters in 1979 to state that aircraft 'A' would be phased out starting from 1985. The Chief of the Air Staff stated during evidence:

"As far as aircraft 'A' trainer was concerned, we wanted to use it in the training role but we would only use it in the OCU role provided the aircraft 'A' fighter was viable. This accident occurred in 1982. But the fact of the matter is aircraft 'A' were in service by the time the trainer accident occurred in 1982. At that time, aircraft 'A' was found to be unsuitable for the inexperienced pilots, in the operation unit."

1.13 The Committee enquired as to when was the second prototype of trainer aircraft developed and test flown and with what results. The Ministry of Defence stated:

"First flight of the second prototype took place on 7th September, 1983. The test trials were carried out thereafter and the clearance for production was given in August, 1985."

1.14 IAF pointed out in a meeting held in March, 1983 that OCU training was meant for new entrants after they had been trained on basic trainer aircraft. These pilots required an aircraft with proven safety records and the trainer aircraft under development did not fit into that category. Elucidating it further, the Ministry of Defence stated as follows:

"The primary objective for the development of trainer aircraft was to meet the requirements of a specific to type trainer for the fighter aircraft 'A'. However, the aircraft was also expected to be utilised in the Operational Conversion Unit right from the beginning. The aircraft 'A' was inducted into IAF in 1979. During the exploitation of aircraft 'A', it was found that the aircraft 'A' had a high accident rate and low serviceability. Problems of inadequate product support were also encountered during the exploitation of the aircraft. Since the trainer aircraft was expected to inherit the characteristics of aircraft 'A', IAF felf that it would not be the right aircraft for OCU role in which comparatively inexperienced pilots would fly the aircraft."

1.15 At a meeting held in March, 1983 it was also observed that there had already been a hike in development costs as well as considerable delay. According to the Ministry of Defence, the expenditure incurred on the production project till March 1983 was Rs. 330.82 lakhs excluding labour cost and Rs. 776.69 lakhs on the development project.

1.16 At the same meeting held in March, 1983, the IAF had also recommended the short-closure of the development project. The IAF had added, that while there would be infructuous expenditure in foreclosing the trainer aircraft project, the overall savings in men and material would be of a substantial higher order which could not be ignored. The Committee enquired as to why such a categorical assertion by IAF, the user of the trainer aircraft, was brushed aside at that point of time. The Ministry of Defence stated:—

"The assertion made by IAF in the March 1983 meeting, regarding the foreclosure of trainer project and the savings in men and materials, was duly considered and it was decided in the same meeting that while the development work could continue upto December 1983, no procurement of any fresh material for the production of aircraft was to be undertaken.

The above decision was taken with a view to avoid any additional infructuous expenditure in case it was decided to foreclose the project. The development work was, however, continued so as to avoid time-overrun in case it was decided to continue the project."

1.17 It was decided in March 1983 that while development work should continue upto December 1983, by which time a decision on the foreclosure of the project would be taken HAL should not procure any fresh materials for production of trainer aircraft. The Committee enquired as to why the proposed decision which was then expected to be taken upto December, 1983 could not be taken by that date. The Committee also enquired about the reasons for continuing the development work after December, 1983. The Ministry of Defence stated:—

"As per the decision taken in the meeting held in the Ministry of Defence in March 1983, a final view on the proposal to foreclose the project was to be taken by December 1983, keeping in view the financial and technical implications. The development of the trainer aircraft was still in progress and it was not possible to take a final decision on the foreclosure of the project as HAL had not carried out sufficient trials on the prototype even by October 1984, when the project was further reviewed in the Ministry of Defence."

1.18 The trainer aircraft project was again reviewed in October, 1984. The Committee desired to know the reasons for not taking any action in the matter till October, 1984. When at a meeting held in March, 1983 IAF had emphatically stated for the foreclosure of the development project. In a note, the Ministry of Defence stated:—

"The views expressed by IAF in the meeting of March 1983 were duly taken into consideration and it was decided to discontinue procurement of any fresh material for production activities. Besides, the development activity was continued as it would have helped in reducing the time over-run in the event of a decision to continue the project. after proper financial and technical appreciation. The development activity continued at HAL as the necessary development trials had not been completed by HAL/ASTE in the absence of which a firm conclusion about the technical aspects of the aircraft could not have been taken."

1.19 The Committee desired to know the nature of the decision taken in Decemeber, 1984 after HAL had carried out the required number of sorties. The Ministry of Defence. stated:—

"A Committee headed by the Deputy Chief of Air Staff had gone into this issue. Based on the recommendations of this Committee, the Government sanction for the procurement of 8 trainer aircraft was issued in August 1985."

1.20 Even at a review meeting held in October, 1984 no concrete action was taken. Finally in February, 1985, it was decided that a Committee would be constituted to examine the possibility of continuing with the trainer aircraft production programme. The Committee desired to know the reasons for the constitution of this Committee when the users had expressed their categorial opinion of the question of continuation of the development project. The Ministry of Defence stated:—

"Chairman, HAL had stated in the meeting held in Feb., 1985 that, in his opinion, all trials required for taking an investment decision had been carried out and if IAF/ASTE wished to undertake more sorties, they might do so. In the light of this, the Chief of Air Staff suggested constitution of a Committee as he felt that the schedule for further trials should be finalised on the basis of the findings of such a technical Committee, which could come up with a firm recommendation whether go-ahead should be given for productionisation of the aircraft."

1.21 The Committee constituted in pursuance of the decision taken in Feb., 1985, recommended in June 1985 that clearance might be given for the production of the aircraft on the basis of tests carried out till then and assurance given by the HAL with regard to other shortcomings. Government sanctioned in August 1985, the procurement of trainer aircraft from HAL, but reduced the quantity from twelve to eight. The sanction stipulated that the development cost of the trainer aircraft beyond

2171/LS/92

Rs. 11.25 crores would be met by HAL from their Research and Development reserves. Amendment to the earlier order of August 1980 was issued by the Air HQ in March 1986 reducing the quantity on order to eight, "Stop order" imposed in March 1983 was also lifted in July 1986.

1.22 On a specific query by the Committee, the Ministry of Defence confirmed that the question of phasing out of the aircraft 'A' was also considered before given the clearance for production of trainer aircraft in August, 1985.

1.23 Asked whether IAF/Air Headquarters were specifically consulted before taking the decision for clearance, the Ministry of Defence stated:—

> "The Air Headquarters were specifically consulted before clearing the production of trainer aircraft in August 1985. The Air Headquarters had recommended that there could be no serious objection to a production go-ahead for 8 trainers, as these were intended to serve as type familiarisers in the operational squadrons only."

