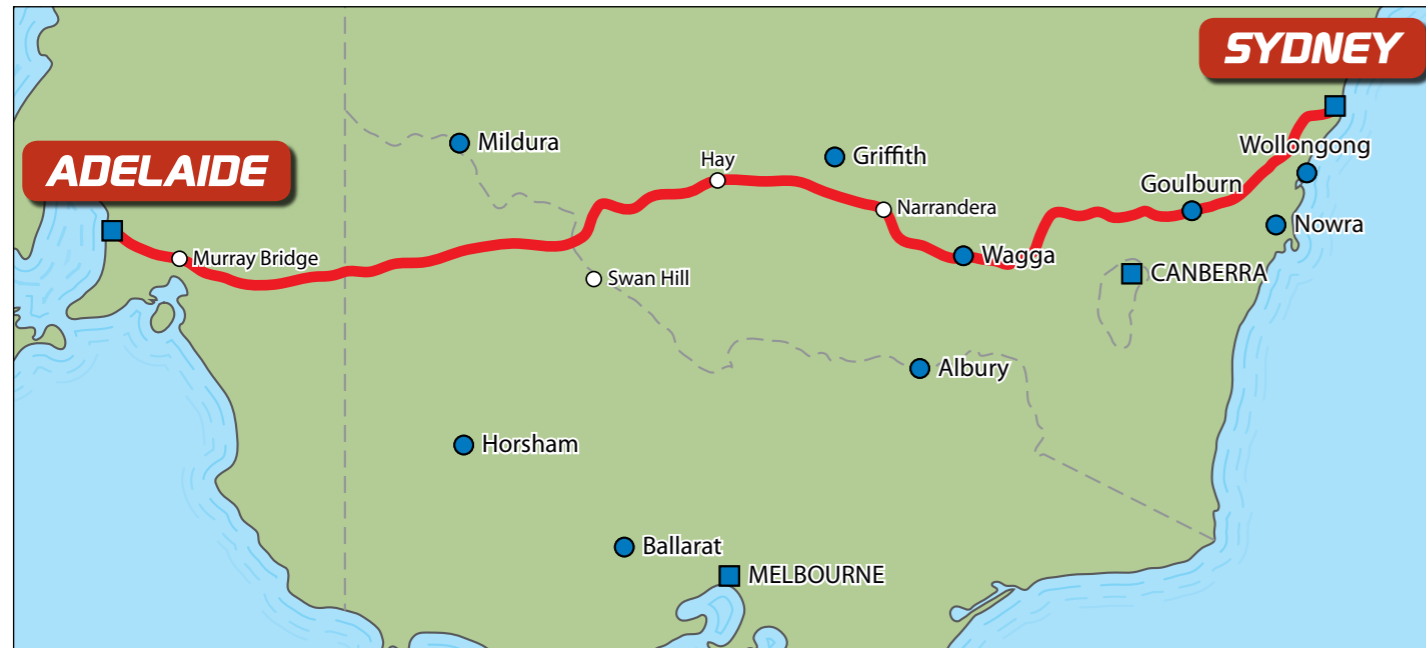


# KIA DIESEL FUEL ECONOMY CHALLENGE

1st November 2007



The Kia Diesel Economy Challenge sounded simple enough: drive two brand new Kia turbo-diesel SUVs from Adelaide to Sydney in one day. But the catch was that they had to do it without stopping for fuel. This meant completing the trip on a maximum of 58 litres for the new Sportage CRDi 4WD and 80 litres for the new Sorento CRDi 4WD. They did it, and the results are an astonishing endorsement of Kia's CRDi technology and dependability:

- 1,330 kilometres
- Adelaide to Sydney
- Tanks sealed by RAA and seals broken by NRMA
- Sportage – 58 litres of fuel at 4.36 litres/100km
- Sorento – 69 litres of fuel at 5.18 litres/100km

The latest generation of common rail turbo-diesels from Kia proved they can go the distance if required with economy car fuel efficiency. And all this while still managing to deliver space and luxury for five adults, their luggage and – in the case of the Sorento CRDi – a class-leading 2.8 tonnes braked towing capacity<sup>1</sup>

1. Medium SUVs under \$42,000.



Traversing the Hay Plain



End of the road: arriving at Kia Motors Australia's head office in Sydney.

# The Kia diesel experience



CRDi



**KIA MOTORS**  
The Power to Surprise™



## Why Kia Diesel?

Kia has been designing and manufacturing diesel engines for more than three decades. The company has been at the forefront of high speed direct-injection diesel engine development and continues to work towards the evolution of even cleaner and more efficient diesel power for the future. Our diesel engines have proven themselves over billions of kilometres in passenger cars, commercial trucks and vans, buses, and even military vehicles.

The diesel engine was invented in Germany over 130 years ago, so it's no surprise that the 'nerve centre' for Kia diesel technology development is our European Technical Centre located in Rüsselsheim, Germany. The Centre has proven to be the perfect location for advanced diesel development, due in no small part to its close proximity to key partners such as Bosch (direct-injection systems) and Engelhard (particulate filter technology).

