Weichai America Corp.

WP06GNA 6.75 L

	Units		Specificaiton	
	Std	Metric	1800	
Basic Data				
Type	N/A		In-Line 4 cycle	
Number of cylinders	N/A		6	
Aspiration	N/A		Naturally Aspirated	
Bore	in	mm	4.1	105
Stroke	in	mm	5.1	130
Displacement	in^3	L	411.9	6.75
Lambda	N/A		1.0	
Compression Ratio	N/A		9.75	
Mean Piston Speed	ft/min	m/s	1535.4	7.8
Gross Standby Power Rating[1,2,3] Per ISO 3046 at the Flywheel				
NG	Hp	kW	111.1	82.8
LP	Hp	kW	119.1	88.8
MEP (@ rated Load on NG)	psi	bar	120.3	8.2
MEP (@ rated Load on LP)	psi	bar	128.9	8.8
Thermal Balance				
Total Fuel	Ft^3/hr	kg/hr	935.3	19
Heat to Work	btu/min	kW	4549.5	80
Heat rejected to Cooling water at rated Load	btu/min	kW	699.5	12.3
Heat Rejection per CAC	btu/min	kW	/	/
Heat Rejected to Exhaust (LHV TO 77oF)	btu/min	kW	4179.9	73.5
Enigne Radiated Heat	btu/min	kW	779.1	13.7
Gross Prime Power Rating[1,2,3] Per ISO 3046 at the Flywheel				
NG	Hp	kW	107.8	80.4
LP	Hp	kW	117.6	87.7
MEP (@ rated Load on NG)	psi	bar	116.7	7.9
MEP (@ rated Load on LP)	psi	bar	127.3	8.7
Thermal Balance				
Total Fuel	Ft^3/hr	kg/hr	831.9	16.9
Heat to Work	btu/min	kW	3980.8	70
Heat rejected to Cooling water at rated Load	btu/min	kW	4185.6	73.6
Heat Rejection per CAC	btu/min	kW	/	/
Heat Rejected to Exhaust (LHV TO 77oF)	btu/min	kW	3633.9	63.9
Engine Radiated Heat	btu/min	kW	688.1	12.1
Gross Continuous Power Rating[1,2,3] Per ISO 3046 at the Flywheel				
NG	Hp	kW	92.9	68
LP	Hp	kW	101.4	75
MEP (@ rated Load on NG)	psi	bar	99.2	6.75
MEP (@ rated Load on LP)	psi	bar	108.2	7.36
Rotation Viewed from Flywheel	N/A		Counter Clockwise	
Firing Order	N/A		1-5-3-6-2-4	
Weight and Power Output				
Dry Weight				
Fan to Flywheel	lb	kg	1376.7	625
Rad to Flywheel	lb	kg	1652.0	750
Maximum Allowable Bending Moment at Rear of Block	lb ft	N m	5457.5	7400
Moment of Inertia About Roll Axis	lb ft^2	kg m^2	17.7	3.62
Flywheel housing	N/A		SAE No.3	
Flywheel	N/A		No.10	
Number of Flywheel Teeth	N/A		145	
Exhaust System				
Type			Air Cooled Manifold	
Maximum allowable Back pressure	inH2O	kPa	68.3	17
Standard Catalyst Back pressure	inH2O	kPa	40.2	10
Exhaust Outlet Pipe Size	in	mm	2.13→2	54→50.5
Maximum Turbine Inlet Temperature	℉	℃	1490.0	810
Exhaust Flow at Rated Power	lb/hr	kg/hr	618.8	326
Air Induction System				
Maximum allowable Intake Air Restriction with Air Cleaner				
Clean	inH2O	kPa	8.0	2
Dirty	inH2O	kPa	14.9	3.7
Combustion Air required (entire engine)	lb/hr	kg/hr	676.2	307
Combustion Air required (entire engine)	cfm	m^3/min	140.1	3.97
Charge Air Cooler				
Compressor Outlet Temperature	℉	℃	/	/
Compressor Flow Rate per CAC (total flow is 2x this number)	lb/hr	kg/hr	/	/

