



General Engine Data <sup>5</sup>														
Type	V-type 4-cycle				Flywheel housing				SAE #0					
Number of cylinders	16				Flywheel				SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	5500				
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180			
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757			
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596			
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing				in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline				in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification				SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114			
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171			
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4			
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6			
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature				°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)				gal	L	26	100		
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)				gal	L	39	148		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)				lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80		
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7			Full Open	°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning				°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown				°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp				°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head				psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified				°F	°C	15	8		

Performance Data 60Hz <sup>3,5</sup>														
Nominal Engine Speed	RPM				1800		Total Engine Coolant Flow		gal/min	L/min	601	2274		
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power <sup>11</sup>				HP	kW	107	80		
Steady-State RPM Range - ISO 8528-5 G3	RPM				1791 - 1809		Cooling Fan Speed				RPM		1206	
Charging Alternator Voltage	Volts				28		Cooling Fan Air Flow <sup>11</sup>				SCFM	m <sup>3</sup> /min	67300	1906
Charging Alternator Current	Amps				55									

Standby 60Hz Natural Gas	Load		100%		75%		50%		25%	
	Power Rating <sup>1,2,3,4</sup> Per ISO 3046	HP	kWm	1589	1185	1192	889	795	593	397
Brake Mean Effective Pressure	psi	bar	219	15.1	164	11.3	110	7.6	55	3.8
Fuel Consumption <sup>3,4,7,12</sup>	lb/hr	kg/hr	565	256	435	197	311	141	193	88
	ft <sup>3</sup> /hr	m <sup>3</sup> /hr	12626	358	9721	275	6949	197	4312	122
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.356	216	0.365	222	0.391	238	0.486	296
Turbine Outlet Temperature	°F	°C	1212	655	1187	642	1171	633	1133	612
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	9946	4512	7653	3471	5461	2477	3371	1529
	ACFM	m <sup>3</sup> /min	6855	194	5207	147	3685	104	2230	63
Air Induction System <sup>5</sup>										
Combustion Air required (entire engine)	lb/hr	kg/hr	9381	4255	7217	3274	5150	2336	3178	1441
	ACFM	m <sup>3</sup> /min	2205	62	1696	48	1210	34	747	21
Compressor Outlet Temperature <sup>2</sup>	°F	°C	309	154	253	123	188	87	130	55
Thermal Balance <sup>5</sup>										
Total Fuel	BTU/min	kW	192296	3381	148044	2603	105834	1861	65667	1155
Mechanical Power	BTU/min	kW	67390	1185	50542	889	33695	593	16847	296
Heat Rejected to Cooling Water	BTU/min	kW	51593	907	42945	755	34297	603	25649	451
Heat Rejected to CAC	BTU/min	kW	8923	157	5259	92	2212	39	412	7
Heat Rejection to Exhaust	BTU/min	kW	59975	1055	45184	795	31289	550	18290	322
Engine Radiated Heat	BTU/min	kW	4416	78	4114	72	4342	76	4470	79

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psia (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

5: All values in the following section are provided for informational purpose only and are non-binding.

6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

8: Maximum pressure the fuel system components can withstand without being damaged. Operating pressure should fall between the listed minimum and maximum pressures.

9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide



General Engine Data <sup>5</sup>											
Type	V-type 4-cycle				Flywheel housing				SAE #0		
Number of cylinders	16				Flywheel				SAE #18		
Aspiration	Charge Cooled Forced Induction				Dry Weight		Fan to Flywheel		lb	kg	5500
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15				Radiator to Flywheel		Fan to Flywheel		lb	kg	13625 6180
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight		Radiator to Flywheel		lb	kg	12692 5757
Bore	in	mm	5.91	150	CG From Rear Face of Flywheel Housing		in	mm	51.3	1303	
Stroke	in	mm	7.28	185	CG Above Crank Centerline		in	mm	7.3	186	
Displacement	in <sup>3</sup>		L		Oil Specification		SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight				
Compression Ratio	10.5 : 1				Engine Oil Capacity		Min	qts	L	120 114	
Exhaust Manifold Type	Water Cooled				Max		qts	L	181 171		
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	ECU Oil Pressure Warning <sup>6</sup>		psi	bar	57	3.9	
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Shut Down <sup>6</sup>		psi	bar	47	3.2	
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	Oil Pressure at		Min	psi	bar	53 4	
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	1000 RPM (Idle)		Max	psi	bar	82 6	
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200	Max Allowable Oil Temperature		°F	°C	250	121	
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Coolant Capacity (Engine only)		gal	L	26	100	
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Radiator only)		gal	L	39	148	
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Radiator Weight (Dry)		lb	kg	1500	680	
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176 80	
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Full Open		°F	°C	198 92	
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning		°F	°C	219	104	
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown		°F	°C	230	110	
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp		°F	°C	140	60	
Battery Voltage	Volts				Max External Coolant Friction Head		psi	kPa	9	60	
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified		°F	°C	15	8	

Performance Data 50Hz <sup>3,5</sup>														
Nominal Engine Speed	RPM				1500				Total Engine Coolant Flow		gal/min	L/min	460	1743
Mean Piston Speed	ft/min	m/s	1821	9.3	Cooling Fan Power <sup>11</sup>		HP	kW	62	46				
Steady-State RPM Range - ISO 8528-5 G3	RPM				1493 - 1508				Cooling Fan Speed		RPM		1005	
Charging Alternator Voltage	Volts				28				Cooling Fan Air Flow <sup>11</sup>		SCFM	m <sup>3</sup> /min	56080	1588
Charging Alternator Current	Amps				53									

Standby 50Hz Natural Gas	Load		100%		75%		50%		25%	
	HP	kWm	1324	987	993	740	662	494	331	247
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	HP	kWm	1324	987	993	740	662	494	331	247
Brake Mean Effective Pressure	psi	bar	219	15.1	164	11.3	109	7.5	55	3.8
Fuel Consumption <sup>3,4,7,12</sup>	lb/hr	kg/hr	450	204	348	158	250	113	154	70
	ft <sup>3</sup> /hr	m <sup>3</sup> /hr	10059	285	7781	220	5574	158	3440	97
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.340	207	0.351	213	0.377	229	0.465	283
Turbine Outlet Temperature	°F	°C	1156	625	1144	618	1120	604	1059	571
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	7931	3598	6080	2758	4320	1959	2650	1202
	ACFM	m <sup>3</sup> /min	5311	150	4046	115	2837	80	1684	48
Air Induction System <sup>5</sup>										
Combustion Air required (entire engine)	lb/hr	kg/hr	7481	3393	5732	2600	4070	1846	2496	1132
	ACFM	m <sup>3</sup> /min	1723	49	1320	37	938	27	575	16
Compressor Outlet Temperature <sup>2</sup>	°F	°C	328	165	272	133	202	95	135	57
Thermal Balance <sup>5</sup>										
Total Fuel	BTU/min	kW	152884	2688	118249	2079	84717	1490	52287	919
Mechanical Power	BTU/min	kW	56130	987	42097	740	28065	494	14032	247
Heat Rejected to Cooling Water	BTU/min	kW	41594	731	34710	610	27827	489	20944	368
Heat Rejected to CAC	BTU/min	kW	5284	93	2756	48	1101	19	245	4
Heat Rejection to Exhaust	BTU/min	kW	44685	786	33587	591	23116	406	13273	233
Engine Radiated Heat	BTU/min	kW	5191	91	5099	90	4608	81	3793	67

