

Rev.

0

## ENGINE SPECIFICATIONS

Engine Model	Base Model :	AH-6WG1X (Intercooler turbo)
	Model No. :	AH-6WG1XYBW-01
Customer	EXPORT	
Application	General power	
Drawing No.	E9-1020-032-0	
( 3D Data Code )		

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

ISUZU MOTORS LIMITED  
Powertrain Business Dept.

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## Engine Specifications

Model No. AH-6WG1XYBW-01

Rev. 0

Manufacturer	ISUZU MOTORS LIMITED
Engine Model	Base Model: 6WG1X Intercooler Turbo Model No. AH-6WG1XYBW-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 - 147.0 mm x 154.0 mm
Total piston displacement	15.681 L
Compression ratio	16 to 1
<b>Engine performance</b>	<b>Rating</b>
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	: 397 ± 8 kW / 1800 min-1
Droop point	: Approx. 297kW / 1850 min-1
Maximum Torque	: 2250 ± 113 Nm / 1500 min-1
Fuel consumption at rated.	: 214 ± 13.6 g/kw.h
No load max. speed	: 1850 ± 30 min-1
Low idle speed	: 900 ± 25 min-1
Type of fuel	Diesel fuel only ( JPN:JIS-NO.2, US:ASTM-2D, EU:EN590 )
Engine dry weight	Approx. 1150 kg
Dimensions	L 1774.4 x W 1010.4 x H 1332.7 (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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**Supercharging device**

Supercharging system	With Exhaust turbocharger
Driving system	---
Lubricating system	Full forced pressure feed type (Oil-cooled)
Manufacturer	mitsubishi heavy industries ltd.
Name of type	TD08H型

**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 (Spin-On 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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**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 1016 mm - Suction - 6 Blade

Driving system Belt driven by crankshaft, speed ratio: 0.90

## Water pump

Type of pump Impeller type

Driving system Driven by gear train

## Thermostat

Regulating system Wax-pellet type

Manufacturer Fuji Bellows Co., Ltd.

Water temperature indicating device With engine coolant water temperature sensor

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

**Starting device**

Starting motor  
Manufacturer MITSUBISHI LTD.  
Name of type Reduction type  
Voltage 24 V  
Output 7.0 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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**Allowable inclination angle** 0.61 rad. for all directions viewed from flywheel

**Capacity**

Lubrication oil MAX: approx. 52.0 L MIN: approx. 37.0 L (Oil pan only)  
 Air cleaner ---  
 Injection pump ---  
 Governor ---  
 Cooling water 36 L (Engine only)  
 Others ---

**Maintenance data**

Valve clearance and adjustment	Valve	Valve clearance	Valve timing: open	Valve timing: close
Inlet	0.4 mm at cold	0.37 rad BTDC	0.47 rad ABDC	
Exhaust	0.4 mm at cold	0.92 rad BBDC	0.31 rad ATDC	

Injection timing Electrical control  
 Initial injection pressure ---  
 Compressive pressure 2.94 MPa ( 31 kgf/cm<sup>2</sup>) (At engine speed 200 min<sup>-1</sup>)

**Reference data**

Thermostat Initial opening temperature at atmospheric pressure: 83.0°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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## Dress Level

No.	Item	Description
1	HOUSING ; FLYWHEEL	SAE J617c #1 short length type
2	FLYWHEEL	SAE J620 14"
3	COOLING FAN	Dia 1016 mm - Suction - 6 Blade
4	AC GENERATOR	24V - 50A
5	STARTER	24V - 7.0kW
6	FUEL FILTER	With
7	WATER SEDIMENTER	With (Integrated with fuel filter)
8	FUEL FILTER ASM;PRE.	Loose parts (Remote type)
9	OIL FILTER	Spin-on, dual cartridge type (Remote)
10	POWER TAKE OFF	With

