DAIMLERCHRYSLER

BLUETEC – Heading for 50 State Diesel

Diesel Engine-Efficiency and Emissions Research Conference
Detroit, MI. August 22nd, 2006

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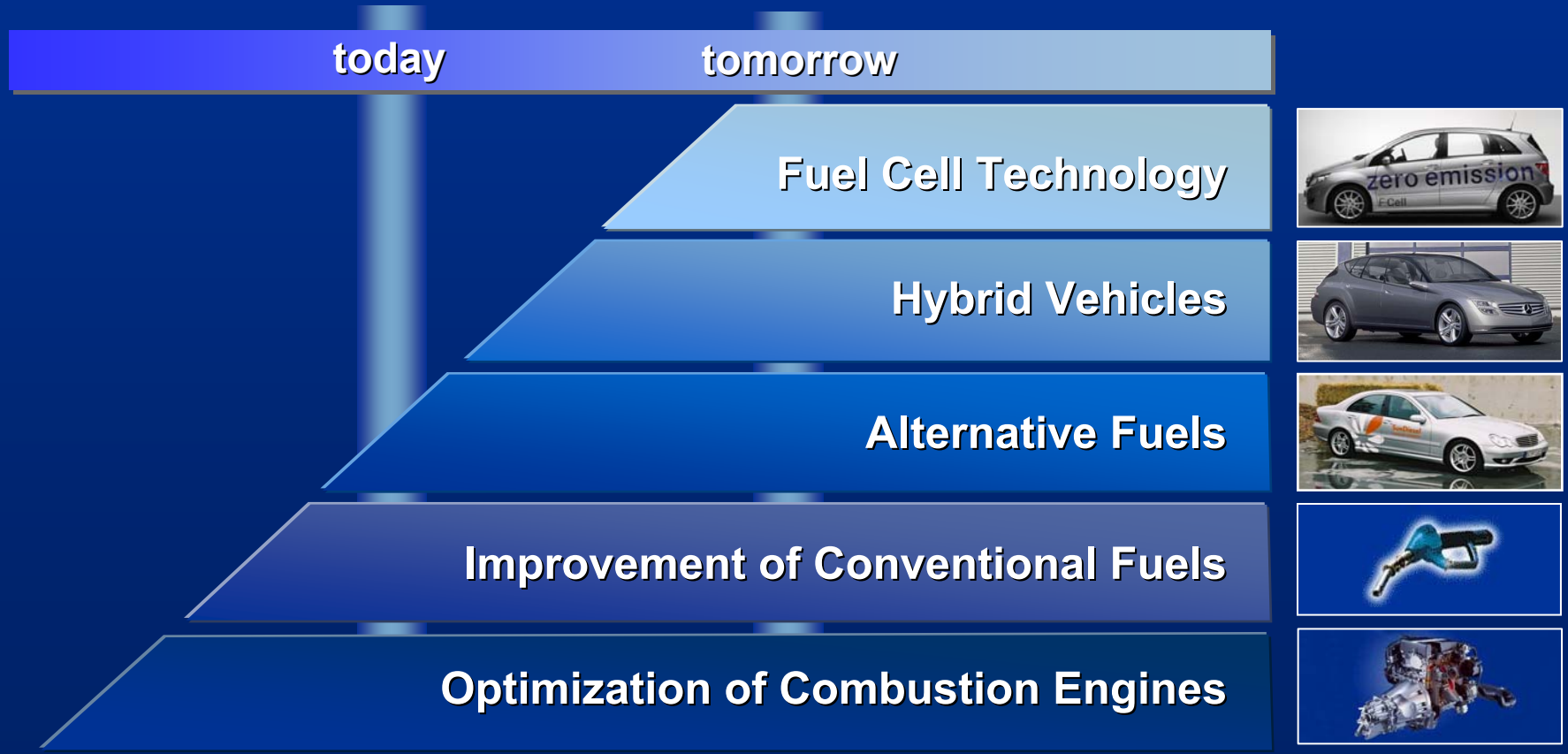
2. BLUETEC technology
3. The future of diesel

