

Wind Turbine Nacelle & Blade Maintenance Safety Checklist

Site / Project	_____	Address	_____
Inspector name	_____	Company	_____
Date	_____	Time	_____

Documentation aid only. Adapt this resource to the site, manufacturer instructions, and applicable local requirements. It does not replace a competent person, professional judgment, legal advice, or a required statutory form.

Inspection checklist

I. Rope Access Equipment Inspection (Pre-Use)

☐	Inspect SPRAT/IRATA-approved harness for tears, cuts, abrasions, chemical damage, and UV degradation. Verify manufacturing date is within the acceptable lifespan.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Examine lanyards (energy-absorbing and positioning) for fraying, cuts, burns, and proper stitching. Ensure hardware (snap hooks, D-rings) functions smoothly and locks securely.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Visually and tactilely inspect ropes (main and belay lines) for cuts, abrasions, core damage, and excessive wear. Check for proper termination and end-to-end integrity.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify ascenders and descenders (e.g., Petzl ID, GriGri) are free from damage, corrosion, and debris. Ensure proper cam engagement and smooth operation. Check friction surfaces for wear.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Inspect carabiners and connectors for cracks, deformation, and proper gate function. Ensure locking mechanisms engage securely and are free from obstruction.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Check helmet (ANSI Z89.1 Type II) for cracks, dents, and proper fit. Ensure chinstrap is functional and adjusted correctly. Verify impact absorption is not compromised.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Inspect anchor slings (textile or wire rope) for cuts, abrasions, and proper stitching/termination. Verify load rating is appropriate for the intended use.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

☐	Inspect rope protectors for damage and proper placement at all edges and potential abrasion points. Ensure adequate coverage to prevent rope damage.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify all tools are properly tethered to prevent dropped objects. Inspect tethers for wear and tear, and ensure they are securely attached to both the tool and the technician's harness.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Inspect emergency descent device (EDD) for proper function and readiness. Ensure technician is trained and competent in its use.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

II. Nacelle Anchor Point Verification

☐	Verify that all nacelle anchor points are certified by a qualified engineer and have a valid inspection tag indicating load capacity and last inspection date.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Visually inspect anchor points for corrosion, cracks, deformation, and any signs of damage. Ensure they are securely attached to the nacelle structure.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Confirm that tie-off points are easily accessible and free from obstructions that could interfere with rope access operations.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure adequate edge protection is in place at all anchor points to prevent rope abrasion and damage.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify that the load rating of each anchor point meets or exceeds the required safety factor for the intended load (typically 5000 lbs or 22kN per person).	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Confirm that redundant anchor systems are in place for critical operations, providing a backup in case of primary anchor failure.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Assess the spacing between anchor points to ensure adequate coverage and minimize swing fall potential.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Inspect the yaw deck surface for slip, trip, and fall hazards. Ensure adequate lighting is available, especially during low-light conditions.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify the lightning protection system is properly grounded and functioning correctly. Check for any signs of damage or corrosion.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Inspect all access points to the nacelle (ladders, platforms) for structural integrity and proper safety features (handrails, non-slip surfaces).	☐ Pass	☐ Fail	☐ N/A	Notes: _____

III. Environmental Conditions & Weather Monitoring

☐	Monitor wind speed using a calibrated anemometer. Cease rope access operations if wind speeds exceed the manufacturer's recommended limits (typically 25-30 mph).	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Assess temperature conditions. Avoid rope access work in extreme heat or cold that could affect equipment performance or technician safety.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Monitor weather forecasts for lightning activity. Suspend rope access operations if lightning is detected within a 10-mile radius.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Evaluate precipitation conditions (rain, snow, ice). Ensure surfaces are not slippery and visibility is adequate. Provide appropriate weather protection for technicians.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Assess visibility conditions. Ensure adequate lighting is available for safe rope access operations, especially during dawn, dusk, or overcast conditions.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify that reliable communication systems (radios, cell phones) are available and functioning properly for all technicians and ground support personnel.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure that the work area is properly barricaded and access is restricted to authorized personnel only.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Assess potential environmental impacts (e.g., noise pollution, wildlife disturbance) and implement appropriate mitigation measures.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Check for ice accumulation on blades and nacelle surfaces. De-icing procedures must be in place before work commences.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Consider humidity levels, as high humidity can affect the grip and performance of ropes and equipment.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

IV. Emergency Preparedness & Rescue Plan

☐	Verify that a written emergency rescue plan is readily available and understood by all personnel involved in the rope access operation.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure that all necessary rescue equipment (e.g., rescue descender, hauling system, cutting tools) is readily available, inspected, and in good working order.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Confirm that all technicians are equipped with suspension trauma straps and are trained in their proper use to mitigate the risk of orthostatic intolerance.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

☐	Verify that a fully stocked first-aid kit is readily available at the work site, including supplies for treating common injuries such as cuts, burns, and sprains.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Establish clear communication protocols with local emergency services (fire department, ambulance) and ensure they are aware of the rope access operation.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure that the designated rescue team is adequately trained and competent in performing rope rescue techniques. Conduct regular drills to maintain proficiency.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify that emergency contact information (e.g., site supervisor, medical personnel, emergency services) is readily available and easily accessible.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Identify and clearly mark evacuation routes from the nacelle in case of an emergency. Ensure that all personnel are familiar with these routes.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure appropriate fire suppression equipment (fire extinguishers) are readily available and inspected. Personnel must be trained in their use.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Implement spill control measures to contain and clean up any potential spills of hazardous materials (e.g., lubricants, hydraulic fluid).	☐ Pass	☐ Fail	☐ N/A	Notes: _____

V. Documentation & Training Records

☐	Verify that all rope access technicians possess valid SPRAT or IRATA certifications and that their certifications are current.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Review equipment inspection logs to ensure that all rope access equipment has been inspected regularly and that any defects have been addressed.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Confirm that a site-specific risk assessment has been conducted and that all identified hazards have been addressed in the work plan.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Review the Job Safety Analysis (JSA) or Task Hazard Analysis (THA) for the specific maintenance task being performed. Ensure all technicians are familiar with the JSA/THA.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify that all technicians have received adequate training in rope access techniques, fall protection, rescue procedures, and the use of personal protective equipment.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Confirm that all technicians have undergone medical evaluations to ensure they are physically fit to perform rope access work.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

☐	Review equipment maintenance records to ensure that all rope access equipment is properly maintained and serviced according to the manufacturer's recommendations.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Review incident reports from previous rope access operations to identify any recurring hazards or areas for improvement.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure all required permits to work (e.g., hot work, confined space entry) are obtained and properly authorized before commencing work.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Confirm that all personnel have completed a site-specific orientation covering hazards, emergency procedures, and site rules.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

Findings

#	Item	Location	Severity	Action required
1				
2				
3				
4				
5				
6				
7				
8				

Signature

Inspector signature _____

Name _____

Date _____