Statistical Summary of Commercial Jet Airplane Accidents

Worldwide Operations
1959 - 2006

1959

2006

Note to Our Readers

This year's summary incorporates a number of significant changes from past versions. Those changes are described below.

- *The definitions used in this summary have been clarified. Differences from International Civil Aviation Organization (ICAO) and National Transportation Safety Board (NTSB) definitions have been noted.*

- *The focus of this year's publication is on **Fatal Accidents**, whereas in prior years it was on **Hull Loss and/or Fatal Accidents**. There has been an increasing aviation-industry emphasis on fatalities as demonstrated by the Commercial Aviation Safety Team (CAST) selection of **Fatal Accident Rate** as their metric. Generating statistics based upon hull loss has been de-emphasized in this publication, although it has not been completely eliminated. Hull loss is not necessarily a good indicator of accident severity. The age of the fleet and the economics of repairs are resulting in less severe accidents becoming hull loss accidents. For example, last year's summary showed 22 hull losses in 2005, of which 8 involved a loss of life.*

- *The term **Major Accident** is introduced into this publication for the first time. This is a term defined and used by both the NTSB and Flight Safety Foundation (FSF). The definition can be found on page 6.*

- *Assignment of airplane types into "generations" has been discontinued along with the chart that used the "generations" (**Accident Rates by Years Following Introduction**). The message of the chart had become misleading because many other factors were significant contributors to the curves generated. The unlabeled "generation" lines have also been eliminated from the **Accident Rates by Airplane Type** chart on page 20.*

- *The **Accidents by Primary Cause** chart has been eliminated. Many investigating authorities do not assign a primary cause. Assigning a "primary cause" can oversimplify the complexities of the aviation system and can therefore be misleading.*

- *The **Excluded Events** section which contained **Hostile Action Events** and **Non-Hostile Events** has also been discontinued. This information had always been excluded from the accident data and charts, but had been included as information only. However, as this information is not regularly reported to Boeing, the charts were eliminated to avoid potential publication of inaccurate or incomplete information.*

- *Boeing conducted an audit of fatal accidents and hull loss accidents in our database. It included cross-checking against a number of national and international sources. The reader may observe changes in accident listings or accident rates on some charts.*

This page intentionally left blank

Contents

Published by:

Aviation Safety
Boeing Commercial Airplanes
P.O. Box 3707 M/S 67-TC
Seattle, Washington 98124-2207, U.S.A.
(425) 237-1242
E-mail: statsum@boeing.com
http://www.boeing.com/news/techissues
July 2007

Introduction

The accident statistics presented in this summary are confined to worldwide commercial jet airplanes that are heavier than 60,000 pounds maximum gross weight. Within that set of airplanes, there are two groups excluded:

1) Airplanes manufactured in the Commonwealth of Independent States (CIS) or the Union of Soviet Socialists Republic (USSR) are excluded because of the lack of operational data, and;

2) Commercial airplanes operated in military service. (However, if a military-owned commercial jet transport is used for civilian commercial service, those data will be included in this summary.)

The following airplane types are included in the statistics:

717	DC-8	A300	BAe 146	F-28	Concorde	L-1011	BAC 1-11	Comet 4
707, 720	DC-9	A300-600	Avro RJ-70/-85/-100	F-70				Trident
727	DC-10/MD-10	A310	CRJ-700/-900	F-100				Caravelle
737	MD-11	A320/321/319/318	EMB-170/-175/-190					Mercure
747	MD-80/-90	A330						CV-880/-990
757		A340						VC-10
767								
777								

Flight operations data for Boeing airplanes are developed internally from airline operator reports. Flight operations data for non-Boeing airplanes are developed from two external sources, AirCraft Analytical System (ACAS), published by Flight, and Client Aviation System Enquiry (CASE) published by Ascend.

Accident data are obtained, when available, from government accident reports. Otherwise, information is from operators, manufacturers, various government and private information services, and press accounts.

Definitions related to development of statistics in this summary are primarily based on corresponding International Civil Aviation Organization (ICAO), National Transportation Safety Board (NTSB), and Flight Safety Foundation (FSF) terms as explained in the next section.

Definitions

Airplane Accident: An occurrence associated with the operation of an airplane that takes place between the time any person boards the airplane with the intention of flight and such time as all such persons have disembarked, in which:

- Death or serious injury results from:
  - being in the airplane, or
  - direct contact with the airplane or anything attached thereto, or
  - direct exposure to jet blast; or

  (Excluding:
    - fatal and nonfatal injuries from natural causes; and
    - fatal and nonfatal self-inflicted injuries or injuries inflicted by other persons; and
    - fatal and nonfatal injuries of stowaways hiding outside the areas normally available to the passengers and crew; and
    - nonfatal injuries resulting from atmospheric turbulence, maneuvering, loose objects, boarding, disembarking, evacuation, maintenance and servicing; and
    - nonfatal injuries to persons not aboard the airplane**)**
- The airplane sustains substantial damage; or
- The airplane is missing or is completely inaccessible.

The following occurrences are **not** considered airplane accidents – those that are the result of experimental test flights or the result of a hostile action, including sabotage, hijacking, terrorism, and military action.

Note: This is generally consistent with the ICAO and the NTSB definition of an accident (see the referenced ICAO and NTSB Definitions section). The differences are:

1) *The ICAO and NTSB references to "aircraft" were changed to "airplane" and references to propellers and rotors were eliminated; and*

2) *This publication excludes events that result in nonfatal injuries from atmospheric turbulence, maneuvering, etc., nonfatal injuries to persons not aboard the airplane, and any events that result from an experimental test flight or from hostile action, such as sabotage, hijacking, terrorism, and military action.*

Note: Within this publication the term "accident" is used interchangeably with "airplane accident".

Definitions (continued)

Destroyed: The estimated or likely cost of repairs would have exceeded 50% of the new value of the airplane had it still been in production at the time of the accident.

Note: This definition is consistent with the FSF definition. The NTSB defines destroyed as damage due to impact, fire, or in-flight failures to an extent not economically repairable.

Fatal Injury: Any injury that results in death within 30 days of the accident.

Note: This is consistent with both the ICAO and the NTSB definition.

Major Accident: An accident in which any of three conditions is met:

- The airplane was destroyed; or
- There were multiple fatalities; or
- There was one fatality and the airplane was substantially damaged.

Note: This definition is consistent with the NTSB definition. It is also generally consistent with Flight Safety Foundation (FSF), except that FSF confines multiple fatalities to occupants. ICAO does not formally define the term major accident.

Serious Injury: An injury which is sustained by a person in an accident and which:

- requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- involves lacerations which cause severe hemorrhage, nerve, muscle or tendon damage; or
- involves injury to any internal organ; or
- involves second or third degree burns, or any burns affecting more than 5 percent of the body surface; or
- involves verified exposure to infectious substances or injurious radiation.

Note: This is consistent with the ICAO definition. It is also consistent with the NTSB except for the last bullet which is not included in the NTSB definition.

