

HUNDRED AND FIFTY-FIRST REPORT

PUBLIC ACCOUNTS COMMITTEE (1982-83)

(SEVENTH LOK SABHA)

MANUFACTURE OF DEFECTIVE COMPONENTS FOR VEHICLES AND PROCUREMENT OF DEFECTIVE EQUIPMENT FROM ABROAD

**MINISTRY OF DEFENCE AND DEPARTMENT
OF DEFENCE PRODUCTION**



Presented in Lok Sabha on 29-4-1983

Laid in Rajya Sabha on 29-4-1983

**LOK SABHA SECRETARIAT
NEW DELHI**

April, 1983/Vaisakha, 1905 (S)

Price : Rs. 2.55

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

ANDHRA PRADESH

1. Andhra University General Co-operative Stores Ltd., Waltair (Visakhapatnam).

BIHAR

2. M/s. Crown Book Depot, Upper Bazar, Ranchi (Bihar).

GUJARAT

3. Vijay Stores, Station Road, Anand.

MADHYA PRADESH

4. Modern Book House, Shiv Vilas Palace, Indore City.

MAHARASHTRA

5. M/s. Sunderdas Gianchand, 601, Girgaum Road, near Princess Street, Bombay-2.
6. The International Book House Pvt., 9, Ash Lane, Mahatma Gandhi Road, Bombay-1.
7. The International Book Service, Deccan Gymkhana, Poona-4.
8. The Current Book House, Maruti Lane, Raghunath Dadaji Street, Bombay-1
9. M/s. Usha Book Depot, 585/A, Chira Bazar Khan House, Girgaum Road, Bombay-2.

10. M & J Services, Publishers, Representatives Accounts & Law Book Sellers, Bahri Road, Bombay-15.

11. Popular Book Depot, Dr. Bhadkamkar Road, Bombay-400001.

MYSORE

12. M/s. Peoples Book House, Opp. Jaganmohan Palace, Mysore-1

UTTAR PRADESH

13. Law Book Company, Sardar Patel Marg, Allahabad-1
14. Law Publishers, Sardar Patel Marg, P.B. No. 77, Allahabad—U.P.

WEST BENGAL

15. Granthaloka, 5/1, Ambica Mookherjee Road, Belgharia, 24-Pargans,
16. W. Newman & Company Ltd. 3, Old Court House Street, Calcutta.
17. Mrs. Manimala, Buys & Sells, 128, Bow Bazar Street, Calcutta-12.

DELHI

18. Jain Book Agency, Connaught Place, New Delhi.
19. M/s Sat Narain & Sons, 3141, Mohd. Ali Bazar, Mori Gate, Delhi.

CONTENTS

	PAGE
COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE	(iii)
INTRODUCTION	(v)
CHAPTER I — Manufacture of defective components for vehicles	1
CHAPTER II — Procurement of defective equipment from abroad	28
PART II	
*Minutes of the sittings of Public Accounts Committee (1982-83) held on :	
22-12-1981 (AN)	
21-12-1982 (AN)	
18-3-1983 (AN)	
26-4-1983 (AN)	
APPENDIX I — Statement showing the production programme, actual production achieved since 1959 to 1981	44
APPENDIX II — Statement of observations and recommendations.	45

PARLIAMENT LIBRARY
Central Govt. Publications
Acc. No. NC...616.87.(3)
Date...20...1...83...

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

**PUBLIC ACCOUNTS COMMITTEE
(1982-83)**

CHAIRMAN

Shri Satish Agarwal

MEMBERS

Lok Sabha

2. Shri Chitta Basu
3. Smt. Vidyavati Chaturvedi
4. Shri C.T. Dhandapani
5. Shri G.L. Dogra
6. Shri Bhiku Ram Jain
7. Shri K. Lakkappa
8. Shri Mahavir Prasad
9. Shri Sunil Maitra
10. Shri Dhanik Lal Mandal
11. Shri Jamilur Rahman
12. Shri Uttam Rathod
13. Shri Harish Rawat
14. Shri G. Narsimha Reddy
15. Shri Ram Singh Yadav

Rajya Sabha

16. Dr. Sankata Prasad
17. Smt. Pratibha Singh
18. Shri Syed Rehmat Ali
19. Shri B. Satyanarayan Reddy
20. Shri Kalyan Roy
21. Shri Nirmal Chatterjee
22. Shri A.P. Janardhanam

SECRETARIAT

1. Shri T.R. Krishnamachari—*Joint Secretary*
2. Shri K.C. Rastogi—*Chief Financial Committee Officer*
3. Shri K.K. Sharma—*Senior Financial Committee Officer*

INTRODUCTION

1, the Chairman of the Public Accounts Committee, as authorised by the Committee, do present on their behalf, this Hundred and Fifty-First Report on paragraphs 15 and 30 of the Reports of the Comptroller and Auditor General of India for the years 1980-81 and 1979-80, Union Government (Defence Services) regarding Manufacture of defective components for vehicles and procurement of defective equipment from abroad respectively.

2. The reports of the Comptroller and Auditor General of India for the years 1980-81 and 1979-80, Union Government (Defence Services) were laid on the Table of the House on 5 April 1982 and 28 April 1981 respectively. The Committee (1982-83) examined paragraph 15 on Manufacture of defective components for vehicles at their sitting held on 21 December 1982 whereas Audit paragraph 30 on Procurement of defective equipment from abroad, was examined by the Committee (1981-82) at their sitting held on 22 December 1981. The Committee considered and finalised the Report at their sittings held on 18 March 1983 and 26 April 1983. Minutes of these sittings of the Committee form Part II* of the Report.

3. In Chapter I of this Report, the Committee have expressed shock to note that against the installed capacity of factory 'B', as per Detailed Project Report, being 13,200 in a mix of 6,000 Shaktiman and 72,00 Nissan vehicles, the total production of the vehicles during 1970-71 to 1981-82 (12 years) has been 70,534 numbers only, and the maximum production achieved in any year was 8,576 vehicles in 1976-77. As a project to augment the capacities of the factory to 10,000 vehicles per annum has been sanctioned in January 1982 by provisioning of balancing plant and equipment and civil works at an estimated cost of Rs. 8.48 crores, the Committee has recommended that Government should look into the deficiencies and take necessary corrective measures so that the factory is able to achieve the production target envisaged.

The Committee have also expressed its concern to note that indigeneous furnaces were installed in 1971 without fully ensuring their suitability. After a technical appreciation of the problems in the factory, Factory 'B' intimated the Director General Ordnance Factories in January 1975 that the defects were due to defective equipment in the heat treatment plant, non-availability of lapping machines and inadequate inspection facilities in the factory.

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

(vi)

The Committee has, therefore, desired to know the remedial action taken to improve the performance of the heat treatment plant. Whereas the Committee are in favour of use of indigenous' machinery, they feel that quality of production particularly in a field like defence should have been ensured. The Committee have therefore desired to know how the defective furnaces were accepted, what action was taken against the firm for supplying defective furnaces and whether liquidated damages were recovered from the firm.

4. In Chapter II of this Report, the Committee have pointed out that for procuring six units of mobile communication equipment required for the Army on an urgent basis, the contract was concluded with a foreign firm in September, 1976. Although the equipment was scheduled for delivery within 10 to 12 months from the date of signing the contract, the equipment was actually delivered by the firm by March-May, 1978. The equipment on receipt was found to be defective and has not been repaired so far. The result is that the equipment which was purchased in 1978 by spending scarce foreign exchange to meet the urgent needs of defence services has not been put to use all these years. Observing that the entire deal has been handled by the concerned authorities in a very sordid manner and the entire delay has resulted in not only financial loss to the Government involving heavy amount of foreign exchange but also proved infructuous as the armed forces have been denied much needed facility for improved communication service. The Committee has therefore recommended that the various acts of omission and commission in respect of the deal should be thoroughly investigated by a high powered team of officials drawn from the Defence Ministry/Army Headquarters, enquiry completed expeditiously and responsibility fixed for lapses at various stages.

5. A statement containing conclusions and recommendations of the Committee is appended to this Report (Appendix II). For facility of reference these have been printed in thick type in the body of the Report.

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

7. The Committee would also like to express their thanks to the officers of the Ministry of Defence and Department of Defence Production for the cooperation extended by them in giving information to the Committee.

NEW DELHI;

April 28, 1983

Vaisakha 8, 1905 (S)

SATISH AGARWAL

Chairman

Public Accounts Committee

REPORT

CHAPTER I

MANUFACTURE OF DEFECTIVE COMPONENTS FOR VEHICLES

Audit Para

1.1 In paragraph 12 of the Audit Report (Defence Services) for 1978-79 rejections of axle assembly and brake assembly (cost : Rs. 50.81 lakhs) of Shaktiman vehicles manufactured in factories 'A', 'C' and 'D' for fitment to the vehicles in factory 'B' were mentioned. Losses (Rs. 22.30 lakhs) due to rejections of transmission assemblies (consisting of gear boxes and transfer cases) for Shaktiman and Nissan vehicles and road springs for the latter are mentioned below :

1.2 A. Transmission assemblies.—Shaktiman, Nissan 1-ton and Nissan Patrol vehicles had been in production since 1959, 1960 and 1962 respectively. Factory 'N' established the manufacture of transmission assemblies for Shaktiman and Nissan 1-ton vehicles during 1959-63 and 1970-73 respectively; factory 'B' established their manufacture during 1969 (Shaktiman), 1973 (Nissan 1-ton) and 1975 (Nissan Patrol).

1.3 Reports were received from the users (April 1974) that a large number of transfer cases and gear boxes manufactured at factories 'B' and 'N' and fitted to these vehicles were noisy and suffered from other defects, such as, hard shifting, gear slipping, etc. Simultaneously, these defects were noticed in inspection (April 1974) during road tests of the vehicles after assembly at factory 'B' and the assemblies were rejected for rectification; such rejections were stated (April 1974) to be about 30 per cent. The Director of Inspection (Vehicles) stated (November 1974) that the main reasons for heavy rejections were inadequate heat treatment of the components and bad manufacturing techniques at factory 'B'. He also said that the lapping of gears envisaged in the drawings was not being done. After a technical appreciation of the problem (in pursuance of a decision taken in November 1974), factory 'B' intimated (January 1975) the Director General, Ordnance Factories (DGOF) that the defects were due to defective equipment in the heat treatment shop, non-availability of lapping machines in the machine shop and inadequate inspection facilities in the factory. The

Ordnance Factory Board (OFB), however, stated (October 1980) that the lapping of gears was not being done by the foreign collaborators (firms 'X' and 'Y') in all kinds of transmission assemblies and gear boxes. It was also stated that during the initial years of production of the vehicles in the Ordnance Factories, the Inspectorate was not very critical about the standard of inspection, and that when a sizeable fleet of vehicles grew up with the Army, the inspection was tightened up to have quality products, which resulted in increased rejections of the assemblies.

1.4 Following the technical appreciation, factory 'B' proposed (January and February 1975) augmentation of the heat treatment capacity and other facilities in the factory at a cost of Rs. 202.49 lakhs. However, the DGOF considered (July 1975) that the requirement of additional plant and machinery could be decided upon only after a detailed study of the production process and inspection methods of the assemblies at the works of the collaborators. Accordingly, Government sanctioned the deputation of a technical team (June 1976) to the works of the collaborators for the purpose at an estimated cost of Rs. 0.80 lakh. The team visited the works of firms 'X' and 'Y' during June-August 1976 and based on its reports (November 1976), the DGOF put up a proposal (December 1976) for procurement of additional machinery and equipment for improving the quality of the transmission assemblies at factory 'B'. After protracted correspondence, Government sanctioned the procurement of additional machinery and equipment only in February 1980 at a cost of Rs. 292.85 lakhs including Rs. 125.81 lakhs in foreign exchange. The additional machinery and equipment were expected to be in position in the later half of 1982. The OFB stated (March 1981) that factory 'N' had also initiated action to provide additional plant and machinery (estimated cost : Rs. 74.66 lakhs) for the same purpose.

1.5 Meanwhile, rejections of the assemblies during road test at factory 'B' (before the vehicles were issued to the users) varied from 24 to 57, 39 to 47 and 35 to 51 per cent. for Shaktiman, Nissan 1-ton, and Nissan Patrol vehicles respectively during 1974 to 1979. Factory 'N' had incurred an expenditure of Rs. 10.89 lakhs during 1974-75 to 1979-80 on the repair of such rejected assemblies. Though factory 'B' intimated the Ministry of Defence and the DGOF (January 1976) that an expenditure of about Rs. 0.10 lakh per month as direct labour on the rectification of the defective assemblies was being incurred, the OFB stated (February 1981) that the actual expenditure at factory 'B' during 1975 to 1979 was Rs. 2.90 lakhs. As no separated records of the rectifications were kept at factory 'B', these statements were not susceptible of verification in audit. The expenditure incurred by the

users since 1974 on premature replacements and repairs of the assemblies fitted to the vehicles issued to them was not intimated to Audit (September 1981) though called for in July 1980.

