



TONTEK POWER
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Engine Model
KTA19-M

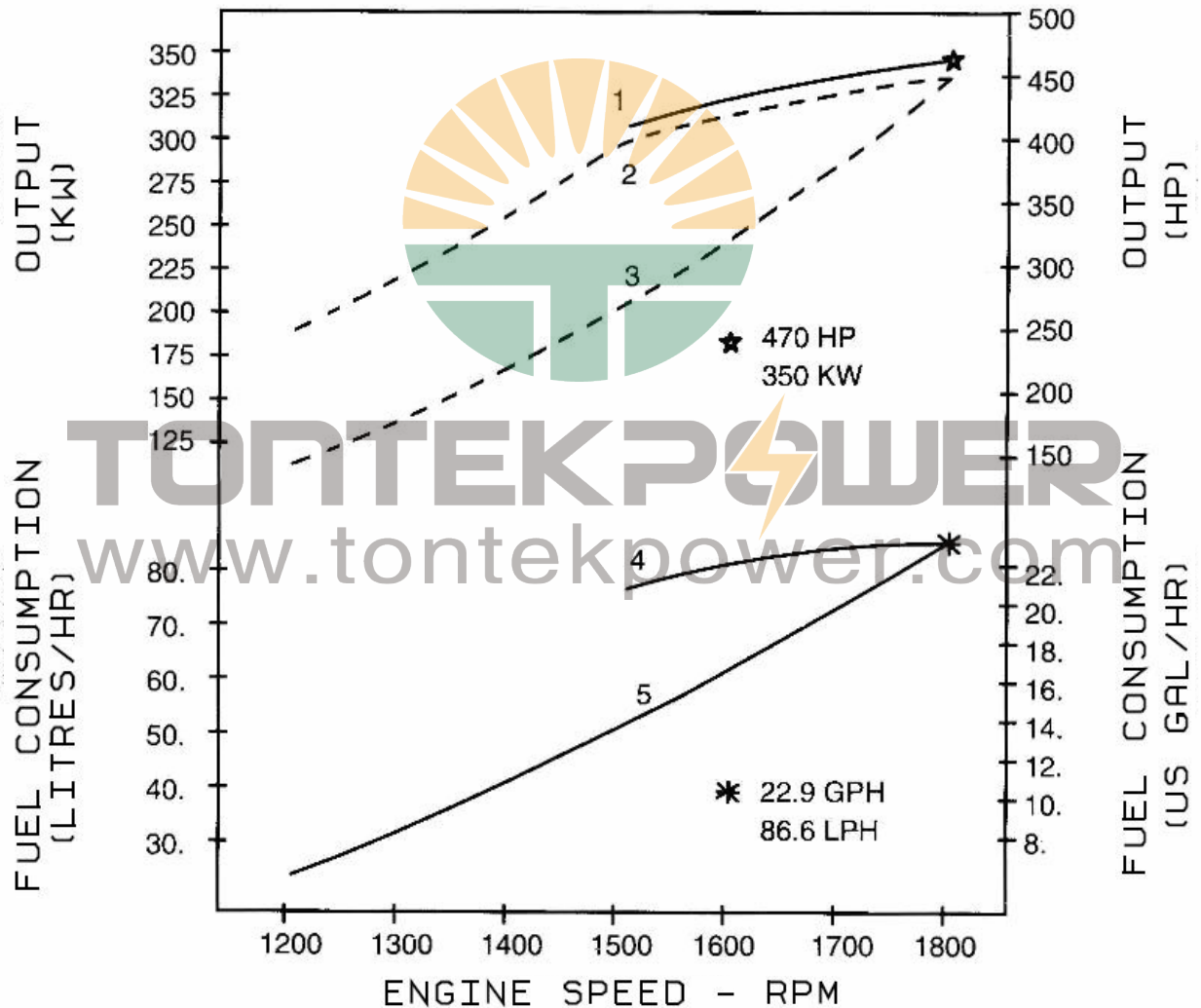
Advertised Power: **351kW [470HP] @1800 r/min**

Displacement: **14L [855 in.³]**
Bore: **140mm [5.50 in.]**
Stroke: **152mm [6.00 in.]**
Fuel System: **PT**
Cylinders: **6**

Aspiration: **Turbocharged/Aftercooled**
Rating Type: **Continuous**

CERTIFIED: This marine diesel engine complies with or is certified to the:

IMO-NOx requirements of the International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13



Rating Conditions: Ratings are based upon ISO 8665 and SAE J1228 reference conditions; air pressure of 100kPa [29.612 in.Hg] air temperature 25°C [77°F] and 30% relative humidity. Power is rated in accordance with IMCI procedures.

