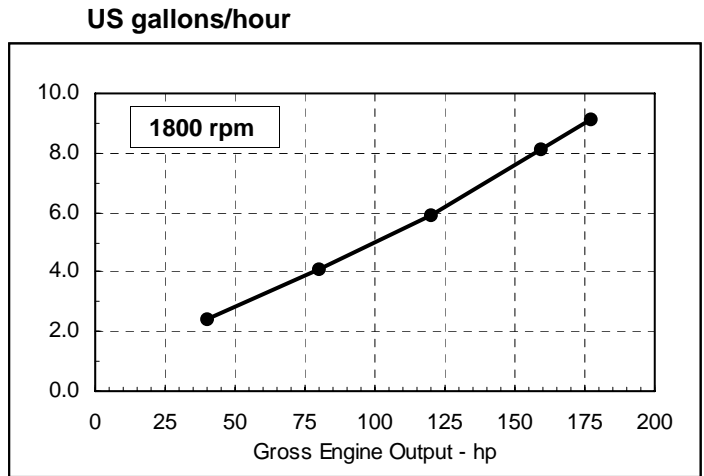
	Cummins Inc. Columbus, Indiana 47202-3005	Basic Engine Model: 6BTA5.9-G6	Curve Number: FR-92242	<i>G-DRIVE</i> B5.9 1
	Engine Data Sheet	Engine Critical Parts List: CPL: 2416	Date: 3Mar10	
Displacement : 5.9 litre (360 in³)		Bore : 102 mm (4.02 in.) Stroke : 120 mm (4.72 in.)		
No. of Cylinders : 6		Aspiration : Turbocharged and Aftercooled		

Engine Speed rpm	Standby Power		Prime Power		Continuous Power	
	kWm	hp	kWm	hp	kWm	hp
1800	132	177	119	159	101	135


Engine Performance Data @ 1800 rpm

OUTPUT POWER			FUEL CONSUMPTION			
%	kWm	hp	kg/ kWm-h	lb/ hp-h	litre/ hour	US gal/ hour
STANDBY POWER						
100	132	177	0.223	0.366	35	9.1
PRIME POWER						
100	119	159	0.220	0.362	31	8.1
75	89	120	0.214	0.353	23	5.9
50	59	80	0.222	0.365	16	4.1
25	30	40	0.257	0.423	9	2.4
CONTINUOUS POWER						
100	101	135	0.214	0.351	25	6.7