Definitions (continued)

Substantial Damage: Damage or failure which adversely affects the structural strength, performance, or flight characteristics of the airplane, and which would normally require major repair or replacement of the affected component.
Substantial damage is **not** considered to be:

- Engine failure or damage limited to an engine if only one engine fails or is damaged
- Bent fairings or cowlings
- Dents in the skin
- Small puncture holes in the skin
- Damage to wheels
- Damage to tires
- Damage to flaps
- Damage to engine accessories
- Damage to brakes
- Damage to wingtips

Note 1. – This is generally consistent with the NTSB definition of substantial damage except: 1) It deletes reference to "puncture holes in the fabric" and "ground damage to rotor or propeller blades"; and 2) It deletes "damage to landing gear" from the list of items not considered to be substantial damage.

Note 2. – ICAO does not define the term substantial damage. Still, the above definition is generally consistent with the ICAO definition of structural damage contained within part b) of the ICAO accident definition.

Boeing Terms

The terms on this page were created by Boeing for this publication and do not have corresponding equivalents in ICAO, the NTSB, etc.

Accident Rates: In general, this expression is a measure of accidents per million departures. Departures (or flight cycles) are used as the basis for calculating rates, since there is a stronger statistical correlation between accidents and departures than there is between accidents and flight hours, or between accidents and the number of airplanes in service, or between accidents and passenger miles or freight miles. Airplane departures data are continually updated and revised as new information and estimating processes become available. These form the baseline for the measure of accident rates and, as a consequence, rates may appear to vary between editions of this publication.

Airplane Collisions: Events involving two or more airplanes are counted as separate events, one for each airplane. For example, destruction of two airplanes in a collision is considered to be two separate accidents.

Fatal Accident: An accident that results in fatal injury.

Hull Loss: Airplane totally destroyed or damaged beyond economic repair. Hull loss also includes but is not limited to events in which:

- The airplane is missing; or
- The search for the wreckage has been terminated without it being located; or
- The airplane is completely inaccessible.

Note: Neither ICAO nor the NTSB has a definition for hull loss.

Exclusions

Certain airplanes and events are excluded from consideration as accidents in this summary. This is a complete list of exclusions.

Excluded Airplanes

Airplanes manufactured in the Commonwealth of Independent States (CIS) or the Union of Soviet Socialists Republic (USSR) are excluded because of the lack of operational data. Commercial airplanes operated in military service are also excluded. (However, if a military-owned commercial jet transport is used for civilian commercial service, those data are included in this summary.)

Excluded Events

- Fatal and nonfatal injuries from natural causes
- Fatal and nonfatal self-inflicted injuries or injuries inflicted by other persons
- Fatal and nonfatal injuries of stowaways hiding outside the areas normally available to the passengers and crew
- Nonfatal injuries resulting from atmospheric turbulence, maneuvering, loose objects, boarding, disembarking, evacuation, and maintenance and servicing
- Nonfatal injuries to persons not aboard the airplane
- Experimental test flights (However, maintenance test flights, ferry, positioning, training, and demonstration flights are not excluded events.)
- Sabotage, hijacking, terrorism, and military action

Referenced ICAO and NTSB Definitions

International Civil Aviation Organization (ICAO) and the National Transportation Safety Board (NTSB) definitions are included below for reference.

Accident

ICAO defines an **accident** as follows:

An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which:

a) a person is fatally or seriously injured as a result of:
   - being in the aircraft, or
   - direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
   - direct exposure to jet blast

   except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
b) the aircraft sustains damage or structural failure which:
   - adversely affects the structural strength, performance, or flight characteristics of the aircraft, and
   - would normally require major repair or replacement of the affected component,

   except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or
c) the aircraft is missing or is completely inaccessible.

The NTSB defines an **aircraft accident** as follows:

Aircraft accident means an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage.

Referenced ICAO and NTSB Definitions (continued)

Serious Injury

ICAO defines **serious injury** as follows:

An injury which is sustained by a person in an accident and which:

a) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
b) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
c) involves lacerations which cause severe hemorrhage, nerve, muscle or tendon damage; or
d) involves injury to any internal organ; or
e) involves second or third degree burns, or any burns affecting more than 5 percent of the body surface; or
f) involves verified exposure to infectious substances or injurious radiation.

The NTSB defines **serious injury** as follows:

Serious injury means any injury which:

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

Substantial Damage

The NTSB defines **substantial damage** as follows:

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

ICAO does not define the term **substantial damage**.

Airplane Accidents

All Accidents – Worldwide Commercial Jet Fleet – 2006

Date	Airline	Model (A/P Age Yrs)	Type of Operation	Accident Location	Phase of Flight	Event Description	Damage Category	Hull Loss	Injury Category	Onboard Fatalities / Onboard Occupants (External Fatalities)	Major Accident
16-Jan-06	Continental Airlines	737-500 (11)	Sched Pax	El Paso, TX, USA	Parked	While the airplane was being prepared for departure, a mechanic was fatally injured during engine troubleshooting.			Fatal	(1)	
7-Feb-06	UPS	DC-8 (39)	Sched Cargo	Philadelphia, PA, USA	Initial Approach	A fire started in flight. After an emergency landing, all 3 crew members evacuated with minor injuries, but the airplane was completely engulfed by the fire.	Destroyed	X			X
4-Mar-06	Air Macau	A321 (7)	Sched Pax	Macau, China	Tow	The airplane was being pushed back when the tow bar broke, the airplane stopped suddenly, and 1 passenger was seriously injured.			Serious		
4-Mar-06	Lion Air	MD-82 (20)	Sched Pax	Surabaya, Indonesia	Landing	On landing rollout, upon application of reverse thrust, the airplane departed the right side of the runway, substantially damaging the NLG and E&E bay. There were no injuries.	Substantial Damage	X			
18-Mar-06	Air Algerie	737-600 (4)	Charter Pax	Seville, Spain	Landing	The airplane was substantially damaged when it touched down hard during landing. Its RH MLG subsequently fractured and collapsed. There were minor injuries during evacuation.	Substantial Damage				
19-Apr-06	United Airlines	777-200 (6)	Sched Pax	Shanghai, China	Descent	At the top of descent, the airplane experienced a TCAS RA advisory in the vicinity of a climbing A340. One passenger was seriously injured during the avoidance maneuver.			Serious		
3-May-06	Armavia	A320 (11)	Sched Pax	(near) Sochi, Russia	Final Approach	The airplane crashed into the sea in bad weather while making a second attempt to land.	Destroyed	X	Fatal	113/113	X
30-May-06	Shuttle America	EMB 170 (1)	Sched Pax	Dulles, VA, USA	Landing	Airplane landed with the NLG retracted, sustaining substantial damage. A serious injury occurred during the evacuation.	Substantial Damage		Serious		
4-Jun-06	Arrow Cargo	DC-10 (33)	Sched Cargo	Managua, Nicaragua	Landing	The airplane overran the runway, collapsing the NLG, causing substantial damage to the forward fuselage. There were no injuries.	Substantial Damage	X			
7-Jun-06	TradeWinds Airlines	747-200SF (24)	Charter Cargo	Medellin, Colombia	Takeoff	Near V1, the crew heard a loud explosion, rejected the takeoff, and overran the runway, substantially damaging the airplane. There were no injuries.	Substantial Damage	X			
9-Jun-06	Asiana Airlines	A321 (6)	Sched Pax	(near) Seoul, Korea	Cruise	The airplane encountered a severe thunderstorm, sustaining substantial lightning and hail damage. There were no injuries.	Substantial Damage				
15-Jun-06	TNT Airways	737-300SF (19)	Charter Cargo	East Midlands, UK	Landing	Following a hard touchdown that broke off the RH MLG, the airplane bounced. The flight crew applied full power and proceeded to another airport, landing on the remaining gear. There were no injuries.	Substantial Damage	X			
16-Jun-06	VARIG	MD-11-P (13)	Sched Pax	Brasilia, Brazil	Landing	The airplane was substantially damaged on landing when its center MLG fractured and broke away. There were no injuries.	Substantial Damage				
23-Jun-06	AMC Airlines	MD-83 (10)	Charter Pax	Juba, Sudan	Landing	After a reportedly normal approach and landing, the airplane sustained substantial damage when it overran the runway. There were no injuries.	Substantial Damage	X			

