



**REPORT OF THE  
COMPTROLLER AND AUDITOR GENERAL  
OF INDIA**

**UNION GOVERNMENT  
NO. 8 (COMMERCIAL) OF 1991**

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**VAYUDOOT LIMITED  
OPERATIONAL PERFORMANCE**



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## P R E F A C E

1. A reference is invited to prefatory remarks in the Report of the Comptroller & Auditor General of India - Union Government No.1 (Commercial) of 1991 wherein mention was made that this Report will be presented in several parts.
2. This part contains review on the working of Operational performance of Vayudoot Limited.





## OVERVIEW

1. The Company was incorporated in January 1981 as third level airline with the primary objective of connecting inaccessible areas in the North Eastern Region. Out of the 14 stations selected for airlinking of North-East India, the Company was able to airlink on a regular basis only three stations. In 8 stations services were started and suspended and no airlinkage could be attempted in 3 stations due to lack of airfield/runway at these stations.

(Para 1 and 1.1)

II In October 1981, the Government of India approved the proposal to extend services to 23 stations identified on the basis of their commercial and tourist importance and subsequently ( September 1986) the Company was given freedom to select stations on considerations of commercial viability. It was noticed that during 1987-88 the Company incurred losses on 46 out of a total of 50 routes operated by it in regions other than in the North East. As the Company had not been given a mandate by Government to operate services in 'regions other than North East' on considerations other than commercial, its operations in these regions were not in conformity with the Government policy.

(Para 1.2)

III. The operations revealed that the Company failed to maintain schedule in respect of stations operated by it. A test check of flight data for the month of April 1987 in respect of Northern region alone showed that in case of 3



sectors, the percentage of flight cancellation to scheduled flights ranged from 46 to 59 per cent.

Poor seat utilisation has been a chronic problem of Vayudoot. The Company had a seat utilisation of below 50% during the years 1987-88 to 1989-90 on as many as 22 out of 59, 20 out of 56 and 25 out of 57 routes respectively. 7 routes were operated below 20 per cent seat utilisation factor, the lowest being Bombay-Ratnagari at 6.8 per cent.

An analysis of routes carried out by the Management at the instance of Audit, revealed that on as many as 14 routes the break even seat factor was above 200 per cent atleast in one of the years for the period 1987-88 to 1989-1990.

(Para 1.3)

National Airports Authority (NAA) developed aerodromes for Vayudoot operations. The expenditure on 22 aerodromes where services have either been irregular or suspended for long period was Rs. 534.60 lakhs. This does not take into account the expenditure incurred by the Civil Aviation Department on such development prior to the formation of the NAA; nor does account for the recurring expenditure on the maintenance of such airports as do not have Vayudoot operations any more.

(Para 1.4)

IV. The Company carried out major maintenance job on DO-228, while the maintenance of F-27 and HS-748 was carried out by Indian Airlines.

(Para 2.1)



V. During the period April 1985 to March 1989, there were 44 cases of premature grounding of Dornier engines, out of which 27 groundings were due to manufacturing defects. It was also noticed that 16 engines remained grounded for period ranging from 3 to 10 months.

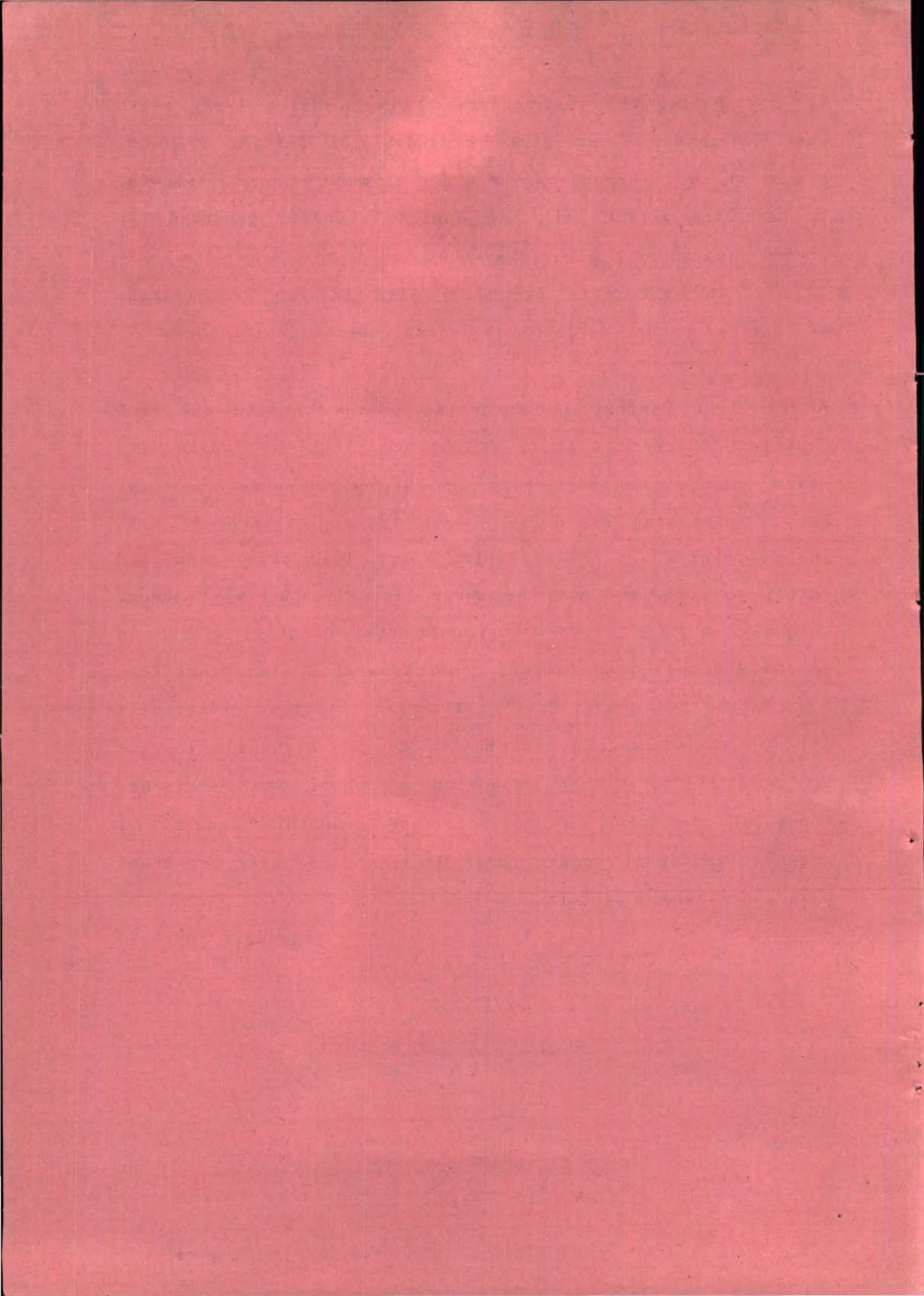
The excessive grounding also led to cancellation of services resulting in consequential operational losses.

(Para 2.2 and 2.3)

VI. The Company is incurring losses despite the fact that fare charged by it is at the same level as Indian Airlines on the common sectors and higher on other sectors, due to operating expenditure being disproportionately high and its routes not being viable. A very high break even load factor in respect of all the three aircraft used by Vayudoot (highest in case of STOL aircraft viz. Dornier) against a very low actual load factor, combined with a high Break Even Seat Factor and a poor seat utilisation factor on practically all the routes mainly contributed to the Company's losses; besides, indiscriminate expansion of short haul services, irregular operation of services and premature removal of engines leading to grounding of Dornier fleet were the other main contributory factors.

(Para 4.1 and 4.2)





## 1. INTRODUCTION

The Company was incorporated in January 1981, as the third level national airline to connect inaccessible areas in the North-Eastern Region. The main objective of the Company is to plan, promote, develop, organise and operate air transport services, scheduled and non-scheduled, for the carriage of passengers, mail and freight and for any other purpose, including aerial work. The authorised capital of the Company is ₹.50 crores to be held jointly by Indian Airlines and Air India. The paid up capital of the Company was ₹.35.95 crores as on 31 March 1991, contributed by Indian Airlines and Air India.

