

Solar Module Roof Lifting and Mounting - JSA - B

en-US · Technical failure review · v1.0 · 2026-10-14 · Sources: article section 9

Site: | Item ID: | Work area:

Approval	Work supervisor	Technical reviewer	Release / handover authority

1. Job details and team signatures

Date / time	Location / area			Assessor		Supervisor	
Team signatures							

2. Conditions and hold points

Stage	Time	Location / area	Environment / readings	Item / condition	Controls	Plant / tools	Approval / signature
HP-0 Start							
HP-1 Review roof and staging							
HP-2 Establish roof access							
HP-3 Lift land and restrain							
HP-4 Inspect and hand over							

Complete after actual checks. Recheck after changes, defects or shift handover.

3. JSA risk assessment

Job stage	Hazards and effects	Failure factors	Technical and procedural controls	Site verification	P	S	R	A
1. Prepare lifting operation	1. Wind-driven load strike 2. Rigging failure 3. Power-line contact	1. Wind limits unreviewed 2. Lift gear unsuitable 3. Overhead route ignored	1. Apply actual weather limits 2. Inspect rated lifting equipment 3. Review route and utilities	1. Wind and lift orientation 2. Rigging and equipment basis 3. Clear route and exclusion				
2. Establish roof access	1. Skylight fall 2. Dropped-tool injury 3. Delayed rescue	1. Opening mistaken for floor 2. Tools unsecured 3. Rescue access blocked	1. Protect openings and weak areas 2. Control tools and area below 3. Verify rescue arrangement	1. Skylight and opening controls 2. Safe access and tool control 3. Rescue route and equipment				
3. Lift land and restrain	1. Panel uplift 2. Roof overload 3. Worker crushed by load	1. Lift released too early 2. Landing point changed 3. Hands under package	1. Apply planned wind restraint 2. Hold changed staging locations 3. Keep clear of load pinch zones	1. Temporary load distribution 2. Stability and restraint check 3. Release authority				
4. Install rails and modules	1. Roof leakage 2. Glass breakage 3. Fastener failure	1. Penetration seal damaged 2. Module used as walkway 3. Torque or zone improvised	1. Apply specified weatherproofing 2. Keep people off modules 3. Use actual attachment requirements	1. Attachment zone and tightening 2. Penetration and seal inspection 3. Module glass and frame condition				
5. Protect DC leads	1. DC arc injury 2. Damaged insulation 3. Wrong electrical handover	1. Connector opened under load 2. Lead pinched under module 3. Damaged parts left unmarked	1. Exclude live connector work 2. Protect and secure leads 3. Identify electrical restrictions	1. Cable routing and protection 2. Qualified electrical owner 3. Electrical work boundary				
6. Hold changes or damage	1. Damaged module use 2. Uncontrolled wind exposure 3. Lost fall protection	1. Cracks dismissed 2. Weather changes ignored 3. Route narrows unnoticed	1. Quarantine damaged components 2. Recheck actual weather limits 3. Restore protected access	1. Damage and disposition 2. Wind and restraint condition 3. Access and rescue continuity				

P/S/R/A: Complete only after actual site assessment using the site risk method.

4. Pre-work checklist

☐ Wind and lift orientation	☐ Skylight and opening controls	☐ Temporary load distribution
☐ Attachment zone and tightening	☐ Cable routing and protection	☐ Damage and disposition
☐ Clear route and exclusion	☐ Module glass and frame condition	☐ Access and rescue continuity