

ASSESSMENT OF VIBRATION LEVELS FOR SHEAR WRENCHES

ASSESSMENT BODY	FIVE SIDES INDUSTRIAL LTD
ASSESSOR	MR MARCUS BARHAM
DATE OF ASSESSMENT	11 TH JANUARY 2018
LARSON DAVIS METER	IHVM100 SERIAL # 00124
PCB PIEZOTRONICS TRI AXIAL SHEAR ACCELEROMETER	SEN020 - SERIAL # P29011

In accordance with the Control of Vibration at Work Regulation 2005, TCB have employed a qualified third party to assess the exposure to hand transmitted vibration when using Electric Shear Wrenches.

HAV Control Ltd carried out a vibration assessment consisting of three 30 second readings of the a_{hw} rms of the three orthogonal axes expressed as a Σ sum m/sec^2 and averaged. From this the Touch Time required to reach an A(8) $2.5m/sec^2$ was produced. This figure is expressed in Hrs & Mins.

The trial was undertaken with the accelerometer configured with the Y axis running through the fingers of the hand in relation to the grip on the individual tools. At the time of the trial the temperature was $19.8^{\circ}C$ and the humidity was 50%.

Tooling		Avg. Vibration Level m/s^2	Time to reach EAV $2.5 m/s^2$ (Hrs:Mins)	Time to reach ELV $5 m/s^2$ (Hrs:Mins)
Model	Type			
GM160EZ	New	1.77	15:58	>24:00
GM160EZ	Hire	1.27	>24:00	>24:00
GM220EZ	New	1.47	23:08	>24:00
GM220EZ	Hire	1.84	14:46	>24:00
GMC220EZ	New	1.02	>24:00	>24:00
GMC220EZ	Hire	1.09	>24:00	>24:00
GH240EZ	New	1.70	17:18	>24:00
GH240EZ	Hire	1.55	20:49	>24:00
GHC240EZ	New	0.91	>24:00	>24:00
GHC240EZ	Hire	1.20	>24:00	>24:00
GV300EZ	New	2.37	8:54	>24:00
GV300EZ	Hire	2.53	7:49	>24:00
GVC300EZ	New	1.17	>24:00	>24:00
GVC300EZ	Hire	1.00	>24:00	>24:00
GX360EZ	New	0.98	>24:00	>24:00
GX360EZ	Hire	1.11	>24:00	>24:00

Conclusion

Those working with Shear Wrenches supplied by Tension Control Bolts are exposed to very low vibration magnitude. This results in an extremely low exposure points per hour/time to reach the exposure action value (EAV). Time to reach the exposure limit value (ELV) is therefore not applicable.