This review deals with the following aspects:-

- I. Operations of the Company in North East and other regions.
- II. Engineering Workshop
- III. Fare structure and financial position

### 1.1 Operation of services in North East Region

In December 1980, the Government of India decided to set up a Company for running a third airline which would initially operate in West Bengal, Assam and other states/territories of the North-Eastern region. Consequent, to the above decision, the air services started operating from 26 January 1981. Following 14 stations were selected for operation :



- |                |                |            |
|----------------|----------------|------------|
| 1. Rupsi       | 6. Cooch Behar | 11. Sadiya |
| 2. Shillong    | 7. Along       | 12. Tezu   |
| 3. Kamalpur    | 8. Daparizo    | 13. Zero   |
| 4. Kailashahar | 9. Itanagar    | 14. Aizwal |
| 5. Gangtok     | 10. Passighat  |            |

It was, however, noticed that out of 14 stations initially proposed for operation (i) the Company has been able to airlink on a regular basis only 3 stations namely, Shillong, Cooch Behar and Aizwal, (ii) in case of 8 other stations while it started the services, it later suspended the same though some of them were airlinked after a lapse of 5 to 6 years from the date of its incorporation and (iii) in case of three stations namely Gangtok, Sadiya and Itanagar, no airlinkage was attempted. Details of services started/suspended are indicated in the table below :

Stations	Date/ Year of commencement.	Date/ Year of termination of services to the stations	Date of recommen- cement of services	Date of subsequ- ent termi- nation of services	Present status (Decemb- er 1990)
1	2	3	4	5	6

(A) Services in Regular Operation

Shillong	1981-82				in operation
Cooch Behar	1984-85				- do -
Aizwal	1983-84				- do -



(B) Services not operated regularly.

---

1	2	3	4	5	6
Kailash har	26.1.81	10.4.82	28.9.86	21.10.88	in operation

---

(C) Services presently suspended

Kamalpur	26.1.81	10.4.82	28.9.86	21.10.88	not in operation (January 1990)
Rupsi	26.1.81	10.4.82			- do - (April 1982)
Along	22.12.86	2.4.88			- do - (January 1990)
Daparizo	22.12.86	26.5.88			- do - (February 1990)
Passi ghat	23.12.85	26.5.88			- do - (January 1990)
Zero	23.12.85	27.5.88			- do - (February 1990)
Tezu*	26.1.81	30.5.84	22.12.86	1.12.88	- do - (December 1989)

(D) Services not operated at all

Gangtok

Sadiya

Itanagar

---

The Company stated (January 1990) that services to Gangtok, Sadiya and Itanagar could not be started due to non-

---

\* The Ministry stated (April 1991) that as on December 1990, the Company had commenced operations to Tezu also in addition to Kailashahar. However, the Company has stated (April 1991) that the flights to Tezu have been withdrawn with effect from 1 August 1990.

availability of airfield/runways at these stations. They further stated that except for Rupsi, services to remaining 7 stations were resumed in February/March 1989. A test check in audit revealed that services to Tezu was suspended in December 1989; to Kamalpur, Along and Passighat in January 1990 and to Daparizo and Zero in February 1990. Thus, it is evident that as on February 1990; the Company was operating only 4 stations viz. Shillong, Coochbehar, Aizwal and Kailashahar, out of 14 stations identified by Government.

The Company suffered losses on the operation of services in North-Eastern region. The yearwise details of losses are as follows :

<u>Year</u>	<u>No. of routes</u>	<u>Amount</u> <u>(Rs. in lakhs)</u>
1981-82	5	(-) 66.60
1982-83	6	(-) 11.65
1983-84	5	(-) 10.65
1984-85	4	(-) 1.41
1985-86	4	(-) 30.93
1986-87	8	(-) 250.96
1987-88	8	(-) 578.05
Total Losses (-)		950.25



The Ministry stated (April 1991) that the losses incurred in North-East were mainly due to the fare structure being lower by 17 percent than fares in the rest of India, inadequate passenger traffic and pay load penalties on account of airport and runway restrictions. The Ministry added that the high maintenance and fuel cost of ageing Turbo Prop aircrafts as well as the high rate of premature engine removal in the Dornier fleet also added to the losses.

#### **1.2 Extension of Vayudoot Services to Regions other than North-East.**

In April 1981 the Government of India gave permission to the Company to extend its services to places other than North Eastern region on the basis of a phased programme. In pursuance of this decision the Company/Ministry of Civil Aviation identified 23 routes/stations for airlinking in the first phase on the basis of commercial and tourists importance and the availability of the runways. The Company had projected that the traffic on these routes would be above the break-even level with the STOL aircraft in operation within months of introduction of services. The Company had further visualised that these services would not be from point to point, but would, as far as possible be in circuits covering a number of places at a time. The proposal was approved by the Government in October 1981.

It was, however, noticed that right from inception the Company had been incurring heavy losses. In order to reduce losses, Ministry of Civil Aviation/Company came up with a fresh proposal before the Cabinet (September 1986) suggesting that the Company be



permitted to select stations for being airlinked on commercial criteria. The criteria that the Company would adopt in deciding new routes would be - (i) economic viability of operations, (ii) geographical terrain, (iii) tourism and industrial potential of the place and (iv) availability of infrastructural facilities.

It may, however, be mentioned that in the proposal seeking Government approval to operate services on commercial consideration the Planning Commission had expressed certain reservations. The Planning Commission observed that, indiscriminate expansion of short haul services on routes where adequate and efficient surface mode of transport were available and where saving in time offered by air transport was only marginal had led to distortion in realisation of optimal intermodal mix. The Commission also felt that the Company was extending its services into areas which were already accessible easily by rail or road within a few hours and there existed no national compulsion for the Company to operate in such areas.

Taking an overall view the Government accepted the proposal of the Company that, being a commercial organisation, it should have freedom regarding selection of new stations to be airlinked. The Government further decided that a committee be set up to work out notional subsidies which the Airline should get on the routes opened on the directive of the Government but which were

not commercially viable. This would help in ensuring that the Airline functioned on commercial basis.

From the foregoing, it was evident that:-

- (a) In 'regions other than North Eastern', the stations were to be selected/airlinked only on the basis of commercial consideration and there was no mandate for the Company to operate services in a station if it did not prove to be commercially viable;
- (b) The Company was entitled to get subsidy only on routes opened on the specific direction of the Government. Since Government had not directed the Company to operate services in routes other than in North-East India without the criterion of commercial viability, only services in North-East would be entitled for subsidy by Government in the event of loss. However, no committee was set up to workout notional subsidies nor was any subsidy released (January 1992).

In reply to audit observations, the Company (January 1990) had stated that their operations to station outside North-East region were at the instance of Government and the list of 14 stations in North-East and 23 stations outside North-East region were drawn up by the Government. The Company further stated that the discretion to select new station was accorded to them in September 1986 and the Government itself conceded that subsidies would be due for operation not only in North-East region but outside North-East also, provided the uneconomic routes/sectors were operated at the instance of the Government.



The contention of the Company was not correct as a study of Government decision cited above revealed that Government had decided that the Company should operate stations 'other than North-East' only on commercial considerations.

The Ministry in their reply stated (April 1991) that commercial viability was only one of the specified considerations. However, as already detailed earlier the entire set of criteria were fixed in the overall context of "commercial viability" and "reduction of losses".

It was noted that most of the routes/stations airlinked by the Company in regions other than North-East had been incurring losses. The yearwise losses suffered by the Company in respect of stations operated in the regions other than North-East during the years 1982-83 to 1987-88 were as under. The route-wise details are given in the Annexure 'A', 'B', 'C' and 'D'

Year	No of routes operated	No of routes in which losses were incurred	Amount (Rs. in lakhs)
1982-83	5	5	(-) 96.50
1983-84	7	6	(-) 48.05
1984-85	13	10	(-) 69.12
1985-86	31	27	(-) 340.84
1986-87	48	46	(-) 880.81
1987-88*	50	47	(-) 953.55
			(-) 2388.87

\*Accounts for 1988-89, 1989-90 and 1990-91 have not yet been finalised.

In 1986-87 it incurred losses on 46 out of 48 routes and in 1987-88 on 46 out of 50 routes. The profit making routes were: Delhi-Dehradun Delhi; Delhi-Chandigarh Kulu-Chandigarh Delhi (1986-87) and Delhi-Ludhiana Delhi, Delhi-Dehradun-Delhi Delhi-Chandigarh Kulu-Chandigarh-Delhi, Calcutta-Jamshedpur-Calcutta (1987-88). As per the Company profits on these routes were attributable to the fares fixed at higher levels than the approved rates as these were monopoly sectors; higher revenue yield from US dollar fares on tourist sectors and higher fares being charged on some sectors to compensate for payload restrictions. As the Company was not given a mandate to operate services in 'regions other than North-East' on considerations other than commercial, its operations on loss-making routes were not in consonance with the Government policy.

### 1.3 Irregular operation of Services

The Company was stated to have been operating 50 stations in 1985-86 and gradually expanded its operations to 84 stations in 1986-87 and to 100 stations as on March 1989. A test check of its operations during the year 1987-88 and 1988-89 however, revealed that the Company had stopped operations at some stations and suspended operations at other stations for months together as indicated below:-

- a) The Company ceased services to the seven following stations and these have not been resumed till date (May 1991).

