



**Generator Engine Performance Data**

DONGFENG CUMMINS ENGINE Co.,LTD

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<http://www.dcec.com.cn>

Basic Engine Model:

**6BTAA5.9-GM115**

**FR92437**

**115kW @ 1500 RPM**

|                                     |                             |                              |
|-------------------------------------|-----------------------------|------------------------------|
| <b>Configuration</b><br>D403096MX02 | <b>CPL Code</b><br>CPL:2976 | <b>Revision</b><br>2009-4-15 |
|-------------------------------------|-----------------------------|------------------------------|

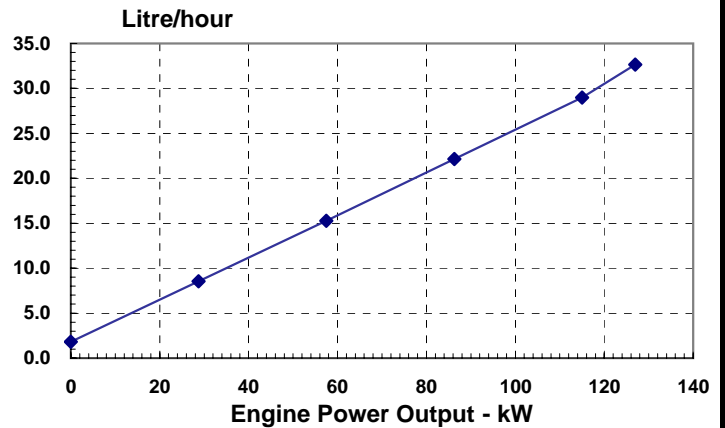
|                      |                 |                   |   |
|----------------------|-----------------|-------------------|---|
| Compression Ratio:   | <b>17.3 : 1</b> | Aspiration:       | <b>Turbocharged and Charge Air Cooled</b> |
| Bore:                | <b>102 mm</b>   | Displacement:     | <b>5.9 L</b>                              |
| Stroke:              | <b>120 mm</b>   | No. of Cylinders: | <b>6</b>                                  |
| Governor Regulation: | <b>≤3%</b>      | Fuel System:      | <b>BYC PB/GAC 24V</b>                     |

All data is based on the engine operating with fuel system, water pump, and 10 in H<sub>2</sub>O (2.488 kPa) inlet air restriction with 5.98 in (152mm) inner diameter, and with 2.01 in Hg (7 kPa) exhaust restriction with 4.02 in (102 mm) inner diameter; not included are alternator, fan, optional equipment and driven components. Coolant flows and heat rejection data based on coolants as 50% ethylene glycol/50% water. All data is subject to change without notice.

| Engine Speed<br>RPM | Standby Power |     | Prime Power |     | Continuous Power |     |
|---------------------|---------------|-----|-------------|-----|------------------|-----|
|                     | kW            | HP  | kW          | HP  | kW               | HP  |
| 1500                | 125           | 168 | 115         | 154 | 80               | 107 |

**Engine Performance Data @ 1500 RPM**

| OUTPUT POWER            |     |     | FUEL CONSUMPTION |     |
|-------------------------|-----|-----|------------------|-----|
| %                       | kW  | HP  | g/kW.h           | L/h |
| <b>STANDBY POWER</b>    |     |     |                  |     |
| 100                     | 127 | 170 | 212              | 33  |
| <b>PRIME POWER</b>      |     |     |                  |     |
| 100                     | 115 | 154 | 208              | 29  |
| 75                      | 86  | 116 | 212              | 22  |
| 50                      | 58  | 77  | 219              | 15  |
| 25                      | 29  | 39  | 245              | 9   |
| <b>CONTINUOUS POWER</b> |     |     |                  |     |
| 100                     | 80  | 107 | 214              | 21  |



**Engine Performance Data @ 1800 RPM**

**Not Available at 1800 RPM**

**Not Available at 1800 RPM**

Curves shown above represent gross engine performance capabilities obtained and corrected in accordance with GB/T18297 conditions of 100kPa (29.61 in. Hg) barometric pressure [80 m (263 ft.) altitude], 25°C (77°F) inlet air temperature, and 1 kPa (0.30 in. Hg) water vapor pressure with No.0# diesel fuel.

