

	Basic Engine Model:	140kW@1500rpm 150kW@1800rpm		
	6BTAA5.9-G12	Configuration	CPL Code	Revision
	FR94438	D403076GX03	4283	2014/5/20

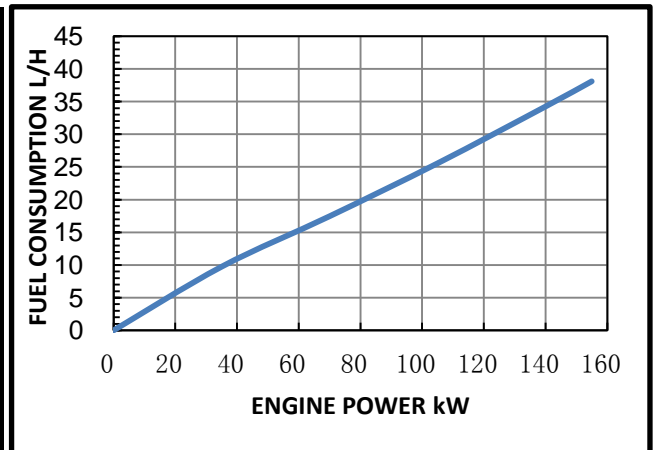
Compression Ratio: 17.3:1	Aspiration: Turbocharged & Charge Air Cooled
Bore: 102 mm	Displacement: 5.9 L
Stroke: 120 mm	No. of Cylinders: 6
Emission Certification:	Fuel System: BYC P7100/Electronic Governor
Governor Regulation: ≤5%	

All data is based on the engine operating with fuel system, water pump, and 14.85 in H₂O (3.7 kPa) inlet air restriction , and with 2.95 in Hg (10 kPa) exhaust restriction ; not included are alternator, fan, optional equipment and driven components.

Engine Speed	Standby Power		Prime Power		Continuous Power		
	RPM	kW	HP	kW	HP	kW	HP
1500	155	207	140	187			
1800	165	220	150	200			

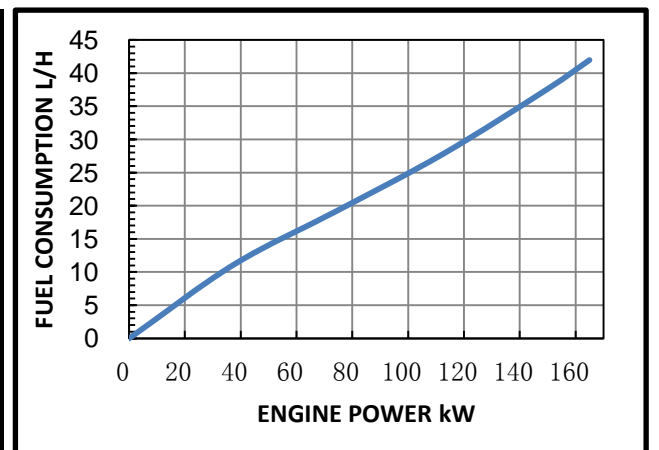
Engine Performance Data @ 1500RPM

OUTPUT POWER			FUEL CONSUMPTION	
%	kW	HP	g/kW.h	L/h
STANDBY POWER				
100	155	207	204	38
PRIME POWER				
100	140	187	203	34
75	105	140	202	26
50	70	93	207	17
25	35	47	231	10
CONTINUOUS POWER				



Engine Performance Data @ 1800RPM

OUTPUT POWER			FUEL CONSUMPTION	
%	kW	HP	g/kW.h	L/h
STANDBY POWER				
100	165	220	211	42
PRIME POWER				
100	150	200	208	38
75	112.5	150	205	28
50	75	100	214	19
25	37.5	50	246	11
CONTINUOUS POWER				



Curves shown above represent gross engine performance capabilities obtained and corrected in accordance with GB/T18297 conditions of 100kPa (29.53 in. Hg) barometric pressure , 25°C (77°F) inlet air temperature, and 1 kPa (0.30 in. Hg) water vapor pressure with No.0 diesel fuel. The engine may be operated without changing the fuel setting up to 1600 m (5250ft.) altitude.