1.24 Asked whether before clearing the trainer aircraft for production any re-appraisal of the production programme was made keeping particularly in view the impending phasing out of the aircraft 'A' the Ministry of Defence stated:—

> "The progress of the Project was reviewed in a high level meeting held in the Ministry of Defence in Oct. 84. Taking into consideration the funds and the efforts that had gone into the project and the status of the Trainer Programme at that time, it was agreed that the final decision in the matter should be taken after HAL completed 50 development sorties by Dec. 84 and the IAF had fully evaluated and cleared the aircraft. The requisite number of sorties were completed by Dec. 84 by HAL. The matter was further reviewed in a meeting held in the Ministry of Defence in Feb. 85. It was decided to constitute a Committee consisting of Deputy Chief of Air Staff, Chairman HAL and Assistant Chief of Naval Staff (Air) to finalise the schedule for further trials and to give a firm recommendation whether clearance should be given for productionising the aircraft. The Committee headed by the Deputy Chief of Air Staff gave its report in March 1985, in which it was recommended that the production go-ahead can be given to HAL, based on the tests carried out till then and the assurance given by HAL to meet IAF requirements relating to spin/recovery characteristics."

1.25 Following are the details of purchases made by HAL for the production of the trainer aircraft 'A':—

YEAR	*(Rs. in Lakhs)*
1979-80	6.51
1980-81	29.15
1981-82	118.86
1982-83	169.77
1983-84	57.08
1984-85	19.97
1985-86	0.50
1986-87	130.39

YEAR	(Rs. in Lakhs)
1987-88	330.34
1988-89	136.96
1989-90	116.11
1990-91	18.40
	1029.54

1.26 Similarly, details of the purchases made by HAL for development of the trainer aircraft 'A' are as follows:

YEAR	(Rs. in Lakhs)
1976-77	9.51
1977-78	15.82
1978-79	12.30
1979-80	50.51
1980-81	65.70
1981-82	65.90
1982-83	50.25
1983-84	42.95
1984-85	10.31
1985-86	13.51
1986-87	18.47
1987-88	7.75
1988-89	8.45
1989-90	NIL
1990-91	0.05
	371.48

1.27 The Committee pointed out that the Air Headquarters had decided to phase out aircraft 'A' from 1985. The Committee, therefore, enquired about the necessity of placing order subsequent to 1985. The Committee also desired to know the reasons for making purchases for more than Rs. 5 crores after 1985 for this project. The Chief of the Air Staff stated during evidence as follows:—

"There are two specific questions. The first question, I will answer first. The answer to the question on the trainer aircraft is that the trainer is typical to a type of fighter aircraft. That is the basis. When we found that the aircraft 'A' had high accident rate, it was some what disturbing. Added to it was the serviceabilities were low and the product support was not adequate, and we felt that this machine firstly was not going to be viable over a long time.

Secondly, we felt that the inexperienced pilots could not fly it. Therefore, the fighter 'A' had to be removed from the scene. The moment the fighte gets removed, there is no way by which we can keep the trainer because t! trainer is attuned to the fighter. To that extent, there is definitely a reason to why we decided against using it.

The second question is very pertinent. Here I have no hesitation in saying that the Air Force started saying in 1983 that "We do not want this trainer." Subsequently, the then CAS had said, "We will accept eight trainers." Possibly, I cannot answer for him now. Possibly, what was in his mind was that with the passage of time, the problems that are basic on the machine would be looked into and consequently things would become all right. But this estimation did not work out to that extent. The answer therefore is specific. As far as the first question is concerned, I have given you the answer which is the reality. The second is also the reality. To say that the Air Force did not make any mistakes is not correct and to that extent I feel sorry that I have to say this. In the same set of circumstances, I might have made this same mistake. I hope you would appreciate this and I am willing to accept anything on this."

1.28 On the question of making purchases for more than Rs. 5 crores after 1985 for this project, the Chairman, HAL elucidated the position as follows:—

"Basically we had to produce 16 aircrafts, 8 for the Air Force and 8 for the Navy and we had placed the orders. We were having a number of orders in pipe line even before we gave up this project."

1.29 In 1986, Air Headquarters once again suggested premature withdrawal of the Combat aircraft 'A'. They also wanted cancellation of the orders for the trainer aircraft as it was only a type trainer and once the aircraft 'A' themselves were withdrawn the trainer would not be necessary. The Committee desired to know the specific action taken on a suggestion made by Air Headquarters in 1986, for cancellation of the order. The Ministry of Defence stated:—

"The issue relating to the foreclosure of trainer project was further discussed in a meeting held under the Chairmanship of the RRM (Rajya Raksha Mantri) on December 1, 1986, wherein it was decided that a paper would be prepared indicating the savings and additional costs of the proposal of the IAF. The issue was further discussed in a subsequent meeting held in the Ministry of Defence on Decemeber 23, 1986. Based on the recommendations of the IAF, it was decided to keep the production of trainer aircraft in abeyance and HAL was informed accordingly in January 1987."

Orders by the Navy for trainer aircraft

1.30 The Navy had also projected a requirement of eight trainer aircraft and obtained a Government sanction in November 1982 to procure them at a cost of Rs. 19.51 crores. An order was placed by Navy on HAL in November, 1985. Against this order, an amount of Rs. 9 crores as 'on account payment' was paid to HAL in March 1986. The Navy however, did not carry out any evaluation to adjudge the suitability of trainers for their requirements. The Committee desired to know the basis for placing the order for 8 aircraft in November 1985 particularly in view of the fact that IAF wanted foreclosure of the trainer project in March 1983 itself due to its unsuitability and also in view of the fact that foreclosure of trainer project was under consideration of the Ministry since 1984 itself. The Ministry of Defence stated:—

"The order for the Navy was placed after examination of the recommendations of the Committee headed by the DCAS and the recommendation of the IAF for procurement of 8 trainer aircraft for use as type familiarisers in Operational Squadrons. The Navy had not carried out a separate evaluation, as it relied upon IAF's evaluation of the aircraft, as is usual in such cases."

1.31 The Navy too indicated in June 1988 that they would not require the trainer aircraft in case the IAF was not going in for them. The Committee sought elucidations stating if it does not show that Navy had no requirement of their own for these trainer aircraft. The Ministry of Defence stated:

"The Navy needed the trainer aircraft to perform the following specific tasks:—

(a) High speed target for training the ship's crewon advanced weapon/missile system for the fleet; and

(b) To provide high performance aircraft experience to the pilots earmarked for flying Sea Harriers.

However, keeping in view the problems encountered by the IAF in the exploitation of aircraft 'A' and the limited utility of the trainer, the Navy did not acquire the trainers."

1.32 The Committee enquired as to how Navy have met their requirement for trainer aircraft till June, 1988 and thereafter. According to the Ministry of Defence the Navy have managed their Sea Harrier OCU requirement by deputing pilots to the IAF for experience on high performance aircraft.

1.33 Asked about the position for the recovery of an amount of Rs. 9 crores which was paid by them to HAL, the Ministry of Defence stated:—

The amount of Rs. 9 crores advanced by the Indian Navy to HAL, had been utilised for funding the requirement for material/labour and other related expenditure. The amount advanced by the Indian Navy is part of the total out-flow of funds from the Ministry of Defence to HAL for the project."

1.34 A meeting was held in the Defence Minister's Room on 9.6.1988. The Committee desired to know the decision taken at this meeting and the follow up action taken in pursuance thereof. The Ministry of Defence stated:—

"The decision taken in this meeting was to find out an economically viable agreed solution to the question of foreclosing the trainer project. Accordingly the matter was further considered in the Ministry of Defence. During examination of the issue, the Finance Division of the Ministry of Defence advised that the requirements of the Indian Navy for the trainer aircraft were different from IAF requirements and even if the IAF did not need the trainer aircraft, The Indian Navy would require it. However, since Naval Headquarters expressed their unwillingness to acquire the trainer aircraft in view of the limited utility of the aircraft, it was proposed to foreclose the trainer project."

