



**Welcome**  
**North East/Midwest**  
**Equipment Managers**

# Fuel Efficiency – a key component of sustainability



# Volvo CE strategy to increase fuel efficiency

Systems



Training



Engines



Emerging technologies



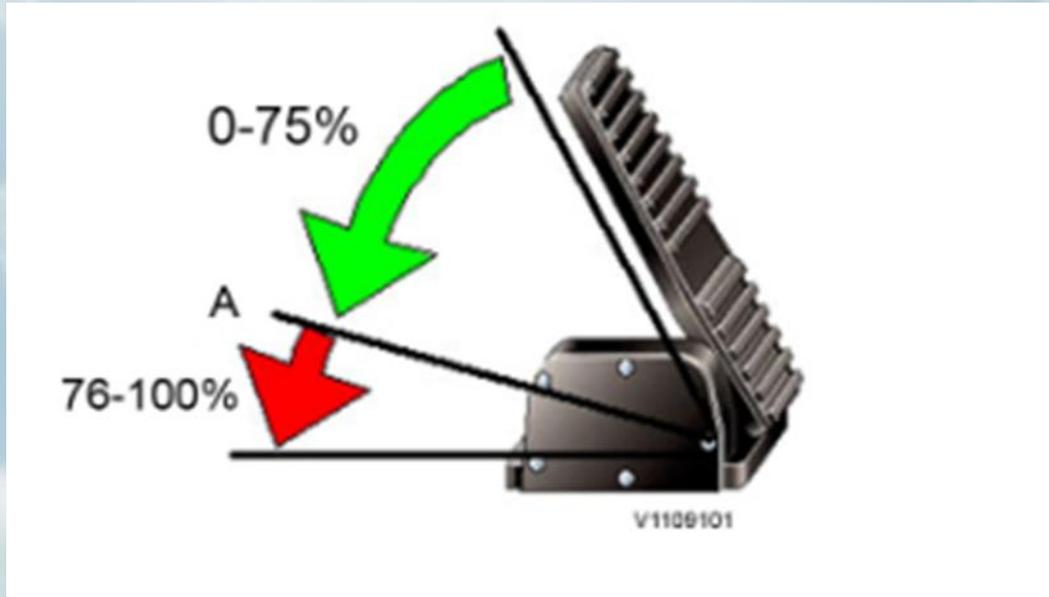
# Systems



## OptiShift

- New Lock-up Torque converter
- Patented RBB (Reverse by Braking)
  - ✓ Reduced fuel consumption by 15%
  - ✓ Increase operator comfort

