



Industrial Engine Performance Data

Dongfeng Cummins Engine Co.,Ltd
www.cumminspowerunits.com

QSZ13-P550

FR20954

410 kW (550 bhp) @ 1800 r/min
410 kW (550 bhp) @ 1500 r/min

CPL Code
3787

Revision Date
2016-12-23

Version
00

Engine Configuration: D0C3005CX03

Displacement: 13L

Compression Ratio: 17:1

Application : Water Pump

Fuel System: HPCR

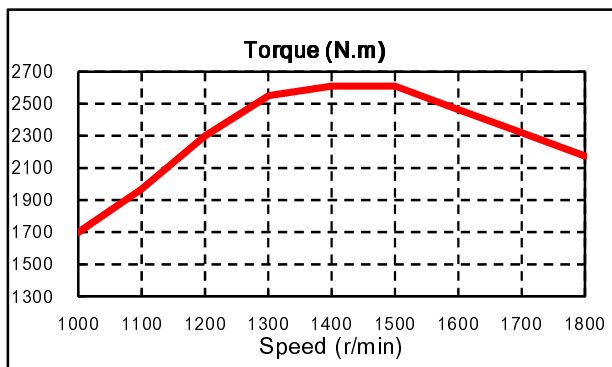
Aspiration: Turbocharged and Charge Air Cooled

Governor Droop: 10%

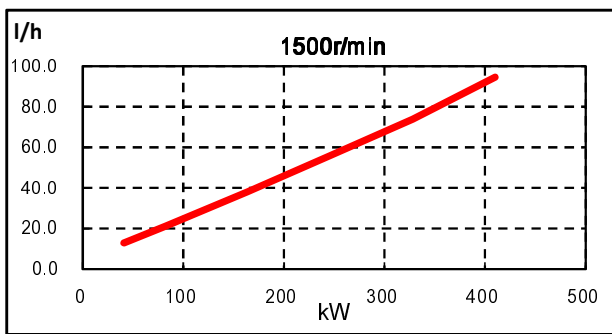
NOTES

- 1.The performance data is obtained under the condition of GB/T18297 of inlet dry air pressure 99kPa, water vapor partial pressure of 1kPa and inlet temperature of 298K.
- 2.All data is based on the engine operating without air compressor,fan,generator fan,optional equipment and driven components .
- 3.All data is based on the engine operating with 3.7 kPa inlet air restriction , 10 kPa exhaust restriction and with 13 kPa Intercooler pressure drop.

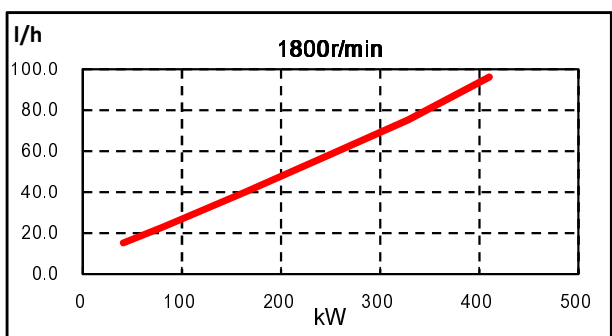
Speed r/min	Torque		Power	
	lb-ft	N.m	bhp	kW
1800	1604	2175	550	410
1700	1711	2320	554	413
1600	1818	2465	554	413
1500	1925	2610	550	410
1400	1925	2610	513	383
1300	1881	2550	466	347
1200	1696	2300	388	289
1100	1453	1970	305	227
1000	1254	1700	239	178



Engine Fuel Consumption @1500 r/min						
OUTPUT POWER			FUEL CONSUMPTION			
%	bhp	kW	lb/bhp.h	g/kW.h	gal/h	l/h
100	550	410	0.118	193.8	25.0	94.6
80	440	328	0.115	189.4	19.5	74.0
60	330	246	0.116	191.3	14.8	56.0
40	220	164	0.119	195.4	10.1	38.1
20	110	82	0.131	215.6	5.6	21.0
10	55	41	0.161	265.4	3.4	13.0



Engine Fuel Consumption @1800 r/min						
OUTPUT POWER			FUEL CONSUMPTION			
%	bhp	kW	lb/bhp.h	g/kW.h	gal/h	l/h
100	550	410	0.120	196.9	25.4	96.1
80	440	328	0.117	192.5	19.9	75.2
60	330	246	0.119	196.3	15.2	57.5
40	220	164	0.125	205.0	10.6	40.0
20	110	82	0.144	237.1	6.1	23.1
10	55	41	0.189	311.2	4.0	15.2





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GENERAL ENGINE DATA

Low idle speed:..... - r/min 700 ± 50
 Maximum no load speed:..... - r/min 1980
 Maximum altitude for continuous operation:..... - m 5200
 Maximum torque available at 700 rpm:..... - N.m 1200
COLD START CAPABILITY
 Minimum ambient temperature for unaided cold start:..... - °C -15
 Minimum ambient temperature with Intake Air Heater(engine no load): - °C -30
 1 meter sound pressure level (GB/T1859):..... - dB 96

PERFORMANCE DATA

	r/min	1500	1800
Engine Speed	r/min	1500	1800
Gross Engine PowerOutput	kW	410	410
Torque	N.m	2610	2175
Fuel Consumption	kg/h	79.6	80.6
Intake Air Flow	m ³ /min	26.7	30.9
Exhaust Gas Temp - DryStack	°C	477	435
Exhaust Gas Flow	kg/min.	32.5	37.5
Heat Rejection to Coolant	kW	168	170
Heat Rejection to Aftercooler	kW	64	70
TurbochargerCompressor Outlet Pressure	kPa	235	233
Charge Air Flow	kg/min.	31.2	36.1
TurbochargerCompressor Outlet Temperature	°C	190	186

ALTITUDE DERATE

The atmosphere parameters of engine test at different altitude refer to ISO 2533.

Speed (r/min)	Turque Derate (%)	
	1500	1800
Altitude(m)		
0	0	0
500	0	0
1000	0	0
1500	0	0
2000	0	2
2500	3	9
3000	10	15
3500	17	21
4000	23	26
4500	30	31

-End-