



**ENGINE PERFORMANCE CURVE**

Rating: Gross Power  
 Application: Generator  
 1800 RPM (60 Hz)

**PowerTech 2.9L Engine**  
 Model: **3029TF150**

**58 hp (43 kW) Prime**  
**64 hp (48 kW) Standby**  
 [Option 16TR / 16TS]

Nominal Engine Power @ 1800 RPM			
Prime		Standby	
HP	kW	HP	kW
58	43	64	48

Generator Efficiency %	Fan Power		Power Factor	Prime Rating		Standby Rating <sup>1</sup>		4 sec Standby Block Load Capability
	hp	kW		kW	kVA	kW	kVA	
88-92	4	3	0.8	35-37	44-46	39-41	49-51	100%

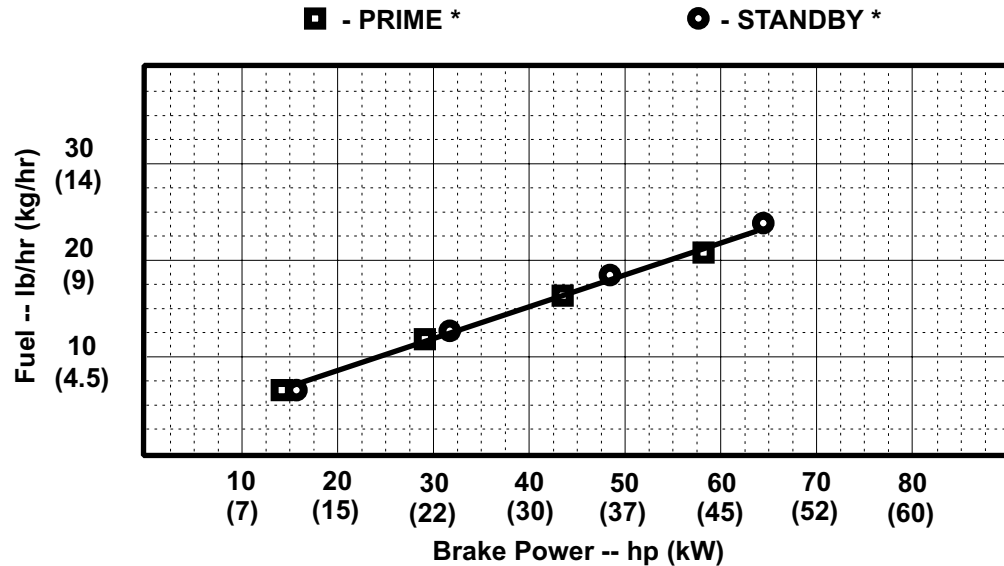
Note 1: Based on nominal engine power.

Air Intake Restriction ..... 12 in.H<sub>2</sub>O (3 kPa)  
 Exhaust Back Pressure ..... 30 in.H<sub>2</sub>O (7.5 kPa)

Gross power guaranteed within + or - 5% at SAE J1995 and ISO 3046 conditions:  
 77 °F (25 °C) air inlet temperature  
 29.31 in.Hg (99 kPa) barometer  
 104 °F (40 °C) fuel inlet temperature  
 0.853 fuel specific gravity @ 60 °F (15.5 °C)

Conversion factors:  
 Power: kW = hp x 0.746  
 Fuel: 1 gal = 7.1 lb, 1 L = 0.85 kg  
 Torque: N\*m = lb-ft x 1.356

All values are from currently available data and are subject to change without notice.



Notes:

Emission Certifications:

Certified by:

**CARB; EPA\***

Ref: Engine Emission Label

\* Revised Data  
 Curve 3029TF180064 ..... Sheet 1 of 2  
 November 2000

## Engine Specification Data

### General Data

Model ..... 3029TF150  
 Number of Cylinders ..... 3  
 Bore and Stroke--in.(mm)..... 4.20 x 4.33 (106 x 110)  
 Displacement--in.<sup>3</sup> (L)..... 177 (2.9)  
 Compression Ratio ..... 17.2 : 1  
 Valves per Cylinder--Intake/Exhaust ..... 1 / 1  
 Firing Order ..... 1-2-3  
 Combustion System ..... Direct Injection  
 Engine Type ..... In-line, 4-Cycle  
 Aspiration ..... Turbocharged  
 Engine Crankcase Vent System ..... Open  
 Maximum Crankcase Pressure--in.H<sub>2</sub>O (kPa) ..... 2 (0.5)

### Physical Data

Length--in.(mm) ..... 28.2 (716)  
 Width--in.(mm) ..... 20.4 (519)  
 Height--in.(mm) ..... 32.2 (819)  
 Weight, dry--lb (kg)..... 697 (316)  
 (Includes SAE 4 flywheel housing, RE28119 flywheel, starter and electrics.)  
 Center of Gravity Location  
 From Rear Face of Block (X-axis)--in.(mm) .... 7.8 (198)  
 Right of Crankshaft (Y-axis)--in.(mm) ..... 0.4 (10)  
 Above Crankshaft (Z-axis)--in.(mm) ..... 4.9 (124)  
 Max. Allow. Static Bending Moment at Rear  
 Face of Flywhl Hsg w/ 5-G Load--lb-ft (N•m) ... 600 (814)  
 Thrust Bearing Load Limit (Forward)  
 Continuous--lb (N) ..... 500 (2224)  
 Intermittent--lb (N)..... 900 (4003)

