

Generator
500kVA Stage 3A Scania DC16-071A 02-01

Document No: G08000764
 Revision: D
 Created By: J. Lastauskiene
 Approved By: J. Darroch
 Approval Date: 21/10/2021
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Model

Model reference	GN0500GHPCAN
Model size and rating	500 kVA
Bill of Material reference number	601326 - B

Manufacturer

Model Reference	Scania DC16-071A 02-01 Stage 3A
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Electrical Output

Electrical Output	Hz (Hz)	50.0	60.0	(0.0)
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Performance Data

Maximum Ambient	°C (°F)	40.0	(104)	40.0	(104)
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Electrical (ISO 8528-1) *

Continuous Power (COP)	kW (kVA)	319.0	(398.75)	344.0	(430)
Prime Power (PRP)	kW (kVA)	402.0	(502.5)	435.0	(543.75)
Permissible Average of PRP		70%		70%	

Electrical (ISO 3046-1) **

Single Step Load Application		0-60%		0-70%	
Fuel Stop Power/Standby	kW (kVA)	441.0	(551.25)	488.0	(610)

Alternator

Class F Temp Rise (105°C) Three Phase	kW (kVA)	440.0	(550)	500.0	(625)
Class F Temp Rise (105°C) Single Phase	kW (kVA)	176.0	(220)	200.0	(250)
Ends Out		12			
Make & Type		Newage HCI534E			
AVR		MX341+PMG			
Regulation		+1/ 1%			

Circuit Breaker

Make & Type		Merlin Gerin NS1250N			
Rating	Amp (Amp)	1250.0	(1250)	0.0	(0)
Trip Unit Type		Micrologic 6.0A			

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ISO references apply to Aggreko Manufacturing built equipment only

* ISO 8528-1 Reciprocating Internal Combustion Engine Driven Alternating Current Generating Sets:

Part 1 - Application, Ratings and Performance

** ISO 3046-1 Reciprocating Internal Combustion Engines: Performance:

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Overload Protection Range	500-1250 Amps
Short Circuit Protection Range	1875-12500 Amps

Load Terminals

Type Busbar M12

Engine

Make & Type	Scania DC16-071A 02-01
Cylinders & Form	V8
Aspiration	Turbo Charged
Fuel Pump	Bosch
Governor Make & Type	Scania EMS
Steady State Frequency	+/- 0.5%
Battery Voltage	Volts (Volts) 24.0 (24) 0.0 (0.0)

Fuel Consumption

Standby/Fuel Stop (EN15940)	L/hr (US gal/hr)	116.8 (30.835)	131.9 (34.822)
100% Prime Power	L/hr (US gal/hr)	106.8 (28.195)	121.9 (32.182)
HVO % Increase in Fuel Consumption		1%	
GTL % Increase in Fuel Consumption		3%	
75% Prime Power	L/hr (US gal/hr)	82.5 (21.78)	92.3 (24.367)
HVO % Increase in Fuel Consumption		2%	
GTL % Increase in Fuel Consumption		4%	
50% Prime Power	L/hr (US gal/hr)	55.3 (14.599)	62.1 (16.394)
HVO % Increase in Fuel Consumption		2%	
GTL % Increase in Fuel Consumption		5%	

Running Hours EN590

100% Prime Power	Hrs (Hrs)	11.5 (11.5)	9.5 (9.5)
75% Prime Power	Hrs (Hrs)	14.5 (14.5)	11.9 (11.9)
50% Prime Power	Hrs (Hrs)	23.0 (23)	19.0 (19)

Running Hours HVO EN15940

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100% Prime Power	Hrs (Hrs)	12.0	(12)	0.0	(0.0)
75% Prime Power	Hrs (Hrs)	15.2	(15.2)	0.0	(0.0)
50% Prime Power	Hrs (Hrs)	22.5	(22.5)		

Running Hours GTL EN15940

100% Prime Power	Hrs (Hrs)	11.8	(11.8)		
75% Prime Power	Hrs (Hrs)	14.9	(14.9)		
50% Prime Power	Hrs (Hrs)	22.0	(22)		

Exhaust Emissions Comparison to EN590 100% Prime Power Load

NOx - Oxides of Nitrogen	4.76 g/kWh	-
HVO % Reduction in Emissions	20%	
GTL % Reduction in Emissions	25%	
PM - Particulate Matter	0.025 g/kWh	-
HVO % Reduction in Emissions	68%	
GTL % Reduction in Emissions	44%	
CO - Carbon Monoxide	0.28 g/kWh	-
HVO % Reduction in Emissions	18%	
GTL % Reduction in Emissions	25%	
HC - Unburnt Hydrocarbons	0.04 g/kWh	-
HVO % Reduce in Emissions	0%	
GTL % Reduce in Emissions	25%	

