

WHY LISTENING IS  
ENOUGH

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It has been repeatedly reported in many publications that in order to properly lubricate a bearing one must measure the decibels of sound given off by that bearing and attempt to listen to the ultrasonic sound it is producing. I would like to provide an alternative to that point of view.

When a person listens to sounds, in the audible or sonic range, sounds such as music or in this case a bearing, the brain's response involves a number of regions outside the auditory cortex, including areas normally involved in other kinds of thinking. A person's visual, tactile, and emotional experience all affect where the brain processes these sounds. Thus, the reasoning for source of sound or its quality is determined by more than just the sound heard and the level of decibels noted.

The primary auditory cortex of the brain is retuned by experience so that more cells become maximally responsive to the important sounds such as the correct amount of grease to add to a bearing to achieve the correct lubrication level, by sonic sound alone. Retuning the brain to learn the sound qualities that are important in diagnosing a bearing's proper lubrication level is done automatically with the brain-ear-subjective reasoning method. Retuning the brain to learn the sound qualities that are important to know to be able to diagnose a bearing's proper lubrication level is done automatically with the brain-ear-subjective reasoning method.

Individual brain cells respond optimally to a particular pitch or frequency. These cells shift their original tuning when a person learns the specific tone that is important. This cellular adjustment "edits the frequency map" for say (X) kilohertz when that is the important frequency. The important tones and contours of sound made by a bearing that needs grease are modified when the proper amount of additional grease is added. This optimal level is more easily achieved using the brain-ear-subjective reasoning method alone. Relying on a decibel increase to indicate churning, caused by over greasing, could be dangerous to the bearings health.

Consider the doctor stethoscope principal. We go to doctors; they listen to various organs of the body with their stethoscope. They are able to determine if further investigation is necessary. The ability of doctors to detect a particular fault increases with experience. This ability to diagnose and analyze sound is being used all over the world by lubrication technicians, using the ear-brain-subjective reasoning method.

Allowing a person the ability to properly lubricate bearings, WITHOUT increasing their work load is critical. Experience has taught me that making a person's job easier, more interesting, or rewarding is the only acceptable method of getting them to change their work habits, willingly! If you make someone's job harder, more time consuming or difficult, you will see stiff resistance to any change of work habits.

Armed with their grease guns and acoustic lubrication monitors the lubrication technicians are able to complete their assigned tasks of greasing bearings. With a small degree of experience and innate knowledge even a novice will be able to become a part of the front line of defense in reducing bearing failures, and our war on the problem of improper lubrication.