



ENERGY

14.6L

56100022
Rev: 1
Units
Std Metric

14.6L			
1500		1800	

General Engine Data							
Type	N/A		V-type 4 cycle				
Number of cylinders	N/A		8				
Aspiration	N/A		Turbo Charge Air Cooled				
Bore	in	mm	5.04	128	5.04	128	
Stroke	in	mm	5.59	142	5.59	142	
Displacement	in^3	L	892	14.6	892	14.6	
Compression Ratio	N/A		10.5				
Mean Piston Speed	ft/min	m/s	1398	7.1	1677	8.52	
Gross Standby Power Rating^{1,2,3} Per ISO 3046 at the Flywheel							
NG	Hp	kW	369	275	459	342	
LP	Hp	kW	229	171	319	238	
MEP (@ rated Load on NG)	psi	bar	218	15.0	226	15.6	
MEP (@ rated Load on LP)	psi	bar	136	9.4	157	10.9	
Gross Prime Power Rating^{1,2,3} Per ISO 3046 at the Flywheel							
NG	Hp	kW	332	248	390	291	
LP	Hp	kW	206	154	271	202	
MEP (@ rated Load on NG)	psi	bar	196	13.5	192	13.3	
MEP (@ rated Load on LP)	psi	bar	122	8.4	134	9.2	
RPM Range (Min-Max)	RPM		1500-1800				
Rotation Viewed from Flywheel	N/A		Counter Clockwise				
Firing Order	N/A		1-5-7-2-6-3-4-8-1				
Dry Weight							
Fan to Flywheel	lb	kg	3150	1429	3150	1429	
Rad to Flywheel	lb	kg	4450	2018	4450	2018	
Wet Weight							
Fan to Flywheel	lb	kg	3291	1475	3291	1475	
Rad to Flywheel	lb	kg	4757	2155	4757	2155	
CG							
Distance from FW housing	in	mm	18	449	18	449	
Distance above center of crankshaft	in	mm	6	159	6	159	
Engine Mounting							
Maximum Allowable Bending Moment at Rear of Block	lb ft	N m	4425	6000	4425	6000	
Moment of Inertia About Roll Axis	lb ft^2	kg m^2					
Flywheel housing	N/A		SAE No.1				
Flywheel	N/A		No. 14				
Number of Flywheel Teeth	N/A		160				
Exhaust System							
Type	Water Cooled Manifold						
Maximum allowable Back pressure	in HG	kPa	3	10.2	3	10.2	
Standard Catalyst Back pressure	in HG	kPa	1.5	5.1	1.5	5.1	
Exhaust Outlet Pipe Size							
Maximum Turbine Inlet Temperature	F	C	1382	750	1382	750	
Exhaust Flow at Rated Power	lb/hr	kg/hr	2302	1044	2782	1301	
Exhaust Flow at Rated Power @1350F	cfm	m^3/min	1727.3	48.9	1895	53.6	
Air Induction System							
Maximum allowable Intake Air Restriction with Air Cleaner							
Clean	inH2O	kPa	5	1.24	5	1.24	
Dirty	inH2O	kPa	15	3.74	15	3.74	
Combustion Air required (entire engine)	lb/hr	kg/hr	2172	985	2625	1227	
Combustion Air required (entire engine)	cfm	m^3/min	490	14	687	19	



