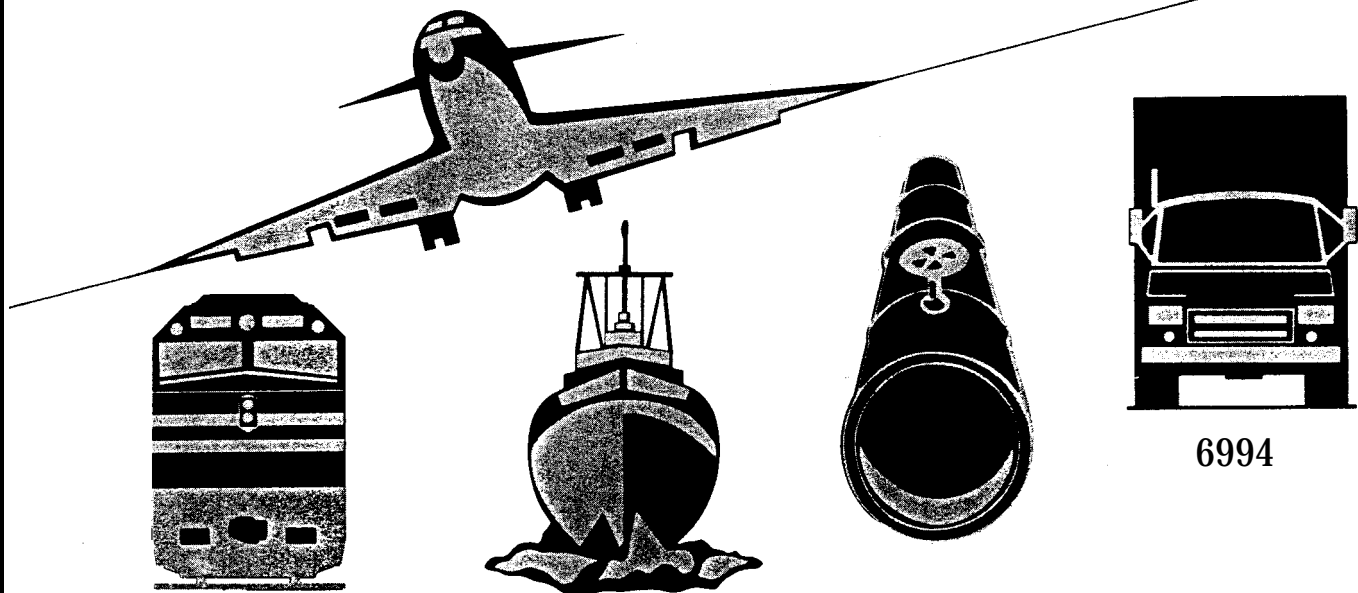


# NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C. 20594

## ANNUAL REVIEW OF AIRCRAFT ACCIDENT DATA

U.S. AIR CARRIER OPERATIONS  
CALENDAR YEAR 1995



6994

TECHNICAL REPORT DOCUMENTATION PAGE

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		<p>15. Supplementary Notes</p>	
<p>16. Abstract</p> <p style="margin-left: 40px;">This publication presents the record of aviation accidents involving revenue operations of U.S. Air Carriers including Commuter Air Carriers and On Demand Air Taxis for calendar year 1995.</p> <p style="margin-left: 40px;">The report is divided into three major sections according to the federal regulations under which the flight was conducted - 14 CFR 121, Scheduled 14 CFR 135, or Nonscheduled 14 CFR 135. In each section of the report tables are presented to describe the losses and characteristics of 1995 accidents to enable comparison with prior years.</p>			
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## INTRODUCTION

This report presents a statistical compilation and review of air carrier accidents that occurred in 1995, and involved U.S. registered aircraft conducting operations under Title 14 Code of Federal Regulations (CFR) Parts 121 and 135. Briefly stated, Part 121 applies to air carriers, such as major airlines and cargo haulers, that fly large transport aircraft. Part 135 applies to commercial air carriers commonly referred to as commuter airlines and to air taxis. For a complete definition of operations under each of these Parts, consult the applicable sections of the CFR.

The report is divided into three major sections: 14 CFR 121 Operations; Scheduled 14 CFR 135 Operations; and Nonscheduled 14 CFR 135 Operations. Each section begins with an overview of accidents and their consequences for 1995 and for the 10 preceding years. Several tables then present accident parameters for 1995 only. Each section concludes with tabulations that present comparative statistics for 1995 and for the 10-year period 1985-1994.

Exposure data (flight hours, miles, and departures) used to compute accident rates for operations under Part 121 and for scheduled operations under Part 135 were obtained from the Federal Aviation Administration (FAA), which compiled data reported by carriers to the Research and Special Programs Administration (RSPA) of the U.S. Department of Transportation (DOT). Flight hours for nonscheduled operations under Part 135 were obtained by the FAA in its surveys of general aviation activity. National Transportation Safety Board Report Form 6120.4 (Appendix F) shows the data elements upon which this report is based.

In many of the tables presented in this report (such as table 4), the number of accidents in a given category is small. In these tables, even a small change in the number of accidents would result in a significant change in the accident rate. Therefore, the reader should exercise caution in the use of these rates and in comparing numbers and percentages of accidents between two time periods when the number of accidents is small.

#### 14 CFR 121 OPERATIONS

There were 36 accidents in Part 121 operations in 1995. The overall accident rate for 1995 was 0.266 accidents per 100,000 hours flown, a 58 percent increase from the 1994 rate of 0.168. The 1995 rate was 21 percent higher than the overall rate of 0.219 for the period from 1985 through 1994.

There were three fatal accidents involving Part 121 operators in 1995 with a fatal accident rate of 0.022 per 100,000 hours flown, a 27 percent decrease from the 1994 rate of 0.030. The three fatal accidents in 1995 were responsible for a total of 168 fatalities. These three accidents involved a Boeing 757 at Cali, Colombia (160 fatalities), a McDonnell Douglas DC-8 at Guatemala City, Guatemala (six fatalities), and a Convair 440 at La Ramona, Dominican Republic (two fatalities).



Table 1 - SUMMARY OF LOSSES  
14 CFR 121 OPERATIONS  
1985 - 1995

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
<b>Accidents</b>											
Fatal	7	3	5	3	11	6	4	4	1	4	3
Serious Injury	8	15	12	16	5	11	11	12	13	12	16
Minor Injury	2	2	3	4	5	1	2	0	3	3	1
No Injury	4	4	14	6	7	6	9	2	6	4	16
<b>Total</b>	<b>21</b>	<b>24</b>	<b>34</b>	<b>29</b>	<b>28</b>	<b>24</b>	<b>26</b>	<b>18</b>	<b>23</b>	<b>23</b>	<b>36</b>
<b>Fatalities</b>											
Passenger	486	4	213	255	259	8	40	26	0	228	152
Crew	39	3	17	19	17	4	9	5	0	9	10
Other Persons	1	1	2	11	2	27	13	2	1	2	6
<b>Total</b>	<b>526</b>	<b>8</b>	<b>232</b>	<b>285</b>	<b>278</b>	<b>39</b>	<b>62</b>	<b>33</b>	<b>1</b>	<b>239</b>	<b>168</b>
<b>Aircraft Damage</b>											
Destroyed	8	2	5	3	7	3	5	3	1	3	3
Substantial	8	8	16	12	11	8	10	3	8	8	18
Minor	0	4	4	0	0	4	3	1	3	3	2
None	5	10	12	14	10	10	9	11	11	9	14
<b>Total</b>	<b>21</b>	<b>24</b>	<b>37<sup>a</sup></b>	<b>29</b>	<b>28</b>	<b>25<sup>a</sup></b>	<b>27<sup>a</sup></b>	<b>18</b>	<b>23</b>	<b>23</b>	<b>37<sup>a</sup></b>

<sup>a</sup> The number of aircraft damaged is higher than the number of accidents because the accidents involved collisions between two aircraft.

Table 2 - ACCIDENT RATES  
14 CFR 121 OPERATIONS  
1985 - 1995

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
<b>Accidents Rates <sup>d</sup></b>											
Miles Flown <sup>b</sup>	.0058	.0057	.0076	.0062	.0061	.0049	.0054	.0036	.0044	.0040	.0064
Hours Flown <sup>c</sup>	.241	.231	.310	.251	.248	.198	.221	.146	.181	.168	.266
Departures Flown <sup>c</sup>	.333	.319	.434	.363	.366	.297	.333	.228	.285	.267	.425
<b>Fatal Accident Rates <sup>d</sup></b>											
Miles Flown <sup>b</sup>	.0019	.0005	.0009	.0004	.0024	.0012	.0008	.0008	.0002	.0007	.0005
Hours Flown <sup>c</sup>	.080	.020	.038	.018	.098	.049	.034	.032	.008	.030	.022
Departures Flown <sup>c</sup>	.111	.028	.053	.026	.144	.074	.051	.051	.012	.049	.035

<sup>b</sup> Per Million Miles Flown

<sup>c</sup> Per Hundred Thousand Hours and Departures Flown

<sup>d</sup> A nonfatal accident, occurring 4/7/94, that involved criminal activity is excluded from accident rates. The 12/21/88 sabotage involving a Pan Am B747-100, 12/7/87 suicide/sabotage involving a PSA BAE-146e and the 4/2/86 sabotage of a TWA B727-200 are also excluded from accident rate computations.

Table 3 - LIST OF ACCIDENTS  
14 CFR 121 OPERATIONS  
1995

Date	Location	Type of Operation	Air Carrier	Aircraft Type	Aircraft Damage	Degree of Injury	First Occurrence
1/06	Monroe, LA	Sch Pax/Cargo	Delta	McD-Douglas MD-88	None	Serious	In flight encounter with weather
1/10	Memphis, TN	Sch Passenger	Valujet	McD-Douglas DC-9-32	Substantial	None	On ground collision with object
1/27	Dallas, TX	Sch Pax/Cargo	Southwest	Boeing 737-2H4	None	Serious	Miscellaneous/other (child fell through a gap between aircraft and catering truck)
3/12	San Juan, PR San Juan, PR	Sch Pax/Cargo Sch Passenger	Delta Executive	Lockheed L-1011-385 Short SD3-60	Minor Substantial	None None	Collision between aircraft (other than midair)
3/16	Alma, GA	Sch Pax/Cargo	Delta	Boeing 727-200	None	Serious	In flight encounter with weather
4/02	Jamaica, NY	Sch Pax/Cargo	American	McD-Douglas MD-11	None	Serious	Miscellaneous/other (tailpipe fire)
4/11	San Antonio, TX	Sch Pax/Cargo	American	Boeing 757-223	None	Serious	Miscellaneous/other (aircraft rolled after park brake had been set)
4/13	Denver, CO	Sch Passenger	Markair	Boeing 737-400	Substantial	None	Hard landing
4/19	Utopia, TX	Sch Pax/Cargo	Continental	McD-Douglas MD-82	None	Serious	In flight encounter with weather
4/28	Guatemala City, Guatemala	Sch Cargo	Millon Air	McD-Douglas DC-8	Destroyed	Fatal (6)	On ground collision with object
5/19	Tallahassee, FL	Sch Passenger	Continental	Boeing 737-300	None	Serious	In flight encounter with weather
5/24	W. Palm Beach, FL	Sch Passenger	Delta	Boeing 727-232	Substantial	None	On ground collision with object
6/03	St. Paul, MN	Sch Passenger	Northwest	Airbus A320-211	Substantial	None	On ground collision with object
6/03	Panama City	Sch Passenger	American Int.	Boeing 747-238	Substantial	None	In flight collision with object
6/05	McGrath, AK	Nonsch Cargo	Southern Air	Lockheed 382E	Substantial	None	Dragged wing, rotor, pod, or float

Table 3 - LIST OF ACCIDENTS (Continued)  
 14 CFR 121 OPERATIONS  
 1995

Date	Location	Type of Operation	Air Carrier	Aircraft Type	Aircraft Damage	Degree of Injury	First Occurrence
6/08	Atlanta, GA	Sch Passenger	Valujet	McD-Douglas DC-9-32	Substantial	Serious	Airframe/component/system failure/malf.
6/20	Champagne, IL	Sch Passenger	United	Boeing 767-222	None	Serious	In flight encounter with weather
6/27	La Ramona, Dominican Republic	Nonsch Cargo	Salair	Convair 440	Destroyed	Fatal (2)	In flight collision with terrain
7/28	Dallas, TX	Sch Passenger	Southwest	Boeing 737-3A4	Minor	None	Collision between aircraft (other than midair)
8/03	Portland, OR	Sch Passenger	Horizon Air	Dornier 328-100	Substantial	None	Loss of control - on ground
8/04	Detroit, MI	Sch Pax/Cargo	Northwest	Boeing 757	None	Serious	In flight encounter with weather
8/05	Orlando, FL	Sch Passenger	Am. Trans Air	Boeing 727-264	Substantial	None	On ground collision with object
8/17	Philadelphia, PA	Sch Passenger	Business Exp.	Saab SF-340A	Substantial	None	Airframe/component/system failure/malf.
8/23	Pacific Ocean	Sch Passenger	Delta	Lockheed L1011-385	Substantial	None	Airframe/component/system failure/malf.
9/06	Miami, FL	Sch Passenger	Carnival	Boeing 737-4Q8	Substantial	None	On ground collision with object
10/13	Cedar Rapids, IA	Sch Cargo	Airborne Ex.	McD-Douglas DC-9-31	Substantial	None	Airframe/component/system failure/malf.
10/17	Pacific Ocean	Sch Passenger	United	Boeing 747-422	None	Serious	In flight encounter with weather
10/23	Miami, FL	Sch Cargo	Tower Air	Boeing 747-121	Substantial	None	Loss of power(total)-mechanical failure/malf.
11/01	Pacific Ocean	Sch Passenger	United	Boeing 747-122	None	Serious	Miscellaneous/other (passenger fell)
11/07	Pensacola, FL	Sch Pax/Cargo	Delta	Boeing 737-200	None	Serious	In flight encounter with weather
11/12	East Granby, CT	Sch Passenger	American	McD-Douglas MD-83	Substantial	Minor	Undershoot

Table 3 - LIST OF ACCIDENTS (Continued)  
 14 CFR 121 OPERATIONS  
 1995

Date	Location	Type of Operation	Air Carrier	Aircraft Type	Aircraft Damage	Degree of Injury	First Occurrence
11/25	Portland, OR	Sch Passenger	United	Boeing 737-522	None	Serious	In flight encounter with weather
12/20	Jamaica, NY	Sch Pax/Cargo	Tower Air	Boeing 747-136	Substantial	Serious	Loss of control - on ground
12/20	Cali, Colombia	Sch Pax/Cargo	American	Boeing 757	Destroyed	Fatal (160)	In flight collision with terrain
12/29	Atlanta, GA	Sch Passenger	Delta	Boeing 737-232	Substantial	None	Collision between aircraft (other than midair)
12/30	Honolulu, HI	Sch Passenger	Mahalo Air	Aerospatiale ATR-42	None	Serious	In flight encounter with weather

Table 4 - ACCIDENTS AND RATES BY TYPE OF OPERATION  
 14 CFR 121 OPERATIONS  
 1995

	Type of Operation				
	-----				
	Scheduled				
	Passenger/ Cargo	All Cargo	All	All Non- Scheduled	All
	-----	-----	-----	-----	-----
Accidents	31	3	34	2	36
Fatal Accidents	1	1	2	1	3
Aircraft Miles Flown (Thousands)	5,056,335	272,634	5,328,969	322,246	5,651,215
Aircraft Hours Flown	12,063,012	713,667	12,776,679	733,387	13,510,066
Departures Flown	7,638,373	467,197	8,105,570	359,633	8,465,203
-----					
Accident Rates					
-----					
Per Million Miles Flown	0.0061	0.0110	0.0064	0.0062	0.0064
Per Hundred Thousand Hours Flown	0.257	0.422	0.266	0.273	0.266
Per Hundred Thousand Departures Flown	0.406	0.647	0.419	0.556	0.425
-----					
Fatal Accident Rates					
-----					
Per Million Miles Flown	0.0002	0.0037	0.0004	0.0031	0.0005
Per Hundred Thousand Hours Flown	0.008	0.141	0.016	0.136	0.022
Per Hundred Thousand Departures Flown	0.013	0.216	0.025	0.278	0.035

Table 5 - PERSONS BY ROLE AND DEGREE OF INJURY  
 14 CFR 121 OPERATIONS  
 1995

Role of Person	Degree of Injury				Total
	Fatal	Serious	Minor	None	
-----	-----	-----	-----	-----	-----
Pilot	2	1	0	34	37
Copilot	2	0	1	35	38
Flight engineer	0	0	0	11	11
Cabin attendants	6	8	1	132	147
Other crew	0	1	0	8	9
Passenger	152	15	75	3599	3841
Total aboard	162	25	77	3819	4083
Other aircraft*	0	0	0	2	2
Other ground	6	0	0	0	6
Grand total	168	25	77	3821	4091
Percent	4.1	.6	1.9	93.4	

\* Injuries carried opposite "Other aircraft" are injuries occurring in aircraft that are not part of this tabulation, but which were involved in collisions with aircraft which are a part of this tabulation.

Table 6 - AIRCRAFT BY DAMAGE AND DEGREE OF INJURY  
14 CFR 121 OPERATIONS  
1995

Aircraft damage	Degree of injury				Aircraft	
	None	Minor	Serious	Fatal	No.	Percent
None	0	0	14	0	14	37.8
Minor	2	0	0	0	2	5.4
Substantial	15	1	2	0	18	48.6
Destroyed	0	0	0	3	3	8.1
Aircraft						
Number -	17	1	16	3	37	
Percent -	45.9	2.7	43.2	8.1		

Table 7 - AIRCRAFT BY FIRST OCCURRENCE AND DEGREE OF INJURY AND BY DAMAGE  
14 CFR 121 OPERATIONS  
1995

Type of first occurrence *	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Seri- ous	Fatal	None	Minor	Substan- tial	De- stroy	No.	Percent
Airframe/component/system failure/malfunction	3	0	1	0	0	0	4	0	4	10.8
Dragged wing, rotor, pod or float	1	0	0	0	0	0	1	0	1	2.7
Hard landing	1	0	0	0	0	0	1	0	1	2.7
In flight collision with object	1	0	0	0	0	0	1	0	1	2.7
In flight collision with terrain	0	0	0	2	0	0	0	2	2	5.4
In flight encounter with weather	0	0	10	0	10	0	0	0	10	27.0
Loss of control - on ground/water	1	0	1	0	0	0	2	0	2	5.4
Collision between aircraft (other than midair)	4	0	0	0	0	2	2	0	4	10.8
On ground collision with object	5	0	0	1	0	0	5	1	6	16.2
Loss of engine power (total) - mech. failure/malfunction	1	0	0	0	0	0	1	0	1	2.7
Undershoot	0	1	0	0	0	0	1	0	1	2.7
Miscellaneous/other	0	0	4	0	4	0	0	0	4	10.8
Aircraft										
Number -	17	1	16	3	14	2	18	3	37	
Percent -	45.9	2.7	43.2	8.1	37.8	5.4	48.6	8.1		

\* First occurrence is the first (or in some cases the only) occurrence in the accident sequence of events. "Occurrences" are relatively major events that may be further described by "findings". See Appendix B for further explanation and an example.

Table 8 - AIRCRAFT BY FIRST OCCURENCE AND BROAD PHASE OF OPERATION  
14 CFR 121 OPERATIONS  
1995

Type of first occurrence	Phase of operation									Aircraft	
	Stndg	Taxi	Tkoff	Climb	Cruis	Dscnt	Aprch	Landg	Other	No.	Percent
Airframe/component/system failure/malfunction	1	0	1	1	1	0	0	0	0	4	10.8
Dragged wing, rotor, pod, or float	0	0	0	0	0	0	0	1	0	1	2.7
Hard landing	0	0	0	0	0	0	0	1	0	1	2.7
In flight collision w/obj.	0	0	0	0	0	0	1	1	0	2	5.4
In flight collision w/ter.	0	0	0	0	0	0	1	0	1	2	5.4
In flight encounter w/wx.	0	0	0	1	6	3	0	0	0	10	27.0
Loss of control - on ground	0	0	1	0	0	0	0	1	0	2	5.4
Collision between aircraft (other than midair)	1	3	0	0	0	0	0	0	0	4	10.8
On ground collision w/obj.	0	5	0	0	0	0	0	0	0	5	13.5
Loss of power (total) - mech. failure/malfunction	0	0	1	0	0	0	0	0	0	1	2.7
Undershoot	0	0	0	0	0	0	1	0	0	1	2.7
Miscellaneous/other	1	1	0	0	1	0	0	0	1	4	10.8
Aircraft											
Number -	3	9	3	2	8	3	3	4	2	37	
Percent -	8.1	24.3	8.1	5.4	21.6	8.1	8.1	10.8	5.4		

Table 9 - AIRCRAFT BY PHASE OF OPERATION AND DEGREE OF INJURY AND BY DAMAGE  
14 CFR 121 OPERATIONS  
1995

Phase of operation *	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Ser	Fatal	None	Minor	Subs	Dest	No.	Percent
Standing	0	0	1	0	1	0	0	0	1	2.7
Standing - engines operating	2	0	0	0	0	0	2	0	2	5.4
Taxi - pushback/tow	5	0	0	0	0	1	4	0	5	13.5
Taxi - to takeoff	1	0	1	0	1	0	1	0	2	5.4
Taxi - from landing	2	0	0	0	0	1	1	0	2	5.4
Takeoff - roll/run	1	0	2	0	0	0	3	0	3	8.1
Climb	1	0	0	0	0	0	1	0	1	2.7
Climb - to cruise	0	0	1	0	1	0	0	0	1	2.7
Cruise	1	0	5	0	5	0	1	0	6	16.2
Cruise - normal	0	0	2	0	2	0	0	0	2	5.4
Descent - normal	0	0	3	0	3	0	0	0	3	8.1
Approach	0	0	0	1	0	0	0	1	1	2.7
Approach - FAF/outer marker to threshold (IFR)	1	1	0	0	0	0	2	0	2	5.4
Landing - flare/touchdown	2	0	0	0	0	0	2	0	2	5.4
Landing roll	1	0	0	1	0	0	1	1	2	5.4
Not reported	0	0	1	1	1	0	0	1	2	5.4
Aircraft										
Number -	17	1	16	3	14	2	18	3	37	
Percent -	45.9	2.7	43.2	8.1	37.8	5.4	48.6	8.1		

\* Phase of Operation is the phase of flight in which the first occurrence happened.

