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CEMILAC\_PGP\_GTAPMS\_02

# **GAS TURBINE AUXILLARY POWER UNIT MODEL SPECIFICATION**

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## **TEMPLATE FOR GAS TURBINE AUXILIARY POWER UNIT MODEL SPECIFICATION**

The following information must be considered, as appropriate, for inclusion into the model specification.

1. Manufacturers name and address.
2. Part number, serial number, and model designation.
3. Category for which approved.
4. Maximum allowable dry weight
5. The following performance information and limitations at standard sea level atmospheric conditions:
  - 5.1 Rated output shaft power (if applicable).
  - 5.2 Rated output speed (if applicable).
  - 5.3 Maximum turbine inlet or exhaust gas temperature at rated output.
  - 5.4 Maximum allowable speed and over speed duration
  - 5.5 Maximum Allowable turbine inlet or exhaust gas temperature.
  - 5.6 Minimum compressor bleed airflow (if applicable).
  - 5.7 Minimum compressor bleed air pressure ratio (if applicable).
  - 5.8 Maximum fuel consumption at rated output.
  - 5.9 Torque-Speed Characteristics
  - 5.10 Maximum Number of starts, time interval between successive starts
- 6 The temperature and speed control tolerances at rated output.
- 7 The maximum duration of time the APU is capable of operating without hazardous malfunction when the APU is subjected to negative “g” conditions.
- 8 The following lubrication system specification:
  - 8.1 Type, grade, and specification of oil.
  - 8.2 Maximum oil consumption rate.

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8.3 Maximum inlet oil temperature.

8.4 Minimum inlet oil pressure (if applicable).

8.5 Inlet oil flow rate (if applicable).

8.6 Maximum oil system outlet pressure (if applicable).

9 The following fuel system specifications:

9.1 Type, grade, and specification of fuel.

9.2 Minimum inlet fuel pressure.

9.3 Maximum and minimum fuel inlet temperatures.

9.4 Inlet fuel flow rate.

9.5 The type and degree of fuel filtering necessary for protection of the APU fuel system. against foreign particles in the fuel

9.6 Method of preventing filter icing (if applicable).

10 Maximum loads, including shear, axial, and overhang moment, that the exhaust attachment provisions are capable of withstanding

11 The output shaft configuration, direction of shaft rotation, and maximum allowable overhang moment for the main power output pad (if applicable).

12 Maximum loads, including shear, axial, and overhung moment, that the compressor bleed air attachment provisions are capable of withstanding (if applicable).

13 The following accessory drive specifications:

13.1 Configuration of drive shaft and mounting pad.

13.2 Direction of drive shaft rotation.

13.3 Maximum static torque

13.4 Rated torque.

13.5 Ratio of accessory drive shaft RPM to power turbine RPM.

13.6 Maximum overhung moment the mounting pad is capable of withstanding.

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