POWER SOLUTIONS INTERNATIONAL

40L

Natural Gas / LPG

56100026
Revision 9
2022-05-10

General Engine Data[5]												
Type	V-type 4-cycle				Flywheel housing			SAE #0				
Number of cylinders	12				Flywheel			SAE #18				
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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	127	120		
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89		Max	qts	L	154	146		
Catalyst Inlet Size (O.D)	in	mm	5	124	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Shut Down[6]		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	59	4.1		
Maximum Fuel System Pressure[8]	psi	kPa	29	200		Max	psi	bar	82	5.7		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Coolant Capacity (Engine only)		gal	L	20	76		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	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[10]	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	8.3		

Performance Data 60Hz[3,5]												
Nominal Engine Speed	RPM		1800		Total Engine Coolant Flow		gal/min	L/min	459	1736		
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power[11]		HP	kW	54	40		
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[11]		SCFM	m^3/min	52000	1472		
Charging Alternator Current	Amps		55									

Standby 60Hz Natural Gas	Load		100%		75%		50%		25%	
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	1234	920	925	690	617	460	308	230
Brake Mean Effective Pressure	psi	bar	227	15.6	170	11.7	113	7.8	57	3.9
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	452	205	336	152	242	110	155	70
	ft^3/hr	m^3/hr	10109	286	7503	212	5410	153	3468	98
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.367	223	0.363	221	0.393	239	0.503	306
Turbine Outlet Temperature	°F	°C	1238	670	1185	640	1131	611	1077	581
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	7755	3518	5916	2684	4203	1907	2599	1179
	ACFM	m^3/min	5420	153	4021	114	2777	79	1668	47
Air Induction System[5]										
Combustion Air required (entire engine)	lb/hr	kg/hr	7302	3312	5580	2531	3961	1797	2444	1109
	ACFM	m^3/min	1676	47	1281	36	909	26	561	16
Compressor Outlet Temperature[2]	°F	°C	277	136	247	119	225	107	153	67
Thermal Balance[5]										
Total Fuel	BTU/min	kW	154098	2710	115643	2034	82411	1449	54400	957
Mechanical Power	BTU/min	kW	52319	920	39240	690	26160	460	13080	230
Heat Rejected to Cooling Water	BTU/min	kW	43684	768	36018	633	28352	499	20686	364
Heat Rejected to CAC	BTU/min	kW	5977	105	3992	70	2242	39	728	13
Heat Rejection to Exhaust	BTU/min	kW	42017	739	29184	513	19192	337	12041	212
Engine Radiated Heat	BTU/min	kW	10101	178	7210	127	6465	114	7866	138

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-H2O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide

POWER SOLUTIONS INTERNATIONAL

40L

Natural Gas / LPG

56100026
Revision 9
2022-05-10

General Engine Data[5]												
Type	V-type 4-cycle				Flywheel housing			SAE #0				
Number of cylinders	12				Flywheel			SAE #18				
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 50Hz[3,5]												
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[11]		HP	kW	31	23		
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[11]		SCFM	m^3/min	56080	1588		
Charging Alternator Current	Amps		53									
Standby 50Hz Natural Gas	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	992	740	744	555	496	370	248	185		
Brake Mean Effective Pressure	psi	bar	219	15.1	164	11.3	109	7.5	55	3.8		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	347	158	262	119	192	87	121	55		
	ft^3/hr	m^3/hr	7762	220	5859	166	4296	122	2709	77		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.350	213	0.352	214	0.388	236	0.489	297		
Turbine Outlet Temperature	°F	°C	1183	639	1106	597	1082	583	1065	574		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	6043	2741	4630	2100	3320	1506	2097	951		
	ACFM	m^3/min	4102	116	3019	85	2137	61	1337	38		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	5695	2583	4368	1981	3128	1419	1976	896		
	ACFM	m^3/min	1307	37	1003	28	718	20	454	13		
Compressor Outlet Temperature[2]	°F	°C	250	121	242	117	182	83	127	53		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	118722	2088	90439	1590	64622	1136	41269	726		
Mechanical Power	BTU/min	kW	42083	740	31562	555	21042	370	10521	185		
Heat Rejected to Cooling Water	BTU/min	kW	35132	618	28966	509	22799	401	16633	292		
Heat Rejected to CAC	BTU/min	kW	4054	71	2866	50	1388	24	329	6		
Heat Rejection to Exhaust	BTU/min	kW	30027	528	21583	380	14515	255	8824	155		
Engine Radiated Heat	BTU/min	kW	7426	131	5462	96	4877	86	4962	87		

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-H2O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