Perspectives

Future Powertrain

DaimlerChrysler's roadmap towards energy for the future



Perspectives

The diesel consumer proposition

Fun to drive

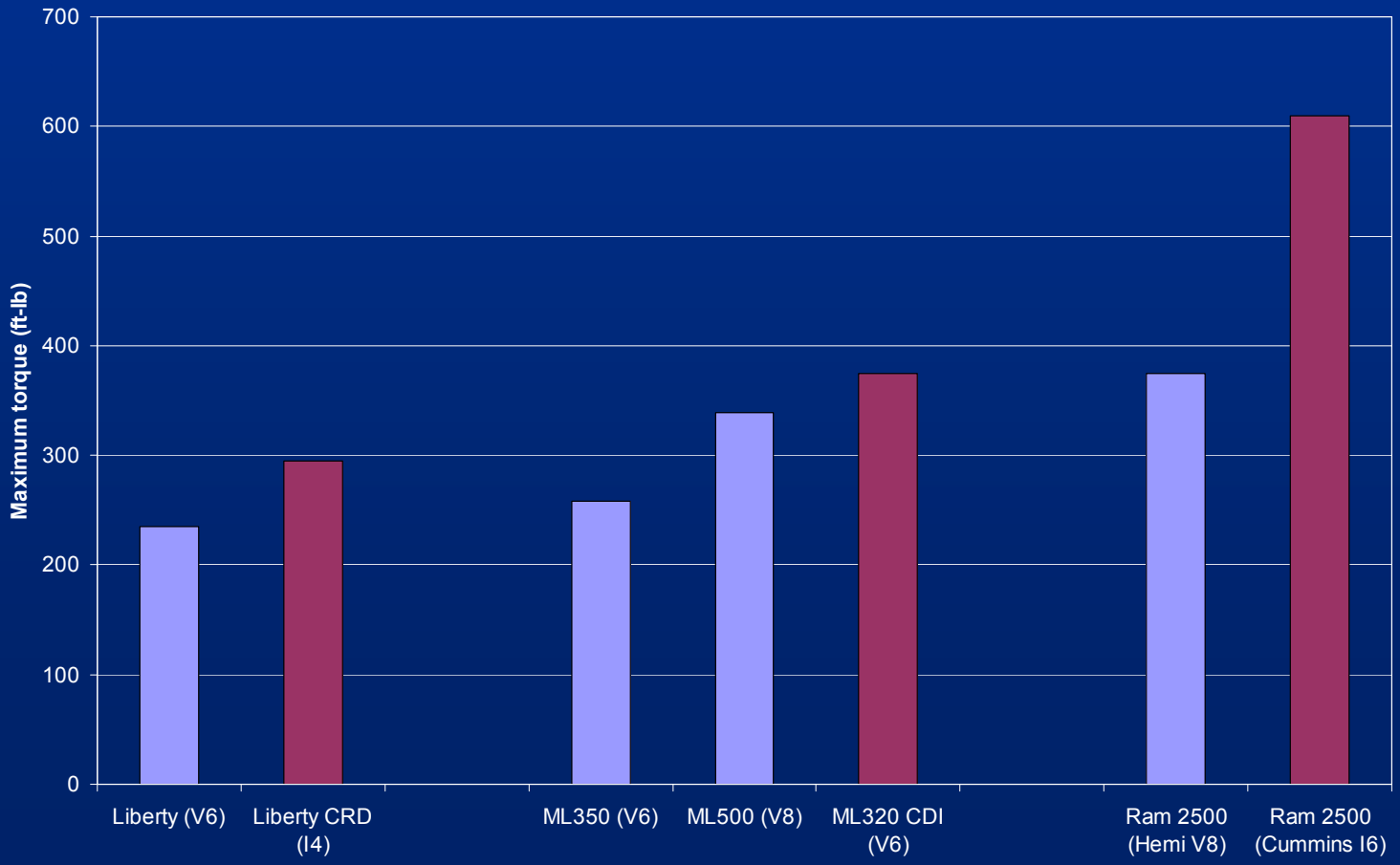
Fuel economy

- US consumers will be attracted to diesels for premium performance
- For US driving conditions, diesel offers optimum fuel savings
- With rising fuel prices, the consumer case for diesel strengthens

Perspectives

It's all about torque

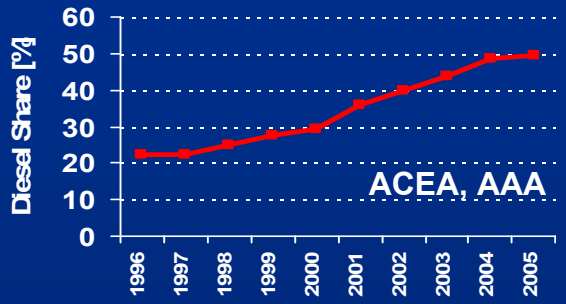
Comparison of torque – diesel as premium



Perspectives

Reducing petroleum consumption

European diesel effect



Estimated fuel savings through diesel with current penetration:

7 mn gall / day

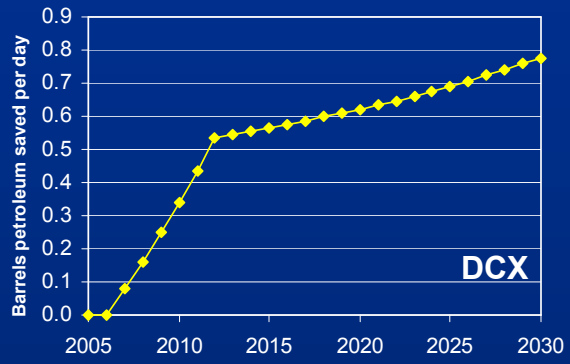
US diesel effect

With a US diesel penetration of 30% from 2010 onwards, total fuel savings in 2020 would be:

14 mn gall / day

(EIA)

US B20 biodiesel effect



Estimated 2030 fuel savings through B20 on-highway use:

32 mn gall / day

- Europe's high diesel share drives lower petroleum consumption
- High diesel penetration in the U.S. will deliver petroleum savings
- Biodiesel use further decreases petroleum consumption

