

## 6M26D447E200 G-Drive Engine Data Sheet

Speed	Gross Engine Output		
	COP	PRP	ESP
rpm	kWm	kWm	kWm
<b>1500</b>	<b>345</b>	<b>406</b>	<b>447</b>

### Ratings Definitions

	Continuous Power(COP)	Prime Power (PRP)	Standby Power (ESP)
Mean engine load factor	100%	≤70% per 250 h	≤80% per 24 h
Annual working time	Unlimited	Unlimited	≤200 h
Time at full load	Unlimited	≤500 h per year	≤25 h per year
Overload capacity	No	1 h per 12 h (10% overload)	No

- 1) The power ratings are in accordance with ISO 3046.
- 2) Test conditions: 100 kPa, 25 °C air inlet temperature, relative humidity of 30%, with fuel density 0.84 kg/L.
- 3) The engine maybe operated at : up to 1000m and 30 °C without power deration. For sustained operation above these conditions, derate by 3% per 300m, and 2% per 11 °C.
- 4) Power output curves are based on the engine operating with fuel system, water pump and lubricating oil pump; not included are battery charging alternator, fan and optional equipment.

### Engine basic data

Engine model	6M26D447E200	Cylinder number/Valve number	6/24
bore diameter /stroke mm	150×150	Displacement(L)	15.9
Fuel System	Mechanical Pump	Aspiration	Turbocharged and Intercooled
Compression Ratio	15.7	Emission Standard	/
Overall Dimension (Length×Width×Height) (mm)	1846/1221/1551	Engine net weight (kg)	1650
Injection timing ( °CA)	18-19		
Flywheel housing	SAE 1/14	Flywheel	14"
Max. Permissible Fixing Angle ( °)	Longitudinal Inclination	Front /Rear	12.5/12.5
	Cross Inclination	Left/Right	22.5/22.5
	Longitudinal Inclination	Front/Rear	/

Dynamic angle (°)	Cross Inclination	Exhaust pipe side /Intake pipe side	/
Permitted temperature ambient °C	-10-50	Permitted altitude limit (m)	2000
Valve lashes at cold (mm)	0.3±0.03		

## Performance Data

Idle Speed (rpm)	750±30	Over Speed limit (rpm)	1545
Mean Piston Speed (m/s)	7.5	BMEP (MPa)	2.043
Friction Power (kW)	/	Fan Power (kW)	15
<b>Load factor</b>	<b>Power kW</b>	<b>Fuel consum. g/kW.h</b>	<b>Fuel consum. L/h</b>
10%	35	197	8.21
25%	87.5	198	20.63
50%	175	195.7	40.77
75%	262.5	194.8	60.88
85%	297.5	196.2	69.49
100%	350	198.2	82.58
110%	385	202.2	92.68

## Air intake system

Intake air temperature rise (°C)	Permitted difference between turbocharger inlet temperature and ambient temperature (this parameter impacts emission ,LAT and altitude capability)	5
Intake air resistance (kPa)	Clean filter	≤3
	Dirty filter	≤5
Air filter mass flow (kg/h)		/
Air mass flow (kg/h)	Rated Power	2454
	Standby Power	2576
Clear efficiency of air filter (%)		≥99.5
Recommended Min. diameter of intake pipe (mm)		140

## Inter cooling system

Intercooler heat dissipating capacity (KJ/S)	Rated Power	89.5
	Standby Power	105.5
Intercooler efficiency (%)	Rated Power	≥85
	Standby Power	≥85
Max. intake temperature (°C)		55

Max. difference between intake temperature and ambient temperature (°C)	30
Permitted max. intake pressure drop of intercooler (kPa)	15
Recommended intercooler radiator cooling area (m <sup>2</sup> )	68.9

## Exhaust system

Max. exhaust back pressure (kPa)	7.5	
Max. exhaust temperature (°C)	Before turbocharger	750
	After turbocharger	550
Recommended muffler mass flow/volume (kg/h)	/	
Exhaust-gas mass flow (kg/h)	Rated Power	2535
	Standby Power	2666
Recommended Min. diameter of exhaust pipe (mm)	200	
Max. bending moment of turbocharged flange (N•m)	10	