# ECO- accelerator pedal

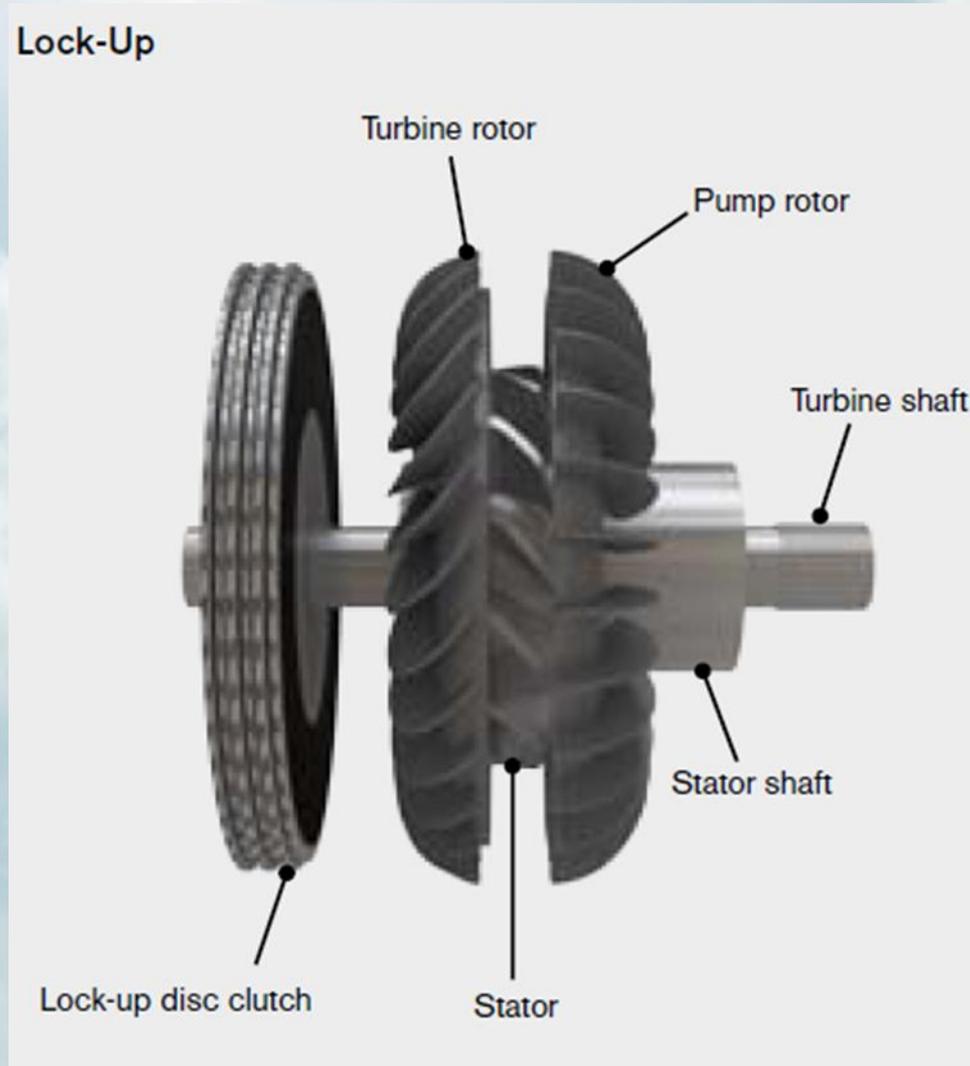


**Economy mode:** focus on fuel efficiency, lower rim pull and reduced speed in highest gear.

**Power mode:** focus on maximum performance, rim pull and high speed in every gear.

# OptiShift

## ➤ Lock-up Torque convertor



# OptiShift

## RBB- Reverse by Braking

- Applies the standard service brake instead of torque converter.
- Application: short cycle loading / truck loading



