

## ***Appendix 11: Air Carrier Questionnaire***

Interviewing of the air carrier (AC) pilots began in March 2001. The initial interview sample was split between pilots who were randomly selected for one interview and pilots who were asked to complete the interview once every three months. This appendix includes a copy of the AC questionnaire. The questionnaire consisted of four sections that corresponded with general topics covered in the general aviation (GA) questionnaire: Section A addressed pilot qualifications and experience; Section B addressed safety events; Section C addressed a specific focus topic\*; and Section D offered pilots an opportunity to provide feedback on the interview process and the questionnaire. This appendix contains a copy of the air carrier questionnaire.

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\* Two Section Cs were prepared during the course of this survey: one pertains to In-close Approach Changes (ICACs), and the other pertains to the development of baseline safety for the CAST-JIMDAT.

# ***Air Carrier Questionnaire***

## ***Section A: Background Questions***

TIME BEGUN .....(MILITARY) .....	<input type="text"/>	:	<input type="text"/>	<input type="text"/>
(FILLS)				
INTERVIEWER: DATE OF INTERVIEW IS BEING RECORDED AS (START DATE). IS THIS THE CORRECT DATE?				
YES.....				1
NO .....	(RECORD DATE OF INTERVIEW) .....			0
START DATE .....	<input type="text"/>	/	<input type="text"/>	/
	MONTH		DAY	YEAR
----- S				
TART DATE = 30/90 DAYS BEFORE END DATE				
END DATE .....	<input type="text"/>	/	<input type="text"/>	/
(FILLS)	MONTH		DAY	YEAR
BEFORE DAY OF INTERVIEW				
END DATE = DAY				

**SECTION A: BACKGROUND QUESTIONS**

**INTRODUCTION:**

For this survey most of the questions will refer to (30/90) days prior to today. Therefore, whenever I say the “last (TIME PERIOD), I am referring to the period from (START DATE) through (END DATE).

I am now going to ask you a few questions about the commercial flying that you did during the last (TIME PERIOD).

A1. During the last (TIME PERIOD), how many **hours** did you fly as a crewmember on commercial aircraft? # HOURS IN TIME PERIOD.....

<b>PROMPT IF 30 DAYS&gt;100, 90 DAYS&gt;300: I'd just like to verify. You said you flew (HOURS A1) hours during the last (TIME PERIOD) as a crewmember on a commercial aircraft. Is this correct?</b>	NO.....	0
	YES..... (A2).....	1
A1 NEW During the last (TIME PERIOD), how many hours did you fly as a crewmember on a commercial aircraft?	RF..... (A2).....	7
	DK..... (A2).....	8
	# HOURS .....	<input type="text"/>
	RF .....	997
	DK.....	998



A2. During the last (TIME PERIOD), how many **legs** did you fly as a crewmember on commercial aircraft? # LEGS IN TIME PERIOD.....

A2.1 During the last (TIME PERIOD), how many of the (#A2) legs you flew involved taking off or landing at an airport outside the United States? # LEGS OUTSIDE U.S.....

**NUMBER OF LEGS IN A2.1 MUST BE LESS THAN OR EQUAL TO LEGS IN A2.**

**NOTE: THE UNITED STATES MEANS THE 50 STATES AND WASHINGTON DC, BUT DOES NOT INCLUDE US TERRITORIES.**

A3. Please tell me the makes, models and series for all of the aircraft you flew commercially as a crewmember during the last (TIME PERIOD)? RECORD VERBATIM IN COLUMN A, THEN ASK PROMPT.

<i>PROMPT A3_A1: Did you fly any other makes, models or series of aircraft commercially during the last (TIME PERIOD)?</i>	YES..... (ASK PROMPT A3_A2).....	1
	NO..... (ASK B) .....	0
	RF.....	7
	DK.....	8

*PROMPT A3\_A2: Please tell me the next aircraft make, model and series you flew commercially as a crewmember during the last (TIME PERIOD)? RECORD IN COLUMN A*

A. MAKE/MODEL/SERIES (NOTE; MAKE/MODEL/SERIES DROP DOWN SCREEN INCREASED WITH THIS VERSION)	B. During the last (TIME PERIOD), what <b>percent</b> of the (HRS IN A1) did you fly the (MAKE/MODEL/SERIES)?
1 <sup>st</sup> _____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> %
2 <sup>nd</sup> _____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> %
3 <sup>rd</sup> _____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> %
4 <sup>th</sup> _____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> %
5 <sup>th</sup> _____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> %
6 <sup>th</sup> _____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> %
	<b>THE TOTAL PERCENT OF A3-B SHOULD BE 100.</b>



**INTRODUCTION:**

During the last (TIME PERIOD), you may have transported passengers or cargo, or conducted other flight operations. We would like to understand what types of operations you flew.

A4. During the last (TIME PERIOD), what percent of the (HRS IN A1) did you fly as a crewmember on flights with revenue passengers? % WITH REVENUE PASSENGERS.....|\_|\_|\_|

A5. During the last (TIME PERIOD), what percent of the (HRS IN A1) did you work as a crewmember on flights that carried only cargo or freight and did **not** carry revenue passengers? % CARGO/FREIGHT W/O PASSENGERS .....|\_|\_|\_|

A6. During the last (TIME PERIOD), what percent of the (HRS IN A1) did you work as a crewmember on flights that carried no revenue passengers or cargo, such as maintenance flights, ferry flights, or repositioning flights? % NO PASSENGER OR CARGO .....|\_|\_|\_|

**THE TOTAL PERCENT OF A4, A5, AND A6 SHOULD BE 100.**

A. What type of flights were these?

SPECIFY: \_\_\_\_\_

	YES	NO	RF	DK
A7. During the last (TIME PERIOD), did you fly a commercial aircraft (READ QUESTIONS)?				
a. as a captain.....	1	0	7	8
b. as a first officer.....	1	0	7	8
c. as a flight engineer or second officer.....	1	0	7	8
d. as a relief pilot.....	1	0	7	8
e. in any other capacity (SPECIFY).....	1	0	7	8
1. What was that capacity?				

**A7a THROUGH A7e CANNOT ALL BE ANSWERED NO.**

SPECIFY: \_\_\_\_\_

**INTERVIEWER: CAN INCLUDE CHECK PILOT.**



A7.1 Which of the following three categories best describes the number of airplanes currently operated by your airline? Please do not include airplanes operated by code-share partners. READ CATEGORIES.

- 350 airplanes or more..... 1
- 150 to 349 airplanes..... 2
- 149 or less airplanes ..... 3
- RF..... 7
- DK ..... 8

**NOTE: WE ARE ONLY INTERESTED IN AIRPLANES CURRENTLY BEING USED, NOT THOSE IN STORAGE.**

**PROBE IF PILOT FLEW FOR MORE THAN ONE AIRLINE IN TIME PERIOD:** Please tell me the number of airplanes currently operated by the airline **that you flew the most hours for** in the last (TIME PERIOD).

A8. Approximately how many **hours** in total have you flown a **commercial aircraft during your career?**

TOTAL HOURS DURING CAREER..... 

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# ***Air Carrier Questionnaire***

## ***Section B: Safety Related Events***

**SECTION B: SAFETY RELATED EVENTS**

**INTRODUCTION:**

My next questions are about safety related events. In answering these questions, please report only events that **you experienced on a commercial aircraft on which you were a crewmember**. The first of these questions are about **equipment-related events**.

ER1. How many times during the last (TIME PERIOD) did an aircraft on which you were a crewmember divert to an alternate airport or return to land because of an aircraft equipment problem?

# EQUIPMENT PROBLEMS.....

A. What systems caused the diversion or return to land?

SPECIFY: \_\_\_\_\_

ER2. How many times during the last (TIME PERIOD) did an aircraft on which you were a crewmember experience a spill, fire, fumes, or aircraft damage due to transporting hazardous materials?

# HAZMAT .....      
**IF 0, SKIP TO ER3.**

A. (How many of these [# in ER2] times were the spills, fire, fumes or aircraft damage/Was this spill, fire, fumes or aircraft damage) in the cargo compartment?