## Lubrication system

Volume of oil pan (L)	50	
Oil pressure in normal condition (kPa)	Idle speed	≥200
	Rated Power	450~650
Alarm for low & high oil pressure (kPa)	200/1000	
Temperature range in main oil passage at rated working condition (°C)	85~105	
max. oil temperature (°C)	/	
Max. oil pressure while engine starting (kPa)	1000	
Opening pressure of main oil passage pressure limiting valve (kPa)	550~600	
Max. Oil flow (L/min)	≥190	
Oil consumption	≤0.3	

## Noise and Emission

Emission standard	Off-road stageII	
Exhaust smoke (FSN)	Rated Power	≤1.5
	Standby Power	/
Diesel engine noise dB(A)	103.6	

## Fuel system

Injection pump type	Mechanical Pump
Governor	Electric governor
Steady speed governing factor	≤3%

Max supply fuel restriction at rated power condition (kPa)		13
Return restriction in pipe (kPa)		15
Max. supply fuel temperature at rated power condition (°C)		45
Max. flow of fuel supply (kg/h)	Rated Power	79.67
	Standby Power	88.7
Min. pressure of fuel pump (kPa)		35
Min. Ventilation rate of fuel tank (L/h)		/
Recommended diameter of inlet pipe (mm)		12
Recommended diameter of return pipe (mm)		12

## Electrical system

Electrical system voltage (V)		24
Motor power/ working voltage (kW/V)		8.5/24
Battery charging Alternator/ working voltage (kW/V)		1.54/28
Permitted max. electric resistance of motor control lines( $\Omega$ )		0.002
Recommended Min. conductor cross-sectional area( $\text{mm}^2$ )		70
The lowest cold starting temperature (°C)	No aided starting device	0
	Aided starting device	-10

## Cooling system

Water pump Transmission ratio		2
Min. coolant temperature of engine working (°C)		50
Min. water fill rate (L/min)		11
Max. initial fill time (min)		8
Recommended Min diameter of outside water pipe(mm)		45
Min. pressure at water pump inlet at No or only a part of degassing Device (kPa)		50
Min. pressure at water pump inlet at Complete degassing device (kPa)		0
Max. deaeration time(min)		25
Min. expansion tank volume (% total cooling system capacity)		/
Min expansion space (% total cooling system capacity)		/
Coolant capacity of engine (L)		79

Coolant capacity of radiator (L)	/
High temperature of alarm (°C)	95
Thermostat opening temp./ full open temp. (°C)	77/87
Min. permitted pressure in cooling system (kPa)	50
Max. permitted external resistance (at rated speed) (kPa)	50

### Heat balance test data (environment temperature 24.8°C)

Pressure of water in/ water out (kPa / kPa)	Rated Power	-37.1/83.7
	Standby Power	-39.0/79.7
Coolant mass flow (m <sup>3</sup> /h)	Rated Power	38.9
	Standby Power	38.3
Temperature of water in/ water out (°C/°C)	Rated Power	86.2/90.3
	Standby Power	85.7/90.3
Temperature of intake air : before/after intercooler (°C/°C)	Rated Power	185.0/54.3
	Standby Power	205.0/58.2
Pressure of intake air :before /after intercooler (kPa / kPa)	Rated Power	216.7/211.9
	Standby Power	240.6/233.8
Heat be taken away by Coolant (kJ/s)	Rated Power	171.5
	Standby Power	189.2
Heat be taken away by intercooler (kJ/s)	Rated Power	89.5
	Standby Power	105.5
Heat be taken away by exhaust gas (kJ/s)	Rated Power	320.4
	Standby Power	349.7
Gross Heat of Engine (kJ/s) Rated Power / Standby Power		1005/1118

### Mounting system

Inertia of complete engine (kg•m <sup>2</sup> )		/
		/
		/
Inertia of flywheel (kg•m <sup>2</sup> )		4.68
Inertia of crankshaft (including crankshaft gear) (kg•m <sup>2</sup> )		1.71
Centroid position mm	X	/
	Y	/
	Z	/
Permitted static bending moment at flywheel housing flange face		/

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