

2010 Emissions



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Navistar 2010

- Why isn't Navistar going with SCR?
 - What was the decision process?
- All done after 2010? Is that the end?
What makes us think we can get there?
 - What happens when “credits” are gone?
- Where is Navistar on testing? Ready for 2010?

Navistar 2010 Commitment

- Meet 2010 with minimal customer burden
- EPA / CARB compliance and certification
 - CARB Best Available Control Technology

Meeting 2010 without SCR



4 June 2007

The first and only company to meet 2010 for NOx, 3 years early – with the launch of 6.7L Turbo Diesel for Dodge Ram



21 November 2008

Volkswagen Jetta TDI diesel named 2009 Green Car of the Year



Technology Outlook

17 July 2008



Scania: EGR cost effective and convenient. Just add diesel!



28 August 2008

MAN Introduces Euro 5 and EEV Without SCR



4 February 2009

TENNECO and GE Transportation to Develop Hydrocarbon-SCR Technology for Diesel Emission Aftertreatment



22 June 2006

Eaton Evaluates Unique Emission Control Technology

2010 Alternatives

- Run hot combustion, create NO_x, reduce out of engine
 - SCR effective but requires customer involvement
 - European technology
 - All 2010 SCR engines will retain EGR
 - NO_x adsorbers, Lean NO_x traps do not scale
 - GE / Tenneco SCR catalyst not mature
- Run cool combustion with EGR, reduce NO_x
 - Best for customers
 - Doable with High Pressure Common Rail - timing challenge
 - 5 million engines produced with High Pressure Common Rail
 - Large investment in R&D

Development Issues and Solutions

- 60 vehicle fleet on test since early 2008
 - Illinois, Minnesota, Colorado, Nevada, Texas
- Development - EGR runs engine “cold” with reduced oxygen
 - Issue: Condensation can form
 - Solution: Cycle EGR 100-130 degrees
 - Maintain or reduce condensation

Development Issues and Solutions

- Cool combustion reduces efficiency
 - Issue: Could reduce power and fuel economy
 - Issue: Could increase DPF regen, oil intervals
 - Positive: Reduced thermal, mechanical loads
 - Solution: Increase fuel pressure, recalibrate
 - Restores power and efficiency to 2007 levels
 - Restores oil intervals, DPF regen to 2007 levels

We are Ready for 2010 with Advanced EGR

Easy for Operators

- Easy to operate
- Maintain fuel economy
- “Business as usual” for fleet operators
 - No added hardware – no space restrictions

Easy to Understand

- Built on mature 2007 platform
- Over 2 million Navistar EGR engines in service

Easy to Maintain

- No urea
- No technician and driver training, no increased maintenance

Easy on the Environment: Phase-in strategy = cleaner engines earlier



QUESTIONS?

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