# IN CARGO COMPARTMENT .....

**THE AMOUNT IN ER2A CANNOT BE GREATER THAN THE AMOUNT IN ER2.**

B. (How many of these [# in ER2] times were spills, fire, fumes or aircraft damage/Was this spill, fire, fumes or aircraft damage) in the passenger compartment?

# IN PASSENGER COMPARTMENT .....

**THE AMOUNT IN ER2A AND ER2B COMBINED CANNOT BE GREATER THAN THE AMOUNT IN ER2.**

C. (How many of these [# IN ER2] times were the spills, fire, fumes or aircraft damage/Was the spill, fire, fumes or aircraft damage) caused because the hazardous materials in question were out of compliance with regulations?

# OUT OF COMPLIANCE WITH REGULATIONS .....

**THE AMOUNT IN ER2C CANNOT BE GREATER THAN THE AMOUNT IN ER2.**

ER3. How many times during the last (TIME PERIOD) did an aircraft on which you were a crewmember experience a cargo shift

# CARGO SHIFTS .....



ER4. How many times during the last (TIME PERIOD) did an in-flight aircraft on which you were a crewmember experience uncommanded movements of any of the following devices (READ QUESTIONS)?

- a. Uncommanded movements of the elevators? ..... # ELEVATORS .....
- b. Uncommanded movements of the rudder? ..... # RUDDER.....
- c. Uncommanded movements of the ailerons? ..... # AILERONS.....
- d. Uncommanded movements of the spoilers? ..... # SPOILERS.....
- e. Uncommanded movements of the speedbrakes? . # SPEEDBRAKERS.....
- f. Uncommanded movements of the trim tabs? ..... # TRIM TABS.....
- g. Uncommanded movements of the flaps? ..... # FLAPS.....
- h. Uncommanded movements of the slats? ..... # SLATS.....
- i. Did any other devices have uncommanded movements during the last (TIME PERIOD)?
  - YES..... 1
  - NO..... (SKIP TO ER5)..... 0
  - RF ..... (SKIP TO ER5)..... 7
  - DK..... (SKIP TO ER5)..... 8

1. Which devices?

SPECIFY: \_\_\_\_\_

- 2. **FOR EACH DEVICE LISTED IN ER4i1:** # UNCOMMANDED MOVEMENTS.....      
 How many times did (DEVICE LISTED IN ER4i1) perform uncommanded movements during the last (TIME PERIOD)?

ER5. How many times during the last (TIME PERIOD) did an inflight aircraft on which you were a crewmember experience smoke, fire, or fumes that originated in any of the following areas (READ QUESTIONS):

- A. the engine or nacelle?..... # IN ENGINE OR NACELLE.....      
 IF 0, SKIP TO ER5B.

- 1. (Of the [# in ER5A] times there was smoke, fire, or fumes in the engine or nacelle, how many involved/Did the smoke, fire, or fumes in the engine or nacelle involve) electrical components or wiring? # SMOKE/FIRE/FUMES .....      

**THE AMOUNT IN ER5A1 CANNOT BE GREATER THAN THE AMOUNT IN ER5A.**

- B. the flight deck?..... # IN FLIGHT DECK.....      
 IF 0, SKIP TO ER5C.

- 1. (Of the [# in ER5B] times there was smoke, fire, or fumes in the flight deck, how many involved/Did the smoke, fire, or fumes in the flight deck involve) electrical components or wiring? SMOKE/FIRE/FUMES .....      

**THE AMOUNT IN ER5B1 CANNOT BE GREATER THAN THE AMOUNT IN ER5B.**



C. the cargo hold?..... # IN CARGO HOLD.....      
**IF 0, SKIP TO ER5D.**

1. (Of the [# in ER5C] times there was smoke, fire, or fumes in the cargo hold, how many involved/Did the smoke, fire, or fumes in the cargo hold involve) electrical components or wiring? SMOKE/FIRE/FUMES.....

**THE AMOUNT IN ER5C1 CANNOT BE GREATER THAN THE AMOUNT IN ER5C.**

D. the galley? ..... # IN GALLEY .....      
**IF 0, SKIP TO ER5E.**

1. (Of the [# in ER5D] times there was smoke, fire, or fumes in the galley, how many involved/Did the smoke, fire, or fumes in the galley involve) electrical components or wiring? SMOKE/FIRE/FUMES.....

**THE AMOUNT IN ER5D1 CANNOT BE GREATER THAN THE AMOUNT IN ER5D.**

E. elsewhere in the passenger compartment? ..... # IN ELECTRICAL COMPONENTS OR WIRING .....      
**IF 0, SKIP TO ER5F.**

1. (Of the [# in ER5E] times there was smoke, fire, or fumes elsewhere in the passenger compartment, how many involved/Did the smoke, fire, or fumes elsewhere in the passenger compartment involve) electrical components or wiring? SMOKE/FIRE/FUMES.....

**THE AMOUNT IN ER5E1 CANNOT BE GREATER THAN THE AMOUNT IN ER5E.**

F. During the last (TIME PERIOD), how many times did an inflight aircraft on which you were a crewmember experience smoke, fire or fumes that originated other than in the engine or nacelle, flight deck, cargo hold, galley, or passenger compartment? # ORIGINATE OTHER PLACES.....

1. Where did the smoke, fire or fumes originate? SPECIFY.  
 SPECIFY: \_\_\_\_\_

ER6. During the last (TIME PERIOD), how many times did an inflight aircraft on which you were a crewmember experience a precautionary engine shutdown? # PRECAUTIONARY ENGINE SHUTDOWNS.....

ER7. During the last (TIME PERIOD) how many times did an inflight aircraft on which you were a crewmember experience a total engine failure? # TOTAL ENGINE FAILURE.....



**INTRODUCTION:**

The following questions relate to **turbulence**.

During the last (TIME PERIOD), how many times did an aircraft on which you were a crewmember (READ QUESTION)?

TU1. Encounter severe turbulence that caused large abrupt changes in altitude, airspeed, or attitude .. # CAUSED ABRUPT CHANGES.....      
**IF 0, SKIP TO TU2.**

A. (Of the [#in TU1] severe turbulence encounters, how many occurred/Did this severe turbulence encounter occur) in I.M.C. conditions? I.M.C. = INSTRUMENT METEOROLOGICAL CONDITIONS # IN IMC CONDITIONS .....      
**THE AMOUNT IN TU1A CANNOT BE GREATER THAN THE AMOUNT IN TU1.**

B. (Of the [# in TU1] severe turbulence encounters, how many occurred/Did this severe turbulence encounter occur) in clear air? # IN CLEAR AIR .....      
**THE AMOUNT IN TU1A AND TU1B CANNOT BE GREATER THAN THE AMOUNT IN TU1.**

TU2. Encounter wake turbulence that resulted in 10 or more degrees of aircraft roll ..... # RESULTING IN AIRCRAFT ROLL .....

**INTRODUCTION:**

The next few questions are about **weather-related events while airborne**.

During the last (TIME PERIOD), how many times did an aircraft on which you were a crewmember (READ QUESTION)?

WE1. Lack accurate weather information when crewmembers needed it while airborne ..... # LACK WEATHER INFORMATION .....      
**IF 0, SKIP TO WE2.**

A. (Of the [# WE1] times when crewmembers lacked accurate weather information while airborne, how many involved non-U.S. airports or controllers?/ Did this time when crewmembers lacked accurate weather information while airborne involve a non-U.S. airport or controller?) # INVOLVE NON-US AIRPORT OR CONTROLLER ...      
**THE AMOUNT IN WE1A CANNOT BE GREATER THAN THE AMOUNT IN WE1.**



B. (Of the [# WE1] times when crewmembers lacked accurate weather information while airborne, how many involved ATIS?/Did this time when crewmembers lacked accurate weather information while airborne involve ATIS?)

# INVOLVE ATIS.....

**THE AMOUNT IN WE1A AND WE1B COMBINED CANNOT BE GREATER THAN THE AMOUNT IN WE1.**

WE2. Fail to receive A.T.C. approval for a request to avoid severe weather .....

# FAIL RECEIVE ATC APPROVAL.....  
**IF 0, SKIP TO WE3.**

A. (Of the [# WE2] times crewmembers failed to receive A.T.C. approval to avoid severe weather, how many times was emergency authority invoked in these situations/Was emergency authority invoked in this situation?)