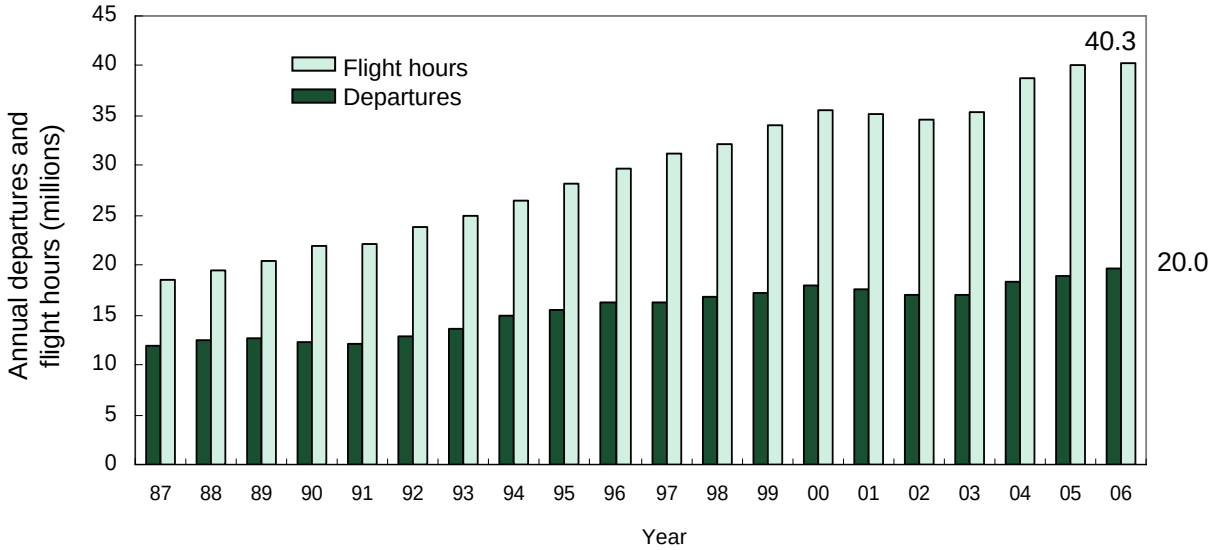
Airplane Accidents

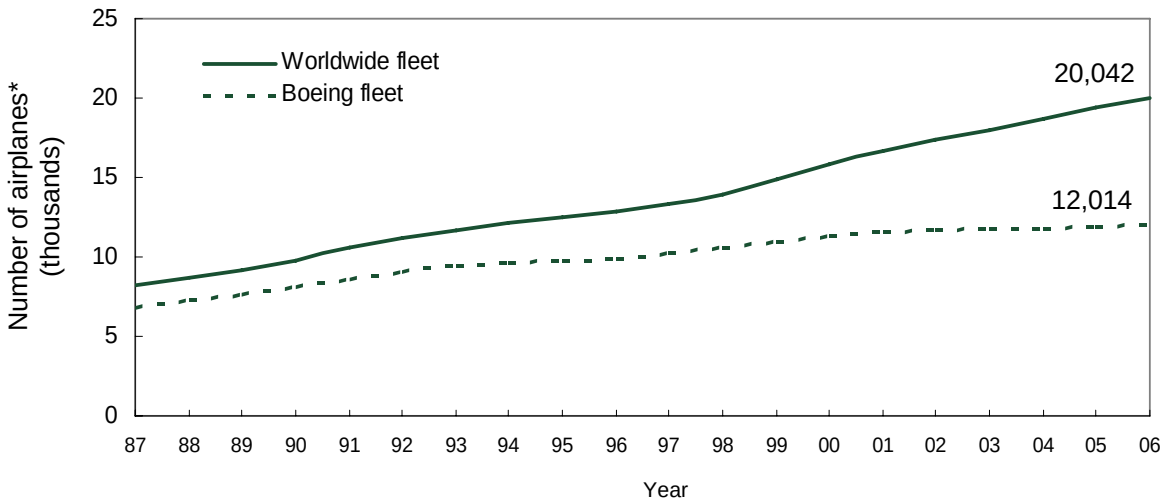
All Accidents – Worldwide Commercial Jet Fleet – 2006

Date	Airline	Model (A/P Age Yrs)	Type of Operation	Accident Location	Phase of Flight	Event Description	Damage Category	Hull Loss	Injury Category	Onboard Fatalities / Onboard Occupants (External Fatalities)	Major Accident
9-Jul-06	S7 Airlines	A310 (19)	Sched Pax	Irkutsk, Russia	Landing	The airplane overran the runway, collided with several buildings and caught fire.	Destroyed	X	Fatal	126/203	X
28-Jul-06	FedEx	MD-10-10F (31)	Sched Cargo	Memphis, TN, USA	Landing	During landing rollout, the LH MLG collapsed, sending sparks into the nearby grass which ignited both the grass and the airplane's left wing. There were no injuries.	Substantial Damage	X			
27-Aug-06	China Eastern Airlines	A320 (1)	Sched Pax	Beijing, China	Tow	On pushback, the airplane was substantially damaged when it collided with a taxiing 777. There were no injuries.	Substantial Damage				
7-Sep-06	DHL Aviation	727-200F (25)	Charter Cargo	Lagos, Nigeria	Landing	In heavy rain, the airplane overran the runway on landing and struck a navigation facility, collapsing the NLG. There were no injuries.	Substantial Damage	X			
9-Sep-06	KLM - Royal Dutch Airlines	MD-11-P (12)	Sched Pax	Amsterdam, Netherlands	Landing	The airplane landed on a runway that had been resurfaced three days earlier. Loose FOD caused substantial airplane damage. There were no injuries.	Substantial Damage				
14-Sep-06	FedEx	MD-11-F (7)	Charter Cargo	Subic Bay, Philippines	Landing	The airplane suffered a tail strike on landing. There were no injuries.	Substantial Damage				
29-Sep-06	GOL Linhas Aereas	737-800 (18 days)	Sched Pax	(near) Peixote Azavedo, Brazil	Cruise	The airplane collided with another airplane at FL360, went out of control, and crashed.	Destroyed	X	Fatal	154/154	X
3-Oct-06	Mandala Airlines	737-200 (23)	Sched Pax	Tarakan, Indonesia	Landing	On landing in a heavy haze, the airplane overran the end of the runway, sustaining significant damage. There were no injuries.	Destroyed	X			X
10-Oct-06	Atlantic Airways (Faroe Islands)	BAe 146 (19)	Charter Pax	Stord, Norway	Landing	The airplane overran the runway, continued down a steep slope, and caught fire.	Destroyed	X	Fatal	4/16	X
29-Oct-06	ADC Airlines	737-200 (23)	Sched Pax	Abuja, Nigeria	Initial Climb	The airplane crashed shortly after takeoff.	Destroyed	X	Fatal	96/105 (1)	X
10-Nov-06	AirTran Airways	717-200 (6)	Sched Pax	Memphis, TN, USA	Taxi	After a normal landing and turnoff, the airplane departed the side of the paved taxiway, struck a drainage ditch, and collapsed the NLG, substantially damaging airplane structure. There were no injuries.	Substantial Damage				
17-Nov-06	Cielos Airlines	DC-10 (22)	Sched Cargo	Barranquilla, Colombia	Landing	On landing in rain, to avoid an overrun, the flight crew steered the airplane off the side of the runway onto soft ground, where the NLG collapsed into the forward fuselage. There were only minor injuries.	Substantial Damage	X			
18-Nov-06	Aerosucre Colombia	727-100F (39)	Charter Cargo	(near) Leticia, Colombia	Final Approach	In fog, the airplane hit a communication tower on final approach, lost control, and crashed.	Destroyed	X	Fatal	5/5	X
24-Dec-06	Lion Air	737-400 (16)	Sched Pax	Ujung Pandang, Indonesia	Landing	During landing, the crew reported a loud noise and the airplane swerved off the runway, sustaining substantial damage. There were no injuries.	Substantial Damage	X			
28	Total Accidents							17		498 Onbd Fatalities 2 Ext. Fatalities	8

