Power Generation

C550D5e Genset Data Information

TECHNICAL INFORMATION

CUMMINS:
Business Country Leader: Farrell Spollen

CUMMINS

PROJECT: DCITA

PROJECT NUMBER: AWS-DCITA-001

TECHNICAL SUBMITTAL: FOR INFORMATION

WORKS PACKAGE: GENERATORS TECH

SUBTITLE: TECHNICAL INFORMATION/DATA

TECHNICAL SUBMITTAL NUMBER:

DCITA-CMM-ZZ-TS-E-POWR-0001

REVISION P01

Issue No. & Date Key:

Revision No.	Date	Prepared by:	Details
P01	01/08/2022	G. Crampton	Issued for Information

Approval Status Key:

A = Approved – No Comments
B = Approved for build / minor comments
C = Rejected

Consultant Name	Approval Status	Date	Signed

Generator set data sheet

Model: C550D5E
Frequency: 50 Hz
Fuel type: Diesel

Spec sheet:	**SS11-CPGK**
Noise data sheet:	**MSP-2030**
Cooling data sheet:	**MCP-2077**
Prototype test summary data sheet:	**PTS-653**
Alternator data sheet:	**ADS-306，ADS-307**

Fuel consumption

	Standby				Prime			
	kVA (kW)				**kVA (kW)**			
Ratings	550 (440)				500 (400)			
Load	**1/4**	**1/2**	**3/4**	**Full**	**1/4**	**1/2**	**3/4**	**Full**
gph	8.0	13.6	19.3	26.7	7.3	12.6	17.7	22.9
L/hr	36.5	62.0	88.0	121.7	33.4	57.4	80.6	104.2

Engine

	Standby rating	**Prime rating**
Engine manufacturer	Cummins	
Engine model	QSX15 G8	
Configuration	4 cycle; in-line; 6 cylinder diesel	
Aspiration	Turbocharged and charge air-cooled	
Gross engine power output, kWm	500	444
BMEP at set rated load, kPa	2675	2371
Bore, mm	137	
Stroke, mm	169	
Rated speed, rpm	1500	
Piston speed, m/s	8.4	
Compression ratio	17:1	
Lube oil capacity, L	91	
Overspeed limit, rpm	1500 ±10%	
Regenerative power, kW	37	
Governor type	Electronic	
Starting voltage	24 Volts DC	

Fuel flow

Maximum fuel flow, L/hr	424
Maximum fuel inlet restriction, mm Hg	127
Maximum fuel inlet temperature, °C	71

Air	Standby rating	Prime rating
Combustion air, m^3/min	36.27	32.50
Maximum air cleaner restriction, kPa	3.73 - 6.22	

Exhaust		
Exhaust gas flow at set rated load, m^3/min	82.2	75.3
Exhaust gas temperature, °C	515	488
Maximum exhaust back pressure, kPa	10.2	

Standard set-mounted radiator cooling		
Ambient design, °C	50	
Fan load, kW_m	16	
Coolant capacity (with radiator), L	65.9	
Cooling system air flow, m^3/sec @ 12.7 mm H_2O	11.35	
Total heat rejection, Btu/min	16700	13700
Maximum cooling air flow static restriction, mm H_2O	25.4	

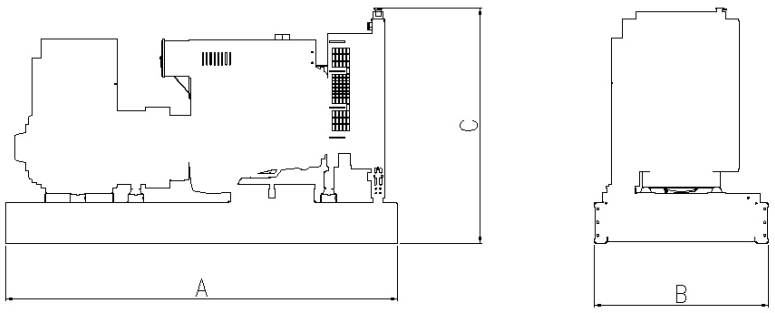
Weights*	Open	Enclosed
Unit dry weight kgs	4137	5442
Unit wet weight kgs	4975	6280

* Weights represent a set with standard features. See outline drawing for weights of other configurations.

