

Safely using and correctly choosing high tip buckets on loading shovels



This safety sheet outlines the key precautions and guidelines for safely using high tip buckets on loading shovels and selecting the correct bucket for the job.

Following these guidelines will help operators maintain safety, efficiency, and productivity while minimising the risk of accidents or equipment damage.

1: Understanding High Tip Buckets

High tip buckets are specialised attachments designed to allow loading shovels to empty material at greater heights than standard buckets. This is essential for loading high-sided trucks, bins, and hoppers. While they improve reach and productivity, improper use or selection can lead to safety hazards, equipment strain, and instability.

2: Key Hazards When Using High Tip Buckets

- **Tipping Hazard:** Overloading or operating the machine on uneven ground can cause the loader to tip over, particularly when the bucket is raised to its maximum height.
- **Instability:** A bucket that is too large or loaded beyond the loader's rated capacity can shift the centre of gravity, making the loader unstable.
- **Strain on Hydraulic Systems:** A bucket that is overloaded for the loader can overwork the hydraulic system, causing premature wear or sudden equipment failure.
- **Reduced Visibility:** Large buckets may block the operator's line of sight, increasing the risk of collisions with other equipment, vehicles, or personnel.

3: Safe Operating Practices for High Tip Buckets

Perform Pre-Operation Inspections:

- Check all hydraulic systems, quick hitch connections to the attachment and bucket linkages before use.
- Ensure the bucket is securely attached and that no leaks or signs of wear are present on the hydraulics.

Avoid Overloading the Bucket:

- Never exceed the loader's rated lifting capacity. Always refer to the loading shovel manual. Use scales or estimated weight calculations to ensure the bucket is not overloaded.
- Be aware of the bucket's "struck capacity" (the volume of material when the bucket is level) and "heaped capacity" (the volume when material is heaped above the edges). Avoid over-filling the bucket to keep weight within safe limits.

Operate on Stable Ground:

- Always operate the loader on firm, level ground to reduce the risk of tipping, especially when the bucket is raised.
- Avoid uneven surfaces or operating near edges or slopes, which can destabilize the machine.

Maintain a Low Centre of Gravity:

- Keep the bucket close to the ground when transporting materials. Only raise the bucket when necessary to tip into a truck or container.
- Avoid traveling with the bucket raised as this increases the risk of tipping.

Use Caution When Tipping at Height:

- Always make sure the vehicle or container receiving the material is stable and can accommodate the load without risking spillage or tipping.
- Ensure the loader is on level ground before raising the bucket to its maximum height to tip.

4: Operator Best Practices

Training and Certification: Only trained and certified operators should handle loading shovels with high tip buckets. Operators should be familiar with the specific controls, weight limits, and safety features of the equipment.

Constant Awareness: Maintain full awareness of the loader's surroundings, particularly when visibility is reduced by the bucket's size. Use mirrors, cameras, or a spotter when necessary.

Use Locking Mechanisms: For quick hitch systems, always use safety locking mechanisms to ensure the bucket is securely attached to the loader. Double-check connections before use. Carry out a physical check. For direct mount, check retaining bolts are in the correct position and. Carried out by a competent person.

5: Maintenance and Inspection

Regular maintenance and inspection are crucial for safe operation. Ensure the following are inspected regularly:

- **Hydraulics:** Check for leaks, proper fluid levels, and smooth operation.
- **Bucket Integrity:** Inspect the bucket for cracks, dents, or wear that could compromise its strength or stability.
- **Quick Hitch System:** Ensure all locking pins and couplings are secure and in good working order.
- **Grease points:** Ensure all pins and bushes are greased daily to reduce wear and breakages.
- **Nuts and bolts:** Check wear plate bolts and pin retaining bolts daily, tighten if needed.

High Tip Bucket Safety Summary

Using a high tip bucket on a loading shovel can significantly enhance productivity, but only when safety precautions are strictly followed. Always select the correct bucket size, ensure proper attachment, and operate within the loader's capacity. Prioritize regular inspections, proper training, and adherence to best operating practices to maintain a safe and efficient work environment.

