

# 2010 Air Charter Safety Symposium



Federal Aviation  
Administration

## FAR Part 135 Air Charter Past, Present, and Future

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# Part 135 On Demand Activity

- **Non-scheduled Part 135 often is implicitly assumed to identify a single, coherent set of flight activity.**
- **However, much like “General Aviation”, the term captures a collection of very different types of operations.**



# On-Demand 135 Activities Include:

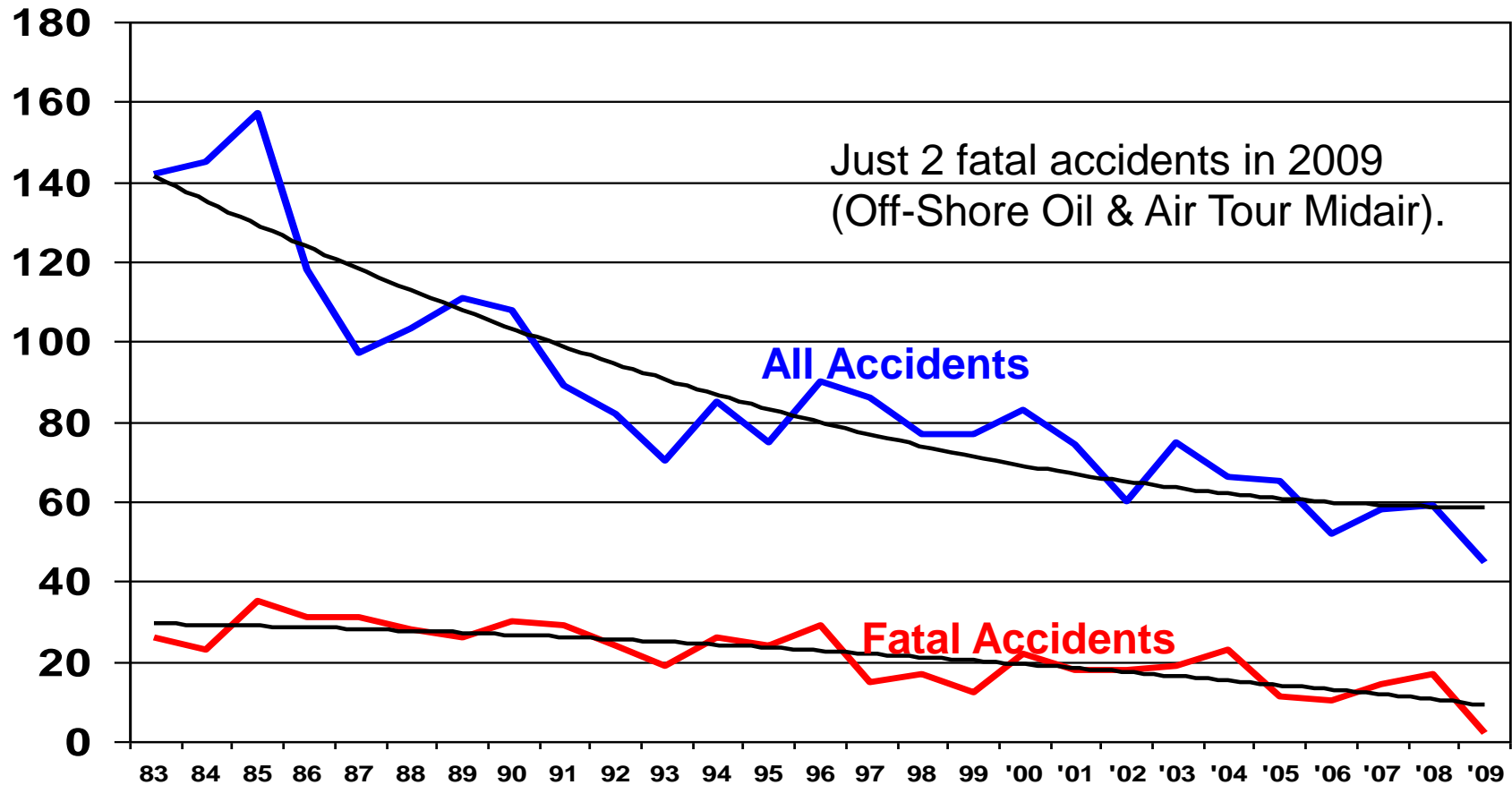
- **Air Tour:** mostly helicopters; day VFR; low altitude; big markets dominated by mountainous terrain.
- **HEMS:** low-altitude; helicopters; 24 hours; mostly VFR; weather issues; challenging sites.
- **Off-Shore Energy:** Historically very limited IFR support; helicopters; weather issues.
- **Cargo:** dominated by single-engine VFR, with some twins & business jets; dominated by check-haulers & Alaska.
- **Alaska:** dominated by small, single-engine aircraft operating to-from isolated markets, off-airport, weather issues.
- **Business Jet Market:** IFR system; airport-to-airport; very different profile.
- **“Traditional” passenger service:** wide range of fleets and operating environments, but dominated by Alaska.
- **Other** – some heavy lift, some survey, photography, air ambulance, etc.