1.6 While there were rejections of the assemblies produced in the ordnance factories, import of 420 sets of the assemblies for Nissan 1-ton vehicles (September 1974) and 3,110 sets for Nissan Patrol vehicles (1,660 during August 1974-December 1975 and 1,450 during February 1979-February 1980) at a total cost of Rs 112.66 lakhs (FOB) was arranged, though the production of the vehicles (ranging from 2,550 to 4,170 numbers for Nissan 1-ton and from 550 to 914 numbers for Nissan Patrol Per annum) was below the installed capacity (4,200 numbers for Nissan 1-ton and 3000 numbers for Nissan Patrol Vehicles per annum). The OFB stated (August 1981) that the imports were made based on requirements and indigenous availability of the assemblies.

1.7 B. Road springs.—Factory 'K' supplied about 6,704 sets and 5,578 sets of road springs (one set consisting of 2 numbers each of front and rear springs) for Nissan 1-ton and Nissan Patrol vehicles respectively to factory 'A' during 1961 to 1971 and about 227 sets of the former and 893 sets of the latter to factory 'B' during 1970 to 1974.

1.8 No complaint was received till December 1973 from the user factory regarding the quality of road springs supplied by factory 'K'. Factory 'A' had used all the road springs except 596 sets for Nissan Patrol vehicles which were transferred to factory 'B' after production of the vehicles was discontinued (1971-72) in factory 'A'. However, in January 1974, factory 'B' informed factory 'K' of rejections of the springs for Nissan Patrol vehicles in inspection at the stage of final passing of vehicles due to high camber. Later in June 1975 factory 'B' apprised the DGOF that their rectification was not possible. Apprehending that further supplies of road springs would be rejected by factory 'B', no further supplies were made by factory 'K' after 1974 and, therefore, factory 'B' suggested (August and October 1976) short closure of the pending orders on factory 'K' (506 sets of front springs and 511 sets of rear springs for Nissan 1-ton and about 311 sets of road springs for Nissan Patrol vehicles). A Board of Enquiry, set up by the DGOF (April 1973) to investigate the reasons for factory 'K' being not able to continue with the production, stated (June 1980) that factory 'K' was producing springs without proper facilities and that it had made considerable efforts to satisfy requirements of factory 'B' without success. The OFB stated (October and December 1980) that with the establishment of factory 'B', the inspection standard was tightened up to have quality products and this led to the rejections of some of the supplies of road springs from factory 'K'.

1.9 Out of the supplies of factory 'K' (1,489 sets for Nissan Patrol and 227 sets for Nissan 1-ton vehicles including the transferred quantity from factory 'A') 1,180 numbers of front spring and 1,286 numbers of rear spring (total cost : Rs. 5.91 lakhs) for Nissan Patrol vehicles were lying rejected at factory 'B' (November 1976); of these, 786 numbers of the former and 1,038 numbers of the latter (cost : Rs. 4.37 lakhs) were returned to factory 'K' in November 1976 and February 1977 and a part (628 numbers of front spring and 638 numbers of rear spring) of these returns was melted (March 1978) as scrap. The total loss due to rejections and short-closure of the pending orders at factory 'K' was Rs. 8.51 lakhs. The OFB stated (August 1981) that the overall financial repercussion was under computation.

1.10 Summing up—The following points emerge :

Due to defective transmission assemblies manufactured at factories 'B' and 'N' Rs. 13.79 lakhs had to be spent on their repairs during 1974-75 to 1979-80.

Procurement of additional machinery and equipment proposed in December 1976 by the DGOF for factory 'B' to overcome the defects in the assemblies was sanctioned by Government only in February 1980 (after protracted correspondence) at a cost of Rs. 292.85 lakhs; the machinery and equipment were expected to be received by end of 1982.

Due to rejection of assemblies produced in factories 'B' and 'N', imports valuing Rs. 112.66 lakhs had to be made (August 1974 February 1980).

The overall loss due to rejections of road springs and short-closure of orders on factory 'K' was Rs. 8.51 lakhs.

[Paragraph 15 of the Report of the Comptroller and Auditor General of India for the year 1980-81 Union Government (Defence Services)]

Transmission Assemblies

1.11 The Audit para points out that Shaktiman and Nissan Vehicles were initially being manufactured in factory 'A' in collaboration with M/s. MAN of West Germany and M/s. Nissan of Japan respectively, 1959. After factory 'B' was established in 1970, manufacture of these vehicles was discontinued at factory 'A' and factory 'B' commenced assembly of Nissan petrol, Nissan 1-ton and Shaktiman vehicles in June 1970. As Shaktiman & Nissan

vehicles were being produced in factory 'A' satisfactorily, the Committee desired to know as to why the Government discontinued the production thereof in that factory. The Ministry of Defence have stated in a note :

“On account of shrinkages in the requirements of Services for various types of armaments stores between 1951 and 1956, considerable idle capacities had existed in the Ordnance Factories. Government felt that maintenance of such large idle capacities in the Ordnance Factories was both uneconomic and undesirable, as apart from being a burden on the country's economy, it did not enable maintenance of skills/expertise acquired by the artisans. It was, therefore, felt that, with the idle capacities then available, progressive manufacture of about 1500 Shaktiman and about 4000 Nissan Vehicles could be undertaken annually in the various Ordnance Factories. Since the plant and machinery in the various Ordnance Factories had not been originally provided for the manufacture of trucks/vehicles, it was not possible to effect large scale movement of plant and machinery to facilitate Truck production in an organised and integrated manner at a single factory. The production of various components was undertaken in a number of factories. These Factories either individually or jointly contributed to the manufacture of components which were finally assembled at Factory 'A'. The production of Shaktiman vehicles started in 1959 after a Collaboration Agreement was concluded with M/s. MAN in September 1958. The manufacture of Nissan Vehicles started in 1961-62, after a separate Collaboration was concluded for these Vehicles with M/s. Nissan Motors, Japan. After 1962 conflict, the requirements of Army for armament stores increased manifold necessitating a review of the production of Trucks/vehicles in the then existing factories. With the raising of additional force levels and with the revision of discard policy, the demand of Army for vehicles also increased considerably. Since it was not possible to organise production of armament stores and vehicles for meeting higher requirements of Army in the then existing Factories, a decision was taken to set up a separate integrated factory for manufacture of vehicles. Government accordingly sanctioned a project in November 1965 at a cost (revised) of Rs. 46.84 crores.”

1.12 The Committee desired to know about the installed capacity of the factory for the production of various vehicles and if the capacity had actually been achieved. In reply, the Ministry of Defence (Deptt. of Defence Production) have stated in a note :

“The installed capacity of Factory ‘B’, as per detailed project Report, was 13200 vehicles in a mix of 6000 Shaktiman and 7200 Nissan vehicles. This capacity could not be achieved, as various assumptions made in Detailed Project Report did not come true. The actual achievable capacity, is only 8000 vehicles per annum.”

1.13 In this connection, the Secretary, Ministry of Defence (Deptt. of Defence Production) stated during evidence:

“...The capacity in Ordnance Factories has been a very complex matter which has been attempted over a number of years. Without much success, factory by factory it has been attempted. We are now going in for additional investment for achieving a target of 10,000 vehicles per annum.”

In a subsequent note the Department of Defence Production have stated:

“Government have sanctioned on 2 January, 1982 a project for augmentation of capacities at VFD from the present annual achievable capacity level of 8000 vehicles to 10,000 vehicles by provisioning of balancing plant and equipment and civil works at estimated cost of Rs. 8.48 crores. ...The project is expected to be completed by 1985-86.”

1.14 The Department of Defence Production have added :

“It may be mentioned that the programme for production of vehicles is fixed annually in consultation with the Army Hqrs. who are the main users. A statement showing the production programme, the actual production achieved, since 1959 to 1981-82 is *enclosed (for the years 1959-69, the production programme figures are not readily available). The total outstanding orders, for supply of Vehicle to Army as on 1.4.1982, are as under :

Shaktiman	—	22022
Nissan 1 ton	—	10677
Nissan Jonga	—	13286
		45985

According to the information supplied by Army Hqrs. the data regarding number of vehicles lying off road is as follows :

	S/MAN	NSW 1 Ton	NSN Jonga
(a) Number of Vehs lying offroad for want of Main shaft gear Box Primary shaft, Radiator Assy, Water Pump assy, T/Case, Gear Box, Transfer Case . .	76	10	8
(b) Number of vehs lying offroad due to engines	534	2581	187
	611	2591	195

1.15 Asked whether the collaboration with M/s. MAN of West Germany and M/s. Nissan of Japan materialised according to the agreements, the Ministry of Defence have stated :

“The Collaboration Agreements with M/s. MAN, West Germany and M/s. Nissan Motors, Japan, were for the transfer of technical know-how and supply of components etc. The above Collaboration materialised according to the Agreements. However, these Agreements were extended beyond the initial terms of 10 years, in order to assimilate fully the technology as well as to ensure limited product support in critical areas, pending indigenisation.”

1.16 The Audit para points out that reports were received from the users in April 1974 that a large number of transfer cases and gear boxes manufactured at factories ‘B’ and ‘N’ and fitted to these vehicles were noisy and suffered from other defects, such as hard shifting, gear slipping etc. Simultaneously, these defects were noticed in inspection (April 1974) during road tests of the vehicles after assembly at factory ‘B’ and the assemblies were rejected for rectification; such rejections were stated (April 1974) to be about 30 per cent. Asked as to how it was that no defect reports on transfer cases gear boxes were received from the users prior to 1974 particularly when these vehicles were in use since 1959-62, the Ministry of Defence have, in a written note, replied as under :

“Before 1974 there were occasional defect reports, from users. However, during 1974 these reports became noticeable in the background of the Army raising question of quality of vehicles manufactured at Factory ‘B’.”

1.17 In a subsequent note the Ministry have further stated :

“The users had reported occasional defects in transfer cases and gear boxes to the tune of 2.5% during 1971-73 in case of Shaktiman and 4.6% in the case of Nissan. However, the defect reports showed an increase in 1974.”

1.18 In reply to a question as to how it was ensured that there was no further deterioration in the quality of transmission assemblies and gear boxes manufactured in the factories, the Ministry of Defence have stated :

“The defects reported by the users after 1974 were analysed thoroughly. The following study Team/Committee were formed to investigate the matter and to recommend measures for improvement in the quality of production of not only transfer cases and gear boxes, but of the vehicles as whole :

- (i) A team of officers from Military College of Electronic and Mechanical Engineering, Secunderabad, was asked to investigate and submit their report.
- (ii) The gear boxes and transfer cases produced at Vehicle Factory Jabalpur, were sent to the Collaborators in West Germany and Japan for their expert opinion, and suggesting to improve the quality control.
- (iii) The quality control systems adopted in the automobiles manufactured in the country like TELCO Jamshedpur M/s. Ashok Leyland, Madras etc. were studied.
- (iv) Expert opinion of acknowledged Indian Metallurgical experts was obtained.

1.19 Based on the investigations carried out by the above teams and the recommendations made by them, a total quality control concept has been evolved at Vehicle Factory Jabalpur.

1.20 Asked whether there was any deterioration in quality due to indigenisation of the various parts and components or due to extension in activities, the Ministry of Defence have replied in a note :

“According to analysis made by the Director of Inspection (vehicles), there has not been any deterioration in quality either due to indigenisation or extension of activities of VFD. The fact that, out of a total population of about 50,000 vehicles, only 276 gear boxes and 371 transfer cases had failed prematurely since 1974, proves that the levels of quality in the production of these sub-assemblies were adequate.”

1.21 It has been stated in the audit para that the Director of Inspections (Vehicles) stated in November 1974 that the main reasons for heavy rejection were inadequate heat treatment of the components and bad manufacturing techniques at factory 'B'. He also stated that the lapping of gears envisaged in the drawings was not being done. After a technical appreciation of the problem (in pursuance of decision taken in November 1974), factory 'B' intimated (January 1975) the Director General, Ordnance Factories (DGOF) that the defects were due to defective equipment in the heat treatment shop, non-availability of lapping machines in the machine shop and inadequate inspection facilities in the factory.

The Committee desired to know the reasons for not providing adequate facilities for 'heat treatment' and lapping of gears in the factories. In reply, the Department of Defence Production have stated :

“Facilities for heat treatment were recommended by the Collaborators and provided in the factory. However, in place of certain imported furnaces recommended by the collaborators, indigenous furnaces were provided as manufacture of such furnaces had been taken up in the country mean-while. These indigenous furnaces did not give consistent performance. Lapping is not provided by the collaborators and this process is not being adopted in their production lines. The quality of the gears produced by them is consistently good and does not require lapping.”

