

DS
89
17, II

DOT/FAA/DS-89/17,II
Advanced System Design Service
Washington, D.C. 20591

Accident/Incident Data Analysis Database Summaries - Vol. II

T.P. Murphy
R.J. Levendoski

RJO Enterprises, Inc.
4550 Forbes Boulevard
Lanham, MD 20706

March 1989

Final Report

This document is available to the public
through the National Technical Information
Service, Springfield, Virginia 22161.



U.S. Department of Transportation
Federal Aviation Administration

NOTICE

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

The United States Government does not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the objective of this report.

1. Report No. DOT/FAA/DS-89/17, II	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Accident/Incident Data Analysis Database Summaries (Vol. II)		5. Report Date March 1989	
		6. Performing Organization Code	
7. Author(s) T.P. Murphy, R.J. Levendoski		8. Performing Organization Report No.	
9. Performing Organization Name and Address RJO Enterprises, Inc. 4550 Forbes Boulevard Lanham, MD 20706		10. Work Unit No. (TRAIS)	
		11. Contract or Grant No. DTFA01-87-Y-01043	
12. Sponsoring Agency Name and Address Department of Transportation Federal Aviation Administration 800 Independence Avenue, S.W. Washington, D.C. 20591		13. Type of Report and Period Covered	
		14. Sponsoring Agency Code ADS-210	
15. Supplementary Notes Flightcrew Systems Research Branch, ADS-210 Martin J. Lynn			
16. Abstract <p>This two volume report provides a compendium of the existence, availability, limitations, and applicability of aviation accident and incident databases for use in human factors research. An aviation and data processing oriented form was used to survey 41 U.S. Government, military, aircraft manufacturers, airlines, special interest groups, and international aviation safety database sources. The compendium in Volume I presents information about 34 aviation safety databases.</p> <p>Recommendations include a feasibility study of a combined master aviation safety database, the convening of a task force to standardize human factors terminology and data collection, the establishment of a limited immunity program to facilitate the flow of air carrier incident data, and a more vigorous effort to present available aviation safety information to pilots.</p> <p>Appendices are contained in Volume II to provide detailed information about database collection forms, data structures, and human factors information within the database.</p>			
17. Key Words Aviation Accident Aviation Incident Database Compendium Human Factors		18. Distribution Statement This document is available to the U.S. public through the National Technical Information Service, Springfield, Virginia 22161	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 280	22. Price

ACCIDENT/INCIDENT DATA ANALYSIS

DATABASE SUMMARIES

Volume II

Appendixes

Contract No. DTFA01-87-Y-01043

March, 1989

Prepared for:

**Department of Transportation
Federal Aviation Administration
Flight Crew Systems Research Branch (ADS-210)
800 Independence Avenue, S.W.
Washington, DC 20591**

Prepared by:

**RJO Enterprises, Inc.
4550 Forbes Boulevard
Lanham, MD 20706**

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

ACADS	Air Carrier Accident Data System
ACASS	Air Carrier Analysis Support System
ADREP	Accident/Incident Data Reporting
AIDS	Accident/Incident Data Subsystem
ALPA	Air Line Pilots Association
AOPA	Aircraft Owners and Pilot Association
APA	Allied Pilots Association
ARTCC	Air Route Traffic Control Center
ASAS	Aviation Safety Analysis System
ASMIS	Army Safety Management Information System
ASRS	Aviation Safety Reporting System
AT	Air Traffic
ATA	Air Transport Association
CAIS	Comprehensive Airmen Information Subsystem
DoD	Department of Defense
DoI	Department of Interior
DoT	Department of Transportation
EIS	Enforcement Information Subsystem
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FBI	Federal Bureau of Investigation
FSF	Flight Safety Foundation
GAMA	General Aviation Manufacturing Association
HAI	Helicopter Association International
HAP	High Accident Potential
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
LOFT	Line Oriented Flight Training
NAIMS	National Airspace Incident Monitoring System
NASA	National Aeronautics and Space Administration
NBAA	National Business Aircraft Association
NMAC	Near Mid Air Collision
NORAD	North American Aerospace Defense Command
NTSB	National Transportation Safety Board
OE	Operational Error
PD	Pilot Deviation
RAA	Regional Airline Association
SIE	Safety Information Exchange
SIS	Safety Information System
SDRS	Service Difficulty Reporting Subsystem

TABLE OF CONTENTS

	<u>Page</u>
APPENDIX A	
FAA Form 8020-5, Aircraft Incident Record	A-1
FAA AIDS Database Fields List	A-3
Selected AIDS Database Fields and Coding Elements Having Potential Human Factors Interest	A-6
APPENDIX B	
FAA Form 8020-11, Incident Report	B-1
FAA PD Database Data Dictionary	B-2
APPENDIX C	
FAA Form 7210-2.1, Preliminary Operational Error/ Deviation Report	C-1
FAA Form 7210-3, Final Operational Error/Deviation Report . .	C-6
APPENDIX D	
FAA Form 3556, Near Mid Air Collision Preliminary Report . .	D-1
FAA Form 8020-15, Investigation of Near Mid-Air Collision Incident	D-2
APPENDIX E	
NASA Form ARC-277	E-1
ASRS Database Information System Structure	E-3
ASRS Database Field 204, Containing Human Factors Terms . . .	E-4
APPENDIX F	
NTSB Form 6120.4, Factual Report Aviation Accident/Incident .	F-1
NTSB Sequence of Events Worksheet	F-67
Section of the NTSB Sequence of Events Aviation Coding Manual Containing Direct and Underlying Modifier Terms with Human Factors Interest	F-69
NTSB Two Page Brief of Accident	F-77
APPENDIX G	
Words and Terms With Possible Human Factors Interest, from the U.S. Air Force Aircraft File Classifications Elements and Factors Manual	G-1

TABLE OF CONTENTS (CONTINUED)

	<u>Page</u>
APPENDIX H	
A List of Human Factors Engineering Topics and Selected Topics from the U.S. Air Force Lessons Learned Database	H-1
APPENDIX I	
Sections of the Naval Safety Data Coding Manual with Human Factor Coding Elements Information	I-1
APPENDIX J	
A List of Lessons Learned, and Sample Lessons from the Human Factors Impact Area of the U.S. Navy Lessons Learned Database	J-1
APPENDIX K	
Department of the Army Form 2397-R Technical Report of U.S. Army Aircraft Accident	K-1
U.S. Army Coding Words/Phrases with Potential Human Factors Interest, from the U.S. Army Aviation Safety Center User's Guide	K-18
APPENDIX L	
List of Human Error Codes and Strong Human Error Connections Codes Used in a Recent Boeing Study	L-1
APPENDIX M	
Samples of Computer Generated IATA Incident Reports	M-1
APPENDIX N	
Sample ICAO Aircraft Accident Report, from ICAO ADREP Manual	N-1
Partial List of Descriptive Factors and Modifiers used in ICAO Accident/Incident Database taken from ICAO ADREP Manual	N-18
Partial List of Explanatory Factors and Modifiers with Human Factor Information, taken from ICAO ADREP Manual	N-24
Copies of Event Worksheet, taken from ICAO ADREP Manual	N-28

APPENDIX A

FAA Form 8020-5, Aircraft Incident Record	A-1
FAA AIDS Database Fields List	A-3
Selected AIDS Database Fields and Coding Elements Having Potential Human Factors Interest	A-6

IDENTIFICATION A.	1. CODE		2. DATE		3. TIME (Local)		AIRCRAFT INCIDENT RECORD				
	4. CATEGORY				5. DAY OF WEEK						7. LOCATION (City and State)
	<input type="checkbox"/> AIR CARRIER-TYPE <input type="checkbox"/> AIR TAXI <input type="checkbox"/> GENERAL AVIATION <input type="checkbox"/> COMMUTER <input type="checkbox"/> OTHER				6. COORDINATES		8. NEAREST FIX (Radial and Distance)				
AIRCRAFT B.	1. AIRFRAME			MAKE/MODEL		TOTAL HOURS		MAKE/MODEL		TOTAL HOURS	
	MAKE/MODEL			SERIAL NO. (Malfunctioning)		SERIAL NO. (Malfunctioning)		SERIAL NO. (Malfunctioning)		SERIAL NO. (Malfunctioning)	
	REGISTRATION NO.		AIRCRAFT CLASS	2. ENGINES		1. _____ 2. _____		3. _____ 4. _____		1. _____ 2. _____	
	AIRWORTHINESS CLASS					T.S.O. (Malfunctioning)		1. _____ 2. _____		3. _____ 4. _____	
	HOURS			1. _____ 2. _____		1. _____ 2. _____		3. _____ 4. _____		3. PROPELLERS	
T.S.O.		TOTAL TIME	3. _____ 4. _____		3. _____ 4. _____		3. _____ 4. _____		3. _____ 4. _____		
OPERATOR C.	1. NAME AND ADDRESS				6. AIR CARRIER OPERATING CERTIFICATE NO.		AUTHORIZED OPERATIONS UNDER FAR PARTS				
	2. OPERATING NO.		4. MAINT. DESIGNATOR		7. OPERATING CERTIFICATE NO.		AUTHORIZED OPERATIONS UNDER FAR PARTS				
	3. ICAO PREFIX		5. CAB 298C FILED <input type="checkbox"/> YES <input type="checkbox"/> NO								
INJURY AND DAMAGE D.	1. PERSONS INVOLVED	2. PERSONS ABOARD	3. MINOR INJURY	4. SERIOUS INJURY	5. FATAL INJURY	6. DAMAGE		7. TYPE OF FLYING			
	PASSENGERS					NONE		PERSONAL			
	PILOT CREW					MINOR		BUSINESS			
	CABIN CREW					SUBSTANTIAL		EXECUTIVE CORP.			
	GROUND CREW					DESTROYED		INSTRUCTION			
	PUBLIC OTHER					FIRE AFTER IMPACT		AERIAL APPLICATION			
	TOTALS					PROPERTY DAMAGE		INDUSTRIAL SPECIAL			
	HANDICAPPED					UNKNOWN		FERRY			
	EVACUATION INJURIES					7. PHASE OF OPERATION		TEST			
	SERVICEMEN					GROUND		FOREST FIRE			
					TAXI		PARACHUTE				
					TAKEOFF		AIR SHOW				
					CLIMB		PASSENGER				
					LEVEL FLIGHT		CARGO				
					DESCENT		PASSENGER/CARGO				
					APPROACH		MAIL				
					LANDING		OTHER				
							UNKNOWN				
AIRPORT E.	1. NAME				6. REMARKS						
	<input type="checkbox"/> CONTROLLED <input type="checkbox"/> UNCONTROLLED										
2. RUNWAY NUMBER	3. FIELD ELEVATION	4. RUNWAY LENGTH	5. SURFACE CONDITION								
WEATHER F.	1. SOURCE	3. SKY CONDITION	5. VISIBILITY RESTRICTION	7. D.P.	8. WIND	10. REMARKS					
	2. TIME	4. VISIBILITY	6. TEMP.	9. ALTIMETER							

AIR TRAFFIC	1. CONTROL COMMUNICATION FACILITY		4. DEPARTURE POINT DATE TIME		7. RADAR COVERAGE <input type="checkbox"/> YES <input type="checkbox"/> NO		9. FUEL CONSUMPTION			
	2. FLIGHT PLAN CLEARANCE <input type="checkbox"/> IFR <input type="checkbox"/> VFR <input type="checkbox"/> NONE			5. DESTINATION ETA OR ATA		8. RADAR CONTROL <input type="checkbox"/> YES <input type="checkbox"/> NO		10. TYPE APPROACH		
	3. TAKEOFF GROSS WEIGHT/C.G.			6. LAST COMMUNICATION (Position, Time, Altitude)						
CREW HISTORY				1. PIC	2. SIC	3. FE				
	NAME									
	DATE OF BIRTH AGE									
	CERTIFICATE NO. AND TYPE									
	DATE OF LAST MEDICAL									
	HOURS THIS MAKE MODEL									
	HOURS LAST 90 DAYS - MAKE/MODEL									
	TOTAL HOURS LAST 90 DAYS									
	TOTAL HOURS									
	DUTY TIME Last 24 Hours									
	RATINGS									
	PROFICIENCY CHECK DATE									
	ROUTE CHECK DATE									
	SIMULATOR CHECK									
SEAT OCCUPIED										
DOMICILE (City and State)										
OTHER SPECIFY										
HUMAN FACTORS	1. PASSENGERS		2. EQUIPMENT		3. ENVIRONMENT		4. INVESTIGATION		YES	NO
	OBESE		SEATS		SMOKE		NTSB NOTIFIED			
	AGED		RESTRAINTS		FUMES		VOICE RECORDER REVIEW			
	BLIND		EXITS		FIRE		FLIGHT RECORDER REVIEW			
	INFANT		SLIDES		LIGHTS		OFFICE INVESTIGATION			
			RAFTS				SCENE INVESTIGATION			
DISP	1. REPORT SUBMITTED BY:				5. SOURCE OF INFO					
	2. OFFICE				6. FAA COORDINATOR INVEST.					
	3. DATE				7. NTSB INVESTIGATOR					
	4. DISTRIBUTION				8. RELATED REPORTS					
NARRATIVE	K.									

DS FIELD DEFINITIONS

- 1 Event Type Code
- 2 FAR Part Number
- 3 Latest Data Source
- 4 Investigating Agency
- 5 Identifier for Case Number
- 6 Year of Occurrence
- 7 Month of Occurrence
- 8 Day of Occurrence
- 9 Date of Occurrence
- 10 Local Time of Occurrence
- 11 Region Where Occurred
- 12 District Office
- 13 State of Occurrence
- 14 City Of Occurrence
- 15 Airport
- 16 Runway
- 17 Location Identifier
- 18 Direction from ID
- 19 Distance from ID
- 20 Latitude
- 21 Longitude
- 22 Registration Number
- 23 Aircraft Make
- 24 Aircraft Model
- 25 Aircraft Group
- 26 Aircraft Tech. Certification Sheet
- 27 Aircraft Certification Region
- 28 Aircraft Category
- 29 Aircraft Class
- 30 Airworthiness Class
- 31 Total Airframe Hours
- 32 Year Manufactured
- 33 Wing Type*
- 34 Engine Make
- 35 Engine Model
- 36 Engine Group
- 37 Engine Tech. Certification Sheet
- 38 Engine Certification Region
- 39 Engine Type
- 40 Certifications
- 41 Certifications Code
- 42 Pilot Certification Number
- 43 If Student Pilot
- 44 Ratings
- 45 Ratings Code
- 46 Other Ratings
- 47 Other Ratings Code
- 48 Qualifications
- 49 Qualifications Code
- 50 Age
- 51 Profession
- 52 Profession Code
- 53 Total Hours in this Make/Model
- 54 Total Hours in this Make/Model Last 90 Days
- 55 Total Hours - Last 90 Days
- 56 Total Hours
- 57 Pilot Residence Region
- 58 Pilot Residence District Office
- 59 Pilot Residence State

60 Second Pilot Certification Number
61 Total On Board
62 Passengers On Board
63 Passenger Fatalities
64 Passenger Injuries
65 Flight Crew On Board
66 Flight Crew Fatalities
67 Flight Crew Injuries
68 Cabin Crew On Board
69 Cabin Crew Fatalities
70 Cabin Crew Injuries
71 Ground Crew Injuries
72 Ground Crew Fatalities
73 Public/Third Party Injuries
74 Public/Third Party Fatalities
75 Midair Collision
76 Number of Fatalities
77 Cause Factor (A)
78 Cause Factor Code
79 Contributing Cause (A)
80 Contributing Cause (A) Code
81 Persons Involved (A)
82 Persons Involved (A) Code
83 Supporting Factors (A)
84 Supporting Factors (A) Code
85 Cause Factor (B)
86 Cause Factor Code
87 Contributing Cause (B)
88 Contributing Cause (B) Code
89 Persons Involved (B)
90 Persons Involved (B) Code
91 Supporting Factors (B)
92 Supporting Factors (B) Code
93 Type of Accident or Incident
94 Type of Accident or Incident Code
95 Phase of Flight
96 Phase of Flight Code
97 Damage
98 Damage Code
99 General Cause Category
100 General Cause Category Code
101 Type of Flying (Primary)
102 Type of Flying (Primary) Code
103 Type of Flying (Secondary)
104 Type of Flying (Secondary) Code
105 Flying Conditions (Primary)
106 Flying Conditions (Primary) Code
107 Flying Conditions (Secondary)
108 Flying Conditions (Secondary) Code
109 Light Conditions
110 Light Conditions Code
111 Type of Approach
112 Sky Conditions
113 Ceiling
114 Visibility
115 Visibility Restrictions
116 Wind
117 Runway Conditions
118 Braking Action
119 Remarks

120 Owner/Operator Name
121 Owner/Operator State
122 Operator Code
123 ELT on Board
124 ELT Operational
125 ELT Used
126 Air Agency Certificate
127 Air Agency Region
128 Air Agency District Office
129 NTSB File Number
130 Flight Plan
131 First Remedial Action Area
132 First Remedial Action Area Code
133 First Remedial Action Taken
134 First Remedial Action Taken Code
135 Second Remedial Action Area
136 Second Remedial Action Area Code
137 Second Remedial Action Taken
138 Second Remedial Action Taken Cod
139 Related Reports
140 Extent of Investigation
141 Notification Method
142 Quality Control
143 FAA Airport ID
144 Aircraft Design Code
145 Aircraft Weight Class Code
146 Aircraft Weight Class Text
147 Aircraft Wing Type Code
148 Aircraft Wing Type Text
149 Aircraft Power Class Code
150 Aircraft Power Class Text
151 Number of Engines
152 Characteristics of Engine Type
153 Engine Power Class Code
154 Engine Power Class Text
155 Engine Type Code
156 Engine Type Text
157 Landing Gear Code
158 Landing Gear Text
159 Other Factors Record
160 Other Factors Code
161 Other Factors Text

* = Fields that are record Fields and can have repeating values.

AIDS CODES REPORT

TABLE ID: CAUSA TABLE NAME: CAUSE FACTOR A & B TABLE NO: 77
 CAUSB

---CODE--	----- SHORT FORM -----	----- DESCRIPTION -----
AA	APT/COND	FAIL ADVISE UNSAFE APT COND
AF	APT/FAC	IMPROPER MAINTENANCE APT FAC
AI	AWY/FAC	INADEQUATELY MAINTAIN AWY FAC
AL	ASG/ALT	DIDN'T FLY ASG ALT IFR CLRNS
AP	APCH/FAC	INADEQUATELY MAINTAIN APCH FAC
AS	FLY/SPD	FAIL TO MAINTAIN ADEQ FLY SPD
AT	TFC/ADY	FAILED TO ADV OF OTHER TRAFFIC
AU	EQP/DEF	ATTEMPT OPERATION WITH DEF EQP
AW	WX/COND	FAIL TO ADV OF UNSAFE WX COND
BS	STRUCK/BIRD	STRUCK BIRDS IN FLIGHT PATH
BW	BLOWN OVER	BLOWN OVER BY STRONG WIND
CE	ENG/GL	DIDN'T CLEAR ENGINE IN GLIDE
CH	CARBHT/DEIC	MISUSE CARBHT/DEIC PROC TB ENG
CI	IMPR/INSTR	ISSUED IMPR CONFLICTING INSTR
CP	STUD/PAX	STUD PILOT CARRIED PASSENGERS
CS	COOL/OIL	IMPROP OPER COOL SYS OIL ENG C
DC	DRIFT	FAILED TO CORRECT FOR DRIFT
DE	EQUIP/SERV	DEFIC, CO MAINTAIN EQUIP/SERV
DP	DISPATCH	FAIL COMPLY DISPATCH PROC REGS
DR	ALCOHOL	DRANK ALCOHOLIC BEVERAGE
DW	TAKEOFF/DW	DOWNWIND TAKEOFF OR LANDING
EL	EXPER LEVEL	ATTEMPTED OPS BEYOND EXP LEVEL
EQ	EMEG/EQUIP	IMPROPER OPERATION EMEG/EQUIP
ES	ENG/START	STARTED ENG W/OUT ASSIST/EQUIP
FA	COLLIDE/APP	COLLIDED WITH OBJ ON FINAL APP
FC	DEST/FAC	CLEARED FLIGHT INADEQ FAC/DEST
FE	FIRE/EXT	FAILED TO USE ENGINE FIRE/EXT
FN	UNSAFE/COND	UNSAFE/COND & FAIL TO MSRK OBS
FO	FUEL/SYS	MISCELLANEOUS MISUSE FUEL SYS
FP	PROC/INSTR	FAIL FOLLOW APPROVED PROC/INSTR
FR	RELINQ/CNTL	FAILED TO RELINQUISH CONTROL
FT	MGT/FUEL	IMPROPER MGT/FUEL TANK SELECTO
FX	FUEL/LOW	CONT FLT LOW/FUEL/EXHAUSTION
GA	INIT/GOAR	DELAYED IN INIT/GOAR
GC	BRAKE/GRDCTL	IMPROPER OPER BRAKE/FLT CLTGRD
GE	EMEG/GEAR	MISUSED EMERGENCY GEAR SYSTEM
GF	GEAR/POSCK	GEAR SWITCH/CONT FAIL CK POS
GI	RET/GEAR	INADVERTANT RET LANDING GEAR
GL	GEAR/LATE	EXTENDED GEAR TOO LATE
GN	GEAR/NONE	FORGOT TO EXTEND LANDING GEAR
GP	GEAR/EARLY	RETRACT GEAR EARLY ON TAKEOFF
HA	AVOID/AC	FAIL AVOID AC NON AB/ONLY LAB
HG	GRND/WTR	FAIL AVD COLLISION GRDN OR WTR
HO	OBJECT/AVOID	FAIL AVD OBJS OR OBSTRUCTIONS
HT	TOWER/AVOID	FAIL TO AVD TV OR RADIO TOWER
IA	RWY/ALIGN	AC IMPROPERLY ALIGN WITH RUNWAY

AIDS CODES REPORT

TABLE ID:	CAUSA	TABLE NAME:	CAUSE FACTOR A & B	TABLE NO:
CAUSB	SHORT FORM	DESCRIPTION		
--CODE--				
IC	HAZD/MATER	CFZD/MATER ON BOARD AIRCRAFT		
IE	AC/EQUIP	AC IMPROPERLY EQUIP FOR FLIGHT		
IF	FAC/INSP	IMPROPER INSP OF FAC		
IG	IGNIT/USE	IMPROPER USE OF IGNIT SYSTEM		
II	PREFLT/INSP	INADEQUATE INSP OF AC PREFLT		
IO	AIR/FLTCNTL	IMPROPER OPER FLT CNTL IN AIR		
IP	INST/PROC	IMP INST LANDING/TAKEOFF PROC		
IS	AC/SPACE	INADEQ SPACE AC/WKE TURBULENCE		
IT	TRAIN/PROC	INADEQ FLT/GRD TRAINING-PROCS		
LA	ACRO/LOW	FORM ACRO BELOW SAFE ALTITUDE		
LC	CNTL/WX	LOST CONTROL IN ADVERSE WX		
LO	LYL/OFF	IMPROPER LEVEL OFF		
LR	CNTL/NTYFR	LOST GROUND REF AT NT YFR		
MA	ACAVOID/AIR	FAIL AVOID AC/BOTH AIRBORNE		
MC	CREW/INST	GAVE INCORRECT INFO TO CREW		
ME	USE/EQUIP	FAIL/INCORRECT USE MISC EQUIP		
MI	INSTRUCT	MISUNDERSTAND ORD, INSTRUCT, ETC		
MM	MIX/CNTL	MISUSED MIXTURE CONTROL		
MO	EQUIP/MGT	PILOT/CREW MISMANAGED AC SYS		
NO	ISSUE/NOTAM	FAILED TO ISSUE NOTAM		
OB	THROT/ BOOST	ADVANCED THROT RAPIDLY/BOOST		
OC	LOST/YFR	LOST ON/OFF COURSE YFR		
OF	OPER/FAC	IMPROPER OPERATION OF FAC		
OM	OTHER/MISC	OTHER, MISCELLANEOUS		
OP	OP/PROP	IMPROPER OPERATION OF PROPELLER		
OS	OY/SHOOT	LAND FAR DOWN LAND AREA/OYSHOT		
OT	OP/TEMP	FAIL TO ATTAIN PROPER OP TEMP		
PA	TAXI/PARK	TAXI/PARK WITHOUT PROPER ASSIST		
PB	PLAN/WTBAL	POOR PREFLIGHT PLAN/WT AND BAL		
PC	INCAP	PILOT INCAP EXCLUDES ALCOHOL		
PD	PLAN/MANUAL	FAIL PROV ADEQ DIR, MANUALS, ETC		
PF	PLAN/FUELQT	POOR PREFLIGHT PLAN FUEL QT		
PI	CNTL/INTFR	CNTL INTFR BY PASSENGER/CREW		
PL	EARLY/LIFTOF	EARLY LIFTOFF/INTENTIONAL/IND		
PO	PLAN/OTHER	INADEQ/IMP PF PREP/PLANNING		
PP	PLAN/ACPERF	POOR PREFLIGHT PLAN/AC PERF		
PS	FLT/SUPERY	INADEQUATE FLT/SUPERY (PILOT)		
PW	PLAN/WX	POOR PREFLIGHT PLANNING-WX		
RC	CLEAR/WRWY	CLEAR AC WRWY FOR CONDITION		
RI	USE/FACIFR	UNABLE UTIL NAVIG FAC PROP IFR		
RS	ROTOR/RPM	FAIL MAINTAIN ADEQ ROTOR RPM		
RY	USE/FACYFR	UNABLE UTIL NAVIG FAC PROP YFR		
SA	AC/SERVICE	IMPROPERLY SERVICED AC		

AIDS CODES REPORT

TABLE ID: CAUSA TABLE NAME: CAUSE FACTOR A & B TABLE NO: 77
 CAUSB

---CODE---	----- SHORT FORM -----	----- DESCRIPTION -----
SC	TRAIN/RAMP	INADEQ SUP-VISION TRAIN RAMP C
SN	TERRAIN/SNIC	UNSUITABLE TERRAIN SN/IC AREA
SO	START/ENG	MISC UNSAFE ACTS START ENGINE
SP	WALK/PROP	WALK INTO PROPELLER OR ROTOR
SR	REMOVE/SNICE	IMP/INADEQ SNICE/REMOVE FROMAC
ST	FLT/TURB	CONT FLT AREA SEVERE TURB
TC	ENRT/TERRAIN	INSUFFICIENT TERRAIN CLR IN RT
TO	TKOF/DELAY	DELAY ACTION IN ABORTED TKOF
TP	TFC/PROC	IMPROPER PROC IN GROUND TRAFFIC
TX	TKOF/WX	TKOF ADYRSE WX CRASH INHED VIC
UA	UNAUTH/ACT	UNAUTHORIZED ACTION
UD	UNDETER	UNDETERMINED
UN	MISC/PILACT	MISC/PILOT UNSAFE ACTS
UO	MISC/THDPTY	UNSAFE ACTS BY THIRD PARTY
US	LAND/UNDER	LANDED SHORT
UT	TERRAIN/UNSUI	SELECTED UNSUITABLE TERRAIN
VN	BELOW VMC	OPERATION BELOW VMC
WF	WX/FORECAST	INCORRECT WEATHER FORECAST
WO	WHITE OUT	WHITEOUT CONDITIONS
WR	WX/REPORT	INCOMPLETE WEATHER REPORT
WX	WX/VFR	CONT VFR FLIGHT INTO ADY WX
XL	DSGN/LOAD	EXCEED LOAD DSGN AC SPEED CONT

AIDS CODES REPORT

TABLE ID: CONTRA TABLE NAME: CONTRIBUTING CAUSE A & B TABLE NO: 79
 CONTRB

---CODE--	SHORT FORM	DESCRIPTION
1	VISOBS	VISION OBSCURED BY SUN
2	FOGICE	FOG, ICE, RAIN ON WINDSHIELD
3	PILFAT	PILOT FATIGUE OR LACK OF REST
4	RUFF	ROUGH OR RUTTED SOD
5	WIND	GUSTY WIND
A	WETRWY	WET RUNWAY
B	ICESLS	ICE/SLUSH RUNWAY
C	SOFTSH	SOFT SHOULDERS
D	DITCH	DITCHING
E	EMLAND	EMERGENCY LANDING
F	FIRE	FIRE AFTER CRASH
G	GLASSY	GLASSY WATER
H	HAZOBS	HIDDEN HAZARDOUS OBJECTS
I	ICING	ICING ON AIRCRAFT
J	SHIFT	SHIFTING FUEL CARGO
K	HIGHVG	HIGH VEGETATION
L	SABOTG	SABOTAGE
M	DECOMP	DECOMPRESSION, HYPOXIA
N	PAXDST	PAX DISTURBANCE
O	PRECLD	PRECAUTIONARY LANDING
P	ROUGHW	ROUGH WATER
Q	SNOBNK	SNOW BANK
R	UNDET	UNDETERMINED
S	ACEVAC	INADEQUATE RWY, TAXIWAY LGTS
T	DWDRF	DOWNDRAFT
U	BLADST	BLADE STALL
V	MISCL	OTHER/MISCELLANEOUS
W	STOLAC	STOLEN AIRCRAFT
X	BIRDS	BIRD STRIKE
Y	DENALT	DENSITY ALTITUDE
Z	WX	WEATHER

AIDS CODES REPORT

TABLE ID: SUPPA

TABLE NAME: SUPPORTING FACTORS OPR

TABLE NO: 83

---CODE--	--- SHORT FORM ---	----- DESCRIPTION -----
A	MISJG	MISJUDGEMENT
B	MISTK	MISTAKE
C	CALCR	CALCULATED RISK
D	LASUP	LACK OF SUPERVISION
E	INATT	INATTENTION
F	CARLS	CARELESS
G	RCKLS	RECKLESS
H	UNSKL	UNSKILLED IN AIRCRAFT
I	UNOPS	UNSKILLED IN TYPE OF OPERATION
J	UNFIT	UNFORSEEN SITUATION
K	STOLN	STOLEN AIRCRAFT
L	INMED	PILOT INCAPACITATION-MEDICAL
M	INACL	PILOT INCAPACITATION-ALCOHOL
N	INOTH	PILOT INCAPACITATION-OTHER
O	BIRDS	BIRD STRIKE
P	DENAL	DENSITY ALTITUDE
Q	LREXP	LACK OF RECENT EXPERIENCE
R	WXBRF	WEATHER-PILOT RCVD WX BRIEFING
S	OTHER	OTHER
T	SUPFC	SUPPLEMENTAL FORTHCOMING
U	UNK	UNKNOWN
V	WXBRU	WEATHER-BRIEFING NOT REPORTED
W	WXNBR	WEATHER-PILOT NOT WX BRIEFED

AIDS CODES REPORT

TABLE ID: GCAT

TABLE NAME: GENERAL CAUSE CATEGORY

TABLE NO: 99

---CODE---	--- SHORT FORM ---	----- DESCRIPTION -----
1	IMPRM	IMPROPER MAINTENANCE
2	MANUF	MANUFACTURER
3	DESGN	DESIGN OF AIRCRAFT
4	OPDEF	OPDEF, OTHER THAN PILOT
5	PILOT	PILOT INDUCED
6	UNDET	UNDETERMINED
7	MISCL	MISCELLANEOUS, OTHER, NONE
8	PILTM	PILOT AND MAINTENANCE
9	INADH	INADEQUATE MAINTENANCE

AIDS CODES REPORT

TABLE ID: FREM TABLE NAME: FIRST REMEDIAL ACTION AREA TABLE NO: 131

---CODE--	----	SHORT FORM	-----	DESCRIPTION	-----
A		NONE		NONE	
B		FLTP		FLIGHT PERSONNEL	
C		FLMT		FLIGHT & MAINTENANCE PERSONNEL	
D		FMST		FLT MAINT FAA ST POLICIES/PROC	
E		FLTI		FLIGHT INSTRUCTOR	
F		FOSS		FLT OPER FAA STANDARDS POL/PRO	
G		FLMO		FLIGHT, MAINTENANCE & OPERATOR	
H		FLPP		FLT, FAA STANDARDS POL/PROCS	
I		HAIN		MAINTENANCE PERSONNEL	
J		HTOP		MAINTENANCE AND OPERATOR	
K		MTST		MT FAA ST POLICIES/PROCEDURES	
L		MOST		MAINT, OPER FAA ST POL OR PROC	
M		HANU		MANUFACTURER	
N		MAOP		MANUFACTURER AND OPERATOR	
O		MAST		MA & FAA ST POLICIES, OR PROCS	
P		OPER		OPER FLT SCH, A/TAXI, AGR/ETC.	
Q		OPST		OP & FAA ST POLICIES, OR PROCS	
R		FAAP		FAA PERSONNEL	
S		FAPF		FAA PERSONNEL & FACILITIES	
T		FPST		FAA PERS & FAA ST POL/PROC	
U		FAAF		FAA FACILITIES	
V		FFST		FAA FAC/ST POLICIES/PROCEDURES	
W		RPST		REPAIR STATION	
X		RSST		F S & FAA ST, POLICIES OR PROC	
Y		FAST		FAA STS, POLICIES OR PROCEDURE	
Z		OTHR		OTHER	

AIDS CODES REPORT

TABLE ID: FACT TABLE NAME: FIRST REMEDIAL ACTION TAKEN TABLE NO: 13:

--CODE--	----	SHORT FORM	-----	DESCRIPTION	-----
A		DIS		DISCUSSION	
B		LTR		LETTER	
C		TRN		ADDITIONAL TRAINING	
D		REX		RE-EXAMINATION/RE-INSPECTION	
E		VIO		VIOLATION	
F		SUS		EMERGENCY SUSPENSION	
G		SUR		VOL SURRENDER OF CERTIFICATE	
H		PRO		RECOMMEND GEN CHANGE IN PROC	
I		STP		RECOMMEND GEN CHANGE STAND/POL	
J		OTH		OTHER	
K		ADC		NON-COMP AIRWORTHINESS DIRECT	
R		NTS		A/DATA CODED FROM NTSB/6120.19	
X		NON		NONE	
Y		NRP		NOT REPORTED	

AIDS CODES REPORT

TABLE ID: OTHFACTCD TABLE NAME: OTHER FACTORS TABLE NO: 160

---CODE--	---- SHORT FORM ----	----- DESCRIPTION -----
ZA	LAND/UNSCHE	UNSCHEDULED LANDING
ZB	LAND/WRGAPT	LANDED ON WRONG AIRPORT
ZC	LAND/WRGRWY	LANDED ON WRONG RUNWAY
ZD	OFF/RWY	OFF SIDE OF RUNWAY
ZE	REJECT/TO	REJECTED TAKEOFF
ZF	LAND/MERCY	MERCY LANDING
ZG	EMER/DECL	DECLARED EMERGENCY
ZH	EMER/DESC	DESCENT EMERGENCY
ZI	AVOID/COLL	COLLISION AVOIDANCE MANEUVER
ZJ	EVAC	EVACUATION
ZK	FIRERES/ALRT	FIRE AND RESCUE - ALERT
ZL	FIRERES/ACTN	FIRE AND RESCUR - ACTION
ZM	NEAR/MID	NEAR MIDAIR
ZN	BLOCK/RWY	RUNWAY BLOCKED
ZO	SECURITY	AIR SECURITY
ZP	PAX/OFFLOAD	NON-ROUTINE PAX OFF-LOADING
ZQ	OX/MASKS	PAX OX MASKS EXTENDED
ZR	FIRE	INFLIGHT/GROUND FIRE
ZS	NARCOTICS	NARCOTICS INVOLVEMENT
ZT	CABIN/SMOKE	SMOKE/FUMES IN COCKPIT OR CABIN
ZU	PUB/PROT	PUBLIC PROTECTION
ZV	PUB/COMPLT	PUBLIC COMPLAINT
ZW	TAXI/UNSAFE	UNABLE/UNSAFE TO TAXI
ZX	PARACHUTE	PARACHUTE INCIDENT
ZY	ABANDONED	ABANDONED AIRCRAFT
Z1	AUTO FUEL	AUTOMOTIVE FUEL

APPENDIX B

FAA Form 8020-11, Incident Report	B-1
FAA PD Database Data Dictionary	B-2

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION INCIDENT REPORT			
TO:		FROM:	
<p>The following is a description of a deviation/incident. It appeared advisable to prepare a formal record, and a copy is being forwarded to acquaint you with its particulars. It is requested that, as necessary, these details be brought to the attention of the pilot or other individuals involved. We hope that through review, recommendations leading toward action to prevent recurrence of incidents of this type will be obtained. No reply is required; however, the undersigned will be glad to answer any questions at your convenience. Any action you can take to assist the Air Traffic Service to provide more efficient service will be appreciated.</p>			
TYPE OF INCIDENT	TIME OF INCIDENT		INCIDENT NO.
	DATE:	<input type="checkbox"/> DAY <input type="checkbox"/> NIGHT	
AGENCY/AIRCRAFT IDENTIFICATION			
NAME(S) OF PERSONNEL OR PILOT			
SUMMARY OF INCIDENT			
REMARKS			
ATTACHMENTS	FORWARDED		
	DATE	SIGNATURE OF FACILITY CHIEF	

DATA DICTIONARY

<u>NAME</u>	<u>TYPE</u>	<u>LEN</u>	<u>DOMAIN</u>
Report Number RPT_NBR	A	13 17	unique alpha-numeric number
Report Type RPT_TYPE	A	1	Preliminary or final
Deviation Type	A	5	
		<u>Surface</u>	
DEV_TYPE1 - DEV_TYPE5	13A		TAKEOFF W/O CLEARANCE
	13B		TAKEOFF ON WRONG RUNWAY/TAXIWAY
	13C		LANDED W/O CLEARANCE
	13D		LANDED ON WRONG RUNWAY/TAXIWAY
	13E		ENTERED RUNWAY/TAXIWAY W/O CLEARANCE
	13F		DID NOT CLOSE FLIGHT PLAN
	13H		RUNWAY
	13I		RUNWAY INCURSION A-A
	13J		RUNWAY INCURSION A-V
	13K		RUNWAY INCURSION A-P
	13G		OTHER

AIR
ATC CLEARANCE DEVIATION

22A1	FROM ALTITUDE, SEPARATION LOSS
22A2	FROM COURSE, SEPARATION LOSS
22A5	FROM ALTITUDE, NO SEPARATION LOSS
22A6	FROM COURSE, NO SEPARATION LOSS
	<u>AIRSPACE VIOLATED</u>
22B1	TERMINAL CONTROL AREA (TCA)
22B2	AIRPORT RADAR SERVICE AREA (ARSA)
22B3	AIRPORT TRAFFIC AREA (ATA)
22B4	POSITIVE CONTROL AREA (PCA)
22B5	CONTROL ZONE (CZ)
22B6	SPILOUT
22B6A	SPELLIN
22B7	UNAUTHORIZED LOW LEVEL FLYING
22B8	SPECIAL USE AIRSPACE
22B10	OTHER
22B9	S FRA
	<u>OTHER</u>
-22C	FLYING VFR IN IFR CONDITIONS
22D	MISSED COMPULSORY REPORTING POINT
22F	OTHER
22G	UNDETERMINABLE

<u>NAME</u>	<u>TYPE</u>	<u>LEN</u>	<u>DOMAIN</u>
Prelim report date	PRPT_DTE	D 8	valid date
Final report date	FRPT_DTE	D 8	not < prelim report date

Investigating Office	OFFICE	A	3	FAA office code
Investigating Region	REGION	A	3	Valid region
Facility Code	FAC_CODE	A	3	Valid facility
Facility Type	FAC_TYPE	A	6	Type of facility
Facility Region	FAC_REG	A	3	Valid region
Date of incident	INC_DTE	D	8	Not > prelim. report date
Incident time	INC_TIME	N	4	GMT of incident (0000-2359)
Day or Night	DAYNITE	A	4	D, N
NMAC	NMAC	C	1	Y, N
Operator	O_TYPE	A	1	1 = Air Carrier 2 = Air Taxi 3 = Commuter 4 = General Aviation 5 = Military 6 = Other 9 = Unknown
Location City	LOC_CITY	A	20	self explanitory
Location State	LOC_STA	A	2	same
Location Fix	LOC_ID	A	6	FIX code of location
Distance from Fix	LOC_DIR	N	5	Miles: 0.0 - 150.0
Direction from Fix	LOC_DIST	N	3	Degrees: 001 - 360
Latitude	LATITUDE	N	6	0.0 - 180.00
Longitude	LONGITUDE	N	5	0.0 - 90.00
Make	MAKE	A	6	Aircraft make
Model	MODEL	A	12	Aircraft model
Registration #	REGR_NBR	A	7	Aircraft registration number
Airworthiness Class	AIRWORTH	A	1	E = Experimental U = Utility S = Standard R = Restricted
Operator Name	OPERATOR	A	20	Owner or operator

Operator Address	O_ADDR	A	30	
Flight identifier	FLIGHT	A	7	call sign of aircraft
FAR	FAR	N	3	Federal Aviation Regulation
Maintenance Designator	O_DESIG	A	4	Code identifier for operator
Operating Certificate Number	O_CERT	A	10	
Passengers	PASS_INV	N	3	Number aboard aircraft
Crew	CREW_INV	N	3	Number aboard
Other Involved	OTHR_INV	N	3	
Damage	DAMAGE	A	1	Y, N
Phase of Operation	PHASE	A	2	2 one character indicators 1 = Ground 2 = Taxi 3 = Take off 4 = Climb 5 = Level flight 6 = Descent 7 = Approach 8 = Landing
Type of flying	FLYING	A	2	01 = Personal 02 = Business 03 = Executive/ 04 = Corporation 05 = Instruction 06 = Aerial/ Application 07 = Industrial/ Special 08 = Ferry 09 = Test 10 = Forest Fire 11 = Parachute 12 = Air Show 13 = Passenger 14 = Cargo 15 = Mial 20 = Other 99 = Unknown

Operational Area	OP_AREA	N	2	01 = airport traffic area 02 = control zone 03 = terminal control area 04 = terminal radar service area 05 = positive control area 06 = enroute on airway 07 = enroute off airway 08 = oceanic airspace 09 = special use airspace 10 = uncontrolled airspace 11 = other 12 = airport service radar area 13 = none 14 = unknown
Airport name	AIRPORT	A	40	self explanatory
Control	CONTROL	A	1	Y = Controlled airport N = uncontrolled airport
Runway	RUNWAY	A	4	R99X where: 99 = 0 - 99 X = L, R, or C or blank TAA where AA = Alpha
Elevation	ELEVAT	N	5	Elevation of airport in feet
Length of Runway	R_LENGTH	N	5	in feet
Surface Condition	SURFACE	A	4	Wet Ice Dry Snow Mud
Weather Source	W_SOURCE	A	5	Source of weather information
Time of Weather Information	W_TIME	N	4	Military Time 0000 - 2359
Sky Condition	SKY_COND1 through SKY_COND3	A	3	(Up to 3) OVC = overcast SCT = scattered clouds BKN = broken clouds CLR = clear sky PX = partially obscure X = obscure
Ceiling		A	4	ceiling of the clouds MNNN: M = type of measurement: E, M or W NNN = numeric height in hundreds of feet
Visibility	VISIBIL	N	5	miles to hundredths of a mile
Visibility - or Restrictions	RESTRICT	A	3	AAS: AA = Obstruction code, S = + B-5 , ,

Temperature	TEMP	N	3	1 - 125 at airport
Dew Point	DEW	N	3	1 - 100
Wind Direction	WIND_DIR	N	3	1 - 360 degrees
Wind Speed	WIND_SPD	N	3	1 - 200
Altimeter	ALTIM	n	3	2850 - 3100
Weather Remarks	W_REMARKS	A	40	comments where apply
Flight Plan	PLAN	A	1	I = IFR V = VFR N = NONE
Departure Airport	DEPART	A	5	of aircraft
Departure Time	DEP_TIME	N	4	0000 - 2359 (military time)
Departure Date	DEP_DTE	D	8	of aircraft
Destination Airport	DESTIN	A	5	of aircraft
Destination Time	DES_TIME	N	4	0000 - 2359 (military time)
Last communication raft Position	LAST POS	A	5	FIX of last communication with ai
Last Communication Time	LAST_TIME	A	4	0000 - 2359 (military time)
Last Communication Altitude	LAST_ALT	N	5	in feet
Radar Coverage	RDR_COVR	A	1	Y, N
Radar Control	RDR_CTRL	A	1	Y, N
Fuel on Board	FUEL	N	6	Amount
Fuel unit of measure	FUEL_MSR	A	3	LBS, GAL, HRS or blank
Type of Approach	APPROACH	A	1	1 = ILS 2 = MLS 3 = Localizer 4 = DME 5 = VOR 6 = TACAN 7 = NDB 8 = other

Investigation Status	INV_STAT	A	1	O = Open C = Closed
Close Date	CLOS_DTE	D	8	
NTSB Notified	NTSP_NTF	A	1	Y, N
Voice Recorder Review	VCE_RCRDR	A	1	Y, N
Flight Recorder Review	FLT_RCRDR	A	1	Y, N
Report Submitted By	RPT_NAME	A	20	investigator
FAA Coordinator	FAA_NAME	A	20	investigator
Related Reports	RELATED	A	20	two 10 character report identifi
Disposition	DISPO	A	1	V = violation, N = no finding
Violations	VIOLAT	A	30	three 10 character FAR numbers
Remarks	REMARK1 to REMARK3	A	720	narrative
Detected By	DETECT	N	1	1 = Controller 2 = Pilot 3 = Computer 4 = Audit 5 = Mode C 6, 7: for future use 8 = other 9 = unknown
Action Taken	ACTN	N	1	0 = none 1 = Correct Altitude 2 = Report to Air Traffic Facili 3 = Assist 4 - 9: for future use
Other Aircraft Involved	OTHER	N	1	0 - 2
Separation	SEPARAT	N	4	distance, if applicable

Aircraft 2 information:

Make	A2_MAKE	A	6	
Model	A2_MODEL	A	12	
Registration	A2_REGR	A	7	2nd aircraft
Type of operator	A2_OTYPE	N	1	same codes as for deviating aircraft
	-			
Relationship	A2_RELAT	A	20	relationship to primary deviation
	-			

Same information for a 3rd aircraft, if applicable.

	ENFORCE	C	1	
	FINE	N	7	
	NMACFILE	C	1	Y, N

The following are system generated:

Addition Badge	ADD_BADGE	A	6	LOGONID
Addition Date	ADD_DTE	D	8	date entered in addition mode
Update Badge	UPD_BADGE	A	6	LOGONID for update operator
Update Date	UPD_DTE	D	8	date entered in update mode

APPENDIX C

FAA Form 7210-2.1, Preliminary Operational Error/ Deviation Report	C-1
FAA Form 7210-3, Final Operational Error/Deviation Report . .	C-6

PRELIMINARY OPERATIONAL ERROR/DEVIATION REPORT
(RIS: AT 7210-3)

REPORT NUMBER _____

1. CLASSIFICATION <input type="checkbox"/> OPERATIONAL ERROR <input type="checkbox"/> OPERATIONAL DEVIATION		2. DATE AND TIME OF OCCURRENCE Date: _____ Time: _____ MO DAY YR GMT LOCAL			
3. REPORTING FACILITY ID: _____	4. WERE OTHER FACILITIES INVOLVED <input type="checkbox"/> YES (If yes, complete the following) <input type="checkbox"/> NO		ID: _____	ID: _____	
5. NEAR MID-AIR COLLISION REPORTED <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		6. OCCURRENCE REPORTED BY <input type="checkbox"/> SPECIALIST <input type="checkbox"/> SUPERVISOR <input type="checkbox"/> PILOT			
7. SUMMARY OF WEATHER INFORMATION <input type="checkbox"/> NOT AVAILABLE			8. ALTITUDE/FLIGHT LEVEL OF OCCURRENCE _____		
9. LOCATION OF OCCURRENCE	A. <input type="checkbox"/> IN THE AIR			B. <input type="checkbox"/> ON THE SURFACE	
	FIX _____	DIRECTION _____	DISTANCE _____	INTERSECTION _____	RUNWAY _____
10. CLOSEST PROXIMITY	A. <input type="checkbox"/> DISTANCE (In the air)			B. <input type="checkbox"/> SURFACE (Description)	
	VERTICAL _____ FEET	HORIZONTAL <input type="checkbox"/> _____ FEET <input type="checkbox"/> _____ MILES			
11. AIRCRAFT DATA <input type="checkbox"/> Continuation page(s) attached		AIRCRAFT NO. 1		AIRCRAFT NO. 2	
A. IDENTIFICATION		_____		_____	
B. TYPE/SUFFIX		_____		_____	
C. WAS THE AIRCRAFT AT LEVEL FLIGHT WHEN THE CONFLICT OCCURRED?		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
D. WAS THE AIRCRAFT CLIMBING TO THE LEVEL WHERE THE CONFLICT OCCURRED?		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
E. WAS THE AIRCRAFT DESCENDING TO THE LEVEL WHERE THE CONFLICT OCCURRED?		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
F. EVASIVE ACTION		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
G. STRUCTURAL DAMAGE		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
H. INJURIES		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
I. UNDER RADAR CONTROL		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
J. WAS THE AIRCRAFT ON RADAR VECTORS?		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
K. FUNCTIONING TRANSPONDER		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
L. FUNCTIONING MODE C		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
M. REMARKS 					
N. AIRCRAFT AND OBSTRUCTION/OBSTACLES <input type="checkbox"/> TERRAIN <input type="checkbox"/> VEHICLE(S) <input type="checkbox"/> PERSONNEL <input type="checkbox"/> AIRPORT MOVEMENT AREA <input type="checkbox"/> OBSTRUCTION <input type="checkbox"/> EQUIPMENT <input type="checkbox"/> PROTECTED AIRSPACE					

PRELIMINARY OPERATIONAL ERROR/DEVIATION REPORT
(RIS: AT 7210-3)

REPORT NUMBER

12. OPERATIONS								
A. WAS PRE-DUTY FAMILIARIZATION PROPERLY ACCOMPLISHED								
<input type="checkbox"/> YES								
<input type="checkbox"/> NO (If no, explain)								
B. WAS INVOLVED SPECIALIST(S) OPERATING A COMBINED POSITION/SECTOR OF OPERATION								
<input type="checkbox"/> YES (If yes, explain)								
<input type="checkbox"/> NO								
13. WAS TRAINING INVOLVED								
<input type="checkbox"/> YES (If yes, specify type)		<input type="checkbox"/> TAP		<input type="checkbox"/> OJT				
<input type="checkbox"/> NO		<input type="checkbox"/> CK/OUT		<input type="checkbox"/> OTHER: _____				
14. TYPE OF AIRSPACE								
<input type="checkbox"/> TERMINAL CONTROL AREA (TCA)		<input type="checkbox"/> MILITARY OPERATIONS AREA (MOA)		<input type="checkbox"/> RESTRICTED AREA				
<input type="checkbox"/> TERMINAL RADAR SERVICE AREA (TRSA)		<input type="checkbox"/> POSITIVE CONTROL AREA (PCA)		<input type="checkbox"/> OTHER: _____				
15. PROCEDURES INVOLVED								
A. TYPE OF CONTROL PROVIDED			B. SPECIFY SEPARATION MINIMA INVOLVED					
<input type="checkbox"/> RADAR			HANDBOOK [][] . [][]		OTHER (Specify): _____			
<input type="checkbox"/> NONRADAR			PARAGRAPH [][] . [][]					
16. EQUIPMENT								
A. TYPE	GOOD	FAIR	POOR	OUT OF SERVICE	<i>(If other than good, explain)</i>			
RADIO COMMUNICATIONS								
LANDLINE COMMUNICATIONS								
COMPUTER								
RADAR								
B. WAS RADAR IN USE								
<input type="checkbox"/> YES (If yes, enter source) <input type="checkbox"/> NO								
<input type="checkbox"/> DARC <input type="checkbox"/> NARROWBAND <input type="checkbox"/> BROADBAND <input type="checkbox"/> ARTS II <input type="checkbox"/> ARTS III <input type="checkbox"/> ARTS IIIA <input type="checkbox"/> BRITE <input type="checkbox"/> TPX-42								
C. WAS RADAR TRANSITION IN PROGRESS								
<input type="checkbox"/> YES (If yes, complete the following) <input type="checkbox"/> NO								
	DARC	NARROWBAND	BROADBAND	ARTS II	ARTS III	ARTS IIIA	BRITE	TPX-42
FROM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. MSAW/EMSAW (Complete if applicable)		18. CONFLICT ALERT (Complete if applicable)	
A. AVAILABLE <input type="checkbox"/> YES <input type="checkbox"/> NO (If no, explain)		A. AVAILABLE <input type="checkbox"/> YES <input type="checkbox"/> NO (If no, explain)	
B. ACTIVATED <input type="checkbox"/> YES <input type="checkbox"/> NO (If no, explain)		B. ACTIVATED <input type="checkbox"/> YES <input type="checkbox"/> NO (If no, explain)	
C. SUPPRESSED <input type="checkbox"/> YES (If yes, explain) <input type="checkbox"/> NO		C. SUPPRESSED <input type="checkbox"/> YES (If yes, explain) <input type="checkbox"/> NO	
19. WERE NAVAIDS A FACTOR <input type="checkbox"/> YES (If yes, explain) <input type="checkbox"/> NO			
20. SUMMARY OF PERTINENT EVENTS			
21. OFFICIAL MAKING TELEPHONE NOTIFICATION	DATE (GMT)	TIME (GMT)	NAME AND TITLE (Please type or print)
22. RECEIVING PERSON'S NAME			SIGNATURE

DATE _____

FACILITY _____

REPORT NUMBER _____

PERSONNEL INFORMATION

PRELIMINARY OPERATIONAL ERROR/DEVIATION REPORT

1. Name
2. FPL/AS/AM/DEV/ATM/Staff
3. Total Time (years/months) Certified on the Position of Operation Assigned to at the Time of the Incident ?
4. Time (hours/minutes) Assigned to the Position of Operation at the Time of the Incident
5. Total Time as an ATCS
6. Traffic Volume (Number of Aircraft)
7. Date of Last Over-The-Shoulder (Prior to and Not as a Result of This Incident)
8. Date of Last Tape Talk
9. List All Other Operational Errors/Deviations Involved in Within Last 2 Years. (If None, Indicate "None")
10. If Certified on the Assigned Position of Operation Less Than 1 Year, Indicate Total Training Time on the Position
11. Weekly Work Schedule (i.e., Third Day of Five)
12. Indicate if Working Overtime
13. Date of Last Controller Physical
14. Area of Specialization
15. Sector/Position
16. Position Function (AS,R,HO,RA,NR,C,LC,GC,CD,DEP,ARR,FD,ATA,etc.)

<u>CONTROLLER A</u>		<u>CONTROLLER B</u>		<u>CONTROLLER C</u>	
1.	_____	1.	_____	1.	_____
2.	_____	2.	_____	2.	_____
3.	_____ (yrs) _____ (mos)	3.	_____ (yrs) _____ (mos)	3.	_____ (yrs) _____ (mos)
4.	_____ (hrs) _____ (mins)	4.	_____ (hrs) _____ (mins)	4.	_____ (hrs) _____ (mins)
5.	_____ (yrs) _____ (mos)	5.	_____ (yrs) _____ (mos)	5.	_____ (yrs) _____ (mos)
6.	_____	6.	_____	6.	_____
7.	_____ / _____	7.	_____ / _____	7.	_____ / _____
8.	_____ / _____	8.	_____ / _____	8.	_____ / _____
9.	_____	9.	_____	9.	_____
10.	_____ (hrs) _____ (mins)	10.	_____ (hrs) _____ (mins)	10.	_____ (hrs) _____ (mins)
11.	_____ Day of	11.	_____ Day of	11.	_____ Day of
12.	_____	12.	_____	12.	_____
13.	_____ / _____	13.	_____ / _____	13.	_____ / _____
14.	_____	14.	_____	14.	_____
15.	_____	15.	_____	15.	_____
16.	_____	16.	_____	16.	_____

FINAL OPERATIONAL ERROR/DEVIATION REPORT (RIS: AT 7210-3)

Instructional Guide

GENERAL INFORMATION

The Final Operational Error/Deviation Report, FAA Form 7210-3, has been designed to facilitate the gathering and documentation of factual information concerning the events which led to the occurrence of an operational error or deviation. It also provides a means of recording the findings, recommendations, and conclusions of the Facility Chief and Regional Air Traffic Division Chief.

Situations may arise which are not adequately accounted for in Part I of this report. However, a careful analysis of the facts should usually establish a relationship to the information required in this report. If there are exceptions, when the information cannot be adequately expressed, or there is insufficient space to answer a question — use the remarks section in Part I. Each remark should reference the section and/or item number to which it pertains.

REPORT NUMBER

Enter the number from the preliminary report describing this error/deviation on each page of the final report.

PART I Investigative Data

GENERAL INFORMATION

Part I provides for the documentation of the factual data which is gathered by the Investigator-In-Charge (IIC), and when appointed, an investigation team.

SECTION A General Data

1. DATE AND TIME OF OCCURRENCE

DATE: Determine the date based on Greenwich Mean Time (GMT), and enter the date as follows:

Example: July 1, 1981

Enter: 0171011981

TIME: Using the 24 hour clock, enter the time of the occurrence in GMT and local time.

Example: 6:38 p.m. (Time of occurrence)

Enter: 1181318

2. REPORTING FACILITY (Facility that prepared the preliminary report)

A. Identification

Enter the 3-letter location identifier.

Example: Los Angeles ARTCC

Enter: ZLA

B. Type

Indicate the type of facility by placing an "X" in the appropriate box.

C. Classification

Indicate the facility classification level by placing an "X" in the appropriate box.

3. WERE OTHER FACILITIES INVOLVED

Indicate if other facilities were involved in the occurrence by placing an "X" in the appropriate box. A facility does not have to contribute to the cause of the error/deviation to be considered involved. Complete the identification, type and classification level for each facility involved.

4. OCCURRENCE REPORTED BY

Indicate the person who first brought the incident to the supervisor's facility's attention by placing an "X" in the appropriate box.

5. ALTITUDE/FLIGHT LEVEL OF OCCURRENCE

Indicate the level at which the conflict occurred as follows:

IF OCCURRENCE HAPPENED	ENTER
On the Airport Surface	SFC
Airport Surface to 949 AGL	Enter altitude above surface to nearest 100 ft. level. Example: 1 ft — 149 ft. Enter: <u>0101</u>
950 AGL and above	MSL of flight level to nearest 1000 ft. level Example: 1150 Enter: <u>0112</u> Example: 17500 Enter: <u>180</u>

If not on airport surface complete A & B.

A. Was the Altitude/Flight Level ABOVE Available

B. Was the Altitude/Flight Level BELOW Available

Place an "X" in the appropriate box indicating whether either of the aircraft could have been assigned the Altitude/Flight Level above or below and have avoided the conflict.

6. SUMMARY OF WEATHER INFORMATION

Provide pertinent weather data in plain language. The reported weather conditions at the time of the occurrence should be described. This includes, but is not limited to, the SIGMETs and PIREPs in effect within a 50 mile radius of the location of the occurrence, and any reported flight conditions. If the weather is not available, or if weather is determined to be no factor, place an "X" in the appropriate box.

Examples:

Sky partially obscured, measured ceiling two-hundred overcast, visibility one and one-half, very light snow.

or

Thunderstorm throughout the area. Light chop ten west of Cleveland at Flight Level three-one-zero, Boeing 727.

7. TYPE OF AIRSPACE

Indicate the type of airspace where the occurrence happened by placing an "X" in the appropriate box.

8. LOCATION OF OCCURRENCE

Indicate whether the incident occurred in the air or on the surface by placing an "X" in the appropriate box, then complete that section.

A. In the Air

FIX: The fix provides a reference as to where the occurrence happened. Enter a 3 or 5 letter location identifier whenever possible to clearly identify the fix.

Example: Cleveland VORTAC

Enter:

Example: NESTO Intersection

Enter:

DIRECTION: If the fix used is an airport, intersection or waypoint that does not have prescribed radials or compass rose, use the 16 points of the compass to establish direction. Specify the direction from NAVAIDs i.e., VOR VORTACs, in degrees using 3 digits.

Example: 10 Degree Radial

Enter:

Example: North-Northeast

Enter:

DISTANCE: Specify the distance of the occurrence from the fix in nautical miles.

Example: 1 N.M.

Enter:

Example: 20 N.M.

Enter:

B. On the Surface

INTERSECTION: Enter the airport intersection closest to the occurrence.

RUNWAY: Enter the runway(s) closest to the occurrence. Runway 9 would be entered as 00009; if it was at the intersection of runways 9 and 17 it should be entered as 000917. Runway 9L is entered as 00009L. Enter runways 9L and 17R as 09L17R. Use a slant (/) to separate single numbered runways; runways 1 and 8 would be entered 0001/8.

TAXIWAY: If the taxiway is described using the phonetic alphabet - enter the letter not the word.

Example: Echo

Enter:

If the description is alphanumeric - use the letter and number.

Example: Hotel-1

Enter:

9. SUMMARY OF PERTINENT EVENTS

(Do not fill in this item until Sections B through J have been completed.)

Provide a chronological narrative of pertinent events leading to the operational error, deviation, and any subsequent information relevant to the incident. The summary shall start 10 minutes prior to the time of the occurrence and end 5 minutes after. The time parameters may be exceeded when it is necessary to fully describe the relevancy of the event.

CONTINUATION PAGE: Continuation pages may be necessary to describe all the pertinent events. Each continuation page is completed in the same manner as described below with the following additional requirement:

- Enter the appropriate sequential page number in the space provided.

COLUMN	YOU PROVIDE	
a. Time	Greenwich Mean Time (GMT)	
b. Data Source	Describes the source of information. Abbreviate as follows:	
	R D I S C	Recording Flight progress strips or display Interviews Statements Computer Generated
c. Employee	Use employee identifier (described in Section B, item 1.a.) or individuals associated with the event as shown below.	
	IF	ENTER
	Pilot Employee A No individual	P A Leave blank
d. Event	Provide a brief, but meaningful, description of the factors involved in the event.	

SECTION B Personnel Involved

GENERAL INFORMATION

There should be one Section B (pages 3-4-5-6) completed for each employee directly involved in the occurrence. Personnel directly involved in an operational error deviation are defined as an individual whose action(s) or lack of action(s) contributed to the operational error or deviation.

Number of Personnel Involved

Indicate the total number of personnel involved in the error or deviation.

1. PERSONAL DATA

a. **Employee:** Each employee involved shall be assigned a letter (e.g., A., B., C., etc.) which will be used as the employee's identification or key whenever it is required in other parts of this report form (e.g., Section A, item 9) and any narrative replies submitted. The only place within this report that the name and or Social Security Number (SSN) of an individual involved in an operational error deviation is to be provided is in Section B.

b. **Name:** List the last name, first name, and middle initial of the employee.

c. **Date of Birth:** Enter the month, day, year.

d. **Social Security Number:** Self explanatory.

2. EMPLOYMENT HISTORY.

List the employee's FAA work experience starting with the date of the incident, and work back 5 years.

- Do not include work experience for another employer.
- Make one entry for each position, grade and or facility.

a. **Dates:** Enter the date that the employee began working a particular position under "From." Enter the last date that the employee worked on a given position under "To." Both dates should be in the following format:

Example: June 1973

Enter:

0	6	7	3
---	---	---	---

b. **Position (Title-Series-Grade):** enter the employee's title, series, and grade for each position.

Example: Full performance level, GS-13

Enter:

S	P	E	C	I	A	L	I	S	T
2	1	5	2						

 GS-13

Example: First level supervisor, GS-14

Enter:

S	U	P	E	R	V	I	S	O	R
2	1	5	2						

 GS-14

c. **Facility Identifier:** Enter the 3-letter location identifier of the facility where the employee works worked.

Example: Los Angeles ARTCC

Enter:

Z	L	A
---	---	---

d. **Classification Level:** Enter the facility's classification level: e.g., 1-2-3-4-5.

Enter:

5

e. **Performance Level:** Indicate the performance level of the employee for the corresponding dates in the space provided. Enter one of the following:

- Trainee
- Facility Officer
- Developmental
- FPL
- Supervisor
- Assistant Chief
- Staff Specialist
- Chief

3. POSITION CERTIFICATION

a. **Last Date of Certification/Recertification on Position:** Enter the most recent of either the date that the employee was initially certified, or the last date that the employee was recertified on the position that he/she was working at the time of the occurrence. Indicate whether the date provided is the certification or recertification date by placing an "X" in the appropriate box.

Example: Employee certified June 1, 1972;
Recertified August 12, 1980.

Enter:

0	8	1	2	8	0
---	---	---	---	---	---

b. **Was the Employee Qualified on the Position?** Place an "X" in the appropriate box.

c. **Employee's First Level Supervisor:** Enter the last name, first name, and middle initial and Social Security Number (SSN) of the employee's first level supervisor at the time of the occurrence.

d. **Employee's Second Level Supervisor:** Enter the last name, first name, and middle initial and Social Security Number (SSN) of the employee's second level supervisor at the time of the occurrence.

4. PERFORMANCE EVALUATION

a. **Date of Last Technical Appraisal Program (TAP). (Center or Terminal Option):** Enter the date of the most recent over-the-shoulder training review administered within the past 12 months. If none—explain, and move to item 5.

b. **Date of Last Technical Performance Appraisal (TPAP). (Flight Service Station Option):** Enter the date of the most recent over-the-shoulder performance evaluation administered within the past 12 months. If none — explain, and move on to item 5.

c. **Were Any Deficiencies Identified?** If YES, list all deficiencies identified during the most recent TAP or TPAP.

d. **Was Remedial Training Administered?** If YES, list the remedial training administered as the result of the most recent TAP or TPAP.

5. PROFICIENCY TRAINING

Enter the type of proficiency training received, within the past 12 months, that is directly related to the type of control being used at the time of the occurrence. If none — place an "X" in the box labeled "NONE." Place an "X" in the box labeled "N A" if the training received was not related to the type of control being provided.

a. **What Type of Refresher Training Has Been Received?** List the type and date of the last refresher training which relates to the type of control being provided.

b. **What Type of Supplemental Training Has Been Received?** List the type and date of the last supplemental training which relates to the type of control being provided.

c. **What Type of Remedial Training Has Been Received?** List the type and date of the last remedial training which relates to the type of control being provided.

d. **Date of Last Tape Monitor (Tape Talk):** Enter the date of the most recent tape monitor session (*tape talk*) during which the employee's application of procedures, good operating practices and phraseology were reviewed. If none — place an "X" in the box labeled "NONE."

6. MEDICAL CERTIFICATION

- a. **Date of Last Airman Medical Examination:** Enter the month-day-year of the last airman medical examination.
- b. **Are There Any Waivers and/or Restrictions?** If YES — list all waivers and/or restrictions.
- c. **Were Restrictions Being Complied With?** If there are no restrictions place an "X" in the box labeled "N. A.". If NO — provide an explanation.

7. WORK SCHEDULE

Beginning with the day of the occurrence and working backward, show the employee's work schedule for the past four (4) weeks (i.e., 28 days). Under the column heading "Week Ending", enter the date of the occurrence. In the same column below that date enter the date one week prior to the occurrence; then enter the next week, etc. After completing the "Week Ending" column, fill in the work schedule as follows.

Use the first two digits of the 24 hour clock (local) time to indicate the shift worked. Use "RDO" to show regular day off. Use "A. L." for annual leave and "S. L." for sick leave. Underline shift if other than regular scheduled shift. Use "O. T." for overtime and "C. T." for compensatory time.

The following example shows how the work schedule would be recorded for an operational error deviation which occurred on Thursday, July 16, 1981.

7. WORK SCHEDULE							
WEEK ENDING (Mo/Day/Yr)	SUN	MON	TUE	WED	THU	FRI	SAT
07-16-81	07-15	00-08	RDO	RDO	16-00		
07-09-81	A/L	00-08	RDO	RDO	16-00	15-23	08-16
07-02-81	07-15	00-08	RDO	RDO	16-00	15-23	A/L
06-25-81	S/L	00-08	RDO	O/T 07-15	<u>07-15</u>	<u>08-16</u>	08-16

8. ACTIVITY PROFILE

Using local time, provide a detailed profile of the employee's activity on the shift of the occurrence.

- Use 4 digits of the 24 hour clock to describe the breakdown.
- Under description include such items as: positions worked, relief breaks (coffee, lunch, etc.), training, details, etc.
- The profile should be completed for the entire shift — including removal from operational duty.

Example: Shift worked: 1600-0000-Error Occurs 1910 EST

8. ACTIVITY PROFILE			
HOUR	TIME (LOCAL)		DESCRIPTION OF ACTIVITY
	FROM	TO	
1ST	1600	1700	R-34
2ND	1715 1731	1730 1800	Coffee Break R-34
3RD	1815 1846	1845 1900	Training — Briefing R-34
4TH	1900 1920	1920 2000	R-34 Removed from Position Operational Error
5TH	2000	2100	Removed from Position Operational Error
6TH	2100	2200	Removed from Position Operational Error

9. DID THE EMPLOYEE REQUIRE ASSISTANCE PRIOR TO THE OCCURRENCE?

Response to this question should be obtained from the employee's assigned supervisor. If the supervisor was not assigned — place an "X" in the box labeled "Not Available." If a supervisor was assigned, but not in the area — place an "X" in the box labeled "Not in Area." An explanation is required for either a yes or no response. When answering the question, consider the following:

- Was the supervisor aware of the traffic volume and complexity?
- Was the supervisor aware of anything that may have indicated that the employee needed assistance?
- If, in the supervisor's opinion, assistance was required, what type of assistance was given?

10. DID THE EMPLOYEE REQUEST ASSISTANCE PRIOR TO THE OCCURRENCE?

If YES — provide an explanation of the request, to whom it was directed, any action that resulted based upon the request, etc.

11. WAS THE EMPLOYEE AWARE THAT AN OPERATIONAL ERROR/DEVIATION WAS DEVELOPING?

An explanation is required for either a yes or no response. If YES, determine when. If NO, determine why.

12. DID THE EMPLOYEE CONTEMPLATE TAKING CORRECTIVE ACTION?

An explanation is required for either a yes or no response, if the answer to question 11 was YES. If the answer to question 11 was NO — place an "X" in the box labeled "N. A.", and move on to question 13.

13. DID THE EMPLOYEE ATTEMPT TO TAKE CORRECTIVE ACTION?

An explanation is required for either a yes or no response. If the answer is YES, explain why the action failed to prevent the error or deviation. If the answer is NO — explain why.

14. EMPLOYEE WAS ALERTED TO THE OCCURRENCE BY

Indicate the FIRST source that alerted the employee of the occurrence by placing an "X" in the appropriate box.

