State of California AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-168

Relating to Certification of New Heavy-Duty Motor Vehicle Engines
CUMMINS ENGINE COMPANY, INC.

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 Cummins Engine Company, Inc. 1997 model diesel 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 | <u>Liters (Cub</u> | ic Inches) | Exhaust Emission Control Systems and Special Features |
|------------------------|--------------------|------------|--|
| VCE855EJDATW (093W) | 14.0 | 855 | Charge Air Cooler Turbocharger Powertrain Control Module |

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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> | Oxides | |
| 1 3 | 15.5 | 5.0 | 0.10 |

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

| Engine | Total | Carbon | Nitrogen | <u>Particulates</u> |
|---------------------|---------------------|-----------------|---------------|---------------------|
| <u>Family</u> | <u>Hydrocarbons</u> | <u>Monoxide</u> | <u>Oxides</u> | |
| VCE855EJDATW (093W) | 0.3 | 0.9 | 4.5 | 0.07 |

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 seq.).

CUMMINS ENGINE COMPANY, INC.

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 23 day of December 1996.

R. B. Summerfield, Chief

Mobile Source Operations Division

| E.O.# | A-21-168 | | | |
|--------|----------|-----|--|--|
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1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY DIESEL-STANDARD ENGINES

| Manufacturer Cummins Engine Company, Inc. Engine Family 093W/VCE855EJDATW | | | | | | |
|---|-------------------|--|-------------------------------------|---------------------|--------------------------|--|
| Displacement: | | <u>/14</u> Lite: | rs | | / 855 Cu | ubic Inches |
| Maximum Rated Power: 525 HP @ 1800 RPM Engine Configuration: I-6 | | | | | | |
| | | _ Compre | | | | |
| Fuel Type(s): | Dedicated_ | <pre>K_ Flex-Fuel_</pre> | Dual-Fuel | Diesel_ | х м100 | м85 |
| | CNG L | NG LPG | Other (spe | cify) | | |
| Diesel Cert F | uel: 13 CCR | 2282 | 40 CFR 86.13 | 13-90 | 40 CFR 86 | .1313-94 <u>X</u> |
| Primary Inten | ded Service (| Class: LHD | мно | HHD_X | Urba | n Bus |
| Exhaust ECS (| include.MFI, | TC, CAC): | PCM (TC, CAC |) | | |
| | y | | (use abbrevi | ations per SA | | |
| Engine Model (Eng Code) | Rated HP @ RPM | Fuel Rate @ Rated HP mm3 / stroke (lbs/hr) | Fuel Pump & Injector Part No. | ECM/PCM Part No. | EGR Valve Part No. | PTOX / Catalytic Converter Part No. |
| N14-525E+ (2025) | 525 @ 1800 | 288 (175.1) | 3095086 | 3090528 3096662 | N/A | N/A |
| N14-500E+ (2025) | 505 @ 1800 | 272 (165.3) | Same | Same | N/A | N/A |
| N14-460E+ (2025) | 480 @ 1800 | 255 (154.9) | Same | Same | N/A | N/A |
| N14-435E+ (2025) | 450 @ 1800 | 237 (143.8) | Same | Same | N/A | N/A |
| N14-435E+ (2025) | 435 @ 1800 | 229 (138.8) | Same | Same | N/A | N/A |
| N14-435E+ (2025) | 448 @ 1800 | 236 (143.3) | Same | Same | N/A | N/A |
| N14-435 ESP+ (2025) | 435 @ 1800 | 229 (138.8) | Same | Same | N/A | N/A |
| N14-500E+ (2025) | 505 @ 1900 | 259 (166.0) | Same | Same | N/A | N/A |
| N14-460E+ (2025) | 465 @ 1800 | 243 (147.4) | Same | Same | N/A | N/A |
| N14-410E+ (2025) | 427 @ 1800 | 231 (136.5) | Same | Same | N/A | N/A |
| Date Issued: | | | | | | |
| Revisions: | | | 1 | | I | |