1.22 When asked about the reasons for such heavy rejections, the Member, Ordnance Factory Board stated during evidence :

“All the vehicles have not been rejected. The vehicles are never rejected on that basis. If they are found to be noisy or having the other defects that have been mentioned, they are sent back to the assembly section, re-worked and then put back to the vehicles, and the vehicles get passed. This is a normal feature. About how much of this can be reduced in actual practice, we are attempting to reduce this considerably.

In the initial stages we had certain difficulties. Even now we have some difficulties. about heat treatment of the gears. We are using a particular type of furnace which is not giving consistent results. We have to change the furnace to get consistent results in the heat treatment of gears. Once this is done, the incidence of rework will be reduced. It will not be completely eliminated, but it will be reduced. The total amount that has been spent, including 1981-82, in both factories is Rs. 17.27 lakhs only. It forms only 0.39 per cent of the total value of the sub-assemblies which have been manufactured. This is just a fraction of the total investment that has been made.’

1.23 In reply to a question whether the Government had purchased and planned all the equipments needed for the factories in consultation with the collaborators, the witness stated :

“It was done in collaboration with them. They had recommended certain furnaces. But when we went for purchase, we found that some of these furnaces were being manufactured in India. But in actual practice we found that these furnaces were not giving consistent results because the hardness varied; there was inconsistency in hardness and also in the manufacture of the gears themselves. Some of the gear are ground and some are shaved. If the shaving is not accurate, when we match them, these hard spots give noise. For removing the hard spots, they recommend lapping.”

1.24 Asked who had recommended lapping, he replied :

“MAN. In the contract itself it is mentioned that wherever there are hard spots, there should be lapping. But lapping brings some other problems. They say that lapping should be avoided as far as possible. That is why we have mentioned that the ordnance factories did not favour lapping operations.

1.25 Enquired whether lapping was not an operation of the medieval ages, he deposed :

“It is honing operation. Only honing is done. That machine, we did not have. We are going to get it now. These furnaces were produced indigenously. These have design limitations. We had to go in for steel quench furnaces. They had to be imported.”

1.26 To a question whether the collaborators had recommended import of these furnaces, the witness replied in affirmative. Asked whether the Government was bound to accept their advice, the witness stated :

“In the meantime we found that these furnaces were being made in the country. We wanted to give them a trial.”

1.27 When the Committee desired to know whether it was done in consultation with the collaborators and with their approval, he stated :

“I would not say ‘approval’. They recommended the type of furnace to be used. But since these furnaces were available in the country, we went for those.”

1.28 The Member, Ordnance Board had deposed during evidence that “these furnaces were purchased from reputed manufacturers like the G.E.C.” Asked about the standard of efficiency of these furnances, he stated:

“These furnaces we wanted to import at that time, but we could not get clearance from the DGTD; we had to use the indigenous furnace. You asked a pertinent question whether we got the approval of the collaborator for procurement of that equipment. There was no individual approval for each equipment. The general plan was in consultation with them and they gave the approval for carborising furnace.”

1.29 In a subsequent note, the Ministry of Defence have clarified the position as under :

“In the detailed project report for setting up Vehicle Factory Jabalpur, it was envisaged that the furnaces would be imported. However, due to availability of indigenous furnaces in the country, the DGTD did not clear the import proposal and advised that the furnaces from M/s. Therelek furnaces should be considered. The furnaces available with this Company were evaluated but were found to be not meeting the requirements. Subsequently in Dec. 67, DGTD advised that M/s. AEI (GEC) and couple of other firms should be approached as these firms were the leading manufacturers of furnaces and had experience of supplying Gas Carborising furnances to the specifications required. After technical consideration of the various offers, it was decided to purchase the furnaces from M/s. AEI (GEC).”

1.30 The following are the details of these furnaces :

Type	Make	Cost	Nos.
PGC	GEC	Rs. 1,62,157 each	4
PGC	GEC	Rs. 1,62,305 each	2

“These have been commissioned in 1971.”

1.31 As the factory was started in 1969 it was only in 1974 that some defects were reported by the users the Committee desired to know as to why it was only after 5 years of installation of these furnaces, the Government felt the need for importing these furnaces. The Ministry have stated ;

“The furnaces supplied by M/s GEC were commissioned in 1971. After commissioning, it was found that the furnaces were not giving the output as per the prescribed qualitative level. The defects were analysed and it was found that these were mainly due to inconsistency in the performance of the furnaces in as much as the levels of heat treatment were not uniform, resulting in distortion of the components, which required rectification/rework.”

1.32 The Audit para points out that the Ordnance Factory Board stated in October 1980 that during the initial years of production of the vehicles in the Ordnance Factories, the Inspectorate was not very critical about the standard of inspection, and that when a sizeable fleet of vehicles grew up with the Army, the inspection was tightened up to have quality products, which resulted in increased rejections of the assemblies. Asked whether it was brought to the notice of the users that the assemblies were being rejected only due to raising the standard of inspection by the Army and considerable expenditure was being incurred to suit their stricter inspection standard, the Ministry of Defence have stated :

“There was no rejection of gear boxes/transfer cases due to raising the standard of inspection. The deficiencies in these sub-assemblies during manufacture/inspection were rectified by reworking/recycling.”

The inspection criteria are laid down by the Director General of Inspection on behalf of Army. The Army Hqrs lay down the General Staff Qualitative Requirement (GSQR). It may be mentioned that the cost of rework of gear boxes/transfer cases vis-a-vis the cost of manufacture of these sub-assemblies, during the period 1974-75 to 1981-82, was only Rs. 17.34 lakhs

against a total value of production of these assemblies of Rs. 4481.38 lakhs, giving a percentage of only 0.392 per cent for rework."

1.33 The Committee enquired about the expenditure incurred by the user since 1974 on premature replacement and repairs of the assemblies fitted to the vehicles issued to them. In reply, the Deptt. of Defence Production have stated in a note ;

"Army Headquarters have intimated that, out of a total fleet of about 57,000 vehicles, only 276 Gear Boxes and 371 Transfer Cases had failed prematurely since 1974 and were repaired by various Workshops of the Army Hqrs. There are a large number of components in each of the assemblies mentioned above for example, there are 141 items in the Gear Box and 175 items in the Transfer case of Shaktiman Vehicle. It has been stated by the Army Hqrs. that it is seldom that the complete gear box or transfer case would have become defective and would require total replacement and only the components or minor assemblies are replaced or repaired. Army Headquarters have further stated that, since the differents Workshops would not be holding, at present, documents, such as job cards etc. for such replacement during the period 1974-80, it may not be possible to compute the expenditure incurred on these replacements.

However since the number of gear boxes and transfer cases which had failed prematurely is only marginal, the expenditure incurred on replacement etc. will not be high.

1.34 In a subsequent note, the Department of Defence Production have furnished the details of rejections of gear box/transfer cases as under :

"Regarding rejections by the users, the following data regarding the performance of gear box and transfer case assemblies in respect of Vehicles after inductions into service (based on the year of manufacture Jan-Dec.) for the last 5 years is given below :

Assemblies	Year of manufacture	1978	1979	1980	1981	1982
SHAKTIMAN GEAR BOX	Production of vehicles	2682	1552	3077	3466	2525
	Vehicle affected Percentage	15 0.55	9 0.57	16 0.51	22 0.63	7 0.27

- DEFECTS :** (i) Main shaft worn out (low hardness Incorrect heat treatment)
(ii) Gear Lever broken (incorrect of machining/grinding)
(iii) Breakage of Gear Teeth (Improper heat treatment more case depth and more carbide)
(iv) Failure of Primary shaft bearing (Improper alignment)

Assemblies	Year of manufacture	1978	1979	1980	1981	1982
SHAKTIMAN TRANSFER CASE	Production of Vehicles	2682	1552	3077	3466	2625
	Vehicles affected	2	4	2	8	—
	Percentage	0.07	0.26	0.06	0.23	—

- DEFECTS :** (i) Failure of Transfer Case Planetary gear (insufficient clearance, distortion during heat treatment).
(ii) Bearing failure (failure of lubrication)
(iii) Intermediate shaft gear teeth broken (improper heat treatment)

NISSAN CARRIER GEAR BOX & TRANSFER CASE	Production of Vehicles	2666	2302	2879	2971	2989
	Vehicles affected	3	1	6	1	—
	Percentage	0.11	0.04	0.20	0.03	—

- DEFECTS** (i) Gear Box noisy (incorrect profile and backlash due to heat treatment)
(ii) Gear slippage (defective synchroniser and improper tightening of screws)
(iii) Main shaft jammed (blockage of oil passage)
(iv) Main shaft worn out (Improper alignment)

NISSAN PATROL GEAR BOX & TRANSFER CASE	Production of Vehicles	573	496	676	965	1090
	Vehicles affected	5	3	3	6	—
	Percentage	0.87	0.60	0.44	0.62	—

- DEFECTS** (i) **Gear damaged (Improper heat treatment high hardness)**
- (ii) **Counter shaft bearing damaged (Misalignment, Lubrication failure)**

“The defective parts are replaced or re-worked and there is no final rejection of the sub-assemblies in question.”

1.35 Asked about the total amount spent on buying the components of various vehicles from trade and from foreign countries as a result of defective manufacturing or otherwise, the Department of Defence Production have stated :

“No purchase of components from trade or from foreign countries as a result of defective manufacturing, has been made by the Factory. ‘B’

All components of gear boxes/transfer cases in respect of the 3 vehicles being produced at Factory, ‘B’ are being manufactured indigenously. However, certain components in small quantities are being imported for gear box transfer case for Nissan Vehicles, to supplement the indigenous production in order to meet the higher requirements of Army for these vehicles.”

1.36 It has been stated in Audit paragraph that rejections of the assemblies during road tests at factory ‘B’ (before the vehicles were issued to the users) varied from 24 to 57, 39 to 47 and 35 to 51 per cent for Shaktiman, Nissan 1-ton, and Nissan Patrol vehicles respectively during 1974 to 1979. Factory ‘N’ had incurred an expenditure of Rs. 10.89 lakhs during 1974-75 to 1979-80 on the repair of such rejected assemblies. In this connection, the Secretary, Defence Production stated during evidence as under :

“Our capacity of the three vehicles factories put together is around 8000 vehicles per year. The para refers to re-work of certain rejections over a number of years. The total cost of re-work in the books of account is about Rs. 10 lakhs. In terms of value of production to which it relates, it would be a fraction. The re-work is a normal incident of manufactures. It is possible that some items get picked up during stage-inspection but some items which have to match together and when we put a load test, those items may not be okayed, as, in the case, gear box and transfer case. Possibly, you cannot get a final

O.K. on the test bed. You have to put on the load test, driving vehicles to see noise level etc., and during this time, some items may come back.

There is our own inspection. It is not the user's inspection. It is also not an internal inspection. It is an independent inspection agency which also belongs to the Department of Defence Production but totally independent of the factory. Therefore, these vehicles when they come back, they may come back for rectification of the items. It is these figures, we are talking about. The cost of re-work may be a fraction, may be a few rupees on each occasion. That is not a frightening figure."

1.37 In this connection the Member, Ordnance Factory Board stated :
"They come back for a certain rectification. Afterwards they are put up for inspection again."

1.38 About the final inspection of vehicle, Director of Inspection (Vehicles) in the Ministry of Defence stated before the Committee :

"Final inspection is done after the vehicle has been fully assembled. After that also vehicles may need some minor problems and so they are returned for rectification. In these cases, we do have some problems such as transfer case as also gear box. You mentioned about Nissan springs. These were rejected before they were actually assembled on the vehicles. That really did not form part of the vehicle. We had problems, about Nissan Jhunga springs, gear box, transfer case etc. Noise and slippage were there. So, these had to be returned. In certain cases, marginal cases, certain components had to be re-assembled and that is where they have given the total cost of rectification as Rs. 10 lakhs".

In this connection he added :

"Even if we buy vehicles from the trade, no vehicle till this day has been accepted on first tendering. Even the vehicles that we take from Tatas are returned two, three or four times before they are finally cleared."

1.39 In reply to a question as to what was the percentage of rejection at the time of inspection, the Secretary, Defence Production stated :

"The authorised rejection level is 0.2 per cent and the actual average from 1979 to 1982 comes to 0.03 per cent. We are

talking about 10.8 lakh expenditure on re-work. This relates to a total number of 39,754 vehicles produced during that period of the total value of Rs. 57 crores."

1.40 The attention of the witness was drawn to the total rejection of 57 percent mentioned in the Audit para and therefore the Committee desired to know whether the inspection was very liberal at part levels, he stated:

"There are very many critical items. The only proper test would be to test the vehicles on the road."