Departures, Flight Hours, and Jet Airplanes in Service*

Worldwide Operations 1987 Through 2006





- 487.5 million cumulative departures since 1959 (396.1 million on Boeing airplanes)
- 874.4 million cumulative flight hours since 1959 (684.9 million on Boeing airplanes)
- 7 manufacturers – 35 significant types (14 Boeing) in service as of 12/31/2006

*Certified jet airplanes greater than 60,000 pounds maximum gross weight, including those in temporary nonflying status and those in use by non-airline operators. Excluded are military airplanes and CIS/USSR-manufactured airplanes.

BOEING

Accident Summary by Type of Operation

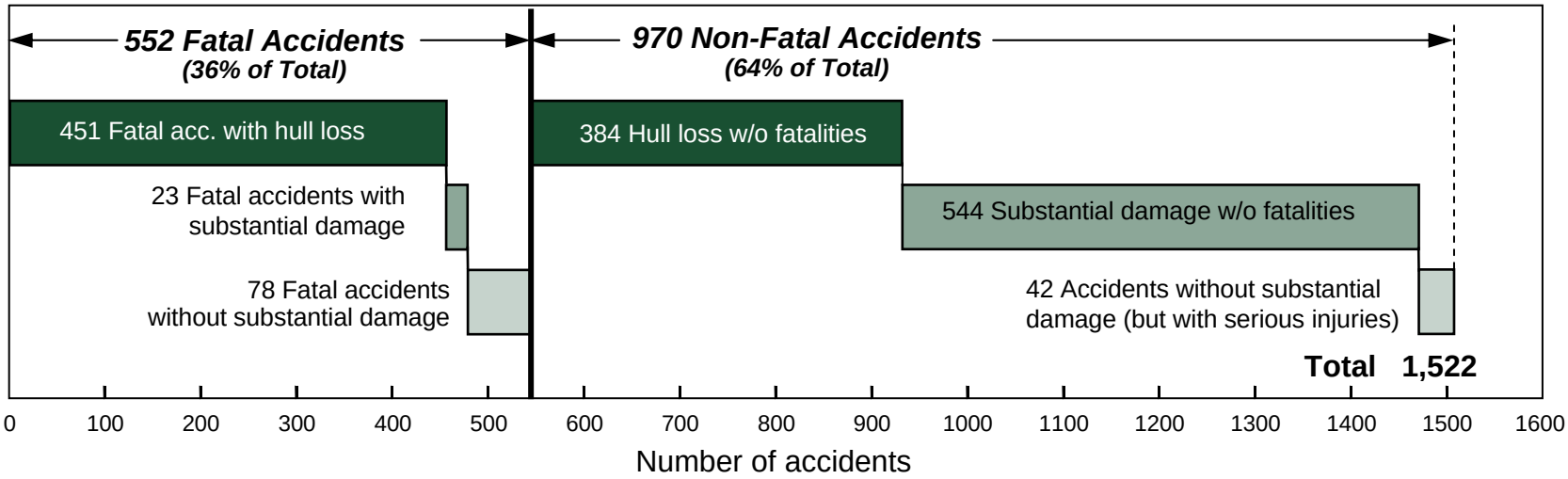
Worldwide Commercial Jet Fleet

Type of operation	All Accidents		Fatal Accidents		Onboard Fatalities (External Fatalities)*		Hull Loss Accidents	
	1959-2006	1997-2006	1959-2006	1997-2006	1959-2006	1997-2006	1959-2006	1997-2006
Passenger	1,198	285	445	75	26,454 (934)	5,102 (170)	618	143
– *Scheduled*	*1,109*	*274*	*405*	*73*	*22,527*	*5,045*	*558*	*135*
– *Charter*	*89*	*11*	*40*	*2*	*3,927*	*57*	*60*	*8*
Cargo	215	79	67	14	237 (329)	47 (79)	150	57
Maintenance test, ferry, positioning, training, and demonstration	109	9	40	0	186 (66)	0 (0)	67	6
Totals	1,522	373	552	89	26,877 (1,329)	5,149 (249)	835	206
U.S. and Canadian Operators	495	82	168	16	6,079 (447)	371 (85)	209	34
Rest of the World	1,027	291	384	73	20,798 (882)	4,778 (164)	626	172
Totals	1,522	373	552	89	26,877 (1,329)	5,149 (249)	835	206