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CAC Rise over Ambient (Charge)			/	/
Specified	℉	℃	/	/
Acutal	℉	℃	/	/
Max pressure loss across the CAC	inH2O	kPa	48.2	12
Maximum Intake Air Temperature (IAT)	℉	℃	122.0	50
ECU IAT Warning	℉	℃	169.9	76.6
ECU IAT Shutdown	℉	℃	180.0	82.2
Cooling System				
Coolant Capacity				
Engine only	gal	L	30.3	8
Engine with Radiator	gal	L	75.7	20
Engine Coolant Flow	gal/min	L/min	643.5	170
Water Pump Speed	RPM		2700	
Standard Thermostat Range				
Cracking Temperature	℉	℃	167.0	75
Full Open Temperature	℉	℃	194.0	90
Maximum Output Pressure of Engine Water Pump	psi	bar		
Maximum Allowable Pressure Cap	psi	bar	13.2	0.9
Maximum Allowable Top Tank Temperature	℉	℃	203.0	95
ECU Warning	℉	℃	205.0	96.1
ECU Shutdown	℉	℃	212.0	100
Fan Power	HP	kW	10.9	8.0
Fan Diameter, including blades	in	mm	23.6	600
Fan Speed	RPM		2520	
Electrical System				
Minimum Recommended Battery Capacity	AH		150	
Cold Cranking Current				
Engine only	CCA		750	
Engine with Drive train	CCA		750	
Maximum Allowable Resistance of Starting Circuit	Ohms		0.002	
Starting Motor Power	HP	kW	11.6	8.5
Battery Charging Alternator				
Voltage	Volts		12	
Current	Amps		90	
Coil primary Resistance	Ohms		0.59Ω ± 10%	
Spark Plug p/n			TORCH/R 5498-3	
Spark plug gap	mm		0.3-0.35	
Lubrication System				
Oil Specification	SAE 15W-40 Low Ash Gas engine oil (.25-.5% by wt), API CD/CF or higher			
Oil Pressure				
Idle				
Min	Psi	Bar	11.8	0.8
Max	Psi	Bar	17.6	1.2
Rated Speed				
Min	Psi	Bar	44.1	3
Max	Psi	Bar	97.0	6.6
Maximum Allowable Oil Temperature	℉	℃	239.0	115
Engine Oil Capacity				
Min	Qts	L	14.8	14
Max	Qts	L	28.5	27
Oil Filter Capacity	Qts	L	2.1	2
ECU Oil Pressure Warning	psi		8	
ECU Oil Pressure Shut Down	psi		10	
Fuel System				
Fuel Consumption				
NG	Ft^3/hr	kg/hr	900.8	18.3
LP	Ft^3/hr	kg/hr	351.4	20.1
Maximum EPR Rated Pressure	psi	kPa	1.0	6.9
Maximum Running pressure to Electronic Pressure Regulator (EPR)	inH2O	kPa	10.8	2.7
Minimum Running pressure to EPR	inH2O	kPa	6.8	1.7
Minimum Gas Supply Pipe Size	1-1/4" NPT			
Maximum EPR Rated Pressure	psi	kPa	1.0	6.90
Maximum Running Pressure to EPR	inH2O	kPa	10.8	2.70
Minimum Running Pressure to EPR	inH2O	kPa	6.8	1.70
Minimum LPG Supply Pipe Size[4]	1/4" NPT			

