



GAS TURBINE (Serial Nos. 66-S-6023)

Model W191G, Simple Cycle, Single Shaft

Reference Drawings (Contained in Part 16)

General Arrangement	117-E-798
Outline	200-D-711
General Assembly	643-J-503 GR1
Longitudinal Section Assembly	643-J-503 GR1
Alignment Arrangement	459-B-086
Conduit and Wiring:	
Turbine	643-J-489 GR1 *
Aux. Bedplate	643-J-531 GR1 *
Turbine Wiring Diagram	200-D-662

Capacity (At Site Conditions of: 26.7°C and 2300 feet above sea level)

Rated Power: 14,640 KW (Base)

Gas Turbine Shaft Speed: 4912 RPM

Maximum Turbine Inlet Temperature

(As calculated by Heat Balance - Refer to "Temperature Considerations")

At Base Load 788°C (1450°F)

Maximum Turbine Exhaust Temperature

At Base Load 430°C., 806°F

Fuel

Start and Run on: Natural Gas/
#2 Distillate Oil

GENERATOR (Outline Drawing 638-F-204)

Salient Pole; Air Cooled
Type HG, Frame 75½

Rating:

16,320 KW at 900 RPM
0.85 Power Factor
19,200 KVA, 803 Amps.
3 Ph., 60 Hz.

Temperature Ambient:

26.7°C at 2300 feet
above sea level

EXCITER

Brushless; Direct Connected

Rating:

Field Volts: 125
Field Amps: 3.25
Ambient Temp: 26.7°C

STARTING UNIT (Outline Dwg. 623-C-553 GR1)

replaced with Detroit Diesel Engine 1996

Rating:

324 KW (435 HP) at
2100 RPM

TURNING GEAR SPEED REDUCER (Outline Dwg. 465-B-893 GR1)

Cone Drives, Model VO-7600C - CUL

Primary Reduction:

10:1

Secondary Reduction:

20:1

Overall Reduction

200:1

Drive Motor:

3.73 KW (5 HP), 1800 RPM,
125V DC

AUXILIARY GEAR (Gen. Assembly 681-J-978 GR1)

Pinion Speed:

4912 RPM

Gear Speed:

3781 RPM

Starting Gear Speed:

2991 RPM

MAIN REDUCTION GEAR (Gen. Assembly 681-J-959 GR6)

Pinion Speed:

4912 RPM

Gear Speed:

900 RPM

MAIN LUBE OIL PUMP (Dwg. 465-B-876 GR1)

De Laval, Type A424ASX-231 (Direct Drive From Auxiliary Gear)

Flow Rate: .022m³/sec (350 gpm)
Pressure Head: 8.79 Kg/cm² (125 psig)
Speed: 3600 RPM
Rotation (Viewed from Coupling End): Counterclockwise

PRIMARY AUXILIARY LUBE OIL PUMP (Dwg. 819-C-166 IT2)

Buffalo Pumps, Dwg. 46571

Frame: 256TP
Flow Rate: .019 m³/sec (300 gpm)
Pressure Head: 6.64 Kg/cm² (218 Ft. H₂O)
Speed: 3600 RPM
Drive Motor: 25 HP, 460 Volt, 60 Hz.

SECONDARY AUXILIARY LUBE OIL PUMP (Dwg. 819-C-166 IT1)

Buffalo Pumps Dwg. CC-7980-46X

Frame: 218A
Flow Rate: .0095 m³/sec (150 gpm)
Pressure Head: 0.975 Kg/cm² (32 Ft. H₂O)
Speed: 1800 RPM
Drive Motor: 2.24 KW (3 HP), 125 V. DC

LUBE OIL RESERVOIR

Capacity (not including piping) 6.624 m³ (1,750 gallons)

PLANT DRAWING LIST

* 3389-A-64

* Included at front of Volume 1

Total Run Hours 11,167 fired. Total Starts unknown. Gas turbine major in year 2000 at 10,780 fired hours, total rotor and stationary reconditioned, bearings reconditioned. Generator has issues and has been derated by owner to 12 MW. Gas compressor is Worthington OF5SU-2 with cooler, driver motor is electric Brown Boveri 350HP 895RPM 460V. Package has complete black start capability and is self-sufficient with switchgear, control house and field switchgear as well.