Table 10 - AIRCRAFT BY CONDITION OF LIGHT AND TYPE OF WEATHER  
14 CFR 121 OPERATIONS  
1995

Condition of light	Type of weather			Aircraft	
	VMC	IMC	Unknown	No.	Percent
Daylight	19	3	0	22	59.5
Night (dark)	6	2	0	8	21.6
Night (bright)	1	0	0	1	2.7
Dusk	2	0	0	2	5.4
Not reported	2	1	1	4	10.8
Aircraft					
Number -	30	6	1	37	
Percent -	81.1	16.2	2.7		

Table 11 - AIRCRAFT BY TYPE OF OPERATION AND DEGREE OF INJURY  
14 CFR 121 OPERATIONS  
1995

Type of Operation	Degree of Injury				Aircraft	
	None	Minor	Serious	Fatal	No.	Percent
Scheduled Domestic Passenger	11	1	5	0	17	45.9
Scheduled Domestic Cargo	1	0	0	0	1	2.7
Scheduled Domestic Pax/Cargo	1	0	8	0	9	24.3
Scheduled International Pax	1	0	2	0	3	8.1
Scheduled Int'l Cargo	2	0	0	1	3	8.1
Scheduled Int'l Pax/Cargo	0	0	1	1	2	5.4
Nonscheduled Domestic Cargo	1	0	0	0	1	2.7
Nonscheduled International Cargo	0	0	0	1	1	2.7
Aircraft						
Number -	17	1	16	3	37	
Percent -	45.9	2.7	43.2	8.1		

Table 12 - AIRCRAFT BY OCCURRENCE OF FIRE AND DEGREE OF INJURY AND BY DAMAGE  
14 CFR 121 OPERATIONS  
1995

Aircraft fire	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Ser	Fatal	None	Minor	Subs	Dest	No.	Percent
None	15	0	14	3	13	2	14	3	32	86.5
In-flight	0	1	0	0	0	0	1	0	1	2.7
On ground	2	0	2	0	1	0	3	0	4	10.8
Aircraft										
Number -	17	1	16	3	14	2	18	3	37	
Percent -	45.9	2.7	43.2	8.1	37.8	5.4	48.6	8.1		



Table 13 - BROAD CAUSE/FACTOR ASSIGNMENTS\*  
 14 CFR 121 OPERATIONS  
 1995

Cause/Factor	Cited as a Cause		Cited as a Factor		Cited as Either a Cause or a Factor(or Both)	
	Fatal Accidents	All Accidents	Fatal Accidents	All Accidents	Fatal Accidents	All Accidents
<b>Aircraft #</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>7</b>
Propulsion System and Controls	0	4	0	0	0	4
Airframe	0	1	0	1	0	1
Landing Gear	0	0	0	1	0	1
Systems/Equipment/Instruments	0	1	0	1	0	1
<b>Environment #</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>12</b>
Weather	0	7	0	3	0	10
Object (trees, wires, etc.)	0	1	0	0	0	1
Terrain/Runway Condition	0	0	0	1	0	1
<b>Personnel #</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>26</b>
Pilot	0	5	0	3	0	5
Others (Aboard)	0	7	0	2	0	8
Others (Not Aboard)	0	10	0	6	0	14
Number of Aircraft					3	37
NTSB Determined Probable Cause					0	33

\* Multiple causes and factors may be assigned in an accident.

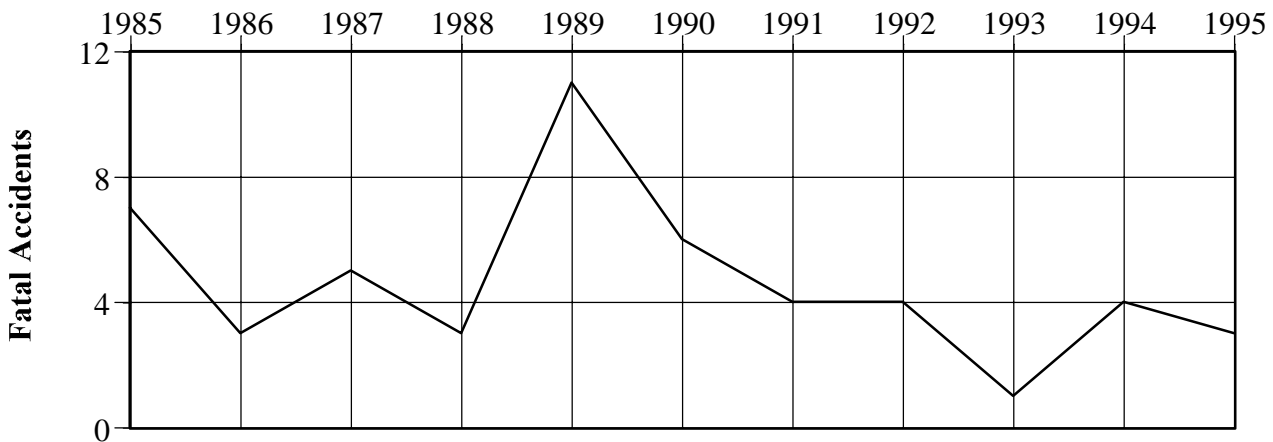
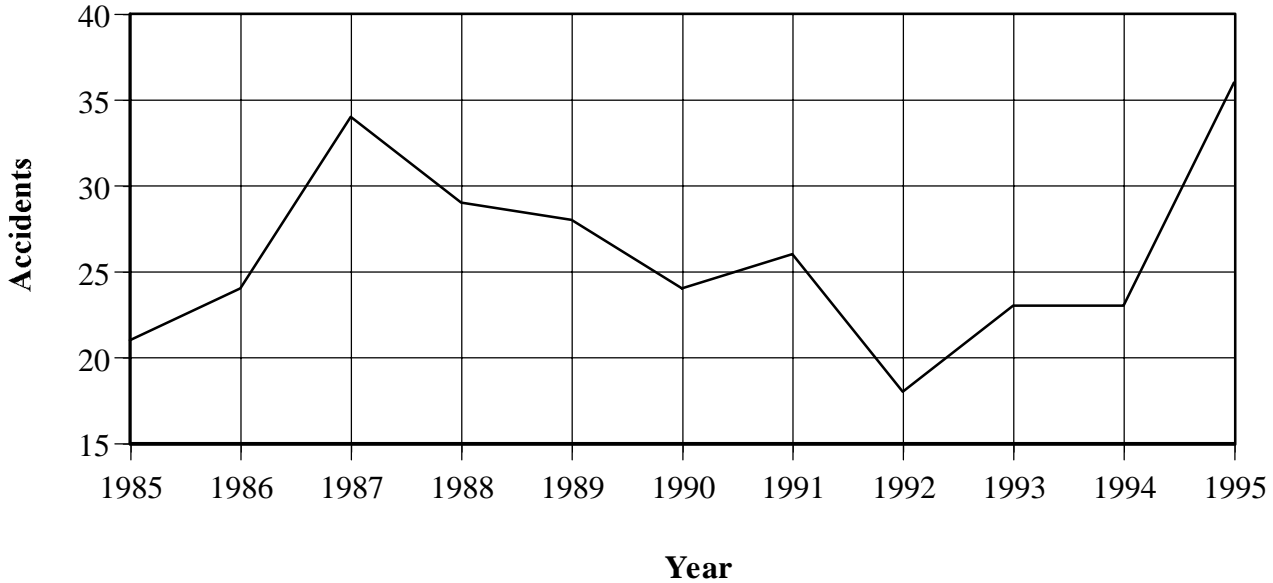
# This category is composed of the sub-categories indented below it. The number of aircraft cited in a category may be less than or equal to the sum of the sub-category citations.

Table 14 - ACCIDENTS, FATAL ACCIDENTS, FATALITIES, AND RATES  
 ALL 14 CFR 121 OPERATIONS  
 1985 - 1995

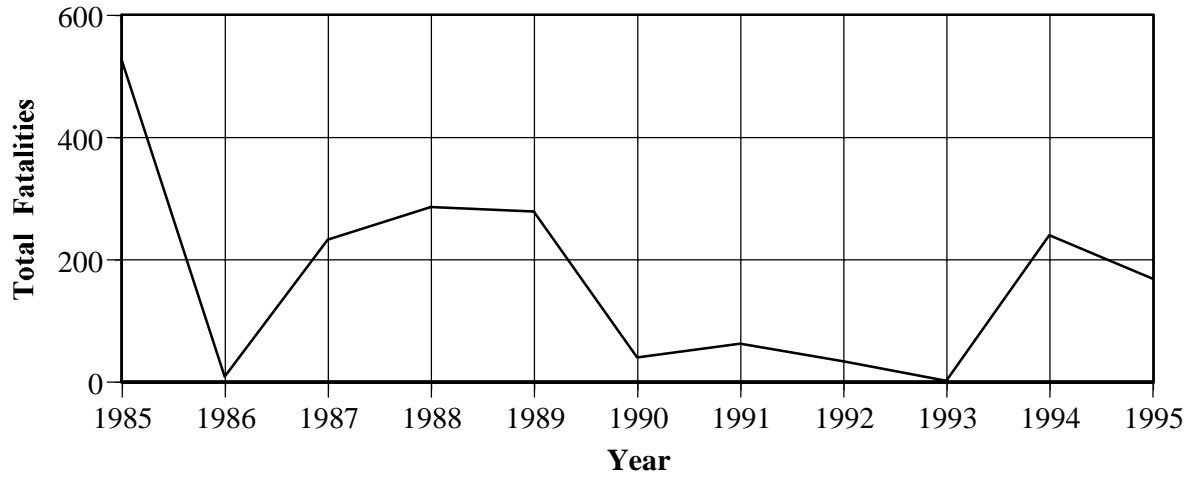
Year	Accidents	Fatal Accidents	Fatalities		Accident Rate per 100,000* Aircraft Hours Flown		
			Total	Aboard Aircraft In This Category	Hours Flown	Total	Fatal
1985	21	7	526	525	8,709,894	0.241	0.080
1986	24	3	8	7	9,976,104	0.231	0.020
1987	34	5	232	230	10,645,192	0.310	0.038
1988	29	3	285	274	11,140,548	0.251	0.018
1989	28	11	278	276	11,274,543	0.248	0.098
1990	24	6	39	12	12,150,116	0.198	0.049
1991	26	4	62	49	11,780,610	0.221	0.034
1992	18	4	33	31	12,359,715	0.146	0.032
1993	23	1	1	0	12,706,206	0.181	0.008
1994	23	4	239	237	13,124,315	0.168	0.030
1995	36	3	168	162	13,510,066	0.266	0.022

\* Suicide and sabotage accidents excluded from rates as follows:  
 Total - 1986 (1), 1987 (1), 1988 (1), 1994 (1)  
 Fatal - 1986 (1), 1987 (1), 1988 (1)

**Figure 1 - ACCIDENTS AND FATAL ACCIDENTS  
 ALL 14 CFR 121 OPERATIONS**



**Figure 2 - NUMBER OF FATALITIES  
ALL 14 CFR 121 OPERATIONS**



**Figure 3 - ACCIDENTS PER 100,000 HOURS FLOWN  
ALL 14 CFR 121 OPERATIONS**

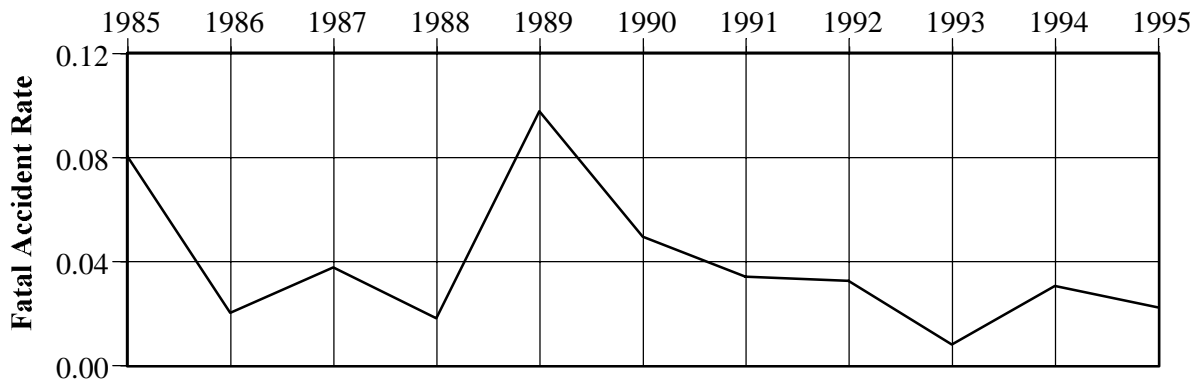
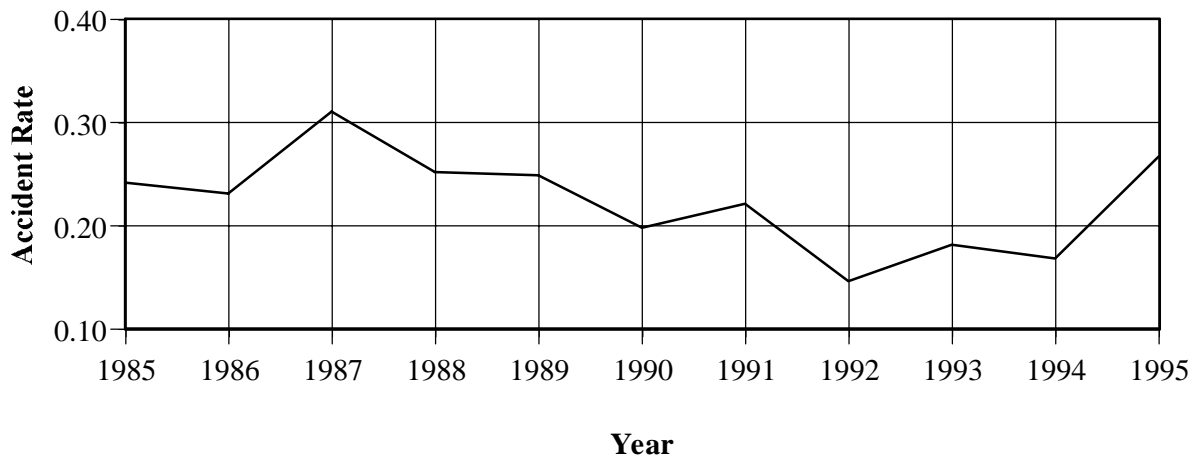


Table 15 - ACCIDENTS, FATAL ACCIDENTS, FATALITIES, AND RATES  
 SCHEDULED 14 CFR 121 OPERATIONS  
 1985 - 1995

Year	Accidents	Fatal Accidents	Fatalities		Accident Rate per 100,000* Aircraft Hours Flown		
			Total	Aboard Aircraft In This Category	Hours Flown	Total	Fatal
1985	17	4	197	196	8,265,332	0.206	0.048
1986	21	2	5	4	9,495,158	0.211	0.011
1987	32	4	231	229	10,115,407	0.306	0.030
1988	28	3	285	274	10,521,052	0.257	0.019
1989	24	8	131	130	10,597,922	0.226	0.075
1990	22	6	39	12	11,524,726	0.191	0.052
1991	25	4	62	49	11,139,166	0.224	0.036
1992	16	4	33	31	11,732,026	0.136	0.034
1993	22	1	1	0	11,981,347	0.184	0.008
1994	19	4	239	237	12,292,356	0.146	0.033
1995	34	2	166	160	12,776,679	0.266	0.016

\* Suicide and sabotage accidents excluded from rates as follows:  
 Total - 1986 (1), 1987 (1), 1988 (1), 1994 (1)  
 Fatal - 1986 (1), 1987 (1), 1988 (1)

**Figure 4 - ACCIDENTS AND FATAL ACCIDENTS  
 SCHEDULED 14 CFR 121 OPERATIONS**

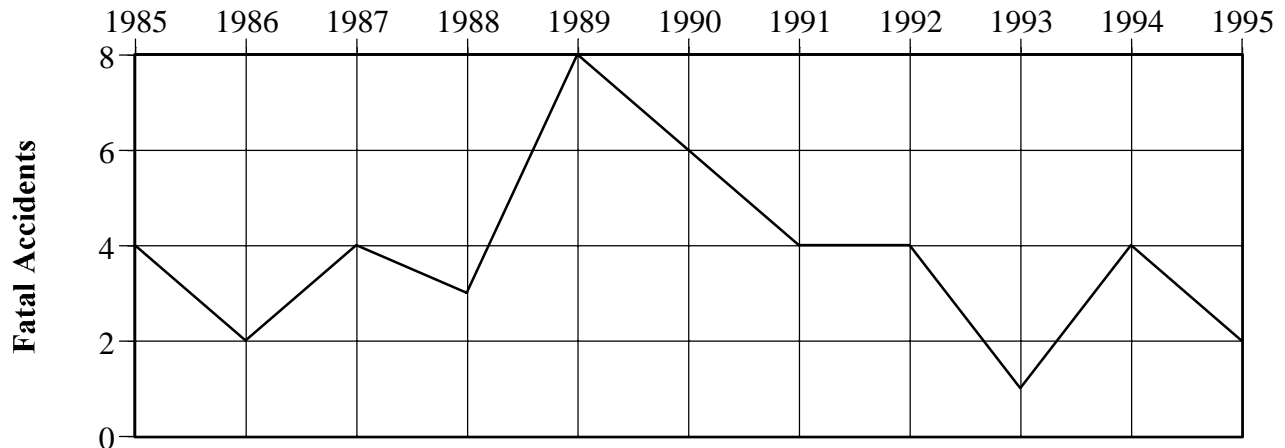
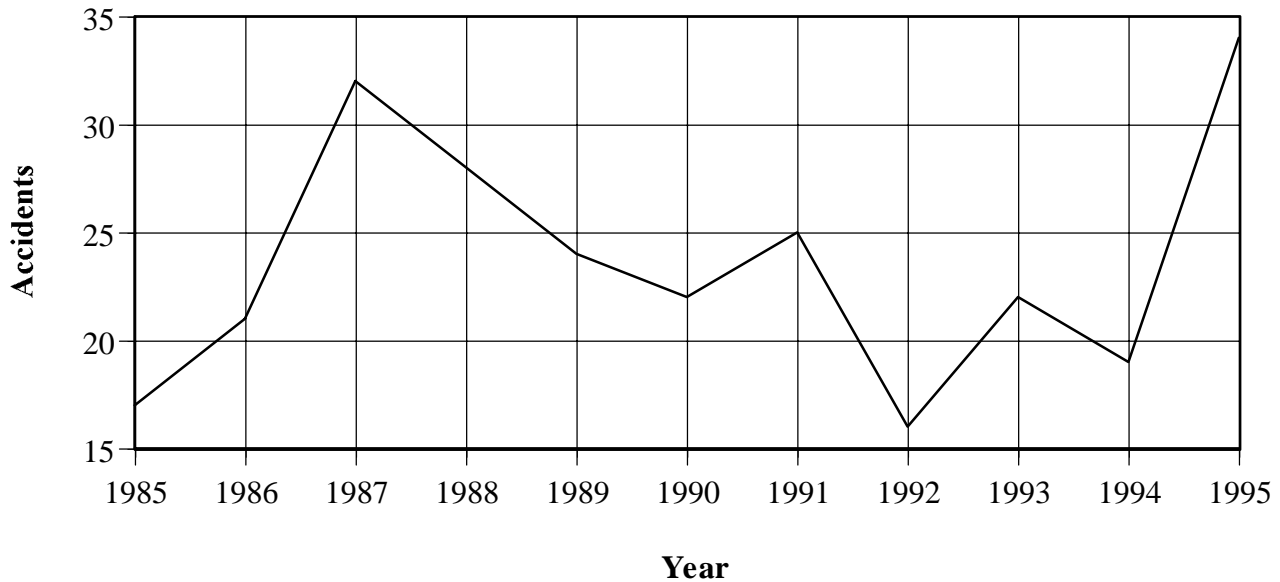


Table 15 - ACCIDENTS, FATAL ACCIDENTS, FATALITIES, AND RATES  
 SCHEDULED 14 CFR 121 OPERATIONS  
 1985 - 1995

Year	Accidents	Fatal Accidents	Fatalities		Accident Rate per 100,000* Aircraft Hours Flown		
			Total	Aboard Aircraft In This Category	Hours Flown	Total	Fatal
1985	17	4	197	196	8,265,332	0.206	0.048
1986	21	2	5	4	9,495,158	0.211	0.011
1987	32	4	231	229	10,115,407	0.306	0.030
1988	28	3	285	274	10,521,052	0.257	0.019
1989	24	8	131	130	10,597,922	0.226	0.075
1990	22	6	39	12	11,524,726	0.191	0.052
1991	25	4	62	49	11,139,166	0.224	0.036
1992	16	4	33	31	11,732,026	0.136	0.034
1993	22	1	1	0	11,981,347	0.184	0.008
1994	19	4	239	237	12,292,356	0.146	0.033
1995	34	2	166	160	12,776,679	0.266	0.016

\* Suicide and sabotage accidents excluded from rates as follows:  
 Total - 1986 (1), 1987 (1), 1988 (1), 1994 (1)  
 Fatal - 1986 (1), 1987 (1), 1988 (1)