# Training

## ➤ Small things make a big difference

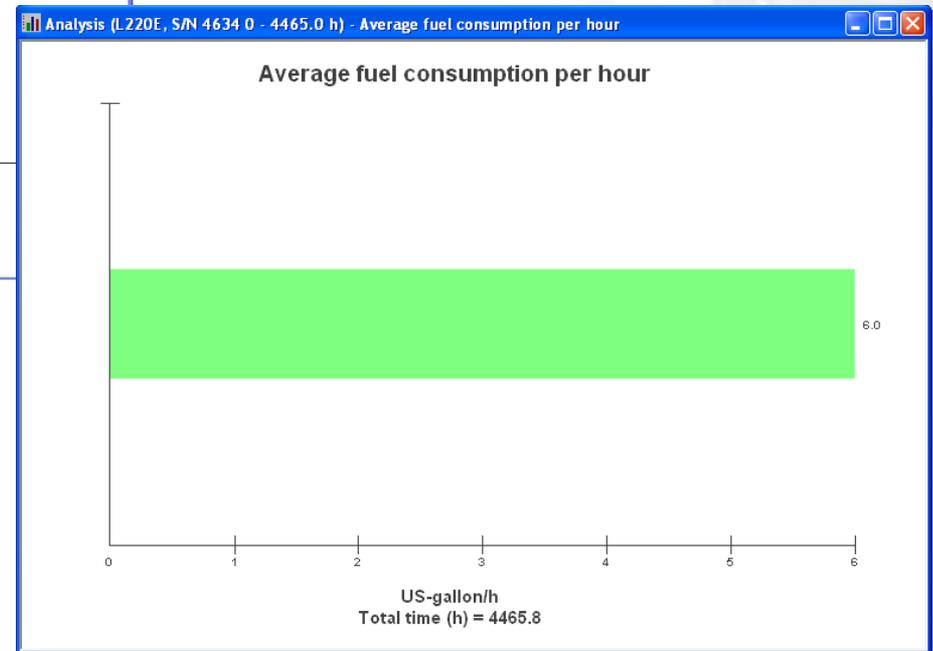
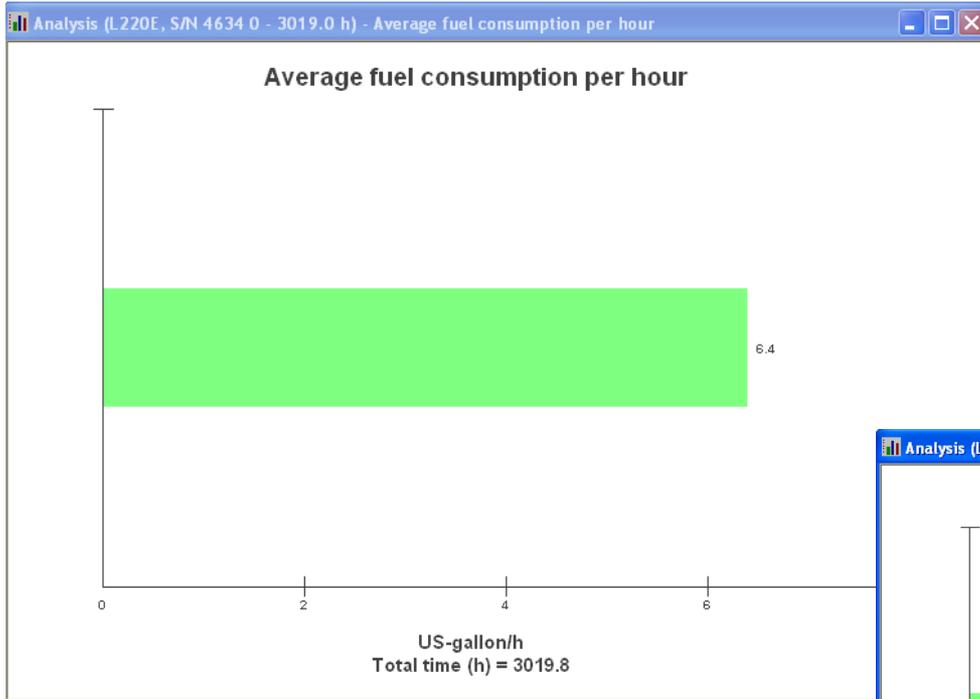
- ✓ **The Eco Operator training is not a “driving school”, but rather an advanced course for those who are already operators. Its purpose is to refine operators’ skills, knowledge and awareness of how to operate more ecologically and economically.**

### **Big savings**

- **Some operators reduced their consumption up to 20–25 % , without reducing productivity.**
- **Overall, Skanska Region Asphalt and Concrete West lowered fuel consumption by about five percent.**
- **Savings of about \$ 325,000 in hard cash.**
- **Reduction of emissions of around 500 tons carbon dioxide.**