1.35 The Committee sought elucidation of the relevant extract from the minutes of the meeting held in Defence Minister's Room on 9.6.1988, as reproduced below:

"The Ministry of Defence had gone before the PAC and had categorically stated, on the assurance given by the Air Headquarters, that the aircraft 'A' had always operated satisfactorily. Trainer 'A' was not only a type trainer, but was also to be used in the operational conversion units. At this stage, a total *volte-face* would be extremely embarassing for the Ministry of Defence."

1.36 Elucidating the position, the Ministry stated as follows:—

"The Department of Defence Production & Supplies had informed the PAC in November 1985 that accident/incident rates were being monitored regularly for all aircraft and on analysis of data relating to aircraft 'A' in Squadron service during 1978-82, Air HQrs had concluded by end-1982 that the accident rate for the aircraft was much higher than the average accident rate and that it had persistent maintenance and reliability problems.

The Deptt. of Defence Production & Supplies had further stated that the shortcomings in aircraft 'A' had, with suitable modifications, been overcome. In addition, on the basis of the fatigue tests, simultated operating conditions, the airframe life of the aircraft was increased from 900 hrs. to 2,400 hrs. The PAC was also informed that the objective of the trainer project was to develop a type-trainer for aircraft 'A', which was also planned to be used in the OCU.

The Defence Secretary had drawn attention to the above facts in the meeting held on 9.6.1988. However, the Chief of Air Staff had reiterated in the said meeting that the change in the stand could be explained as there were valid reasons for it."

1.37 At this meeting, The Defence Minister had expressed his concern that, knowing the ASRs which had been given to the HAL, and the Fight Safety Record of the aircraft in 1985, the project should have been allowed to reach the stage where it has reached today. However, he also expressed the view that in the large interests of the security of the country we would not like to use an aircraft which is not found fit by the IAF.

1.38 To a pointed observation by the Committee that the history of this case presented a dismal picture, the Defence Secretary reacted as follows:—

follows:—

"If the decision was not to have aircraft 'A' in the fighter Squadrons the situation would have required to be viewed differently. When the perception came that this aircraft may not be continued as a fighter aircraft the usefulness of this aircraft as a trainer was considered. Meanwhile, the cost had also gone up and considerable time slippages had occurred. The other aircraft being used for training, e.g. the Hunters were also completing their life. These various circumstances led to decisions at successive points of time for the withdrawal of aircraft 'A' strike aircraft and the non- production of the trainer aircraft Rightly, Sir you have observed that the Story is dismal, but one should not forget that one of the primary objectives of the Government of India and the Ministry of Defence has continuously been to progressively develop effective indigenous capability in the design and development of military aircraft and likewise, of trainer aircraft compatible with the fighter aircraft. There are bound to be occasions when these efforts are not totally successful. If we consider the cost of an aircraft which is to be imported from any foreign source and the experience which our manufacturing units acquire in the design and development of such aircraft, I would honestly submit that the prospect of failure should, in my perception, require to be moderated. In this context, it is not such a gross failure as may appear from the succession of events. I would submit that certain things did go wrong. The only other option available to us was the importation of aircraft from outside."

Phasing out of Aircraft 'A' and foreclosure of the project for development

1.39 The IAF started phasing out aircraft 'A' from 1987 and in 1988 reiterated the premature withdrawal of aircraft 'A' and the foreclosure of the trainer aircraft project. The Navy too indicated in June 1988 that they would not require the trainer aircraft in case the IAF was not going in for them. HAL pointed out in June 1988 that nearly 400 men were working on the trainer aircraft project and its foreclosure would create idle capacity in the factory apart from redundancies that would arise on account of materials already procured.

1.40 It was decided in October 1988 that a detailed paper would be prepared regarding premature withdrawal of aircraft 'A' and foreclosure of trainer aircraft project for submission to the Govt. However, no such paper was prepared. The Ministry intimated Audit in October, 1990 that the matter was considered in a meeting where it was decided that though aircraft would not be withdrawn before 1991-92, the trainer aircraft would not be required by IAF.

1.141 The last squadron of aircraft 'A' was phased out on 31 March, 1991.

1.42 The Committee enquired about the number of the employees rendered idle on the foreclosure of the project to which the Chairman, HAL stated:

"No, Sir, by the time, this project had been closed, we had the other project with us."

Delay in Development

1.43 According to HAL's original proposal, approved by Government in February 1976, trainer aircraft 'A' was to be developed, within a time frame of 54 months. The first prototype of the trainer aircraft, due in December 1980, was actually flown in September, 1982. There have been delay in the development of the aircraft and resultant increase in development cost. The Committee desired to know the reasons for delay. The Chairman, HAL explained as follows:—

> "We had the first aircraft flown in September 1982 and we had successfully completed 14 flights. But in the 15th flight in December aircraft had crashed. It was due to the pilot's error and he is no more to give evidence. The pilot forgot to switch on the oxygen. With the result, there was a setback in the programme. Since money was always a constraint, we went ahead with only two prototypes and to complete 200 flights which were required to be completed. We had to take one aircraft from the production line to be utilised for this. And that is how we got our second aircraft. With regard to the delay, we knew what are the reasons for it. We had to change the oxygen system so that the pilots can use it easily and there were a number of modifications based on our past experience with the first aircraft. We had produced two aircrafts and gave those aircraft to the IAF. By the time, they were inducted in to the airforce, we had the phasing out process going on. That is why, the order had to be foreclosed.

Delivery of trainer aircraft 'A'

1.44 HAL delivered only two trainer aircraft to IAF, one in December 1987 and the other in April 1988, for which they claimed Rs. 4.75 crores as against Rs. 1 crore each as quoted in the order. The first aircraft delivered was a production aircraft while the other a prototype modified to production standard. No aircraft had been delivered to the Navy.

1.45 The first trainer aircraft was inducted in squadron service in December 1987 while the second was inducted in April 1988. The utilisation rate achieved by these trainer aircraft was poor as it ranged from 0.15 to 5.30 hours per month during January 1988 to May 1990.

1.46 Asked about the reasons for the low rate of utilisation of the two trainer aircraft 'A', the Ministry of Defence stated that it was due to low serviceability (22% approx,) and high AOG (aircraft on ground) (46% approx,).

1.47 The Committee enquired as to how these two aircraft would be utilised in future, the Ministry of Defence stated that the two trainer aircraft were phased out on 31 March 1991, alongwith Aircraft 'A' fighters on expiry of their UE and would be desposed of as per existing procedure.

Escalation in cost and Redundancies

1.48 According to the audit paragraph, the cost of development of trainer aircraft was enhanced to Rs. 18 crores in January, 1988 from Rs. 4.16 crores sanctioned in Feb., 1976. Besides HAL claimed Rs. 4.75 crores as the cost of trainers delivered to IAF as against Rs. 1 crore each as quoted in the order.