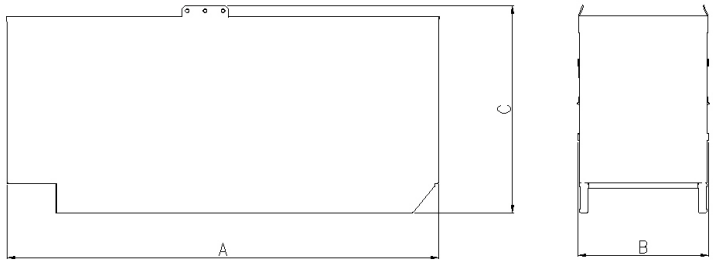
Dimensions	Length	Width	Height
Standard open set dimensions mm	3427	1500	2066
Enclosed set standard dimensions mm	5106	1553	2447

Genset outline

Open set



Enclosed set



Outlines are for illustrative purposes only. Please refer to the genset outline drawing for an exact representation of this model.

Alternator data

Connection	Temp rise °C	Duty	Alternator	Voltage
Wye, 3 Phase	125/105	S/P	HC5D	380-440
Wye, 3 Phase	150/125	S/P	HC5E	400

Ratings definitions

Emergency Standby Power (ESP)	Limited-Time running Power (LTP):	Prime Power (PRP)	Base Load (Continuous) Power (COP)
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power to a constant electrical load for limited hours. Limited-Time running Power (LTP) is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.

Formulas for calculating full load currents:

Three phase output

$$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$$

Single phase output

$$\frac{\text{kW} \times \text{SinglePhaseFactor} \times 1000}{\text{Voltage}}$$

For more information contact your local Cummins distributor or visit power.cummins.com

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DS349-CPGK (06/21)

Cooling System Data
C550D5e

Enhanced High Ambient Air Temperature Radiator Cooling System												
				Max Cooling @ Air Flow Static Restriction, Unhoused (inches water/mm water)						Housed in Free Air, No Air Discharge Restriction		
				0.0/ 0.0	0.25/ 6.4	0.5/ 12.7	0.75/ 19.1	1.0/ 25.4	1.5/ 38.1	Weather	Sound Level 1	Sound Level 2
	Fuel Type	**Duty**	**Rating (kW)**	**Maximum Allowable Ambient Temperature, Degree C**								
50 Hz	Diesel	Standby	440	57.4	55.3	50.2	46.8	43.8	33.8	N/A	N/A	N/A

Notes:

1. Data shown are anticipated cooling performance for typical generator set.
2. Cooling data is based on 1000 ft (305 m) site test location.
3. Generator set power output may need to be reduced at high ambient conditions. Consult generator set data sheet for derate schedules.
4. Cooling performance may be reduced due to several factors including but not limited to: Incorrect installation, improper operation, fouling of the cooling system, and other site installation variables.

Cummins Inc.	G-Drive	Date:		
Columbus, Indiana 47202-3005	QSX15-G8	7/6/2021		
		Configuration:	CPL:	Rev:
EXHAUST EMISSIONS DATA SHEET	FR11822	D103021GX03	5432	3

Compression Ratio	17.2:1	**Displacement**	14.9 L (912 in³)
Fuel System	XPI	**Aspiration**	Turbocharged and Charge Air Cooled
Aftertreatment	None	**Emission Certification**	NSPS Tier 2, UNECE R96.04

Engine Speed	Standby Power		Prime Power		Continuous Power	
rpm	kWm	bhp	kWm	bhp	kWm	bhp
1500	500	670	444	595	317	425
1800	455	610	414	555	295	395

US EPA

This engine, tested in accordance with 40 CFR 89, is in compliance with the US EPA Nonroad Tier 2 regulations

Component	g/hp-hr	g/kW-hr
NOx (Oxides of Nitrogen + HC + Hydrocarbons)	4.8	6.4
CO (Carbon Monoxide)	2.6	3.5
PM (Particulate Matter)	0.15	0.20

Test Methods and Conditions:
Tests to demonstrate compliance with the regulated levels shown above were conducted per 40CFR89 (ref. ISO8178-1) and weighted at load points prescribed in Subpart E, Appendix A for Constant Speed Engines. (ref.ISO8178-4,D2).

Fuel Specifications:
40-46 Cetane Number, 0.03 - 0.05 Wt.% Sulfur; Reference ISO8178-5, 40CFR86, 1313-98 Type 2-D and ASTM D975 No. 2 D.