# EMERGENCY AUTHORITY INVOKED.....

**THE AMOUNT IN WE2A CANNOT BE GREATER THAN THE AMOUNT IN WE2.**

WE3. Divert to an alternate airfield because of weather .....

# DIVERT TO ALTERNATE AIRFIELD .....

WE4. Experience airframe icing that reduced the aircraft's ability to maintain altitude, speed, stability, or directional control.....

# EXPERIENCE AIRFRAME ICING.....

WE5. Encounter windshear or a microburst condition that resulted in an airspeed deviation of 15 knots or greater .....

# ENCOUNTER WINDSHEAR/MICROBURST .....

WE6. Encounter windshear or a microburst condition that resulted in a windshear avoidance maneuver .....

# RESULT IN WINDSHEAR AVOIDANCE.....

**IF A4=0, SKIP TO AC1.**

**INTRODUCTION:**  
The next few questions are about **passenger-related events**.

During the last (TIME PERIOD), how many times did an **in-flight** aircraft on which you were a crewmember (READ QUESTIONS):

CP1. Expedite landing or divert to an alternate airport due to a passenger medical emergency .....

# DUE TO PASSENGER MEDICAL EMERGENCY.....

CP2. Expedite landing or divert to an alternate airport due to a passenger disturbance.....

# DUE TO PASSENGER DISTURBANCE .....

CP3. During the last (TIME PERIOD), how many times did a crewmember leave the cockpit to handle a passenger disturbance on an inflight aircraft on which you were a crewmember .....

# CREWMEMBERS LEAVE COCKPIT .....



**INTRODUCTION:**

The next few questions are about **airborne conflicts**.

During the last (TIME PERIOD), how many times did an aircraft on which you were a crewmember (READ QUESTION)?

- AC1. Experience a bird strike..... # BIRD STRIKES .....
- AC2. Perform an evasive action to avoid an imminent in-flight collision with another aircraft that was never closer than 500 feet including evasive action in response to a TCAS advisory? ..... # EVASIVE ACTIONS.....
- AC3. Experience less than 500 feet of separation from another aircraft while both aircraft were airborne ..... # LESS THAN 500 FEET SEPARATION .....

**INTRODUCTION:**

The next few questions are about **ground operations**.

During the last (TIME PERIOD), how many times did an aircraft on which you were a crewmember (READ QUESTION)?

- GE1. Go off the edge of a runway or taxiway while taxiing ..... # GO OFF EDGE RUNWAY/TAXIWAY .....
- GE2. Collide or nearly collide with a ground vehicle? ..... # COLLIDE WITH GROUND VEHICLE.....      
**IF 0, SKIP TO GE3.**
- A. (Of the [# in GE2] near collisions with a ground vehicle, how many occurred/Did this near collision with a ground vehicle occur) while your aircraft was on the ramp, apron or in the gate area? # ON RAMP/APRON/GATE AREA .....      

**THE AMOUNT IN GE2A CANNOT BE GREATER THAN THE AMOUNT IN GE2.**
- B. (Of the [# in GE2] near collisions with a ground vehicle, how many occurred/Did this near collision with a ground vehicle occur) while your aircraft was on the taxiway? # ON TAXIWAY.....      

**THE AMOUNT IN GE2A AND GE2B COMBINED CANNOT BE GREATER THAN THE AMOUNT IN GE2.**
- C. (Of the [# in GE2] near collisions with a ground vehicle, how many occurred/Did this near collision with a ground vehicle occur) while your aircraft was on the runway? # ON RUNWAY .....      

**THE AMOUNT IN GE2A, GE2B, AND GE2C COMBINED CANNOT BE GREATER THAN THE AMOUNT IN GE2.**
- GE3. Skid, slide, or hydroplane resulting in a significant increase in stopping distance during landing ..... # SKID/SLIDE/HYDROPLANE .....
- GE4. Experience a rejected takeoff..... # REJECTED TAKEOFFS .....



GE5.	Go off the edge of a runway while taking off or landing.....	# GO OFF EDGE OF RUNWAY.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
GE6.	Go off the end of the runway.....	# GO OFF END OF RUNWAY.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
GE7.	Inadvertently enter an active runway.....	# ENTER ACTIVE RUNWAY.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
GE8.	Begin takeoff roll while another aircraft occupied or was crossing the same runway.....	# TAKEOFF ROLL WITH OCCUPIED RUNWAY.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
GE9.	Land while another aircraft occupied or was crossing the same runway.....	# LAND ON OCCUPIED RUNWAY.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
GE10.	Nearly experience a ground collision with another aircraft while both aircraft were on the ground.....	# NEAR GROUND COLLISION.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <b>IF 0, SKIP TO AH1.</b>
A.	(Of the [# in GE10] near collisions with another aircraft, how many occurred/Did this near collision with another aircraft occur) while your aircraft was on the ramp, apron or in the gate area?	# ON RAMP/APRON/GATE AREA.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
<b>THE AMOUNT IN GE10A CANNOT BE GREATER THAN THE AMOUNT IN GE10.</b>			
B.	(Of the [# in GE10] near collisions with another aircraft, how many occurred/Did this near collision with another aircraft occur) while your aircraft was on the taxiway?	# ON TAXIWAY.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
<b>THE AMOUNT IN GE10A AND GE10B COMBINED CANNOT BE GREATER THAN THE AMOUNT IN GE10.</b>			
C.	(Of the [# in GE10] near collisions with another aircraft, how many occurred/Did this near collision with another aircraft occur) while your aircraft was on the runway?	# ON RUNWAY.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
<b>THE AMOUNT IN GE10A, GE10B, AND GE10C COMBINED CANNOT BE GREATER THAN THE AMOUNT IN GE10.</b>			

**INTRODUCTION:**

The next few questions are about **aircraft handling-related events**.

During the last (TIME PERIOD), how many times did an aircraft on which you were a crewmember (READ QUESTION)?

AH1.	Use some of its reserve fuel as defined by the F.A.Rs.....	# USE RESERVE FUEL.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH2.	Accept an A.T.C. clearance that the aircraft could not comply with because of its performance limits.....	# ACCEPT CLEARANCE NOT COMPLY WITH.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH3.	Lose sight of another aircraft from which the aircrew was trying to maintain visual separation	# LOSE SIGHT OF AIRCRAFT.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <b>IF 0, SKIP TO AH4.</b>
A.	(Of the [# in AH3] times an aircraft lost sight of another aircraft, how many occurred/Did losing sight of another aircraft occur) in marginal visual conditions of 3 miles or less?	# IN MARGINAL VISUAL CONDITONS.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
<b>THE AMOUNT IN AH3A CANNOT BE GREATER THAN THE AMOUNT IN AH3.</b>			



AH4.	Inadvertently land without clearance at an airport with an active control tower.....	# LAND W/O CLEARANCE .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH5.	Inadvertently begin takeoff roll without A.T.C. clearance at an airport with an active control tower.....	# TAKEOFF ROLL W/O CLEARANCE .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH6.	Inadvertently deviate from an assigned routing or A.T.C. vector for one minute or more.....	# DEVIATIONS .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH7.	Experience a tail strike on landing.....	# TAIL STRIKES ON LANDING.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH8.	Experience a tail strike on takeoff .....	# TAIL STRIKES ON TAKEOFF .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH9.	Experience a hard landing.....	# HARD LANDINGS.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH10.	Take off with an out-of-limit center of gravity.....	# TAKE-OFF OUT-OF-LIMIT CENTER OF GRAVITY	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH11.	Take-off overweight .....	# TAKE-OFF OVERWEIGHT.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH12.	Commence take-off roll with an improper aircraft configuration .....	# WITH IMPROPER CONFIGURATION.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH13.	Experience an unusual attitude for any reason.....	# UNUSUAL ATTITUDE .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH14.	Experience a valid stall warning or stick shaker activation.....	# STALL WARNING/STICK SHAKER ACTIVATION...	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
AH15.	Nearly collide with terrain or a ground obstruction while airborne? .....	# NEAR COLLISIONS/GROUND .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <b>IF 0, SKIP TO AD1.</b>

