

Rev.

ENGINE SPECIFICATIONS

Engine Model	<u>Base Model</u> <u>4BG1</u>
	<u>Model No.</u> <u>4BG1TRD-01</u>
Customer	<u>Export Standard</u>
Application	<u>Generator</u>
Drawing No.	<u>E4-1021-097-2</u>
Emission Regulation	<u>EPA Tier-2, EC Stage- II</u>

Revision	Date	Revision Record	Issue No.
0	: 14-Jul-08	: Issued	:
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	:	:	:

ISUZU MOTORS LIMITED	Approval	Check	Issue
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	Group Leader	Manager	Staff

Engine Specification

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Manufacturer	ISUZU MOTORS LIMITED		
Engine Model	Base Model	4BG1	Model No. 4BG1TRD-01
Application	Generator		
Engine type	Four cycle, water cooled, direct injection type, over head valve type		
No. of cylinders - bore x stroke	4 Inline - 105.0 mm x 125.0 mm		
Total piston displacement	4.329 litter		
Compression ratio	18		

Engine performance	Rating
Conditions	: Standard atmospheric condition
	: Breaking time 30 hours
	: With AC generator and cooling fan
	: Without air cleaner and exh. silencer
Rated output	Stand-by : 56.5 ± 2.8 kW/ 1500 min ⁻¹ 63.6 ± 3.1 kW/ 1800 min ⁻¹ Prime : 48.3 kW / 1500 min ⁻¹ 57.8 kW / 1800 min ⁻¹
Fuel consumption	: 214 ±13 g / kW.h @ 1500min ⁻¹
(at rated output power)	: 218 ±13 g / kW.h @ 1800min ⁻¹
High idle speed	: Less than 1575 min ⁻¹ Less than 1890 min ⁻¹
Level set speed	: Less than 1630min ⁻¹ Less than 1923min ⁻¹
Low Idle speed	: 1000 ±25 min ⁻¹
Type of fuel	: Diesel fuel (JPN:JIS-NO.2, US:ASTM-2D, EU:EN590)
Engine dry weight	: Approx. 360 kg
Engine Dimensions (L x W x H)	: 845.2mm x 648mm x 857mm (with Fan)
Firing order	: 1 - 3 - 4 - 2
Rotating direction	: Clockwise viewed from cooling fan side
Valve device	: Overhead valve

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Aspiration	:	Turbocharged
Fuel device	:	Injection pump, Bosch In-line type
Injection nozzle	:	Multi-hole type
Governor	:	Centrifugal variable speed type
Fuel feed pump	:	Plunger type, Integrated in injection pump
Fuel filter	:	Paper element type
Lubrication device	:	Gear type, Camshaft driven, Full forced pressure
Oil pressure indicate device	:	Oil pressure warning switch
Oil filter	:	Full flow, Paper element type
Cooling fan	:	500mm dia., sucker, 7-blade, plastic
Water pump	:	Impeller type, Belt driven from crankshaft pulley
Thermostat	:	Wax pellet type
Starter	:	12V-2.2kW, Magnetically actuated type
Alternator	:	12V-35A, AC type, IC regulator build in type, Belt driven from crankshaft pulley
Pre-heating device	:	Glow plug, Quick on start-III (QOS-III) type
Engine stop device	:	Fuel cut lever
Power take off	:	Without
Inclination limit	:	All direction 25deg
Lubrication oil capacity	:	Maximum 14 litter - Minimum 9.0 litter (Oil pan only)
Cooling water capacity	:	8.5 litter

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Injection timing : 9deg BTDC

Initial injection pressure : 18.1MPa

Compressive pressure : 3.04MPa at 200rpm engine speed

Valve clearance :	Valve	Valve Clearance	Valve timing	
			Open	Close
	Inlet	0.4mm at cold	19.0deg BTDC	47.0deg ABDC
	Exhaust	0.4mm at cold	57.0deg BBDC	15.0deg ATDC

Paint : Gray

Recommended lubrication oil : API classification, Service CD class, SAE10W-30

Shipped loose parts

No.	Parts Name	Qty
1	Gasket; Exhaust pipe	1
2	Relay; Glow Plug	1
3	Relay; Stopper	1
4	Relay Asm; Starter	1
5	Switch Asm; Starter	1
6	Stopper Asm; Engine	1
7	Diode Asm	1
8	Tachometer Asm	1
9	Feed pump Asm; Wlectric	1
10	Timer;QOS-3	1

ISUZU

**4BG1TRD-01
Performance**

Condition	JIS D0006 / SAE J1349 / ISO15550
Atmospheric Condition	25 deg C
Braking time	30 hours
Cooling Fan	With 500mm dia., sucker, 7-blade, PP
Air Cleaner	NONE
Alternator	With (No Load)
Exhaust Silencer	NONE