**Figure 4 - ACCIDENTS AND FATAL ACCIDENTS  
 SCHEDULED 14 CFR 121 OPERATIONS**

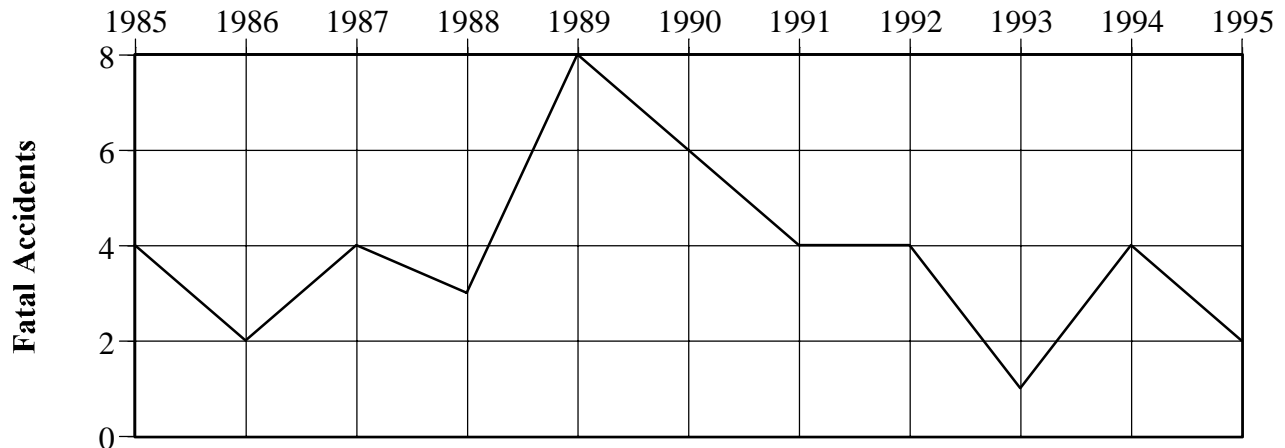
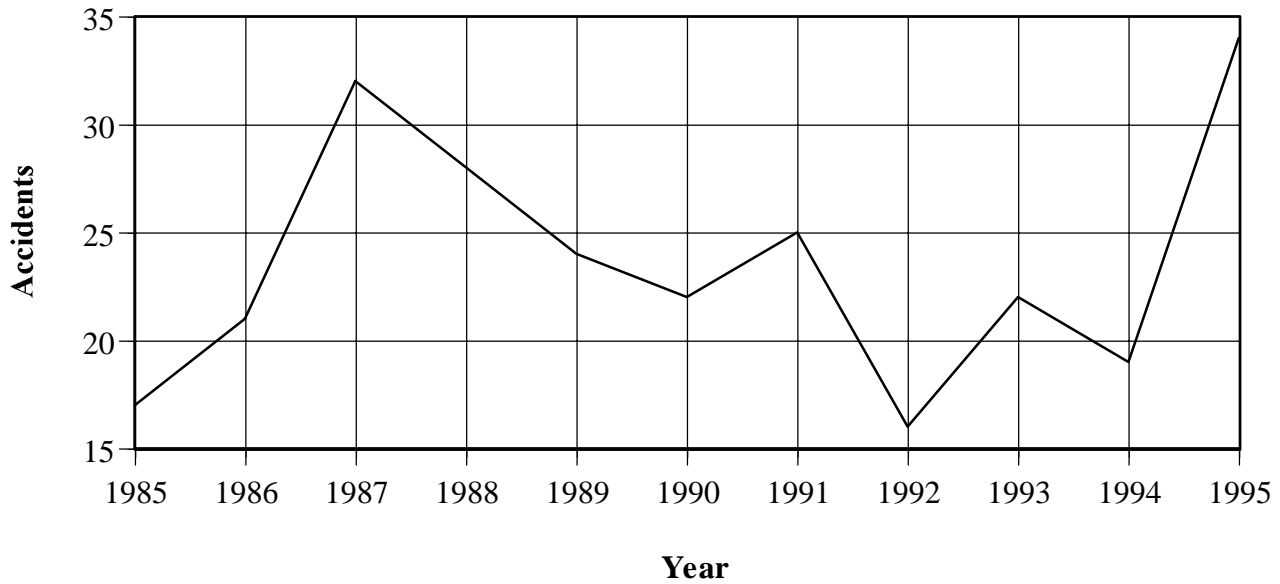
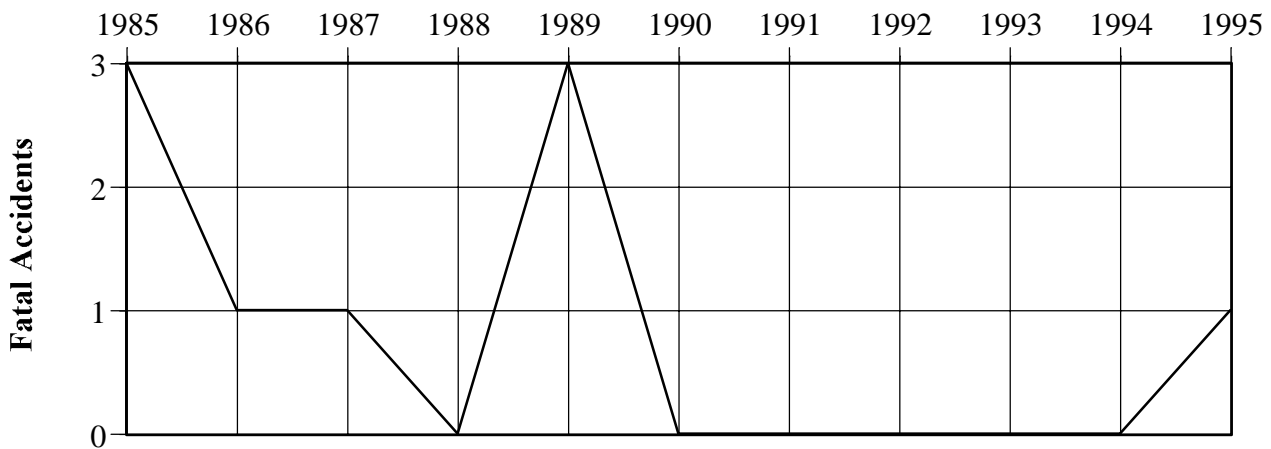
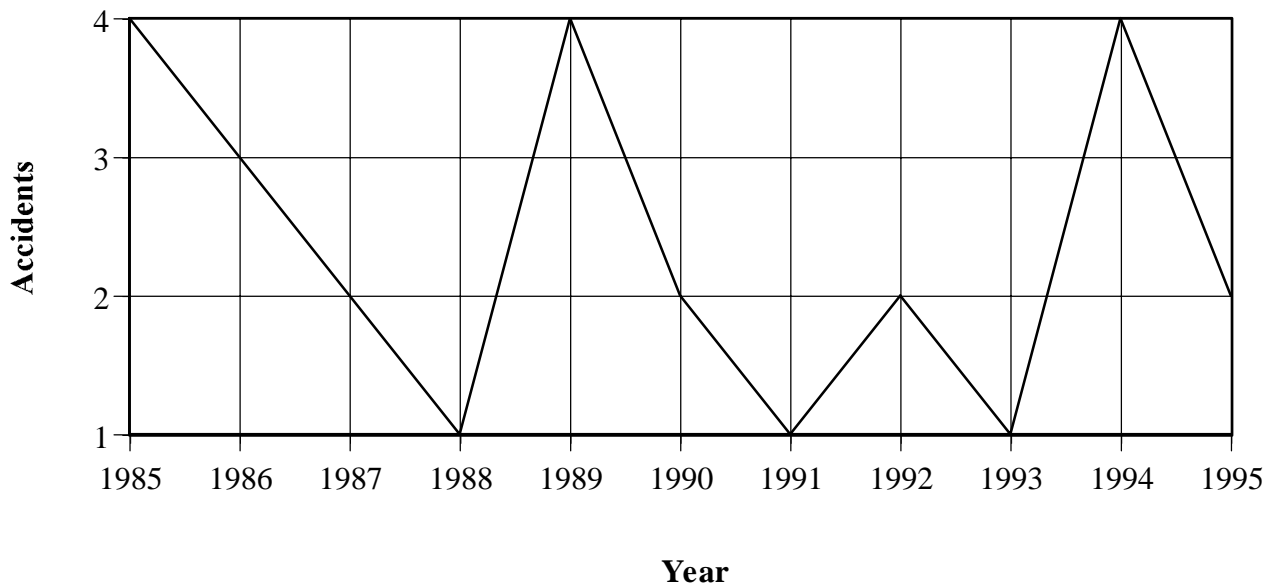


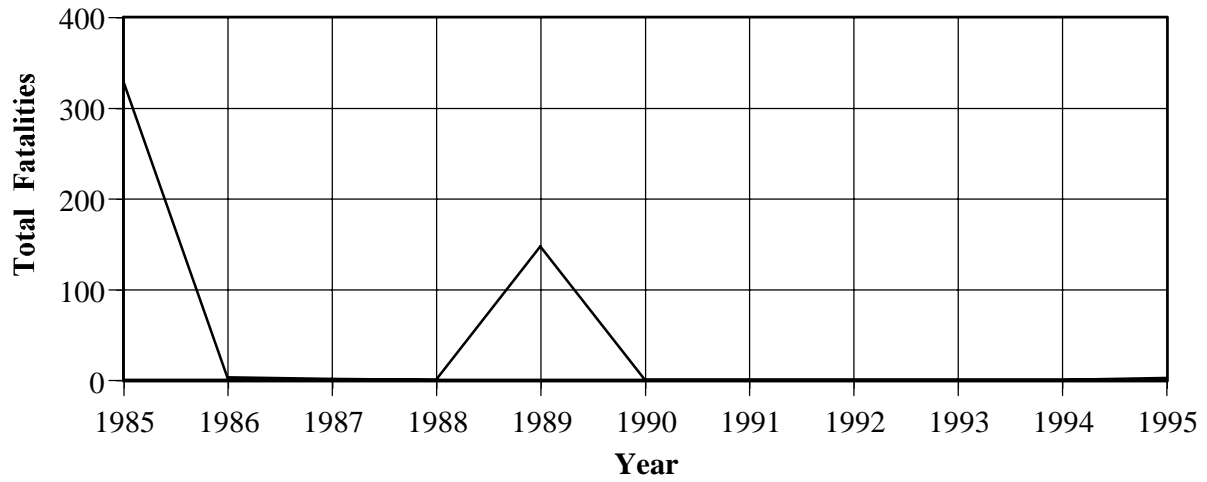
Table 16 - ACCIDENTS, FATAL ACCIDENTS, FATALITIES, AND RATES  
 NONSCHEDULED 14 CFR 121 OPERATIONS  
 1985 - 1995

Year	Accidents	Fatal Accidents	Fatalities		Accident Rate per 100,000* Aircraft Hours Flown		
			Total	Aboard Aircraft In This Category	Hours Flown	Total	Fatal
1985	4	3	329	329	444,562	0.900	0.675
1986	3	1	3	3	480,946	0.624	0.208
1987	2	1	1	1	529,785	0.378	0.189
1988	1	0	0	0	619,496	0.161	0.000
1989	4	3	147	146	676,621	0.591	0.443
1990	2	0	0	0	625,390	0.320	0.000
1991	1	0	0	0	641,444	0.156	0.000
1992	2	0	0	0	627,689	0.319	0.000
1993	1	0	0	0	724,859	0.138	0.000
1994	4	0	0	0	831,959	0.481	0.000
1995	2	1	2	2	733,387	0.273	0.136

**Figure 7 - ACCIDENTS AND FATAL ACCIDENTS  
 NONSCHEDULED 14 CFR 121 OPERATIONS**



**Figure 8 - NUMBER OF FATALITIES  
NONSCHEDULED 14 CFR 121 OPERATIONS**



**Figure 9 - ACCIDENTS PER 100,000 HOURS FLOWN  
NONSCHEDULED 14 CFR 121 OPERATIONS**

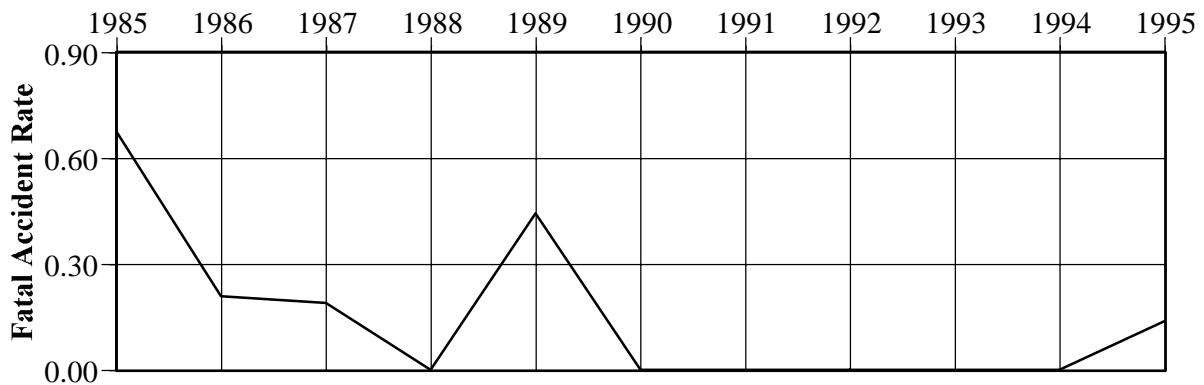
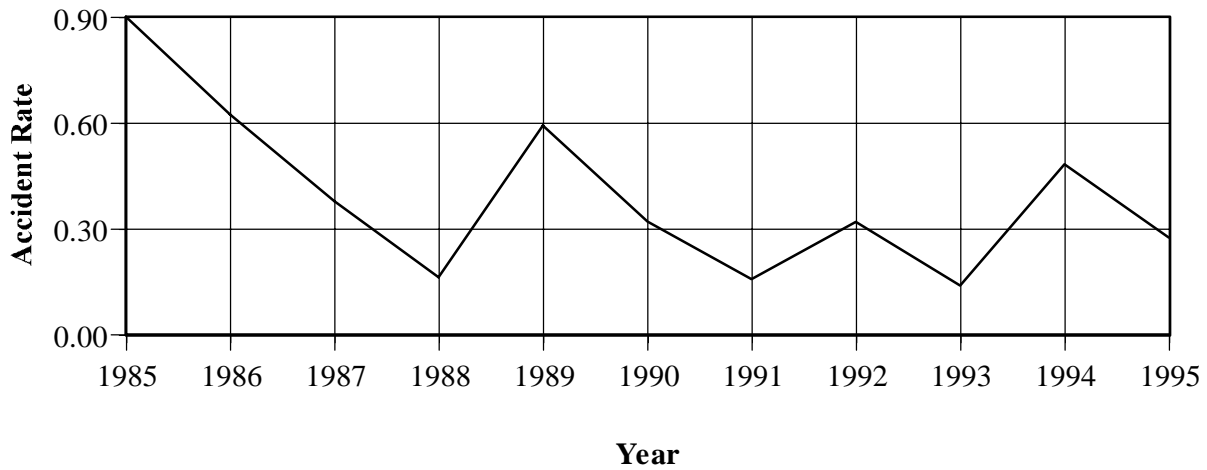


Table 17 - FIRST OCCURRENCES IN ALL ACCIDENTS AND IN FATAL ACCIDENTS  
14 CFR 121 OPERATIONS  
1995 AND 1985 - 1994

Type of Occurrence	All Accidents				Fatal Accidents			
	1995		1985 - 1994		1995		1985 - 1994	
	No.	Percent	Mean	Percent	No.	Percent	Mean	Percent
In flight encounter with weather	10	27.0	5.7	22.4	0	.0	.2	4.2
Airframe/component/system failure/ malfunction	4	10.8	3.6	14.2	0	.0	.6	12.5
On ground collision with object	6	16.2	3.5	13.8	1	.3	1.0	20.8
Miscellaneous/other	4	10.8	2.6	10.2	0	.0	.3	6.3
Loss of control - in flight	0	.0	1.4	5.5	0	.0	1.1	22.9
Not reported	0	.0	.9	3.5	3	100.0	.3	6.3
In flight collision with terrain	2	5.4	.7	2.8	2	.6	.4	8.3
Hard landing	1	2.7	.6	2.4	0	.0	.0	.0
On ground collision with terrain	0	.0	.6	2.4	0	.0	.0	.0
Altitude deviation, uncontrolled	0	.0	.5	2.0	0	.0	.0	.0
In flight collision with object	1	2.7	.5	2.0	0	.0	.1	2.1
Loss of engine power (total) - mechanical failure/malfunction	1	2.7	.5	2.0	0	.0	.0	.0
Overrun	0	.0	.4	1.6				
Loss of engine power (total) - non-mechanical	0	.0	.4	1.6	0	.0	.1	2.1
Abrupt maneuver	0	.0	.3	1.2	0	.0	.1	2.1
Fire/explosion	0	.0	.3	1.2				
Fire	0	.0	.3	1.2	0	.0	.0	.0
Main gear collapsed	0	.0	.3	1.2	0	.0	.0	.0
Loss of control - on ground	2	5.4	.3	1.2	0	.0	.1	2.1
Loss of engine power (partial) - mechanical failure/malfunction	0	.0	.3	1.2	0	.0	.1	2.1
Propeller blast or jet exhaust	0	.0	.3	1.2	0	.0	.0	.0
On ground encounter with weather	0	.0	.2	.8	0	.0	.1	2.1
Propeller/rotor contact to person	0	.0	.2	.8	0	.0	.0	.0
Dragged wing, rotor, pod, or float	1	2.7	.1	.4	0	.0	.0	.0
Explosion	0	.0	.1	.4	0	.0	.1	2.1
Nose gear collapsed	0	.0	.1	.4	0	.0	.0	.0
Tail gear collapsed	0	.0	.1	.4				
Midair collision	0	.0	.1	.4	0	.0	.0	.0
Near collision between aircraft	0	.0	.1	.4	0	.0	.0	.0
Loss of engine power	0	.0	.1	.4	0	.0	.1	2.1
Engine tearaway	0	.0	.1	.4				
Undershoot	1	2.7	.1	.4	0	.0	.0	.0
Collision between aircraft (other than midair)	4	10.8	.0	.0	0	.0	.0	.0
Total	37	100.0	25.4	100.0	3	100.0	4.8	100.0



Table 18 - FIRST PHASES OF OPERATION IN ALL ACCIDENTS AND IN FATAL ACCIDENTS  
 14 CFR 121 OPERATIONS  
 1995 AND 1985 - 1994

Phase of Operation	All Accidents				Fatal Accidents			
	1995		1985 - 1994		1995		1985 - 1994	
	No.	Percent	Mean	Percent	No.	Percent	Mean	Percent
Cruise	8	21.6	4.5	17.7	0	.0	.6	12.5
Takeoff	3	8.1	3.7	14.6	0	.0	1.4	29.2
Taxi	9	24.3	3.5	13.8	0	.0	.5	10.4
Landing	4	10.8	3.1	12.2	1	.3	.2	4.2
Descent	3	8.1	2.7	10.6	0	.0	.1	2.1
Standing	3	8.1	2.6	10.2	0	.0	.5	10.4
Approach	3	8.1	2.1	8.3	1	.3	.9	18.7
Climb	2	5.4	2.0	7.9	0	.0	.2	4.2
Not reported	2	5.4	.9	3.5	1	.3	.3	6.3
Maneuvering	0	.0	.0	.0	0	.0	.0	.0
Total Aircraft	37	100.0	25.4	100.0	3	100.0	4.8	100.0

Table 19 - BROAD CAUSE/FACTOR ASSIGNMENTS IN ALL ACCIDENTS AND IN FATAL ACCIDENTS  
 14 CFR 121 OPERATIONS  
 1995 AND 1985 - 1994

Broad Cause/Factor	All Accidents				Fatal Accidents			
	1995		1985 - 1994		1995		1985 - 1994	
	No.	Percent	Mean	Percent	No.	Percent	Mean	Percent
Other Person (Not Aboard)	14	37.8	9.9	39.0	0	.0	2.7	56.3
Pilot	5	13.5	9.5	37.4	0	.0	1.9	39.6
Weather	10	27.0	7.6	29.9	0	.0	1.0	20.8
Other Person (Aboard)	8	21.6	4.3	16.9	0	.0	.2	4.2
Systems/Equipment/ Instruments	1	2.7	3.8	15.0	0	.0	.8	16.7
Propulsion System and Controls	4	10.8	2.1	8.3	0	.0	.3	6.3
Airframe	1	2.7	1.6	6.5	0	.0	.7	14.6
Object (tree,wires,etc)	1	2.7	1.6	6.3	0	.0	.4	8.3
Light Conditions	0	.0	1.5	5.9	0	.0	.4	8.3
Landing Gear	1	2.7	1.3	5.1	0	.0	.1	2.1
Terrain/Runway Condition	1	2.7	1.0	3.9	0	.0	.1	2.1
Flight Control System	0	.0	.6	2.4	0	.0	.2	4.2
Airport/Airways Facilities, Aids	0	.0	.5	2.0	0	.0	.3	6.3
Total Aircraft	37	100.0	25.4	100.0	3	100.0	4.8	100.0
NTSB Determined Probable Cause	33		23.2		0		4.0	

### Scheduled 14 CFR 135 Operations

There were 11 accidents involving scheduled 14 CFR 135 operations (commuter air carriers) in 1995. The average number of accidents per year in this category for the years 1985 through 1994 was 19.4. The accident rate per 100,000 hours flown for 1995 was 0.444, compared with an overall rate of 0.907 for the period 1985 through 1994.

Of the 11 accidents in this category, two were fatal, which resulted in nine fatalities. During the period 1985 through 1994, there were an average of 5.2 fatal accidents and 32.8 fatalities per year in scheduled 14 CFR 135 operations. The fatal accident rate for 1995 was 0.081 per 100,000 hours flown.

Table 20 - SUMMARY OF LOSSES  
SCHEDULED 14 CFR 135 OPERATIONS  
1985 - 1995

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
<b>Accidents</b>											
Fatal	7	2	10	2	5	4	8	7	4	3	2
Serious Injury	4	2	5	2	2	2	2	1	2	1	2
Minor Injury	2	1	6	3	3	1	3	3	2	1	0
No Injury	8	10	12	12	9	9	9	12	8	5	7
<b>Total</b>	<b>21</b>	<b>15</b>	<b>33</b>	<b>19</b>	<b>19</b>	<b>16</b>	<b>22</b>	<b>23</b>	<b>16</b>	<b>10</b>	<b>11</b>
<b>Fatalities</b>											
Passenger	28	3	42	17	25	3	64	13	19	19	7
Crew	8	1	15	4	6	2	13	8	4	6	2
Other Persons	1	0	2	0	0	2	22	0	1	0	0
<b>Total</b>	<b>37</b>	<b>4</b>	<b>59</b>	<b>21</b>	<b>31</b>	<b>7</b>	<b>99</b>	<b>21</b>	<b>24</b>	<b>25</b>	<b>9</b>
<b>Aircraft Damage</b>											
Destroyed	9	1	11	3	5	3	9	7	4	3	3
Substantial	12	13	19	15	14	12	13	16	10	6	8
Minor	0	1	2	1	0	1	0	0	0	1	0
None	0	1	1	0	1	0	0	0	2	0	0
<b>Total</b>	<b>21</b>	<b>16<sup>a</sup></b>	<b>33</b>	<b>19</b>	<b>20<sup>a</sup></b>	<b>16</b>	<b>22</b>	<b>23</b>	<b>16</b>	<b>10</b>	<b>11</b>

<sup>a</sup> The number of aircraft damaged is higher than the number of accidents because these accidents involved collisions between two aircraft.

Table 21 - ACCIDENT RATES  
SCHEDULED 14 CFR 135 OPERATIONS  
1985 - 1995

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
<b>Accidents Rates <sup>d</sup></b>											
Miles Flown <sup>b</sup>	.070	.049	.094	.050	.048	.036	.051	.043	.029	.017	.020
Hours Flown <sup>c</sup>	1.209	.870	1.695	.908	.848	.683	.960	.942	.606	.359	.419
Departures Flown <sup>c</sup>	.820	.536	1.174	.653	.674	.506	.780	.706	.444	.279	.342
<b>Fatal Accident Rates <sup>d</sup></b>											
Miles Flown <sup>b</sup>	.023	.007	.028	.005	.013	.009	.018	.014	.007	.005	.004
Hours Flown <sup>c</sup>	.403	.116	.514	.096	.223	.171	.349	.300	.152	.108	.076
Departures Flown <sup>c</sup>	.273	.071	.356	.069	.177	.127	.284	.225	.111	.084	.062

<sup>b</sup> Per Million Miles Flown

<sup>c</sup> Per Hundred Thousand Hours and Departures Flown

<sup>d</sup> The 4/17/92 suicide involving a Mesaba Airline Fairchild SA-227AC is excluded from accident rate computation.

