

Mini-Tankers: driving change for noise exposure

Mike Bennetts, Z Energy



At Z Energy Limited, we know that daily exposure to continuous noise above 85 decibels (dBA) can damage hearing. We have made it our business to ensure that noise is carefully considered alongside all other environment-relevant risks for our staff and contractors, in both on- and off-site workplace situations. This consideration extends to the purchase of replacement vehicles and equipment in our Mini-Tankers division.

“The chief executive has to take personal responsibility to understand all the health and safety risks for their staff. Then they need to drive change to identify controls and put them in place.”

Mike Bennetts

Z Energy



■ Our noise problem

In 2017, Z Energy's Mini-Tanker division undertook a significant project that reviewed vehicle fleet requirements to improve both vehicle capability and fitness for purpose. The lifetime of a Mini-Tanker is somewhere between six and eight years (or one million kilometres), so we frequently have the opportunity to advance our fleet safety specifications with new vehicle purchases.

■ Driving change

It's no surprise then that our review recognised that quieter Mini-Tanker cab noise was a non-negotiable feature of future purchases for Z's fleet. To a large degree we are a taker of vehicle technology - in other words, trucks are supplied by international manufacturers to global markets and we are constrained to accepting the performance levels of those respective products. In areas associated with driver health this includes vehicle noise, light transmittance of windscreens, and ride comfort.

To further develop Z Energy's internal capability on fleet specification during the review, the then Principal Fleet Advisor, Domenico Kalasih, joined the New Zealand Transport Agency's New Zealand Safety Partnership Programme. The programme enabled multi-channel market pressure on overseas truck manufacturers to distribute higher specification vehicles to smaller markets such as New Zealand, rather than providing only low- to middle specification vehicles.

Our HSSE vehicle fleet team, led by Domenico, engaged with nine manufacturers to assess Mini-Tankers against a comprehensive list of risk checkpoints, including driver wellbeing. Across the sector there

is a level of 85 dBA and over typically associated with truck noise. Our survey of truck manufacturers required that they provide evidence to confirm vehicle noise below 85 dBA. Of the nine manufacturers all but one could provide evidence. I am pleased to report that we have now explicitly set the 85dBA cab noise threshold as a requirement for any vehicles entering the fleet from 2018. This standard has been endorsed by HSSE Health and Wellbeing manager Chris Eastham.

■ Making the right noises

I know that after our HSSE team's extensive work involved with the Mini-Tankers review, our procedural intervention will make a difference to the people who drive the millions of kilometres to keep our customers moving. We will constantly monitor the success of this procedure and work towards our expectations that we can drive vehicle noise levels even further down.



There are currently over 70 Mini-Tankers operating throughout New Zealand.

Multiply that number by one million kilometres, and you have a potentially large cumulative noise exposure.

APPENDIX

Mini-Tankers: driving change for noise exposure



Mini-Tankers is New Zealand's largest on-site diesel refuelling supply operation and refuels directly into machinery and (small) bulk diesel tanks. Their name might be "Minis" but there's nothing small about the size of the jobs they take on. From Cape Reinga to Bluff, Mini-Tankers keep big customers such as earth-moving companies, transport hubs like railyards and ports, construction sites, power generators, loggers and quarrying operations moving wherever they're located. We're currently supplying fuel to around 100 vehicles on the 18.5 kilometre Puhoi to Wellsford motorway extension project. The commitment for this project is completion by 2021 so there's still a lot of driving to come for our Mini-Tankers team – and this is just one project.

■ Setting expectations

During this vehicle review project, a Mini-Tankers Vehicle Requirements procedure was developed by our HSSE team. This procedure works alongside a previously developed Mini-Tanker Risk Register, and is a regulating document that directs the purchase of any new vehicles entering the fleet from 2018. It also matches the vehicle equipment and capability to the operational activity being undertaken.

■ Mini-Tankers Vehicle Requirements Procedure objectives

- To provide expectations on the equipment and safety features a Mini-Tanker should have so that it is fit for purpose, particularly in relation to its operating environment. In this document, "fit for purpose" is deemed to be that the vehicle is appropriately equipped so that the driver can complete their work as planned, on schedule, while maintaining their wellness and that the risk to harm for them and other affected parties is as low as reasonably practicable
 - To provide a clear link between the vehicle-related operational risks (as established in the Mini-Tanker Operational Risk Review) and the vehicle controls or safety features for mitigating those risks corresponding with the Mini-Tanker Risk Register
 - To provide a reference source, that is not complete in itself but contributes in part to a risk assessment of the respective road environment that Mini-Tanker units operate in. This procedure shall be used when undertaking Job Risk Assessments and developing Journey Management Plans for customer sites
 - To provide a short to medium term strategy that prioritises the fitting of vehicle equipment and safety features relative to managing the risk to safety
- To provide a cost allocation model that gives guidance on optimising vehicle capital and operating costs with the safety, environmental and productivity outcomes that Z Energy desires
 - To further develop Z Energy's internal capability on fleet specification
 - To provide a quality commitment to the NZTA New Zealand Safety Partnership Programme of which Z Energy is a Working Group member. As a consequence of following the guidance and requirements in this document, Z and the Zees (franchise operators) will be actively committing to and procuring heavy vehicles with advanced safety features which, in turn, will encourage vehicle suppliers to provide safer vehicles for other heavy vehicle operators.

Managing the noise risk

Elimination is the most effective noise control method; you do this by completely removing or avoiding the possibility that someone will be exposed to excessive noise – 85dBA over an eight hour period, or a peak sound pressure level of 140dBA (the threshold of pain).

If complete elimination is not reasonably practicable, you must consider ways to minimise the risk so workers are not exposed to excessive noise.

For further information around workplace noise regulations, go to: <https://worksafe.govt.nz>