

**PUBLIC ACCOUNTS COMMITTEE  
(1964-65)**

**THIRTY-SEVENTH REPORT**

(THIRD LOK SABHA)

[Paras 12, 13, 14 and 28 of Audit Report  
(Defence Services), 1964]



**LOK SABHA SECRETARIAT  
NEW DELHI**

*April, 1965  
Chaitra, 1987 Saka*

Price Rs. 1.45p

336.3951R  
KY

**LIST OF AUTHORISED AGENTS FOR THE SALE OF  
LOK SABHA SECRETARIAT PUBLICATIONS**

Sl. No.	Name of Agent	Agency No.	Sl. No.	Name of Agent	Agency No.
<b>ANDHRA PRADESH</b>					
1.	Andhra University General Cooperative Stores Ltd., Waltair (Visakhapatnam)	8	11.	Charles Lambert & Company, 101, Mahatma Gandhi Road, Opposite Clock Tower, Fort, Bombay	30
2.	G. R. Lakshmipathy Chetty and Sons, General Merchants and News Agents, Newpet, Chandragiri, Chittoor District	94	12.	The Current Book House, Maruti Lane, Raghunath Dadaji Street, Bombay-1	60
			13.	Deccan Book Stall, Ferguson College Road, Poona-4	65
<b>ASSAM</b>			<b>RAJASTHAN</b>		
3.	Western Book Depot, Pan Bazar, Gauhati	7	14.	Information Centre, Government of Rajasthan, Tripolia, Jaipur City	38
<b>BIHAR</b>			<b>UTTAR PRADESH</b>		
4.	Amar Kitab Ghar, Post Box 78, Diagonal Road, Jamshedpur	37	15.	Swastik Industrial Works, 59, Heli Street, Meerut City	2
<b>GUJARAT</b>			<b>WEST BENGAL</b>		
5.	Vijay Stores, Station Road, Anand	35	16.	Law Book Company, Sardar Patel Marg, Allahabad-1	48
6.	The New Order Book Company, Ellis Bridge, Ahmedabad-6	63	17.	Granthaloka, 51, Ambica Mookherjee Road, Belgharia, 24 Parganas	10
<b>MADHYA PRADESH</b>			<b>DELHI</b>		
7.	Modern Book House, Shiv Vilas Palace, Indore City	13	18.	W. Newman & Company Ltd., 3, Old Court House Street, Calcutta	44
<b>MAHARASHTRA</b>			<b>DELHI</b>		
8.	M/s. Sunderdas Gianchand, 601, Girgaum Road, Near Princess Street, Bombay-2	6	19.	Firma K. L. Mukhopadhyay, 6/1A, Banchharam Akur Lane, Calcutta-12	82
9.	The International Book House (Private) Limited, 9, Ash Lane, Mahatma Gandhi Road, Bombay-1	22	20.	Jain Book Agency, Connaught Place, New Delhi	1
10.	The International Book Service, Deccan Gymkhana, Poona-4	26	21.	Sat Narain & Sons, 3141, Mohd. Ali Bazar, Mori Gate, Delhi	3
			22.	Atma Ram & Sons, Kashmere Gate, Delhi-6	9
			23.	J. M. Jaina & Brothers, Mori Gate, Delhi	11

Thirty-seventh Report of the Public Accounts Committee

(1964-65) was presented to Lok Sabha on the 21st February,

1966.

ERRATA TO THE THIRTY-SEVENTH REPORT OF P.A.C. (1964-65)

<u>Page</u>	<u>Para</u>	<u>Line</u>	<u>For</u>	<u>Read</u>
(v)	1	8	Part II	Part II*
			add foot-note" * Not printed. One cyclostyled. copy laid on the Table and five copies placed in the Parliament Library."	
	3rd para	1	legally	legally
2	12	29	Fokkar	Fokker
3	2nd sub-para	15	crystalised	crystallised
35	(c)	15	paras....	paras 23-31
37	(i)	1	33	36
38	33	11	Mysteres	Mysteres
40	23	17	Liberators	Liberators
40	36	3 from bottom	inordinated	inordinate
41		8	as	a
41		5	carrieds	carriers
91	S.No.9	4	exorbitant	exorbitant
93	S.No.12	2	June	June, 1959
		2,3	crystalised	crystallised
100	(k)	3	1951	1961
109	S.No.33	3	very	very high
110	S.No. 36(c)	2	Repair	Repair Depot
112	S.No. 36(h)	6	or t. . .	for . . .
113	S.No. 37	1	of a	of
115			S.No.35	S.No.38

## CONTENTS

	Page
Composition of the Public Accounts Committee (1964-65) . . . . .	(iii)
I. Introduction . . . . .	(v)
II. Report on Para 28 of the Audit Report (Defence Services), 1964 regarding unnecessary locking up of public money . . . . .	1
Report of Sub-Committee—	
(I)—Introduction . . . . .	7
(II)—Manufacture of a transport aircraft [para 12 of Audit Report (Defence Services), 1964] . . . . .	8
(III)—Accumulation of repairable stores [para 13 of Audit Report (Defence Services), 1964] . . . . .	39
(IV)—Loss of Milk Tinned [para 14 of Audit Report (Defence Services), 1964] . . . . .	57
PART II*	
Proceedings of the sitting of the Public Accounts Committee held on the 27th October, 1964 relating to consideration of para 13 of Audit Report (Defence Services), 1964	
Proceedings of the sitting of the Public Accounts Committee held on the 30th October, 1964 (forenoon) relating to consideration of para 14 of Audit Report (Defence Services), 1964	
Proceedings of the sitting of the Public Accounts Committee held on the 30th October, 1964 (afternoon) relating to consideration of para 28 of Audit Report (Defence Services), 1964	
Proceedings of the sitting of the Public Accounts Committee held on the 31st October, 1964, (AN) relating to consideration of para 12 of Audit Report (Defence Services), 1964	
Proceedings of the sitting of the P.A.C. held on 19th April, 1965.	
APPENDICES	
I—Note furnished by the Ministry of Transport on para 28 of Audit Report (Defence Services), 1964 and Audit observations thereon . . . . .	73
II—Note furnished by the Ministry of Defence regarding selection of Avro 748 for manufacture in India . . . . .	75
III—Statement furnished by the Ministry of Defence showing cost comparison of Avro 748 Series I and II Aircraft . . . . .	82
IV—Statement furnished by the Ministry of Defence showing the result of Marine Surveys conducted in respect of various shipments of Milk Tinned (referred to in para 14 of Audit Report) . . . . .	84
V—Summary of main Conclusions/Recommendations . . . . .	97

\*Not printed. One cyclostyled copy laid on the Table and five copies placed in the Parliament Library.

**PUBLIC ACCOUNTS COMMITTEE**

**(1964-65)**

**CHAIRMAN**

**Shri R. R. Morarka**

**MEMBERS**

- 1. Shrimati Akkamma Devi**
- 2. Shri Ramchandra Vithal Bade**
- 3. Shri J. B. S. Bist**
- 4. Shri N. T. Das**
- 5. Shri Gulabrao Keshavrao Jedhe**
- 6. Shri R. Keishing**
- 7. Shri V. C. Parashar**
- 8. Shri Nanubhai N. Patel**
- 9. Shri C. L. Narasimha Reddy**
- 10. Dr. Ranen Sen**
- 11. Shri Ravindra Varma**
- 12. Shri P. Venkatasubbaiah**
- 13. Shri Vishram Prasad**
- 14. Shri Ram Sewak Yadav**
- 15. Shri M. P. Bhargava**
- 16. Shri Chandra Shekhar**
- 17. Shri S. C. Deb**
- 18. Shri R. S. Panjhazari**
- 19. Shri Ram Sahai**
- 20. Shri S. S. N. Tankha**
- 21. Shri Atal Bihari Vajpayee**

**SECRETARIAT**

**Shri H. N. Trivedi—Deputy Secretary.**

**Shri R. M. Bhargava—Under Secretary.**

## INTRODUCTION

1. The Chairman of the Public Accounts Committee, as authorized by the Committee do present on their behalf the Thirty-Seventh Report on the cases referred to in paras 12, 13, 14 and 28 of the Audit Report (Defence Services), 1964.

The Public Accounts Committee considered these cases at their sittings held on the 27th, 30th (Forenoon and Afternoon) and 31st (Afternoon) October, 1964. A brief record of the proceedings of the sittings of the Committee relating there to forms Part II of this Report.

2. The Public Accounts Committee at their sitting held on the 31st October, 1964 (afternoon) decided to appoint a Sub-Committee to examine the cases referred to in paras 12, 13 and 14 *ibid.* more fully in view of the importance of the issues involved. The Report of the Sub-Committee which is appended hereto was considered and approved by the Public Accounts Committee at their sitting held on the 19th April, 1965 and should be treated as the Report of the Committee.

3. A mention was also made in para 3 (Introduction) of the Thirty-third Report (Third Lok Sabha) of the Committee about certain additional information awaited from the Ministry of Transport in respect of para 28 *ibid.* The requisite information has since been submitted by that Ministry, and the Committee's observations in this case have also been included in this Report.

4. A statement showing the summary of the main conclusions/recommendations of the Committee is appended to the Report (Appendix V). For facility of reference these have been printed in thick type in the body of the Report.

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

They would also like to express their thanks to the officers of the Ministries of Defence and Transport for their co-operation in giving detailed information during the course of evidence.

R. R. MORARKA,

*Chairman,*

*Public Accounts Committee.*

NEW DELHI;

April 20, 1965.

Chaitra 30, 1887 (S).

## II

### AUDIT REPORT (DEFENCE SERVICES), 1964

#### Unnecessary locking up of public money, para 28—page 29.

For the expansion of the Naval Dockyard at Bombay it was found necessary to take over certain portions of the land held by the Bombay Port Trust and to construct an extension of the Ballard Pier. In 1959, it was agreed that the Port Trust would construct the eastern portion of the extension and that Government would construct the western portion; the Port Trust would be compensated to the extent to which expenditure on the extension would have been incurred had the work been done by the Government's own agency. The consulting engineers of both the parties in a joint report submitted in February, 1962 recommended the payment of Rs. 139.66 lakhs to the Port Trust for the construction of its portion of the work.

According to Audit, on the 27th March, 1962, without any demand from the Port Trust, Government authorised a payment of Rs. 1 crores to be made before the 31st March, 1962. The main reason for making this heavy payment at the close of the financial year, was the existence of large savings in the grant of Defence Capital Outlay of that year. At the time the payment was authorised, the Port Trust had not drawn up any plans for the construction of its portion of the extension. In November, 1962, it was reported by the Director General, Naval Dockyard Expansion Scheme, that the Bombay Port Trust did not intend constructing their portion till after the construction by Government of the "Southern Breakwater" (which formed part of the scheme) was well advanced. The construction of the Navy Portion of the Ballard Pier was, however, taken in hand in April, 1963.

No legally valid agreement has as yet been entered into transferring the rights in the lands to the Central Government.

The Defence Secretary stated during evidence that at the request of the Ministry of Defence the Bombay Port Trust handed over certain portions of the Ballard Pier, which were required for the expansion of the Naval Dockyard. In lieu of this area, the Port Trust demanded that Government should extend the Ballard Pier at their cost and provide an alternative landing place. After



Further negotiations it was agreed in 1959 that the Port Trust would themselves do the extension work and Government would pay an agreed amount of money towards the construction cost. In October, 1961, it was agreed to refer the question of the amount payable by Government to the Port Trust to their Consulting Engineers. The report of the Joint Technical Committee recommending a payment of Rs. 139.68 lakhs to the Port Trust was received in February, 1962. An intimation was received on the 19th March, 1962 that the recommendation of the Joint Committee had been accepted by the Bombay Port Trust and thereafter a payment of Rs. 1 crore was made to them. The witness urged that the payment was really towards the land taken over from the Bombay Port Trust for which they first wanted payment in kind and later in cash. The witness expressed the view that it was not an essential condition from the Government point of view whether the Port Trust utilised the amount for extending the Ballard Pier or kept it for their own purposes. The witness added that the Port Trust had dealt with the Ministry fairly in handing over the land in 1954 without receiving any payment. The B.P.T. could have asked for an alternative land to be provided before handing over this land which was urgently required for the Naval Dockyard Expansion Scheme. The witness further stated that in point of fact the Port Trust were entitled to claim rent for the land upto the date of payment.

The witness informed the Committee that the Maharashtra Government had claimed that the portion of the pier transferred by the Bombay Port Trust was situated at the land at the foundation belonging to them. The State Government had asked the Ministry to pay compensation amounting to Rs. 24 lakhs for the foundation. In their agreement with the Port Trust, the State Government had agreed not to charge any rent for the foundation. The witness added that the Ministry were not aware of the title of the State Government at the time of negotiating the transfer of the land with the Port Trust, but at the time of making the payment the Ministry knew about the dispute. The Ministry had disputed the claim of the State Government. Asked if the Port Trust were asked to reduce the payment due to them by the amount of compensation claimed by the State Government, the witness replied in the affirmative, but added that they had declined to reduce their claim saying that this claim was for an alternative land.

The Committee drew attention to the statement contained in the Audit Para that Government had authorised the payment of Rs. 1 crore on the 27th March, 1962 without any demand from the Port Trust, the main reason being the existence of a large saving in the

grant for Defence capital outlay for that year. The Defence Secretary stated that at a meeting held between the Chairman, Bombay Port Trust and the Director General, Naval Dockyard Expansion Scheme on the 10th March, 1962, the former had assured that the joint report of the Consulting Engineers would be acceptable to the Trustees who were expected to meet on the 13th March, 1962. The Chairman, Port Trust had also suggested that the acceptance of the recommendation by Government might be forwarded and orders for payment of Rs. 139.66 lakhs in the final settlement of their claim be issued. In his letter dated the 10th March, 1962, the Director General, Naval Dockyard Expansion Scheme had informed the Ministry about this discussion. On receipt of this letter the Ministry accepted the joint report on the 16th March, 1962. An intimation was received on the 19th March, 1962 that the Port Trust had also accepted these recommendations, whereafter the payment was authorised on the 27th March, 1962 and made on 31st March, 1962. The Comptroller and Auditor General pointed out that according to a note recorded in the Defence Ministry on the 17th March, 1962 after receipt of the recommendation of the Director General, Naval Dockyard Expansion Scheme to accept the estimates, the Additional Secretary had suggested that since a large amount from the capital grant was being surrendered, a substantial payment to the Port Trust could be made before the close of the financial year. The C. & A.G. pointed out that actually the acceptance of the estimates by the Port Trust was received on the 9th August, 1962. The Defence Secretary reiterated that an intimation about the acceptance of the recommendation by the Port Trust had been received on the 19th March, 1962. The witness however agreed that the payment of the amount to the Port Trust was facilitated because of the savings available in the grant, otherwise the money would have been paid after three or four months during the next financial year.

In reply to a question the representative of the Ministry of Transport stated that the understanding was that the Ministry of Defence should make the payment at that time. Asked why the Port Trust had not so far utilised the money, the witness stated that after the receipt of the money by the B.P.T. in March, 1962, it was considered necessary to combine this project with other extension schemes. It took some time before the design could be prepared and tender paper finalised. The witness added that global tenders which were called for in August, 1963, had been received. These would be finalised shortly and the execution of the scheme entrusted to the contractors. The Committee desired the Ministry of Transport to furnish the following information:—

- (i) A copy of the minutes of the meeting of the Trustees (or resolution) when they approved the estimates re-

garding extension of wall at Ballard Pier to be executed by the B.P.T. Was a demand for Rs. 1 crore made by the B.P.T. from the Defence Ministry?

- (ii) Was the amount lying unutilised with the B.P.T. or had it been merged with funds of the Port Trust?
- (iii) Was there any agreement between the B.P.T. and the Maharashtra Government regarding the ownership of the land before it was transferred to the Defence Ministry?

This information has since been received and is enclosed in Appendix I.

The Defence Secretary informed the Committee that a further payment of Rs. 20 lakhs to the B.P.T. had been sanctioned on the 18th March, 1964, after receipt of a demand from them for the release of a further portion of land. The witness added that out of the lands required by the Ministry of Defence, an area of about 146 sq. yards was still in the possession of Port Trust. In reply to a question the witness stated that a formal agreement with the Port Trust for the transfer of the land could not be signed until the dispute with the Maharashtra Government was settled. Negotiations with the Maharashtra Government were being conducted at a high level.

The Committee feel that had the extension of the Ballard Pier been carried out by the Government as had been originally demanded by the Port Trust, it would not have been necessary to incur the expenditure in one lot before the commencement of the work itself; the expenditure would have been spread over the period of the actual execution of the work. It is difficult to appreciate how the position underwent a change merely because the B.P.T. agreed subsequently to execute the job at the cost of Government. The Committee, therefore, are not wholly convinced about the justification of the lump-sum payment in this case.

The Committee feel concerned over the inordinate delay in entering into a formal agreement by the Ministry of Defence with the Bombay Port Trust for the transfer of the land. A substantial portion of the payment for the construction of an alternative landing place was made to the Port Trust more than 3 years back (March, 1962). The Committee feel that the settlement of the dispute with the Maharashtra Government regarding their title to the land at the foundation has taken unduly long time, pending which a formal agreement with the Bombay Port Trust for the transfer of the land could not be entered into.

In reply to a question whether there was any agreement between the B.P.T. and the Maharashtra Government regarding the ownership of this land, the Ministry of Transport has stated as under:—

“The land under reference was vested in the Bombay Port Trust under the Act of 1873.”

If that is so, the Committee are unable to appreciate how the claim of the Maharashtra Government comes in. The Committee desire that the issue may be settled expeditiously with the Maharashtra Government so that a legally valid agreement transferring the rights in the land to the Central Government, may be entered into. The Committee also recommend that the final payment should be made only after the execution of the transfer documents.

NEW DELHI;  
April 20, 1965  

---

Chaitra 30, 1887 (S).

R. R. MORARKA,  
Chairman,  
Public Accounts Committee.

---

---

**REPORT OF THE SUB-COMMITTEE**

---

---

## I

### INTRODUCTION

I, the Chairman of the Sub-Committee of the Public Accounts Committee, as authorised by the Sub-Committee do present on their behalf this Report on the cases referred to in paras 12, 13 and 14 of the Audit Report (Defence Services), 1964.

At the sitting held on the 31st October, 1964 (afternoon) the Public Accounts Committee decided to appoint a Sub-Committee to consider these cases more fully in view of the importance of the issues involved. Accordingly, a Sub-Committee consisting of the following Members was formed on the 18th November, 1964:—

1. Shri R. R. Morarka—*Chairman*.
2. Shri Ram Chandra Vithal Bade
3. Shri P. Venkatasubbaiah
4. Shri Ravindra Varma
5. Shri M. P. Bhargava.

A detailed questionnaire was forwarded to the Ministry of Defence for submission of written answers. The Sub-Committee held 3 sittings on the 19th (afternoon) and 20th (forenoon and afternoon) March, 1965 and examined the representatives of the Ministry of Defence and Deptt. of Supply and Technical Development.

The Sub-Committee considered and finalised this Report at their sitting held on the 14th April, 1965.

The Sub-Committee place on record their appreciation of the assistance rendered to them in the course of the examination by the Comptroller & Auditor General of India.

They would also like to express their thanks to the representatives of the Ministry of Defence and Deptt. of Supply and Technical Development for the co-operation in giving detailed information asked for by the Sub-Committee during the course of evidence.

NEW DELHI;  
17th April, 1965.  
Chaitra 27, 1887 (Saka)

R. R. MORARKA,  
*Chairman,*  
Sub-Committee of the  
Public Accounts Committee.

## II

### MANUFACTURE OF A TRANSPORT AIRCRAFT

**Para 12—Audit Report (Defence Services), 1964, Pages 10-11.**

3. In July, 1959, an agreement was concluded with a foreign company (Hawker Siddeley Aviation Ltd.) for the indigenous manufacture of a transport aircraft. In August, 1959, Government sanctioned the purchase of plant, machinery, tools, jigs, etc., at an estimated cost of Rs. 131 lakhs (Rs. 78.94 lakhs for manufacture of one prototype and Rs. 52 lakhs for bulk production). Subsequently, during June, 1960 to September, 1963, Government sanctioned further expenditure of Rs. 940 lakhs in this connection. (This included Rs. 839.27 lakhs for components etc., ordered for the manufacture of aircraft).

The Sub-Committee desired to know what were the different types of aircraft which were considered before a selection was made in favour of Avro-748 in July, 1959 and how those aircraft compared with Avro-748 as regards their cost, operational efficiency, payload etc. A copy of the note furnished in this connection is enclosed as Appendix II.

As stated in the note, the following considerations weighed in favour of selection of the aircraft (Avro-748):

- (a) The cost of Friendship and Avro-748 ex-works quoted by the respective manufacturers was as follows:
  - (i) Fokker Friendship—Rs. 30,00,000.
  - (ii) Avro-748—Rs. 24,00,000
- (b) Avro-748 was considered easier to manufacture because of its revitted structure. The Fokker Friendship used more complex Red x Bonding system.
- (c) The Licence fee and royalty in the case of the Avro-748 were more favourable being less by £350,000 on the basis of a manufacturing programme for 100 aircraft.
- (d) Hawker-Siddeley-Aviation undertook to design and develop a rear-loading military transport aircraft. In this connection, it may be mentioned that the bulk of the

requirements of the Air Force was for the military freighter version with rear-loading facilities.

- (e) The cost of jigs and tools of Avro-748 was estimated to be less by Rs. 62 lakhs for 100 aircraft.

Avro-748 was in prototype stage but provision was made in the agreement for the necessary guarantees regarding the performance of the aircraft. It was also considered beneficial for the Indian technicians to be associated in stages of construction of the prototype, its testing, development and associated problems (Fokker Friendship was already in production and in use in certain countries including the U.S.A.)

The Licensor had undertaken to supply the full British certificate of airworthiness by 31st July, 1961. The certificate of airworthiness was actually obtained on the 9th January, 1962. There were two fires in the works of A. V. Roe & Co. in 1960 and 1961 which delayed the certification of aircraft. According to the Ministry of Defence the delay in obtaining the British certificate of airworthiness did not affect the production schedule in India because only the prototype was damaged and the supply of parts and components for Indian production was not affected. Under the agreement it was open to Government to cancel the agreement with the Licensor for delay in providing a certificate of airworthiness. But this was not done and at a meeting held on 1st December, 1961 it was decided to extend the date from 31st July, 1961 to 31st December, 1961. A. V. Roe & Co. were advised to apply to the Government of India for the extension of time in terms of agreement. A. V. Roe & Co. applied on 15th February, 1962 for a formal extension of the date under article 8 of the License Agreement to 9th January, 1962 the date on which the actual certificate of airworthiness was obtained.

The Sub-Committee are surprised that the question of formal extension of the date for obtaining the certificate of airworthiness was first considered by Government as late as four months after the expiry of the date stipulated in the Agreement and that the firm did not even apply for such extension until after the actual date on which the certificate was obtained.

#### *Shortfall in production*

4. The following production schedule was drawn up for Avro-748 aircraft in July, 1959 when the agreement was entered into with Hawker Siddeley Aviation Ltd:

First Indian prototype .. July 1960

First Indian production .. July 1961



**Building Programme:**

1961	..	3
1962	..	12
1963 onwards	..	18 aircraft per year

The actual production at Kanpur was as follows:—

1961	..	1 (Nov. 1961)
1963	..	2 (March and Sept. 1963).
1964	..	1 (Jan. 1964).

4. more aircraft are stated to be in various stages of manufacture.

