

Green Diesels

Cleaner Diesels

Green Diesels

- E.P.A.
- National Clean Diesel Campaign

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- 2007 Heavy Duty Highway Engine Rule
- Clean Air Non-road Diesel Rule
- Trains and Marine Vessels
- Existing Diesel Vehicles

2007 Heavy Duty Diesel Engines

- 2007 Diesel engines will have pollution control equipment that will greatly decrease emissions.
- Sulfur in Diesel Fuel will interfere with the proper operation of the new pollution control equipment, so it must be reduced.

2007 Highway Rule

– Fuel Requirements for Diesel Fuel

- Today Sulfur content of Diesel Fuel is ~ 500 ppm
- Ultra Low Sulfur Diesel (ULSD) sulfur content will be down to 15 ppm

- Ultra Low Sulfur Diesel Fuel
 - Required by the Highway Diesel Rule
- Bio-Diesel Fuel
 - Voluntary



Significant Dates

- June 1, 2006
 - Refineries begin producing ULSD diesel fuel
- September 1, 2006
 - Terminals switch to ULSD diesel fuel
- October 15, 2006
 - Retailers switch to ULSD diesel fuel

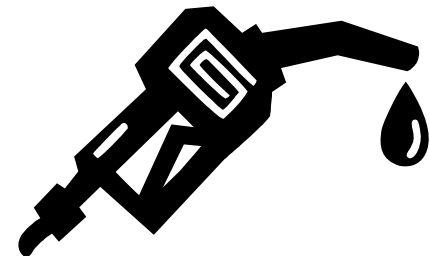


2007 Highway Diesels Cost

- Increased vehicle cost with new emissions equipment should average around \$1200 to \$1900.



- Estimated increase in fuel cost are from \$.04-1/2 to \$.05 per gallon.



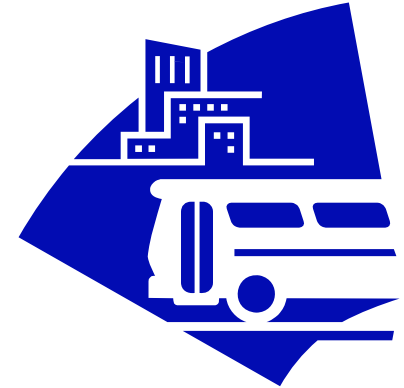
Existing Diesel Vehicles

- Existing Diesel vehicles will need to be retrofitted with pollution control equipment in order for the low sulfur diesel fuel to have a positive effect on emissions.



Diesel Population

- Diesel vehicles comprise less than 10% of the vehicle population.



History Repeats Itself



- 1976 Catalytic Converters installed on automobiles.
- Unleaded gasoline was introduced to be used in new vehicles with converters.
- Lead in gasoline would contaminate the catalytic converter.

Ninety Percent Cleaner

- According to the EPA new heavy duty diesel vehicles will be 90 percent cleaner.



Pollutants To Be Reduced

- Nitrogen Oxides NO_x
- Particulate Matter PM
- Non-methane Hydrocarbons NMHC
- Carbon Monoxide
- Sulfur Dioxide
- Air Toxics



Future Benefits

- EPA is using the year 2030 as the time when the program will show its greatest benefits.

Other Diesel Engines

- Non-road Diesel Equipment



- Locomotives



- Marine Engines



Other Diesel Initiatives

- Clean School Bus USA



- Clean Ports USA



- Clean Construction USA



- SmartWay Transport Partnership



- Clean Agriculture USA



- Questions?