

May 3, 2006

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Workgroup Recommendations and Other Potential Control Measures
Diesel Initiatives Workgroup

DI012 – Light Duty Diesel Vehicle Inspection

Overview

All light duty diesel vehicles (LDDVs) are currently subject to the same biennial inspection for safety as gasoline powered vehicles which is performed either by private inspection facilities (PIFs) or at state maintained central inspection facilities (CIFs). Gasoline powered vehicles are inspected for emission as well. Since 2003, this emissions inspection for vehicles manufactured since 1996 has been done using their On-Board Diagnostic system (OBDII). The OBDII system monitors vehicle engine functions that can impact emissions and provides feedback to the motorist when one of these functions deviates from prescribed norms. In this manner it promotes high levels of vehicle maintenance, often before any excess emissions. Light duty diesel vehicles manufactured since 1997 utilize the same OBDII system and therefore can, and should, be subjected to the same emissions inspection process as their gasoline powered counterparts.

Details

Gasoline powered vehicles are inspected for emissions during their periodic inspection. Since 2003, this emissions inspection for vehicles manufactured since 1996 has been done using their On-Board Diagnostic System (OBDII). The OBDII system monitors vehicle engine functions that can impact emissions and provides feedback to the motorist when one of these sensors indicates a system malfunction. In this manner it promotes high levels of vehicle maintenance, often before any excess emissions occur. Light duty diesel vehicles manufactured since 1997 utilize the same OBDII system, thereby allowing us to monitor their emissions control systems in an identical fashion. Unlike with gasoline powered vehicles, dynamometer testing would not be used for pre-1997 LDDVs.

The current inspection process used at the CIF inspection lanes is identical for both light duty gasoline vehicles (LDGVs) and LDDVs with the sole exception that LDDVs bypass the emissions testing portion of the inspection process. Changing this procedure to include this step for LDDVs would actually simplify the process, as there would no longer be the need for inspectors to note which vehicles to inspect and which to bypass. Moving forward with this proposal would also remove an inequality in the current inspection process that allows owners of some vehicles to avoid the expense of maintaining the emissions control equipment on their vehicle. Besides the inequity of inspection, of major concern is the industry trend of introducing new lines of diesel powered cars and light duty diesel trucks as a means to provide better fuel economy. This trend significantly increases the segment of vehicles in the fleet that would not be inspected for emissions. Given their low and declining numbers, LDDVs prior to MY1997 would continue to bypass emissions inspection.

Stakeholders

- NJ motorists driving LDDVs
- CIF stations throughout the state
- PIF stations throughout the state

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Cost/Benefit

Startup costs for this program would include informing the driving public of the change, training the inspectors, and reprogramming and validating some of the information systems that support the inspection process. Once operational, emissions inspections for LDDVs should cost the same as inspections on LDGVs as the testing equipment used to plug into these vehicles and scan their computer systems for trouble codes is identical. It is estimated that inspecting the approximately 7,000 OBDII equipped LDDVs registered in NJ – 14,000 vehicles inspected every other year – would cost \$91,000 per year at \$13 per inspection (assumes that half of the current CIF inspection cost is for the emissions portion of the process). Exactly how this cost would be reflected in the CIF inspection contract is unknown. The failure rate is expected to be similar to that of OBDII equipped gasoline powered vehicles which was 7.3% in 2004. Likewise the cost to the vehicle owner to repair a failing vehicle is likely to be similar for diesel and gasoline powered cars.

The benefits from these inspections have been estimated using computer modeling at 0.925 tons/year of VOCs and 0.64 tons/year of NOx, which equates to \$58,000 per ton (figures for particulate matter are not yet available). While these figures are quite small, they are likely to grow as many manufacturers have announced plans to introduce diesel engine options in the next few years and high fuel prices have renewed the public's interest in diesel vehicles.