# Part 135 On Demand Activity

- **However, this collection of different activities, fleets, environments and markets has a good story to tell.**
- **We all need to tell that story.**

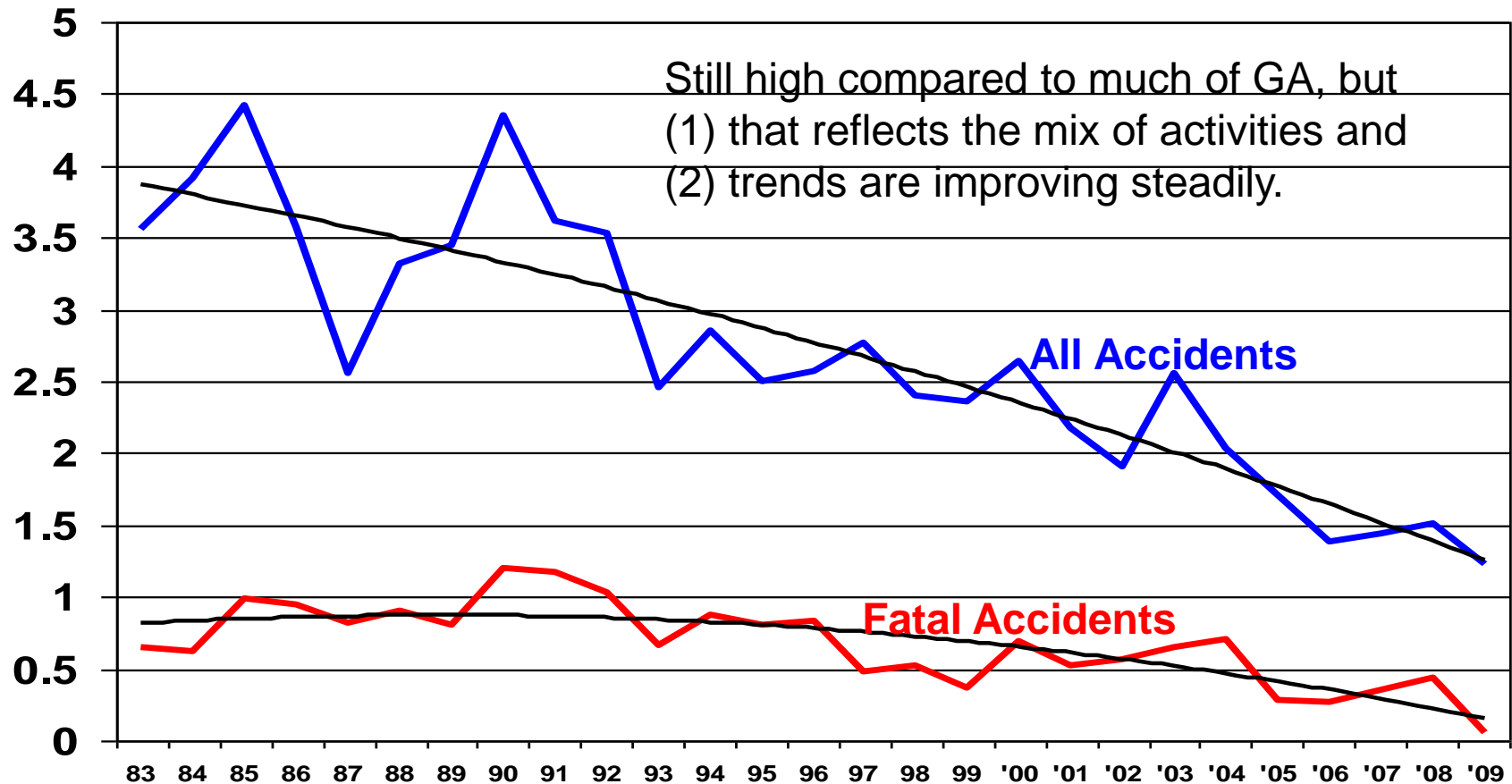


# On-Demand Part 135 Accidents & Fatal Accidents, CY 1983-2009



Note: the 2,216 accidents and 548 fatal accidents depicted here include 25 cargo accidents (4 fatal) from 1983 through 2003 that are erroneously recorded as “Scheduled Commuter” operations in NTSB data.

