SP4 “Light Weight” Status report

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CleanER-D
Objectives of SP4: Light Weight

- Development of a EU stage IIIB compliant prototype propulsion system consisting of engine and diesel particulate filter.
- Field test in freight locomotive BR225 of DB AG.
- Providing valuable information on the vehicle integration and operation of a EU stage IIIB propulsion system.
- Gaining experience with a DPF-system in a shunter BB96400 operated by SNCF.
Integration of the IIIB System

Initial Situation in BR225 008-2

- Cooling System
- Silencer
- Balancing Weights
- Compressors
- MTU 12V956TB10
- Pre-heater
- Gearbox
- Alternator
Integration of the IIIB System

Modifications in BR225 008-2 to integrate the IIIB system

Integration of IIIB-System into BR225 with technical efforts feasible.
Integration of the IIIB System

Efforts to integrate the IIIB system:

- Initial cooling unit of the BR225 is not effective enough
  → integration of a more effective and modified cooling unit from BR218
- Replacement of the silencer by the DPF system
  → no additional silencer required
- The optional active regeneration of the DPF needs additional auxiliaries.

Conclusion:

- MTU and DB AG found a concept to integrate the IIIB system into the 40 years old locomotive.
  → the objectives of the project will be met!
Engine is mounted on the test bench

DPF is ready to be tested on the test bench
BR 4000 - Rail EU IIIb
Milestones for Market introduction

Decision Tech. Concept
MTU Rail Symposium

Definition Phase with OEM
Development and Communication with OEM

Presentation @ Innotrans
Series Engine Testing and Calibration
EGR and DPF
Field Testing
EGR and DPF

OEM Engines
several Units planned
Start of Delivery

AERA (5000h in field)
EGR

LOCEX (actually 4000h in field)
SCR and DPF

Cleaner D Project
EGR and DPF

2006 2007 2008 2009 2010 2011 2012
Thank you for your attention