1.41 To a question whether the Army could not test the critical items separately without the vehicles, the Director of Inspection stated :

"Every vehicle has 2,000 components. You can multiply $3 \times 2,000$ That gives you a sizeable number. Regarding the problem of assembly, the meeting of each component tolerance will be plus and minus and somewhere they cancel each other. When they get added up, they give you real problem. That is why on assembled vehicle, percentage of rejection is higher than the case of individual components. You have to test the alignment. Even a slight variation somewhere can cause you a major problem. In gears, if there is a slight high spot somewhere it is bound to give you trouble till it wears out. Slippage will be there if the synchronising rings are not properly fitted up. Individual components may be within the tolerance-limit specified but if tolerances get added, it can cause serious problem."

1.42 The Audit para points out that factory 'B', on the recommendations of the Technical Team, proposed in January and February 1975 augmentation of the heat treatment capacity and other facilities in the factory at a cost of Rs. 202.49 lakhs. However, the DGOF considered in July 1975 that the requirement of additional plant and machinery could be decided upon only after a detailed study of the production process and inspection methods of the assemblies at the works of the collaborators. Accordingly, Government sanctioned the deputation of a technical team in June 1976 to the works of the collaborators for the purpose at an estimated cost of Rs. 0.80 lakh. The team visited the work of firm 'X' and 'Y' during June-August 1976 and based on its reports of November, 1976, the DGOF put up a proposal in December 1976 for procurement of additional machinery and equipment for improving the awaiting of transmission assemblies at factory 'B'. After protracted correspondence, Government sanctioned the procurement of additional machinery and equipment only in February 1980

at a cost of Rs. 292.85 lakhs including Rs. 125.81 lakhs in foreign exchange. The additional machinery and equipment were expected to be in position in the later half of 1982. The OFB stated in March 1981 that factory 'N' had also initiated action to provide additional plant and machinery at an estimated cost of Rs. 74.66 lakhs for the same purpose.

1.43 Asked about the deficiencies found by the Technical Team, the Ministry of Defence have stated :

“The technical team after a study of the processes involved found that

- (a) the quality of the forgings used for the gear & blanks was rather poor and the turned blanks did not conform to the required dimensional tolerances.
- (b) the indigenous furnaces used in the heat treatment of the finished gears had basic design limitation which resulted in inconsistent quality and distortion.

As a result of these findings, the team identified certain areas where certain changes/additional inputs were needed. These included provision of correct type of furnaces, and stricter quality control of the half-wroughts and blanks used in the manufacture of the gears.”

1.44 The Committee enquired as to how such deficiencies occurred particularly when these gear boxes were being produced in collaboration with firms 'X' and 'Y'. In reply, the Ministry of Defence have stated in a note :

“The Collaboration Agreements did not stipulate the detailed specifications of the plant and machinery required to set up production facilities. The production of gear boxes/transfer case in Factory 'B' was being done strictly in accordance with the design parameters laid down by the Collaborators. Certain deficiencies occurred during the production process, which were rectified after rework.”

1.45 Asked about the reasons for taking over 3 years in accepting the DGOF's proposal of December 1976 for procurement of additional machinery and equipment for factory 'B', the Ministry of Defence have stated :

“The proposal of DGOF for procurement of additional plant and machinery in this case was received by Government in July 1977. After examination of the proposal, DGOF was requested to furnish information/clarification on the following points :

- (a) to confirm whether the collaborators were using the plant and equipment now proposed for factory ‘B’.
- (b) whether the plant and machinery proposed was versatile and suitable for manufacture of the transmission assemblies/gear boxes for futuristic vehicles.
- (c) review the scope of the project since only a sum of Rs. 90 lakhs had been provided for it.

After DGOF had furnished the clarifications on the above points, and additional funds were allocated for this project, it was finally sanctioned by Government in January, 1980.”

1.46 In a further note, the Ministry of Defence have stated :

“When the proposal was received in the Department of Defence Production in July, 1977, it was pointed out during scrutiny that a sum of Rs. 90 lakhs only was available for this project against an estimate of Rs. 3.35 crores made by DGOF. A number of questions were raised regarding the justifications for the number of machines required for this project, taking into account the existing number of machines provided for in the project were also examined and settled. The project could be sanctioned in January 1980 after requisite funds for this project were made available in the Defence Plan.”

1.47 The latest position (as given by the Ministry of Defence in December, 1982), in regard to procurement and receipt of the machines and equipment for factories ‘B’ and ‘N’ is as under :

“Factory ‘B’

Total No. of additional machines	—25+1	Set (3 items of material handling Equipment).
Under purchase/Process	—14+1	material handling equipment
Orders placed/awaiting receipt	—10+1	-do-
Received/commissioned	—1 +1	-do-
Expected date of commissioning the last machine	—3/84	

Factory 'N'

No. of machines required	—3
Received and commissioned	—2
Awaiting receipt	—1
Expected date of receipt	—12/82"

1.48 The Audit paragraph points out that while there were rejections of the assemblies produce in the ordnance factories, import of 420 sets of the assemblies for Nissan 1-ton vehicles in September 1974 and 3,110 sets for Nissan Patrol vehicles (1,660 during August 1974-December 1975 and 1,450 during February 1979-February 1980) at a total cost of Rs. 112.66 lakhs (FOB) was arranged though the production of the vehicles (ranging from 2,550 to 4,170 numbers for Nissan 1-ton and from 550 to 914 numbers for Nissan Patrol per annum) was below the installed capacity of 4,200 numbers for Nissan 1-ton and 3,000 numbers for Nissan Patrol vehicles per annum. The OFB stated in August 1981 that imports were made based on requirements and indigenous availability of the assemblies.

1.49 Asked as to why the ordnance factories failed to meet the full requirement of transmission assemblies particularly when the production of vehicles was far below the installed capacity, the Department of Defence Production have stated :

“The requirements of Shaktiman Transmission Assemblies have been fully met indigenously by factory 'N' and factory 'B'. In the case of Nissan Carrier but for a one time assistance ex-import in the year 1974-75 the requirements of Nissan Carrier Transmission Assemblies have also been met fully from indigenous production by factories 'N' and 'B'. The importation of Nissan Carrier Transmission Assys. was done as a buffer stock to provide production cushion to cover any contingency of any trade failure in supplying adequate quantity of input stocks like forgings, casting etc.

The manufacture of Nissan Patrol Transmission Assys. was undertaken by factory 'B' for the first time and the production/development was undertaken after the establishment of Nissan Carrier Assys. as production lines of Nissan Carrier and Nissan Patrol are common. In order to supplement the indigenous production to meet the requirements, a certain quantity had to be imported and the imports of Transmission Assys. of Nissan Patrol have been gradually reduced over the period and finally stopped in the year 1980.”

1.50 As the Army had imported 3530 assemblies from Japan, the Committee enquired whether it was due to less productivity in factories or otherwise. The Director of Inspection stated during evidence :

“Nissan Jhonga gear boxes were taken because the manufacture was very late. The requirements were being met by imports only. They had marginal import of one tonne gear box which they wanted to retain as a cushion against any failure.”

1.51 Asked whether the Army was having buffer stock of these assemblies, the Secretary, Defence Production replied during evidence :

“420 was for buffer stock. Between 1974-75 to 1981-82, total production was 6173. 3277 was our own manufacture. 3110 was the import. The period of ordering is August 1974 to February 1980. August 1974, 1060; 30 September 1975, 360; 24 December 1975, 240; 7th February 1979 after a gap of 4 years, 1,000 sets. 26 February, 450. 3110 it comes to, over a period of 6 years.”

1.52 In reply to a question whether Factory ‘N’ would be in a position to meet full requirement of transmission Assemblies if the full capacity of Factory ‘B’ as envisaged was achieved, the Department of Defence Production have stated :

“While planning capacities at Factory, ‘B’ credit for production of 1200 Nos. per annum of Gear Box/Transfer case sub-assemblies at MTPF was taken. Machine Tool Prototype Factory, Ambarnath will thus continue to supply 1200 sub-assemblies as the capacities at VFJ do not cater for this.”

Road Springs

1.53 The Audit para points out that Factory ‘K’ supplied about 6,704 sets and 5,578 sets of road springs (one set consisting of 2 numbers each of front and rear springs) for Nissan 1-ton and Nissan Patrol vehicles respectively to factory ‘A’ during 1961 to 1971 and about 227 sets of the former and 893 sets of the latter to factory ‘B’ during 1970 to 1974.

1.54 No complaint was received till December 1973 from the user factories regarding the quality of road springs supplied by factory ‘K’. Factory ‘A’ had used all the road springs except 596 sets for Nissan patrol vehicles which were transferred to factory ‘B’ after production of the vehicles was discontinued (1971-72) in factory ‘A’. However, in January 1974 factory ‘B’ informed factory ‘K’ of rejections of the springs for Nissan Petrol vehicles

in inspection at the stage of final passing of vehicles due to high camber. Later in June 1975, factory 'B' apprised the DGOF that their rectification was not possible. Asked as to how suddenly defects in road springs came up from 1974 particularly when there was no complaints about the quality of these road springs till December 1973 although the same were being supplied by Factory 'K' since 1961, the Department of Defence production have stated that "the inspection standard were upgraded in 1974, resulting in certain defects in the springs produced in Factory 'K'."

1.55 The Committee enquired whether the road springs supplied prior to 1974 were of inferior quality. In reply, the Department of Defence Production have stated :

"There were no defect reports about springs till January 1974, since the springs were utilised for production after the middle of 1973."

1.56 In reply to a question as to what were the actual defects in the Road spring which could not be detected earlier, the Ministry have stated that the springs were found to have higher camber and shorter span.

1.57 The Department of Defence Production have added in this regard, in a note, as under :

"MSF started supplying Nissan Petrol Springs Factory 'B' from 1972 onwards, but these were utilised in production after middle of 1973, when bushes were received from trade, as Metal and Steel Factory did not supply bushes. *The inspection standard were not raised at any time."

1.58 The Audit para points out that in June 1975 factory 'B' apprised the DGOF that their rectification was not possible. Apprehending that further supplies of road springs would be rejected by factory 'B', no further supplies were made by factory 'K' after 1974 and, therefore factory 'B' suggested (August and October 1976) short-closure of the pending orders on factory 'K' (506 sets of front springs and 511 sets of rear springs for Nissan 1-ton and about 311 sets of road springs for Nissan Petrol vehicles). A Board of Enquiry, set up by the DGOF (April 1978) to investigate the reasons for factory 'K' being not able to continue with the production, stated (June 1980) that factory 'K' was producing springs without proper facilities and that it

*The Audit have stated that this statement is not correct.

had made considerable efforts to satisfy requirements of factory 'B' without success.

1.59 The Department of Defence Production have stated in this regard that Factory 'K' was manufacturing the springs by general engineering method. Special purpose machine tools were not available. There was no complaint till January 1974 by which time trade sources were in a position to meet the full requirement of Factory 'B'. Asked about the overall financial repercussion due to short-closure of orders on factory 'K' and rejection of its supplies, and whether the loss has been regularised the Department have stated :

“Financial repercussion for front and rear Nissan Springs rejected and for short-closure of the orders has been worked as Rs. 5.72 lakhs. The final value of loss to be regularised by the competent financial authority will be arrived at after the value of scrap recovered is known.

1.60 Since the manufacture of road springs at Factory 'K' has been stopped, the Committee desired to know as to how the requirements of Factory 'B' was being met. The Department of Defence Production have stated :

“The requirements of road springs are now being fully met ex-trade. Since factory 'K' stopped production in 1974, no price comparison is possible.”

1.61 The Committee note that the production of Shaktiman vehicles in the country started in 1959 after collaboration agreement was concluded with M/s. MAN in September 1958. Manufacture of Nissan vehicles started in 1961-62 after a separate collaboration was concluded for these vehicles with M/s. Nissan Motors, Japan. The production of various components of these vehicles was undertaken in a number of factories which individually or jointly contributed to the manufacture of components which were finally assembled at factory 'A'. After 1962 conflict, the requirement of Army in armaments stores increased manifold necessitating a review of production of armaments stores and vehicles for meeting increased requirements of army in the then existing factories. A decision was taken to set up a separate integrated factory for manufacture of vehicles. The Government accordingly sanctioned a project in November, 1965 at a cost of Rs. 46.84 crores for manufacture of Shaktiman, Nissan-1 ton and Nissan Patrol vehicles. The installed capacity of the factory 'B', as per Detailed Project Report, was 13200 in a mix of 6000 Shaktiman and 7200 Nissan vehicles. However, the

total production of the vehicles during 1970-71 to 1981-82 (12 years) has been 70534 numbers and the production in 1981-82 was only 7,970 vehicles (consisting of 3,670 Shaktiman vehicles, 3100 Nissan carrier and 1200 Nissan Petrol). A project to augment the capacities of the factory to 10,000 vehicles per annum has been sanctioned in January, 1982 by provisioning of balancing plant and equipment and civil works at an estimated cost of Rs. 8.48 crores.

