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Inspection Report:

Example for Instructor



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Module:

Yaw Motor Systems
Learning scenario:
Yaw Motor Fault
Diagnosis



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-	Wind Energy Ireland	
	World Class Maintenance	
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Note This is a fictive generic equipment checklist intended for training purposes and therefore may vary from the equipment checklist provided by a company. It is important that a technician always read and fill checklist carefully prior to any task.

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1 Administration data

Table 1. Documentation overview

Order name Priority WTG serial number Site name Date Reporting by Site Supervisor Inspection start hour Inspection end hour		
Priority WTG serial number Site name Date Reporting by Site Supervisor Inspection start hour	Order number	
WTG serial number Site name Date Reporting by Site Supervisor Inspection start hour	Order name	
Site name Date Reporting by Site Supervisor Inspection start hour	Priority	
Date Reporting by Site Supervisor Inspection start hour	WTG serial number	
Reporting by Site Supervisor Inspection start hour	Site name	
Site Supervisor Inspection start hour	Date	
Inspection start hour	Reporting by	
	Site Supervisor	
Inspection end hour	Inspection start hour	
	Inspection end hour	

Table 2. Report overview

Report type	
Reason for inspection	
Component type	
Component serial number	
Component manufacturer	
Component model	
Date of last inspection	



2 Safety protocol

Table 3. Safety procedures

	LOTO start time	Signature	LOTO end time	Signature
LOTO procedure				
Turbine ID				
Location of LOTO points				
Reason for lockout				

3 Job safety analysis

Table 4. Last minute job safety analysis

Step	Potential Hazards	Mitigation Strategies
Identify Energy Sources		
Gather Equipment		
Inform Relevant Parties		
Yaw Brake Engagement (If Applicable)		
Electrical Isolation (Control Cabinet)		
Yaw Motor Isolation (If Separate Disconnect)		
Mechanical Block (If Applicable)		
Verification of Isolation (verify zero volts)		
Notification		







4 Yaw motor windings assessment

Table 5. Yaw motor windings assessment results

Step	Test	Procedure	Expected Result	Actual Result	Pass/Fail	Notes
1	Visual Inspection (Control Cabinet)	Inspect wiring, connection s, terminals for damage, corrosion, etc.	No damage, corrosion, loose connection s			
1	Visual Inspection (Yaw Motor)	Inspect motor housing, fan, terminal box for damage, leaks, corrosion, secure mounting	No damage, leaks, corrosion, secure mounting			
2	Continuity Test (Control Cabinet)	Test continuity between each phase pair (U-V, V-W, W-U)	Continuity between each pair			
3	Insulation Resistance Test (Control Cabinet)	Test insulation resistance between each phase pair and between each phase and casing/grou nd	Resistance above minimum specified value			
4	Resistance Balance Test (Control Cabinet)	Measure resistance of each phase winding (U, V, W)	Resistance values are balanced (within tolerance)			





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5	Yaw Motor Windings Inspection (At the Motor)	Repeat steps 2, 3, and 4 at the motor terminals	Same as expected results for steps 2, 3, and 4		
6	Condition Assessment	Assess the overall condition of windings based on previous steps			
6	Detailed Report	Summarise findings, include measureme nts, condition assessment, and recommen dations			



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5 Yaw motor brake test

Table 6. Yaw motor brake test results.

Step	Test	Procedure	Expected Result	Actual Result	Pass/Fail	Notes
1	Visual Inspection (Brake Assembly)	Inspect brake for physical damage (cracks, wear, corrosion)	No damage observed			
1	Visual Inspection (Wiring and Connections)	Inspect wiring and connection s to the brake solenoid	No frayed wires, loose connection s, or damage			
2	Solenoid Coil Resistance Test	Measure resistance of the solenoid coil	Resistance within manufactur er's specified range			
3	Solenoid Coil Ground Test	Test for continuity between solenoid terminals and brake housing/ground	No continuity (high resistance)			
4	Brake Torque Test	Apply torque wrench to brake mechanism	Brake holds at specified torque			
5	Functional Test (Post LOTO Removal)	Operate yaw system and observe brake engagemen t/release	Brake engages and releases smoothly and reliably, no unusual noises			
6	Report Completion	Complete the Yaw Motor	Report includes all required information			







Brake Test		
Report		

6 Rectifier test

Table 7. Rectifier test results.

Step	Test	Procedure	Expected Result	Actual Result	Pass/Fail	Notes
1	Visual Inspection	Inspect rectifier assembly and wiring for damage, corrosion, loose connection s	No damage, corrosion, loose connection s			
2	Individual Diode Test					
		Forward Bias (D1, D2, D3, D4)	Voltage drop between 0.5V and 0.8V			
		Reverse Bias (D1, D2, D3, D4)	"OL" or very high resistance			
3	Voltage Drop Test (Rectifier Circuit)					
		Forward Bias (DC Output)	DC output voltage as expected			
		Reverse Bias (DC Output)	Voltage reading close to zero (if performed)			
4	Condition assessment	Assess rectifier condition based on tests				
4	Detailed report	Summarise findings, include measureme nts, condition				





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assessment		
, and		
recommen		
dations		

7 Inspection report

Table 8. Conclusions and recommendations.

Component	Condition Summary	Recommendatio n	Justification	Priority (If Applicable)
Yaw brake				
Rectifier				
Yaw motor windings				



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