

POWER RATING APPLICATION GUIDELINES FOR GENERATOR DRIVE ENGINES

These guidelines have been formulated to ensure proper application of generator drive engines in A.C. generator set installations. Generator drive engines are not designed for and shall not be used in variable speed D.C. generator set applications.

STANDBY POWER RATING is 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.

Reference Standards:

BS-5514 and DIN-6271 standards are based on ISO-3046.

Operation At Elevated Temperature And Altitude:

The engine may be operated at:

1800 RPM up to 2,500 ft (760 m) and 104° F (40° C) without power deration.

For sustained operation above these conditions, derate by 4% per 1,000 ft (300 m), and 1% per 10° F (2% per 11° C).

Cummins Engine Company, Inc.

Engine Data Sheet

G-DRIVE
N855
3

ENGINE MODEL : NTA855-G5

CONFIGURATION NUMBER : D093629DX02

DATA SHEET : DS-1831

DATE : 31May05

PERFORMANCE CURVE : FR-1831

INSTALLATION DIAGRAM

- Fan to Flywheel : 3170239
- Heat Exchanger Cooled :

CPL NUMBER

- Engine Critical Parts List : 2116

GENERAL ENGINE DATA

Type	4-Cycle; In-line; 6-Cylinder Diesel
Aspiration	Turbocharged and Aftercooled
Bore x Stroke	5.5 x 6.0 (140 x 152)
Displacement	855 (14.0)
Compression Ratio	14.0 : 1

Dry Weight		
Fan to Flywheel Engine.....	— lb (kg)	2900 (1315)
Heat Exchanger Cooled Engine.....	— lb (kg)	N. A.
Wet Weight		
Fan to Flywheel Engine.....	— lb (kg)	3018 (1369)
Heat Exchanger Cooled Engine.....	— lb (kg)	N. A.

Moment of Inertia of Rotating Components		
• with FW 1109 Flywheel	— lb _m • ft ² (kg • m ²)	118.5 (4.99)
• with FW 1001 Flywheel	— lb _m • ft ² (kg • m ²)	180.3 (7.60)
Center of Gravity from Rear Face of Flywheel Housing	— in (mm)	27.7 (704)
Center of Gravity Above Crankshaft Centerline	— in (mm)	5.5 (140)
Maximum Static Loading at Rear Main Bearing	— lb (kg)	N.A.

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Block.....	— lb • ft (N • m)	1000 (1356)
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EXHAUST SYSTEM

Maximum Back Pressure.....	— in Hg (mm Hg)	3 (76)
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AIR INDUCTION SYSTEM

Maximum Intake Air Restriction		
• with Dirty Filter Element	— in H ₂ O (mm H ₂ O)	25 (635)
• with Normal Duty Air Cleaner and Clean Filter Element.....	— in H ₂ O (mm H ₂ O)	10 (254)
• with Heavy Duty Air Cleaner and Clean Filter Element.....	— in H ₂ O (mm H ₂ O)	15 (381)

COOLING SYSTEM

Coolant Capacity — Engine Only.....	— US gal (liter)	5.5 (20.8)
— with _____ Heat Exchanger.....	— US gal (liter)	N.A.
Maximum Coolant Friction Head External to Engine		
— 1800 rpm.....	— psi (kPa)	7 (48)
— 1500 rpm.....	— psi (kPa)	
Maximum Static Head of Coolant Above Engine Crank Centerline.....	— ft (m)	60 (18.3)
Standard Thermostat (Modulating) Range.....	— °F (°C)	180 - 200 (82 - 93)
Minimum Pressure Cap	— psi (kPa)	10 (69)
Maximum Top Tank Temperature for Standby Power	— °F (°C)	220 (104)
Minimum Raw Water Flow @ 90°F to _____ Heat Exchanger.....	— US gpm (liter / min)	N.A.
Maximum Raw Water Inlet Pressure at _____ Heat Exchanger.....	— psi (kPa)	N.A.

LUBRICATION SYSTEM

Oil Pressure @ Idle Speed.....	— psi (kPa)	15 (103)
@ Governed Speed	— psi (kPa)	35 - 45 (241 - 310)
Maximum Oil Temperature	— °F (°C)	250 (121)
Oil Capacity with OP 1440 Oil Pan : High - Low	— US gal (liter)	9.0 - 8.0 (34.1 - 30.3)
Total System Capacity (with Combo Filter).....	— US gal (liter)	9.7 (36.7)
Angularity of OP 1440 Oil Pan — Front Down		45°
— Front Up.....		45°
— Side to Side.....		45°

