CCEC CUMMINS ENGINE CO.,Ltd.	Basic Engine Model:	Curve Number:	
Marine Performance Curves	**N855-DM**	**FR896**	
	Engine Configuration:	CPL Code:	Date:
	D093641MX02	**CQ171**	**14-Jul-11**

Displacement: **14 liter** **[855 in³]**
Bore: **140 mm** **[5.50 in]**
Stroke: **152 mm** **[6.00 in]**
Fuel System: **Direct Injection Cummins PT**
Cylinders: **6**

kW [hp] @ rpm
Advertised Power: **240[321]@1500**

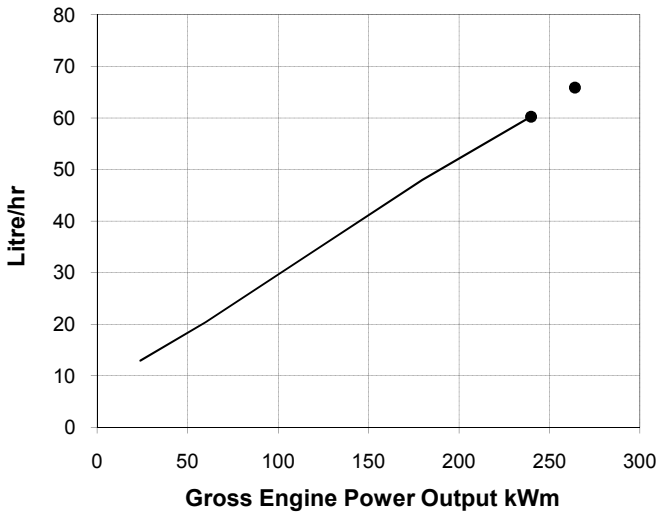
Aspiration: **Turbocharged / LTA**
Exhaust Type: **Wet**

CERTIFIED: This marine diesel engine complies with or is certified to the:
IMO Tier II (Two) NOx requirements of International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13

Engine Speed	Overload Capacity		Prime Power		Continuous Power	
RPM	kWm	BHP	kWm	BHP	kWm	BHP
1500	264	354	240	321	N.A.	N.A.

Engine Performance Data @ 1500 rpm

OUTPUT POWER			FUEL CONSUMPTION			
%	kWm	BHP	kg/kWh	Lb/ BHP-h	Liter/ hour	U.S. Gal/ hour
10% OVERLOAD CAPACITY						
110%	264	354	0.212	0.349	65.9	17.40
PRIME POWER						
100%	240	321	0.214	0.352	60.2	15.91
75%	180	241	0.227	0.374	48.0	12.67
50%	120	161	0.242	0.399	34.1	9.02
25%	60	80	0.289	0.476	20.4	5.39
10%	24	32	0.459	0.756	12.9	3.42
CONTINUOUS POWER						
80%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.



Rating Conditions: Ratings are in accordance with ISO 15550 and ISO 8528-5 reference conditions; air pressure at 100 kPa (29.61 in Hg), air temperature 25°C (77°F), and 30% relative humidity. The fuel consumption data is based on No. 2 diesel fuel weight at 0.85 kg/liter (7.1 lb/U.S. 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.
Unless otherwise specified, all data is at rated power conditions and can vary ± 5%.
Prime Power Rating is applicable for supplying continual electrical power at varied load. The following are the Prime Rating parameters
* 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.
* There is a 10% overload capability for a period of 1 hour within a 12 hour period of operation. Total operating time at 10% overload shall not exceed 25 hours per year.

TECHNICAL DATA DEPT.

CHIEF ENGINEER

Auxiliary Marine Engine Performance Data

Curve No.	**FR896**
DS :	**D(M)-896**
CPL :	**CQ171**
DATE:	**14-Jul-11**

General Engine Data

Engine Model		N855-DM			
Rating Type		Prime Power		Overload	
Rated Engine Power	kW [hp]	240	[321]	264	[354]
Governed Engine Speed	rpm		1500		
Rated HP Production Tolerance	±%		3		
Rated Engine Torque	N·m [lb·ft]	1524	[1124]	1680	[1239]
Low Idle Speed Range Minimum	rpm		575		
Maximum	rpm		650		
Brake Mean Effective Pressure	kPa [psi]	1365	[198]	1510	[219]
Compression Ratio			14.5:1		
Piston Speed	m/sec [ft/min]	7.6	[1500]		
Firing Order			1-5-3-6-2-4		
Friction Power	kW [hp]	22	[29]		
Steady State Stability Band at Constant Load	%		0.25		
Weight Dry - Engine Only	kg [lb]	1314	[2896]		
Weight Dry - Engine With Heat Exchanger	kg [lb]	1431	[3155]		

Fuel System[1]