**GENERAL ENGINE DATA**

|   |        |             |
|---|--------|-------------|
| Weight (Dry) Engine only - Average..... | -kg    | 411         |
| Idle Speed Setting.....                 | -rpm   | 1000±50     |
| Compression Ratio .....                 |        | 17.3 : 1    |
| Piston Speed* .....                     | -m/sec | 6.0         |
| Firing Order.....                       |        | 1-5-3-6-2-4 |

**ENGINE MOUNTING**

|  |      |      |
|--|------|------|
| Maximum (Static) Bending Moment at Rear Face of Block..... | -N•m | 1356 |
|--|------|------|

**EXHAUST SYSTEM\***

|  |            |      |
|--|------------|------|
| Maximum Back Pressure.....   | -kPa       | 10.1 |
| Exhaust Gas Flow.....  | -litre/sec | TBD  |
| Exhaust Gas Temperature Turbine Out (Rated Power).....                 | -°C        | 490  |
| Exhaust Gas Temperature Turbine Out (Standby Power).....               | -°C        | 520  |
| Maximum Static Supported Weight at the Turbocharger Outlet Flange..... | -N•m       | 6    |

**AIR INTAKE SYSTEM\***

|   |            |     |
|---|------------|-----|
| Maximum Intake Air Restriction with Heavy Duty Air Cleaner                  |            |     |
| — Dirty Element.....  | -kPa       | 6   |
| — Clean Element.....  | -kPa       | 4   |
| Minimum Dirt Holding Capacity with Heavy Duty Air Cleaner.....              | -g/cfm     | 53  |
| Maximum Temperature Rise from Ambient to the Inlet of the Turbocharger..... | -°C        | 17  |
| Intake Manifold Pressure .....  | -mmHg      | 840 |
| Intake Air Flow*.....   | -litre/sec | 215 |
| Heat Rejection to Ambient .....   | -kW        | TBD |

**CHARGE AIR COOLING SYSTEM\***

|   |      |    |
|---|------|----|
| Maximum allowable pressure drop across charge air cooler and OEM CAC piping(IMPD):..... | -kPa | 14 |
| Maximum Intake Manifold Temperature Differential (Ambient to IMT) (IMTD):.....          | -°C  | 35 |
| Intake manifold temperature for Fan-ON.....   | -°C  | 60 |

**FUEL SYSTEM\***

|  |           |     |
|--|-----------|-----|
| Maximum Fuel Flow on the Supply Side of the Fuel Pump.....     | -litre/hr | 127 |
| Maximum fuel supply restriction at fuel pump inlet             |           |     |
| — with clean fuel filter element(s) at maximum fuel flow.....  | -kPa      | 8   |
| — with dirty fuel filter element(s) at maximum fuel flow ..... | -kPa      | 14  |
| Maximum fuel inlet temperature.....                            | -°C       | 60  |
| Maximum Allowable Return Line Pressure .....                   | -kPa      | 34  |

**LUBRICATION SYSTEM**

|  |         |         |
|--|---------|---------|
| Normal Operating Oil Pressure Range                            |         |         |
| — minimum low idle.....  | -kPa    | 69      |
| — rated speed (Min/Max).....                                   | -kPa    | 241/345 |
| Maximum Sump Oil Temperature.....                              | -°C     | 121     |
| Minimum Required Lube System Capacity - Sump plus Filters..... | -litre  | 16.3    |
| By-pass Filtration Required.....                               | -Yes/No | Yes     |

**COOLING SYSTEM\***

|   |        |       |
|---|--------|-------|
| Coolant capacity - engine only.....   | -litre | 9.9   |
| Minimum Coolant Makeup Capacity .....   | -litre | 3     |
| Standard (modulating) Thermostat Range.....                                       | -°C    | 82-93 |
| Minimum pressure cap rating at sea level.....                                     | -kPa   | 69    |
| Maximum coolant operating temperature at engine outlet (max. top tank temp):..... | -°C    | 96    |
| Minimum operating block coolant temperature.....                                  | -°C    | 71    |
| Minimum coolant expansion space (% of system capacity).....                       | - %    | 5     |
| Heat Rejection to Coolant.....  | -kW    | TBD   |
| Maximum recommended external coolant flow restriction in engine circuit:.....     | -kPa   | 34    |

**CRANKING SYSTEM**

|  |         |         |       |
|--|---------|---------|-------|
| Minimum Battery Capacity - Cold Soak at 0°F (-18°C) or Above |         | 12V     | 24V   |
| — Engine Only - Cold Cranking Amperes.....                   | -CCA    | 950     | 475   |
| — Engine Only - Reserve Capacity.....                        | -min.   | 160     | 160   |
| Maximum Starting Circuit Voltage Drop.....                   | -Volts  | TBD     |       |
| Minimum Ambient Temperature for Unaided Cold Start.....      | -°C(°F) | -12     | (10)  |
| Minimum Cranking Speed Required for Unaided Cold Start.....  | -rpm    | 125     |       |
| Maximum starting circuit resistance.....                     | -Ohm    | 0.00075 | 0.002 |

**EMISSIONS DATA (in accordance with ISO8178 Cycle D2)**

|   |         |      |
|---|---------|------|
| NO <sub>x</sub> (Oxides of Nitrogen)..... | -g/kW.h | N.A. |
|---|---------|------|

\*All Data at Rated Conditions

ALL DATA CERTIFIED WITHIN 5%

TBD = To Be Decided

N/A = Not Applicable

N.A. = Not Available

All data is subject to change without notice, sorry for inform.

**Dongfeng Cummins Engine Co., Ltd.**