OSHKOSH CORPORATION

ISO 9001 CERTIFIED

2307 OREGON STREET
POST OFFICE BOX 2566
OSHKOSH, WISCONSIN 54903-2566
920-235-9151

Direct Dial No. 920-237-4237
Main No. 920-235-9150
Fax No. 920-233-9231

August 2, 2014
NHTSA Docket No. NHTSA-2010-0079

Docket Management Facility
M-30
U.S. Department of Transportation
West Building, Ground Floor, Rm. W12-140
1200 New Jersey Avenue, SE
Washington, DC 20590.

RE: Comments on **Vocational Vehicle Aspects** of the Proposed Phase II Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles

Dear Sir/Madame:

Oshkosh Corporation is a leading manufacturer and marketer of access equipment, specialty vehicles and truck bodies for the primary markets of defense, concrete placement, refuse hauling, access equipment and fire & emergency.

The company's major brands of vehicles include:

- Frontline Communications and Medical
- IMT Field Service Vehicles
- Jerr-Dan Towing and Recovery Equipment
- London Concrete Mixers
- McNeilus Concrete Mixers
- McNeilus Refuse Trucks
- Oshkosh Airport Rescue Fire Fighting Apparatus
- Oshkosh Airport Snow Blowers and Brooms
- Oshkosh Concrete Mixers
- Oshkosh Defense Vehicles
- Oshkosh Snow Plows
- Pierce Fire Apparatus

It is from this broad base of experience in the design and application of vocational vehicles that we provide the following comments.

Engine Fuel Economy Performance Regulations – PROVEN EFFECTIVE

Current vehicle fuel economy regulations target the engine, the vehicle, or both. Oshkosh Corporation believes that regulating the engine rather than the vehicle is the only rational approach to improving the fuel economy of vocational trucks for the following reasons:

- Engine fuel economy improvements allow gains to be achieved across a broad range of vehicles and applications.
- The vast majority of vocational vehicles are produced by small volume manufacturers. The production volume of each vocation is too small to support significant investments in vehicle fuel efficiency improvements. The engine manufacturers, however, who supply to all the small vehicle manufactures can spread out the cost of innovation over the entire market where the cost can be rationalized.
- It is infeasible due to the overwhelming number of configurations to regulate at the body builder level.
- Standards at the engine level align well with the existing procedures and practices used today for certification and installation in vocational vehicle designs. The engine manufacturer provides certification, and the small volume vehicle manufacturer can simply follow the installation criteria approved and enforced by the engine supplier.

Rolling Resistance Regulations – NOT PRACTICAL FOR VOCATONAL VEHICLES

- Vocation vehicles generally spend a much smaller percentage of their drive time at highway speeds, so the benefit of improved tire rolling resistance is minimal.
- Vocation vehicles often must navigate off-highway conditions such as construction sites, landfills, quarries agricultural sites, forests, beaches etc… These environments necessitate more aggressive tire tread patterns that do not lend themselves to low rolling resistance.

Air Resistance Regulations - NOT PRACTICAL FOR VOCATONAL VEHICLES

- Vocation vehicles generally spend a much smaller percentage of their drive time at highway speeds, so the benefit of improved tire rolling resistance is minimal.
- Vocational vehicles often are designed as compactly as possible to increase maneuverability in urban settings. This requires the cab-over-engine (flat nose) cab configuration where an aerodynamic approach is impractical.
- Vocational vehicles often carry specialized equipment that does not provide opportunity for aero styling. Examples include concrete drums, aerial ladders and platforms, telescoping booms and buckets,

Engine Idle Reduction – NEEDS MORE STUDY

Many vocational vehicle applications employ the main truck engine to perform work

once at the job site. Examples include:

- Concrete mixer drum rotation
- Fire truck pumping and aerial device hydraulic power
- Refuse collection vehicle compacting, container lifting, and dumping.
- Recovery vehicle winching and lifting.
- Communication vehicle power generation
- Bucket truck hydraulic power

In some cases the full power of the main truck engine is necessary to perform the work. In other cases, stationary functions could be powered by electrification or smaller auxiliary engines. While these alternatives have potential, both electrification and auxiliary power adds weight, cost, and extra maintenance tasks. Smaller engines may provide some fuel savings, but they currently have higher exhaust emissions than the main diesel engine. Before considering regulation that would require or promote these technologies they should be studied further to confirm any potential benefits.

Conclusion

Vocational vehicles perform critical functions within our economy including safety, sanitation, construction, communication, and energy infrastructure to name a few. As can be seen from this analysis, any significant means of fuel efficiency improvement for vocational vehicles other than engine enhancements will be in conflict with the vocational duties of the vehicle. For this reason, Oshkosh Corporation strongly urges NHTSA to limit regulation to the main vehicle engine.

We also urge NHTSA to eliminate the current tire rolling resistance regulation for vocational vehicles as it has added reporting burdens without any proven significant benefit to fuel efficiency.

The vast amount of variability in both design and function of vocational vehicles will leave any proposed vehicle regulation with a very high risk of unintended consequences. We believe that natural market forces will continue to push those improvements in efficiency appropriate for each vocational niche in a manner that best maintains the functionality of the vehicle for its intended purpose without the need for increased regulation.

Sincerely,
Oshkosh Corporation

R. Lackore

Roger Lackore, PE, CSP
Director of Product Safety