	<u>Start of Service</u>	<u>Suspension of Service</u>
(i) Hissar	February 1986	April 1986
(ii) Gorakhpur	September 1986	January 1987
(iii) Mangalore	February 1987	May 1987
(iv) Tezpur	December 1986	June 1987
(v) Warangal	October 1985	August 1987
(vi) Gwalior	November 1985	November 1987
(vii) Raibarelli	January 1985	November 1987



It was stated (January 1990) that the Company permanently discontinued operations at Gorakhpur, Tezpur and Gwalior as Indian Airlines started Boeing operations at these stations.

- (b) At the following 29 stations, services were suspended for periods ranging from 3 months to 24 months during the period April 1987 to March 1989.

3-6 Months	6-12 Months	12-18 Months	18-24 Months
1. <u>Kamalpur</u> 11/88-1/89 (3M)	1. <u>Allahabad</u> 12/87-3/88 7/88-12/88 (10M)	1. <u>Jodhpur</u> 4/87-4/88 (13M)	1. <u>Rourkela</u> 4/87-3/89 (24M)
2. <u>Kailashahar</u> 11/88-1/89 (3M)	2. <u>Amritsar</u> 10/87-9/88 (12M)	2. <u>Jaisalmer</u> 4/87-4/88 (13M)	(reairlinked) w.e.f. 5/89
3. <u>Agra</u> 7/87 & 8/87, 4/88 to 6/88 (5M)	3. <u>Ratnagiri</u> 7/88-2/89 (8M)	3. <u>Bhopal</u> 4/87-4/88 (13M)	
4. <u>Varanasi</u> 7/87-9/87 4/88-6/88 (6M)	4. <u>Nagpur</u> 4/87-7/87 10/88-2/89 (9M)	4. <u>Lucknow</u> 4/87-4/88 (13M)	
5. <u>Bellary</u> 4/87-8/87 (5M)	5. <u>Sholapur</u> 7/88-2/89 (8M)	5. <u>Bikaner</u> 4/87-9/88 (18M)	

- |                      |                      |                   |
|----------------------|----------------------|-------------------|
| 6. <u>Ramagundam</u> | 6. <u>Passighat</u>  | 6. <u>Ranchi</u>  |
| 4/88-7/88            | 5/88-2/89            | 4/87-8/88         |
| (4M)                 | (10M)                | (17M)             |
| 7. <u>Ahmedabad</u>  | 7. <u>Zero</u>       | 7. <u>Cuddapa</u> |
| 10/88-2/89           | 5/88-2/89            | 4/87-4/88         |
| (5M)                 | (10M)                | (13M)             |
|                      | 8. <u>Along</u>      |                   |
|                      | 5/88-2/89            |                   |
|                      | (10M)                |                   |
|                      | 9. <u>Daparizo</u>   |                   |
|                      | 5/88-2/89            |                   |
|                      | (10M)                |                   |
|                      | 10. <u>Dhanbad</u>   |                   |
|                      | 5/88-2/89            |                   |
|                      | (10M)                |                   |
|                      | 11. <u>Gaya</u>      |                   |
|                      | 5/88-2/89            |                   |
|                      | (10M)                |                   |
|                      | 12. <u>Balurghat</u> |                   |
|                      | 6/88-2/89            |                   |
|                      | (9M)                 |                   |
|                      | 13. <u>Malda</u>     |                   |
|                      | 8/88-2/89            |                   |
|                      | (7M)                 |                   |
|                      | 14. <u>Bhatinda</u>  |                   |
|                      | 11/87-9/88           |                   |
|                      | (11M)                |                   |

('M' indicates Month)



From the above, it would be seen that services to 36 stations were either terminated or suspended for long intervals of time. The Company stated (January 1990) that they were forced to suspend their operations at these stations temporarily due to shortage of aircraft, poor load factor, runway repairs and monsoon conditions. Apparently the Company offered only sporadic services at these stations because they started these services without proper assessment of the availability of aircraft and the commercial viability of the routes.

The Ministry stated (April 1991) that the Company had since undertaken a rationalisation exercise in view of the shortage of aircraft capacity and to minimise their mounting losses. The operational network was reduced to 55 stations w.e.f. November 1990 as against 105 stations operated earlier. The Ministry added that the number of stations was further reduced to 48 as on February 1991. (However, the Company's schedule for May 1991 still indicated a network of 54 stations). It was also not clear as to why such an exercise was not conducted earlier in view of the fact that the Company had been consistently incurring heavy losses since 1981. The Company had indiscriminately expanded its network without assessing whether it was possible to sustain the services on a regular basis. This was further borne out by the cases mentioned below.

- (i) A test check of flight data for the month of April 1987 in Northern region, revealed that flights in the following sectors/routes were cancelled frequently.

Flight No and Route/ Sector	Number of scheduled flights	Cancelled	Actual take off	Percentage of cancella- tion in scheduled flights
141-142 Delhi-Agra Kanpur- Varanasi & Back)	17	10	7	59
125-126 (Delhi-Gwalior Guna-Bhopal (Kota)-back)	26	12	14	46
131-132 (Delhi-Rai- barelli - Allahabad - back)	26	4	22	15
133-134 (Delhi- Chandigarh- Amritsar - back)	13	6	7	46

- (ii) It was also noticed that in the Printed Schedule/Circulars meant for the information of travelling public, in Northern region the following routes/sectors were stated to have been in operation from the dates mentioned against each, but were not operated from the dates specified.



Route/Sector	Flight No./ Frequency	Date of commencement of operation as per schedule	Remarks
Delhi-Lucknow Gorakhpur back	129-130 (2,4,6)	10.8.1987	Gorakhpur-withdrawn from 1/87 and not resumed.  Lucknow-remained suspended from 4/87 to 4/88 and resumed from 5/88.
Delhi-Guna-Delhi	125-126 (1,3,5)	14.3.1988	Guna-remained suspended from 11/87 to 4/88 and resumed from 5/88.
Delhi-Allahabad-Delhi	131-132 (2,4,6)	14.3.1988	Allahabad-remained suspended from 11/87 to 3/88 and resumed from 4/88.

(iii) One disquieting feature of Vayudoot operations has been the poor seat utilisation factor on many of its routes. Thus, as the table below brings out, during the period 1987-88, 1988-89 and 1989-90, the Company had a seat utilisation of below 50 per cent on as many as 22 out of 59, 20 out of 56 and 25 out of 57 routes respectively.

Year	Total No. of routes	Below 20%	20-30%	30-40%	40-50%	Total No. of routes where seat utilisation was below 50%
1987-88	59	2	3	5	12	22
1988-89	56	1	3	3	13	20
1989-90	57	4	5	5	11	25

A further analysis of seat utilisation also indicated that on as many as 7 routes the seat utilisation factor was below 20%, the lowest being 6.8% in the Bombay-Ratnagiri route (annexure-F). In the case of 11 routes, the seat utilisation varied between 20% to 30%, the lowest (20.8%) being in the Hyderabad - Ramagundam route (annexure-G). Annexure H and I give details of the routes with seat utilisation between 30% to 40% and 40% to 50% respectively.

A route-wise analysis carried out by the management at the instance of audit revealed that on as many as 14 routes, the break-even seat factor (BESF) was above 200 percent at least in one of the years for the period 1987-88 to 1989-90 as indicated below. In all these cases BESF was above 100% which made these routes commercially non-viable.

Sector	BESF%	BESF%	BESF%
	1987-88	1988-89	1989-90
1	2	3	4
1. Calcutta-Rourkela-Ranchi	$\frac{133.6}{(42.2)}$	$\frac{230.4}{(44.3)}$	$\frac{135.1}{(25.8)}$
2. Calcutta-Guwahati-Lilabari-Zero-Daparizo	$\frac{142.0}{(22.6)}$	$\frac{312.9}{(40.4)}$	$\frac{199.3}{(47.1)}$
3. Calcutta-Malda-Balurghat	$\frac{276.6}{(25.0)}$	$\frac{306.1}{(16.9)}$	*
4. Calcutta-Bhubneshwar	$\frac{268.3}{(44.1)}$	*	*
5. Calcutta-Dhanbad-Patna-Gaya	*	$\frac{178.9}{(30.6)}$	$\frac{229.9}{(24.9)}$
6. Bombay-Sholapur	$\frac{274.6}{(45.6)}$	$\frac{350.0}{(44.0)}$	*
7. Bombay-Nasik	*	*	$\frac{260.6}{(48.4)}$



1	2	3	4
8. Hyderabad-Ramagundum	*	<u>206.1</u> (20.8)	<u>129.5</u> (18.5)
9. Hyderabad-Pune		<u>112.2</u> (33.6)	<u>216.6</u> (63.7)
10. Madras-Tirupati		<u>151.5</u> (30.4)	<u>352.3</u> (43.7)
11. Madras-Bangalore	*	<u>318.2</u> (29.6)	* -
12. Hyderabad-Cuddapah	*	<u>221.9</u> (34.4)	<u>110.3</u> (19.8)
13. Madras-Thanjavour	*	*	<u>245.8</u> (44.5)
14. Madras-Bangalore-Calicut- Trichy-Cochin	*	*	<u>200.2</u> (25.9)

\* Routes not operated.

