

## Volvo Powertrain – driving the Volvo Group



*Peter Karlsten*

President and CEO Volvo Powertrain

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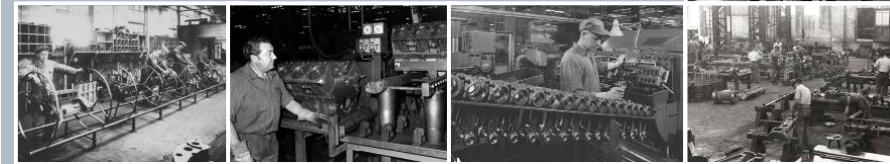
- **Volvo Powertrain**
- Common Architecture and Shared Technology
- The fuel efficiency challenge
- Medium Duty Engine Platform

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## Long engine design and manufacturing history

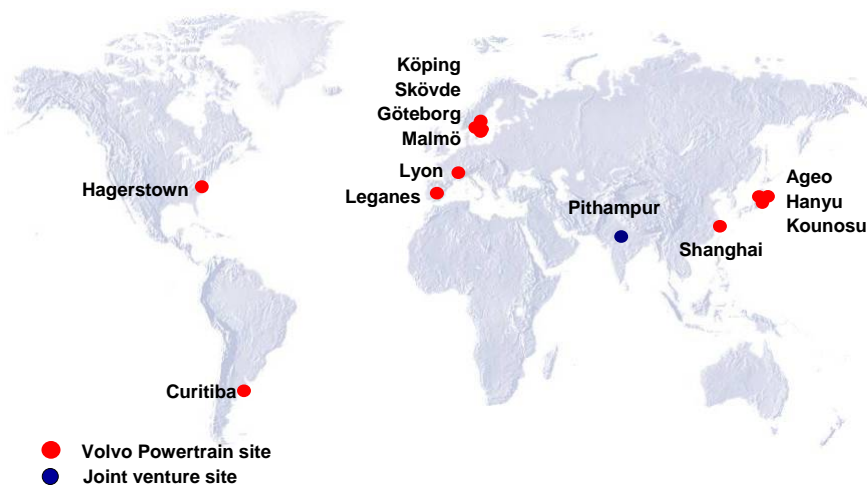
- Sweden – 1927
- France – 1900
- USA – 1900
- Japan – 1935
- Brazil – 1980



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## Volvo Powertrain Operation - product development, purchasing and manufacturing



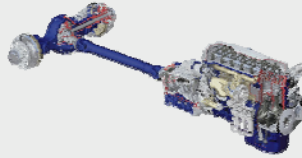
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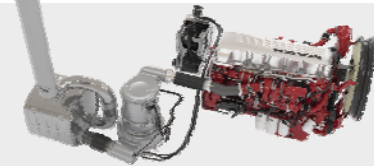
## Volvo Powertrain driveline product offer

- integrated solutions of engines-transmissions-axes for fuel efficiency

Conventional driveline



Hybrid driveline



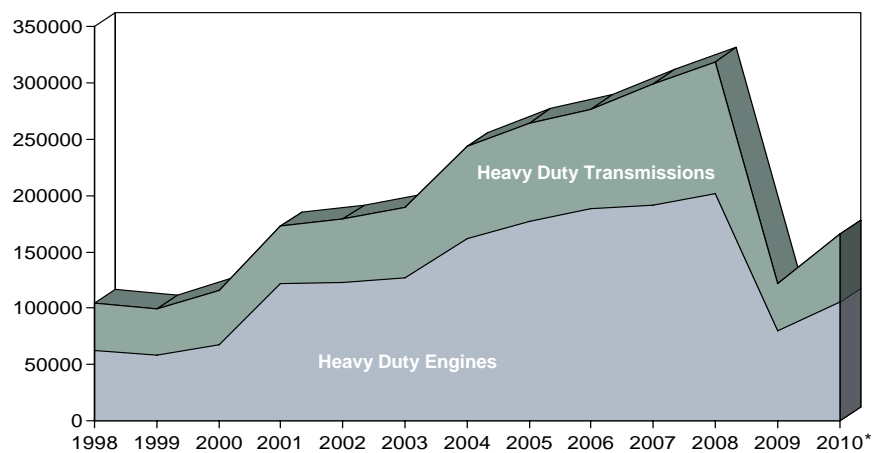
Aftertreatment Systems  
- SCR / EGR / DPF

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## Volvo Powertrain volume base

In-house Heavy Duty Engines and Transmissions 1998-2010 (\*Q1 annualized)



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## Purpose of Volvo Powertrain

