

Machine Guarding: Reach-In and Entanglement

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Why this matters

A guard protects only the hazards it actually covers. Loading, clearing scraps and retrieving a dropped item can bring hands or clothing into dangerous movement.

Objective: Identify access to dangerous movement and verify the required guarding before operation.

Key hazards or failure points

Exposed nip points; rotating shafts; bypassed interlocks; loose clothing; scrap retrieval; unexpected startup.

Practical controls

- Match guarding to the machine, task and manufacturer instructions. Do not remove protection to improve access or output.
- Keep people clear of moving parts. Control loose clothing, hair and jewelry under the task procedure.
- Use the applicable energy-control procedure before reaching inside, clearing jams or removing guards. A stopped motor does not establish isolation.

Verify It in the Field

With equipment safely secured, the trained inspector compares guards and openings with the specified configuration; record missing, damaged or altered parts.

Authorized personnel perform prescribed safeguard tests in the specified safe setup. Never test by inserting a hand or bypassing protection.

Study loading and scrap-removal positions from outside the danger area. Record any step that cannot be completed with protection effective.

Stop and reassess

Hold operation for missing protection, failed tests or required reach into danger. Correct, reinspect and obtain the required release before restarting.

Ask the crew

1. Where could someone reach dangerous movement?
2. Which instruction establishes the required guard?
3. How will scraps be removed without exposure?

Use this HOP tool — Job-site review: From a safe position, trace one normal loading-to-cleanup cycle. Each worker names a place where a person might approach dangerous movement. Compare those positions with the approved guarding arrangement. Record one unresolved access problem and hold the affected operation until corrected.

Sources: OSHA 1926.300(b): guarding; OSHA 1926.307: power transmission. HOP concepts adapted from DOE-HDBK-1028-2009, Vol. 2 (June 2009). No claim to original U.S. Government work; no government endorsement implied.

Free next step: JHA/JSA planning and field-verification worksheet

Expanded guidance and separate forms: toddjeromejenkins.com/toolbox-talks/machine-guarding-reach-in-entanglement