8.8L Naturally Aspirated Stationary

EMERGENCY "STANDBY"

Date:	10/28/2014
Rev:	C

		Units		8.8L NA			
		Std	**Metric**	**1500**		**1800**	
General Engine Data							
	Type	N/A		PSI V-Type 4 Cycle			
	Number of cylinders	N/A		8			
	Aspiration	N/A		Naturally Aspirated			
	Bore	in	mm	4.35	110.5	4.35	110.5
	Stroke	in	mm	4.5	114.3	4.5	114.3
	Displacement	in^3	L	535	8.8	535	8.8
	Compression Ratio	N/A		10.1:1			
	RPM Range (Min-Max)	RPM		1500-1800			
	Rotation Viewed from Flywheel	N/A		Counter Clockwise			
	Firing Order	N/A		1-8-7-2-6-5-4-3			
	Dry Weight (long Block)	lb	kg	730	307	730	307
Gross Standby Power Rating[1,2,3] Per ISO 3046 at the Flywheel				**HP**	**KW**	**HP**	**KW**
	LP			154.17	114.96	185.39	138.25
	Standby Rating Average Load Factor - LP			126.41	94.26	152.02	113.36
	NG			135.60	101.11	162.72	121.34
	Standby Rating Average Load Factor - NG			111.19	82.91	133.43	99.50
Please ask a PSI sales representative for information regarding prime power operation							
Exhaust System							
	Type			Air Cooled Manifold			
	Emergency Standby Rating Catalyst Configuration for US Certified Product			Dual Substrate		Dual Substrate	
	Maximum allowable Back pressure	in HG	kPa	3	10.2	3	10.2
	Exhaust Volumetric Flow at Rated Power @ 1350 F	cfm	m^3/min	662.4	18.76	803.9	22.76
Air Induction System							
	Maximum allowable Intake Air Restriction with Air Cleaner						
	Clean	inH2O	kPa	3	1.49	3	1.49
	Dirty	inH2O	kPa	13	3.24	13	3.24
	Combustion Air required (volume)	cfm	m^3/min	205.1	5.81	248.9	7.05
Cooling System							
	Coolant Capacity						
	Engine only	qts	L	14.5	13.7	14.5	13.7
	Heat rejected to Cooling water at rated Load	btu/min	kcal/sec	2466	10.36	4184	17.58
	Cracking Temperature	F	C	160	71	160	71
	Full Open Temperature	F	C	185	85	185	85
Lubrication System							
	Oil Specification			SAE 5W-30 API Rating of SM or Newer			
	Maximum Allowable Oil Temperature	F	C	250	121	250	121
	Engine Oil Capacity						
	Min	Qts	L	8	7.57	8	7.57
	Max	Qts	L	8	7.57	8	7.57
Fuel System							
	Fuel Consumption @ Rated Load						
	NG	lb/hr	kg/hr	49.8	22.58	62	28.12
	LP	lb/hr	kg/hr	52.8	23.94	65.5	29.71
	Maximum EPR Rated Pressure	psi	kPa	1.0	6.9	1.0	6.9
	Recommended Maximum Running pressure to Electronic Pressure Regulator (EPR)	inH2O	kPa	11.0	2.7	11.0	2.7
	Recommended Minimum Running pressure to EPR	inH2O	kPa	7.0	1.7	7.0	1.7
	Minimum NG Supply Pipe Size[4]			1-1/4" NPT			
	Minimum LPG Supply Pipe Size[4]			3/4"			

[1] Standby and overload ratings based on ISO 3046. See PSI technical standard 3630000A for additional duty cycle and engine rating information

[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 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.

For information not listed in this document, please contact you PSI sales representative

8.8L Naturally Aspirated Stationary

NON-EMERGENCY "PRIME"

