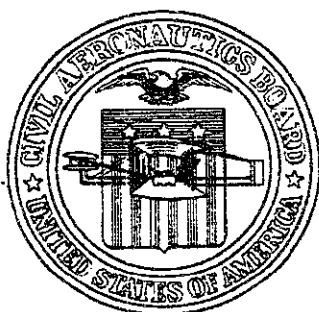


ACCIDENTS IN U.S. SCHEDULED AIR CARRIER PASSENGER OPERATIONS

CALENDAR
YEARS
1951-1952



SEPTEMBER 1, 1954

CIVIL AERONAUTICS BOARD
BUREAU OF SAFETY INVESTIGATION

FOREWORD

The purpose of this report is to set forth, comparatively, significant factors surrounding accidents in U. S. Scheduled Air Carrier Passenger Operations during the calendar years 1952 and 1953. Among other things, detailed tabulations of accident causes, operational phases, etc., as well as pertinent charts, are appended. Furthermore, each scheduled operator is shown in relation to the number of passengers and passenger-miles flown, revenue plane-miles flown, number of accidents, and resultant injuries, if any. Additionally, a composite tabulation is included which shows the division of these operations as follows:

1. Domestic Operations

- a. Trunk
- b. Local
- c. Territorial

2. Foreign/Overseas, U. S. Flag

The Board's Office of Carrier Accounts and Statistics, the source of all traffic data related in this report, has defined the aforementioned operations as follows:

1. "Trunk Lines: Those permanently certificated scheduled air carriers engaged in the transportation of mail, passengers and property over the major airline networks of the country."
2. "Local Service: Those temporarily certificated scheduled air carriers engaged in local services of a regional scope."
3. "Territorial Lines: Consist of those permanently certificated scheduled air carriers conducting services wholly in territories or possessions of the United States."

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Charts (August 22, 1938 - 1953)

1. Plane Miles Flown Annually
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5. Annual Passenger Fatality Rate per One Million Passengers Flown (Domestic & Foreign/Overseas)

ACCIDENTS IN U. S. SCHEDULED AIR CARRIER
PASSENGER OPERATIONS
(Calendar Year - 1953)

Lowest Annual Fatality Rate

Scheduled passenger operations of the U. S. Scheduled Airlines in domestic-foreign/overseas services during the calendar year 1953 were conducted with a passenger-fatality rate of less than one per 100 million passenger-miles for the second consecutive calendar year. The rate of 0.5 in 1953 was the lowest of record in these combined operations. The previous low of 0.9 was in 1952.

Peak Annual Operations

Concurrent with the record safety levels stated, operations were also at record annual highs. Revenue plane-miles reached in excess of 610 million, an increase of 11.7 percent over 1952. Passengers flown numbered 31.4 million, a gain of 14.8 percent, while the passenger-mile figure reached 18.9 billion, 16.9 percent higher than in 1952.

Passenger Fatalities

There were 88 passenger fatalities in 1953 out of the aggregate 31.4 million passengers flown. In 1952, fatalities totaled 140 out of 27.4 million passengers flown.

SCHEDULED DOMESTIC OPERATIONS
(See Table No. I)

Trunk Lines

These services involved 26.1 million passengers (22.8 million in 1952), 14.8 billion passenger-miles (12.6 billion), and 455 million plane-miles (401 million). In these record annual traffic totals, the passenger-fatality rate per 100 million passenger-miles was 0.6 in comparison with 0.4 (the record annual low) in 1952. Passenger fatalities numbered 86 in comparison with 46 in 1952.

Local Service Operations

These carriers flew 2 million passengers 417 million passenger-miles and 45.6 million revenue plane-miles in 1953. The corresponding figures for 1952 were 1.7 million passengers, 364 million passenger-miles, and 41.1 million revenue plane-miles. In both years, these operations were conducted without a single passenger or crew fatality.

Territorial Carriers

The two carriers conducting territorial operations -- Hawaiian Airlines and Trans-Pacific Airlines -- flew 552.7 thousand passengers 74.2 million passenger-miles and 4.4 million revenue plane-miles in 1953. In 1952, the corresponding totals were 515.2 thousand passengers 69.7 million passenger-miles and 4.9 million plane-miles. In both years, these operations were fatality free.

Accident Rates

In the overall domestic scheduled passenger services, 31 accidents were recorded during 1953. The accident rate was 6.1 per 100 million plane-miles flown in comparison with a rate of 8.1 in 1952. Fatal accidents in 1953 numbered 4 and the rate per 100 million plane-miles was 0.8 against 1.1 in 1952.

Accident Types

The accident types in these 31 accidents are shown below in comparison with the types in 1952:

	<u>1953</u>	<u>1952</u>
Turbulence in flight	6	4
Collapse of retractable landing gear	5	4
Overshoot	3	3
Wheels-up	2	2
<u>Fire</u>		
In flight	2	2
On ground	0	0
<u>Airframe</u>		
In flight	2	2
On ground	1	1
<u>Collision</u>		
Ground/water	3	1
<u>Two Aircraft</u>		
Both on ground	1	3
Both airborne	1	2
Collision - objects	1	3
Hard landing	0	2
Wing tip landing	0	1
Groundloop	0	1
Nose-over	0	1
Undershoot	2	1
Engine cowl came off in flight	1	0
Automatic pilot malfunction	0	1
Hailstorm damage	0	1
Ran through ditch	0	1
Evasive maneuver	1	0
Total	31	36

Operational Phases of Accidents (Table No. VI)

In 1953, the landing phase accounted for 13 of the 31 accidents, normal flight for 12, takeoff for 4, and taxi for 2.

Causal Factors (Table No. VII)

In setting forth causal factors of the accidents reviewed in this report, all causal factors have been considered. This approach has been adopted to present all causes for study and preventive measures, rather than to establish a so-called primary cause only.

In the 31 accidents for 1953, there were 54 causal factors involved, denoting that in the majority more than one cause was involved. Of the 36 accidents in 1952, causal factors numbered 67. In establishing these causal factors, an attempt has been made to point to the particular and pertinent personnel action, mechanical malfunction, or circumstance that occurred.

Table No. VII shows that relatively few specific causal factors were repetitive in 1953 or 1952. The outstanding recurring item was "Attendants and/or Passengers Not Secured During Turbulence." Six accidents were noted under this caption in both 1953 and 1952. The circumstance has been placed under the aforementioned heading rather than "Weather" because prior warning and effective crew and/or passenger action would have prevented injury. It is sought to emphasize this type of accident to prevent recurrence year after year.

SCHEDULED FOREIGN/OVERSEAS SERVICES
(See Table No. I)

Two Passenger Fatalities

Record annual traffic levels prevailed in these operations when 2.7 million passengers were flown 3.6 billion passenger-miles and 105 million revenue plane-miles at a passenger-fatality rate of 0.1 per 100 million passenger-miles. Two passenger fatalities were recorded. In 1952, corresponding statistics were 2.4 million passengers 3.2 billion passenger-miles and 99 million plane-miles. There were 94 passenger fatalities.

Accident Types

The accident types in 1953 and 1952 were as follows:

	<u>1953</u>	<u>1952</u>
Collapse of retractable landing gear	0	2
Undershoot	1	1
<u>Collision</u>		
Ground	1	0
Water (ditching)	0	1
<u>Two Aircraft</u>		
One airborne	1	0
Airframe - air	0	2
Engine tearaway	1	0
Turbulence in flight	0	2
Lightning	1	0
Decompression	0	1
*Propeller accidents to persons on ground	1	0
Total	6	9

* Not included elsewhere

Causal Factors (Table No. VIII)

There were 7 causal factors involved in the 5 accidents recorded in 1953. This compared with 18 causal factors in 9 accidents during 1952.

CHARTERED PASSENGER AIR TRAVEL AND CARGO
IN SCHEDULED PASSENGER OPERATIONS
(Calendar Years 1953 and 1952)

TABLE I

Classes of Operation	Accidents	Passenger		Passenger		Passenger		Revenue 3/ Plane Miles			
		Fatal		2/		2/					
		Total	Fatal 1/	Carried 1/	Fatal 2/	Miles (000)	per 100 Mill- lion Passen- ger Miles	Crew Fatalities	Pilot	Copilot	Other
DOMESTIC											
Trunk	28	4	26,135,473	86	14,846,250	0.6	4	4	2	2	455,097,898
1953	29	4	22,759,115	46	12,563,315	0.4	2	2	2	2	401,109,471
1952	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Local Service	3	0	2,032,745	.....	.....	.....	.....	.....	.....	.....	45,594,292
1953	4	1	1,735,520	.....	.....	.....	.....	.....	.....	.....	41,147,752
1952	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Territorial	6	0	552,668	.....	.....	.....	.....	.....	.....	.....	4,382,157
1953	0	0	515,180	.....	.....	.....	.....	.....	.....	.....	4,906,169
1952	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sub-Total Domestic	1	1	28,720,886	86	15,337,760	0.6	4	4	2	2	505,074,317
1953	31	4	25,009,815	46	12,996,657	0.4	2	2	2	2	447,163,392
1952	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
FOREIGN/OVERSEAS	36	5	2,700,365	2	3,558,509	0.1	0	0	0	0	104,669,850
1953	5	2	2,365,223	94	3,172,209	3.0	1	1	1	1	98,870,268
1952	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
SCHEDULED CRUISE CARRIER 5/											
1953	9	.....	1,804	.....	6,911	.....	.....	.....	.....	.....	411,271
1952	.....	.....	1,228	.....	4,575	.....	.....	.....	.....	.....	218,339
SUB-TOTAL FOREIGN/OVERSEAS											
1953	5	2	2,702,169	2	3,565,420	0.1	0	0	0	0	105,081,124
1952	.....	.....	2,366,451	94	3,176,784	3.0	1	1	1	1	99,096,607
GRAND TOTAL - ALL CARRIERS											
1953	36	6	31,423,055	88	18,903,180	0.5	4	4	7	7	610,155,471
1952	45	8	27,376,266	140	16,173,441	0.9	3	3	3	9	546,259,999

1/ Revenue passengers only.
2/ Both revenue and non-revenue.
3/ In scheduled passenger operations.

NOTE: Excludes propeller accidents to persons. Statistics contained in this and subsequent tables are subject to slight revision.

4/ Includes operations of New York Airways in helicopter passenger service.
5/ Resort is the only carrier at present in this category that carries "all expense tours."

SAFETY RECORD OF INDIVIDUAL DOMESTIC TRUNK LINE
AIR CARRIERS IN SCHEDULED PASSENGER OPERATIONS:
(Calendar Years 1953 and 1952)

TABLE II

Operators	Accidents			Passenger			Passenger			Revenue		
	Total	Fatal	Carried	Total	Fatal	Miles (000)	Crew Pilot	Pilot	Copilot	Other	Plane Miles	
<u>American Airlines</u>	8	4	5,742,940	25	3,343,752	1	1	1	1	1	97,439,163	83,223,169
1953.....	6	2	5,020,646	20	2,926,614							
1952.....												
<u>Braniff Airways</u> 6/	1		1,226,165		480,308						21,741,446	
1953.....	3		992,772		354,776						15,469,458	
1952.....												
<u>Capital Airlines</u>	0	0	2,219,898		714,552						28,089,240	
1953.....	6	1	1,990,476		641,972						25,827,295	
1952.....												
<u>Chicago & Southern Air Lines</u> 8/			179,583		71,640						3,226,309	
1953.....			535,624		207,159						9,596,737	
1952.....												
<u>Colonial Airlines</u>	0		366,863		92,584						4,461,763	
1953.....	1		279,868		71,134						4,047,041	
1952.....												
<u>Continental Air Lines</u>			368,490		154,929						8,101,624	
1953.....			348,633		142,282						7,793,905	
1952.....												
<u>Delta Air Lines</u> 8/	1	1	1,437,592	16	615,647	0	0	0	0	0	24,939,198	
1953.....	1	0	972,264		454,976						16,975,989	
1952.....												

Operators	Accident ^s		Passenger		Passenger		Crew Fatalities		Revenue	
	Total	Fatal	Carried	Fatal	Miles (000)	Miles	Pilot	Copilot	Other	Plane Miles
<u>Eastern Air Lines</u>										
1953.....	2		4,639,623		2,359,864					69,430,770
1952.....	4		3,831,234		1,901,595					62,869,379
<u>Mid-Continent Airlines</u> 6/										
1952.....			265,283		84,970					5,406,044
<u>National Airlines</u>										
1953.....	1	1	804,734	41	593,600	2	1	1	3	17,065,885
1952.....	2	1	686,085	26	477,787	1	1	1		15,571,881
<u>Northeast Airlines</u>										
1953.....	2		463,712							5,676,623
1952.....	1		1,27,685							4,711,337
<u>Northwest Airlines</u>										
1953.....	2		1,018,707							20,478,748
1952.....	0		1,857,633							16,089,915
<u>Trans World Airlines</u>										
1953.....	4		2,931,485							62,076,504
1952.....	3		2,397,013							52,704,842
<u>United Air Lines</u>										
1953.....	5	4/	3,898,297							77,942,582
1952.....	1		3,378,606							68,202,812

TABLE II (Continued)

Operators	Accidents		Passenger Carried 1/		Passenger Fatal 2/		Revenue 2/ Plane Miles (000)	
	Total	Fatal	Miles	(000)	Crew Fatalities	Pilot Copilot Other	Miles	
<u>Western Air Lines 2/</u>								
1953.....	3	1	837,384	4	379,023	1	2	14,428,043
1952.....	1	0	773,293	0	309,487	0	0	12,619,667
<u>GRAND TOTAL - TRUNK</u>								
1953.....	28	4	26,135,473	86	14,846,250	4	7	455,097,898
1952.....	29	4	22,759,115	46	12,563,315	2	2	401,109,471

1/ Revenue passengers only.

2/ Both revenue and non-revenue.

3/ In scheduled passenger operations. American Airlines and United Air Lines aircraft. While noted as an accident includes mid-air collision between American Airlines and United Air Lines aircraft. While noted as an accident for each airline in the breakdown above, in the total this mid-air collision is included as one accident.

4/ Includes one fatal mid-air collision with a non-air carrier aircraft in which all fatalities involved occupants of the latter.

5/ Mid-Continent merged with Braniff August 16, 1952.

6/ Person on ground fatally injured.

7/ Chicago & Southern merged with Delta May 1, 1953.

8/ Inland Air Lines consolidated with Western Air Lines on April 10, 1952. Inland's operations January 1, 1952 through April 10, 1952 included with Western data.

SAFETY RECORD OF INDIVIDUAL U. S. DOMESTIC LOCAL SERVICE
AIR CARRIERS IN SCHEDULED PASSENGER OPERATIONS
(1953-1952-1951-1950)

TABLE III

Operators	Accidents		Passenger		Revenue 2/ Plane Miles	
	Total	Fatal	Carried	Fatal	Miles (000)	Crew Fatalities Pilot Copilot Other
<u>Allegheny Airlines</u>			22,049		32,392	3,366,240
1953.....			179,985		26,913	3,122,694
1952.....						
<u>Bonanza Air Lines</u>			65,651		16,506	1,647,614
1953.....			43,277		11,578	1,218,460
1952.....						
<u>Braniff Airways 4/</u>			54,929		10,813	956,666
1953.....			21,737		4,391	349,924
1952.....						
<u>Central Airlines</u>			42,318		7,616	1,847,380
1953.....			46,905		7,758	1,690,243
1952.....						
<u>Empire Air Lines 5/</u>			27,618		5,923	719,063
1952.....						
<u>Frontier Air Lines</u>			127,765		36,381	4,253,497
1953.....			125,525		36,712	4,574,350
1952.....						
<u>Lake Central Airlines</u>			0	0	56,480	9,123
1953.....			2	1	32,742	5,597
1952.....						
<u>Mid-Continent Airlines 4/</u>			28,177		5,753	567,664
1952.....						
<u>Mid-West Airlines 7/</u>			866		166	263,864
1952.....						