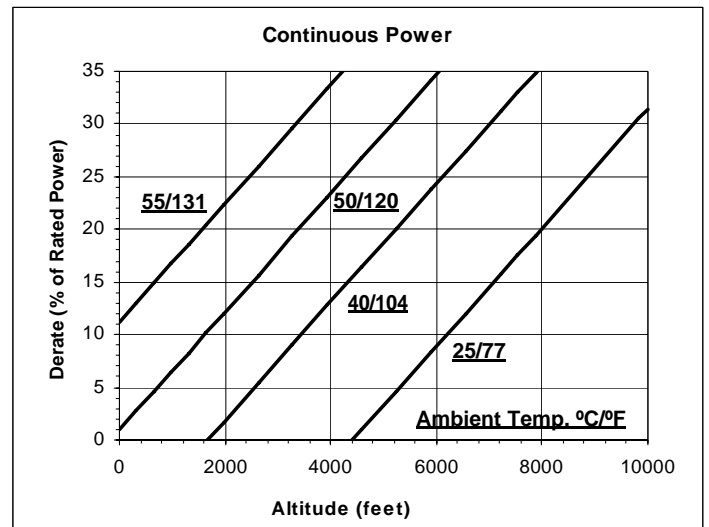
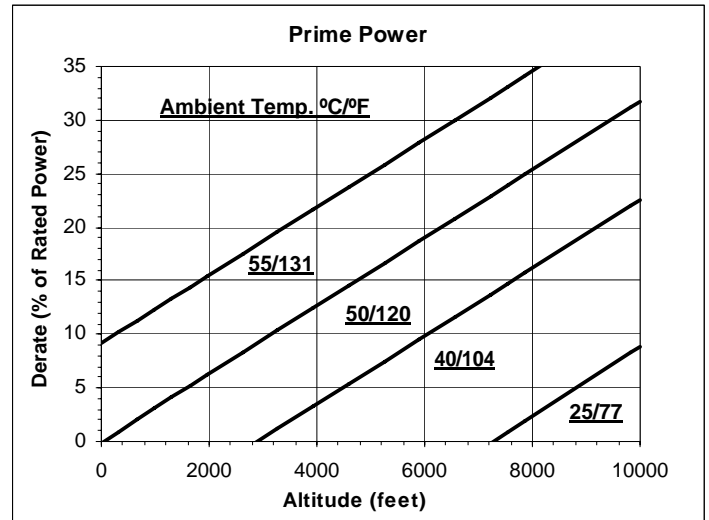
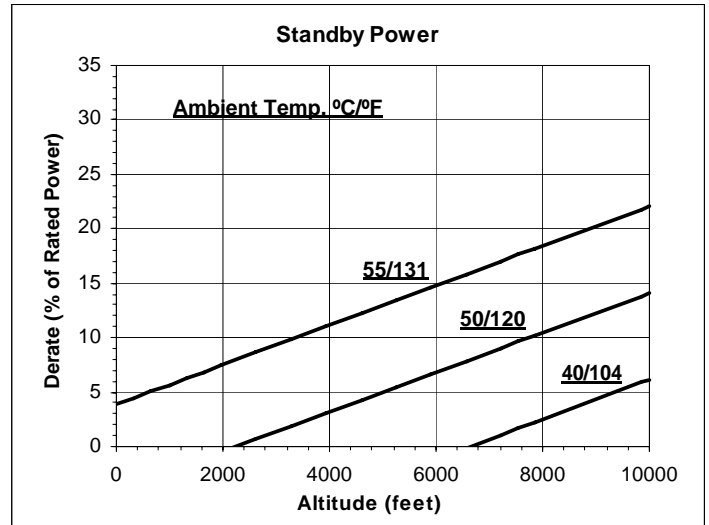


CONVERSIONS:(litres = US Gal x 3.785) (US Gal = litres x 0.2642)

Data Subject to Change Without Notice

<p>These guidelines have been formulated to ensure proper application of generator drive engines in A.C. generator set installations. STANDBY POWER RATING: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. Under no condition is an engine allowed to operate in parallel with the public utility at the Standby Power rating. This rating should be applied where reliable utility power is available. A Standby rated engine should be sized for a maximum of an 80% average load factor and 200 hours of operation per year. This includes less than 25 hours per year at the Standby Power rating. Standby ratings should never be applied except in true emergency power outages. Negotiated power outages contracted with a utility company are not considered an emergency. PRIME POWER RATING: Applicable for supplying electric power in lieu of commercially purchased power. Prime Power applications must be in the form of one of the following two categories: UNLIMITED TIME RUNNING PRIME POWER: Prime Power is available for an unlimited number of hours per year in a variable load application. Variable load should not exceed a 70% average of the Prime Power rating during any operating period of 250 hours. The total operating time at 100% Prime Power shall not exceed 500 hours per year. A 10% overload capability is available for a period of 1 hour within a 12-hour period of operation. Total operating time at the 10% overload power shall not exceed 25 hours per year. LIMITED TIME RUNNING PRIME POWER: Limited Time Prime Power is available for a limited number of hours in a non-variable load application. It is intended for use in situations where power outages are contracted, such as in utility power curtailment. Engines may be operated in parallel to the public utility up to 750 hours per year at power levels never to exceed the Prime Power rating. The customer should be aware, however, that the life of any engine will be reduced by this constant high load operation. Any operation exceeding 750 hours per year at the Prime Power rating should use the Continuous Power rating. CONTINUOUS POWER RATING: Applicable for supplying utility power at a constant 100% load for an unlimited number of hours per year. No overload capability is available for this rating.</p>	Reference AEB 10.47 for determining Electrical Output.
	Data shown above represent gross engine performance capabilities obtained and corrected in accordance with ISO-3046 conditions of 100 kPa (29.53 in Hg) barometric pressure [110 m (361 ft) altitude], 25 °C (77 °F) air inlet temperature, and relative humidity of 30% with No. 2 diesel or a fuel corresponding to ASTM D2. Derates shown are based on 15 in H ₂ O air intake restriction and 2 in Hg exhaust back pressure.
	The fuel consumption data is based on No. 2 diesel fuel weight at 0.85 kg/litre (7.1 lbs/US gal). Power output curves are based on the engine operating with fuel system, water pump and lubricating oil pump; not included are battery charging alternator, fan, optional equipment and driven components.
	Data Status: --Limited Production-- Data Tolerance: ± 5% Chief Engineer: 