1.62 The Committee are shocked that although the original installed capacity of the vehicle Factory was 13,200 the actual production in the factory has been much less. The maximum production achieved in any year was 8,576 vehicles in 1976-77. The factory has a huge outstanding demand of 45,985 from the army consisting of 22,022 Shaktiman, 10677 Nissan 1-ton and 13,286 Nissan Jonga vehicles. Clearly all is not well with the setting up of this factory and its operation. The Committee recommend that the Government should look into the deficiencies in this regard and take necessary corrective measures so that at least after the provisioning of balancing plant and equipment at an estimated cost of Rs. 8.48 crores, the factory is able to achieve the production target envisaged.

1.63 The Collaboration Agreements with M/s. MAN, West Germany and M/s. Nissan Motors, Japan were for the transfer of technical know-how and supply of components etc. The Committee note that Factory 'N' established the manufacture of transmission assemblies (consisting of gear boxes and transfer cases) for Shaktiman and Nissan 1-ton vehicles during 1959-63 and 1970-73 respectively and Factory 'B' established their manufacture for Shaktiman in 1969; for Nissan 1-ton in 1973 and Nissan patrol in 1975. Had the Government established only one factory for manufacturing the transmission assemblies, necessary expertises would have been developed and the factory could have enjoyed the benefit of economics of scale. The Committee would like to know the reasons for setting up facilities in two factories for production of transmission assemblies.

1.64 Though prior to 1974, reports regarding defects in the transmission assemblies were received from the users only occasionally, after 1973 report were received from the users that a large number of transfer cases and gear boxes manufactured at these factories and fitted to the vehicles were noisy and suffered from other defect such as hard shifting, gear slipping etc. Simultaneously, these defects were noticed in inspection in 1974 during road test of these vehicles after assembly at Factory 'B' and the assemblies were rejected for rectification. According to Audit the rejection of assemblies during road test at Factory 'B' varied from 24 to 57% for Shaktiman; 39 to 47% for Nissan 1-ton and 35 to 51% for Nissan petrol vehicles during 1974 to 1979. The Member, Ordnance Factory Board stated before the Committee

that the total amount that had been spent for rectification of these rejected assemblies in both these factories was Rs. 17.27 lakhs upto the year 1981-82 and it was only 0.39% of the total value of the sub-assemblies which had been manufactured. The fact however remains that the failure of the factories to manufacture these components to the requisite standard and quality has resulted not only in an infructuous expenditure of Rs. 17.27 lacs but has also resulted in the delay in the vehicles being put to use and considerable time had to be spent on rectification of these defects.

1.65 The Committee note that while there were rejections of the assemblies produced in the Ordnance Factories, import of 420 sets of the assemblies for Nissan 1-ton vehicles in September 1974 and 3,110 sets for Nissan Petrol vehicles (1660 during August 1974—December, 1975 and 1450 during February 1979—February, 1980) at a total cost of 112.66 lakhs (free on board) were arranged. Thus the factories could not supply the assemblies fully although the requirement was much less, considering the fact that the actual production of the vehicles during 1974-75 to 1979-80 ranged from 2,550 to 4,170 for Nissan 1-ton and from 550 to 914 numbers for Nissan patrol per annum, as against the installed capacity 4200 numbers of Nissan 1-ton and 3,000 numbers for Nissan patrol vehicles per annum. The Committee would await an explanation for the failure to meet even the grossly reduced demand for the assemblies.

1.66 The Committee note from the Audit Paragraph that the Director of Inspection (vehicles) stated in November, 1974 that the main reasons for heavy rejections of the transmission assemblies were inadequate heat treatment of the components and bad manufacturing techniques of factory 'B'. He also stated that the lapping of gears envisaged in the drawings was not being done. However, the Department of Defence Production have stated that 'lapping is not provided by the collaborators and this process is not being adopted in their production lines'. As both of the above statements are inconsistent, the Committee desire to know the factual position in this regard.

1.67 After a technical appreciation of the problems, factory 'B' also intimated the Director General Ordnance factories in January 1975 that the defects were due to defective equipments in the heat treatment plant, non-availability of lapping machines and inadequate inspection facilities in the factory. The Committee are concerned to note that indigenous furnance were installed in 1971 without fully ensuring their suitability. The Committee would like to know what remedial action was taken to improve the performance of the heat treatment plant. The Committee are in favour of use of

indigenous machinery. They however feel that quality of production particularly in a field like Defence should have been ensured. The Committee would therefore like to know how the defective furnaces were accepted, what action was taken against the firm for supplying defective furnaces and whether liquidated damages were recovered from the firm. The Committee would also like to know whether the reasons for the failure of DGGT in this case have been fully gone into and if so, what the findings are.

1.68 The Ministry of Defence (Department of Defence Production) has stated that the defects reported by the users after 1974 were analysed thoroughly and a team of officers from Military College of Electronics and Mechanical Engineering, Secunderabad was asked to investigate and submit their report. The gear boxes and the transfer cases produced at factory 'B' were also sent to the collaborators in West Germany and Japan for their expert opinion and suggestions to improve the quality. The Department had also studied the quality control and systems adopted in the automobile manufacturing concerns in the country such as Telco, Jamshedpur, M/s. Ashok Leyland, Madras and also obtained expert opinion of acknowledged Indian metallurgical experts. The Committee would like to know the details of reports received and measures taken improvement in quality of production of the transfer cases and gear boxes and the effectiveness thereof.

1.69 The Committee note that after the technical appreciation, factory 'B' proposed in January and February, 1975 augmentation of the heat treatment capacity and other facilities in the factory at a cost of Rs. 202.49 lakhs. However, before taking the final decision the Government sent a deputation of a technical team in June 1976 for a detailed study of the production process and inspection methods of the assemblies at the works of the collaborator at an estimated cost of Rs. 0.80 lakh. After protracted correspondence the Government sanctioned the procurement of additional machinery and equipment to replace the existing furnances only in February 1980 at a cost of Rs. 292.85 lakhs including Rs. 125.81 lakhs in foreign exchange. Factory 'N' had also initiated action to provide additional plant and machinery at an estimated cost of Rs. 74.66 lakhs for the same purpose.

1.70 The Committee are surprised to find that it took more than 3 years for the proposal to be finally sanctioned as it continued to be shuttled from one Department to another. The result is that the work is now expected to be completed in 1984 only. The Committee cannot but conclude that a project to remove defects from such a vital equipment like heat treatment plant was not pursued by the authorities with the requisite promptness. The Committee would like such delays to be avoided in future.

1.71 The Committee note that factory 'K' supplied about 6,704 sets and 5,578 sets of road springs for Nissan 1-ton and Nissan patrol vehicles respectively to factory 'A' during 1961 to 1971 and about 227 sets of the former and 893 of the latter to factory 'B' during 1970 and 1974. No complaints were received till December 1973 from the users regarding quality of road springs supplied by factory 'K' although the factory was manufacturing these sets through general engineering method. The Committee are surprised to know that whereas factory 'A' had used all the road springs except 596 sets for Nissan patrol vehicles, factory 'B' informed factory 'K' in January 1974 of rejection of the road springs in inspection at the stage of final passing of vehicles due to high camber and shorter span. Later in June 1975 factory 'B' apprised the DGOF that their rectification was not possible. Apprehending that the further supplies would be rejected by factory 'B', no further supplies were made by factory 'K' after 1974 and therefore factory 'B' suggested short closure of the pending orders on factory 'K'. The Ministry has explained that these road springs were not of the requisite standard as factory 'K' did not have the requisite facility. Now the requirements of road springs are being fully met ex-trade. The Committee would like to know as to why proper facilities were not provided in factory 'K' for producing the road springs before earmarking the production. The Committee also desire to know whether switchover from factory 'K' to private trade was examined in depth from the point of view of comparative cost.

1.72 Out of the supplies of factory 'K' (1489 sets for Nissan patrol and 227 sets for Nissan 1-ton vehicles) including the 596 sets transferred from factory 'A' 1180 numbers of front springs and 1286 numbers of rear springs the total cost of which was Rs. 5.91 lakhs were lying rejected at factory 'B'. Out of these road springs 786 numbers of the former and 1038 number of latter cost of which is Rs. 4.37 lakhs were returned to factory 'K' in November, 1976 and February 1977 a part of which (628 numbers of front springs and 638 numbers of rear springs) was melted in March 1978 as scrap. The total loss due to rejection and short closure of pending orders at factory 'K' was Rs. 8.51 lakhs. The Department of Defence Production has stated that the final amount of loss to be regularised by the competent financial authority would be arrived at after the value of scrap recovered was known. The Committee cannot but express their unhappiness at this heavy loss due to defective planning of the department. They would like to be apprised of the total amount of loss incurred on this account.

CHAPTER II

PROCUREMENT OF DEFECTIVE EQUIPMENT FROM ABROAD

Audit Paragraph

2.1 In paragraph 8 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for 1975-76, mention was, *inter alia*, made about procurement of 14 units of an equipment 'Y' to meet urgent requirements of the Army and Air Force, 6 of which were covered through a contract (value : \$ 2.776 million) concluded with a foreign firm 'B' in September 1976. The amount of the contract was enhanced (January 1979) to US \$ 2.944 million on account of requirement for additional spares for the equipment. The equipment was scheduled for delivery within 10-12 months from the date of signing the contract.

2.2 The contract contained a warranty clause valid for one year from the date of installation of the equipment or 15 months from the date of shipment, whichever was earlier. In the event of delay in delivery for over 1 month, liquidated damages were leviable at the rate of 0.7 per cent per month for the supplies delayed upto a maximum of 4 per cent of the contracted value of the supplies.

2.3 The equipment (6 units) was delivered by the firm during March-May 1978, *i.e.* after a delay of about 6-8 months. This attracted liquidated damages of \$ 105,076 as per the terms of the contract. The firm countered (May 1978) that it was willing to accept liquidated damages to the extent of \$ 40,000 only since the delay in delivery was largely due to delay on the part of the purchaser in carrying out acceptance inspection of the equipment. It was however, decided to reduce the amount of liquidated damages to \$ 60,000 as an acceptable compromise.

2.4 The equipment was shipped by sea in 43 packages of which only 42 packages were received by an Embarkation Headquarters during October-December 1978. In respect of one package shortlanded, a claim for Rs. 13.59 lakhs was preferred against the shipping agent in March 1979. As regards items found short/damaged in certain packages at the time of marine survey (October 1978), another claim for Rs. 3.37 lakhs was raised against the shipping agent in June 1979.

2.5 The stores (42 packages) were received in a Central Ordnance Depot (COD) during November 1978-February 1979. The claim for transit damages (assessed at Rs. 0.37 lakh) was raised by the COD against the railway authorities in April-November 1979.

2.6 During inspection of stores on receipt (February-March 1969) by a Board of Officers in the presence of the firm's representative, some more deficiencies of spares etc. were noticed. The Board found that all the 6 units had defects which the firm undertook to rectify. The firm's engineers were able to repair 2 units, which were issued to the Army user unit with limitations/defects. These 2 units issued to the user in May 1980 were yet (November 1980) to be made functional. The remaining 4 units were not found fit for operation and were in need of major rectification.

2.7 The warranty period having already expired in November 1979-February 1980, the firm took the view that it had no more contractual obligations in this regard. The Army Headquarters, therefore, requested (May 1980) the Ministry of Defence to either explore the possibility of persuading the firm to undertake repair of the equipment and to make it functional within a definite time-frame or to examine the feasibility of getting the equipment repaired through a public sector undertaking (entrusted with indigenous manufacture of similar equipment).

2.8 Additional test equipment (estimated cost : Rs. 18.30 lakhs) was ordered (October 1979) by the Army Headquarters from abroad for unit/depot repair of the main equipment. Some of the test equipment were yet (November 1980) to be received.

2.9 Eighteen generators of 18.75 KW capacity each (total value : Rs. 11.79 lakhs) required for 6 units of this equipment were issued by the COD to the user during August 1978-April 1979 even before the issue of the main equipment. Some of these generators were used sparingly for carrying out testing and repair of the equipment in the COD and subsequently for operation of 2 units of the equipment (non-functional) issued to the user unit.

2.10 The Ministry of Defence stated (November 1980) that the matter concerning the repair of the defective equipment was actively being pursued with the firm and that a supplementary agreement for this purpose was under negotiation.

2.11 The case, thus, revealed the following :

6 units of the equipment (total cost : over Rs. 2 crores) procured from abroad and received (in India) during October-December

1978 were found to have defects; 2 units repaired by firm's engineers were issued to the user with limitations/defects and were yet (November 1980) to be made functional. The remaining 4 units were not found fit for operation and required major rectification.

Claims for shortages/damages (assessed at Rs. 17.33 lakhs) against the shipping agent and railway authorities were pending settlement.

18 generators (cost: Rs. 11.79 lakhs) issued during October 1978—April 1979 were lying with the user without being put to much use due to defects in the main equipment.