15. DATE/TIME EMPLOYEE BECAME AWARE OF THE OCCURRENCE

Using the 24 hour clock, indicate date, and indicate the GMT and local time the employee became aware of the occurrence.

16. DID THE EMPLOYEE IDENTIFY ANY DISTRACTIONS WHICH INFLUENCED THE OCCURRENCE?

If YES — explain. (Consider presence of visitors, construction or installation of equipment, volume of nearby radio speaker, loud or boisterous behavior of coworkers, etc.)

- a. **Was the Employee Providing His/Her Own Distraction:** If YES — explain. (Consider extraneous conversation with coworkers, working with an equipment malfunction, etc.)

17. DID ANYTHING OCCUR IN THE WORK AREA ENVIRONMENT WHICH DISTRACTED FROM THE EMPLOYEE'S PERFORMANCE?

If YES — explain. (Consider training sessions and discussions, interpersonal discussions, etc.)

**SECTION C
Pilot/Aircraft Data**

GENERAL INFORMATION

Enter the total number of aircraft involved in the box provided.

Each aircraft shall be assigned a number (e.g. 1-2-3-4 etc.) which will be used as the aircraft identification or key whenever it is required in other parts of this report form (e.g. Section A, item 9), and any narrative replies submitted.

1. IDENTIFICATION

Enter aircraft identity using combinations not to exceed 7 alphanumeric characters. (REFERENCE: Handbook 7110.65, Aircraft Identity, and Appendix 2.)

2. TYPE/SUFFIX

Enter aircraft type suffix using combinations not to exceed 8 alphanumeric characters. (REFERENCE: Handbook 7110.65, Aircraft Type, Aircraft Equipment Suffix and Appendix 2.)

3. DEPARTURE AIRPORT

Enter the 3-letter location identifier of the departure airport.

4. DESTINATION AIRPORT

Enter the 3-letter location identifier of the destination airport.

5. FLIGHT PROFILE AT THE TIME OF OCCURRENCE

Indicate the flight profile of the aircraft at the time of the occurrence by placing an "X" in the appropriate box.

6. FLIGHT PLAN ROUTE

Should be sufficient enough to describe the route leading to the point of occurrence.

7. EVASIVE ACTION

Self explanatory.

8. DID THE PILOT FILE A NEAR MID-AIR COLLISION REPORT

Self explanatory.

9. UNDER RADAR CONTROL

Self explanatory.

10. FUNCTIONING TRANSPONDER

Self explanatory.

11. FUNCTIONING MODE C

Self explanatory.

12. AIRCRAFT AND OBSTRUCTION/OBSTACLES

If the error or deviation involved an aircraft and terrain, obstruction, or obstacle place an "X" in the appropriate box.

**SECTION D
Procedures Involved**

1. TYPE OF CONTROL PROVIDED

Indicate the type of control that was being provided by placing an "X" in the appropriate box. If nonradar control was being provided, indicate if airport surface or oceanic flight was involved by placing an "X" in the appropriate box.

As a guide in completing this item, consider radar control was being applied if one or more of the involved aircraft was identified on a radar display and could have been provided a radar service until either of the following occurred.

- radar identification was lost
- radar service to the aircraft was terminated for any reason

2. TYPE OF PROCEDURES INVOLVED

Indicate the type of procedures that were being provided when the occurrence happened by placing an "X" in the appropriate box. Indicate local or regional procedures when special procedures supplementary to those in the air traffic control procedures handbooks are involved in the error or deviation.

3. SPECIFY SEPARATION MINIMA INVOLVED

If a national procedure is involved specify the correct separation minima applicable by citing the appropriate manual/handbook paragraph reference. Otherwise, indicate the local or regional procedure in the space labeled "OTHER."

4. APPLIED SEPARATION — DIFFERENT THAN LISTED IN ITEM 3 ABOVE

Indicate by placing an "X" in the appropriate box whether the type of separation the controller was attempting to apply at the time of the occurrence was different than listed in item 3 above. If YES, explain.

5. DESCRIPTION OF PROCEDURES USED

Briefly describe the procedure actually used. When directives other than manuals or handbooks are involved, submit a copy of the pertinent directive(s), order(s), etc.

Example: Specialist "A" had correctly set up vertical separation between aircraft #1 and #2, but failed to detect that aircraft #1 had taken a clearance issued to aircraft #3.

6. WERE ANY PROCEDURAL DEFICIENCIES NOTED AS RESULT OF THE OCCURRENCE

Indicate if any procedural deficiencies were noted as a result of this occurrence by placing an "X" in the appropriate box. If YES, identify the procedure(s) and deficiency.

7. WERE ANY SPECIAL PROCEDURES IN EFFECT AT THE TIME OF THE OCCURRENCE

Indicate if there were any special procedures in effect at the time of the occurrence by placing an "X" in the appropriate box. If YES, describe the procedures which may include procedures established for airport or runway construction or because of radar or approach/NAVAID outages.

SECTION E Closest Proximity

Place an "X" in the appropriate box i.e., "IN THE AIR" or "SURFACE", then complete that section.

A. In the Air

VERTICAL: Vertical distance measured in feet.

Example: 1 foot

Enter:

Example: 100 feet

Enter:

Example: 1000 feet

Enter:

HORIZONTAL: Horizontal distance may be measured in feet or miles.

Example: 1500 feet

Enter:

Example: 2½ miles

Enter: .

Example: 3 miles

Enter: .

B. Surface

Describe, in plain language, the closest proximity to other aircraft, terrain, obstacles or obstructions.

SECTION F Workload

1. TRAFFIC ACTIVITY

a. **Number of Aircraft Being Worked:** Enter the number of aircraft that were being worked at the time of the occurrence. This is not to be confused with the number of aircraft involved in the occurrence. Count those aircraft that have been radar identified, and/or have established radio communication with the controller.

b. **Traffic Complexity:** Indicate the traffic complexity by placing an "X" on the scale as appropriate.

- 1 indicates traffic was not complex.
- 5 indicates traffic workload was *extremely* complex.

Consider the overall difficulty of the controller's task e.g. weather, traffic mix, variety of operations, limited use of altitudes, airspace available for radar vectoring, coordination requirements, etc.

c. **Explanation of Traffic Complexity:** Provide a brief explanation of the traffic complexity rated in b.

2. POSITION/SECTOR OF OPERATION

a. **Were Duties and Responsibilities of Each Position Assignment Clearly Defined:** Indicate if the duties and responsibilities of each position in multi-position sectors or functions were adequately and clearly defined by placing an "X" in the appropriate box. If NO, explain each position which was not clearly and/or adequately defined and why.

b. **Combined Sector (Centers and where applicable)**

(1) **Were Any Sectors Combined?** Indicate if any sectors involved in the occurrence were combined by placing an "X" in the appropriate box.

IF	THEN
YES	<ul style="list-style-type: none"> • List each sector that was combined into one sector. • Enter the employee key of the employee who was working the combined sector.
NO	Proceed to item c.

(2) **Did the Supervisor Approve the Combination?** Indicate if a supervisor approved the combination of the sectors by placing an "X" in the appropriate box.

(3) **Did the Traffic Warrant the Combination?** Indicate if the traffic workload and complexity warranted the combination of the sectors by placing an "X" in the appropriate box.

c. **Combined Positions**

(1) **Were Any Positions Combined?** Indicate if any positions were combined by placing an "X" in the appropriate box. (This would include positions within a sector.)

IF	THEN
YES	<ul style="list-style-type: none"> • List each position that was combined into one position. • Enter employee key of the employee who was working the combined position.
NO	Complete item 3.

(2) **Did the Supervisor Approve the Combination?** Indicate if the supervisor approved the combination of the positions by placing an "X" in the appropriate box.

(3) **Did the Traffic Warrant the Combination?** Indicate if the traffic workload or complexity warranted the combination of the positions by placing an "X" in the appropriate box.

3. SUPERVISOR

a. **Does the Facility Staffing Provide for an Area or Shift Supervisor to Oversee the Involved Position/Sector?** Indicate if the facility staffing provides for an area or shift supervisor by placing an "X" in the appropriate box.

b. **Was the Assigned Supervisor Present in the Operational Area at the Time of the Occurrence?** Indicate if the assigned supervisor was present in the operational area at the time of the occurrence by placing an "X" in the appropriate box. If NO, proceed to item 3.d.

c. **Was the Assigned Supervisor Aware of:** Indicate if the assigned supervisor was aware of any of the items by placing an "X" in the appropriate box.

d. **What Activity was the Assigned Supervisor Engaged in at the Time of the Occurrence?** Indicate the activity the supervisor was engaged in at the time of the occurrence by placing an "X" in the appropriate box. If "Other" is marked, specify the activity as briefly and clearly as possible.

SECTION G Task Environment

1. INDICATE IF ANY OF THE FOLLOWING MAY HAVE INFLUENCED THE OCCURRENCE (Provide an explanation of each)

Place an "X" in each box which is applicable. If there is any other factor(s) which may have influenced the occurrence within the task environment which is not covered elsewhere in the report, place an "X" in the box labeled "Other" and list it. Provide an explanation for each item checked and/or listed.

Consider all of the factors listed under this item to ensure that they were definitely not a factor in the occurrence before they are discarded. The following examples illustrate additional factors to be considered:

- When communications are not heard or otherwise acted upon, investigate the possibility of a noise level too high for reasonable reception.
- When information is not accurately posted or forwarded to another individual or position, investigate the possibility of inadequate lighting or the presence of a glare condition in the area from which the information was read.

SECTION H Equipment

1. DID EQUIPMENT LAYOUT OR DESIGN INFLUENCE THE OCCURRENCE

Indicate if the equipment layout or design influenced the occurrence by placing an "X" in the appropriate box. If YES, provide an explanation.

2. WAS ANY PERTINENT EQUIPMENT OPERATED BY THE CONTROLLER(S) REPORTED AS FUNCTIONING UNSATISFACTORILY BEFORE THE OCCURRENCE

Indicate if any problems were reported by placing an "X" in the appropriate box. If NO, proceed to item 3.

- Date of Report:** Enter the date of the report in the following format: Month, Day, Year.
- Time of Report (GMT):** Enter the time the report was filed using 24 hour clock GMT.
- Describe Equipment Problem(s):** Provide a description of all reported problems for each piece of equipment.
- Was Any Action Undertaken to Correct the Problem(s)?** Indicate if corrective action was undertaken *prior* to the occurrence to correct the problem(s) by placing an "X" in the appropriate box. If NO, provide an explanation.

3. TYPE

Indicate the status/quality of the equipment at the time of the occurrence by placing an "X" in the appropriate box under each type of equipment. Provide an explanation for each type of equipment which was operating at a level of less than GOOD. If maintenance was scheduled, why had it not been started.

4. WAS RADAR IN USE

Indicate if radar was in use for any of the aircraft involved in the occurrence by placing an "X" in the appropriate box. If YES, indicate the type of radar that was in use by placing an "X" in the appropriate box(es).

5. WAS RADAR TRANSITION IN PROGRESS

Indicate if radar transition was in process when the occurrence happened by placing an "X" in the appropriate box. If YES, place an "X" in the box(es) appropriate to the radar *from* which the transition was occurring and an "X" in the box(es) appropriate to the radar *to* which the transition was occurring.

SECTION I Remarks

Include any additional pertinent information not adequately covered in the space provided. Include identifying information (e.g., section, item number, etc.) so that the remark can be related back to the appropriate question. This section also provides space for additional information not covered in the report but relevant to the occurrence.

If more than two continuation pages are necessary, use plain bond paper (8½" x 11"). Place an "X" in the box labeled "Continuation page attached" located at the bottom of the page. Enter the sequential page number in the upper right hand corner of each page, also enter the report number of the error or deviation.

SECTION J Checklist of Attached Documents

The following provides a checklist of documents which are a part of this report. Indicate the documents which are attached by placing an "X" in the appropriate box. Special attention is directed to the following items:

TRANSCRIPTS

Transcripts need not be certified. Transcriptions of all recorded voice and interphone communications shall be prepared from ten minutes before the time of the occurrence until five minutes after the occurrence. (*The transcript time period shall be the same as the summary period covered in Part I, Section A. 9.*)

TAPE VOICE RECORDINGS

Tape voice recordings need not be removed from the original reel. Retain full tape(s) only until the report (*FAA form 7210-3*) has been signed out by the Facility Chief. Return tape reels to service at that time and/or after 15 days whichever is later.

EXCEPTION

In the event the occurrence is associated with an National Transportation Safety Board (NTSB) or Flight Standards aircraft accident incident investigation, follow transcript tape retention instructions contained within Handbook 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting and Handbook 7210.3, Facility Operation and Administration.

IMPORTANT:

At this time complete Section A, Item 9, Summary of Pertinent Events.

SECTION K Investigators

Self explanatory. If an investigation team was not appointed, only the IIC information should be completed.

PART II Facility Chief Action

GENERAL INFORMATION

The Facility Chief's signature indicates that he/she has reviewed and concurs with the data submitted by the IIC and the investigation team (if applicable), and is satisfied that Part I of the final report is complete and sufficient to determine the following:

- The classification of the occurrence;
- The category of the operational error/ deviation and the rationale for the categorization;
- Recommendations and actions to be taken to prevent a recurrence of the operational error/ deviation;
- The causal factor(s) of the operational error/ deviation.

SECTION A Classification

Indicate the classification of the occurrence by placing an "X" in the appropriate box. Sections B through D are only completed for an operational error or operational deviation.

SECTION B Categorization

1. WHAT WAS THE CATEGORY OF THE OPERATIONAL ERROR/DEVIATION

Indicate the category by placing an "X" in the appropriate box(s). It is possible to have more than one category for an occurrence.

2. RATIONALE FOR CATEGORIZATION

Provide a brief rationale for the categorization listed in item 1 above.

SECTION C Causal Factors

GENERAL INFORMATION

This section is to be completed as follows: Enter the employee key, for each employee involved in the error or deviation, under the column heading "Employee" — one key per box, total 7 employees. If there are more than 7 employees involved, a continuation section will be required. The continuation section should be completed in the same manner as described below — with the following additional requirements:

- Place an "X" in the box labeled "continuation section attached"
- Enter the next set of employee keys e.g., H, I, J, etc. — one per box

If "1. DATA POSTING" is not a causal factor, place an "X" in the box labeled "NO" and proceed to item "2. RADAR DISPLAY."

If the response is YES proceed as follows: Each item requires a yes or no response. For example: If "a. COMPUTER ENTRY" is not a causal factor but "b. FLIGHT PROGRESS STRIP" is — place an "X" in the "NO" box next to "a. COMPUTER ENTRY," and complete the appropriate "b. FLIGHT

PROGRESS STRIP" causal factor for each employee. Only place an "X" in a "YES" box for a causal factor which relates to a given employee.

Example: Employee C was determined to have not prepared a required flight progress strip

Enter:

REPORT NUMBER 100211		EMPLOYEE						
SECTION C. CAUSAL FACTORS	NO	YES						
		A	B	C	D	E	F	G
1. DATA POSTING								
a. COMPUTER ENTRY								
(1) Incorrect input	X							
(2) Incorrect output								
(3) Premature termination of data								
(4) Other (Explain)								
b. FLIGHT PROGRESS STRIP								
(1) Not prepared			X					
(2) Not submitted								
(3) Incorrectly prepared								
(4) Incorrectly recorded								
(5) Unbalanced recording								
(6) Suppression of entries								
(7) Repeatedly recorded								
(8) Incomplete recording								
(9) Premature stoppage								
(10) Other (Explain)								
2. RADAR DISPLAY								
a. MISIDENTIFICATION								
(1) Overlapping data block								
(2) Assignment of responsibility or direction to incorrect data/information								
(3) Inappropriate use of identifying term								
(4) Failure to identify aircraft within the assigned target identity description								
(5) Failure to describe aircraft identity prior to issuing a radar transfer								
(6) Other (Explain)								
b. INAPPROPRIATE USE OF DISPLAYED DATA								
(1) Control panel								
(2) BRITE								
(3) Quick scan								
(4) Radar C								
(5) Radar E (MAG)								
(6) Other (Explain)								

CAUSAL FACTORS

1. DATA POSTING

A data posting error is any error of calculation, omission or incomplete data, erroneous entries, handling, or subsequent revisions to this data. This includes errors in posting and recording data. It does not include errors involved in receiving, transmitting, coordinating, or otherwise forwarding this information. If one of the causal factors listed does not adequately describe the factor involved, list the factor under "Other", and provide a brief explanation.

2. RADAR DISPLAY

a. Misidentification: Radar misidentification means a failure to properly identify the correct target and includes subsequent errors committed after the original identification was properly accomplished. Indicate the listed item(s) which most closely describes the reason for misidentification. If one of the causal factors listed does not adequately describe the factor involved, list the factor under "Other" and provide a brief explanation.

b. Inappropriate Use of Displayed Data: A data or display information error occurs due to a failure to maintain constant surveillance of a flight data display or traffic situation and to properly present or utilize the information presented by the display or situation. If one of the causal factors listed does not adequately describe the factor involved, list the factor under "Other" and provide a brief explanation.

3. AIRCRAFT OBSERVATION (Towers Only)

An aircraft observation error means a failure to maintain constant surveillance of aircraft and the movement area, and to properly react to, interpret, or otherwise utilize, in a timely manner, the information being viewed. If one of the causal factors listed does not adequately describe the factor involved, list the factor under "Other" and provide a brief explanation.

4. COMMUNICATIONS

A communications error is a causal factor associated with the exchange of information between two or more people (e.g., pilots and specialists). It refers to the failure of human communication not communications equipment.

- a. **Phraseology:** Use of incorrect or improper phraseology.
- b. **Transposition:** Errors due to transposition of words, numbers or symbols by either oral or written means. This involves writing/saying one thing while thinking/hearing something else.
- c. **Misunderstanding:** The failure to communicate clearly and concisely so that no misunderstanding exists for any actions contemplated or agreed upon.
- d. **Readback:** The failure to identify improper or incorrect readback of information.
- e. **Acknowledgement:** The failure to obtain an acknowledgement for the receipt of information.
- f. **Other:** If the causal factors listed above do not adequately describe the factor involved, list the factor and provide a brief explanation.

5. COORDINATION

Any factor associated with a failure to exchange required information. This includes coordination between individuals, positions of operation, and facilities for the exchange of information, such as APREQs, position reports, forwarding of flight data, etc. If one of the causal factors listed does not adequately describe the factor involved, list the factor under "Other" and provide a brief explanation.

6. POSITION RELIEF BRIEFING DEFICIENCIES NOTED

Relief briefing errors are special errors of both communication and coordination which occur as the result of position relief. They include such things as: failure to give a relief briefing, failure to request a briefing, incomplete or erroneous briefing, etc. If one of the causal factors listed does not adequately describe the factor involved, list the factor under "Other" and provide a brief explanation.

SECTION D

Recommendations and Corrective Actions

List the recommendation(s) and corrective action(s) that will be taken to prevent a recurrence of a similar operational error or deviation.

One or more continuation pages may be necessary. Use plain bond paper (8½" x 11"). Place an "X" in the box labeled "Continuation page attached" located at the bottom of the page. Enter the sequential page number in the upper right hand corner of each page, also enter the report number of the error or deviation.

DATE/TITLE/SIGNATURE

Give the date (month-day-year) that the facility chief, or his/her authorized representative signed the report.

PART III Air Traffic Division Chief

GENERAL INFORMATION

The Air Traffic Division Chief's signature indicates that the information in Parts I and II has been reviewed and is complete and sufficient to determine the following:

- Concurrence with Parts I and II of the final report;
- Recommendations and actions to be taken to prevent a similar recurrence of the operational error, deviation.

SECTION A

Conclusions/Recommendations

List any conclusions or recommendations.

One or more continuation pages may be necessary. Use plain bond paper (8½" x 11"). Place an "X" in the box labeled "Continuation page attached" located at the bottom of the page. Enter the sequential page number in the upper right hand corner of each page, also enter the report number of the error or deviation.

DATE/TITLE/SIGNATURE

Give the date (month-day-year) that the air traffic division chief, or his/her authorized representative signed the report.

FINAL OPERATIONAL ERROR/DEVIATION REPORT
(RIS: AT 7210-3)

REPORT NUMBER

PART I. INVESTIGATIVE DATA

SECTION A. GENERAL DATA															
1. DATE AND TIME OF OCCURRENCE		DATE	TIME												
		<table style="width:100%; border: none;"> <tr> <td style="border: none;"> _ _ </td> <td style="border: none;"> _ _ </td> <td style="border: none;"> _ _ </td> </tr> <tr> <td style="border: none; font-size: 8px;">MO</td> <td style="border: none; font-size: 8px;">DAY</td> <td style="border: none; font-size: 8px;">YR</td> </tr> </table>	_ _	_ _	_ _	MO	DAY	YR	<table style="width:100%; border: none;"> <tr> <td style="border: none;"> _ _ </td> <td style="border: none;"> _ _ </td> </tr> <tr> <td style="border: none; font-size: 8px;">GMT</td> <td style="border: none; font-size: 8px;">LOCAL</td> </tr> </table>	_ _	_ _	GMT	LOCAL		
_ _	_ _	_ _													
MO	DAY	YR													
_ _	_ _														
GMT	LOCAL														
2. REPORTING FACILITY															
A. IDENTIFICATION	B. TYPE			C. CLASSIFICATION LEVEL											
_ _	<input type="checkbox"/> TOWER/CAB <input type="checkbox"/> RAPCON/RATCF <input type="checkbox"/> ARTCC <input type="checkbox"/> TRACON <input type="checkbox"/> FSS			<input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V											
3. WAS ANOTHER FACILITY INVOLVED <input type="checkbox"/> YES <input type="checkbox"/> NO <i>(If yes, complete the following)</i>															
A. IDENTIFICATION	B. TYPE			C. CLASSIFICATION LEVEL											
_ _	<input type="checkbox"/> TOWER/CAB <input type="checkbox"/> RAPCON/RATCF <input type="checkbox"/> ARTCC <input type="checkbox"/> TRACON <input type="checkbox"/> FSS			<input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V											
4. OCCURRENCE REPORTED BY															
<input type="checkbox"/> SPECIALIST <input type="checkbox"/> SUPERVISOR <input type="checkbox"/> PILOT															
5. ALTITUDE/FLIGHT LEVEL OF OCCURRENCE		A. WAS THE ALTITUDE/FLIGHT LEVEL ABOVE AVAILABLE													
_ _		<input type="checkbox"/> YES <input type="checkbox"/> NO													
		B. WAS THE ALTITUDE/FLIGHT LEVEL BELOW AVAILABLE													
		<input type="checkbox"/> YES <input type="checkbox"/> NO													
6. SUMMARY OF WEATHER INFORMATION															
<input type="checkbox"/> NOT AVAILABLE <input type="checkbox"/> NOT A FACTOR															
7. TYPE OF AIRSPACE															
<input type="checkbox"/> TERMINAL CONTROL AREA (TCA) <input type="checkbox"/> TERMINAL RADAR SERVICE AREA (TRSA) <input type="checkbox"/> POSITIVE CONTROL AREA (PCA) <input type="checkbox"/> MILITARY OPERATIONS AREA (MOA) <input type="checkbox"/> RESTRICTED AREA <input type="checkbox"/> OTHER (Specify):															
8. LOCATION OF OCCURRENCE															
A. <input type="checkbox"/> IN THE AIR			B. <input type="checkbox"/> ON THE SURFACE												
FIX	DIRECTION	DISTANCE	INTERSECTION	RUNWAY	TAXIWAY										
_ _ _ _	_ _	_ _	_ _ _ _	_ _ _ _	_ _										

REPORT NUMBER

9. SUMMARY OF PERTINENT EVENTS

Page 1 of ____

TIME (GMT) (a)	DATA SOURCE (b)	EMPLOYEE (c)	EVENT (d)

9. SUMMARY OF PERTINENT EVENTS

Continuation Page ___ of ___

TIME (GMT) <i>(a)</i>	DATA SOURCE <i>(b)</i>	EMPLOYEE <i>(c)</i>	EVENT <i>(d)</i>

REPORT NUMBER

SECTION B. PERSONNEL INVOLVED
Complete Section B for Each Employee

NUMBER OF PERSONNEL INVOLVED

1. PERSONAL DATA

a. EMPLOYEE (Identifier)	b. NAME (Last, First, M.I.)	c. DATE OF BIRTH <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td>MO</td><td>DAY</td><td>YR</td><td> </td><td> </td><td> </td> </tr> </table>							MO	DAY	YR				d. SOCIAL SECURITY NUMBER <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																				
MO	DAY	YR																																	

2. EMPLOYMENT HISTORY (Begin with present position)

DATES (a)	POSITION (Title, Series, Grade) (b)	FACILITY ID (c)	CLASSIF. LEVEL (d)	PERFORMANCE LEVEL (e)																																																																																												
FROM TO <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> PRESENT <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																									<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> GS- _____ <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																									<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																				
MO YR MO YR <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> GS- _____ <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																									<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																																
<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> GS- _____ <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																									<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																																
<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> GS- _____ <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																									<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																																
<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> GS- _____ <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																									<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																																
<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> GS- _____ <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																									<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																																
<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> GS- _____ <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																									<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																																
<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> GS- _____ <table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																									<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>													<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>																																

3. POSITION CERTIFICATION

a. LAST DATE OF CERTIFICATION/RECERTIFICATION ON POSITION

<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> MO DAY YR													<input type="checkbox"/> CERTIFICATION <input type="checkbox"/> RECERTIFICATION

b. WAS THE EMPLOYEE QUALIFIED ON THE POSITION YES NO

c. EMPLOYEE'S FIRST LEVEL SUPERVISOR	NAME (Last, First, M.I.)	SOCIAL SECURITY NUMBER
--------------------------------------	--------------------------	------------------------

d. EMPLOYEE'S SECOND LEVEL SUPERVISOR	NAME (Last, First, M.I.)	SOCIAL SECURITY NUMBER
---------------------------------------	--------------------------	------------------------

REPORT NUMBER

4. PERFORMANCE EVALUATION (Review past 12 months)

a. DATE OF LAST TECHNICAL APPRAISAL PROGRAM (TAP) – *Center Terminal Option*

NONE (Explain)

MO DAY YR

b. DATE OF LAST TECHNICAL PERFORMANCE APPRAISAL PROGRAM (TPAP) – *FSS Option*

NONE (Explain)

MO DAY YR

c. WERE ANY DEFICIENCIES IDENTIFIED

YES (If yes, list all)

NO

d. WAS REMEDIAL TRAINING ADMINISTERED

YES (If yes, explain)

NO

5. PROFICIENCY TRAINING (Review past 12 months)

a. WHAT TYPE OF REFRESHER TRAINING HAS BEEN RECEIVED

NONE

N/A

b. WHAT TYPE OF SUPPLEMENTAL TRAINING HAS BEEN RECEIVED

NONE

N/A

c. WHAT TYPE OF REMEDIAL TRAINING HAS BEEN RECEIVED

NONE

N/A

d. DATE OF LAST TAPE MONITOR SESSION (*Tape talk*)

NONE

MO DAY YR

6. MEDICAL CERTIFICATION

a. DATE OF LAST AIRMAN MEDICAL EXAMINATION

MO DAY YR

b. ARE THERE ANY WAIVERS AND/OR RESTRICTIONS

YES (If yes, explain)

NO

c. WERE RESTRICTIONS BEING COMPLIED WITH

YES

NO (If no, explain)

N/A

REPORT NUMBER

7. WORK SCHEDULE

WEEK ENDING (Mo/Day/Yr)	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY

8. ACTIVITY PROFILE

HOUR	TIME (LOCAL)		DESCRIPTION OF ACTIVITY
	FROM	TO	
1ST			
2ND			
3RD			
4TH			
5TH			
6TH			
7TH			
8TH			
9TH			
10TH			

REPORT NUMBER

9. DID THE EMPLOYEE REQUIRE ASSISTANCE PRIOR TO THE OCCURRENCE

YES (Provide explanation for either, yes or no)

NO

NOT AVAILABLE

NOT IN AREA

10. DID THE EMPLOYEE REQUEST ASSISTANCE PRIOR TO THE OCCURRENCE

YES (If yes, explain)

NO

11. WAS THE EMPLOYEE AWARE THAT AN OPERATIONAL ERROR/DEVIATION WAS DEVELOPING

YES (Provide explanation for either, yes or no)

NO

12. DID THE EMPLOYEE CONTEMPLATE TAKING CORRECTIVE ACTION

YES (Provide explanation for either yes or no)

NO

N/A

13. DID THE EMPLOYEE ATTEMPT TO TAKE CORRECTIVE ACTION

YES (Provide explanation for either yes or no)

NO

N/A

14. EMPLOYEE WAS ALERTED TO THE OCCURRENCE BY

CONFLICT ALERT PILOT MSAW/EMSAW

SELF-IDENTIFIED FACILITY PERSONNEL

OTHER THAN FACILITY PERSONNEL: _____

15. DATE/TIME EMPLOYEE BECAME AWARE OF THE OCCURRENCE

DATE | | | | | |

GMT | | | | |

LOCAL | | | | |

16. DID THE EMPLOYEE IDENTIFY ANY DISTRACTION(S) WHICH INFLUENCED THE OCCURRENCE

YES (If yes, explain)

NO

17. DID ANYTHING OCCUR IN THE WORK ENVIRONMENT WHICH DISTRACTED FROM THE EMPLOYEE'S PERFORMANCE

YES (If yes, explain)

NO

SECTION D. PROCEDURES INVOLVED

1. TYPE OF CONTROL PROVIDED

- RADAR
 NONRADAR (*Specify*):
 AIRPORT SURFACE

 OCEANIC

2. TYPE OF PROCEDURES INVOLVED

- NATIONAL
 REGIONAL
 LOCAL

3. SPECIFY SEPARATION MINIMA INVOLVED

- HANDBOOK [] [] [] [] [] [] . [] [] [] [] [] []

 OTHER (*Specify*):

 PARAGRAPH [] [] [] [] [] [] . [] [] [] [] [] []

4. APPLIED SEPARATION - DIFFERENT THAN LISTED IN ITEM 3 ABOVE

- YES (*If yes, explain*)

 NO

5. DESCRIPTION OF PROCEDURES USED

6. WERE ANY PROCEDURAL DEFICIENCIES NOTED AS A RESULT OF THE OCCURRENCE

- YES (*If yes, explain*)

 NO

7. WERE ANY SPECIAL PROCEDURES IN EFFECT AT THE TIME OF THE OCCURRENCE

- YES (*If yes, explain*)

 NO

SECTION E. CLOSEST PROXIMITY

A. IN THE AIR (*Distance*)

- VERTICAL: [] [] [] [] [] [] FEET

 HORIZONTAL:

 [] [] [] [] [] [] FEET

 [] [] [] [] [] [] MILES

B. SURFACE (*Description*)

REPORT NUMBER

SECTION G. TASK ENVIRONMENT

1. INDICATE IF ANY OF THE FOLLOWING MAY HAVE INFLUENCED THE OCCURRENCE *(Provide an explanation of each)*

AMBIENT AIR PILOT ACTION NOISE LIGHTING
 WORK AREA LAYOUT ERRONEOUS INFORMATION NONE
 OTHER *(Specify):*

SECTION H. EQUIPMENT

1. DID EQUIPMENT LAYOUT OR DESIGN INFLUENCE THE OCCURRENCE

YES *(If yes, explain)*
 NO

2. WAS ANY PERTINENT EQUIPMENT OPERATED BY THE CONTROLLER(S) REPORTED AS FUNCTIONING UNSATISFACTORILY BEFORE THE OCCURRENCE

YES
 NO *(If no, proceed to item 3, below)*

a. DATE OF REPORT <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <div style="display: flex; justify-content: space-between; font-size: 8px;"> MO DAY YR </div>	b. TIME OF REPORT (GMT) <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div>	c. DESCRIBE EQUIPMENT PROBLEM(S)
---	--	----------------------------------

d. WAS ANY ACTION UNDERTAKEN TO CORRECT THE PROBLEM(S)

YES
 NO *(If no, explain)*

3. TYPE	GOOD	FAIR	POOR	OUT OF SERVICE	SCHD MAINT	<i>(If other than good, explain)</i>
RADIO COMMUNICATIONS						
LANDLINE COMMUNICATIONS						
COMPUTER						
RADAR						

4. WAS RADAR IN USE YES *(If yes, enter source)* NO

DARC NARROWBAND BROADBAND ARTS II ARTS III ARTS IIIA BRITE TPX-42

5. WAS RADAR TRANSITION IN PROGRESS YES *(If yes, complete the following)* NO

	DARC	NARROWBAND	BROADBAND	ARTS II	ARTS III	ARTS IIIA	BRITE	TPX-42
FROM	<input type="checkbox"/>							
TO	<input type="checkbox"/>							

REPORT NUMBER

SECTION I. REMARKS

[Empty area for remarks]

REPORT NUMBER

SECTION I. REMARKS (Continued)

Continuation page(s) attached

SECTION J. CHECKLIST OF ATTACHED DOCUMENTS

- | | | |
|--|---|--|
| <input type="checkbox"/> STATEMENT(S) | <input type="checkbox"/> AIRWAY/AIRPORT CHART | <input type="checkbox"/> CONFIGURATION CHART |
| <input type="checkbox"/> FLIGHT PROGRESS STRIP | <input type="checkbox"/> TRANSCRIPT | <input type="checkbox"/> DIRECTIVES |
| <input type="checkbox"/> ORDERS | <input type="checkbox"/> OTHER (<i>Specify</i>) | <input type="checkbox"/> PLOT/TRACE DATA |

SECTION K. INVESTIGATORS

DATE	TYPED OR PRINTED NAME	SIGNATURE (<i>Investigator-in-charge</i>)
DATE	TYPED OR PRINTED NAME	SIGNATURE (<i>Team member</i>)
DATE	TYPED OR PRINTED NAME	SIGNATURE (<i>Team member</i>)
DATE	TYPED OR PRINTED NAME	SIGNATURE (<i>Team member</i>)
DATE	TYPED OR PRINTED NAME	SIGNATURE (<i>Team member</i>)
DATE	TYPED OR PRINTED NAME	SIGNATURE (<i>Team member</i>)

PART II. FACILITY CHIEF ACTION

REPORT NUMBER

SECTION A. CLASSIFICATION

- OPERATIONAL ERROR OPERATIONAL DEVIATION PILOT DEVIATION NO OCCURRENCE
 MILITARY FACILITY DEVIATION

SECTION B. CATEGORIZATION

1. WHAT IS THE CATEGORY OF THE OPERATIONAL ERROR/DEVIATION PROCEDURAL EQUIPMENT HUMAN

2. RATIONALE FOR CATEGORIZATION

REPORT NUMBER

	NO	YES					
		EMPLOYEE					
4. COMMUNICATIONS ERROR							
a. PHRASEOLOGY							
b. TRANSPOSITION							
c. MISUNDERSTANDING							
d. READBACK							
(1) Altitude							
(2) Clearance							
(3) Identification							
e. ACKNOWLEDGEMENT							
f. OTHER (Explain) _____							
5. COORDINATION							
a. AREA OF OCCURRENCE							
(1) Inter-position							
(2) Intra-position							
(3) Inter-sector							
(4) Inter-facility							
b. AN AIRCRAFT PENETRATED DESIGNATED AIRSPACE OF ANOTHER POSITION OF OPERATION OR FACILITY WITHOUT PRIOR APPROVAL.							
c. COORDINATION WAS EFFECTED AND ONE OR BOTH CONTROLLERS DID NOT UTILIZE INFORMATION EXCHANGED IN THE COORDINATION							
(1) Aircraft identification							
(2) Altitudes/Flight Level							
(3) Route of flight							
(4) Clearance limit							
(5) Speeds							
(6) APREQS							
(7) Special instructions							
(8) Other (Explain) _____							
d. FAILURE TO COORDINATE BETWEEN GROUND AND LOCAL CONTROL							
(1) Crossing active runway							
(2) Vehicle, equipment or personnel on active runway							
(3) Runway change							
(4) Use of other than active runway for arrivals and departures							
(5) Aircraft identification and/or landing/departing runway when runways in use are not visible from tower or aircraft using them are not visible on radar							
(6) Runway closure							
(7) Other (Explain) _____							
6. POSITION RELIEF BRIEFING DEFICIENCIES NOTED							
a. EMPLOYEE DID NOT USE POSITION RELIEF CHECKLIST							
b. EMPLOYEE BEING RELIEVED GAVE INCOMPLETE BRIEFING							
c. RELIEVING EMPLOYEE DID NOT MAKE USE OF PERTINENT DATA EXCHANGED AT BRIEFING							
d. OTHER (Explain) _____							

REPORT NUMBER

SECTION D. RECOMMENDATIONS AND CORRECTIVE ACTIONS

Continuation page(s) attached

DATE

TYPED OR PRINTED NAME
FACILITY CHIEF

SIGNATURE

PART III. AIR TRAFFIC DIVISION CHIEF

REPORT NUMBER

SECTION A. CONCLUSIONS/RECOMMENDATIONS

Continuation Page(s) Attached

DATE

TYPED OR PRINTED NAME
AIR TRAFFIC DIVISION CHIEF

SIGNATURE

APPENDIX D

FAA Form 3556, Near Mid Air Collision Preliminary Report . .	D-1
FAA Form 8020-15, Investigation of Near Mid-Air Collision Incident	D-2

NEAR MIDAIR COLLISION PRELIMINARY REPORT

REPORTING FACILITY		PHONE NO.
A. DATE AND TIME (GMT) OF INCIDENT	B. LOCATION OF INCIDENT AND ALTITUDE	
C. IDENTIFICATION AND TYPE OF REPORTING AIRCRAFT, AIRCREW, DESTINATION, NAME AND HOME BASE OF PILOT		
D. IDENTIFICATION AND TYPE OF OTHER AIRCRAFT, AIRCREW, DESTINATION, NAME AND HOME BASE OF PILOT		
E. TYPE OF FLIGHT PLANS, STATION ALTIMETER SETTINGS USED		
F. DETAILED WEATHER CONDITIONS AT FLIGHT ALTITUDE/LEVEL		
G. APPROXIMATE COURSES OF BOTH AIRCRAFT, INDICATE IF ONE OR BOTH AIRCRAFT WERE CLIMBING, DESCENDING		
H. REPORTED SEPARATION IN DISTANCE AT FIRST SIGHTING, PROXIMITY AT CLOSEST POINT HORIZONTALLY AND VERTICALLY, LENGTH OF TIME IN SIGHT PRIOR TO EVASIVE ACTION		
I. DEGREE OF EVASIVE ACTION TAKEN, IF ANY (From both aircraft, if possible), INJURIES IF ANY		
J. CLEARANCES ISSUED, IF PERTINENT		
K. NARRATIVE SUMMARY OF WHAT OCCURRED. INCLUDE IF ATIS WAS TAKEN ACTION TO SECURE PILOT(S) STATEMENTS, WHICH FS DISTRICT OFFICE WILL BE INVESTIGATING, IF AN ATIS CONTROLLER ERROR IS EVIDENT, IF ONE OR BOTH AIRCRAFT WERE WITHIN AN AREA OF RADAR COVERAGE, IF ONE OR BOTH AIRCRAFT WERE UNDER RADAR CONTROL, IF ONE OR BOTH AIRCRAFT WERE TRANSPONDER EQUIPPED, IF TRANSPONDER EQUIPPED WERE THE TRANSPONDERS ON, AND IF ON, WHAT MODE AND CODE WERE BEING USED.		

INVESTIGATION OF NEAR MID-AIR COLLISION INCIDENT
(RPTG: Indicates reporting aircraft - OTHER: Indicates other aircraft involved)

IDENTIFICATION A	1. DATE AND TIME OF INCIDENT				2. AIRCRAFT OPERATORS						
	Z				RPTG	OTHER	AIRCRAFT	RPTG	OTHER	AIRCRAFT	
	3. ESTIMATED ALTITUDES (MSL)				GENERAL AVIATION				MILITARY		
	RPTG: OTHER:				AIR CARRIER				OTHER		
4. GEOGRAPHICAL LOCATION (Nearest city/state)				5. NEAREST 3 LTR FAA FACILITY:				6. OVER WATER			
				DEGREES FROM		MILES FROM		LAT:	LONG:		
7. AIRCRAFT INVOLVED (Make, model, registration number)											
RPTG					OTHER						
GENERAL INFORMATION B	RPTG	OTHER	1. AIRCRAFT DESCRIPTION				RPTG	OTHER	2. OPERATIONAL AREA		
			SINGLE ENGINE						AIRPORT TRAFFIC AREA		
			TWIN ENGINE						CONTROL ZONE		
			THREE ENGINE						TERMINAL CONTROL AREA		
			FOUR ENGINE						TERMINAL RADAR SERVICE AREA		
			MORE THAN FOUR ENGINE						POSITIVE CONTROL AREA		
			TURBO PROP						ENROUTE - ON AIRWAY		
			TURBO JET						ENROUTE - OFF AIRWAY		
			RECIPROCATING						OCEANIC AIRSPACE		
			HIGH WING						SPECIAL USE AIRSPACE (Specify)		
			LOW WING								
			MULTIWING						UNCONTROLLED AIRSPACE		
			HELICOPTER						OTHER (Specify)		
			OTHER (Specify)						NONE		
								UNKNOWN			
3. TYPE OF AIR TRAFFIC CONTROL			RPTG	OTHER	4. PHASE OF FLIGHT			RPTG	OTHER	5. FLIGHT PLAN	
		TOWER			TAKE OFF					VFR	
		CENTER			CLIMB					IFR	
		RADAR			LEVEL FLIGHT					NONE	
		GCA/PAR			DESCENDING					OTHER (Specify)	
		OTHER (Specify)			LANDING					UNKNOWN	
		NONE			TURNING						
		UNKNOWN			OTHER (Specify)						
WEATHER C	1. ATMOSPHERIC CONDITIONS AT FLIGHT ALTITUDE						2. VISIBILITY AT FLIGHT ALTITUDE				
			SOLID INSTRUMENT CONDITIONS								LESS THAN 1 MILE
			MORE THAN 5/10 CLOUDS								1 to 5 MILES
			LESS THAN 5/10 CLOUDS								MORE THAN 5 MILES
			CLEAR								UNLIMITED
3. FLIGHT CONDITIONS		BRIGHT DAY		BRIGHT NIGHT		THUNDERSTORM		DUSK	TURBULENCE		
		GLARING SUN		BLACK NIGHT		PRECIPITATION		DAWN	HAZE		
									ICING		
									FOG		
SIGHTINGS D	1. DISTANCE INITIAL SIGHTING			2. EVASIVE ACTION TAKEN			3. ALTIMETER SETTINGS				
			LESS THAN 100			RIGHT TURN	RPTG	OTHER			
			100' - 500'			LEFT TURN					
			500 - 1,000			CLIMB		4. HEADINGS FLOWN			
			1,000 - 2,500'			DESCEND	RPTG	OTHER			
			2,500' - 1 MILE			ABRUPT		Magnetic			
		OVER 1 MILE			LEVELED OFF		5. ESTIMATED TRUE AIR SPEED				
		UNOBSERVED			NONE		RPTG	OTHER			
OPR/PILOT DATA E	1. REPORTING AIRCRAFT					2. OTHER AIRCRAFT					
	A. OPERATOR (Name/Address)					A. OPERATOR (Name/Address)					
	B. FAA OPERATING CERTIFICATE		C. NUMBER			B. FAA OPERATING CERTIFICATE		C. NUMBER			
	<input type="checkbox"/> YES <input type="checkbox"/> NO					<input type="checkbox"/> YES <input type="checkbox"/> NO					

OPERATOR/PILOT DATA (Cont.) E.	d. TYPE OF FAA OPERATING CERTIFICATE <input type="checkbox"/> AIR CARRIER <input type="checkbox"/> OPERATING				d. TYPE OF FAA OPERATING CERTIFICATE <input type="checkbox"/> AIR CARRIER <input type="checkbox"/> OPERATING			
	e. PILOT (Name and address/home base)				e. PILOT (Name and address/home base)			
	3. PILOT CERTIFICATE INFORMATION				4. PILOT CERTIFICATE INFORMATION			
	a. CERTIFICATE NUMBER		ATP	STUDENT	a. CERTIFICATE NUMBER		ATP	STUDENT
		COMMERCIAL	MILITARY			COMMERCIAL	MILITARY	
		PRIVATE	OTHER			PRIVATE	OTHER	
b. TOTAL FLIGHT TIME		c. TIME IN EQUIPMENT		b. TOTAL FLIGHT TIME		c. TIME IN EQUIPMENT		
INVESTIGATION F.	1. CLOSEST POINT OF PASSAGE IN FEET				2. CLOSEST POINT OF PASSAGE IN FEET			
	a. ABOVE OTHER AIRCRAFT		b. BELOW OTHER AIRCRAFT		a. ABOVE RPTG AIRCRAFT		b. BELOW RPTG AIRCRAFT	
	FT		FT		FT		FT	
	c. LEFT OF OTHER AIRCRAFT		d. RIGHT OF OTHER AIRCRAFT		c. LEFT OF RPTG AIRCRAFT		d. RIGHT OF RPTG AIRCRAFT	
	FT		FT		FT		FT	
	3. ALTIMETRY ERROR <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN				4. ALTIMETRY ERROR <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN			
	5. PILOT ERROR <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN				6. PILOT ERROR <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN			
	7. AIR TRAFFIC OPERATIONAL ERROR				8. AIR TRAFFIC OPERATIONAL ERROR			
	a. SYSTEM ERROR		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		a. SYSTEM ERROR		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
	b. SYSTEM DEVIATION		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		b. SYSTEM DEVIATION		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
	c. MILITARY FACILITY DEVIATION		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		c. MILITARY FACILITY DEVIATION		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
	9. VIOLATION INDICATED		FAR PART NUMBER		10. VIOLATION INDICATED		FAR PART NUMBER	
	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN				<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN			
	11. TRANSPONDER		MODE		12. TRANSPONDER		MODE	
<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN				<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN				
<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		CODE		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		CODE		
<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN				<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN				
13. STATEMENT FROM PILOT OBTAINED <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> DECLINED				14. STATEMENT FROM PILOT OBTAINED <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> DECLINED				
STATUS G.	1. FINAL EVALUATION <input type="checkbox"/> CRITICAL <input type="checkbox"/> POTENTIAL <input type="checkbox"/> NO HAZARD				2. INVESTIGATION <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED		3. DATE CLOSED / /	
	BRIEF DESCRIPTION OF INCIDENT (No opinion or analyses)							
CONCLUSION H.	ATTACHMENTS						DISTRIBUTION OF INVESTIGATION TO	
	DATE	REGION	DISTRICT OFFICE	TYPE/PRINTED NAME OF REPORTING INSPECTOR		SIGNATURE		

APPENDIX E

NASA Form ARC-277	E-1
ASRS Database Information System Structure	E-3
ASRS Database Field 204, Containing Human Factors Terms . . .	E-4

National Aeronautics and
Space Administration
Ames Research Center
Moffett Field, California 94035

Official Business
Penalty for Private Use \$300



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO 12028 WASHINGTON D C

POSTAGE WILL BE PAID BY NASA

FIRST CLASS
AVIATION SAFETY DATA —
DO NOT DELAY

NASA Aviation Safety Reporting System
Post Office Box 189
Moffett Field, California 94035



**NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION**

**AVIATION SAFETY
REPORTING SYSTEM**

NASA has established an Aviation Safety Reporting System to identify problems in the aviation system which require correction. The program of which this system is a part is described in detail in FAA Advisory Circular 00-46C. Your assistance in informing us about such problems is essential to the success of the program. Please fill out this postage free form as completely as possible. Fold it and send it directly to us.

Section 91.57 of the Federal Aviation Regulations (14 CFR 91.57) prohibits reports filed with NASA from being used for FAA enforcement purposes. This report will not be made available to the FAA for civil penalty or certificate actions for violations of the Federal Air Regulations. Your identity strip, stamped by NASA, is proof that you have submitted a report to the Aviation Safety Reporting System. We can only return the strip to you, however, if you have provided a mailing address. Equally important, we can often obtain additional useful information if our safety analysts can talk with you directly by telephone. For this reason, we have requested telephone numbers where we may reach you. Thank you for your assistance.

The information you provide on the identity strip will be used only if NASA determines that it is necessary to contact you for further information. **THE IDENTITY STRIP WILL BE RETURNED DIRECTLY TO YOU.** The return of the identity strip assures your anonymity.

NOTE AIRCRAFT ACCIDENTS SHOULD NOT BE REPORTED ON THIS FORM SUCH REPORTS SHOULD BE FILED WITH THE NATIONAL TRANSPORTATION SAFETY BOARD AS REQUIRED BY 49CFR830

15. NARRATIVE DESCRIPTION (continued): (Use additional sheets if necessary)

SECOND FOLD HERE

SECOND FOLD HERE

Fold as indicated, fasten with staple or tape, and mail. Thank you for your cooperation.

IDENTIFICATION STRIP: Please fill in all blanks. NO RECORD WILL BE KEPT OF YOUR IDENTITY.
This section will be returned to you promptly.

TELEPHONE NUMBERS where we may reach you for further details of this occurrence:

(HOME) Area _____ No. _____ Hours _____
(WORK) Area _____ No. _____ Hours _____

(SPACE RESERVED FOR ASRS DATE/TIME STAMP)

NAME _____ TYPE OF EVENT/SITUATION _____
ADDRESS _____ DATE OF OCCURRENCE _____
LOCAL TIME (24 hr. clock) _____

Except for reports of aircraft accidents and criminal activities — which are not included in the ASRS and should not be submitted to NASA — all identities contained in this report will be removed to assure complete reporter anonymity.

PLEASE FILL IN APPROPRIATE SPACES AND CHECK ALL ITEMS WHICH APPLY TO THIS EVENT OR SITUATION

REPORTER'S ROLE DURING OCCURRENCE

(pilot-flying, radar controller, cabin crew, maintenance, etc.) _____

REPORTER	FLYING TIME	CERTIFICATES/RATINGS	ATC EXPERIENCE
<input type="checkbox"/> captain/pilot	total _____ hrs.	<input type="checkbox"/> student	<input type="checkbox"/> FPL development
<input type="checkbox"/> first officer	last 90 days _____ hrs.	<input type="checkbox"/> commercial	<input type="checkbox"/> radar _____ yrs.
<input type="checkbox"/> other crewmember	in acft type _____ hrs.	<input type="checkbox"/> instrument	<input type="checkbox"/> non-radar _____ yrs.
<input type="checkbox"/> controller		<input type="checkbox"/> multiengine	<input type="checkbox"/> supervisory _____ yrs.
		<input type="checkbox"/> private	<input type="checkbox"/> ATP
		<input type="checkbox"/> CFI	<input type="checkbox"/> F/E
			<input type="checkbox"/> military _____ yrs.

DESCRIBE ONE AIRCRAFT IN THIS SECTION (PILOTS DESCRIBE YOUR OWN) AND ADDITIONAL AIRCRAFT IN THE "DESCRIBE EVENT/SITUATION" SECTION:

AIRFRAME/ENGINES	OPERATOR	PURPOSE OF FLIGHT	FLIGHT PLAN
<input type="checkbox"/> low fixed wing	<input type="checkbox"/> scheduled carrier	<input type="checkbox"/> passenger	<input type="checkbox"/> VFR <input type="checkbox"/> IFR
<input type="checkbox"/> high fixed wing	<input type="checkbox"/> supplemental carrier	<input type="checkbox"/> cargo	<input type="checkbox"/> SVFR <input type="checkbox"/> none
<input type="checkbox"/> rotary wing	<input type="checkbox"/> FBO/flying school	<input type="checkbox"/> business	NAVIGATION IN USE
<input type="checkbox"/> advanced/automated cockpit (e.g., CRT's, FMS, etc.)	<input type="checkbox"/> commuter	<input type="checkbox"/> air taxi	
crew size _____	<input type="checkbox"/> corporate	<input type="checkbox"/> charter	
gross weight _____	<input type="checkbox"/> government	<input type="checkbox"/> private	
	<input type="checkbox"/> military (_____)	<input type="checkbox"/> training	
		<input type="checkbox"/> pleasure	

FIRST FOLD HERE

FIRST FOLD HERE

AIRSPACE/LOCALE	ATC/ADVISORY SERVICE	FLIGHT CONDITIONS	LIGHT AND VISIBILITY
<input type="checkbox"/> uncontrolled	<input type="checkbox"/> ground	<input type="checkbox"/> VMC	<input type="checkbox"/> day/night
<input type="checkbox"/> control zone	<input type="checkbox"/> local	<input type="checkbox"/> mixed	<input type="checkbox"/> dawn
<input type="checkbox"/> special use airspace	<input type="checkbox"/> center	<input type="checkbox"/> IMC	<input type="checkbox"/> dusk
<input type="checkbox"/> airway/route	<input type="checkbox"/> FSS	<input type="checkbox"/> marginal	<input type="checkbox"/> night
ALTITUDE _____	<input type="checkbox"/> UNICOM	<input type="checkbox"/> rain	ceiling _____ feet
NEAREST CITY _____	<input type="checkbox"/> CTAF	<input type="checkbox"/> turbulence	visibility _____ miles
STATE _____	Name of ATC Facility _____	<input type="checkbox"/> fog	RVR _____ feet
		<input type="checkbox"/> snow	
		<input type="checkbox"/> ice	

SPECIFY LOCATION BY REFERENCE TO AN AIRPORT, NAVAID, OR OTHER FIX (distance, bearing, etc.): _____

AIRCRAFT FLIGHT PHASES AT TIME OF OCCURRENCE (preflight, takeoff, cruise, hover, etc.): _____

IF A CONFLICT: Evasive action? yes no no time unknown. Estimated miss in feet _____ vert'l _____ horiz'l.

DESCRIBE EVENT/SITUATION

Keeping in mind the topics shown below, discuss those which you feel are relevant and anything else you think is important. Include what you believe really caused the problem, and what can be done to prevent a recurrence, or correct the situation. (CONTINUE ON THE OTHER SIDE AND USE ADDITIONAL PAPER IF NEEDED).

CHAIN OF EVENTS	HUMAN PERFORMANCE CONSIDERATIONS
- How the problem arose	- Perceptions, judgements, decisions
- Contributing factors	- Actions or inactions
- Corrective actions	- Factors affecting the quality of human performance

NASA ARC 277 (Rev. Oct 84) PREVIOUS EDITIONS ARE OBSOLETE

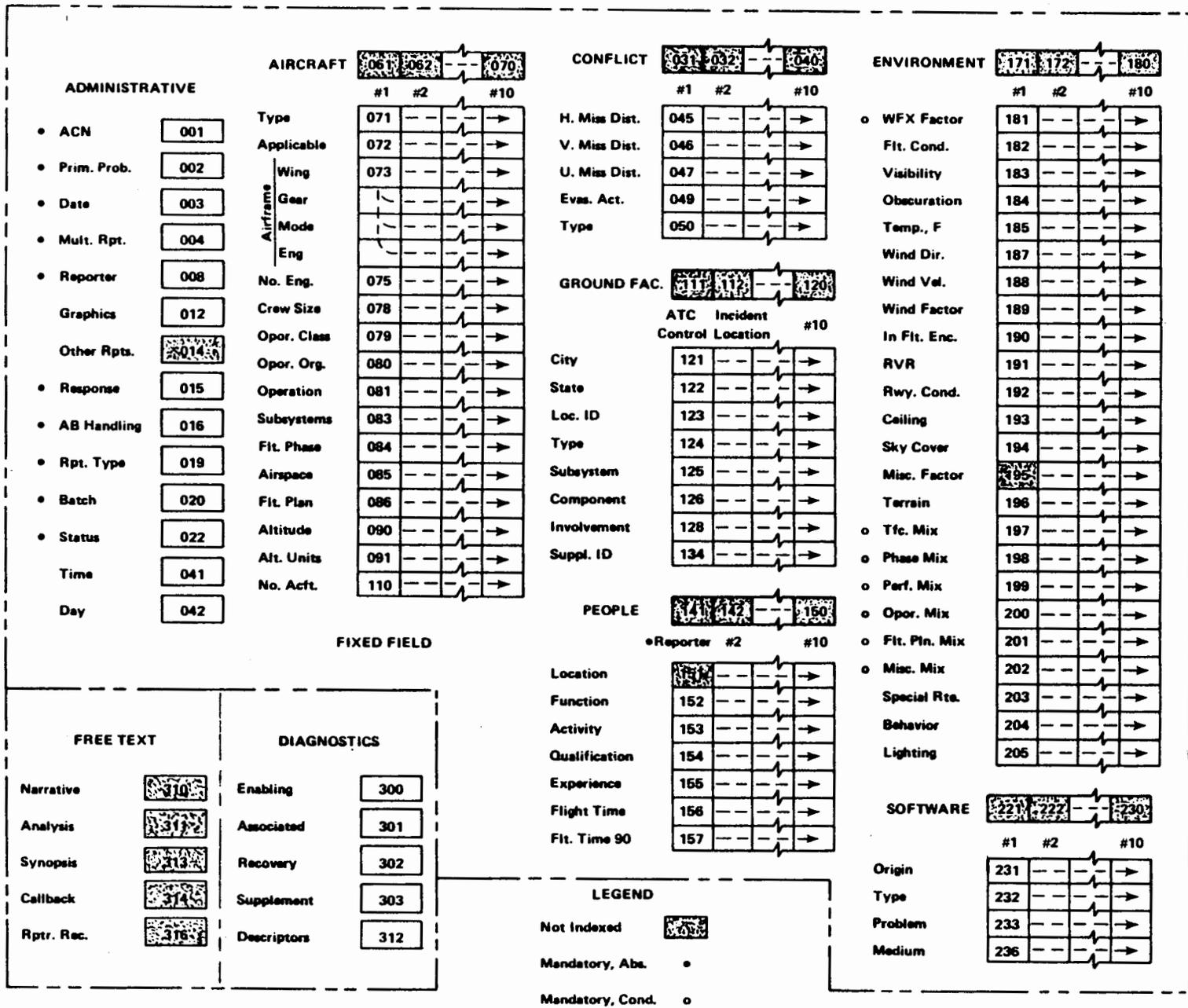


Figure C-1.— ASRS Information system structure.

SOME ASRS FIELD 204 HUMAN FACTORS TERMS

Behavior Factors:

DISC	Physical discomfort
PINJ	Personal injury
SCPR	Social pressure
VCOM	Noisy voice communications
FATG	Fatigue
WKLD	Workload excessive
RSUT	Resource utilization
UNFM	Unfamiliar with operation
INCP	Incapacitation
DIST	Distraction
IRSC	Inadequate human resources
SCHD	Schedule pressure
SICK	Illness
IPER	Interpersonal relationship
RCOM	Noisy radio communications
EMOT	Emotional trauma or stress
CMPL	Complacency
UPAT	Unprofessional attitude

APPENDIX F

NTSB Form 6120.4, Factual Report Aviation Accident/Incident .	F-1
NTSB Sequence of Events Worksheet	F-67
Section of the NTSB Sequence of Events Aviation Coding Manual Containing Direct and Underlying Modifier	
Terms with Human Factors Interest	F-69
NTSB Two Page Brief of Accident	F-77



**FACTUAL REPORT
AVIATION
ACCIDENT/INCIDENT**

**National Transportation Safety Board
Washington, D.C. 20594**

NTSB Form 6120.4

Instructions

Unless otherwise stated in the instructions or on the form, all data fields must be completed. Each data field requires either a direct entry or the entry of one or more x's in appropriate blocks that best describe the mishap circumstances. Multiple entry fields may require two or more responses. Enter all applicable responses in multiple entry fields. When the selections offered are inappropriate, a two digit "other" code shall be entered in the space that follows the word "other." Do not make additional remarks in the margins as the automated data processor is not programmed to accept them. Any information which is needed to outline the sequence of events which preceded the occurrence, to support probable cause determination or which is pertinent to crashworthiness studies should be addressed in the narrative report.

"Other" Codes

01	Limited access to and/or limited time available at site.
02	Aircraft not recovered/missing.
03	Part/component not recovered/not located.
04	Aircraft too badly damaged to determine.
05	Part/component too badly damaged to determine.
06	Information not pertinent to accident/incident.
07	Applicable personnel could not provide information or information not available to applicable personnel.
08	Applicable personnel would not provide information.
09	Not installed.
10	Records not located/not available.
11	Information not entered on NTSB Form 6120.1.
12	See narrative report.

Supplements

The following accident scenarios are provided to assist investigators in selecting the report forms which should supplement the basic NTSB Form 6120.4.

1. A Cessna 172 collided with a snowbank during landing go-around at an airport. Weather was not a factor. The pilot said there was no powerplant or control malfunction. The pilot and one passenger received minor injuries. The pilot had recently been certificated as a private pilot.

Complete supplemental forms F (Training and Proficiency), Q (Airport) and S (Occupant list). A "Limited" investigation should be completed.

2. A PA-31, being operated by two pilots under FAR 135, crashed into a tower while being vectored to intercept the localizer at the destination airport. The PA-31 struck the tower while being operated at an assigned altitude. Flight was in IMC. There were two fatal injuries and three serious injuries. CFR personnel responded and treated the injured.

This accident requires an onscene investigation. Thus supplement A (Wreckage documentation), B (Cockpit documentation) and I (Crash kinematics) are required. Supplements E (Second pilot), F (Training and Proficiency) and U are required because of the two pilot FAR 135 operation (even though proficiency may not be at issue). S is needed to list the occupants; T, to document the CFR activity and P, to cover the possible ATC involvement. R (Meteorology) is required to document the weather conditions. Copies of supplements K and L would be required to document injury/toxicology and seat/restraint damage information, respectively.

**National Transportation Safety Board
FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Airport/Approach/Landing information 24 Not applicable (Go to block 39)

25 Airport Name _____ A Other	26 Airport Identifier _____	27 Accident Location 1 <input type="checkbox"/> Off airport/airstrip 2 <input type="checkbox"/> On airport 3 <input type="checkbox"/> On airstrip A Other	28 Distance From Airport Center (Nearest SM) _____ SM A Other	29 Direction From Airport _____ °mag A Other
--	---	--	--	---

30 VFR Approach/Landing (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Traffic pattern 3 <input type="checkbox"/> Straight-in 4 <input type="checkbox"/> Valley/terrain following 5 <input type="checkbox"/> Go around 6 <input type="checkbox"/> Touch and go 7 <input type="checkbox"/> Full stop 8 <input type="checkbox"/> Stop and go 9 <input type="checkbox"/> Simulated forced landing 10 <input type="checkbox"/> Forced landing 11 <input type="checkbox"/> Precautionary landing A Other	31 Type Instrument Approach Flown (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> ADF/NDB 3 <input type="checkbox"/> SDF 4 <input type="checkbox"/> VOR/TVOR 5 <input type="checkbox"/> VOR/DME 6 <input type="checkbox"/> TACAN 7 <input type="checkbox"/> ILS-complete 8 <input type="checkbox"/> ILS-localizer 9 <input type="checkbox"/> ILS-backcourse 10 <input type="checkbox"/> RNAV 11 <input type="checkbox"/> MLS 12 <input type="checkbox"/> LDA 13 <input type="checkbox"/> ASR 14 <input type="checkbox"/> PAR 15 <input type="checkbox"/> Sidestep 16 <input type="checkbox"/> Visual 17 <input type="checkbox"/> Contact 18 <input type="checkbox"/> Circling 19 <input type="checkbox"/> Practice A Other	32 Runway Used Identifier _____ A Other 33 Runway Length _____ Feet A Other 34 Runway Width _____ Feet A Other 35 Airport Elevation _____ Ft. MSL A Other
---	---	--

36 Runway/Landing Surface 1 <input type="checkbox"/> Macadam 2 <input type="checkbox"/> Asphalt 3 <input type="checkbox"/> Concrete 4 <input type="checkbox"/> Gravel 5 <input type="checkbox"/> Dirt 6 <input type="checkbox"/> Grass/turf 7 <input type="checkbox"/> Snow 8 <input type="checkbox"/> Ice 9 <input type="checkbox"/> Water 10 <input type="checkbox"/> Metal/wood A Other	37 Runway/Landing Surface Condition 1 <input type="checkbox"/> Dry 2 <input type="checkbox"/> Wet 3 <input type="checkbox"/> Ice covered 4 <input type="checkbox"/> Snow—dry 5 <input type="checkbox"/> Snow—wet 6 <input type="checkbox"/> Snow—crusted 7 <input type="checkbox"/> Snow—compacted 8 <input type="checkbox"/> Vegetation 9 <input type="checkbox"/> Water—calm 10 <input type="checkbox"/> Water—choppy 11 <input type="checkbox"/> Water—glassy 12 <input type="checkbox"/> Rubber deposits 13 <input type="checkbox"/> Soft 14 <input type="checkbox"/> Rough 15 <input type="checkbox"/> Slush covered 16 <input type="checkbox"/> Holes A Other
--	---

If accident occurred during approach, departure or on airport, see instructions for completing Supplement Q.