1800 rpm Derate Curves



Operation At Elevated Temperature And Altitude:

For **Standby Operation** above these conditions, derate by an additional 2% per 300 m (1000 ft), and 8% per 10° C (18° F).

For **Prime Operation** above these conditions, derate by an additional 3% per 300 m (1000 ft), and 9% per 10° C (18° F).

For **Continuous Operation** above these conditions, derate by an additional 6% per 300 m (1000 ft), and 10% per 10° C (18° F).

Cummins Inc.

Engine Data Sheet

ENGINE MODEL : **6BTA5.9-G6**

CONFIGURATION NUMBER : D403092GX02

DATA SHEET : DS-92242

DATE : 3Mar10

PERFORMANCE CURVE : FR-92242

INSTALLATION DIAGRAM

- Fan to Flywheel:

CPL NUMBER

- Engine Critical Parts List: 2416

GENERAL ENGINE DATA

Type	Inline 6-Cylinder Diesel
Aspiration	Turbocharged and Aftercooled
Bore x Stroke	4.02 x 4.72 (102 x 120)
Displacement	360 (5.9)
Compression Ratio	17.3 : 1
Dry Weight (Approximate), Fan to Flywheel Engine	886 (402)
Wet Weight (Approximate), Fan to Flywheel Engine	939 (426)
Moment of Inertia of Rotating Components	
• with FW 9017 Flywheel	5 (0.6)
• with FW 9134 Flywheel	11 (1.2)
Center of Gravity from Rear Face of Block	21.4 (544)
Center of Gravity Above Crankshaft Centerline	6.1 (155)
Maximum Static Loading at Rear Main Bearing	N.A. (N.A.)

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Block	996 (1350)
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EXHAUST SYSTEM

Maximum Back Pressure	3 (10)
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AIR INDUCTION SYSTEM

Maximum Intake Air Restriction	
• with Dirty Filter Element	25 (6)
• with Clean Filter Element	15 (4)

COOLING SYSTEM**Jacket Water Circuit Requirements**

Coolant Capacity — Engine Only	2.4 (9.1)
Maximum Static Head of Coolant Above Engine Crank Centerline	46 (14)
Standard Thermostat (Modulating) Range	183-203 (84-95)
Minimum Pressure Cap	7 (48)
Maximum Top Tank Temperature for Standby / Prime Power	220/212 (104/100)
Maximum Coolant Friction Head External to Engine	4 (28)

LUBRICATION SYSTEM

Oil Pressure @ Idle Speed	10 (69)
@ Governed Speed	30-50 (207-345)
Maximum Oil Temperature	250 (121)
Oil Capacity with OP 9006 Oil Pan : Low - High	3-3.8 (11.5-14.3)
Total System Capacity (Including Filter)	4.3 (16.4)

FUEL SYSTEM

Type Injection System	Bosch Mechanical
Maximum Restriction at Lift Pump(clean/dirty filter)..... — in Hg (kPa)	4/8 (14/27)
Maximum Allowable Head on Injector Return Line (Consisting of Friction Head and Static Head) — in Hg (kPa)	2.5 (8.4)
Maximum Fuel Flow to Injector Pump	11.9 (45)
Maximum Return Fuel Flow	N.A. (N.A.)
Maximum Fuel Inlet Temperature	160 (71)