( ) Indicates Actual Seat Factor. Annexure J indicates the break even and actual Seat-Factor on 39 routes, which were readily available with the Company.

"In view of the BESF exceeding 100% on all these routes it is not clear on what calculations it was projected to Government in 1981 that traffic would be above break even level with STOL aircrafts!"

#### 1.4 Non Utilisation of Facilities created by NAA.

National Airports Authority (NAA) incurred substantial expenditure in developing aerodromes for Vayudoot operations. NAA developed 46 aerodromes for Vayudoot operations out of which 24 were for HS-748 and 22 for Dornier.

The works carried out included not only expenditure on aerodrome works (Civil works) but also on the provision of communication, safety, security equipments at these aerodromes.

As mentioned above (para 1.3), the operations of Vayudoot at many of the stations were irregular and remained suspended for long periods of time. At some stations, services

have ceased. At 35 stations, Vayudoot's services have either been terminated or suspended for a long period of time. The expenditure incurred by NAA on 22 of these aerodromes was Rs.534.60 lakhs (Annexure-K). In addition, NAA is also incurring expenditure on the maintenance of these aerodromes. This investment only represents expenditure incurred by the NAA consequent to its formation in May 1986. The assets which were earlier developed by the Civil Aviation Department for Vayudoot aerodromes has not been taken into account.



## 2. ENGINEERING WORKSHOP

2.1 As on 31 March 1991 the Company had a fleet of 8 Dornier aircraft. In addition, it had 11 Avro and 1 Fokker aircraft (including 3 Avro and 1 Fokkar taken on lease from Indian Airlines).

The maintenance base at Delhi carries out major maintenance of Dornier 228 aircraft, ranging from Tranist 'B' Check, carried out every 24 hours to the highest check carried after 4800 hours. Workshops at Bombay, Calcutta and Madras undertake DO-228 inspection ranging from Transit 'B' to 300 hours and Hyderabad upto 100 hours. The Company had established radio/electrical instrumentation and Hot Section Inspection (Engine) Shops where repair and testing of some components was done. There are no facilities for engine overhaul and these were got done outside by the manufacturers.

Line maintenance of HS-748 and F-27 was carried out by the Company. Major maintenance was carried out by Indian Airlines at Calcutta for F-27 and for HS-748 aircraft at Hyderabad.

### 2.2 Premature Grounding of Engines (Dornier-228)

- (i) During the period from April 1985 to March 1989 there have been 44 cases of premature grounding of engines (involving 22 engines) i.e. before completion of 3000 flying hours as detailed below :-

Engines	Total Groundings	Reasons for groundings		
		Manufacturing defects	Operating & Maintenance defects	Bird hit/FOD
6 Engines-each grounded thrice	18	10	6	2
10 Engines-each grounded twice	20	13	5	2
6 Engines-each grounded once	6	4	1	1
	44	27	12	5

- (ii) It was noticed that 16 engines remained grounded for more than 3 to 10 months as detailed below :-

<u>No. of Engines</u>	<u>Period Grounded</u>
2	1-50 days
4	51-100 days
3	101-200 days
9	201-300 days
4	301 and above days

- (iii) Out of 44 groundings, there have been 27 groundings of engines owing to manufacturing defects. The total cost on the repairs of engines amounted to Rs.178.56 lakhs (in 17 cases) as per details in Annexure 'E'.



For manufacturing defects, the Warranty Clause of the agreement provides that Warranty shall expire with respect to any aircraft (or product) after it has flown 1000 hours or 12 months have elapsed from the date of delivery of such aircraft to the purchaser, whichever occurs first. As per these provisions of the Warranty Agreement out of 27 cases only one case of Engine removed on 5 March 1987 became entitled for compensation claim.

In 1988 M/s. Garret, (manufacturers) informed the Company that in respect of first 9 groundings of engines, they would be responsible (through HAL) for parts and labour charges directly associated with the repairs of these engines. Accordingly, in May 1988 the Company claimed compensation from Hindustan Aeronautics Limited for Rs.49.64 lakhs in respect of 7 engines (against their total repair costs of Rs.68.02 lakhs) and subsequently for 2 more engines after Audit had pointed out the omission. The Company had not (14 November 1991) received any amount from HAL towards compensation.

### **2.3 Excess Grounding of Aircraft for want of spare Engines**

Normally, a float of 20-25 percent spare engines is to be maintained. Against the 20 engines fitted in 10 Dornier aircraft, a float of 6 engines was maintained from May 1987. However, it was noticed that due to excessive grounding of engines the float maintained was

insufficient. This led to grounding of Dornier aircraft for a total of 341 days during 1987-88 as indicated in the table below. Thus, due to defective engines, the normal holding of spare engines was insufficient and led to flight cancellations and disruptions in schedules.

Aircraft Regn. No.	Period of Grounding (for want of spare engines)	No. of days Grounded
EIQ	11.5.87 to 5.10.87	148
EIQ	15.8.87 to 17.8.87	3
EIQ	7.10.87 to 12.10.87 18.11.87 to 31.3.88	5 135
EJT	23.2.88 to 29.2.88	7
EJF	10.11.87 to 24.11.87	15
EJU	25.11.87 to 13.12.87	19
EJN	1.2.88 to 9.2.88	9
		<hr/> 341 <hr/>

The Company has stated (January 1990) that due to excessive snags, a number of engines had to be prematurely grounded. It was also stated that HAL did not ensure proper product support and took a very long time to repair these engines.



### 3. MAJOR ACCIDENTS

- (a) One aircraft VT-DMC crashed on 19 October 1988 near Guwahati while operating Silchar-Guwahati sector (all the 35 passengers on board were killed in the accident). The cause of accident was attributed to error of judgement on the part of Pilot-in-Command and the wrong clearance by Air Traffic Control, by the Court of Enquiry headed by Hon'ble Justice U.C. Banerjee.
- (b) One Dornier aircraft VT-EJF crashed on 23 September 1989 while operating flight PF-624 (Pune-Hyderabad) and 11 persons on board were killed in the accident. The cause of the accident as established by the Enquiry Committee headed by Air Marshal C.V. Gole (Retd.) was primarily the "inappropriate action" taken by the Pilots, in turbulent weather conditions.
- (c) Besides, the Company's aircraft also met with three major accidents, as detailed below :-

Aircraft Regn. No.	Place & date of accident/ incident	Nature of Accident	Cost of repairs (Rs. in lakhs)
VT-DMB	<u>Coochbehar</u> <u>6.7.1987</u>	Extensive damage sustained as the aircraft overshoot the runway	37.27
VT-EIP	<u>Calcutta</u> <u>9.8.1987</u>	Aircraft hit stationary Matador Van and was damaged	14.89
VT-DMB	<u>Calcutta</u> <u>23.9.1988</u>	Aircraft hit a high lift van in the apron (one person killed)	40.00
			92.16



#### 4. FARE STRUCTURE AND FINANCIAL POSITION

##### 4.1 Fare Structure

The following points were noticed while studying fare structure of the Company :-

- (i) The fares and freight rates were fixed from 26 January 1981 with the approval of the Central Government. These rates were fixed 30 percent lower than the normal fare for the rest of India, charged by the Indian Airlines.
- (ii) In September 1981 the fares and freight rates were brought at par with the fare charged by the Indian Airlines in North-East region which was 17 percent lower than the fares in the rest of India. These rates were further increased from 29 June 1983 after Indian Airlines increased its fare in 1983.
- (iii) In August 1985, the Company got approval from the Government for a revised taper based on the cost of operation and the fares and freight rates were fixed based thereon. The taper were approved by the Government provisionally for a period of six months.
- (iv) Fares were further increased by 7 percent from 20 April 1986 and 10 percent from 25 October 1987 to overcome the increase in fuel expenses and cost of operation.

(v) In respect of common sectors the fare charged was the same as charged by Indian Airlines.

In October 1987, when it increased its fare by 10 per cent, a comparative study of such fares vis-a-vis fares charged by Indian Airlines revealed that the Company charged 4.89 per cent and 15.92 per cent higher than the average fare of Indian Airlines between the slab 1-300 statute mile(S.M.) and 301-600 S.M. respectively. When the fares were increased by the Company and Indian Airlines in July 1989, fares of the Company were 23 per cent higher than the average fare of Indian Airlines at 301-600 S.M. slab. The details were as under:-

Vayudoot Limited Rates

I.A. rates for Kms/Equivalent S.M. Slab.

