



The Flight and Duty Time Dilemma

In the absence of regulated flight and duty time limitations for private aircraft operators, aviation department managers must develop and support guidelines that meet company travel requirements without compromising safe pilot-scheduling practices.

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by

John A. Pope
Aviation Consultant

Much has been publicly and privately spoken about corporate aviation management's dilemma in developing equitable and workable flight and duty time guidelines. I have conducted 20 workshops dealing with writing a company operations manual and no other subject stirred interest, aroused discussion and left people feeling tentative and uncertain about positive policies more than flight and duty times.

Part of the problem is the absence of government regulations that dictate flight and duty time limitations for private aircraft operators. Regulations applicable to airline pilots provide little guidance because they relate to a scheduled environment where flight times, duty days and layovers are relatively constant. This absence of regulations may be a bane or blessing to business aircraft operators. On the one hand, corporate aviation department managers have the opportunity to create the flexibility so necessary to meet impromptu travel requests. On the other hand, the absence of specific limits may result in abusing a pilot's working schedule.

J. Sheldon "Torch" Lewis, writing in the August 1989 issue of *Business and Commercial Aviation*, questioned the efficacy of a company operations manual and whether printed guidelines stipulating flight and duty time limits

were of any value since they were so often "bent or stretched." Lewis cited the following examples:

- A large midwestern company has a president who is No. 1 nice guy but uses a calendar for a clock. He will climb aboard his jet at 7:00 a.m. and fly to New York, N.Y., U.S., for a board meeting. He usually tells his crew that they will fly back in the afternoon after the meeting. At 5:00 p.m., he finally shows up for the three-hour return trip. By the time the crew gets home to bed they have been up nearly 20 hours. He does this often.
- One company kept their jet busy criss-crossing the United States for three days. Two pilots each flew about 12 hours per day; however, only one crew member was relieved at a time. By the third day the pilots were numb with fatigue; they were an accident going someplace to happen.
- A Gulfstream II pilot, who is no longer with us, used to regularly push his aircraft beyond reasonable range limits. Once, he flew from New York to Madrid in seven hours 20 minutes, then entered in his flight log that they landed with 3,500 pounds of fuel remaining, as required by the company

policy manual. In fact, he had about 1,000 pounds remaining. For a G-II, 1,000 pounds is something like nothing. On another international run, this same captain flew from Oslo, Norway, to Fairbanks, Alaska, U.S., on a great circle route, and his low-fuel lights came on during the descent. When the aircraft reached the chocks, there was nothing in the tanks but fumes.

- Another captain, also no longer with us, flew from New York to Lisbon, Portugal, in a Falcon 20. His low-fuel warning lights were on during the approach.

There is a need to probe a bit into the factors that contribute to the corporate aviation manager's flight and duty time dilemma.

Up front is the company's investment in a corporate aircraft and how the company perceives the airplane(s) should answer its air transportation requirements. Corporate executives may be very astute when it comes to their own functions and responsibilities, but they may be unfamiliar with the human limitations of an air crew or the mechanical limitations of an aircraft. If not corrected very early in the game, that lack of knowledge can create detrimental operational philosophies that may be impossible to amend. It becomes easy to say, "Well, we've always done it that way and never had a problem."

The given is that the company looks for on-demand transportation for its personnel and expects the aviation department to provide it. People in the aviation department recognize that job longevity is dependent on meeting the schedule with little or no compromise, and on making allowances for those few executives whose demands push air crew capability to the limit.

Balancing Your Resources

From a practical standpoint, pilot and airplane resources determine how much of a proposed travel schedule can be satisfied safely. A one-airplane, one-crew operation has very definite and potentially severe performance limits. Assuming that the aircraft is maintained in airworthy condition, adding another aircrew member or two improves the aviation department's ability to respond to travel requests and allows time for adequate crew rest.

Regardless of the size of the aviation department, the company operations manual is the best means to spell out flight and duty guidelines and specific limitations. Aviation department managers find it difficult to be completely restrictive because the priorities may lie with the company's travel requirements and not with the pilot's fatigue factors. Therefore, it is more practical to state limitations as guidelines, and allow for exceptions with

the concurrence of the department manager and the aircrew.

If the corporate aviation department has regularly scheduled flights between certain points at certain times (and some do) and is appropriately staffed, it is not too troublesome to determine flight and duty time guidelines that are within the realm of possibility. But, the vast majority of corporate aviation is not blessed with a fixed schedule, and travel requests are usually based on where and when the passengers need to go in response to the best business interests of the company. While some of those travel requests can be planned, others may stem from an immediate and critical business requirement.

