

Makers warm to fuel-save device

By MARK HINCHLIFFE

A SMALL pipe device fitted to your car's engine could save you about \$6 every time you fill the fuel tank, according to the inventor.

Deakin University engineering senior lecturer Frank Will, 47, says his invention has already received interest from one car manufacturer.

It is named OVER7 because it is claimed to reduce fuel consumption by more than 7 per cent, saving about \$6 on a 60-litre fill-up.

Will says his prototype simply uses waste heat to warm the engine oil and reduce engine friction.

"The first car manufacturer has placed an order to test it and I'm in discussions with several others as well," he says.

"Built into a new car it should pay for itself within a month or two."

OVER7 consists of three components: a bypass pipe between the cylinder head, oil gallery and oil pump; a valve to control oil pressure; and a heat exchange to transfer heat from the exhaust into the oil.

It was developed as part of Will's PhD project and comes after years of research into fuel economy.

"When I was a kid in Germany in the oil crisis, the government decided to ban car driving every second Sunday so I thought it was quite serious," he says.

"I decided I'd better do something about it when I'm old enough, so when I started uni I became a mechanical engineer focused on internal combustion engines."

Will worked at Ford in Europe for several years.

He says a typical car engine loses about 80 per cent of fuel energy through heat transfer, but the OVER7 reduces that heat loss.

"One of its most important features is that it doesn't have to heat all the oil in the sump. Instead, it heats only the active oil in the engine lubrication system," he says.

The invention could also be released as a retrofit modification for all vehicles.

Will also believes the system is suitable for a range of vehicles, including diesels and hybrids.

Ford focuses on a quiet achiever

The Blue Oval has taken a battering locally as Falcon sales falter, but it's not all doom and gloom for Ford, writes **STUART MARTIN**

THE new Focus small-car range is set to turn the segment on its ear.

Packed with technology and displaying impeccable road manners, the Focus will find favour with as many Australian buyers as restricted supply can allow – those who crave a small car that's not just an A-to-B shopping trolley at least.

In fact, some models within the line-up are likely to encourage owners to take the back roads home.

The Sport model range within the new line-up has been expanded to include hatch and sedan with a number of drivetrain variables – the turbodiesel option is an auto-only proposition, albeit the Powershift twin-clutch set-up.

VALUE: The \$33,190 Sport Hatch turbodiesel is a \$3500 impost above the petrol-powered auto Sport, which can also be had with a five-speed manual for \$27,390.

The Sport is not short on gear and features – 17in alloy wheels, rain-sensing windscreen wipers, automatic headlights, dual-zone climate control, a Sony nine-speaker sound system, sports front seats, front fog lights, rear parking sensors, wheel-mounted cruise control and voice-control for the Bluetooth phone and audio link.

TECHNOLOGY: The two-litre direct-injection turbodiesel four-cylinder is smooth and quiet as it produces 120kW at 3750rpm, with 340Nm making its presence felt from 2000 through to 3250rpm.

The new Focus' powerplant gets the job done with higher-pressure within the common-rail fuel injection system and a smaller, faster-responding variable-geometry turbocharger.



The twin-clutch six-speed auto uses two dry clutches to run each gearbox, which can be left to its own devices or slipped into Sport – there are manual change buttons on the side of the gear selector but they are poorly positioned (why not just use the gear selector?) and redundant, as the gearbox's programming is

are more aerodynamic and anything but bland.

SAFETY: The body structure of the new Focus is 15 per cent stiffer than the outgoing model and has a five-star ANCAP crash safety rating – there are seatbelt reminders, front seatbelt pre-tensioners and load-limiters, dual front, side and full-length curtain air-

ing carparks and metropolitan duties, but it was never afraid of zipping through a series of bends at pace either.

The new car builds on that solid foundation with an on-road package that is a well balanced, stable and comfortable compromise.

It's on the firm side as you'd expect from a sport

formative and clear. The only complaint would be that it needs a speed readout as well as range-to-empty display, as the former will be more of a concern than the latter, as it is swift and quiet.

VERDICT:

Ford may not be building this car at Broadmeadows but the new Focus feels like a strong, cohesive package that will do well once supply frees up.

