



**POWER SOLUTIONS  
INTERNATIONAL**

# 40L

## Natural Gas / LPG

56100026

Revision 9

2022-05-10

General Engine Data <sup>5</sup>													
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 <sup>3</sup>	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 <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Warning <sup>6</sup>			psi	bar	57	3.9	
Maximum Allowable Exhaust Back Pressure		in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down <sup>6</sup>			psi	bar	47	3.2	
Maximum Fuel System Pressure <sup>8</sup>		psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	59	4.1	
Maximum Operating pressure to MFG		in-H <sub>2</sub> O	kPa	30	7.5			Max	psi	bar	82	5.7	
Minimum Operating pressure to MFG		in-H <sub>2</sub> O	kPa	20	5.0	Max Allowable Oil Temperature			°F	°C	250	121	
Minimum Gas Supply Pipe Size <sup>13</sup>		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 <sub>2</sub> O	kPa	5.2	1.3	Radiator Weight (Dry)			lb	kg	1292	586	
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80	
Spark Plug Part Number		Denso GK3-5						Full Open	°F	°C	198	92	
Standard Spark Plug Gap <sup>10</sup>		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 <sup>3,5</sup>													
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 <sup>11</sup>			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 <sup>11</sup>			SCFM	m <sup>3</sup> /min	52000	1472	
Charging Alternator Current		Amps		55									
LTP 60Hz Natural Gas		Load		100%		75%		50%		25%			
Power Rating <sup>1,2,3,4</sup> 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 <sup>3,4,7,12</sup>		lb/hr	kg/hr	452	205	336	152	242	110	155	70		
		ft <sup>3</sup> /hr	m <sup>3</sup> /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 <sup>3</sup> /min	5420	153	4021	114	2777	79	1668	47		
Air Induction System <sup>5</sup>													
Combustion Air required (entire engine)		lb/hr	kg/hr	7302	3312	5580	2531	3961	1797	2444	1109		
		ACFM	m <sup>3</sup> /min	1676	47	1281	36	909	26	561	16		
Compressor Outlet Temperature <sup>2</sup>		°F	°C	277	136	247	119	225	107	153	67		
Thermal Balance <sup>5</sup>													
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-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



**POWER SOLUTIONS  
INTERNATIONAL**

# 40L

## Natural Gas / LPG

56100026

Revision 9

2022-05-10

General Engine Data <sup>5</sup>													
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 <sup>3</sup>	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 <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Warning <sup>6</sup>			psi	bar	57	3.9	
Maximum Allowable Exhaust Back Pressure		in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down <sup>6</sup>			psi	bar	47	3.2	
Maximum Fuel System Pressure <sup>8</sup>		psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	59	4.1	
Maximum Operating pressure to MFG		in-H <sub>2</sub> O	kPa	30	7.5			Max	psi	bar	82	5.7	
Minimum Operating pressure to MFG		in-H <sub>2</sub> O	kPa	20	5.0	Max Allowable Oil Temperature			°F	°C	250	121	
Minimum Gas Supply Pipe Size <sup>13</sup>		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 <sub>2</sub> O	kPa	5.2	1.3	Radiator Weight (Dry)			lb	kg	1292	586	
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80	
Spark Plug Part Number		Denso GK3-5						Full Open	°F	°C	198	92	
Standard Spark Plug Gap <sup>10</sup>		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 <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	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 <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%			
Power Rating <sup>1,2,3,4</sup> 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 <sup>3,4,7,12</sup>		lb/hr	kg/hr	347	158	262	119	192	87	121	55		
		ft <sup>3</sup> /hr	m <sup>3</sup> /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 <sup>3</sup> /min	4102	116	3019	85	2137	61	1337	38		
Air Induction System <sup>5</sup>													
Combustion Air required (entire engine)		lb/hr	kg/hr	5695	2583	4368	1981	3128	1419	1976	896		
		ACFM	m <sup>3</sup> /min	1307	37	1003	28	718	20	454	13		
Compressor Outlet Temperature <sup>2</sup>		°F	°C	250	121	242	117	182	83	127	53		
Thermal Balance <sup>5</sup>													
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-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



