THIRTY-SEVENTH REPORT

PUBLIC ACCOUNTS COMMITTEE (1980-81)

(SEVENTH LOK SABHA)

WASTEFUL EXPENDITURE ON PROCUREMENT OF IMPORTED AIRCRAFT SPARES AND IN FRUCTUOUS EXPENDITURE ON PROCUREMENT OF DEFECTIVE AMMUNITION

MINISTRY OF DEFENCE

सत्यमेव जयते

Presented in Lok Sabha on 28 APR 1981
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INTRODUCTION

I, the Chairman of the Public Accounts Committee, as authorised by the Committee, do present on their behalf this Thirty Seventh Report on Paragraphs 26 and 27 of the Report of the Comptroller and Auditor General of India for the year 1978-79, Union Government (Defence Services) on wasteful expenliture on procurement of imported aircraft spares and infructuous expenditure on procurement of defective ammunition.

2. The Report of the Comptroller and Auditor General of India for the year 1978-79, Union Government (Defence Service) was laid on the Table of the House on 26 March, 1980.

3. This Report highlights the problems caused by the defective propeller system of the packet aircraft and the delays in its replacement. The Committee have observed that factors having a vital bearing on the provisioning of spares for the packet aircraft were ignored. The Committee have therefore emphasised the imperative need for revamping the procedure for assessment of requirement of spares and stores and their scrutiny at higher level. The Report highlights yet another case of purchase of old and defective ammunition by short circuiting the established procedure with the result that defective ammunition had to be used for training and the purpose of simulating battle conditions was not fully achieved.

4. The Committee (1980-81) examined paragraph 26 at their sitting held on 13 November, 1980 and paragraph 27 on 28 October, 1980. The Committee considered and finalised the Report at their sitting held on 8 April, 1981. Minutes of the sittings form Part II* of the Report.

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

6. The Committee would like to express their thanks to the Officers of the Ministry of Defence (Department of Defence Production) for the cooperation extended by them in giving information to the Committee.

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

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

NEW DELHI;
April 16, 1981.
Chaitra 26, 1903 (*Saka*)

CHANDRAJIT YADAV,
Chairman,
Public Accounts Committee

REPORT

I

WASTEFUL EXPENDITURE ON PROCUREMENT OF IMPORTED AIRCRAFT SPARES

Audit Paragraph

1.1. In view of low reliability of the propeller system fitted to a transport aircraft, the Air Headquarters considered (1972) the need for its change-over to a different type of propeller system available abroad. This matter was, however, not pursued since it was then anticipated that the aircraft would be phased out by 1973-74 (although Government had approved in October 1971 that the aircraft would continue in squadron service up to 1975-76).

1.2. Due to uncertainty in the selection and induction of a suitable replacement, the existing transport aircraft was continued beyond 1973-74. A special provision review of the spares required for the aircraft for 5 years (up to June 1979) was carried out (June 1974) by an Air Force equipment depot and the requirements of spares (including those for the propeller system), thus worked out, were communicated to the Air Headquarters in August 1974. After obtaining clearance of the Ministry of Finance (Defence), the Air Headquarters placed (February 1975) a requisition for 99 items of these spares (total estimated cost: Rs. 80.16 lakhs) on a foreign Government (through its Embassy in India) with a copy to the Supply Wing of the Indian Embassy located in the foreign country.

1.3. In June 1975, the Air Headquarters advised the foreign Government's Embassy in India to reduce the quantity ordered in respect of one of the items of spares, *viz.* 'gear pump assembly', from 600 to 200 numbers, but failed to advise the Supply Wing of the Indian Embassy abroad simultaneously of this reduction. This reduction in quantity was reiterated by the Air Headquarters in October 1975 when proposal for change-over from the old to the new propeller system was mooted by the Air Headquarters.

1.4. Two months later (December 1975), the Supply Wing of the Indian Embassy advised the supplying agency of the foreign Government to arrange supply of the items demanded except 'gear pump assembly' and simultaneously requested the Air Headquarters

to review the requirement of 600 numbers of this item, which appeared to be excessive. On 6th February, 1976 the Air Headquarters replied that the requirement of this item had already been reduced to 200 numbers and that on further review, the same be treated as cancelled *in toto*. This was communicated by the Supply Wing of the Indian Embassy to the supplying agency by telex on 20th February, 1976. No follow-up action was, however, taken.

1.5. In February 1977, the supplying agency informed the Indian Embassy that it was in receipt of the request for cancellation, but as the item was still on contract, almost 100 per cent termination charges would be leviable in the event of cancellation of the contract. While the matter was under correspondence with the foreign Government, the supplying agency despatched the reduced quantity of 200 numbers of the item (total cost: Rs. 14.95 lakhs) during June—August 1977.

1.6. The Ministry of Defence stated (October 1979) that it was not a failure of the follow-up action, but failure of the communication system that resulted in no action being taken by the suppplier on the request for cancellation of the item (gear pump assembly). The Ministry added (December 1979) that out of the remaining 98 items ordered in February 1975, items valuing about Rs. 25 lakhs had become redundant due to change-over to the new propeller system.

1.7. The following points emerge from the above:

spares required for the aircraft (including the old propeller system) for 5 years (up to June 1979) were ordered (February 1975) without reviewing the necessity for change-over to the new propeller system; and

the quantity ordered (600 Nos.) of gear pump assembly for the old propeller system was reduced (June 1975) to 200 Nos. within a period of 4 months and subsequently (February 1976) cancelled *in toto*, however, failure to ensure timely cancellation of 200 Nos. of this item resulted in wasteful expenditure of Rs. 14.95 lakhs. Besides, other items valuing about Rs. 25 lakhs had also become redundant due to change-over to the new propeller system.

[Paragraph 26 of the Report of the Comptroller and Auditor General of India for the year 1978-79, Union Government (Defence Services)]

Acquisition of Packet aircraft

1.8. The Committee enquired about the year in which the transport aircraft in question were acquired together with the number and cost of aircraft acquired initially and the dates, number and cost of aircraft acquired thereafter, if any. The Defence Secretary stated during evidence:

> "During 1954, 26 were received; in 1960, 24 were received and in 1963 also, 24 were received. The total comes to 74. When we received them in 1954, they were new aircraft. The cost was about Rs. 28,38,233.00 each. The 1960 lot were old aircraft in 'as is where is' condition. The cost is less. It was Rs. 5,83,295.23 per aircraft. The last lot received in 1963 were also old aircraft received under the military assistance programme and the cost is Rs. 8,14,285.71 per aircraft."

1.9. The Committee desired to know the number of accidents and incidents in which the aircraft were involved during each of the years 1954 to 1980; number of accidents due to failure of the Allison propeller system; number of casualties in each accident; and number of aircraft destroyed till date on account of (a) failure of the propeller system and (b) other reasons. The necessary information, as furnished by the Ministry of Defence is tabulated below:

YEAR-WISE ACCIDENTS/INCIDENTS DETAILS OF PACKET AIRCRAFT
(1954–80)

Year	Number of		No. due to failure of Allison Propeller		No. of Casualties	No. of Aircraft Destroyed	
	Accidents	Incidents	Accidents	Incidents		Other Reasons	Propeller Syst.
1	2	3	4	5	6	7	8
1954	2	..	..	..	..	..	..
1955	8	3	..	1	..	..	..
1956	7	2	..	1	..	..	..
1957	19	7	..	3	..	..	..

1	2	3	4	5	6	7	8
1958 .	13	3	..	..	..	..	..
1959 .	14	5	..	3	2	1	..
1960 .	26	14	..	..	4	2	..
1961 .	37	17	..	2	..	..	..
1962 .	22	..	..	..	..	..	..
1963 .	41	4	6	..	17	2	..
1964 .	47	14	9	2	5	2	1
1965 . .	40	17	2	5	1	1	..
1966 .	33	27	1	8	1	1	..
1967 .	15	29	..	7	1	1	..
1968 .	33	29	..	9	6	2	
1969 .	27	87	..	315	17	1	.
1970 .	21	76	4	28	..	..	..
1971 .	27	14	3	2	..	..	..
1972 .	38	16	1	4	7	1	..
1973 .	31	29	2	13	..	..	..
1974 .	13	26	..	5	..	..	..
1975 .	5	70	..	13	1	1	..
1976 .	5	32	3	9	15	..	2
1977 .	3	33	NA	NA	..	..	..
1978 .	3	19	NA	NA	8	1	..
1979 .	..	15	NA	NA	..	..	..
1980 . (Upto Oct.)	3	7	NA	NA	46	3	..
TOTAL .	553	595	31	130	131	19	3

1.10. The Committee desired to know whether the defects in the Packet aircraft were known to the Ministry of Defence at the time of its initial purchase in 1954 and if so, the considerations on which

the decision for procurement of the Packet aircraft was taken. In a note, the Ministry of Defence have stated as follows:

> "Packet aircraft was devoloped/manufactured with Allison Propeller System only. The aircraft acquired by us and all other countries in the world, were with this system. No defects in this system were known to exist at the time of acquisition."

1.11. Elaborating the position, a representative of the Air Headquarters informed the Committee during evidence:

> "When the manufacturers manufacturd the Packet aircraft, they started with the Allison propeller. There were 7-8 countries who were using the Packet aircraft, the larget being US Air Force. The Allison propeller did have defects like the possibility of runaway propeller, and failure to feather/unfeather in flight as also leakage of oil etc. These propellers were prone to defects right from the beginning."

1.12. Asked as to when the Ministry of Defence came to know about these defects, the Defence Secretary stated:

> "The thought that the Allison type of propeller is not quite desirable and it is likely to create problems, or that the aircraft itself is not really most suitable, seems to have come to Air Headquarters quite early, and from 1959 onwards there has been some thinking on the lines that it should be replaced. Now from 1962 onwards we have been living under warlike conditions and our operational requirements override everything else. We had to use these because nothing else was available to replace them. The search for a successor plane was thought out in 1959 and a number of evaluations have been done. It shows that the unsatisfactory conditions of the Packet aircraft was engaging the attention of the Air Headquarters and our Ministry. No doubt there were some defects, but now the change of propeller had some good effect. If you see the accident figures after 1976, it is seven only. But this aircraft had operational advantage. Paratroopers are required to work in a single unit; 42 paratroopers can be

sent out in this. When another aircraft is taken, they are very particular that the operational effciency of the army and paratrooping should not suffer. While going through the records, I find that a large number of aircraft were considered and evaluated. Under our conditions we have to operate in hot and cold climate, in the high Himalayas and we may have to do the paratrooping during war time. From 1962 onwards, we have fought three wars. We could not sacrifice operational requirements for anything. unless we get something better, we cannot replace it. If that aircraft cannot take the required number of paratroppers and we are fully satisfied that it cannot stand on a particular kind of terrain, we cannot accept it. So, unless and until a suitable aircraft is identified, I find that your question I should answer that in spite of the knowledge that this was there, we still went in for its purchase, the last instalment being in 1963. That shows that in spite of the acceptance in 1963, we went in for it because no alternative was available and another point was that the country was offering us on fairly attractive terms this aircraft which was badly required for the Air Force. So, in spite of the fact that there was some defect, until something better was found, our Air Force was to go in for it."

1.13. Asked whether the Ministry have now been able to get the successor aircraft, the Defence Secretary explained during evidence:

"We have not yet finalised it. We have been able to identify and it is under consideration and it is at the final stage of consideration."

1.14. The Committee desired to know about the steps taken by other user countries from time to time to effect improvements in the Allison Propeller System and whether any study was made and reports collected in this regard from our own sources. The Ministry of Defence intimated the Committee as follows:

"The main operator of the Packet aircraft was the USAF. A few other countries like South Korea and Taiwan who received US Military Assistance were also known to be using the aircraft. Since they were getting spare parts support from the USAF under Military Assistance Programme, they too changed over to Hamilton Standard

Propeller System. No specific reports in this regard were collected from our own sources."

1.15. The Committee enquired as to which were the other countries using this Packet aircraft, the Defence Secretary stated during evidence:

"India, Taiwan, Italy, Brazil, Ethiopia, Morocco and South Korea. All these countries have phased them out. Now only India and Taiwan are using it."

1.16. Elaborating further, the representative of the Air Headquarters stated during evidence:

"US Air Force phased them out in 1974. They released their aircrafts to the Coast Guards. They also phased them out in 1976....."

1.17. The Committee enquired whether the defects in the propellers system of the Packet aircraft were specifically brought to the notice of USAF while transacting further purchases in 1960 and 1963. In a note, the Ministry of Defence have stated:

"No. The performance/limitation of Allison Propeller System were fully known to us when additional aircraft were acquired in 1960 and 1963. There were no insurmountable problems in the maintenance/reliability of the Allison Propeller System at that time."

1.18. The Committee further enquired whether the results of various enquiries conducted into the accidents met by the Packet aircraft in which the cause of accidents was attributed to the Allison Propeller were specifically brought to the notice of USAF and if so, what the reaction of USAF was. The Ministry of Defence have replied:

"It was not necessary to bring to the notice of USAF the results of various enquiries conducted into accidents of Packet aircraft in which the cause of the accident was attributable to Allison Propeller System. The causes of such accidents were investigated by IAF specialist agencies and appropriate remedial actions initiated to avoid recurrence."

1.19. Asked as to how many times studies had been made about the safety aspect as well as the serviceability of these aircraft, the Ministry of Defence have replied that no specific studies as such had been carried out. However, individual problems relating to particular area, as and when arose, were examined/studied and measures as necessary taken to avoid recurrence.

1.20. The representative of the Air Headquarters clarified during evidence:

> "Our aim is prevention rather than doing anything thereafter. When we find that in a particular area—either on the technical side or any other side—the achievement is weak and needs improvement, we take action. For example, the engines themselves have a certain rate of failure. If the rate is more than the acceptable limit, we take whatever action is required. If the rate of failure exceeds the limit, we look into the area in consultation with the repairing agency and, if necessary, in consultation with the manufacturers. But the question asks basically about the safety aspect as well as about serviceability of aircraft—whether a major study was made in this regard. To that, the answer is 'No'. To improve the reliability of the aircraft, whenever failures take place, we make a study as to why failures are taking place."

1.21. The Committee pointed out that at the time of procurement of an aircraft, it was very essential to verify whether it was suitable for the climatic conditions and the terrain of the country. The representative of Air-Headquarters replied:

> "The defects of the propeller do not have any direct relevance to the Indian operating or climatic conditions, dust and other things. That the propeller defects in our country are due to our environment is not correct. These defects were noticed in all the countries where they were operating these propellers. But I would like to clarify one point. We have subjected the Packet aircraft to very much more rigorous conditions and that certainly would have affected the aircraft. So, in India the incidence of defect even to the rest of the air-frame is higher because of these rigorous tests to which we subject these aircrafts, for which they were never meant. We have also put a

jet engine on top to give additional power, so that if one engine goes wrong, we have this additional power available. This is because we had no other option but to use the aircraft in that particular terrain in those conditions and we continued using it. Therefore, some defects pertaining particularly to the air frame could be attributed to some kind of hazardous operation applicable to our environment only."

Replacement of Allison propeller system by the Hamilton system

1.22. The Committee desired to know the reasons for considering the replacement of the Allison system by the Hamilton system in 1972. The Ministry have stated:

"In 1972, the question of replacement of Allison propeller system with Hamilton propeller system was examined on the basis of an advice received from USAF that they were switching over to Hamilton standard propeller system on their Packet fleet for better reliabilities."

1.23. The Committee pointed out that even though the need for changeover to a different type of propeller was considered in 1972, the matter was not pursued since it was then anticipated that the aircraft would be phased out by 1973-74 although Government had earlier approved (October 1971) that the aircraft would continue in squadron service upto 1975-76. The Committee desired to know the reasons for not pursuing the proposal. In a note, the Ministry of Defence have stated:

"The availability of Government decision in October 1971 to continue the Packet aircraft, in squadron service upto 1975-76 was not enough to go in far heavy expenditure on the replacement of propeller system. Initiation, acceptance of proposal and induction of a new system itself takes about 2 years and unless long term utilisation plan for aircraft were available it was not prudent to go in for major modification programme. The Overhaul agency *i.e.* M/s. HAL (BC) who were consulted on the subject, also did not favour change-over at that stage. Unfortunately, due to uncertainty about the availability and induction of METAC aircraft, which continued for long time, no firm proposals for refurbishing of Packet fleet, which included change of propeller system and fitment of

Jet Packs to improve the reliability and flight safety of the aircraft could be processed."

1.24. Further explaining why the matter was not pursued at that time, the Defence Secretary stated in evidence:

"It was in the hope that a successor aircraft will be found and should be found by that time. But even today, because a successor has not yet been found, we are somehow carrying on. Many of these aircraft we are using have technically outlived their life and somehow we are still carrying on. If we want to have a satisfactory service, we ought to have replaced it by much earlier. But since there was no alternative, we are carrying on. The decision was taken four years ahead that is in 1973-74 in the hope that the successor would be identified and some purchase could be made and all that. That was the underlying idea in taking the decision."

