Annual Review

U. S. General Aviation Accidents

occurring in calendar year 1968

NATIONAL TRANSPORTATION SAFETY BOARD
Department of Transportation
Washington, D.C. 20591

FOREWORD

The Statistical Review of General Aviation Accidents is published annually by the National Transportation Safety Board. This publication contains statistical information compiled from reports of 4,968 General Aviation accidents that occurred during the calendar year 1968.

In the analysis of accidents a collision between aircraft is treated as one accident in the overall total. However, a complete analysis and coding is made on each aircraft involved in a collision. This produces two aircraft accident records, one for each aircraft. These records contain the same broad categories of coded data, however, the specific entries, such as type of aircraft, kind of flying, phase of operation, etc., may or may not be common to each aircraft. As a result, the number of accidents may differ in the various tables depending upon whether or not collisions are involved and if so, whether or not the selected items of data are common to each aircraft. For example: In a table showing the number of accidents occurring in the various kinds of flying, if each of the colliding aircraft were conducting Pleasure Flying, one accident would appear in the Pleasure Flying column. However, if one aircraft was engaged in Pleasure Flying and the other was conducting Dual Instruction, the accident would appear twice, once in the Pleasure Flying column, and once in the Dual Instruction column.

Included in the total number of accidents are 63 collisions between aircraft. By coding each aircraft involved in the collisions an additional 63 records are produced, bringing the total accident records to 5,031. This figure reflects the true number of pilots and aircraft involved in the 4,968 accidents.

September 1969

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AIRCRAFT ACCIDENT (con't)

characteristics of the aircraft, and which would normally require major repair or replacement of the affected component.

(2) Engine failure, damage limited to an engine, bent fairings or cowling, dented skin, small punctured holes in the skin or fabric, ground damage to rotor or propeller blades, damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered "substantial damage" for this part.

INJURY INDEX

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

TYPE OF ACCIDENT

Type of accident relates to the immediate circumstances of the occurrence. Many accidents involve a series of circumstances and therefore require a second type to more fully describe the sequence of events. Table 36 shows the relationship of first and second accident types. Some examples of types of accidents are as follows:

Gear Collapsed
Collapse of the landing gear due to mechanical failure other than a malfunction of the retracting mechanism.

Gear Retracted
Retraction of the landing gear due to malfunction or failure of the retracting mechanism or to inadvertent retraction by the crew. Excludes intentional gear retraction and wheels-up landing.

Airframe Failure
Occurrences resulting from failure of any part of the airframe while in flight or in motion on the ground. Excludes failure resulting from contact with another airplane or object, or impact with the ground, or damage from landing gear collapse or retraction.

Engine Failure/Malfunction

Occurrences of engine failure or malfunction for any reason. Includes engine stoppage, power interruption or power loss.

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EXPLANATORY NOTES

PHASE OF OPERATION

The phase of operation relates to the particular segment of the flight or operation during which the circumstances of the accident occur.

KIND OF FLYING

Refers to the purpose for which the aircraft is being operated at the time of the accident. There are four broad categories of kind of flying.

1. Instructional Flying
   Refers to flying accomplished in supervised training under the direction of an accredited instructor.

2. Noncommercial Flying

   Refers to the use of an aircraft for purposes of pleasure, personal transportation or in connection with a private business, in corporate/executive operations, and in other operations, wherein there is no direct monetary fee charged. It includes the following categories:

   Pleasure
   Flying by individuals in their own or rented aircraft for pleasure, or personal transportation not in furtherance of their occupation or company business.

   Business
   The use of aircraft by pilots (not receiving direct salary or compensation for piloting) in connection with their occupation or in the furtherance of a private business.

   Corporate/Executive Operations
   The use of aircraft owned or leased, and operated by a corporation or business firm for the transportation of personnel or cargo in furtherance of the corporation's or firm's business, and which are flown by professional pilots receiving a direct salary or compensation for piloting.

3. Commercial Flying
   Commercial flying includes all general aviation flying normally conducted for direct financial return, except instructional flying. It includes air taxi operations, aerial application, fire control, aerial mapping or photography, aerial advertising, power/pipeline patrol and fish spotting.

EXPLANATORY NOTES

GENERAL AVIATION

General Aviation refers to the operation of U. S. Civil Aircraft owned and operated by persons, corporations, etc., other than those engaged in air carrier operations authorized by a certificate of public convenience and necessity, issued by the Civil Aeronautics Board.

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 total number of accidents shown in this publication should not be compared with the total number of accidents for any year prior to 1968. This is because of the effect of an amendment to Section 430.2 of Part 430 of the National Transportation Safety Board's Regulations, effective January 1, 1968. The change which influenced the decrease in the number of total accidents was to "substantial damage" to aircraft of 12,500 pounds maximum certificated takeoff weight or less, as follows:

Prior to January 1, 1968, the definition of substantial damage was:

> (1) Except as provided in subparagraph (2) of this paragraph:
> (i) Substantial damage in aircraft of 12,500 pounds maximum certificated takeoff weight or less means damage or structural failure reasonably estimated to cost $300 or more to repair.
>
> (ii) Substantial damage in aircraft of more than 12,500 pounds maximum certificated takeoff weight means damage or structural failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repairs or replacement of the affected component.
>
> (2) Engine failure, damage limited to an engine, bent fairings or cowling, dented skin, small punctured holes in the skin or fabric, taxiing damage to propeller blades, damage to tires, engine accessories, brakes or wingtips are not considered "substantial damage" for the purpose of this part.

The amendment, however, changed the definition of substantial damage. Effective January 1, 1968, the definition of substantial damage was changed to read:

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4. Miscellaneous Flying

Includes other kinds of flying not covered under the other three broad categories. In some instances the criterion of direct financial return may or may not be present.

COLLISIONS 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 (parked, unoccupied aircraft).

CAUSE AND RELATED FACTORS

In determining the probable cause of an accident, all facts, conditions and circumstances are considered. For statistical purposes, where two or more causes exist in 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 reflect those elements of an accident which further explain or supplement the probable cause (s). This provision was incorporated in the coding system to increase its flexibility and to provide a means for collecting essential items of information which could not be readily categorized elsewhere in the system. The number of total accidents and fatal accidents shown in the different Cause/Factor Tables may not agree with the number of total accidents or fatal accidents in other tables covering the same basic aircraft category or operational segment of General Aviation. This is due to the fact that certain numbers of these accidents are still under investigation and no cause determination could be made by the Safety Board. They were not, therefore, included in the Cause/Factor Tables.

SMALL FIXED-WING AIRCRAFT

Aircraft which have a certificated maximum gross takeoff weight of 12,500 pounds, or less.

LARGE FIXED-WING AIRCRAFT

Aircraft which have a certificated maximum gross takeoff weight in excess of 12,500 pounds.

ROTORCRAFT

Aircraft which in all usual flight attitudes are supported in the air wholly or in part by a rotor or rotors, i.e., by airfoils rotating or revolving about an axis.

EXPLANATORY NOTES

ABBREVIATIONS

AIRCRAFT

SFW - Small Fixed-Wing
LFW - Large Fixed-Wing
ROTOR - Rotorcraft

ENGINES

SE - Single Engine
ME - Multiengine

AIRCRAFT DAMAGE

DEST - Destroyed
SUBST - Substantial

WEATHER CONDITIONS AND/OR TYPE OF FLIGHT PLAN

VFR - Visual Flight Rules
IFR - Instrument Flight Rules
DVFR - Defense Visual Flight Rules

MISCELLANEOUS

EST - Estimated
FAA - Federal Aviation Administration
FAR - Federal Aviation Regulations
NA - Not Available
PASSG - Passenger
UNK - Unknown

Section I

GENERAL AVIATION ACCIDENTS

ALL CATEGORIES of AIRCRAFT

TABLE 1

STATISTICAL RECAPITULATION OF ACCIDENTS
U. S. GENERAL AVIATION
ALL OPERATIONS

1967 - 1968

	1967	1968 c/
Total Accidents	6115	4968
Aircraft Involved a/	6163	5031
Injury Index		
Fatal	603	692
Serious	362	367
Minor	696	665
None	4454	3244
Injuries a/		
Fatal	1333	1399
Serious	617	665
Minor	1146	1146
None	9261	7083
Unknown	1	0
Total Aboard a/	12,298	10,260
Aircraft Damage a/		
Destroyed	1034	1137
Substantial	5087	3858
Minor/None	40	32
Not Reported	2	4
Fire After Impact a/		
Fatal Accidents	166	208
Nonfatal Accidents	100	130
Active Aircraft (Est.) b/	114,186	124,237
Hours Flown (Est.) b/	22,153,000	24,053,025
Accident Rates Per 100,000 Hours Flown		
Total	27.6	20.6
Fatal	2.7	2.9

a/ Includes all aircraft involved in collisions.

b/ Source: FAA

c/ 3 suicide/sabotage accidents are included in all computations except rates.

TABLE 2

ACCIDENTS, RATES, ACTIVE AIRCRAFT

ALL OPERATIONS

1968

	FIXED-WING			Balloon/ Blimp	Rotorcraft
	Single-Engine	Multi-Engine	Glider		
ACCIDENTS.....	4165 c/	498	63	1	250
AIRCRAFT INVOLVED a/..	4209	498	65	1	250
INJURY INDEX					
Fatal.....	555	100	5	1	35
Serious.....	301	22	18	0	26
Minor.....	580	30	12	0	43
None.....	2729	346	28	0	146
ACTIVE AIRCRAFT (est) b/	103,807	16,760	1272	48	2350
AIRCRAFT DAMAGE a/					
Destroyed.....	924	130	12	0	70
Substantial.....	3263	362	51	1	178
Minor/None.....	20	4	1	0	1
Unknown/Not Reported	2	2	1	0	1
HOURS FLOWN (est) b/..	18,987,950	4,326,982	116,892	4234	616,967
ACCIDENT RATES PER 100,000 HOURS FLOWN					
Total.....	21.92	11.51	53.90	23.62	40.52
Fatal.....	2.91	2.31	4.28	23.62	5.67

a/ Excludes 3 U. S. Air Carrier aircraft, 3 military aircraft, and 2 foreign aircraft involved in collisions.

b/ Source: FAA

c/ 3 suicide/sabotage accidents included in all computations except rates.

TYPE OF AIRCRAFT INVOLVED IN ACCIDENTS

TABLE 3

TYPE OF AIRCRAFT INVOLVED IN ACCIDENTS
INJURY INDEX, DAMAGE, FIRE AFTER IMPACT
ALL OPERATIONS
1968

	SMALL FIXED-WING			LARGE FIXED-WING		Rotor	Balloon
	Single Engine	Multi-Engine	Glider	Single Engine	Multi-Engine		
ACCIDENTS	4164	457	63	1	41	250	1
AIRCRAFT INVOLVED [a]	4208	457	65	1	41	250	1
INJURY INDEX							
Fatal	555	93	5	0	7	35	1
Serious	301	20	18	0	2	26	0
Minor	580	27	12	0	3	43	0
None	2728	317	28	1	29	146	0
AIRCRAFT DAMAGE [a]							
Destroyed	923	117	12	1	13	70	0
Substantial	3263	334	51	0	28	178	1
Minor/None	20	4	1	0	0	1	0
Unknown/Not Reported	2	2	1	0	0	1	0
FIRE AFTER IMPACT							
Fatal Accidents	161	32	0	0	5	10	0
Nonfatal Accidents	89	21	0	0	4	16	0

[a] Excludes 3 U. S. Air Carrier aircraft, 3 military aircraft, and 2 foreign aircraft involved in collisions.

TABLE 4

ACCIDENTS, INJURIES, TOTAL ABOARD
BY TYPE OF AIRCRAFT
ALL OPERATIONS
1968 a/

	SMALL FIXED-WING			LARGE FIXED-WING		Rotor-craft	Balloon/ Blimp	TOTAL
	Single Engine	Multi-Engine	Glider	Single Engine	Multi-Engine			
ACCIDENTS.....	4164	457	63	1	41	250	1	-
FATALITIES								
Pilot.....	529	81	5	0	5	32	1	653
Crew.....	56	18	1	0	6	1	1	83
Passengers.....	481	122	0	0	31	13	0	647
Other.....	7	7	0	0	0	0	0	14
Total.....	1073	228	6	0	42	46	2	1397
SERIOUS INJURIES								
Pilot.....	287	19	17	0	2	21	0	346
Crew.....	15	5	0	0	2	3	0	25
Passengers.....	227	43	1	0	3	13	0	287
Other.....	2	2	1	0	1	0	0	6
Total.....	531	69	19	0	8	37	0	664
MINOR INJURIES								
Pilot.....	534	28	10	0	2	38	0	612
Crew.....	39	5	0	0	1	5	0	50
Passengers.....	388	47	3	0	9	30	0	477
Other.....	7	0	0	0	0	0	0	7
Total.....	968	80	13	0	12	73	0	1146
NO INJURIES								
Pilot.....	2858	329	33	1	32	159	0	3412
Crew.....	195	67	2	0	70	22	0	356
Passengers.....	2424	489	9	0	147	120	0	3189
Other.....	2	4	0	0	0	0	0	6
Total.....	5479	889	44	1	249	301	0	6963
TOTAL ABOARD.....	8033	1253	81	1	310	457	2	10,137

a/ Excludes the occupants of 3 U. S. Air Carrier aircraft, 3 military aircraft, and 2 foreign aircraft involved in collisions.

TABLE 5

ACCIDENTS, RATES, INJURY INDEX, AIRCRAFT DAMAGE
BY KIND OF FLYING
ALL OPERATIONS [a]
1968

	KIND OF FLYING											
		NONCOMMERCIAL				COMMERCIAL						
							AIR TAXI					
							SCHEDULED		NONSCHEDULED			
	INSTRUCTIONAL	PLEASURE [d]	BUSINESS	CORPORATE	ALL OTHER [d]	AERIAL APPLICATION	PASSG.	CARGO	PASSG.	CARGO	ALL OTHER	MISCELLANEOUS [d]
ACCIDENTS	993	2291	586	95	148	367	21	15	121 [c]	19	106	241
HOURS FLOWN (THOUSANDS OF HOURS) [b]	6,549	7,405	5,168		NA	1,282	1999				NA	NA
Accident Rates Per 100,000 Hours												
Total Accidents	15.16	30.93	13.18		NA	28.63	8.80				NA	NA
Fatal Accidents	.99	5.17	1.84		NA	3.04	2.25				NA	NA
ACCIDENT INJURY INDEX												
Fatal	65	384	77	18	11	39	5	4	32	4	18	45
Serious	46	175	38	3	9	41	1	2	15	3	11	24
Minor	118	343	57	6	15	61	1	1	14	1	21	32
None	764	1389	414	68	113	226	14	8	60	11	56	140
Unknown/Not Reported	0	0	0	0	0	0	0	0	0	0	0	0
AIRCRAFT DAMAGE												
Destroyed	134	560	122	24	21	113	7	7	41	7	34	66
Substantial	859	1724	461	70	128	254	14	8	80	12	72	174
Minor	4	3	1	1	1	1	0	0	0	0	2	1
None	0	10	2	0	0	1	0	0	0	0	0	0
Unknown/Not Reported	0	3	0	0	0	0	0	0	1	0	0	0
Total	997	2300	586	95	150	369	21	15	122	19	108	241

a/ Excludes 3 U. S. Air Carrier aircraft, 3 military aircraft, and 2 foreign aircraft involved in collisions.

b/ Source: FAA

c/ Includes 3 accidents by air taxi operators during ferry to or from an air taxi (FAR, Part 135) operation.

d/ One suicide/sabotage accident is included in all computations except rates.

TABLE 6

ACCIDENTS, INJURIES BY KIND OF FLYING

ALL OPERATIONS

1968 a/

	KIND OF FLYING												
		NONCOMMERCIAL				COMMERCIAL							
							AIR TAXI						
							SCHEDULED		NONSCHEDULED				
	INSTRUCTIONAL	PLEASURE	BUSINESS	CORPORATE	ALL OTHER	AERIAL APPLICATION	PASSG.	CARGO	PASSG.	CARGO	ALL OTHER	MISCELLANEOUS	TOTAL
Accidents.....	993	2291	586	95	148	367	21	15	121 b/	19	106	241	-
Fatalities													
Pilot.....	61	360	71	14	11	38	5	4	26	4	16	43	653
Crew.....	28	27	1	4	2	0	2	2	3	0	4	10	83
Passengers....	4	452	61	18	2	0	11	0	47	1	31	20	647
Other.....	0	6	0	0	0	3	0	0	4	0	1	0	14
Total.....	93	845	133	40	15	41	18	6	80	5	52	73	1397
Serious Injuries													
Pilot.....	45	164	39	2	8	40	0	2	13	2	8	23	346
Crew.....	14	3	2	2	0	0	0	1	0	3	0	0	25
Passengers....	3	174	28	8	3	0	4	0	39	3	13	12	287
Other.....	1	4	0	0	0	1	0	0	0	0	0	0	6
Total.....	63	345	69	12	11	41	4	3	52	8	21	35	664
Minor Injuries													
Pilot.....	108	306	49	7	14	61	2	1	16	2	17	29	612
Crew.....	40	2	0	1	0	0	1	0	0	0	0	6	50
Passengers....	6	313	44	9	3	2	3	1	43	3	29	21	477
Other.....	1	5	1	0	0	0	0	0	0	0	0	0	7
Total.....	155	626	94	17	17	63	6	2	59	5	46	56	1146
No Injuries													
Pilot.....	783	1472	427	72	115	230	14	8	67	11	67	146	3412
Crew.....	220	5	4	27	6	3	6	4	10	4	24	43	356
Passengers....	61	2053	374	151	70	6	33	0	185	1	174	81	3189
Other.....	2	1	0	0	0	0	0	0	2	0	0	1	6
Total.....	1066	3531	805	250	191	239	53	12	264	16	265	272	6963
Total Aboard....	1373	5331	1100	315	234	380	81	23	449	34	383	434	10137

a/ Excludes occupants of 3 U. S. Air Carrier aircraft, 3 military aircraft, and 2 foreign aircraft involved in collisions.

b/ Includes 3 accidents by air taxi operators during ferry to or from an air taxi (FAR, Part 135) operation.

TABLE 7

CAUSE/FACTOR TABLE

KIND OF FLYING
INSTRUCTIONAL
U. S. GENERAL AVIATION

1968

INVOLVES 984 TOTAL ACCIDENTS
INVOLVES 60 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	43 71.67	8 13.33	46 76.67	835 90.37	87 9.42	839 90.80	878 89.23	95 9.65	885 89.94
PERSONNEL	12 20.00	1 1.67	12 20.00	61 6.60	21 2.27	80 8.66	73 7.42	22 2.24	92 9.35
AIRFRAME	.00	.00	.00	8 .87	.00	8 .87	8 .81	.00	8 .81
LANDING GEAR	.00	.00	.00	26 2.81	7 .76	31 3.35	26 2.64	7 .71	31 3.15
POWERPLANT	2 3.33	.00	2 3.33	53 5.74	1 .11	54 5.84	55 5.59	1 .10	56 5.69
SYSTEMS	2 3.33	.00	2 3.33	5 .54	2 .22	7 .76	7 .71	2 .20	9 .91
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	.00	.00	.00	1 .11	.00	1 .11	1 .10	.00	1 .10
ROTORCRAFT	.00	.00	.00	3 .32	.00	3 .32	3 .30	.00	3 .30
AIRPORTS/AIRWAYS/FACILITIES	.00	2 3.33	2 3.33	11 1.19	43 4.65	54 5.84	11 1.12	45 4.57	56 5.69
WEATHER	2 3.33	8 13.33	10 16.67	64 6.93	122 13.20	184 19.91	66 6.71	130 13.21	194 19.72
TERRAIN	.00	1 1.67	1 1.67	25 2.71	57 6.17	82 8.87	25 2.54	58 5.89	83 8.43
MISCELLANEOUS	2 3.33	.00	2 3.33	17 1.84	2 .22	19 2.06	19 1.93	2 .20	21 2.13
UNDETERMINED	9 15.00	.00	9 15.00	.00	.00	.00	9 .91	.00	9 .91

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

TABLE 8

CAUSE/FACTOR TABLE

KIND OF FLYING
NONCOMMERCIAL - PLEASURE
U. S. GENERAL AVIATION

1968

INVOLVES 2246 TOTAL ACCIDENTS
INVOLVES 356 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	303 85.11	32 8.99	304 85.39	1619 85.66	153 8.10	1622 85.82	1922 85.57	185 8.24	1926 85.75
PERSONNEL	23 6.46	6 1.69	29 8.15	107 5.66	30 1.59	136 7.20	130 5.79	36 1.60	165 7.35
AIRFRAME	5 1.40	1 .28	6 1.69	7 .37	2 .11	9 .48	12 .53	3 .13	15 .67
LANDING GEAR	.00	1 .28	1 .28	82 4.34	24 1.27	105 5.56	82 3.65	25 1.11	106 4.72
POWERPLANT	13 3.65	1 .28	14 3.93	164 8.68	16 .85	180 9.52	177 7.88	17 .76	194 8.64
SYSTEMS	.00	.00	.00	13 .69	3 .16	16 .85	13 .58	3 .13	16 .71
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	.00	.00	.00	2 .11	4 .21	6 .32	2 .09	4 .18	6 .27
ROTORCRAFT	2 .56	.00	2 .56	3 .16	.00	3 .16	5 .22	.00	5 .22
AIRPORTS/AIRWAYS/FACILITIES	.00	7 1.97	7 1.97	29 1.53	151 7.99	179 9.47	29 1.29	158 7.03	186 8.28
WEATHER	40 11.24	96 26.97	136 38.20	135 7.14	217 11.48	349 18.47	175 7.79	313 13.94	485 21.59
TERRAIN	3 .84	19 5.34	22 6.18	54 2.86	158 8.36	211 11.16	57 2.54	177 7.88	233 10.37
MISCELLANEOUS	6 1.69	1 .28	7 1.97	53 2.80	7 .37	60 3.17	59 2.63	8 .36	67 2.98
UNDETERMINED	36 10.11	.00	36 10.11	19 1.01	.00	19 1.01	55 2.45	.00	55 2.45

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

TABLE 9

CAUSE/FACTOR TABLE

KIND OF FLYING

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT
OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

TABLE 9

CAUSE/FACTOR TABLE

KIND OF FLYING
NONCOMMERCIAL - BUSINESS
U. S. GENERAL AVIATION

1968

INVOLVES 577 TOTAL ACCIDENTS
INVOLVES 76 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	66 86.84	4 5.26	66 86.84	401 80.04	27 5.39	401 80.04	467 80.94	31 5.37	467 80.94
PERSONNEL	3 3.95	1 1.32	4 5.26	31 6.19	3 .60	33 6.59	34 5.89	4 .69	37 6.41
AIRFRAME	2 2.63	.00	2 2.63	3 .60	.00	3 .60	5 .87	.00	5 .87
LANDING GEAR	.00	.00	.00	45 8.98	15 2.99	60 11.98	45 7.80	15 2.60	60 10.40
POWERPLANT	5 6.58	.00	5 6.58	36 7.19	1 .20	37 7.39	41 7.11	1 .17	42 7.28
SYSTEMS	.00	.00	.00	3 .60	2 .40	5 1.00	3 .52	2 .35	5 .87
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	.00	.00	.00	1 .20	.00	1 .20	1 .17	.00	1 .17
ROTORCRAFT	1 1.32	.00	1 1.32	3 .60	.00	3 .60	4 .69	.00	4 .69
AIRPORTS/AIRWAYS/FACILITIES	.00	2 2.63	2 2.63	8 1.60	43 8.58	51 10.18	8 1.39	45 7.80	53 9.19
WEATHER	10 13.16	25 32.89	35 46.05	47 9.38	70 13.97	116 23.15	57 9.88	95 16.46	151 26.17
TERRAIN	.00	.00	.00	13 2.59	38 7.58	51 10.18	13 2.25	38 6.59	51 8.84
MISCELLANEOUS	1 1.32	.00	1 1.32	9 1.80	1 .20	10 2.00	10 1.73	1 .17	11 1.91
UNDETERMINED	9 11.84	.00	9 11.84	7 1.40	.00	7 1.40	16 2.77	.00	16 2.77

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT
OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

TABLE 10

CAUSE/FACTOR TABLE

KIND OF FLYING
NONCOMMERCIAL - CORPORATE/EXECUTIVE
U. S. GENERAL AVIATION

1968

INVOLVES 88 TOTAL ACCIDENTS
INVOLVES 15 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	13 86.67	3 20.00	13 86.67	54 73.97	4 5.48	54 73.97	67 76.14	7 7.95	67 76.14
PERSONNEL	3 20.00	.00	3 20.00	9 12.33	2 2.74	11 15.07	12 13.64	2 2.27	14 15.91
AIRFRAME	1 6.67	.00	1 6.67	.00	.00	.00	1 1.14	.00	1 1.14
LANDING GEAR	.00	.00	.00	13 17.81	4 5.48	17 23.29	13 14.77	4 4.55	17 19.32
POWERPLANT	.00	.00	.00	6 8.22	1 1.37	7 9.59	6 6.82	1 1.14	7 7.95
SYSTEMS	.00	.00	.00	.00	2 2.74	2 2.74	.00	2 2.27	2 2.27
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	.00	2 13.33	2 13.33	.00	.00	.00	.00	2 2.27	2 2.27
ROTORCRAFT	.00	.00	.00	.00	.00	.00	.00	.00	.00
AIRPORTS/AIRWAYS/FACILITIES	.00	1 6.67	1 6.67	.00	7 9.59	7 9.59	.00	8 9.09	8 9.09
WEATHER	3 20.00	5 33.33	8 53.33	4 5.48	8 10.96	12 16.44	7 7.95	13 14.77	20 22.73
TERRAIN	.00	2 13.33	2 13.33	1 1.37	1 1.37	2 2.74	1 1.14	3 3.41	4 4.55
MISCELLANEOUS	.00	.00	.00	2 2.74	.00	2 2.74	2 2.27	.00	2 2.27
UNDETERMINED	.00	.00	.00	1 1.37	.00	1 1.37	1 1.14	.00	1 1.14

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

TABLE 11

CAUSE/FACTOR TABLE

KIND OF FLYING
COMMERCIAL - AERIAL APPLICATION
U. S. GENERAL AVIATION

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

TABLE 11

CAUSE/FACTOR TABLE

KIND OF FLYING
COMMERCIAL - AERIAL APPLICATION
U. S. GENERAL AVIATION

1968

INVOLVES 367 TOTAL ACCIDENTS
INVOLVES 39 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	33 84.62	2 5.13	33 84.62	266 81.10	16 4.88	266 81.10	299 81.47	18 4.90	299 81.47
PERSONNEL	3 7.69	 .00	3 7.69	17 5.18	3 .91	20 6.10	20 5.45	3 .82	23 6.27
AIRFRAME	 .00	 .00	 .00	1 .30	 .00	1 .30	1 .27	 .00	1 .27
LANDING GEAR	 .00	 .00	 .00	4 1.22	1 .30	5 1.52	4 1.09	1 .27	5 1.36
POWERPLANT	1 2.56	 .00	1 2.56	56 17.07	4 1.22	60 18.29	57 15.53	4 1.09	61 16.62
SYSTEMS	 .00	 .00	 .00	1 .30	 .00	1 .30	1 .27	 .00	1 .27
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	 .00	 .00	 .00	1 .30	2 .61	3 .91	1 .27	2 .54	3 .82
ROTORCRAFT	1 2.56	 .00	1 2.56	3 .91	 .00	3 .91	4 1.09	 .00	4 1.09
AIRPORTS/AIRWAYS/FACILITIES	 .00	 .00	 .00	2 .61	14 4.27	16 4.88	2 .54	14 3.81	16 4.36
WEATHER	 .00	4 10.26	4 10.26	9 2.74	51 15.55	59 17.99	9 2.45	55 14.99	63 17.17
TERRAIN	1 2.56	3 7.69	4 10.26	9 2.74	31 9.45	40 12.20	10 2.72	34 9.26	44 11.99
MISCELLANEOUS	1 2.56	 .00	1 2.56	11 3.35	 .00	11 3.35	12 3.27	 .00	12 3.27
UNDETERMINED	5 12.82	 .00	5 12.82	1 .30	 .00	1 .30	6 1.63	 .00	6 1.63

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED)

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

TABLE 12

CAUSE/FACTOR TABLE

KIND OF FLYING
COMMERCIAL - AIR TAXI
U. S. GENERAL AVIATION

1968

INVOLVES 168 TOTAL ACCIDENTS
INVOLVES 40 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	26 65.00	1 2.50	26 65.00	89 69.53	12 9.38	89 69.53	115 68.45	13 7.74	115 68.45
PERSONNEL	3 7.50	1 2.50	4 10.00	14 10.94	5 3.91	17 13.28	17 10.12	6 3.57	21 12.50
AIRFRAME	.00	.00	.00	1 .78	.00	1 .78	1 .60	.00	1 .60
LANDING GEAR	.00	.00	.00	5 3.91	2 1.56	7 5.47	5 2.98	2 1.19	7 4.17
POWERPLANT	3 7.50	.00	3 7.50	24 18.75	1 .78	25 19.53	27 16.07	1 .60	28 16.67
SYSTEMS	.00	.00	.00	.00	.00	.00	.00	.00	.00
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	1 2.50	2 5.00	3 7.50	.00	1 .78	1 .78	1 .60	3 1.79	4 2.38
ROTORCRAFT	.00	.00	.00	3 2.34	.00	3 2.34	3 1.79	.00	3 1.79
AIRPORTS/AIRWAYS/FACILITIES	.00	1 2.50	1 2.50	5 3.91	13 10.16	18 14.06	5 2.98	14 8.33	19 11.31
WEATHER	3 7.50	16 40.00	19 47.50	6 4.69	22 17.19	28 21.88	9 5.36	38 22.62	47 27.98
TERRAIN	1 2.50	4 10.00	5 12.50	7 5.47	11 8.59	18 14.06	8 4.76	15 8.93	23 13.69
MISCELLANEOUS	.00	1 2.50	1 2.50	9 7.03	1 .78	10 7.81	9 5.36	2 1.19	11 6.55
UNDETERMINED	12 30.00	.00	12 30.00	4 3.13	.00	4 3.13	16 9.52	.00	16 9.52

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

TABLE 13

I	
ALABAMA...	
ALASKA....	
ARIZONA...	
ARKANSAS.	
CALIFORNI	
COLORADO.	
CONNECTICU	
DELAWARE.	
DISTRICT	
FLORIDA..	
GEORGIA..	
HAWAII...	
IDAHO....	
ILLINOIS.	
INDIANA..	
IOWA.....	
KANSAS...	
KENTUCKY.	
LOUISIANA	
MAINE....	
MARYLAND.	
MASSACHUS	
MICHIGAN	
MINNESOTA	
MISSISSI	
MISSOURI	
MONTANA.	
NEBRASKA	
NEVADA..	
NEW HAMP	
NEW JERS	
NEW MEXI	
NEW YORK	
NORTH CA	
NORTH DA	
OHIO....	
OKLAHOMA	
OREGON..	
PENNSYLV	
RHODE IS	
SOUTH CA	
SOUTH DA	
TENNESS	
TEXAS...	
UTAH....	
VERMONT	
VIRGINI	
WASHING	
WEST VI	
WISCONS	
WYOMING	
U. S. T	
OUTSIDE	
UNKNOWN	
GRA	

a/ In

TABLE 13

LOCATION OF ACCIDENTS BY STATES

ALL OPERATIONS
1968

LOCATION	ACCIDENTS	INJURY INDEX				AIRCRAFT DAMAGE a/			
		Fatal	Serious	Minor None	Unk.	Dest.	Subst.	Minor None	Unk/Not Reported
ALABAMA	67	6	7	54	0	11	57	1	0
ALASKA	161	26	16	119	0	34	124	2	2
ARIZONA	107	14	6	87	0	26	81	0	0
ARKANSAS	70	8	4	58	0	16	54	0	0
CALIFORNIA	644	95	53	496	0	158	493	5	0
COLORADO	125	20	13	92	0	31	98	1	0
CONNECTICUT	34	6	4	24	0	9	26	0	0
DELAWARE	5	0	0	5	0	0	5	0	0
DISTRICT OF COLUMBIA	2	0	0	2	0	0	2	0	0
FLORIDA	197	22	15	160	0	42	158	1	0
GEORGIA	97	20	14	63	0	36	61	1	0
HAWAII	18	3	1	14	0	7	11	1	0
IDAHO	63	10	2	51	0	14	49	0	0
ILLINOIS	189	14	17	158	0	26	161	2	1
INDIANA	101	11	7	83	0	19	83	0	0
IOWA	85	6	5	74	0	13	72	0	0
KANSAS	108	12	9	87	0	20	87	2	0
KENTUCKY	54	3	6	45	0	17	37	0	0
LOUISIANA	98	6	6	86	0	12	86	0	0
MAINE	35	3	2	30	0	5	30	0	0
MARYLAND	49	7	2	40	0	19	29	1	0
MASSACHUSETTS	65	10	3	52	0	14	52	0	0
MICHIGAN	167	14	11	142	0	28	141	0	0
MINNESOTA	91	9	2	80	0	15	77	1	0
MISSISSIPPI	49	8	9	32	0	17	33	0	0
MISSOURI	95	13	9	73	0	24	73	1	0
MONTANA	58	9	2	47	0	10	48	0	0
NEBRASKA	79	6	5	68	0	12	68	0	0
NEVADA	45	14	2	29	0	15	31	1	0
NEW HAMPSHIRE	18	3	2	13	0	4	14	0	0
NEW JERSEY	55	9	6	40	0	16	39	1	0
NEW MEXICO	98	7	10	81	0	12	86	1	0
NEW YORK	168	22	11	135	0	40	130	0	0
NORTH CAROLINA	83	15	8	60	0	19	63	1	0
NORTH DAKOTA	50	2	3	45	0	8	43	0	0
OHIO	179	24	8	147	0	41	141	0	0
OKLAHOMA	100	14	5	81	0	20	80	1	0
OREGON	83	18	5	60	0	32	50	1	0
PENNSYLVANIA	149	25	15	109	0	37	112	0	0
RHODE ISLAND	7	2	0	5	0	1	6	1	0
SOUTH CAROLINA	59	8	2	49	0	13	46	0	0
SOUTH DAKOTA	38	7	2	29	0	9	29	0	0
TENNESSEE	48	4	6	38	0	10	39	0	0
TEXAS	347	49	28	270	0	78	269	3	0
UTAH	42	6	2	34	0	8	34	0	0
VERMONT	14	2	1	11	0	5	9	0	0
VIRGINIA	86	11	4	71	0	19	68	0	0
WASHINGTON	117	24	6	87	0	30	88	2	0
WEST VIRGINIA	27	6	3	18	0	8	18	1	0
WISCONSIN	78	12	2	64	0	20	59	0	0
WYOMING	47	12	2	33	0	15	34	0	0
U. S. TERR./POSSESSIONS	24	3	2	19	0	8	16	0	0
OUTSIDE U. S. A.	77	16	2	59	0	19	50	0	0
UNKNOWN	16	16	0	0	0	15	0	0	1
GRAND TOTAL	4968	692	367	3909	0	1137	3858	32	4

a/ Includes all aircraft involved in collisions.