Perspectives

New 2007 DaimlerChrysler diesels

Fall 2006

Mercedes-Benz E320 BLUETEC

Mercedes-Benz R320 CDI

Mercedes-Benz ML320 CDI

Early 2007

Mercedes-Benz GL320 CDI

Jeep Grand Cherokee CRD

2007 Dodge Ram 2500/3500

Perspectives

Specific challenges

Emissions regulations

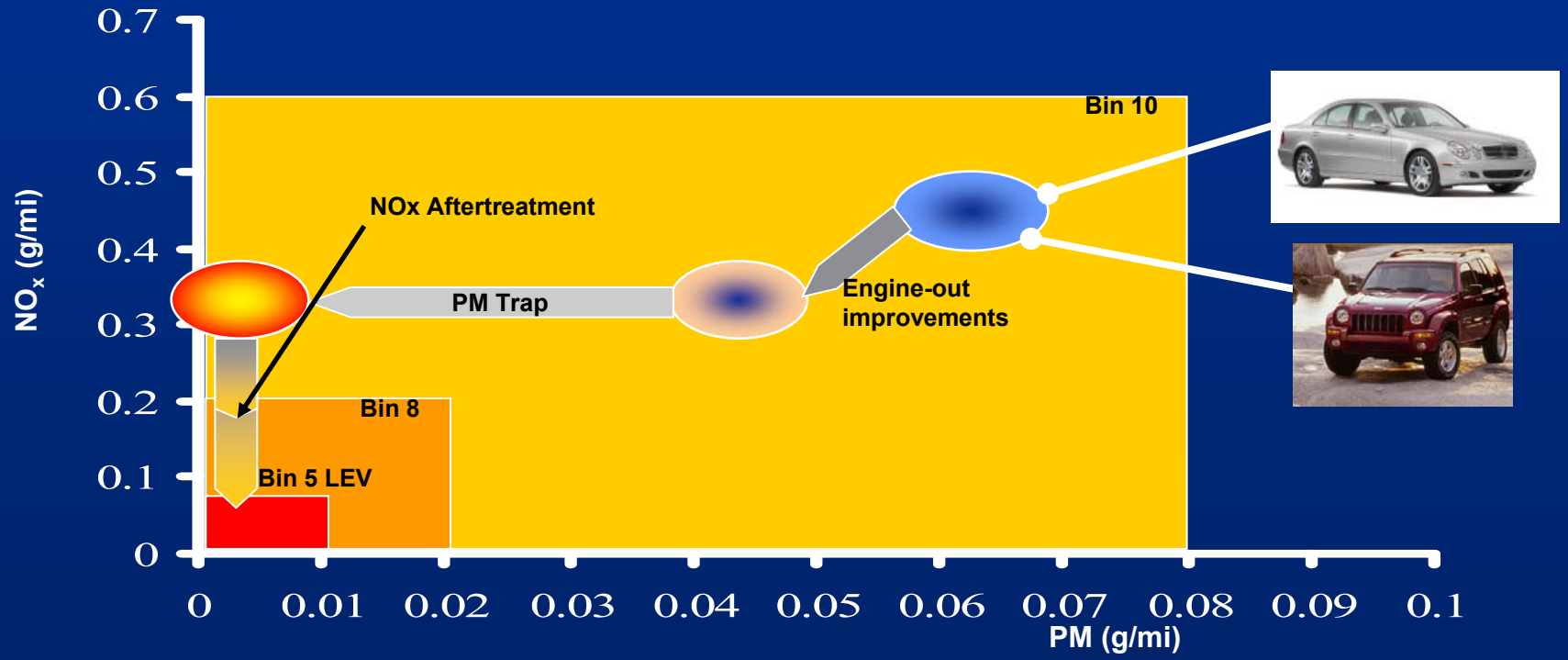
- Current and future
- U.S. / 50 state / global

Diesel image

BLUETEC

Exhaust emissions

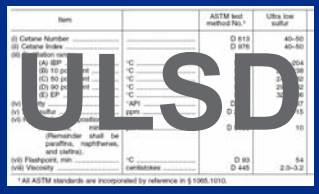
Task: Fulfilling federal and California emissions standards



Solution: BLUETEC, BLUETEC, BLUETEC

BLUETEC

What is BLUETEC?