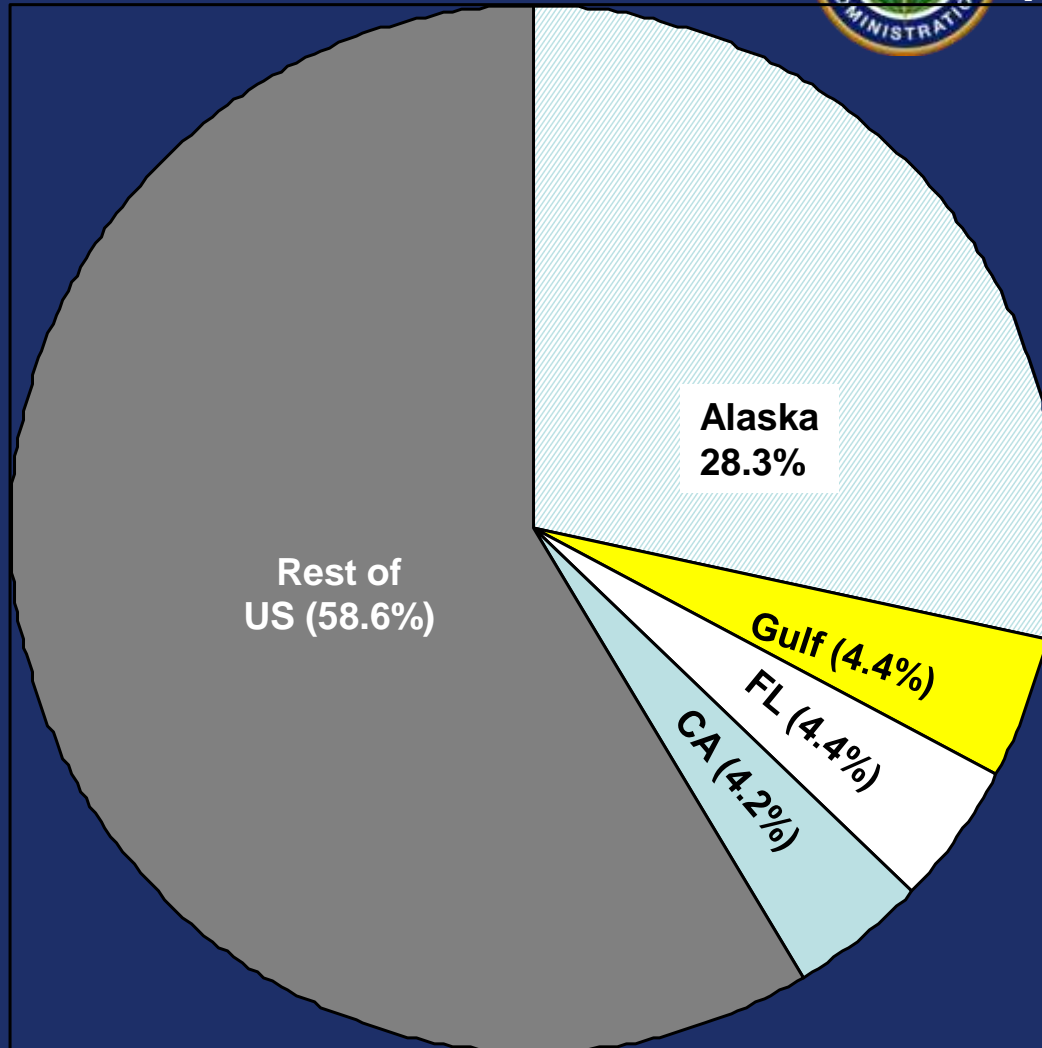
# On-Demand Part 135 Accidents & Fatal Accidents Per 100,000 Hours, CY 1983-2009



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# Federal Aviation Administration



# Key Factors That Explain The Improvement

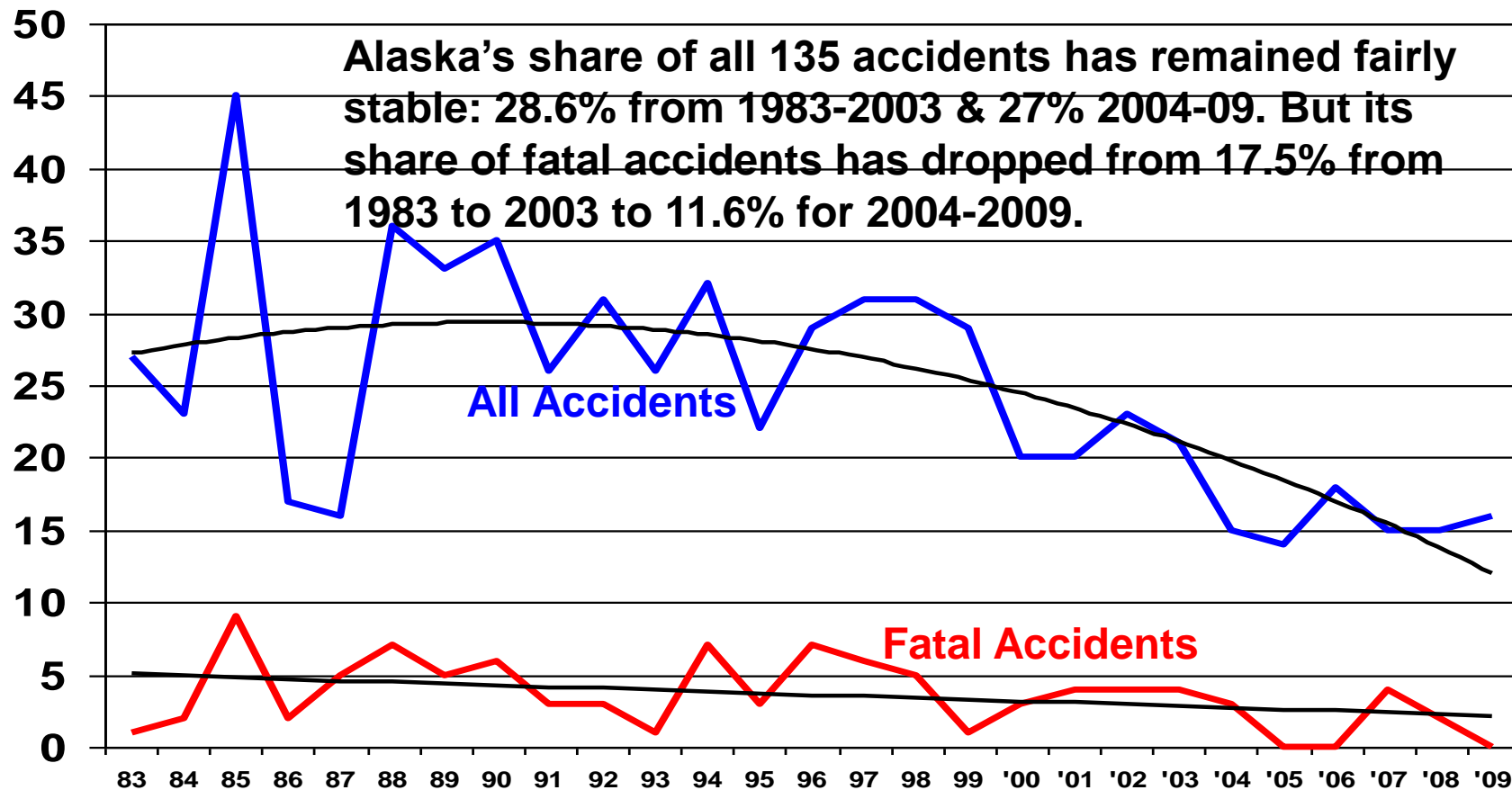
- Rapid penetration of glass cockpits, especially but not only in fixed-wing.
- Introduction of ADS-B (Capstone in Alaska)
- Sustained expansion of business jets in 135 service
- Sustained expansion of turboprops in fleet and near disappearance of reciprocating helicopters.
- **Evidence of these factors:** sharp decrease in CFIT & loss-of-control in flight (technology); sharp decrease in accidents involving reciprocating airplanes; improvements in Alaska.

# Other Factors That Explain the Improvement

- Concerted efforts by segments of the industry (e.g., NBAA, NATA, air tour industry and Alaskan operators)
- Efforts at FAA (Alaska, certification of glass technology, pressing ahead with ADS-B, Next Gen)



# Part 135 Accidents & Fatal Accidents in Alaska, CY 1983-2009

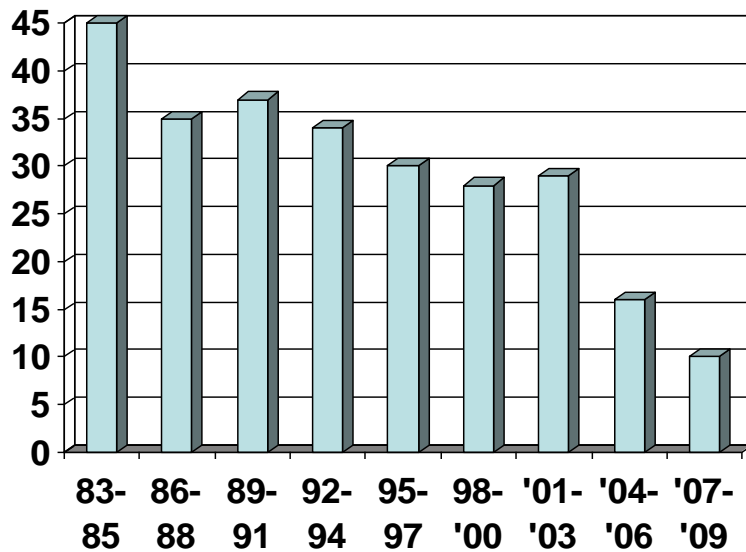


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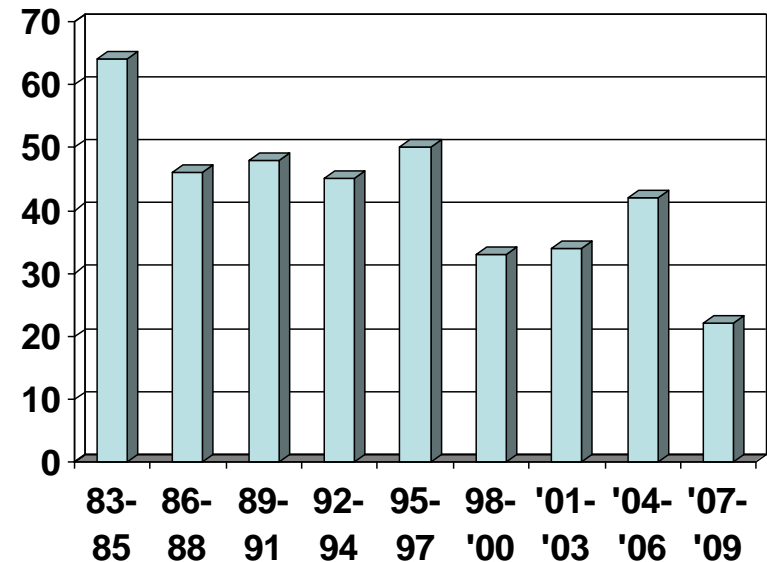


# Changes in 2 Highly Lethal Accident Scenarios By 3-Year Periods

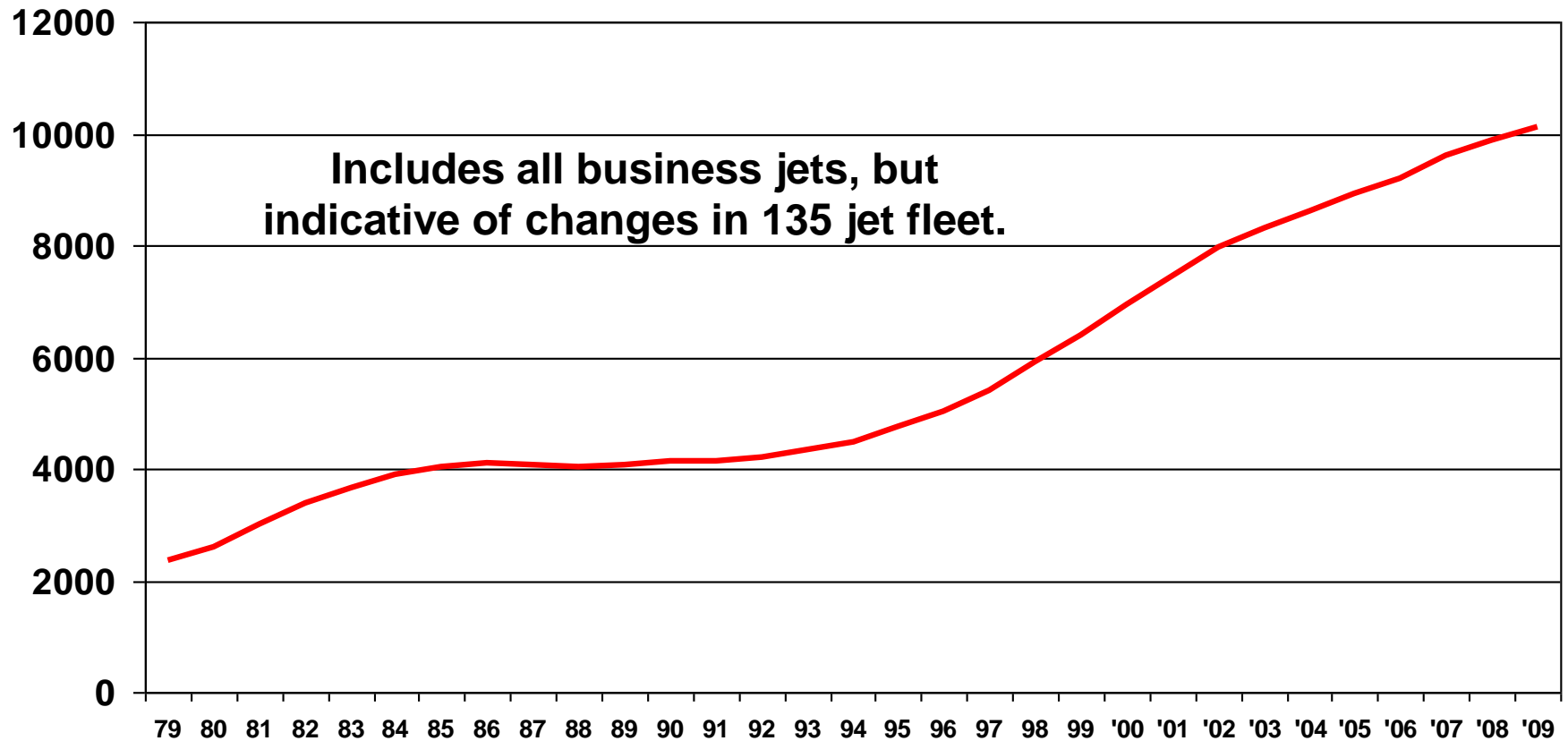
## Part 135 CFIT



## Loss of Control in Flight



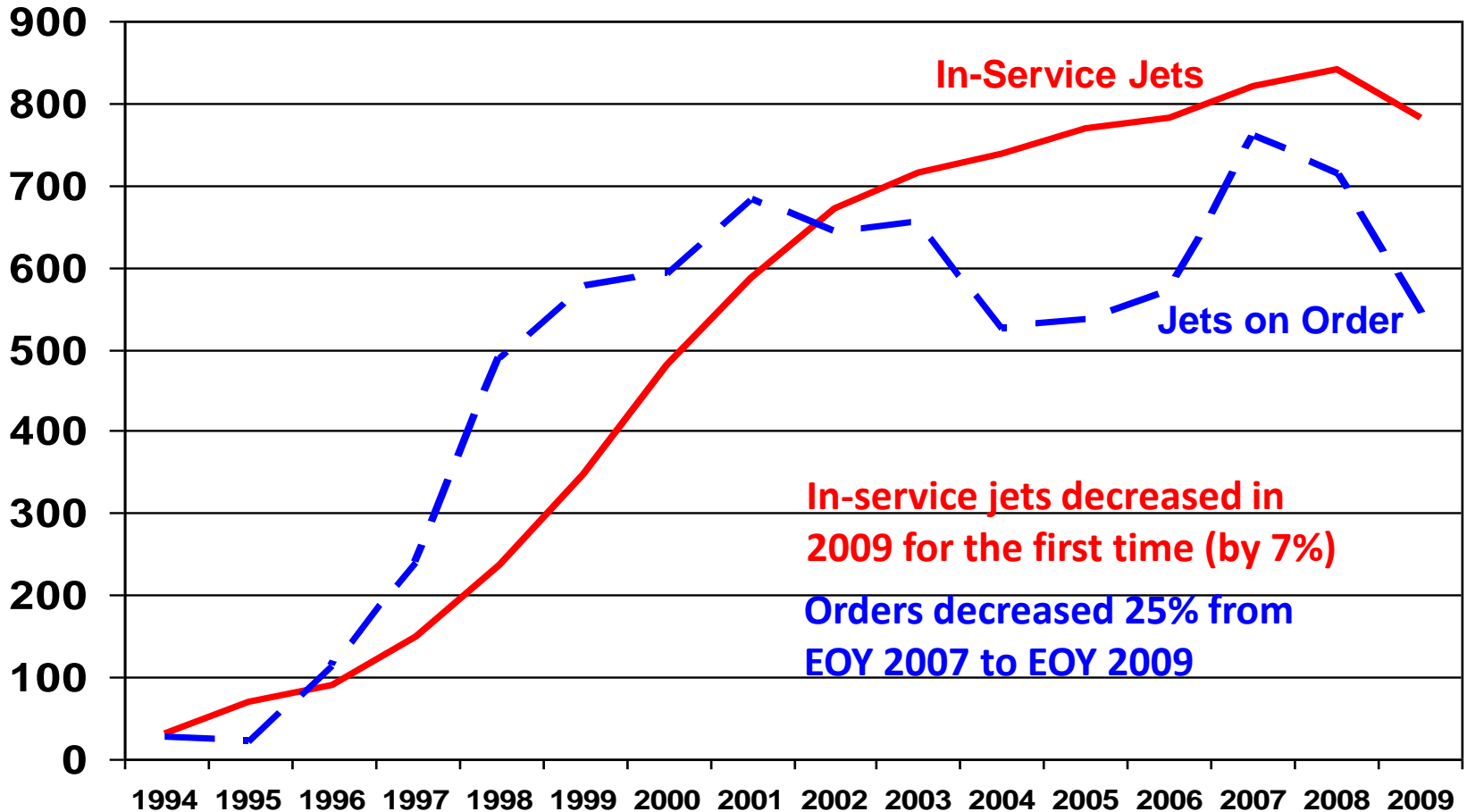
# In-Service, US-Based Business Jets End