The Ministry attributed the shortfall in production to the following main reasons:

- (a) Lack of sufficient experience and knowledge of the work associated with the manufacture of transport aircraft which resulted in an initial optimistic estimate of resources and production capability.
- (b) shortage of technical personnel.
- (c) Uncertainty regarding the continuance of the manufacture of Avro-748 which led to—
  - (i) reduction in the number of Avro-748 aircraft to be manufactured in India; and
  - (ii) fitful orders on the Aircraft Manufacturing Depot, Kanpur.

The Ministry also stated that a realistic assumption of the available resources and the production capability had been recently carried out with the assistance of a senior executive of Hawker Siddeley Aviation Ltd. The programme which now seems feasible and which has the agreement of HSAL is as follows:—

1965	..	6
1966	..	9 (one aircraft per month from September, 1966)
1967	..	12

The Sub-Committee discussed with the representatives of the Ministry of Defence Production the various reasons for shortfall in production of the aircraft.

**5. Lack of experience and knowledge.**—The sub-Committee asked whether the production schedule was not drawn up in consultation with the foreign Licensors and their advice was not sought as to the requirement of resources. The Special Secretary Defence Production stated that the production schedule was drawn up by the Air Force Officers in the background of the discussions they had with the collaborators. The witness added that there was no definite evidence to show that the Collaborators framed the production schedule. The collaborators were generally aware of the production schedule but they were not specifically consulted. It was urged that the production schedule had been framed at that time on the basis of certain assumptions which did not come about. For instance, the number of technical personnel made available had been grossly short of the requirement. The witness however admitted that even if the requisite number of technical personnel had been provided, later events had shown that the production schedules were grossly overestimated, because of inexperience. It was urged that the fact that they were hoping to reach production of 12 aircraft per year in 1967 inspite of making considerable efforts showed that the original estimates were too optimistic. Asked when it was found that the production schedule was overestimated, the witness replied that a committee was appointed in September, 1962 to look into the question of production schedule, and they revised the schedule as follows:—

1961—1.

1962—1

1963—5

1964—12

1965—24

The witness added that even in September, 1962, the estimate made was a gross over-estimate. In reply to a question, the witness stated that between July, 1959 and September, 1962 no re-assessment of the production schedule was made. Explaining the reasons for this, the witness stated that the order for the first plane was placed on the 3rd August, 1959 and for the second, third and fourth planes on the 26th April, 1961. With the time lead that was necessary for the manufacture of these planes, it could not be realised until September, 1962 or thereabout that deliveries had not been coming as fast as these had been expected. The Sub-Committee asked why the collaborators who were being paid technical collaboration fee were not consulted in the first instance in drawing up the schedule. The Special Secretary stated that the Officer Incharge of the Project did not consider it necessary to consult the collaborators in this matter.

He was confident that he would be able to achieve this production target. Asked if the Collaborators were consulted when the production schedule was revised in September, 1962, the witness replied in the negative. He added that the team of officers which was appointed to go into this question, drew up the second schedule after discussion with the Aircraft Manufacturing Depot and on the basis of the past performance. It was not considered necessary to make a reference to the collaborators in this regard. The team of officers was confident that the revised schedule of production was realistic. According to the witness one of the reasons for drawing up this production schedule was also to know how the orders should be placed, and foreign exchange etc. should be committed.

The witness added that the fee payable to the collaborators under the agreement was for the licence for manufacturing the aircraft and not for consultancy. He further added that while collaborators themselves were new to this aircraft officers in charge at Kanpur had gathered some experience.

The Sub-Committee asked why the collaborators were consulted while drawing up the revised production schedule for the third time. The Special Secretary stated that this time the project came under the control of a company and the company took the decision to invite the experts of Hawker Siddeley Aviation Ltd. to advise them in view of the shortfall of the first two production schedules. The experts of the collaborators were consulted by the company in this behalf in October, 1964.

The Sub-Committee note with deep regret the plea of "lack of sufficient experience and knowledge" offered as one of the reasons for heavy shortfall in production. The Sub-Committee are not convinced by the arguments offered for not consulting the collaborators at the time of drawing up the first and the revised production schedule. They find no justification for the failure of the officers in charge of the project to avail themselves of the expertise of the foreign collaborators in this respect.

Whatever be the reasons, the Sub-Committee is distressed to note the heavy shortfall in production against the targets initially fixed and subsequently revised.

The Sub-Committee also consider it unfortunate that such an important decision as drawing up a production schedule for a new and important project should have been left entirely to one individual who was in charge of the project.

The Sub-Committee asked if the collaborators had expressed any views on earlier production schedules. The Special Secretary stated that the collaborators did not express any views in this regard but they repeatedly stated that it would be impossible to achieve any production schedule unless orders were placed on them in a proper manner. The witness added that the orders were not placed consistent with the production schedule and that erratic manner of placing orders was the reason for not achieving even that production which was possible at that stage. Explaining the details of the orders placed, the witness stated that in 1959 an order was placed for one aircraft, in 1961 for three aircraft, in 1962 for six aircraft, in 1963 for six aircraft and in 1965 for 11 aircraft. Explaining the reasons for delay in placing order, the witness stated that when the question of placing orders for planes 5, 6 and 7 was put up to Government in March, 1961, a view was taken that orders should be placed for Series II which had a better performance. The AVRO Project Officer examined the question of feasibility of placing an order for Series II and advised in August, 1961 that it would be possible to place order for Series II. When the proposal was put up to Government, it was pointed out by the Ministry of Defence that the order should be placed after the plane had been proved to be satisfactory. But finally they agreed that the order might be placed against a guarantee performance. Thereafter the agreement was signed in April, 1962. About this time it was also decided to send a team to U.K. to evaluate this aircraft. The order for planes 5, 6 and 7 was finally placed in June, 1962, and simultaneously evaluation of the plane was done. In reply to a question, the witness stated that a decision to place orders for Series II which had been promised much better performance than Series I had been taken by Government in January, 1960 long before the actual performance of Series I was known. Asked why the actual order for Series II was not placed till June, 1962, the witness stated that even if the order had been placed earlier, the collaborators would not have been able to supply parts of Series II, until the plane was proved in U.K.

The Sub-Committee asked why orders for Series I aircraft were placed in March, 1960 even after a decision had been taken in January, 1961 in favour of Series II because of its better performance. The Special Secretary stated that at that time series II was only on the drawing board and as soon as there was the prospect of its being available, Government switched over to Series II. He urged that it took about six months (from March 1961 to September, 1961) for the AVRO Project Officer to say that it was feasible to place an order for Series II. In March, 1961 if it had been decided to await Series

II, it would have resulted in closing down the Aircraft Manufacturing depot.

*Shortage of technical personnel*

6. Under the agreement, the Licensor undertook to train free of charge at his works and at the works of his subsidiary and associate companies in the United Kingdom a reasonable number of staff nominated by the licensee in order that they might study designs, development and manufacturing methods employed on the Avro-748 and all subsidiary work. In a note submitted by the Ministry in March, 1965 it was stated that two batches one of five officers and the other consisting of 28 officers, airmen and civilians were sent to the works of A. V. Roe & Co. in August, 1959 and September, 1959 for a period of 4 weeks for familiarisation with production techniques of the Avro-748 aircraft which was in a prototype stage at that time. In a revised note since submitted to the Sub-Committee in April, 1965, the Ministry have indicated that the total number of officers|airmen etc. sent to U.K. for training was 40; of which two remained in U.K. for 3 months from August, 1961. The officers, airmen and civilians received training in the mechanical, electrical, wireless and general engineering aspects covering the entire range of production activities. Two technical officers were associated during 1962-63 with A.V. Roe & Co. in U.K. for a period of six months for practical training in flight testing, development, aircraft production and control.

The Ministry stated that HSAL had met fully all the requests for the training of Indian technicians in the U.K. It was, however, considered economical and more advantageous to obtain the services of specialists engineers from the Licensor Coy. for guiding and imparting training to the Indian technicians at the Aircraft Manufacturing Depot Kanpur. The services of the specialists on the following subjects were obtained during the period 1960 to 1964 for a duration varying from 4½ months to one year:—

S. No.	Subject	No. of Specialists
(i)	Jig and Tool design and manufacture	6
(ii)	Assembly-Fuselage, mainplane, Nose and Cockpit and Final Assembly	9
(iii)	Inspection	4
(iv)	Stress Engineering	6
(v)	Electrical Installation	2
(vi)	Pattern Maker	1
(vii)	Design	2
(viii)	Process Engineering	1

From a statement furnished to them the Sub-Committee found that the officers and airmen sent to U.K. for training actually remained there for less than a month. The Committee enquired whether the Ministry were satisfied that these persons had been properly trained during this short duration and whether the purpose for which they were sent abroad was achieved. The Special Secretary stated that the head of the Avro Project in India also went with the first batch to U.K. on 14th August, 1959. The second batch went a little later on the 27th August, 1959 at a time when the head of the Project was in U.K. It was his judgment that the duration of the training that was given to these personnel was adequate. Asked if the collaborators had certified whether these personnel had been trained for the job for which they had been sent, the witness replied that it was not the normal practice to get that kind of certificate from the collaborators. He added that these personnel were trained engineers and they knew something about this work. The main purpose of their visit was to familiarise themselves with the operations of the aircraft in U.K. so that they could carry on the work in India with the assistance of the collaborators' technicians. Asked whether the Ministry had approved of the period of training for these personnel in U.K., the witness stated that the selection was done with the approval of Government but could not say whether the period of training was fixed with the approval of Government. From a note furnished by the Ministry of Defence in April, 1965, it is observed that Government had initially approved a training period of 6 to 8 weeks in consultation with the Air Headquarters, but that a curtailment of the period had been decided upon by the Officer-in-Charge of the AVRO Project who was the leader of the team present in the U.K. during the period of training, though he himself had originally proposed a period of 8 to 12 weeks. The Sub-Committee feel that the period of training given to these officers was inadequate, as it does not seem possible that proper training could be imparted to them during such a short period.

The Sub-Committee are surprised that the Ministry did not keep themselves informed as to whether there had been proper and full utilisation of the facilities for training in different directions which had been secured under the Agreement e.g., in regard to design, development and manufacturing methods in the works of the collaborators and their subsidiaries.

The Sub-Committee asked why some of the officers 'trained' in U.K. were posted out of A.M.D. Kanpur after working for sometime. The Special Secretary stated that every time an officer was posted out, the A.M.D. made a representation. But in the larger interest,

the Air Headquarters decided that their experience could be better utilised in some other fields. The Defence Secretary stated that one of the officers was posted out because there was no post in the A.M.D. in which he could be employed. Three of the officers were posted out because A.M.D. did not want them. The Sub-Committee pointed out that when the officers were sent for training, the Avro project was still in its infancy, and at that time the Air Force should have thought about their service requirements also. The Defence Secretary stated that one of the difficulties in combining the service requirements with those of manufacturing units was that as long as these officers remained in the Air Force, they should be available for filling the various posts for which the Air Force cadre was meant. If they were retained permanently or for a long period in that particular section, they would become unsuitable for their main job for which they were required. The witness added that it was really good to keep them for some period in the A.M.D. and then post them out. The Special Secretary stated that by posting these officers out of the project after working for sometime, their training was not wasted as it could be utilised in the interest of the Air Force. He added that they could still send more personnel, and their specialists were coming to India. These officers who worked in the A.M.D. for three to four years had trained and passed on their experience to others. The Sub-Committee observe that this explanation is hardly consistent with the statement that lack of experience and shortage of technical personnel were among the main reasons for the poor achievement in manufacture. The Sub-Committee desired to be furnished with a statement showing the dates on which these officers were posted out of Aircraft Manufacturing Depot, Kanpur. It was seen from the statement furnished by the Ministry of Defence in April, 1965 that 6 of the officers who had training in the U.K. between August and September, 1959 were posted out of the Factory during May, 1960 to August, 1962. While the Sub-Committee appreciate the difficulty pointed out by the Defence Secretary in retaining the trained personnel in the project for a longer period, they cannot help observing that the withdrawal of these personnel, while the project was still in its infancy was not in the best interest of the project. The Sub-Committee feel that only such personnel should have been selected for the training abroad as could have been retained in the project for a period of some years of the training even if recruitment had to be made from outside the Air Force to some extent.

7. From another statement showing the particulars of the foreign technicians who came to India, the Sub-Committee pointed out that most of the technicians who came in 1960 and 1961 left

after a few months stay in A.M.D. Kanpur. The Special Secretary stated that there was no time when no foreign technician was available in Kanpur for imparting training. At present there were 6 foreign technicians at the Depot. These technicians trained the Indian personnel, helped them to set up machinery and make tools and also to manufacture prototype. The witness added that the first aircraft was flown in November, 1961 the second and third aircraft which were flown in 1963 were started in 1961. In 1961, the foreign technicians were helping to make jigs, fixtures and tools because most of the personnel were not experienced in that kind of work. The Sub-Committee desired to be furnished with a statement showing the particulars of training imparted and work done by the foreign technicians. The Sub-Committee observed from a note furnished by the Ministry in April, 1965 that these specialists worked with our technicians on the floor guiding their efforts, correcting their faults and advising them on each of the problems that arose. The pattern of training (according to the Ministry) was such that no records for training were maintained in writing. The Sub-Committee suggest that the Ministry should consider whether the fact that for a period of nearly 4 years there has been only a question of assembling the parts imported as assemblies sub-assemblies has reduced the utility of the foreign specialists maintained in this country or has extended unduly the period of their stay in India.

*Uncertainty regarding the continuance of manufacture of Avro-748.*

8. The Sub-Committee enquired about the reasons for uncertainty regarding the continuance of manufacture of Avro-748. The Defence Secretary stated that the initial forecast of requirement of Avro was 29 for communication and navigation training, 56 for Avro-748M (Side loading type) and 95 for Avro-753 Military Freighter Version of rear-loading type. So far orders for 27 aircrafts had been placed. The order for aircraft 17 to 27 had been placed recently. These belonged to the navigation and training requirement. Apart from that there was the requirement of the Air Force for Military Transport aircraft but the suitability of Avro-748 for military transport purposes had not yet been definitely established. The latest position was that the prototype of this transport aircraft was likely to come to India within a month or two and depending upon the results after the trial, the question of placing further orders would be considered. As regard 748M, the witness stated that by November, 1962 the aircraft was not ready. The manufacturers were to prepare the drawings and the prototype of the aircraft was to be assembled in India. One of the main requirements was its suitability for paratropping. He added that the Air Force was to place orders after carrying out the tests for paratropping. But in



November, 1962, the requirement of the aircraft was so urgent that it was not felt desirable to go into all these processes. Thus having regard to the time factor and uncertainty and limited requirement of 748M, the manufacture of its prototype was dropped and instead it was decided to concentrate on 748 Military Freighter Version. The Special Secretary stated that after the emergency it was found that the Avro-748M would not be suitable for the purpose. They wanted a plane which could land on a smaller air-field. The Defence Secretary stated that in case Avro-748MF reasonably fulfilled the requirements specified by the Air Force, orders would be placed for it. The representative of the Air Headquarters stated that the Air Force had also made an arrangement to know about the performance of Avro-748MF with the Ministry of Aviation in U.K. who were also getting it for use in the Royal Air Force from August this year. The prototype was coming to India in April or May for trials in the Indian conditions. These trials would give a fair idea about the performance of the aircraft in Indian conditions. But the other things like dropping of paratroopers, dropping of supplies, carrying of supplies and the quantities carried would be determined (in greater detail) by the Royal Air Force trials which were due to begin in U.K. around August, 1965. The witness added that the decision about the selection of this aircraft or otherwise would be possible by the end of the current year i.e. 1965. The witness added that the specifications for Avro-748MF were slightly below the operational requirement of the aircraft. But if it meets 60 to 70 per cent of the requirements, in his opinion, it would be good enough for the purpose of Air Force. Otherwise they would have to reject it. The Defence Secretary stated that no existing aircraft might fulfil all the requirements of the Air Force. They might in some respects be inferior and in some other respects superior. The Air Force would be willing to accept the aircraft for service notwithstanding the fact that they did not meet the operational requirements in full. At present they had two aircraft in the field. One was Caribou Mk. I of which they had quite a number in service and the other was Avro which was under development. There was also an improved version of Caribou under development about which the manufacturers had claimed certain improvements but even this did not meet the requirements of the Air Force 100 per cent. Asked if the Ministry were simultaneously processing the feasibility of having the improved version of Caribou, the witness replied in the negative. He added that the main reason for not doing so was that there were already certain manufacturing facilities for Avro available in the country. The Sub-Committee pointed out that if Avro-748 did not suit the requirement of the Air Force ultimately, in that case the Ministry would have lost much time in taking the final decision.

While agreeing with this, the witness urged that the other aspect was that Government would have to incur much expenditure on manufacture or purchase of Caribou Mk. II which would also involve availability of foreign exchange. The overall view was that if Avro was successful, (there were reasonable chances of the Avro being successful, if not fully successful) there would be a considerable advantage to Government having regard to the fact that they would be going to start on a clean slate with regard to the manufacture of Avro-748 MF. The Sub-Committee are of the view that while economy and foreign exchange are important considerations even in defence requirement, the same cannot supersede more vital considerations viz. operational efficiency and urgency of I.A.F. requirements. Taking into consideration the fact that Avro 748, Series I & II aircraft did not come up to the specifications or expectations, and the fact that the need of the Army and the airforce is for an aircraft with specific characteristics, the Sub-Committee suggest that the question of suitability of Caribou Mk. II for I.A.F. requirements may also be processed simultaneously, so that in the event of Avro 748-MF being found unsuitable no time will be lost in exploring an alternative aircraft.

*Delay in supply of components:*

9. According to Audit the supply of components etc., in respect of the first four aircraft was delayed by the Licensor Coy. In a note furnished by the Ministry of Defence to the Sub-Committee in April, 1965 the delay in supply was given as follows:

	Date of completion of delivery as pro- mised.	Date of completion of actual delivery
1st Aircraft	July 1961	November, 1961
2nd Aircraft	July 1961	March, 1963
3rd Aircraft	September, 1961	August, 1963
4th Aircraft	November, 1961	November, 1963

The Sub-Committee asked as to what extent this delay in supply of components for the four aircraft was responsible for late production at Kanpur. The Ministry have stated that while there has been some delay on the part of the Collaborators it is not possible to assess correctly at this stage how much earlier these aircraft would have flown had HSAL strictly adhered to the delivery schedule because other factors also contributed to the delay. The Sub-Committee asked if in view of the fact that supply of components for the 2nd aircraft due to be completed in July, 1961 was

actually completed in March, 1963, the order could not be changed to Series II. The Special Secretary stated that the orders could not be changed because the supplies were made in instalments. The witness added that in the supply contract for the various parts, there was a provision for liquidated damages. He promised to check up as to whether action was taken in this regard.

From the above it is clear that late supply of components was one of the factors which also delayed production programme. The Sub-Committee would like to be informed about the action, if any, taken to realise liquidated damages from the collaborators.

*Indigenous content.*

The Sub-Committee asked whether any programme was drawn up for the manufacture of various component parts indigenously. The Managing Director H.A.L. stated that a phased programme was drawn up starting from part manufacture to complete manufacture from raw materials. But this programme was not actually put into effect as the orders themselves did not materialise. The orders came piecemeal and not in bulk. It was not possible for the Aircraft Manufacturing Depot at that time to plan production phase-wise right upto the stage where they would take on to the manufacture from raw materials. The plan of indigenous manufacture of Avro-748 and the plan for the future has been stated as follows:—

Aircraft No. 1.—The fuselage was manufactured from detail parts. Other parts of the aircraft were imported as assemblies, sub-assemblies, etc.

Aircraft Nos. 2 to 4.—The fuselage was manufactured from detail parts. Wings were also made from sub-assemblies and detail parts.

Aircraft Nos. 5 to 7.—The fuselage was manufactured from detail parts. The wings were manufactured from sub-assemblies and detail parts. The tail units were manufactured from detail parts.

Aircraft Nos. 8 to 10.—In addition to the above, the flying control surfaces are to be manufactured from detail parts .

Aircraft Nos. 11 to 16.—In addition to the above, aircraft doors, control tabs and flaps will be produced from detail parts.

Aircraft No. 17 onwards.—In addition to the above, the manufacture of the detail parts from raw materials for the fuselage will commence.

The Special Secretary stated that at the time of drawing up the overall production schedule in 1959, the Aircraft Manufacturing Depot had in their mind only a broad picture about the components which would be manufactured indigenously at the various stages. But the actual plan about the parts to be manufactured indigenously was worked out at the time of placing orders on the collaborators. At that time the extent to which the components could be manufactured indigenously was decided from one plane to another in consultation with the foreign technicians available at Kanpur and in the background of the experience gained. The witness added that although there was no definite and concrete plan for indigenous manufacture, a broad picture in the mind of the A.M.D. was that the first seven aircraft would be manufactured with assemblies and sub-assemblies. Thereafter, detailed manufactures would take place. From the 17th plane onwards the manufacture of various components would be progressively from raw materials. At present, there was a detailed plan relating to the indigenous content in respect of 16 planes for which orders had already been placed.

The Sub-Committee regret to note that no detailed and concrete plan was chalked out for progressive increase of indigenous contents in the aircraft. The Sub-Committee note from the above details that it is really from the 17th Aircraft onwards that the import of detail parts will give place to indigenous manufacture from raw materials.

#### *Cost of manufacture.*

The actual cost of basic planes manufactured so far is as follows:

	Rs. lakhs
1st aircraft . . . . .	43.58
2nd aircraft . . . . .	48.19
3rd aircraft . . . . .	44.00
4th aircraft . . . . .	43.00

The anticipated cost of basic Avro-748 Series I aircraft was assumed as Rs. 21.23 lakhs in 1959 on the basis of the manufacture of 100 aircraft.

The estimated value unpacked ex-works Licensor of the raw material, components etc. imported for each of the completed basic aircraft is given below:—

	£	Rs.
1st . . . . .	1,36,000	18,01,000
2nd & 3rd . . . . .	1,32,000	17,60,000
1st Series II . . . . .	1,47,675	19,69,000

Asked to explain the difference of about Rs. 30 lakhs between the cost of manufacture of the 2nd aircraft and the cost of imported components, the Special Secretary stated that this was accounted for by the labour cost in India and overhead and amortiation charges.

Since all the components were imported and only assembled here in India, the Sub-Committee were unable to understand how the labour and overheads etc. for second aircraft came to about Rs. 30 lakhs. This is exorbitant and needs examination.

12. It has been further stated that the manufacturing cost per aircraft at the A.M.D. Kanpur could be computed correctly only after the Avro-748 batch has been completed. At this stage, the manufacturing cost could only be an estimate. It was Government decision that an order for 29 aircraft for the Indian Air Force would be placed on the A.M.D. Kanpur. It was likely that an order for 15 aircraft would be placed on A.M.D. Kanpur by the Indian Airlines Corporation. The estimate of cost of the Avro-748 Series II aircraft on the basis of a production run of 29 aircraft was Rs. 40.68 lakhs and on the basis of production run of 44 aircraft, the estimate was Rs. 36.16 lakhs per aircraft.

In a statement furnished to the Sub-Committee (Appendix III) it has been stated that as against the estimated cost of Rs. 21.23 lakhs of Series I on the basis of 100 aircraft assumed in 1959, the present cost of Series II on the same basis was Rs. 30.13 lakhs. The difference of Rs. 9.7 lakhs is made up of the various constituents mentioned in the statement.

In evidence, the Special Secretary stated that in 1963, the Indian Airlines Corporation paid a sum of Rs. 42.21 lakhs for Fokker Friendship, and the recent quotation for Fokkar Friendship was for Rs. 41 lakhs. The reason for the lower quotation to the I.A.C. was partly because they had manufactured more than 100 planes and partly because of competition. The quotation for Avro II Series to I.A.C. in December, 1963 was Rs. 39.36 lakhs.