- Competitive product offer for Volvo Group brands
- Synergies
- Economy of scale
- Common Architecture and Shared Technology



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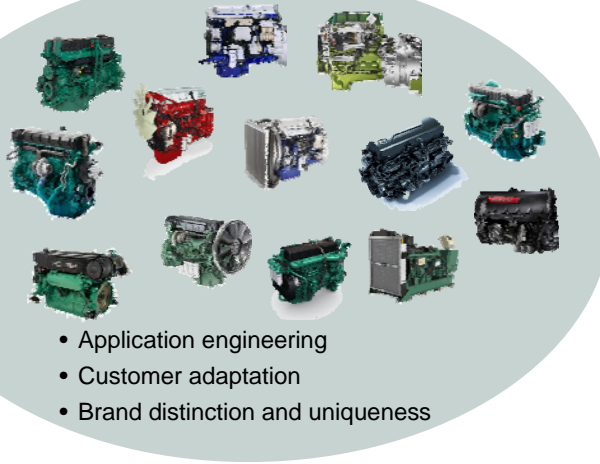
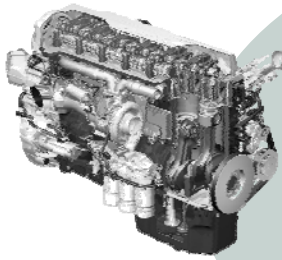
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# Volvo Powertrain heavy duty engine platform

Heavy Duty Engine Platform

Engines for Volvo Group Brands



- Volume base
- Common architecture and shared technology
- 9/11/13/16 litre

- Application engineering
- Customer adaptation
- Brand distinction and uniqueness

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## Vehicles powered by the HDEP engines



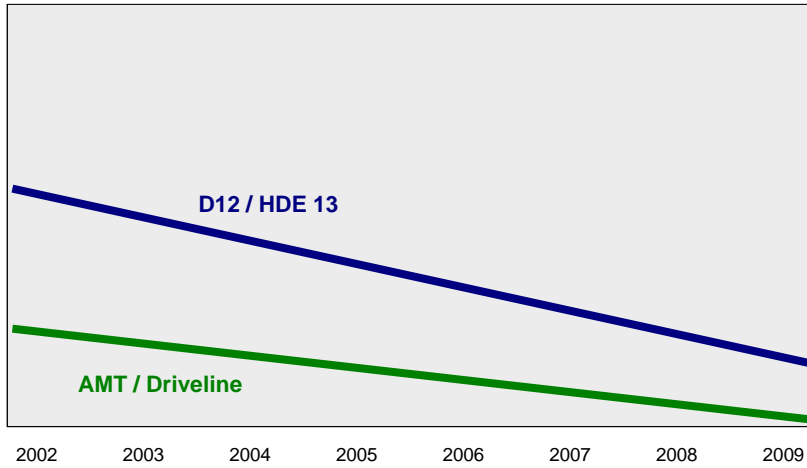
The launch of UD Trucks Quon 2010, will add units to the volume base

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## Improved product quality with CAST

Fault frequency



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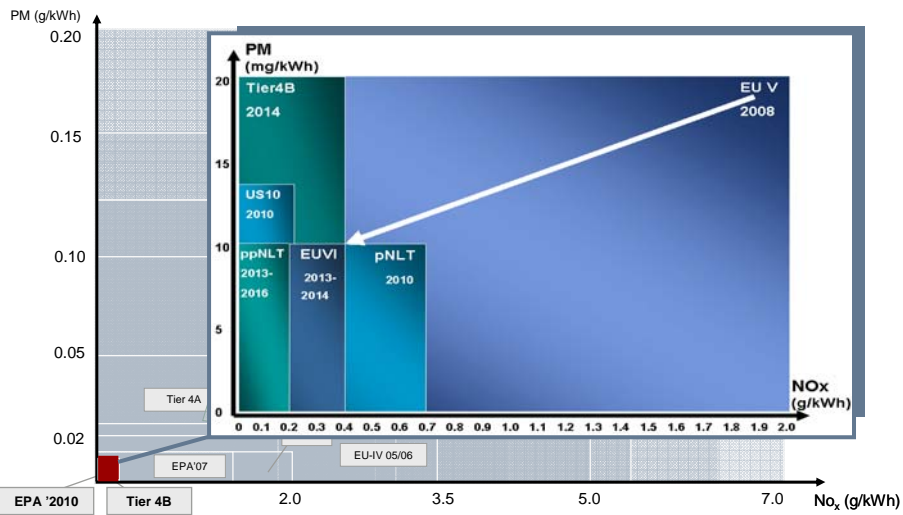