Aircraft Information

39 Aircraft Manufacturer _____	40 Aircraft Model/Series _____	41 Serial No. _____ A Other	42 Certified Maximum Gross Weight _____ A Other
--	--	--	--

43 Type of Aircraft 1 <input type="checkbox"/> Airplane 2 <input type="checkbox"/> Helicopter 3 <input type="checkbox"/> Glider 4 <input type="checkbox"/> Balloon 5 <input type="checkbox"/> Blimp/dirigible 6 <input type="checkbox"/> Ultralight 7 <input type="checkbox"/> Gyroplane A Specify _____	44 Type Airworthiness Certificate (Multiple entry) Standard 1 <input type="checkbox"/> Normal 2 <input type="checkbox"/> Utility 3 <input type="checkbox"/> Acrobatic 4 <input type="checkbox"/> Transport Special 5 <input type="checkbox"/> Restricted 6 <input type="checkbox"/> Limited 7 <input type="checkbox"/> Provisional 8 <input type="checkbox"/> Special flight 9 <input type="checkbox"/> Experimental A Other	45 Home Built 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
---	---	--

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Aircraft Information (continued)

46 Landing Gear (Multiple entry)

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

48 No. of Seats

A Other

49 Stall Warning System

Installed

- 1 Yes
2 No
A Other

50 IFR Equipped

- 1 Yes
2 No
A Other

51 Icing Certification/Equipped

(Multiple entry)

- 1 Certified
2 Not Certified
3 Equipped
4 Not Equipped
A Other

52 Engine Type

- 1 Reciprocating—carburetor
2 Reciprocating—fuel injected
3 Turbo prop
4 Turbo jet
5 Turbo fan
6 Turbo shaft A Other

If not Engine powered, go to block 59

53 Engine Manufacturer

54 Engine Model and Series

55 Engine Rated Power

- A _____ Horsepower
B _____ Lbs. Thrust
C Other

56 Number of Engines

A Other

If 3 or more engines enter times in Supp. C

Engine Time (Hours)

A Total Time

B Time Since Inspection

C Time Since Major Overhaul

D Other

57 Engine No. 1

58 Engine No. 2

59 Type Maintenance Program

- 1 Annual
2 Manufacturer's Inspection Program
3 Other approved inspection program (AAIP)
4 Continuous airworthiness
A Other

60 Type of Last Inspection

- 1 Annual
2 100 hour
3 AAIP
4 Continuous airworthiness
A Other

61 Date Last Inspection Performed

(Nos. for M, D, Y)

A Other

62 Time Since Inspection

_____ Hours
A Other

63 Airframe Total Time

_____ Hours
A Other

64 Source of Maintenance Information

- | | |
|-----------------------------------|--|
| 1 <input type="checkbox"/> Tach | 4 <input type="checkbox"/> Logbooks Records |
| 2 <input type="checkbox"/> Flight | 5 <input type="checkbox"/> Estimate |
| 3 <input type="checkbox"/> Hobbs | 6 <input type="checkbox"/> Pilot/Operator Report |
| | A Other |

65 Hazardous Materials on Aircraft

- 1 No
A (Type) _____
B Other

Emergency Locator Transmitter (ELT)

- | | | |
|-----|----|-------|
| 1 | 2 | A |
| Yes | No | Other |

67 Installed

68 Required

69 Operated

70 Aided in location of accident site

66 Hazardous Material Spill/Factor

- 1 Yes
2 No
A Other

Owner/Operator Information

71 Registered Aircraft Owner Name

72 Address

73 Operator of Aircraft 1 Same as registered owner.

- A Name:
B dba
C Other

74 Address 1 Same as registered owner

- A _____
B Other

75 Operator Certificate No.

A Other

76 Operator Designator Code

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

First Pilot Information (continued) (Multiple entry - blocks 98-102)

98 Ratings—Airplane 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Single engine land 3 <input type="checkbox"/> Multiengine land 4 <input type="checkbox"/> Single engine sea 5 <input type="checkbox"/> Multiengine sea	99 Rotorcraft/Glider/LTA 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Helicopter 3 <input type="checkbox"/> Gyroplane 4 <input type="checkbox"/> Airship 5 <input type="checkbox"/> Free balloon 6 <input type="checkbox"/> Glider	100 Instrument Rating 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Airplane 3 <input type="checkbox"/> Helicopter	101 Instructor Rating(s) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Airplane SE 3 <input type="checkbox"/> Airplane ME 4 <input type="checkbox"/> Helicopter 5 <input type="checkbox"/> Gyroplane	6 <input type="checkbox"/> Glider 7 <input type="checkbox"/> Instrument plane 8 <input type="checkbox"/> Instrument helicopter							
102 Ground Instructor 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Basic 3 <input type="checkbox"/> Advanced 4 <input type="checkbox"/> Instrument	103 Type Rating Endorsement This Aircraft 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No (Go to block 105) A Other _____	104 Months Since Check/Endorsement This Aircraft _____ Months A Other _____	105 Biennial Flight Review (Or equivalent) 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____								
106 Months Since Last BFR _____ Months A Other _____	107 BFR (or equivalent) Aircraft Make/Model A Make _____ B Model _____ C Other _____	108 Medical Certificate 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Class 1 3 <input type="checkbox"/> Class 2 4 <input type="checkbox"/> Class 3 A Other _____	109 Medical Certificate Validity 1 <input type="checkbox"/> Valid medical—no waivers/limitations 2 <input type="checkbox"/> Valid medical—with waivers/limitations 3 <input type="checkbox"/> Non valid medical for this flight 4 <input type="checkbox"/> Expired 5 <input type="checkbox"/> No medical certificate A Other _____								
110 Date of Last Medical (Nos. for M, D, Y) _____ A Other _____	111 Medical limitation 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Vision A Specify _____ B Other _____	112 Medical wavier 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Vision 3 <input type="checkbox"/> Hearing A Specify _____ B Other _____	113 Statement of Demonstrated Ability 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____								
114 Correcting Lenses (Multiple entry) 1 <input type="checkbox"/> Not required 2 <input type="checkbox"/> Required to be in possession 3 <input type="checkbox"/> Required, not in possession 4 <input type="checkbox"/> Required to be worn 5 <input type="checkbox"/> Required, not worn 6 <input type="checkbox"/> Worn at time of accident A Other _____		115 Source of Pilot Flight Time (Multiple entry) 1 <input type="checkbox"/> Pilot log 2 <input type="checkbox"/> Company 3 <input type="checkbox"/> FAA 4 <input type="checkbox"/> Pilot/Operator Report 5 <input type="checkbox"/> Investigator's Estimate 6 <input type="checkbox"/> Relative 7 <input type="checkbox"/> Other Person A Other _____									
Flight Time	A All A/C	B This Make & Model	C Airplane Single Engine	D Airplane Multiengine	E Night	F Instrument Actual	G Instrument Simulated	H Rotorcraft	I Glider	J Lighter Than Air	K Other
125 Total Time											
126 Pilot in Command (PIC)											
127 Instructor											
128 This Make/Model											
129 Last 90 Days											
130 Last 30 Days											
131 Last 24 Hours											
132 Landings—Last 90 Days All Aircraft _____ Day A Other _____	133 Landings—Last 90 Days All Aircraft _____ Night A Other _____	134 Landings—Last 90 Days This Make/Model _____ Day A Other _____	135 Landings—Last 90 Days This Make/Model _____ Night A Other _____								
136 Seatbelt Available 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____	137 Seatbelt Used 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____		138 Shoulder Harness Available 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____								
139 Shoulder Harness Used 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____		140 Autopsy Performed (This pilot) 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____				141 Toxicology Performed (This pilot) 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____					

National Transportation Safety Board
FACTUAL REPORT
AVIATION

NTSB Accident/Incident Number

Pilot Information (continued)

142 Person at Controls

- 1 Pilot in command
 2 Second pilot
 3 Both pilots
 4 Non-pilot
 5 No one
 A Other

143 Simulated Instrument Flight

- 1 Yes
 2 No
 A Other

144 Vision Restricting Device Used

- 1 Yes
 2 No
 A Other

145 Second Pilot

- 1 Yes (Complete second pilot supplement)
 2 No

Flight Itinerary Information

155 Last Departure Point (Multiple entry)

- 1 Same as accident/incident location or
 A Airport identifier _____
 B City/Place _____
 C State _____ D Other _____

157 Destination (Multiple entry)

- 1 Same as accident/incident location or
 2 Local flight
 A Airport Identifier _____
 B City/Place _____
 C State _____
 D Other _____

158 Flight Plan Filed (Multiple entry)

- 1 None
 2 Visual Flight Rules (VFR)
 3 Instrument Flight Rules (IFR)
 4 VFR/IFR
 5 Company (VFR)
 6 Military (VFR)
 A Other _____

156 Time of Departure

- A Time _____ C Other _____
 B Time Zone _____

159 Type of Clearance

- 1 None
 2 VFR
 3 Special VFR
 4 IFR
 5 Special IFR
 6 VFR on top
 7 Cruise
 8 Traffic Advisory
 9 VFR Flight Following
 A Other _____

160 Airspace

- 1 Uncontrolled
 2 Controlled
 3 Airport traffic area
 4 Control zone
 5 Airport advisory area
 6 Positive control area
 7 Terminal control area
 8 Stage II TRSA
 9 Stage III TRSA
 10 Prohibited area
 11 Restricted area
 12 Military Operating Area (MOA)
 13 Student Jet Training Area
 14 Demo Area
 15 Warning area
 16 FAR 93
 (Special air traffic areas)
 A Other _____

161 Control Area

- 1 None
 2 Victor airway
 3 Jet airway
 4 Control airway
 5 Colored airway
 A Other _____

162 Route

- 1 None
 2 Standard instrument departure
 3 Standard terminal arrival
 4 RNAV/OMEGA/LCRAN/INS
 5 Direct
 6 Profile Descent
 7 VR route (military)
 8 IR route (military)
 9 SR route (military)
 10 Refueling route (military)
 A Other _____

163 Last Two Way Communications Established

- 1 None
 2 Yes
 A Facility Identifier _____
 B Other _____

Aircraft Loading Information

164 Fuel on Board at Takeoff (Multiple entry)

- 1 Estimated
 2 Verified
 A _____ Gallons or
 B _____ Pounds
 C Other _____

165 Fuel Types (Multiple entry)

- 1 80/87
 2 100 low lead
 3 100/130
 4 115/145
 5 Kerosene
 6 JP 3, 4, 5, 6
 7 Jet A
 8 Jet B
 9 Mixture
 10 Automotive
 11 Anti-ice additive added (If known)
 A Other _____

166 Aircraft Weight at Takeoff (Multiple entry)

- 1 At or below max cert. gross takeoff weight
 2 Above max certified gross takeoff weight
 3 Estimated
 4 Verified
 A Other _____

167 Aircraft CG at Takeoff (Multiple entry)

- 1 Within limits
 2 Exceeded fwd limit
 3 Exceeded aft limit
 4 Exceeded lateral limit
 5 Estimated
 6 Verified
 A Other _____

168 Aircraft Weight at Accident (Multiple entry)

- 1 Same as takeoff
 2 At or below max cert. gross takeoff weight
 3 Above max certified gross takeoff weight
 4 Estimated
 5 Verified
 A Other _____

169 Aircraft CG at Accident (Multiple entry)

- 1 Same as takeoff
 2 Within limits
 3 Exceeded fwd limit
 4 Exceeded aft limit
 5 Exceeded lateral limit
 6 Estimated
 7 Verified
 A Other _____

National Transportation Safety Board

NTSB Accident/Incident Number

**FACTUAL REPORT
AVIATION**

Supplement A

—Wreckage Documentation, Single and Twin Reciprocating Engine and Unpowered Aircraft

1 Engine #1 Serial No. _____	2 Engine #2 Serial No. _____	3 Supercharger Installed 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	4 Turbocharger Installed 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	5 Propeller Manufacturer _____	6 Propeller Model/Series _____
7 Propeller Type (Multiple entry) 1 <input type="checkbox"/> Wood 2 <input type="checkbox"/> Metal 3 <input type="checkbox"/> Composite 4 <input type="checkbox"/> Constant speed-controllable pitch		5 <input type="checkbox"/> Ground Adjustable/variable pitch 6 <input type="checkbox"/> Reversible 7 <input type="checkbox"/> Full automatic feathering 8 <input type="checkbox"/> Full manual feathering A Other		8 Aircraft STOL Modification Installed 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	
Landing Gear Positions <i>(If fixed gear, go to block 12)</i>	9 Nose/Tail 1 <input type="checkbox"/> Up 2 <input type="checkbox"/> Down 3 <input type="checkbox"/> Intermediate A Other	10 Left Main 1 <input type="checkbox"/> Up 2 <input type="checkbox"/> Down 3 <input type="checkbox"/> Intermediate A Other	11 Right Main 1 <input type="checkbox"/> Up 2 <input type="checkbox"/> Down 3 <input type="checkbox"/> Intermediate A Other	<i>For Rotorcraft or Balloon accidents, go to block 20.</i>	
Control Surface Positions	12 Left Trailing Edge Flap 1 <input type="checkbox"/> Up A Extended _____ deg. B Other	13 Right Trailing Edge Flap 1 <input type="checkbox"/> Up A Extended _____ deg. B Other	14 Speed Brake 1 <input type="checkbox"/> Not Installed 2 <input type="checkbox"/> Stowed 3 <input type="checkbox"/> Deployed A Other	15 Spoiler 1 <input type="checkbox"/> Not Installed 2 <input type="checkbox"/> Stowed 3 <input type="checkbox"/> Deployed 4 <input type="checkbox"/> Deployed Asymmetrically A Other	
Trim Tab Positions <i>(Multiple entry)</i>	16 Left Aileron 1 <input type="checkbox"/> Not Installed 2 <input type="checkbox"/> Neutral 3 <input type="checkbox"/> Up 4 <input type="checkbox"/> Down A _____ deg. B Other	17 Right Aileron 1 <input type="checkbox"/> Not Installed 2 <input type="checkbox"/> Neutral 3 <input type="checkbox"/> Up 4 <input type="checkbox"/> Down A _____ deg. B Other	18 Rudder 1 <input type="checkbox"/> Not Installed 2 <input type="checkbox"/> Neutral 3 <input type="checkbox"/> Left 4 <input type="checkbox"/> Right A _____ deg. B Other	19 Elevator/Stabilator/Rudervator 1 <input type="checkbox"/> Neutral 2 <input type="checkbox"/> Up 3 <input type="checkbox"/> Down A _____ deg. B Other	
Cargo Restraint System	20 Cargo Restraint Installed (Multiple entry) 1 <input type="checkbox"/> None (Go to block 26) 2 <input type="checkbox"/> Cargo net 3 <input type="checkbox"/> Straps/tie down A Other	21 Cargo Restraint Used (Multiple entry) 1 <input type="checkbox"/> None (Go to block 26) 2 <input type="checkbox"/> Cargo net 3 <input type="checkbox"/> Straps/tie down A Other	22 Cargo Restraint Failed (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Cargo net 3 <input type="checkbox"/> Straps/tie down A Other		
Computed Weight and Balance Information-		<i>Complete when weight and/or center of gravity limitations are exceeded on accident flight. (Otherwise go to block 32)</i>			
Takeoff					
26 Weight _____ Lbs.	27 Center of Gravity A _____ % MAC or B _____ Inches	28 CG Range (Multiple entry) 1 <input type="checkbox"/> At takeoff weight 2 <input type="checkbox"/> At max gross weight		A _____ % MAC to _____ % MAC or B _____ Inches to _____ Inches	
Accident					32 Fuel On Board At Accident
29 Weight _____ Lbs.	30 Center of Gravity A _____ % MAC or B _____ Inches	31 CG Range (Multiple entry) 1 <input type="checkbox"/> At takeoff weight 2 <input type="checkbox"/> At max gross weight		A _____ % MAC to _____ % MAC or B _____ Inches to _____ Inches	
					1 <input type="checkbox"/> Estimated 2 <input type="checkbox"/> Verified A Total gallons _____ B Other

National Transportation Safety Board
FACTUAL REPORT
AVIATION

NTSB Accident/Incident Number

Supplement A—Wreckage Documentation, Single and Twin Reciprocating Engine and Unpowered Aircraft (continued)

Fuel Tanks	Fuel on Board at Accident			D Tank Construction				F Spillsafe Fittings			H Fuel Leakage/Rupture				
	A Gallons Estimated	B Gallons Verified	C Other	1 Wet Wing	2 Bladder	3 Metal	E Other	1 Yes	2 No	G Other	1 None	2 Line	3 Fitting	4 Tank	I Other
33 Left Wing															
34 Right Wing															
35 Left Tip															
36 Right Tip															
37 Fuselage															
38 (Specify)															

41 Fuel Found In #1 Engine (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Lines 3 <input type="checkbox"/> Gascolator/strainer 4 <input type="checkbox"/> Carburetor/fuel injector 5 <input type="checkbox"/> Engine driven pump 6 <input type="checkbox"/> Auxiliary fuel pump 7 <input type="checkbox"/> Filter(s) 8 <input type="checkbox"/> Selector valve 9 <input type="checkbox"/> Fuel manifold/spider 10 <input type="checkbox"/> Accumulator tank A Other	42 Fuel Found In #2 Engine (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Lines 3 <input type="checkbox"/> Gascolator/strainer 4 <input type="checkbox"/> Carburetor/fuel injector 5 <input type="checkbox"/> Engine driven pump 6 <input type="checkbox"/> Auxiliary fuel pump 7 <input type="checkbox"/> Filter(s) 8 <input type="checkbox"/> Selector valve 9 <input type="checkbox"/> Fuel manifold/spider 10 <input type="checkbox"/> Accumulator tank A Other
--	--

43 Flight Controls, Evidence or Operational Failure or Malfunction (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Pitch control 3 <input type="checkbox"/> Roll control 4 <input type="checkbox"/> Yaw control A Other	44 Airframe/Structure, Evidence of In-Flight Separation/Failure (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Helicopter (Complete Supp. G) 3 <input type="checkbox"/> General disintegration 4 <input type="checkbox"/> Left wing 5 <input type="checkbox"/> Right wing 6 <input type="checkbox"/> Left stab/elevator 7 <input type="checkbox"/> Right stab/elevator 8 <input type="checkbox"/> Vertical fin/rudder 9 <input type="checkbox"/> Canard 10 <input type="checkbox"/> Powerplant 11 <input type="checkbox"/> Cabin/cargo door A Other	45 Propeller, Evidence of In-Flight Separation/Failure 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	46 Powerplant, Evidence of In-Flight Mechanical Malfunction 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
---	---	---	--

47 Fuel, Evidence of Improper Grade or Contamination (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Improper grade 3 <input type="checkbox"/> Contamination A Other	48 Oil, Evidence of Improper Grade or Contamination (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Improper grade 3 <input type="checkbox"/> Contamination A Other
---	--

Emergency Locator Transmitter (ELT) Information

51 ELT Manufacturer _____ A Other	52 ELT Model No. _____ A Other	53 ELT Battery Type 1 <input type="checkbox"/> Alkaline 2 <input type="checkbox"/> Cadmium 3 <input type="checkbox"/> Nicad 4 <input type="checkbox"/> Nickel 5 <input type="checkbox"/> Lithium A Other	54 ELT Battery Expiration Date (Nos. for M, D, Y) _____ A Other	55 Preimpact ELT Location(s) (Multiple entry) 1 <input type="checkbox"/> Cockpit 2 <input type="checkbox"/> Cabin 3 <input type="checkbox"/> Tailcone 4 <input type="checkbox"/> Empennage 5 <input type="checkbox"/> Raft 6 <input type="checkbox"/> Survival Kit A Other
--	---	---	--	--

56 ELT-Reason for Noneffectiveness/Failure (Multiple entry) 1 <input type="checkbox"/> Operated effectively 2 <input type="checkbox"/> Insufficient G's 3 <input type="checkbox"/> Improper installation 4 <input type="checkbox"/> Battery dead 5 <input type="checkbox"/> Battery corroded 6 <input type="checkbox"/> Battery installation incorrect 7 <input type="checkbox"/> Incorrect battery 8 <input type="checkbox"/> Fire damage 9 <input type="checkbox"/> Impact damage 10 <input type="checkbox"/> Antenna broken/disconnected 11 <input type="checkbox"/> Water submersion 12 <input type="checkbox"/> Unit not armed 13 <input type="checkbox"/> Shielded by wreckage 14 <input type="checkbox"/> Shielded by terrain 15 <input type="checkbox"/> Internal failure 16 <input type="checkbox"/> Test satisfactorily after accident 17 <input type="checkbox"/> Signal direction altered by terrain 18 <input type="checkbox"/> Packing device still installed 19 <input type="checkbox"/> Remote switch off A Other
--

**National Transportation Safety Board
FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement B—Cockpit Documentation, Single and Twin Reciprocating Engine and Unpowered Aircraft

1 Cockpit Secured, Readings Not Pertinent 1 Yes (Go to block 3)

2 Cockpit/Instrument Panel Destroyed 1 Yes (Go to block 3)

Cockpit Instrument Indications—Enter direct in appropriate category

Flight Instruments		Engine/System Instruments	
Item	Reading/Setting	Item	Reading/Setting

Comm/Nav Equipment		Miscellaneous	
Item	Frequency/Remark	Item	Remark

National Transportation Safety Board
FACTUAL REPORT
AVIATION

NTSB Accident/Incident Number

Supplement B—Cockpit Documentation, Single and Twin Reciprocating Engine and Unpowered Aircraft (continued)

3 Navigational Equipment/Displays Installed (Multiple entry) 1 <input type="checkbox"/> OMNI Head(s) 2 <input type="checkbox"/> Glide slope 3 <input type="checkbox"/> HSI 4 <input type="checkbox"/> Flight director 5 <input type="checkbox"/> RMI 6 <input type="checkbox"/> RNAV	7 <input type="checkbox"/> LORAN/Omega/INS 8 <input type="checkbox"/> DME 9 <input type="checkbox"/> ADF 10 <input type="checkbox"/> Marker beacons A Other	4 Autopilot 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Engaged 3 <input type="checkbox"/> Not engaged A Other	5 Digital Electronic/Nav/Com Displays 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed A Other	6 Primary Altimeter Type 1 <input type="checkbox"/> Counter-pointer 2 <input type="checkbox"/> Drum-pointer 3 <input type="checkbox"/> 3-pointer 4 <input type="checkbox"/> 2-pointer A Other
---	---	---	---	---

7 Standby Altimeter Installed 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	8 Radar Altimeter Installed 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	9 Transponder 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed-not used 3 <input type="checkbox"/> Installed-used 4 <input type="checkbox"/> Installed-used-Altitude encoding A Other	10 Attitude Indicator Installed 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
--	--	--	--

11 Attitude Indicator Power Source (Multiple entry) 1 <input type="checkbox"/> Pressure/vacuum system 2 <input type="checkbox"/> Pressure/vacuum system-with backup power source 3 <input type="checkbox"/> Electrical 4 <input type="checkbox"/> Standby indicator with alternate power source A Other	12 Type of Stall Warning Indicator 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Visual/light 3 <input type="checkbox"/> Visual/gauge 4 <input type="checkbox"/> Aural 5 <input type="checkbox"/> Stickshaker A Other	13 Weather Radar/Detection Equipment 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed-on 3 <input type="checkbox"/> Installed-off 4 <input type="checkbox"/> Installed, on/off unknown A Other
---	---	---

14 Type Weather Radar/Detection Equipment (Multiple entry)
 1 Storm scope 2 Black and white radar 3 Color radar A Other

Electrical/System Switches 18 **Switches Destroyed/Inaccessible (Go to block 56)**
 19 **Switch Positions Not Pertinent (Go to block 56)**

Switch/Item	Not Installed	2 On	3 Off	A Other	Pertinent Setting/Remark
20 Electrical Master					
21 Battery					
22 #1 Gen/Alternator					
23 #2 Gen/Alternator					
24 Inverter					
25 Avionics Master					
28 Pitot Heat					
29 Ice Detection					
30 Propeller Deice/Anti-ice					
31 Windshield Deice					
32 Windshield Anti-ice					
33 Airframe Deice					
36 Cabin Air/Fan					
37 Cabin Heater					
38 Air Conditioning					
39 Cabin Pressure Altitude					
40 Cabin Pressure Temperature					
41 Crew Oxygen					
42 Cabin/Passenger Oxygen					
45 Taxi Lights					
46 Landing Lights					
47 Rotating Beacon					

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement B—Cockpit Documentation, Single and Twin Reciprocating Engine and Unpowered Aircraft (continued)

Electrical/System Switches (continued)

Switch/Item	1 Not Installed	2 On	3 Off	A Other	Pertinent Setting/Remark
48 Strobes					
49 Navigation Lights					
50 Instrument Panel Lights					
51 Cockpit/Storm Lights					
52 Cabin Lights					
53 ELT Remote					

Engine Controls-No. 1 Engine

56 Engine Control Positions Not Pertinent (Go to block 65)

57 Throttle Position 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full forward 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle A Other	58 Propeller 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full increase (Low pitch) 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Full decrease (High pitch) 5 <input type="checkbox"/> Feather A Other	59 Mixture 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full rich 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle cutoff A Other	60 Carburetor Heat 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full on 3 <input type="checkbox"/> Partial 4 <input type="checkbox"/> Off A Other
61 Alternate Air 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other	62 Cowl Flaps 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other	63 Magneto Switch Position 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Both 3 <input type="checkbox"/> Left 4 <input type="checkbox"/> Right 5 <input type="checkbox"/> Off 6 <input type="checkbox"/> Start A Other	64 Throttle Friction 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Tight 3 <input type="checkbox"/> Loose A Other

Engine Controls-No. 2 Engine

65 Engine Control Positions Not Pertinent (Go to block 74)

66 Throttle Position 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full forward 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle A Other	67 Propeller 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full increase (Low pitch) 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Full decrease (High pitch) 5 <input type="checkbox"/> Feather A Other	68 Mixture 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full rich 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle cutoff A Other	69 Carburetor Heat 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full on 3 <input type="checkbox"/> Partial 4 <input type="checkbox"/> Off A Other
70 Alternate Air 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other	71 Cowl Flaps 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other	72 Magneto Switch Position 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Both 3 <input type="checkbox"/> Left 4 <input type="checkbox"/> Right 5 <input type="checkbox"/> Off 6 <input type="checkbox"/> Start A Other	73 Throttle Friction 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Tight 3 <input type="checkbox"/> Loose A Other

National Transportation Safety Board

NTSB Accident/Incident Number

**FACTUAL REPORT
AVIATION**

Supplement C—Wreckage Documentation, Multi-(3 or more) Reciprocating Engine and Turbine-Powered Aircraft

Landing Gear Position		1 Nose/Tail 1 <input type="checkbox"/> Up 2 <input type="checkbox"/> Down 3 <input type="checkbox"/> Intermediate A Other	2 Left Main 1 <input type="checkbox"/> Up 2 <input type="checkbox"/> Down 3 <input type="checkbox"/> Intermediate A Other	3 Right Main 1 <input type="checkbox"/> Up 2 <input type="checkbox"/> Down 3 <input type="checkbox"/> Intermediate A Other	4 Body Gear 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Up 3 <input type="checkbox"/> Down 4 <input type="checkbox"/> Intermediate A Other		
Landing Gear Damage	A Impact			B Fire			
		1 Destroyed	2 Substantial	3 Minor/None	1 Destroyed	2 Substantial	3 Minor/None
	5 Nose/tail						
	6 Left/main						
7 Right/main							
Trailing Edge Flap Positions	8 Left Inboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	9 Left Outboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	10 Right Inboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	11 Right Outboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other			
Leading Edge Flap Positions	13 Left Inboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	14 Left Outboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	15 Right Inboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	16 Right Outboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	12 <input type="checkbox"/> Not Installed (Go to block 17)		
Leading Edge Slat Position	18 Left Inboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	19 Left Outboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	20 Right Inboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	21 Right Outboard 1 <input type="checkbox"/> Up A Down _____ deg. B Other	17 <input type="checkbox"/> Not Installed (Go to block 22)		
Spoiler Positions	23 Flight Spoilers-Left 1 <input type="checkbox"/> Stowed 2 <input type="checkbox"/> Deployed A Other	24 Flight Spoilers-Right 1 <input type="checkbox"/> Stowed 2 <input type="checkbox"/> Deployed A Other	25 Ground Spoilers-Left 1 <input type="checkbox"/> Stowed 2 <input type="checkbox"/> Deployed A Other	26 Ground Spoilers-Right 1 <input type="checkbox"/> Stowed 2 <input type="checkbox"/> Deployed A Other	22 <input type="checkbox"/> Not Installed (Go to block 27)		
Trim Tab Positions (Multiple entry)	28 Left Aileron 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Neutral 3 <input type="checkbox"/> Up 4 <input type="checkbox"/> Down A _____ deg. B Other	29 Right Aileron 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Neutral 3 <input type="checkbox"/> Up 4 <input type="checkbox"/> Down A _____ deg. B Other	30 Upper Rudder 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Neutral 3 <input type="checkbox"/> Left 4 <input type="checkbox"/> Right A _____ deg. B Other	31 Lower Rudder 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Neutral 3 <input type="checkbox"/> Left 4 <input type="checkbox"/> Right A _____ deg. B Other	32 Elevator/Stab. 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Neutral 3 <input type="checkbox"/> Up 4 <input type="checkbox"/> Down A _____ deg. B Other		
Cargo Restraint System(s) (Multiple entry for each block)	33 Cargo Restraint Installed 1 <input type="checkbox"/> None (Go to block 36) 2 <input type="checkbox"/> Cargo net 3 <input type="checkbox"/> Straps/tie down A Other		34 Cargo Restraint Used 1 <input type="checkbox"/> None (Go to block 36) 2 <input type="checkbox"/> Cargo net 3 <input type="checkbox"/> Straps/tie down A Other		35 Cargo Restraint Failed 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Cargo net 3 <input type="checkbox"/> Straps/tie down A Other		
36 Airframe/Structure, Evidence of In-flight Separation/Failure (Multiple entry)							
1 <input type="checkbox"/> None	5 <input type="checkbox"/> Right wing	9 <input type="checkbox"/> Canard	13 <input type="checkbox"/> Cabin door(s)				
2 <input type="checkbox"/> Helicopter (Complete Supplement G)	6 <input type="checkbox"/> Left stab/elevator	10 <input type="checkbox"/> Tail cone	14 <input type="checkbox"/> Cargo door(s)				
3 <input type="checkbox"/> General disintegration	7 <input type="checkbox"/> Right stab/elevator	11 <input type="checkbox"/> Powerplant	A Specify _____				
4 <input type="checkbox"/> Left wing	8 <input type="checkbox"/> Vertical fin/rudder	12 <input type="checkbox"/> Powerplant nacelle	B Other				

**National Transportation Safety Board
FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement C—Wreckage Documentation, Multi-(3 or more) Reciprocating Engine and Turbine-Powered Aircraft (continued)

39 Flight Control System, Evidence of Operational Failure or Malfunction (Multiple entry)

- 1 None
 2 Pitch Control
 3 Roll control
 4 Yaw control
 A Specify _____
 B Other _____

40 Aircraft STOL Modification Installed

- 1 Yes
 2 No
 A Other _____

Computed Weight and Balance Information— Complete when weight and/or center of gravity limitations are exceeded. Otherwise, go to block 51.

Takeoff

45 Weight _____ Lbs.	46 Center of Gravity A _____ % MAC or B _____ Inches	47 CG Range (Multiple entry) 1 <input type="checkbox"/> At takeoff weight 2 <input type="checkbox"/> At max gross weight A _____ % MAC to _____ MAC or B _____ Inches to _____ Inches
--------------------------------	---	--

Accident

48 Weight _____ Lbs.	49 Center of Gravity A _____ % MAC or B _____ Inches	50 CG Range (Multiple entry) 1 <input type="checkbox"/> At takeoff weight 2 <input type="checkbox"/> At accident weight A _____ % MAC to _____ MAC or B _____ Inches to _____ Inches	51 Fuel On Board at Accident 1 <input type="checkbox"/> Estimated 2 <input type="checkbox"/> Verified A _____ Gallons B _____ Pounds C Other _____
--------------------------------	---	---	---

Fuel Tanks	Fuel On Board at Accident			D Tank Construction				F Spillsafe Fittings			H Fuel Leakage/Rupture				
	A Gallons Estimated	B Gallons Verified	C Other	1 Wet Wing	2 Bladder	3 Metal	E Other	1 Yes	2 No	G Other	1 None	2 Line	3 Fitting	4 Tank	I Other
52 Left Wing															
53 Right Wing															
54 Left Tip															
55 Right Tip															
56 Fuselage															
57 (Specify)															

Engine/Propeller Historical Information

Engines	A Engine #1	B Engine #2	C Engine #3	D Engine #4	E Other
60 Serial Number					
61 Hours, Total					
62 Date, Last Overhaul (Nos. for M, D, Y)					
63 Hours, Since Last Overhaul					
64 Date, Last Inspection (Nos. for M, D, Y)					
65 Hours, Since Last Inspection					

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement C—Wreckage Documentation, Multi-(3 or more) Reciprocating Engine and Turbine-Powered Aircraft (continued)

Propellers ⁶⁸ Not installed (Go to block 85)	A Engine #1	B Engine #2	C Engine #3	D Engine #4	E Other
69 Propeller Manufacturer					
70 Propeller Model/Series Number					
71 Hours, Total					
72 Hours, Since Overhaul					
73 Date, Last Overhaul (Nos. for M. D. Y)					
74 Hours, Since Last Inspection					
75 Date, Last Inspection (Nos. for M. D. Y)					
78 Propeller Type (Multiple entry)		79 Engine Supercharger Installed		80 Engine Turbocharger Installed	
1 <input type="checkbox"/> None installed 2 <input type="checkbox"/> Metal 3 <input type="checkbox"/> Composite 4 <input type="checkbox"/> Constant speed-controllable pitch 5 <input type="checkbox"/> Reversible 6 <input type="checkbox"/> Full automatic feathering 7 <input type="checkbox"/> Full manual feathering A Other		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	
Firewall Valve Shutoff Position			85 <input type="checkbox"/> Not installed (Go to block 90)		
86 Engine #1		87 Engine #2		88 Engine #3	
1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed A Other		1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed A Other		1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed A Other	
89 Engine #4		90 <input type="checkbox"/> Not installed (Go to block 97)			
Thrust Reverser Position					
	1 Open	2 Closed	3 Intermediate	A Other	
91 #1 Engine					
92 #2 Engine					
93 #3 Engine					
94 #4 Engine					
97 Fuel Found In #1 Engine (Multiple entry)			98 Fuel Found In #2 Engine (Multiple entry)		
1 <input type="checkbox"/> None 2 <input type="checkbox"/> Lines 3 <input type="checkbox"/> Strainer 4 <input type="checkbox"/> Fuel control 5 <input type="checkbox"/> Carburetor/fuel injector 6 <input type="checkbox"/> Engine driven pump 7 <input type="checkbox"/> Aux fuel pump 8 <input type="checkbox"/> Filter(s) 9 <input type="checkbox"/> Selector valve 10 <input type="checkbox"/> Fuel manifold/spider A Other			1 <input type="checkbox"/> None 2 <input type="checkbox"/> Lines 3 <input type="checkbox"/> Strainer 4 <input type="checkbox"/> Fuel control 5 <input type="checkbox"/> Carburetor/fuel injector 6 <input type="checkbox"/> Engine driven pump 7 <input type="checkbox"/> Aux fuel pump 8 <input type="checkbox"/> Filter(s) 9 <input type="checkbox"/> Selector valve 10 <input type="checkbox"/> Fuel manifold/spider A Other		

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement C—Wreckage Documentation, Multi-(3 or more) Reciprocating Engine and Turbine-Powered Aircraft (continued)

99 Fuel Found In #3 Engine (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Lines 3 <input type="checkbox"/> Strainer 4 <input type="checkbox"/> Fuel control 5 <input type="checkbox"/> Carburetor/fuel injector 6 <input type="checkbox"/> Engine driven pump 7 <input type="checkbox"/> Aux fuel pump 8 <input type="checkbox"/> Filter(s) 9 <input type="checkbox"/> Selector valve 10 <input type="checkbox"/> Fuel manifold/spider A Other		100 Fuel Found In #4 Engine (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Lines 3 <input type="checkbox"/> Strainer 4 <input type="checkbox"/> Fuel control 5 <input type="checkbox"/> Carburetor/fuel injector 6 <input type="checkbox"/> Engine driven pump 7 <input type="checkbox"/> Aux fuel pump 8 <input type="checkbox"/> Filter(s) 9 <input type="checkbox"/> Selector valve 10 <input type="checkbox"/> Fuel manifold/spider A Other	
101 Fuel Samples Analyzed 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	102 Fuel, Evidence of Improper Grade or Contamination (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Improper Grade 3 <input type="checkbox"/> Contamination A Other	103 Lube Oil Analyzed 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	104 Lube Oil, Evidence of Improper Grade or Contamination (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Improper Grade 3 <input type="checkbox"/> Contamination A Other
105 Engine In-flight Failure (Multiple entry) 1 <input type="checkbox"/> No 2 <input type="checkbox"/> Yes 3 <input type="checkbox"/> Rotational 4 <input type="checkbox"/> Explosion A Other	106 Engine Failure Position (Multiple entry) 1 <input type="checkbox"/> #1 2 <input type="checkbox"/> #2 3 <input type="checkbox"/> #3 4 <input type="checkbox"/> #4 A Other	107 Failure Contained 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	108 Engine In-flight Fire (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> #1 Engine 3 <input type="checkbox"/> #2 Engine 4 <input type="checkbox"/> #3 Engine 5 <input type="checkbox"/> #4 Engine A Other

ELT (Emergency Locator Transmitter) Information

112 Preimpact Location of ELT's (Multiple entry) (Enter number by location) A Cockpit _____ D Raft _____ B Cabin _____ E Survival kit _____ C Empennage _____ F Other _____	113 Reason(s) for ELT Failure/Noneffectiveness (Enter codes from list below by ELT location) (Multiple entry) A Cockpit _____ C Empennage _____ E Survival kit _____ B Cabin _____ D Raft _____ F Other _____
--	---

- Reason(s) for Noneffectiveness/Failure (ELT choices for block 113)**
- | | | | |
|----------------------------------|--------------------------------|---|-----------------------------------|
| 01 Insufficient G's | 07 Fire damage | 12 Shielded by wreckage | 17 Packing device still installed |
| 02 Improper installation | 08 Impact damage | 13 Shielded by terrain | 18 Remote switch off |
| 03 Battery corroded | 09 Antenna broken/disconnected | 14 Internal failure | |
| 05 Battery installed incorrectly | 10 Water submersion | 15 Tested satisfactorily after accident | |
| 06 Incorrect battery | 11 Unit not armed | 16 Signal direction altered by terrain | |

114 ELT Manufacturer, Fixed ELT's _____ A Other	115 ELT Model No., Fixed ELT's _____ A Other	116 ELT Battery Type, Fixed ELT's 1 <input type="checkbox"/> Alkaline 2 <input type="checkbox"/> Cadmium 3 <input type="checkbox"/> Ni/Cad 4 <input type="checkbox"/> Nickel 5 <input type="checkbox"/> Lithium A Other	117 Battery Expiration Date, Fixed ELT's (Nos. for M, D, Y) _____ A Other
118 ELT Manufacturer, Raft ELT's _____ A Other	119 ELT Model No., Raft ELT's _____ A Other	120 ELT Battery Type, Raft ELT's 1 <input type="checkbox"/> Alkaline 2 <input type="checkbox"/> Cadmium 3 <input type="checkbox"/> Ni/Cad 4 <input type="checkbox"/> Nickel 5 <input type="checkbox"/> Lithium A Other	121 Battery Expiration Date, Raft ELT's (Nos. for M, D, Y) _____ A Other

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement D— Cockpit Documentation, Multi (3 or more) Reciprocating Engine and Turbine Powered Aircraft

1 Cockpit Secured, Readings Not Pertinent Yes (Go to block 3)

2 Cockpit/Instrument Panel Destroyed Yes (Go to block 3)

Cockpit Instrument Indications—

Enter direct in appropriate category

Flight Instruments

Engine Instruments

Item

Reading/Setting

Item

Reading/Setting

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement D— Cockpit Documentation, Multi (3 or more) Reciprocating Engine and Turbine Powered Aircraft (continued)

Cockpit Instrument Indications (continued)—

Enter direct in appropriate category

Aircraft System Instrumentation

Communications and Navigation Equipment

Item

Reading/Setting

Item

Frequency/Setting/Reading

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement D— Cockpit Documentation: Multi (3 or more) Reciprocating Engine and Turbine Powered Aircraft (continued)

Aircraft Equipment

3 Aircraft Certificated For Two-Pilot Operation 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other		4 Autopilot 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Engaged 3 <input type="checkbox"/> Not engaged A Other		5 Digital Electronic Nav/Comm Displays 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed A Other		6 Heads Up Display 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> In use 3 <input type="checkbox"/> Not in use A Other			
7 Nav Equipment/Displays Installed (Multiple entry) 1 <input type="checkbox"/> OMNI heads 2 <input type="checkbox"/> Glide slope 3 <input type="checkbox"/> HSI 4 <input type="checkbox"/> Flight director 5 <input type="checkbox"/> RMI 6 <input type="checkbox"/> RNAV 7 <input type="checkbox"/> INS 8 <input type="checkbox"/> VLF/Omega 9 <input type="checkbox"/> LORAN 10 <input type="checkbox"/> DME 11 <input type="checkbox"/> ADF 12 <input type="checkbox"/> Marker beacons A Other				8 Left Panel Altimeter Type 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Counter/pointer 3 <input type="checkbox"/> Drum/pointer 4 <input type="checkbox"/> 3-pointer 5 <input type="checkbox"/> 2-pointer A Other		9 Right Panel Altimeter Type 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Counter/pointer 3 <input type="checkbox"/> Drum/pointer 4 <input type="checkbox"/> 3-pointer 5 <input type="checkbox"/> 2-pointer A Other		10 Standby Altimeter 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed A Other 11 Radar Altimeter 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed A Other	
12 Angle of Attack Indicator 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed A Other		13 Attitude Indicators Installed and Operating (Multiple entry) 1 <input type="checkbox"/> Left position 2 <input type="checkbox"/> Right position 3 <input type="checkbox"/> None operating A Other		14 Primary Attitude Indicator Power Source (Multiple entry) 1 <input type="checkbox"/> Pressure/vacuum system 2 <input type="checkbox"/> Pressure/vacuum system with backup power source 3 <input type="checkbox"/> Electrical 4 <input type="checkbox"/> Standby indicator with alternate power source A Other			15 Type of Stall Warning Indicator (Multiple entry) 1 <input type="checkbox"/> Visual/light 2 <input type="checkbox"/> Visual/gauge 3 <input type="checkbox"/> Aural 4 <input type="checkbox"/> Stickpusher 5 <input type="checkbox"/> Stickshaker A Other		
16 Stall Warning System Capable of Operation 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Partial A Other			17 Transponder 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed-not used 3 <input type="checkbox"/> Installed-used 4 <input type="checkbox"/> Installed-used-altimeter encoding A Other			18 Weather Radar/Detection Equipment 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed-on 3 <input type="checkbox"/> Installed-off 4 <input type="checkbox"/> Installed, on/off unknown A Other			
19 Weather Radar 1 <input type="checkbox"/> Operative 2 <input type="checkbox"/> Inoperative A Other		20 Type Weather Radar/Detection Equipment 1 <input type="checkbox"/> Storm scope 2 <input type="checkbox"/> Black and white radar 3 <input type="checkbox"/> Color radar A Other							

Electric/System Switches

24 Switches Destroyed/Inaccessible (Go to block 76)
 25 Switch Positions Not Pertinent (Go to block 76)

Switch/Item				A Other	Pertinent Setting/Remark
	1 Not Installed	2 On	3 Off		
26 Electrical Master					
27 Battery					
28 APU					
29 #1 Gen/Alternator					
30 #2 Gen/Alternator					
31 #3 Gen/Alternator					
32 #4 Gen/Alternator					
33 Inverter					
34 Avionics Master					
37 Pitot Heat					
38 Engine/Nacelle Anti-ice					
39 Engine Deice					
40 Ice Detection					

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement D— Cockpit Documentation, Multi (3 or more) Reciprocating Engine and Turbine Powered Aircraft (continued)

Electric/System Switches (continued)

Switch/Item				A Other (Enter code)	Pertinent Setting/Remark
	1 Not Installed	2 On	3 Off		
41 Propeller Deice/Anti-Ice					
42 Windshield Deice					
43 Windshield Anti-Ice					
44 Airframe Deice					
47 Cockpit Air/Fan					
48 Cabin Air/Fan					
49 Cabin Heater					
50 Air Conditioning					
51 Cabin Pressure Altitude					
52 Cabin Pressure Temperature					
53 Crew Oxygen					
54 Cabin/Passenger Oxygen					
57 Taxi Lights					
58 Landing Lights					
59 Rotating Beacon					
60 Strobes					
61 Navigation Lights					
62 Instrument Panel Lights					
63 Cockpit/Storm Lights					
64 Cabin Lights					
65 Seat Belt Light					
66 No Smoking Light					
67 ELT Remote					
70 Antiskid System					
71 Ground Proximity Warning					
72 Altitude Alert					
73 Collision Avoidance System					

Engine Controls—No. 1 Engine

76 Engine Control Positions Not Pertinent (Go to No. 2 Engine)

77 Throttle 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full forward 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle A Other	78 Condition/Power 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full forward 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle 5 <input type="checkbox"/> Reverse 6 <input type="checkbox"/> Off A Other	79 Mixture 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full rich 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle cutoff 5 <input type="checkbox"/> Auto A Other	80 Propeller 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Power range 3 <input type="checkbox"/> Reverse 4 <input type="checkbox"/> Feather 5 <input type="checkbox"/> Beta A Other	81 Carburetor Heat 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full on 3 <input type="checkbox"/> Partial 4 <input type="checkbox"/> Off A Other	82 Alternate Air 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other
83 Cowl Flaps 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other	84 Magneto Switch Position 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Both 3 <input type="checkbox"/> Left 4 <input type="checkbox"/> Right 5 <input type="checkbox"/> Off A Other	85 Auto Ignition 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> On 3 <input type="checkbox"/> Off A Other	86 Auto Feather 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> On 3 <input type="checkbox"/> Off A Other	87 Throttle Quadrant Friction 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Tight 3 <input type="checkbox"/> Loose A Other	

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement D— Cockpit Documentation, Multi (3 or more) Reciprocating Engine and Turbine Powered Aircraft (continued)

Engine Controls—No. 2 Engine

88 Engine Control Positions Not Pertinent (Go to No. 3 Engine)

89 Throttle 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full forward 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle A Other	90 Condition/Power 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full forward 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle 5 <input type="checkbox"/> Reverse 6 <input type="checkbox"/> Off A Other	91 Mixture 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full rich 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle cutoff 5 <input type="checkbox"/> Auto A Other	92 Propeller 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Power range 3 <input type="checkbox"/> Reverse 4 <input type="checkbox"/> Feather 5 <input type="checkbox"/> Beta A Other	93 Carburetor Heat 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full on 3 <input type="checkbox"/> Partial 4 <input type="checkbox"/> Off A Other	94 Alternate Air 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other
95 Cowl Flaps 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other	96 Magneto Switch Position 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Both 3 <input type="checkbox"/> Left 4 <input type="checkbox"/> Right 5 <input type="checkbox"/> Off A Other	97 Auto Ignition 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> On 3 <input type="checkbox"/> Off A Other	98 Auto Feather 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> On 3 <input type="checkbox"/> Off A Other	99 Throttle Quadrant Friction 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Tight 3 <input type="checkbox"/> Loose A Other	

Engine Controls—No. 3 Engine

100 Engine Control Positions Not Pertinent (Go to No. 4 Engine)

101 Throttle 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full forward 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle A Other	102 Condition/Power 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full forward 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle 5 <input type="checkbox"/> Reverse 6 <input type="checkbox"/> Off A Other	103 Mixture 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full rich 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle cutoff 5 <input type="checkbox"/> Auto A Other	104 Propeller 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Power range 3 <input type="checkbox"/> Reverse 4 <input type="checkbox"/> Feather 5 <input type="checkbox"/> Beta A Other	105 Carburetor Heat 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full on 3 <input type="checkbox"/> Partial 4 <input type="checkbox"/> Off A Other	106 Alternate Air 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other
107 Cowl Flaps 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other	108 Magneto Switch Position 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Both 3 <input type="checkbox"/> Left 4 <input type="checkbox"/> Right 5 <input type="checkbox"/> Off A Other	109 Auto Ignition 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> On 3 <input type="checkbox"/> Off A Other	110 Auto Feather 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> On 3 <input type="checkbox"/> Off A Other	111 Throttle Quadrant Friction 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Tight 3 <input type="checkbox"/> Loose A Other	

Engine Controls—No. 4 Engine

112 Engine Control Positions Not Pertinent (Go to block 124)

113 Throttle 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full forward 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle A Other	114 Condition/Power 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full forward 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle 5 <input type="checkbox"/> Reverse 6 <input type="checkbox"/> Off A Other	115 Mixture 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full rich 3 <input type="checkbox"/> Midrange 4 <input type="checkbox"/> Idle cutoff 5 <input type="checkbox"/> Auto A Other	116 Propeller 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Power range 3 <input type="checkbox"/> Reverse 4 <input type="checkbox"/> Feather 5 <input type="checkbox"/> Beta A Other	117 Carburetor Heat 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Full on 3 <input type="checkbox"/> Partial 4 <input type="checkbox"/> Off A Other	118 Alternate Air 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other
119 Cowl Flaps 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Open 3 <input type="checkbox"/> Closed 4 <input type="checkbox"/> Midrange A Other	120 Magneto Switch Position 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Both 3 <input type="checkbox"/> Left 4 <input type="checkbox"/> Right 5 <input type="checkbox"/> Off A Other	121 Auto Ignition 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> On 3 <input type="checkbox"/> Off A Other	122 Auto Feather 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> On 3 <input type="checkbox"/> Off A Other	123 Throttle Quadrant Friction 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Tight 3 <input type="checkbox"/> Loose A Other	

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement D— Cockpit Documentation, Multi (3 or more) Reciprocating Engine and Turbine Powered Aircraft (continued)

Landing Gear Controls/Indicators and Flight Control/Indicators

<p>124 Landing Gear Control</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Up 3 <input type="checkbox"/> Down 4 <input type="checkbox"/> Neutral/off A Other</p>	<p>125 Landing Gear Indicator</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Up 3 <input type="checkbox"/> Down 4 <input type="checkbox"/> Transit/unsafe A Other</p>	<p>126 Trailing Edge Flap Control</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Up A Down _____ deg. B Other</p>	<p>127 Trailing Edge Flap Indicator</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Up A Down _____ deg. B Other</p>	
<p>128 Leading Edge Flap Control</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Up A Down _____ deg. B Other</p>	<p>129 Leading Edge Flap Indicator</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Up A Down _____ deg. B Other</p>	<p>130 Leading Edge Slat Control</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Up A Down _____ deg. B Other</p>	<p>131 Leading Edge Slat Indicator</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Up A Down _____ deg. B Other</p>	
<p>132 Flight Spoiler Control</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Stowed 3 <input type="checkbox"/> Deployed A Other</p>	<p>133 Ground Spoiler Control</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Stowed 3 <input type="checkbox"/> Armed 4 <input type="checkbox"/> Deployed A Other</p>	<p>134 Drag Chute</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Stowed 3 <input type="checkbox"/> Deployed A Other</p>	<p>135 Autothrottle</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Engaged 3 <input type="checkbox"/> Not engaged A Other</p>	<p>136 Dual Controls</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed A Other</p>
<p>137 Elevator/Stab Trim Control</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Up 3 <input type="checkbox"/> Down 4 <input type="checkbox"/> Neutral A Other</p>	<p>138 Aileron Trim Indicator</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Left 3 <input type="checkbox"/> Right 4 <input type="checkbox"/> Neutral A Other</p>	<p>139 Upper Rudder Trim Indicator</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Left 3 <input type="checkbox"/> Right 4 <input type="checkbox"/> Neutral A Other</p>	<p>140 Lower Rudder Trim Indicator</p> <p>1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Left 3 <input type="checkbox"/> Right 4 <input type="checkbox"/> Neutral A Other</p>	

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement F—Pilot/Second Pilot Training and Proficiency

Pilot In Command Information 1 If pertinent certificate or rating obtained more than 2 years previous to accident, mark "X" here and proceed to block 10.

2 Certificate and/or Rating For Which Data Elements 3-9 Pertain. (Multiple entry)
 1 Student 4 ATP 7 Single engine 10 Rotorcraft 13 Type rating
 2 Private 5 Instructor 8 Multiengine 11 Glider A Other
 3 Commercial 6 Instrument 9 Seaplane 12 Lighter Than Air (LTA) A Other

3 Total Flight Hours When Certificate Rating Obtained

 A Other _____

4 Source of Flight Training
 1 14 CFR 61 3 Military
 2 14 CFR 141 A Other

5 Recommending Flight Instructor Certificate #

 A Other _____

6 Recommending Flight Instructor Status
 1 Part-time
 2 Full-time A Other _____

7 Flight Examiner (Multiple entry)
 1 FAA employee 3 Company employee
 2 FAA designee A Other

8 Flight Examiner #

 A Other _____

9 Flight School Certificate #

 A Other _____

Recency of Experience (Complete only items related to accident.)

	A Weeks Since Last		B Other		C FLT Hours Since Last		D Other		E Done on FLT Check			F Done on BFR		
	1	2	1	2	1	2	1	2	1	2	Other	1	2	Other
10 Tailwheel Landing														
11 Crosswind Takeoff/Landing														
12 Short field Takeoff/Landing														
13 Go-Around														
14 Actual/Simulated Instrument														
15 Instrument Approach-Precision														
16 Instrument Approach-Nonprecision														
17 Unusual Attitude Practice														
18 Stall Practice														
19 Spin														
20 Sim/Act Engine Out In Multiengine														
21 Simulated Forced Landing														
22 180 Degree Accuracy Landing														
23 Autorotation														
24 Mountain flying														

25 Prior Experience in Geographical Area Last Year
 1 Yes
 2 No
 A Other _____

26 Prior Experience at Airport/Airstrip Last Year
 1 Yes
 2 No
 A Other _____

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement G—Rotorcraft

1 Main Rotor Blade Type

- 1 Wood
- 2 Metal
- 3 Composite
- A Other

2 Tail Rotor Blade Type

- 1 Wood
- 2 Metal
- 3 Composite
- A Other

3 Auxiliary Fuel Tanks

- 1 None
- 2 Internal
- 3 External
- A Other

4 IFR Certification

- 1 Single pilot
- 2 Dual Pilot IFR
- 3 None
- A Other

5 Stability Augmentation System

- 1 Not installed
- 2 On
- 3 Off
- 4 On/off unknown
- A Other

6 Engine Out Warning

- 1 Not installed
- 2 On
- 3 Off
- 4 On/off unknown
- A Other

7 Low Rotor Speed Warning

- 1 Not installed
- 2 On
- 3 Off
- 4 On/off unknown
- A Other

8 External Load Operations (Multiple entry)

- 1 Yes
- 2 No (Go to block 16)
- 3 Holds FAR 133 certificate
- A Other

9 Type External Load Operation

- 1 Construction
- 2 Aerial Application
- 3 Logging
- 4 Medevac
- 5 Aerial survey
- A Specify _____
- B Other

10 Long Line

- 1 Yes
- 2 No (Go to block 13)
- A Other

11 Length of Long Line

_____ Feet
A Other

12 Load Cell/Computer Utilized

- 1 Yes
- 2 No
- A Other

13 Weight of External Load

- 1 Estimated
- 2 Verified
- A _____ Lbs.
- B Other

14 Load Jettisoned (Multiple entry)

- 1 External load
- 2 Long line
- A Other

15 Landing Area (Multiple entry)

- 1 Level
- 2 Pinnacle
- 3 Confined area
- A Slope _____ deg.
- B Other

16 Obstructions

- 1 Trees
- 2 Wires/poles
- 3 Buildings/construction
- 4 Equipment/vehicles
- 5 Terrain
- A Specify _____
- B Other

17 Component Separation in Flight (Multiple entry)

- 1 None
- 2 General disintegration
- 3 Tailboom/cone
- 4 Stabilizer
- 5 Main rotor blade(s)
- 6 Main rotor hub assembly
- 7 Tail rotor blade(s)
- 8 Tail rotor hub assembly
- 9 Main transmission
- 10 Intermediate gear box
- 11 Tail rotor gear box
- 12 Vertical fin/pylon
- 13 Skids/Float(s)
- 14 Door(s)
- A Other

18 Component Separation Postimpact (Multiple entry)

- 1 None
- 2 General disintegration
- 3 Tailboom/cone
- 4 Stabilizer
- 5 Main rotor blade(s)
- 6 Main rotor hub assembly
- 7 Tail rotor blade(s)
- 8 Tail rotor hub assembly
- 9 Main transmission
- 10 Intermediate gear box
- 11 Tail rotor gear box
- 12 Vertical fin/pylon
- 13 Skids/Float(s)
- 14 Door(s)
- A Other

**National Transportation Safety Board
FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement H—Aerial Application

1 Total Time (Aerial Application) _____ Hours A Other		2 Last 30 Days (Aerial Application) _____ Hours A Other		3 Last 24 Hours (Aerial Application) _____ Hours A Other	
4 Total Night Time (Aerial Application) <i>(If N/A, go to block 7)</i> _____ Hours A Other		5 Total Night, Last 30 Days (Aerial Application) _____ Hours A Other		6 Total Night, Last 24 Hours (Aerial Application) _____ Hours A Other	
7 Type of Chemical Used 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Dry chemical-toxic 3 <input type="checkbox"/> Dry chemical-non-toxic 4 <input type="checkbox"/> Liquid chemical-toxic 5 <input type="checkbox"/> Liquid chemical-non-toxic A Other		8 Name of Chemical _____ A Other		9 Toxic Effect 1 <input type="checkbox"/> Pilot not affected 2 <input type="checkbox"/> Pilot affected in flight 3 <input type="checkbox"/> Pilot affected prior to flight 4 <input type="checkbox"/> Pilot affected postcrash A Other	
10 Duration of Exposure (Last 24 hours) A _____ Hours B _____ Minutes C Other		11 Antidotes 1 <input type="checkbox"/> Not available 2 <input type="checkbox"/> Available-not used 3 <input type="checkbox"/> Available-used A Other		12 Respirator 1 <input type="checkbox"/> Not available 2 <input type="checkbox"/> Available-not used 3 <input type="checkbox"/> Available-used A Other	
13 Gloves 1 <input type="checkbox"/> Not used 2 <input type="checkbox"/> Used A Other	14 Goggles 1 <input type="checkbox"/> Not used 2 <input type="checkbox"/> Used A Other	15 Helmet 1 <input type="checkbox"/> Not used 2 <input type="checkbox"/> Used A Other	16 Crash Pad 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed A Other	17 Crash Bar 1 <input type="checkbox"/> Not installed 2 <input type="checkbox"/> Installed A Other	
18 Tank/Hopper (Multiple entry) 1 <input type="checkbox"/> Forward of pilot 2 <input type="checkbox"/> Aft of pilot 3 <input type="checkbox"/> Wings 4 <input type="checkbox"/> Belly 5 <input type="checkbox"/> Sides 6 <input type="checkbox"/> Sling loaded A Other		19 Obstructions (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Trees 3 <input type="checkbox"/> Wires/poles 4 <input type="checkbox"/> Fences 5 <input type="checkbox"/> Buildings 6 <input type="checkbox"/> Towers A Other		20 Terrain Being Treated (Multiple entry) 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Rolling 3 <input type="checkbox"/> Hilly 4 <input type="checkbox"/> Mountainous 5 <input type="checkbox"/> Swampy 6 <input type="checkbox"/> Dense-trees A Other	
21 Swath Run—Relative Wind 1 <input type="checkbox"/> Crosswind 2 <input type="checkbox"/> Upwind 3 <input type="checkbox"/> Downwind 4 <input type="checkbox"/> Wind calm A Other		22 Procedure Turnaround 1 <input type="checkbox"/> Not in procedure turnaround 2 <input type="checkbox"/> Entry to procedure turn 3 <input type="checkbox"/> First 1/3 of turn 4 <input type="checkbox"/> Second 1/3 of turn 5 <input type="checkbox"/> Third 1/3 of turn A Other		23 Pilot Survey of Area (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> In-flight 3 <input type="checkbox"/> On ground A Other	

National Transportation Safety Board

FACTUAL REPORT
AVIATION

NTSB Accident/Incident Number

Supplement I—Crash Kinematics

1 Accident Site Geographic Coordinates—Latitude (Multiple entry)

- 1 North A _____ deg. _____ minutes
2 South B Other

2 Accident Site Geographic Coordinates—Longitude (Multiple entry)

- 1 East A _____ deg. _____ minutes
2 West B Other

3 Impact Sequence—(Number in sequence. Multiple entry.)

- | | | | |
|--|--|--|--|
| 1 <input type="checkbox"/> None | 7 <input type="checkbox"/> Ground | 13 <input type="checkbox"/> Trees/limbs 12" diam. and up | 19 <input type="checkbox"/> Runway light |
| 2 <input type="checkbox"/> Rock face | 8 <input type="checkbox"/> Dirt bank | 14 <input type="checkbox"/> Frangible approach aid | 20 <input type="checkbox"/> Water |
| 3 <input type="checkbox"/> Rigid structure | 9 <input type="checkbox"/> Scrub tree | 15 <input type="checkbox"/> Non-frangible approach aid | 21 <input type="checkbox"/> Wire |
| 4 <input type="checkbox"/> Rocks to 1' diam. | 10 <input type="checkbox"/> Trees/limbs to 6" diam. | 16 <input type="checkbox"/> Submerged obstacle | 22 <input type="checkbox"/> Pole |
| 5 <input type="checkbox"/> Rocks 1'-2' diam. | 11 <input type="checkbox"/> Trees/limbs 6"-9" diam. | 17 <input type="checkbox"/> Vehicle | 23 <input type="checkbox"/> Snow bank |
| 6 <input type="checkbox"/> Rocks > 2' diam. | 12 <input type="checkbox"/> Trees/limbs 9"-12" diam. | 18 <input type="checkbox"/> Aircraft | A Other |

4 Terrain at Principal Impact Point (Multiple entry)

- | | | | |
|--|--|-------------------------------------|----------------------------------|
| 1 <input type="checkbox"/> None | 6 <input type="checkbox"/> Packed snow | 11 <input type="checkbox"/> Dry sod | 16 <input type="checkbox"/> Rock |
| 2 <input type="checkbox"/> Wet cultivated soil | 7 <input type="checkbox"/> Loose snow | 12 <input type="checkbox"/> Wet sod | 17 <input type="checkbox"/> Ice |
| 3 <input type="checkbox"/> Dry cultivated soil | 8 <input type="checkbox"/> Concrete | 13 <input type="checkbox"/> Water | 18 <input type="checkbox"/> Mud |
| 4 <input type="checkbox"/> Dry packed clay | 9 <input type="checkbox"/> Asphalt | 14 <input type="checkbox"/> Tundra | 19 <input type="checkbox"/> Sand |
| 5 <input type="checkbox"/> Boggy swampy | 10 <input type="checkbox"/> Loose rock | 15 <input type="checkbox"/> Dirt | A Other |

Principal Impact Kinematics

5 Airspeed At Impact (Enter direct or mark estimated range)

- | | | |
|----------------------------------|-------------------------------------|--|
| 1 <input type="checkbox"/> 0-15 | 6 <input type="checkbox"/> 75-90 | 11 <input type="checkbox"/> 210 plus knots |
| 2 <input type="checkbox"/> 15-30 | 7 <input type="checkbox"/> 90-120 | A _____ Knots |
| 3 <input type="checkbox"/> 30-45 | 8 <input type="checkbox"/> 120-150 | B Other |
| 4 <input type="checkbox"/> 45-60 | 9 <input type="checkbox"/> 150-180 | |
| 5 <input type="checkbox"/> 60-75 | 10 <input type="checkbox"/> 180-210 | |

6 Flight Path Angle (Enter direct or mark estimated range)

- | | | |
|----------------------------------|-----------------------------------|-----------------------------------|
| 1 <input type="checkbox"/> Up | 6 <input type="checkbox"/> 15-20 | 11 <input type="checkbox"/> 60-90 |
| 2 <input type="checkbox"/> Down | 7 <input type="checkbox"/> 20-25 | A _____ Degrees |
| 3 <input type="checkbox"/> 0-5 | 8 <input type="checkbox"/> 25-30 | B Other |
| 4 <input type="checkbox"/> 5-10 | 9 <input type="checkbox"/> 30-45 | |
| 5 <input type="checkbox"/> 10-15 | 10 <input type="checkbox"/> 45-60 | |

7 Pitch Attitude At Impact (Enter direct or mark estimated range.)

Pitch Attitude	Nose Down Angle With Horizon	Nose Up Angle With Horizon
1 <input type="checkbox"/> Down		
2 <input type="checkbox"/> Up	<input type="checkbox"/> 75 <input type="checkbox"/> 60 <input type="checkbox"/> 45 <input type="checkbox"/> 30 <input type="checkbox"/> 15 <input type="checkbox"/> 0 <input type="checkbox"/> 15 <input type="checkbox"/> 30 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> 75	<input type="checkbox"/> 15 <input type="checkbox"/> 30 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> 75
A _____ Deg.		
	90 <input type="checkbox"/> 75 <input type="checkbox"/> 60 <input type="checkbox"/> 45 <input type="checkbox"/> 30 <input type="checkbox"/> 15 <input type="checkbox"/> 0 <input type="checkbox"/> 15 <input type="checkbox"/> 30 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> 75 <input type="checkbox"/> 90	

8 Roll Attitude At Impact (Enter direct or mark estimated range.)

Roll	Aircraft Rolled Left	Aircraft Rolled Right
1 <input type="checkbox"/> Left		
2 <input type="checkbox"/> Right	<input type="checkbox"/> 105 <input type="checkbox"/> 120 <input type="checkbox"/> 135 <input type="checkbox"/> 150 <input type="checkbox"/> 165 <input type="checkbox"/> 180 <input type="checkbox"/> 165 <input type="checkbox"/> 150 <input type="checkbox"/> 135 <input type="checkbox"/> 120 <input type="checkbox"/> 105	
A _____ Deg.		
	90 <input type="checkbox"/> 75 <input type="checkbox"/> 60 <input type="checkbox"/> 45 <input type="checkbox"/> 30 <input type="checkbox"/> 15 <input type="checkbox"/> 0 <input type="checkbox"/> 15 <input type="checkbox"/> 30 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> 75 <input type="checkbox"/> 90	

**FACTUAL REPORT
AVIATION**

Supplement I—Crash Kinematics (continued)

9 Yaw Attitude at Impact (Enter direct or mark estimated range.)

1 <input type="checkbox"/> Nose left 2 <input type="checkbox"/> Nose right A _____ Deg.	Aircraft Yawed Left Aircraft Yawed Right	or B Other
90 <input type="checkbox"/> 75 <input type="checkbox"/> 60 <input type="checkbox"/> 45 <input type="checkbox"/> 30 <input type="checkbox"/> 15 <input type="checkbox"/> 0 <input type="checkbox"/> 15 <input type="checkbox"/> 30 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> 75 <input type="checkbox"/> 90 <input type="checkbox"/>		

10 Terrain Angle 1 <input type="checkbox"/> Level A Up _____ deg. B Down _____ deg. C Other	11 Principal Impact Ground Scar Length 1 <input type="checkbox"/> None A _____ feet B Other	12 Principal Impact Ground Scar Depth 1 <input type="checkbox"/> None A _____ inches B Other	13 Fuselage Totally Destroyed 1 <input type="checkbox"/> Yes (Go to block 36) 2 <input type="checkbox"/> No A Other
--	---	--	---

14 Cockpit Damage (Multiple entry) 1 <input type="checkbox"/> Destroyed 2 <input type="checkbox"/> Collapsed 3 <input type="checkbox"/> Part collapsed 4 <input type="checkbox"/> Distorted	15 FWD Cabin Damage (Multiple entry) 1 <input type="checkbox"/> Destroyed 2 <input type="checkbox"/> Collapsed 3 <input type="checkbox"/> Part collapsed 4 <input type="checkbox"/> Distorted	16 AFT Cabin Damage (Multiple entry) 1 <input type="checkbox"/> Destroyed 2 <input type="checkbox"/> Collapsed 3 <input type="checkbox"/> Part collapsed 4 <input type="checkbox"/> Distorted
--	--	--

17 Fuselage Split 1 <input type="checkbox"/> No (Go to block 19) 2 <input type="checkbox"/> Longitudinal 3 <input type="checkbox"/> Circumferential A Other	18 Fuselage Split Behind Seat # _____ A Other	19 Fuselage Collapse (Estimated) 1 <input type="checkbox"/> None A Horizontal _____ inches B Vertical _____ inches C Other	20 Fuselage Crush 1 <input type="checkbox"/> None A Horizontal _____ inches B Vertical _____ inches C Other
--	--	---	--

Approved Exit Data

Exit Location	A Type of Exit				C Operable			E Fire Damage			G Impact Damage		
	1 Door	2 Window	3 Hatch	B Other	1 Yes	2 No	D Other	1 Yes	2 No	F Other	1 Yes	2 No	H Other
21 Cockpit-Left													
22 Cockpit Right													
23 1L													
24 1R													
25 2L													
26 2R													
27 3L													
28 3R													
29 4L													
30 4R													
31 5L													
32 5R													
33 6L													
34 6R													

National Transportation Safety Board

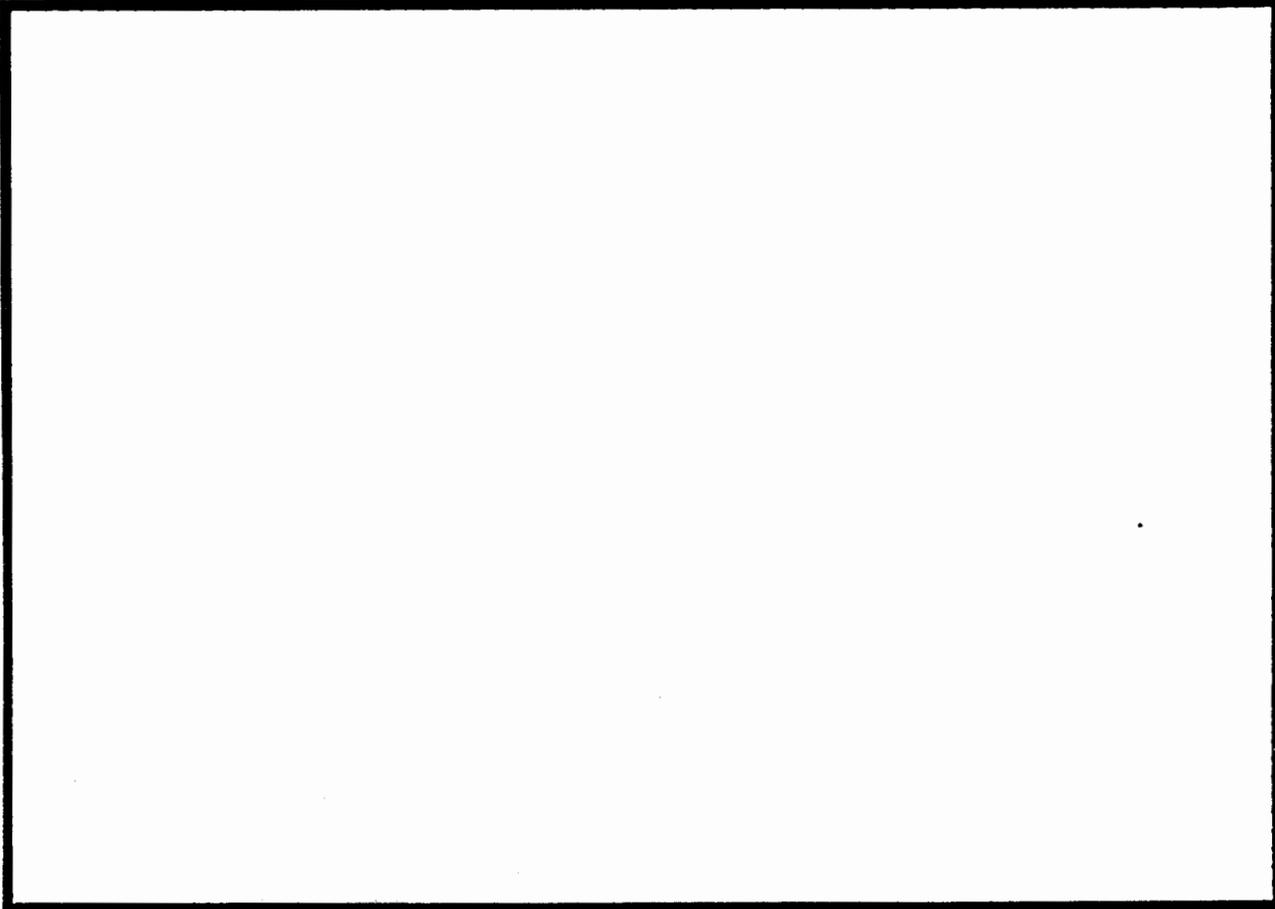
**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

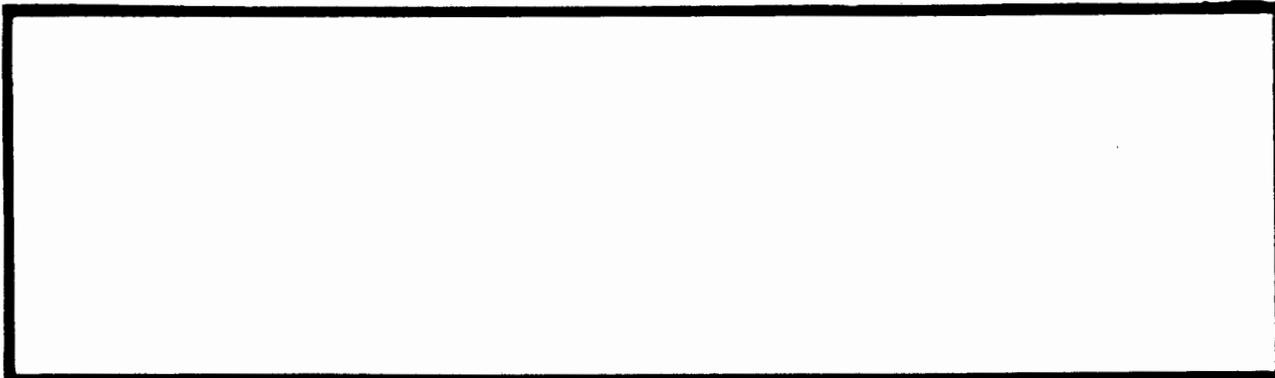
Supplement I—Crash Kinematics (continued)

Crash Site Plan/Elevation

36 Sketch of Crash Site—Show distribution of major components, fire area, obstacles struck, occupants, and magnetic north. Sketch is "NOT TO SCALE".