Reference:
25°C (77°F) Air Inlet Temperature, 40°C (104°F) Fuel Inlet Temperature, 100 kPa (29.53 in Hg) Barometric Pressure; 10.7 g/kg (75 grains H_2O/lb) of dry air Humidity (required for NOx correction): Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back Pressure set to maximum allowable limit.

TA-Luft

The Prime rating with emissions corrected to 5% O2 content, is in compliance with the following TA-Luft standards (see test conditions below):

NOx: N/A **mg/nm³**

CO: N/A **mg/nm³**

Particulates: N/A **mg/nm³**

Test Methods and Conditions:
Steady-State emissions recorded per ISO8178-1 during operation at rated engine speed (+/-2%) and stated constant load (+/-2%) with engine temperatures, pressures and emission rates stabilized.

Fuel Specifications:
40-48 Cetane Number, 0.03 -0.05 Wt.% Sulfur; Reference ISO8178-5, 40CFR86, 1313--98 Type 2-D and ASTM D975 No. 2-D.

Reference Conditions:
25°C (77°F) Air Inlet Temperature, 40°C (104°F) Fuel Inlet Temperature, 100 kPa (29.53 in Hg) Barometric Pressure; 10.7 g/kg (75 grains H_2O/lb) of dry air Humidity (required for NOx correction): Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back Pressure set to maximum allowable limit. Data was taken from a single engine test according to the test methods, fuel specification and reference conditions stated above and is subject to engine-to-engine variability. Test conducted with alternate test methods, instrumentation, fuel or reference conditions can yield different results.

EU NRMM

This engine, tested in accordance with directive 97/68/EC, is in compliance with the EU NRMM Stage III A regulations

Component	g/hp-hr	g/kW-hr
NOx (Oxides of Nitrogen)	4.5	6.0
HC (Hydrocarbons)	0.7	1.0
CO (Carbon Monoxide)	2.6	3.5
PM (Particulate Matter)	0.15	0.20

Test Methods and Conditions:
Tests to demonstrate compliance with the regulated levels shown above were conducted per 97/68/EC (ref. ISO8178-1) and weighted at load points prescribed in 97/68/EC Annex 3, "test procedures". (ref.ISO8178-4,D2).

Fuel Specifications:
52-54 Cetane Number, 0.03 Max. Wt.% Sulfur; as referenced by directive 97/68/EC.

Reference:
25°C (77°F) Air Inlet Temperature, 40°C (104°F) Fuel Inlet Temperature, 100 kPa (29.53 in Hg) Barometric Pressure; 10.7 g/kg (75 grains H_2O/lb) of dry air Humidity (required for NOx correction): Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back Pressure set to maximum allowable limit.

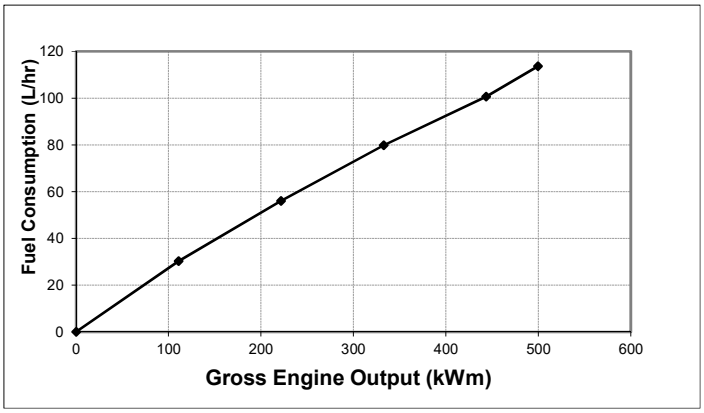
Engine Performance Data	G-Drive	Date		
Cummins Inc. Columbus, Indiana 47202-3005 http://www.cummins.com	QSX15-G8 FR11822	23-Nov-20		
		Configuration	CPL	Revision
		D103021GX03	5432	3

Compression Ratio	17.2:1	**Displacement**	14.9 L (912 in³)
Fuel System	XPI	**Aspiration**	Turbocharged and Charge Air Cooled
Aftertreatment	None	**Emission Certification**	NSPS Tier 2, UNECE R96.04

Engine Speed	Standby Power		Prime Power		Continuous Power	
rpm	kWm	bhp	kWm	bhp	kWm	bhp
1500	500	670	444	595	317	425
1800	455	610	414	555	295	395