Table 22 - LIST OF ACCIDENTS  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Date ----	Location -----	Type of Operation -----	Air Carrier -----	Aircraft Type -----	Aircraft Damage -----	Degree of Injury -----	First Occurrence -----
1/02	Craig, AK	Pax/Cargo	Taquan Air Service	Cessna 208	Substantial	None	On ground collision with object
1/20	Akiak, AK	Passenger	Village Aviation	Piper PA-32-300	Substantial	None	Loss of power(partial) - mech failure/malfunction
2/25	Kotzebue, AK	Pax/Cargo	Yute Air Alaska	Cessna 207A	Destroyed	Fatal (1)	In flight collision with terrain
3/05	Minneapolis, MN	Pax/Cargo	Great Lakes Aviation	Beech 1900	Substantial	None	On ground collision with object
3/10	Ketchikan, AK	Passenger	Ketchikan Air Service	Cessna 207A	Destroyed	Serious	In flight collision with terrain
3/20	Bethel, AK	Passenger	Yute Air Alaska	Cessna 207A	Substantial	None	In flight collision with terrain
3/25	Covington, KY	Pax/Cargo	GP Express	Beech 1900C	Substantial	Serious	On ground collision with object
7/17	Los Angeles, CA	Passenger	West Air	Embraer 120RT	Substantial	None	On ground collision with object
8/21	Carrollton, GA	Passenger	Atlantic Southeast	Embraer 120RT	Destroyed	Fatal (8)	Propeller failure/malfunction
11/03	Toksook Bay, AK	Passenger	Mark Air Express	Cessna 207	Substantial	None	In flight collision with terrain
12/10	Selawik, AK	Passenger	Baker Aviation	Cessna U206G	Substantial	None	On ground encounter with terrain

Table 23 - PERSONS BY ROLE AND DEGREE OF INJURY  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Role of Person	Degree of Injury				Total
	Fatal	Serious	Minor	None	
Pilot	2	1	0	8	11
Copilot	0	1	0	3	4
Cabin attendants	0	1	0	1	2
Passenger	7	21	0	57	85
Total aboard	9	24	0	69	102
Other Ground	0	1		0	1
Grand total	9	25	0	69	103
Percent	8.7	24.3	.0	67.0	

Table 24 - AIRCRAFT BY DAMAGE AND DEGREE OF INJURY  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Aircraft damage	Degree of injury				Aircraft	
	None	Minor	Seri- ous	Fatal	No.	Percent
Substantial	7	0	1	0	8	72.7
Destroyed	0	0	1	2	3	27.3
Aircraft						
Number -	7	0	2	2	11	
Percent -	63.6	.0	18.2	18.2		

Table 25 - AIRCRAFT BY FIRST OCCURRENCE AND DEGREE OF INJURY AND BY DAMAGE  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Type of first occurrence	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Seri- ous	Fatal	None	Minor	Substan- tial	De- stroy	No.	Percent
Propeller failure/malfunction	0	0	0	1	0	0	0	1	1	9.1
In flight collision with terrain	2	0	1	1	0	0	2	2	4	36.4
On ground collision with object	3	0	1	0	0	0	4	0	4	36.4
On ground encounter with terrain	1	0	0	0	0	0	1	0	1	9.1
Loss of power (partial) - mechanical failure/malfunction	1	0	0	0	0	0	1	0	1	9.1
Aircraft										
Number -	7	0	2	2	0	0	8	3	11	
Percent -	63.6	.0	18.2	18.2	.0	.0	72.7	27.3		

Table 26 - AIRCRAFT BY FIRST OCCURRENCE AND BROAD PHASE OF OPERATION  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Type of first occurrence	Phase of operation					Aircraft	
	Stand- ing	Taxi	Take- off	Climb	Maneu- ver	No.	Percent
Propeller failure/malfunction	0	0	0	1	0	1	9.1
In flight collision with terrain	0	0	1	0	3	4	36.4
On ground collision with object	1	3	0	0	0	4	36.4
On ground collision with terrain	0	0	1	0	0	1	9.1
Loss of power (partial) - mechanical failure/malfunction	0	0	1	0	0	1	9.1
Aircraft							
Number -	1	3	3	1	3	11	
Percent -	9.1	27.3	27.3	9.1	27.3		

Table 27 - AIRCRAFT BY PHASE OF OPERATION AND DEGREE OF INJURY AND BY DAMAGE  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Phase of operation *	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Seri- ous	Fatal	None	Minor	Substan- tial	De- stroy	No.	Percent
Standing	0	0	1	0	0	0	1	0	1	9.1
Taxi - to takeoff	1	0	0	0	0	0	1	0	1	9.1
Taxi - from landing	2	0	0	0	0	0	2	0	2	18.2
Takeoff - initial climb	2	0	0	0	0	0	2	0	2	18.2
Takeoff - aborted	1	0	0	0	0	0	1	0	1	9.1
Climb	0	0	0	1	0	0	0	1	1	9.1
Maneuvering	1	0	1	0	0	0	1	1	2	18.2
Maneuvering - turn to reverse direction	0	0	0	1	0	0	0	1	1	9.1
Aircraft										
Number -	7	0	2	2	0	0	8	3	11	
Percent -	63.9	.0	18.2	18.1	.0	.0	72.7	27.3		

\* Phase of Operation is the phase of flight in which the first occurrence happened.

Table 28 - AIRCRAFT BY CONDITION OF LIGHT AND TYPE OF WEATHER  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Condition of light	Type of weather		Aircraft	
	VMC	IMC	No.	Percent
Daylight	4	2	6	54.5
Night (dark)	2	0	2	18.2
Dusk	2	0	2	18.2
Not reported	1	0	1	9.1
Aircraft				
Number -	9	2	11	
Percent -	81.8	18.2		

Table 29 - AIRCRAFT BY TYPE OF OPERATION AND DEGREE OF INJURY  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Type of Operation	Degree of Injury				Aircraft	
	None	Minor	Serious	Fatal	No.	Percent
Scheduled Domestic Passenger	5	0	1	1	7	63.6
Scheduled Domestic Pax/Cargo	2	0	1	1	4	36.4
Aircraft						
Number -	7	0	2	2	11	
Percent -	63.6	.0	18.2	18.2		

Table 30 - AIRCRAFT BY PROXIMITY TO AIRPORT AND FLIGHT PLAN  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Accident location	Flight plan				Aircraft	
	None	VFR	IFR	Company VFR	No.	Percent
Off airport/airstrip	0	3	0	2	5	45.5
On airport	1	1	2	1	5	45.5
Other	0	0	1	0	1	9.1
Aircraft						
Number -	1	4	3	3	11	
Percent -	9.1	36.4	27.3	27.3		

Table 31 - AIRCRAFT BY OCCURRENCE OF FIRE AND DEGREE OF INJURY AND BY DAMAGE  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Aircraft fire	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Seri- ous	Fatal	None	Minor	Substan- tial	Dest	No.	Percent
None	7	0	2	1	0	0	8	2	10	90.9
On ground	0	0	0	1	0	0	0	1	1	9.1
Aircraft										
Number -	7	0	2	2	0	0	8	3	11	
Percent -	63.6	.0	18.2	18.2	.0	.0	72.7	27.3		

Table 32 - AIRCRAFT BY TYPE OF AIRCRAFT AND DEGREE OF INJURY AND BY DAMAGE  
SCHEDULED 14 CFR 135 OPERATIONS  
1995

Type of aircraft	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Seri- ous	Fatal	None	Minor	Substan- tial	Dest	No.	Percent
Fixed Wing - Single Reciprocating Engine	4	0	1	1	0	0	4	2	6	54.5
Fixed Wing - Turboprop	3	0	1	1	0	0	4	1	5	45.5
Aircraft										
Number -	7	0	2	2	0	0	8	2	11	
Percent -	63.6	.0	18.2	18.2	.0	.0	72.7	27.3		



Table 33 - BROAD CAUSE/FACTOR ASSIGNMENTS\*  
 SCHEDULED 14 CFR 135 OPERATIONS  
 1995

Cause/Factor	Cited as a Cause		Cited as a Factor		Cited as Either a Cause or a Factor (or Both)	
	Fatal Accidents	All Accidents	Fatal Accidents	All Accidents	Fatal Accidents	All Accidents
<b>Aircraft #</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3</b>
Propulsion System and Controls	1	2	0	0	1	2
Airframe	0	0	0	1	0	1
<b>Environment #</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>7</b>
Weather	0	0	1	5	1	5
Light Conditions	0	0	0	3	0	3
Object (trees, wires, etc.)	0	0	0	1	0	1
Terrain/Runway Condition	0	0	0	1	0	1
<b>Personnel #</b>	<b>2</b>	<b>10</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>10</b>
Pilot	1	8	1	2	1	8
Others (Not Aboard)	1	2	0	1	1	3
Number of Aircraft					2	11
NTSB Determined Probable Cause					2	11

\* Multiple causes and factors may be assigned in an accident.

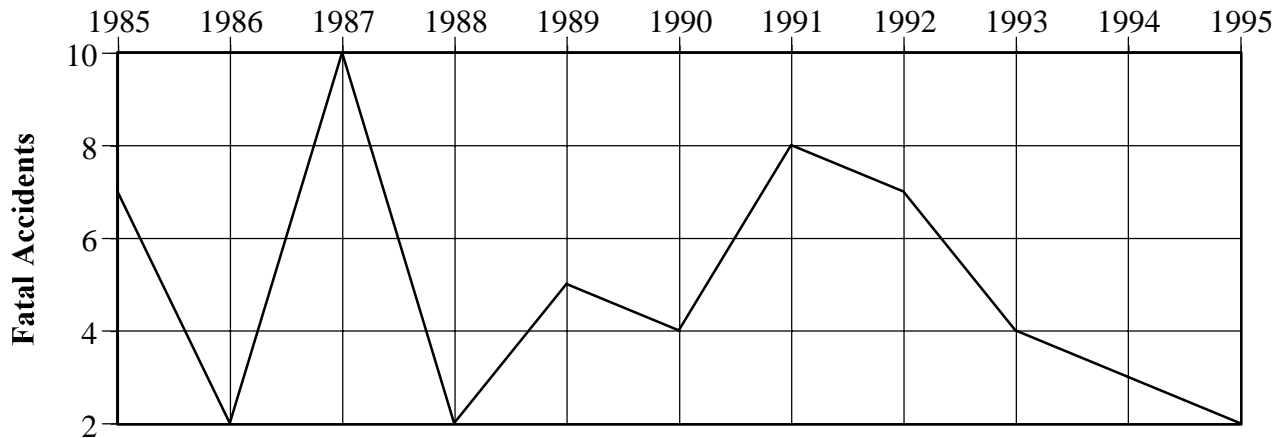
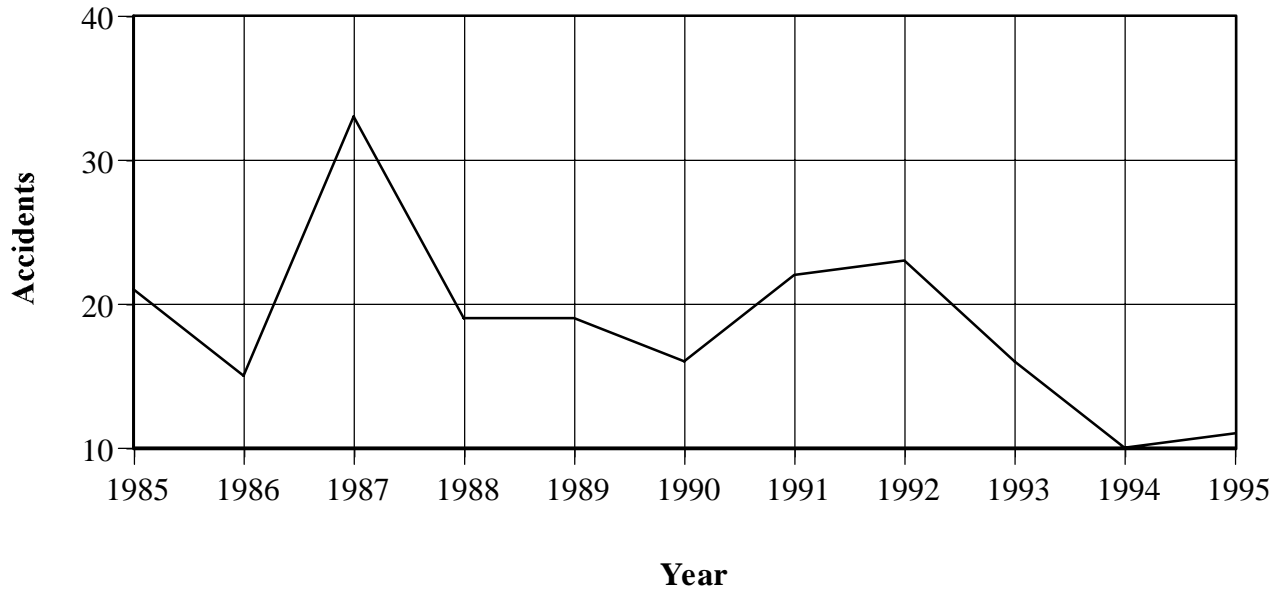
# This category is composed of the sub-categories indented below it. The number of aircraft cited in a category may be less than or equal to the sum of the sub-category citations.

Table 34 - ACCIDENTS, FATAL ACCIDENTS, FATALITIES, AND RATES  
 SCHEDULED 14 CFR 135 OPERATIONS  
 1985 - 1995

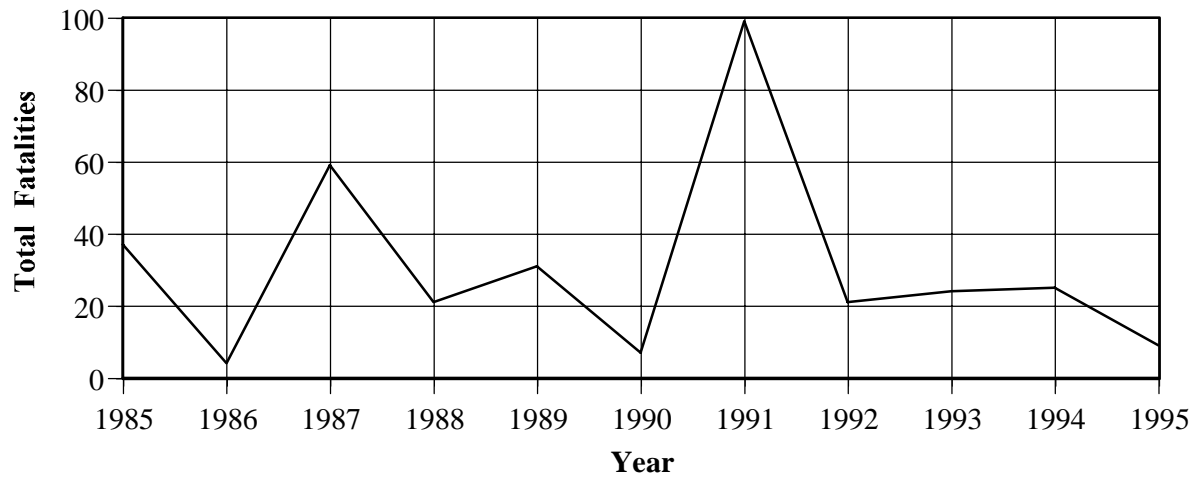
Year	Accidents	Fatal Accidents	Fatalities		Accident Rate per 100,000* Aircraft Hours Flown		
			Total	Aboard Aircraft In This Category	Hours Flown	Total	Fatal
1985	21	7	37	36	1,737,106	1.209	0.403
1986	15	2	4	4	1,724,586	0.870	0.116
1987	33	10	59	57	1,946,349	1.695	0.514
1988	19	2	21	21	2,092,689	0.908	0.096
1989	19	5	31	31	2,240,555	0.848	0.223
1990	16	4	7	5	2,341,760	0.683	0.171
1991	22	8	99	77	2,291,693	0.960	0.349
1992	23	7	21	21	2,335,349	0.942	0.300
1993	16	4	24	23	2,638,347	0.606	0.152
1994	10	3	25	25	2,784,129	0.359	0.108
1995	11	2	9	9	2,625,329	0.419	0.076

\* Suicide and sabotage accidents excluded from rates as follows :  
 Total - 1992 (1)

**Figure 10 - ACCIDENTS AND FATAL ACCIDENTS  
 SCHEDULED 14 CFR 135 OPERATIONS**



**Figure 11 - NUMBER OF FATALITIES  
SCHEDULED 14 CFR 135 OPERATIONS**



**Figure 12 - ACCIDENT RATE PER 100,000 HOURS FLOWN  
SCHEDULED 14 CFR 135 OPERATIONS**

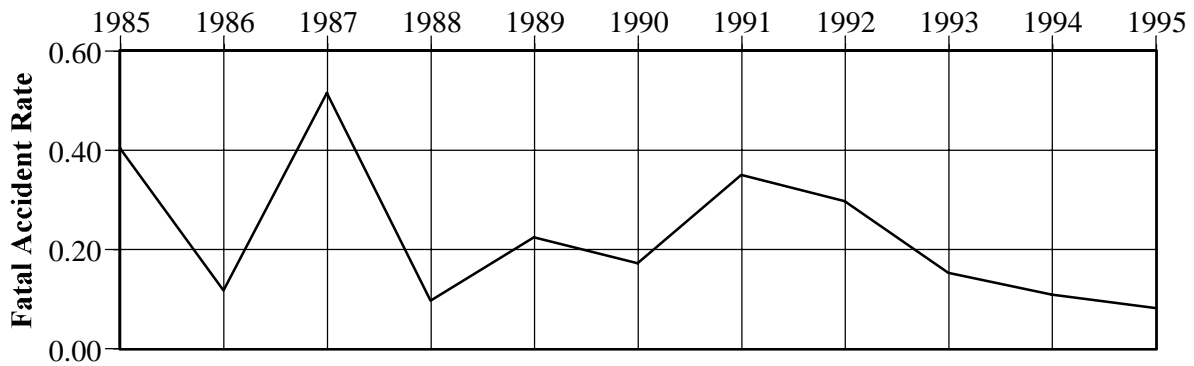
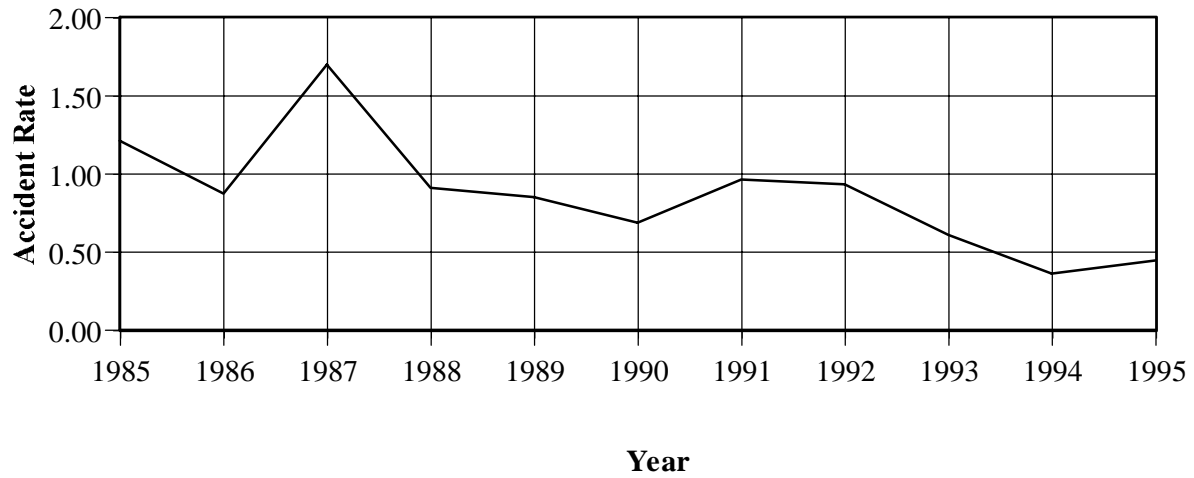


Table 35 - FIRST OCCURRENCES IN ALL ACCIDENTS AND IN FATAL ACCIDENTS  
SCHEDULED 14 CFR 135 OPERATIONS  
1995 AND 1985 - 1994

Type of Occurrence	All Accidents				Fatal Accidents			
	1995		1985 - 1994		1995		1985 - 1994	
	No.	Percent	Mean	Percent	No.	Percent	Mean	Percent
On ground collision with object	4	36.4	2.4	12.2	0	.0	.2	3.8
Loss of control - in flight	0	.0	2.3	11.7	0	.0	1.1	21.2
In flight encounter with weather	0	.0	2.2	11.2	0	.0	1.0	19.2
In flight collision with terrain	4	36.4	2.0	10.2	1	50.0	1.1	21.2
Airframe/component/system failure/ malfunction	0	.0	1.9	9.6	0	.0	.4	7.7
Loss of control - on ground	0	.0	.0	.0	0	.0	.0	.0
Loss of engine power(total) - non-mechanical	0	.0	.8	4.1	0	.0	.2	3.8
In flight collision with object	0	.0	.7	3.6	0	.0	.2	3.8
Hard landing	0	.0	.5	2.5	0	.0	.0	.0
Overrun	0	.0	.5	2.5	0	.0	.0	.0
Undershoot	0	.0	.5	2.5	0	.0	.0	.0
Gear not extended	0	.0	.4	2.0	0	.0	.0	.0
Midair collision	0	.0	.4	2.0	0	.0	.2	3.8
Loss of engine power(total) - mechanical failure/malfunction	0	.0	.4	2.0	0	.0	.0	.0
Loss of engine power(partial) - non-mechanical	0	.0	.4	2.0	0	.0	.0	.0
Propeller/rotor contact to person	0	.0	.4	2.0	0	.0	.1	1.9
Miscellaneous/other	0	.0	.4	2.0	0	.0	.0	.0
Not reported	0	.0	.3	1.5	0	.0	.2	3.8
Nose gear collapsed	0	.0	.3	1.5	0	.0	.0	.0
Complete gear collapsed	0	.0	.3	1.5	0	.0	.0	.0
Loss of engine power	0	.0	.3	1.5	0	.0	.3	5.8
Vortex turbulence encountered	0	.0	.3	1.5	0	.0	.1	1.9
Main gear collapsed	0	.0	.2	1.0	0	.0	.0	.0
On ground encounter with terrain	1	9.1	.2	1.0	0	.0	.0	.0
Loss of engine power(partial)- mechanical failure/malfunction	1	9.1	.2	1.0	0	.0	.1	1.9
Dragged wing, rotor, pod, or float	0	.0	.1	.5	0	.0	.0	.0
Fire	0	.0	.1	.5	0	.0	.0	.0
Explosion	0	.0	.1	.5	0	.0	.0	.0
Undetermined	0	.0	.1	.5	0	.0	.0	.0
Propeller failure/malfunction	1	9.1	.0	.0	1	50.0	.0	.0
<b>Total</b>	<b>11</b>	<b>100.0</b>	<b>19.7</b>	<b>100.0</b>	<b>2</b>	<b>100.0</b>	<b>5.2</b>	<b>100.0</b>