1.49 However, accoridng to the Ministry of Defence, the expenditure incurred on the development of the trainer aircraft was Rs. 14.42 crores. Out of this an expenditure to the tune of Rs. 11.25 crores was borne by the Ministry of Defence and the rest of the expenditure was funded by HAL from their own funds. The price paid to HAL for two trainer aircraft was Rs. 4.42 crores.

1.50 The Committee enquired whether it was not a fact that the entire expenditure of Rs. 18.84 crores had been completely infructuous. The Ministry of Defence stated:—

"Two trainer aircraft were manufactured and delivered to IAF for its use. The expenditure on development and manufacture would appear to be high when viewed in the context of the number of aircraft produced. However, the experience gained in the execution of the project has gone a long way in the further growth of indigenous aviation industry as the execution of the project helped in building up the competence level at HAL to a considerable extent for aircraft programmes like ALH and LCA etc., especially in the technological areas related to the development of stretched acrylic canopy, seat ejection systems, brake parachute system, boot-strip, hydraulic reservoir (self-pressurised reservoir), telemetry and additional weapon integration trials."

1.51 The Committee desired to know the extent of redundancy due to the foreclosure of the project. The Ministry of Defence stated:—

"Out of the redundant material of Rs. 19.18 crores, HAL has already utilized the material worth of Rs. 82 lakhs. The redundancy, therefore, amounts to Rs. 18.36 crores. To the extent possible, the material will be utilized for other projects under execution at HAL. The material which cannot be utilized elsewhere will be disposed of"

Training activities

1.52 The Committee enquired as to how the Indian Air Force and Navy had met their requirement of basic trainer aircraft all these years due to the inordinate delay in the development and supply of the trainer aircraft 'A'. The Ministry of Defence stated:—

"The Trainer aircraft in question was not meant for imparting basic training to the IAF/Naval pilots. Basic training to the IAF and Naval pilots is imparted on HPT-32 and Kiran aircraft. HT-2 was also used for imparting basic training, but this aircraft has since been phased out."

1.53 Asked as to how far it has affected the training standard, the Ministry of Defence stated:—

"Imparting training by using a different trainer aircraft was at best a make-shift arrangement. The IAF ensured the requisite standards by providing extra flying effort and monitoring the performance of trainee pilots closely."

1.54 In this connection, Chief of the Air Staff stated during evidence as follows:—

> 'At that time we did not have a type trainer aircraft for the Gnat. What we used to do was to fly the Hunter trainer aircraft which was 2-3 times the size of a Gnat. In effect, it meant, if I am teaching a man how to drive a scooter, I am putting him in a car. It was in this context that we felt that there was a requirement for a type trainer."

1.55 Aircraft 'A' which was being designed and developed by Hindustan Aeronautics Ltd. was expected to be inducted into squadron service by the end of 1976 and was expected to be in service for a period of 15 years. However, due to delay in development, this aircraft was actually inducted into Indian Air Force in 1979. Since imparting training on a type trainer is considered to be the most economical and effective method, Air Headquarters had felt the necessity of a 'specific to type trainer' for Gnat aircraft/ aircraft A. The possibility of acquiring Gnat trainer aircraft from U.K. was examined but the proposal was dropped due to limited commonality and the quantum of foreign exchange involved. The continued use of Hunter trainer aircraft for training pilots in the squadrons of aircraft 'A' was not fully considered satisfactory, as Hunter aircraft was ageing and its serviceability was showing a downward trend. It was also felt at that time that aircraft 'A' would also be suitable for induction in the Operational Conversion Unit (OCU), provided trainer version was available. Based on this background and the long felt need of the Indian Air Force, the requirement for a specific to type trainer for aircraft 'A' was indicated by Indian Air Force in February 1975. Consequently, HAL prepared the feasibility report in June 1975 for the development of the trainer version of aircraft 'A'. A proposal for the development of a trainer version of aircraft 'A' within a time frame of 54 months at an estimated cost of Rs. 4.16 crores, put up by HAL in June, 1975 was approved by the Government in February, 1976. As the succeeding paragraphs reveal, the whole history of development of trainer aircraft 'A' presents a very dismal picture.

1.56 Inspite of the fact that ina meeting held in November, 1979, Air Headquarters had stated that aircraft 'A' should be phased out starting from 1985 as the aircraft would not have adequate survivability in the future tactical environment, Government sanctioned in April 1980, procurement of 12 trainer aircraft from the HAL at a cost of Rs. 1 crore each. The necessary order was placed on HAL in August, 1980 and according to the delivery schedule indicated by HAL, 2, 4 and 6 aircraft were to be delivered during 1982-83, 1983-84 and 1984-85, respectively. According to the Ministry of Defence, the fact that trainer aircraft would still be required was reiterated at the meeting held in April 1980 though the quantity on order was agreed to be reduced from 24 to 16. Further of the 16 trainers required, it was decided to place an order for 12 trainers with a provision to order 4 more at a later date. In the Ministry's view, even if the phasing out of aircraft 'A' was to commence in 1985, it would have been completed only in 1990 and further the trainer aircraft was expected to be utilised in Operational Conversion Unit also and even if the fighter aircraft was withdrawn from service, the trainer aircraft was expected to be put to appropriate use. The Committee are distressed over the fact that the Ministry of Defence did not seriously review at that stage the need for trainer aircraft 'A' in the light of the Air Headquarters aforesaid views pertaining to the phasing out of aircraft 'A' as is evident from the following paragraphs.

1.57 The first prototype of the trainer aircraft 'A', which was due in December 1980, was actually flown in September, 1982 with a delay of about two years. Unfortuntely, this prototype crashed in December, 1982. Chief of the Air Staff informed the Committee during evidence that aircraft 'A' were in service by the time the first prototype of the trainer aircraft crashed. According to him, at that time aircraft 'A' was found to be unsuitable for the operational conversion unit role. Inspite of the fact that after the crash of the first prototype in December, 1982, it was established that the trainer aircraft 'A' was not fit for Operational Conversion Unit, no further review of the need for the trainer aircraft was conducted even at that stage. The Committee strongly disapprove of this failure on the part of the Ministry.

1.58 IAF specifically pointed out in a meeting held in March 1983 that OCU training was meant for new entrants after they had been trained on basic trainer aircraft. These pilots required an aircraft with proven safety records and the trainer aircraft under development did not fit into that category. It was also observed at this meeting that there had already been a hike in development costs as well as considerable delay. The expenditure incurred on the production project till March 1983 was Rs. 330.82 lakhs excluding labour cost and Rs. 776.69 lakhs on the development project. At this meeting, IAF while recommending for short-closure of the development project had added that though there would be infructuous expenditure in foreclosing the trainer aircraft project, the overall savings in men and material would be of a substantial higher order which could not be ignored. The Committee are distressed to note that such a categorical assertion by the IAF, the user of the trainer aircraft, for the foreclosure of the trainer project at that stage, was lightly brushed aside. The Committee feel that if the trainer project had been foreclosed at that stage, huge expenditure incurred on the project subsequently, would have been saved. The Committee express their strong displeasure in this regard.

