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INTRODUCTION

General

The information in this publication is based on 600 accident and 15 incident reports of the ICAO ADREP SYSTEM for the year 1987 for aircraft of a maximum certificated take-off mass over 2 250 kg. The statistics were compiled in May 1990.

A new coding scheme for factors was introduced in 1988. Old data were recoded to the new format. Factors were recoded only for the years 1983 and following. Some precision may have been lost in the process.

The presentation format of these statistics differs from previous years. This was done to simplify production and presentation. Due to lack of recoded data, only four years could be used for comparison with 1987.

Purpose

The purpose of the ADREP statistics is to provide data that may be useful for general safety studies and accident prevention. For more specific needs the ADREP system provides information in response to specific ADREP requests.

Data Base

These statistics are based on 615 occurrences. Of these, 485 were Data Reports and 130 were Preliminary Reports. Preliminary reports do not contain factors and are therefore excluded from the compilation of statistics on factors.

Limitations

When considering the information presented, the reader must be aware of the following limitations and conventions:

- a) the ADREP manual contains coding instructions; nonetheless, there may be some unintentional bias on the part of the person coding the information;
- b) some occurrences are reported to ICAO on computer tapes and processed through a conversion programme before they are entered in the ADREP data bank. Since some of the data on these tapes are not compatible with the ADREP coding system, precision is not attainable in all cases; and
- c) accidents reported to ICAO before 1988 were classified in a format that differs from the one used now. These data were recoded to the extent possible.

Notes on the Statistical Tables

- a) Each accident/incident may be described by up to five events. For each event, a type of event, a corresponding phase of operation and up to 10 descriptive factors can be coded.
- b) In the lists presenting comparisons, only data representing significant differences are presented. "Significant" here means that the difference exceeds the average difference in a given list by more than one standard deviation. Accordingly, lists in which none of the groups of factors show a significant difference are omitted.

Format

There are two parts:

- | | |
|---------|--------------------------|
| Part I | Accidents to Aeroplanes |
| Part II | Accidents to Helicopters |

Each part is divided into separate sections for Airline Operations and General Aviation.

The format within each section is the same, showing the following:

- Phases of operation;
- Types of events;
- A comparison of the year 1987 with the preceding four years by:
 - phase of operation,
 - type of event,
 - personnel factors,
 - airframe factors,
 - powerplant factors,
 - aircraft systems factors,
 - helicopter components factors (when applicable),
 - aerodrome factors, and
 - weather factors.

TABLE I - ACCIDENTS AND INCIDENTS BY TYPE OF OPERATION AND AIRCRAFT MASS (1987)

	NUMBER OF REPORTS		NUMBER OF OCCURRENCES			NUMBER OF FATALITIES				NUMBER OF AIRCRAFT DESTROYED
	PR ¹	DR ²	FATAL	NON-FATAL	TOTAL	CREW	PAX	OTHER	TOTAL	
I. ACCIDENTS TO AEROPLANES										
Scheduled Airline Operations										
Aeroplanes over 27 000 kg	23	42	11	54	65	79	741	2	822	10
Aeroplanes between 2 250 and 27 000 kg	13	50	21	42	63	41	196	0	237	23
Non-scheduled Airline Operations										
Aeroplanes over 27 000 kg	1	8	1	8	9	0	2	44	46	3
Aeroplanes between 2 250 and 27 000 kg	34	77	23	88	111	27	29	1	57	33
Other Airline Operations										
Aeroplanes over 27 000 kg	2	1	2	1	3	8	0	0	8	2
Aeroplanes between 2 250 and 27 000 kg	10	15	4	21	25	4	0	1	5	5
Airline Operations (Total by mass)										
Aeroplanes over 27 000 kg	26	51	14	63	77	87	743	46	876	15
Aeroplanes between 2 250 and 27 000 kg	57	143	49	151	200	73	225	2	300	62
General Aviation										
Aeroplanes over 5 700 kg	3	20	8	15	23	13	2	0	15	8
Aeroplanes between 2 250 and 5 700 kg	36	230	65	201	266	76	81	6	163	82
II. ACCIDENTS TO HELICOPTERS										
Airline Operations	1	3	0	4	4	0	0	0	0	1
General Aviation	6	24	8	22	30	12	15	0	27	14
III. INCIDENTS										
Airline Operations	1	13	0	14	14	0	0	0	0	0
General Aviation	0	1	0	1	1	0	0	0	0	0

¹Preliminary Report²Accident/Incident Data Report