Table 36 - FIRST PHASES OF OPERATION IN ALL ACCIDENTS AND IN FATAL ACCIDENTS  
SCHEDULED 14 CFR 135 OPERATIONS  
1995 AND 1985 - 1994

Phase of operation	All Accidents				Fatal Accidents			
	1995		1985 - 1994		1995		1985 - 1994	
	No.	Percent	Mean	Percent	No.	Percent	Mean	Percent
Approach	0	.0	4.1	20.8	0	.0	2.0	38.5
Landing	0	.0	3.7	18.8	0	.0	.0	.0
Takeoff	3	27.3	2.7	13.7	0	.0	.6	11.5
Taxi	3	27.3	2.5	12.7	0	.0	.1	1.9
Cruise	0	.0	2.0	10.2	0	.0	1.1	21.2
Descent	0	.0	1.3	6.6	0	.0	.2	3.8
Standing	1	9.1	1.2	6.1	0	.0	.2	3.8
Maneuvering	3	27.3	.8	4.1	1	50.0	.5	9.6
Climb	1	9.1	.6	3.0	1	50.0	.1	1.9
Other	0	.0	.4	2.0	0	.0	.1	1.9
Not reported	0	.0	.3	1.5	0	.0	.2	3.8
Total Aircraft	11	100.0	19.7	100.0	2	100.0	5.2	100.0

Table 37 - BROAD CAUSE/FACTOR ASSIGNMENTS IN ALL ACCIDENTS AND IN FATAL ACCIDENTS  
SCHEDULED 14 CFR 135 OPERATIONS  
1995 AND 1985 - 1994

Broad Cause/Factor	All Accidents				Fatal Accidents			
	1995		1985 - 1994		1995		1985 - 1994	
	No.	Percent	Mean	Percent	No.	Percent	Mean	Percent
Pilot	8	72.7	14.7	74.6	1	50.0	4.3	82.7
Other Person (Not Aboard)	3	27.3	7.6	38.6	1	50.0	2.3	44.2
Weather	5	45.5	6.2	31.5	1	50.0	2.3	44.2
Terrain/Runway Condition	1	9.1	4.9	24.9	0	.0	1.5	28.8
Light Conditions	3	27.3	2.6	13.2	0	.0	.8	15.4
Propulsion System and Controls	2	18.2	2.4	12.2	1	50.0	.7	13.5
Systems/Equipment/ Instruments	0	.0	2.0	10.2	0	.0	.7	13.5
Landing Gear	0	.0	1.7	8.6	0	.0	.0	.0
Object (tree,wires,etc)	1	9.1	1.7	8.6	0	.0	.0	.0
Airframe	1	9.1	1.3	6.6	0	.0	.4	7.7
Airport/Airways Facilities, Aids	0	.0	.9	4.6	0	.0	.2	3.8
Flight Control System	0	.0	.5	2.5	0	.0	.3	5.8
Other Person (Aboard)	0	.0	.3	1.5	0	.0	.1	1.9
Total Aircraft	11	100.0	19.7	100.0	2	100.0	5.2	100.0
NTSB Determined Probable Cause	11		20.4		2		5.4	

### Nonscheduled 14 CFR 135 Operations

There were 75 accidents involving nonscheduled 14 CFR 135 aircraft (air taxis) in 1995. For the period 1985 through 1994, the average number of accidents per year in this category is 100.1 with an overall accident rate of 4.19 per 100,000 hours flown. The accident rate in 1995 was 3.93 accidents per 100,000 hours flown, a seven percent decrease from the 1994 rate of 4.26.

There were 24 fatal accidents that were responsible for 52 fatalities in 1995. During the period 1985 through 1994, the yearly average was 27.3 fatal accidents and 64.1 fatalities. The fatal accident rate for 1995 was 1.26 per 100,000 hours flown.

One of the accidents reported in this section involved a collision between two nonscheduled 14 CFR 135 aircraft. Therefore, this section lists 75 accidents involving 76 aircraft.

Table 38 - SUMMARY OF LOSSES  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1985 - 1995

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
<b>Accidents</b>											
Fatal	35	31	30	28	25	28	27	24	19	26	24
Serious Injury	13	13	9	15	12	14	10	5	8	9	5
Minor Injury	22	19	7	10	14	12	8	9	13	13	7
No Injury	84	54	50	48	59	52	42	38	29	37	39
<b>Total</b>	<b>154</b>	<b>117</b>	<b>96</b>	<b>101</b>	<b>110</b>	<b>106</b>	<b>87</b>	<b>76</b>	<b>69</b>	<b>85</b>	<b>75</b>
<b>Fatalities</b>											
Passenger	39	26	31	22	46	20	35	43	20	40	29
Crew	36	35	32	33	35	28	31	22	22	22	23
Other Persons	1	4	2	4	2	2	4	3	0	1	0
<b>Total</b>	<b>76</b>	<b>65</b>	<b>65</b>	<b>59</b>	<b>83</b>	<b>50</b>	<b>70</b>	<b>68</b>	<b>42</b>	<b>63</b>	<b>52</b>
<b>Aircraft Damage</b>											
Destroyed	50	38	34	37	32	38	31	26	26	24	21
Substantial	104	77	61	62	79	68	53	49	44	60	54
Minor	2	1	4	1	0	1	2	1	0	0	1
None	1	2	0	1	0	1	2	0	0	2	0
<b>Total</b>	<b>157<sup>a</sup></b>	<b>118<sup>a</sup></b>	<b>99<sup>a</sup></b>	<b>101</b>	<b>111<sup>a</sup></b>	<b>108<sup>a</sup></b>	<b>88<sup>a</sup></b>	<b>76</b>	<b>70<sup>a</sup></b>	<b>86<sup>a</sup></b>	<b>76<sup>a</sup></b>

<sup>a</sup> The number of aircraft damaged is higher than the number of accidents because these accidents involved collisions between two aircraft.

Table 39 - ACCIDENT RATES  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1985 - 1995

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
<b>Accident Rates</b>											
Hours Flown <sup>b</sup>	5.99	4.35	3.61	3.84	3.64	4.71	3.88	3.62	3.59	4.11	3.75
<b>Fatal Accident Rates</b>											
Hours Flown <sup>b</sup>	1.36	1.15	1.13	1.06	0.83	1.24	1.20	1.14	0.99	1.26	1.20

<sup>b</sup> Per Hundred Thousand Hours Flown

Table 40 - LIST OF ACCIDENTS  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Date	Location	Type of Operation	Aircraft Type	Aircraft Damage	Degree of Injury	First Occurrence
01/11	Flagstaff, AZ	Cargo	Cessna 208B	Destroyed	Fatal (1)	Miscellaneous/other
01/12	Pleasanton, CA	Cargo	Cessna 208B	Destroyed	Fatal (1)	In flight collision with object
01/14	Los Angeles, CA	Passenger	Bell 206B	Destroyed	Fatal (2)	In flight encounter with weather
01/14	Blyn, WA	Passenger	Cessna 172N	Destroyed	Fatal (3)	In flight collision with object
01/18	Lubbock, TX	Cargo	Cessna 208B	Destroyed	Minor	Loss of control - in flight
01/26	Butte, MT	Cargo	Beech E18S	Substantial	Fatal (1)	In flight collision with object
01/28	Miami, FL	Passenger	Bell 206-B3	Substantial	None	Loss of power(total) - mechanical failure/malfunction
02/01	W.Pt. Village, AK	Cargo	Cessna 185F	Substantial	None	Loss of control - on ground
02/08	Howard, CO	Pax and Cargo	Piper PA-32-300	Destroyed	Fatal (1)	In flight encounter with weather
02/10	Wolf Point, MT	Cargo	Beech S-35	Substantial	None	Loss of power(total) - mechanical failure/malfunction
02/13	Tusayan, AZ	Passenger	Piper PA-31-350	Destroyed	Fatal (8)	Loss of power
02/14	East Cameron, Gulf of Mexico	Pax and Cargo	Bell 206L-4	Destroyed	Fatal (5)	In flight encounter with weather
02/14	Grand Island, NE	Passenger	Cessna T310R	Substantial	None	Hard landing
02/15	Minneapolis, MN	Passenger	Piper PA-23-250	Substantial	None	In flight encounter with weather
03/02	Ardmore, OK	Cargo	Cessna 208B	Substantial	Minor	In flight encounter with weather
03/06	Rockford, IL	Cargo	Cessna T210N	Substantial	None	Airframe/component/system failure/malfunction
03/14	Grand Rapids, MI	Cargo	Beech 58	Substantial	None	Wheels up landing
03/17	Baudette, MN	Passenger	Cessna 185	Substantial	None	On ground encounter with terrain
03/20	Linden, TN	Cargo	Piper PA-60	Substantial	Minor	Overrun
03/22	Reno, NV	Cargo	Cessna 208B	Destroyed	Fatal (1)	In flight collision with terrain



Table 40 - LIST OF ACCIDENTS (Continued)  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Date	Location	Type of Operation	Aircraft Type	Aircraft Damage	Degree of Injury	First Occurrence
----	-----	-----	-----	-----	-----	-----
03/23	Walkers Cay, Bahamas	Cargo	Beech E18S	Substantial	Serious	Not reported
03/26	Deadhorse, AK	Passenger	Helio H700	Substantial	None	On ground collision with terrain
03/29	Chevak, AK	Cargo	Cessna 206G	Substantial	None	Hard landing
04/02	Springdale, AR	Cargo	Beech G18S	Substantial	None	Fire
04/07	Boise, ID Boise, ID	Cargo Cargo	Cessna 402B Piper PA-34-200T	Substantial Minor	None None	Collision between aircraft (other than midair)
04/12	Great Bend, ND	Cargo	Beech 65-B80	Destroyed	Fatal (1)	Loss of power
04/18	Estancia, NM	Cargo	Cessna T210L	Substantial	Minor	Loss of power(total) - mech failure/malfunction
05/02	Venice, LA	Passenger	Bell 206L-3	Destroyed	Fatal (1)	Loss of power(partial) - non-mechanical
05/02	Columbus, OH	Cargo	Beech 58	Substantial	Serious	Loss of power(total) - non-mechanical
05/03	Sea Bright, NJ	Passenger	Eurocopter AS350D	Substantial	None	Loss of power(total) - mechanical failure/malfunction
05/08	Dillingham, AK	Passenger	Piper PA-31-350	Substantial	None	In flight collision with terrain
05/25	Talkeetna, AK	Passenger	Cessna 185	Substantial	Minor	On ground encounter with terrain
05/25	Bethel, AK	Cargo	Cessna 206	Substantial	None	Loss of power(total) - mechanical failure/malfunction
05/31	Skagway, AK	Passenger	Aerospatiale AS-350B2	Substantial	None	On ground encounter with terrain
06/02	Vieques, PR	Cargo	Piper PA-32-260	Substantial	Fatal (1)	Undetermined
06/22	Opa-Locka, FL	Passenger	Piper PA-31-350	Substantial	None	Wheels up landing
06/23	Orlando, FL	Passenger	Beech 58	Destroyed	Fatal (2)	Loss of power(total) - mechanical failure/malfunction
06/24	Gustavus, AK	Passenger	Cessna 172	Substantial	None	Loss of control - on ground
06/26	Highland, CA	Passenger	Hughes 369D	Substantial	Serious	Rotor failure/malfunction

Table 40 - LIST OF ACCIDENTS (Continued)  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Date	Location	Type of Operation	Aircraft Type	Aircraft Damage	Degree of Injury	First Occurrence
06/26	Alamosa, CO	Cargo	Cessna 404	Substantial	None	Loss of power (partial) - non-mechanical
06/30	Kodiak, AK	Pax and Cargo	Piper PA-32-301	Destroyed	Fatal (4)	In flight encounter with weather
06/30	Talkeetna, AK	Passenger	Cessna 185	Substantial	None	In flight collision with terrain
07/07	Haines, AK	Passenger	Piper PA-32R-300	Destroyed	Fatal (6)	In flight collision with terrain
07/10	Treasure Cay, Bahamas	Passenger	Aero Commander 500	Substantial	Fatal (1)	Not reported
07/11	Freeport, IL	Passenger	Beech C24R	Substantial	None	On ground collision with object
07/11	Columbus, OH	Cargo	Cessna 310R	Destroyed	None	Loss of control - on ground
07/13	Ketchikan, AK	Passenger	DeHavilland DHC-3	Substantial	None	Airframe/component/system failure/malfunction
07/18	Paxson, AK	Passenger	Hughes 500D	Substantial	None	Loss of power (partial) - mechanical failure/malfunction
07/28	Dallas, TX	Cargo	Cessna 401	Substantial	None	Collision between aircraft (other than midair)
07/28	Wenatchee, WA	Cargo	Cessna 402B	Substantial	None	Airframe/component/system failure/malfunction
07/31	Kodiak, AK	Passenger	Grumman G-44	Substantial	None	Airframe/component/system failure/malfunction
08/02	Skwentna, AK	Passenger	Cessna 206G	Substantial	None	Loss of power (total) - non-mechanical
08/11	Nikolai, AK	Cargo	Short SC.7	Substantial	None	Hazardous materials leak/spill
08/11	Ocracoke, NC	Passenger	Aero Commander 100	Substantial	Serious	Airframe/component/system failure/malfunction
08/16	Altoona, PA	Cargo	Cessna 310R	Destroyed	Fatal (2)	Airframe/component/system failure/malfunction
08/26	Deadhorse, AK	Pax and Cargo	Piper PA-18-150	Substantial	Fatal (2)	In flight collision with terrain
08/27	Oklahoma City, OK	Passenger	Bell 206L-1	Substantial	None	Loss of power

Table 40 - LIST OF ACCIDENTS (Continued)  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Date	Location	Type of Operation	Aircraft Type	Aircraft Damage	Degree of Injury	First Occurrence
08/28	Atlantic Ocean	Cargo	Beech E-18S	Destroyed	Fatal (1)	Fire
09/08	Aniak, AK	Passenger	Maule M-7	Substantial	None	In flight collision with object
09/20	Aniak, AK	Passenger	Maule M-7-235	Substantial	None	In flight encounter with weather
09/25	Riverton, WY	Cargo	Cessna 340	Substantial	None	Airframe/component/system failure/malfunction
09/27	Greer, SC	Cargo	Beech 58	Destroyed	Fatal (1)	Loss of power(partial) - non-mechanical
10/10	Bayfield, CO	Passenger	Cessna 172RG	Destroyed	Fatal (3)	In flight collision with object
10/11	Hana, HI	Passenger	Hughes 369HS	Substantial	Minor	Loss of power(total) - mechanical failure/malfunction
10/18	Atlantic Ocean	Passenger	Piper PA-31-350	Substantial	Fatal (1)	Loss of power(total) - mechanical failure/malfunction
10/26	Paint Rock, TX	Cargo	Beech 65-B80	Destroyed	Fatal (1)	In flight collision with terrain
11/05	Kodiak, AK	Passenger	Cessna 206	Substantial	None	On ground encounter with object
11/06	Stanley, ID	Passenger	Cessna 180J	Substantial	None	In flight collision with object
12/10	Nanwalek, AK	Passenger	Piper PA-32-300	Substantial	Serious	Undershoot
12/12	Sacramento, CA	Cargo	Cessna 208B	Substantial	None	Nose over
12/14	Guatemala City	Cargo	Aero Commander 1121	Destroyed	Fatal (2)	Loss of power(total) - non-mechanical
12/18	Nome, AK	Cargo	Beech G18S	Substantial	Minor	Loss of control - in flight
12/19	Monroe, NC	Cargo	Piper PA-32-300	Substantial	None	In flight collision with object
12/20	Indianapolis, IN	Cargo	Cessna T210N	Substantial	None	Loss of power(total) - mechanical failure/malfunction
12/22	Nassau, Bahamas	Cargo	Douglas DC-3	Substantial	None	Not reported

Table 41 - PERSONS BY ROLE AND DEGREE OF INJURY  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Role of Person	Degree of Injury				Total
	Fatal	Serious	Minor	None	
Pilot	21	3	9	43	76
Copilot	2	1	1	2	6
Other crew	0	0	0	2	2
Passenger	29	10	13	71	123
Total aboard	52	14	23	118	207
Other aircraft*	0	0	0	97	97
Grand total	52	14	23	215	304
Percent	17.1	4.6	7.6	70.7	

\* Injuries carried opposite "Other" aircraft are injuries occurring in aircraft that are not part of this tabulation, but which were involved in collisions with aircraft which are a part of this tabulation.

Table 42 - AIRCRAFT BY DAMAGE AND DEGREE OF INJURY  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Aircraft damage	Degree of injury				Aircraft	
	None	Minor	Seri-ous	Fatal	No.	Percent
Minor	1	0	0	0	1	1.3
Substantial	38	6	5	5	54	71.1
Destroyed	1	1	0	19	21	27.6
Aircraft						
Number -	40	7	5	24	76	
Percent -	52.6	9.2	6.6	31.6		

Table 43 - AIRCRAFT BY FIRST OCCURRENCE AND DEGREE OF INJURY AND BY DAMAGE  
 NONSCHEDULED14 CFR 135 OPERATIONS  
 1995

Type of first occurrence	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Seri- ous	Fatal	None	Minor	Substan- tial	De- stroy	No.	Percent
Airframe/component/system failure/malfunction	5	0	1	1	0	0	6	1	7	9.2
Rotor/failure malfunction	0	0	1	0	0	0	1	0	1	1.3
Fire	1	0	0	1	0	0	1	1	2	2.6
Hard landing	2	0	0	0	0	0	2	0	2	2.6
Hazardous material leak/spill	1	0	0	0	0	0	1	0	1	1.3
In flight collision with object	3	0	0	4	0	0	4	3	7	9.2
In flight collision with terrain	2	0	0	4	0	0	3	3	6	7.9
Wheels up landing	2	0	0	0	0	0	2	0	2	2.6
In flight encounter with weather	2	1	0	4	0	0	3	4	7	9.2
Loss of control - in flight	0	2	0	0	0	0	1	1	2	2.6
Loss of control - on ground	3	0	0	0	0	0	2	1	3	3.9
Collision between aircraft (other than midair)	3	0	0	0	0	1	2	0	3	3.9
Nose over	1	0	0	0	0	0	1	0	1	1.3
On ground collision with object	2	0	0	0	0	0	2	0	2	2.6
On ground encounter with terrain	3	1	0	0	0	0	4	0	4	5.3
Overrun	0	1	0	0	0	0	1	0	1	1.3
Loss of engine power	1	0	0	2	0	0	1	2	3	3.9
Loss of engine power(total) - mechanical failure/malfunction	5	2	0	2	0	0	8	1	9	11.8
Loss of engine power(partial) - mechanical failure/malfunction	1	0	0	0	0	0	1	0	1	1.3
Loss of engine power(total) - non-mechanical	1	0	1	1	0	0	2	1	3	3.9
Loss of engine power(partial) - non-mechanical	1	0	0	2	0	0	1	2	3	3.9
Undershoot	0	0	1	0	0	0	1	0	1	1.3
Miscellaneous/other	0	0	0	1	0	0	0	1	1	1.3
Undetermined	0	0	0	1	0	0	1	0	1	1.3
Not reported	1	0	1	1	0	0	3	0	3	3.9
Aircraft										
Number -	40	7	5	24	0	1	54	21	76	
Percent -	52.6	9.2	6.6	31.6	.0	1.3	71.1	27.6		

Table 44 - AIRCRAFT BY FIRST OCCURRENCE AND BROAD PHASE OF OPERATION  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Type of first occurrence	Phase of operation										Aircraft	
	Stndg	Taxi	Tkoff	Climb	Cruis	Dscnt	Aprch	Landg	Manvr	Nrept	No.	Percent
Airframe/component/system failure/malfunction	0	1	2	1	3	0	0	0	0	0	7	9.2
Rotor failure/malfunction	0	0	0	0	1	0	0	0	0	0	1	1.3
Fire	0	0	0	0	1	0	0	1	0	0	2	2.6
Hard landing	0	0	0	0	0	0	0	2	0	0	2	2.6
Hazardous materials (leak/spill)	0	0	0	0	1	0	0	0	0	0	1	1.3
In flight collision with object	0	0	2	0	1	1	2	0	1	0	7	9.2
In flight collision with terrain	0	0	1	0	0	0	1	0	4	0	6	7.9
Wheels up landing	0	0	0	0	0	0	0	2	0	0	2	2.6
In flight encounter with weather	0	0	1	1	4	0	1	0	0	0	6	7.9
Loss of control - in flight	0	0	2	0	0	0	0	0	0	0	2	2.6
Loss of control - on ground	0	0	1	0	0	0	0	2	0	0	3	3.9
Collision between aircraft (other than midair)	0	3	0	0	0	0	0	0	0	0	3	3.9
Nose over	0	1	0	0	0	0	0	0	0	0	1	1.3
On ground collision with object	0	0	2	0	0	0	0	0	0	0	2	2.6
On ground collision with terrain	1	1	2	0	0	0	0	0	0	0	4	5.3
Overrun	0	0	0	0	0	0	0	1	0	0	1	2.6
Loss of power	0	0	2	0	1	0	0	0	0	0	3	3.9
Loss of power(total) - mechanical failure/malfunction	0	0	2	1	5	1	0	0	0	0	9	11.8
Loss of power(partial) - mechanical failure/malfunction	0	0	1	0	0	0	0	0	0	0	1	1.3
Loss of power(total) - non-mechanical	0	0	1	0	1	1	0	0	0	0	3	3.9
Loss of power(partial) - non-mechanical	0	0	2	0	0	0	1	0	0	0	3	3.9
Undershoot	0	0	0	0	0	0	1	0	0	0	1	1.3
Miscellaneous/other	0	0	1	0	0	0	0	0	0	0	1	1.3
Undetermined	0	0	0	0	0	0	0	0	0	1	1	1.3
Not reported	0	0	0	0	0	0	0	0	0	3	3	3.9
Aircraft												
Number -	1	6	22	3	18	3	6	8	5	4	76	
Percent -	1.3	7.9	28.9	3.9	23.7	3.9	7.9	10.5	6.6	5.3		