How can the aviation department manager come to grips with meeting the schedule and having rested pilots available? Are unwritten understandings the better way, or does it take the written word? Most managers and air crews apparently prefer to see something in writing, because what is written is less subject to misinterpretation.

The written words can take many forms — informal memo, notes, letters, or company operations manual. The company operations manual is a compilation of aviation department practices. It is a good place to outline the maximum hours in a duty day, the maximum flight hours within a duty day, the desired aircrew rest period between flights and days off duty. The manual can also address waiting time, multiple pilots for extended flights, international flights, pilot recall time, etc.

When does the duty day begin and end, and what does it constitute? For most pilots, the duty day begins when the aircrew is required to report for a scheduled flight, usually one hour or more before departure, depending on the nature or complexity of the flight, and ends up to an hour after the final landing.

Consideration has to be given to other factors that bear on an appropriate duty day. For instance, if a pilot lives an hour away from the airport, the pilot may view the workday as beginning with the wake up call which adds another hour. Consequently, an 0700 departure may mean a 0500 wake up for the aircrew.

What constitutes a "normal" duty day? The inconclusive answer is, "It depends." If, over a significant period of time, an analysis of the company travel patterns shows that the bulk of the schedule can be met within a 10-, 12-, 14-, or 16-hour duty day, that is what the duty day should be with allowances for an extension when circumstances dictate. Waiting time between stops on a schedule is considered part of the duty day. Managers and pilots would agree that the waiting time can be more fatiguing than flying time. Not all en route service facilities are endowed with suitable facilities for rest and relaxation.

How much flight time should be permitted within a duty day? That answer is also, "It depends." Travel requests, the range and speed of the aircraft and where the aviation department is geographically located in relation to where it has to take passengers, are factors to be considered.

Surveys of business aircraft operators indicate that the average flight is about two hours per leg. If coast-to-coast, or international, flights are a frequent part of the travel pattern, longer flight times are the norm. In general, managers relate flight time to the length of the duty day; for example, a maximum of 8, 10 or 12 hours flying within a 12-, 14- or 16-hour duty day. The nature of the flight schedule must be taken into consideration. Long non-stop flights may not be as tiring as flights calling for multiple approaches and landings. On international flights, for instance, the maximum flight time is frequently in the higher ranges. For domestic operations, pilots seldom approach the flight time limitation, but frequently push the duty day limit.

A suitable rest period between scheduled flights depends on the number of travel requests and the luxury of adequate personnel. A very heavy day-in and day-out schedule with one aircrew may court disaster unless there are breaks in the pattern. The normal goal is to provide 12 hours rest, not counting travel to and from the resting place, before a pilot can be scheduled for the next flight. At en route stops where the anticipated waiting time exceeds six hours, most aircrews are given permission to use an appropriate rest facility away from the airport.

Aviation department managers acknowledge that flight and duty time guidelines cannot be set in concrete. Bending and stretching should not be commonplace, but if that does happen frequently, the guidelines have to be reviewed and revised. As stated earlier, the purpose of the airplane is to satisfy the company air transportation needs which, in turn, ensures job longevity. Therefore, guidelines are just guidelines to be used with discretion by both aircrews and aviation department management. It must be clear who has responsibility to determine whether guidelines may be exceeded, if doing so will not affect safety. Aviation departments must consider if they want the pilot-in-command to have final authority in that decision, especially since he will be ultimately responsible for the aircraft's safe flight.

What is stated in the company operations manual demands the endorsement of the company's chief executive officer but not with a rubber stamp. The aviation department manager can simplify the task by emphasizing those portions bearing on safety that could cause controversy between aircrews and executives. Once the CEO endorses the manual, the expectation is that all company personnel, including the CEO, will understand the authority given to the pilot-in-command to make a flight.

With those basic parameters in mind, what brought about the examples cited earlier?

In the first example, the president of the company who is a "nice guy" obviously does not understand that crew fatigue is cumulative. Perhaps he looks forward to relaxing in the cabin instead of flying the airplane with consummate skill. That "nice guy" probably does not believe that flying a sophisticated jet aircraft is as taxing and laborious as working through a business deal and that if he is not tired, why should the aircrew be tired?

