



KENTUCKY
AGC Self Insurers' Fund

Stored Energy Line of Fire Hazards

Why it matters Stored energy can release without warning and move equipment, materials, pressure, or components through a worker's body position. Before servicing, disconnecting, lifting, clearing a jam, or entering a danger zone, identify every energy source and establish a zero-energy state.

Recognize the Hazard

Energy source	Where it hides	Typical line of fire
Hydraulic	Cylinders, hoses, accumulators, jacks, suspended attachments	Pinch or crush points; falling or drifting equipment; high-pressure fluid injection
Pneumatic	Air lines, tanks, tools, actuators, tires and restrained couplings	Hose whip; flying fittings or debris; unexpected tool or cylinder movement
Gravity	Raised beds, booms, buckets, suspended loads, stacked materials, slopes	Dropped, rolling, shifting or collapsing loads; caught-between zones
Tensioned loads	Cables, slings, chains, winch lines, springs, belts and bound material	Snapback or recoil; released binders; shifting loads and failed rigging

Control Stored Energy Before Work Begins

- Plan the task. Review the manufacturer's instructions and the site-specific lockout or hazardous-energy-control procedure. Identify primary and secondary energy sources, including trapped pressure and gravity.
- Create distance. Barricade the danger zone and keep workers out of the path of movement, beneath suspended components, between equipment and fixed objects, and inside cable or hose recoil zones.
- Shut down and isolate. Stop equipment; disconnect, block, blank, chock or restrain each energy source; and apply locks and tags as required. Never rely only on a control switch, valve, brake or hydraulic cylinder.
- Dissipate or restrain. Bleed pressure to a safe location, discharge accumulators, lower elevated parts, block against gravity, release tension gradually, and secure rotating or spring-loaded components.
- Verify zero energy. Try the controls, check gauges, test for pressure or movement, and confirm blocks and restraints are correctly placed. Return controls to neutral or off before work begins.

Critical Practices by Energy Type

- Hydraulic and pneumatic: Never use a hand to locate a leak. Use cardboard or another approved method. Depressurize before loosening fittings, and replace damaged hoses, guards and couplings.
- Gravity: Lower equipment to the ground whenever possible. If elevation is necessary, use rated blocking, cribbing, pins or mechanical supports on stable footing. Never work under a load supported only by hydraulics, rigging or a jack.
- Tensioned loads: Stand outside the anticipated snapback path. Inspect rigging and anchor points, use rated equipment, control binder handles, and release tension slowly from a protected position.

When Conditions Change

Stop work and reassess if the load shifts, pressure rebuilds, a support moves, a hose or fitting leaks, a restraint becomes damaged, or the planned body position enters the line of fire. Only an authorized person should restore energy after confirming that tools, workers, locks, blocks and barriers are accounted for.

IN AN EMERGENCY Keep clear of moving or pressurized equipment. Shut down energy if it can be done safely, call emergency services, and treat suspected fluid-injection injuries as urgent medical emergencies.