| California Environmental Protection Agency<br>**Air Resources Board** | **SCANIA CV AB** | **EXECUTIVE ORDER U-R-024-0020**<br>New Off-Road<br>Compression-Ignition Engines |
|---|---|---|

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 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-14-012;

**IT IS ORDERED AND RESOLVED:** That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

| MODEL YEAR | ENGINE FAMILY | DISPLACEMENT (liters) | FUEL TYPE | USEFUL LIFE (hours) |
|---|---|---|---|---|
| 2014 | EY9XL16.4DAA | 16.4 | Diesel | 8000 |

| SPECIAL FEATURES & EMISSION CONTROL SYSTEMS | TYPICAL EQUIPMENT APPLICATION |
|---|---|
| Electronic Direct Injection, Turbocharger, Charge Air Cooler, Engine Control Module, Smoke Puff Limiter, Selective Catalytic Reduction-Urea, Ammonia Oxidation Catalyst, Exhaust Gas Recirculation | Crane, Loader, Tractor, Dozer, Pump, Compressor |

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

| RATED POWER CLASS | EMISSION STANDARD CATEGORY | | EXHAUST (g/kw-hr) | | | | | OPACITY (%) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | NMHC | NOx | NMHC+NOx | CO | PM | ACCEL | LUG | PEAK |
| 130 ≤ KW ≤ 560 | Tier 4 Final | STD | 0.19 | 0.40 | N/A | 3.5 | 0.02 | N/A | N/A | N/A |
| | | CERT | 0.03 | 0.31 | -- | 0.2 | 0.02 | -- | -- | -- |

**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

**BE IT FURTHER RESOLVED:** The listed engine family is conditionally certified pending submission of additional test data to verify compliance with useful-life emission standards. The manufacturer has until July 31, 2014 to provide test data to confirm or correct the certification emissions levels on this conditional certification. Failure to resolve concerns by the specified date, shall be cause for the Executive Officer to rescind this conditional certification, in which case all engines covered under this conditional certification would be deemed uncertified pursuant to Health and Safety Code Section 43153 and subject to civil penalties pursuant to Health and Safety Code Section 43154.

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

**This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.**

Executed at El Monte, California on this 2nd day of April 2014.

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

SUPERSEDED

ATTACHMENT 1 OF 1

# Engine ModelsEZ

UR-024-0020

| Engine Family | 1.Engine Code | 2.Engine Model | 3.Dis-placement | 4.Power kW @ RPM | 5.Fuel Rate: mm/stroke @ peak HP | 6.Fuel Rate: (lbs/hr) @ peak HP | 7.Torque Nm @ RPM | 8.Fuel Rate: mm/stroke@ peak torque | 9.Fuel Rate: (lbs/hr)@peak torque | 10. Emission Control Device |
|---|---|---|---|---|---|---|---|---|---|---|
| EY9XL16.4DAA | DC16 084A | 2257384 | 16.4 | 405 @ 2100 | 217 | 204 | 2828 @ 1300 | 285 | 166 | ECM, DDI, TC, CAC, EGR, SPL, SCR, AMOX |
| EY9XL16.4DAA | DC16 084A | 2257385 | 16.4 | 478 @ 2100 | 249 | 234 | 3138 @ 1400 | 323 | 203 | " DDI, TC, CAC, EGR, SPL, SCR, AMOX |
| EY9XL16.4DAA | DC16 084A | 2257386 | 16.4 | 493 @ 2100 | 259 | 244 | 3233 @ 1400 | 334 | 210 | " DDI, TC, CAC, EGR, SPL, SCR, AMOX |

SUPERSEDED