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Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 60Hz[3,5]												
Nominal Engine Speed	RPM		1800		Total Engine Coolant Flow		gal/min	L/min	459	1736		
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power[11]		HP	kW	54	40		
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[11]		SCFM	m^3/min	52000	1472		
Charging Alternator Current	Amps		55									
Standby 60Hz LPG	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	783	584	587	438	392	292	196	146		
Brake Mean Effective Pressure	psi	bar	144	9.9	108	7.4	72	5.0	36	2.5		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	352	160	266	121	185	84	123	56		
	gal/hr	L/hr	83	313	62	236	43	165	29	109		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.449	273	0.453	275	0.473	288	0.626	381		
Turbine Outlet Temperature	°F	°C	1292	700	1199	648	1118	603	1049	565		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	5786	2625	4363	1979	3112	1412	2046	928		
	ACFM	m^3/min	4160	118	2988	85	2042	58	1293	37		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	5434	2465	4098	1859	2927	1328	1923	872		
	ACFM	m^3/min	1248	35	941	27	672	19	441	13		
Compressor Outlet Temperature[2]	°F	°C	255	124	243	117	174	79	124	51		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	119825	2107	89725	1578	63603	1118	41458	729		
Mechanical Power	BTU/min	kW	33211	584	24909	438	16606	292	8303	146		
Heat Rejected to Cooling Water	BTU/min	kW	27735	488	22869	402	18002	317	13136	231		
Heat Rejected to CAC	BTU/min	kW	4076	72	2700	47	1450	26	328	6		
Heat Rejection to Exhaust	BTU/min	kW	32842	578	22321	392	14238	250	8593	151		
Engine Radiated Heat	BTU/min	kW	21960	386	16927	298	13307	234	11098	195		

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

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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.

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13: See 56100051 - MFG Fuel System Setup Guide

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General Engine Data[5]												
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Number of cylinders	12				Flywheel			SAE #18				
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 50Hz[3,5]												
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[11]		HP	kW	31	23		
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[11]		SCFM	m^3/min	56080	1588		
Charging Alternator Current	Amps		53									
Standby 50Hz LPG	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	653	487	490	365	327	244	163	122		
Brake Mean Effective Pressure	psi	bar	144	9.9	108	7.4	72	5.0	36	2.5		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	265	120	203	92	147	67	97	44		
	gal/hr	L/hr	62	235	48	181	35	131	23	87		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.405	246	0.415	252	0.450	274	0.597	363		
Turbine Outlet Temperature	°F	°C	1172	633	1134	612	1080	582	1009	543		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	4366	1980	3374	1531	2459	1115	1620	735		
	ACFM	m^3/min	2947	83	2233	63	1580	45	1001	28		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	4102	1860	3171	1438	2312	1049	1523	691		
	ACFM	m^3/min	942	27	728	21	531	15	350	10		
Compressor Outlet Temperature[2]	°F	°C	240	115	190	88	142	61	109	43		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	89959	1582	69000	1213	50048	880	33102	582		
Mechanical Power	BTU/min	kW	27695	487	20771	365	13848	244	6924	122		
Heat Rejected to Cooling Water	BTU/min	kW	23125	407	19068	335	15010	264	10952	193		
Heat Rejected to CAC	BTU/min	kW	2796	49	1510	27	651	11	217	4		
Heat Rejection to Exhaust	BTU/min	kW	21662	381	16762	295	11755	207	6643	117		
Engine Radiated Heat	BTU/min	kW	14681	258	10889	191	8785	154	8366	147		

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-H2O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide

40L Fuel Consumption Data
Standby

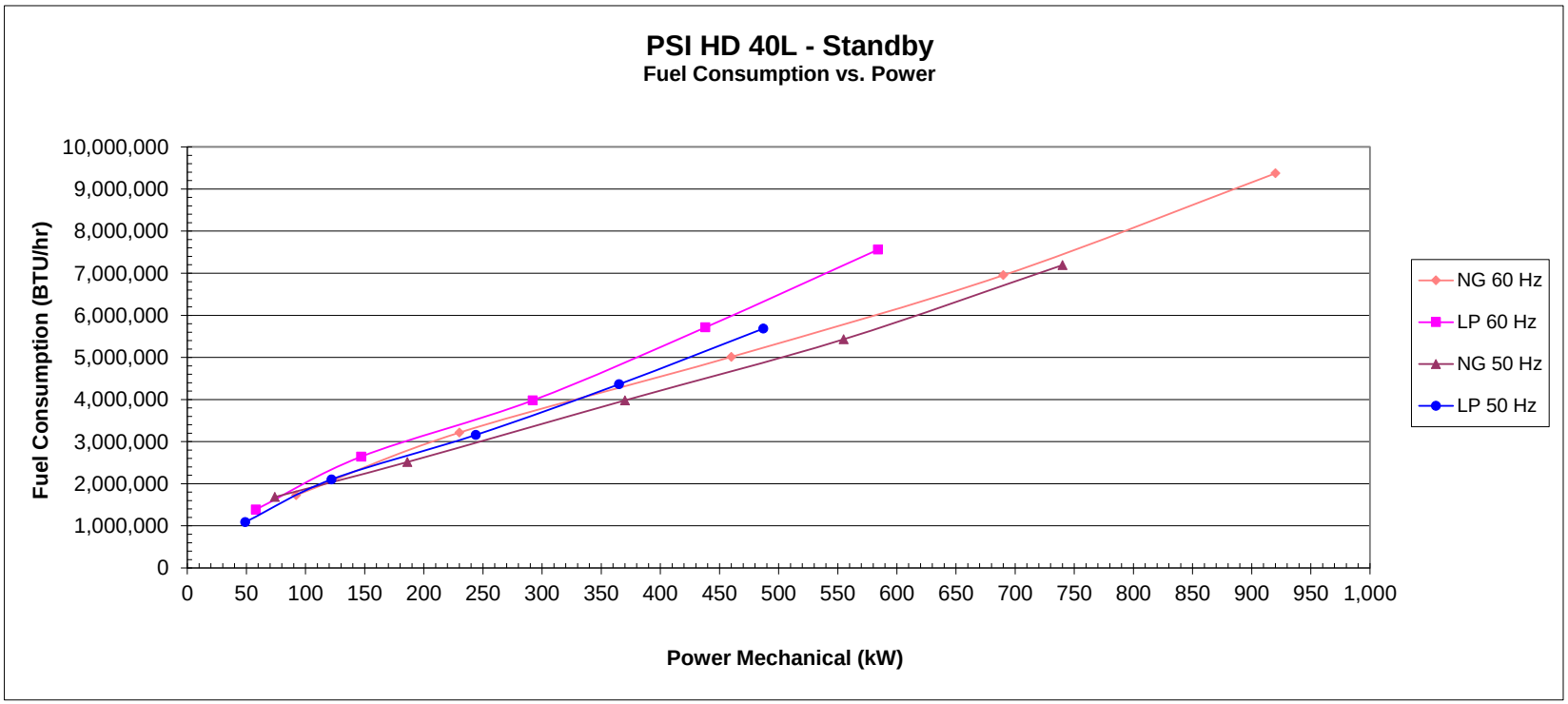
NG 60 Hz				
Power at Flywheel (kw)	kg/hr	m3/hr	ft3/hr	BTU/hr
920	205.2	286.3	10,109	9,371,224
690	152.3	212.4	7,499	6,951,921
460	109.8	153.2	5,408	5,013,131
230	70.4	98.2	3,467	3,213,729
92	37.9	52.8	1,864	1,728,335

NG 50 Hz				
Power at Flywheel (kw)	kg/hr	m3/hr	ft3/hr	BTU/hr
740	157.6	219.8	7,759	7,192,693
555	119.0	166.0	5,859	5,431,031
370	87.2	121.6	4,293	3,979,713
186	55.1	76.8	2,713	2,514,704
74	36.9	51.5	1,817	1,684,076

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
584	159.6	312.9	82.6	7,559,407
438	120.6	236.5	62.4	5,712,184
292	84.0	164.7	43.5	3,978,635
147	55.8	109.4	28.9	2,642,951
58	29.3	57.5	15.2	1,387,786

LP 50 Hz				
Power at Flywheel (kw)	kg/hr	L/hr	gal/hr	BTU/hr
487	120.0	235.3	62.1	5,683,765
365	92.1	180.6	47.7	4,362,289
244	66.7	130.8	34.5	3,159,226
122	44.4	87.1	23.0	2,102,993
49	23.0	45.1	11.9	1,089,388



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%.