**POWER SOLUTIONS  
INTERNATIONAL**

# 40L

## Natural Gas / LPG

56100026

Revision 9

2022-05-10

General Engine Data <sup>5</sup>													
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 <sup>3</sup>	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				
Exhaust Manifold Type	Water Cooled								Ash content 0.25 - 0.5% by weight				
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 <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9	
Maximum Allowable Exhaust Back Pressure	in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2	
Maximum Fuel System Pressure <sup>8</sup>	psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	59	4.1		
Maximum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	30	7.5			Max	psi	bar	82	5.7		
Minimum Operating pressure to MFG	in-H <sub>2</sub> O	kPa	20	5.0	Max Allowable Oil Temperature				°F	°C	250	121	
Minimum Gas Supply Pipe Size <sup>13</sup>	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 <sub>2</sub> O	kPa	5.2	1.3	Radiator Weight (Dry)				lb	kg	1292	586
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80	
Spark Plug Part Number	Denso GK3-5				Full Open			°F	°C	198	92		
Standard Spark Plug Gap <sup>10</sup>	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 <sup>3,5</sup>													
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 <sup>11</sup>				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 <sup>11</sup>				SCFM	m <sup>3</sup> /min	52000	1472	
Charging Alternator Current	Amps		55										
LTP 60Hz LPG	Load		100%		75%		50%		25%				
Power Rating <sup>1,2,3,4</sup> 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 <sup>3,4,7,12</sup>	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 <sup>3</sup> /min	4160	118	2988	85	2042	58	1293	37			
Air Induction System <sup>5</sup>													
Combustion Air required (entire engine)	lb/hr	kg/hr	5434	2465	4098	1859	2927	1328	1923	872			
	ACFM	m <sup>3</sup> /min	1248	35	941	27	672	19	441	13			
Compressor Outlet Temperature <sup>2</sup>	°F	°C	255	124	243	117	174	79	124	51			
Thermal Balance <sup>5</sup>													
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-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



**POWER SOLUTIONS  
INTERNATIONAL**

# 40L

## Natural Gas / LPG

56100026  
Revision 9  
2022-05-10

General Engine Data <sup>5</sup>													
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 <sup>3</sup>	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 <sub>2</sub> O	kPa	33	8.3	ECU Oil Pressure Warning <sup>6</sup>				psi	bar	57	3.9
Maximum Allowable Exhaust Back Pressure		in-Hg	kPa	3.8	13	ECU Oil Pressure Shut Down <sup>6</sup>				psi	bar	47	3.2
Maximum Fuel System Pressure <sup>8</sup>		psi	kPa	29	200	Oil Pressure at 1000 RPM (Idle)		Min	psi	bar	59	4.1	
Maximum Operating pressure to MFG		in-H <sub>2</sub> O	kPa	30	7.5			Max	psi	bar	82	5.7	
Minimum Operating pressure to MFG		in-H <sub>2</sub> O	kPa	20	5.0	Max Allowable Oil Temperature				°F	°C	250	121
Minimum Gas Supply Pipe Size <sup>13</sup>		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 <sub>2</sub> O	kPa	5.2	1.3	Radiator Weight (Dry)				lb	kg	1292	586
	Dirty Air Filter	in-H <sub>2</sub> O	kPa	14.9	3.7	Thermostat Operating Temperature Range <sup>9</sup>		Cracking	°F	°C	176	80	
Spark Plug Part Number		Denso GK3-5						Full Open	°F	°C	198	92	
Standard Spark Plug Gap <sup>10</sup>		in	mm	0.012	0.3	ECU Coolant Temp Warning				°F	°C	219	104
Spark Plug Coil - Primary Resistance		Ohms				ECU Coolant Temp Shutdown				°F	°C	230	110
Battery Voltage		Volts				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 <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	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 <sup>11</sup>				SCFM	m <sup>3</sup> /min	56080	1588
Charging Alternator Current		Amps		53									
LTP 50Hz LPG		Load		100%		75%		50%		25%			
Power Rating <sup>1,2,3,4</sup> 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 <sup>3,4,7,12</sup>		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 <sup>3</sup> /min	2947	83	2233	63	1580	45	1001	28		
Air Induction System <sup>5</sup>													
Combustion Air required (entire engine)		lb/hr	kg/hr	4102	1860	3171	1438	2312	1049	1523	691		
		ACFM	m <sup>3</sup> /min	942	27	728	21	531	15	350	10		
Compressor Outlet Temperature <sup>2</sup>		°F	°C	240	115	190	88	142	61	109	43		
Thermal Balance <sup>5</sup>													
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-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