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

SELECTED ACCIDENT DATA

ALL OPERATIONS

1968 a/

TABLE 14

PILOT AGE	ACCIDENT RECORDS TOTAL	FATAL	NONFATAL
Under 20 years	137	13	124
20-24	537	68	469
25-29	748	101	647
30-34	753	80	673
35-39	745	111	634
40-44	785	128	657
45-49	647	109	538
50-54	355	49	306
55-59	180	30	150
60-64	75	16	59
65-70	34	1	33
Over 70	8	2	6
Unknown/Not Reported	27	8	19
Total	5031	716	4315

TABLE 15

PILOT CERTIFICATE			
Student	828	69	759
Private	2251	344	1907
Commercial	1744	257	1487
Airline Transport	151	27	124
Other	3	2	1
None	35	10	25
Unknown/Not Reported	19	7	12
Total	5031	716	4315

TABLE 16

TOTAL PILOT TIME			
0- 25 Hours	286	17	269
26- 50 Hours	336	25	311
51- 100 Hours	563	50	513
101- 300 Hours	999	129	870
301- 500 Hours	483	77	406
501- 1000 Hours	559	87	472
1001- 3000 Hours	821	115	706
3001- 5000 Hours	325	50	275
5001- 8000 Hours	233	40	193
8001-10,000 Hours	91	19	72
Over-10,000 Hours	229	42	187
Unknown/Not Reported	106	65	41
Total	5031	716	4315

TABLE 17

PILOT TIME IN TYPE AIRCRAFT			
5- Or less Hours	344	41	303
6- 25 Hours	1077	95	982
26- 50 Hours	733	85	648
51- 100 Hours	725	77	648
101- 300 Hours	947	139	808
301- 500 Hours	337	49	288
501- 1000 Hours	299	39	260
1001- 2000 Hours	183	16	167
2001- 3000 Hours	56	4	52
Over- 3000 Hours	96	12	84
Unknown/Not Reported	234	159	75
Total	5031	716	4315

a/ Includes Pilot information for all aircraft involved in collisions.

SELECTED ACCIDENT DATA

ALL OPERATIONS

1968

TABLE 18

TYPE OF FLIGHT PLAN a/	ACCIDENT RECORDS TOTAL	FATAL	NONFATAL
None	4258	524	3734
VFR	547	97	450
IFR	123	35	88
Controlled VFR	5	4	1
IFR (VFR Conditions on Top)	0	0	0
Tower En Route	0	0	0
DVFR	5	0	5
VFR Flight Following	5	1	4
Special VFR	11	7	4
Unknown/Not Reported	77	48	29
Total	5031	716	4315

TABLE 19

TYPE OF AIRCRAFT POWER b/	ACCIDENT RECORDS TOTAL	FATAL	NONFATAL
Reciprocating Engine	4900	690	4210
Turbojet Engine	12	2	10
Turboprop Engine	24	7	17
Turbofan Engine	4	1	3
Turboshaft Engine	21	6	15
None	62	6	56
Total	5023	712	4311

a/ Includes records of all aircraft involved in collisions.

b/ Excludes 3 U. S. Air Carrier aircraft, 3 military aircraft, and 2 foreign aircraft involved in collisions.

SELECTED ACCIDENT DATA

ALL OPERATIONS

1968

TABLE 20

MONTH OF OCCURRENCE	ACCIDENTS TOTAL	FATAL	NONFATAL
January	313	38	275
February	342	42	300
March	383	48	335
April	440	45	395
May	447	62	385
June	499	64	435
July	578	81	497
August	572	76	496
September	432	67	365
October	365	68	297
November	332	52	280
December	265	49	216
Total	4968	692	4276

TABLE 21

TIME OF OCCURRENCE	ACCIDENTS TOTAL	FATAL	NONFATAL
0100-0159	27	13	14
0200-0259	20	8	12
0300-0359	11	5	6
0400-0459	25	9	16
0500-0559	29	4	25
0600-0659	88	9	79
0700-0759	149	26	123
0800-0859	201	29	172
0900-0959	300	32	268
1000-1059	322	29	303
1100-1159	371	37	334
1200-1259	374	36	338
1300-1359	406	43	363
1400-1459	463	60	403
1500-1559	427	56	371
1600-1659	485	49	436
1700-1759	429	58	371
1800-1859	308	36	272
1900-1959	174	31	143
2000-2059	129	26	103
2100-2159	57	15	42
2200-2259	51	16	35
2300-2359	23	8	15
0000-0059	39	16	23
Unknown/Not Reported	50	41	9
Total	4968	692	4276

SELECTED ACCIDENT DATA

ALL OPERATIONS

1968

TABLE 22

CONDITIONS OF LIGHT	ACCIDENTS TOTAL	FATAL	NONFATAL
Dawn	18	5	13
Daylight	4270	478	3792
Dusk (twilight)	191	34	157
Night (dark)	437	153	284
Night (moonlight-bright)	30	5	25
Unknown/Not Reported	22	17	5
Total	4968	692	4276

TABLE 23

TYPE OF WEATHER CONDITIONS	ACCIDENTS TOTAL	FATAL	NONFATAL
VFR	4626	492	4134
IFR	288	171	117
Below Minimums	8	3	5
Unknown/Not Reported	46	26	20
Total	4968	692	4276

TABLE 24

AIRPORT PROXIMITY	ACCIDENTS TOTAL	FATAL	NONFATAL
On Airport	2538	65	2473
On Seaplane Base	6	1	5
On Heliport	11	1	10
On Barge, Ship/Platform(rotor only)	1	0	1
In Traffic Pattern	602	105	497
Within 1/4 Mile	57	21	36
Within 1/2 Mile	39	9	30
Within 3/4 Mile	20	10	10
Within 1 Mile	62	20	42
Within 2 Miles	151	40	111
Within 3 Miles	119	36	83
Within 4 Miles	72	24	48
Within 5 Miles	25	5	20
Beyond 5 Miles	1211	329	882
Unknown/Not Reported	54	26	28
Total	4968	692	4276

COLLISIONS BETWEEN AIRCRAFT

U. S. GENERAL AVIATION

1968

TABLE 25

Total Collisions
By Type of Aircraft

	Injury Index				Total
	Fatal	Serious	Minor	None	Collisions
SFW - SE vs SFW - SE.....	16	1	7	20	44
SFW - SE vs SFW - ME.....	3	0	0	4	7
SFW - SE vs Air Carrier.....	2	0	0	0	2
SFW - ME vs Air Carrier.....	0	0	0	1	1
SFW - SE vs Military.....	1	0	1	1	3
SFW - SE vs Rotorcraft.....	0	0	0	1	1
SFW - SE vs LFW.....	1	0	0	0	1
SFW - SE vs Foreign.....	0	0	0	1	1
SFW - ME vs Foreign.....	1	0	0	0	1
Glider vs Glider.....	0	0	1	1	2
TOTAL.....	24	1	9	29	63

TABLE 26

Conditions of Light

	Injury Index				
	Fatal	Serious	Minor	None	Total
Dawn.....	0	0	0	0	0
Daylight.....	23	1	8	26	58
Dusk.....	1	0	1	2	4
Night.....	0	0	0	1	1

TABLE 27

Airport Proximity

	Injury Index				
	Fatal	Serious	Minor	None	Total
On Airport.....	2	0	6	24	32
Traffic Pattern.....	6	1	1	4	12
Within $\frac{1}{4}$ Mile.....	0	0	0	0	0
Within $\frac{1}{2}$ Mile.....	0	0	0	0	0
Within 1 Mile.....	0	0	0	0	0
Within 2 Miles.....	3	0	1	0	4
Within 3 Miles.....	2	0	1	0	3
Within 4 Miles.....	1	0	0	0	1
Within 5 Miles.....	1	0	0	0	1
Beyond 5 Miles.....	9	0	0	1	10

TABLE 28

Total Aircr
By Type

Single Engi
Multi-Engi
LFW.....
Air Carrie
Rotorcraft
Military..
Glider....
Foreign...
TOTAL..

TABLE 29

Total Airc
By Type

None.....
VFR.....
IFR.....
Unknown/N

TABLE 30

Type of W

VFR.....
IFR.....

COLLISIONS BETWEEN AIRCRAFT

U. S. GENERAL AVIATION

1968

TABLE 28

Total Aircraft Involved
By Type of Aircraft

	Aircraft Damage				Total
	Destroyed	Substantial	Minor	None	Aircraft
Single Engine - SFW.....	42	53	8	0	103
Multi-Engine - SFW.....	2	7	0	0	9
LFW.....	0	1	0	0	1
Air Carrier.....	0	1	2	0	3
Rotorcraft.....	0	1	0	0	1
Military.....	0	1	2	0	3
Glider.....	1	3	0	0	4
Foreign.....	1	1	0	0	2
TOTAL.....	46	68	12	0	126

TABLE 29

Total Aircraft Involved
By Type of Flight Plan

	Injury Index				Total
	Fatal	Serious	Minor	None	Aircraft
None.....	39	2	17	54	112
VFR.....	5	0	0	1	6
IFR.....	1	0	0	1	2
Unknown/Not Reported.....	3	0	1	2	6

TABLE 30

Type of Weather Conditions

	Injury Index				
	Fatal	Serious	Minor	None	Total
VFR.....	24	1	9	29	63
IFR.....	0	0	0	0	0

TABLE 31

COLLISIONS BETWEEN AIRCRAFT
U. S. GENERAL AVIATION
1968

Time of Occurrence (Local Standard Time)	Injury Index				
	Fatal	Serious	Minor	None	Total
0100-0159.....	0	0	0	0	0
0200-0259.....	0	0	0	0	0
0300-0359.....	0	0	0	0	0
0400-0459.....	0	0	0	0	0
0500-0559.....	0	0	0	0	0
0600-0659.....	1	0	1	1	3
0700-0759.....	0	0	0	3	3
0800-0859.....	2	0	0	1	3
0900-0959.....	2	0	0	1	3
1000-1059.....	2	0	1	2	5
1100-1159.....	2	0	1	1	4
1200-1259.....	1	0	1	1	3
1300-1359.....	1	0	0	2	3
1400-1459.....	4	0	2	1	7
1500-1559.....	2	0	0	4	6
1600-1659.....	2	0	1	3	6
1700-1759.....	4	0	1	6	11
1800-1859.....	0	0	0	1	1
1900-1959.....	1	1	0	1	3
2000-2059.....	0	0	1	0	1
2100-2159.....	0	0	0	0	0
2200-2259.....	0	0	0	1	1
2300-2359.....	0	0	0	0	0
2400-0059.....	0	0	0	0	0
TOTAL.....	24	1	9	29	63

TABLE 32

LO

S

Alabama ..
Alaska ...
California
Colorado .
Connecticu
Florida ..
Georgia ..
Hawaii ...
Illinois .
Indiana ..
Kansas ...
Massachus
Michigan
Minnesota
Mississip
Missouri
Nebraska
Nevada ..
New Jerse
New Mexic
New York
North Dak
Ohio ....
Oklahoma
Rhode Isl
Tennessee
Texas ...
Virginia
Washingt
Wisconsi
Wyoming

TOTA

a/Includes

TABLE 32

COLLISIONS BETWEEN AIRCRAFT
U. S. GENERAL AVIATION
1968 a/

LOCATION	TOTAL	INJURIES				AIRCRAFT DAMAGE			
		Fatal	Serious	Minor	None	Dest.	Subst.	Minor	None
State									
Alabama	2	0	0	0	4	0	3	1	0
Alaska	1	4	0	0	0	2	0	0	0
California	12	17	0	3	20	11	11	2	0
Colorado	5	0	0	1	79	0	9	1	0
Connecticut	1	0	0	0	3	0	2	0	0
Florida	4	3	3	1	11	4	3	1	0
Georgia	1	0	0	0	2	0	2	0	0
Hawaii	1	0	0	1	2	0	1	1	0
Illinois	1	0	0	0	3	0	2	0	0
Indiana	1	2	1	0	0	2	0	0	0
Kansas	1	0	0	0	3	0	1	1	0
Massachusetts	1	0	0	1	1	0	2	0	0
Michigan	2	0	0	0	10	0	4	0	0
Minnesota	2	0	0	3	8	1	3	0	0
Mississippi	1	1	0	0	1	1	1	0	0
Missouri	3	4	1	1	44	3	2	1	0
Nebraska	1	0	3	1	0	2	0	0	0
Nevada	2	5	0	0	5	1	2	1	0
New Jersey	1	0	0	0	5	0	2	0	0
New Mexico	1	0	0	0	3	0	2	0	0
New York	2	10	2	1	6	3	1	0	0
North Dakota	1	0	0	0	2	0	2	0	0
Ohio	3	5	0	0	4	3	3	0	0
Oklahoma	1	0	0	0	3	0	2	0	0
Rhode Island	1	0	0	0	3	0	1	1	0
Tennessee	1	1	0	0	1	1	1	0	0
Texas	3	0	0	3	5	2	3	1	0
Virginia	1	2	0	0	0	2	0	0	0
Washington	3	6	0	0	4	3	2	1	0
Wisconsin	1	3	1	0	10	1	1	0	0
Wyoming	2	7	2	0	0	4	0	0	0
TOTAL	63	70	13	16	242	46	68	12	0

a/Includes 3 U. S. Air Carrier aircraft, 3 military aircraft, and 2 foreign aircraft.

TABLE 33

COLLISIONS BETWEEN AIRCRAFT
U. S. GENERAL AVIATION
1968 a/

	Collisions Between Aircraft		
	Both in Flight	One Airborne	Both on Ground
ACCIDENTS			
Total	37	10	16
Fatal	23	0	1
AIRCRAFT INVOLVED	74	20	32
Fatalities			
Pilot	34	0	1
Crew	8	0	0
Passengers	27	0	0
Other	0	0	0
Total	69	0	1
Serious Injuries			
Pilot	4	0	0
Crew	1	0	1
Passengers	7	0	0
Other	0	0	0
Total	12	0	1
Minor Injuries			
Pilot	7	2	3
Crew	1	0	0
Passengers	1	1	1
Other	0	0	0
Total	9	3	4
No Injuries			
Pilot	29	18	28
Crew	15	5	5
Passengers	110	10	22
Other	0	0	0
Total	154	33	55

a/ Includes the aircraft and occupants of 3 U. S. Air Carrier aircraft, 3 military aircraft, and 2 foreign aircraft.

TABLE 34

COLLISIONS BETWEEN AIRCRAFT
BOTH AIRCRAFT AIRBORNE

TABLE 34

COLLISIONS BETWEEN AIRCRAFT
BOTH AIRCRAFT AIRBORNE

CERTIFICATE OF PILOT IN COMMAND - FIRST AIRCRAFT
VS
CERTIFICATE OF PILOT IN COMMAND - SECOND AIRCRAFT

1968

PILOT CERTIFICATE-FIRST AIRCRAFT	PILOT CERTIFICATE - SECOND AIRCRAFT						
	STUDENT	PRIVATE	COMMERCIAL	AIRLINE TRANSPORT	COMMERCIAL-WITH FLIGHT INSTRUCTOR	OTHER (FOREIGN)	UNKNOWN
Student.....	1	6	3		1		
Private.....		5	2	1	5		1
Commercial.....			4	1	3		
Airline Transport...					1		
Commercial-With Flight Instructor...				1	1	1	

TABLE 35

COLLISIONS BETWEEN AIRCRAFT
BOTH AIRCRAFT AIRBORNE
PHASE OF OPERATION - FIRST AIRCRAFT
VS
PHASE OF OPERATION - SECOND AIRCRAFT

1968

PHASE OF OPERATION FIRST AIRCRAFT	PHASE OF OPERATION-SECOND AIRCRAFT										
	TAKEOFF-INITIAL CLIMB	CLIMB TO CRUISE	CRUISE	DESCENDING TO TRAFFIC PATTERN OR PRIMARY APPROACH FACILITY	CIRCLING IN THERMAL (GLIDER)	FLYING FORMATION	SWATH RUN (AERIAL APPLICATION)	PULL UP FROM SWATH RUN (AERIAL APPLICATION)	IN TRAFFIC PATTERN	FINAL APPROACH (VFR)	LANDING-LEVEL OFF
Climb to Cruise.....		2							1		
Cruise.....	1	1	6	2					1		
Descending to Traffic Pattern or Primary Approach Facility.....				1							
Circling in Thermal-(Glider).....					1						
Flying Formation.....						1					
Enroute to Treat Crop (Aerial Application)..		1									
Starting Swath Run (Aerial Application)..							1				
Procedure Turnaround (Aerial Application)..								1			
In Traffic Pattern....			1						3	1	
Final Approach (VFR)..										8	
Landing - Level off											4

Table 36

FIRST ACCIDENT TYPE vs
U.S. GENERAL AVIATI
19

FIRST TYPE OF ACCIDENT

FIRST TYPE OF ACCIDENT	TOTAL FIRST TYPES	Ground/water loop/swerve	Dragged wingtip, pod, or float	Wheels-up landing	Wheels-down landing in water	Gear collapsed	Gear retracted	Hard landing	Nose over/down	Roll over	Overshoot	Undershoot	Collision with aircraft: Both in flight	Collision with aircraft: One airborne	Collision with aircraft: Both on ground	Collision with ground/water: Controlled	Collision with ground/water: Uncontrolled	Collided with: Wires/poles	Collided with: Trees	Collided with: Residence(s)	Collided with: Other buildings	Collided with: Fence, fenceposts	Collided with: Electronic towers	Collided with: Runway or approach lights	Collided with: Airport hazard
Ground/water loop/swerve	679				253		1	107	2									7	33		2	22		10	
Dragged wingtip, pod, or float	2				1																				
Wheels-up landing	226																								
Wheels-down landing in water	5							3																	
Gear collapsed	116	1		1				6																	
Gear retracted	103			1																					
Hard landing	418	9			290			19	5							1			2			1		1	
Nose over/down	154																								
Roll over	17																								
Overshoot	313	9			48		2	26								1		7	32	1	6	62		1	
Undershoot	211				52		3	11	2							2	2	35	29		1	18	1	2	
Collision with aircraft a/																									
Both in flight	74																								
One airborne	20																								
Both on ground	32																								
Collision with ground/water																									
Controlled	180			1	2				4																
Uncontrolled	139								2																
Collided with																									
Wires/poles	158				1		3	1											1						
Trees	120				1			1																	
Residence(s)	1																								
Other buildings	11								1																
Fence, fenceposts	72				4			1											1						
Electronic towers	5																								
Runway or approach lights	3							1																	
Airport hazard	9				3			2														2			
Animals	5				2																				
Crop	11				1																	1			
Flagman, loader	1	1																							
Ditches	39				15			3																	
Snowbank	22				12			4																	
Parked aircraft (unattended, engines not running)	34																								
Automobile	17																								
Dirt bank	18				4			2																	
Other	145	6			45			14	2								1								
Bird strike (collision with birds)	3																								
Stall	235				1																				
Spin	81																		1						
Spiral	11																								
Mush	161			1																		2			
Fire or explosion																									
In flight	14	1		1	2												1		1						
On ground	3																								
Airframe failure																									
In flight	48	1			1			1									18								
On ground	1																								
Engine tearaway	0																								
Engine failure or malfunction	913	11		42	1	186	1	70	91	13	8	19				24	8	49	131	2	4	37	1		
Propeller/rotor failure																									
Propeller	33			4	6		1	5		1							1	1	3			1			
Tail rotor	15						6		1								2								
Main rotor	11						3										5		1						
Propeller/rotor acc. to person	17																								
Jet intake/exhaust acc. to person	0																								
Propeller/jet/rotor blast	8							4																	
Turbulence	20	1			1			1									11		1						
Hail damage to aircraft	0																								
Lightning strike	0																								
Evasive maneuver	1															1									
Uncontrolled altitude deviations	0																								
Ditching	1																								
Missing aircraft, not recovered	26																								
Other/miscellaneous	45	1		2	4		8	3	7								8	1	2						
Undetermined	24																								
TOTAL SECOND ACCIDENT TYPE	2746	41	0	53	1	935	1	97	306	39	9	19	0	0	0	29	57	100	238	3	13	146	2	14	0
TOTAL FIRST ACCIDENT TYPE	5031	679	2	226	5	116	103	418	154	17	313	211	74	20	32	180	139	158	120	1	11	72	5	3	9
TOTAL TYPES	7777	720	2	279	6	1051	104	515	460	56	322	230	74	20	32	209	196	258	358	4	24	218	7	17	9

a/ Includes all aircraft involved in collisions.

ENT TYPE vs. SECOND ACCIDENT TYPE
ERAL AVIATION - ALL OPERATIONS
1968

SECOND TYPE OF ACCIDENT

Collided with

Fire or explosion

Airframe failure

	Other buildings	Fence, fenceposts	Electronic towers	Runway or approach lights	Airport hazard	Animals	Crop	Flagman, loader	Ditches	Sewerbank	Parked aircraft (unattended, engines not running)	Automobile	Dirt bank	Other	Bird strike (collision with birds)	Stall	Spin	Spiral	Mush	In flight	On ground	In flight	On ground	Engine tearaway	Engine failure or malfunction	Propeller/rotor failure	Propeller	Tail rotor	Main rotor	Propeller/rotor acc. to person	Jet intake/exhaust acc. to person	Propeller/jet/rotor blast	Turbulence	Hail damage to aircraft	Lightning strike	Evasive maneuver	Uncontrolled altitude deviations	Ditching	Missing aircraft, not recovered	Other/miscellaneous	Undetermined
	2	22		10			5		63	51	28	4	23	33		6			4																						
														1		1																									
		1		1									2	1		5			2											2											
												1																												
	6	62		1					51	3		2	23	19		12			8																						
	1	18	1	2			2		5	4		1	11	17		8			3				1																		
																1																									
												1																												
		2																				1																			
		1																																							
																1																									
		2																				1																			
												1		1										2																	
																											1										1				
	4	37	1			1	4		33		2	3	20	35		56	19	1	14	2						2											20		3	
		1										1		2		1								2																	
														1									1																		
							1							1								2																			
									1																															
	13	146	2	14	0	1	12	0	153	58	30	14	79	112	0	91	19	1	31	2	0	3	2	0	4		2	3	0	2	0	0	0	0	0	0	21	0	3	0
	11	72	5	3	9	5	11	1	39	22	34	17	18	145	3	235	81	11	161	14	3	48	1	0	913		33	15	11	17	0	8	20	0	0	1	0	1	26	45	24
	24	218	7	17	9	6	23	1	192	80	64	31	97	257	3	326	100	12	192	16	3	51	3	0	917		35	18	11	19	0	8	20	0	0	1	0	22	26	48	24

TABLE 37

TYPE OF ACCIDENT VS INJURY INDEX AND AIRCRAFT DAMAGE

ALL OPERATIONS

1968

FIRST TYPE OF ACCIDENT	INJURY INDEX						AIRCRAFT DAMAGE				
	FATAL	SERIOUS	MINOR	NONE	UNKNOWN/ NOT REPORTED	TOTAL	DESTROYED	SUBSTANTIAL	MINOR	NONE	UNKNOWN/ NOT REPORTED
Ground/waterloop/swerve	4	6	43	626	0	679	30	648	0	1	0
Dragged wingtip, pod, or float	0	0	0	2	0	2	0	2	0	0	0
Wheels-up landing	0	0	1	225	0	226	5	221	0	0	0
Wheels-down landing in water	0	0	3	2	0	5	0	5	0	0	0
Gear collapsed	0	1	9	106	0	116	2	114	0	0	0
Gear retracted	0	0	1	102	0	103	1	102	0	0	0
Hard landing	6	15	42	355	0	418	16	402	0	0	0
Nose over/down	0	1	13	140	0	154	1	153	0	0	0
Roll over	3	2	3	9	0	17	4	13	0	0	0
Overshoot	4	12	57	240	0	313	29	284	0	0	0
Undershoot	13	23	41	134	0	211	33	178	0	0	0
Collision with aircraft a/											
Both in flight	23	1	4	9	0	37	42	27	5	0	0
One airborne	0	0	3	7	0	10	1	16	3	0	0
Both on ground	1	0	2	13	0	16	3	25	4	0	0
Collision with ground/water											
Controlled	107	24	16	33	0	180	127	51	1	0	1
Uncontrolled	101	13	10	15	0	139	114	25	0	0	0
Collided with											
Wires/poles	39	27	38	54	0	158	71	87	0	0	0
Trees	43	18	14	45	0	120	73	47	0	0	0
Residence (s)	1	0	0	0	0	1	1	0	0	0	0
Other buildings	2	0	0	9	0	11	2	9	0	0	0
Fence, fenceposts	1	0	10	61	0	72	6	66	0	0	0
Electronic towers	4	0	1	0	0	5	4	1	0	0	0
Runway or approach lights	0	0	0	3	0	3	0	3	0	0	0
Airport hazard	0	0	1	8	0	9	0	9	0	0	0
Animals	0	0	0	5	0	5	0	5	0	0	0
Crop	1	1	1	8	0	11	1	10	0	0	0
Flagman, loader	1	0	0	0	0	1	0	1	0	0	0
Ditches	0	1	3	35	0	39	2	37	0	0	0
Snowbank	0	1	1	20	0	22	0	22	0	0	0
Parked aircraft (Unattended, engines not running)	0	0	4	30	0	34	1	33	0	0	0
Automobile	0	2	2	13	0	17	1	16	0	0	0
Dirt bank	1	2	3	12	0	18	5	13	0	0	0
Other	7	8	16	114	0	145	18	126	1	0	0
Bird strike (collision with birds)	0	1	0	2	0	3	0	3	0	0	0
Stall	79	53	49	54	0	235	128	107	0	0	0
Spin	61	16	3	1	0	81	69	12	0	0	0
Spiral	5	4	0	2	0	11	8	3	0	0	0
Mush	10	13	31	107	0	161	29	132	0	0	0
Fire or explosion											
In flight	3	0	1	10	0	14	7	7	0	0	0
On ground	0	0	0	3	0	3	0	3	0	0	0
Airframe failure											
In flight	32	0	6	10	0	48	34	14	0	0	0
On ground	0	0	0	1	0	1	1	0	0	0	0
Engine tearaway	0	0	0	0	0	0	0	0	0	0	0
Engine failure or malfunction	70	101	205	537	0	913	186	727	0	0	0
Propeller/rotor failure											
Propeller	1	3	6	23	0	33	7	26	0	0	0
Tail rotor	1	2	1	11	0	15	3	12	0	0	0
Main rotor	5	2	3	1	0	11	6	5	0	0	0
Propeller/rotor accident to person	8	9	0	0	0	17	0	2	4	11	0
Jet intake/exhaust accident to person	0	0	0	0	0	0	0	0	0	0	0
Propeller/jet/rotor blast	0	0	1	7	0	8	0	8	0	0	0
Turbulence	4	1	6	9	0	20	8	11	0	1	0
Hail damage to aircraft	0	0	0	0	0	0	0	0	0	0	0
Lightning strike	0	0	0	0	0	0	0	0	0	0	0
Evasive maneuver	0	0	1	0	0	1	0	1	0	0	0
Uncontrolled altitude deviations	0	0	0	0	0	0	0	0	0	0	0
Ditching	1	0	0	0	0	1	1	0	0	0	0
Missing aircraft, not recovered	26	0	0	0	0	26	23	0	0	0	3
Other/miscellaneous	4	3	10	28	0	45	13	31	1	0	0
Undetermined	20	1	0	3	0	24	21	3	0	0	0

a/ Includes all aircraft involved in collisions.