[Paragraph 30 of the Report of the Comptroller and Auditor General of India for the year 1979-80, Union Government (Defence Services)].

2.12 Giving the background of the case, the Defence Secretary stated before the Committee :

“The equipment was of two types (i) static and (ii) mobile. In 1971, the army initiated a proposal for the mobile one and the Air Force had a similar requirement. The total was 34. At that time, it was decided to import 14, and for the balance, a project was to be given to BEL to undertake indigenous manufacture. Of the imported, 6 were for Army and 8 for the Air Force”.

2.13 Asked why the army wanted to go in for imports when Air Force was not keen to do so, the witness replied :

“Air Force was really planning this as part of their defence plan. As far as Army was concerned, this provided communication support... Initially it was mobile for the Air Force. Then they changed their ground and opted for static ones”.

2.14 To a query as to why orders for these 6 units also could not be placed on the public sector undertaking on whom 8 units were ordered, the Ministry of Defence have stated in a note :

“Both Army and Air Force had pressing requirements for the equipment. However, as BEL equipment was still under development Army's urgent requirement were contracted by

import. As regards AF, they were willing to wait till indigenous equipment was developed”.

2.15 According to Audit Para, the amount of the contract (value \$ 2.776 million) concluded with a foreign firm in September, 1976 for supply of 6 units of an equipment ‘Y’ to meet urgent requirements of the Army and Air Force was enhanced to US \$ 2.944 million in January, 1979 on account of requirement for additional spares for the equipment. Explaining the basis on which the additional spares for the equipment were determined and ordered, the Ministry of Defence have stated :

“For any new equipment, the manufacturers advice on the spares is required. As per the contract, the manufacturers were to supply a list of spares for future requirement. First, they suggested a list which according to them, was to suffice for 45 months. This was subsequently supplemented.”

2.16 The equipment is stated to have been shipped by sea in 43 packages of which only 42 packages were received by Embarkation Headquarters, Bombay during October-December 1978. To a question whether on arrival all the six units were found to be defective, the Defence Secretary stated in evidence :

“When the equipment arrived at Bombay, it was opened in the presence of the representative of the firm. The gentleman who was sent by the firm to supervise, damaged the equipment in such a way that they were not useable thereafter. Since then the firm has been making efforts to rectify the defects. They have been able to set up four of the six equipment. These four are under trials. For the other two, 17 sub-assemblies were sent to the US for repairs. They have not yet come back.”

2.17 In a written note, the Ministry of Defence have stated :

“In order to avoid the equipment lying idle 2 equipments were issued for trials even though they had comparatively minor defects. During trials, these equipments developed some faults and they are in the process of being rectified along with the remaining equipments.”

2.18 The Committee enquired what action had been taken by the Ministry of Defence regarding various points raised by audit immediately on receipt of the Audit Para by them. In a note dated 11 October, 1982 the Ministry have stated :

“Printed copy of the Report of the C&AG for the year 1979-80 (Defence Service) was *received in the Ministry of Defence on 18th May 1981..... First claim report was raised by COD Agra *vide* their letter No. 18447/AGD/DAO/1/USA/79-80 dated 4 April 1979 just after receipt inspection of the equipment. All the deficiencies were made good by the firm but the defect rectification has yet to be carried out.

Two more claims *viz.* 18447/AGD/DAO/4/USA/80-81 dated 27/30 March 81 and 18447/AGD/DAO/5/USA/80-81 dated 30 March 81 were raised by COD Agra for Rs. 37,247.05 and Rs. 11,371.85 for deficiencies found in two boxes traced after 2-1/2 years. EMB HQ Bombay had already raised claims against the suppliers which were later on withdrawn. The firm had flatly refused to entertain these claims *vide* their letter of 3 November, 1981.

The claim raised against the Railways has since been settled.

Since the first claim report was raised, firm has been sending its engineers for defect rectification. Spares/modules used/consumed by the engineers have been replaced/repared by the firm except for one Klystron which is not covered by the warranty and firm has refuted the claim. But when the engineers came last in October 81 to repair the equipment and left in December 81, they had used certain items (Details given below and are yet to be replaced/repared).

1. RF Amplifier	3	Airlifted to USA for repairs.
2. RF Input	1	used in repairs
3. Transformer Assy	1	Found defective not repaired
4. Transistor Board Assy	2	-do-
5. Regular Board Assy	1	-do-
6. Klystron	1	-do-

A claim report was raised by COD Agra *vide* their letter No. 18447/AGD/DAO/IUSA/79-80 dated 9 February 82 forwarded to ASD *Vide* our letter No. 73747/118/PC-1/OS-17A dated 17 February 82 for replacement/repair of these items. In

*According to Audit, the Audit Report was actually delivered to the Ministry of Defence on 29 April 1981.

response to our above letter M/s ASD have *vide* their letter dated 11 March 82 stated that they are not willing to progress the matter further till reply to their letter of 20 January, 82 is received by them.

The firm has written *vide* their letter dated 20 January 82 that unless all balance payments are made, they will not take up further action for repairs. Ministry of Defence have since replied to them after consulting Ministry of Law that no payment is due to the firm because they have not given the equipment in functional condition till date. In reply to this, firm has again reiterated their earlier position. A communication is being prepared by us to send reply to this.

Action has been initiated to entrust the job of repairs to M/s. BEL. Their engineers have since visited Agra in this regard. Their proposal for repairs has since been received. BEL are confident that they will be able to repair the equipment".

2.19 In another note furnished to the Committee in October, 1982, the Ministry of Defence have given the following details regarding the efforts made to get the defects in the equipment rectified by the foreign supplier :

"The equipment arrived at COD Agra in November 1978. Inspection was carried out within the warranty period in the presence of the representatives of the firms, by a Board of Officers, trained in the USA, who found that 5 out of 6 equipments had minor defects and only one unit had a major defect. As per the contract, the firm undertook rectification of these defects. In the process of repair, all the 6 equipments developed additional defects. Subsequent efforts made by the firm's engineers resulted in the two equipments being repaired partially which were issued to the user with limitation/defects. The remaining 4 equipments were not found operational and required major rectification. Repeated efforts were made to persuade the firm to undertake repairs and as a result of these efforts, the firm's engineers came to India number of times, but could not hand over the equipment in serviceable state".

2.20 Regarding the present position of the case, the Ministry of Defence have stated :

"A supplementary agreement was executed with the firm on 20.1.81. As per the terms and conditions of this agreement, the firm was to repair all the 6 terminals within a period of three months from the date of signing the supplementary agreement. The firm was to provide a warranty for a period of 3 months after the terminals had been handed over in a functional state to the Government of India. Two engineers of the firm came to India in October 81 to carry out repairs to the terminals. They offered four terminals, after repairs, to the Board of officers on 2.11.81. The Board carried out inspection of terminals from 2.11.81 to 13.11.81 in the presence of the firm's engineers. The Board of Officers have opined that the four terminals are not fully functional/serviceable and are not fit for exploitation. The reliability of the terminals is very low and these are not fit for operational use in their present state. In the opinion of Board of Officers the remaining 2 terminals are not functional/serviceable and need extensive repairs without which these cannot be checked. This position was brought to the notice of firm with a request that the terminals may be repaired without further delay as the high value sensitive equipment continues to be unutilized since its receipt in India in 1978. They were told that in case immediate action is not taken by the firm, Government of India will be forced to get them repaired at firm's cost.

"In the meantime the foreign firm has written that Government of India has failed in its contractual obligations and they are not willing to associate themselves in any further repairs. A suitable reply has been sent to the firm and they have been asked to repair all the 6 terminals within a period of 45 days w.e.f. 20.5.82 (i.e. the date of issue of letter) failing which the terminals will be got repaired in India at their cost. In this connection, it may be added that keeping in view foreign firm's attitude, no payments have been released to the firm although the supplementary agreement had incorporated the terms for the release of the residuary payments".

2.21 The audit para points out that the equipment was delivered by the foreign firm during March-May 1978 i.e. after a delay of about 6-8 months. The delay in the delivery of equipment attracted liquidated damages of \$ 105,076 as per the terms of the contract. However, on the plea of the

suppliers that the delay in delivery was largely due to delay on the part of the purchaser in carrying out acceptance inspection of the equipment, the amount of liquidated damages was decided to be reduced to \$ 60,000 as an acceptable compromise. The Committee enquired as to when acceptance inspection of the equipment was carried out by the representative of the purchaser, why such inspection was delayed and whether any defects were noticed at that stage. In reply, the Ministry of Defence have stated :

“The inspection by the purchaser’s representative in USA between July 1977-March 1978 was continuous. A number of defects were observed during the inspection and were rectified and modified before the equipment was re-offered for final acceptance. There was no delay in inspection as the equipments and their sub-systems were inspected as and when they were offered by the firm.”

In another note* the Ministry of Defence have stated :

“During the stay of Government of India Inspectors in USA, only four equipments were offered by the firm in time. These were inspected and accepted to the Contractor’s specifications prior to shipment. The remaining two items of equipment were not offered by the firm in time for the inspectors to complete their inspection. The firm’s inspection certificate was, therefore, accepted. The defects noticed in India during receipt inspection did not exist before shipment.”

2.22 Elucidating the position, the Defence Secretary stated in evidence before the Committee :

“There was some delay in the US manufacturing programme. The other delay was because of the shipment .. There was a longer time taken in inspecting because lot of objections were taken by the Indian inspectors. Subsequent equipment was cleared without much delay. The other requirement was that it should be despatched on Indian bottoms. There was some delay because of non-availability of the Indian ship.

2.23 The Committee wanted to know the considerations on which the amount of liquidated damages was reduced, when the delay was on the part of the supplier. In reply, the Ministry of Defence have stated in a note :

“Taking all factors into consideration including the contractual and legal aspects, a decision was taken to fix the quantum of

*Not vetted in Audit.

LD at \$ 60,000. It may be added that an amount of \$129,099.22 is withheld from the firm covering Indian Agent's commission. As per the Supplementary Agreement, release of remaining amount was to be made to the Indian Agent as well as to the foreign firm after adjusting \$ 60,000 as liquiated damages. As the firm has not made encouraging response for the repair of the equipment, no payments have yet been made."

2.24 The Committee desired to know the period of stay abroad of the Indian inspectors, the expenditure incurred on their visit, the precise reasons why two items of equipment were not inspected by them and the considerations on which the firm's Inspection Certificate was accepted. The Ministry of Defence have stated that while one of them stayed in USA from 6 July 1977 to 14 February 1978. An expenditure of nearly Rs. 2.16 lakhs was incurred.

The Ministry have added :

"It will be seen from the information furnished above that the Government of India Inspectors were in USA for nearly a period of 10 months (July 1977-April 1978). During this period the firm could offer only 4 equipments for inspection. These were inspected and accepted to the contractors' specification. As the period of deputation of these Inspectors in USA was not extended beyond this period and the firm could not offer the remaining 2 equipment during this period, these equipments could not be inspected and it was decided to accept the remaining 2 equipments on the basis of the firm's inspection certificate."

2.25 The Committee enquired whether the public sector undertaking (M/s. BEL) had since supplied the 8 units for which orders were placed on them in July 1976 and whether those were functional. The Ministry have stated (11-9-1981) :

"The Public Sector Undertaking has not so far supplied any equipment of the type. Of the 14 equipments, 8 were required for Air Force and 6 for the Army. The order for these 8 equipments was placed on the Public Sector Undertaking. 4 equipments out of the requirement of the 8 by the Air Force ordered with the Public Sector Undertaking have been inspected and accepted. The equipment would be lifted by the Air Force as soon as the trucks to tow these are modified by BEL (GAD)."

2.26 To another question to what extent the whole project had been affected due to non-availability of the 6 units ordered for supply by the foreign firm, the Ministry have replied :*

“Since the requirements are for different users, the question of the whole project having been affected because of non-availability of six terminals to the Army does not arise.”

2.27 The Committee pointed out that the urgency for this equipment was felt in 1971 and the order was placed in 1976 but till now not a single unit is functional and enquired how the urgent requirement of the Army was met. A representative of the Ministry of Defence deposed :

“We have the second best multi-channelling equipment on the line. We have to accept the delays. We have not got the optimum capability of establishing communication as fast as we would want. But we have the second best. We are managing with that even today.”

2.28 To another question whether the Army has in any way suffered on that account, the witness replied :

“Fortunately not”

2.29 The Committee desired to know the outcome of the claims for Rs. 3.37 lakhs preferred against the shipping agent in June 1979 for short-landing/damages found in certain packages of the equipment at the time of marine survey in October, 1978. The Ministry of Defence have intimated that the claim against shipping agent was still under progress.

2.30 Asked how the 18 generators were issued even before the issue of the equipment, the Ministry have stated :

“As a measure of advance planning, the generators earmarked for the six equipments were issued in anticipation of likely use being made of the equipment.”