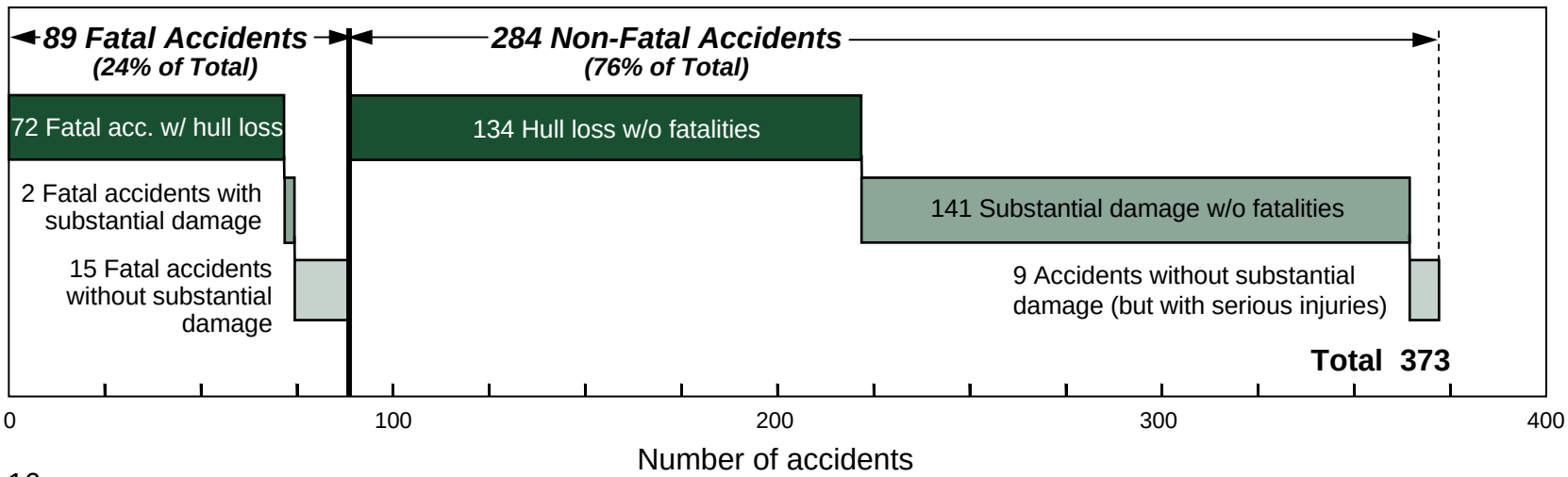
*External fatalities include on-ground fatalities as well as fatalities on other aircraft involved.

Accident Summary by Injury and Damage
All Accidents – Worldwide Commercial Jet Fleet