TABLE III (Continued)

Operators	Accidents		Passenger Miles		Passenger Miles		Crew Fatalities			Revenue Plane Miles
	Total	Fatal	Carried	Fatal	(000)	Pilot	Copilot	Other		
<u>Mohawk Airlines</u>										2,547,960
1953.....	1	0	162,078	105,983	18,966					1,905,709
1952.....										
<u>North Central Airlines</u>										4,270,801
1953.....			217,663	153,067	40,129					2,868,727
1952.....					27,048					
<u>Ozark Airlines</u>										2,976,706
1953.....	1	0	124,445	84,426	21,596					2,679,535
1952.....					15,458					
<u>Piedmont Aviation</u>										5,890,104
1953.....		0	269,773	224,206	59,767					5,010,076
1952.....		2			52,827					
<u>Pioneer Air Lines</u>										3,153,445
1953.....	1	0	146,859	182,144	42,501					3,851,082
1952.....					50,709					
<u>Southern Airways</u>										3,012,275
1953.....	0	1	112,028	121,065	21,505					3,332,598
1952.....					23,026					
<u>Southwest Airways</u>										2,633,923
1953.....			178,817	164,281	36,709					2,696,270
1952.....					32,812					

TABLE III (Continued)

Operators	Passenger			Crew Fatalities			Revenue Plane Miles
	Accidents	1/	2/	Miles	(000)	Pilot Copilot Other	
Total	Total	Carried	Total	Total	Fatal		
Trans-Texas Airways							
1953.....	97,304		22,503				3,538,257
1952.....	76,969		18,291				2,722,222
West Coast Airlines 2/							
1953.....	160,614		31,177				3,509,253
1952.....	113,470		19,390				2,070,681
E. W.airways 3/							
1953.....	1,735		191				203,310
1952.....	3,077		311				418,489
GRAND TOTAL - LOCAL SERVICE							
1953.....	3	0	2,031,508				45,531,270
1952.....	6		1,735,520				41,147,752
Heliocopter Service							
New York Airways, Inc. 2/							
1953.....			1,237				63,022

1/ Revenue passengers only.
2/ Both revenue and non-revenue.

3/ In scheduled passenger operations.
4/ Braniff Airways and Mid-Continent Airlines merged 8/16/52.

5/ Carrier discontinued operations on 5/15/52.
6/ Certificate cancelled effective 8/1/53 by Board
order.

7/ Inaugurated passenger service 7/9/53

SAFETY RECORD OF INDIVIDUAL U. S. TERRITORIAL
AIR CARRIERS IN SCHEDULED PASSENGER OPERATIONS
(Calendar Years 1953 and 1952)

TABLE IV

Operators	Accidents		Passenger		Revenue		
	Total	Fatal	Carried	Total	Miles (000)	Crew Fatalities	Plane Miles
<u>Hawaiian Airlines</u>							
1953.....	0		394,970	53,354	2,839,075		
1952.....	1		362,354	49,146	3,333,523		
<u>Trans-Pacific Airlines</u>							
1953.....			157,698	20,826	1,543,082		
1952.....			152,826	20,567	1,572,646		
<u>GRAND TOTAL - TERRITORIAL</u>					4,382,157		
1953.....	0		552,668	74,180	4,906,169		
1952.....	1		515,180	69,713			

1/ Revenue passengers only.

2/ Both revenue and non-revenue.

3/ In scheduled passenger operations.

SAFETY RECORD OF U. S. SCHEDULED AIR CARRIERS
IN FOREIGN/OVERSEAS PASSENGER OPERATIONS

TABLE V

Operators	Accidents			Passenger			Revenue		
	Total	Fatal	1/	Carried	Fatal	Miles (000)	Crew Fatalities	Pilot	Plane Miles
<u>American Airlines</u>				107,820		87,928			2,365,631
1953.....				118,010		98,077			2,807,366
1952.....									
<u>Braniff Airways</u>				32,704		89,701			3,965,085
1953.....				34,274		92,197			4,220,732
1952.....									
<u>Caribbean Atlantic Airlines</u>				120,491		9,914			710,917
1953.....				109,222		9,001			673,746
1952.....									
<u>Chicago & Southern Air Lines</u> 4/				12,095		14,335			599,437
1953.....				30,923		40,332			1,655,686
1952.....									
<u>Colonial Airlines</u>				1		51,893			1,052,831
1953.....						37,376			842,629
1952.....				0					
<u>Delta Air Lines</u> 4/				24,033		31,085			1,313,360
1953.....									
<u>Eastern Airlines</u>				1	1	131,544	2		4,693,432
1953.....				0	0	97,664	0		3,754,468
1952.....									

TABLE V (Continued)

Operator	Accidents			Passenger			Revenue		
	Total	Fatal	Total	Carried	Fatal	Miles (000)	Pilot	Copilot	Plane Miles
<u>Mackey Air Transport</u>	5/		15,592			3,602			337,920
1953.....									
<u>National Airlines</u>		0	97,409			47,815			1,685,375
1953.....			96,308			26,087			1,771,332
1952.....		1							
<u>Northwest Airlines</u>			79,723			145,949			5,669,606
1953.....			80,267			146,516			5,558,959
1952.....									
<u>Pan American World Airways</u>			1/ 1,643,633		0	2,058,328			56,913,134
(All Divisions)			3 1,412,641		94	1,828,114			55,385,314
1953.....			7						
1952.....									
<u>Pan American Grace Airways</u>		0	124,819			145,159			5,908,899
1953.....			122,425			142,001			5,954,051
1952.....		1							
<u>Trans World Airlines</u>			199,988			541,597			15,605,832
1953.....			170,400			461,679			14,036,038
1952.....									
<u>United Air Lines</u>			56,062			145,827			3,726,775
1953.....			52,238			134,600			3,114,259
1952.....									

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TABLE V (continued)

Operators	Accidents			Passenger			Revenue		
	Total	Fatal	Carried	1/ Fatal	2/ Carried	Miles (000)	Crew Fatalities	Pilots Copilot Other	Plane Miles
<u>Urab. Medellin & Central Airways</u>									
1953.....			2,554		845		121,616		
1952.....			3,475		1,146		103,648		
<u>Sub-Total</u>									
1953.....	6	2	2,700,365	2	3,558,509	0	104,669,950		
1952.....	6	3	2,365,223	94	3,172,209	1	98,978,262		
<u>Scheduled Cruise Carrier</u>									
Resort Airlines 2/									
1953.....			1,804		6,931		411,271		
1952.....			1,228		4,575		218,339		
<u>GRAND TOTAL - FOREIGN/OVERSEAS</u>									
1953.....	5	2	2,702,169	2	3,565,420	0	105,061,124		
1952.....	9	3	2,366,451	94	3,176,984	1	98,086,971		

1/ Revenue passengers only.

2/ Both revenue and non-revenue.

3/ In scheduled passenger operations. Delta Air Lines and Chukchee & Southern Air Lines merged May 1, 1953. Prior to this date Delta operated no foreign or overseas routes.

4/ Service inaugurated January 2, 1953.

5/ Includes one fatal mid-air collision with a non-air carrier aircraft in which all fatalities involved occupants of the latter.

6/ Resort is the only carrier at present in this category - carries "all expense tours".

AIRCRAFT DAMAGE, INJURY INDEX & OPERATIONAL PHASE
IN U. S. SCHEDULED AIR CARRIER PASSENGER OPERATIONS

TABLE NO. VI

	Scheduled		Total
	Domestic	Foreign/Overseas	
<u>Damage to Material:</u>			
<u>Destroyed</u>			
1953.....	5	1	6
1952.....	<u>5</u>	<u>2</u>	<u>7</u>
Total.....	10	<u>3</u>	<u>13</u>
<u>Substantial</u>			
1953.....	18	4	22
1952.....	<u>21</u>	<u>5</u>	<u>26</u>
Total.....	39	9	48
<u>Minor</u>			
1953.....	3	0	3
1952.....	<u>4</u>	<u>1</u>	<u>5</u>
Total.....	7	1	8
<u>None</u>			
1953.....	5	0	5
1952.....	<u>6</u>	<u>1</u>	<u>7</u>
Total.....	11	1	12
<u>Total</u>			
1953.....	31	5	36
1952.....	36	9	45
<u>Injury Index</u>			
<u>Fatal</u>			
1953.....	4	2	6
1952.....	<u>5</u>	<u>3</u>	<u>8</u>
Total.....	9	5	14
<u>Serious</u>			
1953.....	8	0	8
1952.....	<u>9</u>	<u>3</u>	<u>12</u>
Total.....	17	3	20
<u>Minor</u>			
1953.....	4	0	4
1952.....	<u>2</u>	<u>0</u>	<u>2</u>
Total.....	6	0	6
<u>None</u>			
1953.....	15	3	18
1952.....	<u>20</u>	<u>6</u>	<u>23</u>
Total.....	35	6	41
<u>Total</u>			
1953.....	31	5	36
1952.....	36	9	45

TABLE NO. VI (Continued)

	Scheduled		
	Domestic	Foreign/Overseas	Total
<u>Operational Phase:</u>			
<u>Taxiing</u>			
1953.....	2	0	2
1952.....	<u>7</u>	<u>0</u>	<u>7</u>
Total.....	<u>9</u>	<u>0</u>	<u>9</u>
<u>Take Off</u>			
1953.....	4	1	5
1952.....	<u>1</u>	<u>1</u>	<u>2</u>
Total.....	<u>5</u>	<u>2</u>	<u>7</u>
<u>Flight</u>			
1953.....	12	2	14
1952.....	<u>10</u>	<u>5</u>	<u>15</u>
Total.....	<u>22</u>	<u>7</u>	<u>29</u>
<u>Landing</u>			
1953.....	13	2	15
1952.....	<u>17</u>	<u>3</u>	<u>20</u>
Total.....	<u>30</u>	<u>5</u>	<u>35</u>
<u>Ground</u>			
1953.....	0	0	0
1952.....	<u>1</u>	<u>0</u>	<u>1</u>
Total.....	<u>1</u>	<u>0</u>	<u>1</u>
<u>Total</u>			
1953.....	31	5	36
1952.....	<u>36</u>	<u>9</u>	<u>45</u>

NOTE: Excludes propeller accidents to persons on ground.

CAUSAL FACTORS IN AIR CARRIER ACCIDENTS
DURING SCHEDULED DOMESTIC PASSENGER SERVICES
(Calendar Years 1953 - 1952)

TABLE NO. VII

Causal Factors	Operational Phase in Which Accident Occurred						Total	
	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off		
PERSONNEL								
Pilot								
Preceding Aircraft Not Observed in Take Off Line							1	
1953.....	0						0	
1952.....							1	
Flew Into Water While Attempting To Maintain VFR							0	
Flight In IFR Conditions							1	
1953.....	0						0	
1952.....							1	
Collided With Radio Tower While Attempting To Maintain Visual Contact During Approach in IFR Conditions							0	
1953.....	0						0	
1952.....							1	
Flew Into Reported Severe Thunderstorm Area							0	
1953.....	0						1	
1952.....							0	
Let Down Below Authorized IFR Minimums							1	
1953.....	0						0	
1952.....							1	
Landed To Far Down Runway							1	
1953.....	0						1	
1952.....							1	

TABLE NO. VII

Causal Factors	Operational Phase in Which Accident Occurred						Total
	On Ground	Taxi	Take-off	Cruise	Landing Approach	Landing Roll	
<u>PERSONNEL</u>							
Pilot (Cont'd)							
In-Flight Planning							
1953.....	1	0	10	10	10	10	41
1952.....	1	0	10	10	10	10	41
Lack of Crew Coordination							
1953.....	1	0	1	1	1	1	4
1952.....	1	0	1	1	1	1	4
Unintentional Gear Retraction							
1953.....	0	1	2	2	2	2	8
1952.....	1	0	1	1	1	1	6
Flaps Not Retracted During Landing Roll							
1953.....	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0
Confused Ground Crewman Signals							
1953.....	0	1	0	1	0	1	3
1952.....	0	1	0	1	0	1	3
Lost Directional Control							
1953.....	0	2	0	2	0	2	6
1952.....	0	2	0	2	0	2	6
Collided With Parked Aircraft							
1953.....	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0
Incorrect Use of Emergency Braking System							
1953.....	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0

TABLE NO. VII

Operational Phase In Which Accident Occurred

Causal Factors	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off	Landing Roll	Total
PERSONNEL								
Pilot (Cont'd)								
Touched Down Hard and Bounced								
1953.....	0							
1952.....	2							
Throttle Unintentionally Pulled Through Detent Into Reverse								
1953.....	0							
1952.....	0							
Neither Crew Observed Other Aircraft In Time To Avoid Mid-Air Collision								
1953.....	1							
1952.....	0							
Supervision								
Co-Pilot Landed Too Far Down Runway								
1953.....	2							
1952.....	0							
Co-Pilot Touched Down Short of Runway								
1953.....	2							
1952.....	0							
Co-Pilot Made High Fast Approach To Short Runway								
1953.....	0							
1952.....	1							
Co-Pilot Instrument Approach								
1953.....	2							
1952.....	0							
Co-Pilot Improperly Set Hydraulic Selector During Taxi Causing Insufficient Hydraulic Pressure For Braking								
1953.....	0							
1952.....	1							

TABLE NO. VII

	Causal Factors	Operational Phase in Which Accident Occurred						Total
		On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off	
<u>PERSONNEL</u>								
Maintenance								
Engine Cowling Front Latches Not Fastened								
1953.....	1	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0	0
Battery Terminals Shorted By Small Copper Bar								
1953.....	0	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0	0
Smooth, Worn Tires								
1953.....	0	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0	0
Binding Tape On Trailing Edge of Elevator Came								
Loose								
1953.....	0	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0	0
Airport								
Congested Ramp								
1953.....	0	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0	0
Taxiway Lights Inoperative								
1953.....	0	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0	0
Other								
Severe Weather Bulletin Not Relayed to Flight								
1953.....	0	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0	0

TABLE NO. VIII

Causal Factors	Operational Phase in Which Accident Occurred						Total
	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off	
<u>PERSONNEL</u>							
Other (Cont'd)							
Inadequate Weather Forecast							
1953.....	1	0					1
1952.....	0						0
Attendants and/or Passengers Not Secured During Turbulence							
1953.....	6	6					6
1952.....	6	6					6
Ineffective Company Approach Advisory Service							
1953.....	0	1					1
1952.....	0	1					1
Company Training - X-Wing Landings - Flap Use							
1953.....	0	1					1
1952.....	0	1					1
Company Training - Emergency Braking Procedures Relative to Crew Transitions From One Model to Another							
1953.....	0	1					1
1952.....	0	1					1
Reasonable Approach Prudence Not Exercised By Non-Air Carrier Pilot							
1953.....	0	1					1
1952.....	0	1					1
Control Tower Operator Judgment							
1953.....	0	1					1
1952.....	0	1					1