S.M. slab	Rate(%)		K.Ms.	Equiva- lent SM for mul- tiple of 100 Kms.	Per K.M.		Rate(%)	
	w.e.f. 25.10.1987	Per S.M. w.e.f. 20.7.1989			w.e.f. 25.6.1987	w.e.f. 9.7.1989	Correspond per SM w.e.f. 25.6.1987	w.e.f. 9.7.1989
1	2	3	4	5	6	7	8	9
a)1-300	1.93	2.32	1-100	62.11	1.42	1.88	2.29	3.02
			101-200	124.22	1.19	1.56	1.92	2.51
			201-300	186.33	1.10	1.40	1.77	2.25
			301-400	248.45	1.00	1.21	1.61	1.95
			401-500	310.55	1.00	1.19	1.61	1.92
Average Rate:							1.84	2.33



1	2	3	4	5	6	7	8	9
b)301-600	1.82	2.19	501-600	372.66	1.00	1.13	1.61	1.82
			601-700	434.77	0.98	1.11	1.58	1.79
			701-800	496.88	0.97	1.10	1.56	1.77
			801-900	558.99	0.96	1.09	1.55	1.75
			901-1000	621.10	0.97	1.10	1.56	1.77
					Average Rate :		1.57	1.78

In addition to the above, The fare charged by the Company and Indian Airlines were same as regards common routes. A few instances were as under :

Route/Sector	Vayudoot Fare (Rs.)		I.A. Fare (Rs.)	
	w.e.f. 25.10.1987	Revised w.e.f. 20.7.1989	w.e.f. 25.6.1987	Revised w.e.f. 9.7.1989
Agra-Delhi	205	311	205	311
Delhi-Gwalior	305	440	305	440
Allahabad-Delhi	590	728	590	728
Amritsar-Delhi	485	599	485	599
Gwalior-Indore	525	653	525	653
Calcutta-Dibrugarh	680	840	680	840
Calcutta-Guwahati	425	529	425	529
Bombay-Indore	495	615	495	615

Thus, while the fares charged were at the same level as of the Indian Airlines in respect of common sectors, the rates were higher where the Indian Airlines did not operate.

The company had stated (January 1990) that the fare structure for common sectors was identical to that of Indian Airlines in accordance with Government directives and for the short haul sectors, there was a marginal difference in Taper Slab to compensate for the high cost of operation in the short haul sectors. The Ministry, however, stated (April 1991) that no specific directive was given to the Company to restrict the fare chargeable from passengers to the same level as collected by Indian Airlines on common sectors.

The Ministry further clarified that the policy of the Government in this regard is that the Company should fix its fare structure keeping in view the cost incurred by it in providing service as well as the capacity of the market segment to pay.

This clearly indicated that the fare structure fixed did not take into account the costs incurred by it.

#### **4.2 Financial Position**

The Company has been incurring heavy losses since inception. The position since 1985-86 was as follows:



(Rs. in Lakhs)

Particulars	1985-86		1986-87		1987-88		1988-89		1989-90
	Actual	Revised Estimates	Actual	Budget Estimates	Actual	Budget Estimates	Actual (Prov)	Budget Estimates (Prov)	
<b>INCOME</b>									
a) <u>Operating</u>									
Revenue (Traffic)	721.22	774.22	1345.09	2018.01	1736.03	1719.98	2262.20	2625.18	
Revenue (Incidental)	19.14	23.38	43.78	30.90	64.47	47.08	41.38	167.44	
b) <u>Non-operating</u>									
Interest, Insurance Claims & others	48.13	25.00	34.17	-	44.06	38.38	44.83	44.73	
c) Courier & Agro Aviation	-	-	-	-		41.17*	245.15	222.26	
<b>Total</b>	<b>788.49</b>	<b>822.60</b>	<b>1423.04</b>	<b>2048.91</b>	<b>1844.56</b>	<b>1846.61</b>	<b>2593.56</b>	<b>3059.61</b>	
<b>EXPENDITURE</b>									
a) <u>Operating</u>	844.78	807.86	2017.84	1782.56	2158.17	2884.05	4173.74	5587.39**	
b) <u>Non-operating</u>	87.22	93.20	288.52	196.16	1091.28	265.81	377.32	442.19	
c) Courier & Agro Aviation	-	-	-	-		45.48*	178.00	-	
<b>Total</b>	<b>972.00</b>	<b>901.06</b>	<b>2246.36</b>	<b>1978.72</b>	<b>3249.45</b>	<b>3195.34</b>	<b>4729.06</b>	<b>6029.58</b>	

Prior period adjustment

Net Profit (+)/Loss (-)(Yearwise)(-)183.51 (-)78.46 (-)823.32 (+)70.19 (-)1404.89 (-)1359.32(-)2135.50 (-)2969.97

\* Actual figures of Income/Expenditure have been merged in the operational revenue and expenditure as these were not booked separately.

\*\* Including Courier &amp; Agro Aviation expenditure

Note: As per audited accounts the losses for the years 1985-86, 1986-87 &amp; 1987-88 were understated to the extent of Rs. 25.87 lakhs, Rs. 324.55 lakhs &amp; Rs. 540.59 lakhs respectively.

The Company has not finalised its accounts for 1988-89, 1989-90 and 1990-91 so far (January 1992); as such it was not possible to ascertain the actual losses incurred by it till 1990-91.

The Company stated (January 1990) that the losses were due to their operations in short haul sectors which were not a profitable proposition. The other reasons for the losses advanced were (a) high charges levied by Indian Airlines for maintenance of Avro and Fokker aircraft; (b) appreciation of the value of DM leading to increased liabilities towards loans and interest thereon; (c) non-receipt of subsidies claimed from Government for their operations; and (d) inadequate financial support from Government to meet capital expenditure.

That the short haul operations are costly is a well known fact and Vayudoot had been allowed to have a differential fare structure on the exclusive short haul routes to compensate for the high cost of operation in these sectors (please refer to Management's reply vide para 4.1 *ibid*). Further, as has been brought out below, the Vayudoot, inspite of being so conscious of the high operational cost of the short haul routes, went about adding new routes indiscriminately. With reference to maintenance charges it was seen that Indian Airlines rates for maintenance of F-27 and HS-748 aircraft were in accordance with the provisions of the agreement and the same rates were being charged by the Indian Airlines from IAF, DGCA, HAL etc. The increase in



interest liability due to appreciation of the hard currency loan is a phenomenon faced by all other organisations who have gone in for foreign currency loan. As regards inadequate financial support from Government, it may be stated that the Company as a commercial organisation has to make its operations financially viable and self supporting.

Apart from the reasons advanced by the Company for the losses, the basic factors that led to a loss, as already detailed in the previous chapters were very poor seat utilisation factor against a very high break even seat factor (details vide paragraph 1.3 and Annexure-J). Even though the Company, as already brought out above (paragraph 1.2), had projected traffic above break even level on the 23 new routes proposed with STOL aircraft in operation within months of introduction of these services, in effect, there were just 3 profit making routes out of the list of 23 and all these were serviced by HS-748 and F-27 aircraft.

The fact is that the introduction of STOL aircraft hardly made the situation any better; infact, the break even load factor (BELF) has been the highest in the case of STOL aircraft viz Dornier. As per the data furnished by Vayudoot regarding the break even and actual load factor aircraft-wise, there was a wide gap to the disadvantage of the Company as indicated below (for 3 years ending 1989-90):

Type of Aircraft	Load Factor	1987-88	1988-89	1989-90
1	2	3	4	5
HS-748	Break even	105%	118%	128%
	Actual	78%	66%	59%

1	2	3	4	5
F-27	B-Even	105%	118%	128%
	Actual	54%	64%	62%
DO-228	B-even	162%	171%	168%
	Actual	56%	64%	54%

Other reasons for the losses as have been already brought out in the review were:

(a) Indiscriminate expansion of short haul services on routes where adequate and efficient surface mode of transport were available and where saving in time offered by air transport was only marginal, (b) irregular operation of services and (c) premature removal of Dornier engines resulting in grounding of the fleet.