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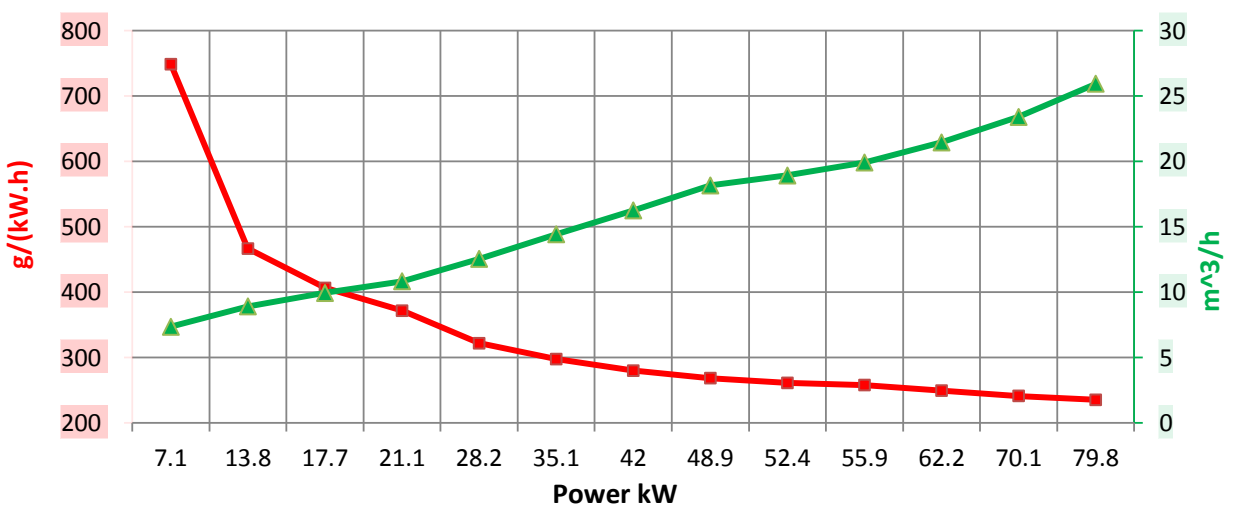
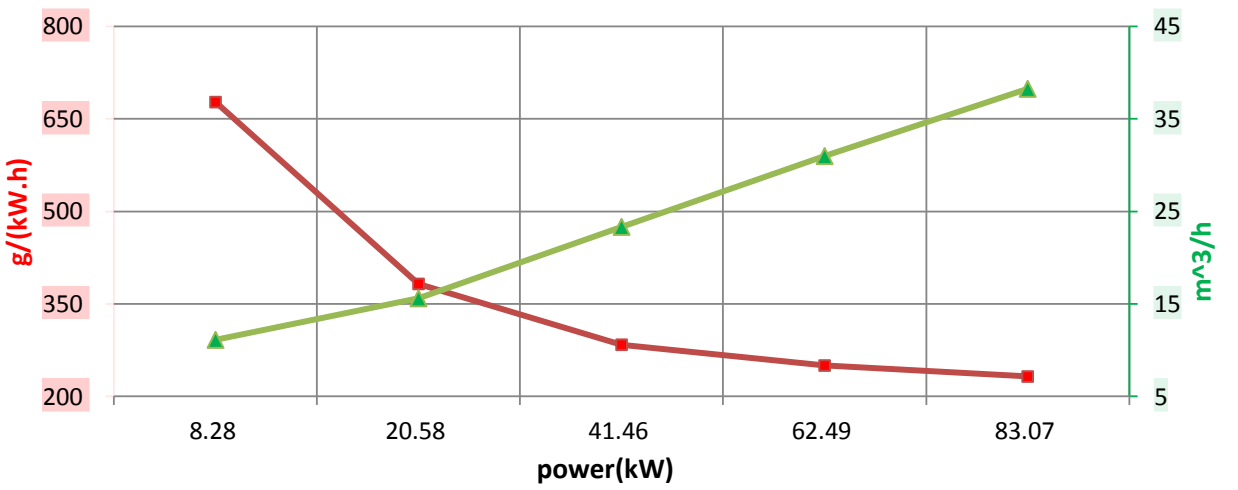
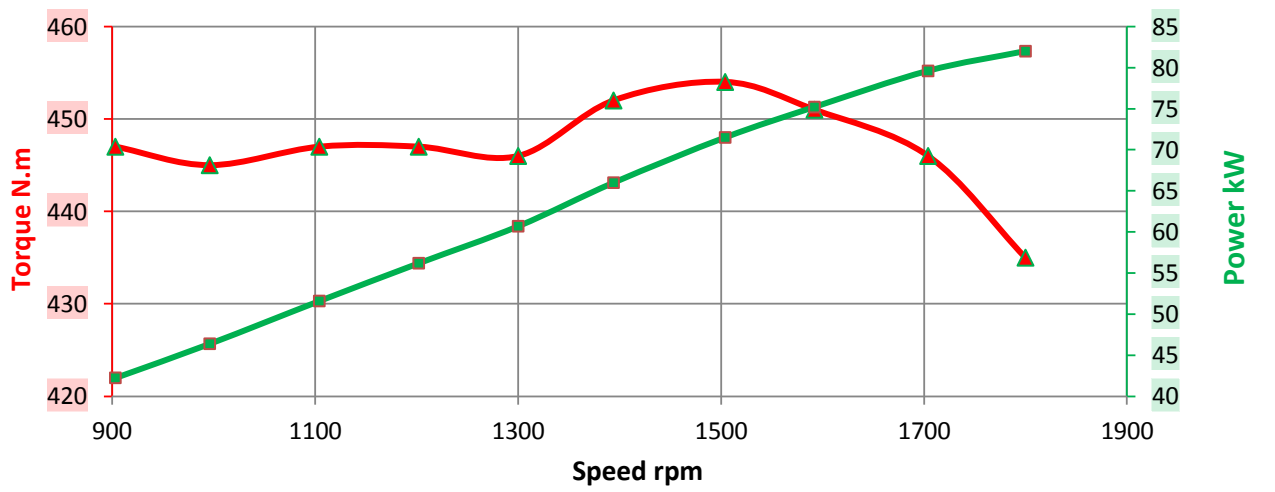
Fuel Consumption Curve @ 1800 RPM (Natural Gas)