TABLE NO. VIII

Causal Factors	Operational Phase In Which Accident Occurred						Total
	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off	
Power Plant							
Crankshaft Failure							
1953.....							1 0
1952.....							1 1
Unwanted Propeller Reversal							
1953.....							0 1
1952.....							1 0
Partially Plugged Vacuum Pump Exhaust Line Caused Engine Nacelle Fire							
1953.....							1 0
1952.....							0 1
Fire-In-Flight Engine Left Aircraft							
1953.....							1 0
1952.....							0 1
Cylinder Exhaust Section Assembly							
1953.....							0 1
1952.....							1 0
Failure of Teeth, Intermediate Gear Cam Gear Train							
1953.....							0 1
1952.....							1 0
Functional Failure of Propeller Governor Due To Foreign Metallic Particles From Fractured Legs Supporting Oil Seal Adapter							
1953.....							1 0
1952.....							1 0
Loss of Oil in Engine From Undetermined Cause							
1953.....							1 0
1952.....							1 0

TABLE NO. VII

Causal Factors	Operational Phase In Which Accident Occurred						Total
	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off	
Airframe							
Failure of Solenoid Plunger Shaft Due to Fatigue -							
Flaps Could Not Be Lowered							
1953.....						1	0
1952.....						0	0
Fatigue Failure Left Wing Center Section Front Spar							
1953.....						0	1
1952.....						1	0
Bending of Manual Flap Control Mechanism For Undetermined Reason							
1953.....						1	0
1952.....						0	0
Landing Gear							
Nose Gear Collapsed Following Touchdown							
1953.....						1	0
1952.....						0	0
Oleo Drag Strut Fork Failed							
1953.....						1	0
1952.....						0	0
Left Gear Collapsed Following Normal Touchdown							
1953.....						1	0
1952.....						0	0
Frame Assembly Holding Drag Strut Fitting							
1953.....						1	0
1952.....						0	0

TABLE NO. VII

Operational Phase In Which Accident Occurred

Causal Factors	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off	Landing Roll	Total
Landing Gear (Continued)								
Seal Fragment In Nose Gear Actuating Cylinder Retarded Operation	0	1	0	1	0	1	0	1
1953.....	0	1	0	1	0	1	0	1
1952.....	0	1	0	1	0	1	0	1
Retract Strut Bolt Failed	0	1	0	1	0	1	0	1
1953.....	0	1	0	1	0	1	0	1
Rear Brace Strut Attachment Failed	0	1	0	1	0	1	0	1
1953.....	0	1	0	1	0	1	0	1
1952.....	0	1	0	1	0	1	0	1
Drag Strut Hydraulic Dampener Cylinder	0	1	0	1	0	1	0	1
1953.....	0	1	0	1	0	1	0	1
1952.....	0	1	0	1	0	1	0	1
Micro-Switch Stuck Giving False Indication	0	1	0	1	0	1	0	1
1953.....	0	1	0	1	0	1	0	1
1952.....	0	1	0	1	0	1	0	1
Equipment & Accessories								
Cabin Compressor Overspeeded	1	0	0	0	0	0	0	1
1953.....	1	0	0	0	0	0	0	1
1952.....	1	0	0	0	0	0	0	1
Cabin Service Door Opened and Left Aircraft	0	1	0	1	0	1	0	1
1953.....	0	1	0	1	0	1	0	1
1952.....	0	1	0	1	0	1	0	1

TABLE NO. VIII

Causal Factors	Operational Phase In Which Accident Occurred						Total
	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Landing Roll	
Equipment & Accessories (Continued)							
Auto-Pilot Malfunction	0	1	0	0	0	0	1
1953.....	.....	.....	.....	.....	.....	.....	.....
1952.....	.....	.....	.....	.....	.....	.....	.....
Landing Gear Selector Poppet Valve Leakage Because of Improper Seating	0	1	0	0	0	0	1
1953.....	.....	.....	.....	.....	.....	.....	.....
1952.....	.....	.....	.....	.....	.....	.....	.....
Design of Hydraulic System Did Not Permit Use of Primary System To Supplement Secondary System	0	1	0	0	0	0	1
1953.....	.....	.....	.....	.....	.....	.....	.....
1952.....	.....	.....	.....	.....	.....	.....	.....
Weather							
Fog	1953.....	.....	0	0	0	0	0
1952.....	.....	.....	.....	.....	.....	1	0
Thunderstorm	1953.....	.....	0	0	0	0	0
1952.....	.....	.....	.....	.....	.....	6	6
Turbulence	1953.....	.....	0	0	0	0	0
1952.....	.....	.....	.....	.....	.....	1	0
Tornadic Conditions	1953.....	.....	0	0	0	0	0
1952.....	.....	.....	.....	.....	.....	0	0

TABLE NO. VII

		Operational Phase In Which Accident Occurred							
		On Ground	Taxi	Take-Off	Cruise	Level Off	Landing Approach	Landing Roll	Total
Weather (Continued)									
Gusty - Variable Wind									
1953.....	0					0	2		0
1952.....	1					2			5
Low Ceiling									
1953.....						1			1
1952.....									1
Icing Conditions									
1953.....					0				0
1952.....					1				1
Rain									
1953.....						0			0
1952.....						1			1
Hail									
1953.....						0			0
1952.....						1			1
Airport - Terrain									
Slushy Snow									
1953.....							1		1
1952.....							0		0
Wet Runway									
1953.....							1		1
1952.....							4		4
Soft Ground - Off Runway									
1953.....							0		0
1952.....							1		1

TABLE NO. VII

Causal Factors	Operational Phase In Which Accident Occurred						Total
	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Landing Roll	
Airport - "Terrain" (Continued)							
Glassy Water							
1953.....	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0
Miscellaneous							
Evasive Maneuver To Avoid Mid-Air Collision							
1953.....	0	0	0	0	0	0	0
Aircraft Turbulence (Wake)							
1953.....	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0
Undetermined							
1953.....	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0

RECAPITULATION OF CAUSAL FACTORS
(Table No. VII)

		Operational Phase In Which Accident Occurred							
		On Ground	Taxi	Take Off	Cruise	Landing Approach	Level Off	Landing Roll	Total
<u>PERSONNEL</u>									
<u>Pilot</u>		0	1	0	4	3	0	8	16
1953	....	1	5	0	0	2	0	10	18
1952	....	0	0	0	1	0	0	1	2
<u>Maintenance</u>		0	0	1	0	1	0	0	2
1953	....	0	0	0	0	0	0	0	0
1952	....	0	0	0	0	0	0	0	0
<u>Airport</u>		0	0	2	0	0	0	0	2
1953	....	0	0	0	0	0	0	0	0
1952	....	0	0	0	0	0	0	0	0
<u>Other</u>		0	0	0	0	0	0	0	0
1953	....	0	0	0	0	0	0	0	0
1952	....	0	0	0	0	0	0	0	0
<u>OTHER</u>									
<u>Power Plant</u>		0	0	0	0	0	2	0	3
1953	....	0	0	0	0	0	2	0	4
1952	....	0	0	0	0	0	0	0	0
<u>Airframe</u>		0	0	0	0	0	0	1	1
1953	....	0	0	0	0	0	0	0	0
1952	....	0	0	0	0	0	1	0	1

Recapitulation of Causal Factors - Table No. VII (Continued)

ITEMS	Operational Phase In Which Accident Occurred						Total
	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off	
OTHER (Cont'd)							4
Landing Gear							5
1953.....	0	1	0	0	0	0	1
1952.....	0	0	0	0	0	0	0
Equipment & Accessories							4
1953.....	0	2	0	1	0	0	10
1952.....	0	0	0	0	2	3	15
Weather							2
1953.....	0	0	0	8	8	0	6
1952.....	0	0	0	0	0	4	2
Airport-Terrain							1
1953.....	0	0	0	0	0	0	0
1952.....	0	1	0	0	0	0	1
Miscellaneous							0
1953.....	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0
Undetermined							1
1953.....	0	0	0	0	0	0	0
1952.....	0	0	0	0	0	0	0
Total Causal Factors							67
1953.....	0	2	3	0	0	0	19
1952.....	0	10	1	0	0	0	25

CAUSAL FACTORS IN AIR CARRIER ACCIDENTS
DURING SCHEDULED FOREIGN/OVERSEAS PASSENGER SERVICES
(Calendar Years 1953 - 1952)

TABLE NO. VIII

Causal Factors	Operational Phase In Which Accident Occurred						Total	
	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off		
PERSONNEL								
Pilot								
Passengers and Crew Not Adequately Prepared For Ditching							0	
1953.....							1	
1952.....							1	
Failed To Use All Available Power In Attempt To Re-establish Climb Following Critical Loss of Power To Another Engine							0	
1953.....							1	
1952.....							0	
Touched Down Short of Runway							0	
1953.....							1	
1952.....							1	
Mistook Cable Crossing Lights For Threshold Lights							0	
1953.....							1	
1952.....							0	
Continued Pressurized Flight With Cabin Door Improperly Secured							0	
1953.....							1	
1952.....							0	
Loss of Visual Reference and Orientation in Drifting Ground Fog							0	
1953.....							1	
1952.....							0	
Sub-Total							5	
1953.....							0	
1952.....							5	

TABLE NO. VIII

Causal Factors	Operational Phase In Which Accident Occurred						Total
	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off	
PERSONNEL (Continued)							
Flight Engineer							
Failed to Follow Maintenance Manual Procedure In Cutting Out Overheating Generator							
1953.....	0						0
1952.....	1						1
Failed to Recognize Unsafe Cabin Door Condition							
1953.....	0						0
1952.....	1						1
Maintenance							
Foreign Material Left In Retract Strut During Overhaul							
1953.....	0						0
1952.....	1						1
Landing Gear Warning Switch Improperly Adjusted							
1953.....	0						0
1952.....	1						1
Cabin Door Seal Loose and Sagging							
1953.....	0						0
1952.....	1						1
Defective Engine Not Changed							
1953.....	0						0
1952.....	1						1
Sub-Total							
1953.....	0	0	0	0	0	0	0
1952.....	0	0	1	2	0	0	3
	0	0	0	0	0	0	6

TABLE NO. VIII

Causal Factors	Operational Phase in Which Accident Occurred						Total
	On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off	
PERSONNEL (Continued)							
Other							
Inadequate Company Training Relative to Exterior Door Mechanism and Safety Devices							
1953.....	0						0
1952.....	1						1
Attendants and/or Passengers Not Secured During Turbulence							
1953.....	0						0
1952.....	2						2
Non-Air-Carrier Pilot Took Off Against Red Light Signals From Tower and Collided With Air-Carrier Aircraft That Had Landed							
1953.....	0						0
1952.....	1						1
Sub-Total							0
1953.....	0						0
1952.....	3						3
OTHER							
Power Plant							
Partial Failure of Reduction Drive Gear Bearing							
1953.....	0						0
1952.....	1						1
Loss of Power Plant in Flight For Reasons Undetermined							
1953.....	0						0
1952.....	1						1

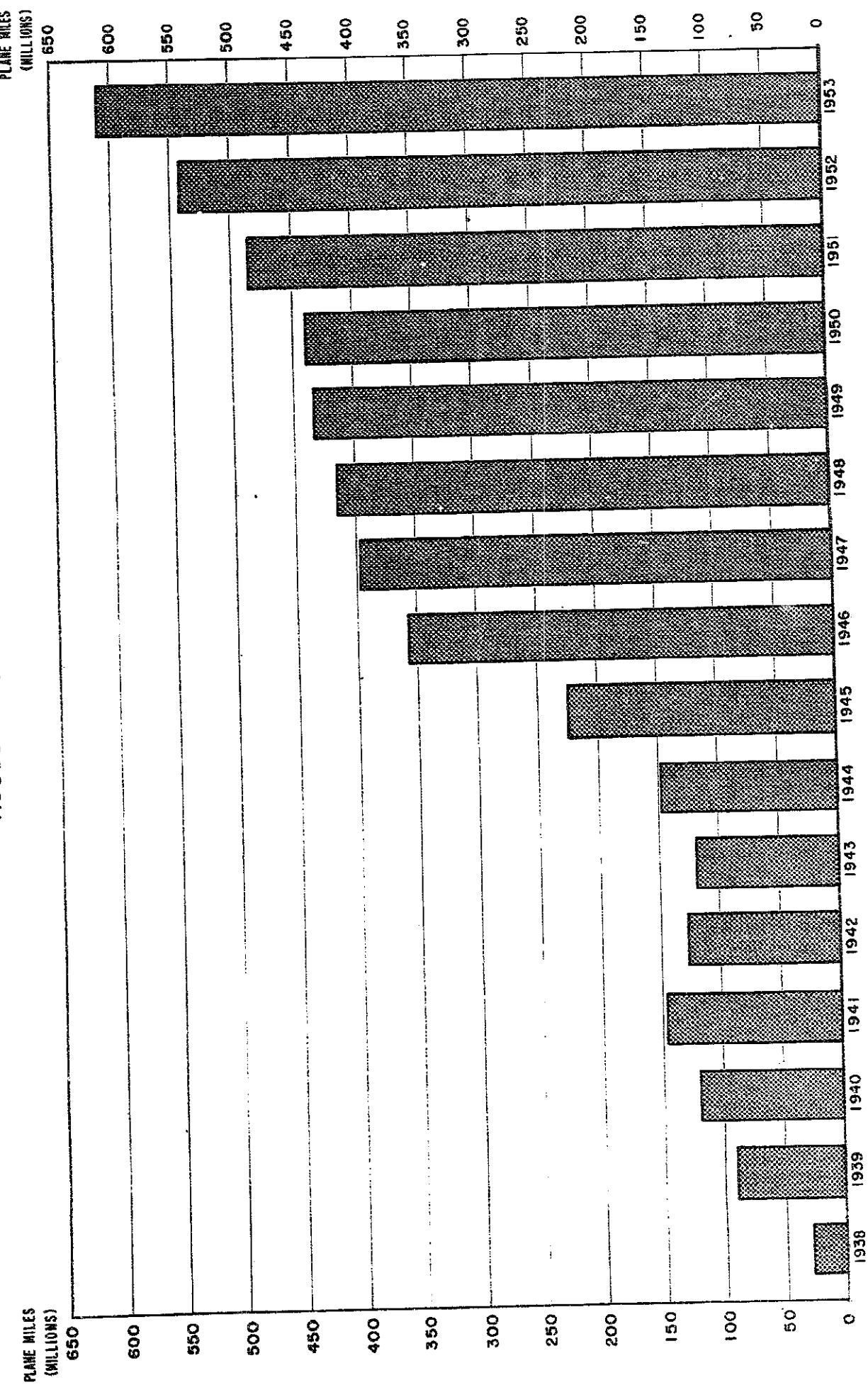
TABLE NO. VIII

Causal Factors	Operational Phase In Which Accident Occurred					Landing Roll	Total
	On Ground	Taxi	Take-Off	Cruise	Landing Approach		
<u>OTHER</u>							
Power Plant (Cont'd)							
Propeller Blade Failure							
1953.....			1				1
1952.....			0				0
Sub-Total							
1953.....							1
1952.....							2
Airframe							
Right Side of Wing Center Section Failed (Fatigue)							
1953.....						0	
1952.....						1	
Landing Gear							
Left Gear Retracted Due to Failure of Emergency Gear							
Clutch Lever							
1953.....						0	
1952.....						1	
Weather							
Downdraft							
1953.....							
1952.....						1	
						0	