GENERAL ENGINE DATA

Approximate Engine Weight (dry).....	-kg	413
Mass Moment of Inertia of Rotating Components (No Flywheel).....	-kg·m ²	0.25
Center of Gravity from Front Face of Block.....	-mm	391
Center of Gravity above Crankshaft Centerline.....	-mm	140

ENGINE MOUNTING

Maximum (Static) Bending Moment at Front Support Mounting Surface.....	-N.m	435
Maximum (Static) Bending Moment at Side Pad Mounting Surface.....	-N.m	TBD
Maximum (Static) Bending Moment at Rear Face of Block.....	-N.m	1356
Moment of Inertia of Complete Engine		
— Roll Axis.....	-kg·m ²	14.8
— Pitch Axis.....	-kg·m ²	36.9
— Yaw Axis.....	-kg·m ²	31.9

EXHAUST SYSTEM

Maximum Back Pressure.....	-kPa	10
Exhaust Pipe Size Normally Acceptable.....	-mm	75
Maximum Static Supported Weight at the Turbocharger Outlet Flange.....	-N.m	13.5
Exhaust Manifold Insulation Acceptable.....	-Yes/No	No
Turbocharger Insulation Acceptable.....	-Yes/No	No

CHARGE AIR COOLING SYSTEM

Maximum allowable pressure drop across charge air cooler and OEM CAC piping (IMPD):.....	-kPa	13
Maximum Intake Manifold Temperature Differential (Ambient to IMT) (IMTD).....	-°C	25
Intake manifold temperature for Fan-ON.....	-°C	50
Intake manifold air temperature derate/alarm temperature.....	-°C	58

AIR INTAKE SYSTEM

Maximum Intake Air Restriction with Heavy Duty Air Cleaner		
— Clean Element.....	-kPa	3.7
— Dirty Element.....	-kPa	6.2
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
Recommended intake piping size (inner diameter).....	-mm	76

LUBRICATION SYSTEM

Normal Operating Oil Pressure Range		
— minimum low idle.....	-kPa	207
— maximum rated speed.....	-kPa	345
Maximum Oil Temperature	-°C	121
Oil Capacity with OP 9006 Oil Pan:High-Low.....	-litre	14.2-12.3
Minimum Required Lube System Capacity - Sump plus Filters.....	-litre	16.4
Angularity of Standard Oil Pan: (Values stated are for intermittent operation only):		
— Front Down.....	- °	40
— Front Up.....	- °	40
— Side to Side.....	- °	40

FUEL SYSTEM

Type Injection System.....		BYC P7100
Maximum Restriction at Lift Pump.....	-kPa	13.6
Maximum Restriction at the Supply Side of the injector.....	-kPa	67.7
Total Drain Flow(constant for all loads).....	-litre/hr	30

COOLING SYSTEM

Coolant Capacity-Engine Only.....	-litre	10
Maximum Coolant Friction Head External to Engine		
-1800rpm.....	-kPa	35
-1500rpm.....	-kPa	28
Maximum Static Head of Coolant Above Engine Crank Centerline.....	-m	14
Standard Thermostat (Modulating) Range.....	-°C	82-95
Minimum Pressure Cap.....	-kPa	69
Maximum Top Tank Temperature for Standby/Prime Power.....	-°C	104/100

ELECTRICAL SYSTEM

Cranking Motor (Heavy Duty,Positive Engagement).....	-volt	24V
Battery Charging System,Negative Ground.....	-ampere	40
Maximum Allowable Resistance of Cranking Circuit.....	-ohm	0.002
Minimum Recommended Battery Capacity		
-Cold Soal @ 10°F (-12°C) and Above.....	-°F CCA	400

EMISSIONS

Gaseous Emissions per GB 20891-2007,Rated Speed@1500:

—Weight-Specific NOx.....	-g/kW.h
—Weight-Specific HC.....	-g/kW.h
—Weight-Specific CO.....	-g/kW.h
—Weight-Specific Particulates.....	-g/kW.h

Gaseous Emissions per GB 20891-2007,Rated Speed@1800:

—Weight-Specific NOx.....	-g/kW.h
—Weight-Specific HC.....	-g/kW.h
—Weight-Specific CO.....	-g/kW.h
—Weight-Specific Particulates.....	-g/kW.h

Fuel Rating Option used for these Data: **FR94438**

Governed Engine Speed.....	-rpm
Engine Idle Speed.....	-rpm
Gross Engine Power Output.....	-kW
Piston Speed.....	-m/s
Friction Horsepower.....	-kW
Engine Water Flow to Engine.....	-litre/sec.
Intake Air Flow.....	-litre/sec.
Exhaust Gas Flow.....	-litre/sec.
Exhaust Gas Temperature	-°C
Radiated Heat to Ambient.....	-kW
Heat Rejection to Coolant.....	-kW
Heat Rejection to Exhaust.....	-kW

STANDBY POWER		PRIME POWER	
1800	1500	1800	1500
750-850	750-850	750-850	750-850
165	155	150	140
7.2	6	7.2	6
16.4	12.7	16.4	12.7
2.4	2.0	2.4	2
196	150	182	137
438	357	398	321
458	507	445	495
21	19	19	17
62	58	58	57
140	125	125	113

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.