1.25. Asked whether any successor aircraft had been identified, when it was decided to phase out the packet aircraft in 1973-74, the Defence Secretary stated:

"A suitable aircraft had not been found when the decision was taken, We only hoped that something will be found out."

He further added:

"In 1969, there was one aircraft under consideration and that was a Canadian aircraft, known as Buffalo and at that time we thought that possibly this would be a suitable successor for the aircraft. But there was two factors to be considered. One is the costing process and the second factor is that some problems came up for Buffalo such as the number of paratroopers etc. There was a distinct possibility at that time that a successor aircraft like Buffalo might be found out. When a weapon becomes obsolete, a decision has to be taken that by a particular date, it has to be phased out. Some of the mountain guns have to be phased out during the next two or three years. We are engaged in the task of taking a decision to find an alternative and in case it is not available or if there is delay, then we should further examine and give a new lease of life to the particular weapon system. So,

phasing out, revising a decision, giving further lease of life, these are all parts of the game."

1.26. The Committee desired to know whether the low reliability and other defects in the Packet aircraft were specifically brought to the notice of Government when the decision to continue this aircraft in squadron service upto 1975-76 was taken in October 1971. The Defence Secretary stated:

"In March 1971, we got the first information about this defect. The knowledge of the Government was that there is a new system which might be better. But then as I mentioned, we immediately consulted the Hindustan Aircraft and others concerned about what will be the cost involved and we also wanted to know whether they would like to have it replaced in view of the higher cost."

The Air officer in charge added:

"As far as an aircraft is concerned, one has to differentiate between two distinct aspects. One is clearcut, black and white, whether the aircraft is 'safe' or 'unsafe'. The second is the degree of reliability of that aircraft. We have not considered Packet as an unsafe aircraft except when we grounded the fleet in 1976 when it gave the maximum problems at that time. Otherwise, even today the latest plan issue says that the Packet will be used till 1986; that is the latest government approved plan issue. We should distinguish between safety and reliability. Here the Packet aircraft has got various systems and the power plant. The power plant consists of the engine and the propeller system. We have been taking steps to improve the reliability of the power plant. We had, in fact, put the orpheus jet engine which was completely an indigenous exercise. If the pilot has a problem on one of the power plants he can use the other as also the jet engine. Steps were taken to use Packet Aircraft continuously by various refurbishment methods and putting the Hamilton propeller was just one such programme."

The witness added:

"The business of aviation is a hazardous exercise and it is a question of the degree of reliability. Certain failures are

bound to take place. It is for the Chief of the Air staff to make an assessment of the risks involved, to take a decision regarding the acceptability or otherwise of the risk. The risk is being taken by the pilot. The question is whether it is acceptable risk or non-acceptable."

1.27. In reply to a further question, the representative of the Air Headquarters informed the Committee that the USAF changed over to the Hamilton Propeller system in 1970-71.

1.28. The Committee desired to know about the deficiencies noted in the Allison Propeller system and in what respects the Hamilton system was considered to be an improvement on the former. The Ministry have replied:

"Allison propeller system was besieged with the chronic defects of over speeding, runaway propeller and failure to feather/unfeather in flight. On piston engine aircraft, these defects are serious potential accident hazards. These recurring defects had led to the low reliability of the Packet fleet. Experience over the year showed that these defects in the propeller system were caused by failure/malfunction of regulator assembely which controls the propeller and formed a very important and sensitive part of Allison propeller system. Hamilton propeller system has done away with the regulator assembly and is free of these defects."

1.29. The Committee desired to know the level of experts who examined the proposal for change over from Allison Propeller System to Hamilton Propeller System on Packet fleet. In a note, the Ministry of Defence have informed the Committee as follows:

"The USAF advice to consider replacement of Allison propeller system by Hamilton Standard propeller system on Packet fleet was examined in consultation with M/s. HAL(BC), the Overhaul Agency. No formal Committee/ Study Team was constituted for this purpose. Considering the cost involved, the time required and the uncertainty about the long-term utilisation plan of Packet fleet, replacement of the propeller system by Hamilton Standard propeller system was then not recommended by HAL(BC)."

1.30. The Defence Secretary further elaborated the position during evidence as follows:

> "On 11th March 1971, it was brought to our notice that there was need to replace the system. On the 25th March, 1972, a decision was taken when the subject was considered by the maintenance staff and in view of their recommendation, it was decided that the proposal need not be pursued. Then the operation staff opined that the advantages that were likely to accrue were not commensurate with the most. Therefore, they did not recommend modification of the Packet. But this was not the final decision. Then on 16th May, 1973 we found that, in view of the failure of Allison propeller, the proposal was reconsidered by the maintenance staff, because this has always to be on the basis of facts and figures. Then some people visited HAL and had a discussion with them. It was felt that in view of the system adopted by them, it was not necessary to convert the fleet again. Suppose in 1971 we had decided to change it. What would have happened? Because the parts had to come from USA. Even if we had taken a decision, it was a theoretical decision, because the parts would not come. When the war was on with Pakistan, as you know, the embargo was imposed. It was lifted three years later. During this period, it was only a theoretical exercise whether we should do it or not. Even the cost is not a factor. We have to carry on. In 1971, the information came out that there was no possibility of changing it."

1.31. Asked about the reasons for the delay in taking a decision on the proposal for change over to a new propeller system, the Defence Secretary stated:

> "For one year, it was under study. If somebody has changed a system, it does not mean that we should also change it. Countries like USA can afford to do it. They have more money. We have to look into our budget and finance and all that. A serious thinking was started whether propeller system was likely to be a serious hazard to fly, whether we should do it, what will be the cost benefit ratio and so on. When the exercise was on, the embargo came. After that, the decision was taken in March 1972 and it

was a practical decision because even if we wanted it we could not change it. The best thing was not to change it."

1.32. Asked whether there was any warranty clause in the contract the Ministry of Defence have informed the Committee that there was no warranty clause in the contract with regard to subsequent replacement and servicing of any defective parts at supplier's cost.

1.33. The Committee enquired whether it was not a fact that had the decision for the replacement of Allison Propeller by Hamilton Propeller been taken as originally proposed, there would have been substantial financial savings besides the other benefits accruing from such replacement. The Defence Secretary stated during evidence:

"I have to be absolutely truthful in whatever I say. I am saying this from the record available to me. This decision was not influenced by the embargo at that time. When the Air Headquarters wanted it to be changed, it was examined. But the thinking right up to 1974 or so was that we could carry on with the old system though an effort was made to change it. Finally, the factor which influenced us was the cost benefit ratio. I now see, that the subject was discussed at the meeting with Raksha Mantri and the Chief of Air Staff stated that the Allison aircraft continued to present problems and if the problems persisted they may even be grounding them. He mentioned very strongly at that time. But again there was thinking and after that a decision was taken, to replace them by stages. First of all they stated 'Let us start with 16 and see the result'. But due to further expansion and all that it was raised to 44. Now only fifteen are left. In spite of this opinion, the cost benefit ratio deterred the Government from going in for a bigger operation rendering redundant work and additional cost. But I only add that the embargo was there in 1972 or 1973. Even if we had actually decided to go in for a new propeller it would not have made much of a difference. I find from the file that we consulted the concerned authorities, consulted HAL, the operation staff, maintenance staff and after considering all things, a balanced decision was taken."

1.34. At the instance of the Committee the Ministry of Defence have furnished a copy of the original proposal submitted by Air Headquarters to the Ministry of Finance (Defence) as contained in Note No. 3 dated 9 October, 1975, recorded on Air HQ/File No. Air HQ/84017/51/Eng D2(I) (PC to M/F). Paras 1.5 of the proposal for change of the Allison propeller system read as follows:

'The Packet fleet of the IAF has for long been be set with the problem of low reliability of the Allison propeller system fitted on the aircraft. Besides causing low serviceability of the fleet, the frequent failures of these propellers, have become serious flight safety hazard.....

The problem has been compounded by the fact that M/s. HAL has been experiencing insurmountable difficulties in overhauling regulators since the spares received from abroad were not new and a large number of these failed during final test..... Further, the rotables and spares required for sustaining Allison propellers have become scarce in the world. In fact, even the USAF have expressed their inability to supply any more governor assemblies and other matched assemblies which are essential requirements for the overhaul of the propeller regulators. Non-availability of the above items would make the Packet fleet unsustainable, since these are high consumption items, being the most failure-prone area in the propeller system.

The Super Constellation aircraft of the IAF, which uses the same basic engine as the Packet, is fitted with the Hamilton Standard Propeller Type 43H60-361. During the past 13 years of operation of the Super Constellation fleet by the IAF, the propeller system has proved to be extremely reliable. M/s. Hamilton Standard of USA had submitted a comprehensive proposal to the IAF for the conversion of the Packet fleet with Hamilton Standard Propeller Type 430-603/605 which is slightly different from the Super Constellation propeller.

A detailed study of the technical aspects of the proposed propeller has been carried out. It is found to be suitable as a replacement for the Allison propeller. The subject of conversion of the fleet has also been discussed with the Air Staff, who, while endorsing its operational suitability, has recommended immediate change over, in

view of the flight safety hazards involved in continuing with the existing propeller.

M/s. Hamilton Standard Company, USA who are the prime manufacturers of Hamilton Standard propellers have confirmed that they would provide spare parts support for Hamilton Standard propeller type 43H60-603/605 proposed for fitment on Packet aircraft. They have also confirmed that they have at their disposal sufficient quantity of new or overhauled Hamilton Standard Propellers to retrofit all the Packet aircraft in the IAF inventory."

1.34. The Committee enquired as to when exactly the Air Headquarters came to realise that the propeller system had become a serious hazard and that its replacement was no longer avoidable. In a note, the Ministry of Defence have stated:

"In October 1975, after detailed examination, Air HQ felt the necessity of replacement of the propeller system on Packet aircraft to improve its reliability and long term utilisation. A proposal to replace propeller system on 40 aircraft was approved by the Government in May 1976. Subsequently, it was in December 1976, after a serious flying accident and alarming deterioration in the reliability/serviceability of Allison Propeller that Air HQ finally concluded that replacement of Allison Propeller on entire Packet fleet was no longer avoidable. Proposal to replace propellers on the entire Packet fleet was approved by the Government in January 77."

1.36. The representative of the Air Headquarters stated during evidence that the conversion programme was started in May-June 1977 and completed in September, 1978.

1.37. The Committee enquired whether any assessment had been made of the performance of the Packet aircraft after the change over to Hamilton Propeller system. In a note, the Ministry of Defence has stated:

"Performance of Hamilton Standard Propeller system has been very satisfactory. Since the introduction of Hamilton Standard propeller in 1977, there has not been a single case of runaway propeller on Packet aircraft."

Procurement of Spares for Allison Propeller

1.38. According to the Audit Paragraph a special provision review of the spares required for the aircraft for 5 years up to June 1979 was carried out in June 1974 by an Air Force equipment depot and the requirements of spares including those for the propeller system, thus worked out, were communicated to the Air Headquarters in August 1974. After obtaining clearance of the Ministry of Finance (Defence), the Air Headquarters placed in February 1975 a requisition for 99 items of these spares (total estimated cost: Rs. 80.16 lakhs) on a foreign Government through its Embassy in India with a copy to the Supply Wing of the Indian Embassy located in the foreign country.

1.39. The Committee asked for the details of these items of spares and enquired as to how many of these items related to Allison propeller system. In a note, the Ministry of Defence have stated that all the items indented were spares for Allison propeller system.

1.40. The Committee enquired as to why the question of replacement of Allison propeller system by the Hamilton propeller system was not considered while considering the question of provisioning of spares for this aircraft in 1974. In a note the Ministry of Defence have stated:

> "In the Air Force, provisioning of spares is carried out on the basis of authorised MPE (Maximum Potential Establishment). Reviews are carried out periodically *i.e.* yearly/ half yearly to replenish the assets taking into account past consumption and planned forecast task. The provi- periodical exercise to replenish the assets. At that stage periodical exercise to replenish the assets. At that stage no proposal to replace the Allison propeller system was under examination/consideration.
>
> It is not practicable to review the major policy issues like replacement of propeller system every time the requirements of spares are reviewed for routine replenishment of spares are reviewed for routine replenishment of approved MPE."

1.41. Asked why it was considered necessary to ascertain the requirements up to June 1979 when the long term utilisation plan of

the Packet fleet itself was uncertain, the Ministry of Defence have replied:

> "The authorised MPE period for these spares was 60 months. Since review was undertaking in June 1974, it covered requirements upto June, 1979. Utilization plans for the Packet aircraft upto 1980-81 were then under finalisation (finally approved in August, 1974)".

Gear Pump Assembly

1.42. The Committee enquired about the number of aircraft and the number of Allison propeller system for which the 600 numbers of gear pump assembly were initially ordered. In a note, the Ministry of Defence have stated that the approved task for the MPE period was 33 aircraft and quantity 603 Regulator Assemblies of which gear pump is a component.

1.43. The Committee desired to know the reasons for reduction of the order for gear pump Assembly from 600 to 200 within three months. In a note the Ministry of Defence have stated:

> "The gear pump was a costly item. Accordingly even at the initial stage Air Hq. projected only qty. 600 as against qty. 1012 calculated by the Overhaul Agency for the approved task. Subsequently, this quantity was further reduced from qty. 600 to 200 as an extra precautionary measure to avoid any possible non-utilisation of this costly item. This initiative taken at the risk of possible under-provisioning resulted in saving of FFE to the extent of Rs. 29.90 lakhs."

The Defence Secretary further stated in evidence:

> "I may mention the system employed in the procurement of spares for the Packet Plans before I answer your question. We were getting the spares for the Packet plane through the U.S. Foreign Military Sales Agency, known as the F.M.S. Our indent for 89 or 90 items was sent to the United States Defence Representative in India. That is where the indent is sent for the Packet plane spares under the F.M.S., keeping the supply Wing informed. The function of the Supply Wing is to procure the supplies and to make the payments and other things. So, the channel is more or less a dual one. One is the U.S.D.S.R. and the other is the Supply Wing. Now, your question

was how was it reduced from 600 to 200 at that particular time. The answer to it is, the decision regarding the Hamilton Standard was crystallising at that time. We have supporting documents to show the decision regarding the adoption of Hamilton Standard Propellers has progressed step by step between the Maintenance Wing, Production, Operation Wing, etc. Finally when it was visualised that they were going to be used, in February 1975 indent went for 600 items and in June 1975 on our own initiative we reduced it from 600 to 200, thereby coming down by 400 items and that was done when we knew we made up our own mind that we should go in for refurbishment. Change-over of propeller, or the power plant etc., are very major changes to the aircraft and should be considered as re-furbishment of the aircraft. But the aircraft is considered safe even today. Refurbishment is done to improve the reliability. Whether to go in for refurbishment or to phase out the Packet, these are the kind of decisions which were to be taken in 1975 and Air Headquarters had made up their mind after the CAS (Chief of Air Staff) had specified in Raksha Mantry's meeting and agreed that they would go in for the refurbishment. We agreed that we would change only one squadron and not the rest. We did not want to go on refurbishing the whole Packet fleet, all the forty aircraft. Finally, in 1976 it was agreed that a part of the Packet fleet will be changed|refurbished and corresponding action was taken to cut down on the obsolescent system."

1.44. Asked as to why the order for gear pump Assembly could not be cancelled totally in June, 1975 itself, a representative of the Air-Headquarters stated during evidence:—

"Earlier the thinking was that we will change over only partially and not the entire fleet because of the cost involved. Out of 59 packets, the decision within Air Headquarters was that we will go in for only one squadron, *i.e.* 16 with Hamilton Standard propeller. It was in May.' 75. Between May and September/October, the decision between the Vice-Chief, Deputy Chief and Air Force Officer Maintenance was that we will go in for 44 aircraft with Hamilton propeller, *i.e.*, almost 3 squadrons. There was a time lag required for change-over from Allison to Hamilton. We had to keep some aircraft with Allison propellers going because the planes which were not going to be

modified were also to be kept going. Hence we did not cancel the entire lot. If the decision was clear cut, then we would have cancelled all."

Other spares

1.45. The Committee desired to know the reasons for not reviewing the requirements for 98 other items of spares for Allison Propeller, when in June 1975, the requirement of 'gear pump assembly' was reduced from 600 to 200 and again subsequently in February 1976, when the Air Headquarters informed the Supply Wing that the order for 'gear pump assembly' might be treated as cancelled. In a note, the Ministry of Defence have stated:—

"The reduction of order from Qty 600 to 200 was sought purely as an extra precautionary measure to avoid any possible non-utilisation of this costly item with large qty. even though the requirements had been calculated correctly.

The cancellation of the balance qty. 200 in February 76 was based on the proposal for change-over of propeller system then under consideration. The proposal then under examination envisaged fitment of new propeller system only on 40 Packet aircraft and to continue to operate about 15 aircraft with the then existing Allison propeller system. This apart from reducing the expenditure on new equipment to bare minimum essential, was with a view to utilisation of spares of old propeller system both in stock as well as dues in against outstanding orders. Spares were required not only to sustain the 15 aircraft proposed to be left with Allison propeller system but also to sustain the Packet fleet till modification of 40 aircraft was progressively completed by September 76. Therefore, at this stage there was no necessity of reviewing the requirements of dues-in for the purpose of cancellation as the proposal under consideration envisaged utilisation of stocks and dues-in.