1.59 It was, however, decided at a meeting held in March, 1983 that while the development work would continue upto December, 1983 by which time a decision on the foreclosure of the project would be taken, no procurement of any fresh material for the production of the aircraft was to be undertaken. Unfortunately, the expected final view on the proposal to foreclose the trainer project could not be taken as according to the Ministry of Defence HAL had not carried out sufficient trials on the prototype even by October 1984, when the project was further reviewed in the Ministry. Even at this review the authorities failed to take any concrete decision. Finally, in February 1985, it was decided that a Committee would be constituted to examine the possibility of continuing with the trainer aircraft production programme. The Committee are deeply concerned to find that two year's precious period since the March, 1983 meeting was wasted by the authorities without taking any concrete decision, which in the Committee's view was to gain time for circumventing the opinion expressed by the Indian Air Force at the said meeting for the foreclosure of the trainer project. The Committee deprecate such an attitude.

1.60. The Committee constituted in pursuance of the decision taken in February, 1985 recommended in June, 1985 that clearance might be given for the production of the trainer aircraft. Consequently, Government sanctioned in August 1985, the procurement of trainer aircraft from HAL but reduced the quantity on order from twelve to eight. Amendment to the earlier order of August 1980 was issued by the Air Headquarters in March 1986 reducing the quantity on order to eight. 'Stop order' imposed in March 1983 was also lifted in July 1986. Strangely enough the Air Headquarters which had in the past recommended for the foreclosure of the project, when specifically consulted before clearing the production of trainer aircraft in August, 1985 stated that there could be no serious objection to a production go-ahead for 3 trainers, as these were intended to serve as type familiarisers. The Committee strongly disapprove the vacillating attitude of the Air Headquarters. This is borne out by the fact that in 1986, Air Headquarters once again suggested premature withdrawal of the combat aircraft 'A'. They also suggested cancellation of the orders for trainer aircraft as it was only a type trainer and once the aircraft 'A' themselves were withdrawn the trainer would not be necessary. This is further corroborated by the statement made by the Chief of the Air Staff, during evidence before the Committee that 'To say that the Air Force did not make any mistake is not correct and to that extent I feel sorry that I have to say this'.

1.61 What is all the more surprising is the fact that the Government sanctioned in August, 1985, the procurement of eight trainer aircraft inspite of the fact that phasing out of the project was to commence from the same year itself. The subsequent developments, which have been discussed in the succeeding paragraphs clearly prove that the decision taken in August, 1985 was not a judicious one. Further, an expenditure of about Rs. 7 crores incurred thereafter proved to be infructuous.

1.62 The issue relating to the foreclosure of trainer project was further discussed in a meeting held under the Chairmanship of the Rajya Raksha Mantri on December 1, 1986, wherein it was decided that a paper would be prepared indicating the saving and additional costs of the proposal of the Indian Air Force. The issue was further discussed in a subsequent meeting held in the Ministry of Defence on December 23, 1986, when it was decided to keep the production of trainer aircraft in abeyance and HAL was informed accordingly in January 1987. At the meeting held in the Defence Minister's room on 9.6.1988, the Defence Minister had expressed his concern that, knowing the Air staff requirements (ASRs) which had been given to the HAL, and the Flight Safety Record of the aircraft in 1985, the project should have been allowed to reach the stage where it had reached till then. He had also expressed the view that in the larger interests of the security of the country we would not like to use an aircraft which is not found fit by the IAF. The decision taken at this meeting was to find out an economically viable agreed solution to the question of foreclosing the trainer project. It was decided in October 1988 that a detailed paper would be prepared regarding premature withdrawal of aircraft 'A' and foreclosure of trainer aircraft project for submission to the Government. Unfortunately, no such paper was prepared. According to the Ministry of Defence, the matter was considered in a meeting where it was decided that though aircraft 'A' would not be withdrawn before 1991-92, the trainer aircraft would not be required by Indian Air Force. The last squadron of aircraft 'A' was phased out in March, 1991.

1.63 The Committee note that the Navy had also projected a requirement of eight trainer aircraft and obtained Government sanction in November 1982 to procure them at a cost of Rs. 19.51 crores. An order for procurement of eight trainer aircraft was placed by Navy on HAL in November, 1985. Against this order, an amount of Rs. 9 crores as 'on account payment' was paid to HAL in March 1986. Strangely enough, the Navy did not carry out any evaluation to adjudge the suitability of the trainers for their requirements and relied upon IAF's evaluation of the aircraft. Surprisingly, when in 1988 IAF reiterated the premature withdrawal of aircraft 'A' and the foreclosure of the trainer aircraft project, the Navy also indicated in June 1988 that they would not require the trainer aircraft in case the IAF was not going in for them. According to the Ministry of Defence, the amount advanced by the Indian Navy is part of the total outflow of funds from the Ministry to HAL for the project. This clearly proves that the Navy did not have any pressing need for these trainer aircraft but the order was placed to merely sustain the trainer aircraft project.

1.64 The Committee note that HAL delivered only two trainer aircraft to IAF, one in December 1987 and the other in April 1988. The first of these two aircraft was a production aircraft while the other a prototype modified to production standard. No aircraft was delivered to the Navy. The first trainer aircraft was inducted in squadron service in December 1987 while the second was inducted in April 1988. The Committee are extremely unhappy to note that the utilisation rate achieved by these trainer aircraft was extremely poor as it ranged from 0.15 to 5.30 hours per month during January 1988 to May 1990.

1.65 The Committee note that according to the original estimate trainer aircraft 'A' was to be developed by HAL within a time frame of 54 months at an estimated cost of Rs. 4.16 crores. Further, according to the delivery schedule indicated by HAL 2, 4 and 6 trainer aircraft were to be delivered during 1982-83, 1983-84 and 1984-85. The Committee are deeply concerned to find that the inordinate delay in the development and production of a trainer aircraft resulted in enormous increase in costs. While the cost of development increased from Rs. 4.16 crores to Rs. 14.42 crores, the cost of production of two trainer aircraft went up to Rs. 4.42 crores from Rs. 1 crore each. Further, out of redundant material due to the foreclosure of the project has been of the order of Rs. 19.18 crores, out of which HAL could so far utilise the material worth Rs. 82 lakhs only. What is all the more distressing is the fact that the two trainer aircraft which were produced by HAL after strenuous efforts of more than 12 years were phased out on 31 March, 1991 alongwith aircraft 'A' fighters on expiry of their UE and would be disposed of as per existing procedure. This goes to prove that the concern expressed by the Air Headquarters from time to time for the foreclosure of the trainer aircraft project was completely justified but the concerned authorities in the Ministry decided time and again to keep the development project alive for which the Ministry have failed to convince the Committee.

