

ESTIMATED PERFORMANCE PG6581

Load Condition		PEAK	PEAK
Exhaust Pressure Loss	in H2O	2.5	2.5
Ambient Temperature	deg F	95.	95.
Evap. Cooler Status		On	On
Evap. Cooler Effectiveness %		85	85
Fuel Type		Methane	Distillate
Fuel LHV	BTU/lb	21,515	18,300
Fuel Temperature	deg F	80	80
Liquid Fuel H/C Ratio			1.8
Output	kW	43,280.	43,800.
Heat Rate (LHV)	BTU/kWh	11,100.	11,450.
Heat Cons. (LHV)	MMBTU/hr	480.4	501.5
Exhaust Flow	x10 ³ lb/hr	1131.	1151.
Exhaust Temperature	deg F	1067.	1063.
Exhaust MolWt	lb/lbmol	27.96	28.22
Exhaust Energy	MMBTU/hr	290.3	293.4
Water Flow	lb/hr	18,170.	33,330.

EMISSIONS

NOx	ppmvd @ 15% O2	42.	42.
NOx AS NO2	lb/hr	81.	87.
CO	ppmvd	10.	20.
CO	lb/hr	10.	20.
UHC	ppmvw	7.	7.
UHC	lb/hr	5.	5.
Particulates	lb/hr	3	10
(PM10 Front-half Filterable Only)			

EXHAUST ANALYSIS % VOL.

Argon	0.85	0.84
Nitrogen	71.41	70.81
Oxygen	12.30	11.96
Carbon Dioxide	3.46	4.88
Water	11.99	11.51

SITE CONDITIONS

Elevation	ft	0.0
Site Pressure	psia	14.7
Inlet Loss	in H2O	3.55
Exhaust Loss	in H2O	2.52 @ ISO Conditions
Relative Humidity	%	40
Application		Air-Cooled Generator
Power Factor (lag)		0.8
Combustion System		Non-DLN Combustor

Emission information based on GE recommended measurement methods. NOx emissions are corrected to 15% O2 without heat rate correction and are not corrected to ISO reference condition per 40CFR 60.335(a)(1)(i). NOx levels shown will be controlled by algorithms within the SPEEDTRONIC control system.

Distillate Fuel is assumed to have 0.015% Fuel-Bound Nitrogen, or less. FBN amounts greater than 0.015% will add to the reported NOx value.
IPS- Version Code - 3.5.2/114A0/3.5.2/PG6581-0101
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General Electric Proprietary Information

GENERATOR DRIVE PERFORMANCE AND EMISSIONS

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NOTES: ALL PERFORMANCE IS RUN WITH F8 INLET AND EXHAUST LOSS, (ISO CONDITIONS) INCLUDING DUN SYSTEM. ADDITIONAL INLET LOSS FOR INLET FILTED HEAT HAS NOT BEEN FACTORED IN.
INSPECTION INTERVALS WITH AN "1" ARE INTRODUCTORY AND WILL BE MOORED AS EXPERIENCE IS GAINED.
By: T. Albert

TURBINE MODEL / COMPUTER	EXHAUST LEVEL (DASIS/HT)	FUELVNT	OUTPUT KW		HEAT RATE Btu/kWh		HEAT COND Btu/kWh		EGH FLOW W/GAL/H		EGH TEMP DEG F		BLU RATE LB/H		NOx PPMV @ 15% O2		CO PPMV		UHC PPMV		VOCs PPMV		PART. LB/H		SO2 BY HRS. PPMV @ 100		DELIVT TO FUEL SATD	
			0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
PG5371PA / NON-DLH	-	DRY	36000	36000	10700	10700	370.2	374.8	980	980	900	970	-	-	140	271	10	10	7	7	0.4	0.8	2.8	0.8	12000	12000	-	-
	42/42	WATER	37120	37100	10480	10500	330	331.1	980	1004	904	904	10000	10000	42	42	10	10	7	7	0.4	0.8	2.8	0.8	8000	8000	0.7801	0.8217
NON-DLH	-	DRY	36000	36000	10700	10700	370.2	374.8	980	980	900	970	-	-	140	271	10	10	7	7	0.4	0.8	2.8	0.8	12000	12000	-	-
	42/42	WATER	37120	37000	10200	10700	310	308.2	990	1010	904	904	10000	10000	42	42	10	10	7	7	0.4	0.8	2.8	0.8	8000	8000	0.7801	0.8217
DLH	42/42	DRY	36000	36000	10700	10700	370.2	374.8	980	980	900	970	-	-	140	271	10	10	7	7	0.4	0.8	2.8	0.8	8000*	8000*	-	-
	-	WATER	-	36000	-	10500	-	340.8	-	980	-	964	-	10000	-	42	-	10	-	7	-	0.4	-	0.8	-	8000*	8000*	-
PG6551B / NON-DLH	-	DRY	41000	41000	10700	10710	420.2	430	1120	1120	1000	1007	-	-	180	270	10	10	7	7	0.4	0.8	2.8	17.0	12000	12000	-	-
	42/42	WATER	40800	40800	10200	10700	351.7	348.0	1147	1149	1000	1000	10000	10000	42	42	10	10	7	7	0.4	0.8	2.8	17.0	8000	8000	0.8700	0.7827
NON-DLH	-	DRY	41000	41000	10700	10710	420.2	430	1120	1120	1000	1007	-	-	180	270	10	10	7	7	0.4	0.8	2.8	17.0	12000	12000	-	-
	42/42	WATER	40800	40800	10200	10700	351.7	348.0	1147	1149	1000	1000	10000	10000	42	42	10	10	7	7	0.4	0.8	2.8	17.0	2000	4000	0.8700	1.0000
DLH	42/42	DRY	40800	40800	10700	10710	420.2	430	1120	1120	1000	1000	-	-	180	270	10	10	7	7	0.4	0.8	2.8	17.0	8000	8000	-	-
	-	WATER	-	40800	-	10200	-	351.8	-	1148	-	1000	-	10000	-	42	-	10	-	7	-	0.4	-	0.8	-	8000	8000	-
DLH	42/42	DRY	40800	40800	10700	10710	420.2	430	1120	1120	1000	1000	-	-	180	270	10	10	7	7	0.4	0.8	2.8	17.0	8000	8000	-	-
	-	WATER	-	40800	-	10200	-	351.8	-	1148	-	1000	-	10000	-	42	-	10	-	7	-	0.4	-	0.8	-	8000	8000	-

THE ABOVE CHARACTERISTICS DO NOT REQUIRE A COST AND SHIP ESTIMATE AND DO NOT REFLECT THE FULL CAPABILITIES OF THE GENERAL ELECTRIC GAS TURBINE PRODUCT LINE.
BMS, TEL: 800.2

Performance and emissions data for GE Frame 5P (PG5371PA) and Frame 6B (PG6551) gas turbines fuelled by gas and distillate, and with 3 types of NOx abatement methods (none, water injection, steam injection, Dry Low NOx). Note effects of water injection on kW output and NOx emissions. VOC emissions are not affected.