

Pursuant to the authority vested in California 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 engines 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) |
|--|---------------|-----------------------|--|---------------------|
| 2018 | JVPXL16.1CJA | 16.1 | Diesel | 8000 |
| SPECIAL FEATURES & EMISSION CONTROL SYSTEMS | | | TYPICAL EQUIPMENT APPLICATION | |
| Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Smoke Puff Limiter, Selective Catalytic Reduction-Urea | | | Crane, Loader, Pump, Compressor, Generator Set | |

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 (NO_x), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NO_x), 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 | NO _x | NMHC+NO _x | 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 | 0.01 | 0.17 | - | 0.1 | 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: That the manufacturer has elected to include engine models in this engine family which are identified for "emergency equipment use only". These "emergency equipment use only" engines are exempt from requirements imposed pursuant to California law and the regulations adopted pursuant thereto for motor vehicle pollution control devices per California Vehicle Code Section 27156.2. The manufacturer must clearly label these engines for "emergency vehicle use only" on the engines' emission control label.

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.

This Executive Order hereby supersedes Executive Order U-R-014-0166 dated November 20, 2017.

Executed at El Monte, California on this 14 day of February 2018.


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

Engine Model Summary Template

J-R-014-0166-1
2/1/2018

Attachment

| Engine Family | 1.Engine Code | 2.Engine Model | 3.BHP@RPM (SAE Gross) | 4.Fuel Rate: mm/stroke @ peak HP (for diesel only) | 5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only) | 6.Torque @ RPM (SEA Gross) | 7.Fuel Rate: mm/stroke@peak torque | 8.Fuel Rate: (lbs/hr)@peak torque | 9.Emission Control Device Per SAE J1930 |
|---------------|----------------|----------------|-----------------------|--|--|----------------------------|------------------------------------|-----------------------------------|---|
| JVPXL16.1CJA | I | TAD1670 VE | 543@1900 | 291 | 186 | 2757 Nm@1260 | 366 | 155 | DDI,EM, ECM, CAC, TC, SPL, SCR-U, EGR |
| JVPXL16.1CJA | II | TAD1671 VE | 603@1900 | 321 | 205 | 2897 Nm@1260 | 386 | 164 | DDI,EM, ECM, CAC, TC, SPL, SCR-U, EGR |
| JVPXL16.1CJA | III | TAD1672 VE | 690@1800 | 386 | 234 | 3213 Nm@1260 | 430 | 182 | DDI,EM, ECM, CAC, TC, SPL, SCR-U, EGR |
| JVPXL16.1CJA | IV (Emergency) | TAD1672 VE | 690@1800 | 386 | 234 | 3213 Nm@1260 | 430 | 182 | DDI,EM, ECM, CAC, TC, SPL, SCR-U, EGR |

↓ added per running change.