TABLE 38

CAUSE/FACTOR TABLE

U. S. GENERAL AVIATION
ALL OPERATIONS

1968

INVOLVES 4874 TOTAL ACCIDENTS
INVOLVES 643 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	531 82.58	57 8.86	534 83.05	3567 84.31	340 8.04	3576 84.52	4098 84.08	397 8.15	4110 84.32
PERSONNEL	49 7.62	8 1.24	55 8.55	281 6.64	68 1.61	341 8.06	330 6.77	76 1.56	396 8.12
AIRFRAME	11 1.71	1 .16	12 1.87	26 .61	2 .05	28 .66	37 .76	3 .06	40 .82
LANDING GEAR	 .00	1 .16	1 .16	194 4.59	56 1.32	247 5.84	194 3.98	57 1.17	248 5.09
POWERPLANT	31 4.82	1 .16	32 4.98	394 9.31	26 .61	420 9.93	425 8.72	27 .55	452 9.27
SYSTEMS	3 .47	 .00	3 .47	31 .73	9 .21	40 .95	34 .70	9 .18	43 .88
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	1 .16	4 .62	5 .78	8 .19	9 .21	17 .40	9 .18	13 .27	22 .45
ROTORCRAFT	6 .93	 .00	6 .93	31 .73	2 .05	33 .78	37 .76	2 .04	39 .80
AIRPORTS/AIRWAYS/FACILITIES	 .00	13 2.02	13 2.02	59 1.39	285 6.74	341 8.06	59 1.21	298 6.11	354 7.26
WEATHER	60 9.33	162 25.19	222 34.53	292 6.90	528 12.48	812 19.19	352 7.22	690 14.16	1034 21.21
TERRAIN	8 1.24	34 5.29	42 6.53	133 3.14	319 7.54	451 10.66	141 2.89	353 7.24	493 10.11
MISCELLANEOUS	15 2.33	2 .31	17 2.64	111 2.62	11 .26	122 2.88	126 2.59	13 .27	139 2.85
UNDETERMINED	77 11.98	 .00	77 11.98	40 .95	 .00	40 .95	117 2.40	 .00	117 2.40

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

TABLE 38 (CONTINUED)

CAUSE/FACTOR TABLE

U. S. GENERAL AVIATION
ALL OPERATIONS

1968

INVOLVES 4874 TOTAL ACCIDENTS
INVOLVES 643 FATAL ACCIDENTS

DETAILED CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
** PILOT **									
PILOT IN COMMAND									
ATTEMPTED OPERATION W/KNOWN DEFICIENCIES IN EQUIPMENT	1	3	4	11	7	18	12	10	22
ATTEMPTED OPERATION BEYOND EXPERIENCE/ABILITY LEVEL	85	10	95	64	11	75	149	21	170
BECAME LOST/DISORIENTED	12	2	14	42	19	61	54	21	75
CONTINUED VFR FLIGHT INTO ADVERSE WEATHER CONDITIONS	141		141	53	5	58	194	5	199
CONTINUED INTO KNOWN AREA OF SEVERE TURBULENCE	3		3	1		1	4		4
DELAYED ACTION IN ABORTING TAKEOFF	1		1	41	2	43	42	2	44
DELAYED IN INITIATING GO-AROUND	3		3	81	8	89	84	8	92
DIVERTED ATTENTION FROM OPERATION OF AIRCRAFT	11	6	17	44	20	64	55	26	81
EXCEEDED DESIGN STRESS LIMITS OF AIRCRAFT	17		17	6		6	23		23
FAILED TO EXTEND LANDING GEAR				96		96	96		96
FAILED TO RETRACT LANDING GEAR				4	2	6	4	2	6
RETRACTED GEAR PREMATURELY				6		6	6		6
INADVERTENTLY RETRACTED GEAR				57		57	57		57
FAILED TO SEE AND AVOID OTHER AIRCRAFT	27	1	28	48	2	50	75	3	78
FAILED TO SEE AND AVOID OBJECTS OR OBSTRUCTIONS	26		26	152	1	153	178	1	179
FAILED TO OBTAIN/MAINTAIN FLYING SPEED	165		165	379		379	544		544
MISJUDGED, SPEED, ALTITUDE OR CLEARANCE				1		1	1		1
FAILED TO MAINTAIN ADEQUATE ROTOR RPM	2		2	21		21	23		23
FAILED TO USE OR INCORRECTLY USED MISC EQUIPMENT		1	1	4	9	13	4	10	14
FAILED TO FOLLOW APPROVED PROCEDURES, DIRECTIVES ETC	4	1	5	20	8	28	24	9	33
IMPROPER OPERATION OF POWERPLANT + POWERPLANT CONTROLS	7	1	8	141	1	142	148	2	150
IMPROPER OPERATION OF BRAKES AND/OR FLIGHT CONTROLS	2		2	225	3	228	227	3	230
IMPROPER OPERATION OF FLIGHT CONTROLS	15		15	124	1	125	139	1	140
PREMATURE LIFT OFF	2		2	31		31	33		33
IMPROPER LEVEL OFF	5		5	303		303	308		308
IMPROPER IFR OPERATION	8	1	9	7		7	15	1	16
IMPROPER IN-FLIGHT DECISIONS OR PLANNING	25	2	27	55	13	68	80	15	95
IMPROPER COMPENSATION FOR WIND CONDITIONS	2		2	61		61	63		63
INADEQUATE PREFLIGHT PREPARATION AND/OR PLANNING	52	2	54	380	36	416	432	38	470
INADEQUATE SUPERVISION OF FLIGHT	5		5	149	1	150	154	1	155
LACK OF FAMILIARITY WITH AIRCRAFT	6	11	17	16	103	119	22	114	136
MISMANAGEMENT OF FUEL SYSTEM	11		11	79		79	90		90
EXERCISED POOR JUDGMENT	22	1	23	125	9	134	147	10	157
OPERATED CARELESSLY	1		1	4		4	5		5
SELECTED UNSUITABLE TERRAIN	1	4	5	263	9	272	264	13	277
IMPROPER STARTING PROCEDURES	1		1	8		8	9		9
STARTED ENGINE WITHOUT PROPER ASSISTANCE/EQUIPMENT				17		17	17		17
TAXIED/PARKED WITHOUT PROPER ASSISTANCE				14		14	14		14
FAILED TO ASSURE THE GEAR WAS DOWN AND LOCKED				68		68	68		68
CONTROL INTERFERENCE					1	1		1	1
SPONTANEOUS-IMPROPER ACTION	1		1	19		19	20		20
MISJUDGED DISTANCE, SPEED, AND ALTITUDE	1		1	28		28	29		29
MISJUDGED DISTANCE AND SPEED	3		3	299	1	300	302	1	303
MISJUDGED DISTANCE	2		2	7		7	9		9
MISJUDGED DISTANCE AND ALTITUDE	11		11	163		163	174		174
MISJUDGED SPEED AND ALTITUDE	2		2	5		5	7		7
MISJUDGED SPEED	1		1	15	4	19	16	4	20
MISJUDGED SPEED AND CLEARANCE				1		1	1		1
MISJUDGED ALTITUDE AND CLEARANCE	5		5	17		17	22		22
MISJUDGED ALTITUDE	22		22	26	4	30	48	4	52
MISJUDGED CLEARANCE	16		16	82		82	98		98
MISUNDERSTANDING OF ORDERS OR INSTRUCTIONS		1	1	2	2	4	2	3	5
IMPROPER RECOVERY FROM BOUNCED LANDING	2		2	183		183	185		185
INCAPACITATION	8		8	4		4	12		12
PHYSICAL IMPAIRMENT	34	9	43	8	1	9	42	10	52
SPATIAL DISORIENTATION	76		76	13		13	89		89
PSYCHOLOGICAL CONDITION	2		2	1	1	2	3	1	4
MISUSED OR FAILED TO USE FLAPS	3	3	6	15	41	56	18	44	62
LEFT AIRCRAFT UNATTENDED ENGINE RUNNING	1		1	2		2	3		3
FAILED TO MAINTAIN DIRECTIONAL CONTROL	3		3	264	1	265	267	1	268
SELECTED WRONG RUNWAY RELATIVE TO EXISTING WIND	1		1	53	12	65	54	12	66

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

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PILOT IN COMMAND (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
FAILED TO ABORT TAKEOFF	5		5	26	2	28	31	2	33
FAILED TO INITIATE GO-AROUND				103	15	118	103	15	118
DIRECT ENTRIES	4		4	7		7	11		11
SUBTOTAL	866	59	925	4544	355	4899	5410	414	5824
COPILOT									
FAILED TO EXTEND LANDING GEAR				1		1	1		1
FAILED TO OBTAIN/MAINTAIN FLYING SPEED				2		2	2		2
IMPROPER OPERATION OF FLIGHT CONTROLS				2		2	2		2
INADEQUATE PREFLIGHT PREPARATION AND/OR PLANNING				1		1	1		1
LACK OF FAMILIARITY WITH AIRCRAFT				1		1	1		1
CONTROL INTERFERENCE		1	1	2		2	2	1	3
SPONTANEOUS-IMPROPER ACTION				1		1	1		1
MISJUDGED DISTANCE AND ALTITUDE				1		1	1		1
FAILED TO MAINTAIN DIRECTIONAL CONTROL				1		1	1		1
SUBTOTAL		1	1	12		12	12	1	13
DUAL STUDENT									
DELAYED IN INITIATING GO-AROUND				5		5	5		5
DIVERTED ATTENTION FROM OPERATION OF AIRCRAFT				2		2	2		2
FAILED TO EXTEND LANDING GEAR				10		10	10		10
INADVERTENTLY RETRACTED GEAR				9		9	9		9
FAILED TO SEE OTHER AIRCRAFT				1		1	1		1
FAILED TO SEE AND AVOID OBJECTS OR OBSTRUCTIONS				1		1	1		1
FAILED TO OBTAIN/MAINTAIN FLYING SPEED	4		4	14		14	18		18
FAILED TO MAINTAIN ADEQUATE ROTOR RPM				2		2	2		2
IMPROPER OPERATION OF POWERPLANT + POWERPLANT CONTROLS				7		7	7		7
IMPROPER OPERATION OF BRAKES AND/OR FLIGHT CONTROLS				16		16	16		16
IMPROPER OPERATION OF FLIGHT CONTROLS	1		1	11		11	12		12
PREMATURE LIFT-OFF				2		2	2		2
IMPROPER LEVEL OFF				21		21	21		21
IMPROPER COMPENSATION FOR WIND CONDITIONS				3		3	3		3
INADEQUATE PREFLIGHT PREPARATION AND/OR PLANNING				1		1	1		1
LACK OF FAMILIARITY WITH AIRCRAFT					2	2		2	2
MISMANAGEMENT OF FUEL SYSTEM				1		1	1		1
SELECTED UNSUITABLE TERRAIN				1		1	1		1
FAILED TO ASSURE THE GEAR WAS DOWN AND LOCKED				4		4	4		4
SPONTANEOUS-IMPROPER ACTION				6		6	6		6
MISJUDGED DISTANCE, SPEED, AND ALTITUDE				3		3	3		3
MISJUDGED DISTANCE AND SPEED				10		10	10		10
MISJUDGED DISTANCE AND ALTITUDE				10		10	10		10
MISJUDGED ALTITUDE AND CLEARANCE				1		1	1		1
MISJUDGED CLEARANCE				2		2	2		2
IMPROPER RECOVERY FROM BOUNCED LANDING				4		4	4		4
MISUSED OR FAILED TO USE FLAPS				1		1	1		1
FAILED TO MAINTAIN DIRECTIONAL CONTROL				17		17	17		17
SELECTED WRONG RUNWAY RELATIVE TO EXISTING WIND				2		2	2		2
FAILED TO INITIATE GO-AROUND				3		3	3		3
SUBTOTAL	5		5	170	2	172	175	2	177
CHECK PILOT									
FAILED TO FOLLOW APPROVED PROCEDURES, DIRECTIVES, ETC				1		1	1		1
IMPROPER OPERATION OF POWERPLANT + POWERPLANT CONTROLS				1		1	1		1
IMPROPER OPERATION OF FLIGHT CONTROLS				1		1	1		1
INADEQUATE SUPERVISION OF FLIGHT	1		1	4		4	5		5
SUBTOTAL	1		1	7		7	8		8
** PERSONNEL **									
FLIGHT INSTRUCTOR									
INADEQUATE SUPERVISION OF FLIGHT				9	5	14	9	5	14
INADEQUATE TRAINING OF STUDENT				12	12	24	12	12	24
MAINTENANCE, SERVICING, INSPECTION									
IMPROPER MAINTENANCE(MAINTENANCE PERSONNEL)	4		4	21	1	22	25	1	26
IMPROPER MAINTENANCE(OWNER PERSONNEL)	2		2	9	1	10	11	1	12

PERSONNEL (CONTINU

IMPROPERLY SERV
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OTHER
OPERATIONAL SUPER
INADEQUATE FLIG
FAILURE TO PROV
WEATHER PERSONNEL
INCORRECT WEATH
INADEQUATE WEAT
INCOMPLETE WEAT
INADEQUATE/INCO
TRAFFIC CONTROL I
FAILURE TO ADV
FAILURE TO ADV
ISSUED IMPROPE
INADEQUATE SPA
FAILURE TO PRO
OTHER
AIRPORT SUPERVIS
IMPROPER MAINT
FAILURE TO NOT
IMPROPER/INADE
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IMPROPER INSPE
OTHER
AIRWAYS FACILIT
PRODUCTION-DESIG
SUBSTANDARD QU
INCORRECT FAC
POOR/INADEQUA
OTHER
MISCELLANEOUS-PI
PILOT OF OTHE
GROUND SIGNAL
SPECTATOR
GROUND CREWMA
PASSENGER
DRIVER OF VEH
OTHER
DIRECT ENTRIE
THIRD PILOT
FLIGHT ENGINEER
DISPATCHING
SUBTOTAL
** AIRFRAME **
WINGS
SPARS
WING ATTACHME
SKIN AND ATT
OTHER
FUSELAGE
SKIN AND ATT
FAIRINGS
WINDSHIELDS,
SEATS
OTHER
LANDING GEAR
MAIN GEAR-SH
NORMAL RETRA
EMERGENCY/EX
TAILWHEEL AS
NOSEWHEEL AS
WHEELS, TIRE
SKI ASSEMBLI
SKID ASSEMBL
BRAKING SYST

TABLE 38 (CONTINUED)

CAUSE/FACTOR TABLE

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
PERSONNEL (CONTINUED)	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
IMPROPERLY SERVICED AIRCRAFT(GROUND CREW)				1		1	1		1
IMPROPERLY SERVICED AIRCRAFT(OWNER-PILOT)				8		8	8		8
INADEQUATE INSPECTION OF AIRCRAFT(MAINTENANCE PERSONNEL)	1		1	2		2	3		3
INADEQUATE INSPECTION OF ACFT(OWNER-PILOT PERSONNEL)				2		2	2		2
INADEQUATE MAINTENANCE AND INSPECTION	9		9	111	14	125	120	14	134
OTHER				1		1	1		1
OPERATIONAL SUPERVISORY PERSONNEL									
INADEQUATE FLIGHT TRAINING-PROCEDURES				1	2	3	1	2	3
FAILURE TO PROVIDE ADEQ DIRECTIVES, MANUALS, EQUIPMENT					1	1		1	1
WEATHER PERSONNEL									
INCORRECT WEATHER FORECAST		2	2		2	2		4	4
INADEQUATE WEATHER OBSERVATION					1	1		1	1
INCOMPLETE WEATHER REPORT		1	1					1	1
INADEQUATE/INCORRECT WEATHER BRIEFING		1	1	1		1	1	1	2
TRAFFIC CONTROL PERSONNEL									
FAILURE TO ADVISE OF UNSAFE AIRPORT CONDITION				1		1	1		1
FAILURE TO ADVISE OF OTHER TRAFFIC				1		1	1		1
ISSUED IMPROPER OR CONFLICTING INSTRUCTIONS	1		1		2	2	1	2	3
INADEQUATE SPACING OF AIRCRAFT					3	3		3	3
FAILURE TO PROPERLY IDENTIFY AIRCRAFT ON RADAR	1		1				1		1
OTHER		2	2					2	2
AIRPORT SUPERVISORY PERSONNEL									
IMPROPER MAINTENANCE-AIRPORT FACILITIES				3	1	4	3	1	4
FAILURE TO NOTIFY OF UNSAFE CONDITION		1		6	2	8	6	3	9
IMPROPER/INADEQUATE SNOW REMOVAL				4	4	8	4	4	8
IMPROPER OPERATION OF FACILITIES					1	1		1	1
IMPROPER INSPECTION OF FACILITIES				1		1	1		1
OTHER				1	1	2	1	1	2
AIRWAYS FACILITIES PERSONNEL									
PRODUCTION-DESIGN									
SUBSTANDARD QUALITY CONTROL	1		1	2		2	3		3
INCORRECT FACTORY INSTALLATION				3		3	3		3
POOR/INADEQUATE DESIGN				7	1	8	7	1	8
OTHER				1		1	1		1
MISCELLANEOUS-PERSONNEL									
PILOT OF OTHER AIRCRAFT	31	1	32	58	11	69	89	12	101
GROUND SIGNALMAN	1		1	1	1	2	2	1	3
SPECTATOR		1	1					1	1
GROUND CREWMAN	2		2	1		1	3		3
PASSENGER	4		4	22	2	24	26	2	28
DRIVER OF VEHICLE	1		1	3	3	6	4	3	7
OTHER	2		2	7	3	10	9	3	12
DIRECT ENTRIES	1		1	4		4	5		5
THIRD PILOT									
FLIGHT ENGINEER									
DISPATCHING									
SUBTOTAL	61	9	70	304	74	378	365	83	448
** AIRFRAME **									
WINGS									
SPARS	1		1	2		2	3		3
WING ATTACHMENT FITTINGS, BOLTS				1		1	1		1
SKIN AND ATTACHMENTS				3		3	3		3
OTHER	5	1	6	1		1	6	1	7
FUSELAGE									
SKIN AND ATTACHMENTS	1		1	1		1	2		2
FAIRINGS				1		1	1		1
WINDSHIELDS, WINDOWS, CANOPIES				1	1	2	1	1	2
SEATS				2	1	3	2	1	3
OTHER	1		1	2		2	3		3
LANDING GEAR									
MAIN GEAR-SHOCK ABSORBING ASSY, STRUTS, ATTACHMENTS, ETC				12		12	12		12
NORMAL RETRACTION/EXTENSION ASSEMBLY				65	8	73	65	8	73
EMERGENCY/EXTENSION ASSEMBLY				30		30	30		30
TAILWHEEL ASSEMBLIES				3	2	5	3	2	5
NOSEWHEEL ASSEMBLIES				43	1	44	43	1	44
WHEELS, TIRES, AXLES				22	4	26	22	4	26
SKI ASSEMBLIES				2		2	2		2
SKID ASSEMBLY					1	1		1	1
BRAKING SYSTEM (NORMAL)		1	1	31	15	46	31	16	47

TABLE 38 (CONTINUED)

CAUSE/FACTOR TABLE

AIRFRAME (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
BRAKING SYSTEM (EMERGENCY)				3		3	3		3
LANDING GEAR WARNING AND INDICATING COMPONENTS					23	23		23	23
GEAR LOCKING MECHANISM				25		25	25		25
SWITCHES, LEVERS, CRANKING MECHANISM, ETC				9	5	14	9	5	14
NOSEWHEEL STEERING				1	1	2	1	1	2
OTHER				2		2	2		2
DIRECT ENTRIES				1		1	1		1
FLIGHT CONTROL SURFACES									
ELEVATOR, ASSEMBLY ATTACHMENTS				2		2	2		2
RUDDER, SURFACES ATTACHMENTS	1		1	2		2	3		3
AILERON, SURFACES ATTACHMENTS				3		3	3		3
HORIZONTAL STABILIZER, ATTACHMENTS	3		3	2		2	5		5
VERTICAL STABILIZER, ATTACHMENTS	2		2				2		2
FLAP ASSEMBLIES	1		1	1		1	2		2
SPOILERS AND SLOTS-LEADING EDGE FLAPS, SPEED BRAKES				1		1	1		1
OTHER				1		1	1		1
SUBTOTAL	15	2	17	275	62	337	290	64	354
** POWERPLANT **									
ENGINE STRUCTURE									
CRANKSHAFT				12		12	12		12
MASTER AND CONNECTING RODS	1		1	15		15	16		16
CYLINDER ASSEMBLY	1	1	2	12		12	13	1	14
PISTON, PISTON RINGS		1	1	16		16	16	1	17
VALVE ASSEMBLIES	1		1	23		23	24		24
BLOWER, IMPELLER ASSEMBLY				1		1	1		1
OTHER	2		2	9		9	11		11
IGNITION SYSTEM									
MAGNETOES	3		3	17		17	20		20
DISTRIBUTOR	1		1				1		1
SPARK PLUG	1	1	2	12	1	13	13	2	15
IGNITION HARNESS, SHIELDING				1		1	1		1
LEADS				2		2	2		2
FUEL SYSTEM									
TANKS				2		2	2		2
LINES AND FITTINGS				4		4	4		4
SELECTOR VALVES				8	1	9	8	1	9
FILTERS, STRAINERS, SCREENS	1		1	1		1	2		2
CARBURETOR	2		2	15		15	17		17
PUMPS	2		2	5		5	7		7
FUEL INJECTION SYSTEM				2	1	3	2	1	3
VENTS, DRAINS, TANK CAPS	1		1	7	2	9	8	2	10
OTHER				1		1	1		1
LUBRICATING SYSTEM									
LINES, HOSES, FITTINGS				5	1	6	5	1	6
VALVES				1		1	1		1
FILTERS, SCREENS				1		1	1		1
PUMP-PRESSURE				1		1	1		1
PUMPS-SCAVENGER				1		1	1		1
OIL COOLERS				1		1	1		1
MAGNETIC PLUGS				1		1	1		1
SEALS AND GASKETS				1		1	1		1
OTHER				1		1	1		1
COOLING SYSTEM									
OTHER				1		1	1		1
PROPELLER AND ACCESSORIES									
BLADES	1		1	18		18	19		19
HUBS				1		1	1		1
ELECTRIC PITCH CONTROL MECHANISM				1	1	2	1	1	2
HYDRAULIC PITCH CONTROL MECHANISM				5		5	5		5
GOVERNORS				1		1	1		1
OTHER				3		3	3		3
EXHAUST SYSTEM									
MUFFLERS				2		2	2		2
STACKS				1		1	1		1
BAFFLES				1		1	1		1
OTHER				1		1	1		1
ENGINE ACCESSORIES									
GENERATORS				1		1	1		1
ENGINE CONTROLS-COCKPIT									

TABLE 38 (CONTINU

POWERPLANT (CO

THROTTLE-POW
MIXTURE CONT
POWERPLANT-INS
POWER INDICA
FUEL QUANTIT
MISCELLANEOUS
POWERPLANT F
BIRD INGEST
COMPRESSOR S
DETONATION
DIRECT ENTRI
REDUCTION GEA
COMPRESSOR AS
BEARING, RO
OTHER
COMBUSTION AS
TURBINE ASSEM
BEARING, SH
ACCESSORY DRI
LUBRICATING S
PUMP, SCAVE
FUEL SYSTEM
OTHER
SAFETY SYSTEM
IGNITION SYST
TORQUEMETER
AIR BLEED
EXHAUST SYSTE
OTHER
THRUST REVERS
PROPELLER SYS
CONSTANT SPEE
POWER LEVER
CABLE
PROPELLER LE
REVERSE THRU
ENGINE INDIC
ENGINE INSTA
SUBTOTA
** SYSTEMS
ELECTRICAL S
BATTERIES
GENERATORS
CONSTANT S
REGULATOR
RELAYS AND
PROTECTIVE
OTHER
HYDRAULIC SY
RESERVOIR,
OTHER
FLIGHT CONT
AILERON A
ELEVATOR
RUDDER AN
WING FLAP
FLIGHT CO
FLIGHT CO
SPEED BRA
OTHER
ANTI-ICING,
CARBURETO
AIR CONDITI
AUTO PILOT
SERVO
OTHER
FIRE WARNIN
FIRE EXTING
OXYGEN SYST

TABLE 38 (CONTINUED) CAUSE/FACTOR TABLE

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
POWERPLANT (CONTINUED)									
THROTTLE-POWER LEVER ASSEMBLIES				7		7	7		7
MIXTURE CONTROL ASSEMBLIES	1		1	4		4	5		5
POWERPLANT-INSTRUMENTS									
POWER INDICATORS					1	1		1	1
FUEL QUANTITY GAUGE					18	18		18	18
MISCELLANEOUS									
POWERPLANT FAILURE FOR UNDETERMINED REASONS	17		17	169		169	186		186
BIRD INGESTION				1		1	1		1
COMPRESSOR STALLS				1		1	1		1
DETONATION				1		1	1		1
DIRECT ENTRIES	1		1	6		6	7		7
REDUCTION GEAR ASSEMBLY									
COMPRESSOR ASSEMBLY									
BEARING, ROTOR SHAFT				1		1	1		1
OTHER				1		1	1		1
COMBUSTION ASSEMBLY									
TURBINE ASSEMBLY									
BEARING, SHAFT				1		1	1		1
ACCESSORY DRIVE ASSEMBLY									
LUBRICATING SYSTEM									
PUMP, SCAVENGE				1		1	1		1
FUEL SYSTEM									
OTHER				1		1	1		1
SAFETY SYSTEM									
IGNITION SYSTEM									
TORQUEMETER									
AIR BLEED									
EXHAUST SYSTEM									
OTHER				1		1	1		1
THRUST REVERSER									
PROPELLER SYSTEM									
CONSTANT SPEED DRIVE									
POWER LEVER									
CABLE				1		1	1		1
PROPELLER LEVER									
REVERSE THRUST LEVER									
ENGINE INDICATING EQUIPMENT									
ENGINE INSTALLATION									
SUBTOTAL	36	3	39	410	26	436	446	29	475
** SYSTEMS **									
ELECTRICAL SYSTEM									
BATTERIES					1	1		1	1
GENERATORS/ALTERNATORS				2	2	4	2	2	4
CONSTANT SPEED DRIVE UNIT					1	1		1	1
REGULATOR				1		1	1		1
RELAYS AND WIRING				1		1	1		1
PROTECTIVE DEVICES					1	1		1	1
OTHER	1		1	1		1	2		2
HYDRAULIC SYSTEM									
RESERVOIR, LINES, FITTINGS				7	1	8	7	1	8
OTHER				2	1	3	2	1	3
FLIGHT CONTROL SYSTEMS									
AILERON AND AILERON TAB CONTROL SYSTEM				1		1	1		1
ELEVATOR AND ELEVATOR TAB CONTROL SYSTEM	1		1	3		3	4		4
RUDDER AND RUDDER TAB CONTROL SYSTEM	1		1	3		3	4		4
WING FLAP CONTROL SYSTEM (ELECTRICAL)				1		1	1		1
FLIGHT CONTROL BOOST SYSTEM (HYDRAULIC)				1		1	1		1
FLIGHT CONTROL GUST LOCK SYSTEM				1		1	1		1
SPEED BRAKE SYSTEM					1	1		1	1
OTHER				1		1	1		1
ANTI-ICING, DE-ICING SYSTEMS									
CARBURETOR DE-ICING SYSTEM				5		5	5		5
AIR CONDITION, HEATING AND PRESSURIZATION									
AUTO PILOT									
SERVO					1	1		1	1
OTHER				1		1	1		1
FIRE WARNING SYSTEM									
FIRE EXTINGUISHER SYSTEM									
OXYGEN SYSTEM									

TABLE 38 (CONTINUED)

CAUSE/FACTOR TABLE

SYSTEMS (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
OTHER SYSTEMS									
OTHER				1		1	1		1
DIRECT ENTRIES				1		1	1		1
SUBTOTAL	3		3	33	9	42	36	9	45
** INSTRUMENTS/EQUIPMENT AND ACCESSORIES **									
FLIGHT AND NAVAGATION INSTRUMENTS									
ALTIMETERS				1	2	3	1	2	3
AIRSPEED					2	2		2	2
ATTITUDE GYRO	1		1				1		1
DIRECTIONAL GYRO	1	2	3				1	2	3
OTHER					1	1		1	1
COMMUNICATIONS AND NAVIGATION EQUIPMENT									
TRANSMITTERS AND/OR RECEIVERS					1	1		1	1
ILS RECEIVERS		1	1					1	1
OTHER		1	1					1	1
MISCELLANEOUS EQUIPMENT									
SPRAY, DUSTING EQUIPMENT				1	1	2	1	1	2
SIGN TOWING EQUIPMENT				1		1	1		1
GLIDER LAUNCH/TOW EQUIPMENT				3	1	4	3	1	4
OTHER				1	2	3	1	2	3
DIRECT ENTRIES				1		1	1		1
SUBTOTAL	2	4	6	8	10	18	10	14	24
** ROTORCRAFT **									
ROTOR ASSEMBLIES									
MAIN ROTOR BLADES	2		2	2	1	3	4	1	5
TAIL ROTOR BLADES	1		1	9		9	10		10
MAIN ROTOR HEAD ASSEMBLIES	1		1	1		1	2		2
DROOP STOPS	1		1				1		1
UNIVERSAL JOINTS, COUPLINGS				1		1	1		1
BEARINGS	1		1	4		4	5		5
TRANSMISSION ROTOR DRIVE SYSTEM									
ENGINE DRIVE SHAFT				1		1	1		1
MAIN ROTOR DRIVE SHAFT	1		1	1		1	2		2
FREE WHEEL UNIT				1		1	1		1
MAIN ROTOR GEAR BOX				1		1	1		1
TAIL ROTOR DRIVE SHAFT ASSEMBLY				3		3	3		3
TAIL ROTOR GEAR BOX				1		1	1		1
CLUTCH ASSEMBLY				2		2	2		2
FLIGHT CONTROL SYSTEMS									
CYCLIC PITCH CONTROL SYSTEM				1		1	1		1
COLLECTIVE PITCH CONTROL SYSTEM					1	1		1	1
MISCELLANEOUS UNITS AND ASSEMBLIES									
TAIL BOOMS/PYLONS/CONES				1		1	1		1
DIRECT ENTRIES	1		1	6		6	7		7
SUBTOTAL	8		8	35	2	37	43	2	45
** AIRPORTS/AIRWAYS/FACILITIES **									
AIRPORT FACILITIES									
RUNWAY LIGHTING		1	1		4	4		5	5
OTHER					1	1		1	1
AIRPORT CONDITIONS									
WET RUNWAY		1	1	6	67	73	6	68	74
ICE/SLUSH ON RUNWAY		1	1	2	25	27	2	26	28
SNOW ON RUNWAY				11	39	50	11	39	50
SNOW WINDROWS				2	2	4	2	2	4
UNMARKED OBSTRUCTIONS				1	3	4	1	3	4
SOFT SHOULDERS (RUNWAY)				7	23	30	7	23	30
GLASSY WATER		1	1		1	1		2	2
HIGH VEGETATION		1	1	3	25	28	3	26	29
HIDDEN HAZARD				8	4	12	8	4	12
POORLY MAINTAINED RUNWAY SURFACE				1	21	22	1	21	22
SOFT RUNWAY		2	2	6	41	47	6	43	49
WET RAMP/TAXIWAY				1	1	2	1	1	2
ICE/SLUSH ON RAMP/TAXIWAY				1	2	3	1	2	3

TABLE 38 (CONTINUED)

AIRPORTS/AIRWAYS/

SNOW ON RAMP/T
SOFT SHOULDERS
POORLY MAINTAI
OTHER
AIRWAYS FACILITI
SUBTOTAL

** WEATHER **

LOW CEILING
RAIN
FOG
SNOW
ICING CONDITIO
CONDITIONS CON
UNFAVORABLE WI
SUDDEN WINDSHI
TURBULENCE IN
TURBULENCE, AS
DOWNDRAFTS, UP
LOCAL WHIRLWIN
LINE SQUALL
ADVERSE WINDS
HIGH TEMPERATU
OBSTRUCTIONS
HIGH DENSITY
THUNDERSTORM
OTHER
SUBTOTAL

** TERRAIN **

WET, SOFT GRO
SNOW-COVERED
ICY
HIGH VEGETATI
HIDDEN OBSTRU
ROUGH/UNEVEN
ROUGH WATER
GLASSY WATER
HIGH OBSTRUCT
LOOSE GRAVEL
SANDY
OTHER
SUBTOTAL

** MISCELLANE

BIRD COLLISI
VORTEX TURBU
PROP/JET BLA
EVASIVE MANE
UNQUALIFIED
SUICIDE
FOREIGN OBJE
SMOKE IN COC
FOREIGN MATE
UNDETERMINED
DIRECT ENTRI
SUBTOTAL

GRAND TOT

** MISCELLANE

ALTIMETER SE

TABLE 38 (CONTINUED)

CAUSE/FACTOR TABLE

AIRPORTS/AIRWAYS/FACILITIES (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
SNOW ON RAMP/TAXIWAY				2	1	3	2	1	3
SOFT SHOULDERS (RAMP/TAXIWAY)				1		1	1		1
POORLY MAINTAINED RAMP/TAXIWAY SURFACE				3		3	3		3
OTHER		7	7	8	50	58	8	57	65
AIRWAYS FACILITIES									
SUBTOTAL		14	14	63	310	373	63	324	387
** WEATHER **									
LOW CEILING	32	99	131	8	61	69	40	160	200
RAIN	11	49	60	5	31	36	16	80	96
FOG	28	75	103	10	39	49	38	114	152
SNOW	4	20	24	1	10	11	5	30	35
ICING CONDITIONS-INCLUDES SLEET, FREEZING RAIN, ETC	7	6	13	9	11	20	16	17	33
CONDITIONS CONDUCIVE TO CARB/INDUCTION SYSTEM ICING	2	2	4	38	24	62	40	26	66
UNFAVORABLE WIND CONDITIONS	1	13	14	194	257	451	195	270	465
SUDDEN WINDSHIFT				13	26	39	13	26	39
TURBULENCE IN FLIGHT, CLEAR AIR	1	1	2	1	1	2	2	2	4
TURBULENCE, ASSOCIATED W/CLOUDS, THUNDERSTORMS	2	10	12	3	9	12	5	19	24
DOWNDRAFTS, UPDRAFTS	4	2	6	12	43	55	16	45	61
LOCAL WHIRLWIND	1		1	10	2	12	11	2	13
LINE SQUALL				1	5	6	1	5	6
ADVERSE WINDS ALOFT					2	2		2	2
HIGH TEMPERATURE		4	4	1	33	34	1	37	38
OBSTRUCTIONS TO VISION	1	3	4	1	10	11	2	13	15
HIGH DENSITY ALTITUDE	2	7	9	5	50	55	7	57	64
THUNDERSTORM ACTIVITY	4	15	19	2	18	20	6	33	39
OTHER		2	2		1	1		3	3
SUBTOTAL	100	308	408	314	633	947	414	941	1355
** TERRAIN **									
WET, SOFT GROUND		2	2	43	98	141	43	100	143
SNOW-COVERED	1		1	6	15	21	7	15	22
ICY				2	2	4	2	2	4
HIGH VEGETATION				8	35	43	8	35	43
HIDDEN OBSTRUCTIONS				13	6	19	13	6	19
ROUGH/UNEVEN	2	4	6	34	98	132	36	102	138
ROUGH WATER				1	4	5	1	4	5
GLASSY WATER		2	2		3	3		5	5
HIGH OBSTRUCTIONS	4	24	28	17	43	60	21	67	88
LOOSE GRAVEL					2	2		2	2
SANDY				3	12	15	3	12	15
OTHER	1	2	3	8	16	24	9	18	27
SUBTOTAL	8	34	42	135	334	469	143	368	511
** MISCELLANEOUS **									
BIRD COLLISION				3		3	3		3
VORTEX TURBULENCE	3		3	11	1	12	14	1	15
PROP/JET BLAST				8		8	8		8
EVASIVE MANEUVER TO AVOID COLLISION	4		4	42	3	45	46	3	49
UNQUALIFIED PERSON OPERATED AIRCRAFT	2	1	3	7	4	11	9	5	14
SUICIDE	3		3				3		3
FOREIGN OBJECT DAMAGE				3		3	3		3
SMOKE IN COCKPIT				2		2	2		2
FOREIGN MATERIAL AFFECTING NORMAL OPERATIONS	2	1	3	30	3	33	32	4	36
UNDETERMINED	77		77	40		40	117		117
DIRECT ENTRIES	1		1	5		5	6		6
SUBTOTAL	92	2	94	151	11	162	243	13	256
GRAND TOTAL	1197	436	1633	6461	1828	8289	7658	2264	9922
** MISCELLANEOUS ACTS, CONDITIONS **									
ALTIMETER SETTING-INCORRECT		1	1		1	1		2	2