*Not vetted in Audit.

2.31 In a further note the Ministry of Defence have stated :*

"The 18 generators earlier issued to a particular Signal Group alongwith imported equipment have since been transferred to other users given by the General Staff

2.32 The Committee called for details of similar cases where the equipment imported from abroad during the last five years had not been found to be functional, the expenditure incurred and the remedial measures taken. The relevant information in respect of items of CIF value of Rs. 5 lakhs and above furnished by the Ministry of Defence is reproduced below :

**“DETAILS OF EQUIPMENT IMPORTED FROM ABROAD DURING 1 JUNE 76 TO 30 JUNE 1981
AND FOUND DEFECTIVE**

Sl. No.	Name of equipment and date of receipt in India	Value in Rupees	Imported from	Nature of defects	Remedial measures
1	2	3	4	5	6
1.	50 KVA Motor Alternators- (May/Aug-81)-6 Nos. for Navy.	75.20 lakhs	UK	Design defect	Defective components air freighted to UK for repair and return. The equipment is still under repairs and the cost of repair will be borne by the firm.
2.	Action Speed Tactical Teacher & Weapon Trainer Received in end April 80 for Navy.	135.5 lakhs	UK	Transit damage during shipping amounted to Rs. 3,72,682.37. Items not insured as per Govt. policy.	Replacement items procured and refitted with the assistance of firm's engineers.
3.	Main Engine for SDB's Mk.II Deltic Engines 1977 for Navy.	31.37 FFE	UK	Failure of Turbo Blower.	Returned to Paxman Diesel Ltd., UK for rectification. It is under repairs and is expected to be ready for shipment in India by Oct. 82. The cost of repairs and transportation will be borne by the firm.

1	2	3	4	5	6
4.	Deltic CT 18-42 K Main Engines for SBD Mk II Jan/Mar 80 for Navy.	2.98 Crores	UK	Phasing gear and clutch failed during machinery trials of the ships.	Firm carried out repair/replacement at their cost.
5.	Electro dynamic motion simulation system-5-2-1980.	33,33,373/-	UK	Transformer damaged	Damaged items being replaced free of cost.
6.	Sabre Model 1040 Magnetic Taperecorder-11-10-80.	8,59,980/-	USA	Voice channel defective	Defective items being rectified free of cost.
7.	Multi Analog Recording CRT display system-18-2-81.	6,49,890/-	USA	Conracmonitor damaged	Defective items being rectified free of cost.
8.	Signal channel Telemetry Receiver & Dualchannel-6-10-79.	8,82,290/-	USA	RF Tuners defective	Defective items being replaced/repared free of cost.
9.	Dual Magna Scanner 1000 with accessories-30-10-78.	5,61,054/-	USA	Pentaprobos not working	Replacement received from the firm free."

2.33 In order to meet urgent requirements for mobile communication equipment, the Army and Air Force initiated a proposal in 1971 for the purchases of 34 units of such equipment. It was decided to import 14 units and for the balance, orders were to be given to Bharat Electronics Ltd. to undertake indigenous manufacture. Of the equipment to be imported, 6 were for Army and 8 for the Air Force. Subsequently however, the Air Force did not go in for import but placed orders with Bharat Electronics Ltd. For procuring 6 units required for the Army, a contract was concluded with a foreign firm in September, 1976. Although the equipment was scheduled for delivery within 10-12 months from the date of signing the contract, the equipment (6 units) was actually delivered by the firm during March-May, 1978 i.e. after a delay of about 6-8 months. The equipment on receipt was inspected by a Board of Officers and was found to be defective and has not been repaired so far. The result is that the equipment which was purchased in 1978 by spending scarce foreign exchange to meet the urgent need of Defence Services has not been put to use all these years.

2.34 The Committee regret to note that the entire deal has been handled by the concerned authorities in a very sordid manner. The initial requirement of the Defence forces was for 36 units (which was subsequently reduced to 34) out of which it was decided to import 6 units for the Army and for the balance an order was placed with the public sector Undertaking Bharat Electronics Ltd. The Ministry have failed to advance any reason as to why the order for the equipment for the Army also could not be placed with the public sector undertaking except that the equipment was required on an urgent basis. However, subsequent events have proved that this urgent requirement of the Army has not been met so far as the equipment is still not in a working condition. The contention that the Army has not in any way suffered in the absence of this equipment. raises a doubt in the mind of the Committee if the requirement of the Army for this equipment was really so urgent as to necessitate its immediate import rather than wait for its development by indigenous sources, as in fact decided by the Air Force.

2.35 As per the terms of the contract entered into with the foreign firm, the delay in delivery attracted liquidated damages of \$1,05,076 but the firm was willing to accept damages only to the extent of \$40,000 since according to them the delay was largely due to delay on the part of Indian authorities in carrying out inspection of the equipment. It was subsequently decided to reduce the amount of damages to \$60,000 as an acceptable compromise. The Committee find that the inspectors deputed by the Army Headquarters stayed in U.S.A. for more than 10 months during which period only 4 units out of six were offered to them for inspection. In view of this,

it is beyond comprehension how the contention of the firm that the delay in delivery was due to delay in carrying out inspection by the purchaser was accepted and the amount of damages reduced. The Committee are also not at all convinced with the argument that the remaining two units could not be inspected as the period of deputation of the inspectors could not be extended.

2.36 The equipment was received during November 17, 1978—February 1979. On inspection by a Board of Officers, all the 6 units were found to be having deficiencies which the firm undertook to rectify. However, the equipment was damaged by the representative of the firm in such a manner that it has not been usable thereafter. Since then a number of representatives of the firm have visited the country and some of the sub-assemblies have been sent to the U.S.A. for repairs, but the equipment is still not in a working condition. In the meantime, the balance payment of \$ 1,29,099 due to the firm has been withheld. The firm has refused to associate itself with any repairs unless the balance payment is made to them. Thus a stalemate has developed. In the meantime, repair of the equipment has been entrusted to M/s. Bharat Electronics Ltd. who are stated to be confident of doing the job.

2.37 From the above facts, it is quite clear that the entire deal has resulted in not only financial loss to the Government involving heavy amount of foreign exchange but also proved infructuous as the armed forces have been denied a much needed facility for improved communication system. The Committee consider that the following acts of omission/commission in respect of the deal need to be thoroughly investigated by a high-powered team of officials drawn from the Ministry/Army Headquarters :

- (i) Whether it was really necessary to go in for import of the equipment and what efforts were made between 1971 and 1976 to get the equipment developed indigenously by M/s. BEL ?
- (ii) Was the selection of firm made judiciously and after taking into account its capability, past performance, technical expertise etc. ? How did the terms of the contract compare with the offers made by other firms in the field ?
- (iii) Considering that a number of defects were observed in the four equipments offered by the firm for pre-shipment inspection, why the remaining two equipments were not inspected and why the firm's inspection certificate was considered sufficient ?

- (iv) How the equipment developed further defects when the defects noticed during inspection were stated to have been rectified and modified by the firm? Was the pre-shipment inspection adequate and whether there was any failure/conivance on the part of our inspectors with the foreign firm?
- (v) Since the delay in delivery was not due to delay on the part of the inspectors in carrying out pre-shipment inspection, why did the Ministry agree to reduce the amount of liquidated damages from the firm by US \$ 45.076?
- (vi) What precautionary steps should be taken in order to ensure that such situations are obviated?

2.38 The Committee desire that the enquiry should be completed expeditiously and responsibility fixed for lapses at various stages. The results of enquiry as well as details of the action taken on the same should be intimated to the Committee within six months. The Committee would also like to be apprised of the outcome of the claim for Rs. 3.37 lakhs preferred against the shipping agent for shortlanding/damages found in certain packages.

2.39 The Committee note with concern that this is not a solitary instance—9 other cases of imports of defective equipment involving large amounts of foreign exchange during the period June 1976 to June 1981 have been reported to the Committee. The Committee would like the Ministry of Defence to examine in depth the reasons for defective supply in each case and take appropriate measures to streamline the procedure for procurement and inspection of equipment and stores from abroad.

NEW DELHI;

April 28, 1983

Vaisakha 8, 1905 (S).

SATISH AGARWAL

Chairman

Public Accounts Committee

APPENDIX I

Statement showing the production programme, actual production
achieved since 1959 to 1981-82

G.C.F. PRODUCTION

Year	Shaktiman vehicle	Nissan Carrier	Nissan Patrol
1959-60	529	—	—
1960-61	1080	276	—
1961-62	999	916	—
1962-63	623	1006	1066
1963-64	1030	2986	1080
1964-65	1116	3675	1204
1965-66	1355	3661	1236
1966-67	1126	3725	1053
1967-68	670	1993	556
1968-69	986	2075	348
1969-70	922	2217	173
1970-71	555	950	109
1971-72	1201	—	—
1972-73	1036	—	—
Total	13228	23480	6825

Vehicle Factory, Jabalpur Production

1970-71	—	250	328
1971-72	25	1919	1055
1972-73	1889	2995	1900
1973-74	2373	3000	1400
1974-75	2000	2550	596
1975-76	3151	3889	801
1976-77	3492	4170	914
1977-78	3071	3638	550
1978-79	2713	2286	627
1979-80	2400+2	2167	560
1980-81	3300+20	3408	925 @-5 Ton
1981-82	3670	3100	1200
Total	27284+22	33372	9856
Grand Total	40512+22	56852	16681

APPENDIX II

Statement of Observations & Recommendations

S. No.	Para No.	Ministry/Deptt. concerned	Observation/Recommendation
1	2	3	4
1	1.61	Deptt. of Defence Production	<p>The Committee note that the production of Shaktiman vehicles in the country started in 1959 after collaboration agreement was concluded with M/s. MAN in September 1958. Manufacture of Nissan vehicles started in 1961-62 after a separate collaboration was concluded for these vehicles with M/s. Nissan Motors, Japan. The production of various components of these vehicles was undertaken in a number of factories which individually or jointly contributed to the manufacture of component which were finally assembled at factory 'A'. After 1962 conflict, the requirements of Army in armaments stores increased manifold necessitating a review of production of armaments stores and vehicles for meeting increased requirements of army in the then existing factories. A decision was taken to set up a separate integrated factory for manufacture of vehicles. The Government accordingly sanctioned a project in November, 1965 at a cost of Rs. 46.84 crores for manufacture of Shaktiman, Nissan-1 ton and Nissan Patrol vehicles. The installed capacity of the factory 'B', as per Detailed Project Report, was 13200 in a mix of 6000 Shaktiman and 7200 Nissan vehicles. However, the total production of the vehicles during 1970-71 to 1981-82 (12 years) has been 70534 numbers and the production in 1981-82 was only 7,970 vehicles (consisting of 3,670 Shaktiman vehicles, 3100 Nissan carrier and 1200 Nissan Patrol). A projects to augment the capacities of the factory to 10,000 vehicles per annum has been sanctioned in January, 1982 by provisioning of balancing plant and equipment and civil works at an estimated cost of Rs. 8.48 crores</p>

1	2	3	4
2	1.62	Deptt. of Defence Production	<p>The Committee are shocked that although the original installed capacity of the vehicle Factory was 13,200 the actual production in the factory has been much less. The maximum production achieved in any year was 8,576 vehicles in 1976-77. The factory has a huge outstanding demand of 45,985 from the army consisting of 22,022 Shaktiman, 10677 Nissan 1-ton and 13,286 Nissan Jonga vehicles. Clearly all is not well with the setting up of this factory and its operation. The Committee recommend that Government should look into the deficiencies in this regard and take necessary corrective measures so that at least after the provisioning of balancing plant and equipment at an estimated cost of Rs. 8.48 crores, the factory is able to achieve the production target envisaged.</p>
3	1.63	do-	<p>The Collaboration Agreement with M/s. MAN, West Germany and M/s. Nissan Motors, Japan were for the transfer of technical know-how and supply of components etc. The Committee note that Factory 'N' established the manufacture of transmission assemblies (consisting of gear boxes and transfer cases) for Shaktiman and Nissan-1 ton vehicles during 1959-63 and 1970-73 respectively and Factory 'B' established their manufacture for Shaktiman in 1969; for Nissan 1-ton in 1973 and Nissan Patrol in 1975. Had the Government established only one factory for manufacturing the transmission assemblies, necessary expertises would have been developed and the factory could have enjoyed the benefit of economics of scale. The Committee would like to know the reasons for setting up facilities in two factories for production of transmission assemblies.</p>
4	1.64	do-	<p>Though prior to 1974, reports regarding defects in the transmission assemblies were received from the users only occasionally, after 1974 reports were received from the users that a large number of transfer cases and gear boxes manufactured at these</p>

1	2	3	4
			<p>factories and fitted to the vehicles were noisy and suffered from other defects such as hard shifting, gear slipping etc. Simultaneously, these defects were also noticed in inspection in 1974 during road test of these vehicles after assembly at Factory 'B' and the assemblies were rejected for rectification. According to Audit the rejection of assemblies during road test at Factory 'B' varied from 24 to 57% for Shaktiman; 39 to 47% for Nissan 1-ton and 35 to 51% for Nissan patrol vehicles during 1974 to 1979. The Member, Ordnance Factory Board stated before the Committee that the total amount that had been spent for rectification of these rejected assemblies in both these factories was Rs. 17.27 lakhs upto the year 1981-82 and it was only 0.39% of the total value of the sub-assemblies which had been manufactured. The fact however remains that the failure of the factories to manufacture these component to the requisite standard and quality has resulted not only in an infructuous expenditure of Rs. 17.27 lakhs but has also resulted in the delay in the vehicles being put to use and considerable time had to be spent on rectification of these defects.</p>
5	1.65 Deptt. of Defence Production		<p>The Committee note that while there were rejections of the assemblies produced in the Ordnance Factories, import of 420 sets of the assemblies for Nissan 1-ton vehicles in September 1974 and 3,110 sets for Nissan Patrol vehicles (1660 during August 1974—December, 1975 and 1450 during February 1979—February, 1980) at a total cost of Rs. 112 66 lakhs (free on board) were arranged. Thus the factories could not supply the assemblies fully although the requirement was much less, considering the fact that the actual production of the vehicles during 1974-75 to 1979-80 ranged from 2550 to 4,170 for Nissan 1-ton and from 550 to 914 numbers for Nissan patrol per annum, as against the installed capacity of 4200 numbers of Nissan 1-ton and</p>

1

2

3

4

3,000 numbers for Nissan patrol vehicles per annum. The Committee would await an explanation for the failure to meet even the grossly reduced demand for the assemblies.