## CRDi

Kia's own brand of diesel technology is known as 'CRDi', for **Common Rail Direct-injection**. CRDi brings together all the latest innovations in the world of diesel, including common rail high-pressure injection, turbochargers with VGT (variable geometry), air-to-air intercooling and particulate (soot) filters<sup>1</sup>.

The matching of Kia's proven expertise in diesel engine development with the very latest in diesel technologies – at one of the most advanced automotive R&D centres in the world – has resulted in a world-class range of engines bearing the CRDi nameplate. Two of these engines are now available for Australian motorists in the new Kia Sportage and Sorento 4WD ranges.

1. Fitted to Sportage CRDi

Kia's European Technical Centre in Rüsselsheim



Sorento's 2.5 litre CRDi engine



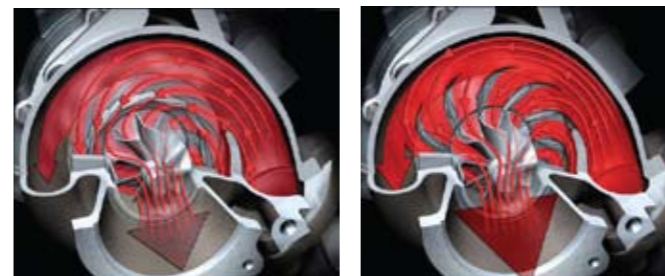
## The Benefits of Kia CRDi Technology

The new generation of Kia diesel engines found in the Sportage and Sorento offers superior performance, tractability and refinement at the same time as providing phenomenal efficiency and environmental compatibility.

### Performance & Driveability

Diesel engines are renowned for their ability to deliver high levels of torque at low engine speeds. Torque can best be described as rotational force, or pulling power... in essence, it is a measure of the size of an engine's 'muscle'. This abundance of low-down torque helps Kia CRDi models come into their own when the going gets tough, because in simple terms they deliver more pulling power with less effort than petrol equivalents. This might become evident, for example, while climbing a steep sand bank or while utilising the class-leading towing capacity<sup>2</sup>. Equally, diesel torque means more effortless overtaking on the open road and fewer gear changes in city driving.

Variable Geometry Turbochargers feature moving impellor vanes, which automatically enable torque and power outputs to be modified to suit the specific road speed.



The Sorento CRDi delivers maximum torque of 392Nm at 2,000rpm. More than 290Nm (74%) of this maximum torque is available from just 1,300rpm. This gives the Sorento CRDi tremendous flexibility in extreme conditions and in everyday driving.

### Efficiency & Economy

Because they produce more output for less effort, diesel engines are well-known for their frugality compared to gasoline (petrol) engines. The Sportage CRDi, for example, delivers outstanding fuel efficiency with a combined-cycle consumption figure of just 7.1 litres per 100 kilometres<sup>3</sup>. This puts Sportage CRDi into a similar efficiency bracket to small four-cylinder urban cars rather than 4WD compact SUVs.

### Refinement

Gone are the days of rattly, noisy diesel engines. Modern diesel technology ensures that the Kia CRDi diesel is highly refined, giving smooth and quiet performance. In fact, it's really only at idle and under hard acceleration that you can readily tell you're

2. Sorento: 2,800kg braked towing capacity. 3. According to ADR 81/01

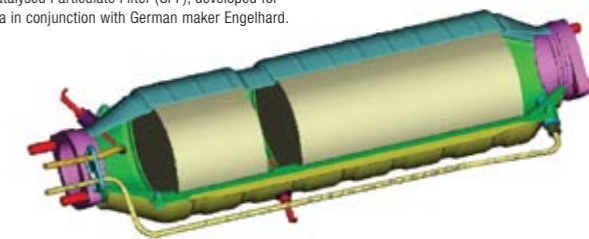


driving a diesel... and even then, it's a reassuring diesel 'beat' rather than an increased noise level that you'll perceive. The state-of-the-art Bosch common rail, high-pressure direct injection system is partly responsible for this refinement; as are the more sophisticated exhaust systems and the benefits that flow from intercooled turbocharging.

### Environmental Compatibility

You can also sleep easier knowing that your Kia diesel has a reduced impact on the environment compared to a similar-sized petrol engine. Improved fuel consumption means less non-renewable resource use, plus considerably lower CO<sub>2</sub> emissions. Kia diesel engines are Euro IV emissions-compliant, meeting and exceeding the toughest environmental standards.

Catalysed Particulate Filter (CPF), developed for Kia in conjunction with German maker Engelhard.



The Catalysed Particulate Filter (CPF) fitted to the Sportage CRDi gathers harmful exhaust emissions into a special filter incorporated in the exhaust system. Approximately every 1,000km, the CPF automatically and imperceptibly decomposes the noxious particulates into less harmful exhaust emissions.