MISCELLANEOUS ACTS, CONDITIONS (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
IMPROPER OPER/FAILED TO USE CARB HEAT/DE-ICING EQUIP	2	1	3	75	2	77	77	3	80
CHECKLIST-FAILED TO USE	1		1	2	106	108	3	106	109
CREW COORDINATION-POOR					1	1		1	1
DISREGARD OF GOOD OPERATING PRACTICE	1		1	1	2	3	2	2	4
IMPROPER EMERGENCY PROCEDURES	9		9	19	12	31	28	12	40
GUST LOCKS ENGAGED	1		1	1		1	2		2
INSTRUCTIONS-MISINTERPRETED					2	2		2	2
INSTRUMENTS-MISREAD OR FAILED TO READ				2	1	3	2	1	3
NOT ALLIGNED WITH RUNWAY/INTENDED LANDING AREA	1		1	28	14	42	29	14	43
UNWARRANTED LOW FLYING	51	17	68	34	26	60	85	43	128
FAILED TO USE ALL AVAILABLE RUNWAY	1		1	3	9	12	4	9	13
LANDED AT WRONG AIRPORT				3	3	6	3	3	6
INATTENTIVE TO FUEL SUPPLY	3		3	19	3	22	22	3	25
FLEW INTO BLIND CANYON	3	2	5	5	4	9	8	6	14
POORLY PLANNED APPROACH	6	2	8	3	28	31	9	30	39
MISCALCULATED FUEL CONSUMPTION		1	1	15	6	21	15	7	22
JETTISONED LOAD		2	2		17	17		19	19
STOLEN OR UNAUTHORIZED USE OF AIRCRAFT	1	9	10		16	16	1	25	26
LANDED ON FOAMED RUNWAY					12	12		12	12
IMPROPERLY SECURED	2		2	15	4	19	17	4	21
BOGUS PART				1	1	2	1	1	2
COMMUNICATIONS FAILURE					2	2		2	2
ELECTRICAL FAILURE	1		1	4	13	17	5	13	18
ENGINE LOADED UP				29	1	30	29	1	30
FATIGUE FRACTURE	2		2	36	2	38	38	2	40
FUEL GRADE-IMPROPER				1		1	1		1
HYDRAULIC FAILURE				7		7	7		7
RPM-UNCONTROLLABLE-OVERSPEED				3		3	3		3
WINDSHIELD, DIRTY, FOGGY, ETC-RESTRICTED VISION	1		1	2	13	15	3	13	16
WRONG PART				3		3	3		3
IMPROPER ALIGNMENT/ADJUSTMENT	2		2	22	2	24	24	2	26
FAILURE OF TWO OR MORE ENGINES	4	2	6	13	12	25	17	14	31
SEPARATION IN FLIGHT		28	28		41	41		69	69
FIRE IN CABIN/ COCKPIT/ BAGGAGE COMPARTMENT	1		1	1		1	2		2
FIRE IN ENGINE	1	1	2	8	2	10	9	3	12
ASYMETRICAL FLAPS	1		1	2		2	3		3
LATERAL IMBALANCE				4		4	4		4
CORRODED/CORROSION	1		1	4	2	6	5	2	7
INCORRECT TRIM SETTING				2		2	2		2
CARGO SHIFTED	1		1	2		2	3		3
CONGESTED TRAFFIC-PATTERN OR RAMP		1	1		14	14		15	15
PILOT FATIGUE		5	5		10	10		15	15
FUEL EXHAUSTION	11		11	167		167	178		178
FUEL CONTAMINATION-EXCLUSIVE OF WATER IN FUEL				15	1	16	15	1	16
PILOT SUFFERED HEART ATTACK	2		2	2		2	4		4
ALCOHOLIC IMPAIRMENT OF EFFICIENCY AND JUDGMENT	34	11	45	6		6	40	11	51
CARBON MONOXIDE POISONING	1		1				1		1
ICE-IN FUEL				2		2	2		2
ICE-ENGINE	1		1				1		1
ICE-CARBURETOR	1		1	76		76	77		77
AIRFRAME ICE				9	3	12	9	3	12
ICE-WINDSHIELD				4	3	7	4	3	7
IMPROPERLY LOADED AIRCRAFT-WEIGHT-AND/OR CG	6	10	16	11	17	28	17	27	44
INTERFERENCE WITH FLIGHT CONTROLS	1		1	2	1	3	3	1	4
WHITEOUT	2		2	1	2	3	3	2	5
SUNGLARE		5	5		32	32		37	37
LACK OF LUBRICATION-SPECIFIC PART, NOT SYSTEM	2		2	8	1	9	10	1	11
OIL EXHAUSTION-ENGINE LUBRICATION SYSTEM				12	1	13	12	1	13
OIL CONTAMINATION				1		1	1		1
SIMULATED CONDITIONS	6	1	7	51	13	64	57	14	71
WATER IN FUEL				36		36	36		36
AIRCRAFT CAME TO REST IN WATER		42	42		78	78		120	120
FROZEN				5	1	6	5	1	6
MISSING	1	1	2	11	2	13	12	3	15
HYDROPLANING ON WET RUNWAY				1	3	4	1	3	4
OVERLOAD FAILURE	16	5	21	17	967	984	33	972	1005
MATERIAL FAILURE	8		8	197	6	203	205	6	211
FUEL STARVATION	15		15	155		155	170		170
OIL STARVATION				4		4	4		4
IMPROPER CLEARANCE-TOLERANCE	2		2	9	1	10	11	1	12
FUEL SELECTOR POSITIONED BETWEEN TANKS	2		2	6		6	8		8
FIRE OF UNDETERMINED ORIGIN				2		2	2		2

MISCELLANEOUS ACT

UNAPPROVED MODI
IMPROPER/INADEQ
ACTION, LACK OF
POOR WELD
PREVIOUS DAMAGE
LEAK/LEAKAGE
LOW FLUID LEVEL
CIRCUIT BREAKER
ARCING
LOW COMPRESSIOI
RUNWAY CLOSED
DOWNWIND
CARBON DEPOSIT
LANDED IN CONS
UNDER TORQUED
LOOSE, PART/FI
GROUND RESONAN
BENT
BINDING
BUCKLED
BURNED
CHAFFED
COLLAPSED
CROSSED
DETERIORATED
DISCONNECTED
EXCESSIVE
ERRATIC
FLUTTER
FRAYED
GROUNDED
IMPROPERLY IN
JAMMED
OBSTRUCTED
CUT OF BALANC
OVERHEATED
PINCHED
PRESSURE TOO
PRESSURE, NON
SCORED
SHEARED
STICKING
STUCK
EXCESSIVE TEM
VIBRATION, EX
WARPED

DIRECT ENTRY CA

MISC-STRUCK LAI
PILOT-FLEW INTO
PILOT-LANDED OI
PWR PLT-DEFECT
PILOT-DELAYED
PILOT-POOR TCH
PWR PLT-PROP C
PERSONNEL-PAX
PILOT-INADVERT
MISC-DOG RAN I
ROTORCFT-ACFT
PERSONNEL-INST
ROTORCFT-SUDDE
ROTORCFT-ENTER
ROTORCFT-TAIL
PWR PLT-GASKET
PILOT-MISCALCU
PILOT-HOVERED
ROTORCFT-REAR
PWR PLT-LOOSE

CAUSE/FACTOR TABLE

MISCELLANEOUS ACTS, CONDITIONS (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
UNAPPROVED MODIFICATION	1		1				1		1
IMPROPER/INADEQUATE VENTING				1	1	2	1	1	2
ACTION, LACK OF				1		1	1		1
POOR WELD	1		1				1		1
PREVIOUS DAMAGE				38	12	50	38	12	50
LEAK/LEAKAGE	1		1	14	2	16	15	2	17
LOW FLUID LEVEL					1	1		1	1
CIRCUIT BREAKER POPPED				1	15	16	1	15	16
ARCING	1		1	2		2	3		3
LOW COMPRESSION				1		1	1		1
RUNWAY CLOSED		1	1	1	4	5	1	5	6
DOWNWIND		4	4		81	81		85	85
CARBON DEPOSITS	1		1	5	2	7	6	2	8
LANDED IN CONSTRUCTION AREA				3	3	6	3	3	6
UNDER TORQUED				2		2	2		2
LOOSE, PART/FITTING	3		3	11	1	12	14	1	15
GROUND RESONANCE				2		2	2		2
BENT				6		6	6		6
BINDING				5	3	8	5	3	8
BUCKLED				5		5	5		5
BURNED				5	1	6	5	1	6
CHAFFED				1		1	1		1
COLLAPSED				2		2	2		2
CROSSED	1		1				1		1
DETERIORATED	1	1	2	6	1	7	7	2	9
DISCONNECTED				9		9	9		9
EXCESSIVE				1	1	2	1	1	2
ERRATIC		2	2	2	10	12	2	12	14
FLUTTER				1		1	1		1
FRAYED	1		1				1		1
GROUNDED				2		2	2		2
IMPROPERLY INSTALLED	2	1	3	24	2	26	26	3	29
JAMMED				14	1	15	14	1	15
OBSTRUCTED				5		5	5		5
OUT OF BALANCE					1	1		1	1
OVERHEATED				4	2	6	4	2	6
PINCHED				1		1	1		1
PRESSURE TOO LOW				3	2	5	3	2	5
PRESSURE, NONE				9	1	10	9	1	10
SCORED	1		1	3		3	4		4
SHEARED	2		2	5		5	7		7
STICKING				1		1	1		1
STUCK				6	2	8	6	2	8
EXCESSIVE TEMPERATURE	1		1	4	1	5	5	1	6
VIBRATION, EXCESSIVE				10	9	19	10	9	19
WARPED				1	1	2	1	1	2

DIRECT ENTRY CAUSES

MISC-STRUCK LARGE DOG JUST PRIOR TO LIFTOFF.
PILOT-FLEW INTO FORECAST ICING CONDITIONS.
PILOT-LANDED ON DRY RUNWAY WITH SKIS EXTENDED.
PWR PLT-DEFECTIVE FUEL PUMP DIAPHRAGM.
PILOT-DELAYED ATTEMPT TO LIFTOFF TO REGAIN CONTROL
PILOT-POOR TCHNIQUE OR LACK OF KNOWLDGE-SPIN RCVRY
PWR PLT-PROP CYLINDER ATTACH SCREWS P/N A-1635-43.
PERSONNEL-PAX SLIPPED ON WET FLOAT.
PILOT-INADVERTENTLY LOWERED LDG GEAR.
MISC-DOG RAN IN FRONT OF ACFT.
ROTORCFT-ACFT IN SETTLING WITH POWER CONDITION.
PERSONNEL-INSTR,AS PX,INTERFERED WITH CONTROLS.
ROTORCFT-SUDDEN DISSYMMETRY OF LIFT.
ROTORCFT-ENTERED SETTLING WITH POWER CONDITION.
ROTORCFT-TAIL RDTOR GRIP RETAINING BOLT.
PWR PLT-GASKET BLOWN NO 3 CYL.
PILOT-MISCALCULATED FUEL CONSUMPTION.
PILOT-HOVERED OVER UNFAMILIAR AREA AT NIGHT.
ROTORCFT-REAR FLOAT CROSS TUBE FAILED IN FATIGUE.
PWR PLT-LOOSE ROD CAP BOLTS ON NO 4 ROD FAILED.

TABLE 38 (CONTINUED)

DIRECT ENTRY CAUSES (CONTINUED)

MISC-DEER RAN ACROSS RNWY STRIKING ACFT.
MISC-LOSS OF CONTROL FOR UNDETERMINED CAUSE.
RCTORCFT-ROTOR RPM LOST, CAUSE UNDETERMINED.
PWR PLT-FUEL PRESSURE DROPPED TO ZERO,CAUSE UNDTMD
MISC-DEER CROSSED IN FRONT OF ACFT.
LDG GR-BRAKES WEAK.
PERSONNEL-PX DID NOT HAVE SEAT BELT TIGHT.
PWR PLT-ENG ROUGH,BACKFIRING,ON FIRE,CAUSE UNDTMND
PERSONNEL-LOADER WALKED INTO ACFT PROPELLER.
RGTORCFT-M/R NOT BALANCED CORDWISE DURING ASSEMBLY
SYSTEMS-L BRAKE FAILED,CAUSE UNDETERMINED.
PERSONNEL-PAX INADVERTENTLY SHUT OUT RT JURY STRUT
PILOT-FAILED TO INSTR PX IN PROPER APPCH TO ACFT.
MISC-TYPE OF TURBULENCE UNDETERMINED.
PILOT-INITIATED NITE FLIGHT IN ADVERSE WEATHER.
PILOT-DID NOT MONITOR REAR ENG INSTRUMENTS.
PWR PLT-IMPROPERLY INSTALLED COUNTERWEIGHT PINS.
EQUIP-TOW HOOK RELEASED,CAUSE UNDETERMINED.
PILOT-NEGLIGENT AND RECKLESS FLYING.

DIRECT ENTRY CAUSES ARE CARRIED UNDER THEIR APPROPRIATE CAUSAL CATEGORIES AND ARE INCLUDED IN THE TOTALS

Section II

GENERAL AVIATION ACCIDENTS

SMALL FIXED-WING AIRCRAFT

TABLE 39

ACCIDENTS, INJURY INDEX, AIRCRAFT DAMAGE BY KIND OF FLYING

SMALL FIXED-WING AIRCRAFT

1968

	KIND OF FLYING																							
	INSTRUCTIONAL				NONCOMMERCIAL					COMMERCIAL								MISCELLANEOUS							GRAND TOTAL
	DUAL	SOLO	OTHER	TOTAL	PLEASURE	BUSINESS	CORPORATE	OTHER	TOTAL	AERIAL APPLICATION	FIRE CONTROL	POWER/PIPELINE PATROL	AIR TAXI-PASSENGER	AIR TAXI-CARGO	OTHER	TOTAL	TEST	DEMONSTRATION	FERRY	TOWING GLIDER	HUNTING	OTHER	TOTAL	
ACCIDENTS.....	265	233	446	944	2217	575	71	132	2995	319	4	9	122	32	27	513	40	22	65	6	5	59	197	-
INJURY INDEX																								
Fatal.....	29	5	25	59	371	76	13	10	470	36	1	2	30	8	9	86	9	3	6	2	2	17	39	654
Serious.....	16	8	18	42	160	36	3	9	208	36	1	0	12	5	1	55	4	1	4	1	1	6	17	322
Minor.....	37	24	50	111	325	57	3	13	398	55	0	3	13	2	4	77	9	2	9	0	0	6	26	612
None.....	183	196	353	732	1361	406	52	100	1919	192	2	4	67	17	13	295	18	16	46	3	2	30	115	3061
AIRCRAFT DAMAGE [a]																								
Destroyed...	53	17	55	125	539	119	15	19	692	102	2	3	39	13	11	170	13	3	9	3	2	23	53	1040
Substantial.	210	215	391	816	1673	453	55	113	2294	217	2	6	83	19	17	344	27	19	56	3	3	35	143	3597
Minor.....	2	1	1	4	4	1	1	0	6	1	0	0	0	0	1	2	0	0	0	0	0	1	1	13
None.....	0	0	0	0	8	2	0	0	10	1	0	0	0	0	0	1	0	0	0	0	0	0	0	11
Unknown.....	0	0	0	0	3	0	0	0	3	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4
Total.....	265	233	447	945	2227	575	71	132	3005	321	4	9	123	32	29	518	40	22	65	6	5	59	197	4665

a/Excludes 1 military aircraft and 2 foreign aircraft involved in collisions.

TABLE 40

TYPE OF ACCIDENT VS KIND OF FLYING

SMALL FIXED-WING AIRCRAFT

1968

FIRST TYPE OF ACCIDENT	KIND OF FLYING																										GRAND TOTAL
	INSTRUCTIONAL				NONCOMMERCIAL					COMMERCIAL								MISCELLANEOUS									
	DUAL	SOLO	OTHER	TOTAL	PLEASURE	BUSINESS	CORPORATE	OTHER	TOTAL	AERIAL APPLICATION	FIRE CONTROL	POWER/PIPELINE PATROL	AIR TAXI-PASSENGER	AIR TAXI-CARGO	OTHER	TOTAL	TEST	DEMONSTRATION	FERRY	TOWING GLIDER	HUNTING	OTHER	TOTAL	
Ground/waterloop/swerve	39	83	127	249	262	52	6	35	355	21	0	1	7	2	2	33	4	5	13	2	0	2	26	663
Dragged wingtip, pod, or float	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Wheels-up landing	16	2	5	23	88	69	12	11	180	0	0	0	5	3	0	8	5	2	4	0	0	1	12	223
Wheels-down landing in water	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	1	0	0	1	2	5
Gear collapsed	8	3	8	19	60	16	6	0	82	2	0	0	4	0	1	7	1	1	1	0	0	1	4	112
Gear retracted	12	0	2	14	41	26	8	4	79	0	0	0	5	2	0	7	0	0	3	0	0	0	3	103
Hard landing	20	49	79	148	184	28	4	9	225	1	0	0	2	1	0	4	1	0	3	0	0	3	7	384
Nose over/down	6	11	12	29	81	24	0	3	108	4	0	0	3	1	0	8	0	0	6	0	0	3	9	154
Roll over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Overshoot	10	21	24	55	188	48	2	2	240	0	0	0	7	0	0	7	0	0	1	0	0	2	3	305
Undershoot	13	11	25	49	99	25	4	7	135	0	0	0	4	1	0	5	1	1	1	0	0	2	5	194
Collision with aircraft a/																								
Both in flight	9	2	10	21	26	3	2	1	32	5	0	1	2	0	4	12	0	0	0	0	0	1	1	66
One airborne	2	2	2	6	7	2	0	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Both on ground	5	3	3	11	10	2	1	0	13	2	0	0	1	0	1	4	0	0	1	0	0	1	2	30
Collision with ground/water																								
Controlled	4	2	6	12	96	27	4	3	131	5	0	1	9	4	1	20	0	0	1	0	0	2	3	165
Uncontrolled	1	2	3	6	73	21	1	2	97	1	0	0	4	2	0	7	3	1	1	0	0	1	6	116
Collided with																								
Wires/poles	2	1	9	12	51	14	1	1	67	41	1	1	3	0	1	47	0	1	2	0	0	5	8	134
Trees	5	4	4	13	58	16	4	2	81	14	1	0	3	0	1	19	0	0	1	0	0	0	1	113
Residence (s)	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Other buildings	0	1	1	2	5	2	0	0	7	0	0	0	0	0	0	0	0	0	0	1	0	0	1	10
Fence, fenceposts	1	3	7	11	34	9	1	1	45	9	0	0	1	0	1	11	0	0	1	0	0	1	2	69
Electronic towers	0	0	0	0	2	0	0	0	2	2	0	0	0	0	1	3	0	0	0	0	0	0	0	5
Runway or approach lights	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Airport hazard	0	1	0	1	4	1	0	0	5	0	0	0	2	0	0	2	0	1	0	0	0	0	1	9
Animals	0	0	0	0	2	1	0	0	3	0	0	0	2	0	0	2	0	0	0	0	0	0	0	5
Crop	0	0	0	0	2	0	0	0	2	8	0	0	0	0	0	8	0	0	0	0	0	0	0	10
Flagman, loader	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Ditches	0	3	2	5	20	8	0	0	28	3	0	0	0	0	0	3	0	0	1	0	0	0	1	37
Snowbank	0	1	1	2	8	4	1	2	15	0	0	0	4	0	0	4	0	0	1	0	0	0	1	22
Parked aircraft (Unattended, engines not running)	2	1	3	6	20	4	0	0	24	1	0	0	0	1	0	2	0	0	1	0	0	0	1	33
Automobile	1	0	1	2	7	1	0	0	8	2	0	0	1	0	0	3	0	0	0	1	0	0	1	14
Dirt bank	0	0	1	1	8	0	0	0	8	7	0	0	0	0	0	7	0	0	0	0	0	0	0	16
Other	5	2	7	14	68	21	0	2	91	18	1	2	4	1	0	26	0	0	1	0	0	3	4	135
Bird strike (collision with birds)	0	0	0	0	1	1	0	0	2	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
Stall	7	7	20	34	106	13	0	6	125	39	0	1	4	1	4	49	3	3	1	2	1	6	16	224
Spin	3	1	3	7	47	5	1	4	57	4	0	0	0	1	0	5	2	1	0	0	2	3	8	77
Spiral	3	0	3	6	2	0	0	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	9
Mush	7	1	5	13	68	17	1	5	91	38	0	1	5	0	1	45	2	0	1	0	1	2	6	155
Fire or explosion																								
In flight	1	0	1	2	3	4	0	0	7	0	0	0	3	1	0	4	0	0	1	0	0	0	1	14
On ground	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Airframe failure																								
In flight	0	1	1	2	27	7	2	1	37	0	0	0	0	0	0	0	3	0	2	0	0	1	6	45
On ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine tearaway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine failure or malfunction	77	15	65	157	394	82	7	25	508	83	1	1	28	10	8	131	13	6	13	0	0	9	41	837
Propeller/rotor failure																								
Propeller	0	0	1	1	17	4	0	0	21	3	0	0	2	0	1	6	1	0	3	0	0	1	5	33
Tail rotor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Main rotor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propeller/rotor accident to person	1	0	1	2	8	2	1	0	11	1	0	0	0	0	2	3	0	0	0	0	0	0	0	16
Jet intake/exhaust accident to person	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propeller/jet rotor blast	0	0	0	0	4	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Turbulence	1	0	0	1	6	5	0	3	14	3	0	0	1	1	0	5	0	0	0	0	0	0	0	20
Hail damage to aircraft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lightning strike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Evasive maneuver	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Uncontrolled altitude deviations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ditching	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Missing aircraft, not recovered	0	0	0	0	20	2	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other/miscellaneous	3	0	1	4	8	1	0	2	11	0	0	0	2	0	0	2	0	0	0	0	0	2	2	1
Undetermined	1	0	3	4	6	2	0	0	8	1	0	0	4	0	0	5	0	0	0	0	1	2	4	20
TOTAL	265	233	447	945	2227	575	71	132	3005	321	4	9	123 b/	32	29	518	40	22	65	6	5	59	197	21
																								4665

a/ Includes all U. S. General Aviation small Fixed-Wing aircraft involved in collisions.

b/ Includes 3 accidents by air taxi operators during ferry to or from an air taxi(FAR, Part 135) operation.

TABLE 41

TYPE OF ACCIDENT VS PHASE OF OPERATION

SMALL FIXED-WING AIRCRAFT

1968

FIRST TYPE OF ACCIDENT	PHASE OF OPERATION																													GRAND TOTAL
	STATIC				TAXI			TAKEOFF				INFLIGHT							LANDING									UNKNOWN	TOTAL	
	STARTING ENGINES	IDLING ENGINES	ENGINE RUNUP	OTHER	TO TAKEOFF	FROM LANDING	OTHER	GROUND RUN	INITIAL CLIMB	ABORTED	OTHER	CLIMB TO CRUISE	NORMAL CRUISE	DESCENDING	HOLDING (IFR)	ACROBATICS	BUZZING	OTHER	IN TRAFFIC PATTERN	FINAL APPROACH (VFR)	APPROACH (IFR)	LEVEL OFF/TOUCH-DOWN	ROLLOUT	GO-AROUND (VFR)	MISSED APPROACH (IFR)	OTHER			
Ground/waterloop/swerve	0	0	0	0	1	10	1	140	0	5	0	0	0	0	0	0	0	0	0	0	0	83	419	4	0	0	0	0	663	663
Dragged wingtip, pod, or float	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	2
Wheels-up landing	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	220	1	0	0	0	0	0	223	223
Wheels-down landing in water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	5
Gear collapsed	0	0	0	0	0	9	0	9	0	10	0	0	0	0	0	0	0	0	0	0	0	11	71	2	0	0	0	0	112	112
Gear retracted	0	0	0	0	0	2	0	11	1	1	0	0	0	0	0	0	0	0	0	0	0	13	73	2	0	0	0	0	103	103
Hard landing	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	381	0	0	0	0	0	0	384	384
Nose over/down	0	0	1	0	29	31	2	4	0	5	0	0	0	0	0	0	0	0	0	0	0	4	76	1	0	0	1	0	154	154
Roll over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Overshoot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	299	1	0	0	0	0	0	305	305
Undershoot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	186	0	6	1	0	0	0	0	0	194	194
Collision with aircraft a/																														
Both in flight	0	0	0	0	0	0	0	0	4	0	0	2	15	2	0	0	0	10	8	16	1	8	0	0	0	0	0	0	66	66
One airborne	0	1	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	6	4	0	0	0	0	0	16	16
Both on ground	0	6	1	0	6	5	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	30	30
Collision with ground/water																														
Controlled	0	0	0	0	0	0	0	0	10	0	0	6	51	16	0	6	6	45	3	3	3	1	0	6	0	5	4	165	165
Uncontrolled	0	0	0	0	0	0	0	0	6	0	0	1	1	0	0	0	0	103	0	2	0	1	0	0	0	2	0	116	116
Collided with																														
Wires/poles	0	0	0	0	2	4	0	1	12	0	0	0	9	0	0	0	2	75	2	21	0	0	2	3	0	1	0	134	134
Trees	0	0	0	0	2	0	1	1	21	4	0	2	17	0	0	3	4	21	1	5	9	1	8	7	0	2	4	113	113
Residence (a)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Other buildings	0	0	0	0	1	2	3	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	10	10
Fence, fenceposts	0	0	0	0	1	3	2	7	21	13	0	0	0	0	0	0	0	3	0	0	0	1	10	7	0	0	1	69	69
Electronic towers	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	5	5
Runway or approach lights	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	3	3
Airport hazard	0	0	0	0	1	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	9	9
Animals	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	5	5
Crop	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	0	10	10
Flagman, loader	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Ditches	0	0	0	0	2	4	2	1	0	14	0	0	0	0	0	0	0	1	0	0	0	0	13	0	0	0	0	37	37
Snowbank	0	0	0	0	1	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	2	12	1	0	0	0	22	22
Parked aircraft (Unattended, engines not running)	0	0	0	0	7	7	16	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	33	33
Automobile	0	0	0	0	3	4	1	1	2	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	14	14
Dirt bank	0	0	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	3	0	0	0	0	6	0	0	0	0	16	16
Other	0	0	0	0	7	14	3	21	6	10	0	0	0	0	0	0	1	17	0	0	0	12	44	0	0	0	0	135	135
Bird strike (collision with birds)	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
Stall	0	0	0	0	0	0	0	0	70	1	0	4	5	0	0	1	10	76	13	19	0	0	20	0	1	4	224	224
Spin	0	0	0	0	0	0	0	0	14	0	0	2	5	0	0	14	2	26	4	3	1	0	0	2	0	0	4	77	77
Spiral	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	5	0	0	0	0	0	1	0	0	0	9	9
Mush	0	0	0	0	0	0	0	0	117	2	0	1	0	0	0	1	0	18	0	2	0	0	0	14	0	0	0	155	155
Fire or explosion																														
In flight	0	0	0	0	0	0	0	0	3	0	0	2	7	0	0	0	0	0	1	1	0	0	0	0	0	0	0	14	14
On ground	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Airframe failure																														
In flight	0	0	0	0	0	0	0	0	3	0	0	0	12	5	0	3	0	21	0	0	0	0	0	0	0	0	1	45	45
On ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine tearaway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine failure or malfunction	0	0	0	0	0	0	0	8	202	1	0	22	330	37	1	1	1	79	59	57	3	1	0	33	1	0	1	837	837
Propeller/rotor failure																														
Propeller	0	0	0	0	0	0	0	2	3	0	0	0	24	1	0	0	0	2	0	0	0	0	0	0	0	0	1	33	33
Tail rotor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Main rotor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propeller/rotor accident to person	2	7	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14
Jet intake/exhaust accident to person	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propeller/jet/rotor blast	0	5	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8
Turbulence	0	0	0	0	1	0	0	0	2	0	0	0	4	0	0	0	0	3	0	6	0	2	0	2	0	0	0	20	20
Hail damage to aircraft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lightning strike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Evasive maneuver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
Uncontrolled altitude deviations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ditching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Missing aircraft, not recovered	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	26	26
Other/miscellaneous	0	0	0	0	0	1	0	0	5	0	0	0	7	0	0	0	0	4	0	0	0	0	1	1	0	0	17	21	21
Undetermined	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	20	20
TOTAL	3	20	2	5	68	98	33	219	517	76	0	42	492	63	1	30	26	525	92	329	17	1062	761	107	1	11	65	4665	4665

a/ Includes all U. S. General Aviation small Fixed-Wing aircraft involved in collisions.

TABLE 42

CAUSE/FACTOR TABLE

SMALL FIXED-WING AIRCRAFT
U. S. GENERAL AVIATION

1968

INVOLVES 4536 TOTAL ACCIDENTS
INVOLVES 602 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	503 83.55	49 8.14	504 83.72	3339 84.88	318 8.08	3346 85.05	3842 84.70	367 8.09	3850 84.88
PERSONNEL	48 7.97	8 1.33	54 8.97	243 6.18	62 1.58	298 7.57	291 6.42	70 1.54	352 7.76
AIRFRAME	10 1.66	1 .17	11 1.83	22 .56	2 .05	24 .61	32 .71	3 .07	35 .77
LANDING GEAR	.00	1 .17	1 .17	189 4.80	52 1.32	238 6.05	189 4.17	53 1.17	239 5.27
POWERPLANT	30 4.98	1 .17	31 5.15	346 8.80	26 .66	372 9.46	376 8.29	27 .60	403 8.88
SYSTEMS	3 .50	.00	3 .50	26 .66	7 .18	33 .84	29 .64	7 .15	36 .79
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	1 .17	4 .66	5 .83	3 .08	7 .18	10 .25	4 .09	11 .24	15 .33
ROTORCRAFT	.00	.00	.00	.00	.00	.00	.00	.00	.00
AIRPORTS/AIRWAYS/FACILITIES	.00	12 1.99	12 1.99	57 1.45	281 7.14	335 8.52	57 1.26	293 6.46	347 7.65
WEATHER	58 9.63	159 26.41	217 36.05	268 6.81	496 12.61	757 19.24	326 7.19	655 14.44	974 21.47
TERRAIN	5 .83	31 5.15	36 5.98	105 2.67	308 7.83	412 10.47	110 2.43	339 7.47	448 9.88
MISCELLANEOUS	15 2.49	2 .33	17 2.82	100 2.54	11 .28	111 2.82	115 2.54	13 .29	128 2.82
UNDETERMINED	68 11.30	.00	68 11.30	38 .97	.00	38 .97	106 2.34	.00	106 2.34

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

TABLE 42 (CONTINUED)

INVOLVES 4536 TOT
INVOLVES 602 FAT

DETAILED CAUSE/			
** PILOT **			
PILOT IN COMMAN			
ATTEMPTED OPE			
ATTEMPTED OPE			
BECAME LOST/D			
CONTINUED VFR			
CONTINUED INT			
DELAYED ACTIO			
DELAYED IN IN			
DIVERTED ATTI			
EXCEEDED DES			
FAILED TO EX			
FAILED TO RE			
RETRACTED GE			
INADVERTENTL			
FAILED TO SE			
FAILED TO SE			
FAILED TO UT			
MISJUDGED,			
FAILED TO U			
FAILED TO FI			
IMPROPER OPI			
IMPROPER OP			
IMPROPER OP			
PREMATURE L			
IMPROPER LE			
IMPROPER IN			
IMPROPER CO			
INADEQUATE			
INADEQUATE			
LACK OF FA			
MISMANAGEM			
EXERCISED			
OPERATED C			
SELECTED U			
IMPROPER S			
STARTED EN			
TAXIED/PAR			
FAILED TO			
SPONTANEOU			
MISJUDGED			
MISJUDGED			
MISJUDGED			
MISJUDGED			
MISJUDGED			
MISJUDGED			
MISJUDGED			
MISJUDGED			
MISJUDGED			
MISJUDGED			
MISUNDER			
IMPROPER			
INCAPACI			
PHYSICAL			
SPATIAL			
PSYCHOLO			
MISUSED			
LEFT AIL			
FAILED			
SELECTED			
FAILED			
FAILED			

TABLE 42 (CONTINUED)

