

Rev.

0

## ENGINE SPECIFICATIONS

Engine Model	Base Model :	AH-6UZ1X (Intercooler turbo)
	Model No. :	AH-6UZ1XYBW-01
Customer	EXPORT	
Application	General power	
Drawing No.	E5-1020-005-1	
( 3D Data Code )		

Symbol	Date	Revision Record	Issue No.
0	22 Sep. 2008	For confirmation of prototype specification	
	:	:	:
	:	:	:
	:	:	:
	:	:	:
	:	:	:

ISUZU MOTORS LIMITED  
Powertrain Business Dept.

Approval  
*S.Nogami*  
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## Engine Specifications

Model No. AH-6UZ1XYBW-01

Rev. 0

Manufacturer	ISUZU MOTORS LIMITED
Engine Model	Base Model: 6UZ1X Intercooler Turbo Model No. AH-6UZ1XYBW-01
Application	General power
Emission regulation	EPA Tier-3 / EC Stage-III A
Engine type	Four cycle, water cooled, overhead camshaft, vertical in-line, direct injection type, with turbocharger
No. of cylinders - bore x stroke	6 - 120.0 mm x 145.0 mm
Total piston displacement	9.839 L
Compression ratio	17.5 to 1
Engine performance	Rating
Test conditions	Standard atmospheric condition
Conforming standard JPN;JIS D0006-1 US;SAEJ1349 EU;ISO15550	Break-in time 30 hrs
	With AC generator and Without cooling fan
	With air cleaner and exh. silencer
	Fuel : JPN: JIS-NO.2
Rated Output	: 270 ± 5.4 kW / 1950 min-1
Droop point	: 250 ± 12.5 kW / 2000 min-1
Maximum Torque	: 1435 ± 72 Nm / 1500 min-1
Fuel consumption at rated.	: 214 ± 13.6 g/kw.h
No load max. speed	: 2000 ± 20 min-1
Low idle speed	: 900 ± 20 min-1
Type of fuel	Diesel fuel only ( JPN:JIS-NO.2, US:ASTM-2D, EU:EN590 )
Engine dry weight	Approx. 840 kg
Dimensions	L 1368.4 x W 1012 x H 1229.5 (with cooling fan)
Firing order	1 - 5 - 3 - 6 - 2 - 4
Rotating direction	Clockwise viewed from cooling fan
Valve device	Overhead camshaft

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Model No. AH-6UZ1XYBW-01

Rev. 0

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**Supercharging device**      With  
Supercharging system      Exhaust turbocharger  
Driving system              ---  
Lubricating system        Full forced pressure feed type (Oil-cooled)  
Manufacturer                ISIKAWAJIMA HARIMA HEAVY INDUSTRIES, LTD.  
Name of type                RHG6 without waist gate

**Fuel device**

Injection pump  
Manufacturer                Denso corporation  
Name of type                Common rail 6HD type

Plunger                        2 - Diameter 8.5 mm x Stroke 12.0 mm

Injection nozzle  
Manufacturer                Denso corporation  
Name of type                Electrical multi-hole type ( G2 type )

Fuel injection time regulator      Electrical controlled  
Manufacturer                ---  
Name of type                ---

Fuel feed pump                With  
Manufacturer                Denso corporation  
Name of type                Plunger type

Fuel filter                    With  
Filtering system            Paper element type (Element type)  
Manufacturer                WAKO INDUSTRIAL CO.,LTD  
Name of type                Element type x 2

Governor  
Speed control system        Electrical variable speed control  
Lubricating system        ---  
Manufacturer                TRANSTRON Inc.  
Name of type                Electrical control type

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Model No. AH-6UZ1XYBW-01

Rev. 0

**Lubricating device**

Lubricating system Full forced pressure feed type

Lubricating pump

Type of pump Gear pump

Driving system Crank gear driven

Oil pressure regulating device Piston - spring type

Oil pressure indicating device With engine oil pressure sensor

Oil filter

Filtering system Full flow paper element, Combined type (Twin cartridge, Remote type)

Manufacturer Nippon Donaldson,Ltd

Oil cooler

Cooling system Water cooled type (Built-in Engine)

Manufacturer TOKYO ROKI CO.,LTD

**Cooling device**

Cooling system Pressurized water forced circulation type

Cooling fan

Type of fan Dia 850 mm - Suction - 6 Blade

Driving system Belt driven by crankshaft, speed ratio: 0.87

Water pump

Type of pump Impeller type

Driving system Belt driven by crankshaft pulley

Thermostat

Regulating system Wax-pellet type

Manufacturer Fuji Bellows Co., Ltd.