Table 45 - AIRCRAFT BY PHASE OF OPERATION AND DEGREE OF INJURY AND BY DAMAGE  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Phase of operation	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Seri- ous	Fatal	None	Minor	Substan- tial	De- stroy	No.	Percent
Standing - engines not operating	1	0	0	0	0	0	1	0	1	1.3
Taxi	1	0	0	0	0	0	1	0	1	1.3
Taxi - to takeoff	5	0	0	0	0	1	4	0	5	6.6
Takeoff	3	0	0	0	0	0	3	0	3	3.9
Takeoff - roll/run	3	1	0	0	0	0	3	1	4	5.3
Takeoff - initial climb	7	3	0	4	0	0	9	5	14	18.4
Takeoff - aborted	1	0	0	0	0	0	1	0	1	1.3
Climb	1	0	0	1	0	0	1	1	2	2.6
Climb - to cruise	1	0	0	0	0	0	1	0	1	1.3
Cruise	4	0	2	5	0	0	6	5	11	14.5
Cruise - normal	3	1	1	2	0	0	5	2	7	9.2
Descent	0	0	0	2	0	0	1	1	2	2.6
Descent - normal	0	0	0	1	0	0	0	1	1	1.3
Approach	0	0	0	1	0	0	1	0	1	1.3
Approach - VFR pattern final approach	0	0	1	1	0	0	1	1	2	2.6
Approach - IAF to FAF/outer marker (IFR)	0	1	0	1	0	0	1	1	2	2.6
Approach - FAF/outer marker to threshold (IFR)	1	0	0	0	0	0	1	0	1	1.3
Landing - flare/touchdown	4	0	0	0	0	0	4	0	4	5.3
Landing - roll	3	1	0	0	0	0	4	0	4	5.3
Maneuvering	0	0	0	4	0	0	1	3	4	5.3
Maneuvering - turn to reverse direction	1	0	0	0	0	0	1	0	1	1.3
Unknown	0	0	0	1	0	0	1	0	1	1.3
Not reported	1	0	1	1	0	0	3	0	3	3.9
Aircraft										
Number -	40	7	5	24	0	1	54	21	76	
Percent -	52.6	9.2	6.6	31.6	.0	1.3	71.1	27.6		

Table 46 - AIRCRAFT BY CONDITION OF LIGHT AND TYPE OF WEATHER  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Condition of light	Type of weather			Aircraft	
	VMC	IMC	Not reported	No.	Percent
Dawn	1	0	0	1	1.3
Daylight	38	9	0	47	61.8
Night (dark)	9	6	2	17	22.4
Night (bright)	3	0	0	3	3.9
Dusk	3	0	0	3	3.9
Not reported	4	1	0	5	6.6
Aircraft					
Number -	58	16	2	76	
Percent -	76.3	21.1	2.6		

Table 47 - AIRCRAFT BY TYPE OF OPERATION AND DEGREE OF INJURY  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Type of Operation	Degree of Injury				Aircraft	
	None	Minor	Serious	Fatal	No.	Percent
Domestic Passenger	20	2	3	8	33	43.4
Domestic Cargo	18	5	1	9	33	43.4
Domestic Pax/Cargo	0	0	0	4	4	5.3
International Passenger	1	0	0	1	2	2.6
International Cargo	1	0	1	2	4	5.3
Aircraft						
Number -	40	7	5	24	76	
Percent -	52.6	9.2	6.6	31.6		

Table 48 - AIRCRAFT BY PROXIMITY TO AIRPORT AND FLIGHT PLAN  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Accident location	Flight plan				Aircraft	
	None	VFR	IFR	Company VFR	No.	Percent
Off airport/airstrip	8	5	15	16	44	57.9
On airport	0	5	12	8	25	32.9
On airstrip	0	0	0	2	2	2.6
Other	1	3	1	0	5	6.6
Aircraft						
Number -	9	13	28	26	76	
Percent -	11.8	17.1	36.8	34.2		



Table 49 - AIRCRAFT BY OCCURRENCE OF FIRE AND DEGREE OF INJURY AND BY DAMAGE  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Aircraft fire -----	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Seri- ous	Fatal	None	Minor	Sub- stantial	De- stroy	No.	Percent
None	38	6	5	17	0	1	51	14	66	86.8
Inflight	1	0	0	2	0	0	1	2	3	3.9
On ground	1	1	0	5	0	0	2	5	7	9.2
Aircraft Number -	40	7	5	24	0	1	54	21	76	
Percent -	52.6	9.2	6.6	31.6	.0	1.3	71.1	27.6		

Table 50 - AIRCRAFT BY TYPE OF AIRCRAFT AND DEGREE OF INJURY AND BY DAMAGE  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Type of aircraft -----	Degree of injury				Aircraft damage				Aircraft	
	None	Minor	Seri- ous	Fatal	None	Minor	Sub- stantial	De- stroy	No.	Percent
All Fixed Wing *	35	6	4	21	0	1	47	18	66	86.8
Single reciprocating engine	19	2	2	7	0	0	25	5	30	39.5
Mutiple reciprocating engine	14	2	2	10	0	1	19	8	28	36.8
Turboprop	2	2	0	3	0	0	3	4	7	9.2
Turbojet	0	0	0	1	0	0	0	1	1	1.3
All Rotorcraft *	5	1	1	3	0	0	7	3	10	13.2
Reciprocating Engine	5	1	1	3	0	0	7	3	10	13.2
Aircraft Number -	40	7	5	24	0	1	54	21	76	
Percent -	52.6	9.2	6.6	31.6	.0	1.3	71.1	27.6		

\* Not included in column totals

Table 51 - BROAD CAUSE/FACTOR ASSIGNMENTS\*  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995

Cause/Factor -----	Cited as a Cause		Cited as a Factor		Cited as Either a Cause or a Factor (or Both)	
	Fatal Accidents	All Accidents	Fatal Accidents	All Accidents	Fatal Accidents	All Accidents
<b>Aircraft #</b>	<b>3</b>	<b>26</b>	<b>3</b>	<b>8</b>	<b>5</b>	<b>31</b>
Propulsion System and Controls	2	13	2	3	3	15
Flight Control System	0	2	0	0	0	2
Airframe	0	2	0	0	0	2
Landing Gear	0	4	0	2	0	6
Systems/Equipment/ Instruments	2	8	0	1	2	8
<b>Environment #</b>	<b>0</b>	<b>4</b>	<b>12</b>	<b>35</b>	<b>12</b>	<b>38</b>
Weather	0	0	10	21	10	21
Light Conditions	0	0	5	10	5	10
Object(trees,wires,etc.)	0	1	0	2	0	3
Airport/Airways Facilities, Aids	0	1	0	2	0	3
Terrain/Runway Condition	0	2	4	16	4	18
<b>Personnel #</b>	<b>17</b>	<b>52</b>	<b>8</b>	<b>22</b>	<b>18</b>	<b>55</b>
Pilot	17	45	7	16	17	49
Others (Not Aboard)	0	10	2	7	2	14
Number of Aircraft					24	76
NTSB Determined Probable Cause					22	72

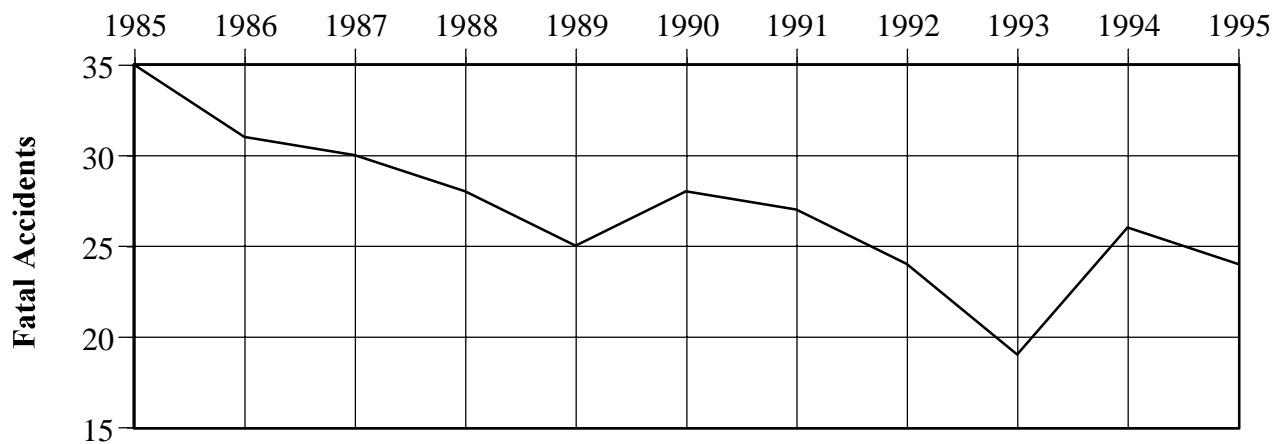
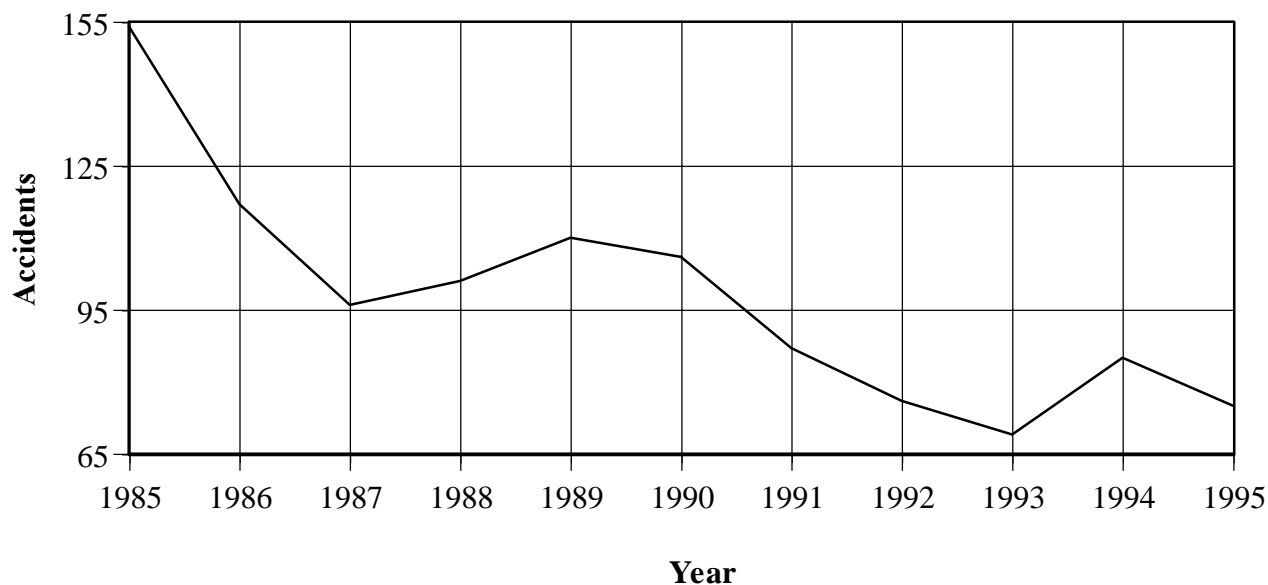
\* Multiple causes and factors may be assigned in an accident

# This category is composed of sub-categories indented below it. The number of aircraft cited in a category may be less than or equal to the sum of the sub-category citations.

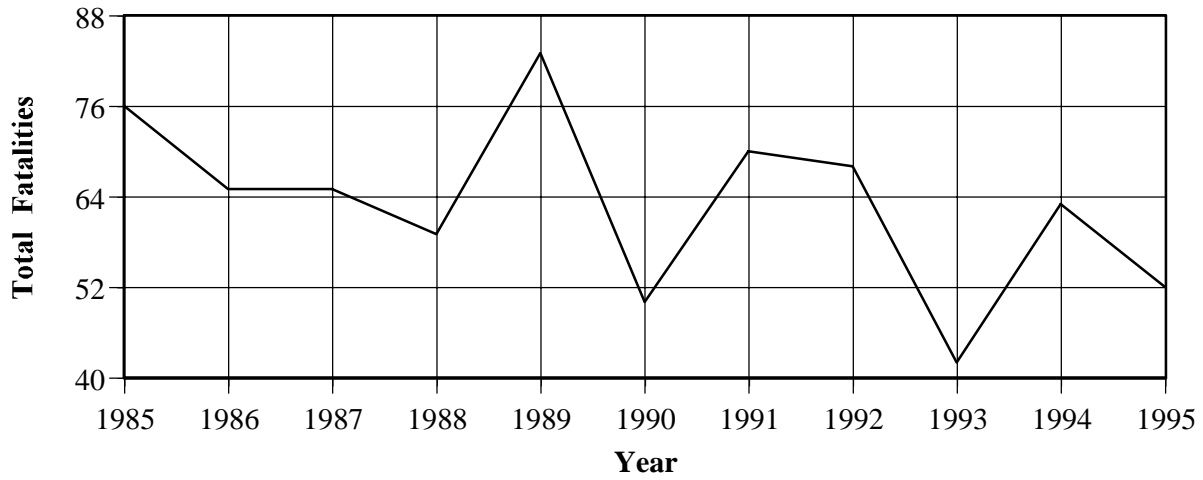
Table 52 - ACCIDENTS, FATAL ACCIDENTS, FATALITIES, AND RATES  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1985 - 1995

Year	Accidents	Fatal Accidents	Fatalities		Accident Rate per 100,000* Aircraft Hours Flown		
			Total	Aboard Aircraft In This Category	Hours Flown	Total	Fatal
1985	154	35	76	75	2,570,000	5.992	1.362
1986	117	31	65	61	2,690,000	4.349	1.152
1987	96	30	65	63	2,657,000	3.613	1.129
1988	101	28	59	55	2,632,000	3.837	1.064
1989	110	25	83	81	3,020,000	3.642	0.828
1990	106	28	50	48	2,249,000	4.713	1.245
1991	87	27	70	66	2,241,000	3.882	1.205
1992	76	24	68	65	2,100,000	3.619	1.143
1993	69	19	42	42	1,920,000	3.594	0.989
1994	85	26	63	62	2,070,000	4.106	1.256
1995	75	24	52	52	2,000,000	3.750	1.200

**Figure 13 - ACCIDENTS AND FATAL ACCIDENTS  
 NONSCHEDULED 14 CFR 135 OPERATIONS**



**Figure 14 - NUMBER OF FATALITIES  
NONSCHEDULED 14 CFR 135 OPERATIONS**



**Figure 15 - ACCIDENT RATE PER 100,000 HOURS FLOWN  
NONSCHEDULED 14 CFR 135 OPERATIONS**

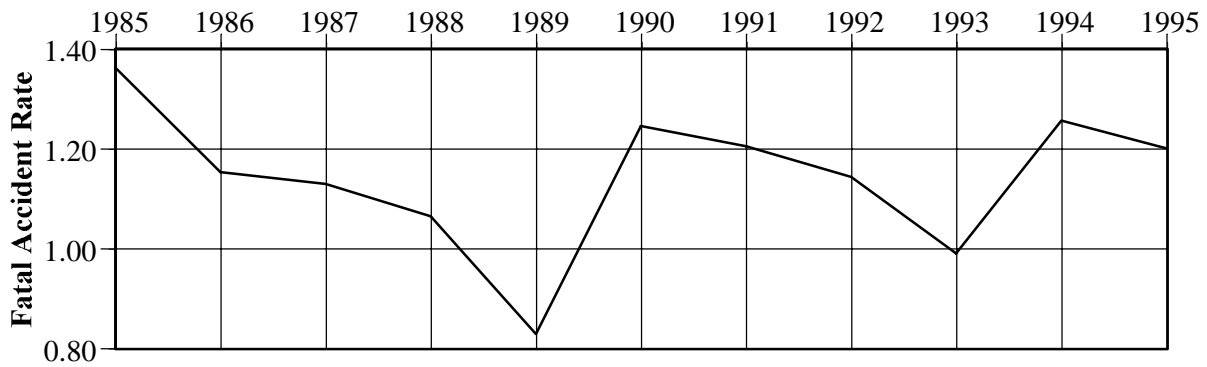
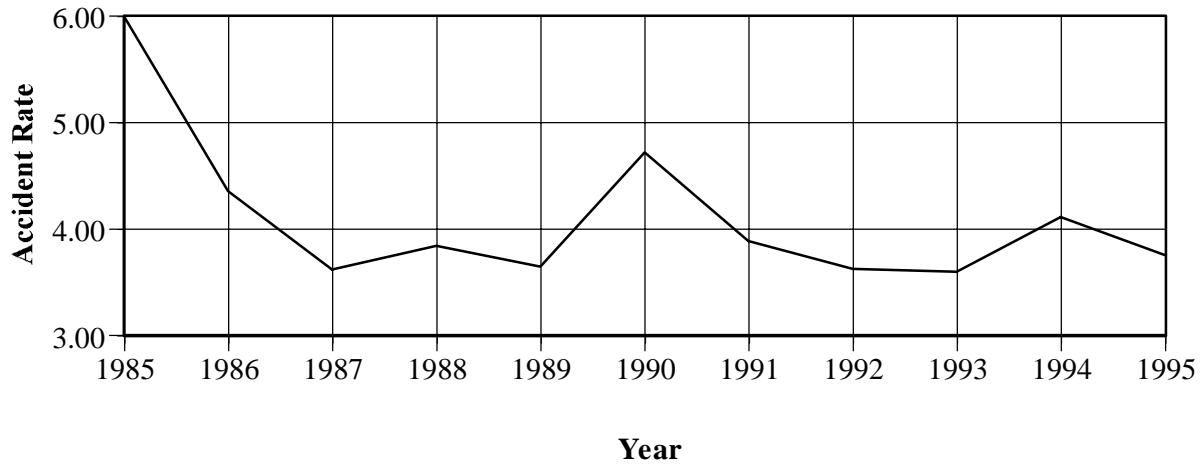


Table 53 - FIRST OCCURRENCES IN ALL ACCIDENTS AND IN FATAL ACCIDENTS  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995 AND 1985 - 1994

Type of Occurrence	All Accidents				Fatal Accidents			
	1995		1985 - 1994		1995		1985 - 1994	
	No.	Percent	Mean	Percent	No.	Percent	Mean	Percent
In flight collision with terrain	6	7.9	10.3	10.2	4	16.7	5.9	21.5
Loss of control - in flight	2	2.6	10.3	10.2	0	.0	5.4	19.6
Loss of control - on ground	3	3.9	8.8	8.7	0	.0	.1	.4
In flight encounter with weather	7	9.2	8.1	8.0	4	16.7	4.1	14.9
Loss of engine power(total) - mechanical failure/malfunction	9	11.8	7.9	7.8	2	8.3	1.6	5.8
Airframe/component/system failure/ malfunction	7	9.2	7.2	7.1	1	4.2	2.2	8.0
In flight collision with object	7	9.2	6.2	6.1	4	16.7	2.0	7.3
Loss of engine power(total) - non-mechanical	3	3.9	6.0	5.9	1	4.2	.7	2.5
On ground collision with object	2	2.6	4.7	4.6	0	.0	.3	1.1
Loss of engine power	3	3.9	4.1	4.0	2	8.3	.9	3.3
Overrun	1	1.3	3.0	3.0	0	.0	.1	.4
Loss of engine power(partial) - mechanical failure/malfunction	1	1.3	2.8	2.8	0	.0	.6	2.2
On ground collision with terrain	4	5.3	2.5	2.5	0	.0	.0	.0
Main gear collapsed	0	.0	1.8	1.8	0	.0	.0	.0
Hard landing	2	2.6	1.8	1.8	0	.0	.0	.0
Midair collision	0	.0	1.7	1.7	0	.0	1.0	3.6
Loss of engine power(partial) - non-mechanical	3	3.9	1.3	1.3	2	8.3	.2	.7
Undershoot	1	1.3	1.3	1.3	0	.0	.1	.4
Fire	2	2.6	1.2	1.2	1	4.2	.5	1.8
Miscellaneous/other	1	1.3	1.1	1.1	1	4.2	.4	1.5
Not reported	3	3.9	1.0	1.0	1	4.2	.0	.0
Dragged wing, rotor, pod, or float	0	.0	.8	.8	0	.0	.1	.4
Gear not extended	0	.0	.8	.8	0	.0	.0	.0
Roll over	0	.0	.8	.8	0	.0	.0	.0
Nose over	1	1.3	.7	.7	0	.0	.0	.0
Altitude deviation, uncontrolled	0	.0	.6	.6	0	.0	.1	.4
Nose gear collapsed	0	.0	.6	.6	0	.0	.0	.0
Propeller/rotor contact to person	0	.0	.6	.6	0	.0	.2	.7
Abrupt maneuver	0	.0	.4	.6	0	.0	.3	1.1
Explosion	0	.0	.4	.6	0	.0	.1	.4
Gear collapsed	0	.0	.4	.6	0	.0	.0	.0
Fire/explosion	0	.0	.3	.3	0	.0	.0	.0
Forced landing	0	.0	.3	.3	0	.0	.0	.0
Gear not retracted	0	.0	.2	.2	0	.0	.0	.0
On ground encounter with weather	0	.0	.2	.2	0	.0	.0	.0
Propeller blast or jet exhaust	0	.0	.2	.2	0	.0	.0	.0
Undetermined	1	1.3	.2	.2	1	4.2	.2	.7
Missing aircraft	0	.0	.2	.2	0	.0	.2	.7
Collision between aircraft (other than midair)	3	3.9	.1	.1	0	.0	.0	.0
Cargo shift	0	.0	.1	.1	0	.0	.1	.4
Other gear collapsed	0	.0	.1	.1	0	.0	.0	.0
Nose down	0	.0	.1	.1	0	.0	.0	.0
Vortex turbulence encountered	0	.0	.1	.1	0	.0	.1	.4
Hazardous materials leak/spill	1	1.3	.0	.0	0	.0	.0	.0
Wheels up landing	2	2.6	.0	.0	0	.0	.0	.0
Rotor failure/malfunction	1	1.3	.0	.0	0	.0	.0	.0
<b>Total</b>	<b>76</b>	<b>100.0</b>	<b>101.4</b>	<b>100.0</b>	<b>24</b>	<b>100.0</b>	<b>27.5</b>	<b>100.0</b>

Table 54 - FIRST PHASES OF OPERATION IN ALL ACCIDENTS AND IN FATAL ACCIDENTS  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995 AND 1985 - 1994