TABLE NO. VIII

	Causal Factors	Operational Phase In Which Accident Occurred						Total
		On Ground	Taxi	Take-Off	Cruise	Landing Approach	Level Off	
<u>Weather (Cont'd)</u>	<u>OTHER</u>							
Lightning								1
1953.....								0
1952.....								0
Drifting Ground Fog								1
1953.....								0
1952.....								0
Sub-Total								1
1953.....		0	0	1	0	1	0	3
1952.....		0	0	0	0	0	0	0
<u>Airport Terrain</u>								
Unmarked Clay Mound 10 Feet From Approach End Of Runway								1
1953.....								0
1952.....								0
<u>GRAND TOTAL</u>								7
1953.....		0	0	2	8	2	0	4
1952.....		0	0	4	4	2	0	18

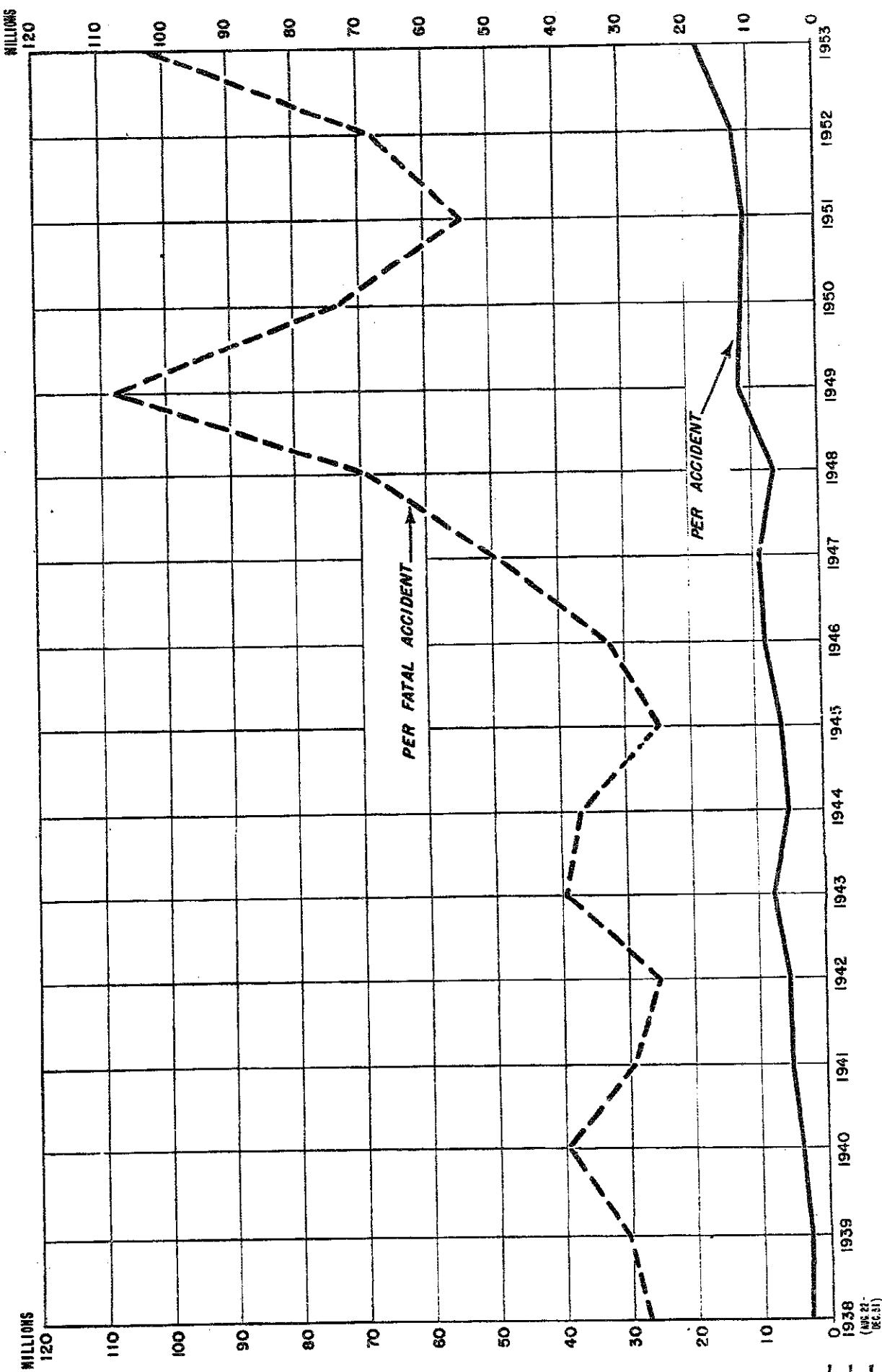
PLANE MILES FLOWN ANNUALLY
IN SCHEDULED DOMESTIC AND FOREIGN/OVERSEAS PASSENGER SERVICES
AUGUST 22, 1938-1953



(AUG 22 - 8031)

CHART 2

ANNUAL NUMBER OF PLANE MILES Flown
PER ACCIDENT AND PER FATAL ACCIDENT
IN SCHEDULED DOMESTIC AND FOREIGN/OVERSEAS PASSENGER SERVICES
(AUGUST 22, 1938 - 1953)



ANNUAL NUMBER OF PASSENGER MILES FLOWN
IN SCHEDULED DOMESTIC AND FOREIGN/OVERSEAS PASSENGER SERVICES
(AUGUST 22, 1938-1953)

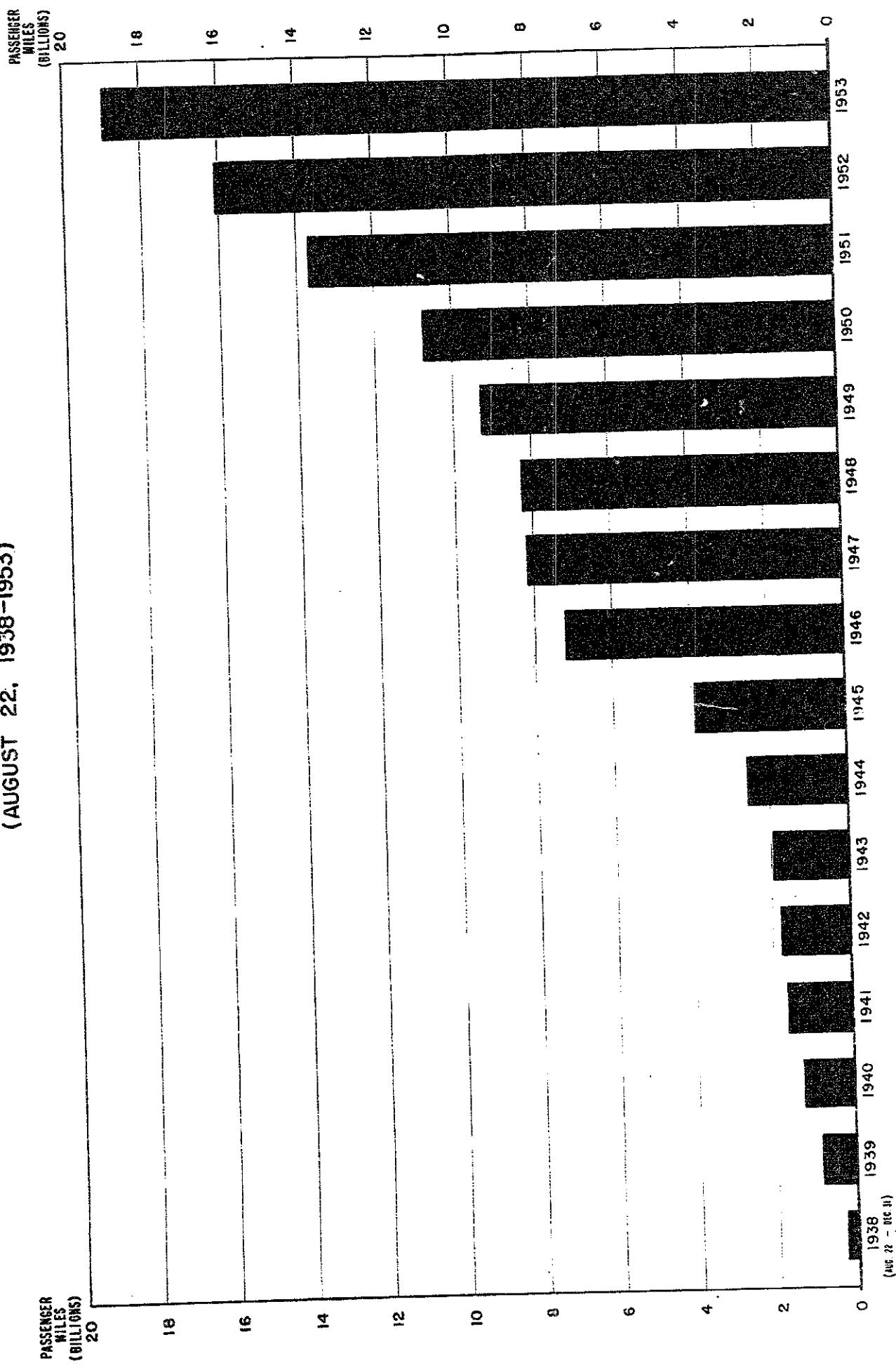
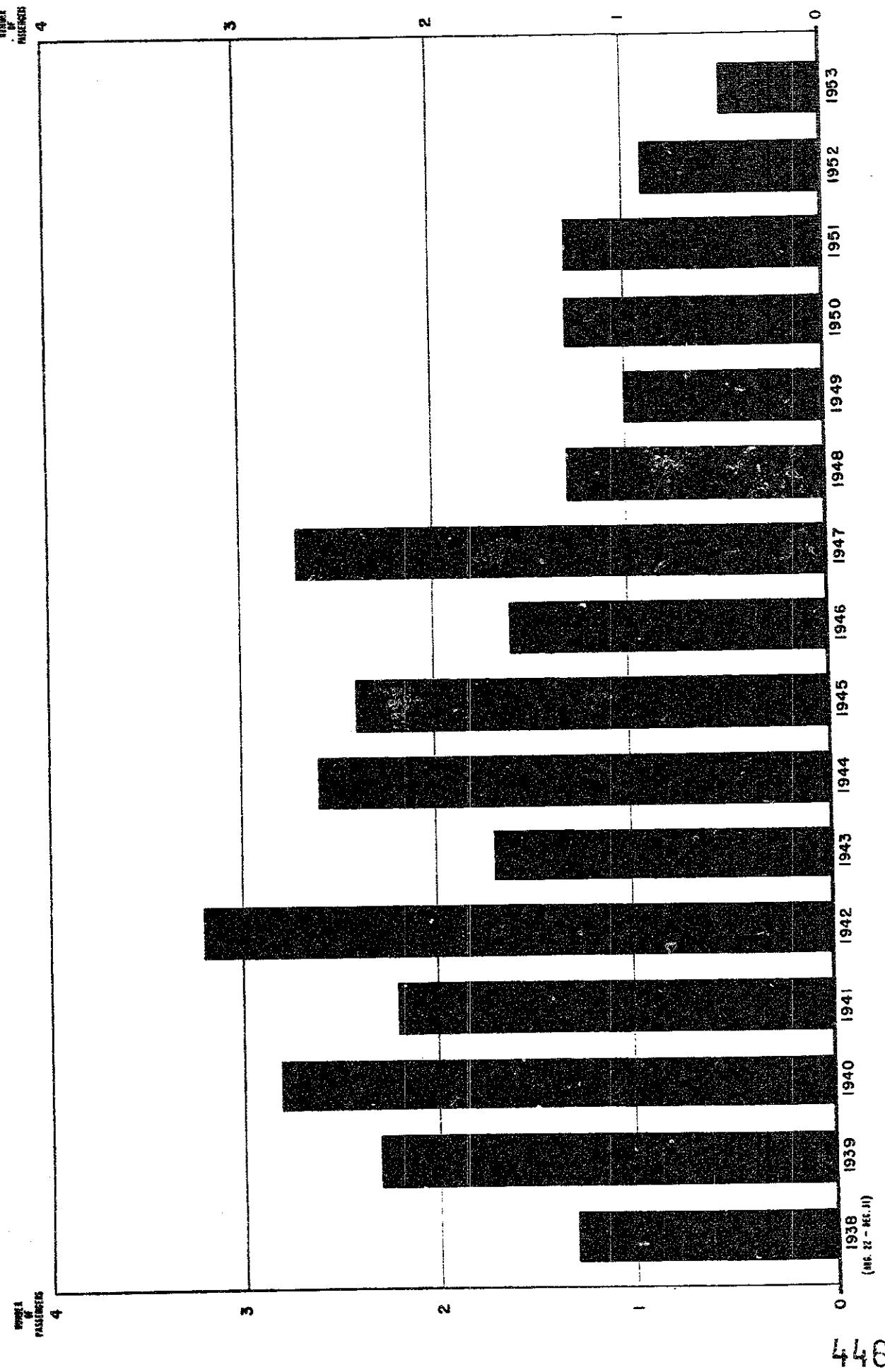
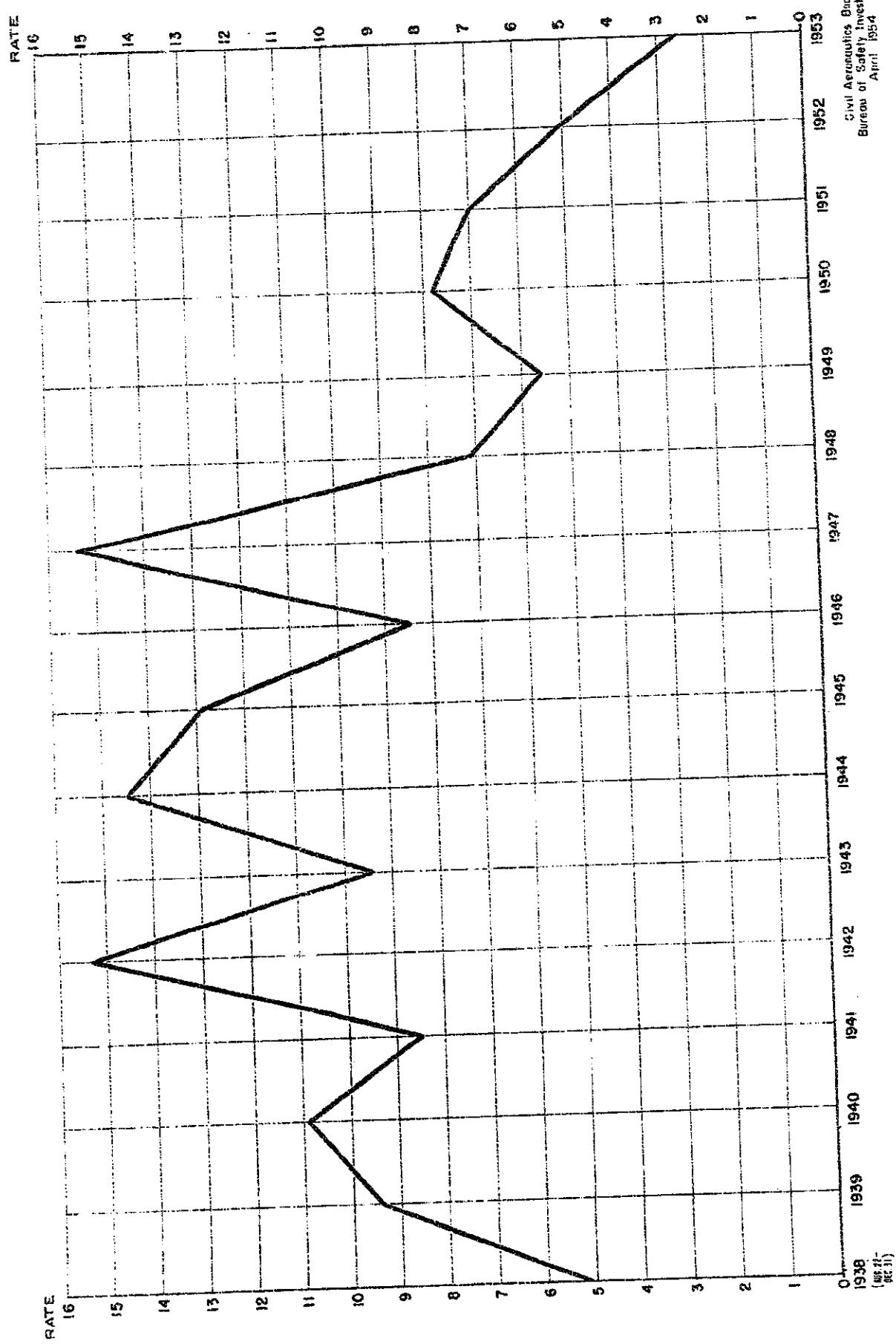