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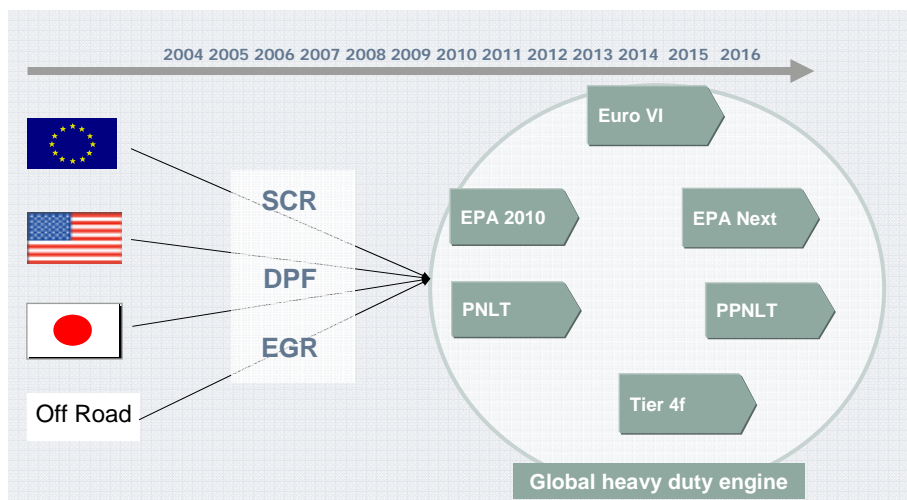
## NO<sub>x</sub> and particulates almost at point zero



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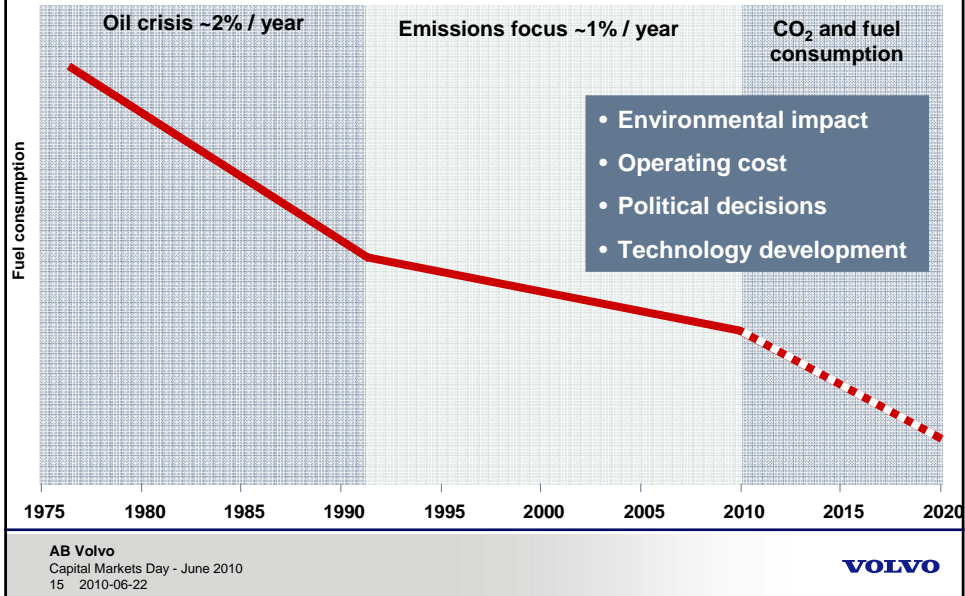
## Towards one common after treatment technology – the global heavy duty engine



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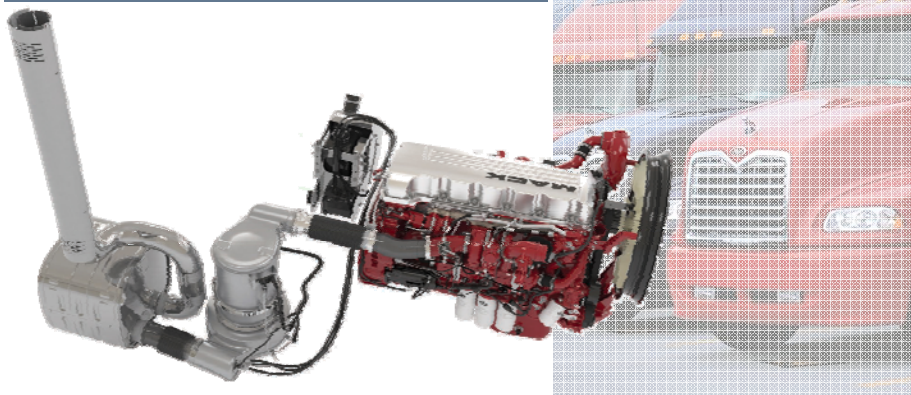
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## Lower fuel consumption and CO<sub>2</sub> emissions – the next challenge