Exhaust Emissions Comparison to EN590 75% Prime Power Load

NOx - Oxides of Nitrogen	3.67 g/kWh	-
HVO % Reduction in Emissions	15%	
GTL % Reduction in Emissions	14%	
PM - Particulate Matter	0.04 g/kWh	-
HVO % Reduction in Emissions	8%	
GTL % Reduce in Emissions	15%	
CO - Carbon Monoxide	0.28 g/kWh	-
HVO % Reduction in Emissions	36%	
GTL % Reduction in Emissions	32%	
HC - Unburnt Hydrocarbons	0.06 g/kWh	-

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HVO % Reduction in Emissions 33%

GTL % Reduction in Emissions 17%

Exhaust Emissions Comparison to EN590 50% Prime Power Load

NOx - Oxides of Nitrogen 4.42 g/kWh

HVO % Reduction in Emissions 12%

GTL % Reduction in Emissions 13%

PM - Particulate Matter 0.048 g/kWh

HVO % Reduction in Emissions 27%

GTL % Reduction in Emissions 15%

CO - Carbon Monoxide 0.26g/kWh

HVO % Reduction in Emissions 8%

GTL % Reduction in Emissions 8%

HC - Unburnt Hydrocarbons 0.1g/kWh

HVO % Reduction in Emissions 30%

GTL % Reduction in Emissions 20%

Exhaust Emissions Comparison to EN590 25% Prime Power Load

NOx - Oxides of Nitrogen 6.47 g/kWh

HVO % Reduction in Emissions 23%

GTL % Reduction in Emissions 26%

PM - Particulate Matter 0.048 g/kWh

HVO % Reduction in Emissions 40%

GTL % Reduction in Emissions 31%

CO - Carbon Monoxide 0.5 g/kWh

HVO % Reduction in Emissions 10%

GTL % Reduction in Emissions 8%

HC - Unburnt Hydrocarbons 0.21 g/kWh

HVO % Reduction in Emissions 33%

GTL % Reduction in Emissions 29%

Exhaust Emissions Comparison to EN590 10% Prime Power Load

NOx - Oxides of Nitrogen 12.46 g/kWh

HVO % Reduction in Emissions 29%

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GTL % Reduction in Emissions	29%
PM - Particulate Matter	0.084 g/kWh
HVO % Reduction in Emissions	37%
GTL % Reduction in Emissions	12%
CO - Carbon Monoxide	2.54 g/kWh
HVO % Reduction in Emissions	36%
GTL % Reduction in Emissions	35%
HC - Unburnt Hydrocarbons	0.58 g/kWh
HVO % Reduction in Emissions	21%
GTL % Reduction in Emissions	24%

Exhaust Silencer

Make & Type	Discom
Certificate Number	RQA653305
Permissible Back Pressure	6.3 mm (0.25 ins) Hg

Noise Data

Sound Power - EEC	94 dBA (IW)	
Certificate Number	R02004531	
Sound Pressure at 1m/3ft	72.2 dBA	73.5 dBA
Sound Pressure at 7m/21ft	63.6 dBA	65 dBA

Other Capacities and Dimensions

Lube Oil Capacity - Min (Deep front oil sump with ladder frame)	L (US gal)	40.0	(10.56)	0.0	(0.0)
Lube Oil Capacity - Max (Deep front oil sump with ladder frame)	L (US gal)	48.0	(12.672)	0.0	(0)
Coolant Capacity - Gross	L (US gal)	37.0	(9.768)	0.0	(0.0)
External Fuel Supply - Max Above Base	m (ft)	3.5	(11.484)	0.0	(0)
External Fuel Supply - Max Below Base	m (ft)	2.0	(6.562)	0.0	(0)

Additional Information

Updated to include emission and fuel data for running alternative fuels.

Based on Fuel Test Report.
 Document No R27003957 Rev A.

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Physical Characteristics

Length	5.16 m	16.93 ft
Width	1.9 m	6.23 ft
Height	2.62 m	8.58 ft
Gross Weight	9300 kg	20502.99 lbs
Net Weight	8200 kg	18077.9 lbs
Gross Fuel	1397 lit	369.05 US gal
Net Fuel	1231 lit	325.2 US gal