The Sub-Committee asked why at the time of selection of Avro-748, its sales price by the manufacturers (Rs. 24 lakhs) was taken into consideration, although it was not intended to purchase any complete aircraft. The Special Secretary stated that the price paid for the assemblies etc. for the first lot of 16 aircraft was affected by the sale price of the manufacturers. The price paid for components of the first Avro plane was about Rs. 18 lakhs.

As regards the actual cost of manufacture being in excess of the average figure reflected in the statement, it was explained that as operators became familiar with the manufacture of specific type and gained familiarity with it, the labour input into the job decreased. The actual manufacture hours at the earlier stages of manufacture were bound to be well above the average at about the 40th aeroplane over a production number of 100. The higher present price over the averaged figure resulted from these higher labour inputs. It was anticipated that labour costs including overheads for assembling detail parts into a complete basic aircraft at the 44th would be Rs. 5.3 lakhs as compared with Rs. 13 lakhs at the 5th set viz. the 1st Series II aircraft.

The Special Secretary added that they had completed the plane for the I.A.C. and handed it over to them for trial. It was expected that the trials would be completed within two/three months. The witness added that there was every expectation that the I.A.C. would place the order for Avro in order to replace their fleet of Dakotas. In case the I.A.C. ordered for Fokker Friendship the performance of which was comparable, then they would have to pay much more in foreign exchange. The witness added that on the basis of calculations made so far, it was felt that the cost of manufacture of Avro was not unreasonable.

The Sub-Committee feel that it would be premature to accept this contention, till the firm orders for at least 44 aircraft are received, and detailed cost worked out.

*Performance of the Agreement.*

13. Under the Agreement, a licence fee of £4,00,000 was payable to the Licensor. The licence fee was subsequently reduced to £2,50,000 as a result of the package agreement between Government of India and HSAL as a result of recent negotiations. The following were the main factors responsible for reduction in the licence fee:—

- (a) The series I and the series II aircraft had shortfalls from performance guarantees for the respective aircraft.
- (b) As there was no requirement in India for the Avro 748M, Government of India waived the obligations of HSAL relating to this aircraft in the Licence Agreement.
- (c) The Government of India waived the requirement for fitting Avro 748 aircraft to perform the photographic reconnaissance/survey role.

- (d) The responsibility of HSAL as claimed by them under the licence agreement was only for fitting Avro 748 to perform the Navigator and Signaller Classroom roles and not for the higher and special specifications of the I.A.F. HSAL, however, agreed to undertake the design of the roles to the IAF specification without claiming the difference in cost in the design between the two standards.

The Licence Agreement with HSAL provided for the design and development of a rear loading military assault transport aircraft called the Avro 758 on payment of a licence fee of £300,000 within a period of 2 years of receiving a request for this from the Government of India. The specifications set down in the licence agreement for Avro 758 are no longer adequate to meet the requirements of the I.A.F. for a rear-loading aircraft. HSAL informed the Government in August, 1962 that they had designed a new rear loading military assault transport aircraft called the Avro 748 MF (Avro 780). This aircraft is fitted with more powerful engines and will, therefore, have better performance. HSAL offered to grant a licence for manufacture in India of the Avro 748 MF for a licence fee of £250,000. This offer has been accepted and the provision regarding the exercise of option for the Avro 758 has been deleted.

The Sub-Committee drew attention to the Law Ministry's opinion that the discrepancies in the performance would be deemed to have been waived by Government and Avro 748 series II would be deemed to have been accepted and that there would not be any ground on which the company could be charged with a breach under Article 9 of the licence agreement. The Ministry of Law advised that in these circumstances a termination of the contract by Government would not appear to be justified. The representative of the Ministry of Defence (Production) stated that on a discussion with the Ministry of Law, they had admitted that in the absence of a provision in the agreement, poor performance of the aircraft could not have enabled Government to claim any damage, since they were not prepared to cancel the agreement. The Sub-Committee feel that to this extent, the agreement was defective. They also feel that as a result of the package agreement with the collaborators, the reduction in licence fee secured by Government was not adequate compensation for the disadvantages suffered under items (a), (b) and (c) above.

The Sub-Committee also understand that there was some difference of opinion between the collaborators and Government about the interpretation of the agreement. The collaborators were of the view

that their obligations in respect of the 748-M were limited to providing such designs and other documentation as A. V. Roe might prepare in the course of its business. According to Government it was the obligation of the collaborators "to get a certificate under the Air Registration Board in U.K. stating that this aircraft with the modifications would be so designed and given to us to meet the airworthiness standard."

The Sub-Committee consider it unfortunate that such ambiguities should have crept in the agreement on such an important point and trust that Ministries who may enter into negotiations for collaboration agreements in future will keep in view the need for avoiding such ambiguity.

*Delay in construction of buildings.*

14. The construction of workshops and other buildings, which was sanctioned only in June, 1961 was further delayed in execution and only the workshop buildings could be completed by the end of August, 1963. (The revised administrative approval was given in September, 1962). It was reported in September, 1963, that serious defects of construction had been noticed in these buildings and that they needed rectification. Plant and machinery worth about Rs. 36 lakhs received during the period 1960-63 had not been installed till September, 1963 as the buildings were not ready. The workshop buildings were completed with electrical service connections and handed over to the Project authorities only in March, 1964.

In their note, the Ministry stated that the first assessment of the modifications, alterations etc. required for the existing hangars and other services required was made in February, 1960 and an indication of cost of Rs. 31.50 lakhs was made. In March, 1960, H.S.A.L. engineers visited Kanpur and advised that taking into consideration the dust conditions in Kanpur, suitable dust-proofing should be provided. As a result the estimate of cost was revised to Rs. 52 lakhs and submitted to the Ministry of Defence on the 28th April, 1960. The Government sanction for the civil works at an estimated cost of Rs. 55.06 lakhs was issued on the 9th June, 1961. The necessity for the workshop and other civil works was recognised as early as February 1960 but unfortunately the expenditure sanction could be issued only in June, 1961. There was no decision to defer the construction of the buildings but it happened unfortunately that in dealing with this request for sanction of civil works there were many discussions. The principal reasons for the delay were stated to be:

- (a) an explanation had to be furnished in not providing civil works at the time the sanction for the manufacture of the Avro-748 in India was issued in August, 1959; and



- (b) an examination had to be undertaken whether instead of the proposal to modify the existing Hangars, it would not be advisable to undertake completely new construction. The settlement of the differences on the specifications and other details was also not expeditious.

The Sub-Committee note that in pursuance of the decision of the Defence Committee of the Cabinet taken on the 9th June, 1959, a Committee under the Chairmanship of the Chief of the Air Staff was appointed to consider the technical, financial and other aspects of the proposals regarding the manufacture of transport aircraft. The D.C.C. considered the report of the departmental Committee at their meeting held on the 26th June, 1959 and approved the proposal to undertake the manufacture in India of transport-aircraft in collaboration with Hawker Siddley Group of U.K. for the requirement of the Indian Air Force. In a meeting held on 3rd July, 1959 in the Ministry of Defence, it was decided to undertake the manufacture of Avro-748 aircraft at the Air Force Station, Kanpur. In pursuance of this decision a licence agreement was concluded on 7th July, 1959. In contrast to the speed with which the decision of the Defence Committee of the Cabinet taken on 9th June was pursued and crystallised into an agreement on the 7th July, 1959, the Sub-Committee are distressed to note that the expenditure sanction for the workshop and other civil works was issued only in June, 1961, inspite of the fact that this project had been conceived as a high priority project of national importance.

15. As regards the present position of installation of machinery, it has been stated that all the machinery received for the project has been installed except the compressors and the Pneumatic Drop Hammer. The value of compressors is Rs. 4.8 lakhs and that of Drop Hammer Rs. 2.06 lakhs. One of the compressors is already in use. Foundation work for 5 compressors is being carried out by M.E.S. and is likely to be completed soon.

In view of the fact that certain defects were reported in the construction of the buildings at Kanpur, the Chief Technical Examiner working under the O.M.G. was requested to carry out an assessment of the defects in the works executed by the M.E.S. at Aircraft Manufacturing Depot, Kanpur. The Chief Technical Examiner is an independent authority outside the Directorate General of Works charged specifically with the responsibility of checking whether the works are executed in accordance with the contracts and to the specified quality. The report of the C.T.E. confirms that there are only three defects which can be ascribed as serious and:

that the remaining defects have been rectified to the satisfaction of the user. These three defects are as follows:

1. Overflooding of workshops due to non-connection to drains of sump pipe outlet gutters.
2. Sun rays entering through north light glazing causes extensive glare and generates high temperatures.
3. Floor of workshop buildings was undulated and uneven and water puddled all over. No separate joints were left in floor of both machinshops. Aluminium strips were not embedded in between blocks while casting floor.

As regards the remedial measures, taken or proposed to be taken, the Ministry have stated:

- (i) In regard to the first defect, the C.T.E. has stated that during monsoon due to leakage from the down take pipes or the valley gutters, certain portions of the workshop floor had water on them. It has been explained by the engineering authorities that principal reason for this is the fact that the general drainage system in the area had become overloaded. While improvements to the general drain system are under consideration and will be executed in due course, it was necessary to authorise improvements to the internal drainage in these workshops with a view to their being used satisfactorily. With this in view, improvement works have been undertaken. The value of the contract for this improvement works is about Rs. 25,000. This will be charged to the contingencies of the sanctioned project and will, therefore, be within the Government sanction already conveyed.
- (ii) The second defect mentioned above cannot be ascribed to faulty construction. It is a consequence of the particular roof design which was adopted in the interest of economy. It was known when the design was adopted that the workshops may get direct sun rays during some hours of the day in certain months and the solution was to use frosted glass in the lower half of the north-line glazing with a special paint. Here too, the cost of the paint would be found within the sanction already conveyed.

- (iii) The floors have been provided with construction joints. Since these floors are in a covered shed, provision of expansion joints was not considered necessary by the engineers. Unevenness of floors was of a minor nature and has been rectified.

The Sub-Committee asked why it was not considered necessary to depute the Chief Technical Examiner to inspect the works after the defects in construction came to the notice of the authorities in September, 1963. The representative of the Engineer-in-Chief's Branch stated that C.T.E. was allowed to examine the construction works upto 3 years after the work was finished. In this particular case, he visited the works in November, 1964. The witness added that in this case from the civil engineering point of view it was felt that the defects were not serious and these were the type of defects which usually occurred. Some of them were set right during the execution of the work and the others a little later. The witness added that in this case it was decided to send the C.T.E. after the matter was considered by the P.A.C. in October, 1964 in order to resolve differences between the user and the engineers. Wherever it was felt that a defect was of a constructional nature it was got rectified by the contractor. Where it was felt that a defect was not due to the fault of the contractor, a separate sanction was given to rectify it. The Sub-Committee desired to be furnished with a statement showing the details of defects rectified by the contractor at his own expense and those on which extra expenditure had been incurred. The Sub-Committee found from the statement furnished to them by the Ministry of Defence in April, 1965 that 8 items of work (including those reported by the CTE) were rectified by the contractor at his own cost while an expenditure of about Rs. 15,200 was incurred by Government in rectifying certain defects which have been stated by the Ministry as 'non-contractual responsibility.'

The Sub-Committee consider it unfortunate that such defects should have crept in the execution of civil works for a project of national importance. The Government of India should have a proper procedure for investigating and determining whether there has been any failure of responsibility or supervision in all cases where such defects come to notice.

#### *Utilisation of Establishment.*

16. The statement furnished by the Ministry indicated that the establishment complement of the A.M.D. ranged between 45 and 70 per cent. of the sanctioned strength during the years 1961 to 1964.

The Sub-Committee asked whether in view of the set-back in production performance, transfer back of some of the staff to the Air Force repair units (B.R.D. and R.M.D.) was considered, where also the programme was lagging behind schedule due to paucity of staff. The Special Secretary stated that the personnel in the Aircraft Manufacturing Depot were fully utilised either for training or for assembly of aircraft or for the manufacture of jigs and tools. Asked if a review was actually undertaken in this regard, the witness replied that it was the responsibility of the officer who was incharge of the project. Actually the officer felt that the A.M.D. was somewhat under-staffed. The Managing Director, H.A.L. stated that the establishment in A.M.D. was drawn up in 1959 to produce one aircraft per year. In 1961 this was revised for three aircrafts per year and an *ad hoc* strength of 300 to 400 workers was added to do this job.

The Sub-Committee asked whether when a decision was taken to set up the Aircraft Manufacturing Depot, it was taken into consideration that the Aircraft repair work was already in arrears and why it was considered wiser to transfer staff to the A.M.D. from the Base Repair Depot, which was the only repair depot in the Air Force (others having gone to Pakistan at the time of the partition). The Defence Secretary stated that even without coming into existence of the Aircraft Manufacturing Depot, there was shortage of technical personnel in the Air Force. With the existing units already short of personnel, Government decided to set up the new depot having regard to the overall requirements. The shortage of technical personnel had to be shared by them alike. The witness added that the Chief of the Air Staff who was intimately associated with all these discussions knew that there were only 50 to 60 per cent personnel in the repair units against the sanctioned strength. In fact in 1959 a decision had been taken to increase the Air Force strength itself to build up which it would have taken sometime apart from making up any previous shortages. The fact that there was a general shortage of staff was well-known to the officers who took the decision to set up the Aircraft Manufacturing Depot. He added that having regard to the importance of this project, the decision must have been taken that the Air Force must go through this project. Asked if it was realised whether by transferring trained technicians for this project, the position regarding repair and maintenance work would not deteriorate, the witness replied that he was not aware whether there was anything on record. The witness added that having regard to shortages in personnel, the Ministry made alternative arrangement for training airmen. It was decided to start an additional training school (No. 4 Ground Training School) in 1960. The witness added that the intake of quite a

number of schools had been increased and the courses reorganised. The whole programme had been reviewed including the requirements of the increased strength of Air Force. It was expected that deficiencies in most trades would be made up by 1967 and in one or two other trades by 1968—70.

In regard to the defection of trained staff, the Defence Secretary stated that after a period of engagement of ten years quite a number of the staff was anxious to go out of the Air Force and take up private jobs. During the Emergency, the period of enrolment had been extended. There were proposals under consideration for extending the initial enrolment period itself to 15 years with option further to increase it for definite periods two or three times. As regards increasing their pay scales, the witness stated that competition with the private sector had certain limitations.

During the course of their visits to three Depots at Kanpur (BRD, RMD and AMD) as also the Ordnance Factories, the Sub-Committee/Study Group of the Committee were informed that the problem of defection of trained technical personnel, because of the financial allurements offered by the private sector, was a serious one.

The Sub-Committee feel that this problem requires to be tackled realistically by rationalising and improving the pay scales/service conditions of the technical personnel, commensurate with their experience, training and prospects.

*Delay in utilisation of engines.*

17. A licence agreement for the manufacture of Dart engines of 1600 to 5900 shaft HP was signed with Messrs. Rolls Royce of U.K. on 30th December, 1959. The licence agreement concluded with HSA in July, 1959 provided for the manufacture of Avro-748 aircraft fitted with two 1600 shaft HP RDa 6 engines. Subsequently, HSA developed Avro-748 Series II aircraft designed to be fitted with 1910 shaft HP RDa 7 engines. The Series II aircraft being superior to the Series I aircraft, it was decided to manufacture 5th and subsequent Avro-748 aircraft at Kanpur of the Series II type and to manufacture Dart 7 engines for these aircraft at HAL, Bangalore under a licence agreement signed with Rolls Royce.

An order for 20 Dart 7 engines was placed on HAL Bangalore on 1st June, 1960 and contracts were concluded with Messrs. Rolls Royce in September, 1960. The engines were received at Bangalore during the period December, 1961 to June, 1962. 19 engines were sent to A.M.D. Kanpur by HAL Bangalore after testing during the

period April, 1962 to December, 1963. Two engines were utilised in September, 1963 for the first Avro-748 Series II aircraft and two engines each were utilised in August, 1964 and December, 1964 respectively for the second and third Avro-748 series II aircraft. The installation of the remaining engines would be as follows:

March, 1965	..	2
May, 1965	..	2
June, 1965	..	2
August, 1965	..	2
September, 1965	..	2
Reserve	..	3

In view of the delay in utilisation of the engines, the H.A.L. Bangalore had been requested to approach Rolls Royce to extend the warranty in accordance with planned utilisation of the engines.

During evidence the Sub-Committee were informed that no reply has yet been received from the Suppliers. In reply to a question, the Special Secretary stated that the extension of warranty period was applied after the expiry of the period. The witness added that whether the extension of warranty period was asked for before its expiry or after was not material consequence. The real fault lay in the fact that engines were not utilised within the period of warranty. The witness, however, agreed that the extension of the period should have been asked for before its expiry. In reply to another question, the witness stated that more engines had been ordered and they were tied up with the production schedule. He added that the work would not be held up for want of engines from H.A.L. Bangalore.

The Sub-Committee regret to note that the production schedule has lagged so much behind that the engines procured for the aircraft have remained unutilised for the entire warranty period. They are sorry to note that it did not occur to any of the authorities to ask for the extension of warranty period before its expiry. They hope that such lapses would be avoided in future.

#### *Irrigularities in Cost Accounting System.*

18. In November, 1962, orders were issued by Government that the maintenance of cost accounts of this project, which had been undertaken by the Air Force authorities themselves, should be transferred to the Defence Accounts Department with effect from the 1st December, 1962.

The Air Force authorities, however, started handing over the work of maintenance of cost accounts to the Defence Accounts Department only from the 1st August, 1963. The handing over had not been completed (October, 1963).

The Controller General of Defence Accounts had brought out the following irregularities in the accounts maintained by the Air Force authorities:—

- (i) non-reconciliation of financial and cost accounts;
- (ii) non-production of final accounts such as Manufacturing Accounts, Stock Accounts, for the three years ending 1962-63;
- (iii) incorrect allocation of labour and materials against the various jobs;
- (iv) non-inclusion in the cost accounts of the expenditure incurred by another depot;
- (v) non-maintenance of proper records to watch the progress of expenditure against Government sanctions; and
- (vi) non-preparation of estimates of direct labour and direct material costs and lack of any system for control of overheads.

The delays in the transfer of the accounts to the Defence Accounts Department were attributed by the Ministry to the following reasons:

- (i) AMD represented that the revised Accounting Procedure was based on the cost accounting system followed in the Ordnance Factories and was not suitable for an Aircraft Factory.
- (ii) CGDA required that:
  - (a) AMD should post the Stores Ledger and the Block Ledgers before these were taken over;
  - (b) AMD should furnish a list of running job orders before the records were taken over completely;
  - (c) AMD should create a separate group to deal with the following:
    - (aa) closing accounts for the past year;
    - (bb) settling the pending audit objections; and
    - (cc) Helping in the transition from the old to the new system.

The above demands particularly under (c) raised fundamental issues. AMD represented that they could not be asked to finalise the accounts according to the new procedure with which they were not familiar. Similar was the position in regard to the audit objection based on the cost accounting procedure followed by AMD upto 31st July, 1963.

The transfer of accounts actually commenced from the 1st August, 1963 and was completed in the third week of June, 1964.

As regards the objections raised by the Controller General of Defence Accounts it was stated that 1600 objections were raised for the period ending 31st May, 1964.

A large proportion of these objections arose because the AMD followed the instructions laid down by them on the lines of the cost accounting system followed in Hindustan Aircraft Ltd. and Messrs. A. V. Roe & Coy. Ltd. whereas the CGDA audited the accounts in the light of the rules and regulations applicable to a normal Air Force unit and the cost accounting rules applicable to the Ordnance Factories. It was added that a special committee had been set up with effect from 9th November, 1964 for the expeditious settlement of the outstanding objections. After the receipt of the report of the Committee action would be taken to fix responsibility for serious lapses. Explaining the present system of accounting the witness stated that with the transfer of the project under a Company the accounts were being maintained on commercial lines. The Sub-Committee would like to be informed about the results achieved by the special committee and the action taken with regard to the serious lapses.

*Transfer of the Project under the control of a Company.*

19. In December, 1963, a proposal was approved that a separate public limited company should be formed to be responsible for manufacture of the transport aircraft at Kanpur. Later it was felt that if this company were also formed, there would really be three companies under the Ministry of Defence responsible for aircraft production, viz. Hindustan Aircraft Ltd. Bangalore, Aeronautics Ltd. Bombay (Mig Project), and the third company at Kanpur. With the limited resources of manpower, an appropriate thing to do was considered to form a single aircraft corporation by amalgamating those three units. This proposal was approved in March, 1964. As a first step towards this amalgamation, the Aircraft Manufacturing Depot Kanpur was transferred to the management of Aeronautics India Ltd. w.e.f. 1st June, 1964. The Hindustan Aircraft Ltd with effect from 1st October, 1964 has been merged with



the Aeronautics India Ltd. and the latter renamed as Hindustan Aeronautics Ltd. The factory at Kanpur is now one of the five divisions of the Hindustan Aeronautics Ltd.

In evidence, the Special Secretary stated that the principal reason for the transfer of the factory under the management of a Company was that the performance of the Hindustan Aircraft Ltd. was better than the factory at Kanpur, and it was felt that there should be a co-ordinated single unit for the manufacture of aircraft. He added that the Company enjoyed much more delegated authority than it was possible to exercise when the unit functioned as a part of the Air Force, or even when it was administratively under the department of Defence Production from August, 1963. The performance and the functioning of the manufacturing unit had improved. **The Sub-Committee hope that the delegation of authority to the Company will not be only in theory, but also in actual practice and that its performance will be judged only on the basis of results produced.**

#### *Conclusions*

20. The Project for manufacturing transport aircraft was conceived in 1959 as a high priority project and national importance was given to it. From the facts placed before them, the Sub-Committee regret to observe that the whole project was badly planned and inefficiently executed resulting in a crop of failures and delays in achieving the objective. The sub-committee are of the view that the chequered history of this important project should serve as an object lesson to the Government that a policy decision to set up such an important project involving huge financial outlay and deployment of technical personnel of which there is continued shortage in the country, should be taken only after a very careful and complete assessment of the various problems involved.

21. The following unsatisfactory features noticed by the Sub-Committee speak for themselves:

- (a) When the agreement with Messrs Hawker Siddeley Aviation Ltd. was signed in July, 1959 Avro-748 was still in a prototype stage and its performance was not proved.
- (b) No project report for the manufacture of the aircraft at Kanpur was prepared. As admitted by the special Secretary, most of the difficulties could have been resolved if a

proper project report had been prepared. Not only was no project Report prepared but also many of the important decisions such as (i) drawing up of production schedule (without consultation with the collaborators) (ii) selection of technical personnel for training abroad and (iii) duration of such training etc. were left entirely at the discretion of one individual officer-in-charge of the project. The decisions taken by him and the progress of the project as a whole was perhaps not reviewed at Government level from time to time.