1959 Through 2006

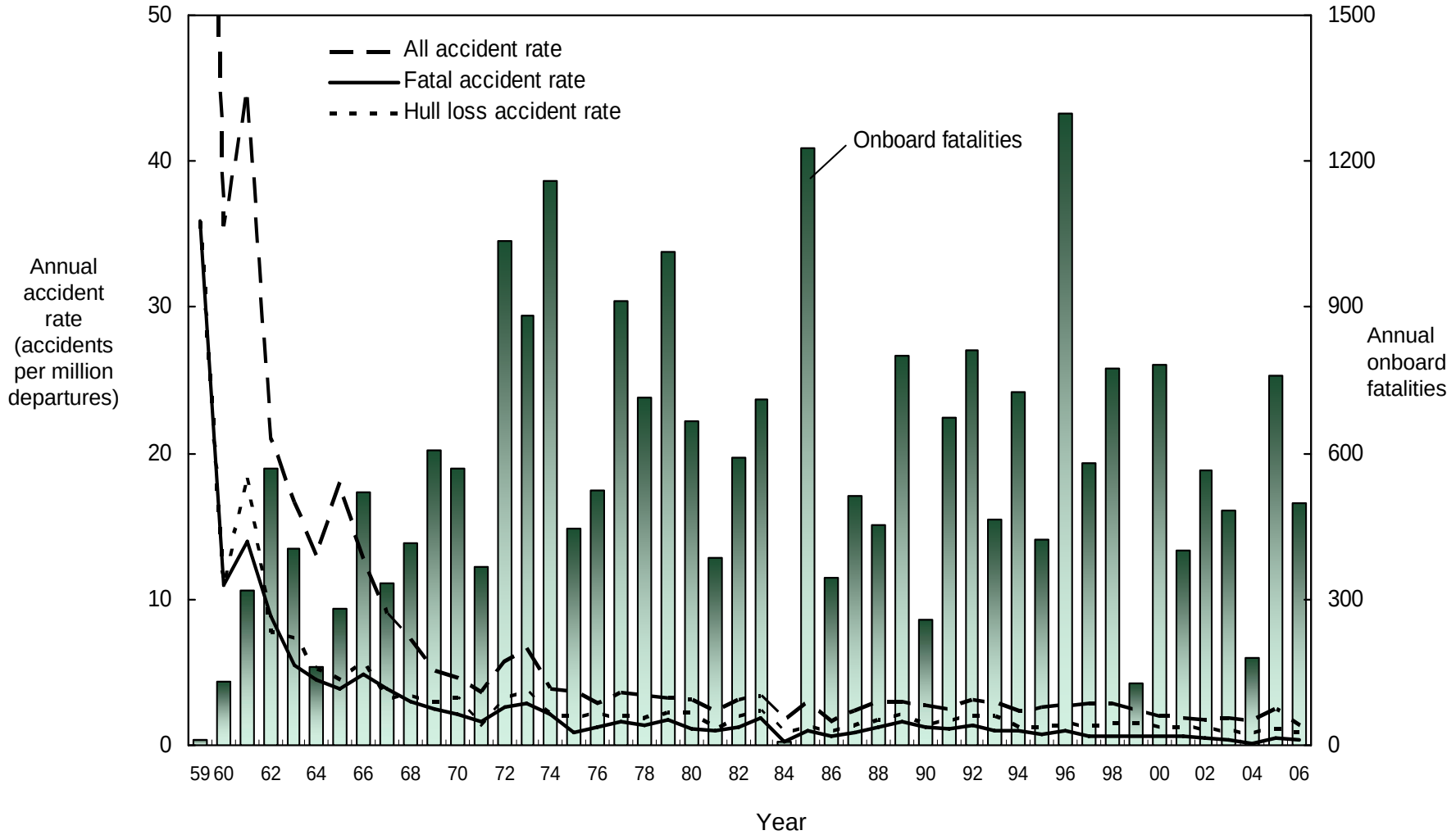


1997 Through 2006



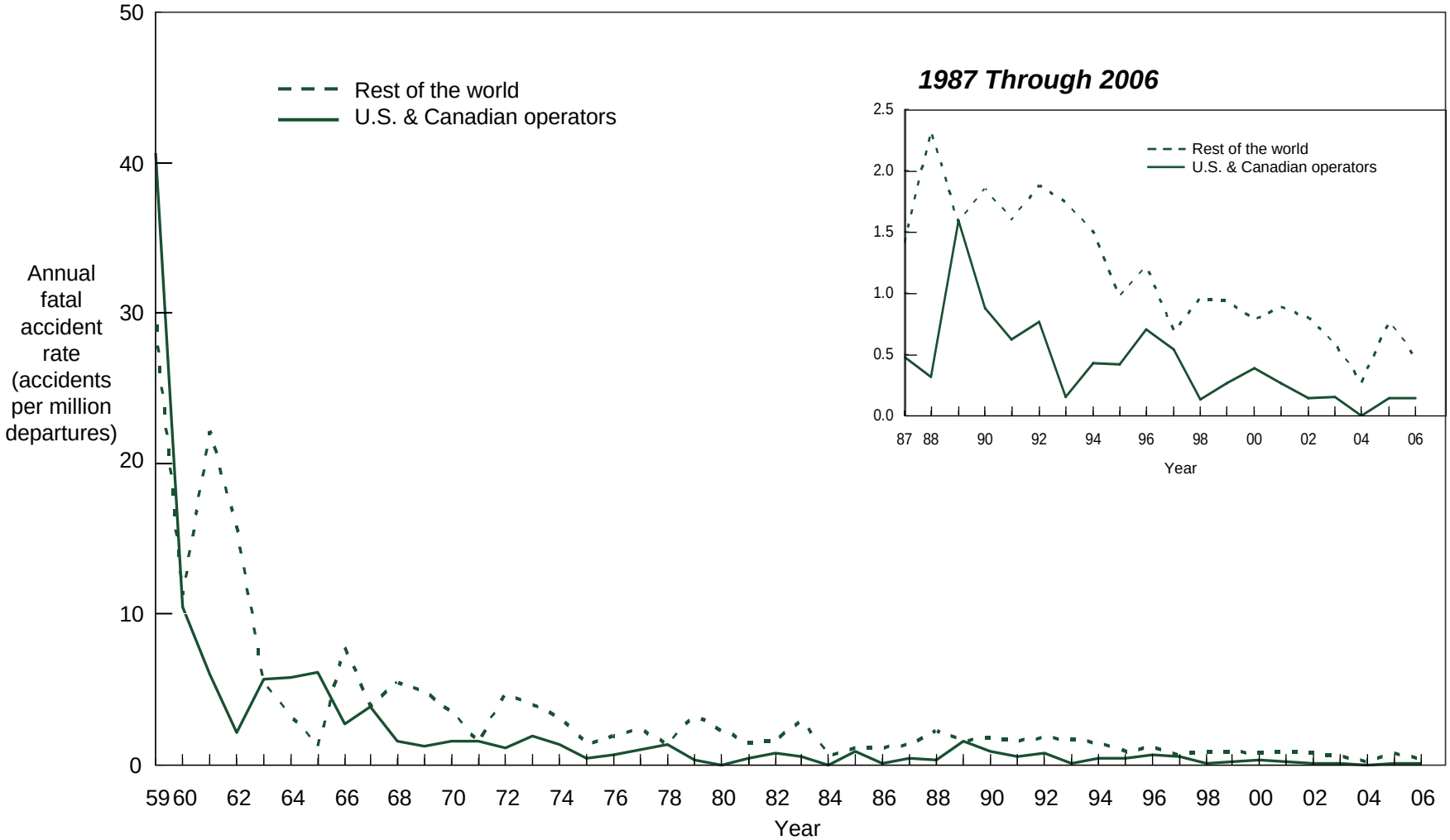
Accident Rates and Onboard Fatalities by Year

Worldwide Commercial Jet Fleet – 1959 Through 2006



U.S. and Canadian Operators Accident Rates by Year

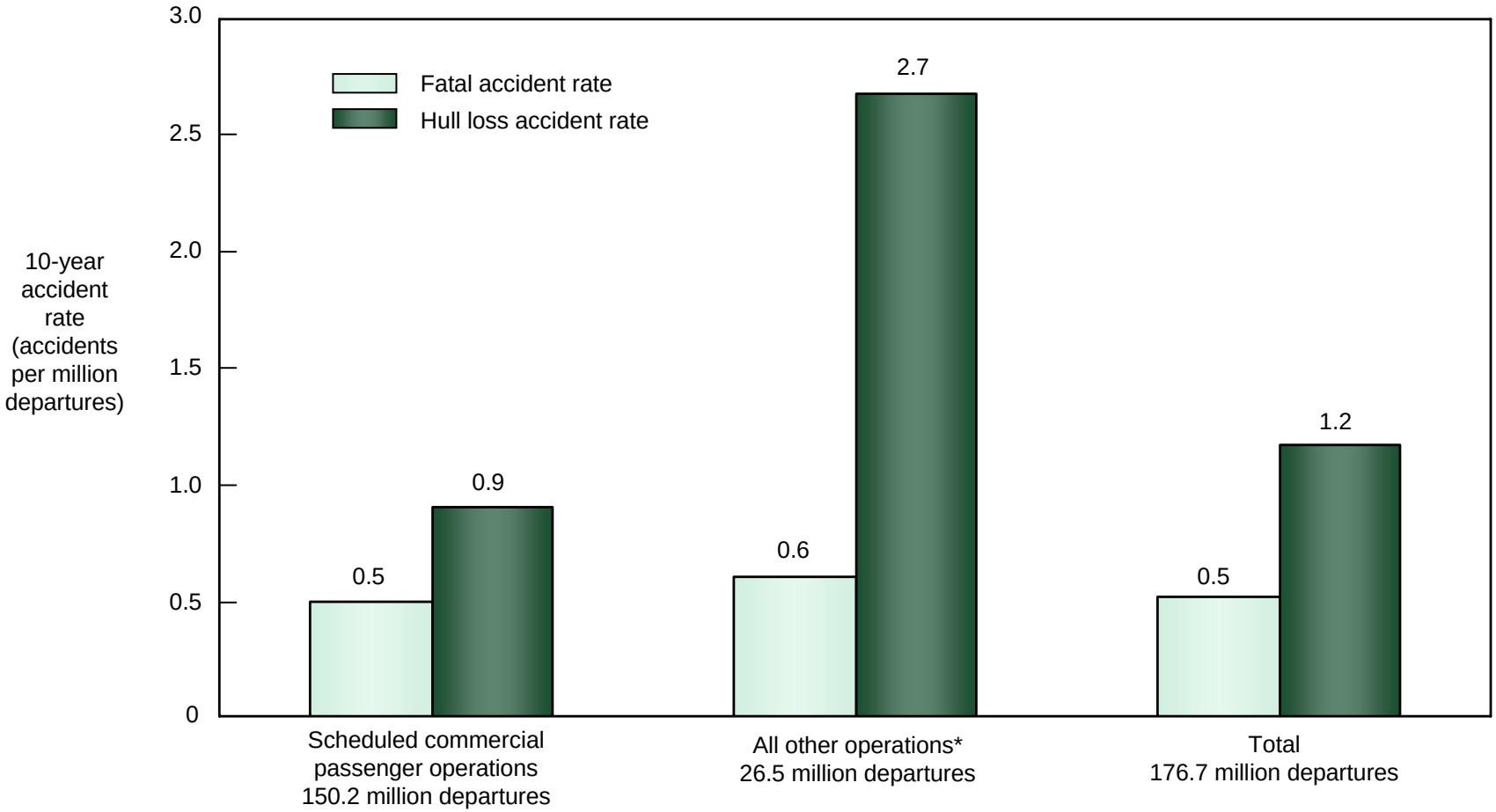
Fatal Accidents – Worldwide Commercial Jet Fleet – 1959 Through 2006



BOEING

10-Year Accident Rates by Type of Operation

Fatal and Hull Loss Accidents – Worldwide Commercial Jet Fleet – 1997 Through 2006