Approximate Fuel Flow to Pump	l/hr [gal/hr]	265	[70]	265	[70]
Maximum Allowable Fuel Supply to Pump Temperature	°C [°F]	71	[160]	71	[160]
Approximate Fuel Flow Return to Tank	l/hr [gal/hr]	204	[54]	201	[53]
Fuel Rail Pressure	kPa [psi]	871	[126.3]	1042	[151.2]
Average Fuel Consumption- Emissions ISO 8178 D2 Test Cycle	l/hr [gal/hr]	33.1	[8.7]		

Air System[1]

Intake Manifold Pressure	mm Hg [in Hg]	749	[29.5]	864	[34]
Intake Air Flow	l/sec [cfm]	250	[529.7]	273	[578]
Heat Rejection to Ambient	kW [Btu/min]	29	[1651]	32	[1821]

Exhaust System[1]

Exhaust Gas Flow	l/sec [cfm]	750	[1589]	N.A.	[N.A.]
Exhaust Gas Temperature (Turbine Out)	°C [°F]	463	[864]	470	[878]
Exhaust Gas Temperature (Manifold)	°C [°F]	533	[991]	548	[1018]
Heat Rejection to Exhaust	kW [Btu/min]	144	[8196]	N.A.	[N.A.]

TBD= To Be Determined **N/A = Not Applicable** **N.A. = Not Available**

1 **Unless otherwise specified, all data is at rated power conditions and can vary ± 5%.**
2 **No rear loads can be applied when the FPTO is fully loaded. Max PTO torque is contingent on torsional analysis results for the specific drive system. Consult Installation Direction Booklet for Limitations.**
3 **Heat rejection to coolant values are based on 50% water/50% ethylene glycol mix and do NOT include fouling factors. If sourcing your own cooler, a service fouling factor should be applied according to the cooler manufacturer's recommendation.**
4 **Consult option notes for flow specifications of optional Cummins seawater pumps, if applicable.**

Auxiliary Marine Engine Performance Data

Curve No.	**FR896**
DS :	**D(M)-896**
CPL :	**CQ171**
DATE:	**14-Jul-11**

Emissions (in accordance with ISO 8178 Cycle D2)

NOx (Oxides of Nitrogen)	g/kw·hr [g/bhp·hr]	6.17	[4.6]
HC (Hydrocarbons)	g/kw·hr [g/bhp·hr]	N.A.	[N.A.]
CO (Carbon Monoxide)	g/kw·hr [g/bhp·hr]	N.A.	[N.A.]
PM (Particulate Matter)	g/kw·hr [g/bhp·hr]	N.A.	[N.A.]

Emissions (in accordance with ISO 8178 Cycle E2)

NOx (Oxides of Nitrogen)	g/kw·hr [g/bhp·hr]	N.A.	[N.A.]
HC (Hydrocarbons)	g/kw·hr [g/bhp·hr]	N.A.	[N.A.]
CO (Carbon Monoxide)	g/kw·hr [g/bhp·hr]	N.A.	[N.A.]
PM (Particulate Matter)	g/kw·hr [g/bhp·hr]	N.A.	[N.A.]

Cooling System[1]

Sea Water Pump Specifications	MAB 0.08.17-07/16/2001		
Pressure Cap Rating (With Heat Exchanger Option)	kPa [psi]	48	[7]

Main Engine Circuit

Coolant Flow to Main Cooler (with open thermostat)	l/min [gal/min]	346	[91.4]
Standard Thermostat Operating Range — Start to open	°C [°F]	77	[170]
Standard Thermostat Operating Range — Full open	°C [°F]	89	[192]
Heat Rejection to Engine Coolant[3]	kW [Btu/min]	N.A.	

Aftercooler (LTA) Circuit

Coolant Flow to LTA Cooler (with open thermostat)	l/min [gal/min]	57	[15.1]
LTA Thermostat Operating Range — Start to open	°C [°F]	57	[135]
LTA Thermostat Operating Range — Full open	°C [°F]	69	[156]
Heat Rejection to Engine Coolant[3]	kW [Btu/min]	N.A.	
Maximum Coolant Inlet Temperature from LTA Cooler	°C [°F]	63	[145]

TBD= To Be Determined **N/A = Not Applicable** **N.A. = Not Available**

1 Unless otherwise specified, all data is at rated power conditions and can vary ± 5%.
2 No rear loads can be applied when the FPTO is fully loaded. Max PTO torque is contingent on torsional analysis results for the specific drive system. Consult Installation Direction Booklet for Limitations.
3 Heat rejection to coolant values are based on 50% water/50% ethylene glycol mix and do NOT include fouling factors. If sourcing your own cooler, a service fouling factor should be applied according to the cooler manufacturer's recommendation.
4 Consult option notes for flow specifications of optional Cummins seawater pumps, if applicable.