- (c) The manufacturing unit was set up as a regular unit of the Air Force and major portion of the resources available at Kanpur were deployed to meet a very tight production schedule. At that time the repair units at Kanpur were already understaffed considerably and the repair work of aircraft required by Air Force was accumulating. Around the same time, a decision had been taken to increase the Air Force strength itself to build up which considerable technical staff was required apart from making up the previous shortages. In spite of this, experienced and trained staff was transferred from the repair and maintenance units to this manufacturing unit, which resulted in deterioration in the position regarding accumulation of repair work. The Sub-Committee have separately dealt with the accumulation of repairable aircraft in paras . . . . of this Report.
- (d) The Licensor Company failed to obtain the British certificate of airworthiness by 31st July, 1961, the date provided in the agreement. The certificate was obtained on the 9th January, 1962.
- (e) The performance of both Avro Series I and Series II aircraft were short of the guarantees given by the Licensor. In some respect the performance of Series II is inferior to that guaranteed for Series I even.
- (f) Both the original production schedule drawn up in July, 1959 and the revised production schedule drawn in September, 1962 proved to be grossly unrealistic. Only 4 aircraft were actually produced upto the end of the year 1964 as against the original production schedule of 51 aircraft and the revised production schedule of 21 aircraft. Surprisingly the officer responsible for drawing up the production schedules did not think it necessary to consult the collaborators. The fact that after the project was transferred under the

management of a Company, it was considered necessary to consult the collaborators in drawing up a realistic production schedule indicates that it was all the more necessary to consult them in 1959 when the manufacturing unit had no experience about the aircraft. Even after their first failure the project authorities did not deem it necessary to consult the collaborator though under the agreement they were bound to give necessary guidance, which in fact they did when approached.

- (g) The cost of manufacture of Avro-748 Series I was estimated at Rs. 21.23 lakhs on the basis of manufacture of 100 aircraft. On the same basis the estimated cost of Series II works out to Rs. 30.13 lakhs at present. In view of the fact that the actual performance of Series II is almost equal to that guaranteed for Series I, Government would be spending an extra expenditure of about Rs. 9 lakhs approximately (per plane) without any advantage of improved performance. (It is significant to note here that the cost of manufacture of Fokker Friendship aircraft was estimated at Rs. 22.69 lakhs in 1959, against Rs. 21.23 lakhs for Avro 748).

From items (e), (f) and (g) it is clear that the advantages in performance, cost and production which were considered in favour of selection of this aircraft have virtually disappeared. This also indicates that the entire project was conceived in hurry and executed without adequate planning.

- (h) Although one of the most important considerations for starting various manufacturing schemes is progressive increase of indigenous content, in this case no plan was drawn up in advance for the manufacture of various components indigenously. The components to be manufactured indigenously were determined only at the time of placing the orders on the collaborators. At present the programme of indigenous content for the first sixteen Planes furnished by the Ministry shows that the manufacture of detailed parts from raw materials has not started at all; it is expected to commence only from the 17th Aircraft onwards. The Sub-Committee desire that the Hindustan Aeronautics Ltd. should now draw up, in consultation with collaborators a detailed plan for the manufacture of various components, raw materials from the 17th Plane onwards.

- (i) Only two batches of 33 technicians (officers, airmen and civilian) were sent to U.K. for training in August, 1959 and September, 1959. Strangely, the duration of the training lasted for less than a month only which in the opinion of the Sub-Committee was grossly inadequate. Further, although the project is still in its infancy, some trained personnel have been posted out of the Project. The Sub-Committee desire that Hindustan Aeronautics Ltd. should carefully examine the question of training more officers and staff in India or abroad and also draw up a plan for the replacement of the foreign technicians working in the factory.
- (j) There was inordinate delay (14 months) in sanctioning the civil works for the project and the further delay of 15 months in issuing the revised administrative approval. There were several defects in the construction of workshop buildings regarding drainage system, flooring and sun rays entering the workshop, which should have been foreseen.
- (k) Because of the set back in the production programme, 19 Rolls Royce engines procured during the period December, 1961 to June 1962 were not utilised before the expiry of their warranty period. The Sub-Committee would like to know the outcome of the request made for extension of the warranty period.
- (l) Even after 5½ years of signing the agreement for manufacture of the aircraft, the question of uncertainty regarding continuance of its manufacture has not yet been settled. There was delay in manufacturing the prototype of Avro-748M (side-loading military freighter version). Therefore, the requirement for this aircraft was cancelled in November, 1962 as the Air Force could not afford to wait in the context of the Emergency. The prototype of Avro-748 MF (rear-loading military freighter assault aircraft) is expected to be received in India in May, 1965, after which the trials would be held in the Indian conditions. The results of the trials of this aircraft by the Royal Air Force starting from August, 1965 are also to be awaited. The decision about the selection of this aircraft or otherwise would be possible only by the end of this year. It is regrettable that uncertainty about the rear-loading military transport aircraft continues although at the time of entering into the agreement the bulk of the requirement of the Air Force was for this

type of aircraft. The Sub-Committee would like to know the outcome of the trials of the prototype.

- (m) Government have been able to get a reduction of £150,000 only in licence fee partly because of shortfall in the respective performance guarantees of Series I and II aircraft.
- (n) There were as many as 1600 objections in the maintenance of cost accounts by the AMD. There was also inordinate delay in handing over the work of maintenance of accounts to the Defence Accounts Department. The Sub-Committee would like to know about the progress made in settlement of the audit objections and the action taken against the officers concerned.

22. During their visit to the Aircraft Manufacturing Depot, in the month of February, 1965, the Sub-Committee were glad to find that the manufacturing work was now getting momentum and that from September, 1966 onwards a target of one aircraft per month would be achieved provided sufficient orders were placed. The present order of 27 aircraft was not considered adequate. It would be a pity if this progress is again thwarted for lack of orders. The Sub-Committee understand that an order of 15 aircraft was expected from the Indian Airlines Corporation who have been delivered one aircraft for trials. They desire that in case the aircraft is found suitable for the requirements of Indian Airlines Corporation, their requirements should be met from the Hindustan Aeronautics Ltd. Any other factors including minor price differences should not be allowed to stand in the way, because meeting the requirements from HAL would *inter alia* mean substantial saving in foreign exchange. The Sub-Committee also desire that with the transfer of manufacturing unit under the management of a company, its working should be thoroughly reviewed and necessary action taken to effect improvements and avoid failures that occurred in the past. The Sub-Committee note that the Executive Director for production of Hawker Siddeley Aviation Ltd. reported in July, 1964 on the working of the Kanpur factory. They hope that necessary action will be taken on this report. They would like to be informed in due course about the action taken on the recommendations of the Executive Director.

---

### III

#### ACCUMULATION OF REPAIRABLE STORES

##### Para 13—Audit Report (Defence Services), 1964—Pages 11-12.

23. (a) *Aircraft*.—In one Depot (No. 1 Base Repair Depot) 204 aircraft, of which 50 had been received more than four years back, were held in repairable condition on the 31st March, 1963. It was reported by the Ministry of Defence that out of these, work on 80 aircraft was not taken up as the overhaul line was full; work on 49 had been held up for want of spares; 29 were not required urgently for issue to units; for another 28, disposal instructions were awaited, while 10 were awaiting cannibalisation; work on 4 had been suspended after doing some repairs and the remaining 4 were under survey.

During the years 1961 and 1962, only 50 per cent of the target fixed by the Ministry of Defence was achieved.

24. *Latest position of repairable aircraft*.—In a note furnished to the Sub-Committee, the Ministry of Defence have stated that the latest position of 204 repairable aircraft is as follows:

No. of aircraft repaired . . . . .	65 (including 44 Vampires)
No. of aircraft under survey/ strike off . . . . .	30
No. of aircraft not required to be repaired . . . . .	22
No. of aircraft to be repaired . . . . .	86
	<hr/>
	203*

Thus, the number of aircraft left in the Depot out of these 203 was 138 (out of which 52 were not required to be repaired).

A total of 252 aircraft were received after 31st March, 1963 upto 30th September, 1964. A total of 112 of these aircraft was repaired and issued upto about the middle of December, 1964 leaving a balance of 140. This included six more aircraft beyond economical repairs awaiting strike off charge and one more aircraft also not required to be repaired. It would therefore be seen that the total

---

\* Out of 204 aircraft one aircraft had been erroneously counted twice.

number of aircraft held in the Base Repair Depot about the middle of December, 1964 was approximately 278 (138 plus 140), against the figure of 203 as on 31st March, 1963 given in the Audit para.

This indicates that the position of the total number of aircraft held at No. 1 B.R.D. (to be repaired, or to be surveyed/struck off etc.) deteriorated further in December, 1964, as compared to March, 1963.

Besides, as on 10th December, 1964, the number of repairable aircraft lying at other places was 101, making a total of 279 plus 101-379.

The Sub-Committee feel deeply concerned at the magnitude of aircraft awaiting repairs with the Air Force. The total number of aircraft for repair, including those waiting to be surveyed etc. comes to 379. This figure the Sub-Committee consider very high.

25. *Position of Vampires.*—The Sub-Committee note that the bulk of the aircraft not repaired are Vampires. In 1957, on the introduction of Hunter aircraft in the IAF, Vampires were intended to be phased out of service. It was decided in 1957 that only a limited number of Vampire aircraft would be kept in service. Consequently, the repairs of Vampires at the B.R.D. was given lower priority. Later on in April, 1960, this decision was revised and all the Vampire Squadrons were kept in service. In the meantime, the earlier decision of 1957 to phase out Vampires had resulted in the pipeline of spares for Vampires being dried up. This considerably affected the repair position of Vampires.

With the onset of the emergency, the Vampire U.E. had to be raised further to augment training facilities. However, in the India Defence Plan, the Vampires are expected to be phased out in the matter of 3-4 years.

The position of repairable Vampire aircraft at the Base Repair Depot as on 31st December each year from 1957 onwards was as follows:—

1957	..	31
1958	..	90
1959	..	102
1960	..	98
1961	..	118
1962	..	120
1963	..	135
1964	..	138

The establishment sanctioned for BRD in 1958 was meant *inter alia* to repair 85 Vampires per year. In 1961, the establishment of BRD was revised which provided for annual repair of 138 Vampires per year. Actual production was, however, limited by shortage of technical personnel and spares. The Defence Secretary stated that although it was decided in 1960 to retain Vampires, the number of repairable aircraft continued to increase. The reason was that though the number of flying hours had increased substantially with a view to giving the pilots the required training, the repair capacity was not augmented. This resulted in increasing the number of aircraft requiring repairs. It was admitted that the accumulation of repairable Vampire aircraft led to difficulties in providing aircraft to the training institutions when the Vampire U.E. had to be increased after the commencement of the emergency to augment the training facilities. During 1963, 8 second-hand Vampire trainers were purchased from Indonesia and 10 Vampire Trainers were obtained from U.K. under aid. These acquisitions were, however, to meet the urgent Air Force requirement to sustain the U.E. It has, however, been admitted that in the case of Vampire Trainers particularly the accumulation of repairable aircraft has resulted in depleted strength of the Units from 1962 onwards.

The Sub-Committee regret to note that the capacity sanctioned in 1961 for repair of 138 Vampires per year bore no relation to the actual production. This led to the somewhat anomalous situation *viz* that on one hand a large number of Vampires were awaiting repairs, and on the other, the Ministry had to purchase second-hand Vampires from other countries because of the limited repair capacity at the Base Repair Depot. It is a matter of serious concern that because of accumulation of repairable aircraft, strength of the units was depleted.

The Sub-Committee discussed with the representative of the Ministry of Defence the reasons for the heavy accumulation of repairable aircraft. They were informed that the accumulation was mainly due to shortage of trained personnel and of spares.

26. *Shortage of Man-power.*—In a statement furnished to the Sub-Committee the Ministry stated that there had been a shortage of man-power from 1958 onwards in B.R.D. It has also been stated that the shortage of technical personnel is not particular to the B.R.D., but this has been due to the general shortages in the technical man-power in the I.A.F. Taking into account the increased requirement of technical personnel for the IAF, an Air-Force Technical Training School was formed at Kanpur with effect from May, 1960. It was decided to undertake training of approximately 1,000 technicians every

260(Aii)LS—4.



year. The training programme for technical airmen has been revised in 1963 to provide for filling up of the cadre in a reasonable time. It has been added that training takes time and even after training, certain amount of experience is necessary before these trained manpower become Gp. I Technicians (proficient in Job).

Despite that training programme the shortage of manpower in the BRD and RMD has continued on account of rapid expansion of the Air Force as a whole and a consequent increased requirement of technical personnel. The Defence Secretary stated during evidence that until their full training quota was completed (by the period 1967 to 1969) the manpower problems would not be fully overcome. In the meanwhile the technical personnel would be distributed among the various workshops (including the new Depots No. 2 and 3 BRD's) according to their availability.

The Sub-Committee regret to note that although the shortages in man-power have existed in BRD since 1958, no effective steps were taken to make up deficiencies. (In this connection, the Sub-Committee were informed that on the partition of the country, while the I.A.F. inherited a number of flying formations, no maintenance unit fell to our lot because all those were located in West Pakistan. Hence since partition, the Aircraft Repair Depot set up at Kanpur on 15th August, 1947 was the only repair depot available to I.A.F.). It is also regrettable that the percentage of actual strength to sanctioned establishment was 45 per cent during the year 1963, when the repair work had accumulated in large dimensions. It is not clear why the man-power actually decreased in BRD in 1963 instead of increasing. This point requires further looking into by the Defence Ministry.

The Sub-Committee also note that some staff were transferred from the B.R.D. and RMD and other Air Force Units to the Aircraft Manufacturing Depot, Kanpur which was established in 1960 under the Maintenance Command of the Air Force. Besides, in a few cases, Air Force personnel belonging to other units worked at AMD without being officially attached to that unit. This was possible because all the three Air Force units (BRD, RMD and AMD) were in the same station and under the same AOC in C. Maintenance Command. The Sub-Committee regret to point out that on the one hand the repair work was falling into arrears, and on the other hand experienced technical staff was withdrawn from the BRD and RMD and other Air Force units for the AMD, resulting in further deterioration of the repair capacity.

27. *Shortage of Spares.*—In regard to shortage of spares, it was stated that the normal procedure of getting spares for repairs was a periodical assessment of requirements for the overhaul of aircraft as

well as accessories, on the basis of which orders were placed abroad. This was a continuous process. Occasions however did arise when demands for new spares, not commonly required also arose. Subject to the limitations of foreign exchange and difficulties in obtaining spares for obsolete aircraft from abroad, continuous efforts were made to obtain the range of spares required. Also since some of the spares were out of current production, orders for the same entailed special manufacture which involved both extra time and cost. To some extent the limitation in foreign exchange resources was also stated to be the cause for inadequate supply of spares. In this connection, the Ministry furnished the following figures of total foreign exchange asked for year-wise for maintenance and overhaul spares for the Indian Air Force and the allocations made against them:

(In lakhs of rupees)

Period	Foreign exchange asked for	Foreign exchange allocated
1957-58	440.60	345.00
1958-59	792.58	636.87
1959-60	358.11	426.82
1960-61	732.20	685.27
1961-62	2062.78	756.75
1962-63	6420.10	1271.91

The sudden spurt in 1962-63 of foreign exchange need is stated as the result of the emergency when special commitments due to increased utilisation of aircraft, life type orders for the French aircraft, special signals and electrical commitments etc. had to be taken into account.

The Sub-Committee asked about the actual utilisation of the foreign exchange allocated to the Ministry. The witness stated that the figures specifically in respect of the maintenance and overhaul spares were not available. He added that during the period April to December 1958 against the total demand of Rs. 53.72 crores, the Ministry were allotted Rs. 20.34 crores, the whole of which was spent. Out of a sum of Rs. 1226.64 lakhs asked for the Air Force, the actual allotment was only Rs. 325 lakhs which was spent. The Sub-Committee pointed out that during the year 1959-60 as against Rs. 358.11 lakhs asked for by the Ministry for maintenance and overhaul spares for the IAF, the actual allotment was Rs. 426.82 lakhs. The Defence

Secretary stated that against the total demand of the Ministry for Rs. 34·7 crores for the year the actual allotment was roughly Rs. 6·7 crores. Having regard to the urgent need of spares, the Ministry placed more orders for spares out of the total sum actually allotted. The Sub-Committee pointed out that during the years 1957-58 to 1960-61, Rs. 20·94 crores of foreign exchange was allotted against Rs. 23·23 crores asked for, which worked to 90 per cent of the amount asked for. The Defence Secretary stated that while asking for Rs. 23·23 crores of foreign exchange, the Air Force must have pruned their demand knowing fully well the difficulties in obtaining it. **The Sub-Committee find it difficult to accept this explanation. In view of the fact that during the years 1957-58 to 1960-61, 90 per cent of the amount asked for spares was allocated, the shortage of spares cannot be attributed to lack of foreign exchange during these years.**

28. In this connection, the Sub-Committee learnt that the entire system of Maintenance Planning in the I.A.F. was defective. In theory, a comprehensive maintenance plan was supposed to be drawn up for each new type of aircraft by an Initial Planning Committee, and the maintenance and supply organisation made ready well in advance of its arrival. This procedure was, however, attempted only once. The usual practice seemed to be for new aircraft to arrive before the supply and maintenance organisation was ready to receive them. Aircraft were flown until they were grounded for lack of spares or for overhaul of the engine, airframe or other components. This happened in the case of several types of aircraft in use in the I.A.F. Their life expired engines along with other components were repaired and overhauled abroad for several years after they entered the I.A.F. **The Sub-Committee cannot but express their great surprise and regret at this lack of planning in the past.**

29. As regards the provisioning procedure for spares, it was stated that there was no scientific system in the BRD of recording consumption data of spares during overhaul. Therefore, the recommendations for overhaul spares made by the BRD were not related to the consumption data but was dependent on their technical advice. As such assessment was not free from inaccuracies. Air Force had now started maintaining consumption data of spares for aircraft production from April, 1964. The Sub-Committee asked how in view of this the Ministry ensured in the past that the foreign exchange made available for spares was effectively used for procuring spares which were necessary and that no spares accumulated in stock. The Defence Secretary replied that there was no absolutely fool-proof method of ordering spares. The Air Headquarters and Maintenance Command were following a particular system of ordering spares. But they found that in point of fact certain spares which were ordered were

not moving so fast as was expected, while certain other spares were consumed more rapidly than expected. They also found that certain other spares which had not even been thought of were suddenly required and were ordered on an emergent basis. In order to improve the system of provisioning, a committee of experts was appointed in 1963 (Lal Committee) to review the position. This committee had pointed out certain defects in the system of provisioning which were being remedied from time to time. The witness added that even today they had not found any answer to the various problems connected with the provisioning of spares, and they were still grappling with the problem.

The Sub-Committee asked about the number of planes held up for repairs for want of spares. The Defence Secretary stated that it was not possible to give this information, for sometimes in case of major overhauls even when spares needed were known and were available, after opening the aircraft it was found that some spares needed were not available. The witness, however, stated that a number of aircraft were held up for want of spares and capacity.

The Sub-Committee are surprised that in the past there was no scientific system for recording consumption data of spares during overhaul. The provision of spares was therefore not free from inaccuracies. The result was that unwanted spares were accumulated and on the other hand the necessary spares were short provisioned or some of them not provisioned at all. In this connection, the Sub-Committee understand that in the case of one particular type of aircraft the value of spares and supporting ground equipment ordered over a period of six years exceeds 160 per cent of the initial cost of the aircraft. Considering that the average utilisation for each aircraft comes to less than 200 hours a year, the amount of spares purchased seems to be excessive.

While the Sub-Committee appreciate that no perfect system can be devised to avoid some accumulation or unexpected shortage, what the Sub-Committee fail to understand is why even the necessary records of consumption etc. were not maintained. The Sub-Committee are, however, glad to be assured that the Air Force have started maintaining consumption data of spares for aircraft production from April, 1964.

30. The Sub-Committee asked about the action taken on the recommendation of the Lal Committee regarding setting up of a maintenance and planning team. The Defence Secretary stated that this recommendation had been accepted. Explaining the difficulties in the implementation of this recommendation, the witness stated that

an Initial Provisioning Team which had been set up in respect of certain aircraft took quite a long time to give their recommendation. In the meantime some interim steps had to be taken, pending the receipt of recommendations. Even the so-called expert data given by the Initial Provisioning Team was based on quite a lot of independent assumptions. If the Ministry asked for more spares, the total bill would become very heavy. Therefore, they had to apply some corrective because of the limitations of resources.

In view of the serious difficulties experienced in the past in regard to the provisioning of spares for the aircraft, the Sub-Committee hope that continued and serious attention will be bestowed on the various recommendations made by the Lal Committee, for improving the system of provisioning and procurement of stores.

31. *Shortfall in the tasks allotted to BRD.*—The Sub-Committee drew the attention of the Ministry to the shortfalls in the target fixed for the Base Repair Depot for the years 1961 and 1962. The Ministry stated in a note that Government did not fix yearly tasks for the Base Repair Depot. However, establishment considered necessary to carry out a specific quantum of task was sanctioned by the Government from time to time. In 1958 an establishment for the B.R.D. was sanctioned which was continued till March, 1961 when a revision took place. The establishment sanctioned in 1958 and 1961 by the Government was based on the assumption that the task mentioned in the sanction might arise. Due to the continuous expansion in the Air Force, the repair requirements had gone up. This led to accumulation of repairable holdings. Further the manning of B.R.D. was not equal even to the sanctioned establishment. In 1961 and 1962 the percentage of effective manning to the sanctioned establishment for important trades was only 64.4 per cent and 62.3 per cent. As against this the production represented 64.5 per cent and 46.1 per cent of the target (Target/Task based on establishment). The lower production in 1962 was further explained by the fact that the percentage manning in three very important trades and particularly of electricians was much lower than the average effective manning figures.

The percentage of actual manning *vis-a-vis* sanctioned establishment as on 31st December, 1963 and 30th September, 1964 for some important trades in the B.R.D. was as follow:—

Trade	On	On
	31-12-1963	30-9-1964
Electrician-I	50%	72.6%
Fitter-II-A	41.5%	78.8%
Fitter-II-E	33.6%	55.2%
Inst. Rep. I	37%	78%

The actual task carried out during 1963 and in 1964 (upto 30th September, 1964) represents 31.4 per cent and 52 per cent respectively of the task based on sanctioned establishment.

The Sub-Committee asked if there was any system to review the work being done by the technical personnel in the Depots. The Defence Secretary stated that from 1964 the Air Headquarters had introduced a system whereby a review could be made every three months to determine how exactly the work done compared with the manpower and the resources available. They would have to wait for sometime to know whether these reviews were effective or some more measures were necessary. In reply to a question the representative of the Air Headquarters stated that each section of the workshop maintained a job card which would show the number of man-hours spent on a task. With the help of the job card, they were able to conclude whether all the man-power had been accounted for, but they had no system to check up whether the man-power available matched with the job card man-hours.

The Sub-Committee feel concerned over the shortfall in the tasks allotted to the Base Repair Depot during the years 1961 to 1964. What is more the tasks carried out were not in proportion to the actual strength available in the Depot. During the year 1962, although the effective manning was 62 per cent in important trades, the production represented only 46.1 per cent of the target. Similarly the tasks carried out in 1963-64 were not in proportion to the actual manning for important trades. The Sub-Committee are, however, glad to note a distinct improvement in the actual manning position *vis-a-vis* the sanctioned establishment on 30th September, 1964 as compared to the position on 31st December, 1963. The Sub-Committee hope that this good trend will continue and that the system of quarterly review introduced by the Air H.Q. will produce results.

#### *Delay in setting up Survey Boards—*

32. The Sub-Committee drew attention to the delay in disposal of 28 aircraft which were beyond economical repairs. They were informed that the Boards of Survey for 16 of these aircraft have been completed, strike off authority for 4 of these had been issued and for the balance 12, the proceedings of the Boards of Survey were being processed. For 12 more aircraft, the Boards of Survey had been ordered and their proceedings awaited. It was stated that the Boards of Survey had in most cases been convened in 1963 only. It had not been possible to ascertain why the Boards were not convened earlier. The Sub-Committee regret that there have

been considerable delays in setting up survey boards to recommend whether repairable aircraft should be categorised beyond economical repairs for disposal action. Out of 28 aircraft referred to in the audit para, Boards of Survey have been completed only in respect of 16 aircraft. These boards were ordered only in 1963. The Sub-Committee desire that the repairable equipment should be periodically inspected and those which are beyond economical repairs should be disposed of or cannibalised in time to provide spare parts for other aircraft which might be needing such spares.

