



DONGFENG CUMMINS ENGINE  
PERFORMANCE CURVE

Engine Model  
**L325-20**

Curve No.  
**FR92014**

CPL Code  
**1480**

Date  
**20-June**

Displacement: 8.9L

Bore: 114mm

Stroke: 145mm

Fuel System: Boxu7100 Pump/RQV-K

Cylinders: 6 Cylinders, in Line

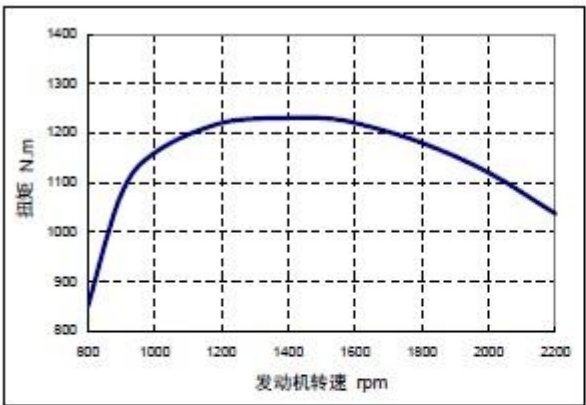
Advertised Power:239kW@2200 rpm

325HP@2200 rpm

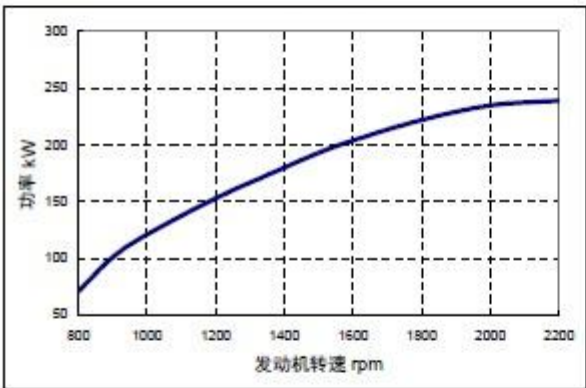
Peak Torque: 1230N.m@1400 rpm

Aspiration: Turbocharged & Inter-cooled

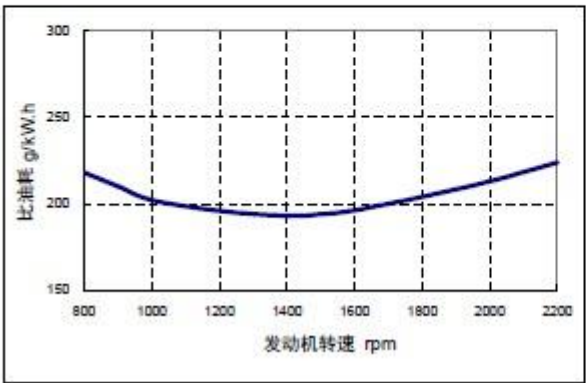
Rating Type: Continuous



扭矩	
rpm	N.m
800	850
900	1075
1000	1160
1200	1220
1400	1230
1500	1230
1600	1220
1800	1180
2000	1120
2200	1037



功率	
rpm	kW
800	71
900	101
1000	121
1200	153
1400	180
1500	193
1600	204
1800	222
2000	235
2200	239



比油耗	
rpm	g/kW.h
800	218
900	210
1000	202
1200	198
1400	193
1500	194
1600	198
1800	204
2000	213
2200	224

Performance data obtain under normal conditions, according to GB/T18297-2001 test conditions

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Diesel Engine for Vehicle Performance Data

## Technical Request

Aspiration:	Turbocharged & Inter-cooled
Emission Certification	GB17691/GB14761
Net Weight(Dry)-Engine Only-Average:	650kg
Net Weight(Dry)-Engine with Heat Exchanger-Average	680kg
Compression Ratio:	16.6:1
Distance from Center of Gravity to the Front Engine Block	427mm
Distance from Center of Gravity to the Crankshaft Centerline	163mm
Maximum Bending Moment at Rear Face of Block	1356 N.m
Limit load of Thrust Bearing:	
Instantaneous maximum:	5338 N
Continuous maximum	2670N

## Performance Characteristic

Idle Speed:	700±100rpm
Maximum non-load speed:	2500rpm
Over speed performance(within 15 seconds):	3500rpm
Maximum Altitude at Continuous Operation:	2000m
The clutch torque @ 800rpm:	780N.m
When install exhaust braking:	
The limit exhaust pressure of Turbocharger export @3150 rpm	450 kPa
Maximum power of Exhaust brake	114kw

Engine Speed (RPM)	Oil Pressure (kPa)	Air Flow (m3/min)	Air Pressurized		Exhaust Flow (m3/min)	Exhaust Temperature (°C)	Fuel Consumption (l/hr)	Heat Energy Loss	
			Flow (kg/min)	Pressure kPa				Coolant (KW)	Air (KW)
2200	426	21.2	—	170	56	510	64	108	65
1400	327	11.2	—	132	35	505	42.5	66.8	29

All values within ±5%.

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Diesel Engine for Vehicle Performance Data

## LUBRICATION SYSTEM

Oil Sump Capacity:

Upper Limit:	23L
Lower Limit:	19L
Capacity of the whole system:	27.6 L

## AIR SYSTEM

Air intake maximum temperature rise from Outside to the Turbocharger 15°C

The allowable maximum restriction when use Dry Air Filter

Medium: kPa (mmH<sub>2</sub>O) 2.9(300)

Heavy: kPa (mmH<sub>2</sub>O) 3.7(380)

The allowable maximum restriction when use dirty Filter Element: kPa (mmH<sub>2</sub>O) 6.2(635)

## TURBOCHARGED & INTERCOOLED

Environment design parameters	Stage II	Stage III
The highest temperature of intake manifold:	55°C	50°C
Temperature after the cooling of the intercooler	25°C	20°C
The maximum allowable cold pressure difference before and after the intercooler:	16.7(125) kPa(mmHg)	
The allowable minimum diameter of the intake manifold:	100mm	

## EXHAUST SYSTEM

The maximum exhaust resistance with exhaust manifold and muffler: kPa(mmHg) 10.0(75)

The allowable minimum diameter of the exhaust manifold: 75mm

## FUEL SYSTEM

The maximum resistance of Fuel Pump when use clean filter 150mmHg

Maximum fuel return oil resistance: 520mmHg

## COOLING SYSTEM

Engine Coolant Capacity:	11.1 L
The range of temperature adjustment for the Thermostat:	83-93 °C
The maximum pressure of Coolant(without pressure cap and thermostat closed)	290kPa
The highest coolant temperature (at engine exports):	100°C
Maximum degassing time	25mins
Maximum coolant flow to accessories	56 L/min
The lowest coolant temperature	70°C
Minimum speed of water-filling	19 l/min
Minimum coolant expansion volume relative to the system capacity	6 %
Water tank capacity without water expansion	6 L

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Minimum allows pressure of pressure cap:	50 kPa	
The alarm temperature of the coolant	104°C	
The open temperature of louver	N/A	
Cooling ability of cooling system:	Stage II	Stage III
The limit environmental temperature at rated speed	45 °C	42 °C
The limit environmental temperature at peak torque	40°C	37°C

#### 24V ELECTRICAL SYSTEM

Maximum resistance of starting circuit 0.002Ω

The cold start current when engine and the clutch separate: CCA 510

#### COLD STARTING SYSTEM

The lowest cold starting temperature without auxiliary starting device -10°C @120rpm

The lowest cold starting temperature with starting device -25°C@ 110rpm

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*All data is subject to change without notice- contact Cummins for most recent data.*