



*GEK 46082B  
Revised, September 1998  
Reformatted, October 1999*

## **GE Power Systems** *Generator*

---

# **Maintenance Check-Off List for Hydrogen-Cooled Gas Turbine-Generators**

---

*These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes the matter should be referred to the GE Company.*

WHAT TO INSPECT	WHAT TO INSPECT FOR	WHEN TO INSPECT					
		D-O	W-O	M-O/S	CI-S	HGP-S	MAJ-S
<ul style="list-style-type: none"> <li>Brush Rigging &amp; Collector Rings</li> </ul>	<ul style="list-style-type: none"> <li>Brushes Sparking</li> <li>Brush Wear Less Than 1/8 Inch Above Top Of Brush Holder</li> <li>Dirty Brush Rigging or Collector Rings</li> <li>Proper Clearance Between Brush Holder &amp; Collector Rings (1/8 inch)</li> <li>Pitting, Threading, Grooving, Wear on Collector Rings</li> <li>Check Grounding Brushes</li> </ul>		x	x			
<ul style="list-style-type: none"> <li>Generator Bearings/ Air &amp; Oil Deflectors</li> </ul>	<ul style="list-style-type: none"> <li>Proper Bearing Lube Oil Temperature &amp; Pressure</li> <li>Bearing Wear &amp; Damage</li> <li>Insulation Resistance Measurement (Collector End Only)</li> <li>Rub or Other Damage</li> <li>Deflector Condition</li> <li>Visual Inspection for Oil Leaks</li> </ul>	x					
<ul style="list-style-type: none"> <li>Stator Winding</li> </ul>	<ul style="list-style-type: none"> <li>Insulation Resistance Measurement &amp; Polarization Index</li> <li>Cleanliness End Windings</li> <li>Evidence of Corona</li> <li>Distortion or Overheating</li> <li>Broken Ties</li> <li>Evidence of End Winding Movement</li> <li>End Winding Support Hardware</li> <li>Internal Cleanliness</li> <li>Strip Heaters Clean &amp; Operational</li> <li>Damaged Punchings</li> <li>Stator Wedge System</li> <li>Cleanliness Core</li> </ul>		x				
<ul style="list-style-type: none"> <li>Frame</li> </ul>	<ul style="list-style-type: none"> <li>Cleanliness, Watertight</li> <li>Access Plates Tight and Secured</li> <li>Roof Drain Piping Clean</li> <li>End Winding Drain Provisions Clear</li> <li>Exhaust and Inlet Bay Clean</li> <li>Tightness of Hold Down Bolts and Jacking Bolts</li> <li>Tightness of Transverse Keys</li> <li>Compartment Interface Seals</li> <li>Water Tight and Intact</li> <li>Flue Gas Leakage into Generator Inlets</li> <li>Rubber Expansion Joint – Load Compartment – Tight and Clean</li> </ul>						
<ul style="list-style-type: none"> <li>Rotor</li> </ul>	<ul style="list-style-type: none"> <li>Insulation Resistance Measurements &amp; Polarization Index</li> <li>Retaining Ring Damage, Nicks, Scratches or Arcing</li> </ul>						

WHAT TO INSPECT	WHAT TO INSPECT FOR	WHEN TO INSPECT					
		D-O	W-O	M-O/S	CI-S	HGP-S	MAJ-S
<ul style="list-style-type: none"> <li>• Rotor (Cont'd)</li> <li>• Alignment</li> <li>• Load Gear</li> <li>• Liquid Level Detector</li> <li>• Cab Enclosure</li> <li>• Water Cool</li> <li>• Shaft Sealing System</li> <li>• Hydrogen Supply</li> <li>• Gas Analyzer &amp; Indicating Instruments</li> <li>• Scavenging &amp; Purging Solenoid Valves</li> <li>• Automatic Purging Solenoid Valves</li> <li>• Alarm Devices</li> <li>• Collector Compartment Air Filters</li> </ul>	<ul style="list-style-type: none"> <li>• Cleanliness of End Winding</li> <li>• Evidence of End Winding Movement</li> <li>• Wedge Movement</li> <li>• Fan Blade Damage or Erosion</li> <li>• Indications of Overheating</li> <li>• Vibration Data Recorded (prior to shut down and start-up)</li> <li>• Cleanliness/Oil Leaks</li> <li>• Tooth Contact</li> <li>• Tooth Wear or Damage</li> <li>• Oil Feed Nozzles Clean and Free of Foreign Matter</li> <li>• Proper Operation</li> <li>• Cleanliness</li> <li>• Side Walls and Roof Joints Watertight</li> <li>• Sealing Gasket in Place Around CO<sub>2</sub> Doors</li> <li>• Water Leaks</li> <li>• Proper Pressure</li> <li>• Air Leakage at Frame Sealing</li> <li>• Cleanliness of Tubes – Air/Water Side</li> <li>• Proper Flow</li> <li>• Low Oil Flow to Hydrogen Seals</li> <li>• Excessive Seal Ring Clearance</li> <li>• Hydrogen Purity Below Specifications</li> <li>• Out of Calibration</li> <li>• Dirty Filters</li> <li>• Improper Operation</li> <li>• Improper Operation</li> <li>• Out of Calibration or Improper Operation</li> <li>• Dirty Filters</li> </ul>					(x) (x) (x) (x) (x)	
					x		
				x	x x x		
						(x)	
				x x x			
		x	x		x x		
		x					
		x				(x)	
		x					
					x x		
					x		
					x		
					x		
					x		
				x			

O = Operation

S = Shutdown

D = Daily

W = Weekly

M = Monthly

CI = Combustion Inspection

HGP = Hot Gas Path Inspection — Remove upper end shield and gas shield

MAJ = Major Generator Insp. — Remove rotor at first major turbine inspection and then at every other major inspection

(x) = Inspections to be performed at first HGP then only at each MAJ thereafter.



## ***GE Power Systems***

---

*General Electric Company  
One River Road, Schenectady, NY 12345  
518 • 385 • 2211 TX: 145354*