

Heavy Duty Engine Design

Over the past several years, FEV has gained experience in the design and development of Medium to Heavy Duty Engines for numerous applications. These include:

- On-road applications
- Off-road applications
- Industrial engines
- Marine applications
- Railway applications
- Aeronautic applications



V6 HD-Diesel Engine

The range of design services is provided by a team of experienced engineers who are well informed with the specific requirements of these engine categories. Using this vast experience, FEV's design department is able to provide comprehensive engineering services, including the following:

- Conceptual layout
- 3D CAD modelling and 2D detailed design from the early prototype stage through production design, all in the client's adopted CAD-standard
- Procurement of test engines through all development stages
- Supplier selection, qualification and coordination
- Prototype engine build
- Engine package design
- Vehicle integration (virtual integration and hardware integration)

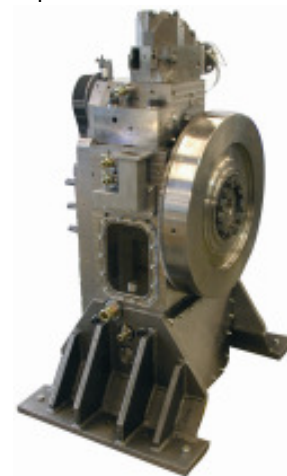
- Quality management, both in FEV's and the client's quality system
- Project coordination and project management



Engine Integration in Off-Road vehicle

Beside the classical design services, FEV offers additional services in the area of Medium and Heavy Duty Engine Design:

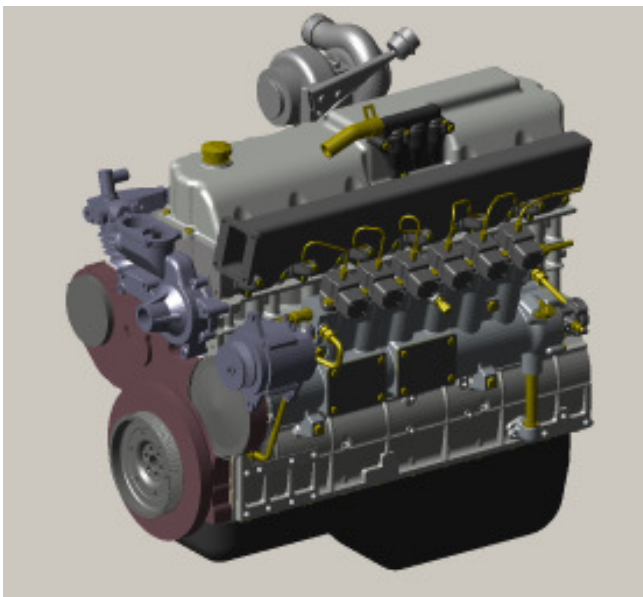
- Competitor engine analysis and benchmarking according to FEV's structured and established benchmarking procedure
- Engine production process planning and optimization
- Engine cost analysis and cost reduction of in production engines
- Design and build of customer-specific research and development engines based upon FEV's HD Single Cylinder Engine platform



Heavy Duty Single Cylinder Research Engine

Various references resulting from the long term experience in design of Medium and Heavy Duty Engine Design are:

- 5.0 l 4-Cylinder air-cooled Diesel Engine for Aircraft Application
- 7.0 l V8 Diesel Engine for Medium Duty Truck Application
- 7.2 l I6 Diesel Engine for Medium Duty Truck and Industrial Application
- 9.6 l I6 Diesel Engine for Heavy Duty Truck Application
- 12.6 l I6 Diesel Engine for Heavy Duty On-Road and Off-Road Applications
- V6/V8 Diesel Engine Family for Heavy Duty and Industrial Applications



Medium Duty Diesel Engine Concept Design

Additionally, FEV is continually developing tailored design solutions for the specific demands of Medium and Heavy Duty Engines. Prominent examples of recent in-house developments are the FEV Engine Brake System (EBS) or the first production truck engine crankcase with open-deck design.



Medium Duty Engine with open-deck crankcase

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