Phase of operation	All Accidents				Fatal Accidents			
	1995		1985 - 1994		1995		1985 - 1994	
	No.	Percent	Mean	Percent	No.	Percent	Mean	Percent
Cruise	18	23.7	21.8	21.5	7	29.2	8.0	29.1
Takeoff	22	28.9	20.5	20.2	4	16.7	4.1	14.9
Landing	8	10.5	19.6	19.3	0	.0	.9	3.3
Approach	6	7.9	14.1	13.9	3	12.5	6.5	23.6
Maneuvering	5	6.6	8.4	8.3	4	16.7	3.5	12.7
Taxi	6	7.9	4.7	4.6	0	.0	.0	.0
Climb	3	3.9	4.6	4.5	1	4.2	1.9	6.9
Descent	3	3.9	3.2	3.2	3	12.5	1.4	5.1
Standing	1	1.3	2.7	2.7	0	.0	.7	2.5
Not reported	3	3.9	1.0	1.0	1	4.2	.0	.0
Other	1	1.3	.8	.8	1	4.2	.5	1.8
Total Aircraft	76	100.0	101.4	100.0	24	100.0	27.5	100.0

Table 55 - BROAD CAUSE/FACTOR ASSIGNMENTS IN ALL ACCIDENTS AND IN FATAL ACCIDENTS  
 NONSCHEDULED 14 CFR 135 OPERATIONS  
 1995 AND 1985 - 1994

Broad Cause/Factor	All Accidents				Fatal Accidents			
	1995		1985 - 1994		1995		1985 - 1994	
	No.	Percent	Mean	Percent	No.	Percent	Mean	Percent
Pilot	49	64.5	75.8	74.8	17	70.8	23.0	83.6
Weather	21	27.6	32.2	31.8	10	41.7	12.2	44.4
Terrain/Runway Condition	18	23.7	30.0	29.6	4	16.7	7.4	26.9
Propulsion System and Controls	15	19.7	21.5	21.2	3	12.5	4.7	17.1
Other Person (Not Aboard)	14	18.4	17.4	17.2	2	8.3	6.5	23.6
Light Conditions	10	13.2	14.2	14.0	5	20.8	6.6	24.0
Object (tree,wires,etc)	3	3.9	10.9	10.7	0	.0	3.4	12.4
Systems/Equipment/Instruments	8	10.5	8.4	8.3	2	8.3	2.3	8.4
Landing Gear	6	7.9	7.1	7.0	0	.0	.1	.4
Airframe	2	2.6	3.8	3.7	0	.0	1.3	4.7
Flight Control System	2	2.6	1.9	1.9	0	.0	1.0	3.6
Airport/Airways Facilities, Aids	3	3.9	1.5	1.5	0	.0	.2	.7
Other Person (Aboard)	0	.0	.3	.3	0	.0	.2	.7
Total Aircraft	76	100.0	101.4	100.0	24	100.0	27.5	100.0
NTSB Determined Probable Cause	72		100.1		22		27.5	

BY THE NATIONAL TRANSPORTATION SAFETY BOARD

/s/ JIM HALL  
Chairman

/s/ ROBERT T. FRANCIS  
Vice Chairman

/s/ JOHN HAMMERSCHMIDT  
Member

/s/ JOHN GOGLIA  
Member

/s/ GEORGE W. BLACK, JR.  
Member

APPENDIX A  
MIDAIR COLLISION ACCIDENTS  
U.S. AIR CARRIER OPERATIONS  
1985 - 1995

Year	Accidents		Total Fatalities	Number of Accidents by Segements of Aviation Involved			
	Total	Fatal		S135 and GA	N135 and N135	N135 and GA	S121 and Forgn
1985	2	1	1	0	2	0	0
1986	0	0	0	0	0	0	0
1987	5	2	12	3	0	2	0
1988	2	1	4	0	0	2	0
1989	1	1	2	0	0	1	0
1990	3	2	5	1	1	1	0
1991	2	2	9	0	1	1	0
1992	2	1	3	0	0	2	0
1993	1	0	0	0	0	0	1
1994	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0
	--- 18	--- 10	--- 36	--- 4	--- 4	--- 9	--- 1

NOTE: S135 = Scheduled 14 CFR 135 Operation  
N135 = Nonscheduled 14 CFR 135 Operation  
S121 = Scheduled 14 CFR 121 Operation  
Forgn = Foreign Registered Aircraft Operation  
GA = General Aviation



APPENDIX B -- EXPLANATORY NOTES

AIRCRAFT ACCIDENT: The accidents included herein are the occurrences incident to flight in which, "as a result of the operation of an aircraft, any person (occupant or nonoccupant) receives fatal or serious injury or any aircraft receives substantial damage." The definition of substantial damage is:

Substantial damage means damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairings or cowling, dented skin, small punctured holes in the skin of fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered "substantial damage."

AIRCRAFT-MILES: The distance flown by aircraft in terms of great circle airport-to-airport distances measured in statute miles.

CAUSES AND RELATED FACTORS: In determining probable cause(s) of an accident, all facts, conditions, and circumstances are considered. The objective is to ascertain those cause and effect relationships in the accident sequence about which something can be done to prevent recurrence of the type of accident under consideration. Accordingly, for statistical purposes, where there are two or more causes of an accident, each is recorded and no attempt is made to establish a primary cause. Therefore, in the cause and related factor table, the figures shown in the columns dealing with cause will exceed the total number of accidents. The term "factor" is used, in general, to denote those elements of an accident that further explain or supplement the probable cause(s); this provides a means for collecting essential items of information that could not be readily categorized elsewhere in the system.

COLLISION BETWEEN AIRCRAFT: Collisions between aircraft are so classified only when both aircraft are occupied. This includes collisions wherein both aircraft are airborne (midair); one is airborne, the other on the ground; and both are on the ground. A collision with a parked, unoccupied aircraft is classified under the broad category of collision with objects.

FATAL INJURY: Any injury which results in death within 30 days of the accident.

INJURY INDEX: Injury index refers to the highest degree of personal injury sustained as a result of the accident.

NONSCHEDULED SERVICE: Revenue flights that are not operated in regular scheduled service, such as charter flights, and all nonrevenue flights incident to such flights.

PASSENGER-MILES: One passenger transported 1 mile. Passenger miles are computed by the summation of the products of the aircraft-miles flown on each inter-airport flight multiplied by the number of passengers carried on the flight.

PERSONNEL (NON-PILOT): As defined for the Broad Cause/Factor tables may include any of the following personnel:

Rules, Regulations, Standards Personnel	Flight Instructor on Ground
Maintenance, Servicing, Inspection Personnel	Operational Supervisor Personnel
Weather Service Personnel	Air Traffic Control Personnel
Airport Management	Airways Facilities Personnel
Production-Design Personnel	Pilot of Another Aircraft
Ground Signaller	Ground Crewman
Passenger	Spectator
Driver of Vehicle	Third Pilot
Flight Engineer	Navigator
Radio Operator	Flight Attendant
Other Flight Personnel	Dispatching Personnel

PHASE OF OPERATION: The phase of flight in which the first occurrence happened.

REVENUE PASSENGER: A person receiving air transportation from an air carrier for which remuneration is received by the air carrier. Air carrier employees and others receiving air transportation for which a token service charge is levied are considered nonrevenue passengers.

REVENUE PLANE-MILES: The total plane-miles flown in revenue service.

ROTORCRAFT (BROAD CAUSE/FACTOR): When any part, assembly, or system which is unique to rotorcraft is cited as a cause or factor, then "Rotorcraft" is considered a broad cause or factor in that accident.

SERIOUS INJURY: Any injury which 1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; 2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); 3) involves lacerations which cause severe hemorrhages, nerve, muscle, or tendon damage; 4) involves injury to any internal organ; or 5) involves second-or third-degree burns, or any burns affecting more than 5 percent of body surface.

TYPE OF OCCURRENCE: The concept of sequence of events as a method of accident classification was introduced in 1982 to describe the circumstances in an accident. A maximum of five occurrences may be used. Typically each occurrence is further described by one or more "findings" which, when presented chronologically, depict the accident scenario from beginning to end. The findings are developed by Safety Board analysts from a menu of words and phrases, and are the most detailed means of classifying an accident. The findings are also used to describe the probable cause of and related factors in an accident. The example below illustrates the relationship between occurrences and findings.

Occurrence #1            LOSS OF POWER (PARTIAL) - MECHANICAL FAILURE/MALFUNCTION  
Phase of Operation TAKEOFF - GROUND RUN

Finding(s)

1. COMPRESSOR ASSEMBLY - FATIGUE
2. COMPRESSOR ASSEMBLY - FAILURE, TOTAL
3. MATERIAL DEFECT (INADEQUATE QUALITY CONTROL) - MANUFACTURER

TYPES OF WEATHER CONDITIONS: Weather condition is described as visual meteorological conditions (VMC) or instrument meteorological conditions (IMC) and is expressed in terms of visibility, distance from clouds, and ceilings in accordance with Part 91 of the Federal Aviation Regulations.

APPENDIX C  
DETAILED CAUSE/FACTOR ASSIGNMENTS  
14 CFR 121 OPERATIONS

**CAUSE/FACTOR TABLE**  
**14 CFR 121 OPERATIONS**  
**1995**

	Cause or Factor -----	Cause -----
<b>AIRCRAFT</b>		
Compressor assembly, rotor disc	1	1
Exhaust system	1	1
Fluid, hydraulic	1	0
Fuselage, pressure bulkhead	1	1
Fuselage, stringer	1	1
Hydraulic system, line	1	1
Landing gear, towbar/attachment	1	0
Miscellaneous, bolt/nut/fastener/clamp	1	1
Thrust reverser	1	1
Turbine assembly, turbine wheel	1	1
<b>FACILITY</b>		
Airport facilities, runway/landing area condition	1	0
<b>ENVIRONMENT</b>		
Ground power unit	1	1
Turbulence	5	4
Turbulence in clouds	1	0
Turbulence, clear air	3	3
Unfavorable wind	1	0
Windshear	1	1
<b>FLIGHT CREW</b>		
Aborted takeoff	1	1
Crew/group coordination	1	1
Directional control	1	0
Diverted attention	1	0
Flare	1	1
Nosewheel steering	1	0
Parking brakes	1	1
Proper descent rate	1	1
Supervision	1	0
Throttle/power control	1	0
Visual separation	1	0
<b>OTHER PERSON</b>		
Airplane handling	1	1
Altimeter setting	1	0
Approach/departure control service	1	0
Clearance	1	1
Condition(s)/step(s) insufficiently defined	1	1
Facility inadequate	1	0
Inadequate certification/approval	1	0
Inadequate certification/approval - Aircraft	1	0
Information unclear	1	0
Instructions, written/verbal	2	1
Insufficient standards/requirements	1	1
Maintenance, inspection of aircraft	1	1
Maintenance, recordkeeping	1	0
Minimum descent altitude	1	1
Miscellaneous equipment	1	1
Planning/decision	2	2
Procedure inadequate	2	0
Procedures/directives	8	7
Seat belt	4	3
Supervision	1	1
Traffic advisory	1	0
Visual lookout	1	1

APPENDIX D  
DETAILED CAUSE/FACTOR ASSIGNMENTS  
SCHEDULED 14 CFR 135 OPERATIONS

**CAUSE/FACTOR TABLE**  
**SCHEDULED 14 CFR 135 OPERATIONS**  
**1995**

	Cause or Factor -----	Cause -----
<b>AIRCRAFT</b>		
Door	1	0
Ignition system,spark plug	1	1
Propeller system/accessories,blade	1	1
<b>ENVIRONMENT</b>		
Dark night	1	0
Fog	2	0
Low ceiling	2	0
Night	1	0
Snow	1	0
Submerged object	1	0
Sun glare	1	0
Terrain condition	1	0
Whiteout	1	0
<b>FLIGHT CREW</b>		
Aircraft preflight	1	1
Altitude	1	1
Altitude/clearance	1	1
Clearance	2	2
Flaps	1	1
Ice/frost removal from aircraft	1	1
Lack of total experience in type operation	1	0
Planning/decision	1	1
Unsuitable terrain or takeoff/landing/taxi area	1	1
VFR flight into IMC	2	2
Wrong taxi route	2	1
<b>OTHER PERSON</b>		
Inadequate training	1	1
Information insufficient	1	1
Insufficient standards/requirements - Aircraft	1	0
Maintenance,overhaul	1	1
Procedure inadequate	1	1
Procedures/directives	2	1

APPENDIX E

DETAILED CAUSE/FACTOR ASSIGNMENTS  
NONSCHEDULED 14 CFR 135 OPERATIONS

**CAUSE/FACTOR TABLE**  
**NONSCHEDULED 14 CFR 135 OPERATIONS**  
**1995**

	Cause or Factor -----	Cause -----
<b>AIRCRAFT</b>		
Aircraft performance,engine out capability	1	0
Airframe	1	1
Anti-ice/de-ice system, windshield	1	1
Cargo/baggage	1	0
Electrical system,drive/belt	1	1
Electrical system,electric wiring	1	1
Engine assembly,bearing	2	2
Engine assembly,connecting rod	1	1
Engine assembly,crankshaft	1	1
Engine assembly,cylinder	1	1
Engine assembly,piston	1	0
Engine assembly,valve,exhaust	1	1
Engine compartment	2	2
Exhaust system,stack	1	1
Exhaust system,turbocharger	1	1
Flight control, elevator tab	1	1
Flt control syst, elevator trim/tab control	1	1
Fluid,fuel	3	3
Fluid,fuel grade	1	1
Fluid,hydraulic	2	2
Fluid,oil	1	1
Fuel system,PC line	1	0
Fuel system,fuel control	1	1
Fuselage	1	1
Hydraulic system	1	1
Hydraulic system,line	1	1
Induction air ducting	1	0
Landing gear,emergency extension assembly	1	1
Landing gear,normal brake system	1	1
Landing gear,normal retraction/extension assembly	1	1
Landing gear,nose gear strut	1	0
Landing gear,ski assembly	2	1
Landing gear,steering system	1	0
Landing gear,wheel	1	1
Miscellaneous,engine	1	1
Rotor system,tail rotor blade	1	1
Turboshaft engine,free turbine governor	1	1
Window,flight compartment window/windshield	1	1
<b>FACILITY</b>		
Airport facilities,runway/landing area condition	3	0
Meteorological equipment	1	1
Miscellaneous,ATC facility/equipment	2	0
<b>ENVIRONMENT</b>		
Clouds	2	0
Dark night	7	0
Downdraft	2	0
Drizzle	1	0
Dusk	1	0
Fence post	1	0
Fog	3	0
Freezing rain	1	0
Gusts	4	0
High density altitude	1	0
High wind	2	0
Icing conditions	4	0
Lightning	2	0
Low ceiling	5	0
Night	1	0
Obscuration	2	0
Rain	3	0
Snow	1	0
Sun glare	1	0
Terrain condition	15	2



**CAUSE/FACTOR TABLE**  
**NONSCHEDULED 14 CFR 135 OPERATIONS**  
**1995**

	Cause or Factor -----	Cause -----
<b>ENVIRONMENT (continued)</b>		
Tree(s)	2	1
Turbulence in clouds	1	0
Turbulence, terrain induced	1	0
Unfavorable wind	1	0
Variable wind	1	0
Wall/barricade	1	0
<b>FLIGHT CREW</b>		
Aborted takeoff	1	0
Aircraft control	4	4
Aircraft preflight	1	0
Aircraft weight and balance	1	1
Airplane handling	1	1
Airspeed(Vmc)	2	2
Airspeed(Vso)	1	1
Altitude	4	4
Altitude/clearance	1	1
Anti-ice/de-ice system	1	1
Autorotation	1	0
Clearance	4	4
Compensation for wind conditions	1	1
Decision height	1	1
Descent	2	1
Directional control	2	2
Diverted attention	2	0
Elevator trim	1	1
Emergency procedure	1	1
Evasive maneuver	1	0
Flare	2	2
Flight into adverse weather	1	0
Flight into known adverse weather	2	2
Fuel tank selector position	1	1
Gear down and locked	1	1
Gear extension	1	1
Gear retraction	1	1
IFR procedure	2	2
Ice/frost removal from aircraft	1	1
Impairment (alcohol)	1	1
In-flight planning/decision	5	4
Lack of recent instrument time	1	0
Lack of total experience in type of aircraft	1	0
Level off	1	0
Operation with known deficiencies in equipment	1	1
Planning/decision	1	1
Preflight planning/preparation	4	2
Procedures/directives	1	1
Proper altitude	2	1
Proper descent rate	1	1
Proper touchdown point	1	1
Remedial action	2	0
Rotor rpm	1	1
Security of cargo	1	1
Spatial disorientation	1	1
Unsafe/hazardous condition	1	1
Unsuitable terrain or takeoff/landing/taxi area	2	2
VFR flight into IMC	4	4
VFR procedures	1	1
Visual lookout	4	3
Weather evaluation	4	2
<b>OTHER PERSON</b>		
Dispatch procedures	2	0
Diverted attention	2	0
Identification of aircraft visually	2	2
Inadequate surveillance of operation	1	0

**CAUSE/FACTOR TABLE**  
**NONSCHEDULED 14 CFR 135 OPERATIONS**  
**1995**

	Cause or Factor -----	Cause -----
<b>OTHER PERSON</b> (continued)		
Instructions,written/verbal	1	0
Maintenance	1	1
Maintenance,inspection of aircraft	4	3
Maintenance,installation	2	2
Maintenance,major repair	1	0
Maintenance,rebuild/remanufacture	1	1
Maintenance,service of aircraft	2	2
Procedures/directives	1	1
Security of cargo	1	0
Traffic advisory	1	0
Visual lookout	3	3

APPENDIX F  
N.T.S.B. FORM 6120.4



**FACTUAL REPORT  
AVIATION  
ACCIDENT/INCIDENT**

National Transportation Safety Board  
Washington, D.C. 20594

National Transportation Safety Board

**FACTUAL REPORT  
AVIATION**

NTSB Accident/Incident Number

2  
1  Accident  
2  Incident

3 Investigation  
1  NTSB  
2  FAA Delegated

4 Aircraft Registration Number

5 Nearest City/Place

6 State

7 Zip Code (First 5 numbers only)

8 Date of Accident (Nos. for M,D,Y)

9 Day of Week (First 2 letters)

10 Local Time (24 hour clock)

11 Time Zone

12 Narrative Statement of Facts, Conditions and Circumstances Pertinent to the Accident/Incident

Additional Persons Participating in this Accident/Incident Investigation (Name, address, affiliation. Continue on page 2 if necessary)

Investigated By:

13 Date (Nos. for M,D,Y)

14 Agency

15 Name/Signature



National Transportation Safety Board

**FACTUAL REPORT  
AVIATION**

NTSB Accident/Incident Number

--	--	--	--	--	--	--	--	--	--

**Airport/Approach/Landing Information**

<b>16 Accident Location</b> 1 <input type="checkbox"/> Off airport/airstrip 2 <input type="checkbox"/> On airport 3 <input type="checkbox"/> On airstrip 4 <input type="checkbox"/> UNK/NA	<b>17 Airport Information</b> <input type="checkbox"/> Not Applicable (go to Block 28)	<b>18 Airport Name</b> _____	<b>20 Distance From Airport Center (Nearest SM)</b> _____ SM 1 <input type="checkbox"/> UNK/NA	<b>21 Direction from Airport</b> _____ ° mag 1 <input type="checkbox"/> UNK/NA
		<b>19 Airport Identifier</b> _____		

<b>22 Runway Used Identifier</b> _____ 1 <input type="checkbox"/> UNK/NA	<b>23 Runway Length</b> _____ Feet 1 <input type="checkbox"/> UNK/NA	<b>24 Runway Width</b> _____ Feet 1 <input type="checkbox"/> UNK/NA	<b>25 Airport Elevation</b> _____ Ft. MSL 1 <input type="checkbox"/> UNK/NA
--	--	---	---

<b>26 Runway/Landing Surface</b> 1 <input type="checkbox"/> Macadam 2 <input type="checkbox"/> Asphalt 3 <input type="checkbox"/> Concrete 4 <input type="checkbox"/> Gravel 5 <input type="checkbox"/> Dirt 6 <input type="checkbox"/> Grass/turf 7 <input type="checkbox"/> Snow 8 <input type="checkbox"/> Ice 9 <input type="checkbox"/> Water 10 <input type="checkbox"/> Metal/Wood 11 <input type="checkbox"/> UNK/NA	<b>27 Runway/Landing Surface Condition (Multiple entry)</b> 1 <input type="checkbox"/> Dry 2 <input type="checkbox"/> Wet 3 <input type="checkbox"/> Ice covered 4 <input type="checkbox"/> Snow--dry 5 <input type="checkbox"/> Snow--wet 6 <input type="checkbox"/> Snow--crusted 7 <input type="checkbox"/> Snow--compacted 8 <input type="checkbox"/> Vegetation 9 <input type="checkbox"/> Water--calm 10 <input type="checkbox"/> Water--choppy 11 <input type="checkbox"/> Water--glassy 12 <input type="checkbox"/> Rubber deposits 13 <input type="checkbox"/> Soft 14 <input type="checkbox"/> Rough 15 <input type="checkbox"/> Slush covered 16 <input type="checkbox"/> Holes 17 <input type="checkbox"/> UNK/NA
---	--

<b>28 Type Instrument Approach Flown (Multiple entry)</b> 1 <input type="checkbox"/> None 2 <input type="checkbox"/> ADF/NDB 3 <input type="checkbox"/> SDF 4 <input type="checkbox"/> VOR/TVOR 5 <input type="checkbox"/> VOR/DME 6 <input type="checkbox"/> TACAN 7 <input type="checkbox"/> ILS--complete 8 <input type="checkbox"/> ILS--localizer 9 <input type="checkbox"/> ILS--backcourse 10 <input type="checkbox"/> RNAV 11 <input type="checkbox"/> MLS 12 <input type="checkbox"/> LDA 13 <input type="checkbox"/> ASR 14 <input type="checkbox"/> PAR 15 <input type="checkbox"/> Sidestep 16 <input type="checkbox"/> Visual 17 <input type="checkbox"/> Contact 18 <input type="checkbox"/> Circling 19 <input type="checkbox"/> Practice 20 <input type="checkbox"/> UNK/NA	<b>29 VFR Approach/Landing (Multiple entry)</b> 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Traffic pattern 3 <input type="checkbox"/> Straight-in 4 <input type="checkbox"/> Valley/terrain following 5 <input type="checkbox"/> Go around 6 <input type="checkbox"/> Touch and go 7 <input type="checkbox"/> Full stop 8 <input type="checkbox"/> Stop and go 9 <input type="checkbox"/> Simulated forced landing 10 <input type="checkbox"/> Forced landing 11 <input type="checkbox"/> Precautionary landing 12 <input type="checkbox"/> UNK/NA
---	--

**Aircraft Information**

<b>30 Aircraft Manufacturer</b> _____	<b>31 Aircraft Model/Series</b> _____	<b>32 Serial No.</b> _____ 1 <input type="checkbox"/> UNK/NA	<b>33 Certificated Maximum Gross Weight</b> _____ 1 <input type="checkbox"/> UNK/NA
--	--	--	---