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psi (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

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6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

8: Maximum pressure the fuel system components can withstand without being damaged. Operating pressure should fall between the listed minimum and maximum pressures.

9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide



General Engine Data <sup>5</sup>														
Type	V-type 4-cycle				Flywheel housing				SAE #0					
Number of cylinders	16				Flywheel				SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	5500				
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180			
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757			
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596			
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing				in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline				in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification				SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114			
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171			
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4			
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6			
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature				°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	26	100				
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	39	148				
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)				lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80		
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7			Full Open	°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning				°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown				°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp				°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head				psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified				°F	°C	15	8		

Performance Data 60Hz <sup>3,5</sup>													
Nominal Engine Speed	RPM				1800		Total Engine Coolant Flow		gal/min	L/min	601	2274	
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power <sup>11</sup>				HP	kW	107	80.0	
Steady-State RPM Range - ISO 8528-5 G3	RPM				1791 - 1809		Cooling Fan Speed				RPM		1206
Charging Alternator Voltage	Volts				28		Cooling Fan Air Flow <sup>11</sup>		SCFM	m <sup>3</sup> /min	67300	1906	
Charging Alternator Current	Amps				55								

Standby 60Hz LPG	Load		100%		75%		50%		25%	
	HP	kWm	1196	892	897	669	598	446	299	223
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	HP	kWm	1196	892	897	669	598	446	299	223
Brake Mean Effective Pressure	psi	bar	165	11.4	124	8.5	82	5.7	41	2.8
Fuel Consumption <sup>3,4,7,12</sup>	lb/hr	kg/hr	496	225	371	168	261	118	166	75
	gal/hr	L/hr	117	442	87	330	61	232	39	148
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.415	252	0.414	252	0.436	265	0.555	337
Turbine Outlet Temperature	°F	°C	1317	714	1252	678	1182	639	1120	604
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	8245	3740	6126	2779	4280	1941	2707	1228
	ACFM	m <sup>3</sup> /min	6007	170	4313	122	2904	82	1777	50
Air Induction System <sup>5</sup>										
Combustion Air required (entire engine)	lb/hr	kg/hr	7749	3515	5755	2611	4019	1823	2541	1152
	ACFM	m <sup>3</sup> /min	1779	50	1321	37	923	26	583	17
Compressor Outlet Temperature <sup>2</sup>	°F	°C	273	134	207	97	152	66	114	45
Thermal Balance <sup>5</sup>										
Total Fuel	BTU/min	kW	167074	2938	124899	2196	87822	1544	55843	982
Mechanical Power	BTU/min	kW	50727	892	38045	669	25364	446	12682	223
Heat Rejected to Cooling Water	BTU/min	kW	48746	857	41120	723	33495	589	25870	455
Heat Rejected to CAC	BTU/min	kW	6213	109	2893	51	1015	18	196	3
Heat Rejection to Exhaust	BTU/min	kW	54192	953	37542	660	24222	426	14233	250
Engine Radiated Heat	BTU/min	kW	7196	127	5298	93	3726	66	2863	50

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2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psia (100kPa) and 30% relative humidity.

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9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide



General Engine Data <sup>5</sup>														
Type	V-type 4-cycle				Flywheel housing				SAE #0					
Number of cylinders	16				Flywheel				SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	5500				
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180			
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757			
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596			
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing				in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline				in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification				SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114			
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171			
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4			
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6			
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature				°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	26	100				
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	39	148				
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)				lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80		
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7			Full Open	°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning				°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown				°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp				°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head				psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified				°F	°C	15	8		

Performance Data 50Hz <sup>3,5</sup>												
Nominal Engine Speed	RPM				1500		Total Engine Coolant Flow		gal/min	L/min	460	1743
Mean Piston Speed	ft/min	m/s	1821	9.3	Cooling Fan Power <sup>11</sup>				HP	kW	62	46
Steady-State RPM Range - ISO 8528-5 G3	RPM				1778 - 1823		Cooling Fan Speed				RPM	1005
Charging Alternator Voltage	Volts				28		Cooling Fan Air Flow <sup>11</sup>		SCFM	m <sup>3</sup> /min	56080	1588
Charging Alternator Current	Amps				53							

Standby 50Hz LPG	Load		100%		75%		50%		25%	
	HP	kW/m	998	744	748	558	499	372	249	186
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	psi	bar	165	11.4	124	8.5	83	5.7	41	2.8
Brake Mean Effective Pressure	lb/hr	kg/hr	364	165	286	130	208	94	130	59
	gal/hr	L/hr	85	324	67	254	49	185	31	116
Fuel Consumption <sup>3,4,7,12</sup>	lb/(hp-hr)	g/(kW-hr)	0.365	222	0.382	233	0.417	254	0.523	318
Brake Specific Fuel Consumption	°F	°C	1110	599	1060	571	1024	551	970	521
Turbine Outlet Temperature	lb/hr	kg/hr	6330	2871	4790	2173	3379	1533	2099	952
Exhaust Flow at Turbine Outlet Conditions (entire engine)	ACFM	m <sup>3</sup> /min	4135	117	3046	86	2106	60	1267	36
<b>Air Induction System<sup>5</sup></b>										
Combustion Air required (entire engine)	lb/hr	kg/hr	5966	2706	4504	2043	3171	1438	1969	893
	ACFM	m <sup>3</sup> /min	1359	38	1026	29	722	20	448	13
Compressor Outlet Temperature <sup>2</sup>	°F	°C	214	101	166	75	128	54	104	40
<b>Thermal Balance<sup>5</sup></b>										
Total Fuel	BTU/min	kW	128916	2267	98191	1727	69924	1230	44116	776
Mechanical Power	BTU/min	kW	42311	744	31733	558	21155	372	10578	186
Heat Rejected to Cooling Water	BTU/min	kW	37463	659	31157	548	24850	437	18544	326
Heat Rejected to CAC	BTU/min	kW	3189	56	1429	25	468	8	74	1
Heat Rejection to Exhaust	BTU/min	kW	38928	685	27267	479	17547	309	9768	172
Engine Radiated Heat	BTU/min	kW	7026	124	6605	116	5904	104	5152	91

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psia (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

5: All values in the following section are provided for informational purpose only and are non-binding.