ELECTRICAL SYSTEM

Cranking Motor (Heavy Duty, Positive Engagement)	— volt	12
Battery Charging System, Negative Ground	— ampere	55
Maximum Allowable Resistance of Cranking Circuit	— ohm	0.002
Minimum Recommended Battery Capacity		
• Cold Soak @ 0 °F to 32 °F (-18 °C to 0 °C)	— 0 °F CCA	(950)

COLD START CAPABILITY

Minimum Ambient Temperature for Cold Start with 1500 Watt Coolant Heater to Rated Speed.....	— °F (°C)	5 (-15)
Minimum Ambient Temperature for Unaided Cold Start.....	— °F (°C)	23 (-5)
Minimum Ambient Temperature for NFPA 110 Cold Start (90 °F Coolant Temperature)	— °F (°C)	N.A. (N.A.)

PERFORMANCE DATA

- All data is based on:
- Engine operating with fuel system, water pump, lubricating oil pump, air cleaner and exhaust silencer; not included are battery charging alternator, fan, and optional driven components.
 - Engine operating with fuel corresponding to grade No. 2-D per ASTM D975.
 - ISO 3046, Part 1, Standard Reference Conditions of:
 - Barometric Pressure : 100 kPa (29.53 in Hg) Air Temperature : 25 °C (77 °F)
 - Altitude : 110 m (361 ft) Relative Humidity : 30%
 - Air Intake Restriction : 381 mm H₂O (15 in H₂O) Exhaust Restriction : 6.7 kPa (2 in Hg)

Steady State Stability Band at Any Constant Load	— %	+/-	0.86
Estimated Free Field Sound Pressure Level of a Typical Generator Set;			
Excludes Exhaust Noise; at Rated Load and 7.5 m (24.6 ft); @1800 rpm	— dBA		N.A.
Exhaust Noise at 1 m Horizontal from Centerline of Exhaust Pipe Outlet Upwards at 45°.....	— dBA		N.A.

Governed Engine Speed	rpm
Engine Idle Speed.....	rpm
Gross Engine Power Output.....	hp (kW)
Brake Mean Effective Pressure.....	psi (kPa)
Piston Speed	ft/min (m/s)
Friction Horsepower.....	hp (kW)
Engine Water Flow at Stated Friction Head External to Engine:	
• 1 psi Friction Head.....	US gpm (litre/s)
• Maximum Friction Head	US gpm (litre/s)

	STANDBY POWER		PRIME POWER	
	60 hz	50 hz	60 hz	50 hz
1800			1800	
700 - 1200			700 - 1200	
177 (132)			159 (119)	
216 (1492)			195 (1344)	
1416 (7.2)			1416 (7.2)	
22 (16.4)			22 (16.4)	
38 (2.4)		Not Available For 1500 RPM Operation	38 (2.4)	Not Available For 1500 RPM Operation
30 (1.9)			30 (1.9)	
370 (175)			343 (162)	
1023 (551)			982 (528)	
995 (470)			687 (325)	
24.8 : 1			25.9 : 1	
791 (14)			703 (13)	
4324 (76)			3803 (67)	
7140 (126)			6309 (111)	
N.A. (N.A.)			N.A. (N.A.)	
N.A. (N.A.)			N.A. (N.A.)	
24 (163)			21 (143)	
335 (169)			306 (153)	

Engine Data

Intake Air Flow	cfm (litre/s)
Exhaust Gas Temperature	°F (°C)
Exhaust Gas Flow	cfm (litre/s)
Air to Fuel Ratio.....	air : fuel
Radiated Heat to Ambient	BTU/min (kW)
Heat Rejection to Jacket Coolant.....	BTU/min (kW)
Heat Rejection to Exhaust	BTU/min (kW)
Heat Rejection to *Fuel.....	BTU/min (kW)
Heat Rejection to Aftercooler.....	BTU/min (kW)
Turbocharger Compressor Outlet Pressure	in Hg (kPa)
Turbocharger Compressor Outlet Temperature.....	°F (°C)

* This is the maximum heat rejection to fuel.

N.A. - Not Available
N/A - Not Applicable to this Engine
TBD - To Be Determined

ENGINE MODEL : 6BTA5.9-G6
DATA SHEET : DS-92242
DATE : 3Mar10
CURVE NO. : FR-92242