However, in the meantime the reliability of the Allison propeller system deteriorated alarmingly. There were as many as three serious flying accidents during 1976 due to malfunctioning of the propeller system. In one of the accidents 15 Air Fore/Army Personnel were killed. These developments forced a situation under which the Packet fleet had to be grounded and decision taken to fly this aircraft only after modification of the entire fleet with Hamilton standard propeller system. While taking the

decision, we were fully conscious of the assets/dues-in of Allison propeller spares and their consequent redundancy but this had to be accepted as a deliberate decision in the national interest and those of aircraft flight safety under the then prevailing circumstances.

The redundancy of spares is a usual phenomenon whenever any aircraft/major system is withdrawn from the service and is not peculiar to IAF only. In the present case, the situation could not be anticipated/foreseen"

1.46. Referring to the three serious flying accidents during 1976 as a result of which the Packet fleet had to be grounded, the Committee enquired as to why the indent for spares was not cancelled even at this stage. In a note, the Ministry of Defence have stated:

"The serious flying accidents in 1976 did result in the grounding of fleet by Air HQ in December, 1976. However, cancellation of dues-in could not be initiated till Government approval to the replacement of propeller system on entire Packet fleet became available. The decision in this regard became available to Air HQ in Jan., 1977 on telephone and immediately action was initiated to seek cancellation of the outstanding dues in even without waiting for formal sanction."

Procedure for procurement of spares

1.47. The Committee desired to know the procedure for procurement of the requirement of the Air Force from abroad. The Ministry of Defence have stated in a note:—

"The Air Force requirements of spares are worked out on the basis of periodical reviews. The requirements are vetted by the specialists over-looking overhaul/maintenance with a view to ensure their correctness. The same are then submitted to Ministry of Finance (Def/Air) for scrutiny and approval. After the requirements are approved by the Ministry of Finance (Def/Air), the foreign exchange is released out of bulk allocation for the Air Force. The requirements are approved by the Ministry of Finance (Def/Air), the foreign exchange is released out of bulk allocation for the Air Force. The requirements are then projected on Supply Wing Washington DC in the form of indents on the format as laid down by Department of Supply (DGS&D).

However, in case of the requirements obtained through USAF on Government to Government basis, the requirements

after approval by Min. of Fin. (Def/Air) are projected on US Embassy, New Delhi on single line cards. Copies of such requirements are endorsed to Supply Wing, Washington DC who are called upon to progress supplies with HQ USAF Pentagon, Washington DC of critical items and also make payments of periodical USAF Bills."

1.48. Asked about the procedure followed by the Supply Wings of our Missions abroad for obtaining the requirements of the Air Force and how they maintained co-ordination with the Air Headquarters, the Ministry have stated:

"On receipt of indents, Supply Wing, Washington DC floats open tender enquiries to manufacturers and US suppliers on their approved list. On receipt of quotations, contracts are finalised by Supply Wing on the basis of competitive prices.

However, in case of supplies obtained from the USAF under Foreign Military Sales (FMS) arrangements, there are no formal contracts for specific items demanded. An open end requisition Military Sales Case is established for a given value normally valid for a period of one year and Air HQ goes on placing single line demands on as required basis (of course, after having obtained concurrence of Min. of Fin. (Def/Air) till the expiry of validity period of FMS Case or complete utilisation of funds allocated, whichever is earlier. The USAF makes supplies either out of their own stocks, if available without prejudice to their own requirement or arranges procurement from the US trade sources/manufacturers to meet our demands. There is no control over the prices charged by the USAF since these become known only after supply of the item. However, the supplies under the FMS arrangements are on no profit basis."

1.49. It is seen from the Audit Paragraph that in June 1975, the Air Headquarters advised the foreign Government's Embassy in India to reduce the order for 'gear pump assembly' from 600 to 200 numbers, but failed to advice the Supply Wing of the Indian Embassy abroad simultaneously of this reduction. This reduction in quantity was reiterated by the Air HQ in October, 1975. The Committee enquired as to why the Supply Wing of the Indian Embassy

was not apprised simultaneously of this reduction and whether responsibility had been fixed for this lapse. In a note, the Ministry of Defence have stated:

> "The Supply Wing was not to take any action in the case. Nevertheless copies of all communications except the one dated 16 June 1975 were endorsed to Supply Wing, Washington DC for information. Our request for reduction from Qty. 600 to 200 was duly actioned by the USAF and therefore there was no question of fixing responsibility for any lapse."

1.50. It is further seen from the Audit Paragraph that in December, 1975, the Supply Wing of the Indian Embassy requested the Air Headquarters to review the requirement of 600 Nos. of gear pump assembly, which appeared to be excessive. The Committee desired to know the basis on which the Supply Wing had come to realise that the quantity of gear pump assembly ordered was excessive, as they were obviously unaware of the request already made by the Air Headquarters to the foreign government in June 1975 to reduce the quantity from 600 to 200 numbers. In a note, the Ministry of Defence have stated:

> "Air HQ letter dated 25 October 1975 advising reduction of Qty of Gear Pumps from 600 to 200 was endorsed to Supply Wing, Washington DC. Thus Supply Wing, Washington DC was aware of our requirements. However, it appears that Supply Wing, on receipt of a back order listing from the USAF, considered the requirements as excessive, considering the high cost, large Qty. involved and extended lead time."

1.51. The Committee enquired why it took two months for the Air Headquarters to send a reply to the Supply Wing saying that the requirement had already been reduced to 200 numbers and that on further review the same should be treated as cancelled in toto. The Ministry of Defence have stated:

> "The Supply Wing, Washington DC letter was dated 23 December, 1975. The same was sent by post and received in Air HQ on 03 Feb. 1976. A reply to the same was sent on 06 February, 1976 (within 3 days). There was no delay of two months in sending a reply...."

1.52. The Committee desired to know as to why the cancellation of order for the gear pump Assembly was not intimated to the US

Embassy, as was done at the time of placement of initial order in June 1975. In a note, the Ministry of Defence have stated:

> "The cancellation advised in February 1976 was in response to Supply Wing, Washington DC communication dated 23 December, 1975 addressed to HQ USAF with copy to Air HQ. The letter was not endorsed to US Embassy in New Delhi. Accordingly, our reply intimating cancellation of the item was also not endorsed to US Embassy, the matter being progressed directly between Supply Wing Washington DC and USAF."

1.53. Asked if responsibility had been fixed for the lapse, the Ministry have stated:

> "As explained above the reply was not endorsed to US Embassy as the communication from Supply Wing was not addressed to them. There was no lapse, hence no responsibility fixed therefor."

1.54. The Audit Paragraph has pointed out that in February 1977, the supplying agency informed the Indian Embassy that it was in receipt of the request for cancellation, but as the item was still on contract, almost 100 per cent termination charges would be leviable in the event of cancellation of the contract. While the matter was under correspondence with the foreign Government, the supplying agency despatched the reduced/quantity of 200 numbers of the item (total cost: Rs. 14.95 lakhs) during June- August 1977.

1.55. The Committee enquired why no follow-up action was taken either by Air Headquarters on the Supply Wing of the Indian Embassy for as long as one year i.e. from February 1976 to February 1977, to get the order for gear pump assembly cancelled in toto, as advised. In a note, the Ministry of Defence have stated:

> "In response to their communication dated 6 February 1976, Air HQ had received a copy of the telex message dated 20 February 1976 sent by Supply Wing, Washington DC to USAF intimating the cancellation of the requirements of Gear Pumps. Since acknowledgement of action desired by Air HQ became available, no further follow up action was considered necessary.
>
> As per Supply Wing, Washington DC, the telex message of 20 Feb. 76 which was a follow up to their earlier communication of 23 Dec. 75 was acknowledged by the receiv-

ing agency on the telex machine 'feed back' and as per the prevalent practice no further follow up was initiated.

However, because of the incident under observation, instructions have now been issued that a written confirmation from USAF should be invariably obtained in all cases of cancellation of order."

1.56. The Ministry of Defence had intimated Audit in October 1979 that it was not a failure of the follow-up action, but failure of the communication system that resulted in no action being taken by the supplier, on the request for cancellation of the item (gear pump assembly). The Committee sought elucidation with regard to the failure of the communication system as stated above. In a note, the Ministry of Defence have stated:—

'The main reason advanced by the USAF about not accepting any responsibility for not initiating timely action for arranging cancellation of Gear Pump qty 200, is that they have no record of receipt of Supply Wing letter dated 23 Dec. 75 and telex dated 20 Feb. 76. Both the communications were sent by the Supply Wing, Washington DC to USAF through normal accepted communication channels then in force and about which there had been no complaints.

When in Dec. 75, the Supply Wing received a bulk order listing from USAF, they informed them vide their letter of 23 Dec. 75 to go ahead with procurement of all items except the Gear Pumps for which a further communication was to follow. Immediately on receipt of a reply from Air HQ they sent another telex of 20 Feb. 76 referring to their earlier of 23 Dec. 75 intimating cancellation of order for Gear Pumps in toto. As per Supply Wing, tre message was acknowledged by the receiving agency on their telex machine as feed back. Under normal circustances, this is considered adequate confirmation of the message having been received at the other end. Unfortunately as per the USAF, there is no trace of receipt of both the communications-letter dated 23 Dec. 75 and telex of 20 Feb. 76 and hence they accept no responsibility for having not initiated cancellation action. Thus it was a failure of normal accepted communication channel that resulted in no cancellation action by USAF, even though there was no certainty that the cancellation would have been agreed to without adequate cancellation charges."

1.57. Elucidating the point further, the Defence Secretary stated during evidence:

> "There are two points. First is that, an intimation was given to the Supply Wing. The Supply Wing sent the intimation through a particular kind of system which in the past was found to be satisfactory. An acknowledgement was received that our cancellation had been registered. So, we presumed that everything was all right. Now, the question arises; did we take any double precaution or not? The Second thing is whether there is any loss because of our not taking prompt action of double precaution. There is no question of loss because of this because if we had actually done it in a most careful fashion, there is a documentary proof that the people there had already placed indent on some firms.'

1.58. The Committee desired to know if under the given circumstances, the Ministry of Defence could have taken any steps to avoid or at least to minimise the loss. The Defence Secretary stated:

> "....There is no denying the fact that there was loss. The loss in concrete terms was Rs. 14.95 lakhs plus Rs. 25 lakhs —making a total of Rs. 40 lakhs. One question is, could this be avoided? If it could have been avoided, then the right question is, who was the person responsible for it. The question is, whether there was any misfeasance or nonfeasance or malfeasance in this regard.
>
> Before going into that, I will answer it this way, I have already taken note of the view that in all these cases there should be double precaution taken. Every precaution should be taken in this matter. That is the normal thing. If we indent to ISM if there is Indian agency, we should inform them. If it is ISM, we should keep them informed. Double precaution is always necessary. It is apparent that procedurally we should have done something better. After going through the record I have this documentary proof. Even if all these things had been done, there was the already committed 100 per cent charge; that would have been charged. We have got here the 1978 communication. That was because of this mistake, and not because of double-precaution not being taken, not being followed up in writing and so on. We have been put to no loss.... The point is, whenever indents were given first time, in

the beginning, no luxury was there in indenting. There was this normal requirement demand of 1016. At the level of Air HQ a Junior Officer thought, you say, 1016 but you will actually be in need of only 100 or 400 or 500. So, the Junior Officer thought, let us bring it down. This view was accepted by the Senior Officer also. At that stage it was brought to 200. So, because of his intiative the original order for 1016 was brought down to 200. Even after that at the earliest time we tried to do something, but it was too late...."

1.59. The Committee called for copies of all correspondence exchanged between the Air Headquarters/Ministry of Defence, the US Government and the Supply Wing of the Indian Embassy in Washington with regard to the procurement of 600 nos. of gear pump assembly, reduction of the order to 200 nos. and its subsequent cancellation in toto. Relevant extracts therefrom having a direct bearing on the points at issue are reproduced below:—

"1. Paragraphs 1 to 5 of Letter No. Air HQ|84404|125A(FC)|7416815|FS|R BAN|Eng B2(EQ) dated 6-12-1977 from the Air Headquarters to USDSRI Embassy of USA, New Delhi:

"Qty. 600 items Gear Pump FSN 1610-313-5320 were requisitioned *vide* document No. DINO 4450450008 under FMS case INRAH in February, 1975.

In June 1975, we sent a cancellation and a modifier to reduce Qty. on order from 600 to 200. We were then advised by the USAF that Qty. 600 of the item are on order with EDD Dec. 75 and that modifier cannot be used to reduce the qtys. and that the matter should instead be taken up through a letter. The position was, therefore, clarified through a letter dated 19 June 75 to USDSRI, that we want reduction in qty. on order from 600 to 200 each.

In Feb. 1976, Air HQ received a copy of ISM, Washington letter dated 23 Dec. 75, wherein in response to query on back order listing, they had told Warner Robins AFB to proceed with the supply action on back order items except for DINO 4450450008 pertaining to subject item. This was followed by a telex dated 20 Feb. 76 from them to Warner Robins AFB requesting that the demand be

treated as cancelled in toto. This telex was acknowledged by NAVCOMST Washington on telex machine. There was no further query from USAF about their inability to accept cancellation or otherwise and it was presumed that the cancellation request has been accepted.

However, in March 77 in response to our request made on 18 January 77 for cancellation of all Allison spares, we were told vide a message from NAVCOMST received through Supply Wing, Washington that the cancellation of item would involve 100 per cent cancellation charges. We immediately informed ISM, Washington that the item stood cancelled as per their letter of 23 Dec. 75 and telex of 20 Feb. 76 to Warner Robins AFB. USDSRI was also requested vide our letter of 20 May 77 to intervene and arrange cancellation.

The HQ USAF in their letter dated 19 Sep. 77, have intimated that there is no record validating US Government receipt of ISM, Washington telex of 20 Feb. 76 and that no verification was provided cancelling item DINO 4450450008.. As would be seen from the Embassy of India, Washington letter of 21 Nov. 77 their telex of 20 Feb. 76 was acknowledged by the NAVCOMST, Washington (the Channel for telex communication with USAF) on telex machine answer back. This was in addition to their earlier letter of 23 Dec. 75 sent by post."

2. Para one of letter of 18-4-1978 from the Embassy of the United States of America, Office, Defence Supply Representative, India to the Air Headquarters, New Delhi reads as follows:—

"The subject matter has been examined by HQ. A. FALD, Wright Patterson AFB, Ohio and this office has been advised that IAF requirements of quantity 200 Gear Pumps against subject document number was processed by the USAF to a civilian contractor. Any subsequent cancellation of the order can only be carried out by the contracting parties subject to mutual agreement between the seller and the buyer. Cancellation of requisition by the requestor alone is of no avail unless the US Government provides verification of the cancellation after negotiation with the

contractor. Therefore, notwithstanding your cancellation request of 20 Feb. 76 cancellation of the items was not possible at that stage, without contract terminating charges of nearly 100 per cent."

3. Para 4 of the Aidmemoire prepared by the Deputy Director General (Supply) Supply Wing, Embassy of India, Washington DC, reads as follows:

"On taking up the matter with Pentagon, we were advised that there was no record validating USAF receipt of our February 20, 76 message. This matter was discussed in person with the officials of Pentagon and WRAFB during our discussions held with them on 28th June, 1978 and the only point brought out to our notice was non-receipt of telex message of 20th February, 1976 by WRAFB, Georgia."

4. Letter dated 17-10-1978 from Supply Wing, Embassy of India, Washington addressed to the Director of Military Assistance and Sales, DCS/L&E, Headquarters United States Air Force, Washington DC states *inter alia.*

It is not quite correct to say that a request for cancellation was not received until about 18 Jan. 1977 and that the order was not cancelled in timely fashion, particularly when the supplies were actually made as late as June through August 1977. You will appreciate that when the supplies were made during June—August, 1977, the point at issue was not the cancellation itself but the termination charges."

5. Letter dated 28-11-1978 from Mr. Bronson E. Percival, Department of State, Washington to Deputy Director General (Supply) Embassy of India, Washington reads as follows:

"After receipt of your letter of October 19, I again discussed the cancellation of the Air Headquarters/ Government of India requisition for gear pump (DINO 4450450008) with the concerned officials in the US Departent of Defence. The fundamental problem is that the Defence Department cannot legally accept a cancellation unless they receive instructions to cancel an order and then, by return cable or letter

to the relevant Foreign Embassy confirm the cancellation. USAF/Warner Robins AFB states that they did not receive your letter of December 23, 1975 or your telex of February 20, 1976. Their records show that a request or cancellation was not received until about January 18, 1977.

I regret the unfortunate misunderstanding which led to the purchase of these gear pumps, but there is no basis under US law which would allow the U.S. Government to waive any of the costs associated with this purchase."