<b>34 Type of Aircraft</b> 1 <input type="checkbox"/> Airplane 2 <input type="checkbox"/> Helicopter 3 <input type="checkbox"/> Glider 4 <input type="checkbox"/> Balloon 5 <input type="checkbox"/> Blimp/dirigible 6 <input type="checkbox"/> Ultralight 7 <input type="checkbox"/> Gyroplane A Specify _____	<b>35 Type Airworthiness Certificate (Multiple entry)</b> Standard 1 <input type="checkbox"/> Normal 2 <input type="checkbox"/> Utility 3 <input type="checkbox"/> Acrobatic 4 <input type="checkbox"/> Transport Special 5 <input type="checkbox"/> Restricted 6 <input type="checkbox"/> Limited 7 <input type="checkbox"/> Provisional 8 <input type="checkbox"/> Special flight 9 <input type="checkbox"/> Experimental 10 <input type="checkbox"/> UNK/NA	<b>36 Home Built</b> 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> UNK/NA
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National Transportation Safety Board

**FACTUAL REPORT  
AVIATION**

NTSB Accident/Incident Number

**Aircraft Information (continued)**

**37 Landing Gear**

- |  |   |  |                                       |                                       |
|--|---|--|---------------------------------------|---------------------------------------|
| 1 <input type="checkbox"/> Tricycle--fixed       | 4 <input type="checkbox"/> Tailwheel--all retractable   | 7 <input type="checkbox"/> Hull        | 10 <input type="checkbox"/> Ski       | 13 <input type="checkbox"/> High Skid |
| 2 <input type="checkbox"/> Tricycle--retractable | 5 <input type="checkbox"/> Tailwheel--retractable mains | 8 <input type="checkbox"/> Float       | 11 <input type="checkbox"/> Ski/wheel | 14 <input type="checkbox"/> UNK/NA    |
| 3 <input type="checkbox"/> Tailwheel--all fixed  | 6 <input type="checkbox"/> Amphibian                    | 9 <input type="checkbox"/> Emerg float | 12 <input type="checkbox"/> Skid      |                                       |

**38 No. of Seats**

- 1  UNK/NA

**39 Stall Warning System Installed**

- 1  Yes  
2  No  
3  UNK/NA

**40 Aircraft Not Engine Powered**

Go to block 46

**41 Engine Type**

- |   |  |
|---|--|
| 1 <input type="checkbox"/> Reciprocating--carburetor    | 5 <input type="checkbox"/> Turbo fan   |
| 2 <input type="checkbox"/> Reciprocating--fuel injected | 6 <input type="checkbox"/> Turbo shaft |
| 3 <input type="checkbox"/> Turbo prop                   | 7 <input type="checkbox"/> UNK/NA      |
| 4 <input type="checkbox"/> Turbo jet                    |  |

**42 Engine Manufacturer**

**43 Engine Model and Series**

**44 Engine Rated Power**

- A \_\_\_\_\_ Horsepower  
B \_\_\_\_\_ Lbs. Thrust  
C \_\_\_\_\_ UNK/NA

**45 Number of Engines**

1  UNK/NA

**46 Type of Last Inspection**

- 1  Annual  
2  100 hour  
3  AAIP  
4  Continuous airworthiness  
5  UNK/NA

**47 Date Last Inspection Performed**

(Nos. for M. D. Y)

1  UNK/NA

**48 Time Since Inspection**

\_\_\_\_\_ Hours

1  UNK/NA

**49 Airframe Total Time**

\_\_\_\_\_ Hours

1  UNK/NA

**Emergency Locator Transmitter (ELT)**

- |       |      |          |
|-------|------|----------|
| 1 Yes | 2 No | 3 UNK/NA |
|-------|------|----------|

**50 Installed**

**51 Operated**

**52 Aided in location of accident site**

**Owner/Operator Information**

**53 Registered Aircraft Owner**

Name :

**54 Address**

**55 Operator of Aircraft** 1  Same as registered owner

A Name :

B dba

2  UNK/NA

**56 Address** 1  Same as registered owner

A \_\_\_\_\_

2  UNK/NA

**57 Operator Designator Code**

**Type of Certificate(s) Held**

58 None  (Go to block 62)

**59 Air Carrier Operating Certificate (Check all applicable)**

- |  |   |
|--|---|
| 1 <input type="checkbox"/> Flag carrier/domestic (121) | 4 <input type="checkbox"/> Large helicopter (127) |
| 2 <input type="checkbox"/> Supplemental                | 5 <input type="checkbox"/> Commuter air carrier   |
| 3 <input type="checkbox"/> All cargo (418)             | 6 <input type="checkbox"/> On-demand air taxi     |

**60 Operating Certificate**

Other operator of large aircraft

**61 Operator Certificate**

- |   |
|---|
| 1 <input type="checkbox"/> Rotorcraft--external load operator (133) |
| 2 <input type="checkbox"/> Agricultural aircraft (137)              |

**Regulation Flight Conducted Under**

**62 Regulation Flight Conducted Under**

- |   |                                       |                                       |   |
|---|---------------------------------------|---------------------------------------|---|
| 1 <input type="checkbox"/> 14 CFR 91 (only) | 4 <input type="checkbox"/> 14 CFR 105 | 7 <input type="checkbox"/> 14 CFR 127 | 10 <input type="checkbox"/> 14 CFR 137                |
| 2 <input type="checkbox"/> 14 CFR 91D       | 5 <input type="checkbox"/> 14 CFR 121 | 8 <input type="checkbox"/> 14 CFR 133 | 11 <input type="checkbox"/> 14 CFR 129 (Foreign flag) |
| 3 <input type="checkbox"/> 14 CFR 103       | 6 <input type="checkbox"/> 14 CFR 125 | 9 <input type="checkbox"/> 14 CFR 135 | A Specify   |

**Type of Flight Operation Conducted**

(Complete 63 a, b, c ONLY if flight was a revenue operation conducted under 121, 125, 127, 129, 135)

**63a**

- 1  Scheduled  
2  Non-scheduled

**63b**

- 1  Domestic  
2  International

**63c**

- |                                      |   |
|--------------------------------------|---|
| 1 <input type="checkbox"/> Passenger | 3 <input type="checkbox"/> Passenger/cargo    |
| 2 <input type="checkbox"/> Cargo     | 4 <input type="checkbox"/> Mail contract ONLY |



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**Owner/Operator Information (continued)**

(Complete 64 ONLY if 63 a, b, c are not applicable)

64

1 <input type="checkbox"/> Personal	4 <input type="checkbox"/> Executive/corporate	7 <input type="checkbox"/> Other work use	10 <input type="checkbox"/> Positioning
2 <input type="checkbox"/> Business	5 <input type="checkbox"/> Aerial application	8 <input type="checkbox"/> Public use	
3 <input type="checkbox"/> Instructional (including air carrier training)	6 <input type="checkbox"/> Aerial observation	9 <input type="checkbox"/> Ferry	A Specify _____

**First Pilot Information**

65 Name (Last, First, Initial)  1 <input type="checkbox"/> UNK/NA	66 Pilot Certificate No.  1 <input type="checkbox"/> UNK/NA	67 City  1 <input type="checkbox"/> UNK/NA
---	---	--

68 State  1 <input type="checkbox"/> UNK/NA	69 Date of Birth (Nos. for M, D, Y)  1 <input type="checkbox"/> UNK/NA	70 Age  ____ Yrs. 1 <input type="checkbox"/> UNK/NA	71 Sex 1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female
---	--	--	--

72 Seat Occupied 1 <input type="checkbox"/> Left 2 <input type="checkbox"/> Right 3 <input type="checkbox"/> Center 4 <input type="checkbox"/> Front 5 <input type="checkbox"/> Rear 6 <input type="checkbox"/> UNK/NA	73 Principal Profession 1 <input type="checkbox"/> Pilot--civilian 2 <input type="checkbox"/> Pilot--military 3 <input type="checkbox"/> Other--military 4 <input type="checkbox"/> Aircraft mechanic 5 <input type="checkbox"/> Business 6 <input type="checkbox"/> Lawyer 7 <input type="checkbox"/> Doctor/dentist 8 <input type="checkbox"/> Police 9 <input type="checkbox"/> Student 10 <input type="checkbox"/> Clergy 11 <input type="checkbox"/> Teacher 12 <input type="checkbox"/> Engineer 13 <input type="checkbox"/> Farmer/rancher 14 <input type="checkbox"/> Retired 15 <input type="checkbox"/> UNK/NA	74 Certificate(s) (Multiple entry) 1 <input type="checkbox"/> Student 2 <input type="checkbox"/> Private 3 <input type="checkbox"/> Commercial 4 <input type="checkbox"/> Airline Transport 5 <input type="checkbox"/> Flight Instructor 6 <input type="checkbox"/> Flight Engineer 7 <input type="checkbox"/> Military 8 <input type="checkbox"/> None 9 <input type="checkbox"/> Foreign 10 <input type="checkbox"/> UNK/NA
--	---	---

75 Ratings--Airplane (multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Single engine land 3 <input type="checkbox"/> Multiengine land 4 <input type="checkbox"/> Single engine sea 5 <input type="checkbox"/> Multiengine sea	76 Rotorcraft/Glider/LTA (multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Helicopter 3 <input type="checkbox"/> Gyroplane 4 <input type="checkbox"/> Airship 5 <input type="checkbox"/> Free balloon 6 <input type="checkbox"/> Glider	77 Instrument Rating (multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Airplane 3 <input type="checkbox"/> Helicopter	78 Instructor Rating(s) (multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Airplane SE 3 <input type="checkbox"/> Airplane ME 4 <input type="checkbox"/> Helicopter 5 <input type="checkbox"/> Gyroplane 6 <input type="checkbox"/> Glider 7 <input type="checkbox"/> Instrument airplane 8 <input type="checkbox"/> Instrument helicopter
--	---	--	---

79 Type-Rating Endorsement This Aircraft 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> UNK/NA	80 Biennial Flight Review (Or equivalent) 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> UNK/NA	81 Months since Last BFR  ____ Months 1 <input type="checkbox"/> UNK/NA	82 BFR (or equivalent) Aircraft Make/Model A Make _____ B Model _____ C <input type="checkbox"/> UNK/NA
--	---	--	--

83 Medical Certificate 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Class 1 3 <input type="checkbox"/> Class 2 4 <input type="checkbox"/> Class 3 5 <input type="checkbox"/> UNK/NA	84 Medical Certificate Validity 1 <input type="checkbox"/> Valid medical--no waivers/limitations 2 <input type="checkbox"/> Valid medical--with waivers/limitations 3 <input type="checkbox"/> Non valid medical for this flight 4 <input type="checkbox"/> Expired 5 <input type="checkbox"/> No medical certificate 6 <input type="checkbox"/> UNK/NA	85 Date of Last Medical (Nos. for M, D, Y)  1 <input type="checkbox"/> UNK/NA
--	---	---

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*First Pilot Information (continued)*

**86 Source of Pilot Flight Time (Multiple entry)**

- 1  Pilot log
- 2  Company
- 3  FAA
- 4  Pilot/Operator Report
- 5  Investigators Estimate
- 6  Relative
- 7  Other Person
- 8  UNK/NA

Flight Time	A All A/C	B This Make & Model	C Airplane Single Engine	D Airplane Multiengine	E Night	F Instrument Actual	G Instrument Simulated	H Rotorcraft	I Glider	J Lighter Than Air
<b>87 Total Time</b>										
<b>88 Pilot in Command (PIC)</b>										
<b>89 Instructor</b>										
<b>90 Last 90 Days</b>										
<b>91 Last 30 Days</b>										
<b>92 Last 24 Hours</b>										

- |  |  |   |
|--|--|---|
| <p><b>93 Seatbelt Used</b></p> <p>1 <input type="checkbox"/> Yes      3 <input type="checkbox"/> UNK/NA</p> <p>2 <input type="checkbox"/> No</p> | <p><b>94 Shoulder Harness Used</b></p> <p>1 <input type="checkbox"/> Yes      3 <input type="checkbox"/> UNK/NA</p> <p>2 <input type="checkbox"/> No</p> | <p><b>95 Autopsy Performed (This pilot)</b></p> <p>1 <input type="checkbox"/> Yes      3 <input type="checkbox"/> UNK/NA</p> <p>2 <input type="checkbox"/> No</p> |
|--|--|---|

- |  |   |  |
|--|---|--|
| <p><b>96 Toxicology Performed (This pilot)</b></p> <p>1 <input type="checkbox"/> Yes</p> <p>2 <input type="checkbox"/> No</p> <p>3 <input type="checkbox"/> UNK/NA</p> | <p><b>97 Person at Controls</b></p> <p>1 <input type="checkbox"/> Pilot in command</p> <p>2 <input type="checkbox"/> Second pilot</p> <p>3 <input type="checkbox"/> Both pilots</p> <p>4 <input type="checkbox"/> Non-pilot</p> <p>5 <input type="checkbox"/> No one</p> <p>6 <input type="checkbox"/> UNK/NA</p> | <p><b>98 Second Pilot</b></p> <p>1 <input type="checkbox"/> Yes<br/><i>(Complete second pilot supplement)</i></p> <p>2 <input type="checkbox"/> No</p> |
|--|---|--|

**Flight Itinerary Information**

- |  |   |  |
|--|---|--|
| <p><b>99 Last Departure Point</b></p> <p>1 <input type="checkbox"/> Same as accident/incident location or<br/>A Airport identifier _____<br/>B City/Place _____<br/>C State _____</p> <p>2 <input type="checkbox"/> UNK/NA</p> | <p><b>100 Destination</b></p> <p>1 <input type="checkbox"/> Same as accident/incident location or<br/>2 <input type="checkbox"/> Local flight</p> <p>A Airport Identifier _____<br/>B City/Place _____<br/>C State _____</p> <p>3 <input type="checkbox"/> UNK/NA</p> | <p><b>101 Flight Plan Filed</b></p> <p>1 <input type="checkbox"/> None</p> <p>2 <input type="checkbox"/> Visual Flight Rules (VFR)</p> <p>3 <input type="checkbox"/> Instrument Flight Rules (IFR)</p> <p>4 <input type="checkbox"/> VFR/IFR</p> <p>5 <input type="checkbox"/> Company (VFR)</p> <p>6 <input type="checkbox"/> Military (VFR)</p> <p>7 <input type="checkbox"/> UNK/NA</p> |
|--|---|--|

- |  |   |
|--|---|
| <p><b>102 Time of Departure</b></p> <p>1 <input type="checkbox"/> UNK/NA</p> <p>A Time _____<br/>B Time Zone _____</p> | <p><b>103 Type of Clearance (Multiple entry)</b></p> <p>1 <input type="checkbox"/> None</p> <p>2 <input type="checkbox"/> VFR</p> <p>3 <input type="checkbox"/> Special VFR</p> <p>4 <input type="checkbox"/> IFR</p> <p>5 <input type="checkbox"/> Special IFR</p> <p>6 <input type="checkbox"/> VFR on top</p> <p>7 <input type="checkbox"/> Cruise</p> <p>8 <input type="checkbox"/> Traffic Advisory</p> <p>9 <input type="checkbox"/> VFR Flight Following</p> <p>10 <input type="checkbox"/> UNK/NA</p> |
|--|---|
- |   |   |  |
|---|---|--|
| <p><b>104 Airspace (Multiple entry)</b></p> <p>1 <input type="checkbox"/> Uncontrolled</p> <p>2 <input type="checkbox"/> Controlled</p> <p>3 <input type="checkbox"/> Airport traffic area</p> <p>4 <input type="checkbox"/> Control zone</p> <p>5 <input type="checkbox"/> Airport advisory area</p> <p>6 <input type="checkbox"/> Positive control area</p> <p>7 <input type="checkbox"/> Terminal control area</p> | <p>8 <input type="checkbox"/> Stage II TRSA</p> <p>9 <input type="checkbox"/> Stage III TRSA</p> <p>10 <input type="checkbox"/> Prohibited area</p> <p>11 <input type="checkbox"/> Restricted area</p> <p>12 <input type="checkbox"/> Military Operation Area (MOA)</p> <p>13 <input type="checkbox"/> Student Jet Training Area</p> <p>14 <input type="checkbox"/> Demo Area</p> | <p>15 <input type="checkbox"/> Warning area</p> <p>16 <input type="checkbox"/> FAR 93<br/><i>(Special air traffic areas)</i></p> <p>17 <input type="checkbox"/> UNK/NA</p> |
|---|---|--|

**Aircraft Loading Information**

- 105 Load Description**
- 1  None
  - 2  Passengers
  - 3  Cargo
  - 4  Towing glider
  - 5  Towing banner
  - 6  Other external
  - 7  Parachutists
  - 8  Water
  - 9  Chemical
  - 10  Livestock
  - 11  Illegal cargo
  - 12  UNK/NA

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**Weather Information**

**106 Source of Weather Briefing (Multiple entry)**

- 1  No record of briefing (Go to block 109)
- 2  National Weather Service (NWS)
- 3  Flight Service Station
- 4  PATWAS (Pilot Automated Trl. WX Answering Svc)
- 5  VRS (Voice Response System)
- 6  Company
- 7  Commercial weather service
- 8  TV/radio weather
- 9  Military
- 10  UNK/NA

**107 Method of Briefing (Multiple entry)**

- 1  In person
- 2  Teletype
- 3  Telephone
- 4  Aircraft radio
- 5  TV/radio
- 6  UNK/NA

**108 Completeness of Weather Briefing**

- 1  Weather not pertinent
- 2  Full
- 3  Partial--limited by pilot
- 4  Partial--limited by briefer/forecaster
- 5  UNK/NA

**109 Investigator's Source of Weather Information**

- 1  Pilot (Go to block 111)
- 2  Witness (Go to block 111)
- 3  Weather observation facility

**110 Weather Observation Facility**

- A Identifier \_\_\_\_\_
- B Time of observation \_\_\_\_\_ zone \_\_\_\_\_
- C Elevation \_\_\_\_\_ feet MSL
- D Distance from accident site \_\_\_\_\_ NM
- E Direction from accident site \_\_\_\_\_ ° magnetic

**111 Basic Weather Conditions at Accident Site**

- 1  Visual Meteorological Conditions (VMC)
- 2  Instrument Meteorological Conditions (IMC)
- 3  UNK/NA

**112 Conditions of Light**

- 1  Dawn
- 2  Daylight
- 3  Night (Dark)
- 4  Night (Bright)
- 5  Dusk
- 6  UNK/NA

**113 Sky/Lowest/Cloud Conditions**

- 1  Clear
- 2  Scattered
- 3  Thin broken
- 4  Thin overcast
- 5  Partial obscuration
- 6  UNK/NA

**114 Lowest Ceiling**

- 1  None
  - 2  Broken
  - 3  Overcast
  - 4  Obscured
  - 5  UNK/NA
- A \_\_\_\_\_ Feet AGL

**115 Visibility (Decimals)**

- A \_\_\_\_\_ SM
- B RVR \_\_\_\_\_ Feet
- C RVV \_\_\_\_\_ SM
- 1  UNK/NA

**116 Temperature**

- \_\_\_\_\_ F
- 1  UNK/NA

**117 Dew Point**

- \_\_\_\_\_ F
- 1  UNK/NA

**118 Wind (From)**

- 1  Variable
  - 2  UNK/NA
- A \_\_\_\_\_ Magnetic

**119 Wind Speed**

- 1  Calm
  - 2  Light and Variable
  - 3  UNK/NA
- A \_\_\_\_\_ Kts.

**120 Gusts**

- 1  None
  - 2  UNK/NA
- A \_\_\_\_\_ Kts

**121 Altimeter Setting**

- \_\_\_\_\_ " Hg
- 1  UNK/NA

**122 Density Altitude**

- \_\_\_\_\_ feet
- 1  UNK/NA

**123 Restrictions to Visibility**

- 1  None
- 2  Haze (H)
- 3  Dust (D)
- 4  Smoke (K)
- 5  Fog (F)
- 6  Ice fog (IF)
- 7  Ground fog (GF)
- 8  Blowing spray (BY)
- 9  Blowing dust (BD)
- 10  Blowing snow (BS)
- 11  Blowing sand (BN)
- 12  UNK/NA

**124 Type of Precipitation**

- 1  None (Go to block 126)
- 2  Rain (R)
- 3  Snow (S)
- 4  Hail (A)
- 5  Rain showers (RW)
- 6  Freezing rain (ZR)
- 7  Snow shower (SW)
- 8  Drizzle (L)
- 9  Ice pellets (IP)
- 10  Snow pellets (SP)
- 11  Snow Grains (SG)
- 12  Freezing drizzle (ZL)
- 13  Ice crystals (IC)
- 14  Ice pellet shower (IPW)
- 15  UNK/NA

**125 Intensity of Precipitation**

- 1  Light
- 2  Moderate
- 3  Heavy
- 4  UNK/NA

**126 Aircraft Damage**

- 1  None
- 2  Minor
- 3  Substantial
- 4  Destroyed
- 5  UNK/NA

**127 Aircraft Fire**

- 1  None
- 2  In-flight
- 3  On ground
- 4  UNK/NA

**128 Explosion**

- 1  None
- 2  In-flight
- 3  On ground
- 4  UNK/NA

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**Accident Information**

**129 Injury Index (Most critical injury)**

1  None    2  Minor    3  Serious    4  Fatal

Injury Summary	A Fatal	B Serious	C Minor	D None	E Total
130 First Pilot					
131 Co-pilot					
132 Dual Student					
133 Check Pilot					
134 Flight Engineer					
135 Cabin Attendants					
136 Other Crew					
137 Passengers					
138 TOTAL ABOARD					
139 Other Aircraft					
140 Other Ground					
141 GRAND TOTAL					

**142 Classification**

- 1  U.S. Registered Aircraft on U.S. Soil, Territories and Possessions, or International Waters
- 2  U.S. Registered Aircraft on foreign Soil
- 3  U.S. Registered Aircraft operated by a Foreign Operator
- 4  Foreign Registered Aircraft on U.S. Soil, Territories or Possessions
- 5  Military Aircraft
- 6  Aircraft not Registered

**Part Failure/Incorrect Part**

**143 Part Failure/Malfunction (Multiple entry)**

- 1  None
- 2  Part/component #1
- 3  Part/component #2
- 4  Part/component #3
- 5  UNK/NA

**144 Incorrect Part (Multiple entry)**

- 1  None
- 2  Part/component #1
- 3  Part/component #2
- 4  Part/component #3
- 5  UNK/NA

	A Part/Component #1		B Part/Component #2		C Part/Component #3	
145 Part Name						
146 Bogus Part	1 <input type="checkbox"/> Yes	2 <input type="checkbox"/> No	1 <input type="checkbox"/> Yes	2 <input type="checkbox"/> No	1 <input type="checkbox"/> Yes	2 <input type="checkbox"/> No