CAUSE/FACTOR TABLE

SMALL FIXED-WING AIRCRAFT
U. S. GENERAL AVIATION

1968

INVOLVES 4536 TOTAL ACCIDENTS
INVOLVES 602 FATAL ACCIDENTS

DETAILED CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
** PILOT **									
PILOT IN COMMAND									
ATTEMPTED OPERATION W/KNOWN DEFICIENCIES IN EQUIPMENT	1	3	4	9	5	14	10	8	18
ATTEMPTED OPERATION BEYOND EXPERIENCE/ABILITY LEVEL	83	8	91	58	10	68	141	18	159
BECAME LOST/DISORIENTED	12	2	14	42	19	61	54	21	75
CONTINUED VFR FLIGHT INTO ADVERSE WEATHER CONDITIONS	141		141	51	5	56	192	5	197
CONTINUED INTO KNOWN AREA OF SEVERE TURBULENCE	3		3	1		1	4		4
DELAYED ACTION IN ABORTING TAKEOFF	1		1	40	2	42	41	2	43
DELAYED IN INITIATING GO-AROUND	2		2	81	8	89	83	8	91
DIVERTED ATTENTION FROM OPERATION OF AIRCRAFT	11	6	17	43	20	63	54	26	80
EXCEEDED DESIGN STRESS LIMITS OF AIRCRAFT	16		16	6		6	22		22
FAILED TO EXTEND LANDING GEAR				96		96	96		96
FAILED TO RETRACT LANDING GEAR				4	2	6	4	2	6
RETRACTED GEAR PREMATURELY				6		6	6		6
INADVERTENTLY RETRACTED GEAR				57		57	57		57
FAILED TO SEE AND AVOID OTHER AIRCRAFT	26	1	27	45	2	47	71	3	74
FAILED TO SEE AND AVOID OBJECTS OR OBSTRUCTIONS	23		23	135	1	136	158	1	159
FAILED TO OBTAIN/MAINTAIN FLYING SPEED	160		160	366		366	526		526
MISJUDGED, SPEED, ALTITUDE OR CLEARANCE				1		1	1		1
FAILED TO USE OR INCORRECTLY USED MISC EQUIPMENT		1	1	3	7	10	3	8	11
FAILED TO FOLLOW APPROVED PROCEDURES, DIRECTIVES ETC	3	1	4	19	6	25	22	7	29
IMPROPER OPERATION OF POWERPLANT + POWERPLANT CONTROLS	6	1	7	131	1	132	137	2	139
IMPROPER OPERATION OF BRAKES AND/OR FLIGHT CONTROLS	2		2	223	3	226	225	3	228
IMPROPER OPERATION OF FLIGHT CONTROLS	9		9	38		38	47		47
PREMATURE LIFT OFF	2		2	31		31	33		33
IMPROPER LEVEL OFF	5		5	298		298	303		303
IMPROPER IFR OPERATION	8	1	9	7		7	15	1	16
IMPROPER IN-FLIGHT DECISIONS OR PLANNING	24	2	26	41	13	54	65	15	80
IMPROPER COMPENSATION FOR WIND CONDITIONS	1		1	59		59	60		60
INADEQUATE PREFLIGHT PREPARATION AND/OR PLANNING	50	2	52	352	36	388	402	38	440
INADEQUATE SUPERVISION OF FLIGHT	4		4	140	1	141	144	1	145
LACK OF FAMILIARITY WITH AIRCRAFT	4	9	13	13	92	105	17	101	118
MISMANAGEMENT OF FUEL SYSTEM	11		11	78		78	89		89
EXERCISED POOR JUDGMENT	20		20	123	9	132	143	9	152
OPERATED CARELESSLY				4		4	4		4
SELECTED UNSUITABLE TERRAIN	1	2	3	259	9	268	260	11	271
IMPROPER STARTING PROCEDURES	1		1	8		8	9		9
STARTED ENGINE WITHOUT PROPER ASSISTANCE/EQUIPMENT				17		17	17		17
TAXIED/PARKED WITHOUT PROPER ASSISTANCE				14		14	14		14
FAILED TO ASSURE THE GEAR WAS DOWN AND LOCKED				67		67	67		67
SPONTANEOUS-IMPROPER ACTION	1		1	18		18	19		19
MISJUDGED DISTANCE, SPEED, AND ALTITUDE	1		1	25		25	26		26
MISJUDGED DISTANCE AND SPEED	3		3	295	1	296	298	1	299
MISJUDGED DISTANCE	1		1	7		7	8		8
MISJUDGED DISTANCE AND ALTITUDE	11		11	153		153	164		164
MISJUDGED SPEED AND ALTITUDE	2		2	3		3	5		5
MISJUDGED SPEED	1		1	12	3	15	13	3	16
MISJUDGED SPEED AND CLEARANCE				1		1	1		1
MISJUDGED ALTITUDE AND CLEARANCE	4		4	13		13	17		17
MISJUDGED ALTITUDE	22		22	24	3	27	46	3	49
MISJUDGED CLEARANCE	15		15	68		68	83		83
MISUNDERSTANDING OF ORDERS OR INSTRUCTIONS		1	1	2	2	4	2	3	5
IMPROPER RECOVERY FROM BOUNCED LANDING	2		2	182		182	184		184
INCAPACITATION	8		8	4		4	12		12
PHYSICAL IMPAIRMENT	34	9	43	8	1	9	42	10	52
SPATIAL DISORIENTATION	75		75	12		12	87		87
PSYCHOLOGICAL CONDITION	2		2	1	1	2	3	1	4
MISUSED OR FAILED TO USE FLAPS	3	2	5	15	40	55	18	42	60
LEFT AIRCRAFT UNATTENDED ENGINE RUNNING				1		1	1		1
FAILED TO MAINTAIN DIRECTIONAL CONTROL	3		3	258	1	259	261	1	262
SELECTED WRONG RUNWAY RELATIVE TO EXISTING WIND	1		1	53	12	65	54	12	66
FAILED TO ABORT TAKEOFF	5		5	25	2	27	30	2	32
FAILED TO INITIATE GO-AROUND				102	15	117	102	15	117

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

TABLE 42 (CONTINUED)

CAUSE/FACTOR TABLE

PILOT IN COMMAND (CONTINUED)	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
DIRECT ENTRIES	3		3	5		5	8		8
SUBTOTAL	827	51	878	4253	332	4585	5080	383	5463
COPILOT									
FAILED TO EXTEND LANDING GEAR				1		1	1		1
FAILED TO OBTAIN/MAINTAIN FLYING SPEED				2		2	2		2
INADEQUATE PREFLIGHT PREPARATION AND/OR PLANNING				1		1	1		1
LACK OF FAMILIARITY WITH AIRCRAFT				1		1	1		1
CONTROL INTERFERENCE		1	1	1		1	1	1	2
MISJUDGED DISTANCE AND ALTITUDE				1		1	1		1
FAILED TO MAINTAIN DIRECTIONAL CONTROL				1		1	1		1
SUBTOTAL		1	1	8		8	8	1	9
DUAL STUDENT									
DELAYED IN INITIATING GO-AROUND				5		5	5		5
DIVERTED ATTENTION FROM OPERATION OF AIRCRAFT				2		2	2		2
FAILED TO EXTEND LANDING GEAR				9		9	9		9
INADVERTENTLY RETRACTED GEAR				9		9	9		9
FAILED TO SEE OTHER AIRCRAFT				1		1	1		1
FAILED TO SEE AND AVOID OBJECTS OR OBSTRUCTIONS				1		1	1		1
FAILED TO OBTAIN/MAINTAIN FLYING SPEED	4		4	14		14	18		18
IMPROPER OPERATION OF POWERPLANT + POWERPLANT CONTROLS				7		7	7		7
IMPROPER OPERATION OF BRAKES AND/OR FLIGHT CONTROLS				16		16	16		16
IMPROPER OPERATION OF FLIGHT CONTROLS				4		4	4		4
PREMATURE LIFT-OFF				2		2	2		2
IMPROPER LEVEL OFF				20		20	20		20
IMPROPER COMPENSATION FOR WIND CONDITIONS				3		3	3		3
INADEQUATE PREFLIGHT PREPARATION AND/OR PLANNING				1		1	1		1
LACK OF FAMILIARITY WITH AIRCRAFT					2	2		2	2
MISMANAGEMENT OF FUEL SYSTEM				1		1	1		1
SELECTED UNSUITABLE TERRAIN				1		1	1		1
FAILED TO ASSURE THE GEAR WAS DOWN AND LOCKED				4		4	4		4
SPONTANEOUS-IMPROPER ACTION				5		5	5		5
MISJUDGED DISTANCE, SPEED, AND ALTITUDE				3		3	3		3
MISJUDGED DISTANCE AND SPEED				10		10	10		10
MISJUDGED DISTANCE AND ALTITUDE				9		9	9		9
MISJUDGED ALTITUDE AND CLEARANCE				1		1	1		1
MISJUDGED CLEARANCE				2		2	2		2
IMPROPER RECOVERY FROM BOUNCED LANDING				4		4	4		4
MISUSED OR FAILED TO USE FLAPS				1		1	1		1
FAILED TO MAINTAIN DIRECTIONAL CONTROL				17		17	17		17
SELECTED WRONG RUNWAY RELATIVE TO EXISTING WIND				2		2	2		2
FAILED TO INITIATE GO-AROUND				3		3	3		3
SUBTOTAL	4		4	157	2	159	161	2	163
CHECK PILOT									
INADEQUATE SUPERVISION OF FLIGHT	1		1	3		3	4		4
SUBTOTAL	1		1	3		3	4		4
** PERSONNEL **									
FLIGHT INSTRUCTOR									
INADEQUATE SUPERVISION OF FLIGHT				9	5	14	9	5	14
INADEQUATE TRAINING OF STUDENT				8	11	19	8	11	19
MAINTENANCE, SERVICING, INSPECTION									
IMPROPER MAINTENANCE(MAINTENANCE PERSONNEL)	4		4	16	1	17	20	1	21
IMPROPER MAINTENANCE(OWNER PERSONNEL)	2		2	6	1	7	8	1	9
IMPROPERLY SERVICED AIRCRAFT(GROUND CREW)				1		1	1		1
IMPROPERLY SERVICED AIRCRAFT(OWNER-PILOT)				8		8	8		8
INADEQUATE INSPECTION OF AIRCRAFT(MAINTENANCE PERSONNEL)	1		1	1		1	2		2
INADEQUATE INSPECTION OF ACFT(OWNER-PILOT PERSONNEL)				2		2	2		2
INADEQUATE MAINTENANCE AND INSPECTION	8		8	100	12	112	108	12	120
OTHER				1		1	1		1
OPERATIONAL SUPERVISORY PERSONNEL									
INADEQUATE FLIGHT TRAINING-PROCEDURES				1	1	2	1	1	2

TABLE 42 (CONTINUED)

CAUSE/FACTOR TABLE

PERSONNEL (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
FAILURE TO PROVIDE ADEQ DIRECTIVES, MANUALS, EQUIPMENT					1	1		1	1
WEATHER PERSONNEL									
INCORRECT WEATHER FORECAST		2	2		2	2		4	4
INADEQUATE WEATHER OBSERVATION					1	1		1	1
INCOMPLETE WEATHER REPORT		1	1					1	1
INADEQUATE/INCORRECT WEATHER BRIEFING		1	1	1		1	1	1	2
TRAFFIC CONTROL PERSONNEL									
FAILURE TO ADVISE OF OTHER TRAFFIC				1		1	1		1
ISSUED IMPROPER OR CONFLICTING INSTRUCTIONS	1		1		2	2	1	2	3
INADEQUATE SPACING OF AIRCRAFT					3	3		3	3
FAILURE TO PROPERLY IDENTIFY AIRCRAFT ON RADAR	1		1				1		1
OTHER		2	2					2	2
AIRPORT SUPERVISORY PERSONNEL									
IMPROPER MAINTENANCE-AIRPORT FACILITIES				3	1	4	3	1	4
FAILURE TO NOTIFY OF UNSAFE CONDITION		1	1	6	1	7	6	2	8
IMPROPER/INADEQUATE SNOW REMOVAL				4	4	8	4	4	8
IMPROPER OPERATION OF FACILITIES					1	1		1	1
IMPROPER INSPECTION OF FACILITIES				1		1	1		1
OTHER				1	1	2	1	1	2
AIRWAYS FACILITIES PERSONNEL									
PRODUCTION-DESIGN									
SUBSTANDARD QUALITY CONTROL	1		1				1		1
INCORRECT FACTORY INSTALLATION				3		3	3		3
POOR/INADEQUATE DESIGN				6	1	7	6	1	7
MISCELLANEOUS-PERSONNEL									
PILOT OF OTHER AIRCRAFT	30	1	31	53	11	64	83	12	95
GROUND SIGNALMAN	1		1		1	1	1	1	2
SPECTATOR		1	1					1	1
GROUND CREWMAN	2		2				2		2
PASSENGER	4		4	20	2	22	24	2	26
DRIVER OF VEHICLE	1		1	3	2	5	4	2	6
OTHER	2		2	6	3	9	8	3	11
DIRECT ENTRIES	1		1	4		4	5		5
THIRD PILOT									
FLIGHT ENGINEER									
DISPATCHING									
SUBTOTAL	59	9	68	265	68	333	324	77	401
** AIRFRAME **									
WINGS									
SPARS	1		1	2		2	3		3
WING ATTACHMENT FITTINGS, BOLTS				1		1	1		1
SKIN AND ATTACHMENTS				3		3	3		3
OTHER	4	1	5	1		1	5	1	6
FUSELAGE									
SKIN AND ATTACHMENTS	1		1	1		1	2		2
WINDSHIELDS, WINDOWS, CANOPIES				1	1	2	1	1	2
SEATS				2	1	3	2	1	3
OTHER	1		1	2		2	3		3
LANDING GEAR									
MAIN GEAR-SHOCK ABSORBING/ASSY, STRUTS, ATTACHMENTS, ETC				11		11	11		11
NORMAL RETRACTION/EXTENSION ASSEMBLY				64	7	71	64	7	71
EMERGENCY/EXTENSION ASSEMBLY				30		30	30		30
TAILWHEEL ASSEMBLIES				3	1	4	3	1	4
NOSEWHEEL ASSEMBLIES				43	1	44	43	1	44
WHEELS, TIRES, AXLES				21	4	25	21	4	25
SKI ASSEMBLIES				2		2	2		2
BRAKING SYSTEM (NORMAL)		1	1	30	15	45	30	16	46
BRAKING SYSTEM (EMERGENCY)				2		2	2		2
LANDING GEAR WARNING AND INDICATING COMPONENTS					21	21		21	21
GEAR LOCKING MECHANISM				24		24	24		24
SWITCHES, LEVERS, CRANKING MECHANISM, ETC				9	5	14	9	5	14
NOSEWHEEL STEERING				1	1	2	1	1	2
OTHER				2		2	2		2
DIRECT ENTRIES				1		1	1		1
FLIGHT CONTROL SURFACES									
ELEVATOR, ASSEMBLY ATTACHMENTS				2		2	2		2
RUDDER, SURFACES ATTACHMENTS	1		1	2		2	3		3
AILERON, SURFACES ATTACHMENTS				3		3	3		3
HORIZONTAL STABILIZER, ATTACHMENTS	3		3				3		3

TABLE 42 (CONTINUED)

CAUSE/FACTOR TABLE

AIRFRAME (CONTINUED)	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
VERTICAL STABILIZER, ATTACHMENTS	2		2				2		2
FLAP ASSEMBLIES	1		1	1		1	2		2
OTHER				1		1	1		1
SUBTOTAL	14	2	16	265	57	322	279	59	338
** POWERPLANT **									
ENGINE STRUCTURE				12		12	12		12
CRANKSHAFT	1		1	10		10	11		11
MASTER AND CONNECTING RODS	1	1	2	10		10	11	1	12
CYLINDER ASSEMBLY		1	1	10		10	10	1	11
PISTON, PISTON RINGS	1		1	21		21	22		22
VALVE ASSEMBLIES				1		1	1		1
BLOWER, IMPELLER ASSEMBLY	2		2	6		6	8		8
OTHER									
IGNITION SYSTEM	3		3	15		15	18		18
MAGNETOES	1		1				1		1
DISTRIBUTOR	1	1	2	9	1	10	10	2	12
SPARK PLUG				1		1	1		1
IGNITION HARNESS, SHIELDING				2		2	2		2
LEADS									
FUEL SYSTEM				2		2	2		2
TANKS				4		4	4		4
LINES AND FITTINGS				8	1	9	8	1	9
SELECTOR VALVES	1		1	1		1	2		2
FILTERS, STRAINERS, SCREENS	2		2	12		12	14		14
CARBURETOR	2		2	4		4	6		6
PUMPS				1	1	2	1	1	2
FUEL INJECTION SYSTEM	1		1	7	2	9	8	2	10
VENTS, DRAINS, TANK CAPS				1		1	1		1
OTHER									
LUBRICATING SYSTEM				5	1	6	5	1	6
LINES, HOSES, FITTINGS				1		1	1		1
VALVES				1		1	1		1
PUMP-PRESSURE				1		1	1		1
PUMPS-SCAVENGER				1		1	1		1
OIL COOLERS				1		1	1		1
OTHER									
COOLING SYSTEM				1		1	1		1
OTHER									
PROPELLER AND ACCESSORIES	1		1	18		18	19		19
BLADES				1		1	1		1
HUBS				1	1	2	1	1	2
ELECTRIC PITCH CONTROL MECHANISM				5		5	5		5
HYDRAULIC PITCH CONTROL MECHANISM				1		1	1		1
GOVERNORS				3		3	3		3
OTHER									
EXHAUST SYSTEM				2		2	2		2
MUFFLERS				1		1	1		1
STACKS				1		1	1		1
BAFFLES				1		1	1		1
OTHER									
ENGINE ACCESSORIES				1		1	1		1
GENERATORS									
ENGINE CONTROLS-COCKPIT				6		6	6		6
THROTTLE-POWER LEVER ASSEMBLIES	1		1	4		4	5		5
MIXTURE CONTROL ASSEMBLIES									
POWERPLANT-INSTRUMENTS					1	1		1	1
POWER INDICATORS					18	18		18	18
FUEL QUANTITY GAUGE									
MISCELLANEOUS	16		16	154		154	170		170
POWERPLANT FAILURE FOR UNDETERMINED REASONS				1		1	1		1
DETONATION	1		1	4		4	5		5
DIRECT ENTRIES									
REDUCTION GEAR ASSEMBLY									
COMPRESSOR ASSEMBLY									
COMBUSTION ASSEMBLY									
TURBINE ASSEMBLY									
ACCESSORY DRIVE ASSEMBLY									
LUBRICATING SYSTEM									
FUEL SYSTEM									

TABLE 42 (CONTINUED)

CAUSE/FACTOR TABLE

POWERPLANT (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
OTHER				1		1	1		1
SAFETY SYSTEM									
IGNITION SYSTEM									
TORQUEMETER									
AIR BLEED									
EXHAUST SYSTEM									
OTHER				1		1	1		1
THRUST REVERSER									
PROPELLER SYSTEM									
CONSTANT SPEED DRIVE									
POWER LEVER									
CABLE				1		1	1		1
PROPELLER LEVER									
REVERSE THRUST LEVER									
ENGINE INDICATING EQUIPMENT									
ENGINE INSTALLATION									
SUBTOTAL	35	3	38	355	26	381	390	29	419
** SYSTEMS **									
ELECTRICAL SYSTEM									
BATTERIES					1	1		1	1
GENERATORS/ALTERNATORS				2	2	4	2	2	4
CONSTANT SPEED DRIVE UNIT					1	1		1	1
REGULATOR				1		1	1		1
PROTECTIVE DEVICES					1	1		1	1
OTHER	1		1	1		1	2		2
HYDRAULIC SYSTEM									
RESERVOIR, LINES, FITTINGS				6		6	6		6
OTHER				1	1	2	1	1	2
FLIGHT CONTROL SYSTEMS									
AILERON AND AILERON TAB CONTROL SYSTEM				1		1	1		1
ELEVATOR AND ELEVATOR TAB CONTROL SYSTEM	1		1	2		2	3		3
RUDDER AND RUDDER TAB CONTROL SYSTEM	1		1	3		3	4		4
WING FLAP CONTROL SYSTEM (ELECTRICAL)				1		1	1		1
FLIGHT CONTROL GUST LOCK SYSTEM				1		1	1		1
OTHER				1		1	1		1
ANTI-ICING, DE-ICING SYSTEMS									
CARBURETOR DE-ICING SYSTEM				4		4	4		4
AIR CONDITION, HEATING AND PRESSURIZATION									
AUTO PILOT									
SERVO					1	1		1	1
OTHER				1		1	1		1
FIRE WARNING SYSTEM									
FIRE EXTINGUISHER SYSTEM									
OXYGEN SYSTEM									
OTHER SYSTEMS									
OTHER				1		1	1		1
DIRECT ENTRIES				1		1	1		1
SUBTOTAL	3		3	27	7	34	30	7	37
** INSTRUMENTS/EQUIPMENT AND ACCESSORIES **									
FLIGHT AND NAVAGATION INSTRUMENTS									
ALTIMETERS				1	1	2	1	1	2
AIRSPEED					2	2		2	2
ATTITUDE GYRO	1		1				1		1
DIRECTIONAL GYRO	1	2	3				1	2	3
OTHER					1	1		1	1
COMMUNICATIONS AND NAVIGATION EQUIPMENT									
TRANSMITTERS AND/OR RECEIVERS					1	1		1	1
ILS RECEIVERS		1	1					1	1
OTHER		1	1					1	1
MISCELLANEOUS EQUIPMENT									
SPRAY, DUSTING EQUIPMENT				1	1	2	1	1	2
SIGN TOWING EQUIPMENT				1		1	1		1
GLIDER LAUNCH/TOW EQUIPMENT					1	1		1	1
OTHER					1	1		1	1

TABLE 42 (CONTINUED)

CAUSE/FACTOR TABLE

INSTRUMENTS/EQUIPMENT AND ACCESSORIES (CONTINUED)	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
SUBTOTAL	2	4	6	3	8	11	5	12	17
** AIRPORTS/AIRWAYS/FACILITIES **									
AIRPORT FACILITIES		1	1		4	4		5	5
RUNWAY LIGHTING					1	1		1	1
OTHER									
AIRPORT CONDITIONS		1	1	6	66	72	6	67	73
WET RUNWAY				2	25	27	2	25	27
ICE/SLUSH ON RUNWAY				11	38	49	11	38	49
SNOW ON RUNWAY				2	2	4	2	2	4
SNOW WINDROWS				1	3	4	1	3	4
UNMARKED OBSTRUCTIONS				7	22	29	7	22	29
SOFT SHOULDERS (RUNWAY)		1	1		1	1		2	2
GLASSY WATER		1	1	3	24	27	3	25	28
HIGH VEGETATION				8	4	12	8	4	12
HIDDEN HAZARD				1	21	22	1	21	22
POORLY MAINTAINED RUNWAY SURFACE		2	2	6	41	47	6	43	49
SOFT RUNWAY				1	1	2	1	1	2
WET RAMP/TAXIWAY				1	2	3	1	2	3
ICE/SLUSH ON RAMP/TAXIWAY				2	1	3	2	1	3
SNOW ON RAMP/TAXIWAY				1		1	1		1
SOFT SHOULDERS (RAMP/TAXIWAY)				3		3	3		3
POORLY MAINTAINED RAMP/TAXIWAY SURFACE		7	7	6	50	56	6	57	63
OTHER									
AIRWAYS FACILITIES		13	13	61	306	367	61	319	380
SUBTOTAL									
** WEATHER **									
LOW CEILING	32	99	131	8	60	68	40	159	199
RAIN	11	49	60	4	30	34	15	79	94
FOG	28	75	103	10	39	49	38	114	152
SNOW	4	20	24	1	9	10	5	29	34
ICING CONDITIONS-INCLUDES SLEET, FREEZING RAIN, ETC	6	6	12	6	10	16	12	16	28
CONDITIONS CONDUCIVE TO CARB/INDUCTION SYSTEM ICING	2	2	4	36	22	58	38	24	62
UNFAVORABLE WIND CONDITIONS	1	10	11	182	245	427	183	255	438
SUDDEN WINDSHIFT				12	25	37	12	25	37
TURBULENCE IN FLIGHT, CLEAR AIR	1	1	2	1	1	2	2	2	4
TURBULENCE, ASSOCIATED W/CLOUDS, THUNDERSTORMS	2	10	12	3	8	11	5	18	23
DOWNDRAFTS, UPDRAFTS	4	2	6	3	34	37	7	36	43
LOCAL WHIRLWIND				10	2	12	10	2	12
LINE SQUALL				1	5	6	1	5	6
ADVERSE WINDS ALOFT					2	2		2	2
HIGH TEMPERATURE		4	4		31	31		35	35
OBSTRUCTIONS TO VISION	1	3	4	1	10	11	2	13	15
HIGH DENSITY ALTITUDE	2	7	9	2	45	47	4	52	56
THUNDERSTORM ACTIVITY	4	15	19	2	17	19	6	32	38
OTHER		2	2		1	1		3	3
SUBTOTAL	98	305	403	282	596	878	380	901	1281
** TERRAIN **									
WET, SOFT GROUND		2	2	37	93	130	37	95	132
SNOW-COVERED				2	14	16	2	14	16
ICY				2	2	4	2	2	4
HIGH VEGETATION				7	35	42	7	35	42
HIDDEN OBSTRUCTIONS				13	6	19	13	6	19
ROUGH/UNEVEN	1	4	5	27	96	123	28	100	128
ROUGH WATER				1	4	5	1	4	5
GLASSY WATER		2	2		3	3		5	5
HIGH OBSTRUCTIONS	3	22	25	11	40	51	14	62	76
LOOSE GRAVEL					2	2		2	2
SANDY				3	12	15	3	12	15
OTHER	1	1	2	4	16	20	5	17	22
SUBTOTAL	5	31	36	107	323	430	112	354	466
** MISCELLANEOUS **									
BIRD COLLISION				3		3	3		3

TABLE 42 (CONTINUED) CAUSE/FACTOR TABLE

MISCELLANEOUS (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
VORTEX TURBULENCE	3		3	11	1	12	14	1	15
PROP/JET BLAST				8		8	8		8
EVASIVE MANEUVER TO AVOID COLLISION	4		4	38	3	41	42	3	45
UNQUALIFIED PERSON OPERATED AIRCRAFT	2	1	3	7	4	11	9	5	14
SUICIDE	3		3				3		3
FOREIGN OBJECT DAMAGE				1		1	1		1
SMOKE IN COCKPIT				2		2	2		2
FOREIGN MATERIAL AFFECTING NORMAL OPERATIONS	2	1	3	25	3	28	27	4	31
UNDETERMINED	68		68	38		38	106		106
DIRECT ENTRIES	1		1	5		5	6		6
SUBTOTAL	83	2	85	138	11	149	221	13	234
GRAND TOTAL	1131	421	1552	5924	1736	7660	7055	2157	9212
** MISCELLANEOUS ACTS, CONDITIONS **									
ALTIMETER SETTING-INCORRECT		1	1		1	1		2	2
IMPROPER OPER/FAILED TO USE CARB HEAT/DE-ICING EQUIP	1	1	2	72	2	74	73	3	76
CHECKLIST-FAILED TO USE	1		1	2	104	106	3	104	107
CREW COORDINATION-POOR					1	1		1	1
DISREGARD OF GOOD OPERATING PRACTICE	1		1		2	2	1	2	3
IMPROPER EMERGENCY PROCEDURES	8		8	18	9	27	26	9	35
GUST LOCKS ENGAGED	1		1	1		1	2		2
INSTRUCTIONS-MISINTERPRETED					2	2		2	2
INSTRUMENTS-MISREAD OR FAILED TO READ				2	1	3	2	1	3
NOT ALLIGNED WITH RUNWAY/INTENDED LANDING AREA	1		1	28	14	42	29	14	43
UNWARRANTED LOW FLYING	50	17	67	34	26	60	84	43	127
FAILED TO USE ALL AVAILABLE RUNWAY	1		1	3	9	12	4	9	13
LANDED AT WRONG AIRPORT				3	3	6	3	3	6
INATTENTIVE TO FUEL SUPPLY	3		3	17	3	20	20	3	23
FLEW INTO BLIND CANYON	3	2	5	4	4	8	7	6	13
POORLY PLANNED APPROACH	5	2	7	3	25	28	8	27	35
MISCALCULATED FUEL CONSUMPTION		1	1	14	6	20	14	7	21
JETTISONED LOAD		1	1		15	15		16	16
STOLEN OR UNAUTHORIZED USE OF AIRCRAFT	1	9	10		16	16	1	25	26
LANDED ON FOAMED RUNWAY					11	11		11	11
IMPROPERLY SECURED	2		2	13	4	17	15	4	19
BOGUS PART				1	1	2	1	1	2
COMMUNICATIONS FAILURE					2	2		2	2
ELECTRICAL FAILURE	1		1	4	13	17	5	13	18
ENGINE LOADED UP				28	1	29	28	1	29
FATIGUE FRACTURE	1		1	26	2	28	27	2	29
FUEL GRADE-IMPROPER				1		1	1		1
HYDRAULIC FAILURE				6		6	6		6
RPM-UNCONTROLLABLE-OVERSPEED				2		2	2		2
WINDSHIELD, DIRTY, FOGGY, ETC-RESTRICTED VISION				2	12	14	2	12	14
WRONG PART				2		2	2		2
IMPROPER ALIGNMENT/ADJUSTMENT	2		2	21	2	23	23	2	25
FAILURE OF TWO OR MORE ENGINES	3	2	5	13	11	24	16	13	29
SEPARATION IN FLIGHT		23	23		33	33		56	56
FIRE IN CABIN/ COCKPIT/ BAGGAGE COMPARTMENT	1		1	1		1	2		2
FIRE IN ENGINE	1	1	2	7	2	9	8	3	11
ASYMETRICAL FLAPS	1		1	2		2	3		3
LATERAL IMBALANCE				1		1	1		1
CORRODED/CORROSION				3	2	5	3	2	5
INCORRECT TRIM SETTING				2		2	2		2
CARGO SHIFTED	1		1				1		1
CONGESTED TRAFFIC-PATTERN OR RAMP		1	1		13	13		14	14
PILOT FATIGUE		5	5		8	8		13	13
FUEL EXHAUSTION	11		11	157		157	168		168
FUEL CONTAMINATION-EXCLUSIVE OF WATER IN FUEL				15	1	16	15	1	16
PILOT SUFFERED HEART ATTACK	2		2	2		2	4		4
ALCOHOLIC IMPAIRMENT OF EFFICIENCY AND JUDGMENT	34	9	43	6		6	40	9	49
CARBON MONOXIDE POISONING	1		1				1		1
ICE-IN FUEL				2		2	2		2
ICE-CARBURETOR	1		1	72		72	73		73
AIRFRAME ICE				9	2	11	9	2	11
ICE-WINDSHIELD				3	2	5	3	2	5
IMPROPERLY LOADED AIRCRAFT-WEIGHT-AND/OR CG	5	10	15	7	15	22	12	25	37

TABLE 42 (CONTINUED)

CAUSE/FACTOR TABLE

MISCELLANEOUS ACTS, CONDITIONS (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
INTERFERENCE WITH FLIGHT CONTROLS	1		1	2	1	3	3	1	4
WHITEOUT	2		2		1	1	2	1	3
SUNGLARE		5	5		31	31		36	36
LACK OF LUBRICATION-SPECIFIC PART, NOT SYSTEM	1		1	6	1	7	7	1	8
OIL EXHAUSTION-ENGINE LUBRICATION SYSTEM				10	1	11	10	1	11
OIL CONTAMINATION				1		1	1		1
SIMULATED CONDITIONS	6	1	7	33	13	46	39	14	53
WATER IN FUEL				35		35	35		35
AIRCRAFT CAME TO REST IN WATER		38	38		69	69		107	107
FROZEN				5		5	5		5
MISSING	1	1	2	9	2	11	10	3	13
HYDROPLANING ON WET RUNWAY				1	3	4	1	3	4
OVERLOAD FAILURE	13	4	17	12	956	968	25	960	985
MATERIAL FAILURE	4		4	172	5	177	176	5	181
FUEL STARVATION	15		15	149		149	164		164
OIL STARVATION				2		2	2		2
IMPROPER CLEARANCE-TOLERANCE	2		2	8	1	9	10	1	11
FUEL SELECTOR POSITIONED BETWEEN TANKS	2		2	6		6	8		8
FIRE OF UNDETERMINED ORIGIN				2		2	2		2
IMPROPER/INADEQUATE VENTING				1	1	2	1	1	2
POOR WELD	1		1				1		1
PREVIOUS DAMAGE				38	12	50	38	12	50
LEAK/LEAKAGE	1		1	12	2	14	13	2	15
LOW FLUID LEVEL					1	1		1	1
CIRCUIT BREAKER POPPED				1	15	16	1	15	16
ARCING	1		1	1		1	2		2
LOW COMPRESSION				1		1	1		1
RUNWAY CLOSED		1	1	1	4	5	1	5	6
DOWNWIND		4	4		75	75		79	79
CARBON DEPOSITS	1		1	5	1	6	6	1	7
LANDED IN CONSTRUCTION AREA				3	3	6	3	3	6
UNDER TORQUED				2		2	2		2
LOOSE, PART/FITTING	3		3	9	1	10	12	1	13
BENT				6		6	6		6
BINDING				4	3	7	4	3	7
BUCKLED				5		5	5		5
BURNED				5		5	5		5
CHAFFED				1		1	1		1
COLLAPSED				2		2	2		2
CROSSED	1		1				1		1
DETERIORATED	1	1	2	6		6	7	1	8
DISCONNECTED				8		8	8		8
EXCESSIVE				1	1	2	1	1	2
ERRATIC		2	2	2	9	11	2	11	13
FLUTTER				1		1	1		1
FRAYED	1		1				1		1
GROUNDED				1		1	1		1
IMPROPERLY INSTALLED	1	1	2	17	1	18	18	2	20
JAMMED				14	1	15	14	1	15
OBSTRUCTED				3		3	3		3
OVERHEATED				2	2	4	2	2	4
PINCHED				1		1	1		1
PRESSURE TOO LOW				3	2	5	3	2	5
PRESSURE, NONE				9	1	10	9	1	10
SCORED	1		1	1		1	2		2
SHEARED	2		2	4		4	6		6
STICKING				1		1	1		1
STUCK				5	2	7	5	2	7
EXCESSIVE TEMPERATURE	1		1	2	1	3	3	1	4
VIBRATION, EXCESSIVE				6	7	13	6	7	13
WARPED				1	1	2	1	1	2

DIRECT ENTRY CAUSES

MISC-STRUCK LARGE DOG JUST PRIOR TO LIFTOFF.
PILOT-FLEW INTO FORECAST ICING CONDITIONS.
PILOT-LANDED ON DRY RUNWAY WITH SKIS EXTENDED.
PILOT-POOR TCHNIQUE OR LACK OF KNOWLDGE-SPIN RCVRY
PWR PLT-PROP CYLINDER ATTACH SCREWS P/N A-1635-43.