Utilisation of surplus spares:

1.60. The Committee enquired as to how the 99 items of spares were proposed to be made use of and the steps taken for the safe preservation of these spares. In a note, the Ministry of Defence have stated:

'Consequent upon withdrawal of Allison propeller system from service all unutilised spares for this system have been declared obsolete as per Government orders and are in the process of being disposed of through DGS&D as per the applicable procedure."

1.61. The Committee further enquired whether users of Packet Aircraft had been contacted to ascertain if they needed these spares. The representative of Air Headquarters stated:

"The only other users of Packet Aircraft today are Taiwan but they also are not using Allison propellers. So, there is no utility."

Procurement of obsolete and defective spares:

1.62. During evidence, the Committee drew the attention of the representatives of the Ministry to the problems faced by HAL in over-hauling the regulators because of the defects in imported spares and enquired about the circumstances in which obsolete and defective spares came to be procured. The representative of the Ministry of Defence stated:

"This is in fact the problem of Allison propeller. It has got a C-2 regulator which rotates along with the propeller

and it has a governor assembly and matched assemblies. Although the governor assembly and the matched assembly can be individually serviceable, when the whole thing had been put together, our experience has been that the final regulator assembly was not passing the spin test at HAL. It shows that, perhaps, due to repeated overhaul or repeated reclamations, we were not getting the performance out of the C-2 regulator assembly as we got in 1954. It is a progressive deterioration of the assembly."

1.63. The Committee sought clarification whether the progressive deterioration of the spares had taken place before or after their procurement. The representative of the Air Headquarters deposed:

"The individual spares, as supplied are certified as serviceable, but we found, particularly during the last three or four years... Before putting that in that particular matched assembly test, an individual test is done to see whether it is serviceable or not. But the combined safety test of the Matched assembly and the governor revealed that it was not giving the service they wanted it to give. In other words, about 35 or 40 of them passed the final test. That was the situation."

1.64. Asked whether these spares were old or new at the time of procurement, the Defence Secretary stated:

"...they had started cannibalisation of spares and they started giving us the spares from out of the aircraft taken as destroyed and things like that. So, our reliability test of these spares parts had definitely deteriorated. This is a normal phenomenon in the case of the aircraft which is phased out by a particular country because they have no new production line. After some stage we were not given new or second-hand spare parts. They were warning us that after one or more years, they would not be able to give us the spares at all. The reason was that their production line had stopped in that country. Unless we have the capacity to produce that here, we are also compelled to phase it out. In this particular case, the possibility is that because the spares taken are from cannibalised parts and they have been put to a lot of overhaul etc., the quality of spares was

not as good as one would like that to be. In the US they found the spares all right and they gave them to us.

When we examined them we found that the serviceability was not as good as we expected that to be. There was not stipulation under which we could claim any compensation. My feeling is that there is no such thing that when they sell such old things, they would give a reasonable guarantee saying that they had tested it and found that all right and that we might test it and check it. They would not give a guarantee for a longer time. If anything goes wrong, we shall have to check up. This point can however be checked as to whether there was any possibility for claiming compensation for the spare parts or not...First of all we had been getting second-hand spares also when new spares were not available. They gave us the cannibalised spares. It means the second-hand spares. It is not that new things are not being produced. In their country the production line was closed in seventies...we were compelled to purchase the second-hand articles indeed."

1.65. In a further note on the subject, the Ministry of Defence have informed the Committee as follows:

"Shares for Allison Propeller System were obtained from PUSAF under FMS (Foreign Minlitary Sales) arrangements. The supplies were made under standard terms and conditions applicable to all countries obtaining supplies from USAF under FMS arrangements. As per FMS procedure, the USAF are to make supply of items in fully serviceable condition. These could be 'NEW' or overhauled/retrieved from old untis...The failure during final test mentioned in the paragraph relates to the failure of complete Regulator Assay (most sensitive and critical components of Allison Propeller System) after repair/assembly from the various components procured from the USAF. Even though the components/sub-assemblies were found to be fully serviceable when inspected/tested individually, the regulator assemblies assembled therefrom often failed on final test and this compounded the problem of production of Regulator Assays."

Fitment of Orpheus Jet Pack in the Packet aircrafts:

1.66. Note No. 3 recorded on Air HQ./File No. Air HQ/84017/51-Eng-B2(T) (PG to MF) *inter alia* contained the following proposal for fitment of orpheus Jet Pack in the Packet Aircraft:—

No. of packet aircraft already modified for fitment of orpheus Jet Pack	16
No. of Aircraft to be modified	28
Cost of modification of 28 aircraft (including Rs. 32.20 lakhs in FFE)	Rs. 181.72 lakhs

1.67. The Committee desired to know the reasons which led to the decision to modify 28 Packet aircraft with orpheus Jet Pack. In a note the Ministry of Defence have stated:

> "Jet Pack is an additional engine. It provides additional thrust which enhances the safety margin of aircraft in the event of an engine failure. It also enables fast climb to safe altitude after take off specially when operating from advance landing grounds in J&K area. Some aircraft were already fitted with the Jet Packs and the experience was highly satisfactory. With a view to long term utilisation of the Packet fleet it was decided to fit Jet Pack on all the remaining Packet aircraft, which then worked out to 28."

Expenditure on Maintenance of Packet Aircraft:

1.68. Asked as to how many of the Packet aircraft were really air-worthy, the representative of the Air Headquarters stated in evidence:

> "We have about 34 in the flying unit and the balance are in the repairing agency wings. We get a serviceability of around 50 per cent of the fleet, which is very reasonable for this type of aircraft."

Asked whether the Air-Headquarters carry out periodical assessment of the air-worthiness of these aircraft, the representative of the Air-Headquarters stated:

> "We do practically daily and weekly assessment of the maintainability of this aircraft and how long we can sustain it. We keep making this assessment from the point of

view of the technical factors and logistic and supply factors."

1.69. Elucidating the position further, the Defence Secretary stated during evidence:

"We are putting up a very brave face with the antiquated aircraft. I have myself seen the performance—the way they dropped parachutes. Their performance was extremely good. Of course, the credit should go to the pilots. Even from these, old, antiquated aircraft, they still try to get the best."

1.70. Asked whether the aircraft was considered to be a flying hazard, the representative of the Ministry stated:

"The Air Force had not considered this aircraft as a flying hazard. It is a risk which the Air Force had accepted."

1.71. The Committee enquired whether the Air-Headquarters had at any time thought of disposing of the Packet aircraft or of transferring them to the civilian authorities. The Defence Secretary replied:

"The question is: once we acquire the other one, what we shall do about this. A very very careful decision has to be taken. I will give my reason. For instance, Canberras and Hunters are to be replaced by the newer generation, and when the newer generation is very much there, I doubt whether it will be wise to dispose them of if some country wants it—and many countries are wanting. I notice that Canberra is doing excellent work in the USA today; they are not using it for fighting, but they are using it for mapping and other things. So, I doubt whether it will be wise to dispose them of at a very cheap price if they can be profitably utilised elsewhere. But as far as Packet is concerned, I have my own doubt because it is so old and also considering it maintainability, the cost of repairs and added to it the spares which will also become a problem. So, whether we should keep it indefinitely is a big question mark. But definitely if we get a market, we may think of disposing of depending on what type of offer we may get."

1.72. The Committee desired to know the annual cost of maintenance of each Jacket aircraft during the last 10 years. In a note, the Ministry have furnished the following information:

Year	Total Maintenance Cost (Rs. in lakhs)
1973	544·99
1974	923·23
1975	1484·91
1976	703·74
1977	381·61
1978	1122·96
1979	610·34
1980 (Upto Oct. 80)	458·22

1.73. A number of new transport aircraft known as Packet aircraft were acquired from USA by the Indian Air Force in 1954. Further additions to the fleet were made in 1960 and 1963. The 1960 batch consisted of old aircraft in 'as is where is' condition as also those procured in 1963 which were received under the military assistance programme in the wake of the Chinese aggression.

1.74. The Committee find that the new aircraft procured in 1954 met with a series of accidents|incidents right from the time of their induction into service. Of the number of accidents/incidents in which these aircraft were involved during each of the years 1954 to 1959 (i.e. before procurement of the second batch of old aircraft), as many as 8 incidents were attributable to the failure of the Allison propeller system. During the years 1960 to 1962 i.e., before procurement of the third batch, the rate of accidents/incidents rose sharply and two of the incidents were caused by the failure of the propeller. The history of operation of this aircraft right through 1976 when the entire fleet was grounded unfolds an unfortunate chapter of accidents incidents on a large scale which took a toll of as many as 131 precious lives and 22 aircraft. Loss of three of these aircraft was attributable to the failure of the propeller system. Over 5 per cent of accidents and 24.9 per cent of incidents occurring during the years 1954 to 1976 were on account of the Allison propeller.

1.75. The Committee consider it extremely unfortunate that the Ministry of Defence went ahead with the procurement of Packet

aircraft and that too old aircraft, in 1960 and again in 1963 without making a critical evaluation of itsp performance. It is surprising that no specific study about the reliability/serviceability of the aircraft was ever made it spite of the fact that the aircraft including the new ones were involved in a series of acidents|incidents right from the time of their induction into service.

1.76. The Committee consider that before taking the decision to procure old transport aircraft which were meant for ferrying the troops over difficult terrain, a careful evaluation of its performance and deficiencies should have .been undertaken. This is a serious lapse. The Committee expect that in future whenever new type of aircraft are acquired, their suitability in the Indian conditions particularly in the context of the role envisaged for them, would be carefully considered before bulk purchases are made.

1.77. The Committee find that one of the problem areas in the Packet aircraft has been Allison propeller system which has been "besieged with the chronic defects of over-speeding, runaway propeller and failure to feather/unfeather in flight. On piston engine aircraft, these defects are serious potential accident hazards".. It was admitted in evidence that "these propellers were prone to defects right from the beginning." The Committee were also informed during evidence that "the thought that the Allison type of propeller is not quite desireable and it is likely to create problems or that the aircraft itself is not really most suitable, seems to have come to Air Headquarters quite early and from 1959 onwards there has been some thinking on the lines that it should be replaced." If this were really so, the Committee find it strange that it was not considered necessary to bring to notice of USAF results of various enquiries conducted into accidents to Packet aircraft particularly those in which the accidents/incidents were attributable to the Allison propeller system.

1.78. It was only as late as in March, 1971 that the low reliability and other defects in the aircraft were specifically brought to the notice of Government by Air Headquarters. However, the matter seems to have been taken serious note of only in 1972 when the question of replacement of Allison propeller system by Hamilton propeller system was examined on the basis of an advice received from USAF that they were switching over to Hamilton standard propeller system on their Packet fleet for better reliability. It has been admitted that 'no specific reports in this regard were collected from our own sources'. It is therefore evident that in spite of the

large scale failure during all these years, neither the Air HQs nor the Ministry of Defence took any initiative to make inquiries from other foreign Government which were using this aircraft so as to ascertain their experiences and how they had dealt with the problems that arose particularly with regard to propellers. This denotes not only lack of interaction between the field units and the Air HQs on the one side and the Ministry of Defence on the other but also a singular lack of seriousness at all levels in devising effective steps to remedy the defects and deficiencies in the aircraft, which continued to plague the operations of the Air Force for over two decades.

1.79. The Committee find that the proposal to replace the Allison propeller with the Hamilton propeller system was considered in March 1972 but the matter was not pursued since it was then anticipated that the Packet aircraft would be phased out in 1973-74. This argument is apparently unconvincing for the reason that it had already been decided by Government in October, 1971 to continue the aircraft in squadron service upto evidence that even if they had decided to go in for Hamilton propeller as proposed by USAF in 1972, it would not have made much difference because of the embargo placed by US Government on the export of military hardware in the wake of the war with Pakistan. At the same time, he averred that the decision was not influenced by the embargo but was based on a study of the cost benefit ratio undertaken in consultation with HAL, Bangalore.

1.80. Three and a half years later i.e. in October 1975, the Air Headquarters, after detailed examination, felt the necessity of replacement of the propeller system on Packet aircraft to improve its reliability and long-term utilisation. A proposal to replace the propeller system on some aircraft was approved by Government in May 1976 but it was only in December, 1976 "after a serious flying accident and alarming deterioration in the reliability/serviceability of Allison propeller system that Air Headquarters finally concluded that replacement of Allison propeller system on entire Packet fleet was no longer avoidable." The proposal to replace the propellers on the entire fleet was approved by Government in January. 1977.

1.81. The Committee thus observe that decision in the matter was unduly delayed. Considering that the IAF had been long beset with the problem of low reliability of the Allison propeller whose failures had become serious flight safety hazard, the Committee are

of the view that the Ministry of Defence should have taken effective steps to replace the Allison propeller immediately after the embargo was lifted. There is no evidence of any such efforts having at all been made.

1.82. The Committee find that the Super-Constellation aircraft of the IAF which has the same basic engine as the Packet, is fitted with the Hamilton standard propeller and that during the last 13 years of operation of the Super-Constellation fleet by the IAF, the propeller system has proved to be extremely reliable. It is, therefore, obvious that matters were allowed to drift till the flash point was reached.

1.83. The Committee find that the search for a successor to the Packet aircraft which started as early as in 1959, is still on. The Defence Secretary stated in evidence that "many of these aircraft we are using have technically outlived their life and somehow we are still carrying on. If we want to have a satisfactory service, we ought to have replaced it much earlier.....We are putting up a very brave face with the antiquated aircraft....even from these old, antiquated aircraft, they still try to get the best." The Committee were however given to understand that the successor aircraft had since been identified and the proposal was at the final stage of consideration.

1.84. The Committee note with concern that the Ministry of Defence have been unable over the last as many as 22 years to locate a suitable transport aircraft in replacement of the Packet aircraft which have far outlived their utility. The Committee expect that the decision in this regard would be announced without any further delay.

1.85. The Committee learn that on the basis of a special provision review of spares required for the Packet aircraft over the five year period ending June 1979, a requisition for 99 items of spares relating to the Allison propeller system (total estimated cost—Rs. 80.16 lakhs), was placed in February, 1975 on the USAF through the US Embassy in India. As pointed out by Audit, this resulted in wasteful expenditure of about Rs. 15 lakhs. Besides, other items of spares valuing about Rs. 25 lakhs became redundant due to changeover to the Hamilton propeller system.

1.86. According to the Ministry, this was necessitated because the utilisation plans for the Packet aircraft upto 1980-81 were then under finalisation (finally approved in August, 1974). The Ministry

have also contended that "it is not practicable to review the major policy issues like replacement of propeller system every time the requirements of spares are reviewed for routine replenishment of approved MPE (Maximum Potential Establishment)". Both these arguments are not quite convincing since the need for switching over to the Hamilton propeller system had already been recognised and the proposal would in fact have been implemented but for the embargo placed by the US Government. The Committee consider that the Ministry of Defence should have proceeded in the matter of procurement of spares with caution. It is evident that the check which the Ministry/Air Headquarters were expected to exercise in this case was not applied and the inflated requirements submitted by the lower formations were approved. How defective the assessment of requirements of spares was, is seen from the succeeding paragraphs.

1.87. The Committee find that the above stated order (February, 1975) for spares contained an order for 600 Nos. of gear pump assembly. In June 1975 i.e. within a short period of 4 months the order for this item was reduced to 200 nos. and cancelled in toto in February, 1976. It is surprising to note that "the reduction of order from qty. 600 to 200 was sought purely as an extra precautionary measure to aviod any possible non-utilisation of this costly item with large qty. even though the requirements had been calculated correctly.". The contradiction is too obvious to merit comment.

During evidence, it transpired that it was on the initiative of a junior officer in the Air Headquarters that the original order was brought down from 600 to 200.

The Ministry's note goes on to say that "the cancellation of the balance qty. 200 in February, 1976 was based on the proposal for change-over of propeller system then under consideration."

1.88. The conclusion that emerges is that factors having a vital bearing on the provisioning of spares were ignored at levels charged with taking an overall view of the situation. The Committee would emphasise the imperative need for revamping the procedures for assessment of requirements of spares and stores and their scrutiny at higher levels so that such glaring cases of over-provisioning could be avoided.

1.89. The Committee observe that the US Government have declined to accept any responsibility for not initiating timely action

for arranging cancellation of 200 Nos. of gear pump assembly on the ground that they have no record of receipt of Supply Wing letter dated 23 December, 1975 and telex dated 20 February, 1976 which according to the Ministry were sent "through normal accepted communication channels then in force and about which there had been no complaints."

.1.90. The Committee find that the communication dated 6 February, 1976 cancelling the item in toto was not endorsed to the US Embassy through whom the initial order was placed. Further, the telex message sent by the Supply Wing, Washington to USAF on 20 February, 1976 cancelling the order was not followed up with a formal communication in confirmation of the message. Accepting that there was a failure of communication in this case, the Ministry have stated that instructions have since been issued that a written confirmation from USAF should be invariably obtained in all cases of cancellation of order.

1.91. The Committee consider that the loss of Rs. 15 .lakhs arising from supply of 200 Nos. of gear pump assembly is attributable to the failure of the concerned authorities to take timely follow-up action which any prudent buyer would have taken in the given circumstances.