1.66 In view of the serious drawbacks like high accident rate and poor utilisation of combat aircraft 'A', IAF had been repeatedly insisting from 1983 onwards, on its premature withdrawal and foreclosure of the trainer aircraft project. The project, however, was allowed to continue. There has also been a vacillating attitude on the part of the Air Headquarters. Surprisingly, when in 1988 IAF reiterated the premature withdrawal of aircraft 'A' and the foreclosure of the trainer aircraft project, the Navy also indicated that they would not require the trainer aircraft in case the IAF was not going in for them. While the cost of development increased from Rs. 4.16 crores to Rs. 14.42 crores, the cost of production of two trainer aircraft went up to Rs. 4.42 crores from Rs. 1 crore each. Further, the redundant material due to the foreclosure of the project has been of the order of Rs. 19.18 crores, out of which HAL could so far utilise the material worth Rs. 82 lakhs only. HAL delivered only two trainer aircraft to IAF, one in December 1987 and the other in April, 1988. The utilisation rate of these aircraft was extremely poor and were phased out on 31 March, 1991. The Committee are, therefore, deeply distressed to note that these facts as detailed in the foregoing paragraphs clearly prove that the entire expenditure of about Rs. 37 crores incurred on this project has turned out to be entirely infructuous apart from the manhours expended on the project that could have been deployed more productively elsewhere. The Committee strongly recommend that Government should draw suitable lessons from the

sad experience in this case and take all corrective steps with a view to obviate the chances of such recurrences in future. The Committee would like to know the detailed corrective steps taken in this regard.

NEW DELHI;
April 24, 1992
Vaisakha 4, 1914(S)

ATAL BIHARI VAJPAYEE,
Chairman,
Public Accounts Committee

APPENDIX-I

(*Vide* Para-1)

Audit Paragraph 2 of the Report of the C&AG of India for the year ended 31 March, 1990 (No. 9 of 1991) Union Government (Defence Services—Air Force & Navy) relating to Development and production of a trainer aircraft

. . . .

A proposal for the development of a trainer version of aircraft 'A' within a time frame of 54 months at an estimated cost of Rs. 4.16 crores, put up by Hindustan Aeronautics Limited (HAL) in June 1975, was approved by the Government in February 1976. In a meeting in November 1979 Air Headquarters (HQ) had stated that aircraft 'A' should be phased out starting from 1985. Government sanctioned in April 1980, procurement of 12 trainer aircraft from the HAL at a cost of Rs. 1 crore each. The order was placed in August 1980. The aircraft were to be delivered at the rate of six each during 1982-83 and 1983-84. There had, however, been delays in the development of the trainer aircraft and resultant increase in development costs. This had been commented upon in paragraph 8 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1983-84. The Ministry of Defence (Ministry) had stated in October 1984 that the foreclosure of the trainer aircraft project was under consideration. The project, however, was continued on the plea that the trainer aircraft would be required not only as a specific to type trainer but also for the Operational Conversion Units (OCUs) as a link trainer. A further review of the progress of the project brought out the following features.

The first prototype of the trainer aircraft, due in December 1980, was actually flown in September 1982, but it crashed in December 1982 after carrying out 14 sorties.

In a meeting in March 1983, the Indian Air Force (IAF) pointed out that the OCU training was meant for new entrants after they had been trained on a basic trainer aircraft. These pilots required an aircraft with proven safety records and the trainer aircraft under development did not fit into that category. Moreover, there had already been a hike in development costs as well as considerable delay. The IAF recommended the short-closure of the development project. The IAF had added that while there would be infructuous expenditure in foreclosing the trainer aircraft project, the overall savings in men and material would be of a substantially higher order which could not be ignored. It was decided in March 1983 in the same meeting that while development work should continue upto December 1983, by which time a decision on the foreclosure of the project would be taken, HAL should not procure any fresh materials for production of trainer aircraft.

The trainer aircraft project was again reviewed in October 1984. It was brought out then, that the redundancy in the event of the short-closure of the project would be to the tune of Rs. 22 crores. It was decided in October 1984 that a final decision could be taken after HAL had completed 50 development sorties by December 1984 and furnished their evaluation report. The Ministry stated in October 1990 that the decision had been taken after taking into consideration the effort and the finances that had gone into the project as well as the status of the project at that time.

In February 1985, it was decided that a committee would be constituted to examine the possibility of continuing with the trainer aircraft production programme. The Committee recommended in June 1985 that clearance might be given for the production of the aircraft on the basis of tests carried out till then and assurance given by the HAL with regard to other shortcomings. Government sanctioned in August 1985, the procurement of trainer aircraft from HAL, but reduced the quantity from twelve to eight. The sanction stipulated that the development cost of the trainer aircraft beyond Rs. 11.25 crores would be met by HAL from their Research and Development reserves. Amendment to the earlier order of August 1980 was issued by the Air HQ in March 1986 reducing the quantity on order to eight. "Stop order" imposed in March 1983 was also lifted in July 1986.

The Navy had also projected a requirement of eight trainer aircraft and obtained a Government sanction in November 1982 to procure them at a cost of Rs. 19.51 crores. An order was placed by the Navy on HAL in November 1985 with a delivery schedule of six aircraft in 1988-89 and two aircraft in 1989-90. Against this order, an amount of Rs. 9 crores as "on account payment" was paid to HAL in March 1986.

In 1986, Air HQ once again suggested premature withdrawal of the combat aircraft 'A'. They also wanted cancellation of the orders for the trainer aircraft as it was only a type trainer and once the aircraft 'A' themselves were withdrawn the trainers would not be necessary. Subsequently, it was decided that the Ministry would ask HAL to furnish details regarding development cost and redundancy charges in case a decision was taken to scrap the order. In view of this, go-ahead sanction accorded in July 1986 was again held in abeyance in January 1987.

The IAF started phasing out aircraft 'A' from 1987 and in 1988 reiterated the premature withdrawal of aircraft 'A' and the foreclosure of the trainer aircraft project. The Navy too indicated in June 1988 that they would not require the trainer aircraft in case the IAF was not going in for them. HAL pointed out in June 1988 that nearly 400 men were working on the trainer aircraft project and its foreclosure would create idle capacity in the factory apart from redundancies that would arise on account of materials already procured.

The cost of development of trainer aircraft was enhanced to Rs. 18 crores in January 1988 from Rs. 4.16 crores sanctioned in February 1976. It was decided in October 1988 that a detailed paper would be prepared regarding premature withdrawal of aircraft 'A' and foreclosure of trainer aircraft project for submission to the Government. However, no such paper was prepared. The Ministry stated in October 1990 that the matter was considered in a meeting where it was decided that though aircraft 'A' would not be withdrawn before 1991-92, the trainer aircraft would not be required by the IAF.

So far, HAL has delivered only two trainer aircraft to IAF, one in December 1987 and the other in April 1988, for which they claimed Rs. 4.75 crores as against Rs. 1 crore each as quoted in the order. The first aircraft delivered was a production aircraft while the other a prototype modified to production standard. No aircraft had been delivered to the Navy.

The first trainer aircraft was inducted in squadron service in December 1987 while the second was inducted in April 1988. The utilisation rate achieved by these trainer aircraft was poor as it ranged from 0.15 to 5.30 hours per month during January 1988 to May 1990. The Ministry stated that the trainer aircraft was to be developed as a type trainer and had also initially been proposed to be used for OCUs. It added that Air HQ had estimated in January 1980 that the curtailed force level of squadrons of aircraft 'A' would continue till 1991-92. Therefore, Air HQ had proposed procurement of 12 trainer aircraft on the basis of HAL's projection that it was possible to commence supply of the trainers in 1982-83 and complete its delivery by 1984-85.

To sum up:

The inordinate delay in the development and production of a trainer aircraft had resulted in enormous increase in costs. While the cost of development increased from Rs. 4.16 crores to Rs. 18 crores, the cost of producton of two trainer aircraft went upto Rs. 4.75 crores from Rs. 1 crore each.