When the Cruze hatch arrives, the Red versus Blue battleground will not just be interesting to watch because of Commodore v Falcon, as the Focus will give small car buyers ample food for thought, particularly if they're in the market for a diesel.

WE LOVE ride and handling, quiet and frugal diesel, exterior design and LED interior lights

WE LOATHE busy centre stack and C-pillar blindspot.

STAR RATE 4 out of 5

OWNERSHIP

Price: \$33,190
Warranty: 3 years, 100,000km
Service interval: 15,000km or 12-months
Economy: 5.5l/100km, on test 7.2; 144g/km CO₂
Safety equipment: six airbags, ABS, EBD, stability control
Engine: 120kW/340Nm 2-litre DOHC 16-valve common-rail direct-injection turbodiesel 4-cyl
Transmission: six-speed twin-clutch automated manual, front drive
Body: 5-door, 5 seats
Dimensions: 4358mm (L); 1823mm (W); 1484mm (H); 2648mm (WB)

OR... HYUNDAI

i30 SLX CRDi HATCH
Price: \$30,090
Engine: 1.6-litre, 4-cyl common-rail direct-injection turbodiesel, 85kW/255Nm
Trans: 5-speed manual (optional four-speed auto), front-wheel drive
Thirst: 4.7l/100km (auto 6), CO₂ 125g/km

OR... PEUGEOT

308 ACTIVE HDI
Price: \$34,990
Engine: 2-litre, 4-cyl turbodiesel, 120kW/340Nm
Trans: 6-speed automatic, front-wheel drive
Thirst: 6.1l/100km, CO₂ 159g/km

ODD SPOT

□ The new Ford Focus on sale in Australia now is built in Germany but our market will switch to the Thai-built Focus from mid-2012



The Focus has always been a decent little machine that was never afraid of zipping through a series of bends at pace

pretty good.

DESIGN: Earlier incarnations of the Focus have not always been head-turners but the new hatch follows the company's "kinetic" design direction – strong, sharp lines with aggressive lighting packages

bags, anti-lock brakes with brakeforce distribution and emergency assist, rear parking sensors and traction and stability control.

DRIVING: The Focus has always, even in base guise, been a decent little machine, not just for negotiat-

hatch, but that doesn't mean it's uncomfortable and press-ahead motoring is achieved with aplomb, with a chassis composure that belies the pricetag.

The driver is well informed by the centre display, which is small but in-

Mini thinks big with new offerings

APART from world record people-stuffing attempts, it was always hard to get more than two people in a Mini.

But now you don't have to stress over that unused space in the rear seat.

Mini has launched its first two-seater – the Mini Coupe.

The Coupe will have a starring role at this week's Frankfurt motor show and will arrive here very early next year, with pricing an-

nounced in a few months.

The Australian line-up will start with the 135kW Mini Cooper S Coupe and the sports performance of the 155kW/211 hp Mini John Cooper Works Coupe both of which will be available with a six-speed manual transmission as standard but a six-speed automatic as an option.

A 90kW Mini Cooper Coupe and a 105kW diesel Mini Cooper SD Coupe will

ODDSPOT

□ The Guinness World Record for the number of people to fit into a Mini Cooper is 26, reached earlier this year – and one up on the previous record.

be available overseas, but not in the initial range here.

"We can't comment on price at this stage," Mini spokesperson Lucy McLellan says. We'll have some idea closer to the Australian launch. We'll know more

about price towards the end of this year."

Acting boss of Mini in Australia, Matt Schmidt, acknowledges there will be a small premium over similar models in the current range. "As far as pricing goes, lo-

cally we will see a small uplift over the current Hatch, Clubman and Cabrio," he says. That suggests the Cooper S Coupe is likely to be no higher than \$45,000, and the John Cooper Works about \$10,000 more.

While you don't often think of two-seater coupes as being practical cars, McLellan says the Mini Coupe will fill a practical need for buyers.

"Lots of Mini owners

never put anybody in the rear seat of the car, so this will appeal to those who want more load space but still want the qualities of a smaller Mini," she says.

"The Mini Coupe's boot space is fantastic."

McLellan also says the addition of the Mini Coupe is helping to extend the brand. "We've moved from just having an iconic car to having an entire brand," she says.