Tough Teaching Job

What should the aviation department manager and aircrew do to educate the boss? Given the motivation for job preservation, it will take a heaping spoonful of guts to tell the boss, "We are too tired and do not believe we can take you to your destination safely." If he is really a "nice guy," he may be able to comprehend that the aircrew is concerned about his safety and support the pilot-in-command's right to speak up. Should the abuses continue after conversation and discussion, the aircrew has to face up to a "like-it-or-leave-it" decision.

In the second example, the aviation department manager who approved the three-day schedule can be faulted for not reviewing the schedule for practicality. The assumption that one pilot of a three pilot crew can and will rest, while the others fly, can be shot down by most aircrews who have tried it. Going overboard on the premise that meeting the schedule at all costs is good planning may win points for the aviation department manager with the company executives. The better plan would be a thorough review of the travel requests, discussion with the aircrews as to how to accomplish the missions without compromising safety and, perhaps, a revised travel plan with options submitted to management.

Examples were given of three international flights where the aircraft landed with minimum fuel. Where does one place responsibility in these instances? Can the company operations manual guidelines be blamed after being ignored by the pilot-in-command? Or is a hard look at the pilot-in-command and pilot macho factors in order? There are pilots (some of whom are managers and chief pilots) who are overloaded with ego and who have absolutely no fear of putting themselves or their aircraft into situations fraught with danger. There is often a fixation that as superb practitioners of the art of flying, they can outwit the dumb mechanics of a machine or the stupid variations in the weather.

The judgment and decision making capability of a pilot who lands "with nothing in the tanks but fumes" suggests foolish motivation and poor flight planning. If these long-legged flights had been meticulously planned in

accordance with the aircraft manufacturer's flight manual fuel burn estimates, practical experience in fuel management, careful evaluation of weather and wind reports and regulations regarding minimum fuel requirements, perhaps none would have left the ground. While the macho pilot might take a certain amount of pride in boasting of daredevil exploits, there would probably be greater admiration for the professional skill that puts safety first.

Later in his commentary, Lewis stated, "The printed word does not make a pilot safe. Good judgement does." No pilot would disagree with that statement. However, if good judgment is lacking, or buried under the pilot's macho attitudes, then a good hard look at the company manual for guidance is absolutely necessary.

The arrogant, inconsiderate, thoughtless, aviation-ignorant executive who punctuates demands with "Do it or I will get somebody who will," shows little regard for his personal safety and places an immense burden on the pilot to make the right decision with due regard for job preservation and safety. The likelihood of changing that executive's attitude is rather slim. A thorough and recognizable scare that endangers his body and soul may bring daylight to the end of the tunnel but, perhaps, only temporarily. Chances are that sort of executive also manages the corporate business with a casual disregard for people or consequences.

The pilot's choices are few. One is to go along and wait for the inevitable which may be either an accident or getting fired for irritating the boss in some other fashion. The second option is to exert the authority vested in a pilot-in-command, bite the bullet and decline to make any flight that, in the pilot-in-command's good judgment is potentially unsafe. There is no question that this option may consume a huge quantity of intestinal fortitude, but the ultimate rewards may be worth the effort. The action may command the respect of the passengers

because it is their safety, too, that is at stake. If the boss makes good on the termination threat, the pilot should pick up his flight bag and walk away without looking back. In that case, the boss will be immune from injury, at least for that flight and the pilot will have preserved his professionalism and pride, albeit at the price of unemployment. The bottom line in this instance is that the pilot will be alive to look for new opportunities.

The flight and duty time dilemma will not go away if ignored, nor will operations manual guidelines that are continually bent and stretched have any redeeming value. Aviation department managers must develop and design guidelines that can meet most of the challenges of the company travel requirements. When an impasse is reached and safety is threatened or about to be compromised, then conversation at the corporate executive level is basic and fundamental to the survival of the passengers and to the aviation department.

About the Author

John A. Pope established John A. Pope & Associates, an aviation consulting firm located in Arlington, VA, U.S., after retiring in 1984 as vice president of the U.S. National Business Aircraft Association. He specializes in developing comprehensive operation manuals for corporate flight departments.

Pope is Washington Editor for "Aviation International News" and is a frequent contributor to Flight Safety Foundation's publications. He is equally at home as an aviation safety speaker.

He served as a command pilot in the U.S. Air Force and the Air National Guard. He retired as a colonel from the U.S. Air Force Reserve after 33 years of service.

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