TABLE 42 (CONTINUED

DIRECT ENTRY CAU

PERSONNEL-PAX SL
PILOT-INADVERTEN
MISC-DOG RAN IN
PERSONNEL-INSTR
PWR PLT-GASKET
PILOT-MISCALCUL
MISC-DEER RAN A
MISC-LOSS OF CO
PWR PLT-FUEL PR
MISC-DEER CROSS
LDG GR-BRAKES W
PERSONNEL-PX DI
PWR PLT-ENG ROU
PERSONNEL-LOADE
SYSTEMS-L BRAKE
PERSONNEL-PAX I
MISC-TYPE OF TU
PILOT-INITIATED
PILOT-DID NOT
PWR PLT-IMPROPE
PILOT-NEGLIGENT

DIRECT ENT
CAUSAL CAT

DIRECT ENTRY CAUSES (CONTINUED)

ACCIDENTS	
FACTOR	TOTAL
1	4
1	3
36	36
1	8
1	11
	1
14	53
	35
107	107
	5
3	13
3	4
960	985
5	181
	164
	2
1	11
	8
	2
1	2
	1
12	50
2	15
1	1
15	16
	2
	1
5	6
79	79
1	7
3	6
	2
1	13
	6
3	7
	5
	5
	1
	2
	1
1	8
	8
1	2
11	13
	1
	1
	1
2	20
1	15
	3
2	4
	1
2	5
1	10
	2
	6
	1
2	7
1	4
7	13
1	2

PERSONNEL-PAX SLIPPED ON WET FLOAT.
PILOT-INADVERTENTLY LOWERED LDG GEAR.
MISC-DOG RAN IN FRONT OF ACFT.
PERSONNEL-INSTR,AS PX,INTERFERED WITH CONTROLS.
PWR PLT-GASKET BLOWN NO 3 CYL.
PILOT-MISCALCULATED FUEL CONSUMPTION.
MISC-DEER RAN ACROSS RNWY STRIKING ACFT.
MISC-LOSS OF CONTROL FOR UNDETERMINED CAUSE.
PWR PLT-FUEL PRESSURE DROPPED TO ZERO,CAUSE UNDTMD
MISC-DEER CROSSED IN FRONT OF ACFT.
LDG GR-BRAKES WEAK.
PERSONNEL-PX DID NOT HAVE SEAT BELT TIGHT.
PWR PLT-ENG ROUGH,BACKFIRING,ON FIRE,CAUSE UNDTMND
PERSONNEL-LOADER WALKED INTO ACFT PROPELLER.
SYSTEMS-L BRAKE FAILED,CAUSE UNDETERMINED.
PERSONNEL-PAX INADVERTENTLY SHOT OUT RT JURY STRUT
MISC-TYPE OF TURBULENCE UNDETERMINED.
PILOT-INITIATED NITE FLIGHT IN ADVERSE WEATHER.
PILOT-DID NOT MONITOR REAR ENG INSTRUMENTS.
PWR PLT-IMPROPERLY INSTALLED COUNTERWEIGHT PINS.
PILOT-NEGLIGENT AND RECKLESS FLYING.

DIRECT ENTRY CAUSES ARE CARRIED UNDER THEIR APPROPRIATE CAUSAL CATEGORIES AND ARE INCLUDED IN THE TOTALS

TABLE 43

INJURIES, ACCIDENTS
SMALL FIXED-WING AIRCRAFT
U.S. GENERAL AVIATION

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	610	306	562	3187			4665
COPILOT	46	10	5	53			114
DUAL STUDENT	26	10	36	192			264
CHECK PILOT	1			6			7
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT				1			1
EXTRA CREW	1		3	10			14
PASSENGERS	603	270	435	2913			4221
TOTAL	1287	596	1041	6362		ABOARD	9286
* OTHER-AIRCRAFT	2	1		123			126
OTHER-GROUND	14	4	7	6			31
GRAND TOTAL	1303	601	1048	6491			944

INVOLVES 4614 TOTAL ACCIDENTS
INVOLVES 645 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 44

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - DUAL
SMALL FIXED-WING AIRCRAFT

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 44

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - DUAL
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	27	15	30	193			265
COPILOT				2			2
DUAL STUDENT	26	10	36	191			263
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW	1						1
PASSENGERS	2	1	4	38			45
TOTAL	56	26	70	424		ABOARD	576
* OTHER-AIRCRAFT	8	3	1	55			67
OTHER-GROUND			1	2			3
GRAND TOTAL	64	29	72	481			646

INVOLVES 265 TOTAL ACCIDENTS
INVOLVES 29 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 45

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - SOLO
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	5	8	24	196			233
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS				1			1
TOTAL	5	8	24	197		ABOARD	234
* OTHER-AIRCRAFT				11			11
OTHER-GROUND							
GRAND TOTAL	5	8	24	208			245

INVOLVES 233 TOTAL ACCIDENTS
INVOLVES 5 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 46

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - ALL OTHER
SMALL FIXED-WING AIRCRAFT

1968

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 46

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - ALL OTHER
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	24	18	48	357			447
COPILOT				1			1
DUAL STUDENT							
CHECK PILOT	1			5			6
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS	1	2	2	9			14
TOTAL	26	20	50	372		ABOARD	468
* OTHER-AIRCRAFT	3	1	3	20			27
OTHER-GROUND							
GRAND TOTAL	29	21	53	392			495

INVOLVES 446 TOTAL ACCIDENTS
INVOLVES 25 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 47

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - PLEASURE
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	347	150	291	1439			2227
COPILOT	26	3	2	4			35
DUAL STUDENT				1			1
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS	452	173	309	2039			2973
TOTAL	825	326	602	3483		ABOARD	5236
* OTHER-AIRCRAFT	7	1		36			44
OTHER-GROUND	6	3	5	1			15
GRAND TOTAL	838	330	607	3520			5295

INVOLVES 2217 TOTAL ACCIDENTS
INVOLVES 371 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 48

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - BUSINESS
SMALL FIXED-WING AIRCRAFT

1968

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 48

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - BUSINESS
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	70	37	49	419			575
COPILOT	1	2		3			6
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS	60	28	43	370			501
TOTAL	131	67	92	792		ABOARD	1082
* OTHER-AIRCRAFT	2	1	1	5			9
OTHER-GROUND			1				1
GRAND TOTAL	133	68	94	797			1092

INVOLVES 575 TOTAL ACCIDENTS
INVOLVES 76 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 49

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - CORPORATE/EXECUTIVE
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	11	2	4	54			71
COPILOT	1	1		13			15
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS	12	7	5	109			133
TOTAL	24	10	9	176		ABOARD	219
* OTHER-AIRCRAFT	3			1			4
OTHER-GROUND							
GRAND TOTAL	27	10	9	177			223

INVOLVES 71 TOTAL ACCIDENTS
INVOLVES 13 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 50

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - ALL OTHER
SMALL FIXED-WING AIRCRAFT

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 50

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - ALL OTHER
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	10	8	12	102			132
COPILOT	2			1			3
DUAL STUDENT							
CHECK PILOT				1			1
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW				1			1
PASSENGERS	2	3	3	60			68
TOTAL	14	11	15	165		ABOARD	205
* OTHER-AIRCRAFT			1	1			2
OTHER-GROUND							
GRAND TOTAL	14	11	16	166			207

INVOLVES 132 TOTAL ACCIDENTS
INVOLVES 10 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 51

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - AERIAL APPLICATION
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	35	35	55	196			321
COPILOT				1			1
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS				1			1
TOTAL	35	35	55	198		ABOARD	323
* OTHER-AIRCRAFT		2	1	2			5
OTHER-GROUND	3	1					4
GRAND TOTAL	38	38	56	200			332

INVOLVES 319 TOTAL ACCIDENTS
INVOLVES 36 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE "OTHER-AIRCRAFT" ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 52

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - FIRE CONTROL
SMALL FIXED-WING AIRCRAFT

1968

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 52

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - FIRE CONTROL
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	1	1		2			4
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS							
TOTAL	1	1		2		ABOARD	4
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	1	1		2			4

INVOLVES 4 TOTAL ACCIDENTS
INVOLVES 1 FATAL ACCIDENTS

TABLE 53

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - POWER AND PIPELINE PATROL
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	2		3	4			9
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW				1			1
PASSENGERS	2		1	1			4
TOTAL	4		4	6		ABOARD	14
* OTHER-AIRCRAFT			2				2
OTHER-GROUND							
GRAND TOTAL	4		6	6			16

INVOLVES 9 TOTAL ACCIDENTS
INVOLVES 2 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 54

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - AIR TAXI - PASSENGER OPERATIONS
SMALL FIXED-WING AIRCRAFT

1968

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 54

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - AIR TAXI - PASSENGER OPERATIONS
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	26	10	15	72			123
COPILOT	5		1	13			19
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT				1			1
EXTRA CREW							
PASSENGERS	50	38	41	192			321
TOTAL	81	48	57	278		ABOARD	464
* OTHER-AIRCRAFT				2			2
OTHER-GROUND	4			2			6
GRAND TOTAL	85	48	57	282			472

INVOLVES 122 TOTAL ACCIDENTS
INVOLVES 30 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 55

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - AIR TAXI - CARGO OPERATIONS
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	8	4	3	17			32
COPILOT	2	4		5			11
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW				2			2
PASSENGERS	1	3	4	1			9
TOTAL	11	11	7	25		ABOARD	54
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	11	11	7	25			54

INVOLVES 32 TOTAL ACCIDENTS
INVOLVES 8 FATAL ACCIDENTS

TABLE 56

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - ALL OTHER
SMALL FIXED-WING AIRCRAFT

1968

TABLE 56

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - ALL OTHER
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	7	1	4	17			29
COPILOT				3			3
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW				4			4
PASSENGERS	2	4	5	20			31
TOTAL	9	5	9	44		ABOARD	67
* OTHER-AIRCRAFT				5			5
OTHER-GROUND	1						1
GRAND TOTAL	10	5	9	49			73

INVOLVES 27 TOTAL ACCIDENTS
INVOLVES 9 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 57

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - TEST
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	9	4	8	19			40
COPILOT	1		1				2
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW			2	1			3
PASSENGERS	8	1	3	11			23
TOTAL	18	5	14	31		ABOARD	68
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	18	5	14	31			68

INVOLVES 40 TOTAL ACCIDENTS
INVOLVES 9 FATAL ACCIDENTS

TABLE 58

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - DEMONSTRATION
SMALL FIXED-WING AIRCRAFT

1968

TABLE 58

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - DEMONSTRATION
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	3	1	2	16			22
COPILOT	2			5			7
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS	1	1	3	21			26
TOTAL	6	2	5	42		ABOARD	55
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	6	2	5	42			55

INVOLVES 22 TOTAL ACCIDENTS
INVOLVES 3 FATAL ACCIDENTS

TABLE 59

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - FERRY
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	5	4	9	47			65
COPILOT			1	1			2
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS			1	12			13
TOTAL	5	4	11	60		ABOARD	80
* OTHER-AIRCRAFT	1	1					2
OTHER-GROUND							
GRAND TOTAL	6	5	11	60			82

INVOLVES 65 TOTAL ACCIDENTS
INVOLVES 6 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 60

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - TOWING GLIDERS
SMALL FIXED-WING AIRCRAFT

1968

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 60

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - TOWING GLIDERS
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	2	1		3			6
COPILOT	1						1
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS							
TOTAL	3	1		3		ABOARD	7
OTHER-AIRCRAFT							
OTHER-GROUND				1			1
GRAND TOTAL	3	1		4			8

INVOLVES 6 TOTAL ACCIDENTS
INVOLVES 2 FATAL ACCIDENTS

TABLE 61

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - HUNTING
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	2	1		2			5
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS	1	1	1	2			5
TOTAL	3	2	1	4		ABOARD	10
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	3	2	1	4			10

INVOLVES 5 TOTAL ACCIDENTS
INVOLVES 2 FATAL ACCIDENTS

TABLE 62

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - ALL OTHER
SMALL FIXED-WING AIRCRAFT

1968

TABLE 62

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - ALL OTHER
SMALL FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	16	6	5	32			59
COPILOT	5			1			6
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW			1	1			2
PASSENGERS	9	8	10	26			53
TOTAL	30	14	16	60		ABOARD	120
* OTHER-AIRCRAFT				63			63
OTHER-GROUND							
GRAND TOTAL	30	14	16	123			183

INVOLVES 59 TOTAL ACCIDENTS
INVOLVES 17 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

Section III

GENERAL AVIATION ACCIDENTS

LARGE FIXED-WING AIRCRAFT

TABLE 63

ACCIDENTS, INJURY INDEX AND AIRCRAFT DAMAGE BY KIND OF FLYING

LARGE FIXED-WING AIRCRAFT

1968

	KIND OF FLYING																	
	INSTRUCTIONAL			NONCOMMERCIAL			COMMERCIAL						MISCELLANEOUS					
	TRAINING	OTHER	TOTAL	CORPORATE	OTHER	TOTAL	AERIAL APPLICATION	FIRE CONTROL	AIR TAXI-PASSENGER	AIR TAXI-CARGO	OTHER	TOTAL	TEST	DEMONSTRATION	FERRY	OTHER	TOTAL	GRAND TOTAL
TOTAL ACCIDENTS....	0	3	3	18	4	22	1	3	1	1	5	11	2	0	1	3	6	42
INJURY INDEX																		
Fatal.....	0	0	0	5	0	5	0	1	0	0	1	2	0	0	0	0	0	7
Serious.....	0	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Minor.....	0	0	0	2	0	2	0	0	0	0	1	1	0	0	0	0	0	3
None.....	0	2	2	11	4	15	1	1	1	1	3	7	2	0	1	3	6	30
Unknown.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AIRCRAFT DAMAGE [a]																		
Destroyed.....	0	0	0	8	0	8	0	3	1	1	1	6	0	0	0	0	0	14
Substantial.....	0	3	3	10	4	14	1	0	0	0	4	5	2	0	1	3	6	28
Minor.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
None.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total.....	0	3	3	18	4	22	1	3	1	1	5	11	2	0	1	3	6	42

a/ Excludes 3 U. S. Air Carrier aircraft and 2 military aircraft involved in collisions.

TABLE 64

TYPE OF ACCIDENT VS KIND OF FLYING

LARGE FIXED-WING AIRCRAFT

1968

FIRST TYPE OF ACCIDENT	KIND OF FLYING																	
	INSTRUCTIONAL			NONCOMMERCIAL			COMMERCIAL						MISCELLANEOUS					GRAND TOTAL
	TRAINING	OTHER	TOTAL	CORPORATE	OTHER	TOTAL	AERIAL APPLICATION	FIRE CONTROL	AIR TAXI-PASSENGER	AIR TAXI-CARGO	OTHER	TOTAL	TEST	DEMONSTRATION	FERRY	OTHER	TOTAL	
Ground/waterloop/swerve	0	0	0	5	0	5	0	0	0	0	0	0	0	0	1	0	1	6
Dragged wingtip, pod, or float	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheels-up landing	0	1	1	2	0	2	0	0	0	0	0	0	0	0	0	0	0	3
Wheels-down landing in water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gear collapsed	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	3
Gear retracted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hard landing	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	1	2
Nose over/down	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Roll over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Overshoot	0	1	1	2	0	2	0	0	0	0	1	1	0	0	0	1	1	5
Undershoot	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Collision with aircraft a/																		
Both in flight	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
One airborne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Both on ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Collision with ground/water																		
Controlled	0	0	0	1	0	1	0	1	0	0	1	2	0	0	0	0	0	3
Uncontrolled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Collided with																		
Wires/poles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Trees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residence (s)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other building	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fence, fenceposts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electronic towers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Runway or approach lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Airport hazard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Animals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flagman, loader	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ditches	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Snowbank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parked aircraft (Unattended, engines not running)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Automobile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dirt bank	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Other	0	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	0	2
Bird strike (collision with birds)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stall	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Spin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spiral	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mush	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire or explosion																		
In flight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
On ground	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1
Airframe failure																		
In flight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
On ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine tearaway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine failure or malfunction	0	0	0	2	1	3	0	1	1	0	3	5	1	0	0	0	1	9
Propeller/rotor failure																		
Propeller	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tail rotor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Main rotor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propeller/rotor accident to person	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jet intake/exhaust accident to person	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propeller/jet/rotor blast	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbulence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hail damage to aircraft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lightning strike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Evasive maneuver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Uncontrolled altitude deviations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ditching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing aircraft, not recovered	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other/miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Undetermined	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	3	3	18	4	22	1	3	1	1	5	11	2	0	1	3	6	42

a/ Excludes 3 U. S. Air Carrier aircraft and 2 military aircraft involved in collisions.

TABLE 65

TABLE 65

TYPE OF ACCIDENT VS PHASE OF OPERATION

LARGE FIXED-WING AIRCRAFT

1968

FIRST TYPE OF ACCIDENT	PHASE OF OPERATION: STATIC				TAXI			TAKEOFF				INFLIGHT							LANDING								UNKNOWN	TOTAL
	STARTING ENGINES	IDLING ENGINES	ENGINE RUNUP	OTHER	TO TAKEOFF	FROM LANDING	OTHER	GROUND RUN	INITIAL CLIMB	ABORTED	OTHER	CLIMB TO CRUISE	NORMAL CRUISE	DESCENDING	HOLDING (IFR)	ACROBATICS	BUZZING	OTHER	IN TRAFFIC PATTERN	FINAL APPROACH (VFR)	APPROACH (IFR)	LEVEL OFF/TOUCH-DOWN	ROLLOUT	GO-AROUND (VFR)	MISSED APPROACH (IFR)	OTHER		
Ground/waterloop/swerve	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	6
Dragged wingtip, pod, or float	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheels-up landing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Wheels-down landing in water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gear collapsed	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	3
Gear retracted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hard landing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Nose over/down	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Roll over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Overshoot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
Undershoot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Collision with aircraft a/																												
Both in flight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
One airborne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Both on ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Collision with ground/water																												
Controlled	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	3
Uncontrolled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Collided with																												
Wires/poles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Trees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residence (s)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other buildings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fence, fenceposts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electronic towers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Runway or approach lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Airport hazard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Animals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flagman, loader	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ditches	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Snowbank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parked aircraft																												
(Unattended, engines not running)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Automobile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dirt bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Other	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Bird strike (collision with birds)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stall	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Spin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spiral	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mush	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire or explosion																												
In flight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
On ground	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Airframe failure																												
In flight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
On ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine tearaway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine failure or malfunction	0	0	0	0	0	0	0	0	5	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	9
Propeller/rotor failure																												
Propeller	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tail rotor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Main rotor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propeller/rotor accident to person	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jet intake/exhaust accident to person	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propeller/jet/rotor blast	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbulence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hail damage to aircraft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lightning strike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Evasive maneuver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Uncontrolled altitude deviations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ditching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing aircraft, not recovered	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other/miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Undetermined	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	2	0	0	2	6	1	0	0	2	1	0	0	0	4	1	2	0	11	8	2	0	0	0	42

a/ Excludes 3 U. S. Air Carrier aircraft and 2 military aircraft involved in collisions.

TABLE 66

CAUSE/FACTOR TABLE

LARGE FIXED-WING AIRCRAFT
U. S. GENERAL AVIATION

1968

INVOLVES 31 TOTAL ACCIDENTS
INVOLVES 4 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	4 100.00	1 25.00	4 100.00	19 70.37	4 14.81	19 70.37	23 74.19	5 16.13	23 74.19
PERSONNEL	1 25.00	.00	1 25.00	4 14.81	3 11.11	6 22.22	5 16.13	3 9.68	7 22.58
AIRFRAME	.00	.00	.00	.00	.00	.00	.00	.00	.00
LANDING GEAR	.00	.00	.00	5 18.52	4 14.81	9 33.33	5 16.13	4 12.90	9 29.03
POWERPLANT	.00	.00	.00	5 18.52	.00	5 18.52	5 16.13	.00	5 16.13
SYSTEMS	.00	.00	.00	2 7.41	1 3.70	3 11.11	2 6.45	1 3.23	3 9.68
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	.00	.00	.00	.00	.00	.00	.00	.00	.00
ROTORCRAFT	.00	.00	.00	.00	.00	.00	.00	.00	.00
AIRPORTS/AIRWAYS/FACILITIES	.00	1 25.00	1 25.00	.00	2 7.41	2 7.41	.00	3 9.68	3 9.68
WEATHER	1 25.00	.00	1 25.00	.00	4 14.81	4 14.81	1 3.23	4 12.90	5 16.13
TERRAIN	.00	1 25.00	1 25.00	.00	1 3.70	1 3.70	.00	2 6.45	2 6.45
MISCELLANEOUS	.00	.00	.00	.00	.00	.00	.00	.00	.00
UNDETERMINED	.00	.00	.00	.00	.00	.00	.00	.00	.00

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

INVOLVES 31 TOTA
INVOLVES 4 FATA

DETAILED CAUSE/FA			
** PILOT **			
PILOT IN COMMAND			
ATTEMPTED OPERAT			
DELAYED ACTION I			
DELAYED IN INITI			
FAILED TO SEE AN			
FAILED TO OBTAIN			
FAILED TO FOLLOW			
IMPROPER OPERATI			
IMPROPER OPERATI			
IMPROPER LEVEL C			
INADEQUATE PREFL			
INADEQUATE SUPER			
LACK OF FAMILIAR			
FAILED TO ASSURE			
MISJUDGED DISTAN			
MISJUDGED DISTAN			
MISJUDGED DISTAN			
MISJUDGED SPEED			
MISJUDGED ALTIT			
MISUSED OR FAILE			
FAILED TO MAINTA			
FAILED TO INITI			
SUBTOTAL			
COPILOT			
IMPROPER OPERATI			
SPONTANEOUS-IMPA			
SUBTOTAL			
DUAL STUDENT			
FAILED TO EXTEN			
MISJUDGED DISTAN			
SUBTOTAL			
** PERSONNEL **			
FLIGHT INSTRUCTOR			
MAINTENANCE, SERV			
INADEQUATE INSP			
INADEQUATE MAIN			
OPERATIONAL SUPER			
INADEQUATE FLIG			
WEATHER PERSONNEL			
TRAFFIC CONTROL P			
FAILURE TO ADVI			
AIRPORT SUPERVISO			
FAILURE TO MAINTI			
AIRWAYS FACILITIE			
PRODUCTION-DESIGN			
MISCELLANEOUS-PER			
PILOT OF OTHER			
THIRD PILOT			
FLIGHT ENGINEER			
DISPATCHING			

TABLE 66 (CONTINUED)

CAUSE/FACTOR TABLE

LARGE FIXED-WING AIRCRAFT
U. S. GENERAL AVIATION

1968

INVOLVES 31 TOTAL ACCIDENTS
INVOLVES 4 FATAL ACCIDENTS

DETAILED CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
** PILOT **									
PILOT IN COMMAND									
ATTEMPTED OPERATION W/KNOWN DEFICIENCIES IN EQUIPMENT					1	1		1	1
DELAYED ACTION IN ABORTING TAKEOFF				1		1	1		1
DELAYED IN INITIATING GO-AROUND	1		1				1		1
FAILED TO SEE AND AVOID OTHER AIRCRAFT	1		1				1		1
FAILED TO OBTAIN/MAINTAIN FLYING SPEED				3		3	3		3
FAILED TO FOLLOW APPROVED PROCEDURES, DIRECTIVES ETC					2	2		2	2
IMPROPER OPERATION OF POWERPLANT + POWERPLANT CONTROLS	1		1	2		2	3		3
IMPROPER OPERATION OF BRAKES AND/OR FLIGHT CONTROLS				1		1	1		1
IMPROPER OPERATION OF FLIGHT CONTROLS				1		1	1		1
IMPROPER LEVEL OFF				1		1	1		1
INADEQUATE PREFLIGHT PREPARATION AND/OR PLANNING				1		1	1		1
INADEQUATE SUPERVISION OF FLIGHT				2		2	2		2
LACK OF FAMILIARITY WITH AIRCRAFT		1	1					1	1
FAILED TO ASSURE THE GEAR WAS DOWN AND LOCKED				1		1	1		1
MISJUDGED DISTANCE AND SPEED				2		2	2		2
MISJUDGED DISTANCE	1		1				1		1
MISJUDGED DISTANCE AND ALTITUDE				1		1	1		1
MISJUDGED SPEED				1		1	1		1
MISJUDGED ALTITUDE AND CLEARANCE	1		1	1		1	2		2
MISUSED OR FAILED TO USE FLAPS					1	1		1	1
FAILED TO MAINTAIN DIRECTIONAL CONTROL				1		1	1		1
FAILED TO INITIATE GO-AROUND				1		1	1		1
SUBTOTAL	5	1	6	20	4	24	25	5	30
COPILOT									
IMPROPER OPERATION OF FLIGHT CONTROLS				2		2	2		2
SPONTANEOUS-IMPROPER ACTION				1		1	1		1
SUBTOTAL				3		3	3		3
DUAL STUDENT									
FAILED TO EXTEND LANDING GEAR				1		1	1		1
MISJUDGED DISTANCE AND ALTITUDE				1		1	1		1
SUBTOTAL				2		2	2		2
** PERSONNEL **									
FLIGHT INSTRUCTOR									
MAINTENANCE, SERVICING, INSPECTION									
INADEQUATE INSPECTION OF AIRCRAFT(MAINTENANCE PERSONNEL)				1		1	1		1
INADEQUATE MAINTENANCE AND INSPECTION				2	1	3	2	1	3
OPERATIONAL SUPERVISORY PERSONNEL									
INADEQUATE FLIGHT TRAINING-PROCEDURES					1	1		1	1
WEATHER PERSONNEL									
TRAFFIC CONTROL PERSONNEL									
FAILURE TO ADVISE OF UNSAFE AIRPORT CONDITION				1		1	1		1
AIRPORT SUPERVISORY PERSONNEL									
FAILURE TO NOTIFY OF UNSAFE CONDITION					1	1		1	1
AIRWAYS FACILITIES PERSONNEL									
PRODUCTION-DESIGN									
MISCELLANEOUS-PERSONNEL									
PILOT OF OTHER AIRCRAFT	1		1				1		1
THIRD PILOT									
FLIGHT ENGINEER									
DISPATCHING									

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

TABLE 66 (CONTINUED)

CAUSE/FACTOR TABLE

PERSONNEL (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
SUBTOTAL	1		1	4	3	7	5	3	8
** AIRFRAME **									
WINGS									
FUSELAGE									
LANDING GEAR									
MAIN GEAR-SHOCK ABSORBING ASSY, STRUTS, ATTACHMENTS, ETC				1		1	1		1
NORMAL RETRACTION/EXTENSION ASSEMBLY				1	1	2	1	1	2
TAILWHEEL ASSEMBLIES					1	1		1	1
WHEELS, TIRES, AXLES				1		1	1		1
SKID ASSEMBLY					1	1		1	1
BRAKING SYSTEM (NORMAL)				1		1	1		1
BRAKING SYSTEM (EMERGENCY)				1		1	1		1
LANDING GEAR WARNING AND INDICATING COMPONENTS					2	2		2	2
GEAR LOCKING MECHANISM				1		1	1		1
FLIGHT CONTROL SURFACES									
SUBTOTAL				6	5	11	6	5	11
** POWERPLANT **									
ENGINE STRUCTURE									
CYLINDER ASSEMBLY				2		2	2		2
OTHER				1		1	1		1
IGNITION SYSTEM									
FUEL SYSTEM									
LUBRICATING SYSTEM									
COOLING SYSTEM									
PROPELLER AND ACCESSORIES									
EXHAUST SYSTEM									
ENGINE ACCESSORIES									
ENGINE CONTROLS-COCKPIT									
POWERPLANT-INSTRUMENTS									
MISCELLANEOUS									
POWERPLANT FAILURE FOR UNDETERMINED REASONS				1		1	1		1
BIRD INGESTION				1		1	1		1
COMPRESSOR STALLS				1		1	1		1
REDUCTION GEAR ASSEMBLY									
COMPRESSOR ASSEMBLY									
COMBUSTION ASSEMBLY									
TURBINE ASSEMBLY									
ACCESSORY DRIVE ASSEMBLY									
LUBRICATING SYSTEM									
FUEL SYSTEM									
SAFETY SYSTEM									
IGNITION SYSTEM									
TORQUEMETER									
AIR BLEED									
EXHAUST SYSTEM									
THRUST REVERSER									
PROPELLER SYSTEM									
CONSTANT SPEED DRIVE									
POWER LEVER									
PROPELLER LEVER									
REVERSE THRUST LEVER									
ENGINE INDICATING EQUIPMENT									
ENGINE INSTALLATION									
SUBTOTAL				6		6	6		6
** SYSTEMS **									
ELECTRICAL SYSTEM									
RELAYS AND WIRING				1		1	1		1
HYDRAULIC SYSTEM									
RESERVOIR, LINES, FITTINGS				1	1	2	1	1	2
OTHER				1		1	1		1
FLIGHT CONTROL SYSTEMS									
ANTI-ICING, DE-ICING SYSTEMS									
AIR CONDITION, HEATING AND PRESSURIZATION									
AUTO PILOT									
FIRE WARNING SYSTEM									

TABLE 66 (CONTINUED) CAUSE/FACTOR TABLE

SYSTEMS (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
FIRE EXTINGUISHER SYSTEM									
OXYGEN SYSTEM									
OTHER SYSTEMS									
SUBTOTAL				3	1	4	3	1	4
** AIRPORTS/AIRWAYS/FACILITIES **									
AIRPORT FACILITIES									
AIRPORT CONDITIONS									
WET RUNWAY					1	1		1	1
ICE/SLUSH ON RUNWAY		1	1					1	1
SNOW ON RUNWAY					1	1		1	1
AIRWAYS FACILITIES									
SUBTOTAL		1	1		2	2		3	3
** WEATHER **									
LOW CEILING					1	1		1	1
SNOW					1	1		1	1
ICING CONDITIONS-INCLUDES SLEET, FREEZING RAIN, ETC	1		1				1		1
CONDITIONS CONDUCIVE TO CARB/INDUCTION SYSTEM ICING					1	1		1	1
UNFAVORABLE WIND CONDITIONS					1	1		1	1
HIGH TEMPERATURE					1	1		1	1
SUBTOTAL	1		1		5	5	1	5	6
** TERRAIN **									
HIGH OBSTRUCTIONS		1	1		1	1		2	2
SUBTOTAL		1	1		1	1		2	2
GRAND TOTAL	7	3	10	44	21	65	51	24	75
** MISCELLANEOUS ACTS, CONDITIONS **									
IMPROPER OPER/FAILED TO USE CARB HEAT/DE-ICING EQUIP	1		1	1		1	2		2
CHECKLIST-FAILED TO USE					1	1		1	1
IMPROPER EMERGENCY PROCEDURES	1		1	1	1	2	2	1	3
POORLY PLANNED APPROACH					1	1		1	1
LANDED ON FOAMED RUNWAY					1	1		1	1
IMPROPERLY SECURED				1		1	1		1
FATIGUE FRACTURE				2		2	2		2
HYDRAULIC FAILURE				1		1	1		1
FAILURE OF TWO OR MORE ENGINES	1		1		1	1	1	1	2
FIRE IN ENGINE				1		1	1		1
CARGO SHIFTED				1		1	1		1
CONGESTED TRAFFIC-PATTERN OR RAMP					1	1		1	1
ICE-ENGINE	1		1				1		1
ICE-CARBURETOR				1		1	1		1
AIRCRAFT CAME TO REST IN WATER					3	3		3	3
OVERLOAD FAILURE					8	8		8	8
MATERIAL FAILURE				4	1	5	4	1	5
IMPROPER CLEARANCE-TOLERANCE				1		1	1		1
LEAK/LEAKAGE				1		1	1		1
ARCING				1		1	1		1
DETERIORATED					1	1		1	1
VIBRATION, EXCESSIVE					1	1		1	1

DIRECT ENTRY CAUSES ARE CARRIED UNDER THEIR APPROPRIATE CAUSAL CATEGORIES AND ARE INCLUDED IN THE TOTALS

TABLE 67

INJURIES, ACCIDENTS
LARGE FIXED-WING AIRCRAFT
U. S. GENERAL AVIATION

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	5	2	2	33			42
COPILOT	5	1		29			35
DUAL STUDENT		1		2			3
CHECK PILOT							
FLIGHT ENGINEER				6			6
NAVIGATOR							
CABIN ATTENDANT				6			6
EXTRA CREW	1		1	27			29
PASSENGERS	31	3	9	147			190
TOTAL	42	7	12	250		ABOARD	311
* OTHER-AIRCRAFT	2						2
OTHER-GROUND		1					1
GRAND TOTAL	44	8	12	250			314

INVOLVES 42 TOTAL ACCIDENTS
INVOLVES 7 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 68

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - TRAINING
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN	TOTAL
PILOT						
COPILOT						
DUAL STUDENT						
CHECK PILOT						
FLIGHT ENGINEER						
NAVIGATOR						
CABIN ATTENDANT						
EXTRA CREW						
PASSENGERS						
TOTAL						ABOARD
OTHER-AIRCRAFT						
OTHER-GROUND						
GRAND TOTAL						

INVOLVES NO TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 69

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - ALL OTHER
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT		1		2			3
COPILOT							
DUAL STUDENT		1		2			3
CHECK PILOT							
FLIGHT ENGINEER				1			1
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW				1			1
PASSENGERS				11			11
TOTAL		2		17		ABOARD	19
OTHER-AIRCRAFT							
OTHER-GROUND		1					1
GRAND TOTAL		3		17			20

INVOLVES 3 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 70

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - CORPORATE
LARGE FIXED-WING AIRCRAFT

1968

TABLE 70

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - CORPORATE
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	3		2	13			18
COPILOT	3	1		12			16
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER				1			1
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW			1	1			2
PASSENGERS	6	1	4	39			50
TOTAL	12	2	7	66		ABOARD	87
* OTHER-AIRCRAFT	2						2
OTHER-GROUND							
GRAND TOTAL	14	2	7	66			89

