State of California AIR RESOURCES BOARD

EXECUTIVE ORDER A-4-211-2

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

NAVISTAR INTERNATIONAL TRANSPORTATION CORPORATION

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following 1998 model-year Navistar International Transportation Corporation diesel-cycle engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

| Engine Family | | Displacement (Cubic Inches) | Exhaust Emission Control Systems and Special Features |
|---------------|-----|--------------------------------|---|
| WNVXH0444CCD | 7.3 | (444) | Turbocharger Charge Air Cooler Engine Control Module Oxidation Catalytic Converter |

Engine models and codes are listed on attachments.

The following are the certification exhaust emission standards for this engine family in grams per brake horsepower-hour:

| Total | Carbon | Nitrogen | · <u>Particulates</u> |
|---------------------|-----------------|---------------|-----------------------|
| <u>Hydrocarbons</u> | <u>Monoxide</u> | <u>Oxides</u> | |
| 1.3 | 15.5 | 4.0 | 0.10 |

The following are the certification exhaust emission values for this engine family in grams per brake horsepower-hour:

| Total | Carbon | Nitrogen | <u>Particulates</u> |
|---------------------|-----------------|---------------|---------------------|
| <u>Hydrocarbons</u> | <u>Monoxide</u> | <u>Oxides</u> | |
| 0.1 | 2.7 | 3.9 | 0.09 |

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seg.).

BE IT FURTHER RESOLVED: That the aforementioned engine family has been conditionally certified subject to the following conditions:

- Any engine which employs a defeat device shall not be covered by this Executive Order.
- 2. Within 150 days following the issuance of Executive Order A-4-211, the manufacturer must show cause, to the satisfaction of the Executive Officer or his designee, that the strategy for fuel injection timing, including timing during the fuel economy mode, is not a defeat device.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 14th day of April 1998.

R. B. Summerfield, Chief

Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

Manufacturer: Navistar E.O.#A-4-211-2

T444E Manufacturer Family Name:

Process Code: New Submission

EPA Engine Family: WNVXH0444CCD

5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only) mm/stroke @ peak HP (for diesel only) 4.Fuel Rate:

7.Fuel Rate: mm/stroke@peak torque

6.Torque @ RPM (SEA Gross)

93.2

99.0

66.3

DI,TC,CAC,ECM,

DI,TC,CAC,ECM,

62.8

93.7

605@1500

88.6

DI,TC,CAC,ECM,

54.7

81.6

520@1500

79.2

77.1

210@2300

BH210C

BH210C

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8.Fuel Rate: 9.Emission Control (Ibs/hr)@peak torque Device Per SAE J1930

650@1500

B250C

1.Engine Code

B250C

2.Engine Model

90.7

86.3

3.BHP@RPM (SAE Gross)

230@2300

B230C

B230C

250@2300