





Chongqing Cummins Engine Co. Ltd.

Auxiliary Marine Engine Performance Data

Curve No.: D(M)-459
DS: DS-D193097
CPL: CQ410
DATE: 23-Oct-08

General Engine Data¹

Engine Model.....	KTA19-D(M)	
Rating Type	Prime Power	Overload
Rated Engine Power..... hp [kW]	600 [448]	675 [504]
Governed Engine Speed.....rpm	1500	1500
Rated HP Production Tolerance.....	±2%	
Rated Engine Torque.....lb. ft. [N·m]	2103 [2852]	2366 [3208]
Idle Speed Range..... rpm	625-700	
Brake Mean Effective Pressure.....psi [kPa]	273 [1886]	308 [2122]
Compression Ratio	14.5:1	
Piston Speed..... ft/min [m/sec]	1565 [7.95]	
Friction Power.....hp [kW]	60 [45]	

Fuel System¹

Fuel Consumption.....gal/hr [l/hr]	29.1 [110]	32 [120]
Approximate Fuel Flow to Pump.....gal/hr [l/hr]	63 [238]	70 [264]
Maximum Allowable Fuel Supply to Pump Temperature.....°F [°C]	N.A.	
Approximate Fuel Flow Return to Tank..... gal/hr	33 [126]	37 [140]
Fuel Rail Pressure.....psi [kPa]	113 [779]	137 [944]

Weight¹

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 System¹

Intake Manifold Pressure.....in. Hg [kPa]	66 [223]	73 [247]
Intake Air Flow.....cfm [l/sce]	1161 [548]	1273 [601]
Heat Rejection to Ambient.....BTU/min [kW]	3643 [64]	4041 [71]

Exhaust System¹

Exhaust Gas Flow.....cfm [l/sec]	3166 [1495]	3505 [1655]
Exhaust Gas Temperature (Turbine Out).....°F [°C]	993 [534]	1018 [548]
Heat Rejection to Exhaust.....BTU/min [kW]	16621 [292]	18157 [319]

Cooling System¹

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 ³	BTU/min [kW]	15653 [275] 17361 [305]
Heat Rejection to LTA Coolant ³	BTU/min [kW]	N.A.
Sea Water Flow @ 10 psi Pump Discharge Pressure	l/min [gal/min]	204 [54]
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).

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