*P.K. Sarker*

(P.K. SARKAR)

New Delhi  
The

Deputy Comptroller and Auditor General  
(Commercial)-Cum-Chairman, Audit Board

Countersigned

*C.G. Somiah*

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New Delhi  
The

Comptroller and Auditor General of India



**STATEMENT SHOWING THE REGION WISE/YEARWISE LOSSES INCURRED IN RESPECT  
OF THE ROUTES OPERATED IN THE REGIONS OUTSIDE NORTH EASTERN REGION**

Particulars	(Rs. in lakhs)											
	1982-83		1983-84		1984-85		1985-86		1986-87		1987-88	
	No. of Routes	Amount	No. of Routes	Amount	No. of Routes	Amount	No. of Routes	Amount	No. of Routes	Amount	No. of Routes	Amount
Northern Region (Annexure-A)	03	(-)47.63	04	(-) 3.24	06	(-) 1.77	13	(-)117.20	18	(-)337.42	15	(-)166.78
Western Region (Annexure-B)			01	(-)12.50	04	(-)35.15	07	(-)111.22	13	(-)247.18	15	(-)385.94
32 Southern Region (Annexure-C)							07	(-) 72.73	10	(-)178.88	14	(-)268.86
Eastern Region (Annexure-D)	02	(-)48.87	02	(-)32.31	03	(-)32.20	04	(-) 39.19	07	(-)117.33	06	(-)131.97
	05	(-)96.50	07	(-)48.05	13	(-)69.12	31	(-)340.34	48	(-)880.81	50	(-)953.55

ROUTEWISE/YEARWISE ROUTE ECONOMICS  
IN RESPECT OF ROUTES OPERATED IN NORTHERN REGION

NORTHERN REGION			(Rs. in lakhs)						
S.NO.	ROUTE	FLIGHT NO.	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
1.	Delhi-Ludhiana-Delhi	101/102	(-)13.64	(-) 1.48	(+)20.19	(+)12.88	(-)3.09	(+)7.99	Operated
2.	Delhi-Dehradun-Delhi	103/104	(-)27.71	(+)0.89		(+)8.36	(+)3.73	(+)11.54	Operated
3.	Delhi-Chandigarh-Kulu & Back	105/106	(-) 6.28	(-)1.98		(+)10.64	(+)3.62	(+)27.83	Operated
4.	Delhi-Pantnagar-Delhi	107/108		(-)0.67	(-) 6.23	(-)20.22	(-)13.75	(-)7.94*	Operated
5.	Delhi-Raibarelli-Lucknow- & Back	109/110			(-)8.77	(-)23.89	(-)36.17	(-)32.41	Operated
6.	Delhi-Jaipur-Kota & Back	111/112				(-)27.33	(-)31.17	(-)16.49	Operated
7.	Lucknow-Dehradun-Lucknow	113/114			(-)6.96	(-)17.40	(-)14.54	(-)13.16	Operated (Del-Dehradun in 107/108)
8.	Delhi-Chandigarh-Delhi	115/116				(-)14.27	(-)36.40	(-)20.52	Operated (Delhi-Chandigarh- Ludhiana & back)
9.	Delhi-Jaipur-Jodhpur- Jaisalmer & Back	117/118				(-)15.57	(-)10.53	Not Operated	Operated (Delhi-Jaipur- Bikaner-Jaisalmer- Jodhpur- Jaisalmer- & Back)
10.	Delhi-Jaipur-Bikaner & Back	119/120				(-)10.92	(-)8.17	Not Operated	Not Operated
11.	Delhi-Hissar-Delhi	127/128				(-)1.50	(-)0.60	Not Operated	Not Operated
12.	Delhi-Kanpur-Lucknow -Gorakhpur & back	129/130				-	(-)36.76	Not Operated	Not Operated
13.	Delhi-Agra-Jaipur & Back	121/122				(-)7.39	(-)7.88	Not Operated	Not Operated
14.	Delhi-Gwalior-Guna & Back	125/126				(-)10.59	(-)44.45	(-)12.99	Operated (Delhi-Gwalior (Delhi- Guna/Bhopal Gwalior-Guna) Indore & Back)
15.	Delhi-Allahabad-Delhi	131/132					(-)48.50	(-)31.87	Operated (Delhi-Rai- (Delhi- barelli- Allahabad- Allahabad-Delhi) Jabalpur & Back)



1	2	3	4	5	6	7	8	9	10
16.	Delhi-Chandigarh -Amritsar & Back	133/134					(-)9.78	(-)12.13	Not Operated
17.	Delhi-Jaipur-Indore- Ahmedabad	139/140					(-)7.88	Not Operated	Not Operated
18.	Delhi-Agra-Kanpur-Varanasi	141/142					(-)35.10	(-)8.08	Operated (Delhi-Agra- Khajuraho- Varanasi)
19.	Delhi-Chandigarh-Shimla	143/144						(-)39.89	Operated
20.	Shimla-Kulu	145/146						(-)16.11	Operated
21.	Delhi-Bhatinda	147/148						(-)2.55	Not Operated
			(-)47.63	(-)3.24	(-)1.77	(-)117.20	(-)337.42	(-)166.78	

Total(-)674.04 Lakhs

\*Delhi-Pantnagar-Dehradun-Delhi

( ) Routes operated during that year.

**ROUTEWISE/YEARWISE ROUTE ECONOMICS  
IN RESPECT OF STATIONS OPERATED IN WESTERN REGION**

S.NO.	ROUTE	FLIGHT NO.	(NET PROFIT/LOSS)					(Rs. in Lakhs)	
			1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	
1.	Bombay-Kandla-Bombay	301/302	(-)12.50	(-)25.40	(-)32.35	(-)23.71	(-)36.38	Operated	
2.	Bombay-Ratnagiri-Bombay	303/304	-	(-) 2.05	(-)15.38	(-)32.46	(-)18.87	Operated	
3.	Bombay-Surat-Bhavnagar- Ahmedabad & Back	305/306	-	(-) 3.46	(-)16.49	(-)35.07	(-)25.70	Operated	
4.	Bombay-Aurangabad- Nanded & Back	307/308	-	(-) 4.24	(-)16.42	(-)32.97	(-)45.70	Operated	
5.	Surat-Bhavnagar-Surat	309/310	-	-	(-) 5.58	(-)11.38	(-) 2.21	Not Operated	
6.	Bombay-Pune-Indore & Back	311/312	-	-	(-)16.23	(-)40.50	(-)34.49	Operated	
7.	Bombay-Aurangabad-Pune & Back	313/314	-	-	(-) 8.77	(-)36.94	(-)13.42	Operated (Bombay- Aurangabad-Pune&Back)	
8.	Bombay-Pune-Goa & Back	315/316	-	-	-	(-) 7.96	(-)21.93	Operated	
9.	Bombay-Indore-Ahmedabad&Back	317/318	-	-	-	(-)13.00	(-)35.81	Operated	
10.	Bombay-Surat-Ahmedabad	321/322	-	-	-	(-) 8.55	(-)14.93	Operated	
11.	Bombay-Pune-Sholapur & Back	319/320	-	-	-	(-) 1.87	Not Operated	Not Operated	
12.	Bombay-Porbandar-Bombay	323/324	-	-	-	(-) 1.18	(-)54.16	Operated	
13.	Bombay-Keshod-Bombay	325/326	-	-	-	(-) 1.58	(-)31.42	Operated	
14.	Bombay-Sholapur	327/328	-	-	-	-	(-)17.78	Operated	
15.	Bombay-Aurangabad-Nagpur	329/330	-	-	-	-	(-)20.21	Operated	
16.	Nagpur-Indore	331/332	-	-	-	-	(-)12.93	Operated	
			(-)12.50	(-)35.15	(-)111.22	(-)247.18	(-)385.94		

( ) Routes operated during that year. Total (-) Rs. 791.99 Lakhs



**ROUTEWISE/YEARWISE ROUTE ECONOMICS  
IN RESPECT OF STATIONS OPERATED IN SOUTHERN REGION**

SOUTHERN REGION		( Rs. in Lakhs )				
S.NO.	ROUTE	FLIGHT NO.	1985-86	1986-87	1987-88	1988-89
1.	Hyderabad-Cuddapah-Hyderabad	603/604	(-) 1.97	Not Operated	Not Operated	Not Operated
2.	Hyderabad-Tirupati-Bangalore & Back	605/606	(-)28.88	(-)37.01	(-) 9.98	Not Operated
3.	Hyderabad-Rajahmundry-Vizag & Back	607/608	(-)22.75	(-)53.09 (Hyderabad- Rajahmundry- Vishakapatnam- Jeypore-Bhubaneswar & Back)	(-)48.04 (Hyderabad- Rajahmundry- Vizag-Jeypore- Bhubaneswar & Back)	Not Operated
4.	Hyderabad-Nanded-Hyderabad	609/610	(-) 5.18	Not Operated	(-) 4.85 (Hyderabad- Warangal-Ramagundam)	Operated(Hyderabad- Ramagundam)
5.	Bangalore-Bellary-Bangalore	611/612	(-) 7.43	(-) 5.22	Not Operated	Not Operated
6.	Hyderabad-Warangal-Hyderabad	613/614	(-) 4.22	(-)12.05 (Hyderabad- Warangal- Ramagundam & Back)	Not Operated	Not Operated
7.	Bangalore-Mysore-Bangalore	615/616 615/616 (From 1987-88)	(-) 2.30 -	(-)11.56 -	(-) 3.60 (-)22.37 (Hyderabad-Bellary- Bangalore-Mysore)	Operated
8.	Hyderabad-Goa-Hyderabad	617/618	-	(-)21.54	(-)16.85	
9.	Hyderabad-Rajahmundry-Vijaywada	619/620	-	-	(-)12.75	
10.	Hyderabad-Sholapur	621/622	-	-	(-) 2.22	
11.	Hyderabad-Pune	623/624	-	-	(-) 8.23	
12.	Madras-Thanjavur-Madras	651/652	-	(-) 4.10	(-)46.41 (Madras-Thanjavur-Madurai- Cochin)	

Contd....2..