**INTERVIEWER: INCLUDES BUILDINGS**

- A. (Of the [# in AH15] near collisions with terrain or a ground obstruction, how many were/Was this near collision with terrain or a ground obstruction)-brought to your attention by A.T.C.?
- # ATC BROUGHT TO YOUR ATTENTION.....
- THE AMOUNT IN AH15A CANNOT BE GREATER THAN THE AMOUNT IN AH15.**
- B. (Of the [# in AH15] near collisions with terrain or a ground obstruction, how many were/Was this near collision with terrain or a ground obstruction) detected through direct sighting of the ground or obstruction?
- # DETECTED THROUGH DIRECT SIGHTING.....
- THE AMOUNT IN AH15A AND AH15B COMBINED CANNOT BE GREATER THAN THE AMOUNT IN AH15.**
- C. (Of the [# in AH15] near collisions with terrain or a ground obstruction, how many were/Was this near collision with terrain or a ground obstruction)-detected through activation of G.P.W.S. or E.G.P.W.S.?.....
- # DETECTED THROUGH GPWS/EGPWS.....
- THE AMOUNT IN AH15A, AH15B, AND AH15C COMBINED CANNOT BE GREATER THAN THE AMOUNT IN GE10.**
1. (How many of these [# in AH15c] near collisions were/Was this near collision) detected through activation of E.G.P.W.S.?
- # DETECTED THROUGH ACTIVATION OF EGPWS.....
- THE AMOUNT IN AH15C1 CANNOT BE GREATER THAN THE AMOUNT IN AH15C.**



**INTRODUCTION:**

The next few questions are about **altitude deviations**.

How many times during the last (TIME PERIOD) did an aircraft on which you were a crewmember (READ QUESTIONS)?

AD1. Inadvertently deviate from an assigned altitude by more than 300 feet?..... # ALTITUDE DEVIATIONS .....      
**IF 0, SKIP TO AD2.**

A. (Of the [# in AD1] deviations from an assigned altitude, how many were/Was this deviation from an assigned altitude) in response to a TCAS Resolution Advisory? # IN RESPONSE TO TCAS.....

**THE AMOUNT IN AD1A CANNOT BE GREATER THAN THE AMOUNT IN AD1.**

AD2. Descend below Minimum Safe Altitude when you were **not** following A.T.C. radar vectors ..... # NOT FOLLOWING ATC RADAR VECTORS .....

**INTRODUCTION:**

The next few questions are about **interactions with air traffic control**.

AT1. During the last (TIME PERIOD), how many times was an aircraft on which you were a crewmember unable to communicate with A.T.C. in a time-critical situation because of frequency congestion? # UNABLE TO COMMUNICATE WITH ATC .....      
**IF 0, SKIP TO AT2.**

These problems may have occurred on the ground, or while airborne in the terminal area, or while en route. I'm going to ask you about each.

A. (Of these [# in AT1] times you were unable to communicate with A.T.C. in a time-critical situation because of frequency congestion, how many occurred/Did the time you were unable to communicate with A. T.C in a time critical situation because of frequency congestion occur) **while on the ground?** # WHILE ON GROUND.....      
 # TIMES

**THE AMOUNT IN AT1A CANNOT BE GREATER THAN THE AMOUNT IN AT1.**

B. (Of these [# in AT1] times you were unable to communicate with A.T.C. in a time-critical situation because of frequency congestion, how many occurred/Did the time you were unable to communicate with A. T.C in a time critical situation because of frequency congestion occur) **while airborne in the terminal area?** # WHILE AIRBORNE .....      
 # TIMES

**THE COMBINED TOTALS IN AT1A AND AT1B CANNOT BE GREATER THAN 100.**



C. (Of these [# in AT11] times you were unable to communicate with A.T.C. in a time-critical situation because of frequency congestion, how many occurred/Did the time you were unable to communicate with A. T.C in a time critical situation because of frequency congestion occur) **while en route?**.....

# WHILE EN ROUTE.....      
# TIMES

**THE COMBINED TOTALS IN AT1A, AT1B, AND AT1C CANNOT BE GREATER THAN 100.**

AT2. How many times during the last (TIME PERIOD) did an aircraft on which you were a crewmember fly at an undesirably high altitude or airspeed on approach due to an A.T.C. clearance .....

# HIGH ALTITUDE OR AIRSPEED.....

**NOTE TO INTERVIEWERS: THIS INCLUDES BUT MAY NOT BE LIMITED TO "SLAM DUNK" APPROACHES.**



***Air Carrier Questionnaire***

***Section C:  
In-close Approach Changes***

**SECTION C: IN-CLOSE APPROACH CHANGES**

**INTRODUCTION:**

My next questions are about **clearance changes received on approach** within 10 miles of the runway threshold **that the flight crew did not request.**

IC1. During the last (TIME PERIOD), how many times did an aircraft on which you were a crewmember receive an unrequested clearance change to runway assignment, altitude restrictions or airspeed within 10 miles of the runway threshold?

# UNREQUESTED CLEARANCE CHANGES .....

**IF 00, DK OR RF, SKIP TO SECTION D.  
IF 01, CONTINUE WITH ROUTE A.  
IF 02 OR MORE, SKIP TO ROUTE B.**

**ROUTE A—ONLY ONE CHANGE**

A. Was this unrequested clearance change declined?

YES.....(SKIP TO SECTION D) .....001  
NO.....000  
RF.....(SKIP TO SECTION D) .....997  
DK.....(SKIP TO SECTION D) .....998

B. Did this unrequested clearance change result in (READ QUESTIONS)?

	YES	NO	RF	DK
1. An unstabilized approach.....	1	0	7	8
2. A go-around or missed approach.....	1	0	7	8
3. An airborne conflict.....	1	0	7	8
4. A wake turbulence encounter.....	1	0	7	8
5. Landing with out-of-limit tailwinds or crosswinds.....	1	0	7	8
6. Landing on a wrong runway .....	1	0	7	8
7. Landing long or fast.....	1	0	7	8
8. Landing without clearance .....	1	0	7	8
9. A conflict on the ground with another aircraft or ground vehicle?.....	1	0	7	8
10. Any other undesirable event after the clearance change? .....	1	0	7	8

a. What events occurred?

ASK a.

SKIP TO IC2.

SPECIFY: \_\_\_\_\_

**SKIP TO IC2.**



**ROUTE B—TWO OR MORE CHANGES**

A. Of the (# IN IC1) unrequested clearance changes, how many, if any, were declined?

# UNREQUESTED CLEARANCE CHANGES .....      
 IF NUMBER IN IC1A=NUMBER IN IC1, DK or RF, SKIP TO SECTION D.

IF ONLY ONE CHANGE REMAINS, GO TO ROUTE A, IC1B.

**THE NUMBER OF UNREQUESTED CLEARANCE CHANGES WAS (NUMBER IC1) SO THE NUMBER OF UNREQUESTED CLEARANCE CHANGES THAT WERE DECLINED HAS TO BE (NUMBER IN IC1) OR FEWER.**

B. How many of the accepted clearance changes resulted in (READ QUESTIONS)? IF 01 OR GREATER, ASK C.

**THE ANSWERS IN IC1B 1-10 CANNOT BE GREATER THAN IC1 MINUS IC1A.**

C.

Did (this/any of these) (EVENT) happen in the most recent **accepted** clearance change?

	# CHANGES	C.			
		YES	NO	RF	DK
1. An unstabilized approach.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1	0	7	8
2. A go-around or missed approach.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1	0	7	8
3. An airborne conflict .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1	0	7	8
4. A wake turbulence encounter.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1	0	7	8
5. Landing with out-of-limit tailwinds or crosswinds	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1	0	7	8
6. Landing on a wrong runway .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1	0	7	8
7. Landing long or fast.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1	0	7	8
8. Landing without clearance .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1	0	7	8
9. A conflict on the ground with another aircraft or ground vehicle?.....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1	0	7	8
10. Any other undesirable event after the clearance change? .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1	0	7	8

IF NONE, SKIP TO IC2. IF ≥1, ASK a.

1 ASK a.      0      7      8  
 SKIP TO IC2.

a. What events occurred?

SPECIFY: \_\_\_\_\_



**INTRODUCTION:**

(My next questions are about **this accepted clearance** change that we have been talking about./My next questions are about the **most recent clearance change** that the flight crew **accepted**.)