In view of the serious drawbacks like high accident rate and poor utilisation of combat aircraft 'A', IAF had been repeatedly insisting from 1983 onwards, on its premature withdrawai and foreclosure of the trainer aircraft project. The project, however, was allowed to continue. The IAF has started phasing out the combat aircraft 'A' from 1987 onwards and the entire fleet is expected to be withdrawn by 1991-92. As such, the chances of optimum utiliation of the two trainer aircraft delivered by HAL are remote. The utility of the trainer aircraft at OCUs has been ruled out. Thus, the entire expenditure of Rs. 22.75 crores (Rs. 18 crores for development and Rs. 4.75 crores being cost of two aircraft) incurred would be infructuous.

An amount of Rs. 9 crores advanced by the Navy in March 1986 continued to remain with HAL without any benefit accruing to the Navy. The amount of advance together with interest thereon have yet to be recovered from HAL.

APPENDIX II

Conclusions and Recommendations

Sl. No.	Para No.	Ministry Concerned	Conclusion/Recommendation
1	2	3	4
1.	1.55	Ministry of Defence	Aircraft 'A' which was being designed and developed by Hindustan Aeronautics Ltd. was expected to be inducted into squadron service by the end of 1976 and was expected to be in service for a period of 15 years. However, due to delay in development this aircraft was actually inducted into Indian Air Force in 1979. Since imparting training on a type trainer is considered to be the most economical and effective method, Air Headquarters had felt the necessity of a 'specific to type trainer' for Gnat aircraft/aircraft 'A'. The possibility of acquiring Gnat trainer aircraft from U.K. was examined but the proposal was dropped due to limited commonality and the quantum of foreign exchange involved. the continued use of Hunter trainer aircraft for training pilots in the squadrons of aircraft 'A' was not fully considered satisfactory, as Hunter aircraft was ageing and its serviceability was showing a downward trend. It was also felt at that time that aircraft 'A' would also be suitable for induction in the Operational Conversion Unit (OCU), provided trainer version was available. Based on this background and the long felt need of the Indian Air Force, the requirement for a specific to type trainer for aircraft 'A' was indicated by Indian Air Force in February 1975. Consequently, HAL prepared the

1	2	3	4
			feasibility report in June 1975 for the development of the trainer version of aircraft 'A'. A proposal for the development of a trainer version of aircraft 'A' within a time frame of 54 months at an estimated cost of Rs. 4.16 crores, put up by HAL in June, 1975 was approved by the Government in February, 1976. As the succeeding paragraphs reveal, the whole history of development of trainer aircraft 'A' presents a very dismal picture.
2.	1.56	Ministry of Defence	In spite of the fact that in a meeting held in November, 1979, Air Headquarters had stated that aircraft 'A' should be phased out starting from 1985 as the aircraft would not have adequate survivability in the future tactical environment, Government sanctioned in April 1980, procurement of 12 trainer aircraft from the HAL at a cost of Rs. 1 crore each. The necessary order was placed on HAL in August, 1980 and according to the delivery schedule indicated by HAL, 2, 4 and 6 aircraft were to be delivered during 1982-83, 1983-84 and 1984-85, respectively. According to the Ministry of Defence, the fact that trainer aircraft would still be required was reiterated at the meeting held in April 1980 though the quantity on order was agreed to be reduced from 24 to 16. Further of the 16 trainers required, it was decided to place an order for 12 trainers with a provision to order 4 more at a later date. In the Ministry's view, even if the phasing out of aircraft 'A' was to commence in 1985, it would have been completed only in 1990 and further the trainer aircraft was expected to be utilised

1	2	3	4
			in Operational Conversion Unit also and even if the fighter aircraft was withdrawn from service, the trainer aircraft was expected to be put to appropriate use. The Committee are distressed over the fact that the Ministry of Defence did not seriously review at that stage the need for trainer aircraft 'A' in the light of the Air Headquarters aforesaid views pertaining to the phasing out of aircraft 'A' as is evident from the following paragraphs.
3.	1.57	Ministry of Defence	The first prototype of the trainer aircraft 'A', which was due in December 1980, was actually flown in September, 1982 with a delay of about two years. Unfortunately, this prototype crashed in December, 1982. Chief of the Air Staff informed the Committee during evidence that aircraft 'A' were in service by the time the first prototype of the trainer aircraft crashed. According to him, at that time aircraft 'A' was found to be unsuitable for the operational conversion unit role. In spite of the fact that after the crash of the first prototype in December, 1982, it was established that the trainer aircraft 'A' was not fit for Operational Conversion Unit, no further review of the need for the trainer aircraft was conducted even at that stage. The Committee strongly disapprove of this failure on the part of the Ministry.
4.	1.58	Ministry of Defence	IAF specifically pointed out in a meeting held in March 1983 that OCU training was meant for new entrants after they had been trained on basic trainer aircraft. These pilots required an aircraft with proven safety records and the trainer aircraft under development did not fit into that category. It was also observed at this meeting that there had already been a hike in development costs as well as considerable delay. The expenditure incurred on

1	2	3	4
			the production project till March 1983 was Rs. 330.82 lakhs excluding labour cost and Rs. 776.69 lakhs on the development project. At this meeting, IAF while recommending for short closure of the development project had added that though there would be infructuous expenditure in foreclosing the trainer aircraft project, the overall savings in men and material would be of a substantial higher order which could not be ignored. The Committee are distressed to note that such a categorical assertion by the IAF, the user of the trainer aircraft, for the foreclosure of the trainer project at that stage, was lightly brushed aside. The Committee feel that if the trainer project had been foreclosed at that stage, huge expenditure incurred on the project subsequently, would have been saved. The Committee express their strong displeasure in this regard.
5.	1.59	Ministry of Defence	It was, however, decided at a meeting held in March, 1983 that while the development work would continue upto December, 1983 by which time a decision on the foreclosure of the project would be taken, no procurement of any fresh material for the production of the aircraft was to be undertaken. Unfortunately, the expected final view on the proposal to foreclose the trainer project could not be taken as according to the Ministry of Defence HAL had not carried out sufficient trials on the prototype even by October 1984, when the project was further reviewed in the Ministry. Even at this review the authorities failed to take any concrete decision. Finally, in February 1985, it was decided that a Committee would be constituted to examine the possibility of continuing with the trainer aircraft production programme. The Committee are deeply concerned to

1	2	3	4
			find that two year's precious period since the March, 1983 meeting was wasted by the authorities without taking any concrete decision, which in the Committee's view was to gain time for circumventing the opinion expressed by the Indian Air Force at the said meeting for the foreclosure of the trainer project. The Committee deprecate such an attitude.
6.	1.60	Ministry of Defence	The Committee constituted in pursuance of the decision taken in February, 1985 recommended in June, 1985 that clearance might be given for the production of the trainer aircraft. Consequently, Government sanctioned in August 1985, the procurement of trainer aircraft from HAL but reduced the quantity on order from twelve to eight. Amendment to the earlier order of August 1980 was issued by the Air Headquarters in March 1986 reducing the quantity on order to eight. 'Stop order' imposed in March 1983 was also lifted in July 1986. Strangely enough the Air Headquarters which had in the past recommended for the foreclosure of the project, when specifically consulted before clearing the production of trainer aircraft in August, 1985 stated that there could be no serious objection to a production go-ahead for 8 trainers, as these were intended to serve as type familiarisers. The Committee strongly disapprove the vacillating attitude of the Air Headquarters. This is borne out by the fact that in 1986, Air Headquarters once again suggested premature withdrawal of the combat aircraft 'A'. They also suggested cancellation of the orders for trainer aircraft as it was only a type trainer and once the aircraft 'A' themselves were withdrawn the trainer would not be necessary. This is further corroborated by the statement made by the Chief of the Air