Fuel Consumption Curve @ 1800 RPM (Propane)



Power Curve vs. Speed (Natural Gas)



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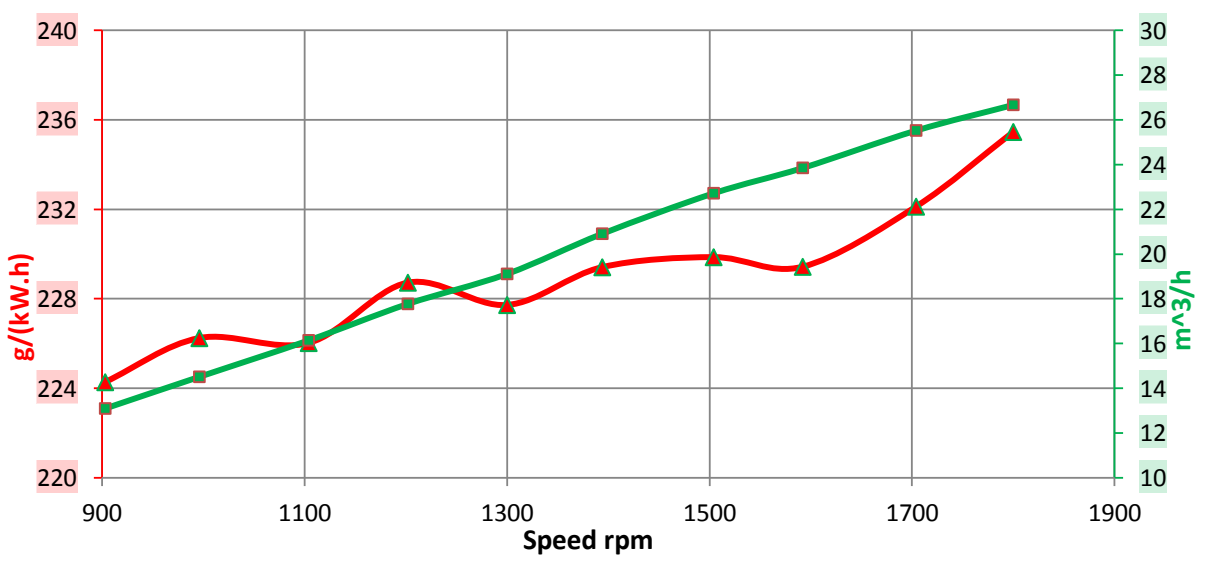