*Expansion of Repair facilities—*

33. The Sub-Committee asked whether the Ministry had chalked out any programme to clear the arrears of repairs to aircraft. The Defence Secretary stated that the whole arrangement for maintenance and overhaul of aircraft was being reviewed to find out to what extent it should be done by the Air Force or the manufacturers and to what extent the aircraft could be scrapped. One of the difficulties was that the number of man-hours required for repairs of the older aircraft was much more than for new ones. Another difficulty was that for the older aircraft some of the spares were not available. For instance the maintenance of Vampires, Toofanis and Hysteres had considerably added to the problems. But because of the difficulty of immediately getting the replacements for these aircraft, these had to be continued in service. The witness added that it was proposed to have repair facilities for standardised aircraft and that in respect of the aircraft like Vampires, Toofanis and Mysteres it would be waste of effort to establish additional repair facilities. At present the Air Force had to live from hand to mouth with these aircraft. If an aircraft was required urgently, they would repair it, but they would not waste too much effort on them. With regard to the Gnats, Hunters and transport aircraft, they were really making an assessment of the repair facilities needed.

The Sub-Committee learnt from the Ministry's note that a technical committee has been appointed to take stock of all the repairable stores lying at various depots, survey them and report on an adequate repair programme. This committee has started functioning from 1st December, 1964. The report of this committee would enable Government to know the premature problems and the order of repair programme required.

The Sub-Committee are glad to note that the Ministry are taking internal steps to reorganise the existing repairs depots on a more rational and scientific basis with a view to facilitate better production. The Sub-Committee desire that the work regarding

**assessment of repairable aircraft and other equipment as well as re-organisation of the repair depots should be completed expeditiously.**

34. The Ministry have also stated in their note that due to the inadequacy of the repair facilities at the Repair Depot Kanpur, No. 2 Base Repair Depot was planned to be established at Maharajpur from the year 1963, which was still in the process of being developed. The work pertaining to the repair/overhaul of light aircraft and their components would be dealt with at this depot. In addition to this No. 3 Base Repair Depot was being established at Chandigarh to undertake repair and overhaul of all Russian type of aircraft. The Sub-Committee asked if the new depots had been planned properly. The Defence Secretary stated that in regard to the Repair Depot at Chandigarh, arrangement had been made in consultation with the USSR Government to determine the machinery required for the workshops. The machinery was arriving and the workshops were being built. As regards, Maharajpur Depot, the witness stated that it had been planned to supplement the repair capacity of the Kanpur Depot. The Depot had already started functioning and some repair work was already being done there. The Depot would start functioning with greater capacity from the end of 1965. The witness added that the Depot was sanctioned in a hurry in 1963 when the repair work suddenly increased and it was not possible to say whether it would be permanently required, until a review which was being carried out in regard to the overall repair work was completed. The witness however held the view that the additional repair depot would be needed because apart from aircraft they had a considerable quantity of other equipment which had to be repaired. The Sub-Committee desire that the functions of No. 2 B.R.D. Maharajpur should be carefully chalked out and its requirements of manpower and machinery properly planned.

#### *Standardisation of aircraft*

35. The Sub-Committee were informed that a large variety of aircraft was one of the important factors responsible for difficulties in procurement of spares and establishment of repair lines. This had been taken due note of by Government in formulating the India Defence Plan for the next five years period. An attempt had been made to achieve a gradual standardisation by eliminating the obsolete types from service. Due to practical limitations, the process of standardisation was of course a gradual one and it was bound to take some years before it could be completed.

**The Sub-Committee are glad to learn that the policy of introducing the principle of standardisation of aircraft has been accepted and same has been incorporated in the India Defence Plan.**



**(b) Other aviation items:**

36. In another Depot (Repair and Maintenance Depot) approximately 1.53 lakhs numbers of other repairable items, some of them dating from 1950, had accumulated upto 31st December, 1962.

A rough break-down of the repairable holdings in broad-categories is given below:—

Instruments . . . . .	40%
Aircraft components . . . . .	30%
Wireless . . . . .	10%
Ground and other Misc. equipment . . . . .	10%
Armament . . . . .	5%
Electrical . . . . .	5%

The Ministry have stated that the Repair and Equipment Section of R. & M. D. has by convention been a holding unit for all repairable equipment of the entire Air Force including those for which R. & M. D. is not the repair agency. Considerable parts of the items relate to Dakota, Liberators, Spitfire, Tempest and Hurricane aircraft. All these aircraft except Dakotas and liberators have already been withdrawn from service. At present, the boards of survey are being held with a view to segregate inactive stores for disposal and transferring the items of current use to the appropriate repairs depots. The boards of survey, to inspect, recategorise and recommend disposal of various ranges of repairable equipment were convened or are being convened. Repairable equipment of Goblin, Nene and Verdon engines are being handed over to No. 1 B.R.D. who are the repair agency for these items. About 75,000 items in all have been surveyed out of which 33,000 are not required.

The Sub-Committee asked why the stores pertaining to the aircraft already withdrawn from service were not surveyed earlier and disposed of. The Defence Secretary stated that previously there was reluctance in the Air Force to dispose of old stores. The witness added that an equipment could not be necessarily discarded just because an aircraft was discarded. Most of the items which were bought out items were common to more than one aircraft, e.g. speedometer, electrical device etc. All these items had to be identified and having regard to the aircraft in use, they had to decide further action to be taken.

**The Sub-Committee feel concerned over the inordinate delay in this case in sorting out repairable items which have been accumulating in the Repair and Maintenance Depot since 1950. Out of 1.53**

lakhs numbers of items accumulated upto 31st December, 1962, only about 75,000 items in all have been surveyed so far, out of which 33,000 items are not required. According to Ministry's own admission some loss might have occurred due to non-repair for long time of some repairable items. The Sub-Committee regret that on the one hand the Air Force were short of aviation items, on the other hand some components, which might be of current use, were allowed to lie unattended in as disorganised manner.

As a considerable part of the items relate to the aircraft which have already been withdrawn from service, these items should have been surveyed simultaneously with the withdrawal of the respective aircraft and action taken to dispose of such of them as were not required. The Sub-Committee desire that an enquiry should be made to find out why action to sort out these items was not taken earlier. The Sub-Committee hope that the remaining items would be surveyed more vigorously and action taken to dispose of those required. The Sub-Committee also desire that a system should be introduced under which when a plane is withdrawn from service, its spares etc. should be simultaneously disposed of if not required for any other current aircraft.

37. The Sub-Committee were informed during their visit to the Depot that the total number of repairable items accumulated at the Depot was about 3 lakhs upto December, 1963, against the figure of 1.53 lakhs on 31st December, 1962 as mentioned in the audit para. The Sub-Committee would like the Ministry of Defence to have these figures carefully checked up and properly reconciled. If number of repairable items has increased so abruptly from 1.53 lakhs to 3 lakhs during the course of one year, then the position requires special attention to sort out these items and arrange for their repairs/disposal.

#### *Shortfall in tasks*

38. According to Audit, during the three years 1960, 1961 and 1962, only items, representing 52 per cent of the target, were actually repaired. In their note the Ministry have stated that during the relevant years the repairable task was issued by the Air Headquarters on the basis of periodical provisioning reviews. During the reviews, items which were required to be repaired were ascertained and tasks were raised on the R.M.D. Such tasks in no way related to the establishment or capacity of the R.M.D. In those years, R.M.D. was not consulted whether it was possible to achieve the task laid down. The Ministry have urged that the performance of R.M.D. may not, therefore, be judged by considering the task as a target for R.M.D. for any year. The establishment of R.M.D. was revised in 1962 and made effective towards the end of

1962. The strength of Group I tradesmen who are mainly responsible for production was only about 42 per cent. of the sanctioned strength. The output obviously depended on the effective manning and not on the sanctioned establishment. As regards the performance of R.M.D. during 1963, it has been stated that the output was 22,521 against the arising of 32,600 and task of 95,148.

As regards the steps taken to improve the repair output of the Depot, it has been stated that the technical committee referred to in para 33 above would be looking into this problem.

The Sub-Committee feel concerned over the persistent and heavy shortfalls in the tasks allotted to the Repair and Maintenance Depot, resulting in a large accumulation of repairable items, some of them dating from 1950. They are surprised to learn that the tasks allotted to the R.M.D. in the past bore no relation to its establishment or capacity to undertake those tasks, resulting in considerably reduced output. The Sub-Committee, therefore, cannot understand the purpose of assigning such tasks. They cannot escape the conclusion that the R.M.D. suffered from neglect in the past. They have been assured that the technical committee referred to in para 33 would be looking into this problem. The Sub-Committee hope that in future, the task allotted to R.M.D. will be properly co-related to the expected arisings, actual establishment and the available capacity. Their observations regarding introduction of a scientific system for manning made in respect of BRD also apply in this case.

#### *General*

39. To sum up, the unsatisfactory features in both these cases are as under:—

- (a) There is a very high number of aircraft requiring repair lying with the Air Force.
- (b) The main reasons for accumulation of repairable aircraft was stated as inadequacy of manpower and shortage of spares. The inadequacy of manpower has been attributed to the sudden expansion of the Air Force. The Sub-Committee note with concern that despite the opening of an Air Force Technical Training School in May, 1960 with training capacity of 1000 technicians per year, the shortages in manpower in the Base Repair Depot and Repair and Maintenance Depot have continued. The Sub-Committee were assured that the problem of shortage of technical staff would be solved by the year 1967 and in some

traders by 1969 when the training quota was completed. The Sub-Committee desire that serious attention should be paid by the Defence Ministry to this problem which is confronting the various repair units and the workshops of the Air Force. They hope that the manning of the new repair depots including Nos. 2 and 3 B.R.Ds. will be planned on a scientific basis.

- (c) The Sub-Committee note that because of the actual manning of the Base Repair Depot being considerably short of the sanctioned establishment, the tasks allotted were not fulfilled. Furthermore, the actual work done by the staff available was also not in proportion to the strength. For instance, during the year 1962, although the percentage of manning to the establishment for important trades was 62, the actual production represented only 46 per cent of the target. The Sub-Committee, therefore, feel that there is a need for evolving some scientific system to determine the requirements of manpower. They were given to understand that a system has been introduced from 1964 whereby a review for every three months would be made to determine how exactly the work done compared with the manpower and the resources available. The Sub-Committee desire that the matter should be kept under constant watch to ensure that these reviews were effective.
- (d) With regard to the spares, the Sub-Committee were informed that there were a number of difficulties in their provisioning; c.g., first difficulty of foreign exchange; secondly, difficulty in obtaining spares for certain obsolete aircraft; thirdly, lack of scientific system of recording the consumption data of spares. The Lal Committee appointed in 1963 pointed out certain defects in the system of provisioning which were being remedied. The Sub-Committee regret to note that although the problem regarding provisioning of spares was not new to the Air Force, no effective steps were taken till 1963 to go into this matter in any detail. Even now the Ministry have not been able to devise a fool-proof system. According to the Defence Secretary's own admission on the one hand the Ministry had difficulty in getting foreign exchange for procurement of spares, and on the other hand they utilised the foreign exchange made available to them for purchasing the spares which were not urgently required. The Sub-Committee hope that the system would be put on sound and scientific lines in the near future.

- (e) The Sub-Committee were informed during evidence that it was not proposed to build up more repair facilities for obsolescent aircraft as it would take nearly two to three years to build them in the right dimensions by which time most of these aircraft would have to go out of service. It was proposed to concentrate on the repair facilities for standardised aircraft. While the Sub-Committee appreciate this, they would like the Ministry to examine thoroughly whether without clearing the backlog of obsolescent aircraft held in repairable condition, they would be able to meet fully the requirements of the Air Force until newer aircraft were available.
- (f) There have been considerable delays in setting up Survey Boards to recommend whether repairable aircraft should be categorised beyond economical repairs for disposal action.
- (g) There has been inordinate delay in sorting out repairable items some of which have been accumulated in the Repair and Maintenance Depot since 1950. It is obvious that items which were good and repairable in 1950 may have become obsolete and beyond economical repairs in 1965.
- (h) From the above facts, it is clear that both the Base Repair Depot and the Repair and Maintenance Depot have suffered from a certain amount of neglect in the past. The jobs done at these Depots have been persistently less than the tasks allotted year after year. One of the important reasons for those shortfalls and the consequent accumulation of work has been the chronic shortage of trained personnel. Yet, despite these difficulties, according to Ministry's own admission "In view of the high priority allotted to the production of Avro-748 aircraft and the national importance given to the project, major portion of resources available at Kanpur (BRD and RMD) were deployed to meet a very tight production schedule." The wisdom of this step is not free from doubt, as it could not have been in the best interest of the I.A.F.

However, during their recent visit to these two Depots, the Sub-Committee were glad to discern a keen sense of awareness of the difficulties involved and a determination to tackle them boldly. The Sub-Committee have no doubt that with proper support from the H.Q. and a realistic policy in regard to the manning of technical personnel and provisioning of spares on scientific lines, these Depots

will be able to play their role in keeping the Indian Air Force in proper trim, ready for any eventuality.

40. While on the subject of repair and maintenance of aircraft, the Sub-Committee would like the Ministry of Defence to give their serious and sustained attention to the following suggestions:—

- (i) The number of types of aircraft in the I.A.F. should be reduced and standardised.
- (ii) A Maintenance Planning Team should be set up well in advance before a new aircraft is brought into service so that it can chalk out a proper maintenance plan instead of relying completely and mechanically on manufacturer's recommendations.
- (iii) Standing Planning and Provisioning Committee should be set up at each repair and overhaul depot to analyse the tasks given and prepare production plans for the future.
- (iv) The Sub-Committee understand that the unserviceability of most of the aircraft in the Air Force is because of shortage of inexpensive items. This factor should be carefully analysed and holdings of such items in field units should be liberalised.
- (v) Quick and effective action should be taken to weed out obsolete and surplus stores which are not required.
- (vi) Telephonic and telegraphic communications between Equipment Depots, Repair Organisations, Overhaul Stores Depots, Forward Supply Depots, HQ. Maintenance Command and Air Headquarters should be improved.
- (vii) The Sub-Committee were surprised to learn that under the extant transport regulations, movement of aviation stores had normally to be by goods train and by the wagon load. Following these regulations literally, units went on accumulating rotables for many months before despatch to the repair agencies. While this went on, some items might be down-graded to scrap, some cannibalised for spares, some might be damaged or deteriorated in storage under field conditions and the few that finally arrived at the repair agency might need much more work and spares than would be otherwise necessary. These outdated transport regulations should be scrapped forthwith and fast rail and road transport, including civil carriers, should be used for this purpose.

**A suitable scheme for setting up an air-courier service for movement of high value rotables and A.O.G. (Aircraft-on-Ground) stores should also be evolved.**

**(viii) The Sub-Committee understand that sometimes aircraft are grounded for lack of such small parts as bolts, nuts, rivets, stainless steel wire etc. In the absence of indigenous manufacture of relatively simple general purpose spares, I.A.F. is solely dependent on imported items. The Sub-Committee desire that early action should be initiated to establish indigenous manufacture of these items.**

---

(IV)

LOSS OF MILK TINNED

para 14—Audit Report (Defence Services), 1964—Page 12

41. The Government of India entered into an agreement with the Government of the United States of America on the 30th November, 1962 for the purchase of tinned milk of the value of \$41,18,000 (Rs. 194 lakhs approx.). On the basis of this agreement, India Supply Mission, Washington entered into 4 contracts with three American firms for the purchase of 17,500 tonnes (15,816 tonnes net) of milk tinned, in February and May, 1963. 10,000 tonnes of this quantity was to be despatched between March and June, 1963 and the balance between July and November, 1963. The requirements of milk had suddenly arisen on account of the emergency in October, 1962.

The supplies of milk came to India in 26 shipments during the period April, 1963 to January, 1964. On arrival at Bombay, the Port Trust authorities, Embarkation Commandant, Bombay and the local representatives of the Army Service Corps found that many of the cartons containing tinned milk cans had been damaged, the cans were dented, rusty, blown or bulged and reported severe loss on this account. Although only good tins were segregated and forwarded to Supply Depots, reports about further losses were received by the Army Headquarters. So in addition to the damages/losses caused during the voyage, considerable loss also occurred both at the Port of discharge and at the consignee's end which was mainly attributed to the weak nature of tins and cartons.

Further tests conducted at the various Supply Depots showed that large quantities of milk had either curdled or were in process of curdling. Certain quantities were reported unfit for human consumption and some as having short life. Up to the end of November, 1963, 13,940 tonnes were received by the Embarkation Commandant, Bombay and despatched to 55 supply depots. Out of a total quantity of 13,155 tonnes received by the depots, 2,048 tonnes (valued at Rs. 32.77 lakhs approximately) representing 15.57 per cent of the stock was reported unfit for human consumption till December, 1963.

Out of the total quantity of 15,816 net tonnes of the tinned milk imported, the losses upto 30th September, 1964 were as under:

Nature of Loss	Quantity	Value
	Tonnes	Rs.
(a) Quantity damaged in ships on unloading and during storage in the Indian port	323.691	4,98,4844



Nature of Loss	Quantity	Value
(b) Quantity damaged while carrying packages from Indian ports to the Army Supply Depots . . . . .	Tonnes 1866·412	Rs. 28,74,274
(c) Losses or damages due to deterioration in quality of milk, curdling, or due to short life. . . . .	935·725	14,41,017
TOTAL . . . . .	3,125·828	48,13,775

"NOTE :—According to the latest information given by the Ministry of Defence, the total loss upto the end of February, 1965 was 3144·516 tonnes valued at Rs. 48·44 lakhs (approx.)"

A Board of Officers was appointed in April, 1964 to inquire into the exact causes of the loss and suggest remedial measures for future. The Board submitted their Report on the 15th March, 1965, a copy of which was furnished to the Sub-Committee.

#### *Conclusion of contracts and fixing of specifications for packing*

42. The normal procedure of inviting tenders and concluding contracts with the Suppliers on the basis of tenders obtained was followed by the India Supply Mission, Washington. The notice inviting tenders was issued by the I.S.M. on the 22nd December, 1962. After calling for competitive tenders, the I.S.M. negotiated with the tenderers, the lowest possible price acceptable to them. In regard to specifications for packing, the I.S.M. informally consulted the U.S. Department of Agriculture and adopted the commercial packing in fibre cases with 200/275 lbs. bursting strength, which were considered satisfactory for overseas shipment of evaporated milk.

Army Supply Corps specifications provide that tins should be packed in wooden cases. In the past, the Army Headquarters had agreed to obtain supplies upto 25 per cent. in fibre board cartons usually with bursting strength of 380/450 lbs. to save expenditure on cost and freight.

Before issuing tender notice, the I.S.M., Washington sent a cable on the 5th December, 1962 *inter alia* asking for instructions regarding specifications, packaging, destination etc. In a cable sent by Defence Ministry on the 7th December, 1962, the Ministry accepted the variety and grade of milk prescribed by the U.S. Department of Agriculture. But no mention was made in this cable with regard to packaging (cans) and outer packing (fibre board or wooden case). It was also not mentioned that a copy of Army Supply Corps specifications was being sent separately. A copy of the specifications was actually despatched on the 11th December, 1962 but it reached I.S.M., Washington only on the 28th December, 1962, i.e. a week

after the issue of tender notice. The Sub-Committee asked the reasons for delay in despatch of the specifications by the Ministry of Defence. In a note furnished to the Sub-Committee, the Ministry of Defence have stated that the letter was sent on the 11th December, 1962, and it was to go by diplomatic bag category 'A'. In 1962, category 'A' mail was despatched only once a week to Washington. There was despatch on the 11th, but since the mail for despatch was to be handed over to the Ministry of External Affairs by 12 noon, the letter from the Ministry was not despatched to Washington on that day. This letter was despatched to Washington in the next bag on the 18th December, 1962. The Sub-Committee regret to note that even though the cable from Washington dated the 5th December, 1962 asked for specific instructions regarding packing and destination etc. the Defence Ministry did not consider it necessary to either send such instructions by cable or even to inform them that the instructions were following in a letter.

Not only this when the letter was actually sent on the 11th December, 1962, instead of sending it directly by airmail it was sent to the External Affairs Ministry for further transmission in the diplomatic bag which was going only once a week. What is more when it was known that the letter had not been able to catch the diplomatic mail on 11th and that the letter would not go until 18th, no steps were taken either to inform Washington by cable or to send a copy of that letter by air-mail to I.S.M., Washington. The Sub-Committee desires that this failure should be investigated and responsibility fixed.

43. The Sub-Committee asked about the action taken by the I.S.M., Washington on receipt of the A.S.C. specifications on the 28th December, 1962. In a note furnished to them, the department of Supply and Technical Development have stated that on receipt of the A.S.C. specifications from the Ministry of Defence, the I.S.M. Washington compared them with U.S. specifications and they did not find (the U.S. Federal) specification inconsistent with the A.S.C. specification. It is, however, significant to note that there is an important aspect in which the U.S. Federal specification differs from the A.S.C. specification. The latter contains a definite warranty clause laying down that the product should keep wholesome and reconstitute properly in a tropical climate for one year from the date of delivery or shipment whichever is later. There is no such warranty clause in the U.S. specifications.

The I.S.M. had already informally consulted the U.S. Department of Agriculture about the adoption of commercial packing, and had

also made the following provision in the tender enquiry:

**"Cartons/cases should be scurely strapped with metal straps capable of withstanding handling and transportation to Indian ports. The packages product shall be packed in containers which are acceptable to common carriers for shipment to point of destination at the lowest transportation rate for such shipping."**

It has been added that the tenderers were free to quote for both types of packing. In other words they were not debarred from quoting for supplies with wooden cases. In view of this the Mission did not consider it necessary to reinvite tenders on the basis of A.S.C. specifications. None of the tenderers in any of the three inquiries, however, quoted for supply with wooden cases. According to the Mission, they were informed by the U.S. Department of Agriculture that the commercial packing was being adopted for overseas shipment by that Department and also the U.S. Army specifications admitted use of commercial packing. The main difference between the U.S. (Federal specification) and A.S.C. specification related to the use of wooden cases and according to I.S.M., it would have meant an additional foreign exchange expenditure of \$1.7 million (Rs. 78 lakhs approximately). It has been stated that this would have resulted in purchase of correspondingly less quantity of milk with the amount specifically allotted under the Agreement and that the I.S.M. were anxious to purchase the maximum possible quantity of milk to meet the emergent requirements of the Defence Services.

The Mission did not specifically take up with the Ministry of Defence the deviation from A.S.C. specification in so far as it related to the use of fibre cases instead of wooden. On the basis of information available to them about the use of commercial packing of U.S. Department of Agriculture or U.S. Army for overseas shipment, the Mission presumed that the fibre carton with bursting strength of 200/275 lbs. would be adequate. Copies of the contracts had been endorsed to the Defence Ministry and the Embarkation Commandant indicating clearly the package specifications adopted.