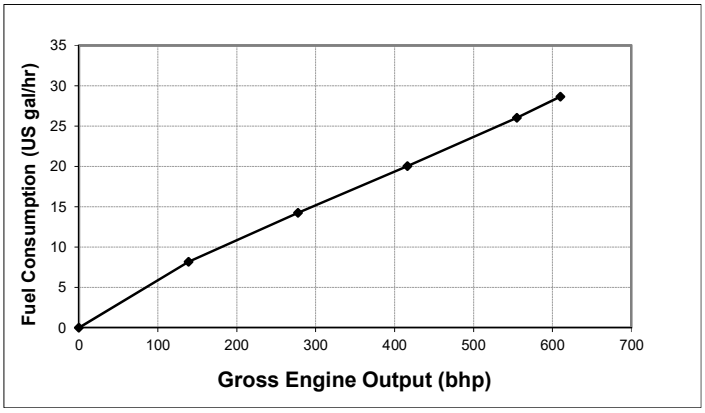
Engine Fuel Consumption @ 1500 rpm

Output Power			Fuel Consumption			
%	kWm	bhp	kg/kWm-hr	lb/bhp-hr	L/hr	US gal/hr
Standby Power						
100	500	670	0.193	0.318	114	30.0
Prime Power						
100	444	595	0.193	0.317	101	26.6
75	333	446	0.204	0.335	80	21.1
50	222	298	0.214	0.353	56	14.8
25	111	149	0.232	0.381	30	8.0
Continuous Power						
100	317	425	0.206	0.338	77	20.2



Engine Fuel Consumption @ 1800 rpm

Output Power			Fuel Consumption			
%	kWm	bhp	kg/kWm-hr	lb/bhp-hr	L/hr	US gal/hr
Standby Power						
100	455	610	0.203	0.333	109	28.6
Prime Power						
100	414	555	0.203	0.333	99	26.0
75	310	416	0.208	0.342	76	20.1
50	207	278	0.221	0.364	54	14.2
25	103	139	0.254	0.417	31	8.1
Continuous Power						
100	295	395	0.210	0.345	73	19.2



Data Subject to Change Without Notice

These guidelines have been formulated to ensure proper application of generator drive engines in A.C. generator set installations. **STANDBY POWER RATING:** Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. Under no condition is an engine allowed to operate in parallel with the public utility at the Standby Power rating. This rating should be applied where reliable utility power is available. A Standby rated engine should be sized for a Max of an 80% average load factor and 200 hours of operation per year. This includes less than 25 hours per year at the Standby Power rating. Standby ratings should never be applied except in true emergency power outages. Negotiated power outages contracted with a utility company are not considered an emergency. **PRIME POWER RATING:** Applicable for supplying electric power in lieu of commercially purchased power. Prime Power applications must be in the form of one of the following two categories: **UNLIMITED TIME RUNNING PRIME POWER:** Prime Power is available for an unlimited number of hours per year in a variable load application. Variable load should not exceed a 70% average of the Prime Power rating during any operating period of 250 hours. The total operating time at 100% Prime Power shall not exceed 500 hours per year. A 10% overload capability is available for a period of 1 hour within a 12-hour period of operation. Total operating time at the 10% overload power shall not exceed 25 hours per year. **LIMITED TIME RUNNING PRIME POWER:** Limited Time Prime Power is available for a limited number of hours in a non-variable load application. It is intended for use in situations where power outages are contracted, such as in utility power curtailment. Engines may be operated in parallel to the public utility up to 750 hours per year at power levels never to exceed the Prime Power rating. The customer should be aware, however, that the life of any engine will be reduced by this constant high load operation. Any operation exceeding 750 hours per year at the Prime Power rating should use the Continuous Power rating. **CONTINUOUS POWER RATING:** Applicable for supplying utility power at a constant 100% load for an unlimited number of hours per year. No overload capability is available for this rating.

Reference AEB 10.47 for determining Electrical Output.

Data shown above represent gross engine performance capabilities obtained and corrected in accordance with ISO-3046 conditions of 100 kPa (29.53 in Hg) barometric pressure [110 m (361 ft) altitude], 25 °C (77 °F) air inlet temperature, and relative humidity of 30% with No. 2 diesel or a fuel corresponding to ASTM D2.