1.92. The Committee further find that the failure of the concerned authorities to review the requirements of 98 other items of spares both at the time of curtailing the requirements of gear pump assembly in June 1975 and subsequently while cancelling the item in toto in February, 1976, resulted in spares of the value of Rs. 25 lakhs becoming redundant.

1.93. The Committee consider that the above lapses call for detailed investigation with a view to fixing responsibility. Results of the investigation should be Reported to the Committee.

1.94. Yet another unhappy aspect of the case is procurement of obsolete and defective spares.. The Committee are given to understand that "M/s. HAL has been experiencing insurmountable difficulties in overhauling regulators since the spares received from abroad were not new and a large number failed during final test". The representative of the Ministry admitted in evidence that "they (USAF) had started cannibalisation of spares from out of the aircraft taken as destroyed.....the reason was that their production line had stopped. In this particular case, the possibility is that because the spares taken are from cannibalised parts and they have

been put to a lot of overhaul etc. the quality of spares was not as good as one would like that to be". The Committee find from the Ministry's reply that the supplies were obtained from USAF under FMS (Foreign Military Sales) arrangements and that as per FMS procedure, the USAF are to make supply of items in fully serviceable condition. The Defence Secretary stated in the evidence that the question whether there was any possibility of claiming compensation could be examined. The Committee would like the Ministry of Defence to take up the question of reimbursement for the defective supplies with the US-Government in all earnestners.

II

INFRUCTUOUS EXPENDITURE ON PROCUREMENT OF DEFECTIVE AMMUNITION

Audit Paragraph

2.1. Against the requirements intimated by the Director of Ordnance Services (DOS), the Military Adviser attached to an Indian Mission abroad accepted in July 1966/January 1967 the offer of a foreign Government for supply of 16,000 rounds of service ammunition (8,000 rounds at £50 each for new production and the balance 8,000 rounds at £45 each from the existing stocks) and 11,000 rounds of its practice version (at £39 each) at a total cost of £1,189,000 (Rs. 2.50 crores). The offer in respect of service ammunition from existing stocks was subject to the following conditions:

—the ammunition would not be more than 2 years old at the time of issue;

—the residual shelf-life of the ammunition and the "tracer" would be at least 10 years and 5 years respectively at the time of issue; and

—the supplier would give a guarantee in respect of the above two conditions.

2.2. The service ammunition (16,000 rounds) and its practice version (11,000 rounds) were received in India in different consignments during January 1968—October 1969 and March 1968 respectively. On check-proof inspection during April 1968—December 1969, the performance of the service ammunition was round to be satisfactory except the "tracer functioning". In two lots containing 3,850 (out of 8,000) rounds of the service ammunition, which were subjected to inspection during April 1968, the tracers were found to have been fitted during 1958—1961. The normal shelf-life for this type of tracers being 7 years, the same had expired at the time of receipt in 1968-69. Thus, although the condition of residual shelf-life of 5 years for the tracer at the time of issue was not fulfilled, the ammunition was declared (May 1968) fit for issue as it was assigned a further shelf-life of 5 years on critical examination by technical authorities and as such no claim was preferred on the supplier.

2.3. During firing in August 1973 at a station, the service ammunition was found to suffer from certain defects. Thereafter, trials were conducted (August 1974) in the presence of a team of representatives of the supplier, which attributed the defects mainly to moisture. The team, however, suggested that the defects could be ractified by fitting anti-friction rings to the grooves of the ammunition.

2.4. In February 1975, five rounds of the ammunition were air-lifted to the supplier for investigation. The supplier reiterated the views expressed earlier by the team. On the request of the DOS, the supplier agreed (September 1975) to supply anti-frication rings free of charge and the same were received in India in March 1977.

2.5. In the meantime, the inspection authorities, on being consulted, stated (December 1975 and February 1976) that the fitting of anti-friction rings would in no way improve the overall performance of the ammunition as opening of hermetically sealed containers for fitting of anti-friction rings would expose the ammunition to atmospheric conditions and moisture which might further cause deterioration to the ammunition.

2.6. In April, 1977, 3,459 (out of the existing stock of 7,678) rounds of service ammunition were found to require retracing. The Director General, Ordnance Factories having declined to undertake repair of the defective ammunition and also due to non-availability of adequate repair facilities in the ordnance depots, the Army Headquarters decided (July 1977) that defective service ammunition would be utilised for training purposes at 100 per cent training scales instead of the restricted scale of 50 per cent.

2.7. The case disclosed the following interesting points:

—The agreement for the supply of ammunition did not stipulate any warranty period during which the defective ammunition could be replaced or repaired at the cost of the supplier.

—Tracers fitted to the ammunition did not fulfil the condition of residual shelf-life of 5 years at the time of issue; but on critical examination, the ammunition was assigned a further shelf-life of 5 years and declared fit for issue (May 1968) and as such no claim for the defective ammunition was preferred against the supplier.

—3,459 rounds, out of the existing stock of 7,678 rounds, of service ammunition requiring retracing could not be

repaired for want of adequate facilities in the ordnance depots.

—while on the one hand the service ammunition was reported to be defective, on the other hand its life was extended from time to time (latest up to 31st December 1979) for being consumed in training.

2.8. The Ministry of Defence stated (November 1979) that:

—the main defects for which the service ammunition was downgraded to practice ammunition were "short ranging and broad side on" and these had nothing to do with the tracer; and

—the service ammunition had been/was being utilised for training purposes.

2.9. Thus, the defective service ammunition (7,678 rounds) procurred at a cost of Rs. 72.56 lakhs had to be utilised or ear-marked mainly for training purposes only, thereby resulting in infructuous expenditure of Rs. 9.67 lakhs (being the difference between the cost of service and practice versions).

[Paragraph 27 of the Report of the Comptroller and Auditor General of India for the year 1978-79, Union Government (Defence Services)]

Assessment of requirements

2.10. The Audit Para points out that against the requirements intimated by the Director of Ordnance Services (DOS), the Military Adviser attached to the Indian Mission, abroad accepted in July 1966/ January 1967 the offer of a foreign Government for supply of 16,000 rounds of service ammunition (8,000 rounds at £50 each for new production and the balance 8,000 rounds at £45 each from the existing stocks) and 11,000 rounds of its practice version (at £39 each) at a total cost of £1,189,000 (Rs. 2.50 crores).

2.11. The Committee desired to know the procedure followed in the Ministry of Defence for procurement of service ammunition from abroad and the authority competent to take decisions in such matters. The Ministry of Defence, in a note, stated:

"The requirements for a particular type of ammunition are vetted by the Ministry of Finance (Defence) and subsequently the proposal for procurement of ammunition is approved by the Ministry of Finance (Defence) and

the Ministry of Defence. After the requirements have been assessed and in case it is found that the required type of ammunition cannot be procured indigenously, reference is made to our Agency abroad to explore the source of supply and obtain quotations. In case of procurement from East European countries (which is normally on Government to Government basis) enquiries are routed through Military/Naval/Air Attache in the Indian Mission.

The competent authority to take a final decision is Ministry of Defence with the concurrence of Ministry of Finance (Defence). In such cases the approval is obtained at the level of Joint Secretary/Defence Secretary, where the amount involved is upto Rs. 1 crore. Where the amount involved is more than Rs. 1 crore, approval of RRM/RM/FM is obtained."

2.12. Asked to indicate the procedure followed in the present case with particular reference to the role of the Military Adviser in our Mission abroad the Ministry of Defence have stated:—

"After the requirements given by Army Headquarters were vetted and the need for procurement was accepted by Finance, the Mission was approached to obtain the offer for supply of these items from the foreign Government. The Military Adviser had acted only as a representative of the Ministry of Defence."

2.13. The Committee enquired how the requirements were assessed in this case, by whom and at what level the decision to import the ammunition was taken and whether the Director General, Ordnance Factories (DGOF) was consulted to ascertain if capacity was available indigenously for such ammunition. The Ministry of Defence have stated:

"The requirements were assessed taking into account the likely availability of tanks during the years 1966-67 to 1968-69 and the planned raising of approximately 3 regts. and likely indigenous production of this ammunition during these three years.

The decision to import was taken in a meeting held in the Ministry of Defence at the level of Joint Secretary which was attended by Deputy Director (Proj.) who represented

ammunition, which simulates the service ammunition externally, is designed for practice by the troops in the use of regular service ammunition."

2.20. As regards urgency in acquiring this ammunition, the Defence Secretary stated:

"The tanks were being planned and they were to come out very soon. In 1966-67, 25 tanks were produced. Ammunition is necessary to have them tested. Another 34 tanks came out in 1967-68. So, we had to take advance action in 1965, to get the ammunition."

2.21. Asked why large orders for purchase of both service and practice ammunition were placed, the Secretary, Ministry of Defence, clarified:

"....after the experience of 1965 and the conditions which culminated in the war of 1971, at that time not for practice, but to stockpile ammunition it was necessary to collect it very urgently."

Warranty Clause

2.22. The offer in respect of service ammunition, according to Audit Para, was subject to certain conditions—these being (1) the ammunition would not be more than 2 years old at the time of issue, (2) the residual shelf-life of the ammunition and the "tracer" would be at least 10 years and 5 years respectively at the time of issue and (3) the supplier would give a guarantee in respect of the above two conditions.

2.23. While explaining the difficulty in giving a warranty for the ammunition to be supplied to India, the foreign Government had, in a letter dated 21-12-1966, stated:

"I regret I must confirm that as a matter of principle, the Department does not give such warranty for the ammunition it sells. This is because the life of ammunition depends so much upon factors over which the Department has no control when the ammunition has been sold."

2.24. During evidence, the Committee enquired why the Defence authorities were unable to get a guarantee in respect of the above two conditions. The Secretary, Ministry of Defence stated:

"These were the conditions which we wanted. We searched the whole world for it, we could not get anything satisfying

the conditions. The foreign Government was the only source from where we could get anything. Nor did that Government conceal anything. They said: these are the things available, if you want you take it. At that time they did not have two-years old stock. Their stock was much older. We had the option of taking it or not. Knowing that it was much older stock, the person concerned took a conscious decision that this was necessary, that it would serve our purpose."

2.25. Asked whether there was any other provision in the contract to protect the interests of the country in case of dispute pertaining to the quality of the ammunition, the Ministry of Defence have stated:

"The foreign Government was found to be the only source of supply of these urgently required rounds and they were not willing to include a provision in the contract for the manner in which disputes pertaining to quality were to be settled. Also, it was a Government to Government transaction."

2.26. On being asked whether the deal was struck with the full authority of the Ministry, the Defence Secretary replied:

"With the full authority of the Ministry because it had been brought to the notice of the Ministry. They had given advice also that they wanted the ammunition. We would have liked to get two-year old ammunition only, but unfortunately it was not available."

2.27. In reply to a question whether the decision to forego legal claim or compensation was on the basis of the report of the technical authorities and whether the advice of the Ministry of Law was taken, the Defence Secretary stated:

"I fear there is some misunderstanding. There was no claim at all. They had not accepted any such condition. The foreign Government had made it clear in the very beginning that it would not be possible to give any guarantee with regard to the continued life of the ammunition or the tracer element since this depends so much on the condition of storage. This was reiterated by the Military Adviser in his letter of 6th December. 'It has, however, been made clear by the foreign government that they were not able to give any warranty.' In this connection it has been pointed out by them that with regard to

ammunition they do not give any warranty—mainly because the performance of ammunition depends on storage conditions and they have no control on the ammunition once it has been issued.

We were anxious to get warranty. They said that their stocks were old and new stocks would come later. They would give new stocks at higher rates and they were unable to give any kind of warranty at that time.

I have been dealing with various countries and transactions. I find certain countries do not give any such warranty at all. For various reasons they say they cannot take responsibility. They do their best to help and cooperate.

There are some who make a provision for failures, in which case they compensate. Some foreign Governments have such a provision. The Government in question even now does not agree to any such type of warranty but they cooperate whenever any difficulty is pointed out to them. They send team for inspection. Whenever such things happen, we bring it to the notice of the Government and after consultation with the Ministry of Law and Finance, we decide to accept the conditions. In this particular case the matter has been placed even before the Finance Ministry. We know that these are the conditions. Without warranty, without any type of compensation, we took a conscious decision. So, the question of claiming any damages could not have arisen. We told them of our difficulties. They cooperated. They had their own theory. We had our theory. They did not accept our theory. Ultimately, there was some scope for improvement which we did. The main defect was not with the tracers. This was possibly of design. We ultimately rectified it."

2.28. Asked whether this clause had been included in subsequent agreements with the foreign Government for supply of defence equipment and what was the position in this regard was in similar agreements entered into with other countries, the Ministry of Defence have explained:

"All our contracts with the foreign Government, including the one under reference, do not provide for the guarantee clause.

Contracts entered into with other countries on Government basis provide for the guarantee clause."

2.29. At the instance of the Committee, Government have furnished copies of the undermentioned documents constituting the contract. (According to the Ministry, the contract was concluded through exchange of letters between the foreign Government and our Mission in that country acting under instructions from the Ministry of Defence, New Delhi).

(1) Letter No. MA|34105|AR6 dated 29 Sept. 65 from our Military Adviser addressed to foreign Government.

(2) Letter No. MA|34105|AE-6 dated 7 July, 1966 from our Military Adviser addressed to foreign Government.

(3) Foreign Government's letter No. A|10|AFV-Amn(27141)-N&NS of 21st Dec. 1966.

(4) Letter No. MA|34105|AR6 dated 9-1-67 from our Military Adviser addressed to foreign Government.

2.30. Asked whether there were any deviations in the stipulated conditions at a later stage, the Ministry have stated:

"There were no deviations in the stipulated conditions of the contract. In this connection, it may however be stated that para 6 of the Acceptance Letter dated 9-1-67 from the Military Adviser, of our Mission to the foreign Government provided as under:

"Other conditions of the Sales Agreement remain the same as conveyed in letters of even number dated 29-9-65 and 7-7-66. Our order of even number dated 7-7-1966 may please be amended accordingly."

In para 6 of our Military Adviser's letter dated 7-7-1966 the following conditions were stipulated for acceptance of the ammunition ex-stock:

(a) The ammunition is not more than two years old at the time of issue.

(b) The ammunition has a shelf life of at least 10 years left in it at the time of issue and in the case of the tracer element, the remaining shelf life at least 5 years.

(c) The foreign Government is able to give us a guarantee in respect of the aspects mentioned at sub-paras (a) and (b) above.

However these conditions were not found acceptable by the foreign Government and a detailed clarification was given *vide* letter No. A|10|AFV|Amn|145 (27141)N dated 8-8-66.

Army Headquarters who were consulted stated that in view of the urgent requirement, there was no choice but to accept the ammunition from the foreign Government on conditions laid down by them. Nevertheless, while advising our Military Adviser in that country to accept the ammunition from their stock under conditions specified by them in their letter dated 8-8-66 he was also advised that Warranty for such period as may be given by those authorities subject to satisfactory storage condition, may be obtained. The foreign Government was, however not prepared to give any such warranty vide para 9 of their letter No. A|10|AFV|Amn. (27141)N&NS dated 21-12-1966." (Referred to above).

2.31. When asked why samples were not obtained for trial before placing firm orders, the Secretary, Ministry of Defence stated during evidence:

"When we have a number of sources of supply, it is always our practice to make a comparative evaluation of all of them and whichever is considered the best, that is accepted. So far as this particular case was concerned this was a standard ammunition and known to the Army. They were very badly in need of this. At that time, we had not developed our indigenous production well. We thought of two possible sources—countries 'A' and 'B'. We found that it was not possible to get this thing from 'A'. But so far as 'B' was concerned, they had only old stock and their attitude was 'if you want you can take it', otherwise they have nothing to offer. Our Army did not go in for any trial because it was a standard ammunition. Whatever be the condition, they were in no mood to subject themselves to any kind of stipulation. They also said that they were not prepared to give any kind of guarantee."

He added:

"At that time, we were going quite a lot by the report of inspection by the foreign Government. In this particular case, they had been quite honest. They said that these were the old stock and the price was £45. Had it been

a new stock, we would have got it at £50...At that time we were relying on everything that had come from their sources as it proved to be of standard quality because we had also participated in the war. That ammunition was very well known to our Army because of historical reasons. Moreover, their own inspectors had also cleared that. Because, our going and making a trial also involves expenditure. Sometimes a trial is permitted. But it is at our cost, particularly under monopolistic conditions. I recently had experience in a foreign country that when we told them we want trial under Indian conditions, they said, 'yes, we shall send you these equipment, but at your expense'. So, the cost benefit ratio has to be analysed. Our experience is that the test done by the authorities of foreign Government is more or less reliable, to the satisfaction of the army, and the facts subsequently have not belied it. For a few years they were found all right.

