

# Designing for life

BY JONNY HEDT

Geelong's Ron Kukler hides a big secret.

The 2003 Australian Design Awards Invention of the Year winner has invented and patented a fuel injector he believes will revolutionise diesel engines across the world.

Only he knows what's inside the heavy, cigar-shaped aluminium tube.

The Kukler Fuel Injector injects diesel into an engine cylinder at pressures of 60,000 pounds per square inch - 20 times the output of conventional injectors and equivalent to pressures nine kilometres below the sea.

Unlike conventional injectors which produce fine droplets, the fuel instantly vapourises providing a 30 percent reduction in emissions and 30 percent more power on two-thirds the fuel.

Combustion pressure in the cylinder powers the injector hydraulically, replacing the need for a fuel pump, high-pressure fuel lines and other equipment com-

prising about 25 percent of a diesel engine's cost.

Ron has spent \$4 million developing a prototype during a decade of trial and error in his backyard. Melbourne University has verified the test results.

"Ten years ago a bus went past and I could barely see the city for the black smoke.

"I thought, why should we have to live like that," he recalls.

"I'm a conceptual person. I can look at something and say, there's something wrong with that and think of a way to make it better."

It's a timely invention, with stringent pollution standards starting in the US and Europe in 2007. There are 200 million diesel vehicles worldwide.

Not bad for a guy who signed up for a mechanical engineering degree by accident.

"I wanted to join the airforce after school by I was too young," he says.

"I went along with a friend when he was signing up to go to the Gordon

Institute, and I was in line behind him talking and came to the counter and the man asked 'what do you want to do?'"

"I asked my friend what he wrote down and he said engineering, so I told the man 'put me down for that'."

Ron worked at Shell, the Gas and Fuel Corporation and other fuel companies.

His family emigrated from Holland when he was nine to farm at Portarlington.

Ron and Moorabool St chartered accountant Peter Bloink have launched a share offer as Green Diesel Corp aiming to raise \$400,000 to internationally certify the injector in the US within 18 months.

Ron's keen for Geelong investors to back him.

"There's no reason why we can't manufacture the injectors here," he says.

"It has the potential to be as big as Ford."

In March, he'll travel to Colorado to talk with US military officials.

"I'll go skiing too," he smiles.

An inventor needs time off too.



**Green gem:**  
Geelong inventor  
Ron Kukler's diesel  
fuel injector could  
revolutionise the  
diesel engine.