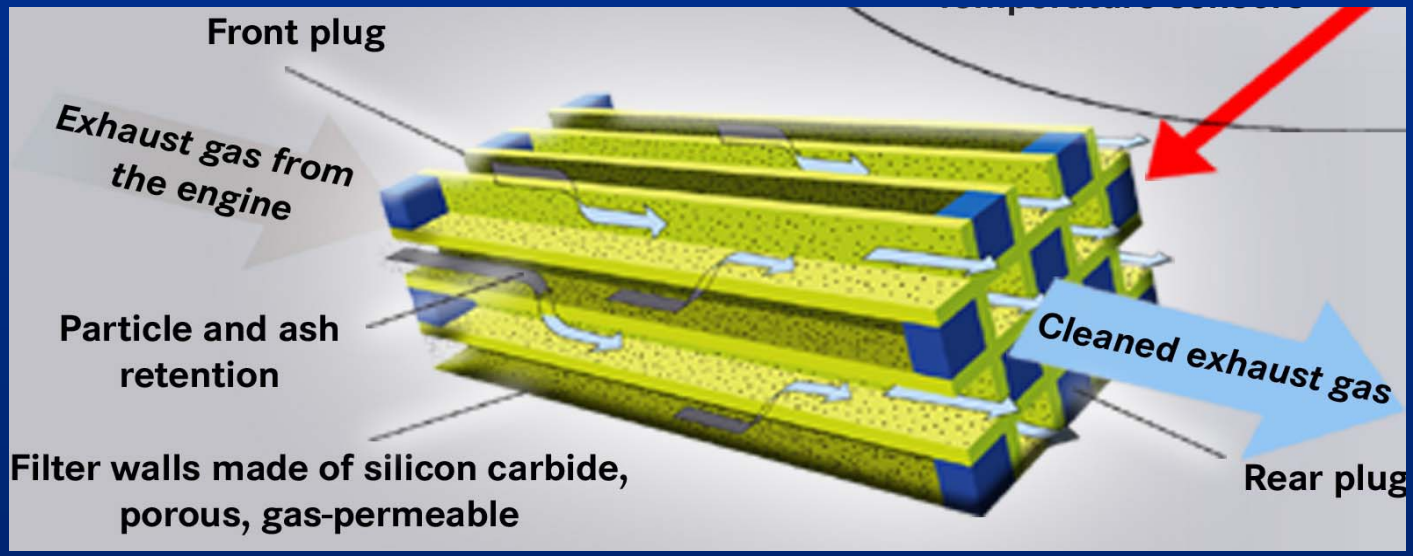


- “Blueprint for the cleanest diesel technology in the world”
- For all vehicle segments, all world markets
- Enables 50 state US emissions
- BLUETEC represents a bundle of technologies

BLUETEC

Diesel particulate filter

Diesel particulate filter

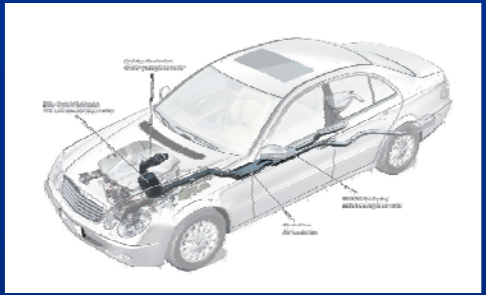


- Mercedes-Benz standard equipment in Germany since 2005
- Standard on all DCX US diesels from 2007 MY
- Filter durability has been proven and demonstrated

BLUETEC

2007 MY E320 BLUETEC

E320 BLUETEC

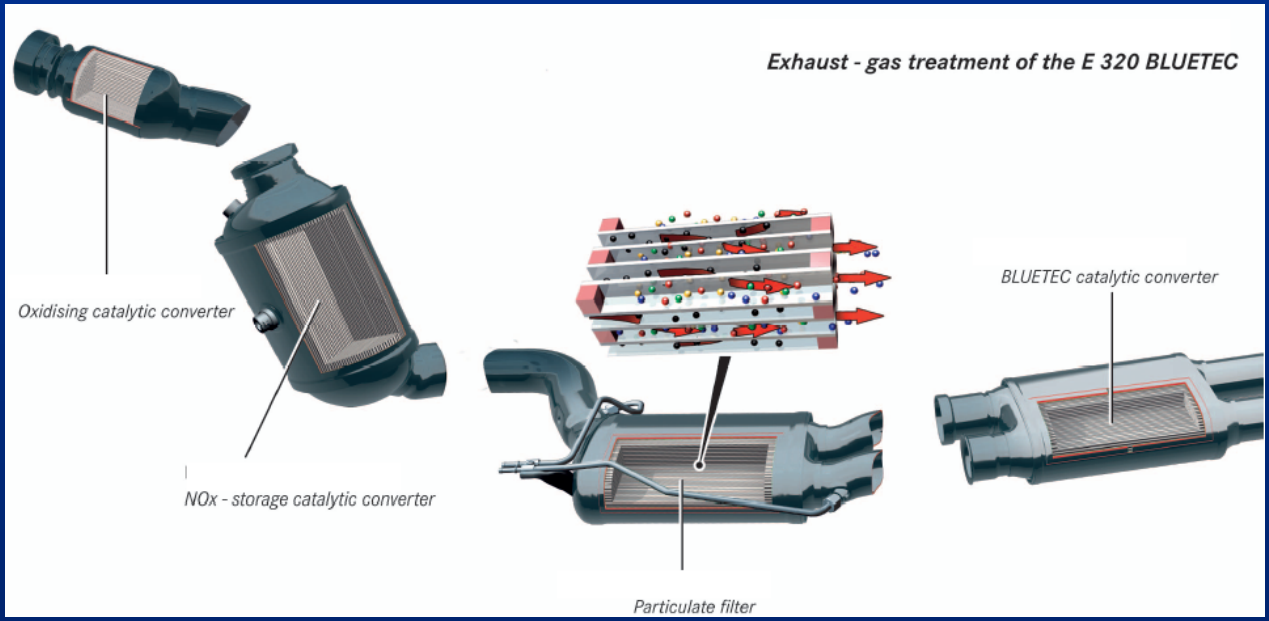


Diesel oxidation catalyst

DeNOx (NOx storage) catalyst

Diesel particulate filter (DPF)