IC2. At which airport did this event occur? NAME OF AIRPORT: \_\_\_\_\_

A. Please tell me the location identifier for (AIRPORT). AIRPORT LOCATION ID: \_\_\_\_\_

IC3. **ASK ONLY IF TWO OR MORE MODELS REPORTED IN A3. IF ONLY ONE MODEL, SKIP TO IC4.**

Which model aircraft were you flying when this event occurred, the (LIST MODELS IN A3A)? **CODE MODEL FROM A3A** NAME/MODEL: \_\_\_\_\_

IC4. Were you a crewmember on an F.M.S. or F.M.C. equipped aircraft at the time of this event? YES.....1  
NO ..... (SKIP TO IC8).....0  
RF ..... (SKIP TO IC8).....7  
DK..... (SKIP TO IC8).....8

A. Was the F.M.S. or F.M.C. that was being used capable of storing multiple routes? YES.....1  
NO ..... (SKIP TO IC8).....0  
RF ..... (SKIP TO IC8).....7  
DK..... (SKIP TO IC8).....8

B. Are the navigation and communication frequency changes in this aircraft made through the F.M.S. or F.M.C.? YES.....1  
NO .....0  
RF .....7  
DK.....8

IC5. In response to this clearance change, did the flightcrew reprogram or attempt to reprogram the F.M.S. or F.M.C. YES.....1  
NO ..... (SKIP TO IC8).....0  
RF ..... (SKIP TO IC8).....7  
DK..... (SKIP TO IC8).....8

IC6. When programming changes were made or attempted, (READ QUESTIONS)?

	YES	NO	RF	DK
--	-----	----	----	----

A. Did the inputs load properly.....	1	0	7	8
--------------------------------------	---	---	---	---

B. Was it possible to complete the programming within available time .....	1	0	7	8
--	---	---	---	---

C. Were all of the programming inputs cross-checked by other crewmembers? .....	1	0	7	8
---	---	---	---	---

D. Were there other programming difficulties .....	1	0	7	8
--	---	---	---	---

ASK 1.

SKIP TO IC7.

1. Please describe these difficulties.

SPECIFY: \_\_\_\_\_



IC7.	Overall, did the F.M.S. or F.M.C. assist you in complying with the clearance change?	YES .....	1
		NO .....	0
		RF .....	7
		DK .....	8

**ONLY IF ROUTE B IC1A IS 2 OR GREATER, READ INTRODUCTION:**

**INTRODUCTION:**

Before we continue, I want to remind you that these questions are still about the **most recent** unrequested clearance change within 10 miles of the runway threshold.

IC8.	Was the aircraft on an instrument approach prior to the clearance change?	YES .....	1
		NO .....	0
		RF .....	7
		DK .....	8

A.	Did this change involve a change from an instrument approach to a visual approach?	YES .....	1
		NO .....	0
		RF .....	7
		DK .....	8

IC9.	Did this change involve a change from a visual approach to an instrument approach?	YES .....	1
		NO .....	0
		RF .....	7
		DK .....	8

IC10.	Was the aircraft programmed for an auto-coupled approach at the time of the clearance change?	YES .....	1
		NO .....	0
		RF .....	7
		DK .....	8
		NA .....	9

IC11.	Did this clearance change the aircraft's runway assignment?	YES .....	1
		NO .....	0
		RF .....	7
		DK .....	8

A.	Did the runway reassignment involve a change from one runway to another parallel runway	YES .....	1
		NO .....	0
		RF .....	7
		DK .....	8

IC12.	Did this clearance change the aircraft's altitude assignment?	YES .....	1
		NO .....	0
		RF .....	7
		DK .....	8

IC13.	Did this clearance change the aircraft's airspeed assignment?	YES .....	1
		NO .....	0
		RF .....	7
		DK .....	8



**ONLY IF ROUTE B IC1A IS 2 OR GREATER, READ INTRODUCTION:**

**INTRODUCTION:**

Once again, before we continue, I want to remind you that these questions are still about the **most recent** unrequested clearance change within 10 miles of the runway threshold.

IC14.	In response to this clearance change, did the flightcrew (READ QUESTIONS)?	YES	NO	RF	DK
	A. Change a navigational aid frequency .....	1 (ASK 1)	0 (SKIP TO B)	7 (SKIP TO B)	8 (SKIP TO B)
	1. Confirm the identity of the new navaid.....	1	0	7	8
	B. Change the A.T.C. communication frequency .....	1	0	7	8
	C. Revise the approach briefing .....	1	0	7	8
	D. Change the airplane configuration .....	1	0	7	8
	E. Disconnect any of the automated control systems? .....	1	0	7	8

IC15.	Was the flight crew given a reason for the clearance change?	YES .....	1
		NO .....	0 (SKIP TO IC16)
		RF .....	7 (SKIP TO IC16)
		DK .....	8 (SKIP TO IC16)

A.	Was one of the reasons given (READ QUESTIONS)?	YES	NO	RF	DK
	1. Wake turbulence avoidance .....	1	0	7	8
	2. Maintaining traffic flow and separation .....	1	0	7	8
	3. Providing a runway favorable to your gates .....	1	0	7	8
	4. A change in active runways .....	1	0	7	8
	5. Weather or wind factors .....	1	0	7	8
	6. Noise abatement factors .....	1	0	7	8
	7. A.T.C. equipment problems .....	1	0	7	8
	8. Was any other reason given for the clearance change .....	1 ASK a	0	7	8

} SKIP TO IC16

a. What reasons were given?

SPECIFY: \_\_\_\_\_



IC16.	Did responding to the clearance change (READ QUESTIONS)?	YES	NO	RF	DK
A.	reduce the quality of cockpit coordination.....	1	0	7	8
B.	reduce situational awareness .....	1	0	7	8
C.	Compromise traffic watch .....	1	0	7	8
D.	Was safety compromised in any other way. ....	1 ASK 1.	0	7	8

SKIP TO SECTION D.

1. How was safety compromised?

SPECIFY: \_\_\_\_\_



# ***Air Carrier Questionnaire***

## ***Section C: JIMDAT Questions***

**SECTION C: JIMDAT QUESTIONS**

**INTRODUCTION:**

In the next section, I will be asking you some questions about your flying experience and training as it relates to terminal operations and instrument approaches. As we go forward, please limit your answers to those things that you personally experienced.

JD1. Is the aircraft you flew (most) during the last 60 days equipped with G.P.W.S?  
 GPWS = ground proximity warning system

NO ..... (SKIP TO JD2) ..... 0  
 YES ..... 1  
 RF ..... (SKIP TO JD2) ..... 7  
 DK ..... (SKIP TO JD2) ..... 8

A. Is it equipped with a terrain display, such as you find in an enhanced G.P.W.S, or Terrain Avoidance Warning System, also known as TAWS (taws)?

NO ..... (SKIP TO JD2) ..... 0  
 YES ..... 1  
 RF ..... (SKIP TO JD2) ..... 7  
 DK ..... (SKIP TO JD2) ..... 8

B. Does your airline require the terrain display to be selected during takeoff at specific airports?

NO OR NEVER ..... (SKIP TO JD2) ..... 0  
 YES OR SOMETIMES ..... 1  
 RF ..... (SKIP TO JD2) ..... 7  
 DK ..... (SKIP TO JD2) ..... 8

C. Does your airline require the terrain display to be selected during descent and landing?

NO OR NEVER ..... 0  
 YES OR SOMETIMES ..... 1  
 RF ..... 7  
 DK ..... 8

D. For times that terrain display is not required, do you usually use it during takeoff?

NO, NOT USUALLY ..... 0  
 YES, USUALLY ..... 1  
 RF ..... 7  
 DK ..... 8

E. For times that terrain display is not required, do you usually use it during descent and landing?

NO, NOT USUALLY ..... 0  
 YES, USUALLY ..... 1  
 RF ..... 7  
 DK ..... 8

F. Has the terrain display experienced a map shift on any aircraft on which you were a crew member?

NO OR NEVER ..... 0  
 YES OR SOMETIMES ..... 1  
 RF ..... 7  
 DK ..... 8

JD2. During the last 60 days, how many times did an aircraft on which you were a crewmember experience a ground proximity warning?