Plan View



Elevation View

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement J—Water Contact/Ditching

1 Intentional 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	2 Type of Water 1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salt 3 <input type="checkbox"/> Open sea 4 <input type="checkbox"/> Lake/river A Other	3 Water Condition (Multiple entry) 1 <input type="checkbox"/> Calm 2 <input type="checkbox"/> Glassy 3 <input type="checkbox"/> Rough A Wave height _____ feet B Swell height _____ feet C Water temperature _____ F D Other	4 Water Contact Relative to Swell (Estimated Range) 1 <input type="checkbox"/> 0-15° 2 <input type="checkbox"/> 16-30° 3 <input type="checkbox"/> 31-45° 4 <input type="checkbox"/> 46-60° 5 <input type="checkbox"/> 61-90° A Other	5 Water Contact Relative to Wind 1 <input type="checkbox"/> Into wind 2 <input type="checkbox"/> Tail wind 3 <input type="checkbox"/> Crosswind 4 <input type="checkbox"/> Quartering headwind 5 <input type="checkbox"/> Quartering tailwind A Other
--	--	--	---	--

6 Occupied Area in Aircraft 1 <input type="checkbox"/> Sunk immediately 2 <input type="checkbox"/> Stayed afloat after evacuation 3 <input type="checkbox"/> Stayed afloat for evacuation A Other	7 Rescued By 1 <input type="checkbox"/> Boat 2 <input type="checkbox"/> Airplane 3 <input type="checkbox"/> Helicopter 4 <input type="checkbox"/> None A Other	8 Occupant Time in Water A _____ Hours B _____ Minutes C Other	9 Fire on Water 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	10 Fuel on Water 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A
--	--	--	--	---

11 Floatation Devices on Aircraft (Multiple entry) 1 <input type="checkbox"/> Slideraft 2 <input type="checkbox"/> Lifteraft 3 <input type="checkbox"/> Vest-inflatable 4 <input type="checkbox"/> Vest-noninflatable 5 <input type="checkbox"/> Cushion A Specify _____ B Other	12 Floatation Equipment TSO'd (Multiple entry) 1 <input type="checkbox"/> Slideraft 2 <input type="checkbox"/> Lifteraft 3 <input type="checkbox"/> Vest-inflatable 4 <input type="checkbox"/> Vest-noninflatable 5 <input type="checkbox"/> Cushion A Specify _____ B Other
--	--

Signaling Devices 13 (If none available, check block 21 and go to block 22)	A Aboard A/C			C Available for Use			E Used			G Assisted in Locating			I Reasons Not Effective			
	1 Yes	2 No	B Other	1 Yes	2 No	D Other	1 Yes	2 No	F Other	1 Yes	2 No	H Other	1 Lost Missing	2 Failed in Use	3 Improper Use	J Other
14 Flare																
15 Smoke																
16 Dye																
17 Mirror																
18 Flashlight																
19 Aircraft Radio																
20 Portable Radio																
21 (Specify)																

This section to be completed for Rotorcraft accident/incidents ONLY.

22 Inflation of Floats (Multiple entry) 1 <input type="checkbox"/> Prior to contact 2 <input type="checkbox"/> After contact 3 <input type="checkbox"/> Not equipped A Other	23 Float Damage/Lost 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	24 Riding Qualities (Multiple entry) 1 <input type="checkbox"/> Remained upright thru evac. 2 <input type="checkbox"/> Asymmetrical bouyancy 3 <input type="checkbox"/> Rolled during evac. 4 <input type="checkbox"/> Rolled at contact A Other	25 Antiexposure Suite (Multiple entry) 1 <input type="checkbox"/> Available 2 <input type="checkbox"/> Not available 3 <input type="checkbox"/> Used 4 <input type="checkbox"/> Not used A Other
---	---	--	--

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

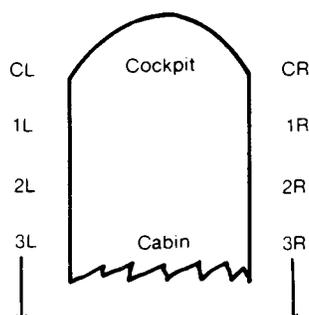
NTSB Accident/Incident Number

Supplement K—Occupant, Survival and Injury Information

1 Seat No. A _____ B If Seat Unknown Enter Persons Name _____ C Other _____	2 Position 1 <input type="checkbox"/> Pilot in command 2 <input type="checkbox"/> Second pilot 3 <input type="checkbox"/> Other crewmember 4 <input type="checkbox"/> Passenger A Other _____	<i>For non-survivable accident, go to block 36</i>	3 Age A _____ Yrs B Under 24 mos., enter months _____ C Other _____	4 Height _____ Inches A Other _____	5 Weight _____ Lbs A Other _____
---	---	--	---	--	---

6 Injury Index 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Minor 3 <input type="checkbox"/> Serious 4 <input type="checkbox"/> Fatal	7 Condition Prior to Accident (Multiple entry) 1 <input type="checkbox"/> Smoker 2 <input type="checkbox"/> Language difficulty 3 <input type="checkbox"/> Pre-existing disease 4 <input type="checkbox"/> Prothesis A Other _____	8 Physically Handicapped (Multiple entry) 1 <input type="checkbox"/> No 2 <input type="checkbox"/> Blind 3 <input type="checkbox"/> Mobility impaired 4 <input type="checkbox"/> Deaf A Other _____	9 Seat Belt Adjustment 1 <input type="checkbox"/> Not fastened 2 <input type="checkbox"/> Loose 3 <input type="checkbox"/> Snug 4 <input type="checkbox"/> Tight 5 <input type="checkbox"/> Fastened-Tightness Unknown 6 <input type="checkbox"/> Not seated 7 <input type="checkbox"/> Seat not equipped A Other _____	10 Shoulder Harness Adjustment 1 <input type="checkbox"/> Not fastened 2 <input type="checkbox"/> Loose 3 <input type="checkbox"/> Snug 4 <input type="checkbox"/> Tight 5 <input type="checkbox"/> Fastened-Tightness Unknown 6 <input type="checkbox"/> Seat not equipped A Other _____
--	--	---	--	---

11 Knew Impact/Accident Coming 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____	12 Braced for Impact 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____	13 Direction of Movement at Impact (Multiple entry) 1 <input type="checkbox"/> Forward 2 <input type="checkbox"/> Rearward 3 <input type="checkbox"/> Upward 4 <input type="checkbox"/> Downward 5 <input type="checkbox"/> Left 6 <input type="checkbox"/> Right A Other _____
---	---	---

14 Exit Used 1 <input type="checkbox"/> Did not escape 2 <input type="checkbox"/> Split in fuselage A Exit number (use diagram) _____ B Other _____	Exit Diagram  <p>Use following codes for overhead hatches</p> <p>Cockpit 99 Cabin 88 Tailcone 77</p>	15 Escape Hampered by (Multiple entry) 1 <input type="checkbox"/> Not hampered 2 <input type="checkbox"/> Smoke 3 <input type="checkbox"/> Heat 4 <input type="checkbox"/> Injuries 5 <input type="checkbox"/> Trapped 6 <input type="checkbox"/> Darkness 7 <input type="checkbox"/> Debris 8 <input type="checkbox"/> Disorientation 9 <input type="checkbox"/> Difficulty Using Exit A Specify _____ B Other _____
--	---	---

16 Briefed on Emergency Procedures (Multiple entry) 1 <input type="checkbox"/> No 2 <input type="checkbox"/> Before takeoff 3 <input type="checkbox"/> Before impact/accident A Other _____	17 Evacuation Aided by (Multiple entry) 1 <input type="checkbox"/> Passenger 2 <input type="checkbox"/> Crew 3 <input type="checkbox"/> Bystander 4 <input type="checkbox"/> CFR personnel 5 <input type="checkbox"/> Unaided A Other _____	18 Injured During Evacuation 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____
--	--	---

Complete this section if oxygen was used.

21 Type of Equipment 1 <input type="checkbox"/> Supplemental 2 <input type="checkbox"/> Portable A Other _____	22 Difficulty In Use 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other _____	23 Type of Oxygen System 1 <input type="checkbox"/> Solid state 2 <input type="checkbox"/> Gaseous A Specify _____ B Other _____
--	---	---

**National Transportation Safety Board
FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement K—Occupant, Survival and Injury Information (continued)

Results of Toxicological Analyses—(Complete as applicable for survivors and nonsurvivors.) (continued)

Substances	A Test Results			C Level of Substances Found
	1 Positive	2 Negative	B Other	
41 Ethanol (Alcohol)				Mg %
42 CO (Carbon Monoxide)				% Saturation
43 hb (Hemoglobin)				gm %
44 HCN (Hydrogen Cyanide)				Microgram/ml
45 Acidic and Neutral Drugs				
46 Basic Drugs				
47 Marijuana				
48 (Specify) _____				

List any additional toxicological substances discovered below.

A Substance Code	B Level of Substances Found	A Substance Code	B Level of Substances Found
49		56	
50		57	
51		58	
52		59	
53		60	
54		61 (Specify)	
55		62 (Specify)	

Toxicological Substances/Codes

Acetaminophen 001	Cocaine 018	Imipramine 035	Mebutal 052
Acetaldehyde 002	Codeine 019	Isopropanol 036	Morphine 053
Acetone 003	Desipramine 020	Ketamine 037	Medazepam 054
Amoxapine 004	Diazepam 021	Lidocaine 038	Nicotine 055
Amitriptyline 005	Dihydrocodeinone 022	Loxapine 047	Norsipytine 056
Amobarbital 006	Diphenhydramine 023	Mecloqualone 039	Oxazepam 057
Amphetamine 007	Diphenhydantoin 024	Mepredine 040	Pemoline 058
Benzoylcegonine 008	Doxepin 025	Mephentermine 041	Phenobarbital 059
Brompheniramine 009	Desalkylflurazepam 026	Meprobanate 042	Procaine 060
Butalbital 010	Demoxepam 027	Methanol 043	Propoxyphene 061
Butabarbital 011	Ethchlorvynol 028	Methadone 044	Sarcosine 062
Caffeine 012	Flunitrazepam 029	Methamphetamine 045	Thioctic acid 063
Cannabinoids 013	Flurazepam 030	Methaqualone 046	Tenazepam 064
Chlorazepate 014	Fluphenazine 031	Methylhexanamine 048	Nordazepam 065
Chlordiazepoxide 015	Glutethimide 032	Methylphenidate 049	Phenobarbital 066
Chlorpheniramine 016	Haloperidol 033	Methylphenidate 050	Phenylethylamine 067
Clonazepam 017	Hexobarbital 034	Methyprylon 051	Phenylmethazine 068
			Praxepam 069

**National Transportation Safety Board
FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement K—Occupant, Survival and Injury Information (continued)

63 For multiple extreme traumatic injuries, check box, and go to next applicable supplement.

Occupant Injury Coding Chart (Complete for survivors and non survivors as applicable.)

	A Body Region	B Aspect	C Lesion	D System/Organ	E A.I.S. Severity	F 6 Injury Source	G 7 Source of Data
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							

Body Region - A

- 01 Head (Skull, scalp, ears)
- 02 Face (Forehead, nose, eyes, mouth)
- 03 Neck (Cervical spine, C1-C7)
- 04 Shoulder (Clavicle, scapula, joint)
- 05 Upper limb (Whole arm)
- 06 Arm (Upper)
- 07 Elbow
- 08 Forearm
- 09 Wrist
- 10 Hand—fingers
- 11 Chest (Anterior and posterior ribs)
- 12 Abdomen (Diaphragm and below)
- 13 Back (Thoracic spine T1-T12)
- 14 Back (Lumbar L1-L5)
- 15 Pelvis—hip
- 16 Lower limb (Whole leg)
- 17 Thigh (Femur)
- 18 Knee
- 19 Leg (Below knee)
- 20 Ankle
- 21 Foot—toes
- 22 Whole body
- 88 Injured, unknown region
- 99 Other

Lesion - C

- 01 Laceration
- 02 Contusion
- 03 Abrasion
- 04 Fracture
- 05 Concussion
- 06 Avulsion
- 07 Rupture
- 08 Sprain
- 09 Dislocation
- 10 Crush
- 11 Amputation
- 12 Burn
- 13 Fracture and dislocation
- 14 Severance (Transection)
- 15 Strain
- 16 Detachment (Separation)
- 17 Perforation (Puncture)
- 88 Injured unknown lesion
- 99 Other

System/Organ - D

- 01 Skeletal
- 02 Vertebrae
- 03 Joints
- 04 Digestive

- 05 Liver
- 06 Nervous System
- 07 Brain
- 08 Spinal cord
- 09 Ears
- 10 Arteries/veins
- 11 Heart
- 12 Spleen
- 13 Urogenital
- 14 Kidneys
- 15 Respiratory
- 16 Eye
- 17 Pulmonary/lungs
- 18 Airway
- 19 Muscles
- 20 Integumentary
- 21 Thyroid (Thyroid or other endocrine gland)
- 88 Injured, unknown system or organ
- 99 Other

Abbreviated Injury Scale - E

- 00 Not injured
- 01 Minor injury
- 02 Moderate injury
- 03 Serious injury (Not life-threatening)
- 04 Severe injury (Life-threatening survival probable)
- 05 Critical injury (Survival uncertain)
- 06 Maximum (untreatable)
- 07 Injured (Unknown severity)
- 88 Unknown if injured

Source of Data - G

- Official
- 01 Autopsy records with or without hospital/medical records
- 02 Hospital/medical records
- 03 Emergency room records
- 04 Private or treating physicians
- Unofficial
- 05 Lay coroner
- 06 E.M.S. personnel
- 07 Interviewee
- 08 Police
- 09 Other source

National Transportation Safety Board

FACTUAL REPORT
AVIATION

NTSB Accident/Incident Number

Supplement K—Occupant, Survival and Injury Information (continued)

Injury Source List - F

- | | |
|---------------------------------|--|
| 01 Windshield | 25 Ground/runway |
| 02 Windshield frame | 26 Unsecured seat(s) |
| 03 Window | 27 Outside object(s) entering aircraft |
| 04 Window frame | 28 Galley item(s) |
| 05 Instrument panel | 29 Food/beverage item(s) |
| 06 Side console | 30 Other interior objects |
| 07 Center console | 31 Other exterior objects |
| 08 Control stick/cyclic stick | 32 Evacuation slide/slide raft |
| 09 Collective | 33 Escape rope/tape |
| 10 Control yoke/column | 34 Escape inertia device |
| 11 Throttle quadrant/levers | 35 Ejected from aircraft |
| 12 Rudder pedals | 36 Propeller/rotor blades |
| 13 Ceiling | 37 Exterior aircraft surface |
| 14 Sidewall | 38 Engine |
| 15 Floor | 39 Wheel/tires |
| 16 Fuselage framing/structure | 40 Ground vehicle |
| 17 Table | 41 Toxic/noxious/irritant fumes |
| 18 Seat | 42 Fire/radiant heat |
| 19 Seatback tray | 43 Flying glass |
| 20 Restraints—seatbelt/tiedown | 44 Door/hatches |
| 21 Restraints—shoulder harness | 45 Acceleration forces |
| 22 Unsecured item(s) in cockpit | 46 Exposure |
| 23 Unsecured item(s) in cabin | 47 Glare Shield |
| 24 Other occupants | 48 Eyeglasses |
| | 88 Unknown |
| | 99 Other |

74 Death Due To Fire/Smoke

- 1 Yes
2 No
A Other

75 Death Due To Drowning

- 1 Yes
2 No
A Other

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement L—Seat, Restraint System and Fuselage Deformation

Seat Information

1 Seat Number _____ A Other		2 Seat Manufacturing Standard 1 <input type="checkbox"/> Type certificate (Airframe manufacturer) 2 <input type="checkbox"/> Non-TSO A TSO (Specify) _____ B Other		3 Seat Orientation 1 <input type="checkbox"/> Forward facing 2 <input type="checkbox"/> Rearward facing 3 <input type="checkbox"/> Side facing A Other		4 Seat Unit 1 <input type="checkbox"/> Fixed 2 <input type="checkbox"/> Adjustable 3 <input type="checkbox"/> Swivel A Other	
5 Seat Type (Multiple entry) 1 <input type="checkbox"/> Cockpit crew 2 <input type="checkbox"/> Flight attendant single jumpseat 3 <input type="checkbox"/> Flight attendant double jumpseat 4 <input type="checkbox"/> Folding stowable 5 <input type="checkbox"/> Single passenger seat 6 <input type="checkbox"/> 2 passenger seat unit 7 <input type="checkbox"/> 3 passenger seat unit 8 <input type="checkbox"/> Sofa/Bench A Other					6 Seat Location at Time of Examination 1 <input type="checkbox"/> Inside aircraft-attached 2 <input type="checkbox"/> Inside aircraft-separated 3 <input type="checkbox"/> Outside aircraft A Other		
7 Total Seat Destruction (Multiple entry) 1 <input type="checkbox"/> Impact (Go to block 30) 2 <input type="checkbox"/> Fire (Go to block 30) A Other		8 Seat Anchored 1 <input type="checkbox"/> Bulkhead/wall 2 <input type="checkbox"/> Floor A Other	9 Seat Primary Structure 1 <input type="checkbox"/> Tube 2 <input type="checkbox"/> Sheet metal 3 <input type="checkbox"/> Composite 4 <input type="checkbox"/> Wood 5 <input type="checkbox"/> Metal Castings A Other		10 Energy Absorbing Features 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	11 Evidence of Fire/Heat Damage (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Cushions/covers 3 <input type="checkbox"/> Structure 4 <input type="checkbox"/> Restraints A Other	

Seat Installation/Damage/Displacement

12 Seat Impact Damage 1 <input type="checkbox"/> None (Omit 15-28 type impact damage)	A Installed				C Type Impact Damage (Multiple entry)							E Direction of Seat Displacement (Multiple entry)								
	1	2	3	B	1	2	3	4	5	6	D	1	2	3	4	5	6	7	F	
13 Seat Displacement 1 <input type="checkbox"/> None (Omit 15-28 direction of seat displacement)	No	Yes	Improper Installation	Other	None	Bent	Distorted/Buckled	Collapsed	Partially Separated	Separated	Other	None	Forward	Rearward	Left	Right	Up	Down	Other	
Seat Component (Complete only pertinent items)																				
15 Pedestal																				
16 Enclosure																				
17 Back Frame																				
18 Seat Pan																				
19 Pan Frame																				
20 Legs																				
21 Leg Attach Fittings																				
22 Seat Attach Fittings																				
23 Structural Attach Fittings, Floor																				
24 Structural Attach Fittings, Wall																				
25 Seat Track																				
26 Arm Rest																				
27 Seat Back Tray																				
28 Head Restraint																				

Restraint System Information—

30 Totally Destroyed (Go to block 46)

31 Restraint System Manufacturer _____ A Other		32 Restraint System TSO 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other		33 Restraint System Design 1 <input type="checkbox"/> 2-point A Other 2 <input type="checkbox"/> 3-point 3 <input type="checkbox"/> 4-point 4 <input type="checkbox"/> 5-point		34 Type Release/Buckle 1 <input type="checkbox"/> Metal to metal 2 <input type="checkbox"/> Fabric pull thru A Specify _____ B Other	
---	--	--	--	--	--	---	--

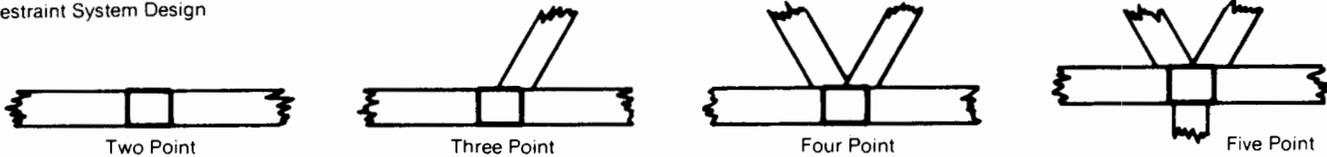
National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement L—Seat, Restraint System and Fuselage Deformation (continued)

Restraint System Design



Component	A Installed			C Fire Damage			E Evidence of Use			G Location of Anchor Points						
	1	2	B	1	2	D	1	2	F	1	2	3	4	5	H	
	Yes	No	Other	Yes	No	Other	Yes	No	Other	Seat	Wall	Floor	Ceiling	Bulkhead	Other	
35 Lapbelt																
36 Shoulder Harness																
37 Inertia Reel																
38 Tiedown Strap																

Component	A	B Webbing/Stitching			C Restraint Attach Fittings					D Seat/Structure Attach Fittings				
	1	1	2	3	1	2	3	4	5	1	2	3	4	5
	No Damage	Destroyed	Partially Separated	Separated	No Damage	Destroyed	Bent	Partially Separated	Separated	No Damage	Destroyed	Bent	Partially Separated	Separated
39 Lapbelt														
40 Shoulder Harness														

41 Other Damage—Release Buckle

- 1 Yes
2 No
A Other

42 Other Damage—Tie Down Strap

- 1 Yes
2 No
A Other

43 Other Damage—Inertia Reel

- 1 Yes
2 No
A Other

Fuselage Deformation Around This Seat

46 Fuselage Collapse Around This Seat

- 1 None
2 Collapse
3 Disintegrated/Incinerated
A Other

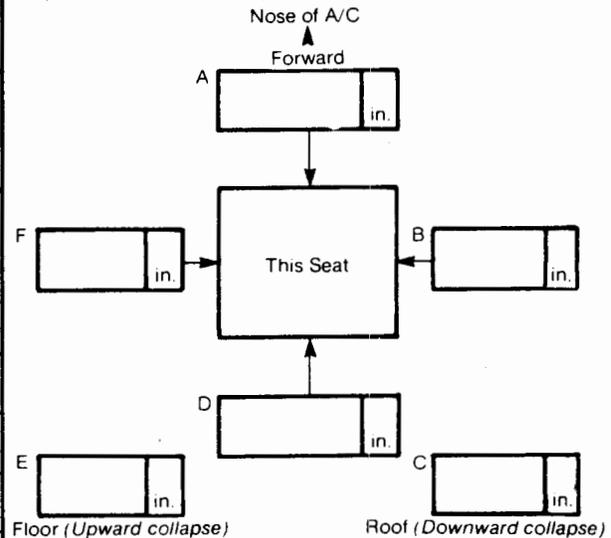
47 Interior Surface Damage To This Seat

- 1 Yes
2 No
A Other

Cabin/Interior Deformation Around This Seat (Select codes from list below)	A Direction of Deformation							B
	1	2	3	4	5	6		
	Forward	Rearward	Left	Right	Up	Down	Other	
50 Code _____								
51 Code _____								
52 Code _____								
53 Code _____								

48 Fuselage Collapse Measurements Around This Seat

(Enter inches on drawing)



Note: Arrow (→) shows direction of displacement

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement L—Seat, Restraint System and Fuselage Deformation (continued)

(Codes to be used in 50-53 above)

- | | |
|-------------------------------|---------------------------------|
| 01 Windshield | 16 Fuselage framing/structure |
| 02 Windshield frame | 17 Table |
| 03 Window | 18 Seat |
| 04 Window frame | 19 Seatback tray |
| 05 Instrument panel | 20 Restraints—seatbelt/tiedown |
| 06 Side console | 21 Restraints—shoulder harness |
| 07 Center console | 22 Unsecured item(s) in cockpit |
| 08 Control stick/cyclic stick | 23 Unsecured item(s) in cabin |
| 09 Collective | 24 Other occupants |
| 10 Control yoke/column | 25 Ground/runway |
| 11 Throttle quadrant/levers | 26 Unsecured seat(s) |
| 12 Rudder pedals | 27 Galley item(s) |
| 13 Ceiling | 28 Other interior objects |
| 14 Sidewall | 29 Door/hatches |
| 15 Floor | |

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement M—Search/Rescue/Firefighting/Medical Treatment

Search and Rescue		1 <input type="checkbox"/> None Conducted (Go to block 16)	
2 Type of Search Conducted (Multiple entry)		4 Search Agency Notified	
1 <input type="checkbox"/> Air 2 <input type="checkbox"/> Ground 3 <input type="checkbox"/> Sea 4 <input type="checkbox"/> Informal A Other		A _____ (Nos. for M, D, Y) B _____ Local time C Other	
5 Aircraft/Occupants Located		7 Civil Air Patrol Involved in Search	
A _____ (Nos. for M, D, Y) B _____ Local time C Other		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	
9 Distress Call Transmitted (Multiple entry)		8 Military or Coast Guard Personnel Involved	
1 <input type="checkbox"/> None transmitted 2 <input type="checkbox"/> Prior to accident 3 <input type="checkbox"/> After impact/accident A Other		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	
10 Distress Call Received (Multiple entry)		11 Method of Locating Accident Site (Multiple entry)	
1 <input type="checkbox"/> None received 2 <input type="checkbox"/> Prior to accident 3 <input type="checkbox"/> After impact/accident A Other		1 <input type="checkbox"/> ELT 2 <input type="checkbox"/> HF radio 3 <input type="checkbox"/> VHF radio 4 <input type="checkbox"/> UHF radio 5 <input type="checkbox"/> Visual sighting of wreckage 6 <input type="checkbox"/> Visual sighting of occupants 7 <input type="checkbox"/> Visual sighting of signal/smoke/fire 8 <input type="checkbox"/> SAR satellite 9 <input type="checkbox"/> ATC computer generated A Other	
12 Condition of Aircraft Occupants at Rescue (Multiple entry)			13 Weather Conditions—Indicate Most Severe Temperature/Wind Chill Condition During Search
1 <input type="checkbox"/> Located alive 2 <input type="checkbox"/> Located deceased 3 <input type="checkbox"/> Located alive-died later 4 <input type="checkbox"/> Died awaiting rescue 5 <input type="checkbox"/> Located alive-trapped 6 <input type="checkbox"/> Able to assist with locating 7 <input type="checkbox"/> Left scene-successfully located 8 <input type="checkbox"/> Left scene-unsuccessful in finding aid 9 <input type="checkbox"/> Left scene-unsuccessful in finding aid—died later A Other			A Temperature _____ ° F B Wind/chill factor _____ ° F C Other

Fire Fighting 16 <input type="checkbox"/> None Conducted (Go to block 31)				
17 Firefighting Unit Notified (Nos. for M, D, Y)		18 First Firefighting Unit Arrived		21 Fire Extinguished
A _____ B _____ Local time C Other		_____ Local time A Other		_____ Local time A Other
19 Firefighting Units Responding (Multiple entry)			20 Firefighting Units Assisted Evacuation	
1 <input type="checkbox"/> Airport 2 <input type="checkbox"/> Municipal 3 <input type="checkbox"/> Military A Other			1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	

Firefighting Agents	A Available			C Used		
	1 Yes	2 No	B Other	1 Yes	2 No	D Other
22 Protein Foam						
23 Dry Chemical						
24 Carbon Dioxide						
25 AFFF (Lite Water)						
26 Water						
26 (Specify) _____						

National Transportation Safety Board

FACTUAL REPORT
AVIATION

NTSB Accident/Incident Number

Supplement N—Fire/Explosion

1 Fire Started

- 1 In-flight 3 During impact sequence 5 Greater than 1 minute after aircraft came to rest
 2 During ground operation 4 After aircraft came to rest A Other

Location of Initial Fire or Explosion (Specify)	A Fire			B Explosion			C In-Flight			E On Ground			G After Impact		
	1	2	3	1	2	3	1	2	D Other	1	2	F Other	1	2	H Other
2															
3															
4															

- 5 Fire/Explosion Ignition Source(s) (Multiple entry)
- 1 Engine
 - 2 APU
 - 3 Hot surface
 - 4 Explosive
 - 5 Aircraft system
 - 6 Cargo
 - 7 Short circuit
 - 8 Static electricity
 - 9 Lightning
 - 10 Sparks (Friction, skidding, etc.)
 - 11 Ground vehicle
 - 12 Ground structure
 - 13 Aircraft occupant
 - A Other

- 6 Fluid Spilled
- 1 Yes
 - 2 No (Go to block 8)
 - A Other

- 7 Type of Fluid Spilled (Multiple entry)
- 1 Fuel
 - 2 Oil
 - 3 Hydraulic
 - A Other

- 8 Other Fuels Present (Multiple entry)
- 1 Natural gas
 - 2 Heating oil
 - 3 Gasoline
 - 4 Kerosene
 - 5 Explosives
 - 6 None
 - A Other

- 9 Fire Propagation Direction (Multiple entry)
- 1 Forward
 - 2 Rearward
 - 3 Upward
 - 4 Downward
 - 5 Left to right
 - 6 Right to left
 - A Other

10 Percent of Occupiable Space in Fire Area at Time of Evacuation

_____ Percent

A Other

- 11 Ground Structure Burned (Multiple entry)
- 1 Single family house
 - 2 Multifamily house
 - 3 Commercial building
 - 4 Farm building
 - 5 Trees
 - 6 Vehicle
 - 7 Other aircraft
 - 8 None
 - A Other

- 12 Fire Sensing and Extinguishing Systems Installed/Available
- 1 Yes
 - 2 No (Omit blocks 13-34)
 - 3 Not pertinent to accident (Omit blocks 13-34)
 - A Other

Sensors Extinguishers	Sensors								Extinguishers							
	A Available			C Type of Sensor					E Available			G Number		I Type of Extinguisher		
	1 Yes	2 No	B Other	1 Heat	2 Smoke	3 Optic	D Other	1 Yes	2 No	F Other	1 Number	H Other	1 Manual	2 Automatic	J Other	
13 Engine #1																
14 Engine #2																
15 Engine #3																
16 Engine #4																
17 APU																

**National Transportation Safety Board
FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement N—Fire/Explosion (continued)

Sensors Extinguishers	Sensors								Extinguishers							
	A Available			C Type of Sensor					E Available			G Number		I Type of Extinguisher		
	1 Yes	2 No	B Other	1 Heat	2 Smoke	3 Optic	D Other	1 Yes	2 No	F Other	1 Number	H Other	1 Manual	2 Automatic	J Other	
20 Galley																
21 Lavatory																
22 Heater																
23 Battery																
24 Electrical System																
25 Specify _____																
26 Specify _____																
27 Specify _____																

Sensor Operation	Engine #1	Engine #2	Engine #3	Engine #4	APU	Cabin	Cargo	Galley	Lavatory	Heater	Battery	Electrical Sys.	Other
	1	2	3	4	5	6	7	8	9	10	11	12	A
28 Activated													
29 Did Not Activate													
Extinguisher Operation	Engine #1	Engine #2	Engine #3	Engine #4	APU	Cabin	Cargo	Galley	Lavatory	Heater	Battery	Electrical Sys.	Other
	A	B	C	D	E	F	G	H	I	J	K	L	M
30 Man													
31 Auto													
32 Man													
33 Auto													

34 Extinguisher Systems/Agents Used (Multiple entry)

1 <input type="checkbox"/> Fixed equipment	3 <input type="checkbox"/> CO ₂ (Carbon Dioxide)	5 <input type="checkbox"/> Halon 1211	7 <input type="checkbox"/> Halon 1301
2 <input type="checkbox"/> Portable equipment	4 <input type="checkbox"/> CB (Chlorobromoyethane)	6 <input type="checkbox"/> ME (Methylbromide)	A <input type="checkbox"/> Other

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement O—In-Flight Collision

		Aircraft A	Aircraft B
1 Aircraft Registration Number			
2 Aircraft Heading		_____ ° mag A Other	_____ ° mag A Other
3 True Airspeed		_____ Kts A Other	_____ Kts A Other
4 Direction of Bank		1 <input type="checkbox"/> None 3 <input type="checkbox"/> Right 2 <input type="checkbox"/> Left A Other	1 <input type="checkbox"/> None 3 <input type="checkbox"/> Right 2 <input type="checkbox"/> Left A Other
5 Climb/Descent		1 <input type="checkbox"/> Level 3 <input type="checkbox"/> Descent 2 <input type="checkbox"/> Climb A Other	1 <input type="checkbox"/> Level 3 <input type="checkbox"/> Descent 2 <input type="checkbox"/> Climb A Other
6 Evasive Action (Multiple entry)		1 <input type="checkbox"/> None 4 <input type="checkbox"/> Climb A Other 2 <input type="checkbox"/> Right turn 5 <input type="checkbox"/> Descent 3 <input type="checkbox"/> Left turn 6 <input type="checkbox"/> Abrupt	1 <input type="checkbox"/> None 4 <input type="checkbox"/> Climb A Other 2 <input type="checkbox"/> Right turn 5 <input type="checkbox"/> Descent 3 <input type="checkbox"/> Left turn 6 <input type="checkbox"/> Abrupt
7 Rotating Beacon On		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
8 Strobe Lights On		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
Collision Avoidance (CA)	9 Type CA System Installed	1 <input type="checkbox"/> None B Other A Specify _____	1 <input type="checkbox"/> None B Other A Specify _____
	10 CA Operation	1 <input type="checkbox"/> Operating A Other 2 <input type="checkbox"/> Not operating	1 <input type="checkbox"/> Operating A Other 2 <input type="checkbox"/> Not operating
	11 CA Identification	1 <input type="checkbox"/> Target identified A Other 2 <input type="checkbox"/> Target not identified	1 <input type="checkbox"/> Target identified A Other 2 <input type="checkbox"/> Target not identified
12 Traffic Advisory Issued (Multiple entry)		1 <input type="checkbox"/> None 6 <input type="checkbox"/> Approach Control (Non radar) 2 <input type="checkbox"/> UNICOM 7 <input type="checkbox"/> Approach Control (Radar) 3 <input type="checkbox"/> Control Tower 8 <input type="checkbox"/> Flight service station 4 <input type="checkbox"/> ARTCC (Non radar) 5 <input type="checkbox"/> ARTCC (Radar) A Other	1 <input type="checkbox"/> None 6 <input type="checkbox"/> Approach Control (Non radar) 2 <input type="checkbox"/> UNICOM 7 <input type="checkbox"/> Approach Control (Radar) 3 <input type="checkbox"/> Control Tower 8 <input type="checkbox"/> Flight service station 4 <input type="checkbox"/> ARTCC (Non radar) 5 <input type="checkbox"/> ARTCC (Radar) A Other
13 Radar Control Surveillance		1 <input type="checkbox"/> Radar not available 4 <input type="checkbox"/> No radar contact 2 <input type="checkbox"/> Under radar contact A Other 3 <input type="checkbox"/> During radar handoff	1 <input type="checkbox"/> Radar not available 4 <input type="checkbox"/> No radar contact 2 <input type="checkbox"/> Under radar contact A Other 3 <input type="checkbox"/> During radar handoff
14 Conflict Alert Issued		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
15 Conflict Alert Received		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
16 Landed Safely		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement P—Air Traffic Control

1 Facility Identifier (3 letter code) _____	2 Facility Level		3 Type of Facility					
	1 <input type="checkbox"/> I	4 <input type="checkbox"/> IV	1 <input type="checkbox"/> ARTCC	6 <input type="checkbox"/> VFR	11 <input type="checkbox"/> RATCF			
	2 <input type="checkbox"/> II	5 <input type="checkbox"/> V	2 <input type="checkbox"/> Radar	7 <input type="checkbox"/> TRACON	12 <input type="checkbox"/> FSS			
	3 <input type="checkbox"/> III	A Other	3 <input type="checkbox"/> CERAP	8 <input type="checkbox"/> RAPCON	13 <input type="checkbox"/> IFSS			
			4 <input type="checkbox"/> Nonradar	9 <input type="checkbox"/> IFR	14 <input type="checkbox"/> FCT			
			5 <input type="checkbox"/> Tower	10 <input type="checkbox"/> Temporary	A Other			

Terminal Facility (If not applicable, go to 19)

	A Installed		B Functioning		C Other
	1 Yes	2 No	1 Yes	2 No	
5 Airport Surveillance Radar (ASR)					
6 Precision Approach Radar (PAR)					
7 TPX-42					
8 ARTS II (Automated Radar Terminal System)					
9 ARTS II A					
10 ARTS III					
11 ARTS III A					
12 PIDP (Position Indicating Data Processor)					
13 BRITE					
14 ASDE (Airport Surface Detection Equipment)					
15 MSAW (Minimum Safe Altitude Warning)					
16 Conflict Alert					
17 LLWSAS (Low Level Wind Shear Alert System)					
18					

Enroute ARTCC Facilities (If not applicable, go to 28)

	A Installed		B Functioning		C Other
	1 Yes	2 No	1 Yes	2 No	
19 Long Range Radar					
20 SECRA (Secondary Radar)(beacon only)					
21 En route ARTS					
22 DARC (Direct Access Radar Channel)					
23 CWSU (Center Weather Service Unit)					
24 Weather Radar/NEXRAD					
25 E/MSAW (En route Minimum Safe Altitude Warning)					
26 E/Conflict Alert					
27 ATC Computer					

Air Traffic Controller(s) Information Controller No. 1

28 Facility Identifier (3 letter code) _____	29 Facility Level		30 Type of Facility					
	1 <input type="checkbox"/> I	4 <input type="checkbox"/> IV	1 <input type="checkbox"/> ARTCC	6 <input type="checkbox"/> VFR	11 <input type="checkbox"/> RATCF			
	2 <input type="checkbox"/> II	5 <input type="checkbox"/> V	2 <input type="checkbox"/> Radar	7 <input type="checkbox"/> TRACON	12 <input type="checkbox"/> FSS			
	3 <input type="checkbox"/> III	A Other	3 <input type="checkbox"/> CERAP	8 <input type="checkbox"/> RAPCON	13 <input type="checkbox"/> IFSS			
			4 <input type="checkbox"/> Nonradar	9 <input type="checkbox"/> IFR	14 <input type="checkbox"/> FCT			
			5 <input type="checkbox"/> Tower	10 <input type="checkbox"/> Temporary	A Other			

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement P—Air Traffic Control (continued)

31 Controller Status 1 <input type="checkbox"/> ATCS (FPL) 2 <input type="checkbox"/> ATCS (DEV) 3 <input type="checkbox"/> SATCS 4 <input type="checkbox"/> PPS 5 <input type="checkbox"/> EPDS 6 <input type="checkbox"/> DSS 7 <input type="checkbox"/> Military 8 <input type="checkbox"/> Staff A Other	32 Date of Last Medical (Nos. for M, D, Y) _____ A Other	Waivers			37 Weather Observer 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
		33 Visual 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	34 Hearing 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	35 None 1 <input type="checkbox"/>	

38 Date of Birth (Nos. for M, D, Y) _____	Position Occupied (Multiple entry)				
	39 EOD Facility (Nos. for M, D, Y) _____	42 Tower 1 <input type="checkbox"/> Local 2 <input type="checkbox"/> Ground 3 <input type="checkbox"/> Fit data/clearance delivery 4 <input type="checkbox"/> Nonradar approach control 5 <input type="checkbox"/> Radar/BRITE 6 <input type="checkbox"/> ASDE 7 <input type="checkbox"/> Coordinator 8 <input type="checkbox"/> Supervisor A Other	43 Approach Control 1 <input type="checkbox"/> Arrival 2 <input type="checkbox"/> Departure 3 <input type="checkbox"/> ASR 4 <input type="checkbox"/> PAR 5 <input type="checkbox"/> Data 6 <input type="checkbox"/> Handoff 7 <input type="checkbox"/> Coordinator 8 <input type="checkbox"/> Supervisor A Other	44 En Route 1 <input type="checkbox"/> Radar 2 <input type="checkbox"/> Nonradar 3 <input type="checkbox"/> Handoff 4 <input type="checkbox"/> Data 5 <input type="checkbox"/> Flow controller 6 <input type="checkbox"/> Coordinator 7 <input type="checkbox"/> Supervisor A Other	45 Flight Service 1 <input type="checkbox"/> In-flight 2 <input type="checkbox"/> EFAS 3 <input type="checkbox"/> Direction finder 4 <input type="checkbox"/> Weather briefer 5 <input type="checkbox"/> Coordinator 6 <input type="checkbox"/> Supervisor A Other
	40 EOD ATC (Nos. for M, D, Y) _____				
	41 Position Rated (Nos. for M, D, Y) _____				
46 Positions Combined 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No					

47 Time on Duty A _____ Hrs B _____ Minutes C Other	48 Time on Position A _____ Hrs B _____ Minutes C Other	49 Rest Period A _____ Hrs B _____ Minutes C Other	50 Aeronautical Rating 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
---	---	--	---

Air Traffic Controller(s) Information Controller No. 2

51 Facility Identifier (3 letter code) _____	52 Facility Level 1 <input type="checkbox"/> I 2 <input type="checkbox"/> II 3 <input type="checkbox"/> III 4 <input type="checkbox"/> IV 5 <input type="checkbox"/> V A Other	53 Type of Facility 1 <input type="checkbox"/> ARTCC 2 <input type="checkbox"/> Radar 3 <input type="checkbox"/> CERAP 4 <input type="checkbox"/> Nonradar 5 <input type="checkbox"/> Tower 6 <input type="checkbox"/> VFR 7 <input type="checkbox"/> TRACON 8 <input type="checkbox"/> RAPCON 9 <input type="checkbox"/> IFR 10 <input type="checkbox"/> Temporary 11 <input type="checkbox"/> RATCF 12 <input type="checkbox"/> FSS 13 <input type="checkbox"/> IFSS 14 <input type="checkbox"/> FCT A Other
--	---	--

54 Controller Status 1 <input type="checkbox"/> ATCS (FPL) 2 <input type="checkbox"/> ATCS (DEV) 3 <input type="checkbox"/> SATCS 4 <input type="checkbox"/> PPS 5 <input type="checkbox"/> EPDS 6 <input type="checkbox"/> DSS 7 <input type="checkbox"/> Military 8 <input type="checkbox"/> Staff A Other	55 Date of Last Medical (Nos. for M, D, Y) _____ A Other	Waivers			60 Weather Observer 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
		56 Visual 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	57 Hearing 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	58 None 1 <input type="checkbox"/>	

61 Date of Birth (Nos. for M, D, Y) _____	Position Occupied (Multiple entry)					
	62 EOD Facility (Nos. for M, D, Y) _____	65 Tower 1 <input type="checkbox"/> Local 2 <input type="checkbox"/> Ground 3 <input type="checkbox"/> Fit data/clearance delivery 4 <input type="checkbox"/> Nonradar approach control 5 <input type="checkbox"/> Radar/BRITE 6 <input type="checkbox"/> ASDE 7 <input type="checkbox"/> Coordinator 8 <input type="checkbox"/> Supervisor A Other	66 Approach Control 1 <input type="checkbox"/> Arrival 2 <input type="checkbox"/> Departure 3 <input type="checkbox"/> ASR 4 <input type="checkbox"/> PAR 5 <input type="checkbox"/> Data 6 <input type="checkbox"/> Handoff 7 <input type="checkbox"/> Coordinator 8 <input type="checkbox"/> Supervisor A Other	67 En Route 1 <input type="checkbox"/> Radar 2 <input type="checkbox"/> Nonradar 3 <input type="checkbox"/> Handoff 4 <input type="checkbox"/> Data 5 <input type="checkbox"/> Flow controller 6 <input type="checkbox"/> Coordinator 7 <input type="checkbox"/> Supervisor A Other	68 Flight Service 1 <input type="checkbox"/> In-flight 2 <input type="checkbox"/> EFAS 3 <input type="checkbox"/> Direction finder 4 <input type="checkbox"/> Weather briefer 5 <input type="checkbox"/> Coordinator 6 <input type="checkbox"/> Supervisor A Other	
						63 EOD ATC (Nos. for M, D, Y) _____
						64 Position Rated (Nos. for M, D, Y) _____
61 Date of Birth (Nos. for M, D, Y) _____						

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement P—Air Traffic Control (continued)

69 Positions Combined 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	70 Time on Duty A _____ Hrs B _____ Minutes C Other	71 Time on Position A _____ Hrs B _____ Minutes C Other	72 Rest Period A _____ Hrs B _____ Minutes C Other	73 Aeronautical Rating 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
---	---	---	--	---

Air Traffic Controller(s) Information Controller No. 3

78 Facility Identifier (3 letter code) _____	79 Facility Level 1 <input type="checkbox"/> I 4 <input type="checkbox"/> IV 2 <input type="checkbox"/> II 5 <input type="checkbox"/> V 3 <input type="checkbox"/> III A Other	80 Type of Facility 1 <input type="checkbox"/> ARTCC 6 <input type="checkbox"/> VFR 11 <input type="checkbox"/> RATCF 2 <input type="checkbox"/> Radar 7 <input type="checkbox"/> TRACON 12 <input type="checkbox"/> FSS 3 <input type="checkbox"/> CERAP 8 <input type="checkbox"/> RAPCON 13 <input type="checkbox"/> IFSS 4 <input type="checkbox"/> Nonradar 9 <input type="checkbox"/> IFR 14 <input type="checkbox"/> FCT 5 <input type="checkbox"/> Tower 10 <input type="checkbox"/> Temporary A Other
--	---	--

81 Controller Status 1 <input type="checkbox"/> ATCS (FPL) 6 <input type="checkbox"/> DSS 2 <input type="checkbox"/> ATCS (DEV) 7 <input type="checkbox"/> Military 3 <input type="checkbox"/> SATCS 8 <input type="checkbox"/> Staff 4 <input type="checkbox"/> PPS A Other 5 <input type="checkbox"/> EPDS	82 Date of Last Medical (Nos. for M, D, Y) _____ A Other	Waivers			87 Weather Observer 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
		83 Visual 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	84 Hearing 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	85 None 1 <input type="checkbox"/> 86 Other	

88 Date of Birth (Nos. for M, D, Y) _____	Position Occupied (Multiple entry)			
89 EOD Facility (Nos. for M, D, Y) _____	92 Tower 1 <input type="checkbox"/> Local 2 <input type="checkbox"/> Ground 3 <input type="checkbox"/> Flt data/clearance delivery 4 <input type="checkbox"/> Nonradar approach control 5 <input type="checkbox"/> Radar/BRITE 6 <input type="checkbox"/> ASDE 7 <input type="checkbox"/> Coordinator 8 <input type="checkbox"/> Supervisor A Other	93 Approach Control 1 <input type="checkbox"/> Arrival 2 <input type="checkbox"/> Departure 3 <input type="checkbox"/> ASR 4 <input type="checkbox"/> PAR 5 <input type="checkbox"/> Data 6 <input type="checkbox"/> Handoff 7 <input type="checkbox"/> Coordinator 8 <input type="checkbox"/> Supervisor A Other	94 En Route 1 <input type="checkbox"/> Radar 2 <input type="checkbox"/> Nonradar 3 <input type="checkbox"/> Handoff 4 <input type="checkbox"/> Data 5 <input type="checkbox"/> Flow controller 6 <input type="checkbox"/> Coordinator 7 <input type="checkbox"/> Supervisor A Other	95 Flight Service 1 <input type="checkbox"/> In-flight 2 <input type="checkbox"/> EFAS 3 <input type="checkbox"/> Direction finder 4 <input type="checkbox"/> Weather briefer 5 <input type="checkbox"/> Coordinator 6 <input type="checkbox"/> Supervisor A Other
90 EOD ATC (Nos. for M, D, Y) _____	91 Position Rated (Nos. for M, D, Y) _____			

96 Positions Combined 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	97 Time on Duty A _____ Hrs B _____ Minutes C Other	98 Time on Position A _____ Hrs B _____ Minutes C Other	99 Rest Period A _____ Hrs B _____ Minutes C Other	100 Aeronautical Rating 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
---	---	---	--	--

Air Traffic Controller(s) Information Controller No. 4

101 Facility Identifier (3 letter code) _____	102 Facility Level 1 <input type="checkbox"/> I 4 <input type="checkbox"/> IV 2 <input type="checkbox"/> II 5 <input type="checkbox"/> V 3 <input type="checkbox"/> III A Other	103 Type of Facility 1 <input type="checkbox"/> ARTCC 6 <input type="checkbox"/> VFR 11 <input type="checkbox"/> RATCF 2 <input type="checkbox"/> Radar 7 <input type="checkbox"/> TRACON 12 <input type="checkbox"/> FSS 3 <input type="checkbox"/> CERAP 8 <input type="checkbox"/> RAPCON 13 <input type="checkbox"/> IFSS 4 <input type="checkbox"/> Nonradar 9 <input type="checkbox"/> IFR 14 <input type="checkbox"/> FCT 5 <input type="checkbox"/> Tower 10 <input type="checkbox"/> Temporary A Other
--	--	---

104 Controller Status 1 <input type="checkbox"/> ATCS (FPL) 6 <input type="checkbox"/> DSS 2 <input type="checkbox"/> ATCS (DEV) 7 <input type="checkbox"/> Military 3 <input type="checkbox"/> SATCS 8 <input type="checkbox"/> Staff 4 <input type="checkbox"/> PPS A Other 5 <input type="checkbox"/> EPDS	105 Date of Last Medical (Nos. for M, D, Y) _____ A Other	Waivers			110 Weather Observer 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other
		106 Visual 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	107 Hearing 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	108 None 1 <input type="checkbox"/> 109 Other	

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement P—Air Traffic Control (continued)

111 Date of Birth (Nos. for M, D, Y)		Position Occupied (Multiple entry)			
112 EOD Facility (Nos. for M, D, Y)		115 Tower 1 <input type="checkbox"/> Local 2 <input type="checkbox"/> Ground 3 <input type="checkbox"/> Flt data/clearance delivery 4 <input type="checkbox"/> Nonradar approach control 5 <input type="checkbox"/> Radar/BRITE 6 <input type="checkbox"/> ASDE 7 <input type="checkbox"/> Coordinator 8 <input type="checkbox"/> Supervisor A Other	116 Approach Control 1 <input type="checkbox"/> Arrival 2 <input type="checkbox"/> Departure 3 <input type="checkbox"/> ASR 4 <input type="checkbox"/> PAR 5 <input type="checkbox"/> Data 6 <input type="checkbox"/> Handoff 7 <input type="checkbox"/> Coordinator 8 <input type="checkbox"/> Supervisor A Other	117 En Route 1 <input type="checkbox"/> Radar 2 <input type="checkbox"/> Nonradar 3 <input type="checkbox"/> Handoff 4 <input type="checkbox"/> Data 5 <input type="checkbox"/> Flow controller 6 <input type="checkbox"/> Coordinator 7 <input type="checkbox"/> Supervisor A Other	118 Flight Service 1 <input type="checkbox"/> In-flight 2 <input type="checkbox"/> EFAS 3 <input type="checkbox"/> Direction finder 4 <input type="checkbox"/> Weather briefer 5 <input type="checkbox"/> Coordinator 6 <input type="checkbox"/> Supervisor A Other
113 EOD ATC (Nos. for M, D, Y)					
114 Position Rated (Nos. for M, D, Y)					
119 Positions Combined 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No					
120 Time on Duty A _____ Hrs B _____ Minutes C Other		121 Time on Position A _____ Hrs B _____ Minutes C Other		122 Rest Period A _____ Hrs B _____ Minutes C Other	
				123 Aeronautical Rating 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	

National Transportation Safety Board
FACTUAL REPORT
AVIATION

NTSB Accident/Incident Number

Supplement Q—Airport/Airstrip

1 Distance From Runway (Multiple entry) 1 <input type="checkbox"/> On airport/airstrip or B Other 2 <input type="checkbox"/> Approach end 3 <input type="checkbox"/> Departure end A Distance _____ NM		2 Bearing From Runway (Multiple entry) 1 <input type="checkbox"/> On airport/airstrip or B Other 2 <input type="checkbox"/> Approach end 3 <input type="checkbox"/> Departure end A Bearing _____ Mag.		3 Type of Airport/Airstrip (Multiple entry) 1 <input type="checkbox"/> Land 2 <input type="checkbox"/> Water 3 <input type="checkbox"/> Heliport 4 <input type="checkbox"/> Oil rig 5 <input type="checkbox"/> Private use 6 <input type="checkbox"/> Public use A Other	
4 Airport Category 1 <input type="checkbox"/> Commercial service 2 <input type="checkbox"/> Reliever 3 <input type="checkbox"/> General aviation A Other		5 Airport Certification (FAR 139) 1 <input type="checkbox"/> Full certification 2 <input type="checkbox"/> Limited certification 3 <input type="checkbox"/> None (Go to block 8) A Other		6 Emergency Plan Tested 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	
8 Instrument Approach to Active Runway (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Nonprecision approach 3 <input type="checkbox"/> Precision approach 4 <input type="checkbox"/> CAT I		9 Runway/Landing Surface Treatment (Multiple entry) 1 <input type="checkbox"/> Porous 2 <input type="checkbox"/> Smooth texture 3 <input type="checkbox"/> Rough texture 4 <input type="checkbox"/> Partially grooved 5 <input type="checkbox"/> Fully grooved A Other		7 Months Since Emergency Plan Tested A Other _____	
11 Length of Overrun _____ Feet A Other		12 Displaced Threshold 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other		13 Length of Displaced Threshold _____ Feet A Other	
14 Obstacles—Runway End to Airport/Airstrip Boundary (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Approach lights 3 <input type="checkbox"/> Approach/navaids 4 <input type="checkbox"/> Building(s) 5 <input type="checkbox"/> Wire(s) 6 <input type="checkbox"/> Pole(s) 7 <input type="checkbox"/> Tree(s) 8 <input type="checkbox"/> Tower(s) 9 <input type="checkbox"/> Dirt bank 10 <input type="checkbox"/> Snow bank			15 Obstacles—Airport Boundary To 2 NM (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Approach lights 3 <input type="checkbox"/> Approach/navaids 4 <input type="checkbox"/> Building(s) 5 <input type="checkbox"/> Wire(s) 6 <input type="checkbox"/> Pole(s) 7 <input type="checkbox"/> Tree(s) 8 <input type="checkbox"/> Tower(s) 9 <input type="checkbox"/> Dirt bank 10 <input type="checkbox"/> Snow bank 11 <input type="checkbox"/> Ditch 12 <input type="checkbox"/> Water 13 <input type="checkbox"/> Vertical drop 14 <input type="checkbox"/> High terrain A Other		

Airport/Airstrip Facilities

(Complete only those items which are pertinent to the accident/incident)	A Installed		B Functioning		C Used		D Other
	1 Yes	2 No	1 Yes	2 No	1 Yes	2 No	
18 VASI/VAPI							
19 Wind Direction Indicator							
20 Landing Direction Indicator							
21 Low Level Wind Shear Alert System							
22 Runway Barrier							
23 Runway Remaining Markers							
24 Tower							
25 UNICOM							
26 FSS							
27 ATIS							

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement Q—Airport/Airstrip. (continued)

Airport/Airstrip Facilities (Night or IMC)

If the accident/incident occurred during approach, departure or on airport and it was night or IMC—complete those items which are considered pertinent to the occurrence.

Airport/Airstrip Facilities	A Installed		B Functioning		C Other
	1 Yes	2 No	1 Yes	2 No	
31 (ILS) Instrument Landing System—Complete					
32 ILS—Localizer Only					
33 ILS—Backcourse					
34 (MLS) Microwave Landing System					
35 VOR/TVOR					
36 VORTAC					
37 TACAN					
38 DME					
39 NDB					
40 (LOM) Locator Outer Marker					
41 Middle Marker					
42 Lighted Wind Indicator					
43 Approach Lights—Ground Actuated					
44 Approach Lights—Pilot Actuated					
45 Touchdown Zone Lights					
46 Threshold Lights					
47 Runway End Identifier Lights (REIL)					
48 Runway Edge Lights					
49 Runway Centerline Lights					
50 Taxiway Edge Lights					
51 Taxiway Centerline Lights					
52 Rotating Beacon					

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement Q—Airport/Airstrip (continued)

55 Type Approach Lights (Runway used) 1 <input type="checkbox"/> ALSF-1 6 <input type="checkbox"/> MALSR 2 <input type="checkbox"/> ALSF-2 7 <input type="checkbox"/> LDIN 3 <input type="checkbox"/> SSALF 8 <input type="checkbox"/> RAIL 4 <input type="checkbox"/> SSALR 9 <input type="checkbox"/> ODALS 5 <input type="checkbox"/> MALSF A Other		56 Type VASI (Runway used) 1 <input type="checkbox"/> 2-bar A Other 2 <input type="checkbox"/> 3-bar 3 <input type="checkbox"/> Tri-color 4 <input type="checkbox"/> T-VASI 5 <input type="checkbox"/> PLASI		57 Type Runway Edge Lights (Runway used) 1 <input type="checkbox"/> LIRL 2 <input type="checkbox"/> MIRL 3 <input type="checkbox"/> HIRL A Other		58 Runway Lights—Intensity/Setting 1 <input type="checkbox"/> Low intensity 2 <input type="checkbox"/> Medium 3 <input type="checkbox"/> High A Other	
59 Point Where Aircraft Left Runway/Landing Surface (Multiple entry) 1 <input type="checkbox"/> Approach end 4 <input type="checkbox"/> Right side 2 <input type="checkbox"/> Departure end 5 <input type="checkbox"/> None 3 <input type="checkbox"/> Left side A Other				60 Departed Runway, Distance from Threshold _____ Feet A Other			
61 Type of Ground Contact on Runway Landing Surface 1 <input type="checkbox"/> Touchdown 2 <input type="checkbox"/> Impact A Other		62 Point of Ground Contact 1 <input type="checkbox"/> Approach end 2 <input type="checkbox"/> Departure end		63 Ground Contact, Distance from Threshold _____ Feet A Other			
64 Ground Contact, Bearing from Threshold _____ Degrees magnetic A Other		65 Point Where Aircraft Came to Rest, Distance From Runway Threshold 1 <input type="checkbox"/> Approach end A _____ Feet 2 <input type="checkbox"/> Departure end B Other					
66 Point Where Aircraft Came to Rest, Relative Bearing from Runway Heading _____ deg. A Other		67 Runway Profile 1 <input type="checkbox"/> Level 4 <input type="checkbox"/> Down-up 2 <input type="checkbox"/> Up 5 <input type="checkbox"/> Up-down 3 <input type="checkbox"/> Down A Other		68 Average Slope Up _____ Percent grade A Other		69 Average Slope Down _____ Percent grade A Other	
<p><i>This section to be completed for all accidents/incidents occurring during takeoff, approach or landing at a limited or full certification airport.</i></p>							
70 Runway RCR Recorded 1 <input type="checkbox"/> No A Yes-reading _____ B Other		71 Runway Friction Measuring Equipment 1 <input type="checkbox"/> Available-used 2 <input type="checkbox"/> Available not used 3 <input type="checkbox"/> Not available A Other		72 Type of Runway Friction Measuring Equipment 1 <input type="checkbox"/> JBD 5 <input type="checkbox"/> Pilot 9 <input type="checkbox"/> Mu-meter 2 <input type="checkbox"/> DBV 6 <input type="checkbox"/> Vehicle 10 <input type="checkbox"/> Estimate 3 <input type="checkbox"/> Friction meter 7 <input type="checkbox"/> Skidmeter A Other 4 <input type="checkbox"/> Mess-fix 8 <input type="checkbox"/> Tapley meter			
73 Braking Action Report 1 <input type="checkbox"/> No report 4 <input type="checkbox"/> Poor 2 <input type="checkbox"/> Good 5 <input type="checkbox"/> Nil 3 <input type="checkbox"/> Fair A Other				74 Pilot Aware of Braking Action NOTAM 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other			

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

Supplement R—Meteorology

Complete this supplement for any accident in which weather conditions were considered a factor **and** an on-scene investigation was conducted.

1 Turbulence Forecast 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No (Go to block 5)	2 Severity of Forecast Turbulence 1 <input type="checkbox"/> Light 2 <input type="checkbox"/> Moderate 3 <input type="checkbox"/> Severe 4 <input type="checkbox"/> Extreme A Other	3 Type of Forecast Turbulence 1 <input type="checkbox"/> In clouds 2 <input type="checkbox"/> In thunderstorm 3 <input type="checkbox"/> Clear air 4 <input type="checkbox"/> Mountain wave A Other	4 Icing Forecast 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No (Go to block 8)	5 Severity of Forecast Icing 1 <input type="checkbox"/> Trace 2 <input type="checkbox"/> Light 3 <input type="checkbox"/> Moderate 4 <input type="checkbox"/> Severe A Other
6 Type of Forecast Icing 1 <input type="checkbox"/> Rime 2 <input type="checkbox"/> Clear 3 <input type="checkbox"/> Mixed A Other	7 Thunderstorm Forecast 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No (Go to block 10)	8 Level of Forecast Thunderstorm 1 <input type="checkbox"/> Severe 2 <input type="checkbox"/> Not severe A Other	9 In-flight Weather Service Available 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	
10 In-flight Weather Service Used 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No A Other	11 Type of In-flight Weather Service Used (Multiple entry) 1 <input type="checkbox"/> ATC 2 <input type="checkbox"/> FSS 3 <input type="checkbox"/> ATIS 4 <input type="checkbox"/> TWEB 5 <input type="checkbox"/> EFAS 6 <input type="checkbox"/> Company weather 7 <input type="checkbox"/> Contract weather 8 <input type="checkbox"/> VOR A Other			

Weather Conditions At Accident Site

If weather information entered on Form 6120.4 is based upon pilot/witness only, enter meteorological information from closest/most pertinent weather observation facility. Otherwise proceed to block 25.

12 Weather Observation Facility (Direct entry) A Identifier _____ B Time of observation _____ zone _____ C Elevation _____ feet MSL D Distance from accident site _____ NM E Direction from accident site _____ magnetic		13 Sky/Lowest Cloud Condition (Multiple entry) 1 <input type="checkbox"/> Clear A _____ Feet AGL 2 <input type="checkbox"/> Scattered B Other 3 <input type="checkbox"/> Thin broken 4 <input type="checkbox"/> Thin overcast 5 <input type="checkbox"/> Partial obscuration		14 Lowest Ceiling (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Broken 3 <input type="checkbox"/> Overcast 4 <input type="checkbox"/> Obscured A _____ Feet AGL B Other	
15 Visibility (decimals) A _____ SM B RVR _____ Feet C RVV _____ SM D Other	16 Temperature _____ °F A Other	17 Dew Point _____ °F A Other	18 Wind Direction (From) 1 <input type="checkbox"/> Variable A _____ magnetic B Other	19 Wind Speed (Multiple entry) 1 <input type="checkbox"/> Calm 2 <input type="checkbox"/> Light and Variable A _____ Knots B _____ (Gusts) Knots C Other	20 Altimeter Setting A _____ " Hg B Other
21 Density Altitude _____ Feet A Other	22 Type of Precipitation (Multiple entry) 1 <input type="checkbox"/> None (Go to block 25) 2 <input type="checkbox"/> Rain (R) 3 <input type="checkbox"/> Snow (S) 4 <input type="checkbox"/> Hail (A) 5 <input type="checkbox"/> Rain showers (RW) 6 <input type="checkbox"/> Freezing rain (ZR) 7 <input type="checkbox"/> Snow shower (SW) 8 <input type="checkbox"/> Drizzle (L) 9 <input type="checkbox"/> Ice pellets (IP) 10 <input type="checkbox"/> Snow pellets (SP) 11 <input type="checkbox"/> Snow grains (SG) 12 <input type="checkbox"/> Freezing drizzle (ZL) 13 <input type="checkbox"/> Ice crystals (IC) 14 <input type="checkbox"/> Ice pellet shower (IPW) A Other				
23 Intensity of Precipitation 1 <input type="checkbox"/> Light 2 <input type="checkbox"/> Moderate 3 <input type="checkbox"/> Heavy A Other		24 Restrictions to visibility (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Haze (H) 3 <input type="checkbox"/> Dust (D) 4 <input type="checkbox"/> Smoke (K) 5 <input type="checkbox"/> Fog (F) 6 <input type="checkbox"/> Ice fog (IF) 7 <input type="checkbox"/> Ground fog (GF) 8 <input type="checkbox"/> Blowing spray (BY) 9 <input type="checkbox"/> Blowing dust (BD) 10 <input type="checkbox"/> Blowing snow (BS) 11 <input type="checkbox"/> Blowing Sand (BN) A Other			

**National Transportation Safety Board
FACTUAL REPORT
AVIATION**

Supplement R—Meteorology (continued)

Turbulence/Icing/Thunderstorms/Other Significant Weather

<p>25 Turbulence (Multiple entry)</p> <p>1 <input type="checkbox"/> None 2 <input type="checkbox"/> In clouds 3 <input type="checkbox"/> In thunderstorms 4 <input type="checkbox"/> Clear air 5 <input type="checkbox"/> Mountain wave A Other</p>	<p>26 Severity of Turbulence</p> <p>1 <input type="checkbox"/> Light 2 <input type="checkbox"/> Moderate 3 <input type="checkbox"/> Severe 4 <input type="checkbox"/> Extreme A Other</p>	<p>27 Source of Turbulence Information</p> <p>1 <input type="checkbox"/> National Weather Service (NWS) 2 <input type="checkbox"/> Weather analysis A Pilot report (Aircraft type _____) B Other</p>
<p>28 Type of Icing Conditions That Existed (Multiple entry)</p> <p>1 <input type="checkbox"/> None 2 <input type="checkbox"/> Frost 3 <input type="checkbox"/> Rime (Glaze) 4 <input type="checkbox"/> Clear 5 <input type="checkbox"/> Mixed A Other</p>	<p>29 Severity of Icing Conditions</p> <p>1 <input type="checkbox"/> Trace 2 <input type="checkbox"/> Light 3 <input type="checkbox"/> Moderate 4 <input type="checkbox"/> Severe A Other</p>	<p>30 Source of Icing Condition Information</p> <p>1 <input type="checkbox"/> National Weather Service (NWS) 2 <input type="checkbox"/> Weather analysis A Pilot report (Aircraft type _____) B Other</p>
<p>31 Thunderstorm Activity Observed</p> <p>1 <input type="checkbox"/> None 2 <input type="checkbox"/> Level 1 (Light) 3 <input type="checkbox"/> Level 2 (Moderate) 4 <input type="checkbox"/> Level 3 (Heavy) 5 <input type="checkbox"/> Level 4 (Very heavy) 6 <input type="checkbox"/> Level 5 (Intense) 7 <input type="checkbox"/> Level 6 (Extreme) A Other</p>		<p>32 Source of Thunderstorm Information</p> <p>1 <input type="checkbox"/> NWS 2 <input type="checkbox"/> Witness 3 <input type="checkbox"/> Weather analysis A Pilot report (Aircraft type _____) B Other</p>
<p>33 Other Significant Weather (Multiple entry)</p> <p>1 <input type="checkbox"/> None 2 <input type="checkbox"/> Tornado 3 <input type="checkbox"/> Wind shear 4 <input type="checkbox"/> Frontal system 5 <input type="checkbox"/> Inversion 6 <input type="checkbox"/> Water spout 7 <input type="checkbox"/> Hurricane 8 <input type="checkbox"/> Funnel cloud 9 <input type="checkbox"/> Squall line 10 <input type="checkbox"/> Updraft 11 <input type="checkbox"/> Downdraft 12 <input type="checkbox"/> Variable cloud base 13 <input type="checkbox"/> Whirlwind/dust devil 14 <input type="checkbox"/> Mountain wave A Other</p>		
<p>34 Pertinent Weather Message Issued (Multiple entry)</p> <p>1 <input type="checkbox"/> AIRMET 2 <input type="checkbox"/> SIGMET 3 <input type="checkbox"/> Center Weather Advisory (CWA) 4 <input type="checkbox"/> Convective SIGMET A Other</p>	<p>35 Pilot Aware of Significant Weather (Multiple entry)</p> <p>1 <input type="checkbox"/> Turbulence 2 <input type="checkbox"/> Icing 3 <input type="checkbox"/> Thunderstorm 4 <input type="checkbox"/> Other significant weather 5 <input type="checkbox"/> No A Other</p>	<p>36 Pilot's Source of Information (Multiple entry)</p> <p>1 <input type="checkbox"/> Briefing 2 <input type="checkbox"/> In-flight advisories (AIRMET, SIGMET, etc.) 3 <input type="checkbox"/> ATC 4 <input type="checkbox"/> Pilot observation 5 <input type="checkbox"/> Weather radar 6 <input type="checkbox"/> Storm scope A Other</p>

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement S—Aircraft Occupant and Injured Ground Personnel

Other Occupants		B Seat No.	C Address (City & State)	D Crew	E Passenger	F Non- Occupant	G FAA	H Degree of Injury			
A Name	4 Fatal							3 Serious	2 Minor	1 None	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement T—Flight Data Recorder (FDR)/Cockpit Voice Recorder (CVR)

Flight Data Recorder

1 Flight Data Recorder (FDR) Installed

- 1 Yes-recovered 3 No
2 Yes-not recovered A Other

2 Flight Recorder Manufacturer

_____ A Other

3 Flight Recorder—Model No.

_____ A Other

4 Flight Data Recorder Condition

- 1 Destroyed-fire 4 Damaged-impact
2 Destroyed-impact 5 Undamaged
3 Damaged-fire A Other

5 Flight Data Recorder Source of Damage (Multiple entry)

- 1 Fire A Other
2 Impact

6 Recording Medium Condition (Multiple entry)

- 1 Not damaged by occurrence
2 Destroyed by impact
3 Destroyed by fire
4 Damaged by impact
5 Damaged by fire
6 Damaged by mishandling
A Other

7 Data Recovery Status

- 1 All parameters recovered 10 No data recovered
2 Partial loss—impact/fire damage A Other
3 Partial loss—preoccurrence recorder malfunction
4 Partial loss due to mishandling
5 Complete loss—preoccurrence allied system malfunction
6 Complete loss—preoccurrence recorder malfunction
7 Complete loss due to mishandling
8 Foil medium expended prior to occurrence
9 Occurrence prior to oldest recorded data

Cockpit Voice Recorder

8 Cockpit Voice Recorder (CVR) Installed

- 1 Yes-recovered 3 No
2 Yes-not recovered A Other

9 Cockpit Voice Recorder Manufacturer

_____ A Other

10 Cockpit Voice Recorder Model No.

_____ A Other

11 Cockpit Voice Recorder Condition

- 1 Destroyed-fire A Other
2 Destroyed-impact
3 Damaged-fire
4 Damaged-impact
5 Undamaged

12 CVR Component Condition

- 1 Pinger operable
2 Pinger inoperable
A Other

13 Recording Medium Condition

- 1 Destroyed
2 Damaged
3 Undamaged
A Other

14 CAM Recording Quality

- 1 Excellent
2 Satisfactory
3 Unsatisfactory
4 Unreadable
A Other

15 RDO Quality of Recording

- 1 Excellent
2 Satisfactory
3 Unsatisfactory
4 Unreadable
A Other

16 Recording Medium Quality Loss Source

- 1 None
2 Fire
3 Mechanical
4 Electrical
5 Maintenance and engineering
A Other

17 CVR Quality Loss Source

- 1 None
2 Fire
3 Mechanical
4 Electrical
5 Maintenance and engineering
A Other

18 Additional Recording Media Received (Multiple entry)

- 1 CVR 6 TV recorder
2 Tower 7 Commercial radio
3 Center 8 Commercial TV
4 ATC 9 Motion picture film
5 Personal recorder A Other

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement U—Crew Information FAR 121, 125, 127, 135 Operations

Pilot In Command Additional Flight/Duty/Rest Time Information

	A Flight Time			D Duty Time			G Rest Period			J Time Zone K Changes	
	B Hrs.	C Mins.	D Other	E Hrs.	F Mins.	G Other	H Hrs.	I Mins.	J Other	K Hrs.	L Other
1 Day of Accident											
2 Day 2											
3 Day 3											
4 Day 4											
5 Day 5											
6 Day 6											
7 Day 7											