Derates shown are based on -15 in H2O air intake restriction and 3 in Hg exhaust back pressure.

The fuel consumption data is based on No. 2 diesel fuel weight at 0.85 kg/L (7.1 lbs/US gal). Power output curves are based on the engine operating with fuel system, water pump and lubricating oil pump; not included are battery charging alternator, fan, optional equipment and driven components.

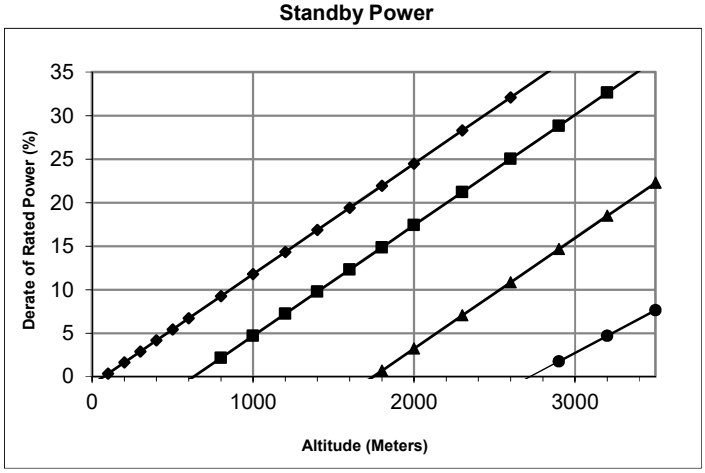
Data Status : Production

Tolerance : +/- 5%

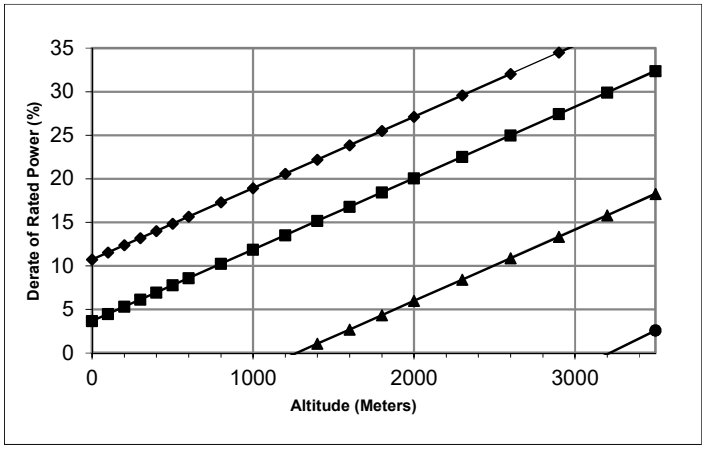
Chief Engineer **Michael P. Hurt**

1,500 rpm Power Derate Curves

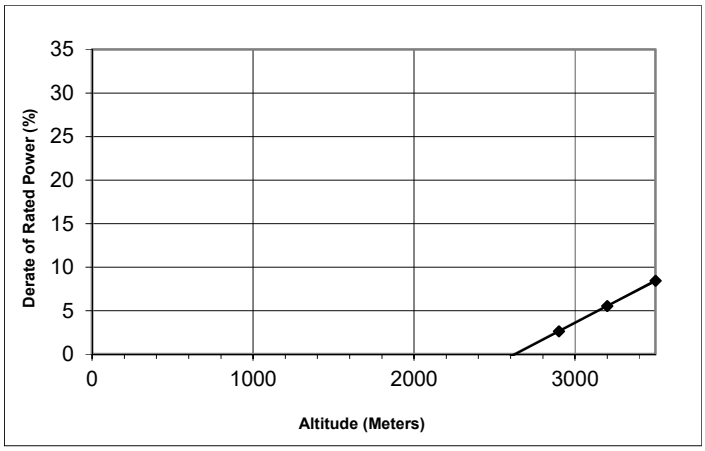
Standby Power



Prime Power

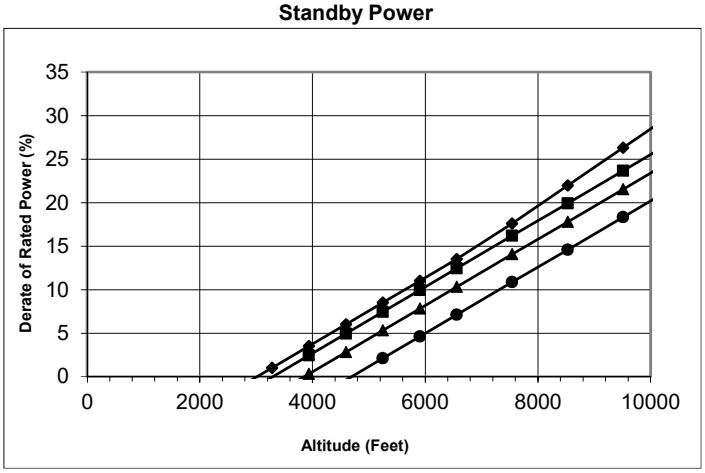


Continuous Power

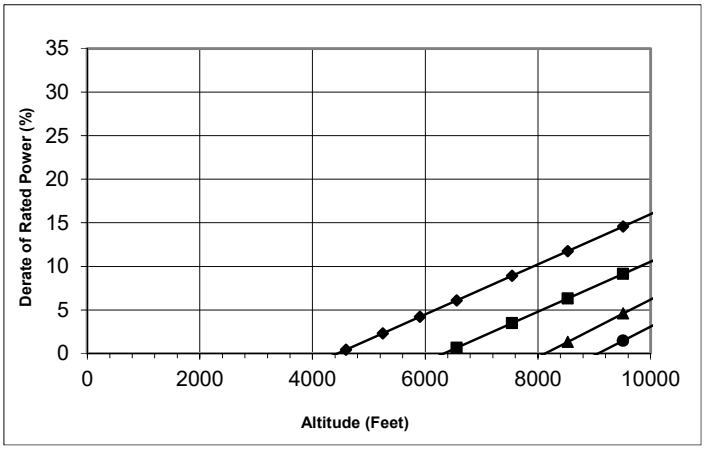


1,800 rpm Power Derate Curves

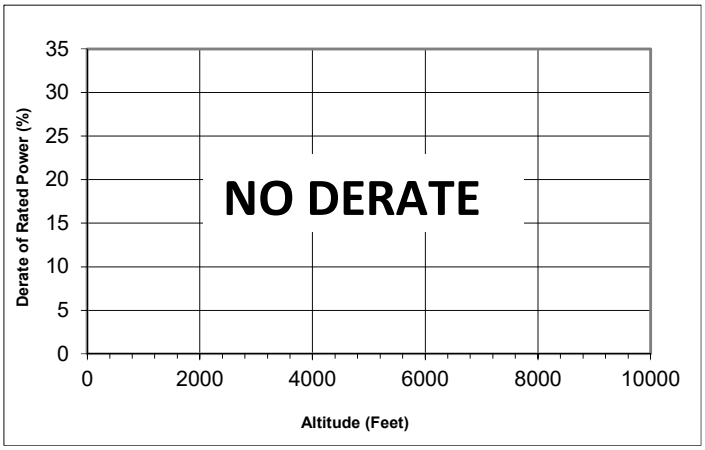
Standby Power



Prime Power



Continuous Power



131 °F (55 °C)
122 °F (50 °C)
104 °F (40 °C)
77 °F (25 °C)

Operation At Elevated Temperature And Altitude:

For **Standby Operation** above these conditions, derate by an additional 3.8% per 300m (1000 ft), and 14.2% per 10 °C (18 °F).
For **Prime Operation** above these conditions, derate by an additional 2.7% per 300m (1000 ft), and 14.1% per 10 °C (18 °F).
For **Continuous Operation** above these conditions, derate by an additional 3.3% per 300m (1000 ft), and 18% per 10 °C (18 °F).

Operation At Elevated Temperature And Altitude:

For **Standby Operation** above these conditions, derate by an additional 4.3% per 300m (1000 ft), and 7.7% per 10 °C (18 °F).
For **Prime Operation** above these conditions, derate by an additional 3.3% per 300m (1000 ft), and 10.9% per 10 °C (18 °F).
For **Continuous Operation** above these conditions, derate by an additional 3.9% per 300m (1000 ft), and 13.6% per 10 °C (18 °F).

