

Global Engine Trends report by AARKstore Enterprise

Fuels, emissions and consumer trends This first edition report, written by leading industry commentator Jeff Daniels, reviews the key market drivers for both petrol and diesel engines.

Nov. 21, 2009 - [PRLog](#) -- This first edition report, written by leading industry commentator Jeff Daniels, reviews the key market drivers for both petrol and diesel engines. It provides an authoritative overview of both the technology issues (both present and future), and regulatory (emissions) concerns involved with this sector.

Chapter one: Fuels, emissions and consumer trends

The design of any engine is heavily influenced by the type of fuel on which it is intended to run. Today there is a clear distinction between the spark ignition engines, designed to run on petrol, and compression ignition engines, operating on diesel fuel. This chapter looks at current technology drivers, and innovations such as the HCCI engine.

The chapter discusses global legislation – both current and planned – as well as standards on emissions regulation. This section of the research also highlights consumer trends in engine buying, explaining how the three main developed-market areas have evolved remarkably different consumer preferences.

Chapter two: Current and future SI technologies

This chapter assesses product trends and processes associated with the petrol SI engine. The report provides authoritative commentary on engine construction, engine management and emission control as well as exhaust aftertreatment.

Chapter three: Diesel (CI)

This chapter reviews the compression-ignition (diesel) engine, and analyses the key differences between its petrol engine counterpart. The advantages of the turbodiesel are explained, and the alternatives to the turbocharger are also reviewed. Engine management and emission control, as well as exhaust aftertreatment are also covered.

Chapter four: Hybrid IC powertrain technology

This chapter reviews current hybrid technologies, and looks at whether existing claims made for their efficiency and fuel economy are valid. It also looks at diesel-electric hybrids, and assesses the likelihood of such engines achieving volume production.

Chapter five: Beyond the internal combustion engine

Will the potential problems associated with the fuel cell hybrid prevent widespread adoption of this technology?

Postscript: In the year 2025...

This provides an opinion on why a highly developed internal combustion engine will continue to be the most widely used power unit for light-duty vehicles, at least out to 2025...

The report provides answers to such vital questions as:

How viable is the HCCI principle, and will it prove more commercially successful than the fuel cell vehicle?

What are the main challenges to vehicle engine designers, in terms of emission regulation compliance?

How do distinctly different consumer preferences in the three main regions complicate both engine design and product planning?

Will the development of diesel hybrids finally ignite European interest in the hybrid concept?

Will the fuel cell establish itself as the true power unit of the future, or will it lose its way?

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