6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

8: Maximum pressure the fuel system components can withstand without being damaged. Operating pressure should fall between the listed minimum and maximum pressures.

9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide



## 53L Fuel Consumption Data Standby

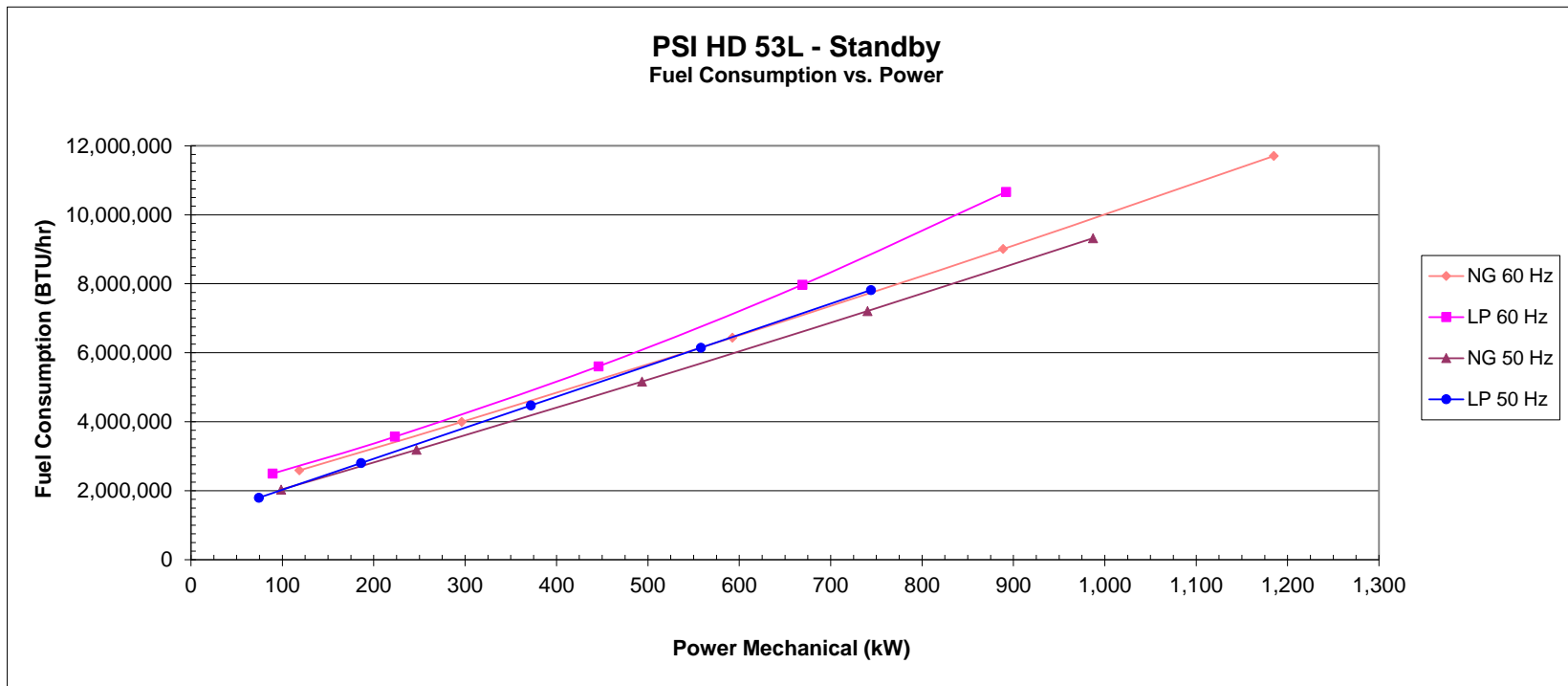
NG 60 Hz				
Power at Flywheel (kw)	kg/hr	m3/hr	ft3/hr	BTU/hr
1,185	256	357.5	12,626	11,704,725
889	197	275.3	9,717	9,007,328
593	141	196.8	6,946	6,439,191
296	88	122.1	4,310	3,995,341
119	56.7	79.1	2,793	2,588,689

NG 50 Hz				
Power at Flywheel (kw)	kg/hr	m3/hr	ft3/hr	BTU/hr
987	204	284.8	10,055	9,321,136
740	158	220.3	7,777	7,209,515
494	113	157.8	5,572	5,165,095
247	70	97.4	3,439	3,187,875
99	45	62.2	2,194	2,033,800

Gas Properties		
	Density	Heat content
LP Density	0.51 kg/L	91500 BTU/gal
NG Density	0.717 kg/m3	927 BTU/ft3

LP 60 Hz				
Power at Flywheel (kw)	kg/hr	L/hr	gal/hr	BTU/hr
892	225	441.5	116.6	10,665,113
669	168	330.1	87.1	7,972,859
446	118	232.1	61.3	5,606,055
223	75	147.6	39.0	3,564,701
89	53	103.3	27.3	2,496,105

LP 50 Hz				
Power at Flywheel (kw)	kg/hr	L/hr	gal/hr	BTU/hr
744	165	323.7	85.5	7,818,856
558	130	254.4	67.2	6,146,370
372	94	185.2	48.9	4,473,884
186	59	116.0	30.6	2,801,397
74	38	74.4	19.6	1,797,906



Technical data based on ISO 3046-1 standards of 77°F (25°C), barometric pressure of 14.5Psia (100kPa) and 30% relative humidity. Production tolerances in engines and installed components can account for power variations of ± 5%.