# ➤ Small things make a big difference

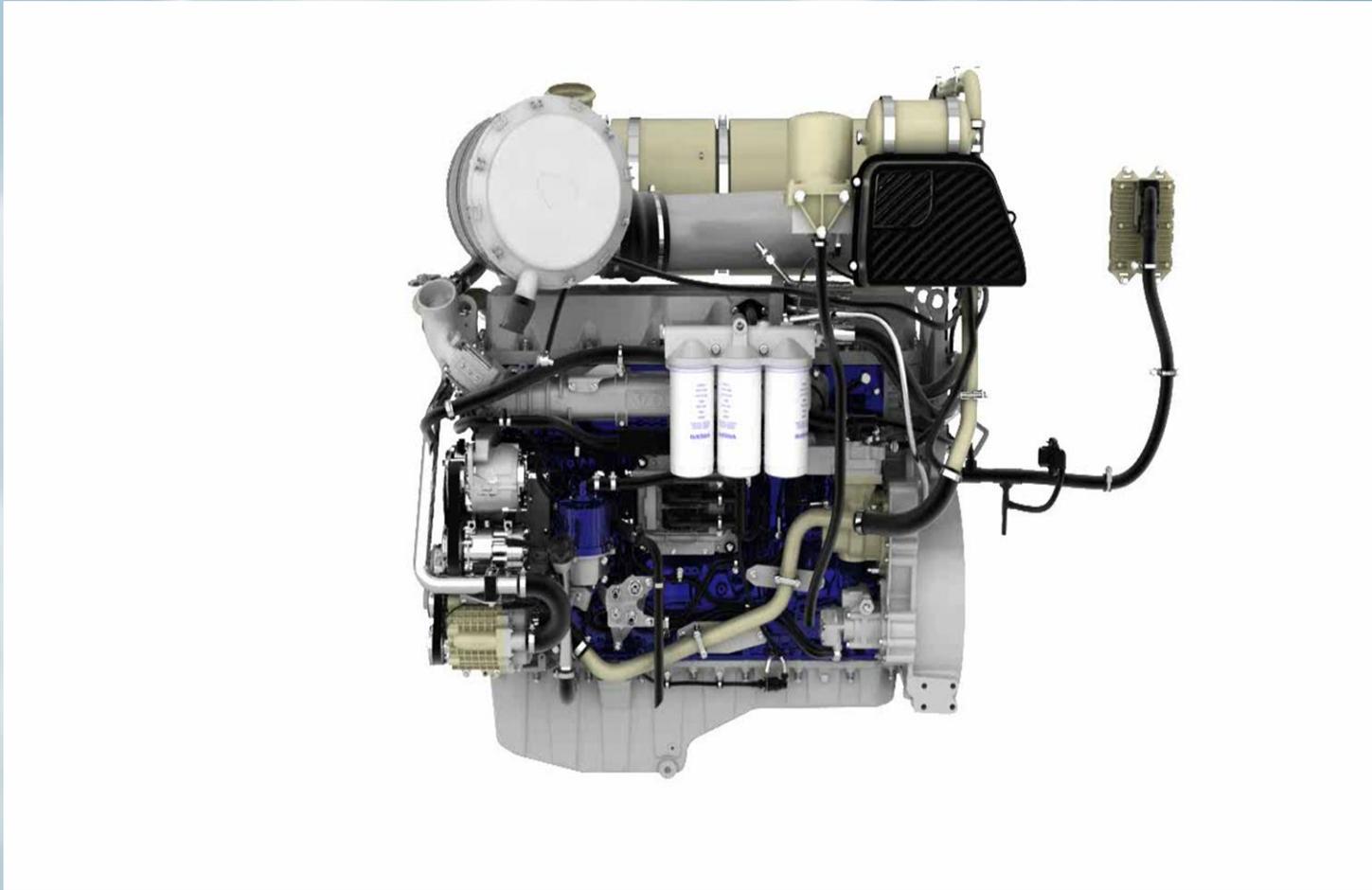


# Engines

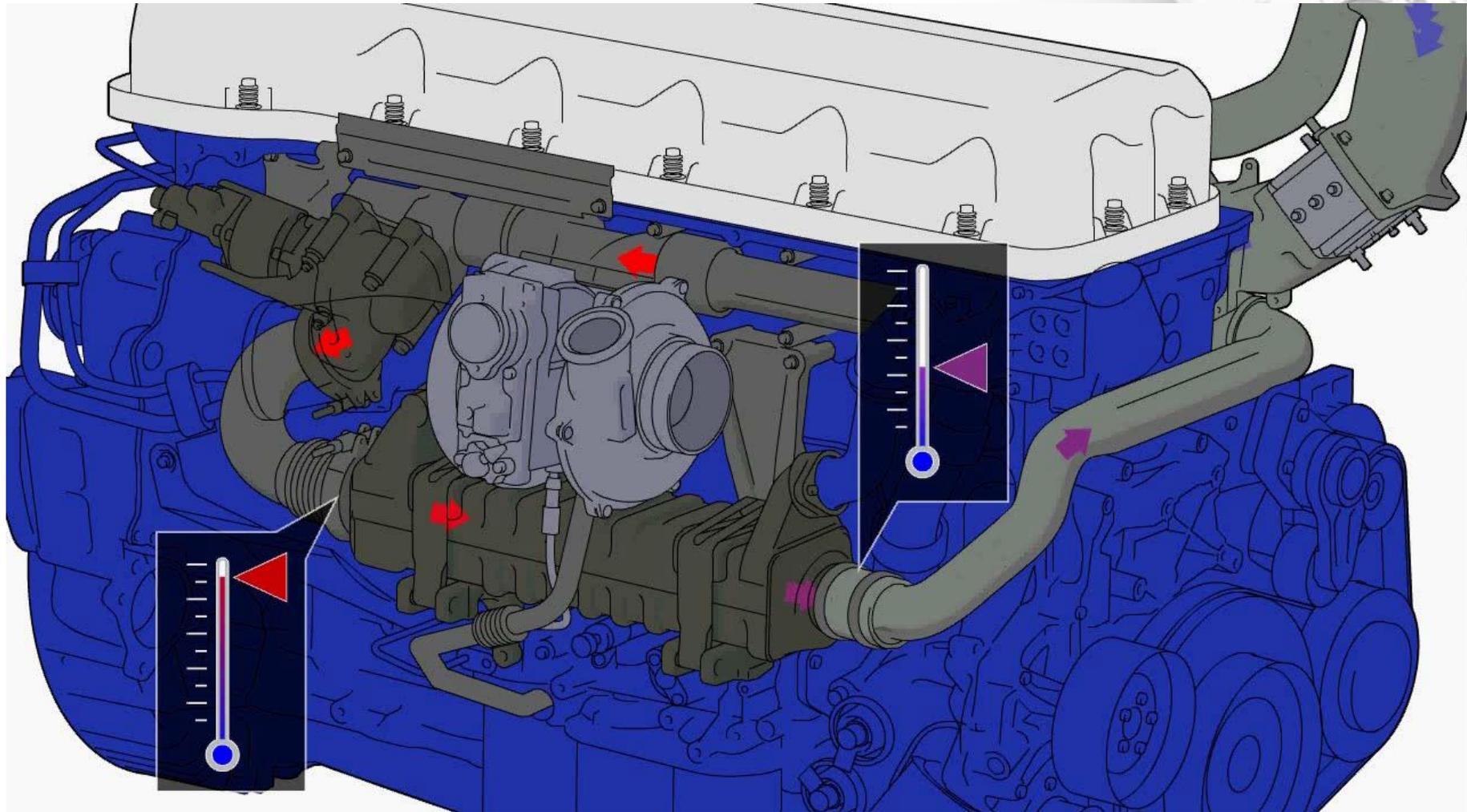
## V-ACT

### (Volvo-Advanced Combustion Technology)

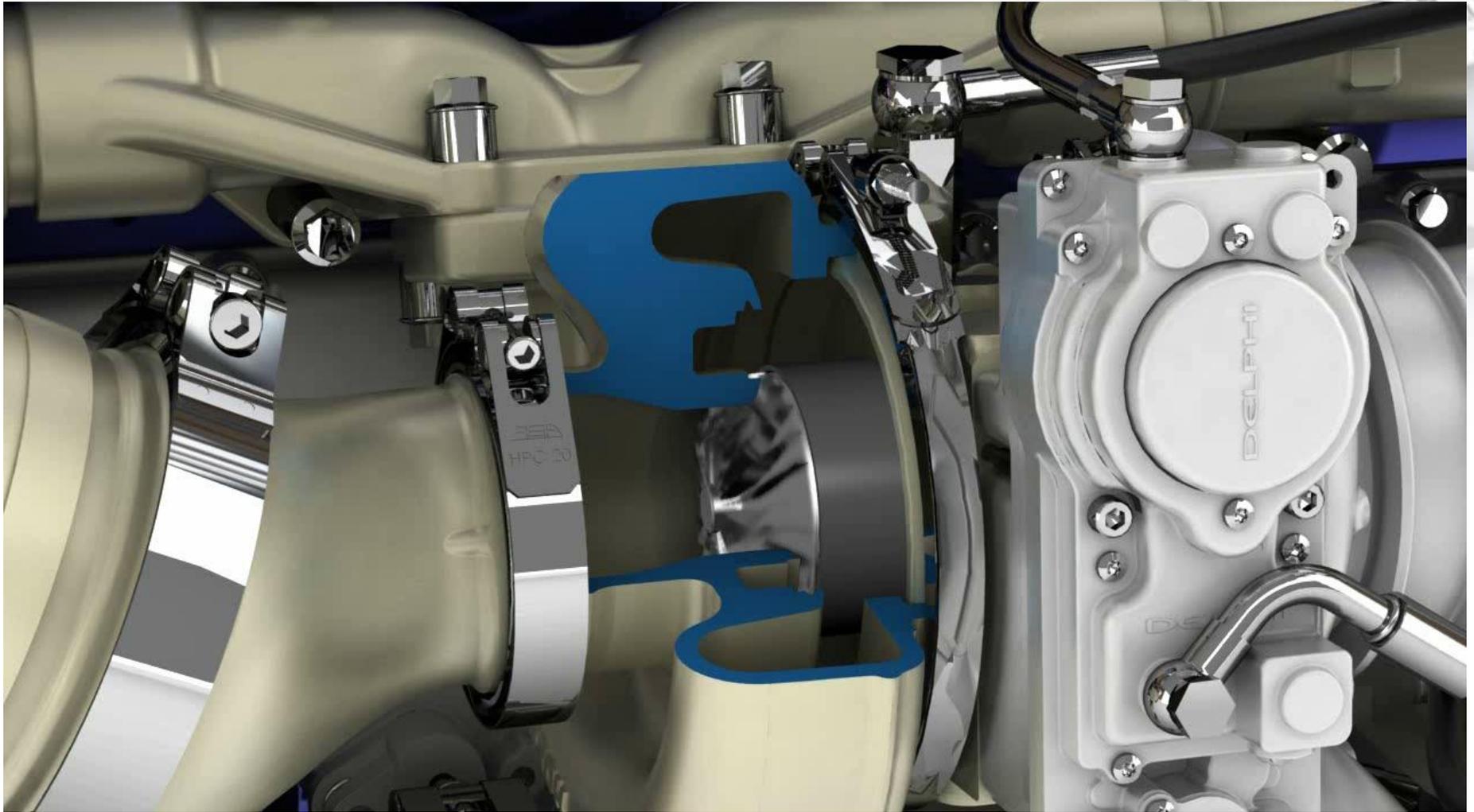
