Short Circuit in Your Vibration Isolation?

You have used the LP-13 Shake Absorber™ Isolation pads with much success with vibration isolation and noise reduction in many of your applications, however, in this instance your machine needs to be bolted to the floor. You purchase the pads in proper size and realize you can drill a hole through the pad for the bolts and install them without much effort. When you turn the machine on, you still feel vibration….WHAT HAPPENED?

First, remember how the LP-13 Shake Absorber™ works to isolate vibrations:

- Our three layer pad has a solid core layer that is surrounded by our proprietary neoprene.
- The first layer of neoprene absorbs some vibration frequencies and others get transferred to the hard core where the frequency becomes spread out and changed.
- The second layer of neoprene then absorbs the remaining frequencies.

Obviously, nuts and bolts are metal apparatuses that are used to connect things together.

Vibration loves things that are connected together!

Vibration in many ways is like electricity. It looks for routes to continue and even increase, via 'connected' multiple harmonics & resonances.

Let's get geeky:

Technique

Mounting motors, pumps, gearboxes and other items of plant on LP-13 Shake Absorber® pads can be a very effective way of isolating transmission of vibration and therefore noise radiated by the rest of the structure. This is particularly the case where vibrating units are bolted to steel supports or floors. However, a common error with the use of these pads is for the bolt to "short-circuit" the pad, resulting in no isolation. Additional pads must be fitted under the bolt heads as shown below as well as sheathing the bolt from the core of the isolation pad.