Prolong the Life of Rotary Electric Vibrators with These Best Practices

By Rob Beiersdorfer

After investing in a rotary electric vibrator, you would probably like to get the most value from it that you can. Here's our recommendation if that's your goal: every three months, perform a thorough inspection of the equipment. After lockout/tagout and other safety considerations, we suggest the following:

1. Perform a visual inspection of the vibrator's housing, looking closely for cracks in mount feet, mount flanges, or the housing itself. If you find any damage, remove the vibratory motor from service and return it to AIRMATIC or another authorized repair facility for a detailed repair/inspection, report of findings, and a quote on repair.

2. Perform a visual inspection of the rotary electric vibrator's mounting plate on the vibrating equipment. If you discover damaged areas, remove the equipment from service until an in-depth equipment inspection/repair has been performed by qualified technicians.

3. Inspect the vibrator's cord. Replace the cord if there are signs of damage or wear (inspect both the power supply cord and the thermistor circuit cord).

4. Remove the vibrator's wiring box cover and inspect for foreign matter or liquid. Vacuum out any foreign matter you find. If there is moisture, remove the vibrator from service and have ground insulation tested by a qualified technician who has been trained and licensed.

5. Before replacing the wiring box cover, make sure the electrical connections are tight (do not over-tighten) and inspect the cover's O-ring and rubber compression block. If the O-ring or rubber compression block are damaged or have lost compression-set, replace.

6. Perform visual inspection of the vibrator's weight covers. If they are damaged, remove and replace them. If there is no damage, remove the weight covers and inspect for foreign matter. Vacuum if

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necessary. Replace O-rings if they are damaged or have lost compression-set. Note that it's not unusual to find extra grease inside the weight cover. If you do, simply remove the excess grease. When reinstalling the weight cover, make sure the cover bolts are torqued to the manufacturer's specifications.

7. Extreme operating demands imposed on vibratory motors require strict adherence to the manufacturer's specifications on the brand and type of grease. Grease specifications and lubrication schedules vary based on the vibrator's speed, duty cycle, and environment. Consult the manufacturer's O/O manual for specifics. Generally, rotary electric vibrators must be re-lubricated after every 2000 hours of operation. NOTE: Never mix grease types or brands.

8. Check the torque on all mounting bolts before starting up the vibrator again and check it once more after the first 40 hours of operation. Thereafter, test/verify mount bolt torque after every 1000 hours of operation or on a yearly basis, whichever comes first. If one or more mount bolts has been removed or is missing, dispose of all bolts, nuts, and washers, and replace them with mounting hardware that meets the manufacture's exact specifications. Always use new "sets" of bolts, nuts, and compression washers. Do not use split lock washers; only compression washers. Use a recently calibrated torque wrench to tighten mounting hardware to the manufacturer's torque specification.

9. If a vibrator has been removed for service, before remounting it, make sure the mounting surface is flat (≤ 0.01" across bolt holes), and clean (free of all dirt, oil, rust, and paint). Failure to mount a rotary electric vibrator or vibratory motor to a flat surface, or failure to remove foreign material between the vibrator's mount feet and the mounting plate surface, will result in mount bolt failure and possible damage to the vibrator and/or the vibratory equipment.

Rob Beiersdorfer is Vibration Products Manager at AIRMATIC and has more than 30 years of applied vibration experience in a wide range of industries.

Thanks for reading our post. If you'd like to learn more about getting the most out of your pneumatic or electric vibrators, or vibratory motors and equipment, please contact one of our Vibration Specialists at +215.333.5600 or at infocenter@airmatic.com.