General Engine Data <sup>5</sup>														
Type	V-type 4-cycle				Flywheel housing				SAE #0					
Number of cylinders	16				Flywheel				SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	5500				
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180			
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757			
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596			
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing				in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline				in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification				SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114			
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171			
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4			
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6			
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature				°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	26	100				
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	39	148				
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)				lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80		
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7			Full Open	°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning				°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown				°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp				°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head				psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified				°F	°C	15	8		

Performance Data 60Hz <sup>3,5</sup>													
Nominal Engine Speed	RPM				1800		Total Engine Coolant Flow		gal/min	L/min	601	2274	
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power <sup>11</sup>				HP	kW	107	80	
Steady-State RPM Range - ISO 8528-5 G3	RPM				1791 - 1809		Cooling Fan Speed				RPM		1206
Charging Alternator Voltage	Volts				28		Cooling Fan Air Flow <sup>11</sup>		SCFM	m <sup>3</sup> /min	67300	1906	
Charging Alternator Current	Amps				55								

LTP 60Hz Natural Gas	Load		100%		75%		50%		25%	
	HP	kWm	1589	1185	1192	889	795	593	397	296
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	psi	bar	219	15.1	164	11.3	110	7.6	55	3.8
Brake Mean Effective Pressure	lb/hr	kg/hr	565	256	435	197	311	141	193	88
	ft <sup>3</sup> /hr	m <sup>3</sup> /hr	12626	358	9721	275	6949	197	4312	122
Fuel Consumption <sup>3,4,7,12</sup>	lb/(hp-hr)	g/(kW-hr)	0.356	216	0.365	222	0.391	238	0.486	296
Brake Specific Fuel Consumption	°F	°C	1212	655	1187	642	1171	633	1133	612
Turbine Outlet Temperature	lb/hr	kg/hr	9946	4512	7653	3471	5461	2477	3371	1529
Exhaust Flow at Turbine Outlet Conditions (entire engine)	ACFM	m <sup>3</sup> /min	6855	194	5207	147	3685	104	2230	63
<b>Air Induction System<sup>5</sup></b>										
Combustion Air required (entire engine)	lb/hr	kg/hr	9381	4255	7217	3274	5150	2336	3178	1441
	ACFM	m <sup>3</sup> /min	2205	62	1696	48	1210	34	747	21
Compressor Outlet Temperature <sup>2</sup>	°F	°C	309	154	253	123	188	87	130	55
<b>Thermal Balance<sup>5</sup></b>										
Total Fuel	BTU/min	kW	192296	3381	148044	2603	105834	1861	65667	1155
Mechanical Power	BTU/min	kW	67390	1185	50542	889	33695	593	16847	296
Heat Rejected to Cooling Water	BTU/min	kW	51593	907	42945	755	34297	603	25649	451
Heat Rejected to CAC	BTU/min	kW	8923	157	5259	92	2212	39	412	7
Heat Rejection to Exhaust	BTU/min	kW	59975	1055	45184	795	31289	550	18290	322
Engine Radiated Heat	BTU/min	kW	4416	78	4114	72	4342	76	4470	79

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psia (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

5: All values in the following section are provided for informational purpose only and are non-binding.

6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

8: Maximum pressure the fuel system components can withstand without being damaged. Operating pressure should fall between the listed minimum and maximum pressures.

9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide





General Engine Data <sup>5</sup>													
Type	V-type 4-cycle				Flywheel housing			SAE #0					
Number of cylinders	16				Flywheel			SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	12125	5500		
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757		
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing			in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline			in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification			SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114		
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171		
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>			psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>			psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4		
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6		
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature			°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	26	100			
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	39	148			
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)			lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80	
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7	Full Open		°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning			°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown			°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp			°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head			psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified			°F	°C	15	8		

Performance Data 50Hz <sup>3,5</sup>											
Nominal Engine Speed	RPM		1500		Total Engine Coolant Flow			gal/min	L/min	460	1743
Mean Piston Speed	ft/min	m/s	1821	9.3	Cooling Fan Power <sup>11</sup>			HP	kW	62	46
Steady-State RPM Range - ISO 8528-5 G3	RPM		1778 - 1823		Cooling Fan Speed			RPM		1005	
Charging Alternator Voltage	Volts		28		Cooling Fan Air Flow <sup>11</sup>			SCFM	m <sup>3</sup> /min	56080	1588
Charging Alternator Current	Amps		53								

LTP 50Hz Natural Gas	Load		100%		75%		50%		25%	
	HP	kWm	1324	987	993	740	662	494	331	247
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	HP	kWm	1324	987	993	740	662	494	331	247
Brake Mean Effective Pressure	psi	bar	219	15.1	164	11.3	109	7.5	55	3.8
Fuel Consumption <sup>3,4,7,12</sup>	lb/hr	kg/hr	450	204	348	158	250	113	154	70
	ft <sup>3</sup> /hr	m <sup>3</sup> /hr	10059	285	7781	220	5574	158	3440	97
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.340	207	0.351	213	0.377	229	0.465	283
Turbine Outlet Temperature	°F	°C	1156	625	1144	618	1120	604	1059	571
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	7931	3598	6080	2758	4320	1959	2650	1202
	ACFM	m <sup>3</sup> /min	5311	150	4046	115	2837	80	1684	48
Air Induction System <sup>5</sup>										
Combustion Air required (entire engine)	lb/hr	kg/hr	7481	3393	5732	2600	4070	1846	2496	1132
	ACFM	m <sup>3</sup> /min	1723	49	1320	37	938	27	575	16
Compressor Outlet Temperature <sup>2</sup>	°F	°C	328	165	272	133	202	95	135	57
Thermal Balance <sup>5</sup>										
Total Fuel	BTU/min	kW	152884	2688	118249	2079	84717	1490	52287	919
Mechanical Power	BTU/min	kW	56130	987	42097	740	28065	494	14032	247
Heat Rejected to Cooling Water	BTU/min	kW	41594	731	34710	610	27827	489	20944	368
Heat Rejected to CAC	BTU/min	kW	5284	93	2756	48	1101	19	245	4
Heat Rejection to Exhaust	BTU/min	kW	44685	786	33587	591	23116	406	13273	233
Engine Radiated Heat	BTU/min	kW	5191	91	5099	90	4608	81	3793	67

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psi (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

5: All values in the following section are provided for informational purpose only and are non-binding.

6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

8: Maximum pressure the fuel system components can withstand without being damaged. Operating pressure should fall between the listed minimum and maximum pressures.

