Workplace Safety & Prevention Services®

INFORMATION

AGRICULTURAL SAFETY TOPICS
HYDRAULIC SYSTEMS

Objective:

To know the hazards that could occur from working with hydraulic equipment and how to prevent them.

Background:

Hydraulic fluid is dangerous. Fluid can escape when adjusting or removing equipment. Fluid can be trapped in the hydraulic system even when the engine and hydraulic pump are stopped. Trapped fluid can be pressurized in excess of 2,000 psi (13,790 kPa). Pressurized fluid can penetrate the skin, requiring prompt surgical removal. If not properly cared for, gangrene may result. Penetration injuries may not appear serious, but the injected body part is usually lost if medical attention is not promptly sought.

Tighten all connectors before applying pressure. Keep hands and body away from pinholes and nozzles that eject fluid under high pressure. Use a piece of cardboard or paper to search for leaks. Relieve pressure before disconnecting a hydraulic line.

Do not cross hydraulic lines. If the lines are not coupled correctly, the implement will not rise and drop as expected. Tape or colour code lines to prevent an accident.

A disconnected implement, in the raised position, has trapped hydraulic fluid that might be pressurized. