

STATEMENT OF  
CAPTAIN JOHN PRATER, PRESIDENT  
AIR LINE PILOTS ASSOCIATION, INTERNATIONAL  
BEFORE  
THE SUBCOMMITTEE ON AVIATION OPERATIONS, SAFETY AND SECURITY  
COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION  
UNITED STATES SENATE  
WASHINGTON, D.C.  
DECEMBER 1, 2009  
**PILOT FATIGUE**

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Mr. Chairman and members of the Subcommittee, I am Captain John Prater, President of the Air Line Pilots Association, International (“ALPA”) which represents 53,000 professional pilots at 36 airlines in the United States and Canada.

ALPA appreciates this opportunity to discuss pilot fatigue because we know that it is a significant flight safety issue. Pilot fatigue is as important to flight safety as metal fatigue, wiring insulation fatigue and other component fatigue.

The FAA has a statutory responsibility to prescribe minimum standards to prevent all fatigue that impacts safety. While the agency has been responsive to other types of fatigue, the FAA has not yet fulfilled its responsibility regarding pilot fatigue.

Pilot fatigue has been a major issue for ALPA since it was founded in 1931 and it has been particularly onerous during the difficult years since 9/11.

The financial crisis in the airline industry has brought bankruptcies and concessionary contracts which have resulted in pilots being required to fly up to the legal limits without receiving adequate rest. We receive daily reports of scheduling that causes pilots to be virtual “zombies.” The domestic flight and duty rules were last amended in 1985 with the promise that the FAA would revisit these rules in two years. Twenty-five years later we are still waiting to review them.

The current rules for International and Supplemental Operations were promulgated in 1954 when the DC-3 aircraft was state-of-the-art. At that time, it was not uncommon to carry a radio operator and mechanic on the aircraft. Today, the Airbus 380 airplane carries 600+ passengers 8,200 miles at a speed of 560 miles per hour. Times and equipment have changed but the flight and duty time rules have not. They were not designed to address our modern environment and equipment.

The National Transportation Safety Board issued three recommendations to the DOT in 1989 following several accidents involving operator fatigue:

1. Expedite a coordinated research program on the effects of fatigue, sleepiness, sleep disorders, and circadian factors on transportation system safety.
2. Develop and disseminate educational material for transportation industry personnel and management regarding shift work, work and rest schedules, and proper regimes of health, diet, and rest.
3. Review and upgrade regulations governing hours of service for all transportation modes to assure that they are consistent and that they incorporate the results of the latest research on fatigue and sleep issues.

Since 1989, the Safety Board has issued more than 70 fatigue-related safety recommendations which were the result of major accident investigations, special investigations, or safety studies that identified operator fatigue as a factor. This includes more than 15 significant accident reports or studies concerning aviation operations conducted under Parts 91, 121 and 135 (see table).

**Listing of Selected Fatigue-related aviation investigations and studies conducted by the National Transportation Safety Board since May 1989.**

Location of accident or topic of the study that identified fatigue-related issues	Accident Date	NTSB Report Number
<b>Aviation</b>		
<b>Accident investigation:</b>		
Molokai, Hawaii	10/28/89	AAR-90-05
Brunswick, Georgia	04/05/91	AAR-92-03
Pine Bluff, Arkansas	04/29/93	AAR-94/01/SUM
Guantanamo Bay, Cuba *	08/18/93	AAR-94-04
Kansas City, Missouri *	02/16/95	AAR-95-06
Cheyenne, Wyoming	04/11/96	AAR-97-02

Everglades, Florida	05/11/96	AAR-97-06
Little Rock, Arkansas	06/01/99	AAR-99-60
Nimitz Hill, Guam	08/06/97	AAR-00-01
Tallahassee, FL *	07/26/02	AAR-04-02
San Diego, CA	10/24/04	AAB-06-05
Kirksville, MO	10/19/04	AAR-06-01
Cleveland, OH	02/18/07	AAR-08-01
Travers City, MI	04/12/07	AAR-08-02
Clarence Center, NY (Colgan 3407)	02/12/09	Open (NTSB Preliminary ID No. DCA09MA027)
<b>Special Investigation:</b>		
Commercial space launch incident, Cape Canaveral, Florida	08/17/93	SIR-93-02
<b>Safety study:</b>		
	Report Date	
Flight crew-involved accidents	02/03/94	SS-94-01
Commuter airline safety	11/30/94	SS-94-02
Aviation safety in Alaska	12/01/95	SS-95-03

\* Air Cargo accident

In addition to the accident reports indicated above, the Board acknowledged that fatigue can result in degraded performance in flight crews and that disruption of the sleep/rest cycle may have played a role in the Air Transport International (Swanton, OH) DC-8 cargo crash on February 15, 1992 (AAR-92-05).

The Board has not made distinctions between reforms needed for the rules applicable to passenger and all-cargo operations in its reports and recommendations to the FAA; rather the Board has recognized that the effect of fatigue is the same whether a pilot is carrying cargo or passengers, or operating a scheduled or non-scheduled flight. Fatigue is an equal opportunity killer.

Pilot fatigue has been on the Safety Board's list of Most Wanted Transportation Safety Improvements since the list's inception in 1990. Other, more specific,

recommendations have followed. The Board's current Most Wanted List (August 2009) specifies the following objective to reduce accidents and incidents caused by human fatigue in the aviation industry: Set working hour limits for flight crews based on fatigue research, circadian rhythms, and sleep and rest requirements.

I believe that there is universal agreement that there is an urgent need for modern flight time regulations.

This brings us to "what should a modern flight time regulation prescribe?" There are three basic principles for a new rule. One, it must be based on science. Two, it must apply equally to all operations: domestic, international and supplemental. There is no basis for any "carveouts" for air cargo or charter operations. Three, it must include the ability for air carriers to transition to a Fatigue Risk Management System, or FRMS.

First, let me address the science.

There is a large body of sleep science available and there are several recent aviation fatigue studies. Over the past 60 years, scientific knowledge about sleep, sleep disorders, circadian physiology, fatigue, sleepiness/alertness, and performance decrements has grown significantly. Some of this scientific knowledge, gained through field and simulator studies, confirms that aviators experience performance-impairing fatigue from sleep loss resulting from current flight and duty practices. There are also several fatigue models available. These models can analyze a schedule and predict whether the pilot will have an adequate level of alertness to fly the schedule.

The International Civil Aviation Organization, ("ICAO"), a United Nations organization, has 190 member countries including the United States. Its role is to establish standards for the safe operation of civil aircraft throughout the world. ICAO

has mandated that flight limitation rules be based on science and they have recently implemented a new standard for flight time rules which states in part:

“For the purpose of managing fatigue, the State of the Operator shall establish regulations specifying the limitations applicable to the flight time, flight duty periods, duty periods and rest periods for flight crew members. These regulations shall be based upon scientific principles and knowledge, where available, with the aim of ensuring that flight crew members are performing at an adequate level of alertness.”

The United States is bound to comply with this standard. Our current rules are simply not based on science and therefore do not comply with the ICAO standard.

Second, I will address the need to have one level of safety in flight time limitation regulations. Scheduled passenger, all-cargo and charter air carrier operations are no different when it comes to the actual operation of the aircraft. All three types of operations use the same aircraft, the same airspace, and the same airports in the same cities. As such, there is no rational basis for cargo or charter pilots to have different or more liberal fatigue rules than scheduled passenger operations.

Domestic pilots who carry passengers under FAR Part 121 have a flight time maximum of 30 hours in seven days, while International (Flag) passenger-carrying pilots are allowed up to 32 hours in the same seven days under the current FAA regulations. These current “flight time” limits only account for the time pilots spend actually operating the airplane. The current flight time limits do not account for the time pilots spend in pre-flight and post-flight duties, the time spent at airports between flights, the time spent going through security or traveling to and from the airport to hotels, or the

time spent in training and other ground-based duties. Even with the existing 30- and 32-hour weekly “flying time” limits applicable to pilots carrying passengers, there is widespread acknowledgement of the existence of serious pilot fatigue problems throughout the industry and widespread acknowledgement that reform of the rules based on modern scientific principles is long overdue. On the other hand, charter and air cargo pilots flying under today’s supplemental rules can fly 48 hours in a six-day period or *60 percent more* than domestic passenger-carrying pilots. We believe that these supplemental rules significantly reduce available safety margins and put all-cargo and charter operation crewmembers, passengers and persons on the ground at risk. A uniform modernization of the flight time/duty time rules including harmonized rules for the cargo industry is long overdue, and needed to enhance safety.

Third, any new regulation dealing with pilot fatigue should provide a method for carriers to transition to a FRMS. This is the gold standard of pilot fatigue management to ensure that pilots have an adequate level of alertness. Ideally it would be a part of a Safety Management System, or SMS. However, FRMS can operate independently of a SMS.

The purpose of a FRMS is to ensure that flight crew members are sufficiently alert so that they can operate to a satisfactory level of performance and safety under all circumstances.

A FRMS supplements prescribed flight and duty-time regulations and competent, independent scientific research-based software scheduling tools by applying safety management principles and processes to proactively and continuously manage fatigue risks through a partnership approach which requires shared responsibility among

management and crew members. FRMS can, therefore, only operate in circumstances where all stakeholders -- particularly the pilots -- support the operation of FRMS. Accordingly, an open reporting system and non-punitive working environment is a prerequisite for FRMS because honest and accurate crew feedback is an essential component of the program. A FRMS must specify the prescriptive regulatory scheme upon which it is based. In the event of suspension, termination or revocation of a FRMS, the carrier's affected operations shall revert to the baseline prescriptive scheme.<sup>1</sup>

Over the last three years, ALPA's Flight Time/Duty Time Committee has developed guidelines for a flight limitation regulation that have a rational, scientific foundation and also incorporate years of operational experience. These guidelines are harmonized with ICAO and the International Federation of Air Line Pilots Association and deal with seven major areas: *duty limits*, including block-hour limits, *rest requirements*, *extension of duty in irregular operations*, *cumulative fatigue*, *augmentation rules that consider the quality of the on-board rest facility*, *reserve rest requirements* and *rules for implementing a FRMS*.<sup>2</sup>

These guidelines represent ALPA's views as to the minimum requirements a regulation must have to insure an adequate level of pilot alertness.

ALPA also believes that it is important that the FAA require air carriers to implement a fatigue education and training program for flight crew members. Such a program should include, at a minimum, information on the detrimental effects of fatigue

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<sup>1</sup> ALPA's White Paper on Fatigue Risk Management Systems (2008) may be found here: [http://public.alpa.org/portals/alpa/pressroom/inthecockpit/FatigueRiskMSWP\\_6-2008.pdf](http://public.alpa.org/portals/alpa/pressroom/inthecockpit/FatigueRiskMSWP_6-2008.pdf)

<sup>2</sup> ALPA's current guidelines for a scientifically-based flight limitation regulation may be found here: <http://public.alpa.org/FTDTFightingFatigue/tabid/3370/Default.aspx>



and strategies for avoiding and countering fatigue. ALPA has implemented its own fatigue training program and we have published and distributed to our members *The Airline Pilots Guide to Fighting Fatigue*.<sup>3</sup>

In closing, I would like to say that I am encouraged that it appears we will finally get new flight limitation rules. As you know, FAA Administrator Randy Babbitt, in June of this year chartered an Aviation Rulemaking Committee (“ARC”) to develop a new flight time rule. ALPA along with other members of the industry participated in this process. In addition to having an ALPA pilot, Captain Don Wykoff, serve as a co-Chair, we had four members and two alternates serve on the Committee who fly for domestic, international, cargo and regional airlines. The ARC presented its report in early September to Administrator Babbitt. Mr. Babbitt has publically stated that he will publish a NPRM on Flight Time by December 31, 2009. We expect a short comment period and hopefully a final rule by mid-2010.

We badly need a new flight and duty-time regulation. While we have been told it will be done in mid-2010, we have seen too many times in the past that the FAA has not delivered on its promises with regard to pilot fatigue regulations. We respectfully solicit Congress’ active support in ensuring that this new regulation becomes a reality.

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<sup>3</sup> [http://public.alpa.org/portals/alpa/fatigue/MagazineInsert10-2008\\_FatigueGuide.pdf](http://public.alpa.org/portals/alpa/fatigue/MagazineInsert10-2008_FatigueGuide.pdf)