INVOLVES 18 TOTAL ACCIDENTS
INVOLVES 5 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 71

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - ALL OTHER
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT				4			4
COPILOT				4			4
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS				2			2
TOTAL				10		ABOARD	10
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL				10			10

INVOLVES 4 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 72

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - AERIAL APPLICATION
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT				1			1
COPILOT				1			1
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW				1			1
PASSENGERS							
TOTAL				3		ABOARD	3
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL				3			3

INVOLVES 1 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 73

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - FIRE CONTROL
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	1	1		1			3
COPILOT	1						1
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS	2						2
TOTAL	4	1		1		ABOARD	6
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	4	1		1			6

INVOLVES 3 TOTAL ACCIDENTS
INVOLVES 1 FATAL ACCIDENTS

TABLE 74

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - AIR TAXI - PASSENGER OPERATIONS
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT				1			1
COPILOT				1			1
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT				1			1
EXTRA CREW							
PASSENGERS							
TOTAL				3		ABOARD	3
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL				3			3

INVOLVES 1 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 75

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - AIR TAXI - CARGO OPERATIONS
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT				1			1
COPILOT				1			1
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS							
TOTAL				2		ABOARD	2
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL				2			2

INVOLVES 1 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 76

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - ALL OTHER
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	1			4			5
COPILOT	1			4			5
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER				2			2
NAVIGATOR							
CABIN ATTENDANT				5			5
EXTRA CREW	1			3			4
PASSENGERS	23	2	5	95			125
TOTAL	26	2	5	113		ABOARD	146
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	26	2	5	113			146

INVOLVES 5 TOTAL ACCIDENTS
INVOLVES 1 FATAL ACCIDENTS

TABLE 77

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - TEST
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT				2			2
COPILOT				2			2
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER				1			1
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW				15			15
PASSENGERS							
TOTAL				20		ABOARD	20
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL				20			20

INVOLVES 2 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 78

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - DEMONSTRATION
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN	TOTAL
PILOT						
COPILOT						
DUAL STUDENT						
CHECK PILOT						
FLIGHT ENGINEER						
NAVIGATOR						
CABIN ATTENDANT						
EXTRA CREW						
PASSENGERS						
TOTAL						ABOARD
OTHER-AIRCRAFT						
OTHER-GROUND						
GRAND TOTAL						

INVOLVES NO TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 79

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - FERRY
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT				1			1
COPILOT				1			1
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW				1			1
PASSENGERS							
TOTAL				3		ABOARD	3
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL				3			3

INVOLVES 1 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 80

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - ALL OTHER
LARGE FIXED-WING AIRCRAFT

1968

TABLE 80

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - ALL OTHER
LARGE FIXED-WING AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT				3			3
COPILOT				3			3
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER				1			1
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW				5			5
PASSENGERS							
TOTAL				12		ABOARD	12
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL				12			12

INVOLVES 3 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

Section IV

GENERAL AVIATION ACCIDENTS

ROTORCRAFT

TABLE 81

ACCIDENTS, INJURY INDEX AND AIRCRAFT DAMAGE BY KIND OF FLYING

ROTORCRAFT

1968

	KIND OF FLYING																						
	INSTRUCTIONAL				NONCOMMERCIAL					COMMERCIAL									MISCELLANEOUS						
	DUAL	SOLO	OTHER	TOTAL	PLEASURE	BUSINESS	CORPORATE	OTHER	TOTAL	AERIAL APPLICATION	FIRE CONTROL	POWER/PIPE-LINE PATROL	AIR TAXI-PASSENGER	AIR TAXI-CARGO	CONSTRUCTION	OTHER	TOTAL	TEST	DEMONSTRATION	FERRY	SEARCH/RESCUE	OTHER	TOTAL	GRAND TOTAL
TOTAL ACCIDENTS	16	3	20	39	29	10	6	11	56	47	8	6	20	0	6	37	124	10	2	7	1	11	31	250
INJURY INDEX																								
Fatal.....	2	0	4	6	8	1	0	1	10	3	0	0	7	0	0	3	13	2	1	1	0	2	6	35
Serious.....	0	0	2	2	2	2	0	0	4	5	1	3	4	0	0	4	17	1	0	1	0	1	3	26
Minor.....	2	1	3	6	7	0	1	2	10	6	3	1	2	0	1	8	21	1	1	1	0	3	6	43
None.....	12	2	11	25	12	7	5	8	32	33	4	2	7	0	5	22	73	6	0	4	1	5	16	146
AIRCRAFT DAMAGE																								
Destroyed.....	4	0	5	9	11	3	1	2	17	11	2	2	8	0	2	8	33	2	2	3	0	4	11	70
Substantial...	12	3	15	30	17	7	5	9	38	36	5	4	12	0	4	29	90	8	0	4	1	7	20	178
Minor.....	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1
None.....	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total.....	16	3	20	39	29	10	6	11	56	47	8	6	20	0	6	37	124	10	2	7	1	11	31	250

TABLE 82

TYPE OF ACCIDENT VS KIND OF FLYING

ROTORCRAFT

1968

FIRST TYPE OF ACCIDENT	KIND OF FLYING																								GRAND TOTAL
	INSTRUCTIONAL				NONCOMMERCIAL					COMMERCIAL								MISCELLANEOUS							
	DUAL	SOLO	OTHER	TOTAL	PLEASURE	BUSINESS	CORPORATE	OTHER	TOTAL	AERIAL APPLICATION	FIRE CONTROL	POWER/PIPE-LINE PATROL	AIR TAXI-PASSENGER	AIR TAXI-CARGO	CONSTRUCTION	OTHER	TOTAL	TEST	DEMONSTRATION	FERRY	SEARCH/RESCUE	OTHER	TOTAL	
Ground/waterloop/swerve	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3
Dragged wingtip, pod or float	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheels-up landing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheels-down landing in water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gear collapsed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Gear retracted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hard landing	6	1	7	14	2	0	1	2	5	1	0	2	0	0	0	3	6	3	0	0	0	0	3	28
Nose over/down	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Roll over	2	2	1	5	1	1	0	1	3	0	1	0	2	0	0	4	7	0	0	0	0	2	2	17
Overshoot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Undershoot	0	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	2	0	0	0	0	0	0	3
Collision with aircraft																								
Both in flight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
One airborne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Both on ground	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Collision with ground/water																								
Controlled	0	0	1	1	0	1	0	0	1	3	0	1	1	0	0	2	7	0	0	0	0	0	0	9
Uncontrolled	2	0	4	6	5	0	0	0	55	0	0	0	1	0	1	3	5	3	0	1	0	0	4	20
Collided with																								
Wires/poles	0	0	0	0	1	1	0	0	2	10	1	1	2	0	0	2	16	0	0	2	0	2	4	22
Trees	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
Residence (s)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other buildings	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Fence, fenceposts	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	2
Electronic towers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Runway or approach lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Airport hazard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Animals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crop	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Flagman, loader	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ditches	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowbank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parked aircraft (Unattended, engines not running)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Automobile	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
Dirt bank	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Other	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	2	4	0	0	0	0	1	1	6
Bird strike (collision with birds)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stall	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
Spin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spiral	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Mush	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	0	0	0	0	0	0	5
Fire or explosion																								
In flight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
On ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Airframe failure																								
In flight	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
On ground	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Engine tearaway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine failure or malfunction	2	0	2	4	11	3	1	4	19	18	2	1	4	0	3	6	34	1	1	2	0	3	7	64
Propeller/rotor failure																								
Propeller	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tail rotor	2	0	0	2	0	3	0	0	3	1	0	0	1	0	1	3	6	1	0	0	1	2	4	15
Main rotor	0	0	0	0	4	0	0	0	4	0	0	0	1	0	0	3	4	2	1	0	0	0	3	11
Propeller/rotor accident to person	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	2	0	0	0	0	0	0	3
Jet intake/exhaust accident to person	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propeller/jet/rotor blast	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbulence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hail damage to aircraft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lightning strike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Evasive maneuver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Uncontrolled altitude deviations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ditching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing aircraft, not recovered	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other/miscellaneous	0	0	2	2	2	1	1	2	6	5	2	1	1	0	1	5	15	0	0	2	0	0	2	25
Undetermined	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2
TOTAL	16	3	20	39	29	10	6	11	56	47	8	6	20	0	6	37	124	10	2	7	1	11	31	250

TABLE 83

TABLE 83

TYPE OF ACCIDENT VS PHASE OF OPERATION

ROTORCRAFT

1968

FIRST TYPE OF ACCIDENT	PHASE OF OPERATION																													GRAND TOTAL
	STATIC				TAXI		TAKEOFF					INFLIGHT						LANDING												
	STARTING ENGINES	ENGINE RUNUP	IDLING ROTORS	OTHER	GROUND TAXI	AERIAL TAXI	INITIAL CLIMB	VERTICAL	RUNNING	ABORTED	OTHER	CLIMB TO CRUISE	NORMAL CRUISE	HOVERING	POWER ON DESCENT	AUTOROTATIVE DESCENT	OTHER	IN TRAFFIC PATTERN (VFR)	APPROACH	TOUCHDOWN	ROLL-ON	POWER ON-VERTICAL	POWER OFF-AUTO-ROTATIVE	OTHER	UNKNOWN	TOTAL				
Ground/waterloop/swerve	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	3				3
Dragged wingtip, pod, or float	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Wheels-up landing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Wheels-down landing in water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Gear collapsed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Gear retracted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1				1
Hard landing	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Nose over/touchdown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	10	13	0	0	28				28
Roll over	0	0	1	0	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Overshoot	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	2	0	1	1	17				17
Undershoot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Collision with aircraft																														
Both in flight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3				3
One airborne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Both on ground	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				1
Collision with ground/water																														
Controlled	0	0	0	0	0	2	1	0	0	0	0	0	1	1	0	0	4	0	0	0	0	0	0	0	0	9				9
Uncontrolled	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	17	0	0	0	0	0	0	0	0	20				20
Collided with																														
Wires/poles	0	0	0	0	0	0	5	1	0	0	0	1	2	1	0	0	10	0	1	0	0	0	0	1	0	22				22
Trees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2				2
Residence.(s)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Other buildings	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				1
Fence, fenceposts	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2				2
Electronic towers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1				1
Runway or approach lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Airport hazard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Animals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Crop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1				1
Flagman, loader	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Ditches	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Snowbank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Parked aircraft																														
(Unattended, engines not running)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Automobile	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1				1
Dirt bank	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2				2
Other	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	3				3
Bird strike (collision with birds)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	4				4
Stall	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Spin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				1
Spiral	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Mush	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1				1
Fire or explosion																														
In flight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5				5
On ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Airframe failure																														
In flight	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2				2
On ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1				1
Engine tearaway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Engine failure or malfunction	0	0	0	0	0	0	12	0	0	0	0	3	23	4	1	1	15	2	2	0	0	0	0	1	0	64				64
Propeller/rotor failure																														
Propeller	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Tail rotor	0	0	0	0	0	1	2	2	0	0	0	0	8	1	0	1	0	0	0	0	0	0	0	0	0	15				15
Main rotor	0	0	0	0	0	1	4	0	0	0	0	0	5	0	0	0	1	0	0	0	0	0	0	0	0	11				11
Propeller/rotor accident to person	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3				3
Jet intake/exhaust accident to person	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Propeller/jet/rotor blast	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Turbulence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Hail damage to aircraft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Lightning strike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Evasive maneuver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Uncontrolled altitude deviations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Ditching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Missing aircraft, not recovered	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Other/miscellaneous	0	0	1	0	0	0	7	1	0	0	0	0	6	1	0	0	6	1	1	0	0	0	1	0	0	25				25
Undetermined	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2				2
TOTAL	0	0	5	0	3	7	33	12	0	1	1	4	45	16	1	3	60	3	10	6	1	17	14	4	4	250				250

TABLE 84

CAUSE/FACTOR TABLE

ROTORCRAFT
U. S. GENERAL AVIATION

1968

INVOLVES 245 TOTAL ACCIDENTS
INVOLVES 32 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	19 59.38	4 12.50	21 65.63	159 74.65	6 2.82	161 75.59	178 72.65	10 4.08	182 74.29
PERSONNEL	1 3.13	 .00	1 3.13	28 13.15	2 .94	30 14.08	29 11.84	2 .82	31 12.65
AIRFRAME	 .00	 .00	 .00	3 1.41	 .00	3 1.41	3 1.22	 .00	3 1.22
LANDING GEAR	 .00	 .00	 .00	 .00	 .00	 .00	 .00	 .00	 .00
POWERPLANT	1 3.13	 .00	1 3.13	41 19.25	 .00	41 19.25	42 17.14	 .00	42 17.14
SYSTEMS	 .00	 .00	 .00	2 .94	 .00	2 .94	2 .82	 .00	2 .82
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	 .00	 .00	 .00	 .00	1 .47	1 .47	 .00	1 .41	1 .41
ROTORCRAFT	6 18.75	 .00	6 18.75	31 14.55	2 .94	33 15.49	37 15.10	2 .82	39 15.92
AIRPORTS/AIRWAYS/FACILITIES	 .00	 .00	 .00	2 .94	 .00	2 .94	2 .82	 .00	2 .82
WEATHER	1 3.13	1 3.13	2 6.25	18 8.45	11 5.16	28 13.15	19 7.76	12 4.90	30 12.24
TERRAIN	3 9.38	2 6.25	5 15.63	26 12.21	10 4.69	36 16.90	29 11.84	12 4.90	41 16.73
MISCELLANEOUS	 .00	 .00	 .00	9 4.23	 .00	9 4.23	9 3.67	 .00	9 3.67
UNDETERMINED	9 28.13	 .00	9 28.13	1 .47	 .00	1 .47	10 4.08	 .00	10 4.08

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

TABLE 84 (CONT'D)

INVOLVES 245
INVOLVES 32

DETAILED CAU
** PILOT **
PILOT IN COMM
ATTEMPTED O
ATTEMPTED O
CONTINUED V
DIVERTED AT
FAILED TO S
FAILED TO O
FAILED TO M
FAILED TO U
FAILED TO F
IMPROPER OP
IMPROPER OP
IMPROPER OP
IMPROPER IN
IMPROPER CO
INADEQUATE
INADEQUATE
LACK OF FAM
EXERCISED P
OPERATED CA
SELECTED UN
CONTROL INT
SPONTANEOUS
MISJUDGED S
MISJUDGED S
MISJUDGED A
MISJUDGED A
MISJUDGED C
IMPROPER RE
SPATIAL DIS
LEFT AIRCRA
FAILED TO M
FAILED TO A
DIRECT ENTR
SUBTOTAL
DUAL STUDENT
FAILED TO M
IMPROPER OP
IMPROPER LE
SPONTANEOUS
SUBTOTAL
CHECK PILOT
FAILED TO F
IMPROPER OP
IMPROPER OP
INADEQUATE
SUBTOTAL
** PERSONNEL
FLIGHT INSTRU
INADEQUATE
MAINTENANCE,
IMPROPER MA
IMPROPER MA

TABLE 84 (CONTINUED)

CAUSE/FACTOR TABLE

ROTORCRAFT
U. S. GENERAL AVIATION

1968

INVOLVES 245 TOTAL ACCIDENTS
INVOLVES 32 FATAL ACCIDENTS

DETAILED CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
** PILOT **									
PILOT IN COMMAND									
ATTEMPTED OPERATION W/KNOWN DEFICIENCIES IN EQUIPMENT				2	1	3	2	1	3
ATTEMPTED OPERATION BEYOND EXPERIENCE/ABILITY LEVEL	2	2	4	5	1	6	7	3	10
CONTINUED VFR FLIGHT INTO ADVERSE WEATHER CONDITIONS				2		2	2		2
DIVERTED ATTENTION FROM OPERATION OF AIRCRAFT				1		1	1		1
FAILED TO SEE AND AVOID OBJECTS OR OBSTRUCTIONS	3		3	16		16	19		19
FAILED TO OBTAIN/MAINTAIN FLYING SPEED	1		1				1		1
FAILED TO MAINTAIN ADEQUATE ROTOR RPM	2		2	21		21	23		23
FAILED TO USE OR INCORRECTLY USED MISC EQUIPMENT					1	1		1	1
FAILED TO FOLLOW APPROVED PROCEDURES, DIRECTIVES ETC	1		1				1		1
IMPROPER OPERATION OF POWERPLANT + POWERPLANT CONTROLS				8		8	8		8
IMPROPER OPERATION OF BRAKES AND/OR FLIGHT CONTROLS				1		1	1		1
IMPROPER OPERATION OF FLIGHT CONTROLS	6		6	82		82	88		88
IMPROPER IN-FLIGHT DECISIONS OR PLANNING	1		1	7		7	8		8
IMPROPER COMPENSATION FOR WIND CONDITIONS	1		1	2		2	3		3
INADEQUATE PREFLIGHT PREPARATION AND/OR PLANNING	1		1	26		26	27		27
INADEQUATE SUPERVISION OF FLIGHT	1		1	7		7	8		8
LACK OF FAMILIARITY WITH AIRCRAFT	1		1	1	1	2	2	1	3
EXERCISED POOR JUDGMENT	2		2	2		2	4		4
OPERATED CARELESSLY	1		1				1		1
SELECTED UNSUITABLE TERRAIN		2	2	2		2	2	2	4
CONTROL INTERFERENCE					1	1		1	1
SPONTANEOUS-IMPROPER ACTION				1		1	1		1
MISJUDGED SPEED AND ALTITUDE				1		1	1		1
MISJUDGED SPEED				1		1	1		1
MISJUDGED ALTITUDE AND CLEARANCE				1	1	2	1	1	2
MISJUDGED ALTITUDE				2		2	2		2
MISJUDGED CLEARANCE				2		2	2		2
IMPROPER RECOVERY FROM BOUNCED LANDING	1		1	12		12	13		13
SPATIAL DISORIENTATION				1		1	1		1
LEFT AIRCRAFT UNATTENDED ENGINE RUNNING	1		1	1		1	2		2
FAILED TO MAINTAIN DIRECTIONAL CONTROL	1		1	1		1	2		2
FAILED TO ABORT TAKEOFF				1		1	1		1
DIRECT ENTRIES				1		1	1		1
SUBTOTAL	1		1	2		2	3		3
	27	4	31	211	6	217	238	10	248
DUAL STUDENT									
FAILED TO MAINTAIN ADEQUATE ROTOR RPM				2		2	2		2
IMPROPER OPERATION OF FLIGHT CONTROLS	1		1	7		7	8		8
IMPROPER LEVEL OFF				1		1	1		1
SPONTANEOUS-IMPROPER ACTION				1		1	1		1
SUBTOTAL	1		1	11		11	12		12
CHECK PILOT									
FAILED TO FOLLOW APPROVED PROCEDURES, DIRECTIVES, ETC				1		1	1		1
IMPROPER OPERATION OF POWERPLANT + POWERPLANT CONTROLS				1		1	1		1
IMPROPER OPERATION OF FLIGHT CONTROLS				1		1	1		1
INADEQUATE SUPERVISION OF FLIGHT				1		1	1		1
SUBTOTAL				4		4	4		4
** PERSONNEL **									
FLIGHT INSTRUCTOR									
INADEQUATE TRAINING OF STUDENT				4	1	5	4	1	5
MAINTENANCE, SERVICING, INSPECTION				5		5	5		5
IMPROPER MAINTENANCE(MAINTENANCE PERSONNEL)				2		2	2		2
IMPROPER MAINTENANCE(OWNER PERSONNEL)									

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

CATEGORY. THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

TABLE 84 (CONTINUED)

CAUSE/FACTOR TABLE

PERSONNEL (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
INADEQUATE MAINTENANCE AND INSPECTION	1		1	9	1	10	10	1	11
OPERATIONAL SUPERVISORY PERSONNEL									
WEATHER PERSONNEL									
TRAFFIC CONTROL PERSONNEL									
AIRPORT SUPERVISORY PERSONNEL									
AIRWAYS FACILITIES PERSONNEL									
PRODUCTION-DESIGN									
SUBSTANDARD QUALITY CONTROL				2		2	2		2
OTHER				1		1	1		1
MISCELLANEOUS-PERSONNEL									
PILOT OF OTHER AIRCRAFT				1		1	1		1
GROUND SIGNALMAN				1		1	1		1
PASSENGER				2		2	2		2
OTHER				1		1	1		1
THIRD PILOT									
FLIGHT ENGINEER									
DISPATCHING									
SUBTOTAL	1		1	28	2	30	29	2	31
** AIRFRAME **									
WINGS									
FUSELAGE									
FAIRINGS				1		1	1		1
LANDING GEAR									
FLIGHT CONTROL SURFACES									
HORIZONTAL STABILIZER, ATTACHMENTS				2		2	2		2
SUBTOTAL				3		3	3		3
** POWERPLANT **									
ENGINE STRUCTURE									
MASTER AND CONNECTING RODS				5		5	5		5
PISTON, PISTON RINGS				6		6	6		6
VALVE ASSEMBLIES				2		2	2		2
OTHER				2		2	2		2
IGNITION SYSTEM									
MAGNETOES				2		2	2		2
SPARK PLUG				3		3	3		3
FUEL SYSTEM									
CARBURETOR				3		3	3		3
PUMPS				1		1	1		1
FUEL INJECTION SYSTEM				1		1	1		1
LUBRICATING SYSTEM									
FILTERS, SCREENS				1		1	1		1
MAGNETIC PLUGS				1		1	1		1
SEALS AND GASKETS				1		1	1		1
COOLING SYSTEM									
PROPELLER AND ACCESSORIES									
EXHAUST SYSTEM									
ENGINE ACCESSORIES									
ENGINE CONTROLS-COCKPIT									
POWERPLANT-INSTRUMENTS									
MISCELLANEOUS									
POWERPLANT FAILURE FOR UNDETERMINED REASONS	1		1	13		13	14		14
DIRECT ENTRIES				2		2	2		2
REDUCTION GEAR ASSEMBLY									
COMPRESSOR ASSEMBLY									
BEARING, ROTOR SHAFT				1		1	1		1
OTHER				1		1	1		1
COMBUSTION ASSEMBLY									
TURBINE ASSEMBLY									
BEARING, SHAFT				1		1	1		1
ACCESSORY DRIVE ASSEMBLY									
LUBRICATING SYSTEM									
PUMP, SCAVENGE				1		1	1		1
FUEL SYSTEM									
SAFETY SYSTEM									
IGNITION SYSTEM									
TORQUEMETER									

TABLE 84 (CONTI

POWERPLANT (C

AIR BLEED
EXHAUST SYSTE
THRUST REVERS
PROPELLER SYS
CONSTANT SPEE
POWER LEVER
PROPELLER LEV
REVERSE THRUS
ENGINE INDICA
ENGINE INSTAL

SUBTOTAL

** SYSTEMS *

ELECTRICAL SY
HYDRAULIC SYS
FLIGHT CONTRO
FLIGHT CONT
ANTI-ICING, DE
CARBURETOR
AIR CONDITION,
AUTO PILOT
FIRE WARNING S
FIRE EXTINGUIS
OXYGEN SYSTEM
OTHER SYSTEMS

SUBTOTAL

** INSTRUMENT

FLIGHT AND NAV
COMMUNICATIONS
MISCELLANEOUS
OTHER

SUBTOTAL

** ROTORCRAFT

ROTOR ASSEMBLI
MAIN ROTOR B
TAIL ROTOR B
MAIN ROTOR H
DROOP STOPS
UNIVERSAL JO
BEARINGS
TRANSMISSION R
ENGINE DRIVE
MAIN ROTOR D
FREE WHEEL U
MAIN ROTOR G
TAIL ROTOR D
TAIL ROTOR G
CLUTCH ASSEM
FLIGHT CONTROL
CYCLIC PITCH
COLLECTIVE P
MISCELLANEOUS
TAIL BOOMS/P
DIRECT ENTRI

SUBTOTAL

** AIRPORTS/A

AIRPORT FACILI
AIRPORT CONDIT
OTHER
AIRWAYS FACILI

TABLE 84 (CONTINUED)

CAUSE/FACTOR TABLE

POWERPLANT (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
AIR BLEED									
EXHAUST SYSTEM									
THRUST REVERSER									
PROPELLER SYSTEM									
CONSTANT SPEED DRIVE									
POWER LEVER									
PROPELLER LEVER									
REVERSE THRUST LEVER									
ENGINE INDICATING EQUIPMENT									
ENGINE INSTALLATION									
SUBTOTAL	1		1	47		47	48		48
** SYSTEMS **									
ELECTRICAL SYSTEM									
HYDRAULIC SYSTEM									
FLIGHT CONTROL SYSTEMS									
FLIGHT CONTROL BOOST SYSTEM (HYDRAULIC)				1		1	1		1
ANTI-ICING, DE-ICING SYSTEMS									
CARBURETOR DE-ICING SYSTEM				1		1	1		1
AIR CONDITION, HEATING AND PRESSURIZATION									
AUTO PILOT									
FIRE WARNING SYSTEM									
FIRE EXTINGUISHER SYSTEM									
OXYGEN SYSTEM									
OTHER SYSTEMS									
SUBTOTAL				2		2	2		2
** INSTRUMENTS/EQUIPMENT AND ACCESSORIES **									
FLIGHT AND NAVAGATION INSTRUMENTS									
COMMUNICATIONS AND NAVIGATION EQUIPMENT									
MISCELLANEOUS EQUIPMENT									
OTHER					1	1		1	1
SUBTOTAL					1	1		1	1
** ROTORCRAFT **									
ROTOR ASSEMBLIES									
MAIN ROTOR BLADES	2		2	2	1	3	4	1	5
TAIL ROTOR BLADES	1		1	9		9	10		10
MAIN ROTOR HEAD ASSEMBLIES	1		1	1		1	2		2
DROOP STOPS	1		1				1		1
UNIVERSAL JOINTS, COUPLINGS				1		1	1		1
BEARINGS	1		1	4		4	5		5
TRANSMISSION ROTOR DRIVE SYSTEM									
ENGINE DRIVE SHAFT				1		1	1		1
MAIN ROTOR DRIVE SHAFT	1		1	1		1	2		2
FREE WHEEL UNIT				1		1	1		1
MAIN ROTOR GEAR BOX				1		1	1		1
TAIL ROTOR DRIVE SHAFT ASSEMBLY				3		3	3		3
TAIL ROTOR GEAR BOX				1		1	1		1
CLUTCH ASSEMBLY				2		2	2		2
FLIGHT CONTROL SYSTEMS									
CYCLIC PITCH CONTROL SYSTEM				1		1	1		1
COLLECTIVE PITCH CONTROL SYSTEM					1	1		1	1
MISCELLANEOUS UNITS AND ASSEMBLIES									
TAIL BOOMS/PYLONS/CONES				1		1	1		1
DIRECT ENTRIES	1		1	6		6	7		7
SUBTOTAL	8		8	35	2	37	43	2	45
** AIRPORTS/AIRWAYS/FACILITIES **									
AIRPORT FACILITIES									
AIRPORT CONDITIONS									
OTHER				2		2	2		2
AIRWAYS FACILITIES									

TABLE 84 (CONTINUED) CAUSE/FACTOR TABLE

AIRPORTS/AIRWAYS/FACILITIES (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
SUBTOTAL				2		2	2		2
** WEATHER **									
RAIN					1	1		1	1
ICING CONDITIONS-INCLUDES SLEET, FREEZING RAIN, ETC				3		3	3		3
CONDITIONS CONDUCIVE TO CARB/INDUCTION SYSTEM ICING				2	1	3	2	1	3
UNFAVORABLE WIND CONDITIONS		1	1	9	4	13	9	5	14
SUDDEN WINDSHIFT				1		1	1		1
DOWNDRAFTS, UPDRAFTS				5	1	6	5	1	6
LOCAL WHIRLWIND	1		1				1		1
HIGH TEMPERATURE				1		1	1		1
HIGH DENSITY ALTITUDE				3	5	8	3	5	8
SUBTOTAL	1	1	2	24	12	36	25	13	38
** TERRAIN **									
WET, SOFT GROUND				5	5	10	5	5	10
SNOW-COVERED	1		1	4	1	5	5	1	6
HIGH VEGETATION				1		1	1		1
ROUGH/UNEVEN	1		1	6	2	8	7	2	9
HIGH OBSTRUCTIONS	1	1	2	6	2	8	7	3	10
OTHER		1	1	4		4	4	1	5
SUBTOTAL	3	2	5	26	10	36	29	12	41
** MISCELLANEOUS **									
EVASIVE MANEUVER TO AVOID COLLISION				2		2	2		2
FOREIGN OBJECT DAMAGE				2		2	2		2
FOREIGN MATERIAL AFFECTING NORMAL OPERATIONS				5		5	5		5
UNDETERMINED	9		9	1		1	10		10
SUBTOTAL	9		9	10		10	19		19
GRAND TOTAL	51	7	58	403	33	436	454	40	494
** MISCELLANEOUS ACTS, CONDITIONS **									
IMPROPER OPER/FAILED TO USE CARB HEAT/DE-ICING EQUIP				2		2	2		2
CHECKLIST-FAILED TO USE					1	1		1	1
DISREGARD OF GOOD OPERATING PRACTICE				1		1	1		1
IMPROPER EMERGENCY PROCEDURES					1	1		1	1
UNWARRANTED LOW FLYING	1		1				1		1
INATTENTIVE TO FUEL SUPPLY				2		2	2		2
POORLY PLANNED APPROACH	1		1				1		1
MISCALCULATED FUEL CONSUMPTION				1		1	1		1
JETTISONED LOAD		1	1		2	2		3	3
IMPROPERLY SECURED				1		1	1		1
ENGINE LOADED UP				1		1	1		1
FATIGUE FRACTURE	1		1	8		8	9		9
RPM-UNCONTROLLABLE-OVERSPEED				1		1	1		1
WINDSHIELD, DIRTY, FOGGY, ETC-RESTRICTED VISION	1		1		1	1	1	1	2
WRONG PART				1		1	1		1
IMPROPER ALIGNMENT/ADJUSTMENT				1		1	1		1
SEPARATION IN FLIGHT		4	4		8	8		12	12
LATERAL IMBALANCE				3		3	3		3
CORRODED/CORROSION	1		1	1		1	2		2
CARGO SHIFTED				1		1	1		1
PILOT FATIGUE					2	2		2	2
FUEL EXHAUSTION				10		10	10		10
ALCOHOLIC IMPAIRMENT OF EFFICIENCY AND JUDGMENT		2	2					2	2
ICE-CARBURETOR				3		3	3		3
AIRFRAME ICE					1	1		1	1
ICE-WINDSHIELD				1	1	2	1	1	2
IMPROPERLY LOADED AIRCRAFT-WEIGHT-AND/OR CG	1		1	4	1	5	5	1	6
WHITEOUT				1	1	2	1	1	2
SUNGLARE					1	1		1	1
LACK OF LUBRICATION-SPECIFIC PART, NOT SYSTEM	1		1	2		2	3		3
OIL EXHAUSTION-ENGINE LUBRICATION SYSTEM				2		2	2		2

TABLE 84 (CONTIN

MISCELLANEOUS

SIMULATED CO
WATER IN FUE
AIRCRAFT CAM
MISSING
OVERLOAD FAI
MATERIAL FAI
FUEL STARVAT
OIL STARVATI
UNAPPROVED M
ACTION, LACK
LEAK/LEAKAGE
DOWNWIND
CARBON DEPOS
LOOSE, PART/
GROUND RESON
BINDING
BURNED
DISCONNECTED
GROUNDED
IMPROPERLY I
OBSTRUCTED
CUT OF BALAN
OVERHEATED
SCORED
SHEARED
STUCK
EXCESSIVE TE
VIBRATION, E

DIRECT ENTRY C.

PWR PLT-DEFECT
PILOT-DELAYED
ROTORCFT-ACFT
ROTORCFT-SUDDE
ROTORCFT-ENTERI
ROTORCFT-TAIL
PILOT-HOVERED
ROTORCFT-REAR
PWR PLT-LOOSE
ROTORCFT-ROTOR
ROTORCFT-N/R NO
PILOT-FAILED TO

DIRECT ENTR
CAUSAL CATE

TABLE 84 (CONTINUED)

CAUSE/FACTOR TABLE

MISCELLANEOUS ACTS, CONDITIONS (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
SIMULATED CONDITIONS				18		18	18		18
WATER IN FUEL				1		1	1		1
AIRCRAFT CAME TO REST IN WATER		4	4		6	6		10	10
MISSING				2		2	2		2
OVERLOAD FAILURE	2	1	3	4	3	7	6	4	10
MATERIAL FAILURE	4		4	19		19	23		23
FUEL STARVATION				4		4	4		4
OIL STARVATION				2		2	2		2
UNAPPROVED MODIFICATION	1		1				1		1
ACTION, LACK OF				1		1	1		1
LEAK/LEAKAGE				1		1	1		1
DOWNWIND					5	5		5	5
CARBON DEPOSITS					1	1		1	1
LOOSE, PART/FITTING				1		1	1		1
GROUND RESONANCE				2		2	2		2
BINDING				1		1	1		1
BURNED					1	1		1	1
DISCONNECTED				1		1	1		1
GROUNDED				1		1	1		1
IMPROPERLY INSTALLED	1		1	5		5	6		6
OBSTRUCTED				2		2	2		2
OUT OF BALANCE					1	1		1	1
OVERHEATED				2		2	2		2
SCORED				2		2	2		2
SHEARED				1		1	1		1
STUCK				1		1	1		1
EXCESSIVE TEMPERATURE				2		2	2		2
VIBRATION, EXCESSIVE				4	1	5	4	1	5

DIRECT ENTRY CAUSES

PWR PLT-DEFECTIVE FUEL PUMP DIAPHRAGM.
PILOT-DELAYED ATTEMPT TO LIFTOFF TO REGAIN CONTROL
ROTORCFT-ACFT IN SETTLING WITH POWER CONDITION.
ROTORCFT-SUDDEN DISSYMMETRY OF LIFT.
ROTORCFT-ENTERED SETTLING WITH POWER CONDITION.
ROTORCFT-TAIL ROTOR GRIP RETAINING BOLT.
PILOT-HOVERED OVER UNFAMILIAR AREA AT NIGHT.
ROTORCFT-REAR FLOAT CROSS TUBE FAILED IN FATIGUE.
PWR PLT-LOOSE ROD CAP BOLTS ON NO 4 ROD FAILED.
ROTORCFT-ROTOR RPM LOST, CAUSE UNDETERMINED.
ROTORCFT-M/R NOT BALANCED CORDWISE DURING ASSEMBLY
PILOT-FAILED TO INSTR PX IN PROPER APPCH TO ACFT.

