Unstable Load Results in Injury

What happened?
While installing flash gas compressor no.1 compressor cylinder piston, injured party (IP) was manually pulling piston rearward while it was hanging on chain hoist rigging. Rigging and piston shifted, causing loss of load. IP lost footing and fell backward when loss of load occurred, causing the piston to strike IP’s lower extremities.

What went wrong?
The slinging of the piston was not correct. The 4’ slings had been used on other similar jobs and although one worker was aware that the rigging was inadequate, he failed to stop the job.

Why did it happen?
A choke or double choke rigging should have been used on the piston, but instead a basket was used which made the load unstable. When the work party had previously done the same task, they used a 6’ sling with the recommended choke. At this time, they could not find a 6’ sling so they used two 4’ slings. The 4’ sling was not long enough to wrap around the piston so this basket arrangement was used.

The recommended practice is using a 10’ sling, which was available on site. The work party had considered using the 10’ sling in a single choke but thought it would be too long for the hook to clear the chain block. Measurements after the incident indicated a single choke could have been used, but it had not been implemented.

What areas were identified for improvement?

• Update JSA to include hazard of piston falling out of rigging with mitigation of using adequate sling length to allow the choke design when the piston is rigged up.
• Update JSA to state facility core person will remain with the work party during tasks.
• Supply adequately sized slings for removing and installing the piston.
• Develop a lift plan for specific task of lifting the piston.