# TIME .....

**IF ZERO, SKIP TO JD3**

A. Was (this warning/ the most recent of these warnings) valid?

NO ..... (SKIP TO JD3) ..... 0  
 YES ..... 1  
 RF ..... (SKIP TO JD3) ..... 7  
 DK ..... (SKIP TO JD3) ..... 8

B. During this (most recent) warning, did you see the approaching terrain on the terrain display before you heard the aural warning?

NO ..... (SKIP TO JD3) ..... 0  
 YES ..... 1  
 RF ..... (SKIP TO JD3) ..... 7  
 DK ..... (SKIP TO JD3) ..... 8



JD3. During the last 60 days, how many times did which you were a crewmember receive a Minimum Safe Altitude Warning Alert, also known as an MSAW (em-saw) or an altitude awareness call from an A.T.C controller?

# TIME .....

**IF ZERO, SKIP TO JD4**

A. (During the most recent of these events,) What did your aircraft do in response to the warning?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

B. (During this most recent A.T.C. warning event,) Did the aircraft have an enhanced G.P.W.S. or T.A.W.S. (taws) installed?

NO ..... (SKIP TO JD4) ..... 0  
 YES ..... 1  
 RF ..... (SKIP TO JD4) ..... 7  
 DK ..... (SKIP TO JD4) ..... 8

GPWS = GROUND PROXIMITY WARNING SYSTEM  
 TAWS = TERRAIN AVOIDANCE WARNING SYSTEM

1. Did your aircraft also receive a ground proximity warning from this system?

NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

JD4. How many times in the last 60 days, did an aircraft on which you were a crewmember fly a non-precision approach?

# TIME .....

**IF ZERO, SKIP TO JD8**

A. (Was this non-precision approach flown in I.M.C? / How many of these non-precision approaches were flown in I.M.C?)

# TIME .....

IMC = INSTRUMENT METEOROLOGICAL CONDITIONS



JD5. How many times in the last 60 days did an aircraft on which you were a crewmember fly an un-stabilized non-precision approach where the aircraft was not in landing configuration, on airspeed, or on glide-slope by 1,000 feet I.M.C or 500 feet V.M.C?

# TIME .....

MC = METEOROLOGICAL CONDITIONS  
VMC = VISUAL METEOROLOGICAL CONDITIONS

**IF ZERO, SKIP TO JD6**

A. (During the most recent un-stabilized non precision approach,) What factors contributed to the inability to conduct a stabilized approach?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

JD6. During the last 60 days, did an aircraft on which you were a crewmember have the choice between flying a constant angle approach or step-down non-precision approach?

NO ..... (SKIP TO JD7) ..... 0  
YES ..... 1  
RF ..... (SKIP TO JD7) ..... 7  
DK ..... (SKIP TO JD7) ..... 8

A. Which did you choose most often, the constant angle or step-down non-precision approach?

CONSTANT ANGLE ..... 1  
STEP-DOWN ..... 2  
CHOOSE BOTH THE SAME ..... 3  
RF ..... 7  
DK ..... 8

JD7. During the last 60 days, how many times did an aircraft on which you were a crewmember fly a non-precision approach to a runway when glide-slope information was available to you?

# TIME .....

**IF ZERO, SKIP TO JD8**

A. During (this/the most recent) non-precision approach, did you use the glide-slope information?

NO ..... 0  
YES ..... 1  
RF ..... 7  
DK ..... 8

JD8. (Is the aircraft you fly/Are any of the aircraft you fly) LNAV/VNAV (L-nav/V-nav) capable?

NO ..... (SKIP TO JD9) ..... 0  
YES ..... 1  
RF ..... (SKIP TO JD9) ..... 7  
DK ..... (SKIP TO JD9) ..... 8

LNAV = LATERAL NAVIGATION  
VNAV = VERTICAL NAVIGATION

A. Does your airline ever require pilots to use LNAV/VNAV (L-nav/V-nav) to fly constant angle approaches?

NO ..... (SKIP TO JD9) ..... 0  
YES ..... 1  
RF ..... (SKIP TO JD9) ..... 7  
DK ..... (SKIP TO JD9) ..... 8



1. In the last 60 days, how many times did an aircraft on which you were a crewmember use LNAV / VNAV (L-nav/V-nav) to fly constant angle approaches? # TIME .....

B. During the last 60 days, how many times did an aircraft on which you were a crewmember not fly an LNAV/VNAV (L-nav/V-nav) approach when that option was available? # TIME .....

**IF ZERO, SKIP TO JD9**

1. Please explain why the LNAV/VNAV (L-nav/V-nav) approach wasn't flown (during the most recent time that it was available).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

JD9. During the last 60 days, was an aircraft on which you were a crewmember equipped to meet Required Navigation Performance standards, sometimes called R.N.P? NO ..... (SKIP TO JD10) ..... 0  
 YES ..... 1  
 RF ..... (SKIP TO JD10) ..... 7  
 DK ..... (SKIP TO JD10) ..... 8

A. Does your airline choose to use R.N.P? NO ..... (SKIP TO JD10) ..... 0  
 YES ..... 1  
 RF ..... (SKIP TO JD10) ..... 7  
 DK ..... (SKIP TO JD10) ..... 8

B. How many times in the last 60 days did an aircraft on which you were a crewmember fly an R.N.P approach? # TIME .....

C. During the last 60 days, how many times did any aircraft on which you were a crewmember not fly an R.N.P approach when that option was available? # TIME .....

**IF ZERO, SKIP TO JD10**

1. Please explain why the R.N.P. approach was not flown (most recent time that it was available).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



JD10. **IF JD4 = 0, SKIP TO JD11.** During the last 60 days, how many times did an aircraft on which you were a crewmember fly a non-precision approach into an airport without D.M.E.?

# TIME .....

**IF ZERO, SKIP TO JD11**

DME = DISTANCE MEASURING EQUIPMENT

A. During (this event/the most recent of these events), would D.M.E have improved your ability to land safely?

NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

JD11. During the last 60 days, how many times did an aircraft on which you were a crewmember fly an instrument approach into an airport where glide-slope or other ground based vertical angle guidance information was unavailable?

# TIME .....

**IF ZERO, SKIP TO JD12**

A. During (this approach/the most recent of these approaches), was D.M.E used to calculate the rate of descent for landing?

NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

JD12. During the last 60 days, how many times did an aircraft on which you were a crewmember land on a runway without VASI (vasi) or PAPI (papi)?

# TIME .....

VASI = VERTICAL APPROACH SLOPE INDICATOR  
 PAPI = PRECISION APPROACH PATH INDICATOR

A. During the most recent of these events) would VASI (vasi) or PAPI (papi) have improved the aircraft's ability to land safely?

NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

I would now like to ask you some questions about your airline's written standard operating procedures or SOPs.

JD13. Do your airline's written SOPs include Controlled Flight into Terrain prevention, sometimes called C-FIT (C-fit)?

NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

JD14. Do your airline's written SOPs talk about how to avoid circumstances that could lead to an in-flight loss of control?

NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

JD15. Do your airline's written SOPs talk about how to perform recovery from unusual **attitudes** and departure from controlled flight?

NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

JD16. Do your airline's written SOPs talk about how to avoid approach and landing accidents?

NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8



JD17.	Do your airline's written SOPs talk about how to fly non-precision approaches?	NO..... 0 YES..... 1 RF..... 7 DK..... 8
JD18.	Do your airline's written SOPs require the use of constant angle non-precision approaches when that option is available?	NO..... 0 YES..... 1 RF..... 7 DK..... 8
JD19.	Do your airline's written SOPs talk about how to respond to E.G.P.W.S warnings?	NO..... 0 YES..... 1 RF..... 7 DK..... 8
	EGPWS = ENHANCED GROUND PROXIMITY WARNING SYSTEM	

Now I would like to ask some questions about your recurrent training. By recurrent training I mean training conducted periodically that is designed to maintain your skills and knowledge. CLARIFICATION: This does not include transition or initial training. Recurrent training can include ground school, simulator training sessions, and any training conducted in the aircraft. I am going to read a list of issues. For each issue, please indicate if that topic or issue was covered during your last recurrent training.