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## Loose parts

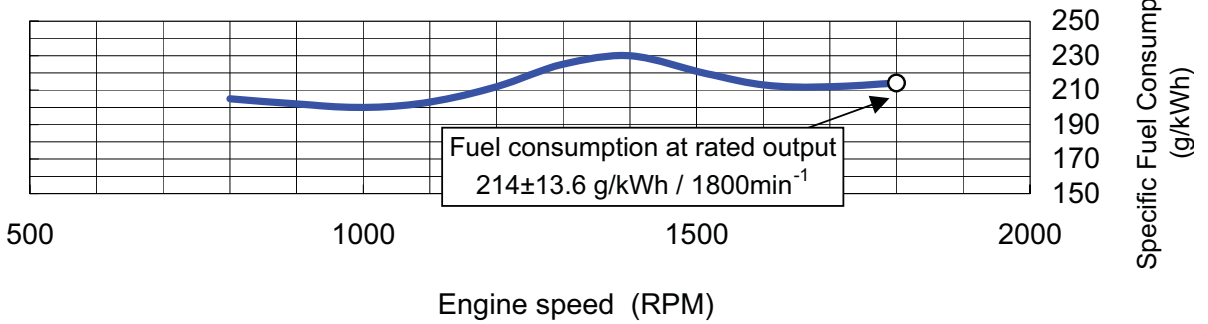
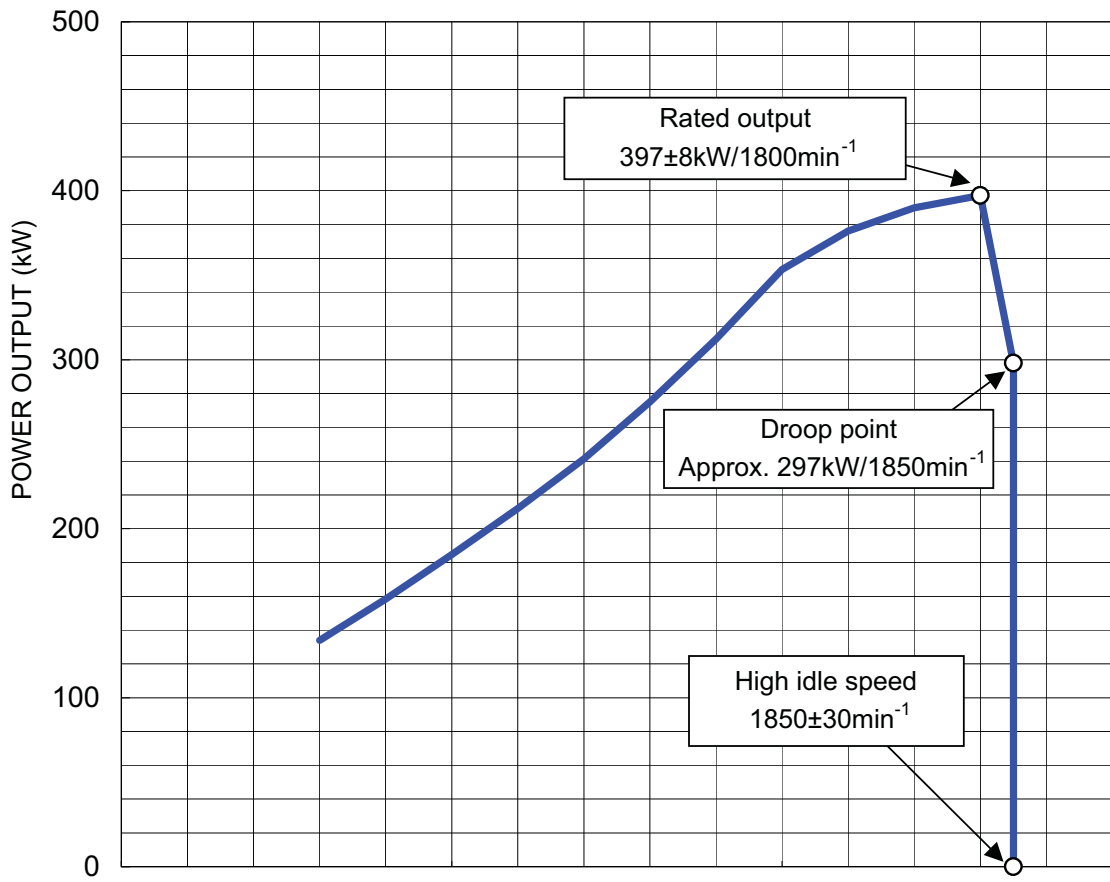
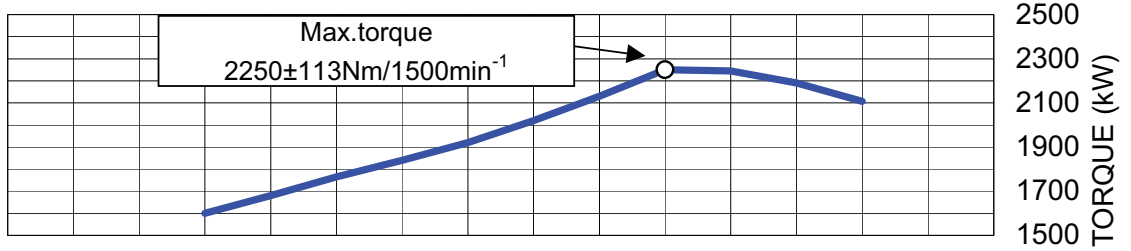
No.	Parts No.	Item	Qty	Remarks
1	812146-8300	SENSOR; Inlet air temp.	1	
2	897217-7780	SENSOR;Barometric press	1	
3	898060-2391	ECM	1	
4	113201-0192	OIL FILTER ASM	1	
5	898075-8551	FILTER;FUEL, PRE	2	
6	109675-0951	BOLT;EYE	4	
7	109630-1110	PACKING;Joint bolt	8	
8	898106-4710	PIPE ASM;PRE FILTER	4	
9	898013-7900	RELAY;MAIN	1	
10	894460-7061	RELAY;GLOW PLUG	1	
11	182553-0391	RELAY;SAFETY	1	
12	114145-1750	Gasket;Turbo exh	1	
13	109400-0720	Nut;Exh duct-turbo	8	
14	109556-0200	Washer;exh duct	4	



**ISUZU**

**AH-6WG1XYBW-01**  
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-6WG1XYBW-01      Application : General power

Rev. No.	IS No.	Date	Page	Item	Previous	Current	Description (Reason of change)
0	IS-08-155-0	22.Sep.08		For confirmation of prototype engine specifications			