



# 14.6LHO

	Rev: A		14.6L HO			
	Units		1500		1800	
	Std	Metric				
<b>General Engine Data</b>						
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
<b>Gross Standby Power Rating<sup>1,2,3</sup> Per ISO 3046 at the Flywheel</b>						
NG	Hp	kW	339	253	459	342
LP	Hp	kW	229	171	253	189
MEP (@ rated Load on NG)	psi	bar	200.8	13.8	226.2	15.6
MEP (@ rated Load on LP)	psi	bar	135.7	9.4	125.0	8.6
<b>Gross Prime Power Rating<sup>1,2,3</sup> Per ISO 3046 at the Flywheel</b>						
NG	Hp	kW	N/A	N/A	N/A	N/A
LP	Hp	kW	N/A	N/A	N/A	N/A
MEP (@ rated Load on NG)	psi	bar	N/A	N/A	N/A	N/A
MEP (@ rated Load on LP)	psi	bar	N/A	N/A	N/A	N/A
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			
<b>Dry Weight</b>						
Fan to Flywheel	lb	kg	3150	1429	3150	1429
Rad to Flywheel	lb	kg	4450	2018	4450	2018
<b>Wet Weight</b>						
Fan to Flywheel	lb	kg	3291	1475	3291	1475
Rad to Flywheel	lb	kg	4757	2155	4757	2155
<b>CG</b>						
Distance from FW housing	in	mm	18	449	18	449
Distance above center of crankshaft	in	mm	6	159	6	159
<b>Engine Mounting</b>						
Maximum Allowable Bending Moment at Rear of Block	lb ft	N m				
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			
<b>Exhaust System</b>						
Type			Water Cooled Manifold			
Maximum allowable Back pressure	in HG	kPa	3.0	10.2	3.0	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	2094	950	3172	1301
Exhaust Flow at Rated Power @1350F	cfm	m^3/min	1596	45	2521	71.3
<b>Air Induction System</b>						
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	lb/hr	kg/hr	1975	896	2993	1227
Combustion Air required	cfm	m^3/min	502	14	687	19



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<b>Electrical System</b>						
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	7.0	9.4	7.0
Battery Charging Alternator						
Voltage	Volts		24			
Current	Amps		45			
Coil primary Resistance	Ohms		0.590 ± 10%			
Spark Plug p/n			IFR7F-4D			
Spark plug gap	inches	mm	.015" (-0/+ .008")		.38mm (-0/+ .2mm)	
<b>Cooling System</b>						
Coolant Capacity						
Engine only	gal	L	9.5	43.2	9.5	43.2
Engine with Radiator	gal	L	28.0	127.3	28.0	127.3
Engine Coolant Flow	gal/min	L/min	150.6	570.0	179.6	680.0
Water Pump Speed	RPM		2547		3056	
Heat rejected to Cooling water at rated Load	btu/min	kcal/sec	13094	55	18456	77.52
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	69.1011	155	69.1011
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 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
Acutal	F	C			147	64
Ambient Clearance (Oil)						
Specified	F	C	142	61	142	61
Acutal	F	C			150	66
CAC Rise over Ambient (Charge)						
Specified	F	C	15	9	15	9
Acutal	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	9.6941	22	16.4054
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 <sup>3</sup> /min	25,714	728	30,000	849
Charge Air Cooler						
Compressor Outlet Temperature	F	C	250	121	285	163
Compressor Flow Rate	lb/hr	kg/hr	2094	950	3172	1301
Heat Rejection per CAC	btu/min	kW	TBD		2669	47



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Rev:	A
<b>Units</b>	
<b>Std</b>	<b>Metric</b>

<b>Lubrication System</b>			<b>14.6L HO</b>			
			<b>1500</b>		<b>1800</b>	

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 <sup>5</sup>	psi		30			
ECU Oil Pressure Shut Down <sup>5</sup>	psi		25			

<b>Fuel System</b>						
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Fuel Consumption <sup>6</sup>						
NG	Ft <sup>3</sup> /hr	kg/hr	2485	56	3172	72
LP	Ft <sup>3</sup> /hr	kg/hr	780	42	926	49
Maximum EPR Rated Pressure	psi	kPa	1	7	1	7
Maximum Running pressure to Electronic Pressure Regulator (EPR)	inH2O	kPa	11	3	11	3
Minimum Running pressure to EPR	inH2O	kPa	7	2	7	2
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 <sup>4</sup>			2 x 1-1/4" NPT			

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.

<sup>1</sup> Standby and overload ratings based on ISO3046.  
<sup>2</sup> 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.  
<sup>3</sup> 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.  
<sup>4</sup> 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.  
<sup>5</sup> >1400RPM  
<sup>6</sup> See NGE Technical Spec. 56300002 - Fuel Specification