Installation of Retrofit Devices

Manufacturers of Emission Controls Association

Southeast Diesel Collaborative
Third Annual Partners Meeting
June 25, 2008

Introduction

• Installing Diesel Oxidation Catalysts (DOCs)
  – In-line Converters
  – Direct fit Converter Mufflers

• Installing Diesel Particulate Filters
  – Below Chassis
  – Vertical
  – Above or in chassis
DOCs

- represent a new installation
- support of unit is critical
- space to install

Converter Installation- Underchassis
Converter Mufflers

- Direct Fit simply installs in place of the original muffler
  - should have all the features of the original muffler
  - saves labor, reduces hardware and insures correct fit

- Generic converter mufflers may be used with a specialized pipe installation kit
  - can be difficult to obtain replacement pipes

Diesel Particulate Filters

- Most feature a more generic design & removable filter centerbody for maintenance
- DPF centerbody is heavy – proper support is vital
  - Inlet and outlet sections rotate to facilitate fit
DPF – Hwy Underchassis

- Flex / Bellows between engine and DPF
- Insulation as instructed by Manufacturer
- Vibration Dampers as indicated by manufacturer

Proper Retrofit Installation
Proper Retrofit Installation
- Vertical Installation

DPF – Above or in Chassis

- Insulation as instructed by Manufacturer
- Flex Pipe
- Vibration Isolators (multiple)
- Support Bracket
Proper Retrofit Installation- Non-road

Source: SAE 2004-01-0077

Other Non-road Installations
Conclusions

- Installation is critical to durable product performance
- Inspect installations at every preventative maintenance
- Continued progress will be made to simplify systems and develop more compact designs
- Consider design attributes when choosing product and vendor