
Clean Diesel Engine Implementation Workshop

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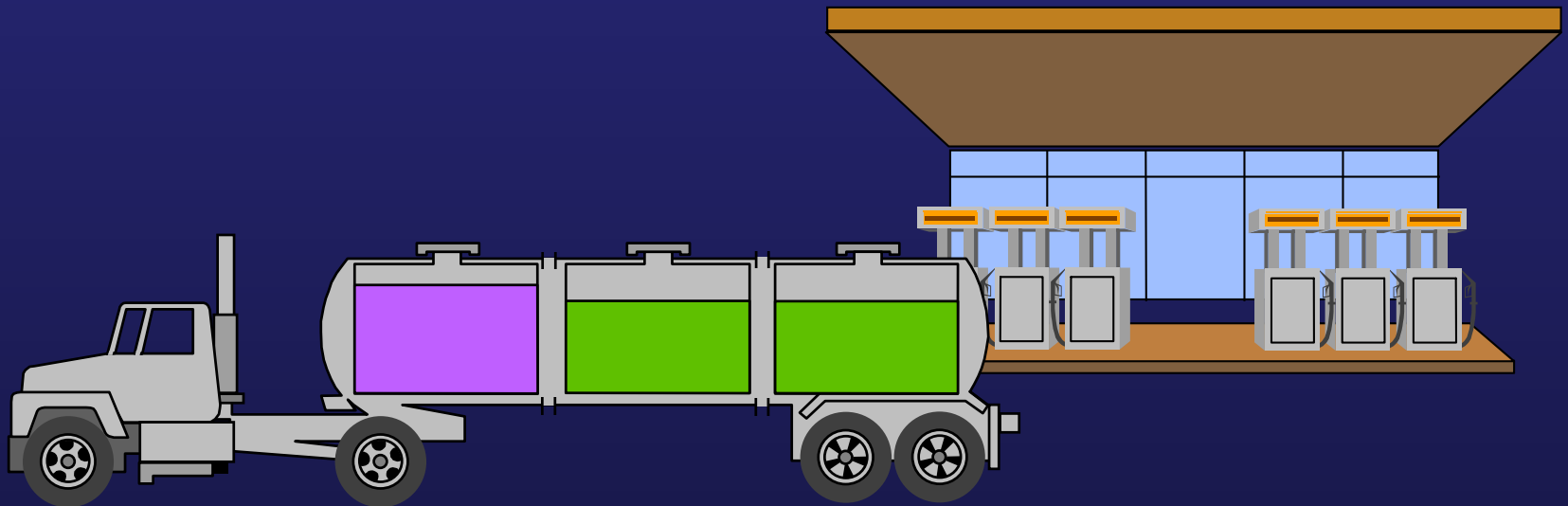


Misfueling

Are Additional Measures Warranted?

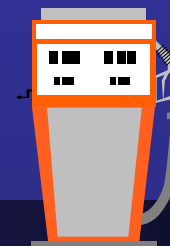
US EPA Office of Transportation and Air Quality

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What is Misfueling?



- Misfueling is the use of 500 ppm sulfur diesel fuel in 2007 and later model year heavy-duty diesel engines/vehicles
- However, the use of 15 ppm sulfur diesel fuel in pre-2007 model year engines/vehicles is not misfueling
 - In fact, 15 ppm sulfur fuel provides immediate benefits for existing trucks (reduced wear in rings/liners/exhaust systems, less frequent oil changes) and their PM emissions
- Misfueling can be accidental or intentional



Misfueling Concerns and Rulemaking Provisions

- Use of high sulfur diesel fuel in engines that require 15 ppm diesel fuel
 - could irreversibly damage emission control equipment
 - may impact engine operability, durability, and fuel economy
 - reduces the environmental benefits of the new emission standards
- We carefully considered misfueling concerns and discussed them with many stakeholders (including some trucking companies and truck stop operators) during the rule's development
- We considered and evaluated several options to mitigate misfueling
 - Unique nozzle shapes/sizes: raised concerns re. flow rates, backwards compatibility, vehicle redesign, etc. – significant cost issues
 - Dyes: are not seen and create distribution system problems
 - Electronic pump/vehicle interfaces: significant cost issues
 - Color coded nozzles: industry has the expertise to do this



Misfueling Concerns and Rulemaking Provisions

- The highway diesel fuel program design should minimize misfueling - both accidental and intentional
 - 80/20 credit program should cause prices for 15 ppm and 500 ppm fuel to be similar
 - 15 ppm fuel will be the dominant fuel in the market beginning in 2006 (Precompliance reports suggest 95%)
 - 500 ppm fuel will have limited availability (geographically and temporally)
 - Rule contains labeling requirements for diesel fuel pumps and vehicles to help prevent accidental misfueling
 - Owners and operators of trucks will not risk voiding the warranty
- No compelling case to take more drastic and costly measures



Future Commitments and Potential Solutions

- Nevertheless, the program does not eliminate all potential for misfueling
 - Prompting liability concerns when it does occur
- In the final rule, we committed to working with industry to evaluate whether additional measures to prevent misfueling would be appropriate
 - If a consensus is reached that additional measures are needed, we will explore with industry simple, cost-effective approaches to further mitigate misfueling potential
- To date, no such consensus has emerged
- But we are still open to taking further actions
 - That don't reopen the rule itself
 - Can be implemented in time