of Year 1979 - 2009



Source: Airclaims (Business jets in service, US operated for business-corporate-executive transport.)

# Jet Fleet, U.S. Fractional Operators

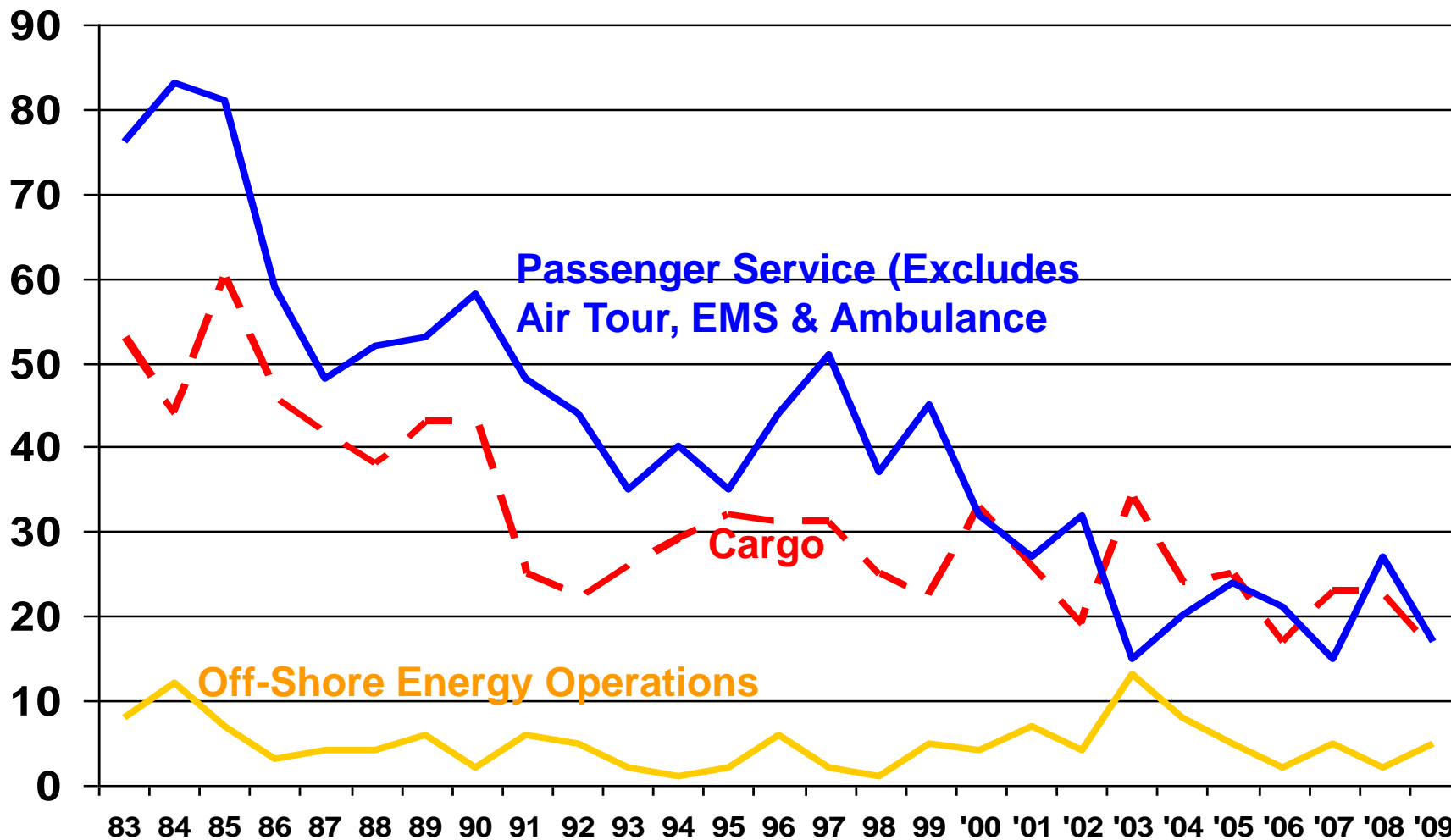
Data as of End of Year (EOY)



