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HSE CONFIRMS NORBAR MULTIPLIER'S GOOD VIBRATIONS



Recent tests carried out by the HSE (Health & Safety Executive) have demonstrated that vibration exposure for operators using pneumatic torque multipliers to tighten 100 commercial vehicle wheel nuts was 10 times lower than when traditional impact wrenches are used. The Norbar Pneutorque® PTM-72-1350B and one other multiplier were subjected to lab and field tests by the HSE and both tools confirmed manufacturer claims of low vibration emissions.

The benefits of using torque multipliers over impact wrenches include:

- Low vibration levels support health & safety in the workplace by avoiding occupational risks such as VWF (vibration white finger) also known as HAVS (hand arm vibration syndrome).
 - The Control of Vibrations at Work Regulations impose a Daily Exposure Action Value (EAV) of 2.5 m/s^2 , above which employers must introduce controls to eliminate or reduce exposure and provide health surveillance to operators regularly exposed to vibration that exceeds this level.
 - The Norbar Pneutorque pneumatic torque multiplier does not exceed 2.5 m/s^2 . This means there is no restriction in its use during the working day.

- Torque multipliers are very much quieter than impact wrenches, so exposure time can be safely increased without the compulsory use of ear defenders.
 - The Noise at Work Regulations state that it becomes compulsory to wear hearing protection when exposure reaches 85dBA.
 - A typical impact wrench will reach 90-98dBA when idling and exceed this level when impacting.
 - The Norbar Pneutorque pneumatic torque multiplier reaches only 83dBA, producing a quieter working environment for the operator and those in the operating vicinity.
- Using impact wrenches requires torque to be checked using a torque wrench and frequently nuts may be over-tightened. A pneumatic torque multiplier undertakes accurate torque tightening in a single process and when fitted with integrated transducer can also be used to measure the applied torque.
- Vibration is also an important element in reducing the life of tools and sockets in commercial vehicle workshops, so using torque multipliers with their low vibration levels can help preserve these components.

Philip Brodey of Norbar Torque Tools, based in Banbury, said that the HSE had identified the need for these tests because of the increased use of torque multipliers as an alternative to impact wrenches. *“We believe that the tests have shown the very clear health & safety benefits that using torque multipliers can provide in the workplace,”* he said.

The HSE tests were carried out at the Health & Safety Laboratory (HSL) using the standard test outlined in ISO/FDIS 28927-2:2008, with declared vibration emission levels verified according to criteria set by BS EN 12096:1997. Both brake device and free running tests were used by the HSL, and the multipliers were also trialled in the field at a commercial vehicle fleet maintenance workshop.