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October 13, 2009

Docket Management Facility
US Department of Transportation
1200 New Jersey Avenue, SE
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Washington, DC 20590

Subject: Petition for Temporary Regulation Suspension – 14 CFR 121.333(c)(3)

To Whom It May Concern:

FedEx Express and the Air Line Pilots Association, International (ALPA), would like to submit this joint petition for a temporary suspension of the regulation at 14 CFR 121.333(c)(3) which states:

> Notwithstanding paragraph (c)(2) of this section, if for any reason at any time it is necessary for one pilot to leave his station at the controls of the airplane when operating at flight altitudes above flight level 250, the remaining pilot at the controls shall put on and use his oxygen mask until the other pilot has returned to his duty station.

We believe that this action is reasonable and urgently needed for the following reasons:

On June 11, 2009, the World Health Organization (WHO) signaled that a global pandemic of novel influenza A (H1N1) was underway by raising the worldwide pandemic alert level to Phase 6. The U.S. Centers for Disease Control and Prevention (CDC) has announced that a pandemic has been declared for the H1N1 flu within the United States. The potential exists for flight crewmembers to contract H1N1 flu and any number of other serious, debilitating diseases.

The current oxygen mask use procedures place pilots at increased risk for contracting transmissible disease. This risk arises due to the design of the aircraft oxygen masks, which precludes them from being properly disassembled and cleaned between users. The National Institute of Occupational Safety and Health (NIOSH) and the Centers for Disease Control (CDC) have stringent guidance and regulations for the operation and cleaning of respirators between multiple users. While aircraft oxygen masks are not defined as respirators, logic dictates that the health risks associated with the sharing of respirators would apply equally to the sharing of oxygen masks.

Several types of diseases may be communicable through sharing of oxygen masks:

- Influenza – According to the CDC, influenza is thought to be spread through coughing or sneezing by people infected with the influenza virus. People may also become infected by touching something with influenza viruses on it and then touching their mouth, nose, or eyes. Admittedly, scientists are not quite certain about the path of transmission for the pandemic H1N1 virus. Respiratory droplets, as well as airborne transmission are likely. The H1N1 virus has been determined to have a life span of 2-8 hours on a hard surface. With current oxygen mask procedures, the risk of passing this virus between pilots is quite high. Following are recommendations from the CDC website on ways to avoid H1N1 when wearing a facemask:
    - Avoid re-using disposable facemasks and N95 respirators, if possible. Used facemasks and N95 respirators should be taken off and immediately placed in the regular trash so they do not touch anything else.
    - After you take off a facemask or N95 respirator, clean your hands with soap and water or an alcohol-based hand sanitizer.
- Methicillin-resistant Staphylococcus aureus (MRSA) bacteria – MRSA is a deadly bacterium that has spread outside hospitals into the community; it now kills more people than AIDS annually. It is a rapidly spreading infection that can require amputation and cause death. MRSA bacteria can live for weeks or months on a hard surface.
- Tuberculosis (TB) – TB is also a worldwide pandemic. Two billion people are infected with the tubercle bacilli; 10% will become sick. TB is highly contagious and becoming multi-drug resistant. People can harbor the bacteria for years before it is triggered, and it can be fatal
- Meningitis – Meningitis is spread by exchange of respiratory and throat secretions. Bacterial infection is more severe and can cause brain damage, hearing loss, limb amputation, or death. CDC recommends not sharing eating utensils or water bottles to avoid transmitting the bacteria. We can extrapolate this to include oxygen masks since respiratory secretions will remain after use.
- Various Bacteria – Other various bacteria found in the environment are becoming increasingly resistant to antibiotics such as *c. difficile* or *pseudomonas aeruginosa*, which are opportunistic when a person's immune system is compromised. Pilot immune systems are constantly under assault from disruption of circadian rhythm, radiation, stress, pesticides and chemicals used in aircraft, foreign environments, etc.
- Mold – According to the oxygen mask manufacturers, mold growth can be a serious health risk because bacteria can quickly reproduce on the surface of a moisture-laden mask or cannula. Mold can be forced deep into the lungs during use and cause serious health problems.

Disinfectant wipes are used, when available, to clean masks. They are somewhat effective against most viruses when they are reachable. However, as relates to the oxygen mask, their effectiveness is limited due to the need to subject the mask to the wet solution for an adequate period of time. The microphone (where respiratory fluids

accumulate) and the inside of the oxygen supply hose are completely inaccessible to the disinfectant. Compounding the problem is the fact that the active ingredient in many disinfectant wipes, benzalkonium chloride (BC), has been shown to be a factor in creating super bacteria that are becoming more resistant to antibiotics. Allergic reactions have also been reported with continuous long-term use in sensitive users especially on mucous membranes. Unfortunately, the wipes are less effective against certain types of bacteria. Gram-positive bacteria are generally more susceptible than gram-negative bacteria to BC. Finally, there is also concern that the wipes have the potential to spread the pathogen to a wider area when wiping.

Both Boeing[1] and Airbus[2] have collected data since the 1950s over millions of flight hours regarding rapid depressurizations above FL250. Since that time, there have only been a handful of incidents, none of which have had an adverse outcome due to pilot physiology. The statistical probability of rapid depressurization is miniscule, yet the resultant risk to pilot health from sharing contaminated oxygen masks is significant.

Recent studies indicate that the time of useful consciousness (TUC) averages 16 to 17 seconds at FL410. This is actually a significant period of time when the pilot's adrenaline is elevated. Response to a rapid decompression event is routinely practiced in simulator training. This training should provide the ability for an air carrier pilot to easily don their oxygen mask within the TUC.

The United States needs to harmonize its regulations on oxygen mask use with the rest of the world. There is no ICAO Standard or Recommended Practice which calls for a single pilot at the controls to don an oxygen mask when operating at flight altitudes above FL 250. Canadian Aviation Regulations Section 605.32(3) states that "the pilot at the flight controls of an aircraft shall use an oxygen mask if (a) the aircraft is not equipped with quick-donning oxygen masks and is operated at or above flight level 250; or (b) the aircraft is equipped with quick-donning oxygen masks and is operated above flight level 410." The pertinent European aviation regulations (i.e., those previously issued as JAR-OPS 1.770, which are now under the domain of the European Aviation Safety Agency) have no requirement to don an oxygen mask when a single pilot is at the controls below FL 420.

Clearly, the international aviation community has interpreted the research to indicate that their oxygen mask-use procedures are safe. It should be noted that non-U.S. pilots flying in U.S. airspace are not required to don oxygen masks above flight level 250 when only one pilot is at the controls.

This waiver, if granted, would result in a safer and more healthful working environment for airline pilots. It would minimize the potential for spreading of serious, life-threatening illnesses among flight crewmembers and the travelling public, while helping

[1] Boeing letter to Department of Transportation requesting exemption from certain sections of 14 CFR 25, July 22, 2008, page 6.
[2] Airbus letter to Department of Transportation requesting exemption from certain provisions of 14 CFR 25.841, December 7, 2004, page 9.

to protect airline scheduling integrity. As we are now coming into the flu season in the United States, this waiver is particularly timely and significant. There would be no compromise to safety with this waiver and in fact, safety would be improved. The grant of this exemption is in the public interest

Summary

In light of the facts provided herein, the Air Line Pilots Association, International and FedEx Express request that FAR 121.333(c)(3) be immediately suspended.

By separate correspondence, we will request a petition for rulemaking to amend FAR Part 121.133(c)(3) by replacing "flight altitudes above flight level 250" in that citation with "flight altitudes above flight level 410."

Thank you for the opportunity to submit this petition for regulation suspension.

Sincerely,

Captain James Bowman
Director of Operations
FedEx Express

Captain Jeff Kilmer,
Executive Chairman
Pilot Assistance Committee
Air Line Pilots Association, International

Attachments:

- *"Oxygen Mask Use in Aviation,"* Air Line Pilots Association, October 2009
- Letter of Health Hazard Evaluation. National Institute for Occupational Safety and Health. Nancy C. Burton, PhD, MPH. July 10, 2009
- *"Transmission of Influenza A in Human Beings,"* Infection Prevention and Control Unit, University Health Network, Toronto, Ontario, Canada. February 19, 2007
- *"Significance of Fomites in the Spread of Respiratory and Enteric Viral Disease,"* Applied and Environmental Microbiology. March 2007.
- *"Respiratory Protection Against Bioaerosols: Literature Review and Research Needs,"* American Journal of Infection Control. 2004

Cc: Mark Hansen, Lead Council, Regulatory Affairs (FedEx Express)
John Maxwell, Lead Council, Labor Relations (FedEx Express)