Water temperature  
indicating device

With engine coolant water temperature sensor

## Engine Specifications

Model No. AH-6UZ1XYBW-01

Rev. 0

**Air cleaner** ---  
Cleaning system ---  
Manufacturer ---

**Starting device**

Starting motor  
Manufacturer MITSUBISHI LTD.  
Name of type Reduction type  
Voltage 24 V  
Output 5.5 kW

**Engine stop device** Fuel cut (Electronic controlled)

**Preheating device** QOS- II

**Alternator**

Generating system A/C type  
Manufacturer MITSUBISHI LTD.  
Voltage 24 V  
Output 50 A  
Driving system Belt driven by crankshaft pulley

**Regulator**

Regulating system Built-in IC regulator  
Manufacturer MITSUBISHI LTD.  
Charging discharging indicating system: ---

**Hour meter** Without

System ---  
Manufacturer ---  
Fitting position ---  
Driving system ---  
Speed ratio ---  
Rated speed indicator ---

**Power Take Off** Without

Maximum torque  
Speed ratio  
Rotation  
Flange type  
Spline number of teeth  
Diametric pitch  
Pressure angle

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Model No. AH-6UZ1XYBW-01

Rev. 0

**Allowable inclination angle** 0.61 rad. for all directions viewed from flywheel

**Capacity**

Lubrication oil MAX: approx. 36.0 L MIN: approx. 25.0 L (Oil pan only)  
 Air cleaner ---  
 Injection pump ---  
 Governor ---  
 Cooling water 22.5 L (Engine only)  
 Others ---

**Maintenance data**

Valve clearance and adjustment	Valve	Valve clearance	Valve timing: open	Valve timing: close
Inlet	0.2 mm at cold	0.38 rad BTDC	0.52 rad ABDC	
Exhaust	0.3 mm at cold	0.85 rad BBDC	0.41 rad ATDC	

Injection timing Electrical control  
 Initial injection pressure ---  
 Compressive pressure 2.75 MPa ( 31 kgf/cm<sup>2</sup>) (At engine speed 200 min<sup>-1</sup>)

**Reference data**

Thermostat Initial opening temperature at atmospheric pressure: 82.0°C  
 Temperature at valve lift of 10.0 mm and over: 95.0°C

Painting color Clear, except for cooling fan, electrical part connectors, and labels

**Lubricating oil at delivery** There is no engine oil when engine deliver from Isuzu factory.

Recommended lubrication oil API Grade CD, CE, CF, CF-4 or ACEA Grade B2/B3, E2/E3  
 \*Please refer to "Engine Instruction Manual" for details.

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Model No. AH-6UZ1XYBW-01

Rev. 0

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Dress Level

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No.	Item	Description
1	HOUSING ; FLYWHEEL	SAE J617c #1 short length type
2	FLYWHEEL	SAE J620 14"
3	OIL PAN	Center sump
4	COOLING FAN	Dia 850 mm - Suction - 6 Blade
5	AC GENERATOR	24V - 50A
6	STARTER	24V - 5.5kW
7	FUEL FILTER	With
8	WATER SEDIMENTER	With (Integrated with fuel filter)
9	FUEL FILTER ASM;PRE.	Loose parts (Remote type)
10	OIL FILTER	Spin-on, dual cartridge type (Remote)
11	POWER TAKE OFF	Without

