





# Chongqing Cummins Engine Co. Ltd.

## Auxiliary Marine Engine Performance Data

Curve No.: D(M)-457  
DS: DS-D193097  
CPL: CQ411  
DATE: 29-Aug-08

### General Engine Data<sup>1</sup>

Engine Model.....	KTA19-D(M)
Rating Type .....	Prime Power    Overload
Rated Engine Power..... hp [kW]	450 [ 336 ]    495 [ 369 ]
Governed Engine Speed.....rpm	1500    1500
Rated HP Production Tolerance.....	±2%
Rated Engine Torque.....lb. ft. [N·m]	1732 [ 2349 ]
Idle Speed Range..... rpm	675-775
Brake Mean Effective Pressure.....psi [kPa]	205 [ 1415 ]
Compression Ratio .....	14.5:1
Piston Speed..... ft/min [m/sec]	1565 [ 7.95 ]
Friction Power.....hp [kW]	60 [ 45 ]

### Fuel System<sup>1</sup>

Fuel Consumption.....gal/hr [l/hr]	21.8 [ 82.5 ]    24 [ 90.8 ]
Approximate Fuel Flow to Pump.....gal/hr [l/hr]	104 [ 394 ]
Maximum Allowable Fuel Supply to Pump Temperature.....°F [°C]	N.A.
Approximate Fuel Flow Return to Tank.....°F [°C]	N.A.
Fuel Rail Pressure.....psi [kPa]	134 [ 923 ]

### Weight<sup>1</sup>

Dry - Engine Only .....	lb. [kg]	3996 [ 1814 ]
Dry - Engine With Heatexchanger .....	lb. [kg]	4416 [ 2005 ]
Installation Diagram No.....		4914569
Hookup Diagram & Drawing, electrical circuit No.....		4061349, 4061350

### Air System<sup>1</sup>

Intake Manifold Pressure.....in. Hg [kPa]	N.A.	43 [ 146 ]
Intake Air Flow.....cfm [l/sce]	915 [ 432 ]	
Heat Rejection to Ambient.....BTU/min [kW]	2846 [ 50 ]	

### Exhaust System<sup>1</sup>

Exhaust Gas Flow.....cfm [l/sec]	2529 [ 1194 ]
Exhaust Gas Temperature (Turbine Out).....°F [°C]	975 [ 524 ]
Heat Rejection to Exhaust.....BTU/min [kW]	13604 [ 239 ]

### Cooling System<sup>1</sup>

Coolant Flow to Engine Heat Exchanger/Keel Cooler		
At 3 psi Friction Head External to Engine .....	l/min [gal/min]	613 [162]
At 8 psi Friction Head External to Engine .....	l/min [gal/min]	549 [145]
Standard Thermostat Operating Range (Min).....	°F [°C]	180 [ 82 ]
Standard Thermostat Operating Range (Max).....	°F [°C]	199 [ 93 ]
Heat Rejection to Engine Coolant <sup>3</sup> .....	BTU/min [kW]	11726 [ 206 ]
Heat Rejection to LTA Coolant <sup>3</sup> .....	BTU/min [kW]	N.A.
Sea Water Flow @ 10 psi Pump Discharge Pressure .....	l/min [gal/min]	N.A.
Pressure Cap Rating (With Heat Exchanger Option).....	psi [kPa]	7 [ 50 ]

TBD = To Be Determined

N/A = Not Applicable

N.A. = Not Available

1. All Data at Rated Conditions.

2. 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).

**CHONGQING CUMMINS ENGINE CO. LTD.**

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All Data is Subject to Change Without Notice - contact CCEC for most recent data .