2022-07-08

POWER SOLUTIONS INTERNATIONAL

40L

Natural Gas / LPG

56100026
Revision 9
2022-05-10

General Engine Data[5]												
Type	V-type 4-cycle				Flywheel housing			SAE #0				
Number of cylinders	12				Flywheel			SAE #18				
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 60Hz[3,5]												
Nominal Engine Speed	RPM		1800		Total Engine Coolant Flow		gal/min	L/min	459	1736		
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power[11]		HP	kW	54	40		
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[11]		SCFM	m^3/min	52000	1472		
Charging Alternator Current	Amps		55									
LTP 60Hz Natural Gas	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	1234	920	925	690	617	460	308	230		
Brake Mean Effective Pressure	psi	bar	227	15.6	170	11.7	113	7.8	57	3.9		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	452	205	336	152	242	110	155	70		
	ft^3/hr	m^3/hr	10109	286	7503	212	5410	153	3468	98		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.367	223	0.363	221	0.393	239	0.503	306		
Turbine Outlet Temperature	°F	°C	1238	670	1185	640	1131	611	1077	581		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	7755	3518	5916	2684	4203	1907	2599	1179		
	ACFM	m^3/min	5420	153	4021	114	2777	79	1668	47		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	7302	3312	5580	2531	3961	1797	2444	1109		
	ACFM	m^3/min	1676	47	1281	36	909	26	561	16		
Compressor Outlet Temperature[2]	°F	°C	277	136	247	119	225	107	153	67		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	154098	2710	115643	2034	82411	1449	54400	957		
Mechanical Power	BTU/min	kW	52319	920	39240	690	26160	460	13080	230		
Heat Rejected to Cooling Water	BTU/min	kW	43684	768	36018	633	28352	499	20686	364		
Heat Rejected to CAC	BTU/min	kW	5977	105	3992	70	2242	39	728	13		
Heat Rejection to Exhaust	BTU/min	kW	42017	739	29184	513	19192	337	12041	212		
Engine Radiated Heat	BTU/min	kW	10101	178	7210	127	6465	114	7866	138		

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-H2O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide

POWER SOLUTIONS INTERNATIONAL

40L

Natural Gas / LPG

56100026
Revision 9
2022-05-10

General Engine Data[5]												
Type	V-type 4-cycle				Flywheel housing			SAE #0				
Number of cylinders	12				Flywheel			SAE #18				
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 50Hz[3,5]												
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[11]		HP	kW	31	23		
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[11]		SCFM	m^3/min	56080	1588		
Charging Alternator Current	Amps		53									
LTP 50Hz Natural Gas	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	992	740	744	555	496	370	248	185		
Brake Mean Effective Pressure	psi	bar	219	15.1	164	11.3	109	7.5	55	3.8		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	347	158	262	119	192	87	121	55		
	ft^3/hr	m^3/hr	7762	220	5859	166	4296	122	2709	77		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.350	213	0.352	214	0.388	236	0.489	297		
Turbine Outlet Temperature	°F	°C	1183	639	1106	597	1082	583	1065	574		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	6043	2741	4630	2100	3320	1506	2097	951		
	ACFM	m^3/min	4102	116	3019	85	2137	61	1337	38		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	5695	2583	4368	1981	3128	1419	1976	896		
	ACFM	m^3/min	1307	37	1003	28	718	20	454	13		
Compressor Outlet Temperature[2]	°F	°C	250	121	242	117	182	83	127	53		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	118722	2088	90439	1590	64622	1136	41269	726		
Mechanical Power	BTU/min	kW	42083	740	31562	555	21042	370	10521	185		
Heat Rejected to Cooling Water	BTU/min	kW	35132	618	28966	509	22799	401	16633	292		
Heat Rejected to CAC	BTU/min	kW	4054	71	2866	50	1388	24	329	6		
Heat Rejection to Exhaust	BTU/min	kW	30027	528	21583	380	14515	255	8824	155		
Engine Radiated Heat	BTU/min	kW	7426	131	5462	96	4877	86	4962	87		

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-H2O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide

POWER SOLUTIONS INTERNATIONAL

40L

Natural Gas / LPG

56100026
Revision 9
2022-05-10

General Engine Data[5]												
Type	V-type 4-cycle				Flywheel housing			SAE #0				
Number of cylinders	12				Flywheel			SAE #18				
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 60Hz[3,5]												
Nominal Engine Speed	RPM		1800		Total Engine Coolant Flow		gal/min	L/min	459	1736		
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power[11]		HP	kW	54	40		
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[11]		SCFM	m^3/min	52000	1472		
Charging Alternator Current	Amps		55									
LTP 60Hz LPG	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	783	584	587	438	392	292	196	146		
Brake Mean Effective Pressure	psi	bar	144	9.9	108	7.4	72	5.0	36	2.5		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	352	160	266	121	185	84	123	56		
	gal/hr	L/hr	83	313	62	236	43	165	29	109		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.449	273	0.453	275	0.473	288	0.626	381		
Turbine Outlet Temperature	°F	°C	1292	700	1199	648	1118	603	1049	565		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	5786	2625	4363	1979	3112	1412	2046	928		
	ACFM	m^3/min	4160	118	2988	85	2042	58	1293	37		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	5434	2465	4098	1859	2927	1328	1923	872		
	ACFM	m^3/min	1248	35	941	27	672	19	441	13		
Compressor Outlet Temperature[2]	°F	°C	255	124	243	117	174	79	124	51		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	119825	2107	89725	1578	63603	1118	41458	729		
Mechanical Power	BTU/min	kW	33211	584	24909	438	16606	292	8303	146		
Heat Rejected to Cooling Water	BTU/min	kW	27735	488	22869	402	18002	317	13136	231		
Heat Rejected to CAC	BTU/min	kW	4076	72	2700	47	1450	26	328	6		
Heat Rejection to Exhaust	BTU/min	kW	32842	578	22321	392	14238	250	8593	151		
Engine Radiated Heat	BTU/min	kW	21960	386	16927	298	13307	234	11098	195		