BLUETEC catalyst

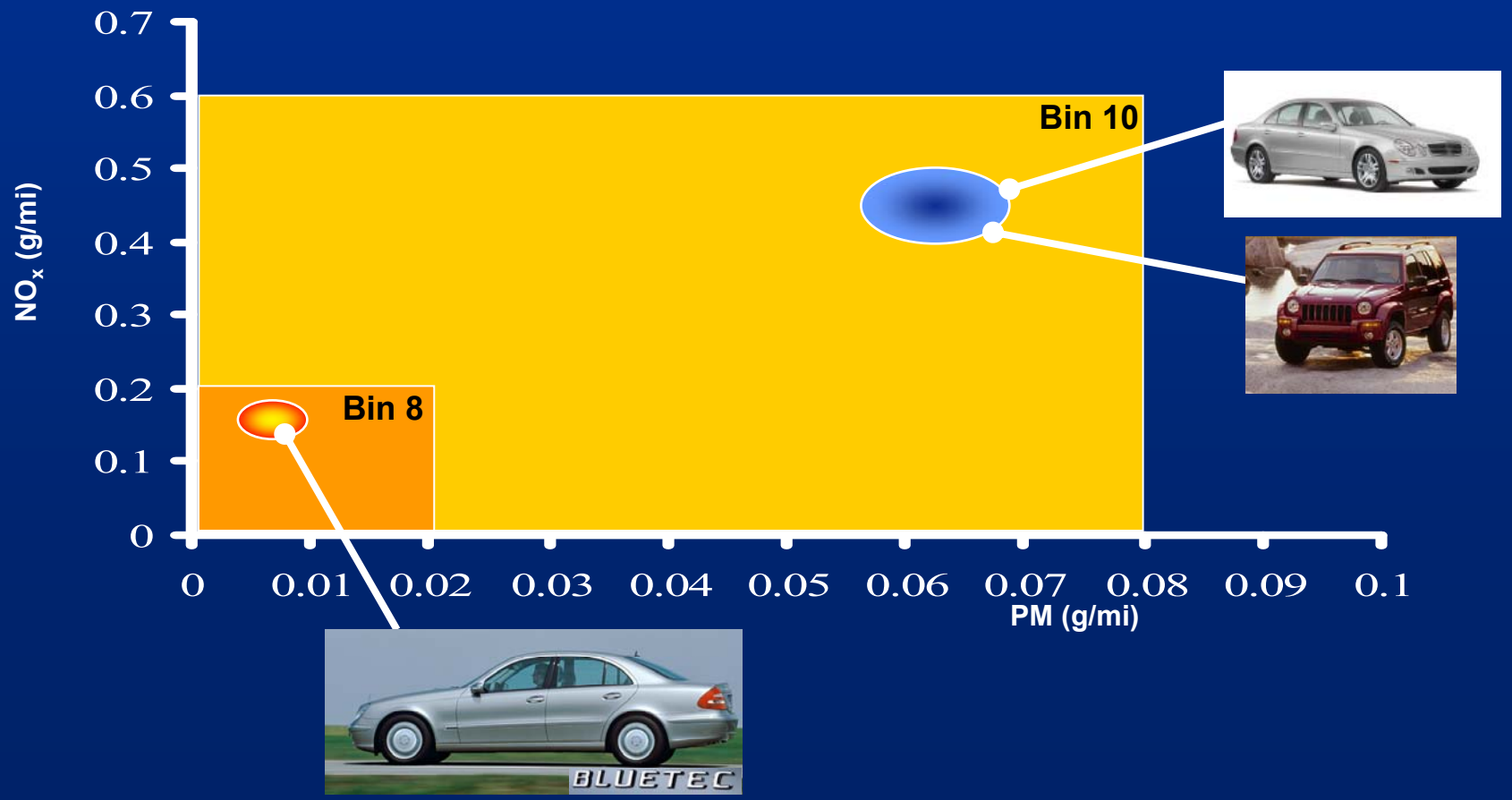


- DeNOx catalyst reduces NOx to achieve Tier 2
- BLUETEC catalyst “cleans up” components of DeNOx function
- With new V6 engine, E320BLUETEC will retain real world 35 mpg