1.	2.	3.	4.	5.	6.	7.
13.	Madras-Coimbatore-Cochin- Bangalore & Back	653/654	-	(-)15.79	(-)27.29	(Madras-Coimbatore)
14.	Madras-Vijaywada-Rajahmundry & Back	655/656	-	(-)14.53	(-)31.65	
15.	Coimbatore-Madras-Coimbatore	657/658	-	(-) 3.99	Not Operated	
16.	Madras-Tirupati	661/662	-	-	(-)15.98	
17.	Madras-Neyveli	669/670	-	-	(-)18.64	
			-----	-----	-----	
			(-)72.73	(-)178.88	(-)268.86	
			-----	-----	-----	

Total (-) 520.47 Lakhs

( ) Routes operated during that year.



**ROUTEWISE/YEARWISE ROUTE ECONOMICS**  
**IN RESPECT OF STATION OPERATED IN EASTERN REGION (OTHER THAN THE STATIONS SELECTED BY THE GOVERNMENT)**

## EASTERN REGION

(Rs. in Lakhs)

S.NO.	ROUTE	FLIGHT NO.	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
1.	Calcutta-Jamshedpur-Rourkela- Jamshedpur-Patna & Back	715/716	(-)25.52	(-)25.02 (Calcutta- Jamshedpur- Rourkela- Ranchi & Back)	(-)14.59 (Calcutta- Rourkela- Ranchi & Back)	(-)18.53	(-)42.47	(-)27.94	
2.	Calcutta-Jamshedpur-Patna- Muzaffarpur & Back	717/718	(-)23.35	(-) 7.29 (Calcutta- Jamshedpur- Calcutta)	(-)11.52	(+) 1.16	(-) 2.67	(+) 5.12	
3.	Rourkela-Bhubaneswar -Rourkela	719/720	-	-	(-) 6.09	(-)14.43	(-)24.26	Not Operated	
4.	Calcutta-Jamshedpur-Patna & Back	725/726	-	-	-	(-) 7.39	(-) 8.37	(-)13.09	
5.	Calcutta-Imphal-Dimapur & Back	727/728	-	-	-	-	(-)19.85	(-)57.20	
6.	Calcutta-Malda-Balurghat & Back	731/732	-	-	-	-	(-)11.55	(-)22.08	
7.	Calcutta-Bhubaneswar- Calcutta	733/734	-	-	-	-	(-) 8.16	(-)16.78	
			(-)48.87	(-)32.31	(-)32.20	(-)39.19	(-)117.33	(-)131.97	

Total (-) Rs.401.87 Lakhs

(-) Routes operated during that year.

STATEMENT SHOWING THE REPAIR COSTS, COMPENSATION CLAIMED IN RESPECT OF  
ENGINES GROUNDED PREMATURELY DUE TO MANUFACTURING DEFECTS.

<u>S.NO.</u>	<u>E.S.N.</u>	<u>AIRCRAFT FROM WHICH REMOVED</u>	<u>DATE OF REMOVAL</u>	<u>COST OF REPAIRS (RS.)</u>	<u>COMPENSATION CLAIMED FROM HAL (RS.)</u>
1.	F-39111	VT-EIP	02.06.86	1,87,538.04	1,87,538.00
2.	F-39112	VT-EJF	30.07.86	7,42,540.19	7,42,540.00
3.	F-39120	VT-EJO	24.11.86	12,73,186.00	12,73,186.00
4.	H-58003	VT-EJW	25.11.86	6,02,029.87	6,02,029.00
5.	P-39089	VT-EJO	14.12.86	80,115.05	80,115.00
6.	H-58004	VT-EJN	05.03.87	20,09,116.00	13,15,803.00
7.	H-58011	VT-EJU	09.03.87	19,07,143.00	7,62,544.00
8.	P-39100	VT-EJN	06.10.86	45,00,000.00	-
9.	H-58013	VT-EJV	23.03.87	19,29,655.00	-
10.	P-39090	VT-EIO	04.02.87	6,56,119.71	-
11.	H-58015	VT-EJW	07.05.87	20,331.00*	-
12.	P-39088	VT-EJW	21.05.87	62,396.00*	-
13.	P-39123	VT-EJF	29.10.87	38,032.00*	-
14.	H-58008	VT-EJU	29.10.87	NA*	-
15.	H-58010	VT-EIO	21.02.88	NA*	-
16.	H-58014	VT-EJN	22.02.88	NA*	-
17.	H-58034	VT-EJV	10.05.88	40,000.00*	-
18.			Only test charges paid to HAL		
18.	H-58010	VT-EJT	10.05.88	NA	-
19.	P-39088	VT-EIO	04.06.88	6,49,730.00	-
20.	P-39152	VT-EJT	26.07.88	NA*	-
21.	H-58004	VT-EJN	10.08.88	13,01,576.70	-
22.	H-58015	VT-EJO	12.08.88	NA*	-
23.	H-58008	VT-EJF	24.08.88	NA*	-
24.	H-58016	VT-EJW	08.10.88	NA*	-
25.	H-58011	VT-EIO	08.10.88	NA	-
26.	P-39088	VT-EIP	18.11.88	18,51,566.00	-
27.	P-39152	VT-EJF	09.01.89	NA*	-
				-----	-----
				1,78,51,074.56	49,63,755.00
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\*Engines locally repaired by Vayudoot at Delhi.



SEAT UTILISATIONRoutes with below 20% Seat Factor

<u>Year</u>	<u>No. of Routes</u>	<u>Route</u>	<u>Seat Factor</u>
1987-88	2	1. Hyderabad - Sholapur	14.8%
		2. Calcutta - Gauhati - Dibrugarh - Passighat - Along	19.0%
1988-89	1	1. Calcutta - Malda - Balurghat	16.9%
1989-90	4	1. Bombay - Ratnagiri	6.8%
		2. Calcutta - Malda	11.3%
		3. Hyderabad - Ramagundam	18.5%
		4. Hyderabad - Cuddapah	19.8%

SEAT UTILISATIONRoutes with Seat factor between 20-30%

<u>Year</u>	<u>No. of Routes</u>	<u>Route</u>	<u>Seat Factor</u>
1987-88	3	1. Delhi- Bhatinda	26.6%
		2. Calcutta - Gauhati - Lilabari - Zero - Daparizo	22.6%
		3. Calcutta - Malda - Balurghat	25.0%
1988-89	3	1. Madras- Bangalore	29.6%
		2. Hyderabad - Ramagundam	20.8%
		3. Delhi - Bhatinda - Amritsar- Jammu	27.3%
1989-90	5	1. Bhopal - Guna - Delhi	28.7%
		2. Calcutta - Dhanbad - Patna -Gaya	24.9%
		3. Calcutta - Rourkela - Ranchi	25.8%
		4. Bombay-Sholapur-Osmanabad	29.6%
		5. Madras - Bangalore - Calicut - Trivandrum	25.9%



SEAT UTILISATIONRoutes with Seat-Factor between 30-40%

<u>Year</u>	<u>No. of Routes</u>	<u>Route</u>	<u>Seat Factor</u>
1987-88	5	1. Bombay-Surat-Ahmedabad	39.4%
		2. Madras - Tirupati	30.4%
		3. Hyderabad -Warangal - Ramagundam	31.4%
		4. Hyderabad - Pune	33.6%
		5. Calcutta-Gauhati-Tezpur-Jorhat- Lilabari - Dibrugarh - Zero	40.0%
1988-89	3	1. Hyderabad - Cuddapah - Tirupati- Bangalore	34.4%
		2. Madras - Thanjore- Madurai - Cochin	38.1%
		3. Calcutta - Dhanbad - Patna - Gaya	30.6%
1989-90	5	1. Delhi - Allahabad - Jabalpur	37.8%
		2. Calcutta - Gauhati - Dibrugarh- Passighat - Along	36.9%
		3. Madras - Thanjore - Madurai - Cochin/Madras - Neyveli - Pondicherry	33.2%
		4. Hyderabad - Bangalore	35.5%
		5. Hyderabad - Bellary - Bangalore	40.0%

SEAT UTILISATIONRoutes with Seat Factor between 40-50%

<u>Year</u>	<u>No. of Routes</u>	<u>Routes</u>	<u>Seat factor</u>
1987-88	12	1. Delhi - Agra - Varanasi/ Delhi - Agra - Kanpur - Varanasi	41.1%
		2. Delhi -Raibarelli - Allahabad	46.4%
		3. Delhi -Gwalior - Guna - Bhopal - Indore	45.4%
		4. Bombay - Aurangabad - Pune	41.2%
		5. Bombay -Solapur/Bombay-Pune-Sholapur	45.6%
		6. Madras - Vijayawada - Rajahmundry	45.3%
		7. Madras - Thanjore - Madurai - Cochin/ Madras - Coimbatore - Madurai - Cochin	44.9%
		8. Hyderabad - Tirupati - Bangalore	48.6%
		9. Bangalore - Mysore	46.9%
		10. Hyderabad - Bellary - Bangalore - Mysore	49.2%
		11. Calcutta - Rourkela - Ranchi	42.2%
		12. Calcutta - Bhubaneshwar	44.1%
1988-89	13	1. Hyderabad-Bellary - Bangalore- Mysore	49.3%
		2. Madras - Cochin - Agathi	42.6%
		3. Madras - Tirupati	43.7%
		4. Bombay - Porbunder - Rajkot	49.9%