General Engine Data

Installation Drawing Number		4361077	
Type		4 Cycle; Inline; 6 Cylinder	
Aspiration		Turbocharged and Charge Air Cooled	
Bore x Stroke	in x in (mm x mm)	5.39 x 6.65	(137 x 169)
Displacement	in^3 (L)	912	(14.9)
Compression Ratio		17.2:1	
Dry Weight (Approximate)	lbm (kg)	3053	(1385)
Wet Weight (Approximate)	lbm (kg)	3166	(1436)
Aftertreatment Weight (Approximate)	lbm (kg)	N/A	(N/A)
Moment of Inertia of Rotating Components			
with FW 1022 Flywheel, SAE 1	in • lbf • sec^2 (kg • m^2)	40.6	(4.59)
with FW 1025 Flywheel, SAE 0	in • lbf • sec^2 (kg • m^2)	69.5	(7.85)
Center of Gravity from Rear Face of Block	in (mm)	23.5	(597)
Center of Gravity Above Crankshaft Centerline	in (mm)	9.6	(244)

Engine Mounting

Max Bending Moment at Rear Face of Block	lb • ft (N • m)	1500	(2034)

Exhaust System

Max Allowable Static Bending Moment @ Exhaust Outlet Flange	lb • ft (N • m)	20	(27)
Max Back Pressure, Standby Power, Turbo Outlet (1500/1800rpm)	in Hg (kPa)	3.0 / 3.0	(10.2 / 10.2)

Air Induction System

Max Intake Air Restriction			
With Normal Duty Air Cleaner and Clean Filter Element	in H_2O (kPa)	15	(3.7)
With Heavy Duty Air Cleaner and Clean Filter Element	in H_2O (kPa)	N/A	(N/A)
With Dirty Filter Element	in H_2O (kPa)	25	(6.2)

Cooling System

Jacket Water/ High Temperature Circuit Requirements			
Max Coolant Friction Head External to Engine (1500/1800 rpm)	psi (kPa)	N/A / 5.0	(N/A / 34.5)
Engine Water Flow at Stated Friction Head External to Engine:			
2.5 psi Friction Head (1500/1800 rpm)	US gpm (L/m)	112 / 136	(424 / 515)
Maximum Friction Head (1500/1800 rpm)	US gpm (L/m)	103 / 127	(390 / 481)
Coolant Capacity - Engine	US gal (L)	8.8	(33)
Minimum Pressure Cap Rating at Sea Level	psi (kPa)	15	(103.4)
Max Static Head of Coolant Above Crankshaft Centerline	ft (m)	46	(14)
Max Coolant (Top Tank) Temperature for Standby/Prime Power	°F (°C)	225 / 220	(107 / 104)
Thermostat (Modulating) Range	°F (°C)	180 - 200	(82 - 93)
Max Intake Manifold Temp Warning/Shutdown	°F (°C)	255 / 262	(124 / 128)
Charge Air Cooler Requirements			
Max Allowable Pressure Drop Across Charge Air Cooler and OEM CAC piping (1500/1800 rpm)	in Hg (kPa)	2.5 / 4.0	(8.5 / 13.5)
Max Charge Air Cooler Outlet to Ambient at 77°F (25°C)(CAC dT)	Δ°F (Δ°C)	43	(24)

Lubrication System

Oil Pressure at Minimum Idle Speed	psi (kPa)	12	(82.7)
Oil Pressure at Governed Speed	psi (kPa)	20 - 40	(138 - 275.8)
Max Oil Temperature	°F (°C)	270	(132)
Oil Capacity with OP 1493: Low - High	US gal (L)	20.0 - 22.0	(75.7 - 83.3)
Total System Capacity (With Combo Filter)	US gal (L)	24.0	(90.8)

Fuel System

Max Fuel Supply Restriction at Fuel Pump Inlet (clean/dirty filter)	in Hg (kPa)	8 / 10	(26.4 / 33.9)
Max Allowable Head on Injector Return Line			
(Consisting of Friction Head and Static Head)	in Hg (kPa)	8	(27.1)
Max Fuel Inlet Temperature	°F (°C)	160	(71)
Max Supply Fuel Flow	US gph (L/hr)	56	(212)
Max Return Fuel Flow	US gph (L/hr)	23	(88)

Electrical System

System Voltage	volts	24	
Minimum Recommended Battery Capacity			
Cold Soak @ 0 °F (-18 °C)	CCA	1425	
Max Starting Circuit Resistance	ohm	0.002	
Max Current Draw of the System	Amps	30	

Cold Start Capability

Unaided Cold Start			
Minimum Cranking Speed	rpm	110	
Minimum Ambient Temp for Unaided Cold Start	°F (°C)	15	(-9)