In the first instance the Sub-Committee are surprised that I.S.M. Washington should be unaware of the A.S.C. specifications. Since tinned milk was not imported for our Defence Forces for the first time, these specifications should have been well known to our purchase mission abroad. Secondly what the Sub-Committee fail to understand is how on receipt of A.S.C. specifications from the Ministry of Defence, the I.S.M. Washington came to the conclusion that the U.S. (Federal) specifications were not inconsistent with the A.S.C. specification when there was a basic difference between them in as

much as the A.S.C. specifications required the use of wooden cases. In the opinion of the Sub-Committee it was a clear failure on the part of I.S.M. Washington in not consulting the Ministry of Defence, who were the indenter, regarding deviation from the A.S.C. specification. The Sub-Committee note that the contracts with the suppliers were signed on the 23rd January, 1963, 27th February, 1963 and 2nd May, 1963 after negotiations. It is not clear why at the time of these negotiations the exact specification i.e. A.S.C. specification required by Defence Ministry was not stipulated and revised quotation obtained.

While the Sub-Committee appreciate the I.S.M.'s anxiety to purchase the maximum possible quantity of milk to meet the emergent requirements of the Defence Services within the allotted amount they feel that this cannot be given as justification for deviation from the A.S.C. specification without consulting the indenter, which resulted in heavy losses of milk.

The Sub-Committee note from the report of the Board of Officers that the tins used by the suppliers were not even those prescribed in the Federal Specification for overseas shipments. The tins when compared to A.S.C. specifications and the Federal Specifications for overseas shipments were of weaker plate; they were of rimless, venthole type which were unable to withstand high pressure, rough handling and extreme climatic conditions and prolonged outside storage. Another unsatisfactory feature was that in the case of one contract, the specification of carton was further reduced from 275lbs. to 200lbs. bursting strength.

*(A) Losses during voyage at the port of discharge.*

44. The Sub-Committee asked about the action taken after the arrival of first consignment of milk tinned when damages to cartons and tins were detected. The representative of the Ministry of Defence stated that a cable was sent to the I.S.M. on the 22nd June, 1963 about the defective packing and the material used, suggesting that further despatches might be sent in wooden packing. The witness added that the first ship had arrived round about the beginning of May, 1963 and that there was considerable congestion at Bombay Port, at that time. Since all the good and bad cases were mixed up it took some time to segregate them and thereafter the matter was taken up with the I.S.M. But the I.S.M. replied that the packing could not be changed and most of the shipping had been done and some consignments were under way. After considerable exchange of telegrams, the I.S.M. were asked to ship the balance consignments in 275lbs. bursting strength cartons out of those

contracted for supply in 200lbs. bursting strength. An additional foreign exchange of \$19,000 was also placed at their disposal. This enabled I.S.M. Washington to arrange shipment of about 19,000 cartons of 275lbs. bursting strength.

After arrival of the consignments brought in 26 ships, marine survey was carried out in respect of 22 ships. The statement at Appendix IV gives details about the quantity unloaded, the quantity marine surveyed and the observations of the marine surveyors. According to the Survey in every case the cartons were found torn. Tins were found loose, badly dented, crushed, stained, leaking and blown. In the case of four ships, marine survey could not be held although it was applied for. Due to heavy congestion in the B.P.T. sheds with unloading of tinned milk consignments in very quick succession, there was delay in segregating good tins from bad ones and the shipping agents had not agreed to the survey. Based on the marine survey reports, claims for Rs. 1,89,599.20 have been preferred against the steamer agents. In one case, payment of Rs. 960 was offered and this has been accepted by the Army Headquarters against the claim of Rs. 1677.22. The other claims yet remained to be settled. The Sub-Committee note from the Board of Officers report that the fibre board cartons had been stacked in the ship holes 10 to 15 high as the shipping companies normally do. But the cartons below and the tins in them could not withstand the pressure of upper layers. The cargo was hence discharged with varying degrees of damage at Bombay. The ships came to Bombay in quick succession during the monsoon. Rough weather during voyage could have led to some of the cartons becoming wet even before arrival at Bombay. In any case, exposure to rain during unloading could not be avoided. The discharge of cargo in quick succession made the task of clearance difficult and the milk oozing from leaky and blown and bulged tins spread contamination before clearance could be effected.

The Sub-Committee regret to observe that there was lack of planning in shipping the consignments to India which resulted in the ships arriving in a bunch at Bombay during the monsoon season. The Sub-Committee desire that the Ministry should take necessary steps to ensure that shipping of the consignments of milk tinned is properly planned in future. The Sub-Committee note that there was delay in clearing the milk tinned from the port. They agree with the view of the Board of Officers that notwithstanding the weak tins and cartons the loss incurred would have been considerably less had not about 65 per cent of the consignments been brought to Bombay during the monsoon, from June to September, 1963.

**(B) Losses during transit from ports to supply depots.**

45. The normal period for sampling and despatch to consuming centres by the A.S.C. Supply Depot, Bombay varied from 15 days to 2 months depending upon the availability of wagons. Since the loss incurred during this transit was the heaviest viz., 1866·412 tonnes or worth Rs. 28,74,274, the Sub-Committee asked about the steps taken by the Army authorities to prevent further losses in transit from the port to the various supply depots in view of the experience that the cartons and tins were weak and likely to damage the quantity further. The representative of the Ministry of Defence stated that the following instructions were issued:

- (1) Consignments should be sent in closed wagons.
- (2) Cartons should be placed in the wagons five cartons high.

But in spite of that the losses could not be prevented because of flimsy packing and thin containers. The milk had already oozed out of the tins in an imperceptible manner which resulted in curdling of milk. The witness urged that whatever action was possible in the circumstances was taken. But they could not change hundreds and thousands of tins which were originally weak. He added that even if they had taken the tins in wooden cases the loss could not have been avoided. According to the Board of Officers the causes that led to the arrival of damaged consignments continued to contribute to loss in transit within India. The pressure due to high stacking in the hold and handling of the cartons at the dock while discharging from the ships and while loading into the wagons would have made the cartons weaker even though no visible sign of damage was present. The bottom layer therefore, in the railway wagons might not have been able to withstand even the pressure of about 200lbs. of the four cartons above. Apart from this the fact that the tins were also weaker contributed more to this damage. In a closed wagon the temperature is quite high and it would appear that the tins had burst at seams, thus causing loss while the consignment was in transit. The witness stated that before transportation, cartons of broken tins were separated and they were put either in tea chests or gunny bags. The Sub-Committee feel that the losses during transit from the port to the supply depots could have been minimised if the flimsy fibre cartons had been replaced by wooden cases before their despatch by rail. They regret to note that the authorities concerned were not wiser even after noticing damages to the fibre cartons during shipment and at the time of unloading at the port. The Sub-Committee are disturbed over the large scale damage during transportation from

the port to the supply depots (1866 tonnes valuing Rs. 28.74 lakhs). In view of the dimensions of this loss the Sub-Committee take a serious view of this lapse and recommend that responsibility for this must be located.

(C) *Losses or damages due to deterioration in quality of milk, curdling or due to short life.*

46. The losses on damages due to deterioration in quality of milk, curdling or due to short life came to 935.725 tonnes (valuing Rs. 14,41,017). In this connection, the attention of the Sub-Committee has been drawn to the following observations contained in the Report of the Docks Manager, Bombay dated the 19th September, 1963:

"Having regard to the fact that clearance of the consignments was effected in a short time after they were landed, the fact that several thousand tins of evaporated milk were found to have bulged could only point to the fact that these consignments were not in good condition at the time they were shipped. In the course of their tour of the docks members of the Port Anti-Pilferage Committee were also shown some of these consignments soon after their landing. The representative of the Insurance Companies on the Committee were of the view that at the time of shipment several of the consignments must have been old stock as they were unable to appreciate how otherwise within a short time of their landing several thousand tins had rusted. No such damage could have occurred at the shed."

In view of the certificate by the Inspector of U.S. Department of Agriculture, the Board of Officers, however, found it difficult to question the condition of the product at the time it was shipped.

The Sub-Committee suggest that the above extract from the Docks Manager's Report may be suitably brought to the notice of the U.S. Department of Agriculture for such action as they may consider necessary in the matter.

47. During their visit to the Field Supply Depot, Misamari, Working Group 'A' of the Public Accounts Committee found that due to inadequate covered accommodation in the Depot, some perishable commodities were lying in the open exposed to the inclemencies of the weather. Some of the covered godowns were also leaking. The Board of Officers in their Report, while dealing with the acute problem of storage accommodation in Bombay, have also suggested that

the covered accommodation available in various depots requires to be assessed.

The Sub-Committee desire that the question of provision of adequate covered accommodation in the various supply depots and improvement of the existing godowns should be given serious attention by the Ministry. The Sub-Committee feel that ultimately the expenditure on construction of covered accommodation and improvement of existing godowns would be more economical than incurring of recurring losses due to deterioration of food supplies and other perishable commodities for want of suitable covered accommodation.

*Absence of warranty clause in the agreement.*

48. From the report of the Board of Officers who enquired into this case, it is clear that at the time the agreement was signed, the Ministry had presumed that the normal warranty conditions would govern these contracts as well. When losses continued to be reported, the Ministry enquired by telegram on the 4th July, 1963 whether the stocks were covered by warranty period. I.S.M. Washington replied that in the absence of specific instruction and in keeping with trade practice in U.S.A. canned products were not covered by any warranty. On a perusal of the contract (confirmation of purchase), the Ministry of Defence found that clause II(9) thereof specified that conditions of contract usually stipulated by I.S.M. would apply in so far as they were not inconsistent with the clauses in the confirmation of purchase. When this was brought to the notice of I.S.M. Washington they clarified that the confirmation of purchase was subject to regulations under the agreement in question and those mentioned in the Purchase Authorisation; that according to the Purchase Authorisation, the responsibility of the supplier ceased on his placing the product on board the ship after obtaining the certificate of inspection from the U.S. Department of Agriculture.

The Sub-Committee would like the Defence Ministry and the Ministry of Supply and Technical Development to examine this matter further in detail with a view to ascertain (a) whether it would have been possible for I.S.M. Washington to have the usual warranty clause incorporated in this deal and (b) if not, what is the remedy available to the Government against shipments of inferior quality goods.

49. The Sub-Committee asked whether the question of making good the losses due to defective packing was taken up by the I.S.M. Washington with the suppliers. In their note the Department of Supply and Technical Development have stated that the supply of milk was subject to inspection by the U.S. Department of Agriculture



and was on F.A.S. vessels U.S. Port basis. U.S.A. Deptt. of Agriculture inspectors gave acceptance certificate in respect of quality and grade of milk and packing certifying that the consignments conformed with the specifications laid down in the contract. The vessel owners had also issued a clean bill of lading indicating that there was no damage to cartons loaded. In the circumstances there was no legal basis to lodge a claim against the suppliers. According to the commercial practice goods are insured to cover transit losses but the purchaser being Government no insurance was taken out as no specific instructions to that effect were issued by the Ministry of Defence. The question of losses has also been taken up with the U.S. Deptt. of Agriculture as the suppliers had delivered the goods in accordance with the terms of the contract and the carriers had given clean bill of lading. In the opinion of I.S.M. no purpose would have been served by taking up the question of losses with the suppliers or the U.S. Deptt. of Agriculture.

The Sub-Committee are surprised that in spite of the heavy loss (Rs. 48 lakhs), the matter has not yet been formally brought to the notice of suppliers through U.S. Deptt. of Agriculture, with a view to obtaining suitable compensation. They desire that this should at least be done now.

The Sub-Committee understand that the contract with suppliers provided for the buyer having the right to make an additional and independent inspection of goods at his own expense, but it appears that this right was not exercised by the I.S.M. They depended only on the inspection certificates issued by the Inspectors of U.S. Deptt. of Agriculture.

#### *General*

50. The Sub-Committee are perturbed over the heavy loss which occurred in this case due to flimsy tins and weak cartons used for packing of milk tinned supplied to India. The Sub-Committee are surprised to note the plea of the Department of Supply and Technical Development that on an overall basis against the total loss of Rs. 48.14 lakhs an expenditure of Rs. 78 lakhs in foreign exchange has been saved which would have been incurred had wooden packing cases been used for outer packing. The Sub-Committee are unable to accept this as a valid argument which proceeds on the assumption that the loss of essential and urgent supplies valued at Rs. 48.14 lakhs did not matter at all. The Sub-Committee consider it most unfortunate that so much of supplies indented for the forward areas should have gone to waste. Moreover, the estimate of extra expenditure of Rs. 78 lakhs if wooden cases had been used instead of cartons needs a careful scrutiny by the Department of Supply and Technical Development.

In the Sub-Committee's opinion there was a clear failure on the part of the I.S.M. Washington in dealing with this case, in several respects while deviating from the A.S.C. specifications in regard to packing conditions such as:

- (i) Failure to consult the indenter (the Ministry of Defence) before agreeing to material deviation from A.S.C. specifications in regard to packing;
- (ii) failure to ask the suppliers to give fresh quotations, on receipt of A.S.C. specifications on the 28th December, 1962;
- (iii) apparent failure to insist that the tins used by the suppliers were in accordance with the Federal specification for overseas shipments (as indicated in the Report of the Board of Officers);
- (iv) agreeing to a further reduction in specification of carton from 275 lbs. to 200 lbs. bursting strength.

The Sub-Committee desire that the Ministry of Supply and Technical Development should inquire into these lapses, with a view to fixing responsibility. They should also examine why the right of additional and independent inspection as provided in the agreement was not exercised by I.S.M. Washington.

51. The Sub-Committee also find that there were certain lapses on the part of the Ministry of Defence which should be taken due notice of:

- (a) the delay on the part of the Ministry of Defence in forwarding specifications of packing to the I.S.M. Washington;
- (b) the delay in clearing the stocks of milk tinned from the docks;
- (c) the delay in applying for marine surveys in respect of some consignments received in four ships; and
- (d) the failure to change the outer packing from fibre cartons to wooden cases before despatch from the port to the respective destinations which substantially accentuated the losses.

R. R. MORARKA,  
Chairman,

NEW DELHI;  
17th April, 1965.  
Chaitra 27, 1887 (Saka).

Sub-Committee of the  
Public Accounts Committee.

---

---

## **APPENDICES**

---

---

## APPENDIX I

### MINISTRY OF TRANSPORT

*Note to be sent to the Public Accounts Committee with reference to para 28 of the Audit Report (Defence Services) 1964 regarding unnecessary locking up of public money.*

S. No.	Para No.	Ministry	Points on which information is required by the Public Accounts Committee.	Remarks
1	2	3	4	5
1	28 of the Audit Report (Defence Services) 1964.	Ministry of Transport.	<p>(i) A copy of the minutes of the meeting of the Trustees (or resolution) when they approved the estimates regarding expansion of wall at Ballard Pier to be executed by the B.P.T. may be furnished. Was a demand for Rs.1 crore made by the B.P.T. from the Defence Ministry ?</p> <p>(ii) Is the amount lying unutilised with the B.P.T. ? Has it been merged with funds of the Port Trust ?</p> <p>(iii) Was there any agreement between the B.P.T. and the Maharashtra Government regarding the ownership of the land before it was transferred to the Defence Ministry ?</p>	<p>The Bombay Port Trust have stated as follows:—</p> <p>(i) For the correct appreciation of the issue, it is necessary to mention the background of the transaction. Originally, it was intended that in exchange for the Trustees' assets at Ballard Bunder and Ballard Pier, the Navy should extend the present Pier southwards by 750 feet and then hand it over to the Port Trust, excepting a strip of land 75 feet wide on the inner face. The entire cost of this extension, excepting that of filling the Central portion admeasuring 700' x 150'— was to be borne by the Navy. It was later on mutually decided that instead of the Navy building the extension and handling it over to the Port Trust, the Port Trust should carry out the work and the Navy should pay a lump sum compensation in discharge of its liability. The amount of compensation, after making due</p>

1

2

3

4

5

allowance for the cost of filling of the Central portion, as worked out jointly by the Consulting Engineers of both the parties, in agreement was Rs. 139.66 lakhs. Of this, the Navy paid Rs. 100 lakhs on the 31st March, 1962 and Rs. 20 lakhs on the 28th March, 1964, leaving a balance of Rs. 19.66 lakhs still to be paid. However, at the time of payment of Rs. 100 lakhs, the Navy informed us that although they had confirmed the settlement worked out jointly by both the parties, the Ministry of Defence had not concurred in it. In view of this, it became necessary to describe the payment made by the Navy as an "on account" one "pending finalisation of the terms of settlement in connection with the extension of the Ballard Pier". As, however, the settlement had already been agreed to by the Officers of the Defence Ministry, the Ministry's official concurrence was only a formality. Thus, the description of the payment as "on account", did not mean that it was provisional or that the Defence Ministry intended to re-open the question. The observation made by the Public Accounts Committee appears to have resulted from the erroneous impression created by the description of the payment as "on

1

2

3

4

5

account" and the above explanation should clarify the position.

As regards the question why the amount was recovered in advance even before the commencement of the work, it may be pointed out that the Port Trust assets at Ballard Bunder and the Ballard Pier were transferred to the Navy some 10 years ago and we became *immediately* entitled to the full compensation. Originally, the compensation was to be paid by the Navy in the form of a concrete asset, viz., the extension of Ballard Pier but later, it was agreed that it should be paid in money and the amount was fixed, by mutual agreement, at Rs. 139.66 lakhs. We could, therefore, rightly have asked for this amount when the above agreement was arrived at, even though we were not ready at the time to commence the construction of the extension. The point is that Rs. 139.66 lakhs is the agreed compensation for the property taken over from us by the Navy. The amount is payable to us irrespective of how long we may take to build the extension. The Port Trust has already suffered some loss inasmuch as no payment at all was made by the Navy till the 31st March, 1962. Another point which needs to be stressed is that as we are

1

2

3

4

5

---

entitled to the amount as compensation for loss of property, the question of our rendering an account for it to the Navy does not arise. It is also necessary to remember that the issue cannot be re-opened, irrespective of whether the actual cost of construction of the Ballard Pier extension is more or less than Rs. 139·66 lakhs or how long we may take to complete this work. The case will be treated as finally closed so far as the Navy is concerned when the balance of Rs. 19·66 lakhs due from them is received by us.

For the sake of information, however, it may be stated that although the physical work on the Ballard Pier extension is still to commence, preliminary work, such as, site investigation, preparation of designs, specifications and tender documents, invitation of tenders, etc. has been completed and the actual contract for the work has also been awarded. We have so far spent a little over Rs. 7 lakhs on the extension of the Ballard Pier. This expenditure has been met from our Capital funds which are made up of withdrawals from our various funds and Capital Receipts. The sum of Rs. 120 lakhs received from the Navy has been treated as a Capital Receipt and accounted for

---

---

**1****2****3****4****5**

---

accordingly. It is, therefore, not possible, under our existing accounting system, to say exactly how much has been expended from the payment made by the Navy, but as explained above, this question does not arise at all.

(ii) A copy of the Trustees' Resolution No. 200, dated the 13th March, 1962 is enclosed (Annexure).

(iii) The land under reference was vested in the Bombay Port Trust under the Act of 1873.

---

**Sd. NAGENDRA SINGH,**  
**Secretary to the Government of India.**



## OBSERVATIONS BY AUDIT

It has been stated in the draft note that the original intention was that in exchange for the trustees' assets at Ballard Bunder and Ballard Pier the Navy should extend the present pier and hand it over to the Port Trust. The position is explained below:—

According to the "Summary of Agreement" between the Government of India and the Bombay Port Trust (entered into in 1954) reproduced in paragraph 3 of the Joint Report of the Consulting Engineers to the Government of India & the Consulting Engineers of the Bombay Port Trust.

"the Government would hand over to Bombay Port Trust free of cost an area on the extended Ballard Pier equal to the area taken over by Government" (Sub-para 8) / and that for this purpose "the Government would extend the Ballard Pier by 750 feet including filling of the area to be handed over to the Bombay Port Trust..... subject to payment by Bombay Port Trust of the cost of filling the area to be handed over to them in excess of their entitlement....." (sub-para 2). It was subsequently agreed during 1959 at the instance of the Bombay Port Trust that the work could be carried out by the Bombay Port Trust themselves, subject to reimbursement by Government. The assessment of the sum of money payable by Government to the Bombay Port Trust in respect of the items of work to be executed by the Bombay Port Trust was one of the terms of reference of the Joint Committee of Consulting Engineers which was set up in November, 1961. This amount was assessed at Rs. 139.66 lakhs there was no agreement at any time a lump sum compensation was to be paid to the Bombay Port Trust immediately irrespective of when the work was to be executed by the Bombay Port Trust.

- (ii) It has also been stated that the Bombay Port Trust became entitled to the full compensation immediately the assets were transferred to the Navy some ten years ago. The compensation that Government were required to give in lieu of the land obtained by them was in the form of land from the extended Ballard Pier and it would have been equitable to make the payment to the Bombay Port Trust in instalments as and when required for the construction of the work of extension of the Pier.

**ANNEXURE**  
**BOMBAY PORT TRUST**

**SECRETARY'S OFFICE**  
**BALLARD ROAD.**

Excerpt from the proceedings of a Meeting of the Trustees of the Port of Bombay, held on the 13th March, 1962.

**6. Ballard Pier Extension.**

Extract from the proceedings of a meeting of the Finance & General Committee held on the 6th March, 1962.

**PRESENT**

1. Shri A. L. Dias—*Chairman.*
2. Shri S. K. Venkatachalam.
3. Shri S. R. Kulkarni.

T.R. No. 813 of 1961 approving the Chairman's proposals that (a) discussions on the Ballard Pier Extension Scheme be held in London between the Port Trust Consulting Engineers and Agents and those of the Defence Department, with a view to arriving at an agreement on the technical aspects of the work; and (b) the lump sum to be paid by Government to the Port Trust in discharge of their obligations, be worked out; and directing that the matter be brought up again before the Board thereafter.

Letter from the Port Trust Consulting Engineers & Agents, No. BPT/503/DPB dated 21st February, 1962, as follows:—

We have pleasure in enclosing herewith two copies of the joint report which we have prepared in collaboration with Sir Alexander Gibb & Partners concerning the financial liability of the Govt. of India in fulfilling the 1954 Agreement.

From this you will see that we have made a joint recommendation that the sum of Rs. 139.66 lakhs should be paid by the Govt. of India to the Trustees of the Port of Bombay in order to discharge their liability to construct an extension to Ballard Pier.

(Letter ends.)

The Chairman explained that at a meeting held on the 3rd instant, he and Rear Admiral Mukerjee, Director General of the Naval

Dockyard Expansion Scheme, had agreed that the rates and quantities which formed the basis of the Consultants' figures were generally acceptable and that the conclusions in paragraph 18 of the Joint Report of the Consultants should be accepted by Government and the Trustees.

The Committee agreed with the Chairman and recommended that the conclusions set out in paragraph 18 of the Joint Report of M/s. Alexander Gibb & Partners, Consulting Engineers to the Government of India, and M/s. Bertlin and Wilton and Bell, Consulting Engineers to the Bombay Port Trust, should be accepted, subject to the sanction of Government.

**RESOLUTION NO. 200.**—The Committee's recommendation is approved, subject to the sanction of Government.

**TRUE EXCERPT.**

**E. H. SIMOES,**

*Secretary.*

## APPENDIX II

### MINISTRY OF DEFENCE

*Para 12, Audit Report (DS) 1964—Appointment of a Sub-Committee*

#### QUESTION No. 1

What were the different types of aircraft which were considered before a selection was made in favour of Avro 748 in July 59? How did those aircraft compare with Avro 748 as regards their cost, operational efficiency, payload etc?

#### QUESTION No. 2

When agreement was entered into with a foreign company in July 1959 for the indigenous manufacture of a transport aircraft the Company had not produced that aircraft and only designed that aircraft. What were the main considerations which led the Defence authorities to select this aircraft which had actually not been produced in preference to the aircraft available in the market at that time?