9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide



General Engine Data <sup>5</sup>														
Type	V-type 4-cycle				Flywheel housing				SAE #0					
Number of cylinders	16				Flywheel				SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	5500				
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180			
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757			
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596			
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing				in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline				in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification				SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114			
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171			
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4			
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6			
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature				°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	26	100				
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	39	148				
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)				lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80		
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7			Full Open	°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning				°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown				°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp				°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head				psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified				°F	°C	15	8		

Performance Data 60Hz <sup>3,5</sup>													
Nominal Engine Speed	RPM				1800		Total Engine Coolant Flow		gal/min	L/min	601	2274	
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power <sup>11</sup>				HP	kW	107	80	
Steady-State RPM Range - ISO 8528-5 G3	RPM				1791 - 1809		Cooling Fan Speed				RPM		1206
Charging Alternator Voltage	Volts				28		Cooling Fan Air Flow <sup>11</sup>		SCFM	m <sup>3</sup> /min	67300	1906	
Charging Alternator Current	Amps				55								

LTP 60Hz LPG	Load		100%		75%		50%		25%	
	HP	kWm	1196	892	897	669	598	446	299	223
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	HP	kWm	1196	892	897	669	598	446	299	223
Brake Mean Effective Pressure	psi	bar	165	11.4	124	8.5	82	5.7	41	2.8
Fuel Consumption <sup>3,4,7,12</sup>	lb/hr	kg/hr	496	225	371	168	261	118	166	75
	gal/hr	L/hr	117	442	87	330	61	232	39	148
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.415	252	0.414	252	0.436	265	0.555	337
Turbine Outlet Temperature	°F	°C	1317	714	1252	678	1182	639	1120	604
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	8245	3740	6126	2779	4280	1941	2707	1228
	ACFM	m <sup>3</sup> /min	6007	170	4313	122	2904	82	1777	50
Air Induction System <sup>5</sup>										
Combustion Air required (entire engine)	lb/hr	kg/hr	7749	3515	5755	2611	4019	1823	2541	1152
	ACFM	m <sup>3</sup> /min	1779	50	1321	37	923	26	583	17
Compressor Outlet Temperature <sup>2</sup>	°F	°C	273	134	207	97	152	66	114	45
Thermal Balance <sup>5</sup>										
Total Fuel	BTU/min	kW	167074	2938	124899	2196	87822	1544	55843	982
Mechanical Power	BTU/min	kW	50727	892	38045	669	25364	446	12682	223
Heat Rejected to Cooling Water	BTU/min	kW	48746	857	41120	723	33495	589	25870	455
Heat Rejected to CAC	BTU/min	kW	6213	109	2893	51	1015	18	196	3
Heat Rejection to Exhaust	BTU/min	kW	54192	953	37542	660	24222	426	14233	250
Engine Radiated Heat	BTU/min	kW	7196	127	5298	93	3726	66	2863	50

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psia (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

5: All values in the following section are provided for informational purpose only and are non-binding.

6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

8: Maximum pressure the fuel system components can withstand without being damaged. Operating pressure should fall between the listed minimum and maximum pressures.

9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide





General Engine Data <sup>5</sup>														
Type	V-type 4-cycle				Flywheel housing				SAE #0					
Number of cylinders	16				Flywheel				SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	5500				
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180			
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757			
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596			
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing				in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline				in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification				SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114			
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171			
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4			
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6			
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature				°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	26	100				
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	39	148				
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)				lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80		
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7			Full Open	°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning				°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown				°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp				°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head				psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified				°F	°C	15	8		

Performance Data 50Hz <sup>3,5</sup>													
Nominal Engine Speed	RPM				1500		Total Engine Coolant Flow		gal/min	L/min	460	1743	
Mean Piston Speed	ft/min	m/s	1821	9.3	Cooling Fan Power <sup>11</sup>				HP	kW	62	46	
Steady-State RPM Range - ISO 8528-5 G3	RPM				1778 - 1823		Cooling Fan Speed				RPM		1005
Charging Alternator Voltage	Volts				28		Cooling Fan Air Flow <sup>11</sup>		SCFM	m <sup>3</sup> /min	56080	1588	
Charging Alternator Current	Amps				53								

LTP 50Hz LPG	Load		100%		75%		50%		25%	
	HP	kW/m	998	744	748	558	499	372	249	186
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	psi	bar	165	11.4	124	8.5	83	5.7	41	2.8
Brake Mean Effective Pressure	lb/hr	kg/hr	364	165	286	130	208	94	130	59
	gal/hr	L/hr	85	324	67	254	49	185	31	116
Fuel Consumption <sup>3,4,7,12</sup>	lb/(hp-hr)	g/(kW-hr)	0.365	222	0.382	233	0.417	254	0.523	318
Brake Specific Fuel Consumption	°F	°C	1110	599	1060	571	1024	551	970	521
Turbine Outlet Temperature	lb/hr	kg/hr	6330	2871	4790	2173	3379	1533	2099	952
Exhaust Flow at Turbine Outlet Conditions (entire engine)	ACFM	m <sup>3</sup> /min	4135	117	3046	86	2106	60	1267	36

Air Induction System <sup>5</sup>										
Combustion Air required (entire engine)	lb/hr	kg/hr	5966	2706	4504	2043	3171	1438	1969	893
	ACFM	m <sup>3</sup> /min	1359	38	1026	29	722	20	448	13
Compressor Outlet Temperature <sup>2</sup>	°F	°C	214	101	166	75	128	54	104	40

Thermal Balance <sup>5</sup>										
Total Fuel	BTU/min	kW	128916	2267	98191	1727	69924	1230	44116	776
Mechanical Power	BTU/min	kW	42311	744	31733	558	21155	372	10578	186
Heat Rejected to Cooling Water	BTU/min	kW	37463	659	31157	548	24850	437	18544	326
Heat Rejected to CAC	BTU/min	kW	3189	56	1429	25	468	8	74	1
Heat Rejection to Exhaust	BTU/min	kW	38928	685	27267	479	17547	309	9768	172
Engine Radiated Heat	BTU/min	kW	7026	124	6605	116	5904	104	5152	91

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psia (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

5: All values in the following section are provided for informational purpose only and are non-binding.

6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

8: Maximum pressure the fuel system components can withstand without being damaged. Operating pressure should fall between the listed minimum and maximum pressures.