### Air System

**Prime   Standby**

Maximum Allowable Temp Rise--Ambient Air to  
 Engine Inlet--°F (°C) ..... 15 (8) ..... 15 (8)  
 Maximum Air Intake Restriction  
 Dirty Air Cleaner--in.H<sub>2</sub>O (kPa).... 25 (6.25) ... 25 (6.25)  
 Clean Air Cleaner--in.H<sub>2</sub>O (kPa)..... 12 (3) ..... 12 (3)  
 Engine Air Flow--ft<sup>3</sup>/min (m<sup>3</sup>/min) ..... 124 (3.5).... 127 (3.6)  
 Intake Manifold Pressure--psi (kPa).... 102 (67)..... 11 (77)  
 Rec'd. Intake Pipe Dia--in.(mm) ..... 2.5 (63.5)... 2.5 (63.5)

### Cooling System

**Prime   Standby**

Engine Heat Reject.--BTU/min (kW). 1423 (25) .. 1593 (28)  
 Coolant Flow--gal/min (L/min)..... 29 (110) .... 29 (110)  
 Thermostat Start to Open--°F (°C) ..... 180 (82) .... 180 (82)  
 Thermostat Fully Open--°F (°C)..... 201 (94) .... 201 (94)  
 Maximum Water Pump  
 Inlet Restriction--in.H<sub>2</sub>O (kPa)..... 28 (7) ..... 28 (7)  
 Engine Coolant Capacity--qt (L) ..... 6 (5.7) ..... 6 (5.7)  
 Recm'd Pressure Cap--psi (kPa) ..... 10\* (69\*) ... 10\* (69\*)  
 Maximum Top Tank Temp--°F (°C) .... 221 (105) .. 221 (105)  
 Min. Coolant Fill Rate--gal/min (L/min) .... 3 (11) ..... 3 (11)  
 Min. Air-to-Boil Temperature--°F (°C) .. 117 (47) .... 117 (47)

### Electrical System

**12 Volt   24 Volt**

Rec'md. Battery Capacity (CCA)--amp ..... 640 ..... 570  
 Max. Allow. Starting Circuit Resist.--Ohm0.0012 ..... 0.002  
 Starter Rolling Current  
 At 32 °F ( 0 °C)--amp ..... 780 ..... 600  
 At -22 °F (-30 °C)--amp ..... 1000 ..... 700

### Exhaust System

**Prime   Standby**

Exhaust Flow--ft<sup>3</sup>/min (m<sup>3</sup>/min)..... 300 (8.5) ... 325 (9.2)  
 Exhaust Temperature--°F (°C) ..... 896(480) ... 941(505)  
 Max. Allow. Back Press.--in.H<sub>2</sub>O (kPa).30 (7.5) ..... 30 (7.5)  
 Recm'd Exhaust Pipe Dia--in.(mm) ... 2.5 (63.5) .. 2.5 (63.5)

### Fuel System

**Prime   Standby**

Fuel Injection Pump ..... Stanadyne Stanadyne  
 Governor Regulation..... 5% ..... 5%  
 Governor Type ..... Mech ..... Mech.  
 Total Fuel Flow--lb/hr (kg/hr)..... 209 (95) .... 209 (95)  
 Fuel Consumption--lb/hr (kg/hr)..... 21 (9.5) ... 23 (10.6)  
 Maximum Fuel Transfer Pump Suction--  
 ft (m) fuel..... 3 (0.9) ..... 3 (0.9)  
 Fuel Filter Micron Size @ 98 % Efficiency ..... 8 ..... 8

### Lubrication System

**Prime   Standby**

Oil Pressure at Rated Speed--psi (kPa)50 (345) ... 50 (345)  
 Oil Pressure at Low Idle--psi (kPa) ..... 15 (105) .... 15 (105)  
 In Pan Oil Temperature--°F (°C) ..... 239 (115) .. 239 (115)  
 Oil Pan Capacity, High--qt (L) ..... 8 (7.6) ..... 8 (7.6)  
 Oil Pan Capacity, Low--qt (L) ..... 7 (6.6) ..... 7 (6.6)  
 Total Engine Oil Capacity  
 w/ Filters--qt (L) ..... 9 (8.5) ..... 9 (8.5)  
 Engine Angularity Limits (Continuous)  
 Any Direction--degrees ..... 20 ..... 20

### Performance Data

**Prime   Standby**

Rated Power--hp (kW) ..... 58 (43) ..... 64 (48)  
 Rated Speed--rpm ..... 1800 ..... 1800  
 Low Idle Speed--rpm ..... 1400 ..... 1400  
 BMEP--psi (kPa) ..... 142 (977) .. 158 (1090)  
 Friction Power  
 @ Rated Speed--hp (kW) ..... 21 (16) ..... 21 (16)  
 Altitude Capability--ft (m) ..... 7500 (2285) .... 5000 (1525)  
 Ratio--Air : Fuel..... 24.8:1 ..... 23.0:1  
 Noise--dB(A) @ 1 m ..... 92.4 ..... 92.7

### Fuel Consumption -- lb/hr (kg/h)

**Prime   Standby**

25 % Power ..... 6.8\* (3.1) ..... 6.8\* (3.1)  
 50 % Power ..... 11.2\* (5.1) ..... 12.6\* (5.7)  
 75 % Power ..... 16.3\* (7.4) ..... 18.1\* (8.2)  
 100 % Power ..... 20.9\* (9.5) ... 23.4\*(10.6)

All values at rated speed and power with standard options unless otherwise noted.

\* Revised Data  
 Curve 3029TF180064 ..... Sheet 2 of 2  
 November 2002