JD20.	In what month and year did you receive your most recent recurrent training?	MONTH..... <input type="text"/> <input type="text"/> YEAR..... <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
JD21.	Did your most recent recurrent training talk about basic airmanship?	NO..... 0 YES..... 1 RF..... 7 DK..... 8
A.	Did your most recent recurrent training talk about normal approach procedures?	NO..... 0 YES..... 1 RF..... 7 DK..... 8
B.	Did your most recent recurrent training talk about approach briefings?	NO..... 0 YES..... 1 RF..... 7 DK..... 8
C.	Did your most recent recurrent training talk about criteria for initiating go-around and missed approaches?	NO..... 0 YES..... 1 RF..... 7 DK..... 8
D.	Did your most recent recurrent training talk about go-around and missed approach execution?	NO..... 0 YES..... 1 RF..... 7 DK..... 8
E.	Did your most recent recurrent training talk about emergency or abnormal conditions procedures?	NO..... 0 YES..... 1 RF..... 7 DK..... 8



Now I would like to ask you some questions concerning training you may have received addressing controlled flight into terrain, or C-FIT (C-fit), and other issues

- JD22. Have you received C-FIT (C-fit) prevention training from your airline? NO ..... (SKIP TO JD23) ..... 0  
 YES ..... 1  
 RF ..... (SKIP TO JD23) ..... 7  
 DK ..... (SKIP TO JD23) ..... 8
- A. In what month and year did you receive your most recent C-FIT (C-fit) prevention training? MONTH .....     
 YEAR .....
- B. Did your most recent C-FIT (C-fit) prevention training talk about minimum obstruction clearance altitudes or MOCA (mo ca)? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8
- C. Did your most recent C-FIT (C-fit) prevention training talk about minimum enroute altitudes or M.E.A? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8
- D. Did your most recent C-FIT (C-fit) prevention training talk about grid NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8
- MORA = MINIMUM OPERATING RADAR ALTITUDE
- E. Did your most recent C-FIT (C-fit) prevention training talk about G.P.W.S or E.G.P.W.S? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8
- GPWS = GROUND PROXIMITY WARNING SYSTEM  
 EGPWS = ENHANCED GROUND PROXIMITY WARNING SYSTEM
- F. Did your most recent C-FIT (C-fit) prevention training talk about escape maneuvers in response to G.P.W.S or G.P.W.S warnings? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8
- GPWS = GROUND PROXIMITY WARNING SYSTEM  
 EGPWS = ENHANCED GROUND PROXIMITY WARNING SYSTEM
- G. Did your most recent C-FIT (C-fit) prevention training talk about drift down procedures after engine failure? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8
- H. Did your most recent C-FIT (C-fit) prevention training talk about maintaining situational awareness? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8



- I. Did your most recent C-FIT (C-fit) prevention training talk about cockpit resource management, or C.R.M as it relates to C-FIT (C-fit) recovery?
  - NO ..... 0
  - YES ..... 1
  - RF ..... 7
  - DK ..... 8

NOTE: CRM CAN ALSO = CREW RESOURCE MANAGEMENT

- J. How would you rate the quality of the most recent C-FIT (C-fit) prevention training you received from your airline? Would you say it was (READ CATEGORIES)?
  - EXCELLENT ..... 1
  - GOOD ..... 2
  - FAIR ..... 3
  - POOR ..... 4
  - VERY POOR ..... 5

- JD23. Did you receive training specifically in upset recovery from your airline?
  - NO ..... (SKIP TO JD24) ..... 0
  - YES ..... 1
  - RF ..... (SKIP TO JD24) ..... 7
  - DK ..... (SKIP TO JD24) 8

- A. In what month and year did you receive your most recent training in upset recovery?
  - MONTH .....
  - YEAR.....

- B. Was this training received in a simulator, in a ground school, or both?
  - SIMULATOR ..... 1
  - GROUND SCHOOL ..... 2
  - BOTH ..... 3
  - RF ..... 7
  - DK ..... 8

- C. How would you rate the quality of the upset recovery training you received? Would you say it was (READ CATEGORIES)?
  - EXCELLENT ..... 1
  - GOOD ..... 2
  - FAIR ..... 3
  - POOR ..... 4
  - VERY POOR ..... 5

- JD24. Does your airline provide training in Cockpit or Crew Resource Management, sometimes called C.R.M?
  - NO ..... (SKIP TO JD25) ..... 0
  - YES ..... 1
  - RF ..... (SKIP TO JD25) ..... 7
  - DK ..... (SKIP TO JD25) ..... 8

- A. Have you received this C.R.M training?
  - NO ..... (SKIP TO JD25) ..... 0
  - YES ..... 1
  - RF ..... (SKIP TO JD25) ..... 7
  - DK ..... (SKIP TO JD25) ..... 8

- B. Did this C.R.M. training change how you manage the flight deck?
  - NO ..... 0
  - YES ..... 1
  - RF ..... 7
  - DK ..... 8

- C. Do you have suggestions for how the C.R.M training might be improved?
  - NO ..... 0
  - YES ..... 1
  - RF ..... 7
  - DK ..... 8

D. What suggestions do you have?

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JD25.	Does your airline have a no-fault missed approach or go-around policy?	NO ..... (SKIP TO JD26) ..... 0 YES ..... 1 RF ..... (SKIP TO JD26) ..... 7 DK ..... (SKIP TO JD26) ..... 8
	CLARIFICATION: No fault means that the airline does not apply disciplinary action or criticize pilots who exercise their authority to exercise a missed approach or go around.	
	A. Would you favor the institution of such policy, oppose it, or neither favor nor oppose it?	FAVOR ..... 1 OPPOSE ..... 2 NEITHER FAVOR NOR OPPOSE ..... 3 RF ..... 7 DK ..... 8
JD26.	During the last 60 days did you perform a missed approach or go around?	NO ..... (SKIP TO JD27) ..... 0 YES ..... 1 RF ..... (SKIP TO JD27) ..... 7 DK ..... (SKIP TO JD27) ..... 8
	A. Did you receive any feedback from your airline regarding this missed approach	NO ..... (SKIP TO JD27) ..... 0 YES ..... 1 RF ..... (SKIP TO JD27) ..... 7 DK ..... (SKIP TO JD27) ..... 8
	B. Was that feedback positive, negative, or both positive and negative?	POSITIVE ..... 1 NEGATIVE ..... 2 BOTH POSITIVE AND NEGATIVE ..... 3 RF ..... 7 DK ..... 8
JD27.	Does your airline participate in the safety reporting program called A-SAP (A-sap) also known as the Aviation Safety Action Program?	NO ..... (SKIP TO JD28) ..... 0 YES ..... 1 RF ..... (SKIP TO JD28) ..... 7 DK ..... (SKIP TO JD28) ..... 8
	A. Have you been briefed on this A-SAP (A-sap) program?	NO ..... 0 YES ..... 1 RF ..... 7 DK ..... 8
	B. Were you told about the general purpose of the A-SAP (A-sap) program?	NO ..... 0 YES ..... 1 RF ..... 7 DK ..... 8
	C. Were you told how to submit an A-SA A-sap) report?	NO ..... 0 YES ..... 1 RF ..... 7 DK ..... 8
	D. If the situation arises in the future, would you submit an A-SAP (A-sap) report?	NO ..... 0 YES ..... (SKIP TO JD27E) ..... 1 RF ..... (SKIP TO JD27E) ..... 7 DK ..... (SKIP TO JD27E) ..... 8
	1. Why not?	
	_____	
	_____	
	_____	
	_____	



- |   |                               |   |
|---|-------------------------------|---|
| E. Do you believe that the confidentiality of A-SAP (A-sap) data is adequately protected? | NO.....                       | 0 |
|   | YES..... (SKIP TO JD27E)..... | 1 |
|   | RF..... (SKIP TO JD27E).....  | 7 |
|   | DK..... (SKIP TO JD27E).....  | 8 |

CLARIFICATION: Confidentiality refers to both the reporter and to the use of the data.

