EXHAUST EMISSION DATA SHEET

MQ POWER GENERATOR SET

Model: DCA125SSIU4F

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	**Bore:**	4.52 in. (115 mm)
Model:	4HK1X	**Stroke:**	4.92 in. (125 mm)
Type:	4 Cycle, in-line, 4 Cylinder, Diesel	**Displacement:**	317 cid (5.2 liters)
Aspiration:	Turbocharger Air Cooler. Electronic Direct Injection ECM, EGR, DOC, SCR	**Compression Ratio:**	16.5 : 1

PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz)	170.8
Rated Load Fuel Consumption (gal/Hr)	7.11
Rated Load Exhaust Gas Flow (cfm)	512
Rated Load Exhaust Gas Temperature (ºF)	658

United States EPA - Mobile Off-Highway Tier 4 Limits - 100< ~ ≤174 BHP

Criteria Pollutant	Emission Requirements	Certified Engine Emissions
NOx (Oxides of Nitrogen as NO2)	0.298 gr/bhp-hr	0.089 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)	3.728 gr/bhp-hr	0.074 gr/bhp-hr
PM (Particulate Matter)	0.014 gr/bhp-hr	0.014 gr/bhp-hr
NMHC (Non-Methane Hydrocarbons)	0.141 gr/bhp-hr	0.007 gr/bhp-hr
NMHC + NOx	N/A gr/bhp-hr	N/A gr/bhp-hr

EPA Engine Family:	JSZXL05.2RXB
EPA Certificate of Conformance:	JSZXL05.2RXB-012
ARB Executive Order:	U-R-006-0454
Effective Date:	Model Year 2018

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.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2018 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Isuzu Motors Limited**
(U.S. Manufacturer or Importer)

Certificate Number: JSZXL05.2RXB-012

Effective Date: 06/07/2017

Expiration Date: 12/31/2018

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 06/07/2017

Revision Date: N/A

Model Year: 2018
Manufacturer Type: Original Engine Manufacturer
Engine Family: JSZXL05.2RXB

Mobile/Stationary Indicator: Mobile
Emissions Power Category: 56<=kW<130
Fuel Type: Diesel
After Treatment Devices: Diesel Oxidation Catalyst, Ammonia Slip Catalyst, Selective Catalytic Reduction
Non-after Treatment Devices: Electronic Control, Electronic/Electric EGR - Cooled

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 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 Part 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 Part 1039 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 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 Part 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 Part 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.

California Environmental Protection Agency Air Resources Board	ISUZU MOTORS LIMITED	EXECUTIVE ORDER U-R-006-0454 New Off-Road 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 engines and emission control systems 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	JSZXL05.2RXB	5.193	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Control Module, Turbocharger, Charge Air Cooler, Electronic Direct Injection, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Selective Catalyst Reduction-Urea, Ammonia Oxidation Catalyst	Generator

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), 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
75 < kW ≤ 130	Tier 4 Final	STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.01	0.12	--	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).

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 29th day of June 2017.

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

ENGINE MODEL SUMMARY

ATTACHMENT 1 OF 1

CARB EO: U-R-006-0454
DATE: 06/05/17

ENGINE FAMILY	ENGINE CODE	ENGINE MODEL	BHP@RPM (SAE Gross)	FUEL RATE: mm3/stroke @peak HP	FUEL RATE: lbs/hr @peak HP	TORQUE@RPM lbs ft	FUEL RATE: mm3/stroke @peak TORQUE	FUEL RATE: lbs/hr @peak TORQUE
JSZXL05.2RXB	4HK1XDRBB-01	BR-4HK1X	170.8 @ 1800 (127.4kW)	144.7	57.9	498.6 @ 1800 (676Nm)	144.7	57.9

ENGINE FAMILY	ENGINE CODE	ENGINE MODEL	EMISSION CONTROL DEVICE Per SAE J1930
JSZXL05.2RXB	4HK1XDRBB-01	BR-4HK1X	ECM, TC, CAC, DFI, EGR, DOC, SCR-U, AMOX