9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide



General Engine Data <sup>5</sup>														
Type	V-type 4-cycle				Flywheel housing				SAE #0					
Number of cylinders	16				Flywheel				SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	5500				
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180			
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757			
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596			
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing				in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline				in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification				SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114			
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171			
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4			
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6			
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature				°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	26	100				
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	39	148				
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)				lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80		
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7			Full Open	°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning				°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown				°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp				°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head				psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified				°F	°C	15	8		

Performance Data 60Hz <sup>3,5</sup>														
Nominal Engine Speed	RPM				1800		Total Engine Coolant Flow		gal/min	L/min	601	2274		
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power <sup>11</sup>				HP	kW	107	80		
Steady-State RPM Range - ISO 8528-5 G3	RPM				1791 - 1809		Cooling Fan Speed				RPM		1206	
Charging Alternator Voltage	Volts				28		Cooling Fan Air Flow <sup>11</sup>				SCFM	m <sup>3</sup> /min	67300	1905.71
Charging Alternator Current	Amps				55									

Prime 60Hz Natural Gas	Load		100%		75%		50%		25%	
	HP	kWm	1431	1067	1073	800	715	534	358	267
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	psi	bar	197	13.6	148	10.2	99	6.8	49	3.4
Brake Mean Effective Pressure	lb/hr	kg/hr	513	233	397	180	287	130	182	82
	ft <sup>3</sup> /hr	m <sup>3</sup> /hr	11453	324	8879	251	6413	182	4057	115
Fuel Consumption <sup>3,4,7,12</sup>	lb/(hp-hr)	g/(kW-hr)	0.358	218	0.370	225	0.401	244	0.508	309
Brake Specific Fuel Consumption	°F	°C	1200	649	1182	639	1167	631	1127	608
Turbine Outlet Temperature	lb/hr	kg/hr	9020	4092	6987	3169	5036	2284	3168	1437
Exhaust Flow at Turbine Outlet Conditions (entire engine)	ACFM	m <sup>3</sup> /min	6178	175	4743	134	3391	96	2088	59

Air Induction System <sup>5</sup>										
Combustion Air required (entire engine)	lb/hr	kg/hr	8508	3859	6590	2989	4749	2154	2987	1355
	ACFM	m <sup>3</sup> /min	1999	57	1549	44	1116	32	702	20
Compressor Outlet Temperature <sup>2</sup>	°F	°C	289	143	234	112	175	80	126	52

Thermal Balance <sup>5</sup>										
Total Fuel	BTU/min	kW	174425	3067	135220	2378	97672	1717	61779	1086
Mechanical Power	BTU/min	kW	60679	1067	45509	800	30340	534	15170	267
Heat Rejected to Cooling Water	BTU/min	kW	48148	847	40361	710	32574	573	24787	436
Heat Rejected to CAC	BTU/min	kW	7430	131	4256	75	1734	30	325	6
Heat Rejection to Exhaust	BTU/min	kW	53976	949	40939	720	28628	503	17044	300
Engine Radiated Heat	BTU/min	kW	4192	74	4155	73	4396	77	4453	78

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psi (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

5: All values in the following section are provided for informational purpose only and are non-binding.

6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

8: Maximum pressure the fuel system components can withstand without being damaged. Operating pressure should fall between the listed minimum and maximum pressures.

9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide



General Engine Data <sup>5</sup>														
Type	V-type 4-cycle				Flywheel housing				SAE #0					
Number of cylinders	16				Flywheel				SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	5500				
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180			
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757			
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596			
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing				in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline				in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification				SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114			
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171			
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4			
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6			
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature				°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	26	100				
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	39	148				
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)				lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80		
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7			Full Open	°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning				°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown				°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp				°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head				psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified				°F	°C	15	8		

Performance Data 50Hz <sup>3,5</sup>													
Nominal Engine Speed	RPM				1500		Total Engine Coolant Flow		gal/min	L/min	460	1743	
Mean Piston Speed	ft/min	m/s	1821	9.3	Cooling Fan Power <sup>11</sup>				HP	kW	62	46	
Steady-State RPM Range - ISO 8528-5 G3	RPM				1778 - 1823		Cooling Fan Speed				RPM		1005
Charging Alternator Voltage	Volts				28		Cooling Fan Air Flow <sup>11</sup>		SCFM	m <sup>3</sup> /min	56080	1588	
Charging Alternator Current	Amps				53								

Prime 50Hz Natural Gas	Load		100%		75%		50%		25%	
	HP	kWm	1191	888	893	666	662	444	298	222
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	HP	kWm	1191	888	893	666	662	444	298	222
Brake Mean Effective Pressure	psi	bar	197	13.6	148	10.2	98	6.8	49	3.4
Fuel Consumption <sup>3,4,7,12</sup>	lb/hr	kg/hr	409	185	318	144	230	104	145	66
	ft <sup>3</sup> /hr	m <sup>3</sup> /hr	9136	259	7109	201	5140	146	3230	91
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.343	209	0.356	217	0.386	235	0.486	295
Turbine Outlet Temperature	°F	°C	1151	622	1140	615	1111	599	1051	566
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	7178	3256	5541	2513	3978	1804	2488	1128
	ACFM	m <sup>3</sup> /min	4793	136	3677	104	2600	74	1574	45
<b>Air Induction System<sup>5</sup></b>										
Combustion Air required (entire engine)	lb/hr	kg/hr	6769	3070	5223	2369	3747	1700	2343	1063
	ACFM	m <sup>3</sup> /min	1559	44	1203	34	863	24	540	15
Compressor Outlet Temperature <sup>2</sup>	°F	°C	308	154	252	122	188	87	128	54
<b>Thermal Balance<sup>5</sup></b>										
Total Fuel	BTU/min	kW	138855	2442	108043	1900	78123	1374	49095	863
Mechanical Power	BTU/min	kW	50500	888	37875	666	25250	444	12625	222
Heat Rejected to Cooling Water	BTU/min	kW	38832	683	32639	574	26446	465	20253	356
Heat Rejected to CAC	BTU/min	kW	4160	73	2169	38	868	15	200	4
Heat Rejection to Exhaust	BTU/min	kW	40157	706	30370	534	21091	371	12321	217
Engine Radiated Heat	BTU/min	kW	5207	92	4990	88	4468	79	3696	65

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psia (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

5: All values in the following section are provided for informational purpose only and are non-binding.

6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

8: Maximum pressure the fuel system components can withstand without being damaged. Operating pressure should fall between the listed minimum and maximum pressures.