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-H2O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide

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General Engine Data[5]												
Type	V-type 4-cycle				Flywheel housing			SAE #0				
Number of cylinders	12				Flywheel			SAE #18				
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 50Hz[3,5]												
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[11]		HP	kW	31	23		
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[11]		SCFM	m^3/min	56080	1588		
Charging Alternator Current	Amps		53									
LTP 50Hz LPG	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	653	487	490	365	327	244	163	122		
Brake Mean Effective Pressure	psi	bar	144	9.9	108	7.4	72	5.0	36	2.5		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	265	120	203	92	147	67	97	44		
	gal/hr	L/hr	62	235	48	181	35	131	23	87		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.405	246	0.415	252	0.450	274	0.597	363		
Turbine Outlet Temperature	°F	°C	1172	633	1134	612	1080	582	1009	543		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	4366	1980	3374	1531	2459	1115	1620	735		
	ACFM	m^3/min	2947	83	2233	63	1580	45	1001	28		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	4102	1860	3171	1438	2312	1049	1523	691		
	ACFM	m^3/min	942	27	728	21	531	15	350	10		
Compressor Outlet Temperature[2]	°F	°C	240	115	190	88	142	61	109	43		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	89959	1582	69000	1213	50048	880	33102	582		
Mechanical Power	BTU/min	kW	27695	487	20771	365	13848	244	6924	122		
Heat Rejected to Cooling Water	BTU/min	kW	23125	407	19068	335	15010	264	10952	193		
Heat Rejected to CAC	BTU/min	kW	2796	49	1510	27	651	11	217	4		
Heat Rejection to Exhaust	BTU/min	kW	21662	381	16762	295	11755	207	6643	117		
Engine Radiated Heat	BTU/min	kW	14681	258	10889	191	8785	154	8366	147		

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-H2O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide

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General Engine Data[5]												
Type	V-type 4-cycle				Flywheel housing			SAE #0				
Number of cylinders	12				Flywheel			SAE #18				
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 60Hz[3,5]												
Nominal Engine Speed	RPM		1800		Total Engine Coolant Flow		gal/min	L/min	459	1736		
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power[11]		HP	kW	54	40		
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[11]		SCFM	m^3/min	52000	1472.46		
Charging Alternator Current	Amps		55									
Prime 60Hz Natural Gas	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	1110	828	833	621	555	414	278	207		
Brake Mean Effective Pressure	psi	bar	204	14.1	153	10.6	102	7.0	51	3.5		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	399	181	307	139	225	102	146	66		
	ft^3/hr	m^3/hr	8903	252	6858	194	5016	142	3253	92		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.359	218	0.369	224	0.404	246	0.525	319		
Turbine Outlet Temperature	°F	°C	1217	658	1169	631	1120	605	1072	578		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	7000	3175	5391	2445	3874	1757	2444	1108		
	ACFM	m^3/min	4838	137	3633	103	2545	72	1564	44		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	6601	2994	5084	2306	3649	1655	2298	1042		
	ACFM	m^3/min	1515	43	1167	33	838	24	528	15		
Compressor Outlet Temperature[2]	°F	°C	256	124	244	118	215	101	144	62		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	138090	2428	105125	1849	76391	1343	51886	912		
Mechanical Power	BTU/min	kW	47088	828	35316	621	23544	414	11772	207		
Heat Rejected to Cooling Water	BTU/min	kW	40617	714	33718	593	26819	472	19919	350		
Heat Rejected to CAC	BTU/min	kW	5155	91	3442	61	1921	34	590	10		
Heat Rejection to Exhaust	BTU/min	kW	36543	643	25888	455	17535	308	11482	202		
Engine Radiated Heat	BTU/min	kW	8687	153	6761	119	6573	116	8124	143		

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-H2O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide

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General Engine Data[5]												
Type	V-type 4-cycle				Flywheel housing			SAE #0				
Number of cylinders	12				Flywheel			SAE #18				
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 50Hz[3,5]												
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[11]		HP	kW	31	23		
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[11]		SCFM	m^3/min	56080	1588		
Charging Alternator Current	Amps		53									
Prime 50Hz Natural Gas	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	893	666	670	500	662	333	223	167		
Brake Mean Effective Pressure	psi	bar	197	13.6	148	10.2	98	6.8	49	3.4		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	290	131	248	112	175	79	116	53		
	ft^3/hr	m^3/hr	6470	183	5530	157	3900	110	2602	74		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.324	197	0.370	225	0.391	238	0.522	317		
Turbine Outlet Temperature	°F	°C	1143	617	1096	591	1080	582	1062	572		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	5443	2469	4234	1921	3065	1390	1982	899		
	ACFM	m^3/min	3619	102	2745	78	1970	56	1261	36		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	5154	2338	3987	1808	2890	1311	1865	846		
	ACFM	m^3/min	1183	34	915	26	664	19	428	12		
Compressor Outlet Temperature[2]	°F	°C	252	122	228	109	168	76	123	51		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	107113	1884	82435	1450	59754	1051	39070	687		
Mechanical Power	BTU/min	kW	37875	666	28406	500	18937	333	9469	167		
Heat Rejected to Cooling Water	BTU/min	kW	32665	574	27116	477	21566	379	16017	282		
Heat Rejected to CAC	BTU/min	kW	3659	64	2421	43	1120	20	273	5		
Heat Rejection to Exhaust	BTU/min	kW	26484	466	19318	340	13267	233	8331	146		
Engine Radiated Heat	BTU/min	kW	6430	113	5174	91	4863	86	4980	88		

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-H2O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide

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General Engine Data[5]												
Type	V-type 4-cycle				Flywheel housing				SAE #0			
Number of cylinders	12				Flywheel				SAE #18			
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 60Hz[3,5]												
Nominal Engine Speed	RPM		1800		Total Engine Coolant Flow		gal/min	L/min	459	1736		
Mean Piston Speed	ft/min	m/s	2185	11.1	Cooling Fan Power[11]		HP	kW	54	40		
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[11]		SCFM	m^3/min	52000	1472		
Charging Alternator Current	Amps		55									
Prime 60Hz LPG	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	705	526	529	395	353	263	176	132		
Brake Mean Effective Pressure	psi	bar	130	8.9	97	6.7	65	4.5	32	2.2		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	322	146	239	108	172	78	115	52		
	gal/hr	L/hr	76	286	56	212	40	153	27	102		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.456	277	0.452	275	0.489	297	0.653	397		
Turbine Outlet Temperature	°F	°C	1254	679	1174	634	1104	595	1043	562		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	5205	2361	3970	1801	2887	1310	1948	883		
	ACFM	m^3/min	3667	104	2683	76	1880	53	1227	35		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	4883	2215	3732	1693	2715	1231	1832	831		
	ACFM	m^3/min	1121	32	857	24	623	18	421	12		
Compressor Outlet Temperature[2]	°F	°C	262	128	225	107	160	71	123	51		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	107391	1888	81526	1434	58888	1035	39476	694		
Mechanical Power	BTU/min	kW	29913	526	22435	395	14957	263	7478	132		
Heat Rejected to Cooling Water	BTU/min	kW	25802	454	21419	377	17036	300	12653	222		
Heat Rejected to CAC	BTU/min	kW	3514	62	2314	41	1217	21	223	4		
Heat Rejection to Exhaust	BTU/min	kW	28371	499	19658	346	12922	227	8165	144		
Engine Radiated Heat	BTU/min	kW	19792	348	15701	276	12756	224	10956	193		

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-H2O of Package Restriction at STP.