8 Method of Payment (Multiple entry)

1 Salary
 2 By flight hour
 3 By duty hour
 4 By completed trip
 A Other

9 Bonus For Speed

1 Yes
 2 No
 A Other

10 Bonus For Completion (Multiple entry)

1 None
 2 Trip
 3 Flight
 A Other

Copilot Additional Flight/Duty/Rest Time Information

11 None (Go to block 25)

	A Flight Time			D Duty Time			G Rest Period			J Time Zone K Changes	
	B Hrs.	C Mins.	D Other	E Hrs.	F Mins.	G Other	H Hrs.	I Mins.	J Other	K Hrs.	L Other
13 Day of Accident											
14 Day 2											
15 Day 3											
16 Day 4											
17 Day 5											
18 Day 6											
19 Day 7											

20 Method of Payment (Multiple entry)

1 Salary
 2 By flight hour
 3 By duty hour
 4 By completed trip
 A Other

21 Bonus For Speed

1 Yes
 2 No
 A Other

22 Bonus For Completion (Multiple entry)

1 None
 2 Trip
 3 Flight
 A Other

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement U—Crew Information FAR 121, 125, 127, 135 Operations (continued)

Flight Engineer Information

25 None on Aircraft (Go to Flight Attendant Information)

26 Certificate(s) (Multiple entry) 1 <input type="checkbox"/> Private 2 <input type="checkbox"/> Commercial Flight Engineer 5 <input type="checkbox"/> Reciprocating 6 <input type="checkbox"/> Turbopropeller 7 <input type="checkbox"/> Turbojet 3 <input type="checkbox"/> Airline transport 4 <input type="checkbox"/> Flight instructor 8 <input type="checkbox"/> Foreign 9 <input type="checkbox"/> Military 10 <input type="checkbox"/> None A Other		27 Airplane Ratings (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> SE land 3 <input type="checkbox"/> ME land 4 <input type="checkbox"/> SE sea 5 <input type="checkbox"/> ME sea	28 Rotorcraft/Glider (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Helicopter 3 <input type="checkbox"/> Gyroplane 4 <input type="checkbox"/> Glider 5 <input type="checkbox"/> Airship 6 <input type="checkbox"/> Free balloon	29 Instrument Rating(s) (Multiple entry) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Airplane 3 <input type="checkbox"/> Helicopter	30 Type Rating 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
--	--	--	--	--	--

31 Total Engineer Flight Time _____ Hrs A Other	33 Engineer Time Last 90 Days _____ Hrs A Other	34 Engineer Time Last 30 Days _____ Hrs A Other	35 Medical Certificate Validity 1 <input type="checkbox"/> Valid medical-no waivers/limitations 2 <input type="checkbox"/> Valid medical-with waivers/limitations 3 <input type="checkbox"/> Non valid medical for this flight 4 <input type="checkbox"/> Expired certificate 5 <input type="checkbox"/> No medical certificate A Other
32 Engineer Time in Type Aircraft _____ Hrs. A Other			

36 Medical Limitation 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Vision A Specify _____ B Other	37 Medical Waiver 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Vision 3 <input type="checkbox"/> Hearing A Specify _____ B Other	38 Medical Certificate 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Class 1 3 <input type="checkbox"/> Class 2 4 <input type="checkbox"/> Class 3 A Other	39 Date of Last Medical (Nos. for M, D, Y) _____ A Other
--	--	---	---

	Flight Time			Duty Time			Rest Period			Time Zone J Changes K
	A	B	C	D	E	F	G	H	I	
42 Day of Accident	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Other
43 Day 2	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Other
44 Day 3	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Other
45 Day 4	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Other
46 Day 5	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Other
47 Day 6	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Other
48 Day 7	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Hrs.	Mins.	Other	Other

Flight Attendant Information

51 None on Aircraft (Go to block 57)

52 Date Hired (Nos. for M, D, Y)	A	B	C	D	E
	F	G	H	I	J
	K	L	M	N	

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**

NTSB Accident/Incident Number

Supplement U—Crew Information FAR 121, 125, 127, 135 Operations

CFR 125, 135 Training and Flight Checks

	Date Completed (Nos. for M. D. Y)			Hours Completed		
	A PIC/Captain	B Copilot	C Flight Eng.	D PIC/Captain	E Copilot	F Flight Eng.
72 Date Hired						
73 Date Qualified in Position						
74 Competency Flight Check						
75 Instrument Proficiency Flight Check						
76 Current In Other Aircraft	1 <input type="checkbox"/> Yes	1 <input type="checkbox"/> Yes	1 <input type="checkbox"/> Yes			
	2 <input type="checkbox"/> No	2 <input type="checkbox"/> No	2 <input type="checkbox"/> No			

FAA Surveillance of Air Taxi Operators

79 Type of FAA Office (Multiple entry) 1 <input type="checkbox"/> GADO 2 <input type="checkbox"/> FSDO	3 <input type="checkbox"/> ACDO A Other	80 Date Certificate Issued (Nos. for M. D. Y) A Other	
	A District Office	B POI	C PMI
81 Date Last Base Inspection Conducted (Accident Operator) (Nos. for M. D. Y)			
82 No. of Enroute Checks Last Year (Accident Operator)			

Docket # _____

SEQUENCE OF EVENTS WORKSHEET

NTSB # _____

Occurrence # _____

Occurrence _____

Phase of Occurrence _____

IA			IB			II			III	
SUBJECT	MODIFIER		SUBJECT	MODIFIER	PERSON	DIRECT	PERSON	INDIRECT	PERSON	
1. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

Occurrence # _____

Occurrence _____

Phase of Occurrence _____

Occurrence # _____

Occurrence _____

Phase of Occurrence _____

IA			IB			II			III	
SUBJECT	MODIFIER		SUBJECT	MODIFIER	PERSON	DIRECT	PERSON	INDIRECT	PERSON	
1. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

Occurrence # _____

Occurrence _____

Phase of Occurrence _____

SEQUENCE OF EVENTS WORKSHEET

OCCURRENCE # _____ OCCURRENCE _____ PHASE OF OPERATION _____

IA

IB

II

III

SUBJECT	MODIFIER
AIRCRAFT	
STRUCTURE	10000-11204
SYSTEMS	12000-13110
POWERPLANT	14000-15000
MISC.	16000-17000
	18011-19000

SUBJECT	MODIFIER
ENVIRONMENT	
ATC SYSTEM	18000-19104
MISC.	21000-21100
TERRAIN	19000
WEATHER	20000
LIGHT	20100
OBJECT	20000
	2100-2113
	2401-2000
	2201-2244
	2301-2307
	2000-2000

SUBJECT	MODIFIER	PERSON
AIRCRAFT		
LDG GEAR	22000-22009	
FLT CHTL	22100-22209	
FUEL	22200-22204	
PWRPLANT	22300-22314	
ELECTRICAL	22400-22404	
HYDRAULIC	22500	
ANT-ICE	22600	
COMM EQPT	22700	
FIRE EXT	22800	
AUTOPLT	22900	
EMERG EQPT	23000	
FLT/NAV	23100-23114	3000 } 4000
ROTORCRAFT	23200-23204	3148 } 4137
MISC EQPT	23300-23314	
OPERATIONS		
PLANNING/DEC	24000-24036	
MAINT	24100-24123	
AIRPORT	24200-24203	
DISPATCH	24300-24302	
WX SERVICES	24400-24408	
ACFT HANDLING	24500-24576	
COMM/INFO/ATC	24600-24630	
MISC	24700-25000	

DIRECT	PERSON
PSYCHOLOGICAL	31000-31200
WORKLOAD	32000
PHYSIOLOGICAL	33000
IMPAIRMENT	33100-33140
INCAPACITATION	33200-33260
STRENGTH	33300
DISORIENTATION	33400
VISUAL/AURAL	33500
FATIGUE	33600-33660
CORRECTING	
LENSES	33700
QUALIFICATIONS	34000-34346
INFORMATION	35000-35310
FACILITY INADEQ	70000-70220
PROCEDURE	
INADEQ	80000-80400
ACFT/EQPT	
INADEQ	82000-82128
ACFT/EQPT	
INADEQ	82200
COMPLIANCE	
MATERIAL	
INADEQUATE	84000-84200

INDIRECT	PERSON
OPERATION	90000
SURVEIL	90200
STANDARDS/REQUIR	91000 91500
CERTIFICATION	92000
APPROVAL	92400
SUBSTANTIATION	93000
PROCESS	93300
	6000 6130

F-68

NTSB CODING MANUAL MODIFYING TERMS

IB

24000 PLANNING-DECISION
 24002 AIRCRAFT PREFLIGHT
 24003 AIRCRAFT SERVICE
 24005 AIRCRAFT UNATTENDED/ENGINE(S) RUNNING
 24006 AIRCRAFT WEIGHT AND BALANCE
 24033 ALL AVAILABLE RUNWAY
 24014 BECAME LOST/DISORIENTED
 24030 CHECKLIST
 24026 COMPENSATION FOR WIND CONDITIONS
 24017 DOCUMENTATION
 24023 FLIGHT INTO KNOWN ADVERSE WEATHER
 24018 FLIGHT MANUALS
 24025 FLIGHT TO ALTERNATE DESTINATION
 24012 FUEL CONSUMPTION CALCULATIONS
 24004 ICE/FROST REMOVAL FROM AIRCRAFT
 24024 IFR PROCEDURE
 24010 IN-FLIGHT PLANNING/DECISION
 24031 JUDGEMENT
 24027 LANDED AT WRONG AIRPORT
 24013 NOTAMS
 24007 OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT
 24019 PERFORMANCE DATA
 24034 PLANNED APPROACH
 24001 PREFLIGHT PLANNING/PREPARATION
 24032 PROCEDURES/DIRECTIVES
 24009 PROPER ASSISTANCE
 24020 REFUELING
 24035 SECURITY OF CARGO
 24627 SUPERVISION
 24008 TIE DOWN
 24029 UNSUITABLE TERRAIN
 24015 VFR FLIGHT INTO IMC
 24016 VFR PROCEDURES
 24021 VISUAL LOOKOUT
 24022 WEATHER EVALUATION
 24011 WIND INFORMATION
 24028 WRONG RUNWAY
 24700 MISCELLANEOUS
 24705 CONTROL INTERFERENCE
 24701 DISTURBANCE
 24702 EQUIPMENT, OTHER
 24712 EVACUATION
 24703 HIJACKING
 24709 HOT START
 24704 INSTALLATION
 24706 RELINQUISHING OF CONTROL
 24714 RESCUE
 24710 SABOTAGE
 24713 SEARCH
 24711 SECURITY
 24708 STOLEN AIRCRAFT/UNAUTHORIZED USE
 24707 SUICIDE
 25000 UNDETERMINED
 24715 WAKE TURBULENCE

MODIFIERS
IB

AIRCRAFT OPERATIONS/PERFORMANCE

3000 ABOVE
3146 ABRUPT
3100 ATTEMPTED
3101 BELOW
3103 CONFLICTING
3142 CONFUSING
3102 CONTINUED
3104 DELAYED
3144 DISCONTINUED
3105 DISPATCHED
3106 DISREGARDED
2147 ENCOUNTERED
3107 EXCEEDED
3108 EXCESSIVE
3109 IMPROPER
3110 IMPROPER USE OF
3111 INACCURATE
3115 INADEQUATE
3113 INADVERTENT
3148 INADVERTENT ACTIVATION
3116 INADVERTENT DEACTIVATION
3117 INADVERTENT USE
3112 INATTENTIVE
3118 INITIATED
3114 INTENTIONAL
3119 ISSUED
3120 MISJUDGED
3121 MISREAD
3122 NOT ATTAINED
3123 NOT CORRECTED
3124 NOT FOLLOWED
3125 NOT IDENTIFIED
3126 NOT ISSUED
3127 NOT MAINTAINED
3129 NOT OBTAINED
3128 NOT PERFORMED
3131 NOT POSSIBLE
3132 NOT RECEIVED
3133 NOT SELECTED
3130 NOT UNDERSTOOD
3134 NOT USED
3135 PERFORMED
3136 POOR
3137 PREMATURE
3143 RECOMMENDED
3138 REDUCED
3145 RESTRICTED
3139 SELECTED
3140 UNCONTROLLED

PERSONS MODIFIER
IB

AIRCRAFT OPERATIONS

4125 AIRPORT PERSONNEL
4109 ATC PERSONNEL (ARTCC)
4110 ATC PERSONNEL (DEP/APCH)
4112 ATC PERSONNEL (FSS)
4113 ATC PERSONNEL (SUPERVISOR)
4111 ATC PSNL (LCL/GND/CLNC)
4105 CHECK PILOT
4107 COMPANY MAINTENANCE PSNL
4121 COMPANY/OPERATOR MGMT
4100 COPILOT/SECOND PILOT
4137 DESIGNATED EXAMINER
4122 DISPATCHER
4131 DRIVER OF VEHICLE
4101 DUAL STUDENT
4114 FAA INSPECTOR
4119 FAA (AIRWAYS FAC PSNL)
4117 FAA (OTHER/ORGANIZATION)
4116 FAA (PRIN MAINT INSPECTOR)
4115 FAA (PRIN OPNS INSPECTOR)
4118 FBO PERSONNEL
4126 FLIGHT ATTENDANT
4102 FLIGHT ENGINEER
4104 FLIGHT INSTRUCTOR (ON GROUND)
4124 GROUND PERSONNEL
4123 MANUFACTURER
4120 NWS PERSONNEL
4106 OTHER CREW MEMBER
4132 OTHER GOVERNMENT PERSONNEL
4108 OTHER MAINTENANCE PSNL
4133 OTHER PERSON
4127 PASSENGER
4000 PILOT IN COMMAND
4103 PILOT IN COMMAND (CFI)
4128 PILOT OF OTHER AIRCRAFT
4135 PILOT PASSENGER
4129 PRODUCTION/DESIGN PSNL
4130 SPECTATOR
4136 UNKNOWN
4001 will leave blank space

UNDERLYING FACTORS
II

DIRECT

82000 AIRCRAFT/EQUIPMENT INADEQUATE
82128 AIRCRAFT COMPONENT
82100 AIRCRAFT/EQUIPMENT, INADEQUATE DESIGN
82124 AIRCRAFT MANUALS
82126 AIRFRAME
82125 ACFT HANDLING/PERF CAPABILITIES
82116 COCKPIT/WORKPLACE
82117 COCKPIT/WORKPLACE LIGHTING
82119 COCKPIT/WORKPLACE NOISE/DISTRACTION
82120 COCKPIT/WORKPLACE SMOKE/FUMES
82114 CONTROL LOCATION
82115 CONTROL SHAPE/SIZE
82122 EQUIPMENT INTERFERENCE
82118 EXTERNAL LIGHTING
82123 FLIGHT MANAGEMENT SYSTEM
82111 INSTRUMENT DISPLAY
82112 INSTRUMENT LOCATION
82113 INSTRUMENT LIGHTING
82110 (STANDARD/REQUIREMENT)
82127 SUPPLEMENTAL TYPE CERTIFICATE
82121 VISUAL RESTRICTION BY EQUIP/STRUCTURE
82200 AIRCRAFT/EQUIPMENT, INADQT COMPLIANCE DETERMINATION
32000 EXCESSIVE WORKLOAD (TASK OVERLOAD)
70000 FACILITY INADEQUATE
70114 CONTROL LOCATION
70115 CONTROL SHAPE/SIZE
70122 EQUIPMENT INTERFERENCE
70118 EXTERNAL LIGHTING
70200 FACILITY, INADEQUATE COMPLIANCE DETERMINATION
70220 FACILITY, INADEQUATE COMPLIANCE (DOCUMENTATION)
70210 FACILITY, INADEQUATE COMPLIANCE (REVIEW)
70100 FACILITY, INADEQUATE DESIGN
70110 FACILITY, INADEQUATE DESIGN (STANDARD/REQUIREMENT)
70123 FLIGHT MANAGEMENT SYSTEM
70111 INSTRUMENT DISPLAY
70112 INSTRUMENT LOCATION
70113 INSTRUMENT LIGHTING
70124 MANUALS/DIRECTIVES
70121 VISUAL RESTRICTION BY EQUIP/STRUCTURE
70116 WORKPLACE
70117 WORKPLACE LIGHTING
70119 WORKPLACE NOISE/DISTRACTION
70120 WORKPLACE SMOKE/FUMES
35000 INFORMATION
35100 INFORMATION INSUFFICIENT
35200 INFORMATION UNAVAILABLE
35300 INFORMATION UNCLEAR
35320 INFORMATION UNCLEAR (LANGUAGE)
35310 INFORMATION UNCLEAR (PHRASEOLOGY)

II

31250 EMOTIONAL REACTION
 31230 EXPECTANCY
 31270 HABIT INTERFERENCE
 31120 INATTENTIVE
 31240 INTERPERSONAL RELATIONS
 31220 MENTAL PERFORMANCE OVERLOAD
 31130 MOTIVATION
 31260 OSTENTATIOUS DISPLAY
 31280 OTHER PSYCHOLOGICAL CONDITION
 31160 OVER CONFIDENCE IN PERSONAL ABILITY
 31170 OVER CONFIDENCE IN AIRCRAFT'S ABILITY
 31190 PANIC
 31200 PRESSURE
 31202 COMPANY-INDUCED PRESSURE
 31203 PRESSURE INDUCED BY OTHERS
 31201 SELF-INDUCED PRESSURE
 31150 UNDER CONFIDENCE IN PERSONAL ABILITY
 31210 VISUAL/AURAL PERCEPTION
 80000 PROCEDURE INADEQUATE
 80100 CONDITION(S)/STEP(S) NOT LISTED
 80200 CONDITION(S)/STEP(S) INSUFFICIENTLY DEFINED
 80300 CONDITION(S)/STEP(S) IN ERROR
 80400 CONDITION(S)/STEP(S) IN IMPROPER SEQUENCE
 34000 QUALIFICATION
 34100 IMPROPER TRAINING
 34110 IMPROPER INITIAL TRAINING
 34120 IMPROPER RECURRENT TRAINING
 34140 IMPROPER TRAINING (EMERGENCY PROCEDURE(S))
 34130 IMPROPER TRANSITION/UPGRADE TRAINING
 34200 INADEQUATE TRAINING
 34210 INADEQUATE INITIAL TRAINING
 34220 INADEQUATE RECURRENT TRAINING
 34240 INADEQUATE TRAINING (EMERGENCY PROCEDURE(S))
 34230 INADEQUATE TRANSITION/UPGRADE TRAINING
 34300 EXPERIENCE
 34310 LACK OF FAMILIARITY WITH AIRCRAFT
 34320 LACK OF FAMILIARITY WITH GEOGRAPHIC AREA
 34330 LACK OF TOTAL EXPERIENCE
 34331 TOTAL
 34333 LACK OF TOTAL EXPERIENCE IN TYPE OF AIRCRAFT
 34335 LACK OF TOTAL EXPERIENCE IN TYPE OPERATION
 34334 LACK OF TOTAL INSTRUMENT TIME
 34340 LACK OF RECENT EXPERIENCE
 34341 LACK OF RECENT TOTAL EXPERIENCE
 34343 LACK OF RECENT EXPERIENCE IN TYPE OF AIRCRAFT
 34345 LACK OF RECENT EXPERIENCE IN TYPE OPERATION
 34344 LACK OF RECENT INSTRUMENT TIME

PERSON MODIFIERS

II

DIRECT FACTORS

5350 AIRPORT PERSONNEL
5190 ATC PERSONNEL(ARTCC)
5200 ATC PERSONNEL(DEP/APCH)
5220 ATC PERSONNEL(FSS)
5230 ATC PERSONNEL(SUPERVISOR)
5210 ATC PSNL(LCL/GND/CLNC)
5150 CHECK PILOT
5170 COMPANY MAINTENANCE PERSONNEL
5310 COMPANY/OPERATOR MANAGEMENT
5100 COPILOT/SECOND PILOT
5407 DESIGNATED EXAMINER
5320 DISPATCHER
5403 DRIVER OF VEHICLE
5110 DUAL STUDENT
5240 FAA INSPECTOR
5280 FAA(AIRWAYS FACILITY PERSONNEL
5270 FAA(ORGANIZATION)
5260 FAA(PRIIN MAINT INSPECTOR)
5250 FAA(PRIIN OPNS INSPECTOR)
5290 FBO PERSONNEL
5360 FLIGHT ATTENDANT
5120 FLIGHT ENGINEER
5140 FLIGHT INSTRUCTOR(ON GROUND)
5340 GROUND PERSONNEL
5330 MANUFACTURER
5300 NWS PERSONNEL
5160 OTHER CREW MEMBER
5370 OTHER GOVERNMENT PERSONNEL
5180 OTHER MAINTENANCE PSNL
5380 OTHER PERSONNEL
5401 PASSENGER
5000 PILOT IN COMMAND
5130 PILOT IN COMMAND(CFI)
5390 PILOT OF OTHER AIRCRAFT
5405 PILOT PASSENGER
5400 PRODUCTION/DESIGN PERSONNEL
5402 SPECTATOR
5406 UNKNOWN
5404 UNQUALIFIED PERSON
5001 will leave blank space

UNDERLYING FACTORS
III

INDIRECT

90000 INADEQUATE SURVEILLANCE OF OPERATION
90100 INADEQUATE PROCEDURE
90200 INSUFFICIENT STAFF

91000 INSUFFICIENT STANDARDS/REQUIREMENTS
91200 AIRCRAFT
91100 AIRMAN
91500 AIRWAYS/AIRSPACE
91400 MANUFACTURER
91300 OPERATION/OPERATOR

92000 INADEQUATE CERTIFICATION/APPROVAL
92200 AIRCRAFT
92100 AIRMAN
92400 MANUFACTURER
92300 OPERATOR

93000 INADEQUATE SUBSTANTIATION PROCESS
93300 INADEQUATE DOCUMENTATION
93100 INADEQUATE METHOD OF COMPLIANCE DTRMTN RCRDKPNG
93200 INSUFFICIENT REVIEW

PERSON MODIFIERS

INDIRECT FACTORS

6000 COMPANY/OPERATOR MGMT
6110 FAA(ORGANIZATION)
6100 MANUFACTURER
6120 OTHER GOVT ORGANIZATION
6130 OTHER INSTITUTION

II

84000 MATERIAL INADEQUATE
84100 MATERIAL DEFECT
84110 MATERIAL DEFECT (INADEQUATE QUALITY CONTROL)
84120 MATERIAL DEFECT (INADEQUATE QUALITY OF MATERIAL)
84200 MATERIAL INADEQUATE, IMPROPEP
33000 PHYSIOLOGICAL CONDITION
33200 INCAPACITATION
33230 INCAPACITATION (ALCOHOL)
33211 INCAPACITATION (ANOXIA/HYPOXIA)
33214 INCAPACITATION (CARBON MONOXIDE)
33240 INCAPACITATION (DRUGS)
33212 INCAPACITATION (HEART ATTACK)
33217 INCAPACITATION (HYPERTENSION)
33216 INCAPACITATION (HYPOGLYCEMIA/DIET)
33250 INCAPACITATION (LOSS OF CONSCIOUSNESS)
33218 INCAPACITATION (MOTION SICKNESS)
33210 INCAPACITATION (ORGANIC PROBLEM)
33213 INCAPACITATION (OTHER CARDIOVASCULAR)
33221 INCAPACITATION (OTHER ORGANIC PROBLEM)
33215 INCAPACITATION (OTHER TOXIC)
33219 INCAPACITATION (STROKE)
33220 INCAPACITATION (VISUAL DEFICIENCY)
33100 PHYSICAL IMPAIRMENT
33130 PHYSICAL IMPAIRMENT (ALCOHOL)
33111 PHYSICAL IMPAIRMENT (ANOXIA/HYPOXIA)
33114 PHYSICAL IMPAIRMENT (CARBON MONOXIDE)
33140 PHYSICAL IMPAIRMENT (DRUGS)
33110 PHYSICAL IMPAIRMENT (ORGANIC PROBLEM)
33112 PHYSICAL IMPAIRMENT (HEART ATTACK)
33117 PHYSICAL IMPAIRMENT (HYPERTENSION)
33116 PHYSICAL IMPAIRMENT (HYPOGLYCEMIA/DIET)
33118 PHYSICAL IMPAIRMENT (MOTION SICKNESS)
33113 PHYSICAL IMPAIRMENT (OTHER CARDIOVASCULAR)
33115 PHYSICAL IMPAIRMENT (OTHER TOXIC)
33121 PHYSICAL IMPAIRMENT (OTHER ORGANIC PROBLEM)
33119 PHYSICAL IMPAIRMENT (STROKE)
33120 PHYSICAL IMPAIRMENT (VISUAL DEFICIENCY)
33300 PHYSICAL STRENGTH OVERLOAD
33400 SPATIAL DISORIENTATION
33500 VISUAL/AURAL DETECTION
33600 FATIGUE
33660 FATIGUE (CIRCADIAN RHYTHM)
33610 FATIGUE (CHRONIC)
33630 FATIGUE (FLIGHT SCHEDULE)
33650 FATIGUE (FLIGHT AND GROUND SCHEDULE)
33640 FATIGUE (GROUND SCHEDULE)
33620 FATIGUE (LACK OF SLEEP)
33700 CORRECTING LENSES NOT WORN
31000 PSYCHOLOGICAL CONDITION
31180 ANXIETY/APPREHENSION
31140 COMPLACENCY
31110 DIVERTED ATTENTION

National Transportation Safety Board
Washington, D.C. 20594

Brief of Accident

File No. - 439 3/03/85 KNOXVILLE, TN A/C Reg. No. N2013K Time (Lcl) - 1700 EST

-----Basic Information-----

Type Operating Certificate-NONE (GENERAL AVIATION)	Aircraft Damage DESTROYED	Fatal	Injuries		
Type of Operation -PERSONAL	Fire	0	Serious	Minor	None
Flight Conducted Under -14 CFR 91	NONE	0	0	1	0
Accident Occurred During -MANEUVERING		0	0	0	0

-----Aircraft Information-----

Make/Model - BEECH C23	Eng Make/Model - LYCOMING O-360-A4K	ELT Installed/Activated - YES/YES
Landing Gear - TRICYCLE-FIXED	Number Engines - 1	Stall Warning System - YES
Max Gross Wt - 2450	Engine Type - RECIPROCATING-CARBURETOR	
No. of Seats - 4	Rated Power - 180 HP	

-----Environment/Operations Information-----

Weather Data	Itinerary	Airport Proximity
Wx Briefing - NO RECORD OF BRIEFING	Last Departure Point	ON AIRPORT
Method - N/A	SAME AS ACC/INC	
Completeness - N/A	Destination	Airport Data
Basic Weather - VMC	LOCAL	KNOXVILLE DOWNTOWN
Wind Dir/Speed- 120/006 KTS	ATC/Airspace	Runway Ident - 08
Visibility - 7.0 SM	Type of Flight Plan - NONE	Runway Lth/Wid - 3500/ 75
Lowest Sky/Clouds - 25000 FT THIN OVC	Type of Clearance - NONE	Runway Surface - ASPHALT
Lowest Ceiling - NONE	Type Apch/Lndg - FORCED LANDING	Runway Status - DRY
Obstructions to Vision- NONE		
Precipitation - NONE		
Condition of Light - DAYLIGHT		

-----Personnel Information-----

Pilot-In-Command	Age - 26	Medical Certificate - VALID MEDICAL-NO WAIVERS/LIMIT
Certificate(s)/Rating(s)	Biennial Flight Review	Flight Time (Hours)
PRIVATE	Current - UNK/NR	Total - 67
SE LAND	Months Since - UNK/NR	Last 24 Hrs - 0
	Aircraft Type - UNK/NR	Make/Model- 13
		Instrument- UNK/NR
		Last 30 Days- 0
		Last 90 Days- 0
		Rotorcraft - UNK/NR

Instrument Rating(s) - NONE

-----Narrative-----

THE PLT HAD NOT FLOWN FOR OVER 90 DAYS & WAS PRACTICING LANDINGS BEFORE FLYING WITH PASSENGERS. WHILE CLIMBING FROM A TOUCH-&-GO LANDING, THE ENG LOST POWER AT ABOUT 250 TO 300 FT AGL. THE PLT SAW ONLY A RIVER AHEAD, SO HE ATTEMPTED TO TURN & LAND ON THE ARPT. HE STATED THAT HE DROPPED THE NOSE TO MAINTAIN AIRSPEED, BUT WAS UNABLE TO KEEP FROM HITTING TREES. THE ACFT WAS DESTROYED BY IMPACT WITH THE TREES & GROUND. THE FUEL SELECTOR WAS FOUND POSITIONED HALF WAY BETWEEN THE LEFT & RIGHT POSITIONS. NO FUEL WAS FOUND IN THE FUEL STRAINER OR FUEL LINES FORWARD OF THE FIREWALL. WHEN THE FUEL SELECTOR WAS MOVED TO EITHER THE LEFT OR RIGHT POSITIONS, FUEL FLOWED FREELY, BUT NO FUEL WOULD FLOW IN THE INTER-MEDIATE POSITION. THE INVESTIGATOR NOTED THAT WHEN THE FLAPS WERE SELECTED, THE FUEL SELECTOR COULD EASILY BE BUMPED. ALSO, THE DETENTS ON THE SELECTOR WERE WEAK & THE SELECTOR COULD EASILY BE MOVED. AD 85-05-02, AMENDMENT 39-5912, WAS NOT COMPLIED WITH; HOWEVER, IF SO, IT WOULD NOT HAVE PREVENTED THIS PROBLEM.

Brief of Accident (Continued)

File No. - 439

3/03/85

KNOXVILLE, TN

A/C Reg. No. N2013K

Time (Lcl) - 1700 EST

Occurrence #1 LOSS OF POWER(TOTAL) - NON-MECHANICAL
Phase of Operation TAKEOFF - INITIAL CLIMB

Finding(s)

1. FUEL SYSTEM, SELECTOR VALVE - OTHER
2. AIRCRAFT/EQUIPMENT, INADEQUATE DESIGN - MANUFACTURER
3. FLUID, FUEL - STARVATION
4. FUEL TANK SELECTOR POSITION - IMPROPER - PILOT IN COMMAND
5. IMPROPER USE OF PROCEDURE, LACK OF TOTAL EXPERIENCE - PILOT IN COMMAND
6. IMPROPER USE OF PROCEDURE, LACK OF RECENT EXPERIENCE - PILOT IN COMMAND

Occurrence #2 FORCED LANDING
Phase of Operation MANEUVERING - TURN TO LANDING AREA (EMERGENCY)

Finding(s)

7. EMERGENCY PROCEDURE - IMPROPER - PILOT IN COMMAND

Occurrence #3 IN FLIGHT COLLISION WITH OBJECT
Phase of Operation MANEUVERING - TURN TO LANDING AREA (EMERGENCY)

Finding(s)

8. OBJECT - TREE(S)

Occurrence #4 IN FLIGHT COLLISION WITH TERRAIN
Phase of Operation DESCENT - UNCONTROLLED

-----Probable Cause-----

The National Transportation Safety Board determines that the Probable Cause(s) of this accident is/are finding(s) 3,4,7

Factor(s) relating to this accident is/are finding(s) 1,2,6,8

APPENDIX G

Words and Terms With Possible Human Factors Interest, from the
U.S. Air Force Aircraft File Classifications Elements
and Factors Manual G-1

U.S. AIR FORCE INSPECTION AND SAFETY CENTER
AIRCRAFT FILE CLASSIFICATION ELEMENTS AND FACTORS MANUAL
ELEMENTS WITH POSSIBLE HUMAN FACTOR INTEREST

Type Mishap Codes

- Pilot Induced Control Loss
 - Basic Flight Maneuvering
 - Air Combat Maneuvering/Aerobatics
 - Landing Pattern
 - Formation
 - Pilot Induced Oscillation
 - Confidence Maneuvering
 - Weather
 - Undetermined
 - Other/Unauthorized Maneuver
- Collision with Ground On/Off Range
- Midair Collision
- Pilot Induced Landing Accidents
 - Hard Landing
 - Directional Control Loss
 - Long/Hot
 - Short
 - Formation
 - Gear Up
- Pilot Induced Takeoff Accidents
 - Directional Control Loss
 - Over/Under Rotate
 - Formation
 - Premature Gear Retraction
 - Abort
- Pilot Induced Flameouts

Description Code

- Miscellaneous Unsafe Conditions
 - Air Contamination in Cabin/Cockpit
 - Hypoxia
 - Decompression Sickness
 - Blackout/Redout
 - Fatigue-Physical/Mental Stress
 - Carbon Monoxide Poisoning
 - Incapacitation, Cause Unknown
 - Hyperventilation
 - Illness in Flight (Ear Block, Sinus)
 - Physical Size of Aircrew Member
 - Other Loss of Consciousness

Description Cause - Condition

- Design Deficiency
- Equipment Aging
- Inadequate Procedure
- Inadequate Training
- Lack of Knowledge
- Management Personnel Policy

Unsafe Act Data

- Inadequate Flight Preparation
 - Poor Navigation Planning
 - Inadequate Operating Procedures
 - Inadequate Briefing
- Miscellaneous Actions
 - Confusion as to Who Was in Control
 - Attempted Flight Beyond Capability
 - Incapacitation
 - Fail Take Immediate Action in Emergency
 - Attempted Flight in Poor Physical Condition
 - Flew Aircraft with Unknown Unsafe Condition
 - Exceeded/Inadequate Crew Rest
 - Handled Equipment Carelessly
 - Failed to See Proper Safety Precautions
 - Intoxicated/Hangover
 - Under Influence of Drugs
 - Smoking
- Mistreated Airframe
 - Performed Prohibited Maneuver
 - Exceeded Engine Envelope
- Improper Operation of Aircraft System
 - Improper Use of (various systems)
 - Incorrect Flight Instrument Interpretation
- Operations From Ground to Landing
 - Taxied in Unsuitable Terrain
 - Overrotated on Takeoff
 - Failed to Use Checklist
 - Landed on Wrong/Unsuitable Runway
 - Failed to Divert to Alternate Field
 - Misjudged Altitude
 - Landed Hard

Landed Short of Runway
Improper Inflight Planning
Failed to Monitor Weather
Control Loss - Stall

Unsafe Act Cause - Condition

Attitude
Briefing
Channelized Attention
Complacency
Discipline Breakdown
Distraction
Experience
Fatigue
Flying Proficiency
Habit Interference
Inadequate Training
Lack of Knowledge
Mission Stress
Motivation
Overcommitment
Overconfidence
Overmotivation
Peer Pressure
Personal Stress
Pressing
Self Image
Skill/Techniques
Task Saturation
Training

APPENDIX H

A List of Human Factors Engineering Topics and Selected
Topics from the U.S. Air Force Lessons Learned
Database H-1

HUMAN FACTORS ENGINEERING

LL #	TOPIC:	PAGE
0319	HUMAN FACTORS, OPERATOR TASK ANALYSIS	1
0320	HUMAN FACTORS, SUB-CONTRACTOR RESPONSIBILITIES	1
0655	WARNING LIGHT REFLECTION AND DISTRACTION	1
0796	CARGO LIGHT GLARE	1
0815	WINDSHIELD RAIN REMOVAL SYSTEM (AIRCRAFT)	1
0823	DIGITAL DISPLAYS ON INSTRUMENT PANEL	1
0856	DATA DISPLAY FORMATS	1
0864	ROCKET FUEL HANDLERS CLOTHING OUTFIT (RFHCO)	1
0884	OPERATOR CONTROLS (MMHE)	1
0895	TRAILER TONGUE SPRING ASSIST (MMHE)	1
0903	INSTRUMENT PANEL LIGHTING MUNITIONS MATERIAL HANDLING EQUIPMENT (MMHE)	1
0917	PORTABLE FLOODLIGHTS MUNITIONS MATERIAL HANDLING EQUIPMENT (MMHE)	2
0921	REMOTE/PORTABLE CONTROL UNITS FOR BOMB TRAILERS, POWER LIFT TYPES MUNITIONS MATERIAL HANDLING EQUIPMENT (MMHE)	2
0923	INTERVEHICULAR BRAKE HOSE COLOR CODING MUNITIONS MATERIAL HANDLING EQUIPMENT (MMHE)	2
0926	PARKING BRAKE LEVERS MUNITIONS MATERIAL HANDLING EQUIPMENT (MMHE)	2
0928	BOMB LIFT TRUCK CONTROL SENSITIVITY (MMHE)	2
0964	ORIGINAL DESIGN INTENT LOST DURING MODIFICATION	2
0997	SWITCH INDICATORS	2
1012	NOISE WITHIN MOBILE SHELTERS	2
1030	LIGHTING	2
1059	CHAFF/FLARE SWITCH LOCATION	3
1061	FIRE WARNING DISPLAYS	3
1147	FIRE SUPPRESSION SYSTEM	3
1263	INADEQUATE COCKPIT HEATING CAPACITY AT HIGH ALTITUDES	3
1287	AERIAL REFUELING LIGHTING	3
1291	FIXED VERSUS MOVEABLE FLIGHT CONTROL STICK	3
1292	SINGLE WARNING LIGHT INDICATES MULTIPLE SYSTEM FAILURE MODES	3
1296	ON-BOARD DETECTION OF HYDRAZINE LEAKS	3
1306	HEADS UP DISPLAY (HUD) LIMITED G DISPLAY	4
1309	IMPROPERLY COLOR CODED AND DESIGNATED EMERGENCY CONTROLS	4
1312	EMERGENCY POWER UNIT (EPU) GROUND SAFING AND GROUND VISUAL DETECTION OF HYDRAZINE FIRING	4
1313	AUTOMATIC FLIGHT CONTROL LIMITING	4
1322	LOCATION OF SWITCHES ON CONTROL PANELS	4
1345	ELECTROLUMINESCENT (EL) LIGHTING	4
1378	MISSILE LOADING EQUIPMENT	4
1382	BRAKE SYSTEM	4
1385	GUN GAS INGESTION	5
1386	QUALITY ASSURANCE EVALUATION PROGRAM COORDINATOR (JOB SERIES GS-1910) PARTICIPATION ON PERFORMANCE WORK STATEMENT (PWS) STEERING GROUPS	5
1391	FLIGHT CONTROL SYSTEM (FCS) JAM WARNING INDICATOR SYSTEM	5
1396	SAFETY DESIGN OF AIRCRAFT/WEAPON INTERFACE	5
1405	ALTITUDE REMINDER INDICATOR	5

CALL NUMBER:
0319

TOPIC:
HUMAN FACTORS, OPERATOR TASK ANALYSIS

LESSON LEARNED:
LATE/INSUFFICIENT OPERATOR TASK ANALYSES ARE OF LITTLE USE AND MAY RESULT IN EQUIPMENT DESIGN DEFICIENCIES.

PROBLEM:
CONTRACTOR DID NOT PERFORM A COMPLETE HUMAN ENGINEERING OPERATOR TASK ANALYSIS, RESULTING IN: (1) CONSOLES/DISPLAYS THAT ARE TOO COMPLICATED FOR AVERAGE PERSONNEL TO PROPERLY UTILIZE AND (2) CONSOLES/DISPLAYS THAT WERE DEFICIENT AND NEEDED TO BE REDESIGNED.

DISCUSSION:
THE PROGRAM OFFICE (PO) DID NOT RECEIVE SUFFICIENT HUMAN ENGINEERING DIAS CALLED FOR BY THE HUMAN FACTORS DEVELOPMENT PLAN.

APPROPRIATE ACTION:
FOR CRITICAL SUBSYSTEMS, FUNCTIONS, EQUIPMENT AND SOFTWARE, HUMAN ENGINEERING OPERATOR TASK ANALYSIS SHOULD BE REQUIRED AND ACCOMPLISHED EARLY ENOUGH IN THE SYSTEM ENGINEERING PROCESS FOR HUMAN FACTORS AND OPERATIONS PERSONNEL FROM THE CONTRACTOR(S), PROGRAM OFFICE AND OPERATING COMMAND(S) TO PROVIDE FEEDBACK PRIOR TO THE DESIGN OF EQUIPMENT, CONSOLES AND DISPLAYS.

CALL NUMBER:
0320

TOPIC:
HUMAN FACTORS, SUB-CONTRACTOR RESPONSIBILITIES

LESSON LEARNED:
SUB-CONTRACTORS MUST BE AWARE HUMAN FACTORS (HF) MEANS
INTEGRATION.

PROBLEM:
FAILURE OF CONTRACTOR TO CONTRACTUALLY IMPOSE NECESSARY SYSTEM
HUMAN FACTORS REQUIREMENTS ON A SUBCONTRACTOR IMPAIRED OVERALL
HUMAN FACTORS INTEGRATION.

DISCUSSION:
DIDS FOR HUMAN ENGINEERING DEVIATION AND BIOMEDICAL PROBLEM DATA
REPORTS WERE SPECIFIED IN THE CONTRACTOR'S CORO, BUT NOT IN THE
(CRITICAL) SUB-CONTRACTOR'S CORO. PO PERSONNEL WERE NOT
SUFFICIENTLY AWARE OF DETAILS OF SUB-CONTRACTOR'S CONTRACT.

APPROPRIATE ACTION:
ENSURE PROGRAM OFFICE HUMAN FACTORS (HF) PERSONNEL ARE AWARE OF
ACTUAL REQUIREMENTS LISTS OF (HF CRITICAL) SUB-CONTRACTORS.

CALL NUMBER:
0655

TOPIC:
WARNING LIGHT REFLECTION AND DISTRACTION

LESSON LEARNED:
READING RETURNS ON A RADAR SCOPE CAN BE AFFECTED BY LIGHT REFLECTIONS EMANATING FROM BEHIND THE OPERATOR OR BY LIGHTS IN CLOSE PROXIMITY TO THE SCOPE.

PROBLEM:
CREW MEMBERS USING A RADAR SCOPE OR OTHER CRT DEVICE CAN BE DISTRACTED BY WARNING, CAUTION OR CONTROL LIGHTS THAT REFLECT OFF THE SCOPE. INTERFERENCE CAN ALSO OCCUR IF THE COLOR OR BRILLIANCE WITHIN THE PRIMARY CODE OF VISION DETRACTS FROM THE RETURNS ON THE SCOPE.

DISCUSSION:
AN INTERVIEW WITH SEVERAL OPERATIONS PERSONNEL IDENTIFIED THIS PARTICULAR OPERATOR LESSON LEARNED. THE REFLECTION OF LIGHTS ON BULKHEADS COULD EASILY MASK A VAGUE BUT SIGNIFICANT RADAR RETURN. IN A SIMILAR MANNER, IF ANY LIGHT IS PLACED CLOSE TO A RADAR OR OTHER CRT SCOPE, IT WOULD TEND TO DRAW THE OPERATORS' ATTENTION AWAY FROM THE SCOPE.

ONLY TWO OF THE 21 MIL SPECS AND STANDARDS REVIEWED ADDRESS THE PROBLEMS OF REFLECTION, GLARE, OR VISUAL INTERFERENCE. HOWEVER, NEITHER OF THESE ARE SPECIFIC IN REGARD TO THE PROBLEM. PARAGRAPH 3.3.14 OF MIL-D-6503H STATES THAT: "THE LOCATION, BRIGHTNESS, COLOR, AND DIMMING OF WARNING, CAUTION AND ADVISORY LIGHTS SHALL BE IN ACCORDANCE WITH MIL-STD-111." THE SPECULAR REFLECTION ASPECT IS NOT ADDRESSED.

APPROPRIATE ACTION:
DESIGN REVIEWS OF COCKPIT/COMPARTMENT LAYOUTS SHOULD SPECIFICALLY ADDRESS REFLECTIONS AND/OR GLARE OF WARNING AND OTHER INTERMITTENT OPERATION LIGHTING ON SCOPES AND INDICATORS.

CALL NUMBER:
0856

TOPIC:
DATA DISPLAY FORMATS

LESSON LEARNED:

COMPUTER DATA DISPLAY FORMATS THAT CONVERT NONELECTRONIC SYSTEM DATA UNITS OF MEASUREMENT TO ELECTRONIC ENGINEERING UNITS CAN BE CONFUSING TO OPERATORS.

PROBLEM:

IN AN ON-BOARD MAINTENANCE MANAGEMENT INFORMATION SYSTEM, PERFORMANCE DATA, AND OTHER TYPES OF NONELECTRONIC SYSTEM DATA, HAVE BEEN CONVERTED TO ELECTRONIC ENGINEERING UNITS. AS AN EXAMPLE, FT-LBS OF TORQUE MIGHT BE PRESENTED AS VOLTS PER CENTIMETER.

DISCUSSION:

PRESENTATION OF DATA IN ODD, PECULIAR, OR ABSTRACT FORMATS CREATES CONFUSION AND UNCERTAINTY AMONGST OPERATORS OR USERS OF COMPUTER EQUIPMENT. THE USER MAY, FOR EXAMPLE, BE A HYDRAULIC REPAIR MAN AND WOULD NOT RECOGNIZE "PSI" EXPRESSED AS "VOLTS D.C.". IT IS IMPORTANT FOR COMPUTER SYSTEM DESIGNERS TO RECOGNIZE THAT DATA DISPLAY IS A FORM OF COMMUNICATION; TO EFFECTIVELY COMMUNICATE, THE SPEAKER MUST KNOW HIS AUDIENCE AND USE THE APPROPRIATE VOCABULARY.

APPROPRIATE ACTION:

DATA DISPLAY SYSTEMS SHOULD USE THE POWER OF THE EMBEDDED COMPUTER TO DISPLAY DATA IN AN EASILY UNDERSTANDABLE FORMAT.

CALL NUMBER:
0997

TOPIC:
SWITCH INDICATORS

LESSON LEARNED:

PRESS-TO-INITIATE SWITCHES SHOULD GIVE THE OPERATOR A DEFINITE INDICATION, SUCH AS A CLICK SOUND OR A POSITIVE FEELING WHEN ACTUATED.

PROBLEM:

THE LACK OF FEEDBACK TO OPERATORS RESULTS IN A LOSS OF USER AWARENESS OF SWITCH OPERATION, A LOSS OF USER CONFIDENCE, AND REPETITIVE SWITCHING WHICH TENDS TO SATURATE THE COMPUTER INPUT CHANNELS.

DISCUSSION:

WHEN DISPLAY REQUEST SWITCHES ARE DEPRESSED TO CALL UP A DISPLAY ON THE CATHODE RAY TUBE (CRT), AND THE DISPLAY DOESN'T APPEAR IN A REASONABLE TIME, THE OPERATOR REQUESTS THE DISPLAY AGAIN BECAUSE HE THINKS HIS REQUEST WASN'T ACKNOWLEDGED THE FIRST TIME. THE OPERATOR USUALLY ASSUMES THAT HE DIDN'T PRESS THE SWITCH FIRMLY ENOUGH. WITH UP TO 14 CONSOLES GENERATING REQUESTS, THE PROCESS IS ALREADY SLOWED DOWN. A SECOND REQUEST IS A DUPLICATION WHICH SLOWS THE PROCESSOR DOWN FURTHER. WITH AFFIRMATIVE INDICATORS OF SWITCH ACTION, THIS PROBLEM WOULD BE ELIMINATED.

APPROPRIATE ACTION:

DESIGN/SYSTEM SPECIFICATIONS FOR SYSTEMS USING PRESS-TO-INITIATE SWITCHES MUST REQUIRE USE OF POSITIVE ACTION SWITCHES.

CALL NUMBER:

1061

TOPIC:

FIRE WARNING DISPLAYS

LESSON LEARNED:

FIRE WARNING LIGHTS, CAUTIONS AND DISPLAYS, MUST BE LOCATED AND ILLUMINATED PROPERLY TO PROVIDE FLIGHT CREWS WITH POSITIVE IDENTIFICATION OF WHICH ENGINE OR SYSTEM HAS DEVELOPED THE CONDITION TO AVOID THE USE OF INAPPROPRIATE EMERGENCY PROCEDURES.

PROBLEM:

CLOSE SIDE-BY-SIDE POSITIONING OF THE TWO ENGINE FIRE WARNING PUSHBUTTONS AND IMPROPER ILLUMINATION CONTRIBUTES TO CONFUSION DURING EMERGENCY PROCEDURES.

DISCUSSION:

A FIGHTER/BOMBER COCKPIT INSTRUMENT PANEL IS PROVIDED WITH SEVERAL WARNING LIGHTS, DISPLAYS, ETC, LOCATED ON THE PILOT'S UPPER LH INSTRUMENT PANEL ARE THE TWO (2) ENGINE FIRE WARNING DISPLAYS. WHENEVER THE FIRE DETECTION SYSTEM SENSES AN OVERHEAT OR FIRE, THE APPROPRIATE ENGINE FIRE WARNING LIGHT WILL ILLUMINATE. THE PILOT MUST THEN REACT PROMPTLY TO THE EMERGENCY BY DEPRESSING THE FIRE PUSHBUTTON AND RETARDING THE CORRESPONDING THROTTLE. FAILURE TO ACT QUICKLY AND RESPOND IN THE PROPER SEQUENCE MAY RESULT IN THE SUBSEQUENT LOSS OF THE AIRCRAFT.

DURING NIGHT OPERATIONS, THE SIDE-BY-SIDE POSITIONING OF THE FIRE CONTROL BUTTONS IS CONFUSING TO FLIGHT CREWS AS THE ILLUMINATED PORTION OF THE BUTTON IS NOT PROVIDED WITH A RIGHT/LEFT OR ONE/TWO DESIGNATION. DURING DESIGN OF THE FIRE WARNING INDICATING SYSTEM IT WAS ASSUMED THAT THE APPLICABLE WARNING LIGHT COULD BE IDENTIFIED PROMPTLY WITHOUT DISTRACTING THE AIRCREW FROM THE ESSENTIAL TASK OF MAINTAINING AIRCRAFT CONTROL. UNDER NIGHT CONDITIONS, THESE DESIGN DEFICIENCIES CREATED A CONDITION CONFUSING TO FLIGHT CREWS, COMPOUNDING EMERGENCY PROCEDURE REACTION. INITIAL CORRECTIVE ACTION WAS THE PLACEMENT OF WHITE TAPE, "R", "L", PLACARDS ON THE TRANSPARENT BUTTONS. THESE MARKINGS WERE CHANGED TO BLACK AS THE WHITE LETTERING PROVED INADEQUATE FOR NIGHT OPERATIONS. IN ADDITION TO THESE MEASURES, THE LOWER HOUSING/RECESS OF THE BUTTONS HAVE BEEN PAINTED WITH "ZYGO" TO ENABLE THE PILOT TO SEE THE BUTTON POSITION TO PREVENT A SECOND PRESSING.

APPROPRIATE ACTION:

SYSTEM SPECIFICATIONS FOR FIRE WARNING LIGHTS AND DISPLAYS SHOULD INCORPORATE TAILORED PROVISIONS OF AFSC 081-3, DESIGN NOTE 2C5, TO PROVIDE FLIGHT CREWS WITH FIRE INDICATING DISPLAYS/CONTROLS THAT CAN BE IDENTIFIED PROMPTLY, WITHOUT DISTRACTING THE AIRCREW FROM THE ESSENTIAL TASK OF MAINTAINING AIRCRAFT CONTROL. PLACEMENT OF DISPLAYS/CONTROLS SHOULD BE A PRIMARY CONSIDERATION DURING DESIGN, AND EVALUATED DURING PRELIMINARY DESIGN REVIEW/CRITICAL DESIGN REVIEW (PDR/CDR).

CALL NUMBER:
1292

TOPIC:
SINGLE WARNING LIGHT INDICATES MULTIPLE SYSTEM FAILURE MODES

LESSON LEARNED:

WHEN A SINGLE INDICATOR LIGHT WARNS OF MULTIPLE SYSTEM FAILURE MODES, CARE MUST BE TAKEN TO ENSURE THAT ALL FAILURES ARE OF THE SAME DEGREE OF CRITICALITY AND THAT THE SAME ACTION SHOULD BE TAKEN EVERY TIME THE LIGHT COMES ON.

PROBLEM:

THE BATTERY FAILURE MONITORING CIRCUIT ILLUMINATED THE A/C FAIL LIGHT AND THE ELECTRICAL SYSTEM CAUTION LIGHT FOR FOUR DIFFERENT BATTERY CIRCUIT PROBLEMS, NOT ALL OF WHICH WERE CRITICAL TO FLIGHT.

DISCUSSION:

ONE FIGHTER AIRCRAFT'S BATTERY FAILURE MONITORING CIRCUIT WAS DESIGNED TO INDICATE FOUR DIFFERENT CONDITIONS THAT ARE HELPFUL FOR MAINTENANCE BUT NOT ALWAYS CRITICAL TO FLIGHT. THE FAILURE MONITORING CIRCUIT WOULD ILLUMINATE THE A/C FAIL LIGHT AND THE ELECTRICAL SYSTEM CAUTION LIGHT WHENEVER: (1) THE BATTERY TERMINAL VOLTAGE WAS LESS THAN 12.00 VOLTS; (2) ONE OR MORE CELLS WERE DEFECTIVE RESULTING IN A 0.5V OR GREATER UNBALANCE BETWEEN TWO HALVES OF THE BATTERY CELLS; (3) THE BATTERY TEMPERATURE SENSOR WHICH PROVIDES SIGNALS TO THE CHARGER HAD FAILED IN EITHER A SHORTED OR OPEN CIRCUIT CONDITION; OR (4) AN OPEN CIRCUIT EXISTED BETWEEN THE BATTERY AND THE CHARGER IN THE BATTERY POWER FEEDER CONDUCTOR. THE FAILURE MONITORING CIRCUIT WAS SUBSEQUENTLY MODIFIED SO THAT THE STRINGENT BATTERY MONITORING FOR MAINTENANCE PURPOSES WILL OCCUR ONLY WHILE THE AIRCRAFT IS ON THE GROUND WITH THE WEIGHT-ON-WHEELS (WOW) SWITCH ENGAGED. THE MODIFIED BATTERY FAILURE MONITORING CIRCUIT DOES NOT MEASURE UNBALANCED VOLTAGES WITHIN THE BATTERY WHILE THE AIRCRAFT IS IN FLIGHT. THE CHANGE WAS ACCOMPLISHED BY ADDING A RELAY WITHIN THE MONITORING CIRCUIT WHICH OPENED THE FAIL LIGHT AND CAUTION LIGHT CIRCUITS, AS LONG AS THE BATTERY IS FUNCTIONAL, WHILE THE AIRCRAFT IS IN FLIGHT. CONDITIONS RESULTING IN THE LOSS OF BATTERY FUNCTION WILL RESTORE THE MONITOR AND CAUSE THE LIGHTS TO ILLUMINATE.

ANOTHER IRRITATION WAS CREATED IN ACCOMPLISHING THIS MODIFICATION. ALTHOUGH NON-FLIGHT CRITICAL FAILURES ARE NOW SUPPRESSED (STORED) WHILE IN FLIGHT, ACTIVATION OF THE WOW SWITCH CAUSES THE STORED FAULTS TO ILLUMINATE THE A/C FAIL LIGHT AND THE ELECTRICAL SYSTEM CAUTION LIGHT. HAVING THESE STORED FAULTS, WHICH ARE ORIENTED FOR MAINTENANCE USAGE, SUDDENLY ILLUMINATE THE FAIL LIGHT AND CAUTION LIGHT AT A CRITICAL PHASE SUCH AS TOUCHDOWN CAN ADD TO PILOT CONFUSION, ESPECIALLY SINCE ILLUMINATION OF THE A/C FAIL LIGHT INDICATES THAT BRAKE OPERATION IS DOUBTFUL IN MAIN AND EMERGENCY GENERATOR FAILURE MODES.

APPROPRIATE ACTION:

LL # 1292 (CONT.)

THE SPO ENGINEERS SHOULD ENSURE THAT DETAILED SPECIFICATIONS REQUIRE ALL FAILURES CAUSING ILLUMINATION OF A SINGLE INDICATOR LIGHT MUST BE OF THE SAME DEGREE OF CRITICALITY AND REQUIRE THE SAME ACTION EVERY TIME. INDICATOR LIGHTS IN THE COCKPIT SHOULD ONLY INDICATE PROBLEMS WHICH ARE COMMON TO SAFE OPERATION OF THE A/C. INDICATOR LIGHTS USED FOR MAINTENANCE ONLY SHOULD BE LOCATED ELSEWHERE ON THE A/C (E.G. WHEEL WELLS, AVIONICS BAYS, ETC.).

CALL NUMBER:

1322

TOPIC:

LOCATION OF SWITCHES ON CONTROL PANELS

LESSON LEARNED:

AIRCRAFT COCKPIT CONTROLS OR INDICATORS WHICH ARE BLOCKED FROM VIEW OF THE AIRCREW BY THE POSITION OF OTHER CONTROLS WILL RESULT IN DECREASED OPERATIONAL CAPABILITY AND POSSIBLY ENDANGER SAFETY OF FLIGHT.

PROBLEM:

THE THROTTLES SET AT CRUISE POWER BLOCKED THE PILOT'S VIEW OF THE "AZ SCAN" AND "EL SCAN" SWITCHES ON THE RADAR CONTROL PANEL AND CAUSED THE PILOT TO HAVE TO MOVE HIS BODY POSITION TO VIEW AND OPERATE THE CONTROLS.

DISCUSSION:

SOME FIGHTER AIRCRAFT PILOTS WERE EXPERIENCING DIFFICULTY SEEING CONTROLS ON THE RADAR CONTROL PANEL WHEN THE THROTTLES WERE SET AT CRUISE POWER. THE PILOTS HAVE TO MOVE THEIR BODY TO VIEW AND OPERATE THE SWITCHES. THE COCKPIT INTEGRATION PROGRAM THAT IS UNDERWAY WILL CORRECT THIS PROBLEM.

APPROPRIATE ACTION:

HUMAN FACTORS ENGINEERING MUST ENSURE, DURING PRELIMINARY DESIGN REVIEW (PDR), THAT CONTROLS OR INDICATORS ARE NOT BLOCKED FROM VIEW BY OTHER CONTROLS REGARDLESS OF THE CONTROL POSITION.

APPENDIX I

Sections of the Naval Safety Data Coding Manual with
Human Factor Coding Elements Information I-1



PILOT CAUSAL FACTORS

FIRST - Card Columns 19 - 20	Card No. 120
SECOND - Card Columns 21 - 22	Card No. 120
THIRD - Card Columns 23 - 24	Card No. 120
AFTER THE FACT - Card Columns 25 - 26	Card No. 120

This is a four (4) two (2) position field coded alpha/numeric to describe the causal factor(s) assigned to the pilot(s) in the mishap.



CODES

- A MISUSED ENGINE CONTROLS. Improper use or failure to use engine controls, i.e., throttle, supercharger, cowl flap, carburetor heat, mixture propeller control, feathering device, or any other engine controls.

CODES

- 1 FAILED TO TAKE SPECIFIC NECESSARY ACTION

Examples - Failed to adjust prop pitch for maneuver
Carburetor heat not set for flight condition
Took off with mixture in lean

- 2 DELAYED ACTION - Pilot did take action but delayed in starting

Examples - Pilot failed to apply throttle soon enough after wave off
Delayed in applying carburetor heat to overcome icing
Delayed reduction or high power after take off resulting in engine malfunction

- 3 PERFORMED IMPROPERLY

Examples - Overcontrolled or under controlled;
variable performance wrong sequence;
reversal of adjustment
Reversed movement of any engine control
Engine missed after too rapid application of throttle on touch and go landings
Uneven application of power in correcting for swerve

- 4 WRONG CONTROL - Self explanatory

- 5 INADVERTENT OPERATION OF CONTROLS - Accidental, unintentional activation of a control

- 6 INADVERTENT OR PREMATURE CLUTCHING (HELOS ONLY)

- 7 OPERATED ENGINE IN VIOLATION OF EXISTING DIRECTIVES AND INSTRUCTIONS - Self explanatory

- 8 IMPROPER MANAGEMENT OF POWER LEVER - PITCH LOCK, etc.



- 9 IMPROPER MANAGEMENT OF THROTTLE
- Ø GENERAL MISUSE. NOT ELSEWHERE SPECIFIED
- A IMPROPER USE OF ENGINE CONDITION LEVER
- B MISUSED EMERGENCY FUEL CONTROL

B MISUSED CONTROLS ON THE GROUND. This includes brakes, flight controls, etc. Improper operation or non-use of brakes, rudder aileron or trim tabs, while the aircraft is on the ground. Distinguish from Inadequate Flight Preparation code.

1 FAILED TO TAKE SPECIFIC NECESSARY ACTION

Examples - Failed to check and set trim tabs before take off
Failed to raise flaps prior to folding wings

2 DELAYED ACTION - Pilot took action, but delayed in starting.

3 PERFORMED IMPROPERLY - Over controlled or under controlled, variable performance, wrong sequence. This category refers mainly to a single or group of controls in contrast to broader coordination of all controls, including engine which comes under Poor Coordination.

Example - Pilot used too much brake too soon and nosed up

4 WRONG CONTROL - Self explanatory

5 INADVERTENT OPERATION OF CONTROL - Accidental, unintentional activation of a control.

Example - Foot slipped off rudder and caught brake

6 POOR COORDINATION - Coordination of all controls on the ground including flight controls and power controls.

Examples - Improper coordination with brake, rudder and power in correcting torque on take off.
Coordination of the same controls on landing roll out.



- 7 MISJUDGED SPEED - Improper use or non-use of brakes or flight controls due to misjudging speed of aircraft while it is on the ground
- 8 PREMATURELY UNLOCKED TAIL WHEEL - After landing or failed to lock prior to take off
- 9 MISUSE OF RUDDER/TAIL ROTOR
- Ø GENERAL MISUSE - NOT OTHERWISE SPECIFIED
- A USED POOR BRAKING TECHNIQUE
- B NOSE/TAIL WHEEL CONTROL

Examples - Did not hold nose/tail wheel on deck/runway, etc.
Misused or failed to use nose wheel steering

- C MISUSE OF COLLECTIVE AND/OR CYCLIC CONTROLS

C IMPROPER USE OF FLIGHT CONTROLS IN AIR

- 1 MISUSED COLLECTIVE PITCH
 - 2 MISUSED TAB CONTROLS - INCLUDES HELO CYCLIC AND COLLECTIVE TRIM
 - 3 MISUSED CYCLIC CONTROL
 - 4 INADVERTENT ACTION
- Example - Landed with dive brakes extended
- 5 EXCESSIVE SINK RATE IN LANDING APPROACH
 - 6 FAST IN LANDING APPROACH
 - 7 SLOW IN LANDING APPROACH
 - 8 OVERCONTROLLED TRIM TABS AT HIGH SPEED
 - 9 OVERCONTROLLED
 - Ø MISUSE OF RUDDER
 - A GENERAL MISUSE - NOT OTHERWISE SPECIFIED
 - B USED POOR LANDING TECHNIQUE



- C FAILED TO CORRECT FOR LOSS OF GROUND CUSHION (HELOS)
- D USED POOR TAKE OFF TECHNIQUE
- E IMPROPER SPIN RECOVERY TECHNIQUE
- F IMPROPER POST STALL GYRATION RECOVERY TECHNIQUES
- G EXCESSIVE SINK RATE IN AUTOROTATION APPROACH
- H FAST IN AUTOROTATION APPROACH
- J SLOW IN AUTOROTATION APPROACH
- K IMPROPER AUTOROTATION TECHNIQUE
- L IMPROPER THROTTLE/COLLECTIVE COORDINATION
- M OVER ROTATED

D EXCEEDED STRESS LIMITS. Exceeded maximum operating limits of airframe, performed restricted maneuvers or abruptly performed maneuvers. This includes gear and flap down speed limits.

- 1 EXCEEDED MAXIMUM "G" LIMIT
- 2 EXCEEDED MAXIMUM "G" LIMIT FOR AIRCRAFT AS A RESULT OF ABRUPT FLIGHT MANEUVER
- 3 EXCEEDED MAXIMUM "G" LIMIT FOR AIRCRAFT AS A RESULT OF PROGRESSIVE STALL
- 4 EXCEEDED MAXIMUM "G" LIMIT FOR AIRCRAFT AS A RESULT OF UNUSUAL ATTITUDE CAUSED BY WEATHER
- 5 EXCEEDED MAXIMUM "G" LIMIT FOR AIRCRAFT AS A RESULT OF THE COMBINED EFFECTS OF MANEUVER INVOLVED AND TURBULENCE
- 6 OVERSTRESSED LANDING GEAR DURING RETRACTION DUE TO SKID OR EXCESS SPEED
- 7 OVERSTRESSED LANDING GEAR DURING EXTENSION DUE TO SKID OR EXCESS SPEED
- 8 ENTERED BLADE STALL
- 9 NOT ELSEWHERE CODED
- Ø EXCEEDED MAXIMUM DESIGN SPEED FOR MANEUVER, INCLUDES SOP



E FAILED TO COMPENSATE FOR WIND. Failure to make proper drift corrections during landing and take off operations

- 1 FAILED TO TAKE ANY CORRECTIVE ACTION - For cross wind
- 2 DELAYED CORRECTION - Delayed too long to take corrective action to maintain control
- 3 PERFORMED IMPROPERLY - Over controlled or under controlled, i.e., in correction or wrong correction used
- 4 FAILED TO NEUTRALIZE CROSSWIND CORRECTION - In landing flareout just before touchdown. Can be used for take off as well.
- 5 FAILED TO SELECT RUNWAY INTO WIND
- 6 FAILED TO POSITION AIRCRAFT INTO PREVAILING WIND
- 7 USED POOR TAKE OFF TECHNIQUE
- 8 USED POOR LANDING TECHNIQUE
- 9 IN HOVER
- Ø GENERAL FAILURE - NOT OTHERWISE SPECIFIED

F MISJUDGED DISTANCE, ALTITUDE OR POSITION

- 1 MISJUDGED CLOSURE RATE
- 2 ALTITUDE DURING AUTOROTATION RECOVERY
- 3 DISTANCE TOO CLOSE BETWEEN AIRCRAFT IN LANDING PATTERN TO TOUCHDOWN
- 4 DISTANCE TOO CLOSE BETWEEN AIRCRAFT IN GROUND OPERATIONS - Includes landing rollout
- 5 DISTANCE TOO CLOSE BETWEEN AIRCRAFT IN "IN FLIGHT OPERATIONS"
- 6 COLLISION AIRCRAFT BECAUSE OF MISJUDGED DISTANCE IN FORMATION
- 7 TAXIED TOO CLOSE BEHIND AIRCRAFT AHEAD
- 8 TOOK OFF TOO CLOSE BEHIND AIRCRAFT AHEAD
- 9 GENERAL MISJUDGMENT - NOT OTHERWISE SPECIFIED



- Ø ALTITUDE ABOVE GROUND/WATER ON TARGET RUN
 - A COLLISION WITH TOW TARGET OR TOW LINE
 - B HIGH IN LANDING APPROACH
 - C LOW IN LANDING APPROACH
 - D NOT LINE UP WITH CENTERLINE OF RUNWAY/DECK
 - E USED POOR LANDING TECHNIQUE
 - F MISJUDGED LANDING ZONE CLEARANCE
- G IMPROPER LEVEL OFF - Restrict use of this code to landing and wave off mishaps occurring ashore, not LSO controlled
- 1 FLOATED UP THE RUNWAY
Example - Held off, pilot leveled off too high
 - 2 WING LOW
Example - One wing down, dropped wing after cut
 - 3 DIVE FOR RUNWAY
Examples - Pilot lets nose fall too far after cut
or lands nose wheel first
Snaps tail down and hits tail first in
recovering dive
 - 4 IMPROPER CUSHION
Example - Too rapid a descent on flareout and/or
hitting hard on all gear and bouncing.
 - 5 STALLED IN - Leveled off too high - dropped in
 - 6 FAST IN APPROACH
 - 7 USED POOR LANDING TECHNIQUE
 - 8 SLOW IN APPROACH
 - 9 NOT ELSEWHERE CODED
 - Ø IMPROPER LEVEL OFF OR FAILURE TO BREAK GLIDE PROPERLY



ii FAILED TO MAINTAIN FLYING SPEED - Unintentional stall or spin due to insufficient airspeed. Excludes stall during flareout

- 1 FAILED TO MAINTAIN ENGINE/ROTOR RPM
- 2 FAILED TO MAINTAIN SUFFICIENT AIRSPEED FOR GROSS WEIGHT
- 3 FAILED TO MAINTAIN SUFFICIENT AIRSPEED FOR MANEUVER INVOLVED
- 4 USED POOR TAKE OFF TECHNIQUE
- 5 FAILED TO USE PROPER RECOVERY TECHNIQUE FROM AN UNUSUAL ATTITUDE OR STALL
- 6 FAILED TO USE PROPER RECOVERY TECHNIQUE FROM FULLY DEVELOPED SPIN
- 7
- 8
- 9 NOT ELSEWHERE CODED
- Ø FAILED TO RECOGNIZE APPROACH TO A STALL

i IMPROPER USE OF AND/OR INATTENTION TO FUEL SYSTEM

- 1 FAILED TO MAINTAIN PERIODIC FUEL WATCH
- 2 POOR TECHNIQUE IN CHANGING TANKS OR IN EMERGENCY PROCEDURES
- 3 FAILED TO JETTISON TIP OR AUXILIARY FUEL TANKS ON EMERGENCY LANDINGS, WHEN FUEL REMAINED THEREIN
- 4 PERMITTED USE OF IMPROPER GRADE FUEL
- 5 RAN FUEL TANK DRY
- 6 IMPROPER FUEL DUMPING TECHNIQUE
- 7 NOT FAMILIAR WITH AIRCRAFT FUEL SYSTEM
- 8 FUEL MISMANAGEMENT
- 9 NOT ELSEWHERE CODED
- Ø FAILED TO PREFLIGHT CHECK FUEL SUPPLY
- A PLACED TOO MUCH CONFIDENCE IN FUEL GAUGE READING - Known or planned fuel consumption not reconciled with gauge reading



B

C MISINTERPRETED FUEL GAUGE

J FAILED TO EXTEND LANDING GEAR

1

2 FAILED TO USE PROPER EMERGENCY PROCEDURES OR USED THEM IMPROPERLY

3

4 INADVERTENT USE OR WRONG CONTROL USED TO OPERATE GEAR

5 PERFORMED IMPROPERLY

6 FAILED TO OR INCOMPLETE USE OF CHECK OFF LISTS

7

8

9 NOT ELSEWHERE CODED

Ø

K RETRACTED LANDING GEAR

1 INADVERTENT RETRACTION OF LANDING GEAR

2 FAILED TO CHECK LANDING GEAR LEVER POSITION ON PREFLIGHT INSPECTION

3 FAILED TO ALLOW ADEQUATE BRAKE COOLING PRIOR TO RETRACTION

4 EXCEEDED DESIGN SPEED FOR RETRACTION

5

6

7

8

9 NOT ELSEWHERE CODED

Ø RETRACTED LANDING GEAR PREMATURELY AND SETTLED ONTO RUNWAY



L FAILED TO SEE AIRCRAFT OR OBJECT - Accidents in which pilot did not see other aircraft or object until it was too late to avoid collision. Also when a pilot was aware of other aircraft, but momentarily loses sight of it. Includes both air and ground operations. Excludes cases where it is impossible to see object, such as mountains hidden by clouds.

