TRUCKS & TRAILERS
RENTAL & LEASE

TR GROUP LTD

Making heavy vehicle fleet management easy for you

REAL Torque

February 2026

Contact maintenance for any questions on 0800 80 80 69

Zero Emission Refrigerated Trailer

Last July, we delivered our first zero-emission refrigerated trailer. It has already clocked up over 65,000km and avoided more than 4,800kg of CO2.

WHAT IS IT?

A fully electric, zero-emission refrigerated trailer. Instead of a diesel engine supplying energy to power the fridge, it uses a battery-electric refrigeration system powered by energy captured from an e-axle and by plug-in depot charging.

HOW DOES IT WORK?

ENERGY IN ➤ ENERGY STORED ➤ COOLING OUT

REGENERATIVE E AXLE (ON THE TRAILER):
The e axle harvests kinetic energy while the trailer is being towed along by the tractor unit, deceleration, and controlled coasting. That energy is converted to electricity and fed into the on-board battery pack.

BATTERY STORAGE:
A high-voltage battery stores the energy supplied from the axle and uses this as required to power the all-electric fridge.

PLUG-IN CHARGING AT THE DEPOT:
When parked, the trailer connects to an external power supply to top up the battery and power the fridge unit. This ensures a high state of charge at the start of shifts and reduces reliance on on-road regeneration for base load.

ELECTRIC REFRIGERATION UNIT:
The battery powers the all-electric fridge unit, delivering precise temperature control without burning diesel. Smart controls balance real-time cooling demand with available battery energy and regen opportunities.

ENERGY MANAGEMENT & TELEMATICS:
The system optimises when to draw from the battery, when to capture regeneration, and when to pre-cool at the depot—minimising energy use and maximising use.

KEY FACT:

The trailer generates much of its own energy via the e-axle and can be plugged in at the depot to charge, keeping the electric fridge running cleanly throughout the day.

KEY BENEFITS

ZERO EMISSIONS
It eliminates greenhouse gas emissions and harmful pollutants during operation, reducing the carbon footprint and improving air quality.

REDUCED NOISE POLLUTION
Electric drivetrains and refrigeration systems are significantly quieter than diesel-powered alternatives.

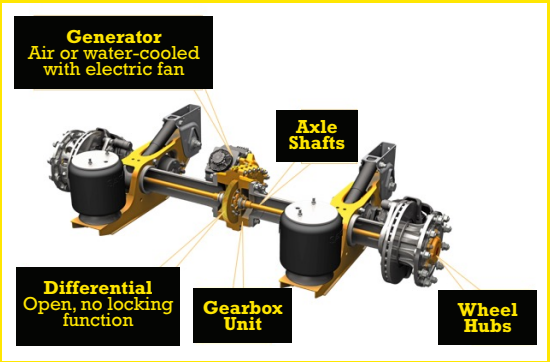
MORE UPTIME
Electric systems have fewer moving parts than internal combustion engines. Reduced servicing requirements due to no diesel power unit requiring servicing and oil changes.

REAL WORLD IMPACT
Demonstrates that regenerative e-axle + depot charge can reliably support a zero emission fridge unit.

THE NUMBERS SO FAR:

Distance covered
65,000km

CO_2 avoided
4,870kg



COMPONENTS: Electric Axle

Tips and Tricks

TR Tips

- When parked at the depot and the fridge is in use, ensure the trailer is plugged into standby power to keep the battery charged and the fridge running.
- Once connected to a tractor unit, check the dashboard for any fault codes. If there are brake system fault codes present, the generator will not produce power.
- Before starting your day, check the fridge controller for any warning lights.
- Complete daily vehicle checks to identify any potential issues before they develop into problems.

Contact maintenance for any questions on 0800 80 80 69

REAL Torque

February 2026

TR GROUP LTD
TRUCKS & TRAILERS RENTAL & LEASE

Making heavy vehicle fleet management easy for you