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Model No. AH-6UZ1XYBW-01

Rev. 0

## Loose parts

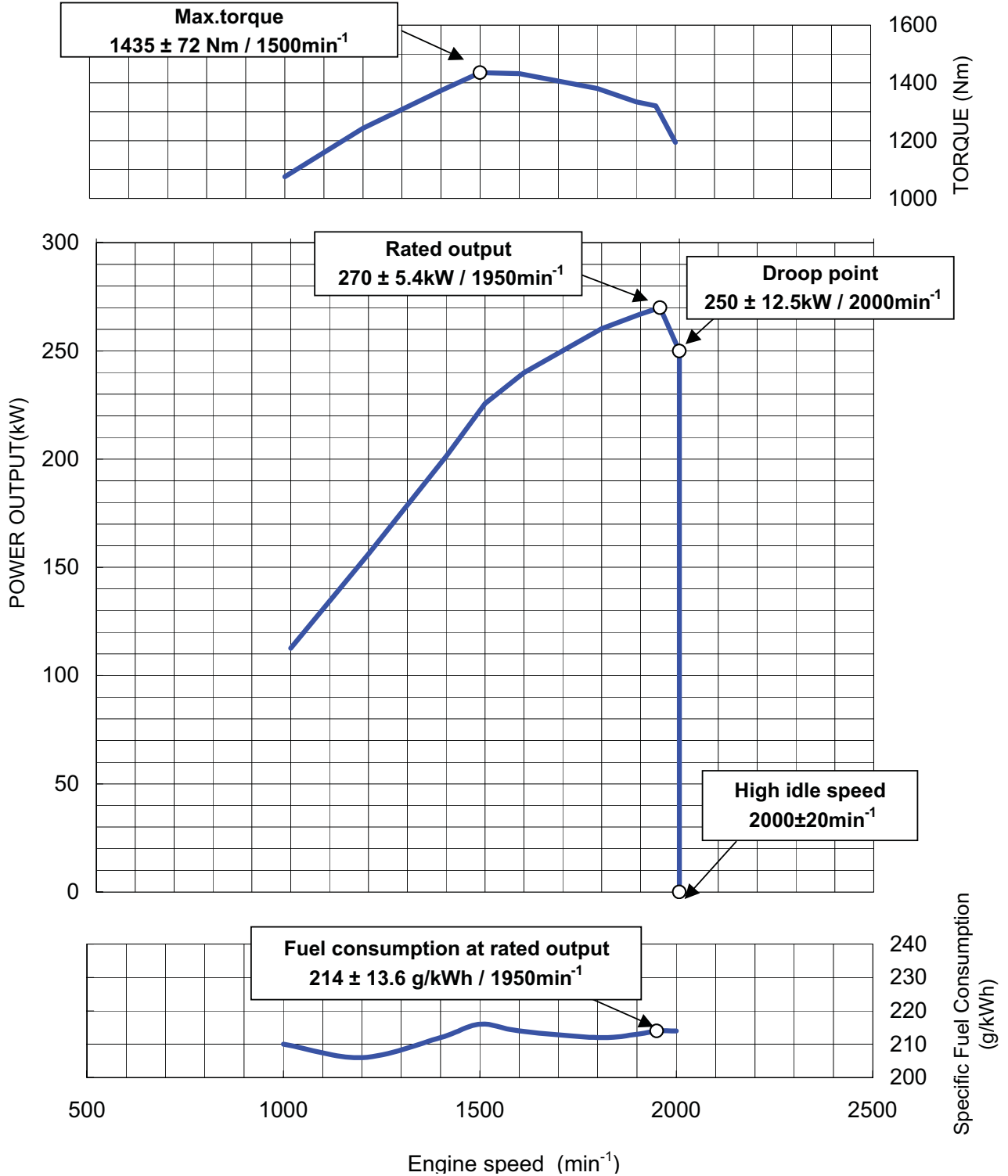
No.	Parts No.	Item	Qty	Remarks
1	812146-8300	SENSOR; Inlet air temp.	1	
2	897217-7780	SENSOR;Barometric press	1	
3	898082-4182	ECM	1	
4	113201-0192	OIL FILTER ASM	1	
5	898075-8551	FILTER;FUEL, PRE	2	
6	109675-0951	BOLT;EYE	4	
7	109630-1110	PACKING;Joint bolt	8	
8	898106-4710	PIPE ASM;PRE FILTER	4	
9	898013-7900	RELAY;MAIN	1	
10	898013-7900	RELAY;STARTER CUT	1	
11	898005-6310	RELAY;STARTER	1	
12	894460-7061	RELAY;GLOW PLUG	1	





**AH-6UZ1XYBW-01(24V)**  
FOR GENERAL POWER

Condition	JIS D0006 / SAE J1349 / ISO15550
Ambient temp.	25 deg.C
Test hour	30Hr
Cooling fan	Without
Air cleaner	With (Intake restriction 3.4kPa)
Exh.silencer	With (Exhaust restriction 13.3kPa)
Generator	With (No load)



### Engine specifications Revision chart

Customer : EXPORT

Engine Model : AH-6UZ1XYBW-01      Application : General power

<b>Rev. No.</b>	<b>IS No.</b>	<b>Date</b>	<b>Page</b>	<b>Item</b>	<b>Previous</b>	<b>Current</b>	<b>Description (Reason of change)</b>
0	IS-08-153-0	22.Sep.08		For confirmation of prototype engine specifications			