- 1 COCKPIT DISTRACTION
- 2 DID NOT CLEAR PRIOR TO TURN DURING TAXI
- 3 FAILED TO SEE OTHER AIRCRAFT IN THE AIR
- 4 MOMENTARILY LOST SIGHT OF AIRCRAFT WHILE IN FORMATION DUE TO MANEUVER OR POSITION
- 5 MISINTERPRETED SIGNAL RECEIVED FROM THE PLANE OR TAXI DIRECTOR
- 6 FAILED TO SEE OBJECT(S) IN TIME TO AVOID COLLISION
- 7 TAXIED INTO CONGESTED AREA WITHOUT ADEQUATE GROUND SIGNALMEN
- 8 ATTEMPTED MANEUVER WITHOUT ADEQUATE ASSISTANCE
- 9 NOT ELSEWHERE CODED
- Ø RELIED TOO MUCH ON TAXI DIRECTOR
- A FAILED TO UTILIZE AVAILABLE EXTERNAL LIGHTING
- B FAILED TO CLEAR AREA PRIOR TO POWER CHECK
- C FAILED TO FOLLOW TAXI DIRECTOR SIGNAL(S)
- D LOST SIGHT OF OTHER AIRCRAFT DURING LANDING ROLLOUT

M BECAME LOST - INCLUDES ALL ACCIDENTS INVOLVING A LOST SITUATION DUE TO ANY CAUSE

- 1 WEATHER
- 2 PLANNED UTILIZATION OF INADEQUATE NAVIGATIONAL FACILITIES
- 9 NOT ELSEWHERE CODED
- Ø NAVIGATION ERROR



N IMPROPER INSTRUMENT PROCEDURES

- 1 FAILED TO USE OR INCORRECT USE OF STANDARD PROCEDURES AND TECHNIQUES WHILE ON INSTRUMENT FLIGHT
 - 2 ERRONEOUS IDENTIFICATION OF ELECTRONIC OR RADIO FIX
 - 3 PLACED PRIMARY RELIANCE ON GROUND CONTROL FACILITIES FOR FIXING THE AIRCRAFT'S ACTUAL POSITION OVER THE GROUND
 - 4 NO EMERGENCY PLAN FOR COMMUNICATION FAILURE WITH GROUND STATION
 - 5 IMPROPER OR LACK OF PRIMARY FLIGHT INSTRUMENT CROSS CHECK
 - 6 ACCEPTED POOR ALTITUDE ON AN IFR FLIGHT PLAN
 - 7 ATTEMPTED TO LAND AT DESTINATION INSTEAD OF USING ALTERNATE WHEN DESTINATION IS BELOW MINIMUMS DUE TO WEATHER
 - 8 DURING GCA/ILS/CCA APPROACH
 - 9 NOT ELSEWHERE CODED
 - Ø IMPROPER PROCEDURES ON AUTHORIZED INSTRUMENT FLIGHT
- A
- B FAILED TO ADVISE CONTROLLING AGENCY OF CONDITIONS THAT ADVERSELY AFFECTS THE CONDUCT OF THE FLIGHT, i.e., AIRCRAFT SYSTEM FAILURES, NAVIGATION SYSTEM FAILURE, WEATHER, LOW FUEL STATE
- C DURING TACAN/VOR/LOW FREQUENCY APPROACH
- D DURING NIGHT (IFR) ASW OPERATIONS

O VIOLATION OF EXISTING REGULATIONS, INSTRUCTIONS AND NATOPS -
Used only when a definite evidence of violation of standard/
specific orders/practice exists

- 1 VIOLATION OF GENERAL AIR DISCIPLINE

Example - Violation of flight regulations, local policies and standard operation procedures, not elsewhere specified.



2 CONTINUED VFR UNDER UNFAVORABLE WEATHER

Example - When pilot went IFR on VFR flight clearance

3 FAILED TO FOLLOW INSTRUCTIONS - Failure to follow
instructions from flight
leader, tower, taxi
directors or LSO signals

4 OPERATED RECKLESSLY - Used only when there is specific
evidence of reckless performance.
If evidence is circumstantial,
but recklessness is implied, use
Code 1, "Violation of General
Air Discipline"

5 VIOLATION OF SPECIFIC ORDERS AND REGULATIONS (SOP)

6 OVER CONFIDENCE IN MANEUVER

7 UNAUTHORIZED PERSONNEL OPERATING AIRCRAFT

8 INTENTIONAL VIOLATION OF NATOPS

9 INADVERTENT VIOLATION OF NATOPS

Ø NOT ELSEWHERE CODED

P INADEQUATE FLIGHT PREPARATION - Failure to perform adequate
preflight of aircraft, weather, maps, fuel, maneuvers, etc.

1 FLIGHT CONTROLS AND AIRFRAME

2 ENGINE - Includes visual preflight as well as engine run up

3 RADIO AND ELECTRONIC EQUIPMENT

4 POOR NAVIGATION PLANNING - This does not include orientation
and planning when lost.
Includes plotting course,
instrument clearance, reviewing
charts and notams, radio
facilities, etc.

5 ATTEMPTED TAKE OFF WITHOUT REMOVAL OF TIEDOWNS

6 OVERLOADING (HELOS ONLY)

7 WEIGHT AND BALANCE



- 8 ACCEPTED AIRCRAFT FOR FLIGHT WHEN EXCESSIVE POWER WAS REQUIRED TO HOVER
- 9 ACCEPTED AIRCRAFT WITH KNOWN DISCREPANCIES
- Ø GENERAL PLANNING FAILURE - NOT OTHERWISE SPECIFIED
- A ACCEPTED RUNWAY TOO SHORT FOR TYPE AIRCRAFT
- B FAILED TO OR INCORRECTLY COMPUTED TAKEOFF/LANDING REQUIREMENTS
- C INCOMPLETE PREFLIGHT DUE TO HASTE, PREOCCUPATION
- D IMPROPER STORAGE OF LOOSE GEAR
- E INADEQUATE BRIEFING OF CREW AND/OR PASSENGERS
- F

Q EXCEEDED ABILITY AND/OR EXPERIENCE - Pertains to all cases in which the pilot was not properly qualified or lacked experience

- 1 IN PARTICULAR TYPE AIRCRAFT - Not fully qualified for the type aircraft in which accident occurred
- 2 IN MISSION OR MANEUVER - Pilot not adequately trained in a particular phase of flying
- 3 INSUFFICIENT REFRESHER EXPERIENCE - Pilot has not kept proficient or has not had sufficient recent experience in the type aircraft in which accident occurred
- 4 PENETRATED KNOWN WEATHER CONDITIONS BEYOND THE AIRCRAFT OR PILOT CAPABILITIES
- 5 EMERGENCY OR UNUSUAL SITUATION DEVELOPED WHICH PLACED THE PILOT BEYOND THE LIMITS OF HIS EXPERIENCE
- 6 EMERGENCY OR UNUSUAL SITUATION DEVELOPED WHICH PLACED THE PILOT BEYOND THE LIMITS OF HIS ABILITY LEVEL
- 7
- 8
- 9
- Ø NOT ELSEWHERE CODED



K IMPROPER USE - MISCELLANEOUS EQUIPMENT - This implies that the pilot did not have adequate operational knowledge of the equipment or was careless in using it. This includes the emergency procedures peculiar to each type of aircraft.

- 1 RADIO
- 2 OTHER ELECTRICAL/ELECTRONIC EQUIPMENT
- 3 HYDRAULIC SYSTEMS
- 4 OXYGEN AND/OR PRESSURIZATION SYSTEMS
- 5 SAFETY EQUIPMENT
- 6 COCKPIT, SEAT, CANOPY AND DOORS
- 7 RADAR
- 8 ARRESTING GEAR
- 9 NOT ELSEWHERE CODED
- Ø ORDNANCE
- A FLIGHT CONTROLS
- B LANDING GEAR
- C WING
- D FLAPS
- E AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS), AUTOMATIC STABILIZATION EQUIPMENT (ASE), STABILITY AUGMENTATION SYSTEM (SAS)
- F EXTERNAL HOOK
- G HOIST/WINCH
- H FIRE EXTINGUISHING SYSTEM



S PHYSICAL/MENTAL CONDITION OF PILOT - Distracted condition, excitement, fatigue, and physical condition refers to accidents in which there is clear evidence that an important cause was the unusual stress both mental and/or physical, under which the pilot was operating. These factors are extracted from the report as presented by the Accident Board - other factors may be brought out by the MOR but will be covered in the BioMedical coding of the occurrence.

- 1 GENERAL SERIOUS UPSET CONDITION - Of the pilot for situations not otherwise specified
- 2 FATIGUE
- 3 PREVIOUS OR EXISTING EMERGENCY - Producing tension. Operating under existing emergency, or experienced a previous emergency, in same flight period or recent periods.
- 4 ANOXIA/HPROXIA
- 5 VERTIGO
- 6 BLACKOUT
- 7 ILLNESS
- 8 INJURY
- 9 FIXATION
- Ø DISORIENTATION
- A LOSS OF/OR FAILURE TO GAIN NIGHT ADAPTATION
- B NOT ELSEWHERE CODED
- C HYPERVENTILATION
- D IMPROPER AND/OR INSUFFICIENT NOURISHMENT
- E EVIDENCE OF HIGH ALCOHOL BLOOD LEVEL CONCENTRATION (HANGOVER)
- F FLYING UNDER INFLUENCE OF SELF-MEDICATION
- G COMPLACENT
- H DISTRACTED



T IMPROPER RESPONSE OR POOR TECHNIQUE FOR CV/FCLP/FMLP/LPH LANDINGS

- 1 CUT
Examples - Took cut late
Took own cut
Took incomplete cut
Took cut then wave off
- 2 WAVE OFF
Examples - Slow in answering
Took cut instead of wave off
Over rotated
- 3 SETTLED IN GROOVE/EASED GUN IN GROOVE
- 4 NOT LINED UP
Examples - Overshot and came back; lined up left or right; over controlled slant or reverse slant; angling or drifting due to adverse wind alignment; late line up.
- 5
- 6 SPEED CONTROL - Fast, slow or failure to answer LSO signals
- 7 HOVER SHORT OF LANDING PLATFORM (ALL SHIPS)
- 8 MISINTERPRETATION OF LSO/LSE SIGNALS OR COMMENTS
- 9 ATTITUDE CONTROL - Nose low, nose high, left roll, right roll
- Ø GENERAL IMPROPER ACTION - NOT ELSEWHERE SPECIFIED
- A IMPROPER SCAN OR CORRECTION FOR "MEATBALL" (INCLUDES SPOTTING DECK)
- B EXCESSIVE SINK RATE
- C ATTEMPTED TO SALVAGE A POOR APPROACH
- D HIGH WITH SLOW START
- E HIGH WITH FAST START
- F LOW WITH SLOW START
- G LOW WITH FAST START



- h GLIDESLOPE CONTROL - Overshoot, undershoot and settle
- J POWER MANAGEMENT - Excessive underpower, erratic power
- K SLOW TO RESPOND TO LSO SIGNAL

U SELECTED UNSUITABLE TERRAIN - Selected unsuitable terrain or runway for landing or take off and taxi operations

V FAULTY PERFORMANCE OF OTHER PILOT IN THIS AIRCRAFT

- 1 MISJUDGED DISTANCE, ALTITUDE OR POSITION
- 2 FAILED TO SEE AIRCRAFT OR OBJECT
- 3 VIOLATION OF AIR DISCIPLINE
- 4 EXCEEDED ABILITY AND/OR EXPERIENCE
- 5 FAILED TO INSURE THAT CHECK OFF LIST WAS COMPLETED
- 6 FAILED TO FOLLOW INSTRUCTIONS
- 7 INADVERTENT OPERATION OF CONTROL - Flaps, landing gear, etc.
- 8 FAILED TO WARN PILOT OF UNSAFE CONDITIONS
- 9 NOT ELSEWHERE CODED
- Ø IMPROPER USE OF FLIGHT CONTROLS IN AIR
- A COMMITTED MISCELLANEOUS ERRORS DUE TO CARELESSNESS, HASTE OR PRESSURE

W WAVE OFF - Use for Wave Off approaches other than CV or FCLP orientated

- 1 PERFORMED IMPROPERLY (TECHNIQUE)
- 2 FAILED TO INITIATE WAVE OFF
- 3 WAVE OFF INITIATED TOO LATE



X MISCELLANEOUS ERRORS

- A AIRCRAFT DEPLANING TECHNIQUE
- B FAILED TO COMPLETE CHECK OFF LIST
- C POOR TEAMWORK - Any act committed by the pilot with any crew member, tower control operator, maintenance man, supervisor, etc., which interferes with smooth working of all these personnel as a team.
- D FAILED TO INITIATE OR DELAYED A PRECAUTIONARY LANDING UPON ENCOUNTERING OR OBSERVING MECHANICAL MALFUNCTION
- E SUPERVISORY ERROR COMMITTED BY THIS PILOT WHEN ACTING AS FLIGHT LEADER OR INSTRUCTOR - Use when instructor is not in same aircraft with student
- F HABIT INTERFERENCE - Break in habit pattern or procedure habits learned in flying one type of aircraft interfering in flying another type of aircraft because of different placement of instruments and controls
- G JUDGMENT ERRORS - All kinds of wrong decisions; failure to make a decision; deciding to abort a take off too late; deciding to land when half the runway has been used up still in flight, etc.
- H POOR APTITUDE - General lack of ability, or specific deficiency in flying ability, such as poor coordination, poor memory, etc.
- I MISREAD OR MISINTERPRETED FLIGHT INSTRUMENTS
- J PILOT PERMITTED HIMSELF TO BECOME PREOCCUPIED AT A CRITICAL MOMENT
- K INADVERTENT ACTION - NOT ELSEWHERE CODED

Example - Lowered landing gear in flight
- L FAILED TO POST FLIGHT CHECK AIRCRAFT OR PERFORMED POSTFLIGHT CHECK IMPROPERLY
- M PILOT FAILED TO CONSIDER RELATIVE WIND FORCES - Includes gusts, blasts, winds, etc.
- N IMPROPER TAXI PROCEDURES



- O PILOT LANDED AIRCRAFT OVER MAXIMUM LANDING WEIGHT
 - P PILOT INDUCED OSCILLATIONS (PIO)
 - Q FAILED TO CHECK BRAKE SYSTEM PRIOR TO LANDING
 - R PILOT COMMENCES INSTRUMENT APPROACH OR PENETRATION WITH INSUFFICIENT FUEL TO REACH ALTERNATE - Also includes when pilot fails to, or delays departing for alternate until fuel state becomes critical.
 - S
 - T PILOT USED IMPROPER EMERGENCY TECHNIQUE
 - U
 - V FAILED TO RECOGNIZE A DANGEROUS SITUATION AND TO TAKE APPROPRIATE CORRECTIVE ACTION
 - W INADEQUATE EVALUATION OF EXISTING CIRCUMSTANCES
- Y FAILED TO SUPERVISE FLIGHT PROPERLY
- 1 FAILED TO TAKE OVER CONTROL IN TIME TO PREVENT AN ACCIDENT
 - 2 FAILED TO INITIATE A TIMELY WAVE OFF
 - 3 USED POOR INSTRUCTOR TECHNIQUE AND/OR JUDGMENT
 - 4 VIOLATED EXISTING ORDERS OR REGULATIONS
 - 5 FAILED TO ASCERTAIN QUALIFICATIONS OF PILOT AT CONTROL OF THE AIRCRAFT
 - 6 FAILED TO BRIEF OTHER PILOT ON RESPONSIBILITIES PRIOR TO FLIGHT
 - 7 FAILED TO PLAN EMERGENCY PROCEDURES WITH OTHER PILOT
 - Ø INADEQUATE SUPERVISION
 - A COMMITTED MISCELLANEOUS ERRORS DUE TO CARELESSNESS, HASTE, OR PRESSURE



OPERATOR INCAPACITATED CAUSE FACTOR

Card Column 27

Card No. 120

This is a single position numeric field which describes a physiological reaction/illness of the pilot. Covers anyone incapacitated in aircraft.

CODES

- 1 ANOXIA/HYPOXIA
- 2 VERTIGO
- 3 ILLNESS
- 4 INJURY
- 5 HYPERVENTILATION
- 6 CARBON MONOXIDE POISONING
- 7 DYSBARISM/DECOMPRESSION
- Ø UNDETERMINED

- L POTENTIAL HAZARD - Anything found during routine maintenance or inspection which could, if uncorrected, lead to and engine related or engine caused mishap.
- X ANY OCCURRENCE WHICH CAUSED THE ENGINE TO BE SHUT DOWN AS A PRECAUTION AGAINST ENGINE DAMAGE BUT LATER THE TROUBLE IF FOUND TO HAVE CONSTITUTED NO THREAT TO THE ENGINE.
For example - Fluid is seen streaming from an engine which is thought to be oil and the engine is shut down. Later, the substance is found to be hydraulic fluid, therefore, no real threat to the engine existed.
- J NON-ENGINE CAUSED/NON-ENGINE RELATED - Mishaps which do not meet the criteria of "Engine Involvement"
- K SUSPECTED ENGINE CAUSED/ENGINE RELATED - Mishaps which are suspected to have been engine related or engine caused.





PILOT/CREWMEMBER/NFO FACTOR INVOLVED

Card Column 12	Card No. 140
Card Column 12	Card No. 170
Card Column 12	Card No. 200
Card Column 22	Card No. 210
Card Column 13	Card No. 220

This is a single position numeric field which indicates if a Pilot Causal Factor was assigned and if the individual was in physical control of the aircraft or not at the time of the mishap. Also includes whether a crewmember/NFO was a factor in the mishap or not.

CODES

- 1 IN CONTROL OF AIRCRAFT - PILOT FACTOR ASSIGNED TO THIS INDIVIDUAL
- 2 IN CONTROL OF AIRCRAFT - PILOT FACTOR NOT ASSIGNED TO THIS INDIVIDUAL
- 3 NOT IN CONTROL OF AIRCRAFT - PILOT FACTOR ASSIGNED TO THIS INDIVIDUAL
- 4 NOT IN CONTROL OF AIRCRAFT - PILOT FACTOR NOT ASSIGNED TO THIS INDIVIDUAL
- 6 FACTOR IN MISHAP (NFO - CREWMEMBER)
- 8 NOT A FACTOR IN MISHAP (NFO - CREWMEMBER)
- 9 FLIGHT LEADER NOT IN CONTROL OF CODED AIRCRAFT BUT CONTRIBUTING TO THE ACCIDENT

NAME

PILOT IN COMMAND - Card Columns 13 - 22	Card No. 140
FLIGHT LEADER - Card Columns 13 - 22	Card No. 140
OFFICER IN TACTICAL COMMAND - Card Columns 13 - 22	Card No. 140
PILOT/COPILOT - Card Columns 13 - 22	Card No. 170
FLIGHT LEADER OF THE AIRCRAFT NOT CODED IN THIS MISHAP - Card Columns 23 - 32	Card No. 210
THIRD PILOT WHEN AN OTC IS CODED IN THIS AIRCRAFT - Card Columns 23 - 32	Card No. 210
NAVAL FLIGHT OFFICER (NFO) - Card Columns 13 - 22	Card No. 200
CREWMEMBER - Card Columns 14 - 23	Card No. 220

There are three ten position fields which are used to code the name of the pilot(s), or in some cases the OTC, embarked aboard the aircraft involved in the mishap or the flight leader of the aircraft not coded in the mishap. The Pilot in Command, Flight Leader or Officer in Tactical Command is the individual responsible for the safe and orderly conduct of the flight. The fields will be coded left justified with the last name and if space permits, skip one space for the initial(s).

CODES

- UNK UNKNOWN - incident to flight mishaps only.
- NOTOCC NOT OCCUPIED - no one at the controls.
- NONPLT NON-PILOT - pilot's position occupied by brakerider or other non-pilot personnel.

NOTE: For an aircraft ground mishap where a Naval Aviator was at the controls, code his name and amplifying data.





SOCIAL SECURITY NUMBER

PILOT IN COMMAND - Card Columns 23 - 31	Card No. 140
FLIGHT LEADER - Card Columns 23 - 31	Card No. 140
OFFICER IN TACTICAL COMMAND - Card Columns 23 - 31	Card No. 140
PILOT/COPILOT - Card Columns 23 - 31	Card No. 170
FLIGHT LEADER OF THE AIRCRAFT NOT CODED IN THIS MISHAP - Card Columns 33 - 41	Card No. 210
THIRD PILOT WHEN AN OTC IS CODED IN THIS AIRCRAFT - Card Columns 33 - 41	Card No. 210
NAVAL FLIGHT OFFICER (NFO) - Card Columns 23 - 31	Card No. 200
CREWMEMBER - Card Columns 24 - 32	Card No. 220

There are five nine position alpha/numeric fields which are used to code the social security number of the pilot(s), or in some cases the OTC, embarked aboard the aircraft involved in the mishap or the flight leader of the aircraft not coded in the mishap. The Pilot in Command, Flight Leader or Officer in Tactical Command is the individual responsible for the safe and orderly conduct of the flight. Also the Naval Flight Officer and up to five crewmembers.

CODES

UNK	Coded when the social security number is not assigned.
NOTOCC	Coded when there is no one at the controls.
NOTAPP	Coded when a foreign, civilian or the member of other military service is involved.
NONPLT	Coded when the pilot's position is occupied by a brakerider or other non-pilot personnel.

RANK/RATE

PILOT IN COMMAND - Card Column 32	Card No. 140
FLIGHT LEADER - Card Column 32	Card No. 140
OFFICER IN TACTICAL COMMAND - Card Column 32	Card No. 140
 PILOT/COPILOT - Card Column 32	 Card No. 170
 FLIGHT LEADER OF THE AIRCRAFT	
NOT CODED IN THIS MISHAP - Card Column 42	Card No. 210
THIRD PILOT WHEN AN OTC IS	
CODED IN THIS AIRCRAFT - Card Column 42	Card No. 210
 NAVAL FLIGHT OFFICER (NFO) - Card Column 32	 Card No. 200
CREWMEMBER - Card Column 33	Card No. 220

This is a one (1) position alpha or numeric field which defines the rank or rate of the individual involved in the mishap.

<u>CODES</u>	<u>NAVY</u>	<u>MARINE</u>
0	FLEET ADMIRAL	
0	ADMIRAL	GENERAL
0	VICE ADMIRAL	LT GENERAL
0	REAR ADMIRAL	MAJOR GENERAL
0	COMMODORE	BRIGADIER GENERAL
1	CAPTAIN	COLONEL
2	COMMANDER	LIEUTENANT COLONEL
3	LIEUTENANT COMMANDER	MAJOR
4	LIEUTENANT	CAPTAIN
5	LIEUTENANT JUNIOR GRADE	1ST LIEUTENANT
6	ENSIGN	2ND LIEUTENANT
7	COMMISSIONED WARRANT OFFICER	COMMISSIONED WARRANT OFFICER
8	WARRANT OFFICER	WARRANT OFFICER
9	NAVAL CADET	
A	MIDSHIPMAN	
B	MASTER CHIEF PETTY OFFICER	MASTER GUNNERY SERGEANT
B	SENIOR CHIEF PETTY OFFICER	MASTER SERGEANT
B	CHIEF PETTY OFFICER	GUNNERY SERGEANT
C	1ST CLASS PETTY OFFICER	STAFF SERGEANT
D	2ND CLASS PETTY OFFICER	SERGEANT
E	3RD CLASS PETTY OFFICER	CORPORAL
F	SEAMAN (SN)	LANCE CORPORAL
G	SEAMAN APPRENTICE (SA)	PRIVATE 1ST CLASS
H	SEAMAN RECRUIT (SR)	PRIVATE

OTHER

J	CIVILIAN	
K	FOREIGN OFFICERS	MIDSHIPMAN - Foreign Pilots / Midship
L	FOREIGN ENLISTED	men





BRANCH OF SERVICE

PILOT IN COMMAND - Card Column 33	Card No. 140
FLIGHT LEADER - Card Column 33	Card No. 140
OFFICER IN TACTICAL COMMAND - Card Column 33	Card No. 140
PILOT/COPILOT - Card Column 33	Card No. 170
FLIGHT LEADER OF THE AIRCRAFT NOT CODED IN THIS MISHAP - Card Column 43	Card No. 210
THIRD PILOT WHEN AN OTC IS CODED IN THIS AIRCRAFT - Card Column 43	Card No. 210
NAVAL FLIGHT OFFICER - Card Column 33	Card No. 200
CREWMEMBER - Card Column 34	Card No. 220

This is a one (1) position alpha or numeric field which describes the branch of service for the individual involved in the mishap.

CODES

1	USN
2	USNR - A
3	USNR (Inactive Reserve - includes temporary duty)
4	NAVY PERSONNEL (To be used when codes 1, 2 or 3 cannot be determined)
5	USMC
6	USMCR - A
7	USMCR (Inactive Reserve - includes temporary duty)
8	MARINE CORPS (To be used when codes 5, 6 or 7 cannot be determined)
9	USCG
D	USAF
A	OTHER (UNKNOWN)
B	ARMY
C	MILITARY RETIRED (ALL SERVICES)
J	CIVILIAN
S	OTHER (FOREIGN)

YEARS EXPERIENCE AS DESIGNATED NAVAL AVIATOR

PILOT IN COMMAND - Card Column 34 Card No. 140
FLIGHT LEADER - Card Column 34 Card No. 140
OFFICER IN TACTICAL COMMAND - Card Column 34 Card No. 140

PILOT/COPILOT - Card Column 34 Card No. 170

FLIGHT LEADER OF THE AIRCRAFT
NOT CODED IN THIS MISHAP/- Card Column 44 Card No. 210
3RD PILOT

This is a single position alpha or numeric field which indicates the number of years the individual has been designated a Naval Aviator. Code to the nearest year.

CODES

0	Less than ½ year
1	1 year
2	2 years
3	3 years
4	4 years
5	5 years
6	6 years
7	7 years
8	8 years
9	9 years
A	10 - 14 years
J	15 - 20 years
B	21 and over

*YEARS DESIGNATED NFO

NAVAL FLIGHT OFFICER - Card Column 34 Card No. 200
CREWMEMBER - Card Column 35 Card No. 220

* USE SAME CODES AS DESIGNATED NAVAL-AVIATOR.

YEARS CREW EXPERIENCE

CREWMEMBER - Card Columns 40 - 41 Card No. 220

This is a two position numeric field which is direct coded from Mishap Investigation Report and right justified with leading zeros (0) if applicable.





AGE

PILOT IN COMMAND - Card Column 35	Card No. 140
FLIGHT LEADER - Card Column 35	Card No. 140
OFFICER IN TACTICAL COMMAND - Card Column 35	Card No. 140
PILOT/COPILOT - Card Column 35	Card No. 170
FLIGHT LEADER OF THE AIRCRAFT NOT CODED IN THIS MISHAP/ 3RD PILOT - Card Column 45	Card No. 210
NAVAL FLIGHT OFFICER - Card Column 35	Card No. 200
CREWMEMBER - Card Column 36	Card No. 220

This is a single position alpha or numeric field which defines the age of the individual.

CODES

0	19 years or under
1	20 years
2	21 years
3	22 years
4	23 years
5	24 years
6	25 years
7	26 years
8	27 years
9	28 years
A	29 years
B	30 years
C	31 years
D	32 years
E	33 years
F	34 years
G	35 years
H	36 years
I	37 years
J	38 years
K	39 years
L	40 years
M	41 years
N	42 years
O	43 years
P	44 years
Q	45 years
R	46 years
S	47 years
T	48 years
U	49 years
V	50 years and over

STATUS

PILOT IN COMMAND - Card Column 36	Card No. 140
FLIGHT LEADER - Card Column 36	Card No. 140
OFFICER IN TACTICAL COMMAND - Card Column 36	Card No. 140
PILOT/COPILOT - Card Column 36	Card No. 170
FLIGHT LEADER OF THE AIRCRAFT NOT CODED IN THIS MISHAP - Card Column 46	Card No. 210
THIRD PILOT WHEN AN OTC IS CODED IN THIS AIRCRAFT - Card Column 46	Card No. 210
NAVAL FLIGHT OFFICER - Card Column 36	Card No. 200
CREWMEMBER - Card Column 37	Card No. 220

This is a one (1) position alpha or numeric field which will describe and identify at the time of the mishap the billet assignment of the individual as a member of the flight crew, regardless of his actual position in the aircraft. These codes will not be used to attempt to identify the individual pilot who was in control of the aircraft at the time of the mishap. Pilot factor assignment codes - Card Column 12 of Card No. 140 and Card Column 12 of Card No. 170 will be used for this purpose.

CODES

- A Pilot in Command/Flight Leader (indicates the Naval Aviator who has the authority to assume and accept responsibility for the aircraft or flight of two or more aircraft and the well-being of the crew(s) and passengers involved when assigned. The exception would be code D when the student code refers to command responsibility.
- Y Officer in Tactical Command Embarked (indicates a Wing, Group or Squadron Commander, or other officer in tactical command, if embarked in a flight of one or more aircraft of his command, retains full authority and responsibility regarding his command including the flight in which he is participating).
- B Unauthorized individual in physical control of aircraft
- C COPILOT/THIRD PILOT/DUAL PILOT - DNA
- D STUDENT (Navy or Marine personnel, not a designated Naval aviator in a flight training status)





STATUS (CONTINUED)

CODES

F FOREIGN PILOT
G FOREIGN STUDENT
I CREWMEMBER, NAVY/MARINE ONLY
J CREWMEMBER, DNA
P CIVILIAN PILOT
W FOREIGN COPILOT - CIVILIAN COPILOT
1 *Observer - not official crew member*
2 FLIGHT LEADER - DNA NOT IN THIS AIRCRAFT BUT ERROR ASSIGNED
4 NAVAL FLIGHT OFFICER
5 PILOT/COPILOT - MILITARY (OTHER THAN NAVY/MARINE)
7 CREWMEMBER - FOREIGN
9 OTHER - NOT ELSEWHERE CODED
M BOMBARDIER/GUNNER (HELOS ONLY)
N STUDENT NFO
O FLIGHT SURGEON
X CREWCHIEF

INJURY

PILOT IN COMMAND - Card Column 37	Card No. 140
FLIGHT LEADER - Card Column 37	Card No. 140
OFFICER IN TACTICAL COMMAND - Card Column 37	Card No. 140
PILOT/COPILOT - Card Column 37	Card No. 170
FLIGHT LEADER OF THE AIRCRAFT NOT CODED IN THIS MISHAP - Card Column 47	Card No. 210
THIRD PILOT WHEN AN OTC IS CODED IN THIS AIRCRAFT - Card Column 47	Card No. 210
NAVAL FLIGHT OFFICER - Card Column 37	Card No. 200
CREWMEMBER - Card Column 38	Card No. 220

This is a single position alpha field which describes the injury to the individual.

CODES

A	FATAL
U	UNKNOWN
L	LOST AT SEA
B	MAJOR INJURY - PERMANENT TOTAL DISABILITY
C	PERMANENT PARTIAL DISABILITY
D	ONE OR MORE LOST WORKDAYS
E	REQUIRING GREATER THAN FIRST AID - NO LOST TIME
F	REQUIRING ONLY FIRST AID OR NO TREATMENT
G	NO INJURY





ABANDON AIRCRAFT

PILOT IN COMMAND - Card Column 39 38	Card No. 140
FLIGHT LEADER - Card Column 39 38	Card No. 140
OFFICER IN TACTICAL COMMAND - Card Column 39 38	Card No. 140
PILOT/COPILOT - Card Column 38	Card No. 170
NAVAL FLIGHT OFFICER - Card Column 38	Card No. 200
CREWMEMBER - Card Column 39	Card No. 220

This is a single position numeric field which indicates if the individual abandoned the aircraft and if so, by what method.

CODES

- 1 NO
- 2 YES - EJECTED
- 3 YES - FREE BAILOUT
- 4 YES - UNINTENTIONAL EGRESS

NOTE: Codes include ground level ejections.

SEQUENCE NUMBER (CREWMEMBERS ONLY)

Card Column 12

Card No. 220

This is a numeric field. Can code up to five (5) crewmembers.

TOTAL FLYING HOURS

PILOT IN COMMAND - Card Columns 39 - 50

Card No. 140

PILOT/COPILOT - Card Columns 39 - 50

Card No. 170

This is a twelve (12) position numeric field which describes the total number of flying hours. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable. Use code 9999 for 9999 hours and over.

FIRST PILOT - Card Columns 39 - 42

COPILOT - Card Columns 43 - 46

SPECIAL CREW - Card Columns 47 - 50

TOTAL HOURS IN MISHAP MODEL

PILOT IN COMMAND - Card Columns 51 - 62

Card No. 140

PILOT/COPILOT - Card Columns 51 - 62

Card No. 170

This is a twelve (12) position numeric field which describes the total time in mishap model. This field is direct coded from mishap report and right justified with leading zeros (0) if applicable. Use code 9999 for 9999 hours and over.

FIRST PILOT - Card Columns 51 - 54

COPILOT - Card Columns 55 - 58

SPECIAL CREW - Card Columns 59 - 62





HOURS IN MISHAP MODEL LAST 7 DAYS

PILOT IN COMMAND - Card Columns 63 - 68 Card No. 140

PILOT/COPILOT - Card Columns 63 - 68 Card No. 170

This is a six (6) position numeric field which describes hours in mishap model last 7 days. This field is direct coded from mishap report and right justified with leading zeros (0) if applicable.

FIRST PILOT - Card Columns 63 - 64

COPILOT - Card Columns 65 - 66

SPECIAL CREW - Card Columns 67 - 68

HOURS IN MISHAP MODEL LAST 30 DAYS

PILOT IN COMMAND - Card Columns 69 - 74 Card No. 140

PILOT/COPILOT - Card Columns 69 - 74 Card No. 170

This is a six (6) position numeric field which describes the total hours flown in mishap model last 30 days. This field is direct coded from the mishap report and right justified with leading zeros (0) is applicable. Use code 99 for 99 hours and over.

FIRST PILOT - Card Columns 69 - 70

COPILOT - Card Columns 71 - 72

SPECIAL CREW - Card Columns 73 - 74

HOURS IN MISHAP MODEL LAST 90 DAYS

PILOT IN COMMAND - Card Columns 12 - 20

Card No. 150

PILOT/COPILOT - Card Columns 12 - 20

Card No. 180

This is a nine (9) position numeric field which describes the total hours flown in mishap model last 90 days. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable.

FIRST PILOT - Card Columns 12 - 14

COPILOT - Card Columns 15 - 17

SPECIAL CREW - Card Columns 18 - 20

TOTAL SHIP HELICOPTER LANDINGS

PILOT IN COMMAND

DAY - Card Column 21

NIGHT - Card Column 22

Card No. 150

COPILOT/
PILOT

DAY - Card Column 21

NIGHT - Card Column 22

Card No. 180

This is two (2) one (1) position alpha fields which express the total number of shipboard helicopter landings for day and night:

CODE

CODE

0	0 landings	N	130 - 139 landings
A	1 - 9 landings	O	140 - 149 landings
B	10 - 19 landings	P	150 - 159 landings
C	20 - 29 landings	Q	160 - 169 landings
D	30 - 39 landings	R	170 - 179 landings
E	40 - 49 landings	S	
F	50 - 59 landings	T	180 - 189 landings
G	60 - 69 landings	U	190 - 199 landings
H	70 - 79 landings	V	200 - 209 landings
I	80 - 89 landings	W	210 - 219 landings
J	90 - 99 landings	X	220 - 229 landings
K	100 - 109 landings	Y	230 - 239 landings
L	110 - 119 landings	Z	240 and over landings
M	120 - 129 landings		





TOTAL CARRIER ARRESTED LANDINGS

PILOT IN COMMAND

DAY - Card Columns 23 - 26
NIGHT - Card Columns 27 - 30

Card No. 150

COPILOT/
PILOT

DAY - Card Columns 23 - 26
NIGHT - Card Columns 27 - 30

Card No. 180

This is two (2) four (4) position numeric field which describe the total number of carrier landings for day and night. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable.

TOTAL CARRIER ARRESTED LANDINGS THIS MODEL

PILOT IN COMMAND

DAY - Card Columns 31 - 33
NIGHT - Card Columns 34 - 36

Card No. 150
Card No. 150

COPILOT/
PILOT

DAY - Card Columns 31 - 33
NIGHT - Card Columns 34 - 36

Card No. 180
Card No. 180

This is two (2) four (4) position numeric fields which describe the total number of carrier landings this model for day and night. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable

TOTAL CARRIER ARRESTED LANDINGS LAST 7 DAYS

PILOT IN COMMAND

DAY - Card Column 37 Card No. 150
NIGHT - Card Column 38 Card No. 150

COPILOT/
PILOT

DAY - Card Column 37 Card No. 180
NIGHT - Card Column 38 Card No. 180

This is two (2) one (1) position numeric fields which describe the total number of carrier landings in the last 7 days for day and night. This field is direct coded from the mishap report.

TOTAL CARRIER ARRESTED LANDINGS LAST 30 DAYS

PILOT IN COMMAND

DAY - Card Columns 39 - 40 Card No. 150
NIGHT - Card Columns 41 - 42 Card No. 150

COPILOT/
PILOT

DAY - Card Columns 39 - 40 Card No. 180
NIGHT - Card Columns 41 - 42 Card No. 180

This is two (2) two (2) position numeric fields which describe the total number of carrier landings in the last 30 days for day and night. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable.





TOTAL FLIGHT HOURS LAST 24 HOURS

PILOT IN COMMAND - Card Columns 43 - 48 Card No. 150

PILOT/COPILOT - Card Columns 43 - 48 Card No. 180

This is three (3) two (2) position numeric fields which describe the number of hours flown in the last 24 hours. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable.

FIRST PILOT - Card Columns 43 - 44

COPILOT - Card Columns 45 - 46

SPECIAL CREW - Card Columns 47 - 48

TOTAL FLIGHT HOURS LAST 48 HOURS

PILOT IN COMMAND - Card Columns 49 - 54 Card No. 150

PILOT/COPILOT - Card Columns 49 - 54 Card No. 180

This is three (3) two (2) position numeric fields which describe number of hours flown in the last 48 hours. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable.

FIRST PILOT - Card Columns 49 - 50

COPILOT - Card Columns 51 - 52

SPECIAL CREW - Card Columns 53 - 54

NUMBER OF MISSIONS WITH COPILOT LAST 6 MONTHS

Card Columns 55 - 57 Card No. 150

This is a three (3) position numeric field which describes the number of missions flown with copilot in last 6 months. This field is direct coded from mishap report and right justified with leading zeros (0) if applicable.



NUMBER OF MISSIONS WITH NFO LAST 6 MONTHS (COPILOT DATA)

Card Columns 55 - 57

Card No. 180

This is a three (3) position numeric field which describes the number of missions copilot has flown with NFO last 6 months. This field is direct coded from mishap report and right justified with leading zeros (0) if applicable.

NUMBER OF MISSIONS WITH CREW LAST 6 MONTHS

Card Columns 58 - 60

Card No. 180

This field is direct coded from mishap report and right justified with leading zeros (0) if applicable.



SYNTHETIC TRAINER SUMMARY LAST 7 DAYS

EMERGENCY PROCEDURES TRAINER

PILOT IN COMMAND - Card Columns 12 - 13	Card No. 160
NAVAL FLIGHT OFFICER (NFO) - Card Columns 46 - 47	Card No. 200
PILOT/COPILOT - Card Columns 12 - 13	Card No. 190

INSTRUMENT TRAINER

PILOT IN COMMAND - Card Columns 22 - 23	Card No. 160
PILOT/COPILOT - Card Columns 22 - 23	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 56 - 57	Card No. 200

WEAPONS SYSTEM TRAINER

PILOT IN COMMAND - Card Columns 32 - 33	Card No. 160
PILOT/COPILOT - Card Columns 32 - 33	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 66 - 67	Card No. 200
CREWMEMBER - Card Columns 52 - 53	Card No. 220

OTHER

PILOT IN COMMAND - Card Columns 42 - 43	Card No. 160
PILOT/COPILOT - Card Columns 42 - 43	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 12 - 13	Card No. 210
CREWMEMBER - Card Columns 62 - 63	Card No. 220

This is four (4) two (2) position numeric fields which describe the number of hours experience last 7 days in emergency procedures trainer, instrument trainer, weapons system trainer and other. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable. If the MIR is blank or unknown leave the field blank.

SYNTHETIC TRAINER SUMMARY LAST 30 DAYS

EMERGENCY PROCEDURES TRAINER

PILOT IN COMMAND - Card Columns 14 - 15	Card No. 160
PILOT/COPILOT - Card Columns 14 - 15	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 48 - 49	Card No. 200

INSTRUMENT TRAINER

PILOT IN COMMAND - Card Columns 24 - 25	Card No. 160
PILOT/COPILOT - Card Columns 24 - 25	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 58 - 59	Card No. 200

WEAPONS SYSTEM TRAINER

PILOT IN COMMAND - Card Columns 34 - 35	Card No. 160
PILOT/COPILOT - Card Columns 34 - 35	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 68 - 69	Card No. 200
CREWMEMBER - Card Columns 54 - 55	Card No. 220

OTHER

PILOT IN COMMAND - Card Columns 44 - 45	Card No. 160
PILOT/COPILOT - Card Columns 44 - 45	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 14 - 15	Card No. 210
CREWMEMBER - Card Columns 64 - 65	Card No. 220

This is four (4) two (2) position numeric fields which describe the number of hours experience last 30 days in emergency procedures trainer, instrument trainer, weapons system trainer and other. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable.





SYNTHETIC TRAINER SUMMARY LAST 90 DAYS

EMERGENCY PROCEDURES TRAINER

PILOT IN COMMAND - Card Columns 16 - 17	Card No. 160
PILOT/COPILOT - Card Columns 16 - 17	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 50 - 51	Card No. 200

INSTRUMENT TRAINER

PILOT IN COMMAND - Card Columns 26 - 27	Card No. 160
PILOT/COPILOT - Card Columns 26 - 27	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 60 - 61	Card No. 200

WEAPONS SYSTEM TRAINER

PILOT IN COMMAND - Card Columns 36 - 37	Card No. 160
PILOT/COPILOT - Card Columns 36 - 37	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 70 - 71	Card No. 200
CREWMEMBER - Card Columns 56 - 57	Card No. 220

OTHER

PILOT IN COMMAND - Card Columns 46 - 47	Card No. 160
NAVAL FLIGHT OFFICER (NFO) - Card Columns 16 - 17	Card No. 210
PILOT/COPILOT - Card Columns 46 - 47	Card No. 190
CREWMEMBER - Card Columns 66 - 67	Card No. 220

This is four (4) two (2) position numeric field which describes the number of hours experience last 90 days in emergency procedures trainer, instrument trainer, weapons system trainer and other. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable.

SYNTHETIC TRAINER SUMMARY - LIFETIME

EMERGENCY PROCEDURES TRAINER

PILOT IN COMMAND - Card Columns 18 - 21	Card No. 160
PILOT/COPILOT - Card Columns 18 - 21	Card No. 190
NAVAL FLIGHT OFFICER (NFO) - Card Columns 52 - 55	Card No. 200

INSTRUMENT TRAINER

PILOT IN COMMAND - Card Columns 28 - 31	Card No. 160
NAVAL FLIGHT OFFICER (NFO) - Card Columns 62 - 65	Card No. 200
PILOT/COPILOT - Card Columns 28 - 31	Card No. 190

WEAPONS SYSTEM TRAINER

PILOT IN COMMAND - Card Columns 38 - 41	Card No. 160
NAVAL FLIGHT OFFICER (NFO) - Card Columns 72 - 75	Card No. 200
PILOT/COPILOT - Card Columns 38 - 41	Card No. 190
CREWMEMBER - Card Columns 58 - 61	Card No. 220

OTHER

PILOT IN COMMAND - Card Columns 48 - 51	Card No. 160
NAVAL FLIGHT OFFICER (NFO) - Card Columns 18 - 21	Card No. 210
PILOT/COPILOT - Card Columns 48 - 51	Card No. 190
CREWMEMBER - Card Columns 68 - 71	Card No. 220

This is four (4) four (4) position numeric fields which describe the number of hours experience in lifetime in emergency procedures trainer, instrument trainer, weapons system trainer and other. This field is direct coded from the mishap report and right justified with leading zeros (0) if applicable.





TOTAL SPECIAL CREW FLIGHT HOURS

NFO LAST 24 HOURS - Card Columns 39 - 40	Card No. 200
NFO LAST 48 HOURS - Card Columns 41 - 42	Card No. 200
CREWMEMBER LAST 24 HOURS - Card Columns 42 - 43	Card No. 220
CREWMEMBER LAST 48 HOURS - Card Columns 44 - 45	Card No. 220

This is four (4) two (2) position numeric fields which are direct coded from the mishap and right justified with leading zeros (0) if applicable.

NUMBER OF MISSIONS LAST 6 MONTHS

NFO WITH PILOT - Card Columns 43 - 45	Card No. 200
CREWMEMBER WITH PILOT - Card Columns 46 - 48	Card No. 220
CREWMEMBER WITH NFO - Card Columns 49 - 51	Card No. 220

This is three (3) three (3) position numeric fields which are direct coded from mishap report and right justified with leading zeros (0) if applicable.

APPENDIX J

A List of Lessons Learned, and Sample Lessons from the
Human Factors Impact Area of the U.S. Navy Lessons
Learned Database J-1

U.S. Navy Lessons Learned
Human Factors Impact Area

BROWSE -- RW8350.INDEX ----- LINE 000000 COL 001 080
COMMAND ==> SCROLL ==> PAGE

***** TOP OF DATA *****
TABLE OF CONTENTS

NATC #	TOPIC	PAGE
00031	INSTRUCTION PLACARDS	1
00052	LANDING GEAR VISIBILITY	2
00067	WARNING AND CAUTION DISPLAY TIME	3
00078	LITHIUM BATTERIES	4
00086	COMPONENT ACCESSIBILITY	5
00092	COMMAND EJECTION OPTION	6
00094	CANOPY HAND PUMP	7
00110	DATA DISPLAY FORMATS	8
00118	IMPACT OF MODIFICATION ON ORIGINAL DESIGN INTENT	9
00135	AIRCRAFT SEAT BELT LATCHES	10
00140	AIRCRAFT SEAT BELTS	11
00145	ENGINE BAY HEAT SHIELDS	12
00173	CROSS-CONNECTED HYDRAULIC LINES	13
00174	FLIGHT CONTROL COMPONENT CONNECTIONS	14
00177	SYSTEM SAFETY DEVICES	15
00182	AIRCRAFT TIEDOWN PROCEDURES	16
00187	SERVICING CAPS	17

BROWSE -- RW8350.INDEX ----- LINE 000022 COL 001 080
COMMAND ==> SCROLL ==> PAGE

00198	PROCEDURALIZED TROUBLESHOOTING AIDS	18
00206	TECHNICAL PUBLICATION VERIFICATION	19
00215	CAUTION AND ADVISORY LIGHT LEGENDS	20
00216	HIGH VISIBILITY COLOR FOR FLIGHT DATA RECORDING COMPONENTS	21
00217	FRESNEL LENS OPTICAL LANDING SYSTEM FAILURE (FLOLS)	22
00225	FLIGHT GEAR	23
00230	SUPPORT EQUIPMENT PARKING BRAKE LEVERS	24
00232	THORIUM FLUORIDE	25
00243	AIRCRAFT FIRE FIGHTING	26
00255	HELICOPTER CABIN EXTERNAL VIEW	27
00271	HELICOPTER TRANSMISSION OIL FILLER SCREENS	28
00277	SURVIVAL RADIOS	29
00280	SURVIVAL VEST FLARE STOWAGE	30
00283	LIFE PRESERVER DESIGN	31

TABLE OF CONTENTS
NATC # TOPIC PAGE

00285	AIRCRAFT DEICER	32
00291	SERVICING HYDRAULIC SYSTEMS	33

BROWSE -- RW8350.INDEX ----- LINE 000044 COL 001 080
COMMAND ==> SCROLL ==> PAGE

00292	LIFE RAFT DEPLOYMENT	34
00297	SUPPORT EQUIPMENT STEERING	35
00301	INTERCOMMUNICATION SYSTEMS (ICS)	36
00303	HOT BRAKE CHECKS	37
00307	COCKPIT LIGHTING SYSTEM COMPATIBILITY WITH NIGHT VISION GOGGLES (NVG)	38
00308	ARMAMENT SAFETY PIN STANDARDIZATION	39
00312	MULTIPIN ELECTRICAL CONNECTOR ALIGNMENT	40
00313	MAINTAINABILITY WITH ARMOR PLATING INSTALLED	41
00320	SELF-LOCKING EQUIPMENT MOUNTS AND ELECTRICAL CONNECTORS	42
00326	PRINTED CIRCUIT BOARD (PCB) ASSEMBLIES	43
00327	INSTRUMENT PANEL VISUAL DISPLAYS	44
00340	AIRCREW COMMUNICATIONS	45
00342	ACCESS TO EXTERNAL SENSING UNITS	46
00344	DEADMAN BRAKE SYSTEMS	47
00347	ELECTRICAL EQUIPMENT SHOCK HAZARD	48
00350	AIRCRAFT WORKSTANDS	49
00352	SELF-PROPELLED GROUND SUPPORT EQUIPMENT (GSE) STARTER INTERLOCK	50
00355	PROPORTIONAL HYDRAULIC SYSTEM CONTROL VALVES	51
00362	SUPPORT EQUIPMENT DRAINAGE PROVISIONS	52

BROWSE -- RW8350.INDEX ----- LINE 000066 COL 001 080
COMMAND ==> SCROLL ==> PAGE

00366	CARGO LOADING PROCEDURES	53
00367	AIRCRAFT SERVICING RECEPTACLES	54
00369	AIRCRAFT COCKPIT ARMOR PLATING	55
00375	EXTERNAL AIRCRAFT LIGHTING ACCESSIBILITY	56
00380	POSITIVE ACTION SWITCHES	57
00381	WIRE BUNDLE IDENTIFICATION	58
00391	CHAFF AND FLARE DISPENSER SWITCH LOCATION	59
00392	EMERGENCY WINDOW JETTISON	60
00393	FIRE WARNING DISPLAYS	61
00397	REVERSE INSTALLATION OF CHECK VALVES	62

TABLE OF CONTENTS

NATC #	TOPIC	PAGE
-----	-----	-----
00403	BERYLLIUM	63
00405	ENGINE MOISTURE DRAIN ACCESS	64
00436	ENGINE AND PYLON INTEGRATION	65
00444	ELAPSED TIME INDICATOR (ETI)	66
00485	ACCESSIBILITY TO LUBRICATION POINTS	67
00487	EQUIPMENT ACCESSIBILITY	68
00492	USE OF APPROVED ELECTRICAL CONNECTORS	69
00545	IN-FLIGHT LOSS OF HELICOPTOR PANELS, HATCHES AND	70

BROWSE -- RW8350.INDEX ----- LINE 000088 COL 001 080
COMMAND ==> SCROLL ==> PAGE

DOORS	
00550	FUEL SYSTEM MANAGEMENT CONTROL LOCATION 71
00556	AIRCRAFT PERFORMANCE CHARACTERISTICS 72
00564	LANDING GEAR POSITION INDICATORS 73
00573	SPARE FLUID STORAGE 74
00604	ACCESS PANEL FASTENERS 75
00607	PANEL FASTENER STANDARDIZATION 76
00644	AIRCRAFT SOUNDPROOFING 77
00647	AVIONICS COOLING FAN NOISE 78
00651	HELICOPTER AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS) 79
	MODE INDICATORS
00653	POSITIVE LOCKING ELECTRICAL CONNECTORS 80
00659	COMPUTERIZED AUTOMATIC FLIGHT CONTROL SYSTEMS 81
	(AFCS)
00683	IMPROPERLY DESIGNATED AND COLOR CODED CONTROLS 82
00695	COCKPIT TAPE DISPLAYS 83
00703	LOCATION OF COCKPIT CONTROLS 84
00724	TOGGLE SWITCH GUARD INCOMPATIBILITY 85
00761	FLIGHT CONTROL SYSTEM (FCS) WARNING INDICATORS 86
00767	ROTOR BLADE DROOP STOP VISIBILITY 87
00784	ROTOR BLADE STOWAGE STRUTS 88
00791	AIRCREW SAFETY BELT ATTACHMENT POINTS 89

BROWSE -- RW8350.INDEX ----- LINE 000088 COL 001 080
COMMAND ==> SCROLL ==> PAGE

DOORS	
00550	FUEL SYSTEM MANAGEMENT CONTROL LOCATION 71
00556	AIRCRAFT PERFORMANCE CHARACTERISTICS 72
00564	LANDING GEAR POSITION INDICATORS 73
00573	SPARE FLUID STORAGE 74
00604	ACCESS PANEL FASTENERS 75
00607	PANEL FASTENER STANDARDIZATION 76
00644	AIRCRAFT SOUNDPROOFING 77
00647	AVIONICS COOLING FAN NOISE 78
00651	HELICOPTER AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS) 79
	MODE INDICATORS
00653	POSITIVE LOCKING ELECTRICAL CONNECTORS 80
00659	COMPUTERIZED AUTOMATIC FLIGHT CONTROL SYSTEMS 81
	(AFCS)
00683	IMPROPERLY DESIGNATED AND COLOR CODED CONTROLS 82
00695	COCKPIT TAPE DISPLAYS 83
00703	LOCATION OF COCKPIT CONTROLS 84
00724	TOGGLE SWITCH GUARD INCOMPATIBILITY 85
00761	FLIGHT CONTROL SYSTEM (FCS) WARNING INDICATORS 86
00767	ROTOR BLADE DROOP STOP VISIBILITY 87
00784	ROTOR BLADE STOWAGE STRUTS 88
00791	AIRCREW SAFETY BELT ATTACHMENT POINTS 89

BROWSE -- RW8350.INDEX ----- LINE 000110 COL 001 080
 COMMAND ==> SCROLL ==> PAGE

00797	AIRCREW SEAT COMFORT	90
00812	FLIGHT INSTRUMENT GROUPING	91
00839	ACCESS DOOR WARNING MARKERS	92
00843	SUBCONTRACTOR REQUIREMENTS	93

NATC # TOPIC PAGE

00844	COCKPIT WARNING AND CAUTION DISPLAYS	94
00849	EXTERNAL STORES EMERGENCY JETTISON SWITCH	95
00851	HYDRAULIC FILTER ACCESSIBILITY	96
00853	AIRCRAFT ENVIRONMENTAL CONTROL	97
00856	FASTENER HEAD COMMONALITY	98
00874	CABIN-COCKPIT TEMPERATURE SENSOR	99
00875	AIRCREW LAP BELTS	100
00881	ENGINE COMPONENT AND AIRFRAME INTERFACE	101
00885	WING TANK FUEL QUANTITY WIRING HARNESS ACCESSIBILITY	102
00899	EQUIPMENT HANDLING	103
00901	ENGINE HEAT SHIELD INSTALLATION	104
00910	ACCESSIBILITY OF FLUID LINE CONNECTORS	105
00912	RESCUE HOIST BOOM STOWAGE	106

BROWSE -- RW8350.INDEX ----- LINE 000122 COL 001 080
 COMMAND ==> SCROLL ==> PAGE

00918	EMERGENCY MANUAL EGRESS SYSTEMS	107
00930	HYDRAULIC HAND PUMP HANDLES	108
00931	WINDSHIELD CLEANLINESS	109
00938	VENTRAL FIN ANTENNAS	110
00964	ENGINE PYLON ACCESS	111
00965	AIRCRAFT BATTERY ACCESS	112
00982	EMERGENCY CONTROLS PLACEMENT	113
00992	ALIGNMENT FOR LOCKING DEVICES	114
01011	RADAR SCOPE LIGHT REFLECTION	115
01020	LINE REPLACEABLE UNIT (LRU) ACCESSIBILITY	116
01028	MUNITIONS HANDLING EQUIPMENT	117
01029	MUNITIONS HANDLING EQUIPMENT FLOODLIGHTS	118
01037	MULTIPLE CELL BATTERIES	119
01040	THROTTLE DESIGN	120
01057	AVIONICS SYSTEM TEST POINTS ON REMOTELY PILOTED VEHICLES (RPV)	121
01070	WIRE HARNESS LEAD IDENTIFICATION	122
01072	TECHNICAL PUBLICATIONS FORMAT	123
01077	ADJACENT ELECTRICAL CONNECTORS	124

NATC # TOPIC PAGE

CALL NUMBERS: IMPACT AREA(S):

NATC 00067 SAFETY
ACCESS 88-698 HUMAN FACTORS
DESIGN
ENGINEERING

TOPIC: WARNING AND CAUTION DISPLAY TIME

LESSON LEARNED: INABILITY TO READ AND INTERPRET DISPLAYED WARNING
AND CAUTION INFORMATION CAN CAUSE DELAYS IN
TAKING APPROPRIATE ACTION.

PROBLEM: CAUTIONS DISPLAYED ON THE DIGITAL DATA INDICATOR
(DDI) DISAPPEAR BEFORE THE PILOT CAN READ THEM.

BROWSE -- RW8350.REPORT ----- LINE 000198 COL 001 080
COMMAND ==> SCROLL ==> PAGE

DISCUSSION: ON A CERTAIN FIGHTER-ATTACK TYPE AIRCRAFT,
CAUTIONS DISPLAYED ON THE PILOT'S DDI ARE
REMOVED WHEN THE CONDITION CEASES. CERTAIN
CONDITIONS, THOUGH TRANSIENT IN NATURE, REQUIRE
APPROPRIATE ACTION BY THE PILOT. DUE TO THE
SHORT DURATION OF THE ASSOCIATED CAUTION DISPLAY,
PILOTS MAY NOT HAVE TIME TO READ SPECIFIC
DISCREPANCIES AND THE RESULTING DELAY CAN ALLOW
FURTHER SYSTEM DEGRADATION. SEVERAL INCIDENTS OF
ENGINE COMPRESSOR STALLS HAVE OCCURRED IN WHICH
THE PILOT WAS UNABLE TO READ THE MOMENTARILY
DISPLAYED CAUTION IDENTIFYING THE MALFUNCTIONING
ENGINE AND COULD NOT TAKE CORRECTIVE ACTION.
ENGINE COMPRESSOR STALLS HAVE RESULTED IN SEVERE
ENGINE INTERNAL DAMAGE.

APPROPRIATE ACTION: DESIGNS FOR WARNING AND CAUTION DISPLAYS SHOULD
INCORPORATE A FEATURE REQUIRING PILOT
ACKNOWLEDGEMENT BEFORE THE INFORMATION IS

BROWSE -- RW8350.REPORT ----- LINE 000220 COL 001 080
COMMAND ==> SCROLL ==> PAGE

REMOVED.

WIC-

BROWSE -- RW8350.REPORT ----- LINE 000066 COL 001 080
COMMAND ==> SCROLL ==> PAGE

QUALITY ASSURANCE
TECHNICAL PUBLICATIONS

TOPIC: INSTRUCTION PLACARDS

LESSON LEARNED: WHEN INSTALLATION INSTRUCTION PLACARDS DO NOT
COINCIDE WITH INSTRUCTIONS IN TECHNICAL MANUALS
AND WORK PACKAGES, CONFUSION AND IMPROPER USE CAN
RESULT.

PROBLEM: AMBIGUOUS INSTRUCTIONS ARE PRINTED ON SLING
PLACARDS.

DISCUSSION: A HELICOPTER EQUIPMENT LIFTING SLING HAS
AMBIGUOUS INFORMATION ON THE INSTRUCTION PLACARD.
THE INSTRUCTIONS ARE WORDED IN SUCH A MANNER THAT
TWO SEPARATE MEANINGS COULD BE INTERPRETED. ONE
IS THAT THE SLING COULD BE USED TO LIFT TWO ITEMS
SEPARATELY, WHICH IS THE CORRECT PROCEDURE. THE
OTHER IS THAT THE SLING COULD BE USED TO LIFT THE

BROWSE -- RW8350.REPORT ----- LINE 000088 COL 001 080
COMMAND ==> SCROLL ==> PAGE

TWO ITEMS AS AN ASSEMBLY, OVERLOADING THE SLING.
THE WORK PACKAGES FOR THESE ITEMS STATE THAT ONE
ITEM IS TO BE REMOVED BEFORE THE OTHER, AND DOES
NOT PROVIDE INSTRUCTIONS FOR REMOVING THE ITEMS
AS AN ASSEMBLY. THIS COULD ALLOW AN ACCIDENT TO
OCCUR IF THE WORK PACKAGE IS NOT ADHERED TO.

APPROPRIATE ACTION: A) IF INSTRUCTION PLACARDS ARE TO BE ATTACHED TO
EQUIPMENT, THEY MUST COINCIDE WITH INSTRUCTIONS
GIVEN IN TECHNICAL MANUALS AND WORK PACKAGES.
B) TECHNICAL MANUALS AND WORK PACKAGES MUST BE
UPDATED PRIOR TO FIELDING OF NEW OR MODIFIED
PECULIAR SUPPORT EQUIPMENT.

WUC: AT AX AI AD BB

BROWSE -- RW8350.REPORT ----- LINE 000176 COL 001 080
COMMAND ==> SCROLL ==> PAGE

ALL NUMBERS: IMPACT AREA(S):

ATC 00118 DESIGN

BROWSE -- RW8350.REPORT ----- LINE 000484 COL 001 080
COMMAND ==> SCROLL ==> PAGE
PROCESS 87-258

TECHNICAL PUBLICATIONS
SAFETY
ENGINEERING
HUMAN FACTORS

TOPIC: IMPACT OF MODIFICATION ON ORIGINAL DESIGN INTENT

LESSON LEARNED: UNDESIRABLE SIDE EFFECTS ARE LIKELY TO RESULT
WHEN MODIFICATIONS ARE APPROVED WITHOUT FULLY
CONSIDERING THE ORIGINAL DESIGN INTENT.

PROBLEM: MODIFICATION OF AN AIRCRAFT'S CONTINUOUS IGNITION
SWITCH HANDLE FOR THE SAKE OF STANDARDIZATION
CREATED AN UNANTICIPATED HAZARD AND THE NEED FOR
A SECOND MODIFICATION.

DISCUSSION: THE PILOT'S OVERHEAD CONTROL PANEL IN A LARGE
FOUR ENGINE AIRCRAFT COCKPIT CONTAINS FOUR FUEL
AND START SWITCHES AND ONE SWITCH FOR APPLYING
CONTINUOUS IGNITION TO ALL ENGINES. AS A HUMAN

BROWSE -- RW8350.REPORT ----- LINE 000506 COL 001 080
COMMAND ==> SCROLL ==> PAGE

FACTORS FEATURE, TO LET THE PILOT KNOW BY TOUCH
THAT HE HAS SELECTED THE RIGHT SWITCH, THE DESIGN
ENGINEER CHOSE A DIFFERENT SHAPE FOR THE HANDLE
OF THE CONTINUOUS IGNITION SWITCH. THE ITEM
MANAGER, WITHOUT FULL KNOWLEDGE OF THE ORIGINAL
DESIGN INTENT, SUGGESTED MODIFICATION OF THIS
SWITCH HANDLE TO MATCH THE FOUR FUEL AND START
SWITCH HANDLES AS A COST SAVING STANDARDIZATION.
SOON AFTER THE MODIFICATION WAS INCORPORATED, A
PILOT SHUT DOWN AN ENGINE INFLIGHT THINKING HE
WAS TURNING OFF THE CONTINUOUS IGNITION SWITCH.
THIS PROMPTED ANOTHER MODIFICATION TO CONVERT THE
SWITCH BACK TO THE ORIGINAL DESIGN.

APPROPRIATE ACTION: MANAGERS MUST ENSURE THAT THE ORIGINAL DESIGN
INTENT IS FULLY UNDERSTOOD BEFORE MODIFICATIONS
OR STANDARDIZATION SUGGESTIONS ARE APPROVED.

JC: AG AD AE AJ AX

CALL NUMBERS:

IMPACT AREA(S):

DATE 00844
ACCESS 89-359

DESIGN
ENGINEERING
HUMAN FACTORS
SAFETY

TOPIC:

COCKPIT WARNING AND CAUTION DISPLAYS

BROWSE -- RW8350.REPORT ----- LINE 000066 COL 001 080
COMMAND ==> SCROLL ==> PAGE

LESSON LEARNED:

EXTRANEIOUS INFORMATION DISPLAYED DURING A
SINGLE SYSTEM FAILURE WILL INCREASE PILOT
WORKLOAD.

PROBLEM:

UNASSOCIATED SYSTEM WARNING AND CAUTION DISPLAYS
DURING A SINGLE SYSTEM FAILURE DISTRACTS THE
PILOT FROM HANDLING THE FAILED SYSTEM PROBLEM.

DISCUSSION:

A SINGLE SYSTEM FAILURE, SUCH AS AN IN-FLIGHT
ENGINE FLAME-OUT, CAN TRIGGER EXTRANEIOUS WARNING
AND CAUTION DISPLAYS WHICH DISTRACTS FROM
ESSENTIAL INFORMATION. FOLLOWING AN ENGINE
SHUTDOWN, THE PILOT MUST SCRUTINIZE THE DISPLAYS
TO VERIFY THEIR ASSOCIATION WITH THE FAILURE OR
THE POSSIBILITY OF ANOTHER SYSTEM DEGRADATION. IN
AN EMERGENCY SITUATION, THIS PUTS UNNECESSARY
WORKLOAD AND STRESS ON THE PILOT AND INCREASES
THE POSSIBILITY THAT A PROBLEM IN A UNASSOCIATED
SYSTEM WILL BE UNDETECTED.

BROWSE -- RW8350.REPORT ----- LINE 000088 COL 001 080
COMMAND ==> SCROLL ==> PAGE

APPROPRIATE ACTION:

COCKPIT WARNING AND CAUTION DISPLAY SYSTEMS MUST
PROVIDE ONLY ESSENTIAL FAULT INFORMATION DURING A
SINGLE SYSTEM FAILURE.

WUC:

AG AJ AX AE

CALL NUMBERS: IMPACT AREA(S):

NATC 00695 DESIGN
ACCESS 88-536 ENGINEERING
SAFETY
HUMAN FACTORS

TOPIC: COCKPIT TAPE DISPLAYS

LESSON LEARNED: COCKPIT TAPE DISPLAY MUST HAVE ACCURATE, EASY TO
READ SCALES SO THAT THE PILOT CAN EASILY
DETERMINE THE AIRCRAFTS OPERATING CONDITIONS.

PROBLEM: THE INFORMATION DISPLAYED ON COCKPIT TAPE
DISPLAYS DOES NOT HAVE THE PRECISION REQUIRED FOR
SPECIFIC PILOT ACTIONS OR DECISIONS.

DISCUSSION:

ON A HEAVY LIFT HELICOPTER, THE ENGINE TORQUE IS
DISPLAYED ON A TRIPLE TAPE INDICATOR. THE
INDICATORS ACCURACY IS SPECIFIED TO BE WITHIN 2
PERCENT. THE INSTRUMENT IS MARKED IN 10 PERCENT
GRADUATIONS REQUIRING THE PILOTS TO ESTIMATE A
HALF OF A DIVISION FOR 5 PERCENT TORQUE. ON
OCCASION, PILOTS HAVE RECORDED TORQUE VALUES THAT
WERE 10 PERCENT IN ERROR. INADVERTENT OVER
TORQUE CAN RESULT DURING POWER ASSURANCE CHECKS
AND ENGINE LOSS EMERGENCIES WHEN THE PILOT IS
UNABLE TO ACCURATELY DETERMINE ENGINE TORQUE.
ALTHOUGH THE INSTRUMENT MET SPECIFICATIONS, THE
USE OF TAPE DISPLAYS WITH GRADUATION MARKINGS NOT
IN THE APPROPRIATE SCALE RANGE CAN CAUSE THE
PILOT DIFFICULTY IN DETERMINING AN ACCURATE
READING.

APPROPRIATE ACTION: THE SCALE MARKINGS ON COCKPIT TAPE DISPLAYS MUST
BE DESIGNED TO DISPLAY PRECISE INFORMATION THAT
THE PILOT CAN ACCURATELY READ.

WUC: 51 AG AJ AE AX

CALL NUMBERS:

IMPACT AREA(S):

NATC 01385
ACCESS 88-016

HUMAN FACTORS
SAFETY
HEALTH
TRAINING
TECHNICAL PUBLICATIONS
SUPPORT EQUIPMENT

TOPIC:

STROBE HAZARD

LESSON LEARNED:

WHILE OBSERVING STROBE FLASH, FLICKER VERTIGO CAN BE INDUCED CAUSING A SEIZURE.

PROBLEM:

MAINTENANCE PERSONNEL HAVE SUFFERED FROM SEIZURES WHILE OBSERVING AN OPERATING STROBE.

BROWSE -- RW8350.REPORT ----- LINE 000242 COL 001 080
COMMAND ==> SCROLL ==> PAGE

DISCUSSION:

WHILE A MAINTENANCE TECHNICIAN WAS CALIBRATING A VIBREX AIRCRAFT VIBRATION, PROPELLER TRACK AND BALANCE ADAPTER SET, A FELLOW TECHNICIAN APPROACHED TO OBSERVE THE PROCEDURE. WHEN THE STROBE COUNT WAS BROUGHT UP TO 174 REVOLUTIONS PER MINUTE AND AIMED AT THE CALIBRATOR, THE OBSERVING TECHNICIAN BECAME RIGID, COLLAPSED AND EXPERIENCED A SEIZURE. THE TECHNICIAN HAD TO BE RESTRAINED TO PREVENT PERSONAL INJURY. THE EPISODE WAS DIAGNOSED AS A CASE OF FLICKER VERTIGO STIMULATING A SEIZURE DISORDER. NO WARNINGS OF THE PHYSIOLOGICAL DANGERS ASSOCIATED WITH STROBE OPERATION ARE INCORPORATED IN THE CURRENT OPERATION OR CALIBRATION MANUALS.

APPROPRIATE ACTION:

A) PROVIDE WARNINGS IN APPLICABLE MANUALS TO READ AS FOLLOWS: "EXTREME CAUTION SHALL BE UTILIZED WHILE OBSERVING STROBE. FLICKER VERTIGO

BROWSE -- RW8350.REPORT ----- LINE 000264 COL 001 080
COMMAND ==> SCROLL ==> PAGE

CAN BE INDUCED CAUSING SEIZURE."
B) CONFINE THE USE OF STROBES TO SECLUDED AREAS, AND RESTRICT ACCESS TO THAT AREA.
C) PROVIDE TRAINING TO INFORM MAINTENANCE PERSONNEL OF THE PHYSIOLOGICAL DANGERS ASSOCIATED WITH STROBE OPERATION.

