

Boiler Lifting and Positioning - JSA - B

en-SG · 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 Prepare lift area							
HP-2 Trial lift and move							
HP-3 Secure and release							
HP-4 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 lift area	1. Suspended-load strike 2. Collision with services 3. Lost operator control	1. Exclusion incomplete 2. Route clearance absent 3. Signals not agreed	1. Separate the danger area 2. Survey route and overheads 3. Assign one signal system	1. Ground and route evidence 2. Service clearance 3. Lift team and permit briefing				
2. Inspect body and rigging	1. Shell or nozzle damage 2. Dropped loose parts 3. Pinch injury	1. Rigging on wrong part 2. Shipping parts unsecured 3. Hands near tensioned gear	1. Use suitable rated rigging 2. Secure loose accessories 3. Keep hands clear	1. Rating and angle check 2. Accessory security 3. Connection seating				
3. Trial lift and move	1. Unequal sling loading 2. Collision and crushing 3. Load instability	1. Snagged attachment 2. Route changed 3. Signal lost	1. Stop on snag or tilt 2. Move within lift plan 3. Stop if communication fails	1. All connections clear 2. Route remains controlled 3. Continuous communication				
4. Seat and align	1. Boiler shift 2. Crushed fingers 3. Base distortion	1. Wrong bearing location 2. Hands used as guides 3. Anchors force alignment	1. Verify level and contact 2. Use hands-clear tools 3. Correct fit by design method	1. Level and position record 2. Foundation bearing check 3. Gap correction method				
5. Secure and release	1. Anchor failure 2. Thermal movement restraint 3. Grout support failure	1. Wrong anchor setting 2. Sliding end fixed 3. Grout strength unverified	1. Check anchor installation 2. Preserve movement details 3. Release after support acceptance	1. Fixed and sliding checks 2. Grout acceptance evidence 3. Release-to-unhook record				
6. Correct a defect	1. Shell distortion 2. Uncontrolled relift 3. Repeat settlement	1. Unreviewed shimming 2. Defect cause ignored 3. Load state misunderstood	1. Plan safe support or relift 2. Resolve cause with designer 3. Reinspect corrected stage	1. Recovery method authority 2. Correction evidence 3. Repeat support inspection				

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

4. Pre-work checklist

☐ Ground and route evidence	☐ Rating and angle check	☐ All connections clear
☐ Level and position record	☐ Fixed and sliding checks	☐ Recovery method authority
☐ Lift team and permit briefing	☐ Gap correction method	☐ Repeat support inspection