### Tier 4 Interim



# Cooled Exhaust Gas Recirculation (EGR) Reduces NOx emissions

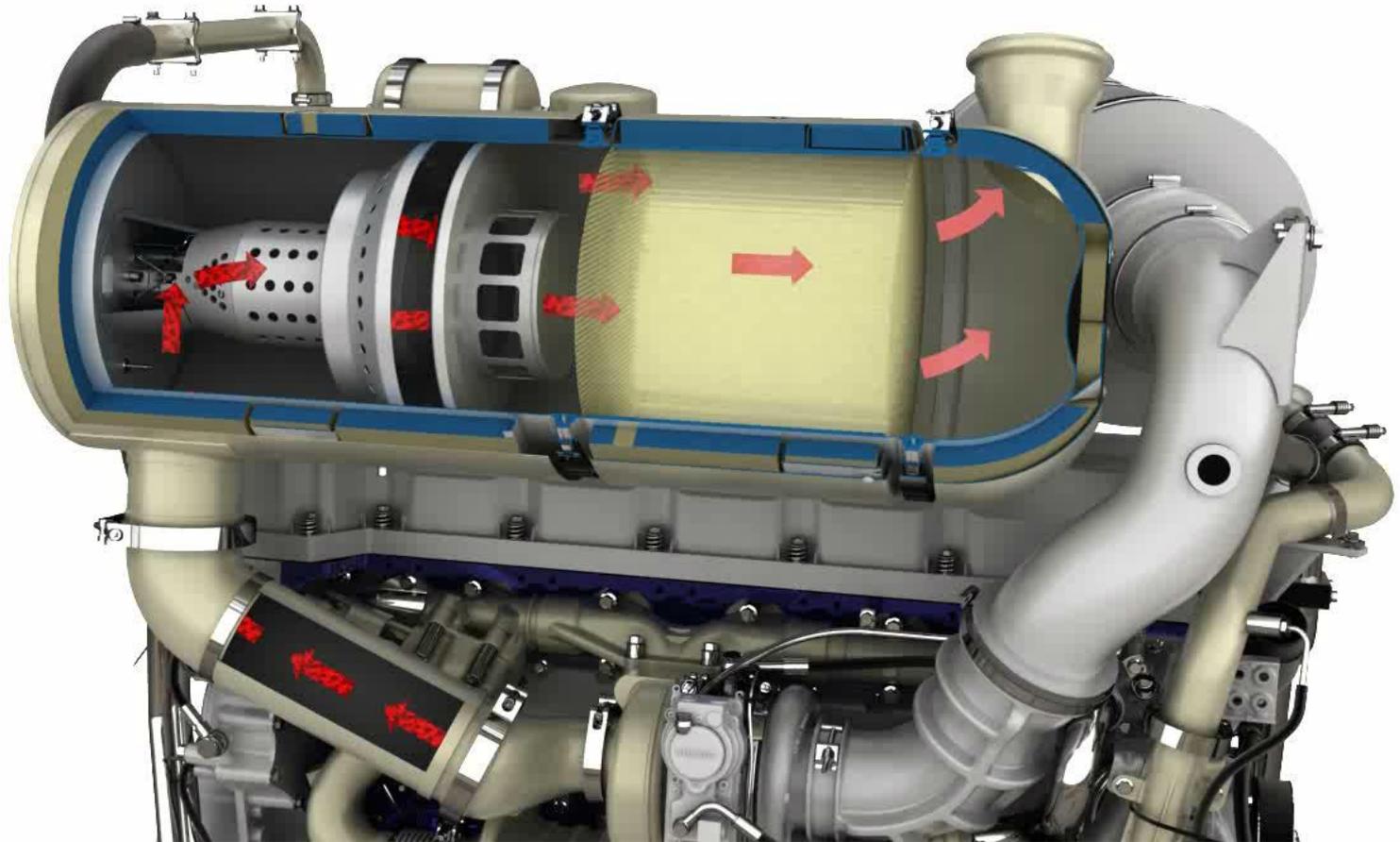


# Variable Geometry Turbo (VGT)



# DPF- Diesel Particulate Filter

Regeneration when required without any loss of machine performance Full power always available