DIRECT ENTRY CAUSES ARE CARRIED UNDER THEIR APPROPRIATE CAUSAL CATEGORIES AND ARE INCLUDED IN THE TOTALS

TABLE 85

INJURIES, ACCIDENTS
ROTORCRAFT
U. S. GENERAL AVIATION

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	32	21	38	159			250
COPILOT				5			5
DUAL STUDENT		1	3	12			16
CHECK PILOT			1	3			4
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW	1	2	1	2			6
PASSENGERS	13	13	30	120			176
TOTAL	46	37	73	301		ABOARD	457
* OTHER-AIRCRAFT				1			1
OTHER-GROUND							
GRAND TOTAL	46	37	73	302			458

INVOLVES 250 TOTAL ACCIDENTS
INVOLVES 35 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 86

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - DUAL
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	1		2	13			16
COPILOT							
DUAL STUDENT		1	3	12			16
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW		2					2
PASSENGERS	1			1			2
TOTAL	2	3	5	26		ABOARD	36
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	2	3	5	26			36

INVOLVES 16 TOTAL ACCIDENTS
INVOLVES 2 FATAL ACCIDENTS

TABLE 87

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - SOLO
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT			1	2			3
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS							
TOTAL			1	2		ABOARD	3
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL			1	2			3

INVOLVES 3 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 88

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - ALL OTHER
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	4	2	2	12			20
COPILOT							
DUAL STUDENT							
CHECK PILOT			1	3			4
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS				1			1
TOTAL	4	2	3	16		ABOARD	25
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	4	2	3	16			25

INVOLVES 20 TOTAL ACCIDENTS
INVOLVES 4 FATAL ACCIDENTS

TABLE 89

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - PLEASURE
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	8	2	6	13			29
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS			1	6			7
TOTAL	8	2	7	19		ABOARD	36
* OTHER-AIRCRAFT				1			1
OTHER-GROUND							
GRAND TOTAL	8	2	7	20			37

INVOLVES 29 TOTAL ACCIDENTS
INVOLVES 8 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

* INJURIES CARRIED OPPOSITE "OTHER-AIRCRAFT" ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 90

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - BUSINESS
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	1	2		7			10
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS	1		1	4			6
TOTAL	2	2	1	11		ABOARD	16
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	2	2	1	11			16

INVOLVES 10 TOTAL ACCIDENTS
INVOLVES 1 FATAL ACCIDENTS

TABLE 91

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - CORPORATE
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT			1	5			6
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS				3			3
TOTAL			1	8		ABOARD	9
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL			1	8			9

INVOLVES 6 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 92

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - ALL OTHER
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	1		2	8			11
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS				8			8
TOTAL	1		2	16		ABOARD	19
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	1		2	16			19

INVOLVES 11 TOTAL ACCIDENTS
INVOLVES 1 FATAL ACCIDENTS

TABLE 93

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - AERIAL APPLICATION
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	3	5	6	33			47
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS			2	5			7
TOTAL	3	5	8	38		ABOARD	54
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	3	5	8	38			54

INVOLVES 47 TOTAL ACCIDENTS
INVOLVES 3 FATAL ACCIDENTS

TABLE 94

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - FIRE CONTROL
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT			3	5			8
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS		1	2	7			10
TOTAL		1	5	12		ABOARD	18
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL		1	5	12			18

INVOLVES 8 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 95

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - POWER / PIPELINE PATROL
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT		2	1	3			6
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS		2	3	2			7
TOTAL		4	4	5		ABOARD	13
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL		4	4	5			13

INVOLVES 6 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 96

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - AIR TAXI - PASSENGER OPERATIONS
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	5	3	3	9			20
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS	8	5	5	26			44
TOTAL	13	8	8	35		ABOARD	64
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	13	8	8	35			64

INVOLVES 20 TOTAL ACCIDENTS
INVOLVES 7 FATAL ACCIDENTS

TABLE 97

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - AIR TAXI - CARGO OPERATIONS
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN	TOTAL
PILOT						
COPILOT						
DUAL STUDENT						
CHECK PILOT						
FLIGHT ENGINEER						
NAVIGATOR						
CABIN ATTENDANT						
EXTRA CREW						
PASSENGERS						
TOTAL						ABOARD
OTHER-AIRCRAFT						
OTHER-GROUND						
GRAND TOTAL						

INVOLVES NO TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 98

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - CONSTRUCTION
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT			1	5			6
COPILOT				1			1
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS				3			3
TOTAL			1	9		ABOARD	10
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL			1	9			10

INVOLVES 6 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 99

INJURIES, ACCIDENTS
KIND OF FLYING
COMMERCIAL - ALL OTHER
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	3	3	5	26			37
COPILOT				1			1
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS	2	4	13	46			65
TOTAL	5	7	18	73		ABOARD	103
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	5	7	18	73			103

INVOLVES 37 TOTAL ACCIDENTS
INVOLVES 3 FATAL ACCIDENTS

TABLE 100

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - TEST
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	2	1	1	6			10
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW			1	2			3
PASSENGERS				1			1
TOTAL	2	1	2	9		ABOARD	14
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	2	1	2	9			14

INVOLVES 10 TOTAL ACCIDENTS
INVOLVES 2 FATAL ACCIDENTS

TABLE 101

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - DEMONSTRATION
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	1		1				2
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS			1	1			2
TOTAL	1		2	1		ABOARD	4
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	1		2	1			4

INVOLVES 2 TOTAL ACCIDENTS
INVOLVES 1 FATAL ACCIDENTS

TABLE 102

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - FERRY
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	1	1	1	4			7
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS				2			2
TOTAL	1	1	1	6		ABOARD	9
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	1	1	1	6			9

INVOLVES 7 TOTAL ACCIDENTS
INVOLVES 1 FATAL ACCIDENTS

TABLE 103

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - SEARCH AND RESCUE
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT				1			1
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS				1			1
TOTAL				2		ABOARD	2
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL				2			2

INVOLVES 1 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 104

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - ALL OTHER
ROTORCRAFT

TABLE 104

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - ALL OTHER
ROTORCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	2		2	7			11
COPILOT				3			3
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW	1						1
PASSENGERS	1	1	2	3			7
TOTAL	4	1	4	13		ABOARD	22
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL	4	1	4	13			22

INVOLVES 11 TOTAL ACCIDENTS
INVOLVES 2 FATAL ACCIDENTS

Section V

GENERAL AVIATION ACCIDENTS

GLIDER AIRCRAFT

TABLE 105

ACCIDENTS, INJURY INDEX AND AIRCRAFT DAMAGE BY KIND OF FLYING

GLIDER AIRCRAFT

1968

	KIND OF FLYING																				
	INSTRUCTIONAL				NONCOMMERCIAL					COMMERCIAL					MISCELLANEOUS					GRAND TOTAL
	DUAL	SOLO	OTHER	TOTAL	PLEASURE	BUSINESS	CORPORATE	OTHER	TOTAL	AERIAL APPLICATION	FIRE CONTROL	AIR TAXI	OTHER	TOTAL	TEST	DEMONSTRATION	AIR SHOW	OTHER	TOTAL	
TOTAL ACCIDENTS	2	3	5	10	45	0	0	2	47	0	0	0	0	0	1	0	3	3	7	-
INJURY INDEX																				
Fatal.....	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5
Serious.....	0	0	1	1	13	0	0	0	13	0	0	0	0	0	1	0	1	2	4	18
Minor.....	0	1	0	1	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	12
None.....	2	2	4	8	16	0	0	2	18	0	0	0	0	0	0	0	2	1	3	29
AIRCRAFT DAMAGE																				
Destroyed.....	0	0	0	0	10	0	0	0	10	0	0	0	0	0	1	0	0	1	2	12
Substantial.....	2	3	5	10	34	0	0	2	36	0	0	0	0	0	0	0	3	2	5	51
Minor.....	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
None.....	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total.....	2	3	5	10	46	0	0	2	48	0	0	0	0	0	1	0	3	3	7	65

TABLE 106

TYPE OF ACCIDENT VS KIND OF FLYING
GLIDER AIRCRAFT

1968

FIRST TYPE OF ACCIDENT	KIND OF FLYING																			
	INSTRUCTIONAL				NONCOMMERCIAL					COMMERCIAL					MISCELLANEOUS					GRAND TOTAL
	DUAL	SOLO	OTHER	TOTAL	PLEASURE	BUSINESS	CORPORATE	OTHER	TOTAL	AERIAL APPLICATION	FIRE CONTROL	AIR TAXI-PASSENGER	AIR TAXI-CARGO	OTHER	TOTAL	TEST DEMONSTRATION	AIR SHOW	OTHER	TOTAL	
Ground/waterloop/swerve		1	2	3	4				4											7
Dragged wingtip, pod, or float																				
Wheels-up landing																				
Wheels-down landing in water																				
Gear collapsed																				
Gear retracted																				
Hard landing		1	1	2	1				1								1		1	4
Nose over/down																				
Roll over																				
Overshoot	1			1	1			1	2								1		1	4
Undershoot		1	1	2	8				8									1	1	11
Collision with aircraft a/																				
Both in flight					2				2											2
One airborne	1			1	1				1											2
Both on ground																				
Collision with ground/water																				
Controlled			1	1	2				2											3
Uncontrolled					3				3											3
Collided with																				
Wires/poles																				
Trees					4			1	5											5
Residence (s)																				
Other buildings																				
Fence, fenceposts					1				1											1
Electronic towers																				
Runway or approach lights																				
Airport hazard																				
Animals																				
Crop																				
Flagman, loader																				
Ditches																				
Snowbank																				
Parked aircraft (Unattended, engines not running)																				
Automobile					1				1											1
Dirt bank																				
Other					1				1								1		1	2
Bird strike (collision with birds)																				
Stall					8				8									1	1	9
Spin					3				3							1			1	4
Spiral					1				1											1
Mush					1				1											1
Fire or explosion																				
In flight																				
On ground																				
Airframe failure																				
In flight					1				1											1
On ground																				
Engine tearaway																				
Engine failure or malfunction					2				2									1	1	3
Propeller/rotor failure																				
Propeller																				
Tail rotor																				
Main rotor																				
Propeller/rotor accident to person																				
Jet intake/exhaust accident to person																				
Propeller/jet/rotor blast																				
Turbulence																				
Hail damage to aircraft																				
Lightning strike																				
Evasive maneuver																				
Uncontrolled altitude deviations																				
Ditching																				
Missing aircraft, not recovered																				
Other/miscellaneous					1				1											1
Undetermined																				
TOTAL	2	3	5	10	46			2	48							1	3	3	7	65

a/ Includes all Glider aircraft involved in collisions.

TABLE 107

TYPE OF ACCIDENT VS PHASE OF OPERATION

GLIDER AIRCRAFT

1968

FIRST TYPE OF ACCIDENT	PHASE OF OPERATION																							
	STATIC				TAXI			TAKEOFF				INFLIGHT						LANDING						
	STARTING ENGINES	IDLING ENGINES	ENGINE RUNUP	OTHER	TO TAKEOFF	FROM LANDING	OTHER	GROUND RUN	INITIAL CLIMB	ABORTED	OTHER	CLIMB TO CRUISE	NORMAL CRUISE	DESCENDING	ACROBATICS	BUZZING	OTHER	IN TRAFFIC PATTERN	FINAL APPROACH	LEVEL OFF/TOUCH-DOWN	ROLLOUT	OTHER	UNKNOWN	GRAND TOTAL
Ground/waterloop/swerve								3												1	3			7
Dragged wingtip, pod, or float																								
Wheels-up landing																								
Wheels-down landing in water																								
Gear collapsed																								
Gear retracted																								
Hard landing																				4				4
Nose over/down																								
Roll over																								
Overshoot																				3				3
Undershoot																			10	1		1		12
Collision with aircraft a/																								
Both in flight																	2							2
One airborne																				1	1			2
Both on ground																								
Collision with ground/water																								
Controlled									1									1		1				3
Uncontrolled																	2			1				3
Collided with																								
Wires/poles																	1							1
Trees														1					1	2				4
Residence (s)																								
Other buildings																								
Fence, fenceposts										1														1
Electronic towers																								
Runway or approach lights																								
Airport hazard																								
Animals																								
Crop																								
Flagman, loader																								
Ditches																								
Snowbank																								
Parked aircraft (Unattended, engines not running)																								
Automobile																					1			1
Dirt bank																								
Other																					2			2
Bird strike (collision with birds)																								
Stall									2				1					5	1					9
Spin																	3	1						4
Spiral																		1						1
Mush									1															1
Fire or explosion																								
In flight																								
On ground																								
Airframe failure																								
In flight															1									1
On ground																								
Engine tearaway																								
Engine failure or malfunction									2								1							3
Propeller/rotor failure																								
Propeller																								
Tail rotor																								
Main rotor																								
Propeller/rotor accident to person																								
Jet intake/exhaust accident to person																								
Propeller/jet/rotor blast																								
Turbulence																								
Hail damage to aircraft																								
Lightning strike																								
Evasive maneuver																								
Uncontrolled altitude deviations																								
Ditching																								
Missing aircraft, not recovered																								
Other/miscellaneous																								
Undetermined																	1							1
TOTAL								3	6	1			1	1	1		10	8	12	14	7	1		65

a/ Includes all Glider aircraft involved in collisions.

TABLE 108

CAUSE/FACTOR TABLE

GLIDER AIRCRAFT
U. S. GENERAL AVIATION

1968

INVOLVES 63 TOTAL ACCIDENTS
INVOLVES 5 FATAL ACCIDENTS

BROAD CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*	CAUSE	FACTOR	TOTAL*
PILOT	5 100.00	3 60.00	5 100.00	50 86.21	12 20.69	50 86.21	55 87.30	15 23.81	55 87.30
PERSONNEL	.00	.00	.00	6 10.34	1 1.72	7 12.07	6 9.52	1 1.59	7 11.11
AIRFRAME	1 20.00	.00	1 20.00	1 1.72	.00	1 1.72	2 3.17	.00	2 3.17
LANDING GEAR	.00	.00	.00	.00	.00	.00	.00	.00	.00
POWERPLANT	.00	.00	.00	2 3.45	.00	2 3.45	2 3.17	.00	2 3.17
SYSTEMS	.00	.00	.00	1 1.72	1 1.72	2 3.45	1 1.59	1 1.59	2 3.17
INSTRUMENTS/EQUIPMENT AND ACCESSORIES	.00	.00	.00	5 8.62	1 1.72	6 10.34	5 7.94	1 1.59	6 9.52
ROTORCRAFT	.00	.00	.00	.00	.00	.00	.00	.00	.00
AIRPORTS/AIRWAYS/FACILITIES	.00	.00	.00	.00	2 3.45	2 3.45	.00	2 3.17	2 3.17
WEATHER	.00	1 20.00	1 20.00	6 10.34	17 29.31	23 39.66	6 9.52	18 28.57	24 38.10
TERRAIN	.00	.00	.00	2 3.45	.00	2 3.45	2 3.17	.00	2 3.17
MISCELLANEOUS	.00	.00	.00	2 3.45	.00	2 3.45	2 3.17	.00	2 3.17
UNDETERMINED	.00	.00	.00	1 1.72	.00	1 1.72	1 1.59	.00	1 1.59

THE FIGURES OPPOSITE EACH CAUSAL CATEGORY REPRESENT THE NUMBER AND PERCENT OF ACCIDENTS IN WHICH THAT PARTICULAR CAUSAL CATEGORY WAS ASSIGNED

* IF AN ACCIDENT INCLUDES BOTH A CAUSE AND RELATED FACTOR IN THE SAME CAUSAL CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

TABLE 108 (CO

INVOLVES
INVOLVES

DETAILED

** PILOT

PILOT IN C
ATTEMPTE
EXCEEDED
FAILED T
FAILED T
FAILED T
FAILED T
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LACK OF
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MISJUDGE
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MISJUDGE
MISJUDGE
MISJUDGE
MISUSED
FAILED

SUBT

** PERSO

FLIGHT IN
MAINTENAN
IMPROPE
OPERATION
WEATHER P
TRAFFIC C
AIRPORT S
AIRWAYS F
PRODUCTIO
POOR/IN
MISCELLAN
PILOT D
GROUND
DRIVER
THIRD PIL
FLIGHT EN
DISPATCHI

SUBT

** AIRFF

WINGS
OTHER
FUSELAGE
LANDING (
FLIGHT C(
SPOILEI

SUB

TABLE 108 (CONTINUED)

CAUSE/FACTOR TABLE

GLIDER AIRCRAFT
U. S. GENERAL AVIATION

1968

INVOLVES 63 TOTAL ACCIDENTS
INVOLVES 5 FATAL ACCIDENTS

DETAILED CAUSE/FACTOR	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
** PILOT **									
PILOT IN COMMAND									
ATTEMPTED OPERATION BEYOND EXPERIENCE/ABILITY LEVEL				1		1	1		1
EXCEEDED DESIGN STRESS LIMITS OF AIRCRAFT	1		1				1		1
FAILED TO SEE AND AVOID OTHER AIRCRAFT				3		3	3		3
FAILED TO SEE AND AVOID OBJECTS OR OBSTRUCTIONS				1		1	1		1
FAILED TO OBTAIN/MAINTAIN FLYING SPEED	4		4	10		10	14		14
FAILED TO USE OR INCORRECTLY USED MISC EQUIPMENT				1	1	2	1	1	2
FAILED TO FOLLOW APPROVED PROCEDURES, DIRECTIVES ETC				1		1	1		1
IMPROPER OPERATION OF FLIGHT CONTROLS				3	1	4	3	1	4
IMPROPER LEVEL OFF				4		4	4		4
IMPROPER IN-FLIGHT DECISIONS OR PLANNING				7		7	7		7
INADEQUATE PREFLIGHT PREPARATION AND/OR PLANNING				1		1	1		1
LACK OF FAMILIARITY WITH AIRCRAFT		1	1	2	10	12	2	11	13
MISMANAGEMENT OF FUEL SYSTEM				1		1	1		1
EXERCISED POOR JUDGMENT		1	1					1	1
SELECTED UNSUITABLE TERRAIN				2		2	2		2
MISJUDGED DISTANCE, SPEED, AND ALTITUDE				3		3	3		3
MISJUDGED DISTANCE AND SPEED				2		2	2		2
MISJUDGED DISTANCE AND ALTITUDE				9		9	9		9
MISJUDGED SPEED AND ALTITUDE				1		1	1		1
MISJUDGED SPEED				1		1	1		1
MISJUDGED ALTITUDE AND CLEARANCE				1		1	1		1
MISJUDGED ALTITUDE					1	1		1	1
MISJUDGED CLEARANCE				2		2	2		2
MISUSED OR FAILED TO USE FLAPS		1	1					1	1
FAILED TO MAINTAIN DIRECTIONAL CONTROL				4		4	4		4
SUBTOTAL	5	3	8	60	13	73	65	16	81
** PERSONNEL **									
FLIGHT INSTRUCTOR									
MAINTENANCE, SERVICING, INSPECTION									
IMPROPER MAINTENANCE(OWNER PERSONNEL)				1		1	1		1
OPERATIONAL SUPERVISORY PERSONNEL									
WEATHER PERSONNEL									
TRAFFIC CONTROL PERSONNEL									
AIRPORT SUPERVISORY PERSONNEL									
AIRWAYS FACILITIES PERSONNEL									
PRODUCTION-DESIGN									
POOR/INADEQUATE DESIGN				1		1	1		1
MISCELLANEOUS-PERSONNEL									
PILOT OF OTHER AIRCRAFT				4		4	4		4
GROUND CREWMAN				1		1	1		1
DRIVER OF VEHICLE					1	1		1	1
THIRD PILOT									
FLIGHT ENGINEER									
DISPATCHING									
SUBTOTAL				7	1	8	7	1	8
** AIRFRAME **									
WINGS									
OTHER	1		1				1		1
FUSELAGE									
LANDING GEAR									
FLIGHT CONTROL SURFACES									
SPOILERS AND SLOTS-LEADING EDGE FLAPS, SPEED BRAKES				1		1	1		1
SUBTOTAL	1		1	1		1	2		2

CATEGORY, THE ACCIDENT IS REPRESENTED ONCE UNDER THE TOTAL FOR THAT CATEGORY

POWERPLANT (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
** POWERPLANT **									
ENGINE STRUCTURE									
IGNITION SYSTEM									
FUEL SYSTEM									
LUBRICATING SYSTEM									
COOLING SYSTEM									
PROPELLER AND ACCESSORIES									
EXHAUST SYSTEM									
ENGINE ACCESSORIES									
ENGINE CONTROLS-COCKPIT									
THROTTLE-POWER LEVER ASSEMBLIES				1		1	1		1
POWERPLANT-INSTRUMENTS									
MISCELLANEOUS									
POWERPLANT FAILURE FOR UNDETERMINED REASONS				1		1	1		1
REDUCTION GEAR ASSEMBLY									
COMPRESSOR ASSEMBLY									
COMBUSTION ASSEMBLY									
TURBINE ASSEMBLY									
ACCESSORY DRIVE ASSEMBLY									
LUBRICATING SYSTEM									
FUEL SYSTEM									
SAFETY SYSTEM									
IGNITION SYSTEM									
TORQUEMETER									
AIR BLEED									
EXHAUST SYSTEM									
THRUST REVERSER									
PROPELLER SYSTEM									
CONSTANT SPEED DRIVE									
POWER LEVER									
PROPELLER LEVER									
REVERSE THRUST LEVER									
ENGINE INDICATING EQUIPMENT									
ENGINE INSTALLATION									
SUBTOTAL				2		2	2		2
** SYSTEMS **									
ELECTRICAL SYSTEM									
HYDRAULIC SYSTEM									
FLIGHT CONTROL SYSTEMS									
ELEVATOR AND ELEVATOR TAB CONTROL SYSTEM				1		1	1		1
SPEED BRAKE SYSTEM					1	1		1	1
ANTI-ICING, DE-ICING SYSTEMS									
AIR CONDITION, HEATING AND PRESSURIZATION									
AUTO PILOT									
FIRE WARNING SYSTEM									
FIRE EXTINGUISHER SYSTEM									
OXYGEN SYSTEM									
OTHER SYSTEMS									
SUBTOTAL				1	1	2	1	1	2
** INSTRUMENTS/EQUIPMENT AND ACCESSORIES **									
FLIGHT AND NAVAGATION INSTRUMENTS									
ALTIMETERS					1	1		1	1
COMMUNICATIONS AND NAVIGATION EQUIPMENT									
MISCELLANEOUS EQUIPMENT									
GLIDER LAUNCH/TOW EQUIPMENT				3		3	3		3
OTHER				1		1	1		1
DIRECT ENTRIES				1		1	1		1
SUBTOTAL				5	1	6	5	1	6
** AIRPORTS/AIRWAYS/FACILITIES **									
AIRPORT FACILITIES									
AIRPORT CONDITIONS									
SOFT SHOULDERS (RUNWAY)					1	1		1	1
HIGH VEGETATION					1	1		1	1

TABLE 108 (CONTINUED) CAUSE/FACTOR TABLE

AIRPORTS/AIRWAYS/FACILITIES (CONTINUED)

	FATAL ACCIDENTS			NONFATAL ACCIDENTS			ALL ACCIDENTS		
	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL	CAUSE	FACTOR	TOTAL
AIRWAYS FACILITIES									
SUBTOTAL					2	2		2	2
** WEATHER **									
RAIN				1		1	1		1
ICING CONDITIONS-INCLUDES SLEET, FREEZING RAIN, ETC					1	1		1	1
UNFAVORABLE WIND CONDITIONS		1	1	3	7	10	3	8	11
SUDDEN WINDSHIFT					1	1		1	1
TURBULENCE, ASSOCIATED W/CLOUDS, THUNDERSTORMS					1	1		1	1
DOWNDRAFTS, UPDRAFTS				4	8	12	4	8	12
HIGH TEMPERATURE					1	1		1	1
THUNDERSTORM ACTIVITY					1	1		1	1
SUBTOTAL		1	1	8	20	28	8	21	29
** TERRAIN **									
WET, SOFT GROUND				1		1	1		1
ROUGH/UNEVEN				1		1	1		1
SUBTOTAL				2		2	2		2
** MISCELLANEOUS **									
EVASIVE MANEUVER TO AVOID COLLISION				2		2	2		2
UNDETERMINED				1		1	1		1
SUBTOTAL				3		3	3		3
GRAND TOTAL	6	4	10	89	38	127	95	42	137
** MISCELLANEOUS ACTS, CONDITIONS **									
IMPROPER EMERGENCY PROCEDURES					1	1		1	1
FLEW INTO BLIND CANYON				1		1	1		1
POORLY PLANNED APPROACH					2	2		2	2
SEPARATION IN FLIGHT		1	1					1	1
IMPROPERLY LOADED AIRCRAFT-WEIGHT-AND/OR CG					1	1		1	1
FROZEN					1	1		1	1
OVERLOAD FAILURE	1		1	1		1	2		2
MATERIAL FAILURE				2		2	2		2
FUEL STARVATION				2		2	2		2
DOWNWIND					1	1		1	1
LOOSE, PART/FITTING				1		1	1		1
ERRATIC					1	1		1	1
IMPROPERLY INSTALLED				2	1	3	2	1	3

DIRECT ENTRY CAUSES

EQUIP-TOW HOOK RELEASED,CAUSE UNDETERMINED.

DIRECT ENTRY CAUSES ARE CARRIED UNDER THEIR APPROPRIATE CAUSAL CATEGORIES AND ARE INCLUDED IN THE TOTALS

TABLE 109

INJURIES, ACCIDENTS
GLIDER AIRCRAFT
U. S. GENERAL AVIATION

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	5	17	10	33			65
COPILOT	1						1
DUAL STUDENT				2			2
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS		1	3	9			13
TOTAL	6	18	13	44		ABOARD	81
OTHER-AIRCRAFT							
OTHER-GROUND		1					1
GRAND TOTAL	6	19	13	44			82

INVOLVES 63 TOTAL ACCIDENTS
INVOLVES 5 FATAL ACCIDENTS

TABLE 110

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - DUAL
GLIDER AIRCRAFT

TABLE 110

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - DUAL
GLIDER AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT				2			2
COPILOT							
DUAL STUDENT				2			2
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS							
TOTAL				4		ABOARD	4
* OTHER-AIRCRAFT				1			1
OTHER-GROUND							
GRAND TOTAL				5			5

INVOLVES 2 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 111

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - SOLO
GLIDER AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT			1	2			3
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS							
TOTAL			1	2		ABOARD	3
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL			1	2			3

INVOLVES 3 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 112

INJURIES, ACCIDENTS
KIND OF FLYING
INSTRUCTIONAL - ALL OTHER
GLIDER AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT		1		4			5
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS							
TOTAL		1		4		ABOARD	5
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL		1		4			5

INVOLVES 5 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 113

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - PLEASURE
GLIDER AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT	5	12	9	20			46
COPILOT	1						1
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW		1	3	8			12
PASSENGERS							
TOTAL	6	13	12	28		ABOARD	59
* OTHER-AIRCRAFT				2			2
OTHER-GROUND		1					1
GRAND TOTAL	6	14	12	30			62

INVOLVES 45 TOTAL ACCIDENTS
INVOLVES 5 FATAL ACCIDENTS

* INJURIES CARRIED OPPOSITE 'OTHER-AIRCRAFT' ARE INJURIES OCCURRING IN AIRCRAFT THAT ARE NOT PART OF THIS SUBJECT TABULATION, BUT WERE PART OF THE TOTAL INJURIES INVOLVED IN COLLISIONS BETWEEN AIRCRAFT.

TABLE 114

INJURIES, ACCIDENTS
KIND OF FLYING
NONCOMMERCIAL - ALL OTHER
GLIDER AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT				2			2
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS							
TOTAL				2		ABOARD	2
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL				2			2

INVOLVES 2 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 115

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - TEST
GLIDER AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT		1					1
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS							
TOTAL		1				ABOARD	1
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL		1					1

INVOLVES 1 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 116

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - AIR SHOW
GLIDER AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT		1		2			3
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS							
TOTAL		1		2		ABOARD	3
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL		1		2			3

INVOLVES 3 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 117

INJURIES, ACCIDENTS
KIND OF FLYING
MISCELLANEOUS - ALL OTHER
GLIDER AIRCRAFT

1968

	FATAL	SERIOUS	MINOR	NONE	UNKNOWN		TOTAL
PILOT		2		1			3
COPILOT							
DUAL STUDENT							
CHECK PILOT							
FLIGHT ENGINEER							
NAVIGATOR							
CABIN ATTENDANT							
EXTRA CREW							
PASSENGERS				1			1
TOTAL		2		2		ABOARD	4
OTHER-AIRCRAFT							
OTHER-GROUND							
GRAND TOTAL		2		2			4

INVOLVES 3 TOTAL ACCIDENTS
INVOLVES NO FATAL ACCIDENTS

TABLE 118

ACCIDENTS, FATALITIES, RATES
U. S. GENERAL AVIATION
1939 - 1968

Year	Accidents Total	Accidents Fatal	Fatalities	Aircraft Hours Flown (000) b/	Aircraft Miles Flown (000) b/	ACCIDENT RATES Per 100,000 Aircraft Hours Flown Total	Per 100,000 Aircraft Hours Flown Fatal	Per Million Aircraft Miles Flown Total	Per Million Aircraft Miles Flown Fatal
1939.....	2,222	203	315	1,922	177,868	115.6	10.56	12.49	1.141
1940.....	3,471	232	359	3,200	264,000	108.4	7.25	13.15	0.879
1941.....	4,252	217	312	4,460	346,303	95.3	4.87	12.28	0.627
1942.....	3,324	143	220	3,786	293,593	87.7	3.78	11.32	0.487
1943.....	3,871	167	257	NA	NA	NA	NA	NA	NA
1944.....	3,343	169	257	NA	NA	NA	NA	NA	NA
1945.....	4,652	322	508	NA	NA	NA	NA	NA	NA
1946.....	7,618	690	1,009	9,788	874,740	77.8	7.05	8.71	0.789
1947.....	9,253	882	1,352	16,334	1,502,402	56.6	5.40	6.16	0.587
1948.....	7,850	850	1,384	15,130	1,469,540	51.8	5.62	5.34	0.578
1949.....	5,459	562	896	11,031	1,128,992	49.4	5.09	4.84	0.498
1950.....	4,505	499	871	9,650	1,061,500	46.6	5.17	4.24	0.470
1951.....	3,824	441	750	8,451	975,480	45.2	5.22	3.92	0.452
1952.....	3,657	401	691	8,186	972,055	44.6	4.90	3.76	0.413
1953.....	3,232	387	635	8,527	1,045,346	37.9	4.54	3.09	0.370
1954.....	3,381	393	684	8,963	1,119,295	37.7	4.38	3.02	0.351
1955.....	3,343	384	619	9,500	1,216,000	35.1	4.04	2.75	0.316
1956.....	3,474	356	669	10,200	1,315,000	34.0	3.49	2.64	0.271
1957.....	4,200	438	800	10,938	1,426,285	38.4	4.00	2.94	0.307
1958.....	4, 84	384	717	12,579	1,660,109	36.4	3.05	2.76	0.231
1959.....	4,576	450	823	12,903	1,716,019	35.5	3.49	2.66	0.262
1960.....	4,793	429	787	13,121	1,768,704	36.5	3.27	2.71	0.243
1961.....	4,625	426	761	13,602	1,857,946	34.0	3.13	2.49	0.229
1962.....	4,840	430	857	14,500	1,964,586	33.4	2.97	2.46	0.219
1963.....	4,690	482	893	15,106	2,048,574	31.0	3.19	2.29	0.235
1964.....	5,069	526	1,083	15,738	2,180,818	32.2	3.34	2.32	0.241
1965.....	5,196	538	1,029	16,733	2,562,380	31.1	3.22	2.03	0.210
1966.....	5,712	573	1,149	21,023	3,336,138	27.2	2.73	1.71	0.172
1967.....	6,115	603	1,228	22,153	3,439,964	27.6	2.72	1.78	0.275
1968 a/.....	4,968	692	1,399	24,053	3,740,000 (est)	20.6	2.86	1.33	0.184

a/ 3 suicide/sabotage accidents are included in all computations except rates.

b/ Source: FAA