

Wheel-loader aggregate loading - 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 Control trucks and people							
HP-2 Approach and scoop							
HP-3 Hold and maintain							
HP-4 Depart park 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. Control trucks and people	1. Blind-zone crush 2. Driver struck 3. Departure collision	1. Signals mixed 2. Driver location unknown 3. Truck leaves early	1. Use agreed signals 2. Define driver safe location 3. Control departure	1. Truck position 2. Driver location 3. Briefed loading and exit signals				
2. Inspect loader and bucket	1. Bucket release 2. Tyre failure 3. Hydraulic leakage	1. Lock display misread 2. Tyre damaged 3. Hose worn	1. Check brakes and warnings 2. Inspect tyres and joints 3. Hold equipment defects	1. Brakes and alarms 2. Tyres and articulation 3. Hydraulic condition				
3. Approach and scoop	1. Forward tip 2. Flying rock 3. Face collapse	1. Bucket overloaded 2. Hard impact 3. Cracks ignored	1. Match load to conditions 2. Avoid forced impact 3. Stop changed face	1. Material and load 2. Approach direction 3. People excluded				
4. Travel and approach truck	1. Truck strike 2. Wheel lift 3. Blind-zone collision	1. Radius too tight 2. Rough ground 3. View blocked	1. Control speed and turn 2. Use accepted route 3. Keep people separated	1. Ground condition 2. Visibility 3. Truck clearance				
5. Dump and distribute	1. Truck overturn 2. Falling aggregate 3. Overloading	1. Load one-sided 2. Person enters zone 3. Mass guessed	1. Distribute accepted load 2. Keep exclusion effective 3. Verify truck limits	1. Load amount 2. Distribution 3. Dump position				
6. Hold and maintain	1. Articulation crush 2. Hydraulic release 3. Unexpected start	1. Lock not applied 2. Pressure retained 3. Engine stop only	1. Control articulation 2. Follow energy procedure 3. Use qualified maintenance	1. Articulation lock 2. Pressure control 3. Maintenance release				

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

4. Pre-work checklist

☐ Truck position	☐ Brakes and alarms	☐ Material and load
☐ Ground condition	☐ Load amount	☐ Articulation lock
☐ Briefed loading and exit signals	☐ Truck clearance	☐ Maintenance release