# Emerging Technologies



# Hybrid

# LNG-CNG



## Alternative Fuels

Biodiesel

Synthetic Diesel

DME

Methanol

Ethanol

Biogas

Biogas+ Biodiesel

Hydrogen + Biogas



Volvo Construction Equipment

2013



# MethaneDiesel - From concept to reality



# DME- Dimethyl Ether Heavy-duty commercial vehicles



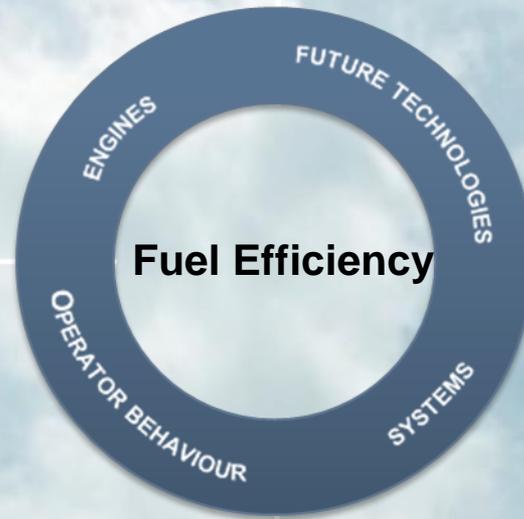
# Sustainable, Fuel efficient future



Productivity

Innovation

Profitability



Environmental efficiency

A peek into the future



Alternative fuels

Energy efficiency