CHART 4

ANNUAL PASSENGER FATALITY RATES
PER 100 MILLION PASSEGER MILES FLOWN
IN SCHEDULED COMMERCIAL AIR
TOWARD CIVILIAN AND CIVILIAN/CARRIER SERVICES
(AUGUST 22, 1938 - 1953)



ANNUAL PASSENGER FATALITY RATE
PER ONE MILLION PASSENGERS FLOWN
IN SCHEDULED DOMESTIC AND FOREIGN/ OVERSEAS PASSENGER SERVICES
(AUGUST 22, 1938-1953)

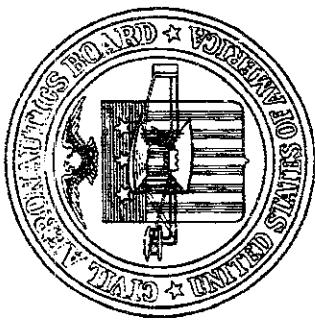


Civil Aeronautics Board
Bureau of Safety Investigation
April 1954

105-111
105-111

RESUME
OF
U. S.
AIR CARRIER ACCIDENTS

CALENDAR YEAR 1953



APRIL 30, 1954

CIVIL AERONAUTICS BOARD
BUREAU OF SAFETY INVESTIGATION

FOREWORD

The purpose of the RESUME OF AIR CARRIER ACCIDENTS is to furnish a brief description of the facts, conditions and circumstances of each accident, as well as the following in relation thereto.

1. Time of accident (in some cases approximate)
2. Location
3. Operator
4. Aircraft make & model
5. Whether fire-in-air or after impact
6. Number of persons aboard
7. Division of Injury
 - (a) Passenger
 - (b) Crew
 - (c) Other

Arrangement of the report is based on the type of airline operator involved:

1. Domestic
 - (a) Scheduled
 - (b) Irregular
 - (c) Intra-State
 - (d) Contract
2. Foreign/overseas
 - (a) Scheduled
 - (b) Irregular
 - (c) Contract
3. Other
 - (a) Alaskan

In addition, the classes of operation being conducted at the time of accident are specified under the following headings:

1. Passenger
2. Other Revenue
3. Non-Revenue
4. Non-Scheduled
5. All Cargo
6. Military Contract

A statistical recapitulation of the accidents in 1953 sets forth:

1. Total number of accidents
2. Number of fatal accidents
3. Division of personal injury
4. Aircraft damage
5. Number of accidents involving fire-in-air, after impact, or on the ground.

Revisions and additions to the resume for 1952 will be found on pages 29-30.

Public reports have been issued by the Board on a number of these accidents and are available upon request. In those cases where a public report has not been released, factual data are available to inquirers at their expense when reproduction of records is required.

RECAPITULATION OF U. S. AIR CARRIER ACCIDENTS
(Calendar Year 1953)

TYPE OF OPERATOR	Total	Fatal Accidents	Aircraft Destroyed	Passenger Injury			Passenger Injury			Passenger Injury			Passenger Injury			Total	Fatal After Impact	On Ground	Dead Pass.
				Fatal	Injuries	Suspected	Fatal	Serious	Moderate	Fatal	Serious	Moderate	Fatal	Serious	Moderate				
C. AIRLINES																			
A. Scheduled Domestic	31	4	5	18	8	15	2	104	86	7	844	0	0	0	2	3	0	1-8	
Scheduled Domestic Passengers	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
Scheduled Domestic Revenue	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	9	
Non-Revenue.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
Non-Scheduled Revenue.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
Military Contract.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
All Cargo Carriers	4	1	1	3	0	2	0	7	9	1	2	0	0	0	0	0	1	10-11	
Scheduled Revenue.....	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	
Passenger.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	
Other Revenue.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
Sub-Total.....	10	9	10	22	8	27	3	116	111	20	846	0	0	0	2	2	0	0	
B. Scheduled Foreign/Overseas	6	3 ^{1/2}	1	4	1	0	0	2	31	2	16	197	4	0	0	0	1	12-13	
Scheduled Domestic Passengers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	
Scheduled Other Revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	
New-Scheduled.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	
Non-Scheduled.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	
Military Contract.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	
All Cargo Carriers	1	0	1	0	0	0	0	3	0	0	0	0	0	0	0	1	0	14	
Scheduled Revenue.....	1	0	1	0	0	0	0	3	0	0	0	0	0	0	0	1	0	14	
Sub-Total.....	7	3	2	4	1	0	2	36	2	16	197	4	0	0	25	0	2	0	
C. AIRLINER DOMESTIC	5	2 ^{3/4}	1	3	2	2	1	13	5	18	127	1	0	0	166	0	0	0	
Passenger.....	2	1	1	0	0	0	0	7	1	1	0	0	0	0	7	0	0	16	
Other Revenue.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	
Non-Revenue.....	3	2	3	0	0	0	0	7	1	1	3	0	0	0	25	0	0	16-17	
Military Contract.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16-17	
Passenger.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18-19	
Other Revenue.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	
Sub-Total.....	20	6	9	10	2	16	2	52	62	19	319	1	0	0	468	1	1	0	
D. IRREGULAR DOMESTIC/Overseas	1	1	1	0	0	0	0	8	0	0	50	0	0	0	38	0	0	20	
Passenger.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	
Other Revenue.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	
Non-Revenue.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	
Military Contract.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	
Passenger.....	1	1	1	0	0	0	0	5	0	0	30	0	0	0	35	0	1	0	
Sub-Total.....	2	2	2	0	0	0	0	13	0	0	80	0	0	0	93	0	1	0	
E. Contract Carriers 2/	1	0	0	1	0	0	0	0	4	0	0	39	0	0	0	43	0	0	
Military Contract.....	1	0	0	1	0	0	0	0	3	0	0	1	0	0	0	4	0	21	
Domestic Passengers.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	
Foreign/Overseas-Other Revenue	2	0	1	0	0	0	0	0	7	0	0	0	0	0	0	47	0	0	
Sub-Total.....	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	23-25	0	0	
F. ALASKA	15	1	2	13	0	1	0	18	8	1	0	41	0	0	0	41	0	0	
Passenger.....	7	0	1	6	0	0	0	10	2	0	0	1	0	0	11	1	0	0	
Other Revenue.....	2	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2	0	0	
Non-Scheduled.....	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Military Contract.....	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	
Passenger.....	25	1	3	22	0	1	2	29	1	0	0	45	0	0	0	78	1	0	
Sub-Total.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	
G. Inter-State.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL - ALL CARRIERS	58	11	10	37	11	26	5	166	144	41	1269	5	0	0	1591	2	4	0	
Passenger.....	25	1	4	11	0	2	2	27	0	1	3	0	2	0	25	1	2	0	
Other Revenue.....	8	4	5	3	0	12	2	14	4	1	1	0	0	0	16	0	2	0	
Non-Revenue.....	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0	0	
Military Contract.....	1	1	4	5	6	0	13	0	23	0	108	16	0	0	388	1	1	0	
Passenger.....	11	4	5	2	1	0	2	5	0	0	0	0	0	0	0	0	0	0	
Other Revenue.....	3	1	2	1	0	0	0	9	236	256	256	256	256	256	256	2062	4	0	
Grand Total.....	95	21	26	39	31	55	9	111	111	29	1647	29	0	0	2062	4	0	0	

1/ Includes one propeller accident to person on ground.

2/ No accidents recorded in Non-Military Operations.

3/ Includes two accidents involving Pilot-Officers.

AIR CARRIER ACCIDENTS - CALENDAR YEAR - 1953

A. Scheduled Domestic Operations - Passenger Service

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury		
								Crew F S	Passenger M/N	Passenger F S M/N
1950 EST	2/6/53	Laguardia Field, N. Y.	Northeast	CV-240	Substantial	None	44	0 0	3 0 0	41
Approx. 1615 EST	2/14/53	Gulf of Mexico, South of Mobile, Ala.	National	DC-6	Destroyed	None	46	5 0	0 41 0	0
1352 CST	3/3/53	Chicago, Illinois Midway Airport	Eastern	L-1049	Substantial	None	84	0 0	7 0 0	77

A violent yaw to the right developed on final approach at an approximate altitude of 100 feet. The aircraft became uncontrollable, struck the runway on the right wheels, and skidded. The right wing sheared and swung back against the fuselage. The yaw was caused by the right propeller blades moving past the low pitch stop toward the reverse pitch range. The blades were found to be in approximately flat pitch position. Detailed study of the right propeller and its control system failed to reveal any mechanical or electrical malfunction.

Flight departed Tampa Florida at 1640E and had been cleared direct to New Orleans to cruise at 14,500 feet. At 1754E flight reported they had slowed down and reduced power on account of severe turbulence. They requested and were granted authority to descend to 4500 feet. Flight reported being at 4500 feet at 1610E and this was the last radio contact. When the aircraft was unreported an emergency was declared and a search instituted. A number of bodies and some wreckage was found about sixteen nautical miles southeast of the Mobile Alabama light. (Preliminary)

An improperly executed approach was made and the aircraft was landed too far down the runway. After the landing was effected and during the landing roll, the entire landing gear retracted. The landing gear was found capable of functioning in a normal manner after the accident.

F - Fatal; S - Serious; M - Minor and/or no injury.

A. Scheduled Domestic Operations - Passenger Service (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury Passenger M/N					Other P/S/W
								Crew F/S	M/N	F	S	M/N	
Between 1045 & 1050 PST	3/10/53	Reno, Nevada	United	DC-3	None	None	24	0	1	3	0	0	20
1554 MST	3/30/53	Cheyenne, Wyoming	Western	DC-3	Substantial	None	20	0	0	3	0	0	17
2120 EST	4/17/53	Greensboro, N. C.	Eastern	Martin 404	Substantial	None	40	0	0	3	0	0	37
1946 PST	4/17/53	Battle Mountain, Nevada	United	DC-6	None	None	32	0	0	5	0	1	26

Pilot was letting down with reduced speed and power, gear and flaps down, when the flight encountered severe turbulence. The stewardess was thrown to the cabin roof twice, sustaining serious injuries. The passengers who sustained minor injuries had either taken off their seat belts or had them loosely fastened. The seat belt sign had been on throughout the entire flight.

The flight made a straight-in instrument approach and established visual ground contact just prior to reaching the middle marker. The aircraft touched down approximately half way down the runway and brakes were applied with no noticeable effect. The aircraft ran through the boundary fence and crossed a highway, coming to rest in an upright position. Snow was falling at the time and the runway was wet and slushy. All of the occupants were evacuated through the main cabin door.

Shortly after touchdown the left gear retracted following a normal night landing. The nose gear was found to be fully extended and locked, and the right gear was in a partially extended position. Subsequent tests and inspection failed to disclose any cause for failure or malfunction of the landing gear system. The passengers were evacuated through the left front leading door and emergency exits over the left wing.

Sudden turbulence was encountered while flight was in normal cruise, in clear air, with the seat belt sign off. It was of short duration, with sharp up-and-down drafts.

A. Scheduled Domestic Operations - Passenger Service (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury Passenger			
								Crew F S	M/W	P F S	M/W
2308 PST	4/20/53	San Francisco Bay, California	Western	DC-6B	Destroyed	None	10	4	0	1	4
											1
Approx. 1825 EST	4/26/53	Nr. Wilkes-Barre, Pa.	American	DC-6	None	None	46	0	0	5	0
											10
Approx. 1535 CST	4/30/53	Nr. Joliet, Ill.	American	CT-240	None	None	19	0	0	3	0
											15
0900 EST	5/8/53	Wheeling, West Va.	Trans World	Martin 404	Substantial	None	25	0	0	3	0
											22

The flight was dispatched in accordance with the Visual Trans-Bay clearance. The reported weather conditions at San Francisco and Oakland at time of departure were above the prescribed minima; however, it was determined that weather conditions over the Bay at the time and place of the accident were below the prescribed minima. The pilot of the aircraft failed to comply with the prescribed Visual Trans-Bay procedures and descended below the prescribed minimum altitude until the aircraft struck the water.

One of the passengers failed to return to her seat (and fasten her belt) as instructed by the stewardess and was thrown about as flight encountered severe turbulence. The seat belt sign was on.

The flight encountered a short period of severe turbulence and one of the passengers was thrown about in her seat, sustaining injuries. The seat belt sign had been on during the entire flight and the passenger previously had been advised by the stewardess to fasten her safety belt.

The left gear oleo drag strut failed and the gear collapsed rearward during the landing roll. Passengers were evacuated through the main door.

A. Scheduled Domestic Operations - Passenger Service (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury					
								Crew	Passenger	Other	M/N		
								F	S	M			
1158 CST	5/15/53	Dallas, Texas	Braniff	CG4B-JC	Substantial	None	52	0	0	4	0	0	48
1415 CST	5/17/53	Marshall, Texas	Delta	DG-3	Destroyed	After Impact	20	3	0	0	16	1	0
0834 CST	6/9/53	Des Moines, Iowa	United	CV-240	Substantial	None	39	0	0	3	0	0	36

Flight was in normal cruise when No. 4 engine oil pressure and quantity began to drop, and the oil warning light came on. The propeller was feathered and crew asked for and was given permission to descend and be No. 1 to land at Dallas. Flight made visual contact at approximately 1200 feet and a straight-in-approach was executed. Touchdown was made approximately one-quarter of the way down the wet runway. Pilot was unable to stop the aircraft on the remaining usable surface and ran through the boundary fence, across an avenue, and came to rest against a bank. All passengers were evacuated through the doors and emergency exits.