Performance Data

		STANDBY		PRIME		CONTINUOUS	
		60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz
Governed Engine Speed	rpm	1800	1500	1800	1500	1800	1500
Engine Idle Speed	rpm	750 - 900	750 - 900	750 - 900	750 - 900	750 - 900	750 - 900
Gross Engine Power Output	bhp (kWm)	610 (455)	670 (500)	555 (414)	595 (444)	395 (295)	425 (317)
Brake Mean Effective Pressure	psi (kPa)	294 (2028)	388 (2676)	268 (1848)	344 (2372)	191 (1317)	246 (1697)
Friction Power	hp (kWm)	N/A (N/A)	N/A (N/A)	N/A (N/A)	N/A (N/A)	N/A (N/A)	N/A (N/A)
Intake Air Flow	ft^3/min (L/sec)	1272 (601)	1152 (544)	1211 (572)	1066 (504)	1031 (487)	929 (439)
Exhaust Gas Temp	°F (°C)	855 (458)	938 (504)	825 (441)	911 (489)	762 (406)	865 (463)
Exhaust Gas Flow	ft^3/min (L/sec)	2879 (1359)	2776 (1311)	2688 (1269)	2546 (1202)	2209 (1043)	2178 (1028)
Air:Fuel Ratio		26.8:1	23.2:1	28.1:1	24.3:1	32.5:1	27.7:1
Radiated Heat to Ambient	BTU/min (kWm)	2481 (44)	2597 (46)	2255 (40)	2300 (41)	1662 (30)	1754 (31)
Heat to JW Radiator	BTU/min (kWm)	9115 (161)	9257 (163)	8504 (150)	8391 (148)	5611 (99)	6855 (121)
Heat to Exhaust	BTU/min (kWm)	18133 (319)	18907 (333)	16343 (288)	16737 (295)	13795 (243)	13683 (241)
* Heat to Fuel	BTU/min (kWm)	67 (2)	62 (2)	67 (2)	62 (2)	67 (2)	62 (2)
Heat to Aftercooler Radiator	BTU/min (kWm)	6359 (112)	5684 (100)	5660 (100)	4763 (84)	3662 (65)	3455 (61)
Charge Air Flow	lb/min (kg/min)	91 (42)	82 (38)	87 (40)	76 (35)	74 (34)	66 (30)
Turbo Comp Outlet Pressure	psi (kPa)	33 (228)	36 (249)	31 (214)	32 (221)	24 (166)	25 (173)
Turbo Comp Outlet Temp	°F (°C)	388 (198)	401 (205)	365 (185)	371 (189)	306 (153)	320 (160)

* This is the maximum heat rejection to fuel.

Noise Emissions

Frequency (Hz) Sound Power dB(A)[123]		63	125	250	500	1000	2000	4000	8000	Overall
1500 rpm 50 Hz	Engine[4]	83.0	99.0	104.0	108.0	110.0	108.0	104.0	105.0	115.0
	Exhaust[5]	94.0	100.0	102.0	107.0	107.0	108.0	106.0	97.0	114.0
1800 rpm 60 Hz	Engine[4]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Exhaust[5]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1. The test figures quoted are from a single gen-set test and do not constitute a guarantee of performance for any particular engine. The data is subject to instrumentation, measurement, and engine to engine variability.
2. Test reference procedures ISO 3744 and ANSI S12.34-1998 as applicable.
3. All data are "A" weighted and are rounded to the nearest dB.
4. Engine with "typical Radiator and fan", Sound Power (dB).
5. Engine Exhaust at 1 Meter from open stack, Sound Pressure (dB).

QSX15 G8 (1500rpm)						
Load (%)	Exhaust Gas Flow (m3/min)	Exhaust Gas Temperature (°C)	Combustion Air (m3/min)	Heat Rejection (BTU/min)	Nox (mg/nm3)@5% O2	Cooling System Air Flow m3/sec @ 12.7mm H2O
20	28.63	352.1	13.9	10129.3	1385.3	11.35
40	45.3	429.1	19.8	17707.7	1388.6	11.35
60	59.51	458.8	25.4	24674	1736.8	11.35
80	68.84	479.2	29.1	30117.8	2616.5	11.35
100	78.6	503.2	32.6	36507.37	3489.7	11.35

Test data captured at reference ambient temperature of 25°C