



Shop Safety Tips

Noise Control in the Shop

Noise is an undesirable sound. At times, it may be enjoyable and other times, it may be annoying or harmful. Noise; as a topic is very complex, however understanding some basics methods of controlling noise in the shop will reduce your exposure to noise and it's effects.

When considering methods of controlling noise in the shop, it is helpful to consider how noise is generated. It may be airborne or transmitted by vibration that is being transmitted through the floor or walls or other items in the shop. Some causes of noise and vibration are:

- Wear or corrosion on machinery
- Aging components of equipment caused by increased tolerances or loss of adhesion or bonding.
- Loose fasteners; broken parts, inadequate lubrication

Noise levels in the shop can be reduced through the use of some or all of the three basic practical approaches discussed below.

- ❑ **Controlling the noise at the source** typically consists of engineering controls. This provides the most effective means of protection. Engineering controls can be as simple as providing sound absorbing materials on the walls or ceiling; Isolating noisy equipment with rubber footings, or other forms of damping suspension so as to reduce the radiation and amplification of noise via vibrations.
- ❑ **Moving or relocating noise-producing equipment** out of the area, since noise intensity decreases significantly as you move away from the source of the noise. Depending on the types of surfaces in your workshop, you can reduce the level of noise that you are exposed to by up to 6 dBA doubling the distance between you and the source of the noise. Partial enclosures or isolation of equipment outside of the work area is also a good engineering control.
- ❑ **Personal Protective Equipment** may consist of hearing protection devices that isolate the human ear from harmful noise levels. They should be worn as the final line of defense against noise hazards. Hearing protection devices can be effective and, compared to source and path control efforts, relatively inexpensive. Their use, however, does demand a considerable level of ongoing effort and commitment of use and care.