

SAFETY BULLETIN

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HEARING & NOISE IN AVIATION

INTRODUCTION

The term hearing describes the process, function, or power of perceiving sound. Hearing is second only to vision as a physiological sensory mechanism to obtain critical information during operation of an aircraft. The term noise refers to a sound, especially one which lacks agreeable musical quality, is noticeably unpleasant or is too loud. Aircraft maintenance is one of the activities involving noisy operations, such as aircraft movement, engine testing, maintenance equipment and powered tools, and other maintenance and repair activities.

POTENTIAL HAZARD AND MITIGATION ACTION DURING AIRCRAFT MAINTENANCE ACTIVITIES INVOLVING NOISY OPERATIONS :

1. HAZARD:

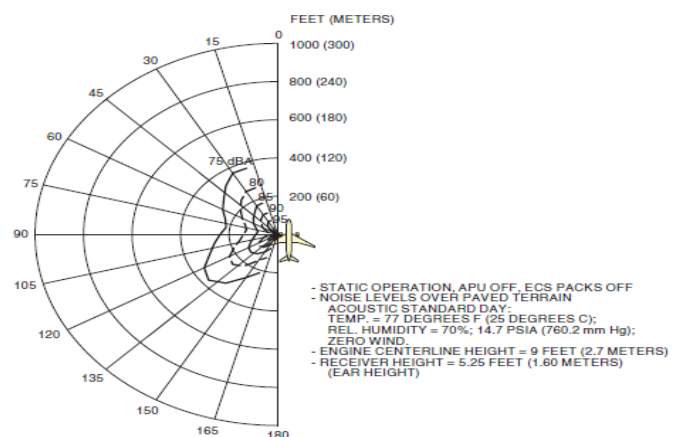
Noise is produced by aircraft equipment powerplants, transmission systems, jet efflux, propellers, rotors, hydraulic and electrical actuators, cabin conditioning and pressurization systems, cockpit advisory and alert systems, communications equipment, etc. These noises at work can cause hearing damage that is permanent and disabling. This can be gradual, from exposure to noise over time, but damage can also be caused by sudden, extremely loud, noises. Hence, aircraft maintenance personnel are exposed to these hazards.

MITIGATION ACTIONS:

1. Limiting duration of exposure to noise.

— OSHA established permissible noise exposure limits for the workplace (including the cockpit of an aircraft):

Noise Intensity (dB)	Exposure Limit (hrs. per day)
90	8
92	6
95	4
97	3
100	2
102	1.5
105	1
110	.5
115	.25



2. Use hearing protection equipments.

If the ambient noise level exceeds OSHA's permissible noise exposure limits, you should use hearing protection devices such as earplugs (provide 30 to 35 dB of noise protection), earmuffs, communication headsets, or active noise reduction headsets. Even if an individual already has some level of permanent hearing loss, using hearing protection equipment should prevent further hearing damage.

3. Increase distance of workers and source of noise.

The further away the noise source is, the less harmful its effect on workers will be.

4. Organize Schedule.

Organizing schedules so that noisy tasks are performed when as few people as possible are present.

5. Minimize staff in noisy area.

The number of individuals working in a noisy area should be minimized by keeping individuals out of the area if their job does not require them to be there.

6. Proper rest area.

A proper rest break area away from all the noise sources should be provided for the staffs.

CONCLUSION

In conclusion, it is essential that anybody working with an aircraft to take the necessary precautions to ensure that their hearing is not harmed by prolonged exposure to the loud noises created by the aircraft while they are being maintained.

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