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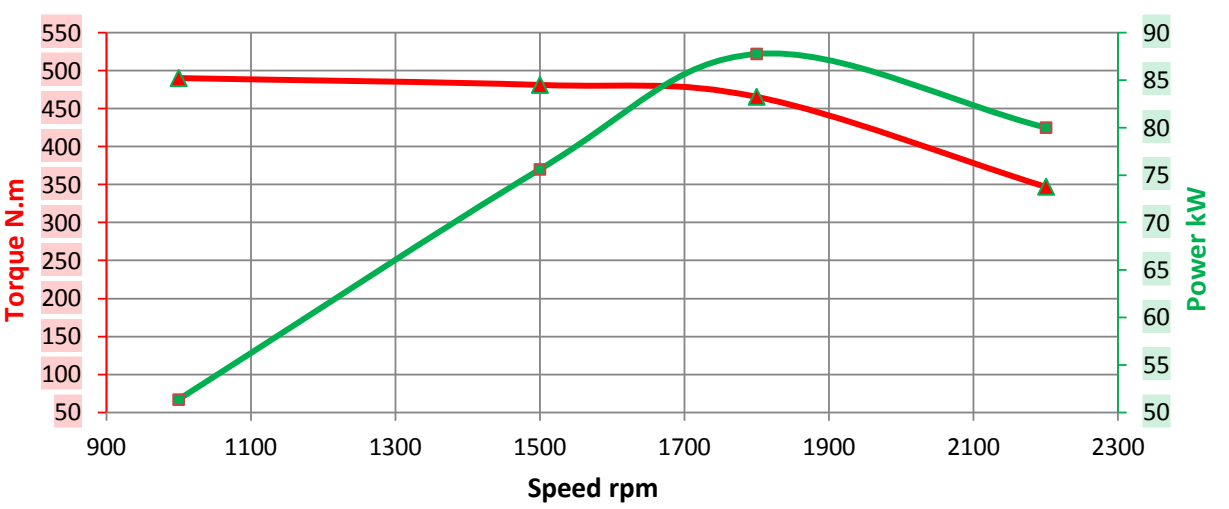
Std	Metric	1800

Power Curve vs. Speed (Propane)



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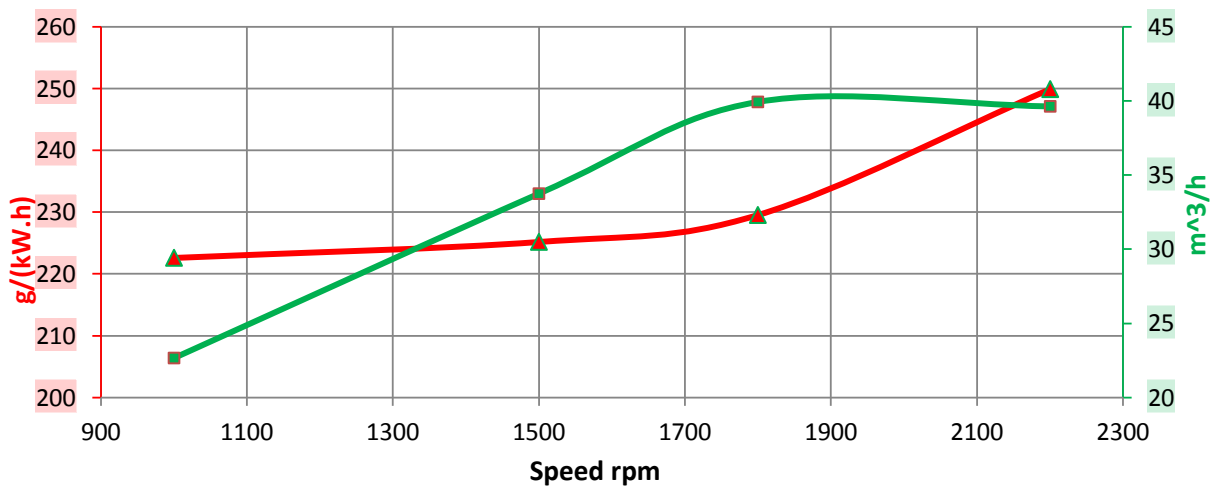

[1]Standby and overload ratings based on ISO3046.

[2] All ratings are gross flywheel horsepower corrected to 77°F at an altitude of 328 feet with no cooling fan or alternator losses using heating value for NG of 1025 BTU/SCF (HHV) and for propane of 2490BTU/SCF (HHV).

[3] Production tolerances in engines and installed components can account for power variations of +/- 5%. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations.

[4] The preceeding pipe sizes are only suggestions and piping sizes may vary with temperature, pressure, distance from supply and application of local codes. Gas must be available at adequate volume and pressure for engine at the EPR.