



HEAVY-DUTY

14.6L

	Rev: C		14.6L			
	Units		14.6L			
	Std	Metric	1500		1800	
General Engine Data						
Type	N/A		V-type 4 cycle			
Number of cylinders	N/A		8			
Aspiration	N/A		Turbo Charge Air Cooled			
Bore	in	mm	5.04	128	5.04	128
Stroke	in	mm	5.59	142	5.59	142
Displacement	in ³	L	892	14.6	892	14.6
Compression Ratio	N/A		10.5			
Mean Piston Speed	ft/min	m/s	1398	7.1	1677	8.52
Gross Standby Power Rating^{1,2,3} Per ISO 3046 at the Flywheel						
NG	Hp	kW	339	253	459	342
LP	Hp	kW	229	171	319	238
MEP (@ rated Load on NG)	psi	bar	201	13.8	226	15.6
MEP (@ rated Load on LP)	psi	bar	136	9.4	157	10.9
Gross Prime Power Rating^{1,2,3} Per ISO 3046 at the Flywheel						
NG	Hp	kW	305	228	390	291
LP	Hp	kW	206	154	271	202
MEP (@ rated Load on NG)	psi	bar	181	12.5	192	13.3
MEP (@ rated Load on LP)	psi	bar	122	8.4	134	9.2
RPM Range (Min-Max)	RPM		1500-1800			
Rotation Viewed from Flywheel	N/A		Counter Clockwise			
Firing Order	N/A		1-5-7-2-6-3-4-8-1			
Dry Weight						
Fan to Flywheel	lb	kg	3150	1429	3150	1429
Rad to Flywheel	lb	kg	4450	2018	4450	2018
Wet Weight						
Fan to Flywheel	lb	kg	3291	1475	3291	1475
Rad to Flywheel	lb	kg	4757	2155	4757	2155
CG						
Distance from FW housing	in	mm	18	449	18	449
Distance above center of crankshaft	in	mm	6	159	6	159
Engine Mounting						
Maximum Allowable Bending Moment at Rear of Block	lb ft	N m	4425	6000	4425	6000
Moment of Inertia About Roll Axis	lb ft ²	kg m ²				
Flywheel housing	N/A		SAE No.1			
Flywheel	N/A		No. 14			
Number of Flywheel Teeth	N/A		160			
Exhaust System						
Type			Water Cooled Manifold			
Maximum allowable Back pressure	in HG	kPa	3	10.2	3	10.2
Standard Catalyst Back pressure	in HG	kPa	1.5	5.1	1.5	5.1
Exhaust Outlet Pipe Size						
Maximum Turbine Inlet Temperature	F	C	1382	750	1382	750
Exhaust Flow at Rated Power	lb/hr	kg/hr	2094	950	2782	1301
Exhaust Flow at Rated Power @ 1350F	cfm	m ³ /min	1596	45.2	1895	53.6
Air Induction System						
Maximum allowable Intake Air Restriction with Air Cleaner						
Clean	inH ₂ O	kPa	5	1.24	5	1.24
Dirty	inH ₂ O	kPa	15	3.74	15	3.74
Combustion Air required (entire engine)	lb/hr	kg/hr	1975	896	2625	1227
Combustion Air required (entire engine)	cfm	m ³ /min	502	14	687	19