## 5% better fuel efficiency with EPA 2010 engines

- First to be emission certified
- Extensive validation at customers
- Quality, cost and fuel consumption secured
- Expanded AMT gearbox offer



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## Volvo Group Captive Medium Duty Engine Platform **The medium engine platform is materializing**

- Press conference on medium duty engine project in India
- Inauguration of engine plant in Ageo, Japan
- First medium duty engine delivered to UD Trucks

### Events June 11, 2010



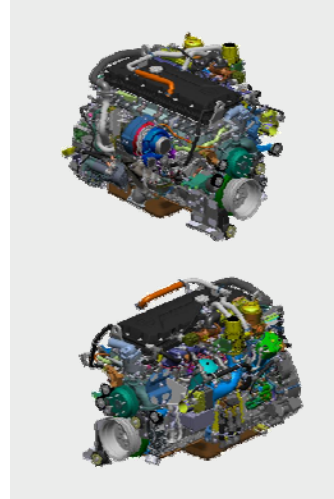
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Volvo Group Captive Medium Duty Engine Platform

## The product range

- Built on the medium duty engine project that was part of the UD Trucks acquisition
- MDE 5, MDE 7, MDE 8
- Automotive and industrial
- PNLT, EPA 2010, Euro III-VI, Tier 4F

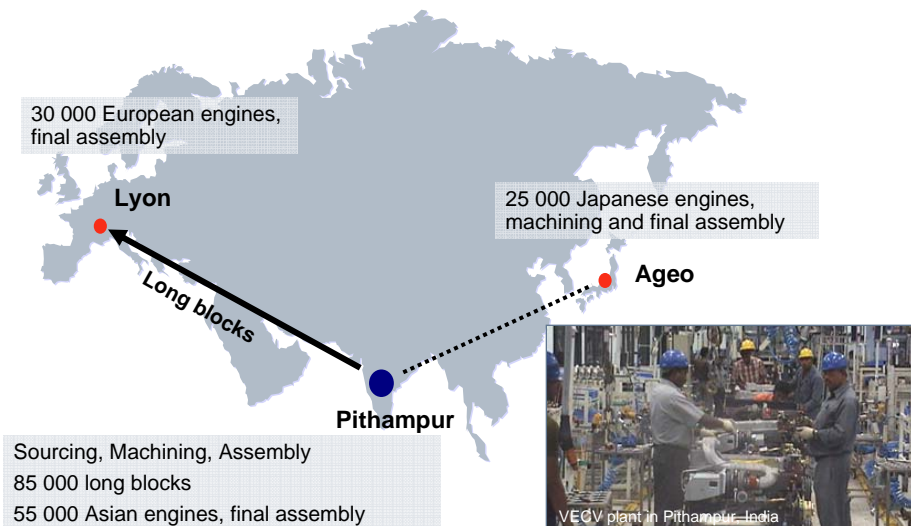


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## Volume base and industrial base in Asia

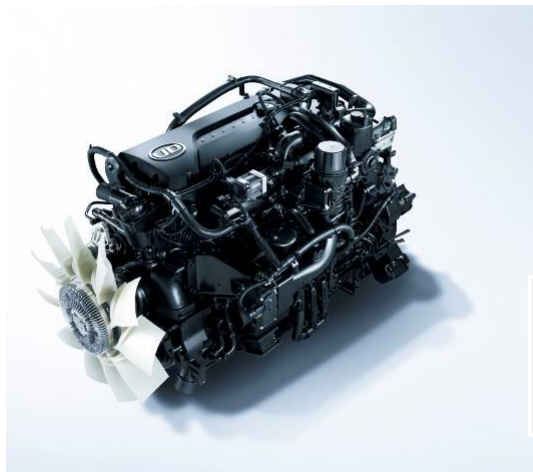


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## UD Trucks Condor powered by new MDE7



- 6 cylinders
- Common rail fuel injection system
- 7.0L displacement
- 180kw(245Hp)/2,500rpm
- 716N.m/1,300rpm
- Start of serial production week 35

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Volvo Group Captive Medium Duty Engine Platform

## Japan, Europe and India – combining the best of three



- Utilize engine project from UD Trucks acquisition
- Combine Japanese quality standard and European technology edge with Indian low cost production
- Leverage the VECV supplier base in India
- Extensive sourcing in LCC

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