WUC:

AE AT AU AX AD

APPENDIX K

Department of the Army Form 2397-R Technical Report of U.S. Army Aircraft Accident	K-1
U.S. Army Coding Words/Phrases with Potential Human Factors Interest, from the U.S. Army Aviation Safety Center User's Guide	K-18

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT
PART I - STATEMENT OF REVIEWING OFFICIALS

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENT CONTROL SYMBOL
CSGPA - 1551

1. REVIEWING OFFICIALS COMMENTS

2. APPROVING AUTHORITY COMMENTS

a. SIGNATURE

3. DEPARTMENT OF ARMY REVIEW

a. SIGNATURE

4. CASE NUMBER			USASC USE ONLY	
a. DATE (YYMMDD)	b. TIME	c. AIRCRAFT SERIAL NO.	DELETE	1.
			ADD	2.
			CHANGE	3.

TECHNICAL REPORT OF U.S. ARMY AIRCRAFT ACCIDENT

PART II - SUMMARY

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENTS CONTROL SYMBOL
CSGPA-1551

1. CLASSIFICATION <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E						2. TYPE EVENTS a. _____ b. _____ c. _____						3. TIME OF DAY 1 <input type="checkbox"/> DAWN 2 <input type="checkbox"/> DAY 3 <input type="checkbox"/> DUSK 4 <input type="checkbox"/> NIGHT											
4. 1. <input type="checkbox"/> ON POST ON AIRFIELD 2. <input type="checkbox"/> ON POST NOT ON AIRFIELD 3. <input type="checkbox"/> ON AIRFIELD OF ANOTHER SVC 4. <input type="checkbox"/> ON CIVIL AIRFIELD 5. <input type="checkbox"/> OFF POST NOT ON AIRFIELD						5. NEAREST MILITARY ESTABLISHMENT						7. LOCATION a. GRID COORDINATES											
6. TOTAL NUMBER OF AIRCRAFT INVOLVED						b. CITY, STATE, COUNTRY																	
8. a. MISSION, TYPE, DESIGN, SERIES						10a. ESTIMATED COSTS <input type="checkbox"/> TOTAL LOSS						OWNER											
b. ORGN AIRCRAFT ASSIGNED (UIC)						ACFT DAMAGE COST \$						OWNER											
c. INSTAL AIRCRAFT ASSIGNED						REPAIR M/HR \$						OWNER											
9. ORGANIZATION/CHAIN OF COMMAND DEEMED MOST RESPONSIBLE/CAPABLE OF TAKING CORRECTIVE ACTION						OTHER DAMAGE MIL \$						OWNER											
UNIT/UIC						MACOM/UIC						INJURY COST \$											
												TOTAL COST THIS ACFT \$											
												b. TOTAL COST MULTIPLE ACFT EVENT \$											
11. SURVIVABILITY 1. <input type="checkbox"/> SURVIVABLE 2. <input type="checkbox"/> PARTIALLY SURV 3. <input type="checkbox"/> NON SURVIVABLE 4. <input type="checkbox"/> ACFT MISSING				12. INFIGHT ESCAPE 1. <input type="checkbox"/> EJECTION 2. <input type="checkbox"/> BAILOUT 3. <input type="checkbox"/> NOT ACCOMPL. 4. <input type="checkbox"/> NA				13. FIRE 0. <input type="checkbox"/> NONE 1. <input type="checkbox"/> INFLIGHT 2. <input type="checkbox"/> POST CRASH 3. <input type="checkbox"/> OTHER				14. POST CRASH ESCAPE DIFFICULTIES 1. <input type="checkbox"/> YES 2. <input type="checkbox"/> NO				15. FUEL a. AT TAKE OFF b. AT TIME OF EMERG. c. TERMINATION							
16. FLAMMABLE FUEL SPILLAGE NONE 0 <input type="checkbox"/> FUEL 1 <input type="checkbox"/> ENGINE OIL 2 <input type="checkbox"/> HYDRAULIC FLUID 3 <input type="checkbox"/> TRANSMISSION OIL 4 <input type="checkbox"/> CARGO 5 <input type="checkbox"/> UNDETERMINED 9 <input type="checkbox"/> OTHER (Specify) 8 <input type="checkbox"/>				17. CLEARANCE VFR 0 <input type="checkbox"/> IFR 1 <input type="checkbox"/> NONE 2 <input type="checkbox"/> FROM _____ TO _____				19. INJURIES (Number)				FATAL		DISABLING		NONDISABLING		MISSING, PRESUMED DEAD		NOT INJURED			
				18. MISSION				a. OCCUPANTS MILITARY				A		B-E		F-G		H		J			
								b. OCCUPANTS OTHER															
								c. NON-OCCUPANTS MIL															
								d. NON-OCCUPANTS OTHER															
								e. TOTAL THIS ACFT															
								f. MULTIPLE ACFT EVENT															
20. TERRAIN OF CRASH SITE (More than one may apply)																							
a. GEN CHARACTERISTICS 14 <input type="checkbox"/> MOUNTAIN 08 <input type="checkbox"/> FLAT 13 <input type="checkbox"/> DESERT TERRAIN 11 <input type="checkbox"/> ROLLING 09 <input type="checkbox"/> WATER						b. AT MISHAP SITE 12 <input type="checkbox"/> LEVEL 07 <input type="checkbox"/> SLOPE						c. SURFACE AT MISHAP SITE 01 <input type="checkbox"/> PREPARED 04 <input type="checkbox"/> ICE 02 <input type="checkbox"/> SOD 15 <input type="checkbox"/> SNOW 03 <input type="checkbox"/> SOGGY 16 <input type="checkbox"/> WATER						d. OBSTACLES AT MISHAP SITE 17 <input type="checkbox"/> STIMPS 05 <input type="checkbox"/> TREES 10 <input type="checkbox"/> BLDG 18 <input type="checkbox"/> WIRES 06 <input type="checkbox"/> ROCKS/BOULDERS 98 <input type="checkbox"/> OTHER					
21. FLIGHT DATA																							
		FLIGHT DURATION		PHASE OF OPERATIONS		ALTITUDE		AIRSPEED		HEADING		AIRCRAFT WEIGHT		DENSITY ALTITUDE		OVERGROSS							
a. PLANNED		HR				AGL		KIAS		(Compass)						YES NO							
b. WHEN EMERGENCY OCCURRED		HR				MSL																	
c. ACCIDENT SEQUENCE TERMINATION		HR																					
		TNS																					
22. ACCIDENT CAUSE FACTORS (Enter a "D" or "S" in appropriate blocks to identify definite or suspected causes)																							
a. PERSONNEL						PERSONNEL (Continued)																	
(1) FLIGHT CREW: DUTY						(3) SUPERVISORY						DUTY											
												DUTY											
												DUTY											
(2) GROUND CREW: DUTY						(8) OTHER						DUTY											
												DUTY											
												DUTY											
												DUTY											
												DUTY											
23. SEQUENCE (Enter a concise summary of accident sequence from onset of emergency through termination of flight. See DA Pam 385-95 for sample statement and restrictions on length of statement)																							
24. CASE NUMBER						25. AVIATION SAFETY OFFICER (Name, orgn and signature)						26. OTHER ACFT SERIAL NUMBER											
a. DATE (YYMMDD)		b. TIME		c. ACFT SERIAL NO.																			

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT

PART III - FINDINGS AND RECOMMENDATIONS

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENT CONTROL SYMBOL
CSGPA - 1551

1. FINDINGS AND RECOMMENDATIONS (Attach additional sheet, if required)

2. SUMMARY OF ACCIDENT CAUSES, SYSTEM INADEQUACIES AND RECOMMENDATIONS

		SYSTEM INADEQUACIES		REMEDIES	
a. PERSONNEL ERROR		1.	1.	2.	3.
	DUTY CODE	2.	1.	2.	3.
	TASK ERROR CODE	3.	1.	2.	3.
b. PERSONNEL ERROR		1.	1.	2.	3.
	DUTY CODE	2.	1.	2.	3.
	TASK ERROR CODE	3.	1.	2.	3.
c. PERSONNEL ERROR		1.	1.	2.	3.
	DUTY CODE	2.	1.	2.	3.
	TASK ERROR CODE	3.	1.	2.	3.
d. MATERIAL FAILURE/MALFUNCTION		1.	1.	2.	3.
	FAILURE CODE	2.	1.	2.	3.
		3.	1.	2.	3.
e. ENVIRONMENTAL		1.	1.	2.	3.
	ENVIRONMENTAL CODE	2.	1.	2.	3.
		3.	1.	2.	3.
3. CASE NUMBER				USASC USE ONLY	
a. DATE (YYMMDD)	b. TIME	c. AIRCRAFT SERIAL NO.		DELETE	1.
				ADD	2.
				CHANGE	3.

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT

PART IV - NARRATIVE

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENT CONTROL SYMBOL

CSGPA - 1551

1. NARRATIVE ACCOUNT OF INVESTIGATION (Use format shown in DA Pamphlet 385-95)

2. CASE NUMBER			USASC USE ONLY	
a. DATE (YYMMDD)	b. TIME	c. AIRCRAFT SERIAL NO.	DELETE	1.
			ADD	2.
			CHANGE	3.

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT PART V - SUMMARY OF WITNESS INTERVIEW <small>For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.</small>			REQUIREMENT CONTROL SYMBOL CSGPA - 1551		
1. NAME OF WITNESS (Last, first, MI)		2. OCCUPATION/TITLE		3. GRADE	4. SSN
6. ADDRESS (Include ZIP Code) (If military, include organization)		7. TELEPHONE NUMBER			
		8. DATE OF INTERVIEW			
9. AVIATION EXPERIENCE AND BACKGROUND		10. LOCATION		11. INTERVIEWER	
12. WITHIN THE ARMY, THIS STATEMENT WILL BE USED SOLELY FOR ACCIDENT PREVENTION/SAFETY PURPOSES AND IT MAY NOT BE USED AS EVIDENCE OR TO OBTAIN EVIDENCE IN ANY JUDICIAL, ADMINISTRATIVE, OR DISCIPLINARY ACTION OR PROCEEDING; IN DETERMINING MISCONDUCT OR LINE-OF-DUTY STATUS OF PERSONNEL; BEFORE FLIGHT EVALUATION BOARDS IN DETERMINING LIABILITY IN CLAIMS FOR OR AGAINST THE GOVERNMENT; IN DETERMINING PECUNIARY LIABILITY (AR 385-40).					
13. CASE NUMBER					
a. DATE (YYMMDD)		b. TIME		c. AIRCRAFT SERIAL NO.	

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT

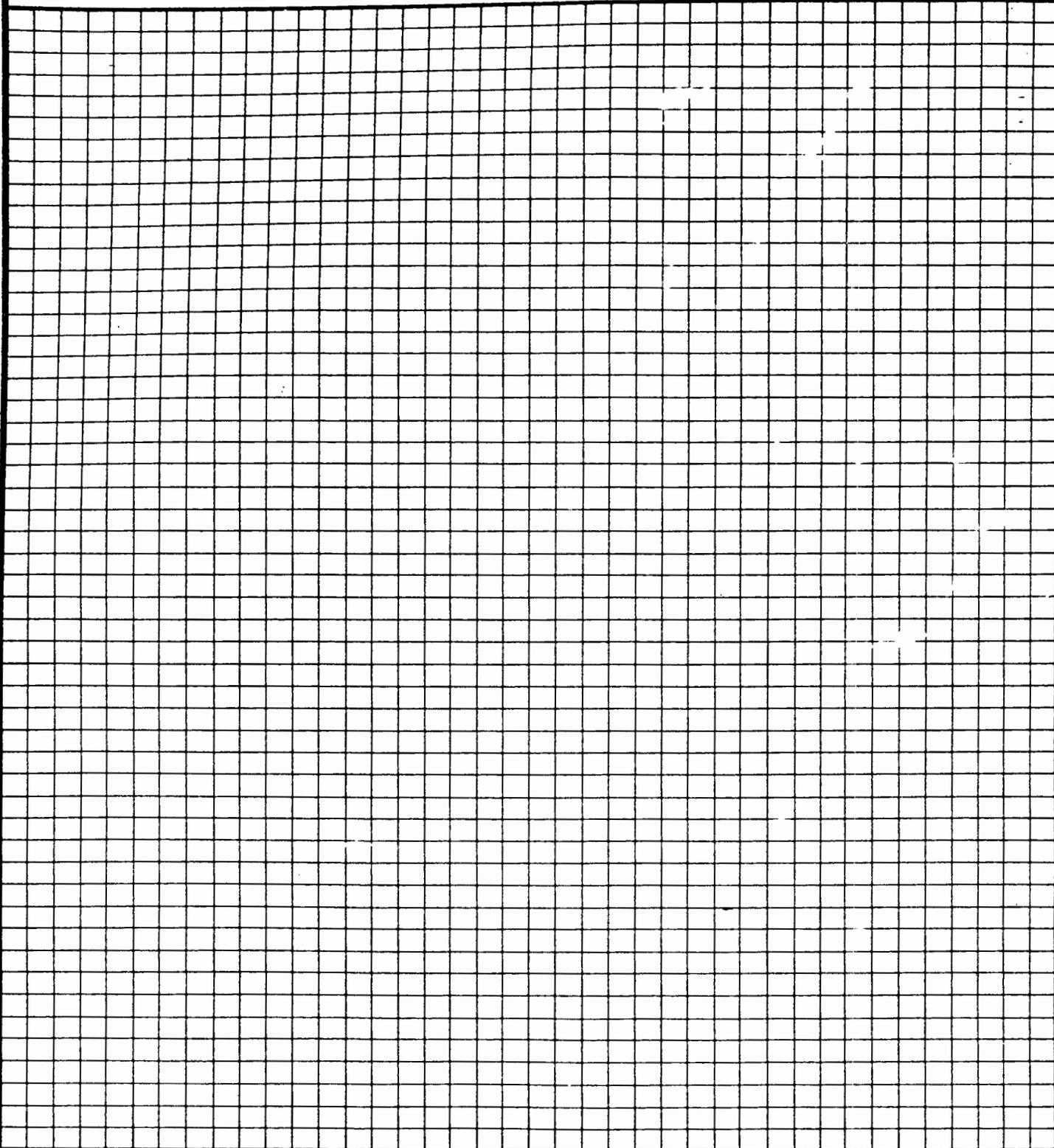
PART VI - WRECKAGE DISTRIBUTION

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENTS CONTROL SYMBOL

CSGPA - 1551

1. GRID: SHOW MAJOR GOUGE MARKS, DISTRIBUTION OF WRECKAGE, OBSTACLES, DIRECTION OF NORTH, WIND DIRECTION, WIND VELOCITY, POSITION OF WITNESS, ETC. SUGGESTED SCALE: 1" EQUALS 40' ACTUAL SCALE: 1" EQUALS _____



2. CASE NUMBER			3. OTHER AIRCRAFT SERIAL NUMBER
a. DATE (YYMMDD)	b. TIME	c. AIRCRAFT SERIAL NO.	

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT

PART VII - IN-FLIGHT OR TERRAIN IMPACT AND CRASH DAMAGE DATA

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENTS CONTROL SYMBOL
CSGPA - 1551

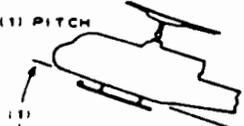
1. INFLIGHT COLLISION KINEMATICS AT INSTANT OF IMPACT

<p>a. AIRSPEED AT IMPACT (Knots) _____</p>	<p>b. VERTICAL SPEED (Feet per minute) _____ <input type="checkbox"/> UP <input type="checkbox"/> DOWN</p>																												
<p>c. WIND VELOCITY AT IMPACT (Knots) _____</p>	<p>d. WIND DIRECTION AT IMPACT (Degrees) _____</p>																												
<p>e. FLIGHT PATH ANGLE (Degrees) _____ <input type="checkbox"/> UP <input type="checkbox"/> DOWN</p>	<p>f. INFLIGHT ATTITUDE AT IMPACT</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>(1) PITCH ANGLE</p> </div> <div style="text-align: center;">  <p>(2) ROLL ANGLE</p> </div> </div> <p>DEGREES _____ <input type="checkbox"/> UP <input type="checkbox"/> DOWN DEGREES _____ <input type="checkbox"/> L <input type="checkbox"/> R</p>																												
<p>g. OBSTACLE IDENTITY AND LOCATION</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">OBSTACLE</th> <th style="width: 50%;">COLLISION HEIGHT ABOVE GROUND (Feet)</th> </tr> </thead> <tbody> <tr> <td>(1) <input type="checkbox"/> BIRDS</td> <td></td> </tr> <tr> <td>(2) <input type="checkbox"/> AIRCRAFT</td> <td></td> </tr> <tr> <td>(3) <input type="checkbox"/> WIRES/CABLES</td> <td></td> </tr> <tr> <td>(4) <input type="checkbox"/> VEHICLES</td> <td></td> </tr> <tr> <td>(5) <input type="checkbox"/> TREE</td> <td></td> </tr> <tr> <td>(6) <input type="checkbox"/> OTHER</td> <td></td> </tr> </tbody> </table>		OBSTACLE	COLLISION HEIGHT ABOVE GROUND (Feet)	(1) <input type="checkbox"/> BIRDS		(2) <input type="checkbox"/> AIRCRAFT		(3) <input type="checkbox"/> WIRES/CABLES		(4) <input type="checkbox"/> VEHICLES		(5) <input type="checkbox"/> TREE		(6) <input type="checkbox"/> OTHER															
OBSTACLE	COLLISION HEIGHT ABOVE GROUND (Feet)																												
(1) <input type="checkbox"/> BIRDS																													
(2) <input type="checkbox"/> AIRCRAFT																													
(3) <input type="checkbox"/> WIRES/CABLES																													
(4) <input type="checkbox"/> VEHICLES																													
(5) <input type="checkbox"/> TREE																													
(6) <input type="checkbox"/> OTHER																													
<p>i. OBSTACLE CONSPICUITY (Within avoidance distance from pilots position, the obstacle in its surroundings was obscured)</p> <p>(1) <input type="checkbox"/> COMPLETELY (2) <input type="checkbox"/> PARTIALLY (3) <input type="checkbox"/> NOT OBSCURED</p>																													
<p>h. OBSTACLE STRIKE SEQUENCE</p> <table style="width: 100%;"> <tr> <td>(1) <input type="checkbox"/> PROP/ROTOR</td> <td>(6) <input type="checkbox"/> LWR NOSE/GUN TURRET</td> </tr> <tr> <td>(2) <input type="checkbox"/> ROTOR MAST</td> <td>(7) <input type="checkbox"/> LANDING GEAR</td> </tr> <tr> <td>(3) <input type="checkbox"/> TAIL ROTOR</td> <td>(8) <input type="checkbox"/> WING</td> </tr> <tr> <td>(4) <input type="checkbox"/> TAIL BOOM</td> <td>(9) <input type="checkbox"/> EMPENNAGE</td> </tr> <tr> <td>(5) <input type="checkbox"/> WINDSCREEN/CANOPY</td> <td>(10) <input type="checkbox"/> OTHER (Specify)</td> </tr> </table>	(1) <input type="checkbox"/> PROP/ROTOR	(6) <input type="checkbox"/> LWR NOSE/GUN TURRET	(2) <input type="checkbox"/> ROTOR MAST	(7) <input type="checkbox"/> LANDING GEAR	(3) <input type="checkbox"/> TAIL ROTOR	(8) <input type="checkbox"/> WING	(4) <input type="checkbox"/> TAIL BOOM	(9) <input type="checkbox"/> EMPENNAGE	(5) <input type="checkbox"/> WINDSCREEN/CANOPY	(10) <input type="checkbox"/> OTHER (Specify)	<p>j. WIRE OR CABLE DESCRIPTION</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">TYPE</th> <th style="width: 20%;">DIA IN INCHES</th> <th style="width: 30%;">NO. STRUCK</th> </tr> </thead> <tbody> <tr> <td>(1) POWER TRANSMISSION</td> <td></td> <td></td> </tr> <tr> <td>(2) TELEPHONE OR TV</td> <td></td> <td></td> </tr> <tr> <td>(3) BRACING (Guy/Support)</td> <td></td> <td></td> </tr> <tr> <td>(4) OTHER (Specify)</td> <td></td> <td></td> </tr> <tr> <td colspan="3">(5) WIRE PROTECTION SYSTEM INSTALLED <input type="checkbox"/> YES <input type="checkbox"/> NO</td> </tr> </tbody> </table>	TYPE	DIA IN INCHES	NO. STRUCK	(1) POWER TRANSMISSION			(2) TELEPHONE OR TV			(3) BRACING (Guy/Support)			(4) OTHER (Specify)			(5) WIRE PROTECTION SYSTEM INSTALLED <input type="checkbox"/> YES <input type="checkbox"/> NO		
(1) <input type="checkbox"/> PROP/ROTOR	(6) <input type="checkbox"/> LWR NOSE/GUN TURRET																												
(2) <input type="checkbox"/> ROTOR MAST	(7) <input type="checkbox"/> LANDING GEAR																												
(3) <input type="checkbox"/> TAIL ROTOR	(8) <input type="checkbox"/> WING																												
(4) <input type="checkbox"/> TAIL BOOM	(9) <input type="checkbox"/> EMPENNAGE																												
(5) <input type="checkbox"/> WINDSCREEN/CANOPY	(10) <input type="checkbox"/> OTHER (Specify)																												
TYPE	DIA IN INCHES	NO. STRUCK																											
(1) POWER TRANSMISSION																													
(2) TELEPHONE OR TV																													
(3) BRACING (Guy/Support)																													
(4) OTHER (Specify)																													
(5) WIRE PROTECTION SYSTEM INSTALLED <input type="checkbox"/> YES <input type="checkbox"/> NO																													

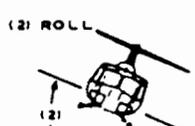
2. TERRAIN COLLISION KINEMATICS AT INSTANT OF MAJOR IMPACT

<p>a. GROUND SPEED AT IMPACT (Knots) _____</p>	<p>b. VERTICAL SPEED (Feet per minute) _____ <input type="checkbox"/> UP <input type="checkbox"/> DOWN</p>
<p>c. FLIGHT PATH ANGLE (Degrees) _____ <input type="checkbox"/> UP <input type="checkbox"/> DOWN</p>	<p>d. INDICATE BY CHECK MARKS WHICH TWO OF THE THREE PRECEDING PARAMETERS (a, b, c) ARE THE MOST ACCURATE.</p> <p>a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/></p>
<p>e. IMPACT ANGLE (Degrees)</p>	

f. ATTITUDE AT MAJOR IMPACT



(1) PITCH



(2) ROLL



(3) YAW

CRASH PATH
LT YAW SHOWN

DEGREES _____ UP DOWN DEGREES _____ LEFT RIGHT DEGREES _____ LEFT RIGHT

3. ROTATION AFTER MAJOR IMPACT

a. DID AIRCRAFT ROTATE ABOUT ANY AXIS AFTER THE ABOVE MAJOR IMPACT (If yes, complete items b, c, and d)

YES NO UNKNOWN

ROTATIONS (degrees)	LEFT	RIGHT
b. ROLL		
c. YAW		
d. FORWARD NOSE OVER (Degrees)		

4. IMPACT FORCES RELATIVE TO AIRCRAFT AXES (G's)

<p>a. VERTICAL (G's) _____ <input type="checkbox"/> UP <input type="checkbox"/> DOWN</p>	<p>b. LONGITUDINAL (G's) _____ <input type="checkbox"/> FORE <input type="checkbox"/> AFT</p>	<p>c. LATERAL (G's) _____ <input type="checkbox"/> LEFT <input type="checkbox"/> RIGHT</p>
---	--	---

5. CASE NUMBER			6. OTHER AIRCRAFT SERIAL NUMBER		USASC USE ONLY	
a. DATE (YYMMDD)	b. TIME	c. AIRCRAFT SERIAL NO.			DELETE	1.
					ADD	2.
					CHANGE	3.

7. FUSELAGE INWARD DEFORMATION OR COLLAPSE AND INJURY RELATIONSHIP (Check appropriate boxes)									
FUSELAGE AREA	AMOUNT OR TYPE OF DEFORMATION OR COLLAPSE	SPECIFIC AREA OF DEFORMATION OR COLLAPSE				(5) FUSELAGE DEFORMATION PRODUCED/CONTRIBUTED TO INJURY			
		Cockpit (1)	Forward Cabin Area (2)	Mid Cabin Area (3)	Rear Cabin Area (4)	Cockpit	Forward Cabin Area	Mid Cabin Area	Rear Cabin Area
a. ROOF	UP TO 1 FOOT								
	MORE THAN 1 FOOT								
	LESS THAN 3 FEET								
b. LEFT SIDE	MORE THAN 3 FEET								
	UP TO 1 FOOT								
c. RIGHT SIDE	MORE THAN 1 FOOT								
	UP TO 1 FOOT								
d. NOSE	MORE THAN 1 FOOT								
	UP TO 1 FOOT								
e. FLOOR	MORE THAN 1 FOOT								
	UP TO 1 FOOT								
f. FLOOR, (Local deformation under seats)	VERTICAL								
	SIDWARD								
	FORWARD/REARWARD								

8. LARGE COMPONENT DISPLACEMENT (Check appropriate boxes)				
COMPONENT	DISPLACED (1)	TORN FREE (2)	PENETRATED/ENTERED	
			COCKPIT (3)	CABIN (4)
a. TRANSMISSION (Forward or main)				
b. TRANSMISSION (Rear)				
c. ROTOR BLADE (Forward or main)				
d. ROTOR BLADE (Rear)				
e. LANDING GEAR (Specify location)				
f. OTHER (Specify)				

9. POSTCRASH FLAMMABLE FLUID SPILLAGE					
a. EQUIPPED WITH CRASHWORTHY FUEL SYSTEM <input type="checkbox"/> YES <input type="checkbox"/> NO	b. IF SO EQUIPPED DID BREAK-AWAY VALVES SEPARATE <input type="checkbox"/> YES <input type="checkbox"/> NO	e. AMOUNT AND TYPE FLUID SPILLED (Check box)			
		GALLONS	ENGINE FUEL	OIL	HYDRAULIC FLUID
c. DID FLAMMABLE FUEL SPILLAGE OCCUR <input type="checkbox"/> YES <input type="checkbox"/> NO	d. WAS AIRCRAFT EQUIPPED WITH FIRE RESISTANT HYDRAULIC FLUID <input type="checkbox"/> YES <input type="checkbox"/> NO	0 - 1			
		1 - 2			
		2 - 10			
		10 - 20			
		20+			

f. SPILLAGE SOURCE			
PART	PART NAME, TITLE, NOMENCLATURE	MANUFACTURERS NO.	NSN
(1) CELL/TANK/RESERVOIR			
(2) FILTER			
(3) FITTING			
(4) FLUID LINE			
(5) VALVE			
(6) BREAKAWAY VALVE			
(7) OTHER (Specify)			

10. REMARKS

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT

PART VIII - MAINTENANCE AND MATERIEL DATA

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENTS CONTROL SYMBOL

CSGPA - 1551

1. AIRCRAFT HISTORY				2. CAUSATIVE ROLE		
a. ACCEPTANCE DATE (YYMMDD)		f. LAST INSPECTION			D	S
b. AIRCRAFT ASSIGNED (YYMMDD)		DATE (YYMMDD)				
c. HOURS SINCE NEW		TYPE				
d. LAST MAJOR REPAIR FACILITY		g. HRS SINCE LAST INSPECTION				
e. HOURS SINCE LAST MAJOR REPAIR		h. ORGN COMPLETING LAST INSP (UIC)				

3. FAILED OR MALFUNCTIONED MATERIEL					
DID PART NUMBER MATCH THAT LISTED IN TM <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN					
IDENTIFICATION	MAJ COMPONENT	PART	IDENTIFICATION	MAJ COMP	PART
a. NOMENCLATURE			(4) HRS SINCE NEW		
b. TYPE DESIGN, SERIES			(5) HRS SINCE LAST INSTALLED		
c. PART NUMBER			(6) OATE LAST INSTALLED (YYMMDD)		
d. NSN			(7) LAST OVERHAUL FACILITY		
e. MFG CODE			(8) LAST SPECIAL INSP (Type)		
f. SERIAL NUMBER			(9) HOURS SINCE LAST SPECIAL INSP		
g. TM DATA			(10) DATE OF LAST SPECIAL INSP (YYMMDD)		
(1) TM NUMBER					
(2) DATE (YYMMDD)					
(3) FUNCTIONAL GP					
(4) FIGURE NUMBER					
(5) ITEM NUMBER					
h. TAMMS DATA			i. TYPE/MODE OF FAILURE/ MALFUNCTION		
(1) NO. OF OVERHAULS			j. CAUSE OF FAILURE/ MALFUNCTION		
(2) DATE OF LAST OVERHAUL (YYMMDD)					
(3) HRS SINCE OVERHAUL			k. QDR/EIR NUMBER		

4. WARNING SYSTEM AND INDICATION OF FAILURE/MALFUNCTION									
a. STATUS OF AIRCRAFT WARNING SYSTEM FOR THIS PART					b. INDICATIONS OF FAILURE/MALFUNCTION (Enter from left to right in sequence they occurred)				
c. OP INOICATIONS AT TIME OF FAILURE/MALFUNCTION					GENERAL		AIRCRAFT SYSTEM		
(1) TORQUE		(6) ENGINE OIL TEMP		(1)	(2)	(3)	(4)	(5)	
(2) RPM (N ¹)		(7) ENG OIL PRESSURE		d. OTHER COMPONENT INDICATIONS					
(3) RPM (N ²)		(8) EPR		(1) TEMP			(3) RPM		
(4) RPM (r ²)		(9) FUEL FLOW		(2) PRESSURE			(4) OTHER (Specify)		
(5) ENGINE EGT									

5. POL			
a. POST ACCIDENT LAB RESULTS			
(1) TYPE			
(2) SOURCE			
(3) LOCATION OF LAB			
(4) DATE (YYMMDD)			
(5) FILTER CONDITION (Specify)			
(6) LAB RESULTS			
b. PRE-ACCIDENT LAB RESULTS			
(1) SPECIFY LAB			
(2) DATE LAST SAMPLE			
(3) LAB RESULTS			

6. TEARDOWN ANALYSIS			
a. ORGN PERFORMING		b. SHIPPING INFORMATION	
c. MAINT REQ NO.		(1) SHIPPED YYMMDD)	(2) MODE
d. USASC CONTROL NO.		(3) GBL/BOL	(4) TCN NO.

7. REMARKS (Use additional sheet if required)

8. CASE NO.			9. OTHER AIRCRAFT SERIAL NUMBER		USASC USE ONLY	
a. DATE (YYMMDD)	b. TIME	c. AIRCRAFT SERIAL NO.			DELETE	1.
					ADD	2.
					CHANGE	3.

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT

PART IX - PERSONAL DATA

For use of this form, see AR 385-40 and DA Pamphlet 385-95, the proponent agency is DCSPER.

REQUIREMENTS CONTROL SYMBOL
CSGPA - 1551

1. ROLE OF THIS INDIVIDUAL		
a. COMMITTED ERRORS THAT CAUSED/CONTRIBUTED TO ACCIDENT (1) <input type="checkbox"/> DEFINITELY (3) <input type="checkbox"/> NO (2) <input type="checkbox"/> SUSPECTED (4) <input type="checkbox"/> UNKNOWN	b. AT CONTROLS WHEN ACCIDENT OCCURRED (1) <input type="checkbox"/> YES (2) <input type="checkbox"/> NO	c. DUTY STATUS (1) <input type="checkbox"/> ON DUTY (2) <input type="checkbox"/> OFF DUTY

2. BACKGROUND DATA			
a. DATE LAST LEAVE ENDED (YYMMDD)	i. HOURS WORKED LAST 72 HOURS	k. DUTY HOURS REMAINING THIS DAY AFTER ACCIDENT OCCURRED	
b. DAYS DURATION LAST LEAVE	l. HEIGHT (Inches)	m. WEIGHT (Pounds)	
c. HOURS SLEPT LAST 24 HOURS	n. AGE	o. HOURS FLOWN LAST 24 HOURS	
d. HOURS SLEPT LAST 48 HOURS	p. HOURS FLOWN LAST 48 HOURS	q. HOURS FLOWN LAST 72 HOURS	
e. HOURS SLEPT LAST 72 HOURS			
f. HOURS AWAKE PRIOR TO ACCIDENT			
g. HOURS DURATION LAST SLEEP PERIOD			
h. HOURS WORKED LAST 24 HOURS			
i. HOURS WORKED LAST 48 HOURS			

3. RATED CREWMEMBER DATA			
a. FW RATED (YYMMDD)	o. MTDS AIRCRAFT FLOWN LAST 60 DAYS ASP/IP		(1)
b. RW RATED (YYMMDD)			(2)
c. LAST PHYSICAL (YYMMDD)			(3)
d. WAIVERS <input type="checkbox"/> YES <input type="checkbox"/> NO	p. MTDS AIRCRAFT QUALIFIED/CURRENT IN		(1)
e. FAC 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> (YYMMDD)	q. ATM TASK NUMBER ASSOCIATED WITH INITIAL INDICATION OF EMERGENCY		(2)
f. ARL 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> (YYMMDD)	(1) LAST PERFORMED (YYMMDD)		(3)
g. -10 EXAMINATION (YYMMDD)	(2) NUMBER OF ITERATIONS		
h. ANNUAL WRIT (YYMMDD)	r. ATM TASK NUMBER INVOLVED IN RESPONSE TO EMERGENCY		
i. INSTRUMENT RENEWAL (YYMMDD)	(1) LAST PERFORMED (YYMMDD)		
j. SDZN RENEWAL (YYMMDD)	(2) NUMBER OF ITERATIONS		
k. MOST RECENT EVALUATION FLIGHT IN MISHAP MTDS AIRCRAFT (YYMMDD)	s. POST-ACCIDENT FLIGHT (YYMMDD) RESULT		
l. NVG QUALIFIED <input type="checkbox"/> YES <input type="checkbox"/> NO	t. POST-ACCIDENT MEDICAL EXAMINATION/AUTOPSY (YYMMDD)		
m. IP <input type="checkbox"/> SIP <input type="checkbox"/> IFE <input type="checkbox"/> MTP <input type="checkbox"/> VT <input type="checkbox"/>	REQUIRED LAB TESTS ACCOMPLISHED <input type="checkbox"/> YES <input type="checkbox"/> NO		
n. PRIMARY AIRCRAFT MTDS	u. LOW PRESSURE/HIGH ALTITUDE CHAMBER <input type="checkbox"/> YES <input type="checkbox"/> NO		
	v. EJECTION SYSTEM QUAL. <input type="checkbox"/> YES <input type="checkbox"/> NO		

4. FLYING EXPERIENCE									
TYPE EXPERIENCE AND TIME	FIXED WING		ROTARY WING		TOTAL	WEATHER INST	MISHAP AIRCRAFT		
	SINGL ENG	MULTI ENG	SINGL ENG	MULTI ENG			DESIGN	SERIES	THIS MO
a. INSTRUCTOR PILOT									
b. PILOT									
c. COPILOT									
d. CIVILIAN PILOT									
e. TOTAL TIME									
f. COMBAT TIME									
g. FLT SIMUL/SYNTH TRAINER									
h. TOTAL TIME LAST 30 DAYS									
i. TOTAL TIME LAST 60 DAYS									
j. MONTHLY FLIGHT HOURS PAST 12 MONTHS									
(1) DATE (YYMM)									THIS MO
(2) HOURS									

5. CASE NUMBER			6. OTHER AIRCRAFT SERIAL NUMBER		USASC USE ONLY	
a. DATE (YYMMDD)	b. TIME	c. AIRCRAFT SERIAL NO.			DELETE	1.
					ADD	2.
					CHANGE	3.

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT

PART XI - PERSONNEL PROTECTIVE/ESCAPE/SURVIVAL/RESCUE DATA

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENTS CONTROL SYMBOL

CSGPA - 1551

1. DID THIS INDIVIDUAL SUSTAIN AN INJURY OR OCCUPATIONAL ILLNESS BECAUSE OF ACCIDENT YES NO
 (NOTE: If "YES" box is checked, insure a DA Form 2397-9-R is completed for this individual)

2. PERSONNEL PROTECTIVE/RESTRAINT/SURVIVAL EQUIPMENT

ITEM	TYPE (1)	RE- QUIRED (2)	NEEDED (3)	AVAIL- ABLE (4)	USED (5)	PRODUC- ED, AL- LOWED INJURY (6)	PRE- VENTED INJURY (7)	RE- DUCED INJURY (8)	FUNC- TIONED AS DE- SIGNED (9)	INFORMATION CODES (10)	
a. HELMUT											
b. VISOR											
c. GLASSES											
d. FLIGHT SUIT											
e. FLIGHT GLOVES											
f. FLIGHT JACKET											
g. BOOTS											
h. OTHER CLOTHING											
i. LAP BELT											
j. SHOULDER HARNESS											
k. GUNNER HARNESS											
l. INERTIA REEL											
m. SEAT/LITTER											
n. SURVIVAL EQUIP											
o.											
p.											

3. PERSONNEL EVACUATION/ESCAPE

										INFORMATION CODES	
a. METHOD OF ESCAPE											
b. LOCATION IN AIRCRAFT											
c. EXIT ATTEMPTED											
d. EXIT USED											
e. AIRCRAFT ATTITUDE DURING ESCAPE											
f. COCKPIT/CABIN CONDITIONS											
g. ESCAPE DIFFICULTIES											
4. LAPSED TIME FOR RESCUE											

	DATE		HOUR OF DAY		LAPSED TIME		5. DISTANCE FROM ACCIDENT TO ACTUAL RESCUE VEHICLE AT TIME OF ACCIDENT
	MM	DD	HR	MIN	HR	MIN	
a. NOTIFICATION OF RESCUE PERSONNEL							a. TO AIRCRAFT IN NAUTICAL MILES
b. INDIV PHYSICALLY REACHED							
c. INDIV ACTUALLY ABOARD RESCUE VEH							b. TO GROUND VEHICLE IN STATUTE MILES
d. RESCUE COMPLETED/ABANDONED							

										INFORMATION CODES	
6. PERSONNEL SURVIVAL/RESCUE											
a. SURVIVAL PROBLEMS ENCOUNTERED											
b. MEANS USED TO LOCATE INDIVIDUAL											
c. RESCUE EQUIPMENT USED											
d. FACTORS THAT HELPED RESCUE											
e. FACTORS COMPLICATING RESCUE											
f. INDIVIDUAL PHYSICAL CONDITION											
g. VEHICLES ACTUALLY PERFORMING EVAC (Specify)											
h. OTHER VEHICLE ASSISTING IN RESCUE (Specify)											
7. REMARKS (Use additional sheet, if required)											

8. NAME (Last, first, MI)			9. SSN		10. GRADE	11. SEX	12. DUTY		13. SVC	14. UIC
---------------------------	--	--	--------	--	-----------	---------	----------	--	---------	---------

15. CASE NUMBER			16. OTHER AIRCRAFT SERIAL NUMBER		USASC USE ONLY	
a. DATE (YYMMDD)	b. TIME	c. AIRCRAFT SERIAL NO.			DELETE	1.
					ADD	2.
					CHANGE	3.

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT

PART XII - WEATHER DATA

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENT CONTROL SYMBOL
CSGPA - 1551

1. ROLE OF WEATHER

a. DEFINITE D b. SUSPECTED S c. NONE W d. UNDETERMINED Z

2. GENERAL DATA AT TIME OF OCCURRENCE

a. TEMPERATURE (degrees Cent.) b. ALTIMETER SETTING (HG) c. ALTIMETER READING (Feet)

3. SKY CONDITION	ACCIDENT SEQUENCE				8. AIRCRAFT ICING		ICING SEVERITY							
	INITIAL INDIC OF EMERG	AT EMERGENCY	DURING DESCENT	ACCIDENT OR TERMINATION	NONE 0 <input type="checkbox"/>	YES 1 <input type="checkbox"/>	TRACE (1)	LIGHT (2)	MODERATE (3)	SEVERE (4)				
a. <input type="radio"/> CLEAR					01. MAIN MOTOR BLADES									
b. <input type="radio"/> SCATTERED (feet)					02. WINGS									
c. <input type="radio"/> BROKEN (feet)					03. PROPELLERS									
d. <input type="radio"/> OVERCAST (feet)					04. CONTROL SURFACES									
e. -X PARTIAL OBSCURATION					05. ROTOR HEAD									
f. X OBSCURATION					06. TAIL ROTOR									
x. UNKNOWN					07. FUSELAGE									
4. HORIZON					08. PITOT STATIC SYSTEM									
a. VISIBLE					09. CARBURETOR									
b. PARTIALLY OBSCURED					10. ENGINE AIR INLET									
c. OBSCURED					11. FUEL VENTS									
5. VISIBILITY (Naut. miles)					12. ANTENNA									
6. OBSTRUCTION TO VISION					13. WINDSCREEN									
a. NATURAL					98. OTHER (Specify)									
01. DUST					9. SIGNIFICANT WEATHER (A maximum of three may be selected)					ACCIDENT SEQUENCE				
02. FOG										INITIAL INDIC OF EMERG	AT EMERGENCY	DURING DESCENT	ACCIDENT OR TERMINATION	
03. GROUND FOG														
04. HAZE														
05. ICE FOG														
06. SMOKE														
b. INDUCED (Rotorwash, etc.)					01. HAIL									
					02. BLOWING SAND					03. SLEET				
					03. BLOWING DUST					05. ICE CRYSTALS				
					04. BLOWING SPRAY					06. DRIZZLE				
					00. NONE					07. RAIN				
					98. OTHER (Specify)					09. SNOW				
					12. LIGHTNING									
					01. BLOWING SNOW					13. THUNDER STORM				
					02. BLOWING SAND					14. FREEZING DRIZZLE				
					03. BLOWING DUST					15. FREEZING RAIN				
					04. BLOWING SPRAY					16. GUSTY WINDS				
					00. NONE					97. UNKNOWN				
					00. NONE									
					98. OTHER (Specify)					98. OTHER (Specify)				

7. WINDS 10. TURBULENCE

a. ALOFT (At enroute altitude)
(1) DIRECTION (Degrees Mag.) (2) VELOCITY (Kt)

NONE 0 (If "YES" enter below "C" for continuous, "I" for intermittent, and "O" for occasional)
YES 1

b. SURFACE WINDS
(1) LANDING DIR. (Degrees Mag.) (2) SURFACE WIND DIR. AND VARIANCE (Degrees Mag.)
(3) SURFACE WIND VELOCITY AND GUST SPREAD (Kt)

a. LIGHT b. MODERATE c. SEVERE d. EXTREME

11. FORECAST
CORRECT C INCORRECT I UNKNOWN U

12. REMARKS (Use additional sheet if required)

13. CASE NUMBER			USASC USE ONLY	
a. DATE (YYMMDD)	b. TIME	c. AIRCRAFT SERIAL NO.	DELETE	1.
			ADD	2.
			CHANGE	3.

TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT

PART XIII - FIRE DATA (To be completed for all events involving fire)

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENT CONTROL SYMBOL
CSGPA - 1551

1. FIRE STARTED (Check D - Definite S - Suspected)				D	S	4. IGNITION SOURCE (Continued)				D	S		
a. INFLIGHT						j. SHORT CIRCUIT							
b. UPON IMPACT (Less than 1 minute)						k. LIGHTNING							
c. UPON IMPACT (More than 1 minute)						l. STATIC ELECTRICITY							
d. DURING REFUELING						m. OTHER (Specify)							
y. OTHER (Specify)						n. UNDETERMINED <input type="checkbox"/>							
z. UNDETERMINED <input type="checkbox"/>						5. COMBUSTIBLE MATERIAL				D	S		
2. INDICATIONS OF FIRE (More than 1 May apply, enter 1, 2 or 3 to show sequence)						a. MAIN FUEL							
a. <input type="checkbox"/> FIRE WARNING SYSTEM		d. <input type="checkbox"/> SMELL		b. AUXILIARY FUEL									
b. <input type="checkbox"/> OTHER INSTRUMENTS		e. <input type="checkbox"/> EXPLOSION (Sound)		c. HYDRAULIC FLUID									
c. <input type="checkbox"/> SIGHT		f. <input type="checkbox"/> EXTERNAL COMMO		d. ENGINE OIL									
y. <input type="checkbox"/> OTHER (Specify)						e. TRANSMISSION OIL							
3. INITIAL AND PRINCIPAL LOCATION OF FIRE (Enter 1 to indicate initial location, 2 to indicate principal location)						f. ELECTRICAL INSULATION							
				D	S	g. ACOUSTICAL MATERIALS							
01. ENGINE SECTION						h. METAL (Specify)							
02. TRANSMISSION SECTION						i. EXPLOSIVES							
03. COCKPIT						j. UPHOLSTERY MATERIALS							
04. TAIL ASSEMBLY						k. CARGO							
05. PASSENGER SECTION						m. EXTERNAL MATERIAL (Specify)							
06. OXYGEN SYSTEM						y. OTHER (Specify)							
07. BAGGAGE COMPARTMENT						z. UNDETERMINED <input type="checkbox"/>							
08. EXTERNAL STORES						6. FIRE EXTINGUISHING SYSTEM				GND	b. AIRCRAFT		
09. FLARE POD						(1) NO EFFECT WHEN DISCHARGED				a.	INST.	PORT	
10. ROCKET POD						(2) ACTIVATED, BUT DID NOT DISCHARGE							
11. AMMUNITION STORES						(3) REDUCED FIRE							
12. AVIONIC SECTION						(4) EXTINGUISHED FIRE							
13. APU						(5) NOT ACTIVATED AND NOT NEAR FIRE							
14. WHEEL WELL						(6) NOT ACTIVATED, BUT NEAR FIRE							
15. WHEEL BRAKE						(7) NOT INSTALLED							
16. TAILPIPE						7. FIRE/SMOKE DETECTION SYSTEM				YES	NO	UN- DETA	
17. INSTRUMENT PANEL						a. SYSTEM INSTALLED				1	2	9	
18. BATTERY COMPARTMENT						b. WARNING SYSTEM OPERATED PROPERLY							
19. JUNCTION BOX						c. SENSORS WITHIN RANGE OF							
20. HEATER COMPARTMENT						8. EFFECT OF EMER SHUTOFF PROCEDURE (Enter D, S, or Unk)				ENG	FUEL	ELEC	
21. FUEL CELL						a. EXTINGUISHED FLAME							
22. WING						b. REDUCED FIRE							
23. GUN TURRET						c. NO EFFECTS							
24. TAIL BOOM						d. NOT ACCOMPLISHED							
25. CARGO SECTION						e. USED FAULTY PROCEDURE							
26. TIRES						9. GENERAL DATA							
98. OTHER (Specify)						a. EST OF AIRCRAFT FIRE DAMAGE (Excl of impact damage)							
99. UNDETERMINED <input type="checkbox"/>						(1) <input type="checkbox"/> 0-25% (2) <input type="checkbox"/> 26-50% (3) <input type="checkbox"/> 51-75% (4) <input type="checkbox"/> 76-100%							
4. IGNITION SOURCE				D	S	b. FIRE DIMENSION: TO CLEAR FIRE, AIRCRAFT OCCUPANTS HAD TO MOVE (Feet):							
a. EXHAUST FLAMES						c. TOXICITY: WAS THERE EVIDENCE OF TOXIC PRODUCTS.				<input type="checkbox"/> 1 YES <input type="checkbox"/> 0 NO (If yes, name, co, etc.):			
b. SPARKS, FRICTION, e.g., SKIDDING						d. DISTANCE TO NEAREST AVAIL MIL FIRE FIGHTING EQUIPMENT (1) AIRMILES (NM): (2) ROAD MILES (SM):							
c. ELECTRICAL SPARKS						e. IS AIRCRAFT EQUIPPED WITH CRASH RESISTANT <input type="checkbox"/> 1 YES							
d. HOT SURFACES, e.g., EXHAUST DUCTS						(1) FUEL CELLS <input type="checkbox"/> 1 YES <input type="checkbox"/> 0 NO (2) FUEL LINES <input type="checkbox"/> 0 NO							
e. AIRCRAFT SUBSYSTEM						10. REMARKS (Use separate sheet of paper)							
f. AIRCRAFT OCCUPANT, e.g., LIGHTED CIGAR						11. CASE NUMBER				12. OTHER AIRCRAFT SERIAL NUMBER			
g. EXTERNAL OF AIRCRAFT, e.g., GRASS FIRE						a. DATE (YYMMDD)		b. TIME		c. AIRCRAFT SERIAL NO.		USASC USE ONLY	
h. CARGO												DELETE 1.	
i. EXPLOSIVES												ADD 2.	
												CHANGE 3.	

**TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT
INDEX A**

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

**REQUIREMENT CONTROL SYMBOL
CSGPA - 1551**

1. MISSION, TYPE, DESIGN AND SERIES	2. CASE NUMBER
-------------------------------------	----------------

3. TAB	INFORMATION	ENCL	NOT APPLIC.	SEE RE- MARKS
1	COPY OF ORDERS APPOINTING INVESTIGATING BOARD			
2	WEATHER REPORTS			
3	CERTIFICATE OF DAMAGE/ECOD			
4	DIAGRAMS AND/OR PHOTOGRAPHS			
5	COPY OF EQUIPMT IMPROVEMENT REPT (DA Form 2407) QUALITY DEFICIENCY REPT (SF 368)			
6	SPECIAL TECHNICAL REPORTS AND LABORATORY ANALYSIS			
7	WEIGHT AND BALANCE (DD Form 365F)			
8	COPY OF DIRECTIVES, REGULATIONS, ETC.			
9	AUTOPSY REPORT (DD Form 1322)			
10	FLIGHT PLAN			
11	COPY OF ARMY AVIATORS FLIGHT RECORD (DA Form 2408-12)			
12	COPY OF AIRCRAFT INSPECTION AND MAINTENANCE RECORD (DA Form 2408-13)			
13	COPY OF UNCORRECTED FAULT RECORD (DA Form 2408-14)			
14	COPY OF EQUIP MODIFICATION RECORD (DA Form 2408-5)			
15	OTHER (Specify)			
16	OTHER (Specify)			
17	OTHER (Specify)			
18	OTHER (Specify)			

4. REMARKS

**TECHNICAL REPORT OF U. S. ARMY AIRCRAFT ACCIDENT
INDEX B**

For use of this form, see AR 385-40 and DA Pamphlet 385-95; the proponent agency is DCSPER.

REQUIREMENT CONTROL SYMBOL
CSGPA - 1551

1. MISSION, TYPE, DESIGN AND SERIES		2. CASE NUMBER			
3.	TITLE	DA FORM NUMBER	ENCL	NOT APPL	SEE RE-MARKS
a.	STATEMENT OF REVIEWING OFFICIALS	2397-R			
b.	SUMMARY OF MISHAP	2397-1-R			
c.	FINDINGS AND RECOMMENDATIONS	2397-2-R			
d.	NARRATIVE OF MISHAP	2397-3-R			
e.	WITNESS STATEMENTS	2397-4-R			
f.	WRECKAGE DISTRIBUTION DATA	2397-5-R			
g.	IN-FLIGHT OR TERRAIN IMPACT AND CRASH DAMAGE DATA	2397-6-R			
h.	MAINTENANCE AND MATERIEL DATA	2397-7-R			
i.	PERSONAL DATA	2397-8-R			
j.	INJURY/OCCUPATIONAL ILLNESS DATA	2397-9-R			
k.	PERSONAL PROTECTION/ESCAPE/SURVIVAL/RESCUE DATA	2397-10-R			
l.	WEATHER	2397-11-R			
m.	FIRE DATA	2397-12-R			

4. REMARKS

5. BOARD MEMBERS					
a. PRESIDENT <i>(Name and Signature)</i>	SSN	GRADE	BR	RATING	ADDRESS AND TEL NO.
b. RECORDER <i>(Name and Signature)</i>	SSN	GRADE	BR	RATING	ADDRESS AND TEL NO.
c. FLIGHT SURGEON <i>(Name and Signature)</i>	SSN	GRADE	BR	RATING	ADDRESS AND TEL NO.
d. INSTRUCTOR PILOT <i>(Name and Signature)</i>	SSN	GRADE	BR	RATING	ADDRESS AND TEL NO.
e. MAINT OFFICER <i>(Name and Signature)</i>	SSN	GRADE	BR	RATING	ADDRESS AND TEL NO.
f. OTHER <i>(Name and Signature)</i>	SSN	GRADE	BR	RATING	ADDRESS AND TEL NO.

U.S. ARMY CODING WORDS/PHRASES WITH POTENTIAL HUMAN FACTORS IMPLICATIONS
FROM USER'S GUIDE

Type Events (98 categories)

Precautionary Landing
Forced Landing
Aborted Takeoff
Human Factor Event
Mid-Air Collision
Hard Landing
Wheels Up Landing
Undershoot
Overshoot/Overrun
Spin/Stall
Engine Overtorque
Whiteout/Dustout
Fuel Starvation

Summary of Causes, Inadequacies and Recommendation (14)

Inadequate Planning
Improper Attention
Failed to Recognize
Misjudged Clearance/Speed/Weight/Size/Distance
Misinterpreted
Failed to Anticipate
Improper Decision
Inadequate Improvising/Problem Solving
Failed to Follow Procedures
Failed to Comply with General Rules/Principles
Improper Simple Physical Action
Improper Complex Physical Action
Inadequate Communication

Environmental Condition (14)

Illumination
Precipitation
Contaminants
Noise
Temperature/Humidity
Wind Turbulence
Vibration
Acceleration/Deceleration
Radiation
Work Surface/Space
Air Pressure
Electricity
Animals
Insufficient Info RPTD to Identify

System Inadequacy (19)

Inadequate School Training
Inadequate Unit Training
Inadequate Experience
Inadequate Composure
Inadequate Attention
Overconfidence
Inadequate Motivation/Mood
Fatigue
Effects of Alcohol, Drugs, or Illness
Habit Interference
Environmental Conditions
Equipment/Material Improperly Designed/Not Provided
Improper Use of Tool, Equipment, or Material
Inadequate Written Procedures for Operation (Normal Cond)
Inadequate Written Procedures for Operation (Abnormal Cond)
Inadequate Supervision/Coordination

Role of Individual in Cause of Event

Committed Error That Caused or Contributed

Definitely
None
Suspected
Unknown

Disease/Defects

Overweight
Presbyopia
Myopia
Hyperphoria/Esophoria
Defective Visual Acuity
Other Visual Defects
Hearing Loss
Diabetes
Peptic Ulcer or History of
Gastro Intestinal Disorder
Hypertension
History of Loss of Consciousness Explained
History of Loss of Consciousness Unexplained
Malignancy
Psychophysiological Reaction
Renal Disease/Disorder
Cardio Vascular Disease
Neurological
Muscle/Skeletal
Other Defects

APPENDIX L

List of Human Error Codes and Strong Human Error
Connections Codes Used in a Recent Boeing Study L-1

BOEING

DIRECT HUMAN ERROR CODES

Misoriented Landing
Crew/Personnel Fatigue
Illusory Cues
Vertigo/Spatial Disorientation
Personnel Distraction
GPWS Deactivated After Warning
GPWS Warning Not Heeded
Failure To See And Avoid
Verbal Communications Breakdown
Improper Use Of Flight Controls
Crew Disoriented
System Mismanagement
Crew ((Cockpit) Factor
Procedures Not Followed
Navigation Error
Cockpit Crew Incapacitation
Cockpit Crew Illness

STRONG HUMAN ERROR CONNECTIONS

Stall Warning
Inadvertent Landing Gear Retraction
Excessive Touchdown Speed Landing
Excessive Descent Rate In Landing
Loss of Control In Flight
Loss Of Control, Engine Out Training
Controlled Flight Into Terrain

Takeoff Or Landing Without Clearance

Loading Error

Landed At Wrong Airport

Takeoff On Wrong Runway

AIRPLANE AND OPERATIONAL FACTORS

Examples -

Flight Controls

Flight Management System (FMS)

Takeoff Abort

Radio Communications

Several hundred
available, can be
combined with
direct Human Error
Codes to net a
worthwhile list
of events

APPENDIX M

Samples of Computer Generated IATA Incident Reports M-1

IATA SAFETY INFORMATION EXCHANGE FOR USE BY AIRCRAFT OPERATORS ONLY

INFORMATION CONTAINED IN THIS BULLETIN COULD BE INCOMPLETE
ANY DIRECT ACTION BASED SOLELY ON THIS COULD BE DANGEROUS.

Time: //// UTC DD/MM/YY: 20/07/87
Aircraft/Engine: DC10 / CF6-6D

Route From-to: YYZ-ORD
Altitude: ///////////////
Phase of flight: DESCENT

Position: Met : FCST 40SCT 5H 22x1220 OCC -XZFH

Narrative:-

The DC10 was dispatched with no alternate and 45 minutes of hold fuel. Flight was in a 33 minute EFC hold at PMM and informed by dispatch to expect another 10 minute delay at KUBBS. After :30 at PMM flight continued V84, PAPI, CGT. After passing CGT the flight was given two delaying vectors because of a single runway operation at O hare due to a severe weather advisory (#408S). The Captain elected to divert to CMH. The crew did not request nor did Dispatch give the flight the CMH WX or NOTAMS which showed the long runway closed. The Captain declared an emergency and landed on runway 10L (6000 ft.) at CMH with between 5.8 and 6.1 of fuel remaining.

Action Taken:-

(1) Recommend Dispatch: (A) Contact the pilot by phone for questionable WX situations (B) React quicker in deteriorating WX situations (C) Provide required information to the Captain during diversions (2) Evaluate the need to establish domestic emergency fuel standards.

* Additional information:

IATA SAFETY INFORMATION EXCHANGE FOR USE BY AIRCRAFT OPERATORS ONLY

INFORMATION CONTAINED IN THIS BULLETIN COULD BE INCOMPLETE
ANY DIRECT ACTION BASED SOLELY ON THIS COULD BE DANGEROUS.

Time: //// UTC DD/MM/YY: 14/03/87
Aircraft/Engine: B747 / JT9D-3A

Route From-to: NRT-SFO
Altitude: ///////////////
Phase of flight: CRUISE

Position: AFTER LEVEL OFF
Met :

Narrative:-

During preflight, fuel fumes were reported in the lower aft galley by the Second Officer. Maintenance found fuel leaking from the APU drain mast and deferred the APU as INOP. After level off, the fumes began again and several flight attendants reported feeling ill. Second Officer investigated and reported that the problem was minor and confined to the lower deck. Flight continued to destination. Maintenance found a failed APU fuel pump drive seal causing a severe fuel leak which exceeded the drainage capability of the drain system and pressurized the APU fuel line shroud causing the shroud seal failure and fuel to enter the floor cavity.

Action Taken:-

(1) Communication to maintenance personnel. (2) Revision of maintenance manual procedure to include check of fuel shroud and to specify standard cleaning procedure following fuel contamination. (3) Service Bulletin to separate the APU fuel drain and the shroud systems.

* Additional information:

APPENDIX N

Sample ICAO Aircraft Accident Report, from ICAO ADREP Manual	N-1
Partial List of Descriptive Factors and Modifiers used in ICAO Accident/Incident Database taken from ICAO ADREP Manual	N-18
Partial List of Explanatory Factors and Modifiers with Human Factor Information, taken from ICAO ADREP Manual .	N-24
Copies of Event Worksheet, taken from ICAO ADREP Manual . .	N-28

ACCIDENT/INCIDENT DATA REPORT

COMPILING INSTRUCTIONS

General The ADREP Manual contains all the information needed to complete this form. The report will be submitted in one of the working languages of ICAO. All codes shall be entered in capitals as should the plain language entries. It is highly desirable that all entries be typewritten. All entries are to be completed. If no other instruction is given, there may be only one entry for each identifier.

When the word "code" is found under an entry, the compiler is requested to refer to the appropriate appendix of the ADREP Manual to find the code to be entered. The plain text for the code is also then to be entered in the space provided.

Entry of figures and letters

For 0 (Zero) enter thus: 0	For Å enter thus: Aa
For 1 (One) enter thus: 1	For Ä enter thus: AE
For 7 (Seven) enter thus: 7	For Ö or Ø enter thus: OE
	For Ü enter thus: UE

For identifiers marked with ● special coding instructions are listed in Chapter 3 of the manual.

00 — OCCURRENCE IDENTIFICATION

FILING INFORMATION

State Reporting 0001 ●	G E R M A N Y Code Plain text
State File number 0002	EXAMPLE

OCCURRENCE CLASSIFICATION

0003	A(<input checked="" type="checkbox"/>) Accident	I() Incident
------	---	------------------

WHERE

State/area of occurrence 0004 ●	G E R M A N Y Code Plain text
Location 0005	N() Near B I R E M E N Local spelling using Roman letters
Latitude 0006	53 Deg 02 Min N(<input checked="" type="checkbox"/>) North. S() South
Longitude 0007	008 Deg 47 Min E(<input checked="" type="checkbox"/>) East. W() West

WHEN

Date of occurrence 0008	8 7 2 9 Year Month Day
Local time of occurrence 0009 (24 h clock)	14 10 Hour Min

Form D
(Rev 9/87)

00 — OCCURRENCE IDENTIFICATION — Continued

AIRCRAFT

Manufacturer 0010 ●	316	DORNIER
Model 0011 ●	07	228
Registration 0012	DI-SAMPLE	
State of registry 0013 ●	G.E.R.F.	GERMANY, FEDERAL REPUBLIC OF
Operator's name 0014 ●		O. P. RATOR

01 — HISTORY OF FLIGHT

AIRLINE OPERATION (AIR TRANSPORT OPERATIONS)

Type of Operation 0101	1() Passenger 4() Ferry/Positioning Z() Unknown	2() Cargo 5() Training/Check	3() Passenger, Cargo Y() Other
0102	S() Scheduled	N() Non-scheduled	Z() Unknown
0103	D() Domestic	I() International	Z() Unknown

GENERAL AVIATION

Type of Operation 0104 ●	Instructional		
	10() Dual 1Y() Other	11() Solo 12() Unknown	12(<input checked="" type="checkbox"/>) Check
	Non-commercial		
	20() Pleasure 23() Aerial work 2Z() Unknown	21() Business 24() Off-shore operation	22() Government/State 2Y() Other
	Commercial		
	30() Aerial application (Crop control) 33() Aerial advertising 36() Logging 3Z() Unknown	31() Fire control 34() Construction/Sling load 37() Off-shore operation	32() Aerial observation 35() Aerial ambulance 3Y() Other
	Miscellaneous		
	40() Test/Experimental 43() Search and Rescue 4Y() Other	41() Illegal (smuggling, etc.) 44() Airshow/Race 4Z() Unknown	42() Ferry 45() Demonstration
Type of Operator 0105	1() Flying Club/School 4() Private owner Z() Unknown	2(<input checked="" type="checkbox"/>) Corporate/Executive 5() Sales/Rental/Service	3() Gov Agency Y() Other

01 — HISTORY OF FLIGHT — Continued

ITINERARY

Last Departure point 0106	_____	Name in local spelling using Roman letters or s(<input checked="" type="checkbox"/>) if same as 0005
Planned Destination 0107	_____	Name in local spelling using Roman letters or s(<input checked="" type="checkbox"/>) if same as 0005
Duration of flight (time airborne) 0108 ●	00 00 00	hours min or Y() If accident occurred on ground

ATC INFORMATION

Type of Flight Plan filed 0109	1() IFR 4() None	2(<input checked="" type="checkbox"/>) VFR Y() Other	3() Special VFR Z() Unknown
Type of Clearance (at time of first event) 0110	1() IFR 4(<input checked="" type="checkbox"/>) Take-off 7() En-route/Airways clearance	2() Special IFR 5() Landing Y() Other	3() Special VFR 6() Approach Z() Unknown
Controlling Agency (at time of first event) 0111	1(<input checked="" type="checkbox"/>) ATC (Positive control) 4() None	2() Flight service station (advisory) Y() Other	3() Operator Z() Unknown

AIRCRAFT SPEED AND ALTITUDE

Aircraft speed (at first event) 0112	<u>140</u> or N() not applicable	Z() Unknown
measured in:	K() km/h M() Mach number	N(<input checked="" type="checkbox"/>) kt
Speed entered is: 0113	1(<input checked="" type="checkbox"/>) Indicated airspeed	G() Ground speed N() Not applicable
Aircraft altitude (at first event) 0114	<u>02000</u> or N() not applicable	Z() Unknown
measured in:	F(<input checked="" type="checkbox"/>) Feet A() AGL	M() Metres M() MSL

FOR FORCED/PRECAUTIONARY LANDING ENTER:

Type of forced/Precautionary landing 0115	F(<input checked="" type="checkbox"/>) Forced landing	P() Precautionary landing	S() Simulated forced landing
Location of forced/Precautionary landing 0116	A(<input checked="" type="checkbox"/>) On land/On aerodrome	L() On land/Off aerodrome	W() On water

01 — HISTORY OF FLIGHT — Continued

FOR APPROACH/LANDING OCCURRENCES ENTER:

Visual approach 0117		
1(<input checked="" type="checkbox"/>) Visual, straight in	2() Traffic pattern	3() Not applicable
4() Visual from IFR approach	Y() Other	Z() Unknown
Instrument approach 0118		
1(<input checked="" type="checkbox"/>) Not applicable	2() ADF/NDB	3() VOR, TVOR
4() VOR/DME	5() TACAN	6() VORTAC
7() RNAV	8() ILS — Complete	9() ILS — Localizer
A() ILS — Backcourse	9() MLS	0() Precision Radar (PAR)
Y() Other	Z() Unknown	
Instrument landing procedure 0119		
1() Straight in	2() Circling	3() Side-step
Precision approach category 0120		
1() CAT I	2() CAT II	3() CAT III
4() CAT III A	5() CAT III B	6() CAT III C
Z() Unknown		
Automatic landing 0121		
Y() Yes	N(<input checked="" type="checkbox"/>) No	

02 — INJURIES TO PERSONS

Injury index (Highest degree of injury sustained)					
0201 ●	F() Fatal	S() Serious	M(<input checked="" type="checkbox"/>) Minor	N() None	Z() Unknown

NUMBER OF PERSONS INVOLVED

	Fatal	Serious	Minor	None	Unknown
0202 Pilot	0	0	1	0	0
0203 Co-pilot	0	0	0	1	0
0204 Other Flight crew	0	0	0	0	0
0205 Cabin Crew	0	0	0	0	0
0206 Passengers	0	0	0	0	0
0207 On ground	0	0	0	0	0

03/04 — DAMAGE

0301 Damage to aircraft				
0() Destroyed	S(<input checked="" type="checkbox"/>) Substantial	M() Minor	N() None	Z() Unknown

0401 Other damage (Third party damage)	
Y(<input checked="" type="checkbox"/>) Yes	N() No

05 — PERSONNEL INFORMATION

Person handling controls (at time of first event)

0501

1() Pilot-in-command	2() Co-pilot	3(<input checked="" type="checkbox"/>) Student pilot
4() Both pilots	5() No one	6() No pilot
Y() Other	Z() Unknown	

PILOT-IN-COMMAND

Age 0502	<u>29</u> Years	Z() Unknown	
Sex 0503	F() Female	M(<input checked="" type="checkbox"/>) Male	
Licence type — Aeroplane 0504	1() Private pilot 4() Airline transport pilot Y() Other	2(<input checked="" type="checkbox"/>) Commercial pilot 5() Student pilot Z() Unknown	3() Senior commercial pilot 6() None
Licence type — Helicopter 0505	1() Private pilot 4() Airline transport pilot Y() Other	2() Commercial pilot 5() Student pilot Z() Unknown	3() Senior commercial pilot 6(<input checked="" type="checkbox"/>) None
Licence/Medical validity 0506	1(<input checked="" type="checkbox"/>) Valid — no medical waivers Z() Unknown	2() Valid — with medical waivers	3() Not valid
Licence class/Type ratings 0507	1(<input checked="" type="checkbox"/>) Held required rating Z() Unknown	2() Did not hold required rating	3() Rating not required
Instrument rating 0508	Y(<input checked="" type="checkbox"/>) Yes	N() No	Z() Unknown
Instructor rating 0509	Y(<input checked="" type="checkbox"/>) Yes	N() No	Z() Unknown
Flying experience	Last 24 hours	Last 90 days	Total
This type 0510	<u>00</u> hours	<u>010</u> hours	<u>01037</u> hours
All types 0513	<u>00</u> hours	<u>029</u> hours	<u>04122</u> hours
Duty time last 24 hours 0516	<u>00</u> hours		
Rest period before duty 0517	<u>09</u> hours		

05 — PERSONNEL INFORMATION — Continued

OTHER FLIGHT CREW MEMBER

Indicate to which crew member the following information pertains			
0518 ●	1() Co-pilot	2(<input checked="" type="checkbox"/>) Dual student	3() Flight engineer
Age 0519	<u>21</u> Years	2() Unknown	
Sex 0520	F(<input checked="" type="checkbox"/>) Female	M() Male	
Licence type — Aeroplane			
0521	1(<input checked="" type="checkbox"/>) Private pilot	2() Commercial pilot	3() Senior commercial pilot
	4() Airline transport pilot	5() Student pilot	6() None
	7() Other	8() Unknown	
Licence type — Helicopter			
0522	1() Private pilot	2() Commercial pilot	3() Senior commercial pilot
	4() Airline transport pilot	5() Student pilot	6(<input checked="" type="checkbox"/>) None
	7() Other	8() Unknown	
Licence/Medical validity			
0523	1(<input checked="" type="checkbox"/>) Valid — no medical waivers	2() Valid — with medical waivers	3() Not Valid
	4() Unknown		
Licence class/Type ratings			
0524	1(<input checked="" type="checkbox"/>) Held required rating	2() Did not hold required rating	3() Rating not required
	4() Unknown		
Instrument rating			
0525	Y() Yes	N(<input checked="" type="checkbox"/>) No	Z() Unknown
Instructor rating			
0525	Y() Yes	N(<input checked="" type="checkbox"/>) No	Z() Unknown
Flying experience			
	Last 24 hours	Last 90 days	Total
This type	<u>01</u> hours 0527	<u>029</u> hours 0528	<u>00601</u> hours 0529
All types	<u>01</u> hours 0530	<u>062</u> hours 0531	<u>01302</u> hours 0532
Duty time last 24 hours			
0533	<u>00</u> hours		
Rest period before duty			
0534	<u>12</u> hours		

05 — PERSONNEL INFORMATION — Continued

OTHER PERSONNEL

Person involved 0535		
1() Other flight crew member	2() Cabin crew member	3() Flight dispatcher/Operations officer
4() Flight service operator	5() Air traffic controller	6(<input checked="" type="checkbox"/>) Maintenance personnel
7() MET personnel	Y() Other	
Age 0536	Z(<input checked="" type="checkbox"/>) Unknown	
_____ Years		
Sex 0537	F() Female	M(<input checked="" type="checkbox"/>) Male
Licence validity 0538		
1(<input checked="" type="checkbox"/>) Valid	2() Not valid	3() Not applicable/Not required
Z() Unknown		
Ratings 0539		
1() Held required ratings	2() Did not hold required ratings	3() Not applicable/Rating not required
Z(<input checked="" type="checkbox"/>) Unknown		
Experience in position 0540	<u>06</u> Years	<u>00</u> Months

06 — AIRCRAFT

GENERAL INFORMATION

Aircraft — Year of manufacture 0601	<u>86</u>
Aircraft — Serial number 0602	<u>1 2 3 4 5 6 7 8 9</u>
Aircraft — Total time 0603	<u>000800</u> hours

DOCUMENTATION

Certificate of Airworthiness 0604		
1(<input checked="" type="checkbox"/>) Valid	2() Invalid	Y() Other
Z() Unknown		
Maintenance Documents 0605		
1(<input checked="" type="checkbox"/>) Current	2() Not current	Y() Other
Z() Unknown		

06 — AIRCRAFT — Continued

DESCRIPTION

Type of Aircraft		
0606	1(<input checked="" type="checkbox"/>) Fixed wing	2() Helicopter
	4() Dirigible	5() Gyroplane
	7() Other	6() Micro-light
		Z() Unknown
Type of Power		
0607	1() Reciprocating	2(<input checked="" type="checkbox"/>) Turboprop
	4() Turbojet	5() Turbofan
	7() Other	6() None
		Z() Unknown
Type of Landing Gear		
0608	1() Hull/Float equipped	2() Tailwheel
	4() Ski	5() Tricycle type fixed
	7() Skid	6(<input checked="" type="checkbox"/>) Tricycle type retractable
		Z() Unknown
Aircraft approved for operation in known icing conditions		
0609	1() No	2() Yes — Light
	4() Yes — Severe	3(<input checked="" type="checkbox"/>) Yes — Moderate
Aircraft approved for precision approaches		
0610	1() Yes	2() No
		Z(<input checked="" type="checkbox"/>) Unknown
if yes: approved for		
0611	1() CAT I	2() CAT II
	4() CAT IIIA	5() CAT IIIB
		3() CAT III
		6() CAT IIIC

FOR ENGINE FAILURES ENTER:

Engine Manufacturer	
0612	119 GARRET
Code	Plain text
Engine Model	
0613	4 TPE331-5-252D
Code	Plain text
Failed Engine TSO (of the first engine that failed)	
0614	4442 hours

06 — AIRCRAFT — Continued

FOR PART/COMPONENT FAILURES/MALFUNCTIONS ENTER:

Part 1	
Name 0615	FUEL PUMP
Part number 0616	D228-731A-01-472A2B4
Part 2	
Name 0617	
Part number 0618	
Part 3	
Name 0619	
Part number 0620	
Part 4	
Name 0621	
Part number 0622	

07 — METEOROLOGICAL INFORMATION

BRIEFING AND FORECAST

Weather briefing obtained		
0701	1(<input checked="" type="checkbox"/>) Pre-flight	2() In-flight
	4() None	3() Pre- and in-flight
		Z() Unknown
Weather Forecast		
0702	1(<input checked="" type="checkbox"/>) Substantially correct	2() Weather considerably better
	Z() Unknown	3() Weather considerably worse
Pilot advised of significant weather		
0703	1() Yes	2() No
	Z() Unknown	3(<input checked="" type="checkbox"/>) Not applicable

GENERAL

Phase of flight to which the following meteorological information pertains		
0704	1() Take-off/Climb	2() En-route
	4() Taxi/ Standing	3(<input checked="" type="checkbox"/>) Approach/Landing
General weather		
0705	1(<input checked="" type="checkbox"/>) Visual meteorological conditions	2() Instrument meteorological conditions
		Z() Unknown
Light conditions		
0706	1() Dawn	2(<input checked="" type="checkbox"/>) Daylight
	4() Night — moonlight	3() Dusk/twilight
		Z() Unknown

07 — METEOROLOGICAL INFORMATION — Continued

WIND

Wind speed
0707 m/s or kt or L() Light and variable or C() Calm

Wind gusting
0708 1() Yes 2() No 3() Unknown

Maximum wind gust
0709 m/s or kt

Wind speed measured at
0710 1() Surface 2() Altitude

VISIBILITY

Runway visual range
0711 metres or U() Unlimited

Visibility
0712 or U() Unrestricted 3() Unknown
measured in: M() Metres N() Nautical miles

Visibility restrictions (select as many as required):
0713
1() None 2() Fog/Mist 3() Haze
4() Light conditions 5() Smoke 6() Cloud
7() Dust 8() Ice fog 9() Other
Z() Unknown

CLOUDS

Sky condition
0714 1() Clear (no cloud) 2() Scattered (1/8 to 4/8) 3() Broken (5/8 to 7/8)
4() Overcast 5() Sky obscured 6() Unknown

Height of cloud base (ceiling) above ground level
0715 measured in: F() Feet M() Metres

PRECIPITATION/OTHER WEATHER PHENOMENA

Type (select as many as required):
0716
1() Rain 2() Hail 3() Snow
4() Ice pellets 5() Freezing drizzle/Rain 6() Rain and snow
7() Drizzle 8() Rain shower 9() Snow shower
A() Tornado or waterspout B() Squall C() Thunderstorm
D() Dust/Sandstorm Y() Other Z() Unknown

Intensity of precipitation
0717
1() None 2() Light 3() Moderate
4() Heavy 3() Unknown

TEMPERATURE

0718 = °C

07 — METEOROLOGICAL INFORMATION — Continued

ICING

Icing intensity		
0719	1(<input checked="" type="checkbox"/>) None	2() Light
	4() Severe	3() Moderate
		Z() Unknown

TURBULENCE

Type		
0720	1(<input checked="" type="checkbox"/>) None	2() In clear air
		3() In cloud
Intensity		
0721	1() None	2() Light
	4() Severe	3() Moderate
		Z() Unknown

FOR TAKE-OFF AND LANDING OCCURRENCES ENTER:

Wind direction relative to aircraft track		
0722	1() Head wind	2() Tail wind
	4() Quartering headwind	3() Crosswind
		Z(<input checked="" type="checkbox"/>) Unknown
Crosswind component		
0723		
	measured in: X() km/h	M() m/s N() kt
Windshear/Micro burst		
0724	1(<input checked="" type="checkbox"/>) None	2() Light
	4() Strong	3() Moderate
		Z() Unknown
		5() Severe

08 — AIDS TO NAVIGATION

If no en-route or landing aids are relevant to the occurrence, proceed to Section 09.