1	2	3	4
			Staff, during evidence before the Committee that 'To say that the Air Force did not make any mistake is not correct and to that extent I feel sorry that I have to say this'.
7.	1.61	Ministry of Defence	What is all the more surprising is the fact that the Government sanctioned in August, 1985, the procurement of eight trainer aircraft inspite of the fact that phasing out of the project was to commence from the same year itself. The subsequent development, which have been discussed in the succeeding paragraphs clearly prove that the decision taken in August, 1985 was not a judicious one. Further, an expenditure of about Rs. 7 crores incurred thereafter proved to be infructuous.
8.	1.62	Ministry of Defence	The issue relating to the foreclosure of trainer project was further discussed in a meeting held under the Chairmanship of the Rajya Raksha Mantri on December 1, 1986, wherein it was decided that a paper would be prepared indicating the savings and additional costs of the proposal of the Indian Air Force. The issue was further discussed in a subsequent meeting held in the Ministry of Defence on December 23, 1986; when it was decided to keep the production of trainer aircraft in abeyence and HAL was informed accordingly in January 1987. At the meeting held in the Defence Minister's room on 9.6.1988, the Defence Minister had expressed his concern that, knowing the Air staff requirements (ASRs) which had been given to the HAL, and the Flight Safety Record of the aircraft in 1985, the project should have been allowed to reach the stage where it had reached till then. He had also expressed the view that in the larger interests of the security of the country we would not

1	2	3	4
			like to use an aircraft which is not found fit by the IAF. The decision taken at this meeting was to find out an economically viable agreed solution to the question of foreclosing the trainer project. It was decided in October 1988 that a detailed paper would be prepared regarding premature withdrawal of aircraft 'A' and foreclosure of trainer aircraft project for submission to the Government. Unfortunately, no such paper was prepared. According to the Ministry of Defence, the matter was considered in a meeting where it was decided that though aircraft 'A' would not be withdrawn before 1991-92, the trainer aircraft would not be required by Indian Air Force. The last squadron of aircraft 'A' was phased out in March, 1991.
9.	1.63	Ministry of Defence	The Committee note that the Navy had also projected a requirement of eight trainer aircraft and obtained Government sanction in November 1982 to procure them at a cost of Rs. 19.51 crores. An order for procurement of eight trainer aircraft was placed by Navy on HAL in November, 1985. Against this order, an amount of Rs. 9 crores as 'on account payment' was paid to HAL in March 1986. Strangely enough, the Navy did not carry out any evaluation to adjudge the suitability of the trainers for their requirements and relied upon IAF's evaluation of the aircraft. Surprisingly, when in 1988 IAF reiterated the premature withdrawal of aircraft 'A' and the foreclosure of the trainer aircraft project, the Navy also indicated in June 1988 that they would not require the trainer aircraft in case the IAF was not going in for them. According to the Ministry of Defence the amount advanced by the Indian Navy is part of the total outflow of.funds from the Ministry to

1	2	3	4
			HAL for the project. This clearly proves that the Navy did not have any pressing need for these trainer aircraft but the order was placed to merely sustain the trainer aircraft project.
10.	1.64	Ministry of Defence	The Committee note that HAL delivered only two trainer aircraft to IAF one in December 1987 and the other in April 1988. The first of these two aircraft was a production aircraft while the other a prototype modified to production standard. No aircraft was delivered to the Navy. The first trainer aircraft was inducted in squadron service in December 1987 while the second was inducted in April 1988. The Committee are extremely unhappy to note that the utilisation rate achieved by these trainer aircraft was extremely poor as it ranged from 0.15 to 5.30 hours per month during January 1988 to May 1990.
11.	1.65	Ministry of Defence	The Committee note that according to the original estimate trainer aircraft 'A' was to be developed by HAL within a time frame of 54 months at an estimated cost of Rs. 4.16 crores. Further, according to the delivery schedule indicated by HAL 2, 4 and 6 trainer aircraft were to be delivered during 1982-83, 1983-84 and 1984-85. The Committee are deeply concerned to find that the inordinate delay in the development and production of a trainer aircraft resulted in enormous increase in costs. While the cost of development increased from Rs. 4.16 crores to Rs. 14.42 crores, the cost of production of two trainer aircraft went up to Rs. 4.42 crores from Rs. 1 crore each. Further, out of redundant material due to the foreclosure of the project has been of the order of Rs. 19.18 crores, out of which HAL could so far utilise the material worth Rs. 82 lakhs only. What is all the more distressing is

1	2	3	4
			the fact that the two trainer aircraft which were produced by HAL after strenuous/ efforts of more than 12 years were phased out on 31 March, 1991 alongwith aircraft 'A' fighters on expiry of their UE and would be disposed of as per existing procedure. This goes to prove that the concern expressed by the Air Headquarters from time to time for the foreclosure of the trainer aircraft project was completely justified but the concerned authorities in the Ministry decided time and again to keep the development project alive for which the Ministry have failed to convince the Committee.
12.	1.66	Ministry of Defence	In view of the serious drawbacks like high accident rate and poor utilisation of combat aircraft 'A', IAF had been repeatedly insisting from 1983 onwards, on its premature withdrawal and foreclosure of the trainer aircraft project. The project, however, was allowed to continue. There has also been a vacillating attitude on the part of the Air Headquarters. Surprisingly, when in 1988 IAF reiterated the premature withdrawal of aircraft 'A' and the foreclosure of the trainer aircraft project, the Navy also indicated that they would not require the trainer aircraft in case the IAF was not going in for them. While the cost of development increased from Rs. 4.16 crores to Rs. 14.42 crores, the cost of production of two trainer aircraft went up to Rs. 4.42 crores from Rs. 1 crore each. Further, the redundant material due to the foreclosure of the project has been of the order of Rs. 19.18 crores, out of which HAL could so far utilise the material worth Rs. 82 lakhs only. HAL delivered only two trainer aircraft to IAF, one in December 1987 and the other April, 1988. The utilisation rate of these

1	2	3	4
			aircraft was extremely poor and were phased out on 31 March 1991. The Committee are, therefore, deeply distressed to note that these facts as detailed in the foregoing paragraphs clearly prove that the entire expenditure of about Rs. 37 crores incurred on this project has turned out to be entirely infructuous apart from the manhours expended on the project that could have been deployed more productively elsewhere. The Committee strongly recommend that Government should draw suitable lessons from the sad experience in this case and take all corrective steps with a view to obviate the chances of such recurrences in future. The Committee would like to know the detailed corrective steps taken in this regard.