<u>Year</u>	<u>No. of Routes</u>	<u>Route s</u>	<u>Seat factor</u>
1988-89		5. Bombay - Pune - Aurangabad	41.0%
		6. Bombay - Sholapur	44%
		7. Bombay - Aurangabad - Nagpur- Akola	40.3%
		8. Calcutta - Rourkela - Ranchi	44.3%
		9. Calcutta - Gauhati - Lilabari- Zero - Debarizo	40.4%
		10. Delhi - Pantnagar - Dehradun	47.0%
		11. Delhi-Pantnagar	40.7%
		12. Delhi-Kanpur - Raibareilly	41.5%
		13. Delhi - Allahabad - Jabalpur	43.3%
1989-90	11	1. Bhopal - Jabalpur - Nagpur - Bilaspur - Raipur	41.5%
		2. Bhopal - Indore - Jaipur	43.1%
		3. Calcutta - Jamshedpur/ Calcutta - Jamshedpur - Patna	48.9%
		4. Calcutta - Gauhati - Lilabari - Zero	47.1%
		5. Bombay - Nasik	48.4%
		6. Bombay - Indore - Nagpur - Akola	47.2%
		7. Madras - Cochin - Agathi/ Madras - Calicut - Cochin - Agathi	41.4%
		8. Madras- Coimbatore/Madras - Bangalore - Coimbatore	47.5%

<u>Year</u>	<u>No. of Routes</u>	<u>Routes</u>	<u>Seat factor</u>
19 89-90		9. Madras - Tiruchy / Madras - Thanjore - Tiruchy	44.5%
		10. Madras - Tirupati - Vijaya- wada - Rajahmundry - Vizag	47.6%
		11. Hyderabad - Pune - Goa / Hyderabad - Goa	42.7%
	Total		
	36		



Region-wise and route-wise percentage  
of Break-Even-Seat-Factor (BESF) and  
Actual Seat Utilisation Factor (SF).

	<u>1987-88</u>	<u>1988-89</u>	<u>1989-90</u>
	<u>B.E.S.F</u>	<u>B.E.S.F</u>	<u>B.E.S.F</u>
	<u>1</u>	<u>2</u>	<u>3</u>
<b><u>EASTERN REGION</u></b>			
1) Calcutta-Rourkela-Ranchi	133.6 (42.2)	230.4 (44.3)	135.1 (25.8)
2) Calcutta-Guwahati-Lilabari-Zero-Daparizo	142.0 (22.6)	312.9 (40.4)	199.3 (47.1)
3) Calcutta-Guwahati-Dibrugarh-Passighat-Along	119.2 (19.0)	178.7 (54.9)	172.9 (36.9)
4) Calcutta-Malda-Balurghat	276.6 (25.0)	306.1 (16.9)	-
5) Calcutta-Bhubaneswar	268.3 (44.1)	-	-
6) Calcutta-Dhanbad-Patna-Gaya	-	178.9 (30.6)	229.9 (24.9)
<b><u>WESTERN REGION</u></b>			
1) Bombay-Aurangabad-Pune	85.9 (41.2)	112.1 (41.0)	-
2) Bombay-Sholapur	274.6 (45.6)	350.0 (44.0)	-
3) Surat-Bhavnagar	75.8 (39.4)	-	-
4) Bombay-Indore-Nagpur-Akola	-	-	174.2 (47.2)
5) Bombay-Sholapur-Osmanabad	-	-	179.8 (29.6)
6) Bombay-Nasik	-	-	260.6 (48.4)
<b><u>NORTHERN REGION</u></b>			
1) Delhi-Gwalior-Guna-Bhopal	118.6 (45.4)	-	-
2) Delhi-Raibareilly-Allahabad	152.6 (46.4)	-	-
3) Delhi-Bhatinda-Ludhiana	80.4 (26.6)	-	-

	1	2	3
4) Delhi-Allahabad-Jabalpur	-	97.8 (43.3)	92.3 (37.8)
5) Delhi-Bhatinda-Amritsar-Jammu	-	155.6 (27.3)	-
6) Delhi-Kanpur-Raibarelli	-	186.3 (41.5)	-
7) Bhopal-Guna-Delhi	-	-	144.2 (28.7)
8) Bhopal-Jabalpur-Nagpur-Bilaspur-Raipur	-	-	149.3 (41.5)
9) Bhopal-Rewa-Satna-Khajuraho	-	-	184.1 (41.0)
10) Bhopal-Indore-Jaipur	-	-	144.6 (43.1)

#### SOUTHERN REGION

1) Hyderabad-Warangal-Ramagundam	176.4 (31.4)	-	-
2) Hyderabad-Ramagundam	-	206.1 (20.8)	129.5 (18.5)
3) Bangalore-Mysore	143.4 (46.9)	-	-
4) Hyderabad-Ballery-Bangalore-Mysore	151.2 (49.2)	185.6 (49.3)	120.5 (40.0)
5) Hyderabad-Sholapur	108.7 (14.8)	-	-
6) Madras-Thanjavur-Madurai-Cochin	173.5 (44.9)	188.9 (38.1)	-
7) Hyderabad-Pune	112.2 (33.6)	216.6 (63.7)	98.3 (42.7)
8) Madras-Tirupati	151.5 (30.4)	352.3 (43.7)	148.8 (47.6)
9) Madras-Bangalore	-	318.2 (29.6)	-
10) Hyderabad-Cuddapah	-	221.9 (34.4)	110.3 (19.8)
11) Hyderabad-Bangalore	-	-	86.1 (35.5)
12) Madras-Bangalore-Coimbatore	-	-	169.6 (47.5)
13) Madras-Bangalore-Calicut-Trichy	-	-	106.3 (25.9)
14) Madras-Thanjavur	-	-	245.8 (44.5)
15) Madras-Thanjavur-Pondicherry-Neyelli	-	-	164.9 (33.2)



	1	2	3
16) Madras-Rajamundry	-	-	$\frac{144.5}{(47.6)}$
17) Madras-Bangalore-Calicut-Trichy-Cochin	-	-	$\frac{200.2}{(25.9)}$

Note: Figures in Brackets indicate Actual Seat Utilisation Factor.

Expenditure incurred by National Airports  
Authority on Vayudoot Aerodromes

(Rs. in lakhs)

Station	Date of suspen- sion of Services	Aerodrome Works	communica- tion/Safety equipments	Total
1.	2.	3.	4.	5.
<u>NORTHERN REGION</u>				
1. Guna	September 1990	-	38.09	38.09
2. Bilaspur	September 1990	-	2.91	2.91
3. Bhatinda	April 1990	-	-	-
4. Rai Bareli	November 1987	-	38.09	38.09
5. Allahabad	April 1990	-	-	-
6. Jabalpur	April 1990	49.32	-	49.32
7. Rajouri	April 1990	-	-	-
8. Gwalior	November 1987	-	-	-
9. Rewa	September 1990	-	-	-
10. Satna	September 1990	30.00	-	30.00
11. Kota	September 1990	13.60	3.01	16.61
12. Jagdalpur	September 1990	-	2.91	2.91
<u>EASTERN REGION</u>				
1. Dhanbad	January 1990	-	-	-
2. Gaya	January 1990	1.00	-	1.00
3. Passighat	September 1989	10.14	0.10	10.24
4. Along	September 1989	9.95	35.18	45.13
5. Malda	September 1989	-	2.91	2.91
6. Tezu	January 1991	-	-	-



1.	2.	3.	4.	5.
7. Kamalpur	September 1990	8.56	-	8.56
8. Jeypore	September 1989	-	35.18	35.18
9. Rourkela	September 1990	-	0.10	0.10

WESTERN REGION

1. Ratnagiri	September 1989	-	38.09	38.09
2. Sholapur	September 1989	-	2.91	2.91
3. Osmanabad	September 1989	-	-	-
4. Daman	July 1990	-	-	-
5. Akola	August 1990	1.00	-	1.00
6. Nanded	October 1990	-	38.19	38.19
7. Nasik	June 1991	-	-	-

SOUTHERN REGION

1. Bellary	September 1989	-	38.09	38.09
2. Mysore	September 1989	-	38.19	38.19
3. Ramagundum	July 1989	-	-	-
4. Thanjavour	September 1989	-	38.09	38.09
5. Cuddapah	September 1989	20.80	38.19	58.99
6. Hubli	September 1989	-	-	-
7. Neyvelli	July 1990	-	-	-

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144.37

390.23

534.60

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