





# Chongqing Cummins Engine Co. Ltd.

## Auxiliary Marine Engine Performance Data

Curve No.: D(M)-461  
DS: DS-D193097  
CPL: CQ412  
DATE: 21-Oct-08

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

Engine Model.....	KTA19-D(M)	
Rating Type .....	Prime Power	Overload
Rated Engine Power..... hp [kW]	620 [ 463 ]	685 [ 511 ]
Governed Engine Speed.....rpm	1800	1800
Rated HP Production Tolerance.....	±2%	
Rated Engine Torque.....lb. ft. [N·m]	1811 [ 2456 ]	1999 [ 2711 ]
Idle Speed Range..... rpm	675-775	
Brake Mean Effective Pressure.....psi [kPa]	236 [ 1625 ]	260 [ 1793 ]
Compression Ratio .....	14.5:1	
Piston Speed..... ft/min [m/sec]	1878 [ 9.54 ]	
Friction Power.....hp [kW]	84 [ 63 ]	

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

Fuel Consumption.....gal/hr [l/hr]	29.3 [ 110.9 ]	32 [ 121.9 ]
Approximate Fuel Flow to Pump.....gal/hr [l/hr]	97 [ 367 ]	
Maximum Allowable Fuel Supply to Pump Temperature.....°F [°C]	140 [ 60 ]	
Approximate Fuel Flow Return to Tank..... gal/hr	68 [ 256.3 ]	65 [ 245.3 ]
Fuel Rail Pressure.....psi [kPa]	135 [ 930 ]	165 [ 1137 ]

### 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]	55 [ 186 ]	61 [ 207 ]
Intake Air Flow.....cfm [l/sce]	1294 [ 611 ]	1370 [ 647 ]
Heat Rejection to Ambient.....BTU/min [kW]	3814 [ 67 ]	4212 [ 74 ]

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

Exhaust Gas Flow.....cfm [l/sec]	3344 [ 1579 ]	3628 [ 1713 ]
Exhaust Gas Temperature (Turbine Out).....°F [°C]	880 [ 471 ]	916 [ 491 ]
Heat Rejection to Exhaust.....BTU/min [kW]	17190 [ 302 ]	18670 [ 328 ]

### 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]	742 [196 ]
At 10 psi Friction Head External to Engine .....	l/min [gal/min]	662 [175 ]
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]	16108 [ 283 ] 17816 [ 313 ]
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.**

CHONGQING, P.R.CHINA, 400031

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