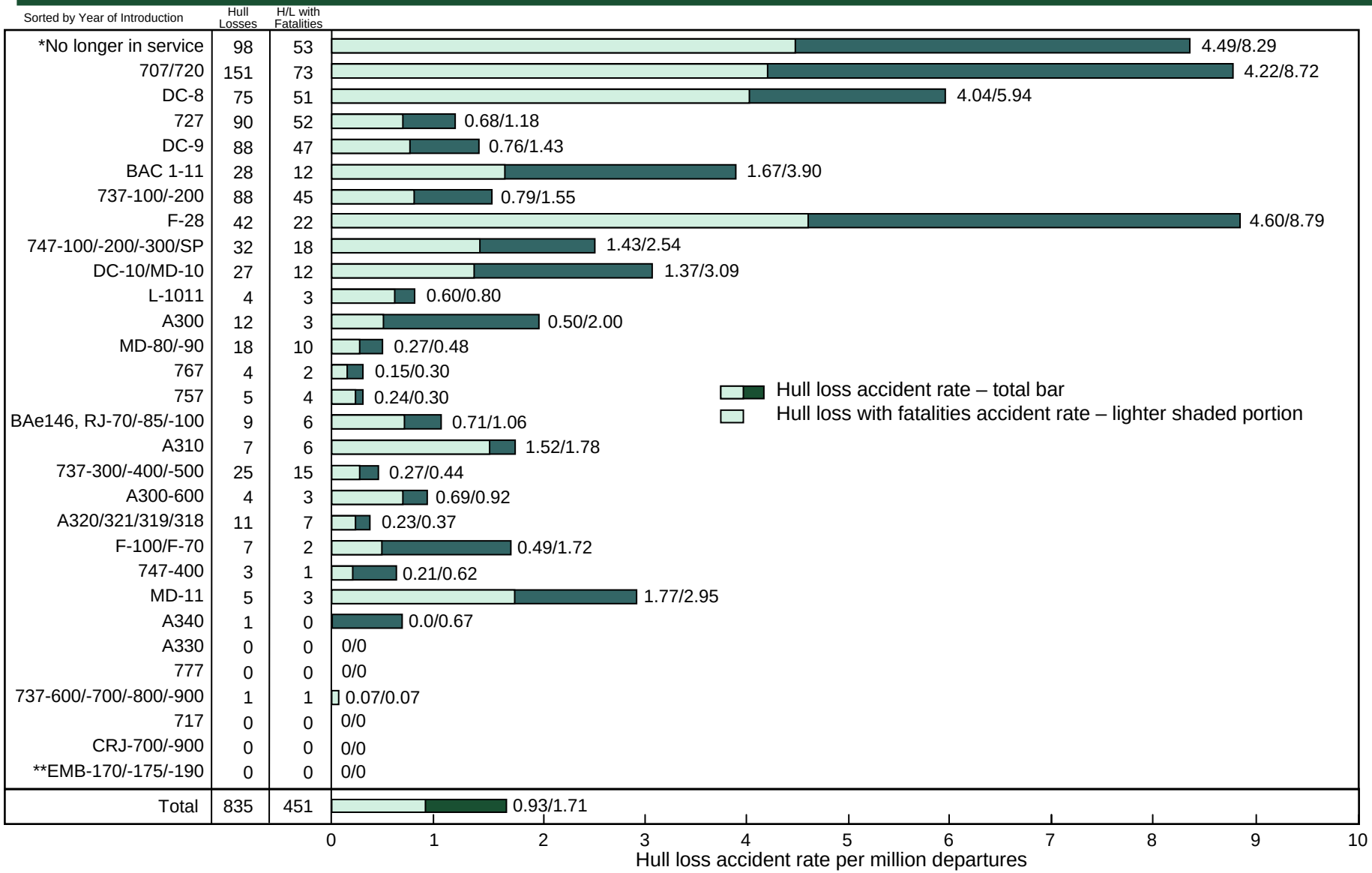


*Charter passenger, charter cargo, scheduled cargo, maintenance test, ferry, positioning, training, and demonstration flights

Accident Rates by Airplane Type

Hull Loss Accidents

Worldwide Commercial Jet Fleet – 1959 Through 2006



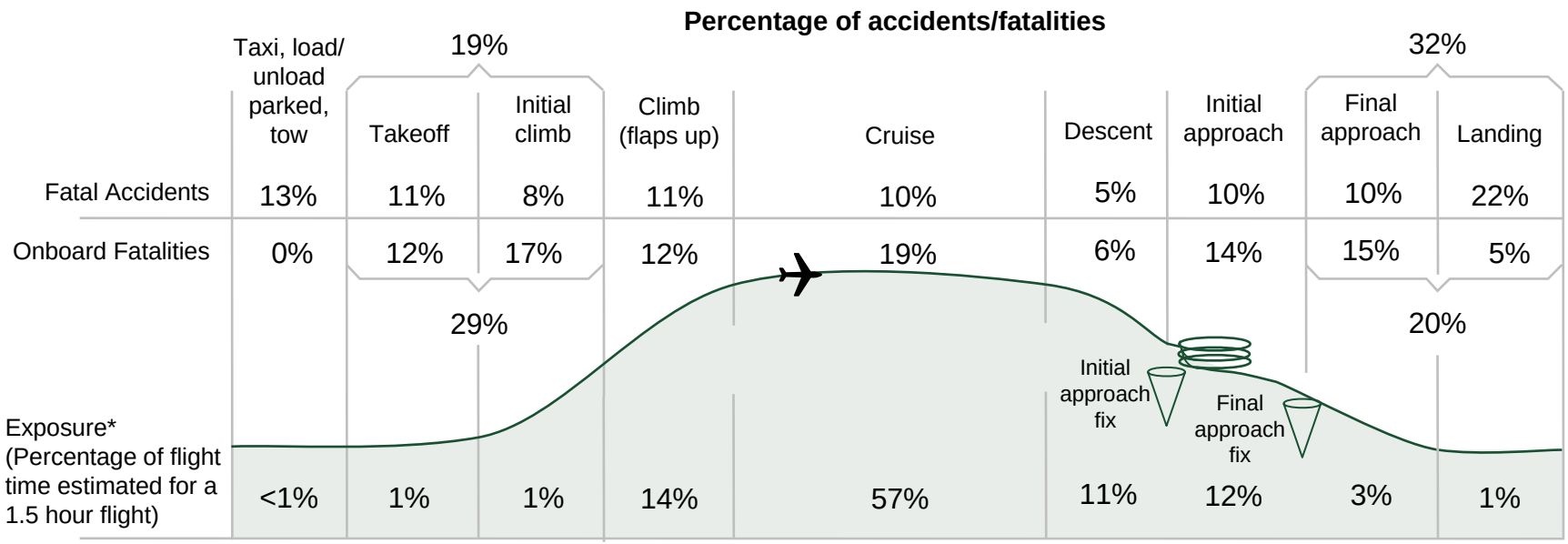
* The Comet, CV880/990, Caravelle, Concorde, Mercure, Trident and VC-10 are no longer in commercial service.

