

Comment on the Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, and Greenhouse Gases from In-Use Heavy Duty Diesel-Fueled The “Truck and Bus Regulation”

Westport Innovations would like to submit comments on the following two items:

Clarification of exemption of CARB Certified Westport ISX G from Section 2025 Title 13, California Code of Regulations – Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, and Greenhouse Gases from In-Use Heavy-Duty Diesel-Fueled Vehicles

Westport wishes to seek clarification on the status of CARB 2004 certified Heavy-Duty Pilot Ignition Engines under this ruling and additionally the Port Drayage Truck Rule, passed on November 24th 2008.

There are currently approximately 120 of these engines operating in Heavy-Duty vehicles in California at this time. The engines are CARB certified with Executive Order A-343-0003. These particular engines have a NO_x reduction of over 50%, and PM levels below the 2004 Certification Levels. Additionally Greenhouse Gas Emissions Reductions of approximately 18% over diesel-fueled engines are achieved with this engine, contributing to the goals of this regulation.

Fleet Averaging

Fleet averaging is a compliance option for fleets affected by this rule. According to the current language of the ruling there is a credit available to fleets running ‘Alternative-Fueled Engines’ or ‘Heavy-Duty Pilot Ignition Engines’ in their fleet. This credit is outlined in definition 9 of the rule and is shown below;

(9) Credit for Alternative Fuel Vehicles - Upon presentation of proper documentation, the Executive Officer will grant a fleet credit for using vehicles equipped with alternative fuel or heavy-duty pilot ignition engines, in calculating the NO_x and PM fleet averages under section 2025(h). Upon approval, the fleet would be allowed to use the NO_x emission factor for the engine model year to which the alternative A-30 or heavy-duty pilot ignition engines have been certified in calculating the NO_x index and zero for the PM index.

With credit being given to these engines effectively taking their PM emissions as zero, Westport understands that these engines are exempt from this fleet rule as it is written. Thus Westport understands that this exemption should also apply to

the subsequent Port-Drayage Truck rule. Westport would like to see CARB supply wording to the current rules to clearly define these engines as being exempt.

Definitions pertaining to the Westport ISX G

(21) “*Dual-Fuel Engine*” means any compression ignition engine that is engineered and designed to operate on a combination of alternative fuels, such as compressed natural gas (CNG) or liquefied petroleum gas (LPG) and diesel fuel or an alternative diesel fuel. These engines have two separate fuel systems, which inject both fuels simultaneously into the engine combustion chamber. A dual-fuel engine is not an alternative-fuel engine.

(32) “*Heavy-Duty Pilot Ignition Engine*” means an engine designed to operate using an alternative fuel, except that diesel fuel is used for pilot ignition at an average ratio of no more than one part diesel fuel to ten parts total fuel on an energy equivalent basis. An engine that can operate or idle solely on diesel fuel at any time does not meet this definition.

(9) *Credit for Alternative Fuel Vehicles* - Upon presentation of proper documentation, the Executive Officer will grant a fleet credit for using vehicles equipped with alternative fuel or heavy-duty pilot ignition engines, in calculating the NOx and PM fleet averages under section 2025(h). Upon approval, the fleet would be allowed to use the NOx emission factor for the engine model year to which the alternative A-30 or heavy-duty pilot ignition engines have been certified in calculating the NOx index and zero for the PM index.

Clarification of exemption of CARB Certified Westport ISX G from Section 2027 Title 13, California Code of Regulations – In-Use On-Road Heavy-Duty Drayage Trucks.

The new amended version of the Proposed Regulation Order lists the applicability as follows;

(b) Applicability

(1) This regulation applies to owners and operators of on-road diesel-fueled, alternative diesel-fueled and dual-fueled heavy-duty drayage trucks operated at California ports and intermodal rail yard facilities. This regulation also applies to “motor carriers,” “marine or port terminals,” “intermodal rail yards,” and “rail yard and port authorities.”

Under this amended Proposed Regulation Order the Westport ISX G engine is defined in the following;

(10) "Compression Ignition Engine" means an internal combustion engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.

(13) "Diesel-Fueled" means a CI engine fueled by diesel fuel, CARB diesel fuel, or alternative diesel fuel in whole or part.

(21) "Dual-Fuel Engine" means any compression ignition engine that is engineered and designed to operate on a combination of alternative fuels, such as compressed natural gas (CNG) or liquefied petroleum gas (LPG) and diesel fuel or an alternative diesel fuel. These engines have two separate fuel systems, which inject both fuels simultaneously into the engine combustion chamber. A dual-fuel engine is not an alternative-fuel engine.

(30) "Liquid Natural Gas (LNG) Fueled Trucks" are drayage trucks that utilize a heavy-duty pilot ignition engine that is designed to operate using an alternative fuel, except that diesel fuel is used for pilot ignition at an average ratio of no more than one part diesel fuel to ten parts total fuel on any energy equivalent basis. An engine that can operate or idle solely on diesel fuel at any time does not meet his definition.

The definition most closely describing vehicles powered with the Westport ISX G is definition 30 and thus Westport understands that any vehicle powered with the Westport ISX G is exempt from the Proposed Regulation Order to Control Emissions from In-Use On-Road Diesel-Fueled Heavy-Duty Port Drayage Trucks.