9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide



General Engine Data <sup>5</sup>														
Type	V-type 4-cycle				Flywheel housing				SAE #0					
Number of cylinders	16				Flywheel				SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	5500				
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180			
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757			
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596			
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing				in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline				in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification				SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114			
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171			
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4			
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6			
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature				°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	26	100				
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	39	148				
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)				lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80		
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7			Full Open	°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning				°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown				°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp				°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head				psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified				°F	°C	15	8		

Performance Data 60Hz <sup>3,5</sup>													
Nominal Engine Speed	RPM				1800		Total Engine Coolant Flow		gal/min	L/min	601	2274	
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power <sup>11</sup>				HP	kW	107	80	
Steady-State RPM Range - ISO 8528-5 G3	RPM				1791 - 1809		Cooling Fan Speed				RPM		1206
Charging Alternator Voltage	Volts				28		Cooling Fan Air Flow <sup>11</sup>		SCFM	m <sup>3</sup> /min	67300	1906	
Charging Alternator Current	Amps				55								

	Prime 60Hz LPG		Load		100%		75%		50%		25%	
	HP	kWm										
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	HP	kWm	1077	803	808	602	538	402	269	201		
Brake Mean Effective Pressure	psi	bar	148	10.2	111	7.7	74	5.1	37	2.6		
Fuel Consumption <sup>3,4,7,12</sup>	lb/hr	kg/hr	445	202	337	153	241	109	157	71		
	gal/hr	L/hr	104	395	79	299	57	214	37	140		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.413	251	0.417	253	0.447	272	0.584	355		
Turbine Outlet Temperature	°F	°C	1297	703	1230	665	1170	632	1112	600		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	7367	3342	5545	2515	3944	1789	2565	1163		
	ACFM	m <sup>3</sup> /min	5309	150	3858	109	2660	75	1677	47		
Air Induction System <sup>5</sup>												
Combustion Air required (entire engine)	lb/hr	kg/hr	6922	3140	5209	2363	3703	1680	2407	1092		
	ACFM	m <sup>3</sup> /min	1589	45	1196	34	850	24	553	16		
Compressor Outlet Temperature <sup>2</sup>	°F	°C	246	119	189	87	142	61	111	44		
Thermal Balance <sup>5</sup>												
Total Fuel	BTU/min	kW	149630	2631	113266	1992	81033	1425	52932	931		
Mechanical Power	BTU/min	kW	45666	803	34249	602	22833	402	11416	201		
Heat Rejected to Cooling Water	BTU/min	kW	45702	804	38838	683	31973	562	25109	442		
Heat Rejected to CAC	BTU/min	kW	4691	82	2197	39	779	14	157	3		
Heat Rejection to Exhaust	BTU/min	kW	47148	829	33206	584	21963	386	13419	236		
Engine Radiated Heat	BTU/min	kW	6424	113	4776	84	3485	61	2830	50		

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psia (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

5: All values in the following section are provided for informational purpose only and are non-binding.

6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

8: Maximum pressure the fuel system components can withstand without being damaged. Operating pressure should fall between the listed minimum and maximum pressures.

9: ± 2 degrees Celsius.

10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide



General Engine Data <sup>5</sup>														
Type	V-type 4-cycle				Flywheel housing				SAE #0					
Number of cylinders	16				Flywheel				SAE #18					
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel		lb	kg	12125	5500			
Firing Order	1 - 7 - 12 - 14 - 4 - 16 - 2 - 8 - 11 - 13 - 3 - 5 - 10 - 6 - 9 - 15					Radiator to Flywheel		lb	kg	13625	6180			
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel		lb	kg	12692	5757			
Bore	in	mm	5.91	150		Radiator to Flywheel		lb	kg	14541	6596			
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing				in	mm	51.3	1303		
Displacement	in <sup>3</sup>	L	3192	52.3	CG Above Crank Centerline				in	mm	7.3	186		
Compression Ratio	10.5 : 1				Oil Specification				SAE 15W-40 Low Ash Gas engine oil Ash content 0.25 - 0.5% by weight					
Exhaust Manifold Type	Water Cooled				Engine Oil Capacity		Min	qts	L	120	114			
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89			Max	qts	L	181	171			
Catalyst Inlet Size (O.D)	in	mm	6	152	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9		
Catalyst Dp	in-H <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	53	4			
Maximum Fuel System Pressure <sup>8</sup>	psi	kPag	29	200			Max	psi	bar	82	6			
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5	Max Allowable Oil Temperature				°F	°C	250	121		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	26	100				
Minimum Gas Supply Pipe Size <sup>13</sup>	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	39	148				
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)				lb	kg	1500	680		
Maximum Allowable Intake Restriction	Clean Air Filter	in-H <sub>2</sub> O	kPa	5.2	1.3	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80		
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7			Full Open	°F	°C	198	92		
Spark Plug Part Number	Denso GK3-5				ECU Coolant Temp Warning				°F	°C	219	104		
Standard Spark Plug Gap <sup>10</sup>	in	mm	0.012	0.3	ECU Coolant Temp Shutdown				°F	°C	230	110		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		Maximum Radiator Cooling Air Temp				°F	°C	140	60		
Battery Voltage	Volts				24		Max External Coolant Friction Head				psi	kPa	9	60
Starter Motor Power (2X starters)	HP	kW	13.4	10	CAC Rise Above Ambient Specified				°F	°C	15	8		

Performance Data 50Hz <sup>3,5</sup>													
Nominal Engine Speed	RPM				1500		Total Engine Coolant Flow		gal/min	L/min	460	1743	
Mean Piston Speed	ft/min	m/s	1821	9.3	Cooling Fan Power <sup>11</sup>				HP	kW	62	46	
Steady-State RPM Range - ISO 8528-5 G3	RPM				1778 - 1823		Cooling Fan Speed				RPM		1005
Charging Alternator Voltage	Volts				28		Cooling Fan Air Flow <sup>11</sup>		SCFM	m <sup>3</sup> /min	56080	1588	
Charging Alternator Current	Amps				53								

Prime 50Hz LPG	Load		100%		75%		50%		25%	
	HP	kWm	898	670	674	503	449	335	225	168
Power Rating <sup>1,2,3,4</sup> Per ISO 3046	psi	bar	149	10.2	111	7.7	74	5.1	37	2.6
Brake Mean Effective Pressure	lb/hr	kg/hr	333	151	263	119	193	87	123	56
	gal/hr	L/hr	78	296	62	234	45	171	29	109
Fuel Consumption <sup>3,4,7,12</sup>	lb/(hp-hr)	g/(kW-hr)	0.371	225	0.390	237	0.429	261	0.546	332
Brake Specific Fuel Consumption	°F	°C	1086	586	1049	565	1016	547	962	517
Turbine Outlet Temperature	lb/hr	kg/hr	5702	2586	4355	1976	3114	1413	1979	898
Exhaust Flow at Turbine Outlet Conditions (entire engine)	ACFM	m <sup>3</sup> /min	3678	104	2753	78	1931	55	1189	34

Air Induction System <sup>5</sup>										
Combustion Air required (entire engine)	lb/hr	kg/hr	5369	2435	4092	1856	2922	1325	1856	842
	ACFM	m <sup>3</sup> /min	1223	35	932	26	666	19	423	12
Compressor Outlet Temperature <sup>2</sup>	°F	°C	194	90	154	68	122	50	102	39

Thermal Balance <sup>5</sup>										
Total Fuel	BTU/min	kW	116398	2047	89499	1574	64594	1136	41684	733
Mechanical Power	BTU/min	kW	38102	670	28577	503	19051	335	9526	168
Heat Rejected to Cooling Water	BTU/min	kW	34954	615	29275	515	23596	415	17917	315
Heat Rejected to CAC	BTU/min	kW	2379	42	1069	19	352	6	57	1
Heat Rejection to Exhaust	BTU/min	kW	34056	599	24163	425	15845	279	9100	160
Engine Radiated Heat	BTU/min	kW	6907	121	6415	113	5751	101	5084	89

1: Max load and overload ratings based on ISO 3046 gross flywheel power. For additional information on ratings and duty cycles see PSI Power Systems Technical Spec #56100017 - Engine Ratings Guidelines

2: Technical data based on ISO 3046-1 standards of 77°F(25°C), barometric pressure 14.5Psia (100kPa) and 30% relative humidity.