The flight was observed to fly directly into a severe thunderstorm without change of course or altitude. The severe conditions within the storm caused a loss of effective control and the aircraft was forced to the ground crashing approximately six miles from point of entry into the thunderstorm. Pilot had been advised of enroute weather, and that heavy turbulence and hail were reported in the storm areas. Company ground personnel had suggested that pilot stay to the north and avoid the storm which was local in nature. Company directive stipulates that all flights, insofar as practicable, should circumnavigate thunderstorms and avoid direct flight through turbulent air.

The nose gear collapsed during landing and the aircraft continued down the runway with the nose section sliding along the concrete. Passengers and crew were evacuated through the right front cargo compartment.

Scheduled Domestic Operations - Passenger Service (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury			
								Open W	F	S	M/N
1818 EST	6/23/53	Syracuse, N. Y.	American	CV-240	Substantial	In Air	40	0	0	3	0 0 0 37
1643 EST	6/24/53	Detroit, Mich.	American	CV-240	Substantial	None	43	0	0	4	0 0 0 39
0610 CST	7/1/53	Nr. Bismarck, N. D.	Northwest	DC-4	Minor	None	53	0	0	4	0 1 1 48
0955 CST	7/7/53	Breckenridge, Texas	Pioneer	Martin 202	Substantial	None	26	0	0	3	0 0 0 23

A. Scheduled Domestic Operations - Passenger Service (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury					
								Passenger's F	Passenger's M	Passenger's W	Other F	Other M	Other W
1630 EST APPROX.	7/10/53	New York, N. Y. LaGuardia Field	American	DC-6B DLSS	Minor Substantial	None None	40	0 0 5	0 0	35	0 0 0		
Both aircraft were parked in line for run-up at the head of the runway. As the Douglas Captain observed aircraft in the line ahead had moved up, he released brakes to taxi and close the gap and did not see the Beechcraft prior to the collision.													
1141 EST APPROX.	7/26/53	Cleveland, Ohio	United	CV-340	Substantial	None	38	0 0 3	0 0	35	0 0 0		
Shortly after takeoff, as climb power was being set, the stewardess reported the cabin service door at buffet area was not tight. The crew then noted the door light was on — it had been out during pre-takeoff check. While the copilot was attempting to secure it, the door blew off, struck the stabilizer and fell clear. The evacuation chute, which is contained in the lower part of this door, streamed back and continued to flap against the undersides of the elevator. The aircraft was not pressurized. Flight returned to Cleveland and landed without further incident.													
1725 EST APPROX.	8/8/53	Over Port Chester, N. Y. Northeast	DC-3		None	None	12	0 0 3	0 1	8	0 0 0		
The flight was descending enroute in accordance with Visual Flight Rules, when the Captain observed another two-engine aircraft approaching on a head-on collision course. He executed a faster than normal climb as an evasive maneuver to avoid the other aircraft. One of the passengers was standing outside of the lavatory and lost her balance during this maneuver and received serious leg injuries.													
2050 MST APPROX.	8/9/53	Butte, Mont. (Great Falls)	Western	CV-240	Substantial	None	16	0 0 3	0 0	13	0 0 0		
The first officer, flying from the left seat, was making the approach for a landing at Butte. The aircraft touched down short of the runway, damaging the left gear. It was kept airborne, however, and returned to Great Falls for an emergency landing. The Captain made the landing at Great Falls after all safety precautions had been accomplished. The left gear folded back and the aircraft gradually turned off the runway. All passengers were evacuated through the regular rear ramp.													
1251 EST APPROX.	8/15/53	Elmira, N. Y.	Mohawk	DG-3	Substantial	In Air	21	0 0 4	0 0	17	0 0 0		
Shortly after takeoff smoke was observed coming into the cockpit. The electrical panel door was opened and an unsuccessful attempt made to extinguish the fire with the portable CO ₂ fire extinguisher. Pilot had already started a descent for landing and it was necessary to open the sliding windows to clear the dense smoke that had filled the cockpit. Landing was effected without further incident and the fire was extinguished by ground crew. All passengers quickly evacuated. Investigation disclosed a small copper bar had lodged across the terminals of the battery shorting it out and causing the fire.													

A. Scheduled Domestic Operations - Passenger Service (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Day/night Passenger Crew F S M/N			Other F S M/N
								F	S	M/N	
1917 CST	8/26/53	Michigan City, Ind.	United American	CV-240	Substantial	None	30	0	0	3	0 0 27
				CV-240	Substantial	None	27	0	0	3	0 0 24
0231 PST	9/6/53	Tacoma, Washington	Northwest	L-1049	Destroyed	After Impact	32	0	0	6	0 1 25
0345 EST	9/16/53	N.Y. Albany, N. Y.	American	CV-240	Destroyed	After Impact	28	3	0	0	25 0 0

Both flights had the same scheduled departure time from Chicago, on VFR flight plans to cruise at 11,000 feet, and were proceeding to their first check point when the collision occurred. Neither crew knew that the other flight was scheduled to operate over the same route and at the same time. The United flight departed Chicago one or two minutes ahead of American and had been in level flight for 30-45 seconds (on automatic pilot to the left and rear), while American was still in climb at the time of the collision. None of the pilots at any time observed the other aircraft except the United Captain caught a glimpse of American an instant before collision. As he attempted to pass under, the top of United fuselage struck the lower portion of American's fuselage, incurring substantial damage to both and instantaneous decompression occurred. Both flights made emergency landings without further incident; United landed at South Bend, Indiana and American at Chicago. Several passengers in both aircraft saw the other for an appreciable period of time before the collision.

Number 3 & 4 propellers had been feathered because of mechanical faults and pilot was making a precautionary landing. The left gear was not down and when the plane landed it veered off the runway. (Preliminary)

The first approach started by the flight was a standard instrument approach which was abandoned because of a mechanical failure of the wing flap mechanism. Shortly thereafter the weather improved to the west of the airport and the captain accepted a contract approach to another runway, for a flaps-up landing. However, the flight encountered intermittent areas of fog and haze which would have prevented adequate visual reference. The approach was continued at an extremely low altitude in an apparent attempt to maintain or regain visual flight, and to touch down as near the approach end of the runway as possible. The aircraft struck radio towers, the upper portions of which were obscured by fog, crashed and burned. The captain was familiar with the terrain surrounding the airport as well as the height and location of the radio towers. It was determined that at the time of the accident there was sufficient fuel on board for the flight to continue to either of its alternates with the required reserve.

Scheduled Domestic Operations - Passenger Services (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury		
								Crew F/S	Passenger S/M/N	Others P/S/N
0945 CST	9/22/53	Ft. Wayne, Ind.	Trans World	Martin 404	Substantial	None	31	0	0	28
Initial touchdown was made 800-1000 feet down the runway followed by a low skip of several hundred feet. On second touchdown the aircraft started to settle immediately as the landing gear retracted. Later tests were made and revealed no evidence of any defect, failure, or malfunction of any component of the landing gear system. Evacuation was accomplished promptly through the forward cargo door, on the left side of aircraft.										
1458 EST	10/17/53	Philadelphia, Pa.	Trans World	Martin 202A	Substantial	None	18	0	0	15
The captain, occupying the copilot's seat, intended to retract the flaps during the landing roll but inadvertently actuated the gear control. He quickly realized his error and attempted to catch it but the gear had already unlocked and was retracting. All but two occupants evacuated the aircraft via the six emergency exits, the other two leaving through the forward crew door.										
1205 EST	10/23/53	Dayton, Ohio	American	CV-240	Substantial	None	24	0	0	21
The copilot was making the landing approach and touched down short of the runway, hitting hard on the left gear.										
1639 CST	12/7/53	Columbia, Mo.	Ozark	DC-3	Substantial	None	22	0	0	19
Left gear failed after the aircraft had completed the landing roll and was taxying in to the terminal. (Preliminary)										
0700 PST	12/11/53	Ontario, Calif.	Trans World	L-049	Minor	None	56	0	1	50
Flight encountered severe turbulence and the cabin attendants were injured while attending to passengers.										

75
C-1
C-2

A. Scheduled Domestic Operations - Other Revenue Operations

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury		
								Crew P S	Passenger's M/N	Others F S M/N
1506 EST	10/17/53	Newark Airport, N. J.	New York Airways	S-55	Substantial	None	2	0 0	2 0 0	0 0 2

The helicopter was in a right turn as pilot was preparing for landing at the gate, which was an area approved for landing of helicopters. It struck the roof of a panel truck and fell to the ground. The truck was proceeding to the same general area on a taxiway considered a part of the ramp area joining the two gates to the administration building. Pilot did not observe the truck, nor was the helicopter observed by the truck driver prior to the collision.

A. Scheduled Domestic Operations - Non-Revenue Operations

Time	Date	Location	Operator	Aircraft	Aircraft Damage	Destroyed	After Impact
1726 PST	6/29/53	Los Angeles, Calif.	Western	DC-3A			3 1 1 1 0 0 0

Flight was being made for a routine test following a major overhaul. Shortly after aircraft became airborne the right wing dropped and struck the ground. The right wing was torn from the fuselage as the aircraft cartwheeled and nosed over. Emergency fire apparatus arrived at the scene within a few minutes and extinguished the fire that started after impact. Investigation disclosed the aileron cables were reversed.

A. Scheduled Domestic Operations - Non-Scheduled Operations

No Accidents

A. Scheduled Domestic Operations - Military Contract Operations

No Accidents

A. Scheduled Domestic Operations - All Cargo Carriers

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury			
								Crew	Passenger's F M/N	Passenger's F M/N	Passenger's F M/N
2055 PST	1/7/53	Issaquah, Wash. (Ferry Flight)	Flying Tiger	C-46B	Destroyed	After Impact	7	4	0	0	3
											0
Between 0145 & 0150 EST	3/4/53	Windsor Locks, Connecticut	Slick	C-46F	Destroyed	After Impact	2	2	0	0	0
											0
1339 MST	6/18/53	Albuquerque, N. Mex.	Slick	C-46F	Substantial	None	5	0	0	2	2
											2
1009 EST	6/26/53	Boston, Mass.	Flying Tiger	C-46F	Substantial	None	2	0	0	2	0
											0

Flight was enroute to Seattle and had been cleared for a range approach to Boeing Field. While in communication with approach control the crew at no time gave any indication that anything other than a routine range approach was to be made. However, for some unknown reason the flight departed from the approved letdown and approach pattern to Boeing Field and crashed into a mountain, approximately 11 miles from the Seattle range station. Fire followed impact.

Between
0145 &
0150 EST

Upon missing an ADF approach the aircraft was heard and observed at low altitude attempting to circle under the overcast; rather than executing a standard missed approach procedure. The aircraft crashed through a wooded area, approximately one and a half miles from the approach side of the airport boundary.

An instant after the gear was retracted during takeoff the left engine failed suddenly. The crew quickly attempted to shut off the right engine and forced the aircraft back on the runway in a belly landing. The left propeller shaft failed and a portion of the shattered propeller severed the controls to the right engine making it impossible to shut down. All five occupants evacuated the aircraft through the crew access door.

The crew was unable to get a "down and locked" indication on the left gear and all means for emergency extension of the gear were used without success. The aircraft was landed on the right gear and as speed was dissipated the left gear collapsed and the aircraft groundlooped off the runway.

A. Scheduled Domestic Operations - All Carve Services (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury Passengers			Other F S M		
								Crew	F	S			
1441 MST	7/31/53	Salt Lake City Utah	Flying Tiger	C-46F	Substantial	None	3	0	0	3	0	0	0
<p>The copilot, occupying the left seat, was making the takeoff on a 6700 foot runway. After a ground run of approximately 4500 feet, the captain cut the power and discontinued the takeoff attempt. Brakes were immediately applied but the aircraft ran off the end of the runway and came to rest straddling the boundary fence. The aircraft was loaded to full gross weight and the density altitude at time of takeoff was approximately 6900 feet.</p>													
1618 CST	9/28/53	Louisville, Ky.	Resort	C-46F	Destroyed	After Impact	41	3	0	0	22	16	0
<p>Failure of left elevator caused loss of longitudinal control during landing flare out. (Preliminary)</p>													
0413 CST	5/22/53	Des Moines, Iowa	Resort	C-46F	Destroyed	After Impact	2	2	0	0	0	0	
<p>Evidence indicates the aircraft was flown into a severe thunderstorm and a structural failure occurred in flight. Examination of the wreckage revealed that, prior to impact, the outboard trunnion supporting the right aileron tab motor backed out of the support bracket due to inadequate fastening. The tab motor then tore loose from its bracket and punched through the wing. These conditions resulted in a tendency to roll erratically, and in conjunction with the extreme turbulence, caused loss of control and subsequent overloading of the wing to the point of failure. Fire followed impact.</p>													

B. Scheduled Certificated Cruise Carrier - Military Contract Operations - Passenger Service

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Crew	F	S	M/N		
1618 CST	9/28/53	Louisville, Ky.	Resort	C-46F	Destroyed	After Impact	41	3	0	0	22	16	0

C. Scheduled Certificated Cruise Carrier - Military Contract Operations - Other Revenue

(Revenue Ferry Flight)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Crew	F	S	M/N	
0413 CST	5/22/53	Des Moines, Iowa	Resort	C-46F	Destroyed	After Impact	2	2	0	0	0	0

B. Scheduled U. S. Foreign/Overseas Operations - Passenger Service

Time of Accidents	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury			
								Crew F S	Passenger M/W	Passenger F S	Passenger M/W
1900 EST	1/25/53	Enroute Bermuda - Lashuardia	Colonial	C-54	Substantial	None	48	0	0	5	0
		While flying at night on instruments the aircraft was damaged by lightning and the crew's vision was impaired for several minutes.									43
1351 Z	5/1/53	Lisbon, Portugal	Pan American World Airways	DC-6B	Substantial	None	39	0	0	8	0
		Encountered unstable air while preparing to flare out for landing and the aircraft touched down short of the runway. The landing gear struck an unearthened mound of hard packed clay, located approximately ten feet from the end of the runway.									31
1849 OCT	7/26/53	San Salvador, El Salvador	Pan American Central American World Airways	L109-16 PA-205	Substantial Destroyed	None	29	0	0	5	0
		The Lockheed had been cleared to land on runway 6 and was nearing completion of the landing roll when the larger pilot started to takeoff on runway 31, against a red light from the tower. It was not possible for the Lockheed pilot to initiate evasive action in time to prevent the two aircraft from colliding at the intersection of the runways.									24
											3/0 0
0056 EST	10/19/53	New York, New York	Eastern	L-749	Destroyed	After Impact	27	0	2	3	2
		Teterboro Airport									16 4
		Report indicates aircraft stalled from approximately 60 feet during take off climb. (Preliminary)									
0138 Z	12/3/53	Athens, Greece	Trans World	L-749	None	None	63	0	0	3	0
		One of the ground crewmen, after restraining the wheel chocks, ran forward and was struck by the propeller.									0 0 1 0 0

b/ Occupants of Non-air-carrier aircraft.