Fuel consumption is based on fuel of 35° API gravity at 16°C (60°F) having LHV of 42,780 kJ/kg (18,390 Btu/lb) and weighing 838.9 g/liter (7.001 lb/U.S.gal).

Propeller Shaft Power represents the net power available after typical reverse/reduction gear losses and is 97% of rated power.

1. Brake power
2. Shaft power with Reverse / Reduction Gear
3. Typical Propeller Power Curve (3.0 exponent)
4. Fuel Consumption for Brake and Shaft power.
5. Fuel Consumption for Typical Propeller.

Continuous Rating: This power rating is intended for continuous use in applications requiring uninterrupted service at full power. This rating is an ISO3046 Standard Power Rating.



General Engine Data

Engine Model.....	KTA19-M
Rating Type	Continuous
Rated Engine Power..... hp [kW]	470 [351]
Rated Engine Speed..... rpm	1800
Peak Engine Torque @ 1500 rpm..... lb. · ft. [N · m]	1438 [1950]
Brake Mean Effective Pressure..... psi [kPa]	179 [1232]
Minimum Idle Speed Setting..... rpm	675-775
Normal Idle Speed Variation..... ±rpm	50
High Idle Speed Range Minimum..... rpm	1962
Maximum..... rpm	2106
Aspiration	
Compression Ratio	15.5:1
Piston Speed..... ft/min [m/sec]	1870 [9.5]
Weight (Dry) - Engine Only - Average..... lb. [kg]	3800 [1725]
Weight (Dry) - Engine With HeatexchangerSystem - Average..... lb. [kg]	Turbocharged/Aftercooled 4198 [1906]
Installation Diagram No.....	4914417

Fuel System¹

Fuel Consumption at Rated Speed..... gal/hr [l/hr]	23 [86.6]
Approximate Fuel Flow to Pump..... gal/hr [l/hr]	72 [273]
Maximum Allowable Fuel Supply to Pump Temperature..... ° F [° C]	160 [71]
Approximate Fuel Return to Tank Temperature..... ° F [° C]	N.A.
Maximum Heat Rejection to Drain Fuel..... BTU/min [kW]	N.A.
Fuel Pressure - Pump Out / Rail Mechanical Gauge..... psi [kPa]	169 [1164]

Air System¹

Intake Manifold Pressure..... in. Hg [kPa]	33 [112]
Intake Air Flow..... cfm [l/sce]	1059 [500]
Heat Rejection to Ambient..... BTU/min [kW]	2448 [43]

Exhaust System¹

Exhaust Gas Flow..... cfm [l/sec]	2605 [1230]
Exhaust Gas Temperature (Turbine Out)..... ° F [° C]	871 [466]
Exhaust Gas Temperature (Manifold)..... ° F [° C]	1141 [616]

Cooling System¹

Sea Water Pump Specifications..... MAB 0.08.17-07/16/2001	
Pressure Cap Rating (With Heat Exchanger Option)..... psi [kPa]	7 [50]

Engines without Low Temperature Aftercooler (LTA)

Jacket Water Aftercooled Engine (JWAC)

Coolant Flow to Engine Heat Exchanger..... gal/min [l/min]	120 [454]
Standard Thermostat Operating Range (Start to Open)..... ° F [° C]	180 [82]
Standard Thermostat Operating Range (Full Open)..... ° F [° C]	203 [95]
Heat Rejection to Engine Coolant ² BTU/min [kW]	16222 [285]

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.
4. Consult option notes for flow specifications of optional Cummins seawater pumps (if applicable).

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