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: All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

5: All values in the following section are provided for informational purpose only and are non-binding.

6: >1400RPM.

7: See PSI Power Systems Technical Spec. 56100019 - Fuel Standard.

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10: ± 0.002" or 0.05mm.

11: At 0.5 in-H<sub>2</sub>O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m<sup>3</sup> for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide





## 53L Fuel Consumption Data Prime

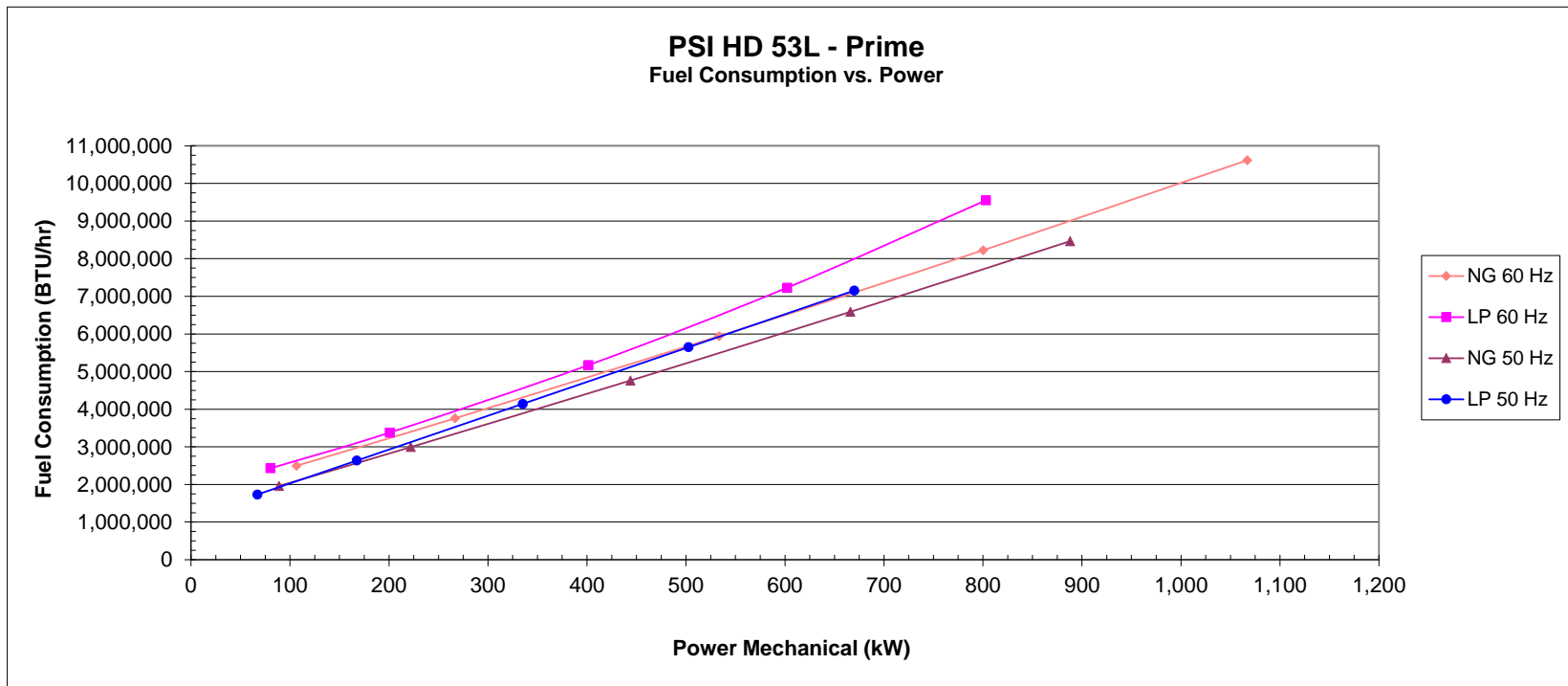
NG 60 Hz				
Power at Flywheel (kw)	kg/hr	m3/hr	ft3/hr	BTU/hr
1,067	233	324.3	11,453	10,616,944
800	180	251.4	8,875	8,227,119
534	130	181.6	6,411	5,942,571
267	82	114.9	4,055	3,758,791
107	54.7	76.3	2,694	2,496,892

NG 50 Hz				
Power at Flywheel (kw)	kg/hr	m3/hr	ft3/hr	BTU/hr
888	185	258.7	9,133	8,465,848
666	144	201.3	7,106	6,587,256
444	104	145.6	5,138	4,763,060
222	66	91.5	3,229	2,993,261
89	43	59.8	2,112	1,957,491

Gas Properties		
	Density	Heat content
LP Density	0.51 kg/L	91500 BTU/gal
NG Density	0.717 kg/m3	927 BTU/ft3

LP 60 Hz				
Power at Flywheel (kw)	kg/hr	L/hr	gal/hr	BTU/hr
803	202	395.4	104.4	9,551,601
602	153	299.3	79.0	7,230,281
402	109	214.1	56.5	5,172,707
201	71	139.9	36.9	3,378,879
80	51	100.6	26.5	2,429,181

LP 50 Hz				
Power at Flywheel (kw)	kg/hr	L/hr	gal/hr	BTU/hr
670	151	296.1	78.2	7,153,458
503	119	233.8	61.7	5,647,321
335	87	171.4	45.3	4,141,185
168	56	109.1	28.8	2,635,048
67	37	71.7	18.9	1,731,366



Technical data based on ISO 3046-1 standards of 77°F (25°C), barometric pressure of 14.5Psia (100kPa) and 30% relative humidity. Production tolerances in engines and installed components can account for power variations of ± 5%.