But the point made by you is accepted. Normally we should do trial under our conditions. But, in this particular case, there was urgency. The tanks were comng out and we could not wait too long. On receipt of this, we did immediately check and the checking did not bring out any defect. The defect came to notie in 1974. When the thing came, the first thing we did was to check and again check. But in all those checks no defect was found out. Perhaps, if we had checked in that country, we would not have found out any defect, because we did not find any defect in Indian conditions."

2.32. To a question as to why the concerned authorities went ahead with the purchase of the ammunition when it had come to their notice that its shelf-life was almost over, the Secretary, Ministry of Defence replied:

"This was known to us. But if the shelf-life is over, it does not mean that it has outlived its utility. It only means that we should be very cautious, we should not accept it unless it is proved otherwise. That is why our Director-General of Inspection and his experts went on examining not only once but time after time. Though the shelf-life has expired, it is quite possible that it is in good condition for five or even ten years. It is unlike medicine, so far as chemical substances are concerned. Why should it

be thrown away, if it is useful? Shelf life only means that there is absolute guarantee that nothing will go wrong for five years."

2.33. In reply to a further question whether the Committee could take it that the Defence Department purchased this ammunition with the full knowledge that it had outlived its life, the Secretary, Ministry of Defence stated:

"The records show it was not concealed. We knew it. Even after knowing it, we took it, though the normal period had expired. Our experts were satisfied that the chemicals in it were serviceable and they could carry on for five years or so.'

2.34. Explaining why the matter was not taken up with the foreign Government, the Ministry have stated in a note:

"As the inspection authorities had assessed the life of tracers as 5 years, the discrepancy about the date of manufacture was not taken up with the foreign Government. In August 1973 at the time of firing at Armoured School, Ahmednagar, a few rounds were fired, which showed some defects and these defects were communicated to the suppliers..... The defects found in this ammunition were discussed with the representatives of foreign government on 27 September, 1973 and a reply was sent...."

2.35. To a question as to why protest was not registered with the supplier and claim for recovery of costs or replacement of ammunition not made when the contracted life of the ammunition had already expired, the Ministry of Defence have replied:

"The contracted life of the ammunition received in 1968-69 had not expired. As such the question of registering protest with the suppliers and lodging claim for recovery or replacement did not arise."

2.36. Clarifying the position further, the Director General of Inspection stated:

"When the ammunition was first received in 1968, it was immediately tested and we found that it met all our requirements. The only discrepancy we noticed at that time was that the tracer was not burning to the stipulated time of 3 seconds. We immediately made a reference to the foreign government through our channel that this

ammunition was going to be rejected. In the meantime, they sent us a letter to say that it was a mistake, that for this ammunition, for this tank, the tracer timing is not 3 seconds and that we would get 2.4 or 2.5 seconds; but it should be above 1.5 seconds. So, we said, let the tracer be checked for its chemical composition. We found that it was okay. In the meanwhile, in 1973, when the users fired in the practice ranges, they came out with defects like broad-side defect, etc. This was the defect which was later on pointed out by the users. That was the time when we were arguing that we should replace the tracer. They said that this was not a major defect and that the major defect was that of broad-side and inaccuracy in the ammunition and they said that removing the tracer which required a numbersome job will not improve the ammunition."

2.37. Asked when the first shot was fired with the sample draw from the new arrivals, the Director-General of Inspection stated during evidence:—

"As soon as the ammunition is received in the country, it is sent to the depots. We try the samples not only for firing but also for chemical analysis. As soon as the consignment came from the foreign suppliers we drew samples and did firing and checking."

The Defence Secretary added:

"The consignment was received on 8 January, 1968 and the first firing took place in March, 1968."

2.38. The Committee pointed out that when orders were placed in 1965, there were certain conditions and one of them was that the foreign Government would forward a certificate to the Government of India alongwith other documents and proof reports to the effect that the ammunition was in good, serviseable condition. The Committee wanted to know whether the certificate and other documents were received alongwith the ammunition. The Director of Ordnance Services stated during evidence:

"The answer is yes. When we got the first consignment, we got from the foreign Government details showing the age of the tubes, the primers, everything that goes into a round. All details were available. Those details did

show that the tracers were of 1958, 1959 and 1961 manufacture."

2.39. Asked whether a certificate to the effect that the ammunition was in good, serviceable condition was received, the witness replied:

"It is not a certificate. It is a document which shows the batch and the lot of the fuse, the igniter, everything, and it says they were all serviceable."

2.40. In a further note on the subject, the Ministry have stated:

"We have not received any quality test certificates. However, date records in respect of various consignments giving batch/Lot details and proof records were received alongwith the supplies of the ammunition. These records give component details, inspection details, proof records and chemical test records in respect of the ammunition."

Extention of shelf life of the ammunition

2.41. The Audit Para points out that although the condition of of residual shelf-life of 5 years for the tracer at the time of issue was not fulfilled, the ammunition was declared (May 1968) fit for issue and it was assigned a further shelf-life of 5 years on critical examination by the technical authorities. In a note on the subject, the Ministry have state:

"Tracer composition of the ammunition when subjected to critical examination had been found serviceable and assigned a further shelf-life of five years, though the timings recorded in check proof firings were slightly less than the stipulated timing (*i.e.* 3 secs). In spite of lower tracer timing, the ammunition was declared as 'serviceable' as the recorded time is considered adequate for all distances at which this ammunition is expected to engage a target.

From the above, it will be seen that except for the fact that the tracers used were of an older date of manufacture, the condition stipulated in the sale offer in regard to residual shelf-life of tracer has been fulfilled by the supplier as the tracers were found to have residual shelf-life of five years in our chemical analysis.

The decision was taken by the concerned authority (AHSP Authority Holding Sealed Particulars) of DGI. The main

cause for down-gradation of this ammunition was defects like BSOs (Broad side on) and short ranges (falling of fragments at ranges between 800 to 1000 mtrs). Failure in the functioning of tracer composition which is being pointed out as the cause of degradation could not have resulted in the down-gradation of this ammunition as the tracer function was found satisfactory except for a few minor lapses in timings at check proof. It is further clarified that the remedial action suggested by the foreign government *i.e.* use of anti-friction rings was to rectify the defect of BSOs and not of tracers."

2.42. In reply to a further question as to who was the competent authority in such matters and whether any criteria had been laid down in this regard, the Ministry of Defence have stated:

"General Staff in the Army Headquarters is the competent authority for acceptance of the ammunition. The life of the ammunition was extended as the ammunition was considered fit as the timings for burning of the tracer were considered adequate for all distances at which this ammunition was expected to hit a target."

2.43. The Commiittee desired to know whether the ammunition was really good enough for use in trainig and whether any other kind of ammunition had been used in training during that period. In a note the Ministry of Defence have stated:

"The life of the ammunition had to be extended from time to time to enable its consumption; further, a long life would not be assigned at a single point of time. The ammunition was serviceable. Side by side with this ammunition APDS ammunition which was indigenously manufactured was also used for training."

The Ministry have further stated:

"The supplier being unwilling to replace/repair the defective ammunition and a satisfactory repair technique or facilities for the same not having been established in the country, the only alternative was to use the defective stock for training purpose as early as possible. With this in view, units were asked to consume the entire stock for training during the year 1977-79. But since the Units continued to report unexpended stock even after the afore-mentioned period, its life was extended from

time to time upto December 31, 1979 with a view to salvage the stock and prevent it from becoming a total loss to the State in site of fact that some defect in its performance could be expected with passage of time."

Defects in the ammunition

2.44. The Audit Para points out that during firing in August 1973 at a station, the service ammunition was found to suffer from certain defects Trials were conducted in August 1974 in the presence of a team of representatives of the supplier which attributed the defects mainly to moisture. The team, however, suggested that the defects could be rectified by fitting anti-friction rings to the grooves of the ammunition.

2.45. The Committee enquired whether the moisture factor was not taken into account at the time of accepting the offer of the supplier or modifications for Indian conditions thought of. The Ministry of Defence, in a note, stated:

"Ingress of moisture can happen at any point of time due to many reasons like high humidity in the atmosphere, during production, storage and movement. No clause against this can be incorporated in any contract."

2.46. The Secretary, Ministry of Defence stated in evidence that "their (foreign supplier's) plea that this defect was due to moisture was not accepted by us. Having found the defect, they also suggested a remedy. It is quite possible that this theory was not correct."

2.47. The Committee enquired how anti-friction rings were then accepted in March 1977 when according to the inspection authorities (December 1975 and February 1976) the fitting of anti-friction rings would in no way improve the overall performance of the ammunition. The Ministry of Defence, in a note, stated:

"Since the foreign government had insisted that fitting of the anti-friction rings would improve performance of the ammunition and supplied the rings free of cost, these were accepted."

2.48. The Committee enquired by whom inspection was carried out in this csae and whether the views of the inspection authorities were referred to the suppliers. The Ministry of Defence stated:

"DGI (Dir. Gen. of Inspection) was the inspecting authority. The views of the DGI had been communicated to the Supplier, but were not accepted by the suppliers."

2.49. Asked whether they could assure the Committee that the defect was not due to moisture, the Director of Ordnance Services deposed:

> "If there were any soggy band, they may contribute to some extent, but not materially. It will not give that much of defect of misbehaviour."

2.50. Asked whether there was some serious defect in the manufacturing process of the fibre ring, the witness replied:

> "I could not say that. But I would say, the design was defective. Even they had improved the design and we had improved our design. In the first ammunition of the earlier years we did not find any defect, but later on, after passage of time only we found out certain defects."

2.51. The Committee wanted to know whether necessary precautions were taken to prevent moisture from effecting the ammunition during storage at both the points *viz.* issue and use points and whether storage facilities were adequate and up to modern standards. The Ministry of Defence have stated:

> "Normal storage conditions are provided to protect the ammunition against heat and ingress of moisture for all types of ammunition and as such no special conditions were required to be observed in respect of this ammunition.
>
> The storage facilities are adequate and have been provided as per laid down regulations."

2.52. During evidence, it was pointed out that a Study Group of the Committee which visited Ahmednagar and some other places had found the ammunition lying under tents for want of concrete dumps. The Committee desired to know why proper storage facilities were not made available. The Secretary, Ministry of Defence, stated:

> "I take very special note of the things mentioned by you because it is by your own personal knowledge, personal inspection of the Members of Parliament of an august body."

2.53 The Director of Ordnance Services added:

> 'Now, we are getting this ammunition only from the Director-General of the Ordnance Factories, the same design, improved by us. We keep it in our depots where the storage is as good as in the supplier country."

2.54. Asked further what percentage of the ammunition was kept under roof in ideal conditions and what percentage was left in the open or in the tents and for how long, the witness stated:

> "One is the storage of ammunition while the ammunition is kept in the ammunition depots where the Director of Ordnance Services controls the storage. The other is the ammunition issued to a regiment or to a training establishment for firing. The ammunition that is used for training would be stored for least possible time. It could be one year. We keep the ammunition in our depots may be for 8 or 10 years or even more. There, the conditions are in fact ideal. We have shown them to the foreign government's experts who came here and they are satisfied about the storage conditions in the ammunition depots."

2.55. The Committee enquired whether the defects of "short ranging" and 'broad-side on' were noticed by the inspection authorities while the representatives of suppliers were also present during trials in August 1974. The Ministry of Defence, in a note, stated:

> "The defects of short-ranging, falling tracers, falling of fragments, rounds wobbling and falling short of targets and BSOs were reported in 1973 by ACC&S Ahmednagar during practice.
>
> These defects were brought to the notice of the suppliers during 1973 and this was followed by trails in August 1974 wherein the representatives of the suppliers were present. They attributed these defects to high humidity and suggested that these defects could be rectified by fitting anti-friction rings on the rounds."

2.56. The Committee wanted to know how the Defence authorities could justify purchase of the ammunition with all the defects mentioned above. The Secretary, Ministry of Defence, stated:

> "I would like to submit that what has been quoted in the record was of the year 1973 and specifically meant for the supplier. We have not mentioned that after 1972 everything went off very well. In the year 1969-70 we went for stockpiling. Suppose, in 1968 and 1969 there had been occasions to use ammunition, it is quite possible that the ammunition would have been quite all right because they did not show the defects then. In 1973 we found these defects. So, in the stronger language, even

in an exaggerated fashion, we have put all the defects to them to bring them around here to see whether these defects could be rectified. As soon as we knew that there was defect in the ammunition we doubted about its quality. What we decided was that we shall not use it for actual war, we shall use it only for practice and in the meanwhile we were depending upon indigenous production and our own capacity. We imported only once. At that time, knowing that we imported old stock, next time we would import new stock. We would have gone in for it, but it was not necessary because in the meanwhile our ordnance factories had already started producing. So, in the war of 1971 it was not used. If it had been used in 1971, it would have served our purpose."

2.57. At the instance of the Committee the Armament Research and Development Organisation, Pune have furnished their findings of the effect of moisture on the driving band of the ammunition. It has been stated *inter alia*:

".....limited simulated experiments have since been carried out under much more severe conditions than what the ammunition would be facing under even worst service conditions.....the effect of these would in general be to reduce the frictional force required to engrave the dring band in the rifled gun bore leading to altered mallistics. Secondly the reduction in the shear strength may lead to reduction in the spin imparted to the projectile by the driving band. This will have a considerable effect on the stability of the ammunition and in the worst case could lead to a BSO."

2.58. In yet another note, the Research and Development Organisation, Ministry of Defence have stated:

"The driving band is made of super imposed layers of specially prepared paper chemically treated....the material is comparable to a composite comprising of cellulose and a thermosetting resin....these materials are susceptible to absorption of moisture resulting in deterioration of both physical and mechanical properties of the material.....Ingress of moisture results in cracking, crazing and swelling etc. which when exceed certain limits will affect the missile ballistic resulting in poorer spin and short ranging. This, however may be one of the many factors contributory to short ranging."

2.59. Asked whether the age of ammunition could not be the contributry factor for the unsatisfactory capability of the ammunition, the Ministry of Defence, in a note, stated:

> "That life of ammunition had not expired. However, checkproof was carried out between April 1968 and Dec. 1969 and it was found that the tracer did not achieve specific time. However considering the distance at which the ammunation was expected to charge a target our inspection authorities considered that the timing achieved was adequate. The tracer composition was also found satisfactory. However, the ammunition had developed defects like BSOs (Broad side on) and short ranging which were not related to the failure in functioning of the tracer. The inspection authorities have stated that it is not possible to pin-point the causes for the development of BSOs. In any case, the age of the ammunition was not contributory factor for these defects."

2.60. When the Committee enquired during evidence how it was that ageing could not be a factor for deterioration of the ammunition, the Secretary, Ministry of Defence, stated:

> "I personally feel that it could."

2.61. The Director General of Inspection added:

> "As I tried to make clear, our acceptance standard for this ammunition is rather stringent and the ammunition did not show any defect other than tracer defect. After the passage of time some defects may creap in because of rough handling; the tungsten Carbide might become slightly loose or during transportation from one place to another the box may fall and it may become defective."

Diversion of service ammunition for practice purposes

2.62. The Committee pointed out that procurement of defective ammunition had necessitated relegating costly service ammunition for practice purposes. The Defence Secretary, stated:

> "I would like to mention here that in 1967-68 the number used was 2,200 because the number of tanks was picking up. In 1968-69 we used 5,253 and we were quite satisfied with the ammunition. The defect came to be known later. As soon as we found the defect we declared it. But one thing

is that the service ammunition is also used for practice. It is meant to be used mainly in practice because we go on preparing for war and luckily we did not have war frequently. So, what is earmarked as service ammunition is ultimately used for practice. The service is of two types One is fixing up targets, the other is operation and going for exercise. So, both the service ammunition and the practice ammunition are used ultimately for practice. All the ammunition and all those things have been planned and purchased, the bulk of which has been used as service ammunition. In that case, I would submit that there is no wastage involved."

2.63. Asked whether in view of the fact that the shelf life of the ammunition had already expired at the time of the purchase there was any other alternative left with the Defence authorities, the witness explained:

"In the practice there is always a proportion. A proportion of service ammunition should be used. So, a particular proportion has been used for service and the rest is used for practice ammunition. In those days because of shortage of ammunition we decided not to use enough of service ammunition as it should be used for efficient training, but later when we found that this was defective, we took it as a blessing in disguise and after that we have kept this normal proportion. Before this we were not using the required optimum number for practice. Taking advantage of a bad situation we decided to divert it and restore the ratio."

2.64. Asked to furnish details of the cases where in the past ammunition purchased for service purposes had to be diverted for training purposes, the Ministry of Defence, in a note, stated:

"In all cases, in addition to practice ammunition, service ammunition is also authorised for training Diversion of the service ammunition for training purposes against authorisation for service ammunition is a normal feature."

2.65. The Committee enquired how the life and efficiency of the guns was affected by relegating the service ammunition for use as practice ammunition. The Ministry of Defence, in a note, stated:

"The aim of all training is to simulate better field conditions. It is only with service ammunition that the real battle

conditions are obtained. Life of the gun barrel is not a material feature in this."

