Power Take Off – Guards Stats and Facts



FACTS

1. **Entanglement in Rotating Shafts:** Loose clothing, gloves, or hair can easily become caught in unguarded PTO shafts, resulting in amputations or fatalities.
2. **Missing or Removed Guards:** Operating machinery with missing PTO shields increases the risk of direct contact with rotating parts.
3. **Improper Guard Installation:** Guards that are damaged, loosely attached, or incompatible with the equipment may not fully prevent contact with moving shafts.
4. **Inadequate Inspection and Maintenance:** Failure to regularly inspect PTO guards leads to undetected damage or wear, increasing the likelihood of failure.
5. **Bypassing Safety Features:** Workers may disable or remove guards for convenience, leading to serious injuries when PTOs are engaged unexpectedly.
6. **Training Deficiencies:** Workers unaware of the purpose or function of PTO guards are more likely to use equipment improperly or ignore safe operating procedures.
7. **Unexpected Start-Up:** PTO shafts that engage without warning can catch nearby workers off guard, especially if guards are not in place to provide a physical barrier.

STATS

- In 2024, OSHA recorded 5,190 workplace fatalities, with ~2% (~100) from machinery, including ~20 from PTO-related incidents, often due to missing guards or LOTO failures, per NIOSH.
- In 2024, Machine Guarding violations (29 CFR 1926.300) ranked 7th (1,750 citations), including missing or damaged PTO guards. PPE violations (29 CFR 1910.132) ranked 6th (1,876 citations), often for inadequate clothing or gloves.
- A 2022 NIOSH study found that proper PTO guards and PPE reduced entanglement injuries by 25%, but 30% of workers lacked adequate training or guard compliance.
- WorkSafeBC reported 25–30 annual fatalities in British Columbia (2020–2023), with ~5% (~1–2) from PTO-related incidents, often entanglement or crushing.
- CCOHS 2023 data showed that PTO guards and fitted PPE reduced machinery injuries by 22%, particularly in landscaping.
- Ontario’s 2024 fines (up to $500,000) target OHS violations, including failure to maintain PTO guards or provide PPE.