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Electrical System							
Minimum Recommended Battery Capacity	AH		200				
Cold Cranking Current							
Engine only	CCA		1000				
Engine with Drive train	CCA		1000				
Maximum Allowable Resistance of Starting Circuit	Ohms		0.002				
Starting Motor Power	HP	kW	9.4	7	9.4	7	
Battery Charging Alternator							
Voltage	Volts		24				
Current	Amps		45				
Coil primary Resistance	Ohms		0.59Ω ± 10%				
Spark Plug p/n	IFR7F-4D						
Spark plug gap	inches	mm	.015" (-0/+0.008")		.38mm (-0/+0.2mm)		
Cooling System							
Coolant Capacity							
Engine only	gal	L	9.5	43.2	9.5	43.2	
Engine with Radiator	gal	L	28	127	28	127	
Engine Coolant Flow	gal/min	L/min	151	570	180	680	
Water Pump Speed	RPM			2547		3056	
Heat rejected to Cooling water at rated Load	btu/min	kcal/sec	14233	59.8	16189	68	
Maximum Intake Air Temperature (IAT)	F	C	155	68	155	68	
ECU IAT Warning	F	C	140	60	140	60	
ECU IAT Shutdown	F	C	155	69	155	69	
Maximum Coolant Friction Head External to the engine	psi	bar	5.8	0.4	5.8	0.4	
Maximum Air Restriction Across a Radiator	inH2O	mmH2O	0.5	12.8	0.5	12.8	
Standard Thermostat Range							
Cracking Temperature	F	C	160	71	160	71	
Full Open Temperature	F	C	185	85	185	85	
Maximum Output Pressure of Engine Water Pump							
Maximum Allowable Pressure Cap	psi	bar	14.7	1	14.7	1	
Ambient Clearance Open Genset (water) (Air-to-Boil)							
Specified	F	C	142	61	142	61	
Actual	F	C			147	64	
Ambient Clearance (Oil)							
Specified	F	C	142	61	142	61	
Actual	F	C			150	66	
CAC Rise over Ambient (Charge)							
Specified	F	C	15	9	15	9	
Actual	F	C			13	8	
Maximum Allowable Top Tank Temperature	F	C	230	110	230	110	
ECU Warning	F	C	220	104	220	104	
ECU Shutdown	F	C	230	110	230	110	
Fan Power	HP	kW	13	9.7	22	16.4	
Fan Diameter, including blades	in	mm	45	1143	45	1143	
Fan Speed	RPM			1200		1440	
Cooling Fan Air Flow @ 1" Static H2O Pressure and 125F @ radiator	CFM	m ³ /min	25,714	728	30,000	849	
Charge Air Cooler							
Compressor Outlet Temperature	F	C	272	133	285	163	
Compressor Flow Rate per CAC	lb/hr	kg/hr	1151	522	1391	650	
Heat Rejection per CAC	btu/min	kW	TBD		2669	46.9	



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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	13	0.9	13	0.9	
Max	Psi	Bar	43.5	3	43.5	3	
Rated Speed							
Min	Psi	Bar	43.5	3	43.5	3	
Max	Psi	Bar	94.5	6.5	94.5	6.5	
Maximum Allowable Oil Temperature	F	C	250	121	250	121	
Engine Oil Capacity							
Min	Qts	L	26.5	25	26.5	25	
Max	Qts	L	32.75	31	32.75	31	
Oil Filter Capacity	Qts	L	7.5	7.1	7.5	7.1	
ECU Oil Pressure Warning ⁵	psi		30				
ECU Oil Pressure Shut Down ⁵	psi		25				
Fuel System							
Fuel Consumption ⁶							
NG	Ft ³ /hr	kg/hr	2918	59	3648	74	
LP	Ft ³ /hr	kg/hr	782	42	1087	58	
Maximum EPR Rated Pressure	psi	kPa	1.0	6.9	1.0	6.9	
Maximum Running pressure to Electronic Pressure Regulator (EPR)	inH2O	kPa	11.0	2.7	11.0	2.7	
Minimum Running pressure to EPR	inH2O	kPa	7.0	1.7	7.0	1.7	
Minimum Gas Supply Pipe Size	2 x 1-1/4" NPT						
Maximum EPR Rated Pressure	psi	kPa	1.0	6.9	1.0	6.9	
Maximum Running Pressure to EPR	inH2O	kPa	11.0	2.7	11.0	2.7	
Minimum Running Pressure to EPR	inH2O	kPa	7.0	1.7	7.0	1.7	
Minimum LPG Supply Pipe Size ⁴	2 x 1-1/4" NPT						

¹Standby and overload ratings based on ISO3046.
² All ratings are gross flywheel horsepower corrected to 77°F at an altitude of 328feet with no cooling fan or alternator losses using heating value for NG of 1015 BTU/SCF.
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 preceding 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.
⁵ >1400RPM
⁶ See PSI Energy Technical Spec. 56100019 - Fuel Specification. Gas properties for fuel consumption data: NG: Density =0.717 kg/m3, LHV = 927 BTU/scf; Propane: Density = 1.882 kg/m3, LHV = 2316 BTU/scf