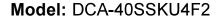
EXHAUST EMISSION DATA SHEET

MQ POWER GENERATOR SET





The engine used in this generator set is certified to comply with United States EPA Tier 4 and CARB Mobile Off-Highway emission regulations.

ENGINE DATA

Manufacturer: ISUZU 3.4 Bore: (87 mm) Model: V2403 Stroke: 4.0 in. (102 mm) Type: 4-Cycle, In-Line, 4-Cylinder, Diesel Displacement: 164 cid (2.4 liters)

Aspiration: Turbocharger, ECM, EGR, DOC, Electronic Direct

Injection, Charge Air Cooler

Compression Ratio: 16.0:1

PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz) Rated 48.3 Load Fuel Consumption (gal/Hr) Rated 2.3 Load Exhaust Gas Flow (cfm) Rated Load 155 Exhaust Gas Temperature (°F) 918

United States EPA - Mobile Off-Highway Tier 4 Limits -

25 ≤ ~ ≤ 49 BHP

| Criteria Pollutant | Emis | sion Requirements | NTE Er | ngine Emissions |
|----------------------------------|-------|-------------------|--------|-----------------|
| NOx (Oxides of Nitrogen as NO2) | N/A | gr/bhp-hr | N/A | gr/bhp-hr |
| HC (Total Unburned Hydrocarbons) | N/A | gr/bhp-hr | N/A | gr/bhp-hr |
| NOx + HC (Combined) | N/A | gr/bhp-hr | N/A | gr/bhp-hr |
| CO (Carbon Monoxide) | 4.10 | gr/bhp-hr | 5.14 | gr/bhp-hr |
| PM (Particulate Matter) | 0.022 | gr/bhp-hr | 0.029 | gr/bhp-hr |
| NMHC (Non-Methane Hydrocarbons) | N/A | gr/bhp-hr | N/A | gr/bhp-hr |
| NMHC + NOx | 3.50 | gr/bhp-hr | 4.39 | gr/bhp-hr |

EPA Engine Family: SKBXL02.4EMC

EPA Certificate of Conformance: SKBXL02.4EMC-020

ARB Executive Order: U-R-025-1117

Effective Date: Model Year 2025

Note: Engine operation with excessive air intake or exhaust restriction beyond factory published maximum limits, or with improper service maintenance, may result in higher emission levels.

Data And Specifications Subject To Change Without Notice Date: 2/20/2025



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 2025 MODEL YEAR CERTIFICATE OF CONFORMITY WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Kubota Corporation

(U.S. Manufacturer or Importer)

Certificate Number: SKBXL02.4EMC-020

Effective Date: 08/15/2024

Expiration Date: 12/31/2025

Issue Date: 08/15/2024

 $\frac{\text{Revision Date:}}{N/A}$

Model Year: 2025

Manufacturer Type: Original Engine Manufacturer

Engine Family: SKBXL02.4EMC

Mobile/Stationary Indicator: Both Emissions Power Category: 37<=kW<56

Fuel Type: Diesel

After Treatment Devices: Diesel Oxidation Catalyst

Non-after Treatment Devices: Electronic Control, Electronic/Electric EGR - Cooled, Engine Design

Byron J. Bunker, Division Director

Compliance Division

Modification

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Parts 60 and 1039, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Parts 60 and 1039 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Parts 60 and 1039 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Parts 60 and 1039.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Parts 60 and 1039. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Parts 60 and 1039.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



KUBOTA CORPORATION

EXECUTIVE ORDER: U-R-025-1177 New Off-Road Compression-Ignition Engines Page 1 of 1

U-R-025-1168 Pursuant to the authority vested in the California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapters 1 and 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-19-095;

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

| | odel 'ear | Engine Family | Combustion Cycle | Fuel Operation | Fuel Type(s) | Engine Operation |
|---|--------------|---------------|------------------|----------------|--------------|------------------|
| 2 | 025 | SKBXL02.4EMC | Diesel | Dedicated | Diesel | Constant-speed |

| Emission Control Systems | Special Features |
|---|------------------|
| [1,2]: Direct Fuel Injection (DFI), Turbocharger (TC), Exhaust Gas Recirculation (EGR), Charge Air Cooler (CAC), Electronic Control Module (ECM), Diesel Oxidation Catalyst (DOC) | None |

The certified engine models are attached.

The listed engine models comply with the following: 1) emission standard limits (STD) and Not-To-Exceed (NTE) limits, as applicable, for criteria pollutants non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM), and for smoke opacity as demonstrated during the Acceleration (ACL) and Lugging (LUG) modes, and the peak value (PEAK) in either mode of the Smoke Opacity cycle, as set forth in 13 CCR 2423 and the applicable California test procedures for off-road compression-ignition engines, and 2) family emission limits (FEL) declared by the manufacturer as allowed by the applicable California test procedures, stated in units of gram per kilowatt-hour (g/kW-hr) and percent opacity (%opacity), respectively, except as noted, or designated as not applicable (*).

| | | | | | Smoke Opacity | | |
|------------------------------|-----|----------|-----|------|---------------|-----|------|
| Applicable Standard | | NMHC+NOx | СО | PM | ACL | LUG | PEAK |
| | STD | 4.7 | 5.0 | 0.03 | * | * | * |
| Tier 4 Final 37 ≤ kW < 56 | FEL | * | * | * | * | * | * |
| 07 = KVV + 00 | NTE | 5.9 | 6.2 | 0.04 | * | * | * |

BE IT FURTHER RESOLVED: Any declared FEL is the emission limit to which all engines must comply in lieu of the standard limit for certification purposes, subject to the restrictions of averaging, banking, or trading (ABT) programs allowed by the applicable California test procedures.

BE IT FURTHER RESOLVED: That the manufacturer has elected to combine engines from the $19 \le kW < 56$ power categories into a single engine family. The listed engine models comply with the more stringent set of standards of the $37 \le kW < 56$ power category in accordance with Section 1039.230(e) of the applicable California test procedures.

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

BE IT FURTHER RESOLVED: The listed engine models may only be installed in or on equipment such that engine operation is consistent with off-road compression-ignition engines as defined in 13 CCR 2421(a)(39).

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

Executed on this _____ day of November 2024.

Robin U. Lang, Chief

Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: SKBXL02.4EMC EO Number: U-R-025-1177 Date Applicable: 10/17/2024

| | | | | | Peak Power | | | Peak Torque | <u>:</u> | | | | |
|-------------------|---------------------|------|--------|--------------|------------|-------|------------|-------------|----------|------------|---------|-----|-------|
| Model | Code | Trim | Config | Displacement | Power | Speed | Fueling | Torque | Speed | Fueling | ECS Num | GHG | Notes |
| - | - | - | - | L | kW | rpm | mm3/stroke | N-m | rpm | mm3/stroke | - | - | - |
| D1803-CR-TI-BG-EF | D1803-CR-TI-BG-EF01 | N/A | 13 | 1.826 | 27.8 | 1800 | 46 | 147.5 | 1800 | 46 | 1 | N/A | |
| D1803-CR-TI-BG-EF | D1803-CR-TI-BG-EF02 | N/A | 13 | 1.826 | 26.6 | 1800 | 43.8 | 141.1 | 1800 | 43.8 | 1 | N/A | |
| V2403-CR-TI-BG-EF | V2403-CR-TI-BG-EF01 | N/A | 14 | 2.435 | 36 | 1800 | 43.4 | 191 | 1800 | 43.4 | 2 | N/A | |