2.66. Referring to the above contention of the Government, the Committee enquired during evidence how battles conditions could be really simulated with defective ammunition. The Deputy Director, Weapons and Equipment replied:

"In our training, scale the Government has authorised use of service ammunition. This much of service ammunition is fired every year from the Vijayanta tanks. While these defects came to notice, a deliberate decision was taken whether to reject this ammunition altogether or can we utilise this ammunition for training purposes. The total failure which came to light as a result of investigation done by DGI was in the region of 10 per cent. So, a deliberate decision was taken that we still have the utility of the remainder 90 per cent of the ammunition for training purposes. Before issuing this ammunition we informed all the combat units that this ammunition has been found prone to certain type of defect and whenever defective round is noticed its performance shall be ignored in the evaluation of practice fire."

The Director, Ordnance Services further deposed:

"For training there are two different scales of ammunition. One is for the APDS and the other is for DS/T practice. The ammunition that has been used for APDS has been within the prescribed scales. All that happened was as the ammunition was short we kept the training to 50 per cent. Once we had this ammunition we have used the APDS within the authorised scales of the APDS."

2.67. In a written note on the subject, the Ministry of Defence have stated:

"Certain quantities of service ammunition is authorised annually for armoured requirements and training establishments for the conduct of training. A percentage of this ammunition that may be defective does not materially alter the quality of training imparted."

Repair of ammunition

2.68. The Audit para has mentioned that in April 1977, 3,459 (out of the existing stock of 7,678) rounds of service ammunition were

found to require retracing. The Director General, Ordnance Factories having declined to undertake repair of the defective ammunition and also due to non-availability of adequate repair facilities in the ordnance depots, the Army Headquarters decided in July 1977 that defective service ammunition would be utilised for training purposes at 100 per cent training scales instead of the restricted scale of 50 per cent.

2.69. Asked why the DGOF declined to undertake repair of the ammunition, what remedial action had since been taken and whether adequate repair facilities now existed for the purpose, the Ministry of Defence, in a note, stated:

> "The DGOF declined to undertake the repair as ever after the retracing of the ammunition, it would have still exhibited BSOs. No remedial facilities for removal of BSOs exist in the country. However, as the ammunition was considered safe for utilising against service ammunition quota for training purposes, no remedial action was necessary."

2.70. The Secretary, Ministry of Defence clarified during evidence:

> "I have a feeling that unwillingly we have given a wrong impression somewhere because these are defects which cannot be remedied. The question of an Ordnance factory doing something would not have arisen."

2.71. The audit para has pointed out that defective service ammunition (7,678 rounds) procured at a cost of Rs. 72.56 lakhs had to be utilised or earmarked mainly for training purposes, thereby resulting in infructuous expenditure of Rs. 9.67 lakhs (being the difference between the cost of service and practice versions). The Committee, therefore, wanted to know about the progress with regard to the repair of 7678 rounds of service ammunition. The Ministry of Defence, in a note, stated:

> "Retracing of the ammunition was not done as it was considered that even after retracing, the ammunition would still exhibit BSOs. As the ammunition was considered safe for use as service ammunition for training purposes its life was extended from time to time."

2.72. Asked whether responsibility had been fixed for the infructuous expenditure, to what extent the service ammunition had been used for training purpose and how long it would take to exhaust

it, the Ministry of Defence have stated:

> "The training ammunition comprises both service ammunition and practice ammunition. As the ammunition is being utilised against the training authorisation of service ammunition only, no infructuous expenditure has been incurred and the question of fixing responsibility for this does not arise. The ammunition is likely to be expended by the end of 1980."

2.73. In reply to a further question as to how the entire consignment of 16,000 rounds was used and what was the balance now held in stock, the Ministry of Defence stated:

> "Apart from operations, the only utilisation during peace is against training requirement and it has been utilised as such. The ammunition depots were holding approximately 1281 rounds. The balance quantity will also be utilised against the training requirement of this item."

2.74. In a note subsequently furnished to the Committee, the Ministry have given the following figures of consumption of the imported ammunition from the time of receipt till September, 1980:

1967-68	2,200
1968-69	5,353
1976-77	1,494
1977-78	2,896
1978-79	2,656
1979-80 . . . . . (Upto 30 Sept. 80)	679
	15,278
Balance	722

The balance qty. is also expected to be utilised by June 1981 the date upto which its life has been extended.

The Committee enquired about the number of gun barrels that have been damaged due to use of this ammunition and the financial implications thereof. The Ministry have replied:

> "Only one gun barrel was damaged. The financial implication of the reported damage is to the tune of Rs. 1 lakh i.e. the cost of the barrel."

Indigenous Production

2.75. The Committee enquired whether any further purchases of this type of ammunition were made from abroad. The Ministry of Defence have stated:

> "We are not buying this ammunition from anywhere. We are now manufacturing this ammunition."

2.76. Asked when the proposal to develop the capacity for indigenous manufacture of this ammunition was mooted and when it was actually established, the Ministry have stated:

> "Information about the exact date/year when the proposal to develop the capacity for indigenous manufacture of this ammunition was mooted is not available. However, it is stated that a licence agreement had been entered into by the Government of India with the foreign government on 11th August, 1961 for the indigenous manufacture of the ammunition. The successful production of this ammunition started coming out of the production line in India from the year 1967-68."

2.77. In reply to a question how the indigenous ammunition compared with the ammunition imported from abroad cost-wise as well quality-wise, the Ministry have stated:

> "The indigenous ammunition produced during the establishment years compared with the imported ammunition from after eliminating certain defects which were noticed in the earlier stage. The current production is defect free. The cost of indigenously produced ammunition compares favourably with that of the imported ammunition."

Procurement of defence supplies from abroad

2.78. The Committee desired to know whether it was not necessary to have an apex purchasing body abroad and a corresponding apex organisation at Headquarters to process the proposals for import of defence items, to technically appraise them and to make direct purchases without the help of our foreign supply missions. The Defence Secretary stated:

> "Regarding a purchasing body abroad, we don't have it. Ministry of Defence coordinates such purchases; but there is no single organisation. There are purchase organisations abroad, *viz.*, ISM in London and Washington. In

other countries, it is done by direct negotiations through our Military Attaches. The three Services have different needs, and there is no single organisation abroad to make purchases."

He added:

"We shall certainly examine this particular advice. I cannot give any reaction immediately, because when a single organisation is created, it will have to be considered carefully. The requirements of our three Services are different. On the question whether it will create problems, I will have to consult the Services also.... For instance, there are people who are technical experts. Then the Director-General Inspection is also there. Similarly, for the Air Force, there are particular experts who are concerned with it and they are the persons who give their recommendations and a view is taken and financial implications are taken into consideration in consultation with the Ministry of Finance."

2.79. Asked whether in view of the delays in procurement of defence requirements through our supply missions abroad, Government proposed to make any structural changes and improvements in their working, the witness deposed:

"I can only assure that this is a matter which should be very carefully examined. At the moment, the Chief of Staff Committee is applying their mind to it. They are making recommendations. We are facing difficulty. At the moment, the India Supply mission is under the control of the Ministry of External Affairs But the point is that we are having some pipeline delay and inadequacy and things like that. These things should be examined from time to time. Since they are examining it, your suggestion will also be taken into consideration."

2.80. In a note subsequently furnished to the Committee, the Ministry have stated:

"The Chiefs of Staff Committee in their Report had suggested that due to the poor performance of our Supply Wings abroad in meeting the needs and aspiration of the Services Headquarters, administrative control of Supply Wings

abroad should be transferred from the Ministry of External Affairs to the Ministry of Defence. The Chiefs of Staff Committee in their Report had also made a reference to the recent order issued by the Ministry of External Affairs (O.M. No. O|SW|798|5|78 dated 16-2-79) by which the Supply Wing abroad would accept indents upto the value of Rs. 50,000|- only when efforts by indentors in India to procure the stores in question by placing the indents directly on Indian Agents or manufacturers abroad have not succeeded or when in respect of the defence indents, the same have been cross-mandated by the DGS&D. According to the Chiefs of Staff Committee in the wake of these orders and unhelpful attitude of Supply Wings abroad high value defence weapon and equipment systems have become non-operational for want of low cost spares.

Since submission of the above Report by the Chiefs of Staff Committee, the above matter has been under active consideration at all levels. Two meetings have taken place in the room of Addl. Secy. (Defence) on 14-8-1980 and 2-12-1980 which were attended by Additional Secretary, Ministry of External Affairs, JS(F) [(Former JS(O)] and other officers of the Ministry of External Affairs. As per information received from Additional Secretary (Defence) in the above meetings it was decided that a small Cell should be set up for low value indents.

The setting up of a small Cell for processing low value indents would meet, the immediate requirements of the Services Headquarters for the present."

2.81. The Committee observe that large quantities of an ammunition (16000 rounds of service ammunition and 11000 rounds of its practice version) required for Vijayanta tanks were procured from a foreign government during January 1968—October 1969 through an Indian Mission abroad at a total cost of Rs. 2.5 crores. The service ammunition consisted of 8000 rounds of old stock and an equal number of new stock—the price differential between the two being £5 per round. Although the extent regulations require that purchases where the amount involved is more than Rs. 1 crore, should be made with the approval of the Minister/Minister of State for Defence and the Finance Minister, the decision in the instant case was taken in the Ministry of Defence at the level of Defence Secretary. Further, evne though the initial decision to make the purchases was taken in consultation with the Ministry of Finance

(Defence), the latter were not consulted while taking the final decision to accept the offer of the foreign Government which declined to accept any condition in the nature of a warranty clause in the agreement.

2.82. The Committee find from the correspondence exchanged on the subject between the Indian High Commission and the foreign government that subsequent to discussions between the representatives of the two sides in November/December, 1966, the Indian authorities notified their desire "to reconsider the suggestion that they might take a quantity of ammunition from Army Stocks o fthe foreign government in leiv of similar ammunition from new production " While affirming that "the Department is glad to reopen the negotiations", the foreign government in their letter dated 21 December 1966 had warned that it would not be possible for them to give any warranty as the life of ammunition depended so much upon factors over which the Department had no control when the ammunition had been sold. However, the communication had added that "such rounds as your authorities might decide to accept from army stocks of the foreign government would be supplied from the most recent available stocks and since they were produced they have been kept in storage of the same standard as used for similar ammunition to be retained for use by the foreign government. In fact, the rounds would have been so retained had not the foreign government decided to adopt theChieftain tank with its 120 mm. Gun. As you will see, a generous allowance has been made for the age of this ammunition in the price quoted above," (Italics added).

2.83. How old was the stock offered had been made clear in an earlier communication dated 8 August, 1966 which stated inter-alia:

> "It is not possible to meet your authorities' condition that the ammunition to be provided from army stocks of the foreign government should be not more than two years old at the time of issue. Investigation has shown that the quantity of 16,000 rounds would have to come from stocks of this type of ammunition that were manufactured in 1961. These are the most recent rounds held in stocks and are upto service standards."

The communication further stated:

> ".....The rounds of 1961 manufacture can be expected to last for a further ten years with satisfactory storage such as they would have in the Service.

Tracers may fail to ignite after about ten years or less in unsatisfactory storage conditions . . . . . "

2.84. The Ministry of Defence went ahead with the purchase of old ammunition on the plea that "Army Headquarters who were consulted, stated that in view of the urgent requirement, there was no choice but to accept the ammunition." The Ministry did not also consider it necessary to obtain any samples for trial "because it was a standard ammunition. Whatever be the condition, they were in no mood to subject themselves to any kind of stipulation. . . . . At that time, we were relying on everything that had come from sources of the foreign government as it proved to be of standard yuality because we had also participated in the war."

2.85. The Committee further observe that in the letter dated 29 September, 1965 addressed by the Indian Mission abroad to the foreign government, it was tipulated that "the ammunition will be inspected by your Inspecting authorities prior to issue and a certificate to that effect will be forwarded to this office alongwith the other documents and proof reports".

2.86. The ammunition which was received from the foreign government gave details showing the age of the tubes, the primers etc. During evidence it was admitted by the Director of Ordnance Services, "It is not a certificate. It is a document which shows the batch and the lot of the fuse, the igniter, everything and it says they were all serviceable." The Ministry have since confirmed in a written reply that "we have not received any quality test certificates."

2.87. The Committee consider it strange that on the plea of urgency, the Ministry of Defence rushed in to make large scale purchases of old ammunition by short-circuiting the established procedure which not only required concurrence of the Ministry of Finance (Defence) but also the approval of the Minister of Defence and the Minister of Finance. It is indeed amazing that in the face of clear refusal by the foreign authorities to include a warranty clause in the agreement, the Army Headquarters neither called for any samples for test firing nor did they insist on the quality test certificates which the supplier was contractually bound to furnish. The fact that the foreign government had no use for such ammunition since it had decided to adopt the Chieftain tank with its 120 mm. gun, casts a grave doubt in the mind of the Committee regarding the entire deal.

2.88. The Committee are of the view that the decision of the Government to procure old ammunition without first obtaining samples or quality test certificates from the foreign Government was a serious lapse. But for the fact that it is an old case, the Committee would have directed an enquiry with a view to find out the circumstances in which the deal was finalised and whether the officers concerned had any vested interest in the matter. The Committee, nevertheless, feel concerned that such a serious lapse has occurred and hope that sufficient care will be taken in future in purchasing defence stores from abroad.

2.89. On receipt of the ammunition in India, it was found on check proof inspection during April 1968 that the tracers had been fitted during 1958—1961 and as such their normal shelf life of 7 years had already expired. Much more serious defects however came to notice during firing at Armoured School, Ahmednagar in August 1973. During discussions with the representative of the supplier in September 1973, it was pointed out that "a considerable proportion of rounds, especially those fired from guns in their last quarter of life, show instability in flight and range excessively short. In some cases, the front sheath of the projectile separates from the rear . . . . . Reports have been received to the effect that foreign ammunition has recorded inaccuracy and successive short ranging were observed on excessive occasions. Three barrels were found to have been damaged ....."

"Generally, the nature of common defects in rounds are as follows:

(i) Inaccuracy, (ii) Dispersion of 1.5 m. at 100 m. range against specified average dispersion between 0.2 to 0.45 m. at 900 m., (iii) Segments of the shot falling off during flight at ranges between 800—100 m., (iv) Tracers falling off during flight at ranges between 600—700 m., (v) Missing the target, (vi) damage to the barrels."

2.90. Trials were again conducted in August 1974 in the presence of a team of representatives of the foreign supplier which attributed the defects mainly to moisture. The Secretary, Ministry of Defence, stated during evidence that the plea of the foreign supplier that the defect was due to moisture "was not accepted by us" as

it was felt that "if there were any soggy band, they may contribute to some extent, but not materially. It will not give that much of defect of misbehavious." On the other hand, it came to be realised that "the design itself was defective. Even they had improved the design and we had improved our design (for indigenous manufacture)."

2.91. While the Committee would not like to hazard a guess whether the defects were due to defective design or on account of ingress of moisture, they would like to express thir apprehension that the possibility of ingress of moisture cannot altogether be ruled out. A Study Group of the Public Accounts Committee which visited the Armoured Corps Centre and School, Ahmednagar, in October 1980, had in fact found certain ammunition lying under tents. The results of studies carried out by the Armament Research and Development Organisation, Pune and the Research and Development Organisation, Ministry of Defence as indicated in paras 1.57 and 1.58 of this Report also reinforce their apprehensions.

2.92. The Committee would therefore be interested to know whether the design changes effected subsequently in the ammunition manufactured indigenously were made with a view to eliminating the effect of moisture on the driving band.

2.93. While taking note of the assurance of the representative of the Ministry that the standard of storage of defence stores and equipment in India is as good as in the foreign country, the Committee would like to point out that the storage facilities available with the regiments and training establishments to whom the ammunition is issued for firing need to be improved.

2.94. The Committee find that although the timings recorded in check proof firings were slightly less than the stipulated timing (i.e. 3 seconds), the ammunition was declared serviceable as the recorded time was considered adequate for all distances at which the ammunition was expected to engage a target. The ammunition procured at a cost of Rs. 72.56 lakhs had, however, to be down-graded for practice purposes because of the defects of BSO (board side on) and short ranging. This had resulted, according to Audit, in an infructuous expenditure of Rs. 9.67 lakhs.

2.95. The supplier being unwilling to replace/repair the defective ammunition and a satisfactory repair technique of facilities for the same not having been established in the country, the life of the

ammunition had to be extended from time to time to enable its consumption. The earlier expectation that the units would be able to consume the entire stock for training during the year 1977-78 has not yet been fulfilled in so far as 722 rounds were reported to be in stock as on 30 September, 1980. This quantity is expected to be utilised by June 1981, the date upto which its life has been extended. According to the Ministry "a percentage of this ammunition that may be defective does not materially alter the quality of training imparted."

2.96. Considering that the ammunition had recorded inaccuracy and successive short ranging on excessive occasions as early as in September, 1973, it is difficult to accept the plea of the Ministry that use of such ammunition would not affect the quality of training particularly when the defects are bound to get aggravated with passage of time. The Committee consider it unfortunate that the Army was led into such a unfortunate situation that the defective ammunition had to be used for training and the purpose of simulating battle conditions was not fully achieved.