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Electrical System						
Minimum Recommended Battery Capacity	AH		200			
Cold Cranking Current						
Engine only	CCA		1000			
Engine with Drive train	CCA		1000			
Maximum Allowable Resistance of Starting Circuit	Ohms		0.002			
Starting Motor Power	HP	kW	9.4	7	9.4	7
Battery Charging Alternator						
Voltage	Volts		24			
Current	Amps		45			
Coil primary Resistance	Ohms		0.59Ω ± 10%			
Spark Plug p/n			IFR7F-4D			
Spark plug gap	inches	mm	.015" (-0/+0.008")		.38mm (-0/+0.2mm)	
Cooling System						
Coolant Capacity						
Engine only	gal	L	9.5	43.2	9.5	43.2
Engine with Radiator	gal	L	28	127	28	127
Engine Coolant Flow	gal/min	L/min	151	570	180	680
Water Pump Speed	RPM		2547		3056	
Heat rejected to Cooling water at rated Load	btu/min	kcal/sec	13094	55	16189	68
Maximum Intake Air Temperature (IAT)	F	C	155	68	155	68
ECU IAT Warning	F	C	140	60	140	60
ECU IAT Shutdown	F	C	155	69	155	69
Maximum Coolant Friction Head External to the engine	psi	bar	5.8	0.4	5.8	0.4
Maximum Air Restriction Across a Radiator	inH2O	mmH2O	0.5	12.8	0.5	12.8
Standard Thermostat Range						
Cracking Temperature	F	C	160	71	160	71
Full Open Temperature	F	C	185	85	185	85
Maximum Allowable Pressure Cap	psi	bar	14.7	1	14.7	1
Ambient Clearance Open Genset (water) (Air-to-Boil)						
Specified	F	C	142	61	142	61
Actual	F	C			147	64
Ambient Clearance (Oil)						
Specified	F	C	142	61	142	61
Actual	F	C			150	66
CAC Rise over Ambient (Charge)						
Specified	F	C	15	9	15	9
Actual	F	C			13	8
Maximum Allowable Top Tank Temperature	F	C	230	110	230	110
ECU Warning	F	C	220	104	220	104
ECU Shutdown	F	C	230	110	230	110
Fan Power	HP	kW	13	9.7	22	16.4
Fan Diameter, including blades	in	mm	45	1143	45	1143
Fan Speed	RPM		1200		1440	
Cooling Fan Air Flow @ 1" Static H2O Pressure and 125F @ radiator	CFM	m ³ /min	25,714	728	30,000	849
Charge Air Cooler						
Compressor Outlet Temperature	F	C	250	121	285	163
Compressor Flow Rate per CAC	lb/hr	kg/hr	1047	475	1391	650
Heat Rejection per CAC	btu/min	kW	TBD		2669	46.9



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Units	
Std	Metric

Lubrication System		14.6L			
		1500		1800	
Oil Specification		SAE 15W-40 Low Ash Gas engine oil (.25-.5% by wt), API CD/CF or higher			
Oil Pressure					
Idle					
Min	Psi Bar	13	0.9	13	0.9
Max	Psi Bar	43.5	3	43.5	3
Rated Speed					
Min	Psi Bar	43.5	3	43.5	3
Max	Psi Bar	94.5	6.5	94.5	6.5
Maximum Allowable Oil Temperature	F C	250	121	250	121
Engine Oil Capacity					
Min	Qts L	26.5	25	26.5	25
Max	Qts L	32.75	31	32.75	31
Oil Filter Capacity	Qts L	7.5	7.1	7.5	7.1
ECU Oil Pressure Warning ⁵	psi	30			
ECU Oil Pressure Shut Down ⁵	psi	25			
Fuel System					
Fuel Consumption ⁶					
NG	Ft ³ /hr kg/hr	2485	56	2782	63
LP	Ft ³ /hr kg/hr	780	42	926	49
Maximum EPR Rated Pressure	psi kPa	1.0	6.9	1.0	6.9
Maximum Running pressure to Electronic Pressure Regulator (EPR)	inH2O kPa	11.0	2.7	11.0	2.7
Minimum Running pressure to EPR	inH2O kPa	7.0	1.7	7.0	1.7
Minimum Gas Supply Pipe Size		2 x 1-1/4" NPT			
Maximum EPR Rated Pressure	psi kPa	1.0	6.9	1.0	6.9
Maximum Running Pressure to EPR	inH2O kPa	11.0	2.7	11.0	2.7
Minimum Running Pressure to EPR	inH2O kPa	7.0	1.7	7.0	1.7
Minimum LPG Supply Pipe Size ⁴		2 x 1-1/4" NPT			

¹Standby and overload ratings based on ISO3046.

² All ratings are gross flywheel horsepower corrected to 77°F at an altitude of 328feet with no cooling fan or alternator losses using heating value for NG of 1015 BTU/SCF.

³ Production tolerances in engines and installed components can account for power variations of +/- 5%. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations.

⁴ The preceding pipe sizes are only suggestions and piping sizes may vary with temperature, pressure, distance from supply and application of local codes. Gas must be available at adequate volume and pressure for engine at the EPR.

⁵ >1400RPM

⁶ See PSI HD Technical Spec. 56300002 - Fuel Specification