BLUETEC

Performance

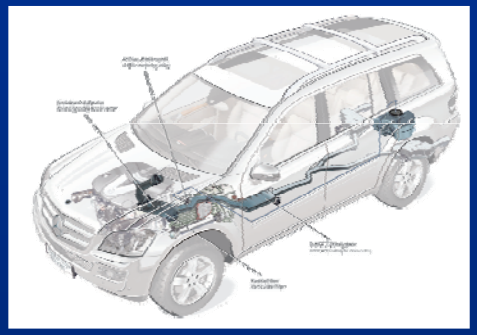
Federal exhaust emissions limits



BLUETEC

BLUETEC with SCR

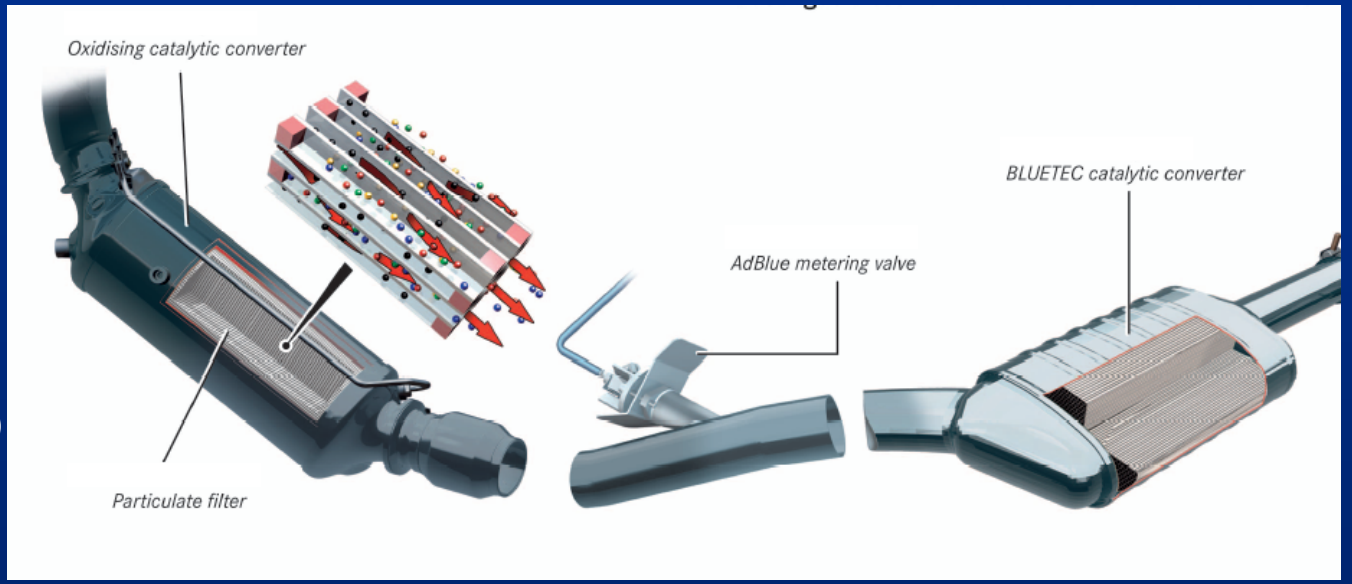
Vision GL320 BLUETEC with AdBlue SCR technology



Oxidation catalyst

Diesel particulate filter (DPF)