EN-ROUTE AIDS

En-Route aids used in the relevant flight phases (select as many as required):		
0801	1() VOR/TVOR	2() DME
	4() Primary RADAR	5() Secondary RADAR
	7() Loran	8() Satellite Nav.
	X() VORTAC	9() TACAN
		Z() Unknown
		3() NDB
		6() Omega
		Y() Other

Note.— Since the information requested on page 12 of the report form is not applicable to the occurrence used for this example, this page has not been reproduced.

10 — AERODROME INFORMATION

If the occurrence did not happen on an aerodrome, nor during take-off and landing, proceed to Section 11.

GENERAL

Name of the Aerodrome 1001	BREMEN		
	Enter direct using local spelling in Roman letters		
Location Indicator (See instrument approach or other chart) 1002 ●	EDDW or Y() Does not have a location indicator Z() Unknown		
Type of Aerodrome 1003	1(<input checked="" type="checkbox"/>) Land 2() Water 3() Heliport 4() Prepared landing area Y() Other Z() Unknown		
Elevation of Aerodrome/Landing area above MSL 1004	000.3 measured in: M(<input checked="" type="checkbox"/>) Metres F() Feet		

FOR OCCURRENCES ON OR NEAR RUNWAYS ENTER:

RUNWAY USED

Identifier 1005 ●	Available length 1006 ●	Available width 1007
27	1909 metres	45 metres
Length of overrun 1008		
66 metres		
Slope 1009 ●		
1() Up 2() Down 3(<input checked="" type="checkbox"/>) Level 4() Up-down 5() Down-up Z() Unknown		

RUNWAY SURFACE

Type 1010	1(<input checked="" type="checkbox"/>) Prepared 2() Unprepared		
Surface type 1011	1(<input checked="" type="checkbox"/>) Cement/Concrete 2() Asphalt 3() Gravel, Dirt 4() Grass 5() Ice 6() Snow Y() Other Z() Unknown		
Runway surface treatment 1012	1() Partially grooved 2() Fully grooved Y() Other Z(<input checked="" type="checkbox"/>) Unknown		
Runway braking action 1013	1(<input checked="" type="checkbox"/>) Good 2() Medium 3() Poor 4() Nil Z() Unknown		
Braking action determined by 1014	1() Measurement 2(<input checked="" type="checkbox"/>) Estimate (includes pilot report) 3() Not determined Z() Unknown		

10 — AERODROME INFORMATION — Continued

AERODROME LIGHTING

1015 Runway edge, threshold and end lights	1(<input checked="" type="checkbox"/>) Operating	2(<input type="checkbox"/>) Not operating	3(<input type="checkbox"/>) Not available
1016 Runway centre-line lights	1(<input type="checkbox"/>) Operating	2(<input type="checkbox"/>) Not operating	3(<input type="checkbox"/>) Not available
1017 Runway touchdown zone lights	1(<input type="checkbox"/>) Operating	2(<input type="checkbox"/>) Not operating	3(<input type="checkbox"/>) Not available
1018 Taxiway edge lights	1(<input type="checkbox"/>) Operating	2(<input type="checkbox"/>) Not operating	3(<input type="checkbox"/>) Not available
1019 Taxiway centre-line lights	1(<input type="checkbox"/>) Operating	2(<input type="checkbox"/>) Not operating	3(<input type="checkbox"/>) Not available
1020 Taxiway hold. pos. lights	1(<input type="checkbox"/>) Operating	2(<input type="checkbox"/>) Not operating	3(<input type="checkbox"/>) Not available
1021 Stooday lighting	1(<input type="checkbox"/>) Operating	2(<input type="checkbox"/>) Not operating	3(<input type="checkbox"/>) Not available
1022 Stooday bars (lights)	1(<input type="checkbox"/>) Operating	2(<input type="checkbox"/>) Not operating	3(<input type="checkbox"/>) Not available

CATEGORY OF RUNWAY USED

1023	1(<input type="checkbox"/>) Non-instrument runway	2(<input type="checkbox"/>) Non precision approach runway
	3(<input checked="" type="checkbox"/>) Precision approach runway, Cat unknown	4(<input type="checkbox"/>) Precision approach runway, Category I
	5(<input type="checkbox"/>) Precision approach runway, Category II	6(<input type="checkbox"/>) Precision approach runway, Category III A
	7(<input type="checkbox"/>) Precision approach runway, Category III B	8(<input type="checkbox"/>) Precision approach runway, Category III C
	9(<input type="checkbox"/>) Unknown	

FOR HELIPORTS/HELICOPTER LANDING AREAS ENTER:

Type of Heliport/Helipad			
1024	1(<input type="checkbox"/>) Surface heliport	2(<input type="checkbox"/>) Heliport on elevated building/Structure	3(<input type="checkbox"/>) Off-shore heliport
	4(<input type="checkbox"/>) Ship helipad	5(<input type="checkbox"/>) Unprepared landing site	6(<input type="checkbox"/>) Prepared landing area
	7(<input type="checkbox"/>) Other	8(<input type="checkbox"/>) Unknown	
Heliport surface type			
1025	1(<input type="checkbox"/>) Concrete/Asphalt/Steel	2(<input type="checkbox"/>) Steel mesh	3(<input type="checkbox"/>) Grass
	4(<input type="checkbox"/>) Ice	5(<input type="checkbox"/>) Snow	6(<input type="checkbox"/>) Water
	7(<input type="checkbox"/>) Other	8(<input type="checkbox"/>) Unknown	
Helicopter landing site configuration			
1026	1(<input type="checkbox"/>) Sloping	2(<input type="checkbox"/>) Pinnacle	3(<input type="checkbox"/>) Confined area

Note. — Since the information requested on pages 15 and 16 of the report form is not applicable to the occurrence used for this example, these pages have not been reproduced.

12 — WRECKAGE AND IMPACT INFORMATION

If the wreckage was not located proceed to Section 13.

Location of the wreckage 1201 1(<input checked="" type="checkbox"/>) On aerodrome/Airstrip 2() Off aerodrome, but within 10 km from the centre of the runway used 3() Off an aerodrome, beyond 10 km from the centre of the runway used	
If the wreckage was located beyond 10 km from the centre of the runway used, proceed to 1207.	
Mark the approximate position of the wreckage on the diagram 1202 ● Note: Diagram not to scale	
Co-ordinates of the point where the aircraft came to rest Distance from threshold 1203 ● <u>5560</u> metres	EXAMPLE
Bearing from threshold 1204 ● <u>318</u> degrees	

FOR OCCURRENCES WHERE THE AIRCRAFT LEFT THE RUNWAY ENTER:

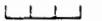
Aircraft left runway at 1205 1() Left side 2(<input checked="" type="checkbox"/>) Right side 3() End		
Distance from threshold to the point where the aircraft left the runway 1206 <u>540</u> metres		

Note. — Since the information requested on pages 18 to 22 of the report form is not applicable to the occurrence used for this example, these pages have not been reproduced.

17 — MIDAIR COLLISIONS/NEAR COLLISIONS — Continued

If the occurrence was a near collision enter closest distance between the aircraft involved

Horizontal distance
1714  metres or Z() Unknown

Vertical distance
1715  metres or Z() Unknown

Registration of the other aircraft
1716  or Z() Unknown

18 — SAFETY RECOMMENDATIONS

Related to personnel (select as many as required):
1801

1() None made	2(<input checked="" type="checkbox"/>) Compliance (with regulations/procedures, etc.)	3() Medical
4(<input checked="" type="checkbox"/>) Management	5(<input checked="" type="checkbox"/>) Procedures	6(<input checked="" type="checkbox"/>) Proficiency checking (Flight tests, etc.)
7() Study/Review	8(<input checked="" type="checkbox"/>) Training	Y() Other

Related to aircraft/equipment (select as many as required):
1802

1() None made	2() Airworthiness directive	3() Inspection
4() Aircraft equipment	5() Ground equipment (starting units, etc.)	6(<input checked="" type="checkbox"/>) Maintenance
7() Modification of aircraft	8() Study/Review	Y() Other

Miscellaneous Recommendations (select as many as required):
1803

1() None made	2() Airport (facilities, services, etc.)	3() Air traffic services (including equipment)
4() Information (Dissemination, etc.)	5() Met services	6() Navigation/Landing aids
7() Search and rescue	8() Security	9() Study/Review
Y() Other		

NARRATIVE

This narrative shall not exceed 200 words. It should complement and, if necessary, amend the Preliminary Report Narrative, so that the two narratives together provide a complete and accurate description of the occurrence. Thus, information given in the Preliminary Report Narrative should only be repeated for reasons of amendment or clarity. Present the information in the following order:

1. Brief description of the occurrence including emergency circumstances and significant information;
2. Additional remarks, including precise information on items which have been coded "OTHER";
3. Safety recommendations and corrective action taken or under consideration.

Note.— Please print or type.

On climb out, the check pilot simulated an engine failure. Instead of only reducing power to idle, he shut down the left engine. The student decided to return to the airport. On final app, the right engine failed.

The cause of the engine failure was a fuel pump seizure. The pump had been overhauled by an unqualified mechanic. The repair shop had been using unskilled personnel in spite of directives from the Aviation Administration.

The left engine was not re-started because the student did not know the procedure. It had not been covered in ground training.

The check pilot did not verify, before the flight, if the student knew the proper procedure. During the attempted re-start, the crew was distracted and the airspeed was not monitored.

Note.— Page 38 of the report form contains additional space for the narrative and was not reproduced for this example.

— END —

Descriptive factors SUBJECTS

AIRCRAFT
Airframe
Flight control systems
Other systems
Miscellaneous
POWERPLANT
General
Structures
Miscellaneous
COMPONENTS UNIQUE TO HELICOPTERS
AIRCRAFT OPERATIONS
General
*Flight crew
AIRCRAFT SERVICING AND MAINTENANCE
AIR TRAFFIC CONTROL SERVICE
AERODROME/HELIPORT
Facilities
Operations
WEATHER
TERRAIN

CODE	TEXT
FLIGHT CREW	
8710 00	FLIGHT CREW PERCEPTION
8710 10	OTHER A/C
8710 15	OBJECT/OBSTACLE
8710 20	LOOK OUT
8710 25	JUDGEMENT — LANDING
8710 30	JUOGEMENT — DISTANCE
8710 31	JUDGEMENT — SEPARATION
8710 32	JUDGEMENT — HEIGHT
8710 33	JUDGEMENT — OBSTACLE CLEARANCE
8710 34	JUDGEMENT — OTHER
8710 35	VISUAL — ORAL WARNING
8710 40	NAVIGATION
8710 45	WIND COMPENSATION
8715 00	FLIGHT CREW DECISIONS
8715 10	FLIGHT INITIATED
8715 15	TAXI/PARKED
8715 20	TAKE-OFF
8715 35	FLIGHT CONTINUED
8715 50	APPROACH
8715 55	LANDING
8720 00	FLIGHT CREW PROCEDURES
8720 05	PRE-FLIGHT PLANNING/PREPARATION
8720 10	PRE-FLIGHT CHECK
8720 15	PROCEDURE — ENGINE START
8720 30	CREW CO-ORDINATION
8720 36	DECISION HEIGHT PROCEDURE
8720 37	WEATHER MINIMA
8720 38	PROCEDURE — EVACUATION
8720 39	PROCEDURE — ENGINE SHUTDOWN
8720 40	RELIGHT PROCEDURE
8720 41	SAFETY ALTITUDE
8720 55	FLIGHT SUPERVISION
8720 56	INSTRUCTIONS (NON ATC)
8720 60	ATC CLEARANCE/INSTRUCTIONS
8720 67	FREQUENCY SELECTION
8720 68	RADIOTELEPHONY PHRASEOLOGY
8720 69	POSITION REPORTING
8720 65	PROCEDURE — AIR TRAFFIC CONTROL
8720 70	PROCEDURE — NOISE ABATEMENT
8720 82	PROCEDURE — EMERGENCY
8720 84	PROCEDURE — STANDARD OPERATING
8720 85	VISUAL FLIGHT RULES
8720 87	INSTRUMENT FLIGHT RULES
8720 88	AIR-GROUND COMMUNICATION
8720 89	AIR-AIR COMMUNICATION

CODE	TEXT
8720 91	FUEL CONSUMPTION CALCULATIONS
8800 00	AIRCRAFT HANDLING — GENERAL
8805 00	OPERATION OF EQUIPMENT — GENERAL
8805 05	INSTRUMENTS
8805 10	ALTIMETER
8805 15	BRAKES
8805 20	CARBURETTOR HEAT
8805 25	POWER PLANT
8805 30	LANDING LIGHTS
8805 31	TAXI LIGHTS
8805 32	NAVIGATION LIGHTS
8805 33	STROBE LIGHTS
8805 35	LANDING GEAR
8805 40	FUEL SYSTEM
8805 41	FUEL DUMP SYSTEM
8805 43	FUEL SELECTOR
8805 45	FLAPS
8805 46	SPOILERS AND LIFT DUMP DEVICES
8805 50	FLIGHT CONTROLS
8805 51	TRIM
8805 52	GUST LOCKS
8805 55	MISCELLANEOUS EQUIPMENT
8805 56	AIR CONDITIONING SYSTEM
8805 57	AUTOFLIGHT SYSTEM
8805 58	COMMUNICATIONS
8805 59	ELECTRICAL SYSTEM
8805 60	EQUIPMENT FURNISHING
8805 61	FIRE PROTECTION SYSTEM
8805 62	HYDRAULIC POWER SYSTEM
8805 63	ICE PROTECTION SYSTEM
8805 64	LIGHTING SYSTEM
8805 65	NAVIGATION SYSTEM
8805 66	OXYGEN
8805 67	PNEUMATIC SYSTEM
8805 68	VACUUM SYSTEM
8805 69	APU
8805 70	DOOR SYSTEM
8805 71	WINDOWS
8805 73	LOAD JETTISON SYSTEM
8805 74	SEAT BELT SIGN
8805 75	NO SMOKING SIGN
8810 00	AIRCRAFT HANDLING
8810 10	DIRECTIONAL CONTROL
8810 15	LATERAL CONTROL
8810 20	LONGITUDINAL CONTROL

Descriptive factors SUBJECTS

CODE	TEXT
8810 40	AIRCRAFT LIMITATIONS
8810 81	TAXI TECHNIQUE
8810 75	T/O TECHNIQUE
8810 46	TRANSLATIONAL LIFT
8810 05	FLYING SPEED
8810 45	ROTOR RPM
8810 65	ROTATION
8810 75	LIFT-OFF
8810 26	ATTITUDE
8810 06	ALTITUDE
8810 25	AIRSPEED
8810 30	RATE OF CLIMB
8810 80	LEVEL-OFF
8810 35	RATE OF DESCENT
8810 36	GLIDE PATH
8810 60	ALIGNMENT WITH RUNWAY
8810 55	LANDING FLARE
8830 00	MISCELLANEOUS
8830 05	A/C PERFORMANCE
8830 15	A/C CONFIGURATION
8830 20	EQUIPMENT DEFICIENCIES
8830 30	GROUND RESONANCE
8830 40	VORTEX RING STATE (HELICOPTER)
9020 50	PASSENGER ACTION
AIRCRAFT SERVICING AND MAINTENANCE	
8900 00	AIRCRAFT LOADING — GENERAL
8905 00	WEIGHT/BALANCE
8905 05	MTOW
8905 10	MAXIMUM LANDING WEIGHT
8905 30	FUEL BALANCE
8905 35	LOADSHEET
8905 40	BALANCE (CENTER OF GRAVITY)
8905 45	FLOOR LIMITS
8910 00	FUEL LOAD
8910 10	FUEL BALANCE
8915 00	CARGO
8915 10	CARGO TYPE
8915 15	HAZARDOUS CARGO
8920 00	BAGGAGE
8925 00	BALLAST
8930 00	PASSENGERS

CODE	TEXT
8756 00	AIRCRAFT MAINTENANCE/REPAIR
8756 05	SCHEDULED CHECK
8756 10	MAINTENANCE DOCUMENTATION
8756 15	MODIFICATION
8756 20	MAJOR REPAIR
8756 25	SERVICE BULLETIN
8756 30	AIRWORTHINESS DIRECTIVE
8756 35	MAINTENANCE TOOLS/EQUIPMENT
8756 40	MAINTENANCE PROCEDURES
AIR TRAFFIC CONTROL SERVICE	
8770 00	ATC SERVICE — PERCEPTION
8770 05	RESPONSE
8770 15	A/C IDENTIFICATION
8770 20	SEPARATION JUDGEMENT
8770 30	ALTIMETER SETTING
8770 35	CLEARANCE/INSTRUCTIONS UNDERSTANDING
8775 00	ATC — DECISIONS
8775 05	ATC SERVICE GIVEN
8775 16	ADVERSE WEATHER
8775 17	A/C PERFORMANCE
8780 00	ATC USE OF PROCEDURES
8780 05	ATC PROCEDURES/DIRECTIONS/INSTRUCTIONS
8780 06	ATC CLEARANCE
8780 07	FREQUENCY
8780 08	ALTIMETER SETTING
8780 09	RADIOTELEPHONY PHRASEOLOGY
8780 11	ATC AIRCRAFT IDENTIFICATION
8780 12	ATC CO-ORDINATION
8780 20	ATC CONTROL OF A/C
8785 00	ATC USE OF EQUIPMENT
8785 05	INSTRUMENT DISPLAY
8785 06	ALTIMETER SETTING
8785 07	SSR CODE
8785 10	A/C DATA RECORD
8540 00	ATC EQUIPMENT
8540 05	ELECTRONIC DATA DISPLAY
8540 10	MANUAL DATA DISPLAY
8540 15	COMM EQUIPMENT — HF
8540 16	COMM EQUIPMENT — UHF
8540 17	COMM EQUIPMENT — VHF
8540 18	COMM EQUIPMENT — OTHER
8540 19	CONFLICT ALERT SYSTEM
8540 20	FLIGHT DATA REPORTING SYSTEM
8540 25	OTHER ATC EQUIPMENT
8555 00	ATC PROCEDURES — GENERAL
8555 05	DEPARTURE PROCEDURE
8555 10	CLIMB PROCEDURE
8555 15	NOISE ABATEMENT PROCEDURE
8555 20	AIRWAYS/ROUTE PROCEDURE
8555 25	HOLDING PROCEDURE

AIRCRAFT
Airframe
Flight control systems
Other systems
Miscellaneous
POWERPLANT
General
Structures
Miscellaneous
COMPONENTS UNIQUE TO HELICOPTERS
AIRCRAFT OPERATIONS
General
Flight crew
*AIRCRAFT SERVICING AND MAINTENANCE
*AIR TRAFFIC CONTROL SERVICE
AERODROME/HELIPORT
Facilities
Operations
WEATHER
TERRAIN

Descriptive factors

SUBJECTS

AIRCRAFT
Airframe
Flight control systems
Other systems
Miscellaneous
POWERPLANT
General
Structures
Miscellaneous
COMPONENTS UNIQUE TO HELICOPTERS
AIRCRAFT OPERATIONS
General
Flight crew
AIRCRAFT SERVICING AND MAINTENANCE
AIR TRAFFIC CONTROL SERVICE
AERODROME/HELIPORT
*Facilities
*Operations
WEATHER
TERRAIN

CODE	TEXT
8555 30	DESCENT PROCEDURE
8555 35	APPROACH PROCEDURE
8555 40	MISSED APPROACH PROCEDURE
8555 45	EMERGENCY/ALERTING PROCEDURE
8555 50	REMOVAL OF EQUIPMENT FROM SERVICE
8555 55	RADAR ASSISTANCE
9210 00	RADIO NAVAIDS — GENERAL
9210 02	MARKER
9210 12	SURFACE RADAR
9210 11	AREA RADAR
9210 15	ILS — COMPLETE
9210 20	ILS — GLIDE PATH
9210 25	ILS — LOCALIZER
9210 35	MLS — COMPLETE
9210 40	MLS — GLIDE SLOPE
9210 45	MLS — LOCALIZER
9210 50	AREA NAVIGATION
9210 55	VDF
9210 60	VOR (INCLUDES DVOR/VORTAC)
9210 70	DME
9210 80	NDB
9210 95	NAVAIDS — UNSPECIFIED
9210 81	MARKER BEACON
9210 83	RADAR — SURFACE
9210 85	RADAR — EN-ROUTE
9210 86	RADAR — OTHER
AERODROME/HELIPORT	
FACILITIES	
FOR AERODROME LIGHTING SEE 9215	
8615 00	RUNWAY DESCRIPTION
8615 35	RUNWAY SLOPE
8620 00	RUNWAY SURFACE STATE — GENERAL
8620 10	RUNWAY SURFACE CONDITION
8620 15	AQUAPLANING CONDITION
8620 20	BRAKING ACTION
8620 25	BRAKING STRENGTH
8620 30	RUNWAY OBSTRUCTION
8620 31	RUNWAY DAMAGE
8620 32	RUNWAY APPROACH OBSTRUCTIONS
8620 35	RUNWAY SHOULDER
8625 00	RUNWAY OVERRUN
8635 00	TAXIWAY STATE
8635 10	TAXIWAY SURFACE CONDITION
8635 15	TAXIWAY BRAKING ACTION

CODE	TEXT
8645 00	RAMP/APRON STATE
8645 05	APRON SURFACE STATE
8645 10	APRON SURFACE CONDITION
8645 15	APRON BRAKING ACTION
8645 25	APRON/RAMP BRAKING STRENGTH
8645 30	APRON/RAMP OBSTRUCTION
8645 31	APRON/RAMP DAMAGE
8645 32	APRON/RAMP CONGESTION
8690 00	OFF AERODROME LANDING AREA
9215 00	AERODROME/HELIPORT LIGHTING
9215 10	APPROACH LIGHTING
9215 15	VASI/PAPI
9215 25	RUNWAY LIGHTING
9215 35	STOP BAR LIGHTING
9215 40	STOP WAY LIGHTING
9215 45	TAXIWAY LIGHTING
9215 50	RAMP/APRON LIGHTING
9215 51	SIGN LIGHTING
9215 55	PARKING LIGHTING
9215 65	OBSTRUCTION LIGHTING
9215 70	AERONAUTICAL LIGHT BEACON
9220 00	AERODROME/HELIPORT MARKING
9220 05	RUNWAY/LANDING AREA MARKING
9220 10	TAXIWAY MARKING
9220 15	APRON MARKING
9220 20	OBSTRUCTION MARKING
9225 00	OTHER AIDS
9225 10	LANDING DIRECTION INDICATOR
9225 11	MAPS/CHARTS
9225 12	AERODROME CHARTS
OPERATIONS	
8670 00	AERODROME/HELIPORT OPERATIONS — GENERAL
8670 05	ANIMAL CONTROL
8670 10	BIRD CONTROL
8670 20	HAZARD WARNING/NOTIFICATION
8670 25	RUNWAY FRICTION MEASUREMENT
8670 30	AERODROME FACILITIES MAINTENANCE
8670 35	FOREIGN OBJECT REMOVAL
8670 40	SNOW/ICE REMOVAL
8670 45	VEHICLE CONTROL
8670 50	OTHER AERODROME OPERATIONS
8670 55	REFUELLING SERVICE
8670 60	AERODROME FUEL STORAGE MAINTENANCE
8670 65	RAMP SERVICE
8680 00	EMERGENCY SERVICES — CFR — GENERAL
8680 05	RESPONSE
8680 10	EFFECTIVITY
8680 15	EQUIPMENT
8680 20	OTHER
8682 00	EMERGENCY SERVICES — MEDICAL

Descriptive factors

SUBJECTS

CODE	TEXT
9310 00	SECURITY OPERATIONS
9310 05	AIRPORT SECURITY
9310 10	CARGO CHECK
9310 15	PASSENGER SECURITY CHECKING
9310 20	AIRCRAFT CHECK
9310 50	OTHER SECURITY OPERATION
9320 00	SECURITY EQUIPMENT
9320 05	PAX SCANNER
9320 10	HAND-HELD METAL DETECTOR
9320 15	X-RAY EQUIPMENT
9320 20	EXPLOSIVE SNIFFER
9320 25	PERIMETER FENCE
9320 50	OTHER SECURITY EQUIPMENT
WEATHER	
9100 00	WEATHER INFORMATION — GENERAL
9100 05	SPECIAL WEATHER WARNING
9100 10	IN-FLIGHT BRIEFING
9100 15	IN-FLIGHT ADVISORY
9105 00	WEATHER BRIEFING
9110 00	WEATHER FORECAST
9112 00	WEATHER REPORT — GENERAL
9112 10	VOLMET
9115 00	WIND
9115 05	SURFACE WIND VELOCITY
9115 10	GALE
9115 14	HEADWIND
9115 15	TAILWIND
9115 20	CROSSWIND
9115 25	WIND SHEAR
9115 26	WIND SHIFT
9115 30	GUSTS
9115 40	JET STREAM
9115 45	TURBULENCE (CAT)
9115 50	TURBULENCE
9115 55	VORTEX/WAKE TURBULENCE
9115 56	MOUNTAIN WAVE
9115 57	CYCLONE (INCLUDES HURRICANE, TR. STORM)
9115 58	TORNADO
9115 59	LINE SQUALL
9115 61	OTHER WIND/TURBULENCE
9130 00	ATMOSPHERIC RESTRICTIONS TO VISION
9130 05	DUST
9130 06	VOLCANIC DUST
9130 10	SANDSTORM
9130 15	FOG
9130 16	MIST
9130 17	PRECIPITATION
9130 20	HAZE
9130 25	SMOKE
9130 30	BLOWING SNOW

CODE	TEXT
9130 31	WHITE OUT
9130 35	SUN GLARE
9130 40	SPRAY
9130 45	ATMOSPHERIC POLLUTION
9135 50	OTHER
9140 00	TYPE OF PRECIPITATION
9140 05	RAIN
9140 10	SLEET
9140 15	SNOW
9140 20	HAIL
9140 25	ICING
9140 30	FROST
9140 40	FREEZING RAIN
9140 45	FREEZING DRIZZLE
9145 00	TEMPERATURE
9145 05	OAT
9145 10	TEMPERATURE SHEAR
9150 00	PRESSURE SETTING
9150 05	DENSITY ALTITUDE
9160 00	GENERAL WEATHER CONDITION
9160 15	VMC
9160 20	IMC
9160 25	FRONTAL SYSTEM
9160 30	INVERSION
9160 35	LIGHTNING STRIKE
9160 40	HUMIDITY
9160 45	WHIRLWIND
9160 55	LINE SQUALL
9165 00	MET EQUIPMENT — GENERAL
9165 05	MET INSTRUMENTS
9170 00	MET OPERATIONS — GENERAL
9170 05	WEATHER OBSERVATION
9170 10	WEATHER UPDATING
9170 15	MET FACILITIES MAINTENANCE
9180 00	LIGHT CONDITIONS — GENERAL
9180 05	DAWN
9180 10	DAYLIGHT
9180 15	DUSK
9180 20	NIGHT/DARK
9180 25	NIGHT/MOONLIT
TERRAIN	
9400 00	TERRAIN CONDITION — GENERAL
9400 05	MOUNTAIN/HILL
9400 10	FIELD
9400 15	PADDOCK
9400 20	SWAMP
9400 25	WATER
9400 30	ICE
9400 99	OTHER

AIRCRAFT
Airframe
Flight control systems
Other systems
Miscellaneous
POWERPLANT
General
Structures
Miscellaneous
COMPONENTS UNIQUE TO HELICOPTERS
AIRCRAFT OPERATIONS
General
Flight crew
AIRCRAFT SERVICING AND MAINTENANCE
AIR TRAFFIC CONTROL SERVICE
AERODROME/HELIPORT
Facilities
Operations
*WEATHER
*TERRAIN

Descriptive factors

MODIFIERS

CODE	TEXT
002	ABNORMAL
004	ABORT -- AFTER V1
006	ABORT -- BEFORE V1
474	ABORT -- LATE
498	ABORT -- NOT PERFORMED
498	ABORT -- PREMATURE
208	ABOVE
010	ACCIDENTAL
012	ACID LEAKED
054	ADJUSTMENT -- INCORRECT
014	ADVERSE
368	AERODROME -- CLOSED
364	AERODROME -- WRONG
354	ALIGNMENT -- INCORRECT
218	ANIMAL IN
212	ANIMAL ON
022	AQUAPLANING
024	ARCED
934	AREA SELECTED -- UNSUITABLE
970	AREA SELECTED -- WRONG
026	ARMED
356	ASSEMBLY -- INCORRECT
362	ASSISTANCE -- WITHOUT
028	ASYMMETRIC
510	ATTEMPT -- NOT MADE
030	ATTEMPTED
032	BAB
034	BELOW
036	BENT
038	BETWEEN TANKS
040	BINDING
042	BIRD DAMAGE
944	BIRD INGESTION
046	BIRD STRIKE
048	BLOCKED
050	BLOCKED BY ICE
052	BOGUS PART
054	BOLT NOT MISSING
056	BRITTLE FRACTURE
058	BROKE
060	BUCKLED
062	BUILT UP AREA
064	BURNED
066	BURST
068	CARBON DEPOSITS
072	CARRIED OUT
074	CAUGHT
076	CAVITATED
078	CHAFED
080	CHIPPED
082	CIRCUIT -- OPEN
084	CLOSE
086	CLOSED
088	CLOSED AERODROME
090	CLOSED RUNWAY
862	COLD -- EXCESSIVE
092	COLLAPSED
096	COMPLETE LOSS OF
286	COMPRESSION -- HIGH
454	COMPRESSION -- LOW
688	CONDITION -- POOR
094	CONFLICTING
100	CONGESTED
184	CONSUMPTION -- EXCESSIVE
104	CONTACTED
106	CONTAMINATED
108	CONTAMINATED
110	CORRODED
234	CORROSION -- FATIGUE
838	CORROSION -- STRESS
888	COULD NOT BE DISCONNECTED
890	COULD NOT BE RESET
306	COVERED BY ICE
880	COVERED WITH TREES
892	COVERED WITH WATER
112	CRACKED
114	CRAZED
116	CROSSED
118	CULTIVATED AREA
640	DAMAGE -- BIRDS
262	DAMAGE -- FOREIGN OBJECT
714	DAMAGE -- PREVIOUS
120	DAMAGED

CODE	TEXT
122	DANGEROUS
124	DECOMPRESSION
208	DECOMPRESSION -- EXPLOSIVE
126	DECREASED
418	DEFICIENCY -- KNOWN
128	DEFLATED
130	DEGRADED
132	DELAMINATED
134	DELAYED
136	DEPARTED FROM
196	DEPLETED/EXHAUSTED
338	DEPLOYMENT -- INADVERTENT
528	DEPLOYMENT -- NOT DONE
700	DEPLOYMENT -- PREMATURE
902	DEPLOYMENT -- UNCOMMANDED
138	DEPLOYMENT FAILED
140	DESCENDED BELOW
358	DESCRIPTION -- INCORRECT
142	DETACHED
398	DETAILS -- INSUFFICIENT
144	DETERIORATED
146	DETONATION
214	DID NOT CLOSE
216	DID NOT EXTEND
218	DID NOT OPEN
220	DID NOT OPERATE
222	DID NOT RESPOND
224	DID NOT RETRACT
226	DID NOT TRIP
148	DIFFICULT
150	DIRTY
828	DISCHARGE -- STATIC
152	DISCONNECTED
542	DISENGAGED
154	DISREGARDED
156	DISTORTED
160	DOWNWIND
162	DRIFTED
164	ELECTRICAL FAILURE
166	ELONGATED
168	ENCOUNTERED
170	ENGAGED
400	EQUIPMENT -- INSUFFICIENT
172	ERODED
174	ERRATIC
728	ERROR -- READBCK
816	ERROR -- SOFTWARE
178	EXCEEDED
180	EXCEEDED LIMITS
654	EXCEEDED TOLERANCES
182	EXCESSIVE
184	EXCESSIVE CONSUMPTION
186	EXCESSIVE FRICTION
868	EXCESSIVE HEAT
188	EXCESSIVE NOISE
190	EXCESSIVE PLAY
710	EXCESSIVE PRESSURE
192	EXCESSIVE VIBRATION
194	EXCESSIVE VOLTAGE
690	EXECUTION -- POOR
196	EXHAUSTED/DEPLETED
202	EXPERIENCED
204	EXPIRED
206	EXPLODED
208	EXPLOSIVE DECOMPRESSION
210	EXTENSION -- INADVERTENT
212	EXTENSION -- NOT DONE
214	EXTENSION -- PREMATURE
904	EXTENSION -- UNCOMMANDED
210	EXTENSION FAILED
212	FAILED
214	FAILED TO CLOSE
216	FAILED TO EXTEND
218	FAILED TO OPEN
220	FAILED TO OPERATE
222	FAILED TO RESPOND
224	FAILED TO RETRACT
226	FAILED TO TRIP
212	FAILED MALFUNCTIONED
918	FAILURE -- CAUSE UNDETERMINED
138	FAILURE -- DEPLOYMENT
164	FAILURE -- ELECTRICAL
210	FAILURE -- EXTENSION
236	FAILURE -- FATIGUE

CODE	TEXT
282	FAILURE -- HIDDEN
298	FAILURE -- HYDRAULIC
380	FAILURE -- INDICATION
230	FAILURE -- MATERIAL
488	FAILURE -- MULTIPLE
668	FAILURE -- OVERLOAD
738	FAILURE -- RETRACTION
782	FAILURE -- SIMULATED
910	FAILURE -- UNCONTAINED
232	FALSE INDICATION
234	FATIGUE CORROSION
236	FATIGUE FAILURE
238	FATIGUE FRACTURE
242	FIRE IN
244	FIRE WARNING
246	FLAMEOUT
248	FLAMES
250	FLOUTATING
252	FLUID INGRESS
254	FLUID WRONG
256	FLUTTERED
258	FOAM ON
260	FOGGED
262	FOREIGN OBJECT DAMAGE
846	FOREIGN OBJECT IMPACT
386	FOREIGN OBJECT INGESTION
264	FORGOT
266	FOULED
056	FRACTURE -- BRITTLE
226	FRACTURE -- FATIGUE
268	FRACTURED
270	FRAYED
186	FRICTION -- EXCESSIVE
402	FRICTION -- INSUFFICIENT
072	FROZEN
408	FUME SMOKE
274	FUMES
276	GLASSY
330	GRADE -- INADEQUATE
360	GRADE -- INCORRECT
360	GRADE -- WRONG
776	GROUNDING/SHORTED
122	HAZARDOUS
868	HEAT -- EXCESSIVE
278	HEAVY
280	HIDDEN
762	HIDDEN FAILURE
284	HIGH
286	HIGH COMPRESSION
288	HIGH PRESSURE
290	HILLY
292	HOLED
294	HORIZONTAL
296	HOT START
298	HYDRAULIC FAILURE
022	HYDROPLANING
300	ICE
050	ICE BLOCKAGE
306	ICE COVERED
302	ICE IN
304	ICE INDICTION
306	ICE ON
308	IGNITED
310	INGORED
426	IMBALANCE -- LATERAL
312	IMPOSSIBLE
316	IMPROPER OPERATION
318	IMPROPER POSITIONING
322	IMPROPER USE
324	IMPROPER VENTING
326	INACCURATE
328	INADEQUATE
330	INADEQUATE GRADE
332	INADEQUATE MARKING
334	INADEQUATE TYPE
336	INADVERTENT
338	INADVERTENT DEPLOYMENT
340	INADVERTENT EXTENSION
342	INADVERTENT RETRACTION
344	INADVERTENT USE
348	INATTENTIVE TO
350	INCOMPLETE

CODE	TEXT
352	INCORRECT
354	INCORRECT ADJUSTMENT
354	INCORRECT ALIGNMENT
356	INCORRECT ASSEMBLY
358	INCORRECT DESCRIPTION
360	INCORRECT GRADE
362	INCORRECT INSTALLATION
364	INCORRECT LABEL
366	INCORRECT PART
476	INCORRECT RIGGING
370	INCORRECT SETTING
372	INCORRECT TYPE
374	INCORRECT USE
376	INCORRECTLY STOWED
378	INCREASED
232	INDICATION -- FALSE
380	INDICATION FAILED
304	INDUCTION -- ICE
384	INEFFECTIVE
044	INGESTION -- BIRDS
388	INGESTION OF FOREIGN OBJECTS
390	INGESTION OF VOLCANIC DUST
392	INITIATED
362	INSTALLATION -- INCORRECT
580	INSTALLATION -- NOT DONE
396	INSUFFICIENT
398	INSUFFICIENT DETAILS
400	INSUFFICIENT EQUIPMENT
402	INSUFFICIENT FRICTION
404	INTENTIONAL
406	INTERFERED
408	INTERMITTANT
412	ISSUED
414	JAMMED/SEIZED
584	JETSON -- DID NOT
416	JETSONED
418	KNOWN DEFICIENCY
364	LABEL -- INCORRECT
420	LACK OF
422	LATE
424	LATE ABORT
426	LATE USE
428	LATERAL IMBALANCE
430	LEADED
012	LEAN -- ACID
718	LEAN -- RADIATION
432	LEAK LEAKED
456	LEVEL -- LOW
434	LIFE EXPIRED
436	LIGHT
438	LIGHTNING STRIKE
440	LIMITED
180	LIMITS -- EXCEEDED
442	LOCAL
444	LOCKED
446	LONG
446	LOOSE
450	LOOSE GRAVEL
096	LOSS -- COMPLETE
678	LOSS -- PARTIAL
724	LOSS -- RAPID
794	LOSS -- SLOW
452	LOW
454	LOW COMPRESSION
456	LOW LEVEL
458	LOW OUTPUT
460	LOW PRESSURE
462	LOW VOLTAGE
212	MALFUNCTIONED/FAILED
332	MARKING -- INADEQUATE
230	MATERIAL -- FAILED
972	MATERIAL -- WRONG
658	MIN EQUIP LIST -- OUTSIDE
960	MIN EQUIP LIST -- WITHIN
464	MISHANDLED
466	MISINTERPRETED
468	MISJUGGED
472	MISMANAGED
474	MISREAD

Descriptive factors

MODIFIERS

Continued from page A5-2.

CODE	TEXT	CODE	TEXT	CODE	TEXT	CODE	TEXT
476	MISRIGGED	622	NOT SEEN	746	RPM UNCONTROLLABLE	886	TURNUED ON
478	MISSING	624	NOT SELECTED	748	RUBBER DEPOSITS	334	TYPE — INADEQUATE
054	MISSING BOLT/NUT	930	NOT SUCCESSFUL	750	RUNAWAY	372	TYPE — INCORRECT
480	MISSING PART	396	NOT SUFFICIENT	752	RUNDOWN	372	TYPE — WRONG
260	MISTED	628	NOT SUITABLE	090	RUNWAY — CLOSED	888	UNABLE TO DISCONNECT
632	MISUNDERSTOOD	632	NOT UNDERSTOOD	754	RUPTURED	890	UNABLE TO RESET
484	MODERATE	636	NOT USED	758	SANDY	504	UNAPPROVED
486	MOUNTAINOUS	638	NOT WANTED	760	SCORED	506	UNARMED
736	MOVEMENT — RESTRICTED	054	NUT/BOLT MISSING	762	SCUFFED	512	UNAUTHORIZED
488	MULTIPLE FAILURE	642	OBSTRUCTED	414	SEIZED/JAMMED	514	UNAVAILABLE
490	NICKED	646	OIL ON	764	SELECTED	652	UNBALANCED
492	NO PRESSURE	648	OPEN	756	SEPARATED	518	UNCALIBRATED
188	NOISE — EXCESSIVE	650	OPEN CIRCUIT	370	SETTING — INCORRECT	522	UNCHECKED
936	NOISE — UNUSUAL	316	OPERATION — IMPROPER	370	SETTING — WRONG	524	UNCOMFORTABLE
494	NOISY	652	OUT OF BALANCE	768	SEVERE	900	UNCOMMANDED
548	NON EXISTENT	654	OUT OF TOLERANCES	770	SHEARED	902	UNCOMMANDED DEPLOYMENT
498	NOT ABORTED	458	OUTPUT — LOW	772	SHIFTED	904	UNCOMMANDED EXTENSION
500	NOT ADVISED OF	180	OUTSIDE LIMITS	774	SHIMMY	906	UNCOMMANDED RETRACTION
502	NOT AIRWORTHY	658	OUTSIDE MIN EQUIPMENT LIST	776	SHORTED/GROUNDED	908	UNCONTAINED
504	NOT APPROVED	660	OVERCONTROLLED	778	SHUT DOWN	910	UNCONTAINED FAILURE
506	NOT ARMED	662	OVERESTIMATED	784	SHUT DOWN — SIMULATED	526	UNCONTROLLABLE
508	NOT ATTAINED	664	OVERHEATED	780	SIMULATED	746	UNCONTROLLEABLE — RPM
510	NOT ATTEMPTED	666	OVERINFLATED	782	SIMULATED FAILURE	912	UNCERTAINATED
512	NOT AUTHORIZED	668	OVERLOAD FAILURE	784	SIMULATED SHUT DOWN	914	UNDERINFLATED
514	NOT AVAILABLE	672	OVERSPEED	786	SIPHONED	916	UNDERFLOODED
516	NOT BELIEVED	674	OVERSTRAINED	788	SKIDDED	530	UNDETECTED
518	NOT CALIBRATED	676	OVERTORQUED	790	SLIPPERY	532	UNDETERMINED
520	NOT CARRIED OUT	052	PART — BOGUS	794	SLOW LOSS	918	UNDETERMINED FAILURE
522	NOT CHECKED	366	PART — INCORRECT	796	SLOW PRESSURE LOSS	920	UNEVEN
524	NOT COMFORTABLE	480	PART — MISSING	798	SLOW REACTION	550	UNEXPECTED
350	NOT COMPLETE(D)	366	PART — WRONG	800	SLUSH ON	556	UNFAVOURABLE
526	NOT CONTROLLABLE	678	PARTIAL LOSS	802	SMELLED	560	UNFORECAST
528	NOT DEPLOYED	680	PENETRATED	804	SMOKE IN	566	UNHEARD
530	NOT DETECTED	682	PERFORMED	806	SMOKE WARNING	568	UNIDENTIFIED
532	NOT DETERMINED	684	PINCHED	808	SMOKE/FUME	578	UNINSPECTED
534	NOT DISPLAYED	692	PLANNING — POOR	810	SNAPPED	924	UNINTENTIONAL
536	NOT DONE	190	PLAY EXCESSIVE	812	SNOW COVERED	926	UNKNOWN
538	NOT EFFECTED	586	POOR	812	SNOW ON	586	UNLOCKED
384	NOT EFFECTIVE	688	POOR CONDITION	814	SOFT	588	UNLUBRICATED
542	NOT ENGAGED	690	POOR EXECUTION	816	SOFTWARE ERROR	594	UNMARKED
544	NOT ESTABLISHED	692	POOR PLANNING	818	SPATTER	598	UNMARKED
546	NOT ESTABLISHED ON	694	POOR WELD	820	SPILLED	620	UNSECURED
548	NOT EXISTING	696	POPPED	824	STALL/SURGE	622	UNSEEN
550	NOT EXPECTED	318	POSITIONING — IMPROPER	826	STARVATION	928	UNSERVICEABLE
552	NOT EXTENDED	864	PREMATURE	828	STATIC DISCHARGE	930	UNSUCCESSFUL
554	NOT FASTENED	698	PREMATURE ABORT	830	STICKING	934	UNSTABLE AREA SELECTED
556	NOT FAVOURABLE	700	PREMATURE DEPLOYMENT	832	STIFF	936	UNUSUAL NOISE
558	NOT FOLLOWED	702	PREMATURE EXTENSION	834	STOLEN	638	UNWANTED
560	NOT FORECAST	704	PREMATURE RETRACTION	836	STOPPED	322	USE — IMPROPER
562	NOT FULLY UTILIZED	706	PREMATURE USE	376	STOWED INCORRECTLY	344	USE — INADEQUATE
564	NOT GIVEN	708	PRESENT	838	STRESS CORROSION	374	USE — INCORRECT
566	NOT HEARD	288	PRESSURE — HIGH	840	STRIPPED	426	USE — LATE
568	NOT IDENTIFIED	460	PRESSURE — LOW	842	STRONG	706	USE — PREMATURE
572	NOT INDICATED	492	PRESSURE — NONE	844	STRUCK	938	USE
574	NOT INFLATED	726	PRESSURE LOSS — RAPID	046	STRUCK BY BIRD	940	USING ROAD TAXIWAY
576	NOT INITIATED	796	PRESSURE LOSS — SLOW	846	STRUCK BY FOREIGN OBJECT	942	VAPOUR LOCK
578	NOT INSPECTED	710	PRESSURE TOO HIGH	438	STRUCK BY LIGHTNING	324	VENTING — IMPROPER
580	NOT INSTALLED	712	PRESSURE TOO LOW	848	STUCK	944	VERTICAL
924	NOT INTENTIONAL	714	PREVIOUS DAMAGE	852	SUDDEN	946	VIBRATION
582	NOT ISSUED	716	PROGRESS NOT MONITORED	824	SURGE/STALL	192	VIBRATION — EXCESSIVE
584	NOT JETTISONED	718	RADIATION LEAK	854	SURGED	948	VIGILANT
926	NOT KNOWN	720	RADIOACTIVE	976	TAXIWAY — WRONG	396	VOLCANIC DUST INGESTION
586	NOT LOCKED	722	RAIN ROUGH	868	TEMPERATURE — EXCESSIVE	194	VOLTAGE — EXCESSIVE
588	NOT LUBRICATED	724	RAPID LOSS	868	TEMPERATURE — TOO HIGH	422	VOLTAGE — LOW
590	NOT MADE	726	RAPID PRESSURE LOSS	862	TEMPERATURE — TOO LOW	244	WARNING — FIRE
592	NOT MAINTAINED	798	REACTION — SLOW	856	THERMAL RUNAWAY	806	WARNING — SMOKE
594	NOT MARKED	728	REARBACK ERROR	858	TIPPED OVER	950	WARNED
598	NOT MONITORED	730	RECOVERED	654	TOLERANCES — EXCEEDED	952	WATER COVERED
600	NOT NOTIFIED	732	REDUCED	860	TOO CLOSE	954	WATER IN
602	NOT OBSERVED	736	RESTRICTED MOVEMENT	862	TOO COLD	952	WATER ON
604	NOT OBTAINED	342	RETRACTION — INADVERTENT	864	TOO EARLY	956	WEAK
606	NOT PERFORMED	618	RETRACTION — NOT DONE	866	TOO HIGH	694	WELD — POOR
312	NOT POSSIBLE	704	RETRACTION — PREMATURE	868	TOO HOT	958	WET
608	NOT RECEIVED	906	RETRACTION — UNCOMMANDED	870	TOO LATE	960	WITHIN MIN EQUIPMENT LIST
608	NOT RECEIVED	738	RETRACTION FAILED	872	TOO LOW	962	WITHOUT ASSISTANCE
612	NOT RECOVERED	476	RIGGING — INCORRECT	188	TOO NOISY	964	WORN
614	NOT RELIQUISHED	340	ROAD/TAXIWAY USED	874	TOO SHALLOW	966	WRONG ACRODROME
616	NOT REMOVED	740	ROLLING	876	TOO STEEP	570	WRONG AREA SELECTED
618	NOT RETRACTED	742	ROTATED	878	TREAD SHED	254	WRONG FLUID
620	NOT SECURED	744	ROUGH	880	TREE COVERED	360	WRONG GRADE
		722	ROUGH RUNNING	882	TRIPPED	972	WRONG MATERIAL
				884	TURNUED OFF	366	WRONG PART
						974	WRONG RUNWAY
						370	WRONG SETTING
						976	WRONG TAXIWAY
						372	WRONG TYPE

Explanatory factors

SUBJECTS

CODE	TEXT
9935 00	PSYCHO-SOCIAL FACTORS
9935 03	ATTITUDE
9935 06	INDUSTRIAL ACTION
9935 09	INTERPERSONAL RELATIONSHIP
9935 12	SENIORITY
9935 15	MOTIVATION
9935 18	MORALE
9940 00	MANAGEMENT
9940 01	APPROVAL
9940 03	BUDGETING
9940 06	COMPLIANCE
9940 09	CO-ORDINATION
9940 12	DECISIONS
9940 15	DIRECTIVES
9940 18	INSTRUCTIONS
9940 21	FORECAST
9940 24	FUNDING
9940 27	INSPECTIONS
9940 30	LIAISON
9940 33	MONITORING
9940 36	OBSERVATION
9940 39	ORDERS
9940 42	ORGANIZING
9940 45	PERSONNEL POLICIES
9940 48	PLANNING
9940 51	POLICY
9940 54	PROCEDURES
9940 57	QUALITY CONTROL
9940 60	RECRUITMENT
9940 63	REGULATIONS
9940 69	REQUIREMENTS
9940 72	RESOURCE MANAGEMENT
9940 75	SPECIFICATIONS
9940 78	STAFFING
9940 81	STANDARDS
9940 84	TRAINING
9940 87	SUPERVISION
9940 90	WORK ENVIRONMENT
9945 00	DESIGN FACTORS
9945 03	INSTRUMENT/CONTROLS DESIGN
9945 06	INSTRUMENT/CONTROLS LOCATION
9945 09	WORKPLACE DESIGN
9945 12	STRUCTURES
9945 15	SYSTEMS

CODE	TEXT
9950 00	MISCELLANEOUS
9950 03	ACTION
9950 06	AIRMANSHIP
9950 09	PLANNING
9950 12	PLANNING — PRE FLIGHT
9950 15	PLANNING — IN FLIGHT
9950 18	ACTIVITIES
9950 21	CERTIFICATION
9950 24	EQUIPMENT
9950 27	FACILITIES
9950 30	MANUALS
9950 33	MEDICAL CERTIFICATE
9950 36	LICENSE/RATING
9950 39	PUBLICATIONS

Explanatory factors SUBJECTS

CODE	TEXT
9900 00	PHYSIOLOGICAL FACTORS
9900 05	FATIGUE - CHRONIC
9900 09	FATIGUE - TIME ZONE
9900 12	FATIGUE - WORK SCHEDULE
9900 15	FATIGUE - OTHER
9900 18	CIRCADIAN RHYTHM
9900 21	DIET
9900 24	DRUGS
9900 27	ALCOHOL
9900 30	CARBON MONOXIDE
9900 33	HANGOVER
9900 36	HEAVY SMOKER
9900 39	HEART ATTACK
9900 42	PRE-EXISTING MEDICAL CONDITION
9900 45	MOTION SICKNESS
9900 48	UNCONSCIOUSNESS
9900 51	DECOMPRESSION SICKNESS
9900 54	DISORIENTATION VERTIGO
9900 57	VISUAL ILLUSIONS
9900 60	HYPOXIA-ANOXIA
9900 63	HYPERVENTILATION
9900 66	PREVIOUS DIVING
9900 69	ACCELERATION
9900 72	EFFECT OF VIBRATION
9900 75	EFFECT OF GLARE
9900 78	EFFECT OF HEAT
9900 81	EFFECT OF COLD
9900 84	EFFECT OF WINDBLAST
9900 87	EFFECT OF NOISE
9900 90	EFFECT OF TOXIC FUMES
9900 93	VISION
9900 96	OTHER
9905 00	SUPERVISORY FACTORS
9905 03	BRIEFING
9905 06	CREW COORDINATION
9905 09	MONITORING
9905 11	SUPERVISION
9905 15	OTHER
9910 00	EXPERIENCE/TRAINING
9910 03	KNOWLEDGE
9910 06	COMPETENCE
9910 09	EXPERIENCE - IN POSITION
9910 12	EXPERIENCE - ON A/C TYPE
9910 15	EXPERIENCE - TOTAL A/C
9910 18	EXPERIENCE - OTHER

CODE	TEXT
9910 21	REGENCY - IN POSITION
9910 24	REGENCY - ON INSTRUMENTS
9910 27	REGENCY - ON TYPE
9910 30	REGENCY - ON AERODROME/ROUTE
9910 31	REGENCY - OTHER
9910 33	SKILL
9910 36	TRAINING - INITIAL
9910 39	TRAINING - ON THE JOB
9910 42	TRAINING - GROUND
9910 45	TRAINING - FLIGHT
9910 48	TRAINING - RECURRENT
9910 51	QUALIFICATION - IN POSITION
9910 54	QUALIFICATION - ON TYPE
9920 00	COMMUNICATION
9920 03	INTERPRETATION
9920 06	PHRASEOLOGY
9920 09	LANGUAGE BARRIER
9920 12	NOISE INTERFERENCE
9925 00	PSYCHOLOGICAL CONDITION
9925 06	ANXIETY
9925 09	APPREHENSION
9925 12	ATTENTION
9925 15	ATTENTION SPAN
9925 21	INATTENTION
9925 24	BOREDOM
9925 27	DISTRACTION
9925 30	CO-ORDINATION/TIMING
9925 33	CONFIDENCE - IN A/C
9925 36	CONFIDENCE - IN EQUIPMENT
9925 39	CONFIDENCE - SELF
9925 42	COMPLACENCY
9925 45	EMOTIONS
9925 48	MENTAL CAPACITY
9925 51	MENTAL PRESSURE - EXTERNAL
9925 54	MENTAL PRESSURE - SELF INDUCED
9925 57	PANIC
9925 60	PERCEPTION
9925 63	TASK SATURATION
9925 66	REACTIONS

Explanatory factors ORGANIZATIONS/PERSONS

CODE	TEXT
ORGANIZATIONS/INSTITUTIONS	
100	OPERATOR — GENERAL
101	MANAGEMENT
102	TRAINING STAFF
103	OPERATIONAL STAFF
104	MAINTENANCE STAFF
109	OTHER
110	TRAINING ORGANIZATION — GENERAL
111	MANAGEMENT
112	FLIGHT INSTRUCTION
113	GROUND INSTRUCTION
119	OTHER
120	GOVERNMENT (CIVIL AVIATION ADMINISTRATION) — GENERAL
121	MANAGEMENT
122	OPERATIONS STAFF
123	AIRWORTHINESS STAFF
129	OTHER
130	AIR TRAFFIC CONTROL — GENERAL
131	MANAGEMENT SUPERVISORY
132	CONTROLLERS
133	TECHNICIANS
134	COMMUNICATIONS STAFF
139	OTHER
140	AIRPORT — GENERAL
141	MANAGEMENT
142	MAINTENANCE STAFF
143	SECURITY STAFF
149	OTHER
150	MAINTENANCE/REPAIR SHOP — GENERAL
151	MANAGEMENT
152	OPERATIONS
160	MANUFACTURER — GENERAL
161	MANAGEMENT
162	DESIGN STAFF
163	PRODUCTION STAFF
169	OTHER
170	EMERGENCY SERVICE ORGANIZATION — GENERAL
171	MANAGEMENT
172	OPERATIONS STAFF
173	FIRE SERVICE STAFF
174	AMBULANCE SERVICE
180	WEATHER SERVICE — GENERAL
181	MANAGEMENT
182	MAINTENANCE STAFF
183	OPERATIONAL STAFF
189	OTHER

CODE	TEXT
PERSONS	
001	PILOT IN COMMAND
002	CO PILOT
003	INSTRUCTOR/CHECK PILOT
004	PILOT OF OTHER A/C
005	DUAL STUDENT PILOT UNDER CHECK
006	FLIGHT ENGINEER
007	OTHER FLIGHT CREW
010	CABIN CREW
011	PASSENGER
020	LOADER
021	DRIVER OF VEHICLE
022	GROUND INSTRUCTOR
023	RAMP LINE CREWMAN
024	FLIGHT OPS OFFICER/DISPATCHER
025	AIR TRAFFIC CONTROLLER
026	FLIGHT SERVICE OPERATOR
027	METEOROLOGICAL BRIEFER
028	TECHNICIAN
029	A/C MAINTENANCE ENGINEER
030	GOVERNMENT INSPECTOR
031	OTHER

Explanatory factors

MODIFIERS

CODE	TEXT
002	ABNORMAL
016	ADVERSELY AFFECTED
016	AFFECTED ADVERSELY
510	ATTEMPT — NOT MADE
032	BAD
070	CARELESS
080	CHANNELIZED
094	COMMITTED
098	CONFLICTING
100	CONFUSING
134	DELAYED
148	DIFFICULT
154	DISREGARDED
158	DIVERTED
176	ERRONEOUS
178	EXCEEDED
182	EXCESSIVE
198	EXISTED
200	EXPECTANCY
212	FAILED
240	FAULTY
264	FORGOT
284	HIGH
310	IGNORED
314	IMPROPER
320	IMPROPER PROCEDURE
326	INACCURATE
328	INADEQUATE
336	INADVERTENT
346	INAPPROPRIATE
350	INCOMPLETE
352	INCORRECT
368	INCORRECT PROCEDURE
382	INDIRECT
384	INEFFECTIVE
386	INEFFICIENT
394	INSTINCTIVE
396	INSUFFICIENT
410	INVALID
420	LACK OF
634	LANGUAGE BARRIER — MISUNDERSTANDING
452	LOW
466	MISINTERPRETED
468	MISJUDGED
470	MISLEADING
472	MISMANAGED
482	MISUSED
548	NON EXISTENT
496	NON STANDARD
892	NOT ACCEPTABLE
510	NOT ATTEMPTED

CODE	TEXT
512	NOT AUTHORIZED
514	NOT AVAILABLE
894	NOT AWARE
896	NOT CLEAR
898	NOT CO-ORDINATED
350	NOT COMPLETE(D)
384	NOT EFFECTIVE
540	NOT ENFORCED
548	NOT EXISTING
570	NOT IMPLEMENTED
926	NOT KNOWN
590	NOT MADE
592	NOT MAINTAINED
596	NOT MET
604	NOT OBTAINED
606	NOT PERFORMED
608	NOT RECEIVED
610	NOT RECENT
626	NOT SPECIFIED
396	NOT SUFFICIENT
630	NOT SUPPLIED
634	NOT UNDERSTOOD — LANGUAGE BARRIER
636	NOT USED
640	OBsolete
644	OBTRUSIVE
656	OUT-DATED
662	OVERESTIMATED
670	OVERLOOKED
686	POOR
708	PRESENT
320	PROCEDURE — IMPROPER
368	PROCEDURE — INCORRECT
734	RESTRICTED
756	SABOTAGED
792	SLOW
822	SPONTANEOUS
850	SUBSTANDARD
892	UNACCEPTABLE
512	UNAUTHORIZED
514	UNAVAILABLE
894	UNAWARE
896	UNCLEAR
898	UNCO-ORDINATED
912	UNDERESTIMATED
922	UNFORESEEN
926	UNKNOWN
932	UNSUITABLE
948	VIOLATED
966	WRONG

EVENT 1

Type of event: 21016 POWER LOSS - FIRST ENGINE - SIMULATED FAILURE
 Code Plain text

Phase of operation: 032 INITIAL CLIMB
 Code Plain text

Subject		DESCRIPTIVE FACTOR No. 1		Modifier	
<u>720000</u> Code	<u>POWERPLANT</u> Plain text	<u>782</u> Code	<u>SIMULATED FAILURE</u> Plain text		
		<u>778</u>	<u>SHUT DOWN</u>		
RELATED EXPLANATORY FACTORS:					
Organization/Person		Subject		Modifier	
<u>003</u> Code	<u>CHECK-PILOT</u> Plain text	<u>995003</u> Code	<u>ACTION</u> Plain text	<u>966</u> Code	<u>WRONG</u> Plain text
<u>003</u>	<u>CHECK-PILOT</u>	<u>995006</u>	<u>AIRMANSHIP</u>	<u>420</u>	<u>LACK OF</u>
<u>003</u>	<u>CHECK-PILOT</u>	<u>992539</u>	<u>SELF-CONFIDENCE</u>	<u>182</u>	<u>EXCESSIVE</u>
Subject		DESCRIPTIVE FACTOR No. 2		Modifier	
<u>020006</u> Code	<u>A/C RETURN</u> Plain text	<u>682</u> Code	<u>PERFORMED</u> Plain text		
RELATED EXPLANATORY FACTORS:					
Organization/Person		Subject		Modifier	
<u> </u> Code	<u> </u> Plain text	<u> </u> Code	<u> </u> Plain text	<u> </u> Code	<u> </u> Plain text
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Note: — Since the information requested on page 28 of the report form is not applicable to the occurrence used for this example, this page has not been reproduced.

EVENT 2

Type of event: 2114 POWER LOSS - ADDITIONAL ENGINE - MECHANICAL FAILURE
 Code Plain text

Phase of operation: 0613 FINAL APPROACH
 Code Plain text

Subject		DESCRIPTIVE FACTOR No. 1		Modifier	
731011	ENGINE-DRIVEN FUEL PUMP	356	INCORRECT ASSEMBLY		
Code	Plain text	Code	Plain text		
		186	FRICTION EXCESSIVE		
		414	SEIZED/JAMMED		
Organization/Person		RELATED EXPLANATORY FACTORS:		Modifier	
			Subject		
029	MAINTENANCE ENGINEER	99103	KNOWLEDGE	328	INADEQUATE
Code	Plain text	Code	Plain text	Code	Plain text
151	REPAIR SHOP - MANAGEMENT	99406	RECRUITMENT	850	SUBSTANDARD
Code	Plain text	Code	Plain text	Code	Plain text
120	CAA - GENERAL	99415	DIRECTIVES	540	NOT ENFORCED
Code	Plain text	Code	Plain text	Code	Plain text
Subject		DESCRIPTIVE FACTOR No. 2		Modifier	
872040	RELIGHT PROCEDURE	558	NOT FOLLOWED		
Code	Plain text	Code	Plain text		
		632	NOT UNDERSTOOD		
Organization/Person		RELATED EXPLANATORY FACTORS:		Modifier	
			Subject		
001	PILOT	991042	GROUND TRAINING	328	INADEQUATE
Code	Plain text	Code	Plain text	Code	Plain text
113	GROUND INSTRUCTION	994084	TRAINING	328	INADEQUATE
Code	Plain text	Code	Plain text	Code	Plain text

Note: — Since the information requested on page 30 of the report form is not applicable to the occurrence used for this example, this page has not been reproduced.

EVENT 3

Type of event: 263 HARD LANDING
Code Plain text

Phase of operation: 0711 LEVEL OFF/TOUCHDOWN
Code Plain text

Subject		DESCRIPTIVE FACTOR No. 1		Modifier			
<u>881105</u> Code	<u>FLYING SPEED</u> Plain text	<u>598</u> Code	<u>NOT MONITORED</u> Plain text				
		<u>592</u> Code	<u>NOT MAINTAINED</u> Plain text				
Organization/Person		RELATED EXPLANATORY FACTORS:		Subject		Modifier	
<u>001</u> Code	<u>PILOT</u> Plain text	<u>991012</u> Code	<u>EXPERIENCE ON TYPE</u> Plain text	<u>328</u> Code	<u>INADEQUATE</u> Plain text		
<u>001</u> Code	<u>PILOT</u> Plain text	<u>992506</u> Code	<u>ANXIETY</u> Plain text	<u>708</u> Code	<u>PRESENT</u> Plain text		
Subject		DESCRIPTIVE FACTOR No. 2		Modifier			
<u>872030</u> Code	<u>CREW CO-ORDINATION</u> Plain text	<u>686</u> Code	<u>POOR</u> Plain text				
Organization/Person		RELATED EXPLANATORY FACTORS:		Subject		Modifier	
<u>003</u> Code	<u>CHECK-PILOT</u> Plain text	<u>990506</u> Code	<u>CREW CO-ORDINATION</u> Plain text	<u>420</u> Code	<u>LACK OF</u> Plain text		
<u>003</u> Code	<u>CHECK-PILOT</u> Plain text	<u>995012</u> Code	<u>PRE-FLIGHT PLANNING</u> Plain text	<u>396</u> Code	<u>INSUFFICIENT</u> Plain text		