B. Scheduled U. S. Foreign/Overs seas - Passenger Service (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Division of Injury		
							Crew F	Passenger S M/N	Others F S R
1236 OCT	12/6/53	Johnston Island	Pan American World Airways	B-377	Substantial	None	42	0 0 7	0 0 35

Flight was proceeding in normal cruise when a severe vibration was felt followed by a violent explosive noise and jolt. This was determined to have been caused by the loss of No. 4 powerplant. The aircraft then went into a steep diving turn to the right and considerable altitude was lost before control was regained, although the aircraft continued to buffet. All necessary precautions for a possible ditching were initiated as the flight continued to the nearest landing field. Approach and landing was made at Johnston Island without further incident. There was no evidence of engine malfunction prior to the time the engine was lost.

B. Scheduled U. S. Foreign/Overs seas - Other Revenue Operations

No Accidents

B. Scheduled U. S. Foreign/Overs seas - Non-Revenue Operations

No Accidents

B. Scheduled U. S. Foreign/Overs seas - Non-Scheduled Operations - (Charter, etc.)

No Accidents

B. Scheduled U. S. Foreign/Overs seas - Military Contract Operations

No Accidents

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B. Scheduled U. S. Foreign/Overseas - All Cargo Carriers

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury		
								Crew F S	Passenger M/N F S M/N	Crew F S M/N F S M/N
0752 EST	3/20/53	St. Petersburg, Fla.	Aerovias Sud Americana	C-46	Destroyed After Impact		3	0 0	3 0 0 0	

A short time after takeoff from St. Petersburg, enroute to British Honduras, the right engine was backfiring. The pilot feathered the propeller, turned back and landed at Tampa. Since no malfunction was apparent during a ground check and runup, a takeoff was made to return to St. Petersburg. Although there was no indication to the crew of engine malfunction, the propeller was again feathered when the tower advised that the right engine was trailing smoke, and a single engine approach was initiated for landing at St. Petersburg. Pilot overshot the approach and applied power for a go-around, with the flaps remaining in the down position. The aircraft stalled and crashed in a wooded area, bursting into flames on impact. The crew safely evacuated the aircraft. Aircraft was loaded to approximately 700 pounds under the maximum gross of 45,000 pounds.

C. Irregular Domestic Operations - Passenger Service

1541 2	1/8/53	Annette Island Alaska	Air Cargo Express	C-46(D)	Substantial	None	20	0 0	3 0 0	17
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The hydraulic system failed during the flight and the crew utilized emergency procedure to extend the gear, but was unable to get a gear "down-and-locked" indication. A normal landing was made but the left gear gradually collapsed and aircarft veered sharply off the runway into a drainage ditch. Inspection disclosed a failure and complete separation of the hydraulic line leading from the right engine hydraulic pump to the main hydraulic system. The left main gear safety down lock mechanism movable arm was found jammed in the unlocked position. This prevented the gear from remaining fully extended as weight of aircraft was transferred to the gear during landing roll.

C. Irregular Domestic Operations - Passenger Service (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury			Others F S M
								G	R	P	
1032 MST	2/15/53	Miles City, Mont.	General Airways	DC-3	Substantial	None	25	0	0	3	0 0 22
A standard range letdown and approach was attempted. However, since the aircraft was not properly aligned with the runway a missed-approach procedure was accomplished and another approach initiated. The ground was snow covered and a light snow was falling. On the second approach the aircraft touched down approximately 1,100 feet from the end of the runway and brakes were not effective in slowing aircraft on snow covered (and somewhat icy) runway. Pilot attempted to groundloop but the aircraft skidded sideways, alit off the end of the runway and sheared the gear, and the right propeller, on a ditch.											
0222 PST	4/14/53	Selleck, Wash.	Miami Airlines	DC-3	Destroyed	None	25	2	1	0	5 17 0
The left engine lost power and was feathered. Within a short time the right engine failed and the aircraft crashed in mountainous terrain 25 miles southeast of Seattle.											
2320 EST	7/4/53	Atlanta, Georgia	Capitol Airways	C-46F	Minor	None	20	0	0	4	0 2 15
Flight was proceeding in normal cruise, in clear dry air, when without warning turbulence was encountered. Most of the passengers were sleeping and because of the suddenness there was not time to warn hostess or passengers to fasten safety belts. One passenger was seriously injured and some others received minor injuries.											
0125 CST	8/30/53	Dallas, Texas	Hemisphere Air Transport	DC-4	None	None	76	0	0	3	0 0 73 1 0 0
Immediately after starting to taxi out, the crew noticed the door warning light was flashing indicating that one of the cargo doors was not fastened securely. Thereupon the captain turned back to the original position at the ramp, set the parking brake and idled the engines as he signalled to the ramp agent, who was standing by with one of the cargo handlers. As they proceeded toward the cargo doors the cargo handler ran forward and was struck by No. 2 revolving propeller.											

C. Irregular Domestic Operations - Other Revenue Operations

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury		
								Gross F S	Passengers M/N	F S M/N
1923 CST	7/19/53	Dallas, Texas	Southern Air Transport	C-46E	Destroyed	None	2	0 0	2 0 0	0
<p>The aircraft touched down short of the runway, making initial impact on the face of an embankment. The left wheel struck the embankment about 3½ feet below the brow, and then the right wheel about 4½ feet below the brow. The aircraft then bounced and, as it contacted the ground, the right wing was broken off and the fuselage rolled over to an inverted position.</p>										
0451 PST	12/12/53	Annette Island Alaska	Aviation Corp. d/b/a Westair Transport	C-46E	Substantial	None	5	0 0	5 0 0	0
<p>Approach and landing was made in a crosswind of 13 m.p.h. with gusts to 32 m.p.h. The aircraft drifted to the left and touched down at approximately the mid-point of the runway with the left wheel on the gravel area alongside. The aircraft ran off the end of the runway, down a slight embankment, and nosed up as the gear bogged down in the partially frozen muskeg.</p>										
1216 MST	1/6/53	Cheyenne, Wyoming	All American Airways	C-46A	Destroyed	None	5	0 0	5 0 0	0
<p>The aircraft touched down short of a runway, which ended on a fill with an abrupt drop to the valley floor below. The right wheel contacted the slope about four feet below the top, and the left wheel one foot from the top, causing a severe bounce. Complete failure of the right wing over the landing gear attachments occurred. The right wing folded back along the fuselage and the aircraft rolled over into an inverted position. The wind was from the right and reported to be 20 m.p.h. with gusts to 30 m.p.h.</p>										

C. Irregular Domestic Operations - Non-Revenue Operations

C. Irregular Domestic Operations - Non-Revenue Operations (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury			
								Crew F	Crew S	M/V	Passenger F
0055 PST 4/23/53	Sellock, Washington	American Air Transport	C-46	Destroyed	None	None	4	2	1	1	0
The flight, during IFR (night) operation, descended below the prescribed minimum enroute altitude of 8000 feet and crashed near the crest of a mountain at approximately 1400 feet altitude. The pilot's repeat back of clearance indicated he misunderstood the crossing altitude for next check point. This apparent misunderstanding on the part of the pilot was missed by the controller.											
Approx. 0415 CDT 5/21/53	St. Louis, Mo.	Meteor Air Transport	DC-3C	Destroyed	None	None	7	5	0	0	1
The flight was cleared for an instrument approach. After reporting passing the outer marker the flight was observed and heard making a circling approach although the weather was below the authorized circling approach minima. During the circle approach, the right engine stopped due to mismanagement of fuel, resulting in loss of power and control during a left turn, and the aircraft fell striking the ground on the right wing.											
1510 CST 6/5/53	Minslow, Indiana	Capitol Airways	Beech 35	Substantial	None	None	4	0	0	1	0
While cruising, and shortly after pilot changed to auxiliary fuel tank, the engine failed. He made a wheels-up landing in a small field and the aircraft slid into a small tree.											
1727 CST 6/19/53	San Antonio, Texas	Argonaut Airways	C-46F	Substantial	None	None	5	0	0	5	0
Leakage of hydraulic fluid occurred while enroute with resultant loss of hydraulic pressure. Upon entry into traffic pattern the crew was unable to extend gear fully by manual procedures. A landing was made but the right gear collapsed and the aircraft ground-looped.											

C. Irregular Domestic Operations - Military Contract Operations - Passenger Service

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury		
								Crew F S	Passenger's M/N P S	
0412 MST	1/7/53	Fish Haven, Idaho	Associated Air Transport	C-46F	Destroyed	None	40	3 0	0 37 0	0 0
0730 EST	4/25/53	Battle Creek, Mich.	Coastal Cargo	C-46F	Substantial	None	38	0 0	4 0 0	34
1342 EST	5/4/53	Louisville, Ky.	Astronaut Airways	C-46F	Substantial	None	44	0 0	3 0 0	41
0350 MST	7/27/53	Cheyenne, Wyo.	Economy Airways	C-46	Substantial	None	38	0 0	3 0 0	35

The flight was apparently routine until passing Malad City (approximately 42 miles back from the crash site), a reporting point, when the flight advised it was at its assigned altitude of 13,000 feet. Light to moderate turbulence and light rime ice prevailed in cloud tops at cruising altitude, while at lower altitudes moderate to severe turbulence, and moderate to heavy icing existed. The crew of another flight, preceding this one by a few minutes, reported they had avoided the turbulence in the area by increasing their altitude from 13,000 to 13,500 feet. However, there was no request from the ill-fated flight for higher altitude. Evidence indicates the aircraft descended, for reason unknown, into an area of turbulence and icing from which it was unable to regain a safe altitude. The aircraft crashed through trees on a mountain, while in near level attitude longitudinally.

Pilot overshot landing on wet runway and went through a fence.

Following a long landing touchdown, brakes were applied and the wheels slid on the wet pavement. The aircraft skidded sideways off the end of the runway onto soft muddy ground and went up on its nose, then settled back into a three point attitude.

About 15 minutes after adjusting power to cruise configuration, a sudden increase in oil temperature on the right engine was noted, with a drop in pressure. Pilot immediately reduced power on the right and increased power on the left engine. Flight continued on course for about 5 minutes prior to initiating a turn back to Cheyenne. The aircraft settled alonly on the return flight and although the right engine feathering button was pushed the propeller was not found in feathered position on inspection after the accident. The feathering mechanism operated normally during a later check. Full allowable power on the left engine was not used and when approximately six miles from the airport the crew suddenly saw a power line in their flight path and maneuvered the aircraft under the wires. The aircraft touched down in a wheat field and skidded approximately 662 feet on the belly, going through two fences. All cabin passengers were promptly evacuated through the main cabin door. There was evidence of an internal structural failure of the right engine.

C. Irregular Domestic Operations - Military Contract Operations - Passenger Service (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Division of Injury Passengers F S M/N	Total Aboard	Crew F S M/N			Others F S M/N
									Destroyed	After Impact	Total	
Between 1800 & 1900 PST	9/1/53	Mr. Vail, Wash.	Regina Cargo	DC-3	Destroyed	After Impact		21	2	0	0	19 0 0
		Pilot cancelled his instrument flight plan at Portland, advising that the trip would be completed in accordance with visual flight rules. Although it is evident intermittent instrument conditions were encountered, pilot did not ask for a change of flight plan back to an assigned instrument altitude. The aircraft was flown into the side of a ridge - in apparent level flight - and burned.										
1620 MST	9/22/53	Miles City, Mont.	Caribbean American	C-46F	Destroyed	In Air		44	0	0	4	0 1 40
		Shortly after takeoff, and about the time of the first power reduction, the right engine surged and the fire warning light came on. The crew observed a fire in the right engine and elected to return to the airport. The right propeller was feathered and the fire extinguishing system for this engine was discharged. The fire died down momentarily but soon flared up, burning more intensely than before. Pilot then decided to make a wheels-up landing in a large wheat field. All occupants were quickly evacuated through the left emergency exits and the main cabin door.										
1012 MST	11/18/53	Cheyenne, Wyo.	Economy Airways	C-46F	Substantial	None		41	0	0	4	0 0 0 37
		During the takeoff run in crosswind conditions, the pilot had difficulty in maintaining directional control of the aircraft which was overloaded by 4715 pounds. When less than half-way down the runway (7658 feet long and 6356 feet above sea level) the aircraft became airborne, and the copilot retracted the gear. The aircraft settled back to the ground and slid along on its belly. Power was cut and it came to rest 1188 feet from the end of the runway.										
2115 MST	8/25/53	Tucson, Arizona	American Air Express & Import Co.	C-46F	Substantial	None		4	0	0	2	0 0 0 2
		Evidence indicates the aircraft was landed WITH the gear in the up position. After aircraft had been raised the gear extended without the use of the hydraulics system. Later retraction and extension tests failed to disclose any malfunction other than the landing gear horn which would blow only when the throttles were very slowly retarded.										

C. Irregular Domestic Operations - Military Contract Operations - Other Revenue

D. Irregular Foreign/Overs seas Operations - Passenger Service

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury			
								Crew F S	Passenger U/A	F S	M/N
0841 GCT	7/12/53	East of Wake Island	Transocean	DC-6A	Destroyed	None	58	8	0	50	0

The last known radio contact made with the flight was when it made the second scheduled position report after departing Wake Island. When the flight did not report over its next scheduled reporting position an alert was declared and an extensive search by aircraft and surface vessels was made. Debris and several bodies were found but no primary structure of the aircraft was recovered. Examination of the recovered bodies and wreckage indicated the aircraft crashed with a high impact force. There was evidence of extensive thunderstorms north of the course but insufficient evidence to determine if they extended far enough to the south to be intercepted by the flight. The cause of the accident remains undetermined.

D. Irregular Foreign/Overs seas Operations - Other Revenue Operations

No Accidents

D. Irregular Foreign/Overs seas Operations - Non-Revenue Operations

No Accidents

D. Irregular Foreign/Overseas Operations - Military Contract Operations - Passenger Service

Type of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fires	Total Aboard	Division of Injury			Crew F S M/N	Passenger F S M/N	Others F S M/N
								Crew	Passenger	Others			
1838 PST	3/20/53	Alvarado, California	Transocean	DC-6	Destroyed	After Impact	35	5	0	0	30	0	0

The aircraft was flying under instrument weather conditions with icing in the clouds above 5,000 feet. However, below this altitude temperatures were above freezing. The flight was cleared for a straight-in range approach to descend from 8000 feet to cross the Newark compass locator at 3500 feet and report leaving each 1000 foot level. This was done and no emergency at any time was declared by the crew. The last report received from the flight was when it reported at an altitude of 3500 feet and leaving the fan marker. Evidence indicates the aircraft became uncontrollable after this last report and it was observed by ground witnesses below the 1300 foot cloud ceiling in a right wing low slipping attitude. The aircraft continued in this attitude until it struck the ground. There was no evidence of any malfunctioning of the aircraft or controls, fire in flight, or structural failure prior to impact. The reason for loss of control could not be determined.