1. Why not?

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- |   |          |   |
|---|----------|---|
| F. Are you aware of any positive changes program other than A-SAP (A-sap) for receiving safety reports from pilots? | NO.....  | 0 |
|   | YES..... | 1 |
|   | RF.....  | 7 |
|   | DK.....  | 8 |

**IF ZERO, SKIP TO JD29**

- |  |                             |   |
|--|-----------------------------|---|
| JD28. Does your airline have a procedure or program other than A-SAP (A-sap) for receiving safety reports from pilots? | NO..... (SKIP TO JD29)..... | 0 |
|  | YES.....                    | 1 |
|  | RF..... (SKIP TO JD29)..... | 7 |
|  | DK..... (SKIP TO JD29)..... | 8 |

- |  |          |   |
|--|----------|---|
| A. Are you aware of any positive changes that have resulted from this pilot reporting program? | NO.....  | 0 |
|  | YES..... | 1 |
|  | RF.....  | 7 |
|  | DK.....  | 8 |

- |  |                               |   |
|--|-------------------------------|---|
| B. Would you favor the establishment of an A-SAP (A-sap) program, oppose it, or neither favor nor oppose it? | FAVOR.....                    | 1 |
|  | OPPOSE.....                   | 2 |
|  | NEITHER FAVOR NOR OPPOSE..... | 3 |
|  | RF.....                       | 7 |
|  | DK.....                       | 8 |

- |   |                               |   |
|---|-------------------------------|---|
| JD29. Does your airline have a Flight Operations Quality Assurance Program, sometimes called FOQA (FO Qua)? | NO..... (ASK JD29A).....      | 0 |
|   | YES..... (SKIP TO JD29B)..... | 1 |
|   | RF..... (SKIP TO JD30).....   | 7 |
|   | DK..... (SKIP TO JD30).....   | 8 |

CLARIFICATION: This is a program at some airlines that analyzes operational data routinely collected from the flight data recorders with concurrence and oversight by the pilot's union or association at that airline.

- |  |                               |   |
|--|-------------------------------|---|
| A. Would you favor the establishment of a FOQA (FO Qua) program at your airline, oppose it, or neither favor nor oppose? | FAVOR.....                    | 1 |
|  | OPPOSE.....                   | 2 |
|  | NEITHER FAVOR NOR OPPOSE..... | 3 |
|  | RF.....                       | 7 |
|  | DK.....                       | 8 |

**IF ZERO, SKIP TO JD30**



B. Have you been briefed on the program? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

C. Do you believe that the confidentiality of FOQA (FO Qua) data is adequately protected? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

CLARIFICATION: Confidentiality refers to both the identity of the pilot flying the aircraft and to the use of the data.

D. Are you aware of any safety improvements that have resulted from the FOQA (FO Qua) program? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

We are interested in hearing about the safety culture at your airline, as expressed by your senior management. By senior management, we mean the C.E.O., Director of Safety, V.P. for Safety, Director of Flight Operations, and other senior management.

CEO = CHIEF EXECUTIVE OFFICER  
 VP = VICE PRESIDENT

JD30. Does your airline have a C.E.O. mission statement on safety? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8  
 CEO = CHIEF EXECUTIVE OFFICER

JD31. Does your airline have a Director of Safety? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

JD32. Does your airline have a V.P. of Safety? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8  
 VP = VICE PRESIDENT

JD33. Have you observed a strong commitment to safety among senior management? (This question focuses on behavior.) NO ..... (SKIP TO JD34) ..... 0  
 YES ..... 1  
 RF ..... (SKIP TO JD34) ..... 7  
 DK ..... (SKIP TO JD34) ..... 8

A. Is this senior management commitment to safety reflected throughout the organization? NO ..... 0  
 YES ..... 1  
 RF ..... 7  
 DK ..... 8

JD34. If you have a safety concern, do you have a mechanism for bringing that concern to the attention of senior management? NO ..... (SKIP TO SECTION D) ..... 0  
 YES ..... 1  
 RF ..... (SKIP TO SECTION D) ..... 7  
 DK ..... (SKIP TO SECTION D) ..... 8

A. How effective is this mechanism in reaching senior management? Would you say (READ CATEGORIES)? EXTREMELY EFFECTIVE ..... 1  
 VERY EFFECTIVE ..... 2  
 SOMEWHAT EFFECTIVE ..... 3  
 NOT VERY EFFECTIVE ..... 4  
 NOT AT ALL EFFECTIVE ..... 5



# ***Air Carrier Questionnaire***

## ***Section D: Questionnaire Feedback***

**SECTION D: QUESTIONNAIRE FEEDBACK**

**INTRODUCTION:**

I only have a couple more questions and these are about your reactions to the survey we have just done.

D1. How confident are you that you accurately counted all of the safety-related events that I asked you about? Would you say you were (READ QUESTIONS)?

Not confident at all..... 1  
 Slightly confident ..... 2  
 Moderately confident ..... 3  
 Very confident ..... 4  
 Extremely confident..... 5  
 RF ..... 7  
 DK..... 8

D2. Were any of the questions I asked confusing, poorly worded, or ambiguous?

YES ..... 1  
 NO ..... (SKIP TO D3) ..... 0  
 RF ..... (SKIP TO D3) ..... 7  
 DK ..... (SKIP TO D3) ..... 8

A. Could you please describe these question problems? RECORD VERBATIM. AT COMPLETION OF INTERVIEW, ENTER QUESTION NUMBER.

QUESTION NUMBER	RECORD VERBATIM

D3. Are there any safety problems happening within the national aviation system that I did not ask about but that you think may be worth asking about in further surveys?

YES ..... 1  
 NO ..... (SKIP TO D4) ..... 0  
 RF ..... (SKIP TO D4) ..... 7  
 DK ..... (SKIP TO D4) ..... 8

A. What are these problems?

SPECIFY: \_\_\_\_\_

D4. Do **you** use the internet at home?

YES ..... 1  
 NO ..... 0  
 RF ..... 7  
 DK ..... 8



D5. Do you have any other comments or suggestions about this survey? RECORD VERBATIM.

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**PANEL PASSWORD HINT**

TAKES INTERVIEWER TO "NEEDPAS" (PANEL 1<sup>ST</sup> QTR OR LATER QTR BUT NEVER COMPLETED INTERVIEW) OR PAST PATH (PANEL 2<sup>ND</sup> QTR OR LATER WHO PREVIOUSLY GAVE PASSWORD).

**NEEDPASS:** We would like to be able to link the information you give us each time we call. Because we do not link your information with your name, we would like to record an individual password we can use to link your data. May we please have a password that you will repeat to us when we call you again?

AGREED ..... 1  
 REFUSED ..... (ENDINT) ..... 7

**PICKPASS:** RECORD PASSWORD

TAKES INTERVIEWER TO ENDINT.

**ASKFORHINT:** Please give us a question that we can use as a hint in case you are unable to remember your password the next time we call. For instance, if you choose the word "RED" as your password, your hint question could be "What is my favorite color?"

RECORD HINT

**PASTPATH:** At the end of your last interview you gave us a password so we could link your information across quarters. Your hint question was (HINTQUESTION). What was your password? RECORD.

REMEMBERS PASSWORD ..... (REPPEATPASS) ..... 1  
 REFUSED ..... (ENDINT) ..... 7  
 CAN'T REMEMBER ..... (SUBSPASS) ..... 8

**REPEATPASS:** RECORD PASSWORD.

IF SUCCESSFUL, TAKES INTERVIEWER TO ENDINT.

**IF PASSWORD NOT IN PASSWORD LIST:** The word you gave me does not match our list of passwords. Perhaps I spelled it wrong. How do you spell your password? RETURN TO REPEATPASS FIELD AND RECORD PASSWORD AGAIN. IF WORD STILL DOESN'T MATCH AFTER TWO ATTEMPTS, CLICK, SUPPRESS.

IF SUPPRESSED, TAKES INTERVIEWER TO SUBSPASS.



**SUBSPASS:** Since (you can't remember/we don't seem to have) your previous password, we'd like you to choose another password and hint so we can link your future interviews. May we please have another password and hint that you will repeat to us when we call again?

YES ..... (PICKPASS) ..... 1  
NO ..... (ENDINT) ..... 0

**ENDINT** Again, thank you very much for your time and your help with this survey. Your input will help the aviation industry a great deal to measure the level of safety in the aviation system and will be held in confidence.

IF PANEL MEMBER: We'll be calling again in three months for your (2<sup>nd</sup>/3<sup>rd</sup>/last) interview.

QUESTIONNAIRE LENGTH:

QUESTIONNAIRE LENGTH (MINUTES) .....