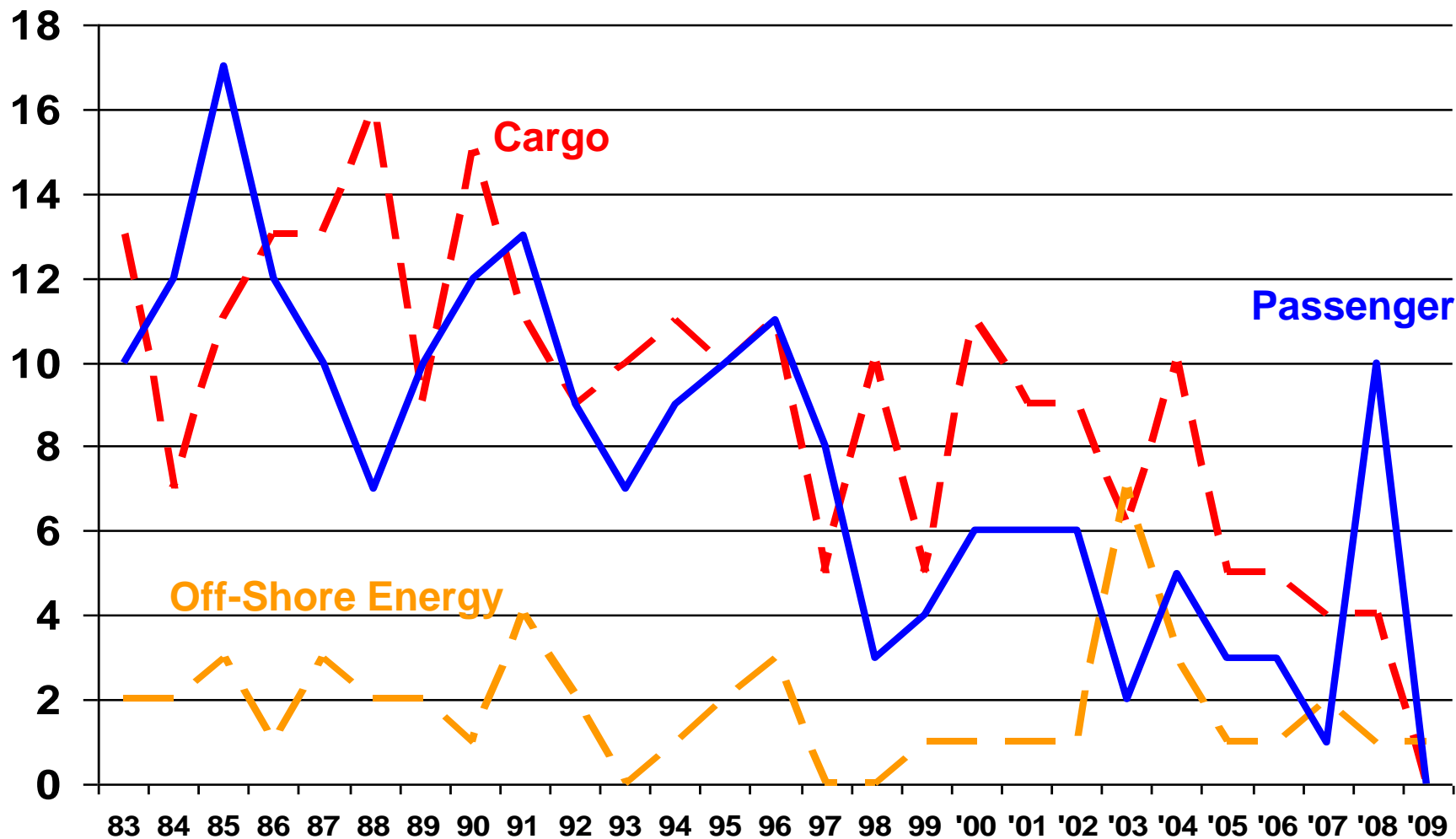
Source: Airclaims



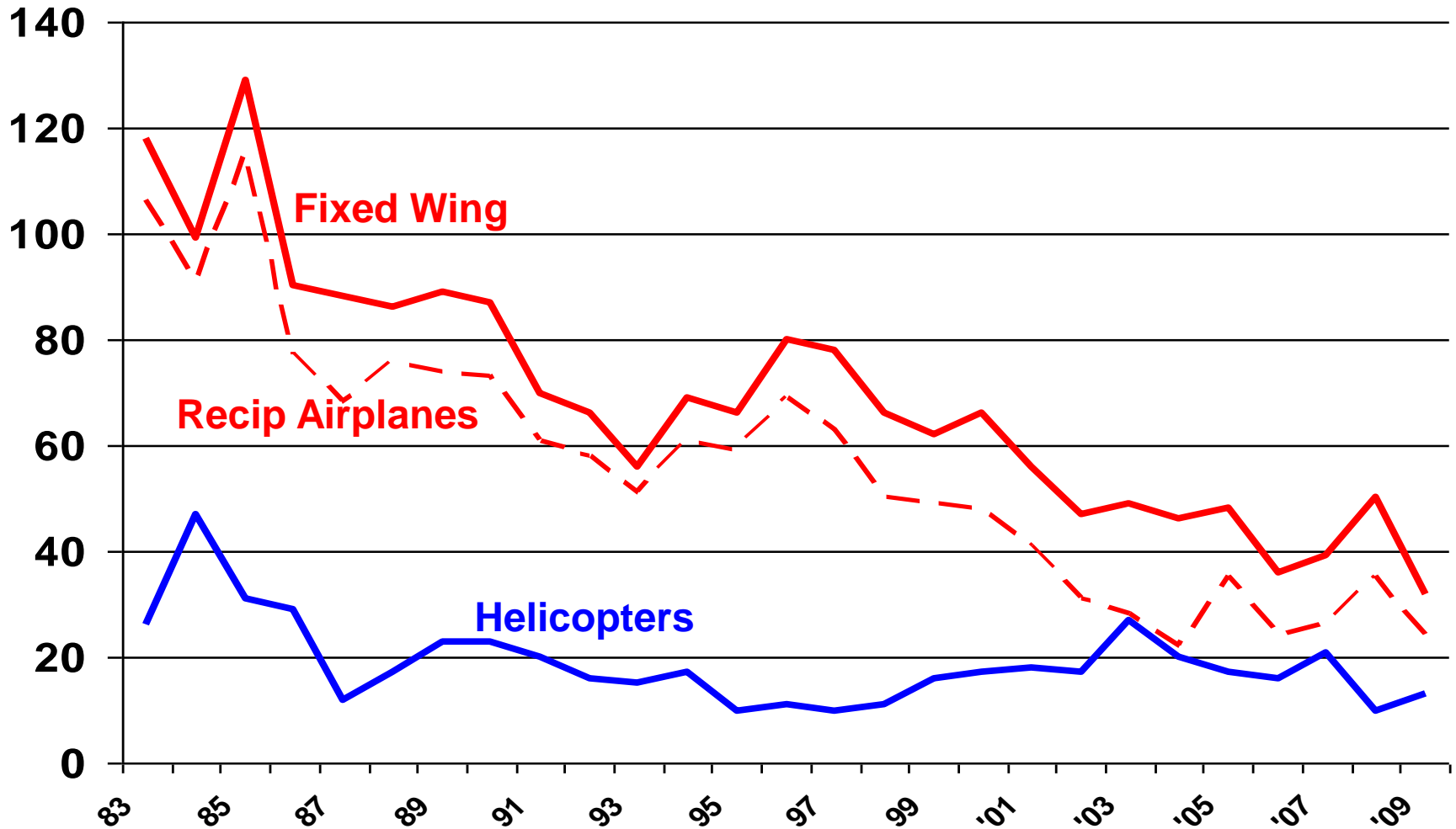
# Accident Trends for 3 Part 135 Activities, 1983-2009



# Fatal Accident Trends for 3 Part 135 Activities, 1983-2009



# Accident Trends, Fixed-Wing & Helicopters, 1983-2009



## Continued Risks

- **21% of fatal accidents are VFR in IMC.**
- **16% of fatal accidents are VFR at night.**
- **4% of fatal accidents manage to combine the two: VFR in night IMC.**
- **13% of fatal accidents involve issues of continued airworthiness.**



# Conclusions

The long-term story in Part 135 is good: rates & numbers are improving steadily, especially in recent years, both for accidents and fatal accidents (just 2 fatal in 2009).

Fleet trends and advancing technology promise continued improvements.

However, still some areas to work on:

- VFR in weather;
- VFR in IMC; and
- Continued airworthiness.

But, overall, a good story to tell.

# Now to the Future

- **Next Gen**

<http://www.faa.gov/about/initiatives/nextgen/>

- **Safety Management Systems**

- AC 120-92

- **Continual Safety Improvements**

- Safety Recommendation Program

- Standardization

- 135 Air Charter Certification (or lack thereof)