BLUETEC catalyst with AdBlue injection

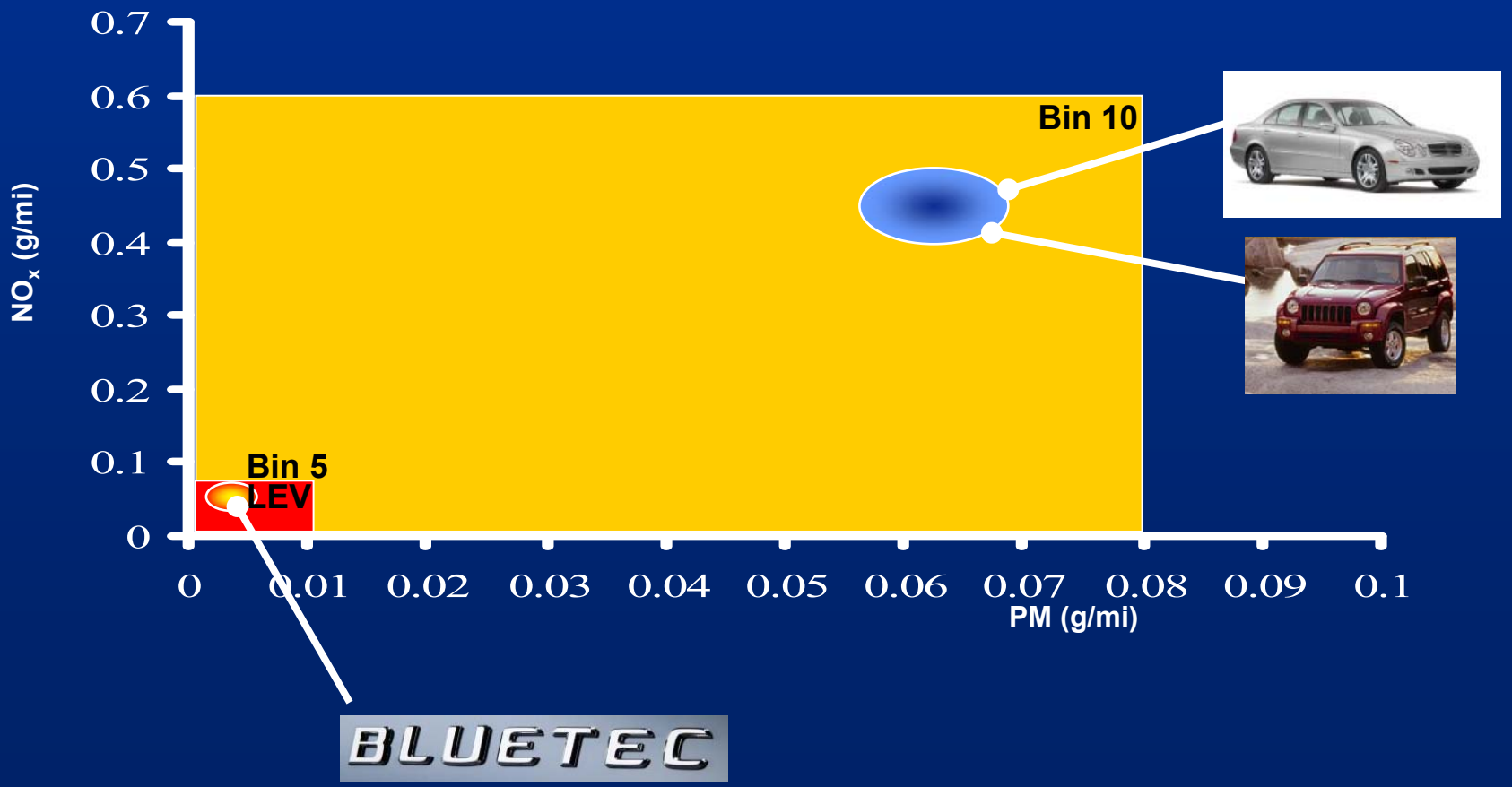


- SCR with AdBlue has high NOx conversion and durability
- Enables Tier 2 Bin 5 for passenger cars and light trucks
- Provision of urea and refill compliance are challenges

BLUETEC

BLUETEC: Performance

Federal and California exhaust emissions limits



BLUETEC

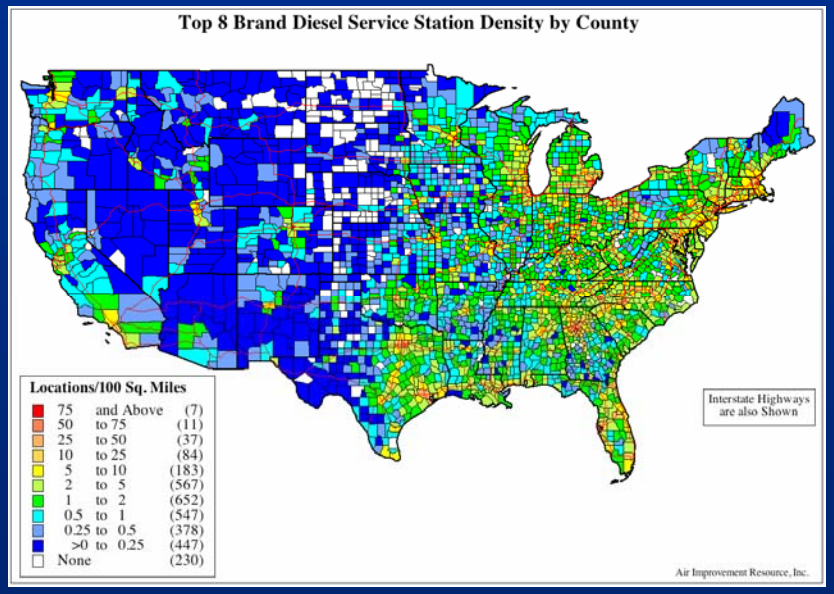
BLUETEC: Maintenance & standards

- AdBlue tank size sufficient for refill interval to exceed oil change interval
- Refill primarily to be performed at oil change by dealer / mechanic
- Measures are under consideration to ensure vehicle operates with urea
- DaimlerChrysler and its competitors are performing research into urea-SCR technology to support consistent standards
- USCAR is leading a cooperative effort of industry in all aspects of urea-SCR