**These types have accumulated fewer than 1 million departures.

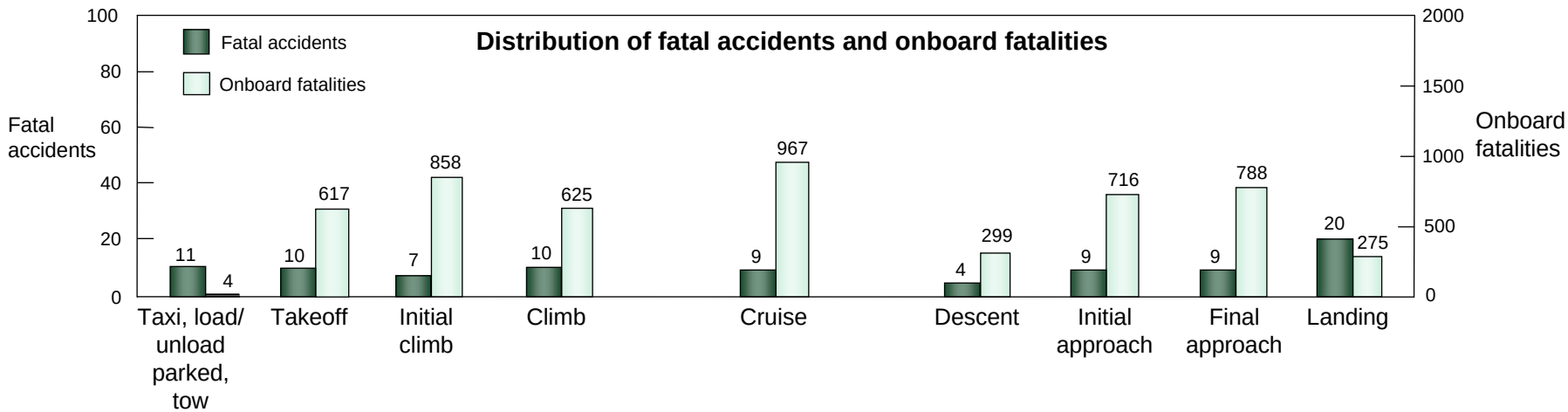
BOEING

Fatal Accidents and Onboard Fatalities by Phase of Flight

Worldwide Commercial Jet Fleet – 1997 Through 2006

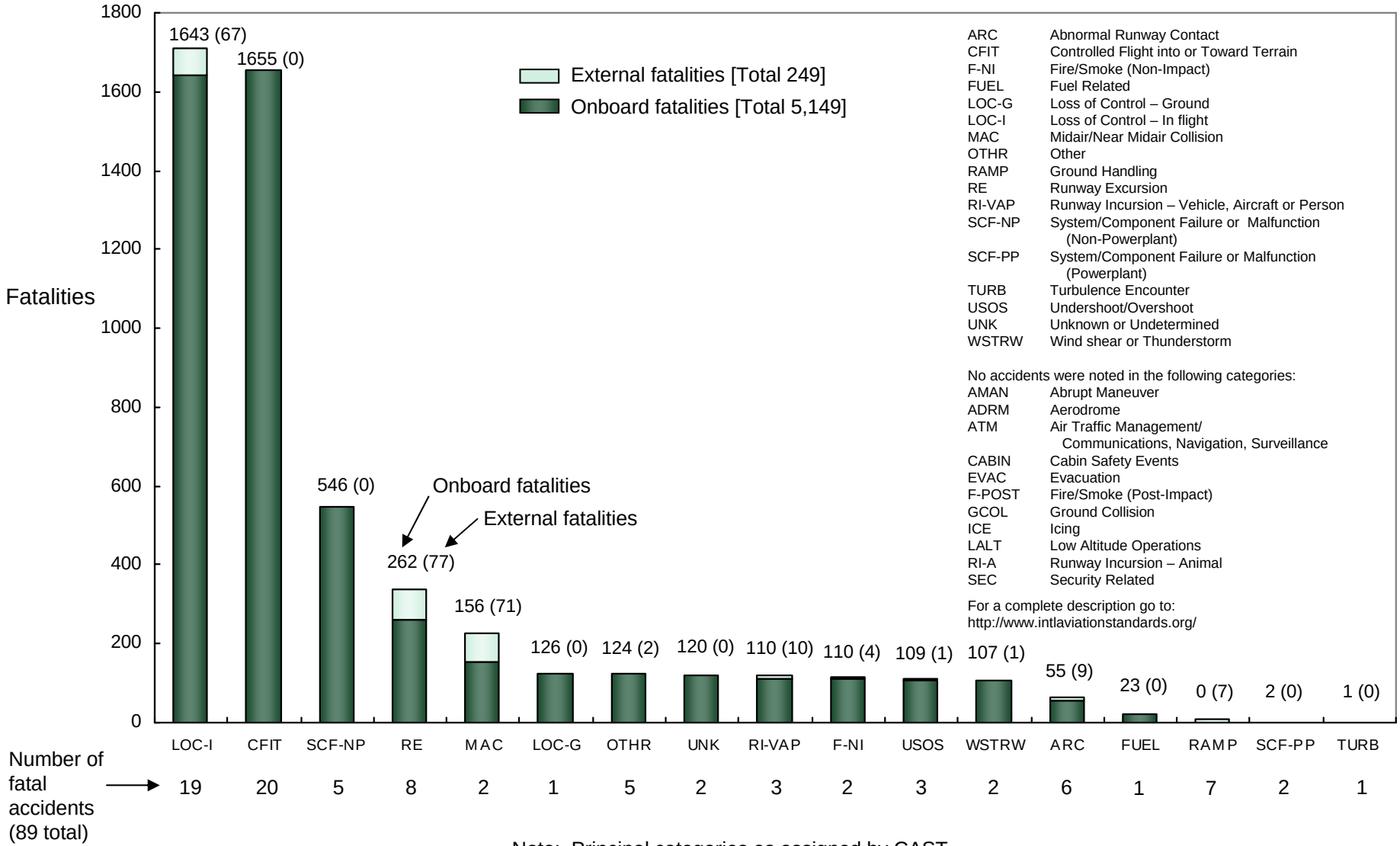


*Percentages do not sum to 100% due to numerical rounding.



Fatalities by CAST/ICAO Taxonomy Accident Category

Fatal Accidents – Worldwide Commercial Jet Fleet – 1997 Through 2006



Note: Principal categories as assigned by CAST.

BOEING

CAST/ICAO Taxonomy Accident Categories

The International Civil Aviation Organization (ICAO) and the Commercial Aviation Safety Team (CAST), which include government officials and aviation industry leaders, have jointly chartered the CAST/ICAO Common Taxonomy Team (CICTT). CICTT includes experts from ICAO, several air carriers, aircraft manufacturers, engine manufacturers, pilot associations, regulatory authorities, transportation safety boards, with members from Canada, the European Union, France, Italy, the Netherlands, the United Kingdom, and the United States. CICTT is co-chaired by a representative from ICAO and CAST.

The team is charged with developing common taxonomies and definitions for aviation accident and incident reporting systems. Common taxonomies and definitions establish a standard industry language, thereby improving the quality of information and communications. With this common language, the aviation community's capacity to focus on common safety issues is greatly enhanced.

The CICTT taxonomy is designed to permit the assignment of multiple categories as necessary to describe the accident or incident. Since 2001, the SISG (Safety Indicator Steering Group) has met annually to assign CICTT occurrence categories to the prior year's accidents.

In a separate activity, the CAST assigned each accident to a single principal category. Those accident assignments and a brief description of the categories are reported in the preceding chart.

The CAST use of principal categories has been instrumental in focusing industry and government efforts and resources on accident prevention. Pareto charts using principal categories are used by CAST to identify changes to historic risk and to help to determine if the safety enhancements put in place are effective.

For a complete description of the categories go to: http://www.intlaviationstandards.org/

Notes

Commercial Airplanes
P.O. Box 3707
Seattle, WA 98124-2207