2.97. The Committee note from the Ministry's latest reply that only one gun barrel was damaged as a result of use of defective ammunition and the loss involved is Rs. one lakh i.e. the cost of the barrel. In the Ministry's Aide Memoire of September 1973, it was however stated that three barrels were found to have been damaged with foreign ammunition. This discrepancy needs to be explained. The Committee recommend that the matter should be examined comprehensively and precise figures of loss on this account should be furnished to them.

2.98. The Committee have been given to understand by the Ministry of Defence that the poor performance of Indian Supply Wings abroad in meeting the needs and aspirations of the Services Headquarters has of late become a matter of anxiety to the Chiefs of Staff. The Committee view with great concern that due to "the unhelpful attitude of our Supply Wings abroad, high value defence weapon and equipment systems have become non-operational for want of low cost spares." While the setting up of a small cell for processing low value indents as decided recently, may be of help to meet the immediate rquirements of the Services Headquarters for the present, the Committee consider that the question of processing of defence requirements, big or small, with a view to eli-

minating the delays which may prove costly, is a matter which calls for immediate attention. The Committee therefore recommend that the Ministries concerned should go into the matter in the light of the difficulties experienced and the organisational changes that may be called for, in the existing set up of the supply wing attached to Indian Missions abroad, should be carried out without loss of time in the interest of the country's defence requirements.

NEW DELHI;
April 16, 1981
Chaitra 26, 1903 (*Saka*).

CHANDRAJIT YADAV,
Chairman,
Public Accounts Committee.

APPENDIX

CONCLUSIONS AND RECOMMENDATIONS

S. No.	Para No.	Ministry / Deptt. Concerned	Conclusion/ Recommendation
1	2	3	4
1	1.73	Defence	A number of new transport aircraft known as Packet aircraft were acquired from USA by the Indian Air Force in 1954. Further additions to the fleet were made in 1960 and 1963. The 1960 batch consisted of old aircraft in 'as is where is' condition as also those procured in 1963 which were received under the military assistance programme in the wake of the Chinese aggression.
2	1.74	-do-	The Committee find that the new aircraft procured in 1954 met with a series of accidents/incidents right from the time of their induction into service. Of the number of accidents/incidents in which these aircraft were involved during each of the years 1954 to 1959 (*i.e.* before procurement of the second batch of old aircraft), as many as 8 incidents were attributable to the failure of the Allison propeller system. During the years 1960 to 1962 *i.e.* before procurement of the third batch, the rate of accidents/incidents rose sharply and two of the incidents were caused by the failure of the propeller. The history of operation of this aircraft right through 1976 when the entire fleet

			was grounded unfolds an unfortunate chapter of accidents/incidents on a large scale which took a toll of as many as 131 precious lives and 22 aircraft. Loss of three of these aircraft was attributable to the failure of the propeller system. Over 5 per cent of accidents and 24.9 per cent of incidents occurring during the year 1954 to 1976 were on account of the Allison propeller.
3	1.75	-do-	The Committee consider it extremely unfortunate that the Ministry of Defence went ahead with the procurement of Packet aircraft and that too old aircraft, in 1960 and again in 1963 without making a critical evaluation of its performance. It is surprising that no specific study about the reliability/serviceability of the aircraft was ever made in spite of the fact that the aircraft including the new ones were involved in a series of accidents/incidents right from the time of their induction into service.
4	1.76	-do-	The Committee consider that before taking the decision to procure old transport aircraft which were meant for ferrying the troops over difficult terrain, a careful evaluation of its performance and deficiencies should have been undertaken. This is a serious lapse. The Committee expect that in future whenever new type of aircraft are acquired, their suitability in the Indian conditions particularly in the context the context of the role envisaged for them, would be carefully considered before bulk purchases are made.
5	1.77	-do-	The Committee find that one of the problem areas in the Packet aircraft has been the Allison propeller system which has been "besieg-

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			ed with the chronic defects of over-speeding, runaway propeller and failure to feather/unfeather in flight. On piston engine aircraft, these defects are serious potential accident hazards". It was admitted in evidence that "these propellers were prone to defects right from the beginning." The Committee were also informed during evidence that "the thought that the Allison type of propeller is not quite desirable and it is likely to create problems or that the aircraft itself is not really most suitable, seems to have come to Air Headquarters quite early and from 1959 onwards there has been some thinking on the lines that it should be replaced." If this were really so, the Committee find it strange that it was not considered necessary to bring to notice of USAF the results of various enquiries conducted into accidents to Packet aircraft particularly those in which the accidents/ incidents were attributed to the Allison propeller system.
6	1.78	Defence	It was only as late as in March, 1971 that the low reliability and other defects in the aircraft were specifically brought to the notice of Government by Air Headquarters. However, the matter seems to have been taken serious note of only in 1972 when the question of replacement of Allison propeller system by Hamilton propeller system was examined on the basis of an advice received from USAF that they were switching over to Hamilton standard propeller system on their

Packet fleet for better reliability. It has been admitted that 'no specific reports in this regard were collected from our own source'. It is therefore evident that in spite of the large scale failure during all these years, neither the Air HQs nor the Ministry of Defence took any initiative to make inquiries from other foreign Governments which were using this aircraft so as to ascertain their experiences and how they had dealt with the problems that arose particularly with regard to propellers. This denotes not only lack of interaction between the field units and the Air HQs on the one side and the Ministry of Defence on the other but also a singular lack of seriousness at all levels in devising effective steps to remedy the defects and deficiencies in the aircraft, which continued to plague the operations of the Air Force for over two decades.

7	1.79	-do-	The Committee find that the proposal to replace the Allison propeller with the Hamilton propeller system was considered in March 1972 but the matter was not pursued since it was then anticipated that the Packet aircraft would be phased out in 1973-74. This argument is apparently unconvincing for the reason that it had already been decided by Government in October, 1971 to continue the aircraft in squadron service upto 1975-76. The Defence Secretary stated during evidence that even if they had decided to go in for Hamilton propeller, as proposed by USAF in 1972, it would not have made much difference because of the embargo placed by US Government on the export of military hardware in the wake of the war with

1	2	3	4
			Pakistan. At the same time, he averred that the decision was not influenced by the embargo but was based on a study of the cost benefit ratio undertaken in consultation with HAL, Bangalore.
8	1.80	Defence	Three and a half years later *i.e.* in October 1975, the Air Headquarters, after detailed examination, felt the necessity of replacement of the propeller system on Packet aircraft to improve its reliability and long-term utilisation. A proposal to replace the propeller system on some aircraft was approved by Government in May 1976 but it was only in December, 1976 "after a serious flying accident and alarming deterioration in the reliability/serviceability of Allison propeller system that Air Headquarters finally concluded that replacement of Allison propeller system on entire Packet fleet was no longer avoidable." The proposal to replace the propellers on the entire fleet was approved by Government in January, 1977.
9	1.81	-do-	The Committee thus observe that decision in the matter was unduly delayed. Considering that the IAF had been long beset with the problem of low reliability of the Allison propeller whose failures had become serious flight safety hazard, the Committee are of the view that the Ministry of Defence should have taken effective steps to replace the Allison propeller immediately after the embargo was

			lifted. There is no evidence of any such efforts having at all been made.
10	1.82	Defence	The Committee find that the Super-Constellation aircraft of the IAF which has the same basic engine as the Packet, is fitted with the Hamilton standard propeller and that during the last 13 years of operation of the Super-Constellation fleet by the IAF, the propeller system has proved to be extremely reliable. It is, therefore, obvious that matters were allowed to drift till the flash point was reached.
11	1.83	-do-	The Committee find that the search for a successor to the Packet aircraft which started as early as in 1959, is still on. The Defence Secretary stated in evidence that "many of these aircraft we are using have technically outlived their life and somehow we are still carrying on. If we want to have a satisfactory service, we ought to have repleaced it much earlier.....We are putting up a very brave face with the antiquated aircraft...even from these old, antiquated aircraft, they still try to get the best." The Committee were however given to understand that the successor aircraft had since been identified and the proposal was at the final stage of consideration.
12	1.84	-do-	The Committee note with concern that the Ministry of Defence have been unable over the last as many as 22 years to locate a suitable transport aircraft in replacement of the Packet aircraft which

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		have far outlived their utility. The Committee expect that the decision in this regard would be announced without any further delay.
13 1.85	Defence	The Committee learn that on the basis of a special provision review of spares required for the Packet aircraft over the five year period ending June 1979, a requisition for 99 items of spares relating to the Allison propeller system (total estimated cost—Rs. 80.16 lakhs), was placed in February, 1975 on the USAF through the US Embassy in India. As pointed out by Audit, this resulted in wasteful expenditure of about Rs. 15 lakhs. Besides, other items of spares valuing about Rs. 25 lakhs became redundant due to change-orve to the Hamilton propeller system.
14 1.86	-do-	According to the Ministry, this was necessitated bacause the utilisation plans for the Packet aircraft upto 1980-81 were then under finalisation (finally approved in August, 1974). The Ministry have also contended that "it is not practicable to review the major policy issues like replacement of propeller system every time the requirement of spares are reviewed for routine replenishment of approved MPE (Maximum Potential Establishment)". Both these arugments are not quite convincing since the need for switching over to the Hamilton propeller system had already been recognised and the proposal would in fact have been implemented but for

the embargo placed by the US Government. The Committee consider that the Ministery of defence should have proceeded in the matter of procurement of spares with caution. It is evident that the cheack which the Ministry/Air Headquarters were expected to exercise in this case was not applied and the inflated requirements submitted by the lower formations were approved. How defective the assessment of requirements of spares was, is seen from the succeeding paragraphs.

15 1.87 -do-

The Committee find that the above stated order (February, 1975) for spares contained an order for 600 Nos. of gear pump essembly. In June 1975 i.e. within a short period of 4 months the order for this item was reduced to 200 Nos. and cancelled in toto in February, 1976. It is surprising that "the reduction of order from qty. 600 to 200 was sought purely as an extra precautionary measure to avoid any possible non-utilisation of this costly item with large qty. even though the requirements had been calculated correctly." The contradiction is too obvious to merit comment.

During evidence, it transpired that it was on the initiative of a junior officer in the Air Headquarters that the original order was brought down from 600 to 200.

The Ministry's note goes on to say that "the cancellation of the balance qty. 200 in Februrary, 1976 was based on the proposal for change-over of propeller system then under consideration."

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16	1.88	Defence	The conclusion that emerges is that factors having a vital bearing on the provisioning of spares were ignored at levels charged with taking an overall view of the situation. The Committee would emphasise the imperative need for revamping the procedure for assessment of requirements of spares and store and their scrutiny at higher levels so that such glaring case of over-provisioning could be avoided.
17	1.89	-do-	The Committee observe that the US Government have declined to accept any responsibility for not initiating timely action for arranging cancellation of 200 Nos. gear pump assembly on the ground that they have no record of reciept of Supply Wing letter dated 23rd December, 1975 and telex dated 20th February, 1976 which according to the Ministry were sent "though normal accepted communication channels then in force and about which there had been no complaints."
18	1.90	-do-	The Committee find that the communication dated 6th February, 1976 cancelling the item *in toto* was not endorsed to the US Embassy through whom the initial order was placed. Further, the telex message sent by the supply Wing, Washington to USAF on 20 February, 1976 cancelling the order was not followed up with a formal communication in confirmation of the message. Accepting that there was a failure of communication in this case, the

			Ministry have stated that instructions have since been issued that a written confirmation from USAF should be invariably obtained in all cases of cancellation of order.
19	1.91	-do-	The Committee consider that the loss of Rs. 15 lakhs arising from supply of 200 Nos. of gear pump assembly is attributable to the failure of the concerned authorities to take timely follow-up action which any prudent buyer would have taken in the given circumstances.
20	1.92	-do-	The Committee further find that the failure of the concerned authorities to review the requirements of 98 other items of spares both at the time of curtailing the requirements of gear pump assembly in June 1975 and subsequently while cancelling the item *in toto* in February, 1976, resulted in spares of the value of Rs. 25 lakhs becoming redundant.
21	1.93	-do-	The Committee consider that the above lapses call for detailed investigation with a view to fixing responsibility. Results of the inevstigation should be reported to the Committee.
22	1.94	-do-	Yet another unhappy aspect of the case is procurement of obsolete and defective spares. The Committee are given to understand that "M/s. HAL has been experiencing insurmountable difficulties in overhauling regulators since the spares received from abroad were not new and a large number failed during final test."

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			The representative of the Ministry admitted in evidence that "they (USAF) had started cannibalisation of spares from out of the aircraft taken as destroyed.....the reason was that their production line had stopped. In this particular case, the possibility is that because the spares taken are from cannibalised parts and they have been put to a lot of overhaul etc. the quality of spares was not as good as one would like that to be." The Committee find from the Ministry's reply that the supplies were obtained from USAF under FMS (Foreign Military Sales) arrangements and that as per FMS procedure, the USAF are to make supply of items in fully serviceable condition. The Defence Secretary stated in the evidence that the question whether there was any possibility of claiming compensation could be examined. The Committee would like the Ministry of Defence to take up the question of reimbursement for the defective supplies with the US Government in all earnestness.
23	2.81	Defence	The Committee observe large quantities of an ammunition (16000 rounds of service ammunition and 11000 rounds of its practice version) required for Vijayanta tanks were procured from a foreign government during January 1968—October 1969 through an Indian Mission abroad at a total cost of Rs. 2.5 crores. The service ammunition consisted of 8000 rounds of old stock and an equal number of new stock—the price differential between the two being

£ 5 per round. Although the extant regulations require that purchases where the amount involved is more than Rs. 1 crore, should be made with the approval of the Minister/Minister of State for Defence and the Finance Minister, the decision in the instant case was taken in the Ministry of Defence at the level of Defence Secretary. Further, even though the initial decision to make the purchases was taken in consultation with the Ministry of Finance (Defence), the latter were not consulted while taking the final decision to accept the offer of the foreign Government which declined to accept any condition in the nature of a warranty clause in the agreement.

24 2.82 -do-

The Committee find from the correspondence exchanged on the subject between the Indian High Commission and the foreign government that subsequent to discussions between the representatives of the two sides in November/December 1966, the Indian authorities notified their desire "to reconsider the suggestion that they might take a quantity of ammunition from Army Stocks of the foreign Government in lieu of similar ammunition from new production....." While affirming that "the Department is glad to reopen the negotiations", the foreign government in their letter dated 21 December 1966 had warned that it would not be possible for them to give any warranty as the life of ammunition depended so much upon factors over which the Department had no control when the ammunition had been sold. However, the communication had added that "such rounds as your authorities might decide to accept from army stocks of the foreign government would be

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25	2.83	Defence	How old was the stock offered had been made clear in an earlier communication dated 8 August, 1966 which stated *inter-alia*: "It is not possible to meet your authorities condition that the ammunition to be provided from army stocks of the foreign government should be not more than two years old at the time of issue. Investigation has shown that the quantity of 16,000 rounds would have to come from stocks of this type of ammunition that were manufactured in 1961. These are the most recent rounds held in stocks and are upto Service standards."

The communication further stated:—

"……The rounds of 1961 manufacture can be a expected to last for a further ten years with satisfactory storage such as they would have in the Service.

Tracers may fail to ignite after about ten years or less in unsatisfactory storage conditions……"

26	2.84	-do-	The Ministry of Defence went ahead with the purchase of old ammunition on the plea that "Army Headquarters who were consulted, stated that in view of the urgent requirement, there was no choice but to accept the ammunition." The Ministry did not also consider it necessary to obtain any samples for trial "because it was a standard ammunition. Whatever be the condition, they were in no mood to subject themselves to any knd of stipulation……At that time, we were relying on everything that had come from sources of the foreign government as it proved to be of standard quality because we had also participated in the War."
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38	2.96	-do-	Considering that the ammunition had recorded inaccuracy and successive short ranging on excessive occasions as early as in September, 1973, it is difficult to accept the plea of the Ministry that use of such ammunition would not affect the quality of training particularly when the defects are bound to get aggrevated with passage of time. The Committee consider it unfortunate that the Army

			was led into such a unfortunate situation that the defective ammunition had to be used for training and the purpose of samulating battle conditions was not fully achieved.
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40	2.98	-do-	The Committee have been given to understand by the Ministry of Defence that the poor performance of Indian Supply Wings abroad in meeting the needs and aspirations of the Services Headquarters has of late become a matter of anxiety to the Chiefs of Staff. The Committee view with great concern that due to "the unhelpful attitude of our Supply Wing abroad, high value defence weapon and equipment systems have become non-operational for want of low cost spares." While the setting up of a small cell for processing low value indents as decided recently, may be of help to meet the immediate requirements of the Services Headquarters for the present, the Committee consider that the question of processing of defence requirements, big or small, with a view to eliminating the

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			delays which may prove costly, is a matter which calls for immediate attention. The Committee therefore recommend that the Ministries concerned should go into the matter in the light of the difficulties experienced and the organisational changes that may be called for, in the existing set up of the supply wing attached to Indian Missions abroad, should be carried out without loss of time in the interest of the country's defence requirements.

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