Date:	10/28/2014
Rev:	C

		Units		8.8L NA			
		Std	**Metric**	**1500**		**1800**	
General Engine Data							
	Type	N/A		PSI V-Type 4 Cycle			
	Number of cylinders	N/A		8			
	Aspiration	N/A		Naturally Aspirated			
	Bore	in	mm	4.35	110.5	4.35	110.5
	Stroke	in	mm	4.5	114.3	4.5	114.3
	Displacement	in^3	L	535	8.8	535	8.8
	Compression Ratio	N/A		10.1:1			
	RPM Range (Min-Max)	RPM		1500-1800			
	Rotation Viewed from Flywheel	N/A		Counter Clockwise			
	Firing Order	N/A		1-8-7-2-6-5-4-3			
	Dry Weight (long Block)	lb	kg	730	307	730	307
Gross Prime Power Rating[1,2,3] Per ISO 3046 at the Flywheel				**HP**	**KW**	**HP**	**KW**
	LP			138.75	103.47	166.85	124.42
	Prime Rating Average Load Factor - LP			104.06	77.60	125.13	93.31
	NG			122.04	91.01	146.44	109.20
	Prime Rating Average Load Factor - NG			91.53	68.25	109.83	81.90
Please ask a PSI sales representative for information regarding standby power operation							
Exhaust System							
	Type			Air Cooled Manifold			
	Non-Emergency Prime Rating Catalyst Configuration for US Certified Product			Dual Substrate		Dual Substrate	
	Maximum allowable Back pressure	in HG	kPa	3	10.2	3	10.2
	Exhaust Volumetric Flow at Rated Power @ 1350 F	cfm	m^3/min	662.4	18.76	803.9	22.76
Air Induction System							
	Maximum allowable Intake Air Restriction with Air Cleaner						
	Clean	inH2O	kPa	3	1.49	3	1.49
	Dirty	inH2O	kPa	13	3.24	13	3.24
	Combustion Air required (volume)	cfm	m^3/min	205.1	5.81	248.9	7.05
Cooling System							
	Coolant Capacity						
	Engine only	qts	L	14.5	13.7	14.5	13.7
	Heat rejected to Cooling water at rated Load	btu/min	kcal/sec	2466	10.36	4184	17.58
	Cracking Temperature	F	C	160	71	160	71
	Full Open Temperature	F	C	185	85	185	85
Lubrication System							
	Oil Specification			SAE 5W-30 API Rating of SM or Newer			
	Maximum Allowable Oil Temperature	F	C	250	121	250	121
	Engine Oil Capacity						
	Min	Qts	L	8	7.57	8	7.57
	Max	Qts	L	8	7.57	8	7.57
Fuel System							
	Fuel Consumption @ Rated Load						
	NG	lb/hr	kg/hr	49.8	22.58	62	28.12
	LP	lb/hr	kg/hr	52.8	23.94	65.5	29.71
	Maximum EPR Rated Pressure	psi	kPa	1.0	6.9	1.0	6.9
	Recommended Maximum Running pressure to Electronic Pressure Regulator (EPR)	inH2O	kPa	11.0	2.7	11.0	2.7
	Recommended Minimum Running pressure to EPR	inH2O	kPa	7.0	1.7	7.0	1.7
	Minimum NG Supply Pipe Size[4]			1-1/4" NPT			
	Minimum LPG Supply Pipe Size[4]			3/4"			

[1] Standby and overload ratings based on ISO 3046. See PSI technical standard 3630000A for additional duty cycle and engine rating information

[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 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.

For information not listed in this document, please contact you PSI sales representative

POWER SOLUTIONS INTERNATIONAL

201 Mittel Dr. Wood Dale, Il 60191
(630) 350-9400 Tel. · (630) 350-9900 Fax

PSI Technical Standard 36300000A- Engine Rating Guidelines

Emergency Standby Power Rating: Applicable for supplying emergency power for the duration of utility power outage. There is no overload capability for the emergency standby rating. Any use of the generator above the emergency standby rating is prohibited. Any unit operating in parallel with a public utility is not considered emergency standby. Emergency standby engine is applicable to a variable load with a maximum average load factor of 82% and 200 hours of operation per year. Emergency standby rating should only be applied in emergency power outages.

Prime Power Rating: Applicable for supplying electrical power in lieu of commercially purchased power or providing guaranteed standby power. The prime power rating is applicable for variable loads with limited number of operating hours per year. The average power output shall not exceed 75% of the prime power rating. The total time at 100% Prime power shall not exceed 500 hours per year. A 110% overload rating is available one hour in every twelve hours with the total hours at 110% not to exceed 25 hours per year. Maximum number of hours per year is 2500.

Continuous Power Rating: The continuous power rating is applicable for variable loads with unlimited number of operating hours per year. The power output shall not exceed 75% of the prime power rating. There is no overload capability.