6

1.66 Defence

The Committee note from the Audit Paragraph that the Director of Inspection (vehicles) stated in November, 1974 that the main reasons for heavy rejections of the transmission assemblies were inadequate heat treatment of the components and bad manufacturing techniques of factory 'B'. He also stated that the lapping of gears envisaged in the drawings was not being done. However, the Department of Defence Production have stated that 'lapping is not provided by the collaborators and this process is not being adopted in their production lines'. As both of the above statements are inconsistent, the Committee desire to know the factual position in this regard.

7

1.67 do-

After a technical appreciation of the problems, factory 'B' also intimated the Director General Ordnance factories in January 1975 that the defects were due to defective equipments in the heat treatment plant, non-availability of lapping machines and inadequate inspection facilities in the factory. The Committee are concerned to note that indigenous furnaces were installed in 1971 without fully ensuring their suitability. The Committee would like to know what remedial action was taken to improve the performance of the heat treatment plant. The Committee are in favour of use of indigenous machinery. They however feel that quality of production particularly in a field like Defence should have been ensured. The Committee would therefore like to know how the defective furnaces were accepted, what action was taken against the firm for supplying defective furnaces and whether liquidated damages were recovered from the firm. The Committee would also like to know whether the

1	2	3	4
8	1.68	Defence	<p>reasons for the failure of DGDT in this case have been fully gone into and if so, what the findings are.</p> <p>The Ministry of Defence (Department of Defence Production) has stated that the defects reported by the users after 1974 were analysed thoroughly and a team of officers from Military College of Electronics and Mechanical Engineering Secunderabad was asked to investigate and submit their report. The gear boxes and the transfer cases produced at factory 'B' were also sent to the collaborators in West Germany and Japan for their expert opinion and suggestions to improve the quality. The Department had also studied the quality control and systems adopted in the automobile manufacturing concerns in the country such as Telco, Jamshedpur, M/s. Ashok Leyland, Madras and also obtained expert opinion of acknowledged Indian metallurgical experts. The Committee would like to know the details of reports received and measures taken for improvement in quality of production of the transfer cases and gear boxes and the effectiveness thereof.</p>
9	1.69	do-	<p>The Committee note that after the technical appreciation, factory 'B' proposed in January and February, 1975 augmentation of the heat treatment capacity and other facilities in the factory at a cost of Rs. 202.49 lakhs. However, before taking the final decision the Government sent a deputation of a technical team in June 1976 for a detailed study of the production process and inspection methods of the assemblies at the works of the collaborator at an estimated cost of Rs. 0.80 lakh. After protracted correspondence the Government sanctioned the procurement of additional machinery and equipment to replace the existing furnaces only in February 1980 at a cost of Rs. 292.85 lakhs including Rs. 125.81 lakhs in foreign exchange. Factory 'N' had also initiated action to provide additional plant and machinery at an estimated cost of Rs. 74.66 lakhs for the same purpose.</p>

1	2	3	4
10	1.70 Defence		<p>The Committee are surprised to find that it took more than 3 years for the proposal to be finally sanctioned as it continued to be shuttled from one Department to another. The result is that the work is now expected to be completed in 1984 only. The Committee cannot but conclude that a project to remove defects from such a vital equipment like heat treatment plant was not pursued by the authorities with the requisite promptness. The Committee would like such delays to be avoided in future.</p>
11	1.71 do-		<p>The Committee note that factory 'K' supplied about 6,704 sets and 5,578 sets of road springs for Nissan 1-ton and Nissan patrol vehicles respectively to factory 'A' during 1961 to 1971 and about 227 sets of the former and 893 of the latter to factory 'B' during 1970 and 1974. No complaints were received till December 1973 from the users regarding quality of road springs supplied by factory 'K' although the factory was manufacturing these sets through general engineering method. The Committee are surprised to know that whereas factory 'A' had used all the road springs except 596 sets for Nissan patrol vehicles, factory 'B' informed factory 'K' in January 1974 of rejection of the road springs in inspection at the stage of final passing of vehicles due to high camber and shorter span. Later in June 1975 factory 'B' apprised the DGOF that their rectification was not possible. Apprehending that the further supplies would be rejected by factory 'B', no further supplies were made by factory 'K' after 1974 and therefore factory 'B' suggested short closure of the pending orders on factory 'K'. The Ministry has explained that these road springs were not of the requisite standard as factory 'K' did not have the requisite facility. Now the requirements of road springs are being fully met ex-trade. The Committee would like to know as to why proper facilities were not provided in factory 'K' for producing the road</p>

1	2	3	4
			springs before earmarking the production. The Committee also desire to know whether switchover from factory 'K' to private trade was examined in depth from the point of view of comparative cost.
12	1.72	Defence	<p>Out of the supplies of factory 'K' (1489 sets for Nissan patrol and 227 sets for Nissan 1-ton vehicles) including the 596 sets transferred from factory 'A', 1180 numbers of front springs and 1286 numbers of rear springs the total cost of which was Rs. 5.91 lakhs were lying rejected at factory 'B'. Out of these road springs 786 numbers of the former and 1038 number of the latter cost of which is Rs. 4.37 lakhs were returned to factory 'K' in November, 1976 and February 1977 a part of which (628 numbers of frontsprings and 638 numbers of rear springs) was melted in March 1978 as scrap. The total loss due to rejection and short closure of pending orders at factory 'K' was Rs. 8.51 lakhs. The Department of Defence Production has stated that the final amount of loss to be regularised by the competent financial authority would be arrived at after the value of scrap recovered was known. The Committee cannot but express their unhappiness at this heavy loss due to defective planning of the department. They would like to be apprised of the total amount of loss incurred on this account.</p>
13	2.33	do-	<p>In order to meet urgent requirements for mobile communication equipment, the Army and Air Force initiated a proposal in 1971 for the purchases of 34 units of such equipment. It was decided to import 14 units and for the balance, orders were to be given to Bharat Electronics Ltd. to undertake indigenous manufacture. Of the equipment to be imported, 6 were for Army and 8 for the Air Force. Subsequently however, the Air Force did not go in for import but placed orders with Bharat Electronics Ltd. For procuring 6 units required for Army, a contract was con-</p>

1

2

3

4

cluded with a foreign firm in September, 1976. Although the equipment was scheduled for delivery within 10-12 months from the date of signing the contract, the equipment (6 units) was actually delivered by the firm during March-May, 1978 i.e. after a delay of about 6-8 months. The equipment on receipt was inspected by a Board of Officers and was found to be defective and has not been repaired so far. The result is that the equipment which was purchased in 1978 by spending scarce foreign exchange to meet the urgent need of Defence Services has not been put to use all these years.

14

2.34

do-

The Committee regret to note that the entire deal has been handled by the concerned authorities in a very sordid manner. The initial requirement of the Defence forces was for 36 units (which was subsequently reduced to 34) out of which it was decided to import 6 units for the Army and for the balance an order was placed with the public sector Undertaking, Bharat Electronics Ltd. The Ministry have failed to advance any reason as to why the order for the equipment for the Army also could not be placed with the public sector undertaking except that the equipment was required on an urgent basis. However, subsequent events have proved that this urgent requirement of the Army has not been met so far as the equipment is still not in a working condition. The contention that the Army has not in any way suffered in the absence of this equipment, raises a doubt in the mind of the Committee if the requirement of the Army for this equipment was really so urgent as to necessitate its immediate import rather than wait for its development by indigenous sources, as in fact decided by the Air Force.

15

2.35

do-

As per the terms of the contract entered into with the foreign firm, the delay in delivery attracted liquidated damage of 1,05,076 but the firm was

1

2

3

4

willing to accept damages only to the extent of \$40,000 since according to them the delay was largely due to delay on the part of Indian authorities in carrying out inspection of the equipment. It was subsequently decided to reduce the amount of damages to 60,000 as an acceptable compromise. The Committee find that the inspectors deputed by the Army Headquarters stayed in U.S.A. for more than 10 months during which period only 4 units out of six were offered to them for inspection. In view of this, it is beyond comprehension how the contention of the firm that the delay in delivery was due to delay in carrying out inspection by the purchaser was accepted and the amount of damages reduced. The Committee are also not at all convinced with the argument that the remaining two units could not be inspected as the period of deputation of the inspectors could not be extended.

16

2.36

.i.do-

The equipment was received during November 17, 1978—February 1979. On inspection by a Board of Officers, all the 6 units were found to be having deficiencies which the firm undertook to rectify. However, the equipment was damaged by the representative of the firm in such a manner that it has not been usable thereafter. Since then a number of representatives of the firm have visited the country and some of the sub-assemblies have been sent to the U.S.A. for repairs, but the equipment is still not in a working condition. In the meantime, the balance payment of 1,29,099 due to the firm has been withheld. The firm has refused to associate itself with any repairs unless the balance payment is made to them. Thus a stalemate has developed. In the meantime, repair of the equipment has been entrusted to M/s. Bharat Electronics Ltd. who are stated to be confident of doing the job.

1	2	3	4
17	2.37	do-	<p>From the above facts, it is quite clear that the entire deal has resulted in not financial loss to the Government involving heavy amount of foreign exchange but also proved infructuous as the armed forces have been denied a much needed facility for improved communication system. The Committee consider that the following acts of omission/commission in respect of the deal need to be thoroughly investigated by a high-powered team of officials drawn from the Ministry/Army Headquarters :</p> <ul style="list-style-type: none">(i) Whether it was really necessary to go in for import of the equipment and what efforts were made between 1971 and 1976 to get the equipment developed indigenously by M/s. BEL ?(ii) Was the selection of firm made judiciously and after taking into account its capability, past performance, technical expertise etc. ? How did the terms of the contract compare with the offers made by other firms in the field ?(iii) Considering that a number of defects were observed in the four equipments offered by the firm for pre-shipment inspection, why the remaining two equipments were not inspected and why the firm's inspection certificate was considered sufficient ?(iv) How the equipment developed further defects when the defects noticed during inspection were stated to have been rectified and modified by the firm ? Was the pre-shipment inspection adequate and whether there was any failure/connivance on the part of our inspectors with the foreign firm ?

1	2	3	4
			<p>(v) Since the delay in delivery was not due to delay on the part of the inspectors in carrying out pre-shipment inspection, why did the Ministry agree to reduce the amount of liquidated damages from the firm by US 45,076 ?</p> <p>(iv) What precautionary steps should be taken in order to ensure that such situations are obviated ?</p>
18	2.38	do-	<p>The Committee desire that the enquiry should be completed expeditiously and responsibility fixed for lapses at various stages. The results of enquiry as well as details of the action taken on the same should be intimated to the Committee within six months. The Committee would also like to be apprised of the outcome of the claim for Rs. 3.37 lakhs preferred against the shipping agent for short landing/damages found in certain packages.</p>
19	2.39	do-	<p>The Committee note with concern that this is not a solitary instance—9 other cases of imports of defective equipment involving large amounts of foreign exchange during the period June 1976 to June 1981 have been reported to the Committee. The Committee would like the Ministry of Defence to examine in depth the reasons for defective supply in each case and take appropriate measures to streamline the procedure for procurement and inspection of equipment and stores from abroad.</p>