#### ANSWER TO QUESTIONS No. 1 & 2

A committee was appointed by Government on 9th June, 1959 to consider the technical, financial and other aspects of the proposals regarding the manufacture of transport aircraft (as replacement of the Dekota aircraft for both the Indian Air Force and the Indian Airlines Corporation) including the offers for Fokker Friendship, Avro 748 and other suitable offers already made by any other firm. The Committee consisted of:

The Chief of Air Staff	} <i>Chairman.</i>
Additional Secretary, Ministry of Defence	
Scientific Adviser to the Minister of Defence	} <i>Members.</i>
Additional Financial Adviser, Ministry of Finance (Defence).	
AOC-in-C, Training Command.	
AOC-in-C, Maintenance Command.	
General Manager, Indian Airlines Corporation.	
Director-General of Civil Aviation	

2. The following aircraft were considered by the Committee in addition to Avro-748:—

<i>Name of Aircraft</i>	<i>Name of Manufacturers</i>
(a) Dart Herald	Handley Page (U.K).
(b) Fokker Friendship	Fokker Company, Holland.
(c) C. L. 459	Lockheed Aircraft Co. USA.

3. A comparison of cost, operational efficiency, payload etc., as available at that time, is given in Appendix 'A'.\*

4. *Dart Herald* was evaluated by the IAF in April 1959 and ruled as unsuitable on operational considerations, namely poor manoeuvrability and asymmetric qualities. IAC also did not consider it suitable, because the operating costs were slightly higher and it was fitted with a Dart engine different from the Viscounts (which was a plane already with the IAC).

5. CL. 459 was still in its design stage and necessary information regarding price, licence fee, royalty and other details including guaranteed performance figures were not immediately available. The proposal was not comprehensive and the manufacturers wanted further time to submit a comprehensive proposal. This would have delayed the finalisation of the proposal.

6. *Fokker Friendship* was in production and in use in certain countries including the USA. The performance of this aircraft was acceptable to the IAC.

7. *Avro-748* aircraft was in prototype stage.

8. The Director-General of Civil Aviation, who was a member of the committee, expressed the view that if Lockheeds would come in with a minimum production programme of only 30 commercial aircraft, which is IAC's estimated current requirement, he would recommend the acceptance of Lockheeds offer in preference to others. He added that the firm had "incomparable resources" and could be depended upon to produce a successful aircraft. He also advised that even if the cost of the Lockheed aircraft was higher, the increase can be set off as an insurance against making a costly mistake and delays. His final view was that if the Lockheed's offer could not be considered "for political or other consideration", the offer of Fokker to manufacture the Friendship in India be accepted in preference to that of Hawker-Siddeley Aviation Ltd.

9. Considering the requirements of the Indian Air Force, the other members of the Committee agreed that the Lockheed proposal was not comprehensive and, therefore, that choice should be restricted to the *Avro-748* and the *Fokker Friendship*. Also, taking into consideration, the divergence of opinion between the civil aviation authorities and the airforce authorities, the Committee concluded that the manufacture of the aircraft to replace the *Dakota* should for the time being be confined only to the Airforce requirements. The following considerations weighed in favour of the selection of *Avro-748*:—

---

\*Not printed

(a) The cost of Friendship and Avro-748 ex-works quoted by the respective manufacturers was as follows:

(i) Fokker Friendship .. Rs. 30,00,000

(ii) Avro-748 .. Rs. 24,00,000

(b) Avro-748 was considered easier to manufacture because of its revitted structure. The Fokker Friendship used the more complex Red x Bonding system.

(c) The Licence fee and royalty in the case of the Avro-748 were more favourable being less by £ 350,000 on the basis of a manufacturing programme for 100 aircraft.

(d) Hawker-Siddeley-Aviation undertook to design and develop a rear loading military transport aircraft for us. In this connection, it may be mentioned that the bulk of the requirements of the Air Force was for the military freighter version with rear-loading facilities.

(e) The cost of jigs and tools of Avro-748 was estimated to be less by Rs. 62 lakhs.

10. In an overall assessment of the relative merits of these two aircraft, the considerations set out in paras 3 to 7 and 9 above justify the Avro-748 being preferred to the Fokker Friendship. The Avro-748 was no doubt in prototype stage but provision was made in the agreement for the necessary guarantees regarding the performance of the Avro-748 aircraft. Moreover, it was considered beneficial for Indian technicians to be associated in the stages of construction of the prototype, its testing, development and associated problems.

**APPENDIX III**  
**MINISTRY OF DEFENCE**  
**COST COMPARISON**

*Explanation of the Variation of Price—Avro 748 Aircraft Basic*

Items	Original Avro 748 Series I Aircraft as in 1959	Present Avro 748	Series II Aircraft
	On the basis of 100 aircraft	On the basis of 100 aircraft	On the basis of 44 aircraft
Aircraft empty weight . . . . .	19,680 lbs.		23,791 lbs.
Engines . . . . .	2×RDA 6		2×RDA 7
Equivalent ShP Drg. . . . .	1,600		1,900
Max A.U.W. . . . .	33,000 lbs.		43,500 lbs.
Coating	On the basis of 100 aircraft	On the basis of 100 aircraft	On the basis of 44 aircraft
Labour manhours . . . . .	1,20,000	1,60,000	1,89,000
Labour rate including overheads per manhour . . . . .	Rs. 4·00	Rs. 5·00	Rs. 5·00
Labour cost including overheads . . . . .	Rs. 4·80	Rs. 8·00 lakhs	Rs. 9·45 lakhs.
Fixed charges (Licence, technical assistance, tooling preliminary expenses) . . . . .	Rs. 1·57 lakhs	Rs. 2·13 lakhs	Rs. 4·85 lakhs.
Bought out parts . . . . .	Rs. 13·33 lakhs.	Rs. 20·00 lakhs	Rs. 21·86 lakhs.
Less Radio+auto pilot included . . . . .	Rs. 1·53		
<b>TOTAL . . . . .</b>	<b>Rs. 21·23</b>	<b>Rs. 30·13 lakhs</b>	<b>Rs. 36·16 lakhs.</b>

On a like to like basis the cost of a basic Avro 748 Series II aircraft is higher than the estimated cost of a Series I aircraft in 1959 by 9.7 lakhs. This difference is made up of the following constituents :—

- |   |                 |
|---|-----------------|
| (a) Engine price differential per pair including a price pre due to indigenous purchase of Rs. 50,000 per engine. . . . .   | Rs. 2.6 lakhs.  |
| (b) Cost increase due to improved parts. . . . .  | Rs. .66 lakhs.  |
| (c) Cost increase due to extra materials. . . . .   | Rs. .30 lakhs.  |
| (d) Price escalation since 1959 . . . . .   | Rs. 3.11 lakhs. |
| (e) Labour increase 20,000 manhours due to increased wt./size, increased refinements in detail design over those assumed prior to aircraft having been designed . . . . . | Rs. 1.00 lakhs. |
| (f) Labour rate increment of Rs. 1.00 per manhour due to DA, C.C.A and wage increases and rise in the cost of indirect materials etc. . . . .                             | Rs. 1.40 lakhs. |
| (g) Increased tooling cost due to more complex tooling, increased labour content and rate and material costs . . . . .  | Rs. 0.49 lakhs. |
| (h) Preliminary expenditure not allowed for . . . . .   | Rs. 0.13 lakhs. |

---

Rs. 9.69 lakhs=Rs. 9.7 lakhs.

---

The price ex UK quoted for an Avro 748 series I basic aircraft in 1959 was £ 179.500

The present ex works Avro 748 Series II basic aircraft is £ 240,000.

---



## APPENDIX IV

### *Milk Tinned—Condition on Receipt*

Sl. No.	Name of vessel	Total quantity due (No of cases)	Quantity actually surveyed in Marine	General remarks regarding the conditions of the packages as observed at the Marine Survey
1	2	3	4	5
1.	Gandhi Jayanti . . . . .	18,294	2,088	Cartons badly torn and contents scattered.
2.	Jagvijaya . . . . .	26,706	812	Several cartons found badly torn and contents loose.
3.	Transyork . . . . .	43,081	Nil.	Consignment badly damaged. Marine survey was not held due to delay in clearance.
4.	Steel Fabricator . . . . .	18,293	Nil.	Consignment discharged in badly damaged condition.
5.	Flying Enterprise . . . . .	30,304	Nil	Large quantity badly damaged. Marine survey was not held due to delay in clearance.

6. Krishna Jayanti	15,000	164	Carton torn and damaged. Contents of most cartons exposed.
7. Jaglaxmi	10,000	170	Cartons badly torn. Contents loose and damaged.
8. Alcoa Partner	15,247	695	Cartons crushed, torn and stained by milk and/or water. Contents loose, dirty, rusty and holed.
9. Ashoka Jayanti	25,000	Nil	Survey not held. Cartons badly damaged and contents loose.
10. Jaladharti	38,701	1,986	Cartons badly torn. Contents loose, and badly damaged.
11. Green Dale	43,189	1,349	Cartons found torn. Tins loose, badly dented, crushed stained, leaking and blown.
12. Steel Chemist	23,504	2,351	Cartons torn, crushed. Tins dented, seems started leaking.
13. Jag Shanti	25,000	183	Cartons torn, contents loose. Tins dented soiled with dirt, contents leaking.
14. Green Island	39,998	3,698	Cartons torn and/or crushed. Cans cut, holed or empty.
15. Flying Fish	37,521	2,150	Cartons badly torn, tins loose, dented and outwardly rusty.
16. Exemplar]	8,160	240	Cartons torn, dented and stained with own contents. Contents exposed partly, lying loose in the Shed.

1	2	3	4	5
17.	Steel Age	39,966	1,386	Cartons torn and/or crushed. Cans dented, cut holed or empty.
18.	Laxmi Jayanti	50,000	465	Cartons torn and contents stained dented, crushed seems started.
19.	Vishwamaya	80,000	1,110	Cartons torn and are crushed. Cans dented, cut holed or empty.
20.	Steel Scientist	39,972	2,000	Cartons torn and contents lying loose.
21.	State of Punjab	40,000	2,879	Cartons torn. Tins loose, badly dented, rusted and seems started.
22.	Exchequer	39,989	749	Cartons dented or torn. Contents missing or dented.
23.	Jalaratna-Usha	4,997	43	Cartons badly torn. Contents lying loose, cut and empty.
24.	State of Uttar Pradesh	48,000	1,099	Cartons dented torn. Contents loose and damaged.
25.	Exemplar	17,984	194	Cartons badly dented and soiled by dirt, cut open and empty.
26.	Jaladuta	22,776	64	Cartons broken. Tins dented, dirty, cut open and empty.

## APPENDIX V

### Summary of main Conclusions/Recommendations

Sl. No.	Para No. of Report	Ministry/Deptt. Concerned	Conclusion/Recommendation
1	2	3	4
1	1	Defence Transport	<p>(i) The Committee feel that had the extension of the Ballard Pier been carried out by the Government as had been originally demanded by the Port Trust, it would not have been necessary to incur the expenditure in one lot before the commencement of the work itself; the expenditure would have been spread over the period of the actual execution of the work. It is difficult to appreciate how the position underwent a change merely because the B.P. T. agreed subsequently to execute the job at the cost of Government. The Committee, therefore, are not wholly convinced about the justification of the lump sum payment in this case.</p> <p>(ii) The Committee feel concerned over the inordinate delay in entering into a formal agreement by the Ministry of Defence with the Bombay Port Trust for the transfer of the land. A substantial portion of the payment for the construction of an alternative landing place was made to the Port Trust more than 3 years back (March, 1962). The Committee feel that the settlement of the dispute with the Maharashtra Government regarding their title to the land at the foundation has taken unduly long time, pending which a formal agreement with the Bombay Port Trust for the transfer of the land could not be entered into.</p>

(iii) In reply to a question whether there was any agreement between the B.P.T. and the Maharashtra Government regarding the ownership of this land. The Ministry of Transport has stated as under:—

“The land under reference was vested in the Bombay Port Trust under the Act of 1873.”

If that is so, the Committee are unable to appreciate how the claim of the Maharashtra Government comes in. The Committee desire that the issue may be settled expeditiously with the Maharashtra Government so that a legally valid agreement transferring the rights in the land to the Central Government, may be entered into. The Committee also recommend that the final payment should be made only after the execution of the transfer documents. 88

Defence

The Committee are surprised that the question of formal extension of the date for obtaining the certificate of air-worthiness was first considered by Government as late as four months after the expiry of the date stipulated in the Agreement and that the firm did not even apply for such extension until after the actual date on which the certificate was obtained.

-do-

The Committee note with deep regret the plea of “lack of sufficient experience and knowledge” offered as one of the reasons for heavy shortfall in production. The Committee are not convinced by the arguments offered for not consulting the collaborators at the

time of drawing up the first and the revised production schedule. They find no justification for the failure of the officers in charge of the project to avail themselves of the expertise of the foreign collaborators in this respect.

Whatever be the reasons, the Committee are distressed to note the heavy shortfall in production against the targets initially fixed and subsequently revised.

The Committee also consider it unfortunate that such an important decision as drawing up a production schedule for a new and important project should have been left entirely to one individual who was in charge of the project.

4

6

-do-

(i) The Committee feel that the period of training given to these officers was inadequate, as it does not seem possible that proper training could be imparted to them during such a short period. The Committee are surprised that the Ministry did not keep themselves informed as to whether there had been proper and full utilisation of the facilities for training in different directions which had been secured under the Agreement e.g., in regard to designs, development and manufacturing methods in the works of the collaborators and their subsidiaries.

68

(ii) The Committee observe that the explanation given by the Special Secretary is hardly consistent with the statement that lack of experience and shortage of technical personnel were among the main reasons for the poor achievement in manufacture.

(iii) While the Committee appreciate the difficulty pointed out by the Defence Secretary in retaining the trained personnel in the project for a longer period, they cannot help observing that the withdrawal of these personnel, while the project was still in its infancy was not in the best interest of the project. The Committee feel that only such personnel should have been selected for the training abroad, as could have been retained in the project for a period of some years after the training even if recruitment had to be made from outside the Air Force to some extent.

5

7

Defence

The Committee observed from a note furnished by the Ministry in April, 1965 that these specialists worked with our technicians on the floor guiding their efforts, correcting their faults and advising them on each of the problems that arose. The pattern of training (according to the Ministry) was such that no records for training were maintained in writing. The Committee suggest that the Ministry should consider whether the fact that for a period of nearly 4 years there has been only a question of assembling the parts imported as assemblies/sub-assemblies has reduced the utility of the foreign specialists maintained in this country or has extended unduly the period of their stay in India.

8

6

8

—Do—

The Committee are of the view that while economy and foreign exchange are important considerations even in defence requirement,

the same cannot supersede more vital considerations viz., operational efficiency and urgency of I.A.F. requirements. Taking into consideration the fact that Avro 748, Series I & II aircraft did not come up to the specifications or expectations, and the fact that the need of the army and the airforce is for an aircraft with specific characteristics, the Committee suggest that the question of suitability of Caribou Mk II for I.A.F. requirements may also be processed simultaneously, so that in the event of Avro 748MF being found unsuitable no time will be lost in exploring an alternative aircraft.

7        9        Defence

It is clear that late supply of components was one of the factors which also delayed production programme. The Committee would like to be informed about the action, if any, taken to realise liquidated damages from the collaborators.

8        10       -Do-

The Committee regret to note that no detailed and concrete plan was chalked out for progressive increase of indigenous contents in the aircraft. The Committee note from the above details that it was really from the 17th Aircraft onwards that import of detail parts will give place to indigenous manufacture from raw materials.

9        11       -Do-

Since all the components were imported and only assembled here in India, the Committee were unable to understand how the labour and overheads etc. for second aircraft came to about Rs. 30 lakhs. This is exorbitant and needs examination.

10       12       -Do-

The Committee feel that it would be premature to accept the contention of the Ministry that the cost of manufacture of Avro



was not unreasonable, till the firm orders for at least 44 aircraft are received, and detailed cost worked out.

11      13      Defence

(i) The Committee feel that to this extent, the agreement was defective. They also feel that as a result of the package agreement with the collaborators, the reduction in licence fee secured by Government was not adequate compensation for the disadvantages suffered under items (a), (b) and (c) of para 13 of this Report.

(ii) The Committee also understand that there was some difference of opinion between the collaborators and Govt. about the interpretation of the agreement. The collaborators were of the view that their obligations in respect of the 748-M were limited to providing such designs and other documentation as A.V. Roe might prepare in the course of its business. According to Govt., it was the obligation of the collaborators "to get a certificate under the Air Registration Board in U.K. stating that this aircraft with the modifications would be so designed and given to us to meet the airworthiness standard."

The Committee consider it unfortunate that such ambiguities should have crept in the agreement on such an important point and trust that Ministry who may enter into negotiations for collaboration agreements in future will keep in view the need for avoiding such ambiguity.

12      14      -Do-

In contrast to the speed with which the decision of the Defence Committee of the Cabinet taken on 9th June was pursued and crystallised into an agreement on the 7th July, 1959, the Committee are distressed to note that the expenditure sanction for the workshop and other civil works was issued only in June, 1961, in spite of the fact that this project had been conceived as a high priority project of national importance.

13      15      -Do-

The Committee found from the statement furnished to them by the Ministry of Defence in April, 1965 that 8 items of work (including those reported by the CTE) were rectified by the contractor at his own cost while an expenditure of about Rs. 15,200 was incurred by Govt. in rectifying certain defects which have been stated by the Ministry as 'non-contractual responsibility'.

The Committee consider it unfortunate that such defects should have crept in the execution of civil works for a project of national importance. The Government of India should have a proper procedure for investigating and determining whether there has been any failure of responsibility or supervision in all cases where such defects came to notice.

14      16      -Do-

The Committee feel that this problem of defection of trained staff requires to be tackled realistically by rationalising and improving the pay scales/service conditions of the technical personnel, commensurate with their experience, training and prospects.

---

1	2	3	4
15	17	Defence	<p>The Committee regret to note that the production schedule has lagged so much behind that the engines procured for the aircraft have remained unutilised for the entire warranty period. They are sorry to note that it did not occur to any of the authorities to ask for the extension of warranty period before its expiry. They hope that such lapses would be avoided in future.</p>
16	18	-Do-	<p>The Committee would like to be informed about the results achieved by the special committee appointed to settle the outstanding audit objections and the action taken with regard to the serious lapses.</p>
17	19	-Do-	<p>The Committee hope that the delegation of authority to the Company will not be only in theory, but also in actual practice and that its performance will be judged only on the basis of results produced.</p>
18	20	-Do-	<p>The Project for manufacturing transport aircraft was conceived in 1959 as a high priority project and national importance was given to it. From the facts placed before them, the Committee regret to observe that the whole project was badly planned and inefficiently executed resulting in a crop of failures and delays in achieving the objective. The committee are of the view that the chequered history of this important project should serve as an object lesson to the Government that a policy decision to set up such an important project involving huge financial outlay and deployment</p>

of technical personnel of which there is continued shortage in the country, should be taken only after a very careful and complete assessment of the various problems involved.

The following unsatisfactory features noticed by the Committee speak for themselves:

- 19            21            -Do-
- (a) When the agreement with Messrs Hawker Siddeley Aviation Ltd. was signed in July, 1959 Avro-748 was still in a prototype stage and its performance was not proved.
  - (b) No project report for the manufacture of the aircraft at Kanpur was prepared. As admitted by the special Secretary, most of the difficulties could have been resolved if a proper project report had been prepared. Not only was no project Report prepared but also many of the important decisions such as (i) drawing up of production schedule (without consultation with the collaborators) (ii) selection of technical personnel for training abroad and (iii) duration of such training etc. were left entirely at the discretion of one individual officer-in-charge of the project. The decision taken by him and the progress of the project as a whole was perhaps not reviewed at Government level from time to time.
  - (c) The manufacturing unit was set up as a regular unit of the Air Force and major portion of the resources
-

available at Kanpur were deployed to meet a very tight production schedule. At that time the repair units at Kanpur were already understaffed considerably and the repair work of aircraft required by Air Force was accumulating. Around the same time, a decision had been taken to increase the Air Force strength itself to build up which considerable technical staff was required apart from making up the previous shortages. In spite of this, experienced and trained staff was transferred from the repair and maintenance units to this manufacturing unit, which resulted in deterioration in the position regarding accumulation of repair work. The Committee have separately dealt with the accumulation of repairable aircraft in paras 23—31 of this Report.

- (d) The Licensor Company failed to obtain the British certificate of airworthiness by 31st July, 1961, the date provided in the agreement. The certificate was obtained on the 9th January, 1962.
- (e) The performance of both Avro Series I and Series II aircraft were short of the guarantees given by the Licensor. In some respect the performance of Series II is inferior to that guaranteed for Series I even.

(f) Both the original production schedule drawn up in July, 1959 and the revised production schedule drawn in September, 1962 proved to be grossly unrealistic. Only 4 aircraft were actually produced upto the end of the year 1964 as against the original production schedule of 51 aircraft and the revised production schedule of 21 aircraft. Surprisingly the officer responsible for drawing up the production schedules did not think it necessary to consult the collaborators. The fact that after the project was transferred under the management of a Company, it was considered necessary to consult the collaborators in drawing up a realistic production schedule indicates that it was all the more necessary to consult them in 1959 when the manufacturing unit had no experience about the aircraft. Even after their first failure the project authorities did not deem it necessary to consult the collaborator though under the agreement they were bound to give necessary guidance, which in fact they did when approached.

97

(g) The cost of manufacture of Avro-748 Series I was estimated at Rs. 21.23 lakhs on the basis of manufacture of 100 aircraft. On the same basis the estimated cost of Series II works out to Rs. 30.13 lakhs at present. In

view of the fact that the actual performance of Series II is almost equal to that guaranteed for Series I, Government would be spending an extra expenditure of about Rs. 9 lakhs approximately (Per plane) without advantage of improved performance. (It is significant to note here that the cost of manufacture of Fokker Friendship air-craft was estimated at Rs. 22.69 lakhs in 1959, against Rs. 21.23 lakhs for Avro 748).

From items (e), (f) & (g) it is clear that the advantages in performance, cost and production schedule which were considered in favour of selection of this aircraft have virtually disappeared. This also indicates that the entire project was conceived in hurry and executed without adequate planning. %

- (h) Although one of the most important considerations for starting various manufacturing schemes is progressive increase of indigenous content, in this case no plan was drawn up in advance for the manufacture of various components indigenously. The components to be manufactured indigenously were determined only at the time of placing the orders on the collaborators. At present the programme of indigenous content for the first sixteen Planes furnished by the Ministry shows

that the manufacture of detailed parts from raw materials has not started at all; it is expected to commence only from the 17th Aircraft onwards. The Committee desire that the Hindustan Aeronautics Ltd. should now draw up in consultation with collaborators a detailed plan for the manufacture of various components, raw materials from the 17th Plane onwards.

- (i) Only two batches of 36 technicians (officers, airmen and civilian) were sent to U.K. for training in August, 1959 and September, 1959. Strangely, the duration of the training lasted for less than a month only which in the opinion of the Sub-Committee was grossly inadequate. Further, although the project is still in its infancy, some trained personnel have been posted out of the Project. The Committee desire that Hindustan Aeronautics Ltd. should carefully examine the question of training more officers and staff in India or abroad and also draw up a plan for the replacement of the foreign technicians working in the factory.
- (j) There was inordinate delay (14 months) in sanctioning the civil works for the project and the further delay of 15 months in issuing the revised administrative approval. There were several defects in the construction of workshop buildings regarding drainage system,
-



flooring and sun rays entering the workshop, which should have been forseen.

