

MOTORING WORK WHEELS

Air mix gives truck owners big savings

WORK WHEELS

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What can you do with 5000 litres of diesel and five litres of distilled water?

Brian Cook tops up the tanks on his 2007 Caterpillar-powered diesel/hydrogen Freightliner that pulls a road train from Brisbane to Perth and return — in six days. Then a day for servicing, refuel and off again like clockwork.

Two freezer vans of Queensland fruit and vegetables are delivered to the Canning Vale markets each Sunday, then the two-up driving team heads back to Brisbane via Albany and Esperance, picking up fresh WA pilchards.

The big difference between this rig and others that share the longest trip in Australian trucking, is a 16kg two shoebox-sized contraption mounted on the back of the sleeper cab and plugged into a 12-amp feed from the truck's electrical system.

It's a hydrogen "reactor" that splits the distilled water into its hydrogen and oxygen components

and feeds the hydrogen into the big engine's air intake to boost the fuel charge. In effect, it replaces some of the inert atmosphere that is just there to make the diesel burn, which means less diesel is required for the same power output.

The truck has now clocked just over 1.1 million kilometres and Mr Cook calculates that he has saved more than \$100,000 for the two years it's been on the road; for an initial investment of \$8000.

Tim Dwyer of H2 Fuel-Save Australia, which manufactures the unit, said that more than 15 million kilometres had been covered by trucks using the system so far.

Mr Cook says that some mates on east coast intercity runs are not saving as much but it seems the device is well suited to long-haul routes.

The system only generates the gas when the engine is running and meters the gas required on demand. There is no gas storage.

When the engine is started, an oil pressure switch triggers power to the splitter and the gas flow begins. Engine off, gas off. If a hose comes loose, as it did on one trip, the system quits producing and the



Lower cost: The "reactor" has saved the owner more than \$100,000 in the two years the truck has been on the road.

truck just keeps going, running on diesel. The same happens if it runs out of water.

With no increase in horsepower, Caterpillar has been quite happy to maintain the engine warranty, though Mr Cook says the engine runs a bit cooler and is quieter. He says the torque is better — up to a gear and a half improvement on the Eaton auto-shift on some hills.

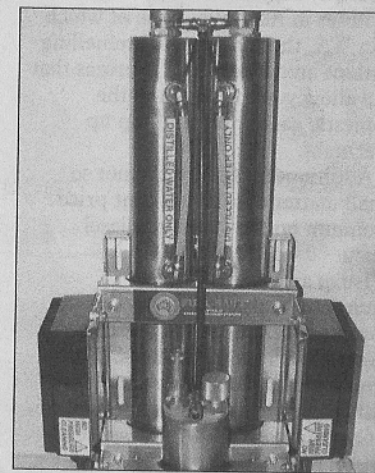
Emissions testing of trucks in service by South Australia's Vehicle Emissions Testing Facility shows a reduction in particulates of about 8 per cent, with a combined reduction in CO₂ of about 50 per cent.

Of course, until an industry-standard testing program is

complete, these fuel and reliability results should be considered as unique to this particular truck. Operators would need to make their own assessment of any potential benefits this system, or others like it, might have to offer their business. H2Fuel-Save Australia is the manufacturer. You can check them out at www.h2fuel-save.net.au.

CORRECTION

In last week's column we ran the wrong picture with the Mining Truck story. We published a picture of the Powertrans T1250 and incorrectly identified it as a Kenworth C540. The error was made in the production process.



Fuel saver: The hydrogen "reactor".