12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide

POWER SOLUTIONS INTERNATIONAL

40L

Natural Gas / LPG

56100026
Revision 9
2022-05-10

General Engine Data[5]												
Type	V-type 4-cycle				Flywheel housing			SAE #0				
Number of cylinders	12				Flywheel			SAE #18				
Aspiration	Charge Cooled Forced Induction				Dry Weight	Fan to Flywheel	lb	kg	7432	3371		
Firing Order	1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12					Radiator to Flywheel	lb	kg	8724	3957		
Rotation Viewed from Flywheel	Counter-Clockwise				Wet Weight	Fan to Flywheel	lb	kg	7894	3581		
Bore	in	mm	5.91	150		Radiator to Flywheel	lb	kg	9412	4269		
Stroke	in	mm	7.28	185	CG From Rear Face of Flywheel Housing		in	mm	38.1	969		
Displacement	in^3	L	2394	39.2	CG Above Crank Centerline		in	mm	7.0	179		
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											
Turbo Exhaust Outlet Pipe Size	in	mm	3.5	89	Engine Oil Capacity	Min	qts	L	127	120		
Catalyst Inlet Size (O.D)	in	mm	5	124		Max	qts	L	154	146		
Catalyst Dp	in-H_2O	kPa	33	8.3	ECU Oil Pressure Warning[6]		psi	bar	57	3.9		
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down[6]		psi	bar	47	3.2		
Maximum Fuel System Pressure[8]	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)	Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H_2O	kPa	30	7.5		Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H_2O	kPa	20	5.0	Max Allowable Oil Temperature		°F	°C	250	121		
Minimum Gas Supply Pipe Size[13]	in	mm	3	76	Coolant Capacity (Engine only)		gal	L	20	76		
Maximum Pressure Drop Across CAC	psi	kPa	1.5	10.3	Coolant Capacity (Radiator only)		gal	L	25	96		
Maximum Allowable Intake Restriction: Clean Air Filter	in-H_2O	kPa	5.2	1.3	Radiator Weight (Dry)		lb	kg	1292	586		
Maximum Allowable Intake Restriction: Dirty Air Filter	in-H_2O	kPa	14.9	3.7	Thermostat Operating Temperature Range[9]	Cracking	°F	°C	176	80		
Spark Plug Part Number	Denso GK3-5					Full Open	°F	°C	198	92		
Standard Spark Plug Gap[10]	in	mm	0.012	0.3	ECU Coolant Temp Warning		°F	°C	219	104		
Spark Plug Coil - Primary Resistance	Ohms		0.59Ω ± 10%		ECU Coolant Temp Shutdown		°F	°C	230	110		
Battery Voltage	Volts		24		Maximum Radiator Cooling Air Temp		°F	°C	140	60		
Starter Motor Power (2X starters)	HP	kW	13.4	10	Max External Coolant Friction Head		psi	kPa	9	60		
					CAC Rise Above Ambient Specified		°F	°C	15	8.3		

Performance Data 50Hz[3,5]												
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[11]		HP	kW	31	23		
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[11]		SCFM	m^3/min	56080	1588		
Charging Alternator Current	Amps		53									
Prime 50Hz LPG	**Load**		**100%**		**75%**		**50%**		**25%**			
Power Rating[1,2,3,4] Per ISO 3046	HP	kWm	587	438	441	329	294	219	147	110		
Brake Mean Effective Pressure	psi	bar	130	8.9	97	6.7	65	4.5	32	2.2		
Fuel Consumption[3,4,7,12]	lb/hr	kg/hr	242	110	184	84	137	62	91	41		
	gal/hr	L/hr	57	215	43	164	32	122	21	81		
Brake Specific Fuel Consumption	lb/(hp-hr)	g/(kW-hr)	0.411	250	0.419	255	0.468	285	0.621	378		
Turbine Outlet Temperature	°F	°C	1159	626	1119	604	1067	575	1001	538		
Exhaust Flow at Turbine Outlet Conditions (entire engine)	lb/hr	kg/hr	3960	1796	3089	1401	2285	1036	1538	698		
	ACFM	m^3/min	2655	75	2028	57	1458	41	946	27		
Air Induction System[5]												
Combustion Air required (entire engine)	lb/hr	kg/hr	3719	1687	2904	1317	2147	974	1447	656		
	ACFM	m^3/min	854	24	667	19	493	14	332	9		
Compressor Outlet Temperature[2]	°F	°C	220	105	175	79	134	57	107	42		
Thermal Balance[5]												
Total Fuel	BTU/min	kW	81283	1429	63068	1109	46477	817	31508	554		
Mechanical Power	BTU/min	kW	24909	438	18681	329	12454	219	6227	110		
Heat Rejected to Cooling Water	BTU/min	kW	21492	378	17843	314	14193	250	10543	185		
Heat Rejected to CAC	BTU/min	kW	2227	39	1206	21	530	9	197	3		
Heat Rejection to Exhaust	BTU/min	kW	19703	346	15262	268	10735	189	6123	108		
Engine Radiated Heat	BTU/min	kW	12952	228	10076	177	8565	151	8418	148		

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12: Volume calculated using density of 0.717 kg/m3 for NG, 0.51 kg/L for LPG

