State of California AIR RESOURCES BOARD

EXECUTIVE ORDER A-276-7 Relating to Certification of New Heavy-Duty Motor Vehicle Engines

NISSAN DIESEL MOTOR CO., LTD.

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-45-3;

IT IS ORDERED AND RESOLVED: That the following Nissan Diesel Motor Co., Ltd. 1990 model-year diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 8,500 pounds:

| Engine Family | Displacement - Liters (Cubic Inches) | Exhaust Emission Control Systems (Special Features) |
|---------------|---|--|
| LND0211EAB4 | 3.465 (211) | Engine Modification Direct Injection (Diesel) (Turbocharger) |
| LND0423DAA3 | 6.925 (423) | Engine Modification Direct Injection (Diesel) |
| LND0423EAB7 | 6.925 (423) | Engine Modification Direct Injection (Diesel) (Turbocharger) |
| LND0452EAB7 | 7.412 (452) | Engine Modification Direct Injection (Diesel) (Turbocharger) |

Engine models and codes are listed on attachments.

The following are the certification emission standards for these engine families:

| Hydrocarbons _gm/bhp-hr | Carbon Monoxide <u>gm/bhp-hr</u> | Nitrogen Oxides gm/bhp-hr | Particulates gm/bhp_hr |
|----------------------------|--|------------------------------|---------------------------|
| 1.3 | 15.5 | 6.0 | . 0.60 |
| The following an | | - | |

The following are the certification emission values for these engine families:

| <u>Engine Family</u> | Hydrocarbons | Monoxide | Nitrogen Oxides | Particulates |
|----------------------|--------------|-----------|-----------------|--------------|
| | _gm/bhp-hr | gm/bhp-hr | gm/bhp-hr | gm/bhp-hr |
| LND0211EAB4 | 0.8 | 1.9 | 5.2 | 0.43 |
| LND0423DAA3 | 0.9 | 3.3 | 5.0 | 0.48 |
| LND0423EAB7 | 1.2 | 2.5 | . 5.5 | 0.30 |
| LND0452EAB7 | 0.8 | 2.1 | 5.1 | 0.44 |

NISSAN DIESEL MOTOR CO., LTD.

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BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Section 2036, and Health and Safety Code, Section 43205.5).

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 30th day of March, 1989.

K. D. Drachand, Chief Mobile Source Division

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| | Section | 16.03.00.00 | Certificat | on Informa | tion | | |
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| | | | | | I | 5.0.NO. <u>A</u> | -276-7 Page 2 |
| | 1990 AI | R RESOURCES BO HEAVY-DU | DARD SUPPLEI FY DIESEL EI | | SHEET | MHC | 0 |
| Manufacturer | NISSAN | DIESEL MOTOR | <u>CO.,LTD.</u> | Engine Fam | ily : LN | D0423DAA3 | |
| Liters (CID) | 6,925 | (423) | | Engine Type | e <u>I</u> | nline 6 | |
| Emission Con | trol Sys. | and (Special | Features) | · · · · · · · · · · · · · · · · · · · | EM | (DID) | |
| | Fuel | | | | | | |
| Ir | jection | | | | | Maximum | |
| | Pump | Injector | Maximum | Fuel F | Rate | Rated | Fuel Rate |
| Engine | Mfr. | Mfr. | Rated H | P mm3/s1 | troke | Torque | mm3/stroke |

| FE6 | DIESEL KIKI CO., LTD. 16713 Z5778 | DIESEL KIKI CO., LTD.: 16600 25569 | 160 HP @ 3000 RPM | 67.0 (67.5) | 332 lbs.ft @ 1600 RPM | 68.0 (36.5) |
|-----|---|--|----------------------|----------------|--------------------------|----------------|

at RPM

(lbs/Hr)

at RPM

(lbs/Hr)

Part Number

Part Number

Model

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E.O.# <u>A-276-7</u> <u>Page 2</u> 1990 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET <u>HEAVY-DUTY DIESEL ENGINES</u> Manufacturer <u>NISSAN DIESEL MOTOR CO., LTD.</u> Engine Family <u>LND0211EAB4</u> Liters (CID) <u>3.465 (211)</u> Engine Type <u>Inline 4</u> Emission Control Sys. and (Special Features) <u>EM</u> (_DID, TC_)____

| Engine Model | Fuel Injection Pump Mfr. Part Number | Injector Mfr. Part Number | Maximum Rated HP at RPM | Fuel Rate mm3/stroke (lbs/Hr) | Maximum Rated Torque at RPM | Fuel Rate mm3/stroke (lbs/Hr) |
|-----------------|--|--|-------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| FD35T | DIESEL KIKI CO., LTD.: 16700 01D01 | DIESEL KIKI CO., LTD.: 16600 01D02 | 120 HP @ 3500 RPM | 67.5 (52.9) | 210 lbs.ft @ 2000 RPM | |

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1990 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY DIESEL ENGINES

| Manufacturer | NISSAN DIESEL MOTOR CO., LTD. | Engine Family | : LND0423EAB7 | |
|----------------|--------------------------------|---------------|---------------|--|
| Liters (CID) | 6.925 (423) | Engine Type | Inline 6 | |
| Emission Contr | ol Sys. and (Special Features) | | EM (DID, TC) | |

| | Fuel Injection | - - . | | | Maximum | |
|--------|------------------------|-------------------------|---------------------|-------------------------|-----------------|-------------------------|
| Engine | Pump Mfr. | Injector Mfr. | Maximum Rated HP | Fuel Rate mm3/stroke | Rated Torque | Fuel Rate mm3/stroke |
| Model | Part Number | Part Number | at RPM | (lbs/Hr) | at RPM | (lbs/Hr) |
| | | | | | | |
| FE6T | DIESEL KIKI | DIESEL KIKI | 180 HP | 71.5 | 332 lbs.ft | 64.4 |
| | CO.,LTD 16713 Z5779 | CO.,LTD. 16600 Z5570 | @ 3000 RPM | (72.0) | @ 1800 RPM | (38.9) |
| | 10110 20119 | 10000 20010 | | | | |

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E.O.NO. 🖊 -276 1990 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET MHDD HEAVY-DUTY DIESEL ENGINES . Manufacturer _____NISSAN DIESEL MOTOR CO.,LTD. Engine Family : LND0452EAB7 Engine Type <u>Inline 6</u> Liters (CID) 7.412 (452) (DID, TC) EM Emission Control Sys. and (Special Features) . Fuel Injection Maximum Rated Maximum Fuel Rate Fuel Rate Pump Injector mm3/stroke Torque mm3/stroke Engine Mfr. Mfr. Rated HP at RPM (lbs/Hr) Part Number Part Number at RPM (lbs/Hr) Model 210 HP NE6T DIESEL KIKI DIESEL KIKI 92.5 456 lbs.ft 93.0 @ 1800 @ 2,800 RPM (87.0) (56.2)CO.,LTD CO.,LTD. 16600 95015 16713 95119

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| Revision No. | | | | |
| Date | | | | |