E. Contract Carriers - Domestic Military Contract Operations - Passenger Service

1400 EST	6/16/53	Columbus, Georgia	Air Transport Associates	C-46P	Substantial	None	43	0	0	4	0	0	29
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Pilot's destination was Lawson Air Force Base, Columbus, Georgia. On arrival in the vicinity pilot made radio contact with the Lawson tower and was cleared to land on runway 14, which is 7000 feet long. He mistook the small Muscogee County Airport for Lawson and proceeded to land thereon. The aircraft touched down on runway 12, approximately 900 feet from the approach end of the 3900 foot runway, in a tail high attitude. Shortly after touchdown the aircraft ballooned and was airborne for approximately 100 feet. Realising that he would be unable to stop on the wet runway the pilot attempted to groundloop and the aircraft skidded off the runway and ran into a ravine about 30 feet deep.

X. Contract Carriers - Foreign/Overseas Military Contract Operations - Other Revenue Operations

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury				Passengers F S M/N
								Crew	S	M/N	F	
0340 PST	3/27/53	Nr. San Francisco, California	Eastern	VC-4	Destroyed	None	4	0	0	3	0	0 1

The flight departed Travis AFB at 2220 PST 3/26/53 on an IFR flight plan and cleared direct to Honolulu, T. H. to cruise at 8000' ASL. At 0155 PST 3/27/53 No. 4 engine began to backfire and the oil pressure dropped to 40 lb. P.S.I. The propeller was feathered and the flight turned back toward San Francisco. At 0250 PST No. 3 engine lost manifold pressure and the crew were unable to maintain a constant manifold pressure or r.p.m. on this engine. This propeller was feathered at 0255 PST. The aircraft could not maintain altitude with the load carried and the power settings used and was ditched skillfully at approximately 0340 PST and remained afloat until 0914 PST.

E. Alaskan Air Carriers - Passenger Service

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury				Other P/S/V
								Crew F S	Passenger U/W	Passenger F S	Passenger M/N	
2217 Z	1/7/53	Nome, Alaska	Wien Alaska	Cessna 195A	Substantial	None	3	0	0	1	0	0
												2
		Pilot landed ski-equipped aircraft on river ice and was taxiing in when the left ski broke through a thin spot and tore out the left gear.										
0935 EST	1/10/53	Ungalik, Alaska	Alaska Airlines	Stinson AT-19	Substantial	None	2	0	0	1	0	0
		Ski-equipped aircraft was landed on glare ice and after losing speed it started to turn. Pilot was unable to recover so he cut power as aircraft slid into an embankment.										1
2205 Z	2/4/53	Bethel, Alaska	Northern Consolidated	Norseman UC-64	Substantial	None	5	0	0	1	0	0
		The engine failed approximately three minutes after takeoff and pilot was forced to land on rough frozen tundra. The temperature was -24F.										4
2140 Z	2/11/53	Mr. Barrow, Alaska	Wien Alaska	Cessna 170A	Substantial	None	1	0	0	1	0	0
		Skull Cliff										
		A routine landing was made on a snow covered frozen lagoon in a ski-equipped aircraft. Shortly after touchdown the right ski separated from the gear strut due to failure of attach bolts, and the aircraft ground-looped.										
1200 EST	4/6/53	Nome, Alaska	Muns Airways	Stinson SR-2R	Substantial	None	3	0	0	1	0	0
												2
		While taxiing in from landing the left landing gear strut attachment separated from the fuselage, resulting in partial collapse of the landing gear.										

P. Alaskan Air Carriers - Passenger Service (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury					
								Crew F	Crew S	Crew M/N	Passenger's F	Passenger's S	
1800 EST	4/25/53	Shishmaref, Alaska	William S. Levy (Pilot Owner)	Skinner 108	Destroyed	None	2	1	0	0	1	0	0
		The aircraft wreckage was located on the sea ice the day after it had been reported overdue. Evidence indicates aircraft struck the ice at high speed in a nose-down, left wing low, attitude. Weather at estimated time of accident was not favorable for VFR flight, due to low clouds and snow.											
1855 AST	5/16/53	Anchorage, Alaska	Pacific Northern	DC-3D	Substantial	None	12	0	0	3	0	0	9
		Aircraft encountered a flock of ducks in flight, damaging leading edge of wing.											
1242 AST	7/29/53	Anchorage, Ninilchik, Alaska	Pacific Northern	L-2A	Substantial	None	4	0	0	1	0	0	3
		Aircraft											
1415 AST	8/11/53	Ruselen Mission, Alaska	Alaska Airlines	Norseman	Substantial	None	2	0	0	1	0	0	1
		UG-6A											
		Shortly after pilot turned inland to avoid rain squalls, an abrupt loss of power was experienced with severe vibration caused by an internal structural engine failure. The aircraft was over a densely wooded area and was crash landed in the trees.											

V. Alaskan Air Carrier - Passenger Service (Continued)

Time of Accident Date	Date Pst	Location	Operator	Aircraft	Fire Damage	Aircraft Destroyed	None	Division of Injury			
								Crew F 9	P M/N	P S	N/N
1135 EST	8/14/53	Bar Mountain, Alaska	Alaska Airlines	Stinson AT-19	Destroyed	None	2	0	0	1	0
		<p>An approach was being made with full flaps for landing in a strong, gusty wind (velocity 30 m.p.h. with gusts to 60 m.p.h.). While on final approach a severe gust was encountered resulting in an abrupt and uncontrolled loss of altitude. The aircraft was deflected abruptly to the left, struck the ground to the left of the runway, bounced and nosed over.</p>									
1300 PST	9/8/53	Tyee, Alaska (Surprise Harbor)	Alaska Coastal	Gruuman G-21A	Substantial	None	7	0	0	1	0
		<p>Hull was damaged during landing in the harbor, due to ground swells.</p>									
1430 AST	10/22/53	Fleetonite, Alaska	Robert F. Vanderpool (Pilot Owner)	Piper PA-20	Substantial	None	2	0	0	1	0
		<p>Northern Consolidated Stinson SR-10 Substantial The Stinson had landed but had not cleared the runway before pilot in Piper started his takeoff. Visibility was restricted in sun glare as the Piper pilot was taking off and he saw the Stinson on the runway too late to clear it. The Piper gear struck the left wing of the Stinson; however, pilot maintained control and circled the airport and made an emergency landing.</p>									
1445 AST	11/4/53	Pilot Point, Alaska	Bristol Bay Airlines	Cessna T-50	Substantial	None	2	0	0	0	0
		<p>Pilot was taxiing out for a takeoff on a frozen lake when the wheels broke through the ice.</p>									
1430 AST	12/2/53	Wr. Aniak, Alaska	Northern Consolidated	Norseman UC-64A	Substantial	None	9	0	0	1	0
		<p>Flight encountered a light snow squall and then a freezing drizzle thaticed up the windshield, reducing forward visibility. Pilot elected to land on a frozen river and the right gear was damaged when the skid struck an ice hummock.</p>									
2240 Z	12/27/53	Klunuk, Alaska	Northern Consolidated	Norseman UC-64	Substantial	None	4	0	0	1	0
		<p>Pilot landed aircraft on a small frozen lake and collided with a hummock after going beyond the boundary of the lake.</p>									

P. Alaskan Air Carriers - Other Revenue Operations

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury						Other F S N	
								Crew F S	Crew M/N	Passenger's F S M/N	Passenger's W/N	Other			
0200 Z	4/4/53	Bettles Field, Alaska	Wien Alaska	Cessna 170B	Substantial	None	1	0	0	1	0	0	0	0	
						The right ski axle bolts failed during a normal landing and the ski separated from the landing gear strut. The strut dug into the runway causing the aircraft to groundloop.									
0345 Z	4/27/53	St. Michael, Alaska	Alaska Airlines	Norseman UC-64	Destroyed	In Air	2	0	2	0	0	0	0	0	
						Flight was in normal cruise when pilot detected smoke coming into the cockpit around the rudder pedals. He directed the mechanic to use the fire extinguisher (which had no apparent effect) and immediately started to let down for landing on a small frozen lake. During landing a flash of flame entered the cockpit and an explosion occurred when the aircraft hit the shore. Both occupants evacuated the burning aircraft through a window that had been broken out of the door. During disassembly and recovery of the engine it was found that the threaded coupling of the hose on the pressure side of the engine-driven fuel pump was loosely connected, indicating the existence of a source of fuel spillage into the engine accessory compartment.									
1836 Z	5/8/53	Old Crow, Yukon Territory, Canada	Wien Alaska	Norseman UC-64A	Substantial	None	1	0	0	1	0	0	0	0	
						The snow on the snow bar used for landing was deeper than reported to the pilot, and the aircraft which was equipped with wheels, nosed over when it contacted several drifts during the landing roll.									
0645 Z	5/15/53	Venetie, Alaska	Wien Alaska	Norseman UC-64A	Substantial	None	2	0	0	2	0	0	0	0	
						During approach for landing on a short strip pilot had brakes applied at the moment of touchdown and the aircraft nosed over.									
2025 Z	7/15/53	Cold Bay, Alaska	Reserve Aleutian	Grumman G-21	Substantial	None	2	0	0	2	0	0	0	0	
						The main landing gear retracted shortly after touchdown and the aircraft skidded to a stop on the tarmac. A mechanical failure in the gear actuating mechanism prevented complete extension and locking of the landing gear.									

I. Alaskan Air Carriers - Other Revenue Operations (Continued)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury				Others F S M	
								Grew	S	M/N	F		
1235 AST	10/6/53	Nikotna, Alaska	Northern	Cessna T-50	Substantial	None	2	0	0	1	0	0	1
			Consolidated										
				The wind, which pilot had estimated to be approximately 5 m.p.h. and across the runway when he circled the strip prior to landing, had shifted to a tailwind and increased in velocity to 25-30 m.p.h. during the landing. Pilot was unable to stop and the aircraft ran off the end of the runway and down an embankment.									
2117 Z	12/14/53	Kivalina, Alaska	Nien Alaska	Cessna 195	Substantial	None	1	0	0	1	0	0	0
				Aircraft landed on a frozen river and was taxying in when the right wheel dropped in a hole that had been obscured by snow.									
2301 Z	4/1/53	Nr. Fairwall, Alaska	Northern	Stinson AT-19	Substantial	None	1	0	0	1	0	0	0
			Consolidated										
				Flight encountered unfavorable weather, approximately 35 miles from takeoff point. Pilot turned back and was then caught in severe turbulence which threw him against the aircraft structure momentarily stunning him. Upon regaining his faculties, he found that the aircraft had descended to a low altitude and was headed into a blind canyon, and being unable to climb out he elected to land on the snow covered rocky terrain. The left gear failed on touchdown and the aircraft nosed over. Pilot abandoned the wreckage to walk back and was found by rescue crews two days later.									

F. Alaskan Air Carriers - Non-Scheduled Operations(Charter, Contract, Special Flights, etc.)

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury		
								Crew F S	Passenger M/N	P F S M/N
1815 AST	8/1/53	Fairbanks, Alaska	Alaska Airlines	Norseman UC-64AS	Substantial	None	2	0 0 1	0 0 1	
<p>The pilot attempted to takeoff a heavily loaded seaplane from a water filled gravel pit within the limits of the airport. This pit paralleled the runway and ranged from one to four feet in depth. The aircraft failed to clear the embankment at the end of the pit and capsized.</p>										
2030 AST	7/21/53	Nr. Cape Lisburne, Alaska	Alaska Airlines	Norseman UC-64	Substantial	None	3	0 0 1	0 0 2	
<p>Flight encountered strong winds, of gale force, and severe turbulence while cruising along the coast-line. Pilot turned inland in an effort to avoid the turbulent area. A series of strong down drafts were then encountered and the aircraft lost altitude and struck the ground.</p>										

G. Alaskan Air Carriers - Military Contract Operations - Passenger Service

2030 AST	7/21/53	Nr. Cape Lisburne, Alaska	Alaska Airlines	Norseman UC-64	Substantial	None	3	0 0 1	0 0 2	
<p>Flight encountered strong winds, of gale force, and severe turbulence while cruising along the coast-line. Pilot turned inland in an effort to avoid the turbulent area. A series of strong down drafts were then encountered and the aircraft lost altitude and struck the ground.</p>										

G. Intra-State Carriers

No. Accidents

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Scheduled Domestic Operations - Passenger Service

Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury			Others F S M
								Crew F S	Passenger M/N	Passenger F S M/N	
1232 EST	10/20/52	Greensboro, N. C.	Piedmont	DC-3C	Substantial	None	16	0 0	3 0 0	13	
1853 PST	12/7/52	Fallon, Nevada	Trans World	LJ049	Substantial	None	40	0 0	5 0 0	35	
0952 CST	12/15/52	Richmond, Indiana	Lake Central	DC-3	Minor	None	9	0 0	4 0 0	5	1 0 0
				Cessna 170	Destroyed	After Impact					

As the flight approached for landing, the wind was variable across the runway 20-30 m.p.h., with strong gusts to 45 m.p.h. The aircraft touched down in a three-point, or nearly so, attitude and shortly thereafter the right wing dug into the earth on the downwind side. The captain decided to go around, calling for gear and flaps up. Indications are the flaps were raised without interruption, and the left wing dropped and struck the ground. Pilot lost directional control and cut power, and the aircraft settled in on the partially retracted gear and skidded sideways for a short distance before stopping.

No. 3 engine failed while cruising and the propeller was feathered. Shortly after this No. 4 engine also failed. Power could not be restored so the propeller was feathered and an emergency landing made at Fallon. The emergency braking system was not properly utilized and the crew had neither nose wheel steering nor brakes during the landing. The aircraft veered off of the runway and ran through a ditch and several piles of gravel tearing the right wing and landing gear from the fuselage. The aircraft was quickly evacuated with most of the occupants leaving through the main cabin door which was close to the ground, and the others left through the forward right door via slide. Engine failure was caused by failure of the teeth of the intermediate gears of both front cam gear trains.

At the time of the accident, the cloud ceiling was estimated at 500 feet, and visibility ½ miles. Icing conditions existed both in and below clouds. The DC-3 was making an instrument approach and as it became visually contact southwest of the airport the pilot was advised by the company agent that there was no other traffic. The latter was monitoring the approach since there is no control tower available. The DC-3 then made an approach to land into the wind on runway 23. It appears that the Cessna approached the airport behind the DC-3 and then cut in for a landing on the intersecting runway 28. Apparently neither the Cessna pilot nor the crew of the DC-3 saw each other in time to avoid the collision which occurred at the intersection of the two runways as the DC-3 was flaring out for a landing.

Revisions and Additions to Previous Reume (Continued)

Accident	Time of Accident	Date	Location	Operator	Aircraft	Aircraft Damage	Fire	Total Aboard	Division of Injury									
									Crew	Passenger	Others	F	S	M/N	F	S	M	A
0736 Z	4/29/52	Nr. Carolina, Brazil (Mato Grosso)	Pan American World Airways	B-377	Destroyed	After Impact	50	9	2	0	.41	0	0					

Evidence indicates the No. 2 engine and propeller separated from the aircraft in flight due to highly unbalanced forces, and that the aircraft became uncontrollable resulting in the loss of the left wing and the tail assembly. Aircraft then crashed in the dense jungle and burned.

Alaskan Air Carriers - Other Revenue Operations

2125 Z	12/30/52	Deering, Alaska	Wien Alaska	Cessna 170-B	Substantial	None	1	0	0	1	0	0	0
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Landing was made on snow covered sea ice in a ski-equipped aircraft. As pilot was turning to taxi in the right ski contacted a ridge of ice and the gear collapsed.

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