13: See 56100051 - MFG Fuel System Setup Guide

40L Fuel Consumption Data
Prime

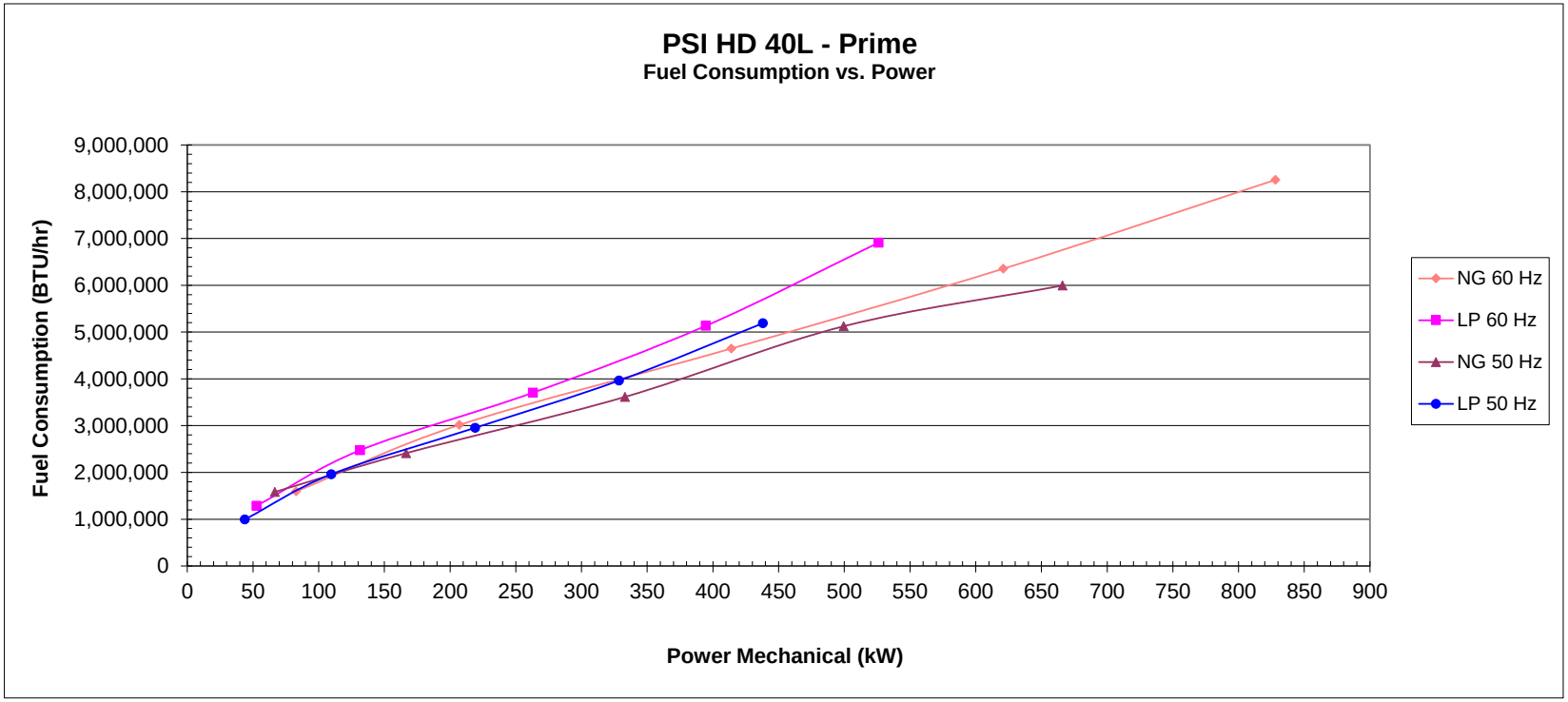
NG 60 Hz				
Power at Flywheel (kw)	kg/hr	m3/hr	ft3/hr	BTU/hr
828	180.8	252.1	8,903	8,253,391
621	139.2	194.2	6,855	6,354,971
414	101.8	142.0	5,014	4,648,264
207	66.0	92.1	3,252	3,014,245
83	34.9	48.7	1,718	1,592,623

NG 50 Hz				
Power at Flywheel (kw)	kg/hr	m3/hr	ft3/hr	BTU/hr
666	131.4	183.2	6,467	5,994,707
500	112.3	156.6	5,528	5,124,108
333	79.2	110.4	3,898	3,613,373
167	52.8	73.7	2,601	2,411,178
67	34.7	48.3	1,706	1,581,483

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
526	145.9	286.1	75.5	6,910,942
395	108.4	212.5	56.1	5,132,402
263	78.2	153.3	40.5	3,704,047
132	52.2	102.4	27.0	2,473,928
53	27.1	53.2	14.0	1,284,787

LP 50 Hz				
Power at Flywheel (kw)	kg/hr	L/hr	gal/hr	BTU/hr
438	109.6	214.8	56.7	5,189,014
329	83.7	164.1	43.3	3,962,941
219	62.4	122.3	32.3	2,953,212
110	41.4	81.1	21.4	1,959,048
44	21.0	41.2	10.9	994,588



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%.

2022-07-08