- (k) Because of the set back in the production programme, 19 Rolls Royce engines procured during the period Dec., 1951 to June, 1962 were not utilised before the expiry of their warranty period. The Committee would like to know the outcome of the request made for extension of the warranty period.
- (l) Even after 5½ years of signing the agreement for manufacture of the aircraft, the question of uncertainty regarding continuance of its manufacture has not yet been settled. There was delay in manufacturing the prototype of Avro-748M (side-loading military freighter version). Therefore, the requirement for this aircraft was cancelled in November, 1962 as the Air Force could not afford to wait in the context of the Emergency. The prototype of Avro-748MF (rear-loading military freighter assault aircraft) is expected to be received in India in May, 1965, after which the trials would be held in the Indian conditions. The result of the trials of this aircraft by the Royal Air Force starting from August, 1965 are also to be awaited. The decision about the selection of this aircraft or other-

wise would be possible only by the end of this year. It is regrettable that uncertainty about the rear-loading military transport aircraft continues although at the time of entering into the agreement the bulk of the requirement of the Air Force was for this type of aircraft. The Committee would like to know the outcome of the trials of the prototype.

(m) Government have been able to get a reduction of £150,000 only in licence fee partly because of shortfall in the respective performance guarantees of Series I and II aircraft.

(n) There were as many as 1600 objections in the maintenance of cost accounts by the AMD. There was also inordinate delay in handing over the work of maintenance of accounts to the Defence Accounts Department. The Committee would like to know about the progress made in settlement of the audit objections and the action taken against the officers concerned.

101

September, 1966 onwards a target of one aircraft per month would be achieved provided sufficient orders were placed. The present order of 27 aircraft was not considered adequate. It would be a pity if this progress is again thwarted for lack of orders. The Committee understand that an order of 15 aircraft was expected from the Indian Airlines Corporation who have been delivered one aircraft for trials. They desire that in case the aircraft is found suitable for the requirements of Indian Airlines Corporation, their requirements should be met from the Hindustan Aeronautics Ltd. Any other factors including minor price differences should not be allowed to stand in the way, because meeting the requirements from HAL would *inter alia* mean substantial saving in foreign exchange. The Committee also desire that with the transfer of manufacturing unit under the management of a company, its working should be thoroughly reviewed and necessary action taken to effect improvements and avoid failures that occurred in the past. The Committee note that the Executive Director for production of Hawker Siddeley Aviation Ltd. reported in July, 1964 on the working of the Kanpur factory. They hope that necessary action will be taken on this report. They would like to be informed in due course about the action taken on the recommendations of the Executive Director.

The Committee feel deeply concerned at the magnitude of aircraft awaiting repairs with the Air Force. The total number of aircraft for repair including those waiting to be surveyed etc. comes to 379. This figure the Committee consider very high.

25 -Do-

The Committee regret to note that the capacity sanctioned in 1961 for repair of 138 Vampires per year bore no relation to the actual production. This led to the somewhat anomalous situation viz. that on one hand a large number of Vampires were lying for repairs, and on the other, the Ministry had to purchase second-hand Vampires from other countries because of the limited repair capacity at the Base Repair Depot. It is a matter of serious concern that because of accumulation of repairable aircraft, strength of units was depleted.

23 26 -Do-

The Committee regret to note that although the shortages in manpower have existed in BRD since 1958, no effective steps were taken to make up deficiencies. (In this connection, the Committee were informed that on the partition of the country, while the I.A.F. inherited a number of flying formations, no maintenance unit fell to our lot because all those were located in West Pakistan. Hence since partition, the Aircraft Repair Depot set up at Kanpur on 15th August, 1947 was the only repair depot available to IAF). It is also regrettable that the percentage of actual strength to sanctioned establishment was 45% during the year 1963, when the repair work had accumulated in large dimensions. It is not clear why the manpower actually decreased in BRD in 1963 instead of increasing. This point requires further looking into by the Defence Ministry.

The Committee also note that some staff were transferred from the B.R.D. and RMD and other Air Force Units to the Aircraft Manufacturing Depot, Kanpur which was established in 1960 under

the Maintenance Command of the Air Force. Besides, in a few cases, Air Force personnel belonging to other units worked at AMD without being officially attached to that unit. This was possible because all the three Air Force units (BRD, RMD and AMD) were in the same station and under the same AOC in C, Maintenance Command. The Committee regret to point out that on the one hand the repair work was falling into arrears, and on the other hand experienced technical staff was withdrawn from the BRD and RMD and other Air Force units for the AMD, resulting in further deterioration of the repair capacity.

24

27

Defence

The Committee find it difficult to accept this explanation. In view of the fact that during the years 1957-58 to 1960-61, 90% of the amount asked for spares was allocated, the shortage of spares cannot be attributed to lack of foreign exchange during these years.

25

28

-Do-

The Committee cannot but express their great surprise and regret at this lack of planning in the past in regard to the system of maintenance planning.

26

29

-Do-

The Committee are surprised that in the past there was no scientific system for recording consumption data of spares during overhaul. The provision of spares was therefore not free from inaccuracies. The result was that unwanted spares were accumulated and on the other hand the necessary spares were short provisioned

or some of them not provisioned at all. In this connection, the Committee understand that in the case of one particular type of aircraft the value of spares and supporting ground equipment ordered over a period of six years exceeds 160% of the initial cost of the aircraft. Considering that the average utilisation for each aircraft comes to less than 200 hours a year, amount of spares purchased seems to be excessive.

While the Committee appreciate that no perfect system can be devised to avoid some accumulation or unexpected shortage, what the Committee fail to understand is why even the necessary records of consumption etc., were not maintained. The Committee are, however, glad to be assured that the Air Force have started maintaining consumption data of spares for aircraft production from April, 1964.

105

27            30            Defence

In view of the serious difficulties experienced in the past in regard to the provisioning of spares for the aircraft, the Committee hope that continued and serious attention will be bestowed on the various recommendations made by the Lal Committee, for improving the system of provisioning and procurement of stores.

28            31            -do-

The Committee feel concerned over the shortfall in the tasks allotted to the Base Repair Depot during the years 1961 to 1964. What is more the tasks carried out were not in proportion to the actual strength available in the Depot. During the year 1962, although the effective manning was 62% in important trades, the

---

1

2

3

4

production represented only 46.1% of the target. Similarly the tasks carried out in 1963-64 were not in proportion to the actual manning for important trades. The Committee are, however, glad to note a distinct improvement in the actual manning position *vis-a-vis* the sanctioned establishment on 30-9-1964 as compared to the position on 31-12-63. The Committee hope that this good trend will continue and that the system of quarterly review introduced by the Air H. Q. will produce results.

29

32

Defence

The Committee regret that there have been considerable delays in setting up survey boards to recommend whether repairable aircraft should be categorised beyond economical repairs for disposal action.

The Committee desire that the repairable equipment should be periodically inspected and those which are beyond economical repairs should be disposed of or cannibilised in time to provide spare parts for other aircraft which might be needing such spares.

30

33

-do-

The Committee are glad to note that the Ministry are taking internal steps to reorganise the existing repairs depots on a more rational and scientific basis with a view to facilitate better production. The Committee desire that the work regarding assessment of repairable aircraft and other equipment as well as re-organisation of the repair depots should be completed expeditiously.

106

- 31            34            -do-            The Committee desire that the functions of No. 2 B.R.D., Maharajpur should be carefully chalked out and its requirements of manpower and machinery properly planned.
- 32            35            -do-            The Committee are glad to learn that the policy of introducing the principle of standardisation of aircraft has been accepted and the same has been incorporated in the India Defence Plan.
- 33            36            -do-            The Committee feel concerned over the inordinate delay in this case in sorting out repairable items which have been accumulating in the Repair and Maintenance Depot since 1950. Out of 1.53 lakhs numbers of items accumulated upto 31st December, 1962, only about 75,000 items in all have been surveyed so far, out of which 33,000 items are not required. According to Ministry's own admission some loss might have occurred due to non-repair for long time of some repairable items. The Committee regret that on the one hand the Air Force were short of aviation items, on the other hand some components, which might be of current use, were allowed to lie unattended in a disorganised manner.

As a considerable part of the items relate to the aircraft which have already been withdrawn from service, these items should have been surveyed simultaneously with the withdrawal of the respective aircraft and action taken to dispose of such of them as were not required. The Committee desire that an enquiry should be made to find out why action to sort out these items was not taken earlier. The Committee hope that the remaining items would be surveyed more vigorously and action taken to dispose of those

---



not required. The Committee also desire that a system should be introduced under which when a plane is withdrawn from service, its spares etc. should be simultaneously disposed of if not required for any other current aircraft.

34

37

Defence

The Sub-Committee were informed during their visit to the Depot that the total number of repairable items accumulated at the Depot was about 3 lakhs upto December, 1963, against the figure of 1.53 lakhs on 31-12-62 as mentioned in the audit para. The Committee would like the Ministry of Defence to have these figures carefully checked up and properly reconciled. If number of repairable items has increased so abruptly from 1.53 lakhs to 3 lakhs during the course of one year, then the position requires special attention to sort out these items and arrange for their repairs/disposal.

35

38

-do-

The Committee feel concerned over the persistent and heavy shortfalls in the tasks allotted to the Repair and Maintenance Depot, resulting in a large accumulation of repairable items, some of them dating from 1950. They are surprised to learn that the tasks allotted to the R.M.D. in the past bore no relation to its establishment or capacity to undertake those tasks, resulting in considerably reduced output. The Committee, therefore, cannot undertand the purpose of assigning such tasks. They cannot escape the conclusion that the R.M.D. suffered from neglect in the past. They have been assured that the technical committee referred to in para 33—would be look-

ing into this problem. The Committee hope that in future, the task allotted to R.M.D. will be properly co-related to the expected arisings, actual establishment and the available capacity. Their observations regarding introduction of a scientific system for manning made in respect of BRD also apply in this case.

#### GENERAL

36

39

#### Defence

To sum up, the unsatisfactory features in both these cases are as under:—

- (a) There is a very number of aircraft requiring repair lying with the Air Force.
- (b) The main reasons for accumulation of repairable aircraft was stated as inadequacy of manpower and shortage of spares. The inadequacy of manpower has been attributed to the sudden expansion of the Air Force. The Committee note with concern that despite the opening of an Air Force Technical Training School in May, 1960 with training capacity of 1000 technicians per year, the shortages in manpower in the Base Repair Depot and Repair & Maintenance Depot have continued. The Sub-Committee were assured that the problem of shortage of technical staff would be solved by the year 1967 and in some trades by 1969 when the training quota was completed. The Committee desire that serious attention should be paid by the Defence Ministry to this problem which is confronting

the various repair units and the workshops of the Air Force. They hope that the manning of the new repair depots including No. 2 and 3 B. R. Ds will be planned on a scientific basis.

- (c) The Committee note that because of the actual manning of the Base Repair being considerably short of the sanctioned establishment, the tasks allotted were not fulfilled. Furthermore, the actual work done by the staff available was also not in proportion to the strength. For instance, during the year 1962, although the percentage of manning to the establishment for important trades was 62, the actual production represented only 46% of the target. The Committee, therefore, feel that there is a need for evolving some scientific system to determine the requirements of manpower. They were given to understand that a system has been introduced from 1964 where by a review for every three months would be made to determine how exactly the work done compared with the manpower and the resources available. The Committee desire that the matter should be kept under constant watch to ensure that these reviews were effective.
- (d) With regard to the spares, the Committee were informed that there were a number of difficulties in their provisioning; e.g., first difficulty of foreign exchange;

secondly, difficulty in obtaining spares for certain obsolete aircraft; thirdly, lack of scientific system of recording the consumption data of spares. The Lal Committee appointed in 1963 pointed out certain defects in the system of provisioning which were being remedied. The Committee regret to note that although the problem regarding provisioning of spares was not new to the Air Force, no effective steps were taken till 1963 to go into this matter in any detail. Even now the Ministry have not been able to devise a fool-proof system. According to the Defence Secretary's own admission on the one hand the Ministry had difficulty in getting foreign exchange for procurement of spares and on the other hand they utilised the foreign exchange made available to them for purchasing the spares which were not urgently required. The Committee hope that the system would be put on sound and scientific lines in the near future.

111

- (e) The Committee were informed during evidence that it was not proposed to build up more repair facilities for obsolescent aircraft as it would take nearly two to three years to build them in the right dimensions by which time most of these aircraft would have to go out of service. It was proposed to concentrate on the repair facilities for standardised aircraft. While the Committee appreciate this, they would like the Minis-
-

try to examine thoroughly whether without clearing the backlog of obsolescent aircraft held in repairable condition, they would be able to meet fully the requirements of the Air Force until newer aircraft were available.

- (f) There have been considerable delays in setting up survey Boards to recommend whether repairable aircraft should be categorised beyond economical repairs for disposal action.
- (g) There has been inordinate delay in sorting out repairable items some of which have been accumulated in the Repair & Maintenance Depot since 1950. It is obvious that items which were good and repairable in 1950 may have become obsolete and beyond economical repairs in 1965.
- (h) From the above facts, it is clear that both the Base Repair Depot and the Repair & Maintenance Depot have suffered from a certain amount of neglect in the past. The jobs done at these Depots have been persistently less than the tasks allotted year after year. One of the important reasons for those shortfalls and the consequent accumulation of work has been the chronic shortage of trained personnel. Yet, despite these diffi-

culties, according to Ministry's own admission "In view of the high priority allotted to the production of Avro-748 aircraft and the national importance given to the project, major portion of resources available at Kanpur (BRD and RMD) were deployed to meet a very tight production schedule." The wisdom of this step is not free from doubt, as it could not have been in the best interest of the I.A.F.

However, during their recent visit to these two Depots, the Sub-Committee were glad to discern a keen sense of awareness of the difficulties involved and a determination to tackle them boldly. The Committee have no doubt that with proper support from the H.Q. and a realistic policy in regard to the manning of technical personnel and provisioning of spares on scientific lines, these Depots will be able to play their role in keeping the Indian Air Force in proper trim, ready for any eventuality.

113

37

40

**Defence**

While on the subject of a repair and maintenance of aircraft, the Committee would like the Ministry of Defence to give their serious and sustained attention to the following suggestions:—

- (i) The number of types of aircraft in the I.A.F. should be reduced and standardised.
  - (ii) A Maintenance Planning Team should be set up well in advance before a new aircraft is brought into service so that it can chalk out a proper maintenance
-

plan instead of relying completely and mechanically on manufacturer's recommendations.

- (iii) Standing Planning and Provisioning Committee should be set up at each repair and overhaul depot to analyse the tasks given and prepare production plans for the future.
- (iv) The Committee understand that the unserviceability of most of the aircraft in the Air Force is because of shortage of inexpensive items. This factor should be carefully analysed and holdings of such items in field units should be liberalised.
- (v) Quick and effective action should be taken to weed out obsolete and surplus stores which are not required.
- (vi) Telephonic and telegraphic communications between Equipment Depots, Repairs Organisations/Overhaul Stores Depots, Forward Supply Depots, HQ Maintenance Command and Air Headquarters should be improved.
- (vii) The Committee were surprised to learn that under the extent transport regulations, movement of aviation stores had normally to be by goods train and by the wagon load. Following these regulations literally, units went on accumulating rotables for many months before despatch to the repair agencies. While this went on, some items might be down-graded to scrap,

some, cannibalised for spares, some might be damaged or deteriorated in storage under field conditions and the few that finally arrived at the repair agency might need much more work and spares than would be otherwise necessary. These out-dated transport regulations should be scrapped forthwith and fast rail and road transport, including civil carriers, should be used for this purpose.

A suitable scheme for setting up an air-courier service for movement of high value rotables and A.O.G. (Aircraft-on-Ground) stores should also be evolved.

(viii) The Committee understand that sometimes aircraft are grounded for lack of such small parts as bolts, nuts, rivets, stainless steel wire etc. In the absence of indigenous manufacture of relatively simple general purpose spares, I.A.F. is solely dependent on imported items. The Committee desire that early action should be initiated to establish indigenous manufacture of these items.

115

The Committee regret to note that even though the cable from Washington dated the 5th December, 1962 asked for specific instructions regarding packing and destination etc. the Defence Ministry did not consider it necessary to either send such instructions by cable or even to inform them that the instructions were following in a letter.

---



Not only this when the letter was actually sent on the 11th December, 1962, instead of sending it directly by airmail it was sent to the External Affairs Ministry for further transmission in the diplomatic bag which was going only once a week. What is more when it was known that the letter had not been able to catch the diplomatic mail on 11th and that the letter would not go until 18th, no steps were taken either to inform Washington by cable or to send a copy of that letter by air-mail to I.S.M., Washington. The Committee desire that this failure should be investigated and responsibility fixed.

39

43

Deptt. of Supply and  
Technical  
Development

In the first instance the Committee are surprised that I.S.M. Washington should be unaware of the A.S.C. specifications. Since tinned milk was not imported for our Defence Forces for the first time, these specifications should have been well known to our purchase mission abroad. Secondly what the Committee fail to understand is how on receipt of A.S.C. specifications from the Ministry of Defence, the I.S.M. Washington came to the conclusion that the U.S. (Federal) specifications were not inconsistent with the A.S.C. specification when there was a basic difference between them in as much as the A.S.C. specifications required the use of wooden cases. In the opinion of the Sub-Committee it was a clear failure on the part of I.S.M. Washington in not consulting the Ministry of Defence. who were the indentor, regarding deviation from the A.S.C. speci-

fication. The Committee note that the contracts with the suppliers were signed on the 23rd January, 1963, 27th February 1963 and 2nd May, 1963 after negotiations. It is not clear why at the time of these negotiations the exact specification i.e. A.S.C. specification required by Defence Ministry was not stipulated and revised quotation obtained.

While the Committee appreciate the I.S.M.'s anxiety to purchase the maximum possible quantity of milk to meet the emergent requirements of the Defence Services within the allotted amount, they feel that this cannot be given as justification for deviation from the A.S.C. specification without consulting the indenter, which resulted in heavy losses of milk.

The Committee note from the report of the Board of Officers that the tins used by the suppliers were not even those prescribed in the Federal Specification for overseas shipments. The tins when compared to A.S.C. specifications and the Federal Specifications for overseas shipments were of weaker plate; they were of rimless, vent-hole type which were unable to withstand high pressure, rough handling and extreme climatic conditions and prolonged outside storage. Another unsatisfactory feature was that in the case of one

---

1

2

3

4

---

contract, the specification of carton was further reduced from 275 lbs. to 200 lbs. bursting strength.

40

44

Defence

Deptt. of Supply  
and Tech. Dev-  
elopment.

The Committee regret to observe that there was lack of planning in shipping the consignments to India which resulted in the ships arriving in a bunch at Bombay during the monsoon season. The Committee desire that the Ministry should take necessary steps to ensure that shipping of the consignments of milk tinned is properly planned in future. The Committee note that there was delay in clearing the milk tinned from the port. They agree with the view of the Board of Officers that notwithstanding the weak tins and cartons the loss incurred would have been considerably less had not about 65% of the consignments been brought to Bombay during the monsoon, from June to September, 1963.

118

41

45

Defence

The Committee feel that the losses during transit from the port to the supply depots could have been minimised if the flimsy fibre cartons had been replaced by wooden cases before their despatch by rail. They regret to note that the authorities concerned were not wiser even after noticing damages to the fibre cartons during shipment and at the time of unloading at the port. The Committee are disturbed over the large scale damage during transportation from

the port to the supply depots (1866 tonnes valuing Rs. 28.74 lakhs). In view of the dimensions of this loss the Committee take a serious view of this lapse and recommend that responsibility for this must be located.

- |    |    |   |  |
|----|----|---|--|
| 42 | 46 | <u>Defence</u><br>Deptt. of Supply<br>& Tech. Development | The Committee suggest that the extract from the Docks Manager's Report may be suitably brought to the notice of the U.S. Department of Agriculture for such action as they may consider necessary in the matter.   |
| 43 | 47 | Defence   | The Committee desire that the question of provision of adequate covered accommodation in the various supply depots and improvement of the existing godowns should be given serious attention by the Ministry. The Committee feel that ultimately the expenditure on construction of covered accommodation and improvement of existing godowns would be more economical than incurring of recurring losses due to deterioration of food supplies and other perishable commodities for want of suitable covered accommodation. |
| 44 | 48 | <u>Defence</u><br>Deptt. of Supply<br>& Tech. Development | The Committee would like the Defence Ministry and the Ministry of Supply and Technical Development to examine this matter further in detail with a view to ascertain (a) whether it would have been possible for I.S.M. Washington to have the usual warranty clause incorporated in this deal and (b) if not, what is the remedy available to the Government against shipments of inferior quality goods.   |

1	2	3	4
45	59	<p style="text-align: center;">Defence</p> <hr/> Deptt. of Supply & Tech. Development.	<p>The Committee are surprised that inspite of the heavy loss (Rs. 48 lakhs), the matter has not yet been formally brought to the notice of suppliers through U.S. Deptt. of Agriculture, with a view to obtaining suitable compensation. They desire that this should at least be done now.</p> <p>The Committee understand that the contract with suppliers provided for the buyer having the right to make an additional and independent inspection of goods at his own expense, but it appears that this right was not exercised by the I.S.M. They depended only on the inspection certificates issued by the Inspectors of U.S. Deptt. of Agriculture.</p>
46	50	Deptt. of Supply & Tech. Development	<p>The Committee are perturbed over the heavy loss which occurred in this case due to flimsy tins and weak cartons used for packing of milk tinned supplied to India. The Committee are surprised to note the plea of the Department of Supply and Technical Development that on an overall basis against the total loss of Rs. 48.14 lakhs an expenditure of Rs. 78 lakhs in foreign exchange has been saved which would have been incurred had wooden packing cases been used for outer packing. The Committee are unable to accept this as a valid argument, which proceeds on the assumption that the loss of essential and urgent supplies valued at Rs. 48.14 lakhs did not matter at all. The Committee consider it most unfortunate that so much of supplies indented for the forward areas should have gone</p>

to waste. Moreover, the estimate of extra expenditure of Rs. 78 lakhs if wooden cases had been used instead of cartons needs a careful scrutiny by the Department of Supply and Technical Development. In the Committee's opinion there was a clear failure on the part of the I.S.M. Washington in dealing with this case, in several respects while deviating from the A.S.C. specifications in regard to packing conditions such as:

- (i) Failure to consult the indentor (the Ministry of Defence) before agreeing to a material deviation from A.S.C. specifications in regard to packing;
- (ii) failure to ask the suppliers to give fresh quotations, on receipt of A.S.C. specifications on the 28th December, 1962;
- (iii) apparent failure to insist that the tins used by the suppliers were in accordance with the Federal specification for overseas shipments (as indicated in the Report of the Board of Officers);
- (iv) agreeing to a further reduction in specification of carton from 275 lbs. to 200 lbs. bursting strength.

The Committee desire that the Ministry of Supply and Technical Development should inquire into these lapses, with a view to fixing responsibility. They should also examine why the right of additional and independent inspection as provided in the agreement was not exercised by I. S. M. Washington.

---

1	2	3	4
47	51	Defence	<p>The Committee also find that there were certain lapses on the part of the Ministry of Defence which should be taken due notice of:</p> <ul style="list-style-type: none"> <li>(a) the delay on the part of the Ministry of Defence in forwarding specifications of packing to the I.S.M. Washington;</li> <li>(b) the delay in clearing the stocks of milk tinned from the docks;</li> <li>(c) the delay in applying for marine surveys in respect of some consignments received in four ships; and</li> <li>(d) the failure to change the outer packing from fibre cartons to wooden cases before despatch from the port to the respective destinations which substantially accentuated the losses.</li> </ul>