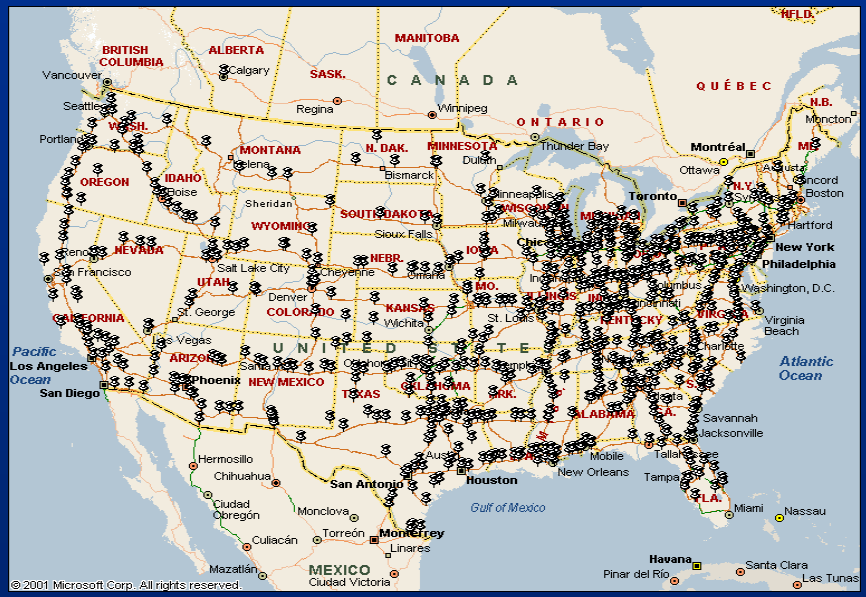
BLUETEC

BLUETEC: AdBlue

Density of diesel filling stations



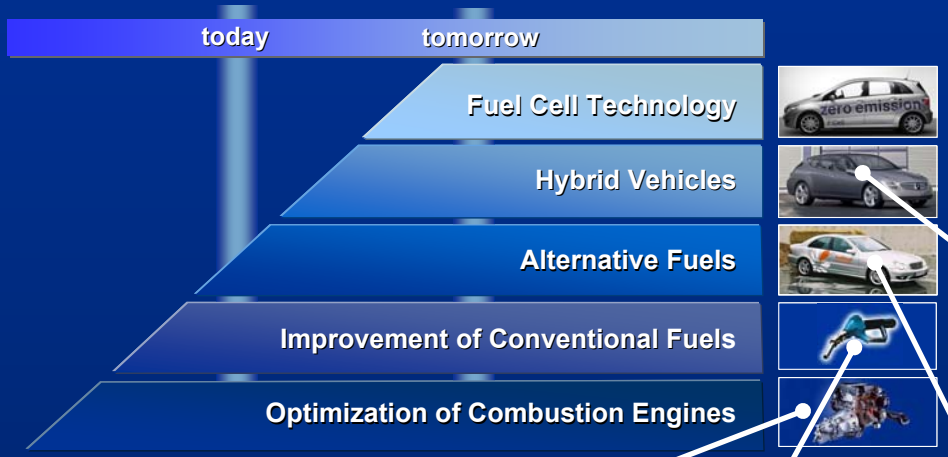
Locations of truck stops



- AdBlue will be provided at DaimlerChrysler dealerships
- The auto/engine industry has set up a urea stakeholder group
- Filling stations, oil change and truck stops will be primary outlets

Future diesel

Diesel as a future powertrain



Diesel is integral to 4 out of the 5 projected future powertrain elements

Reducing emissions, improving fuel economy and performance

Improved fuel specification and new sources (ULSD, biodiesel)

Looking to sustainable non-petroleum fuels such as XtL

Selecting the optimum design and application of of diesel / hybrid combination

Future diesel

Alternative diesel fuels

Method

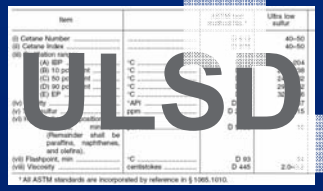
Biomass sources

Fossil sources

Vegetable oil based

Biomass to liquid

Petroleum based



Synthetic fuels

1st generation

2nd generation

Source

Future diesel

How to expand the market

Diesel characteristics

Fuel economy
Range
Torque
Towing
Durability
Familiarity

Customer financial benefit

Current diesel market growth

Image breakthrough in US

Market breakout to new customers

Future diesel

Diesel image breakthrough

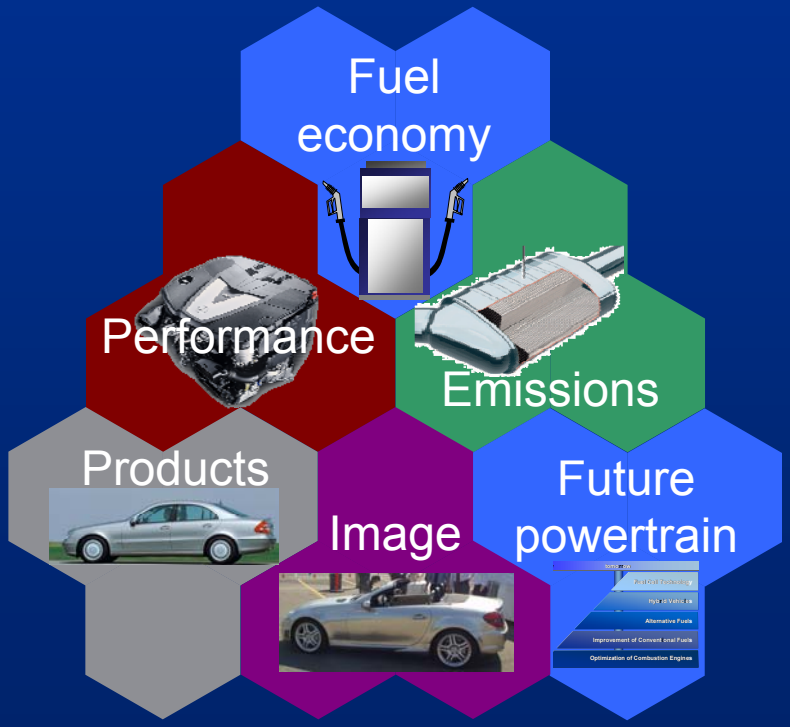
BLUETEC brand

Biofuels, including biodiesel and "XtL"

- BLUETEC provides a focused message: clean technology
- Biofuels associate diesel with clean fuels and technology
- These messages will attract consumers unfamiliar with diesel

Conclusion

The diesel package



- All these elements together will drive the diesel market in the short, medium and long term

Conclusion

A BLUETEC future

- BLUETEC is an enabler for all these elements and ensures a sustainable U.S. diesel market as an integral part of the powertrain roadmap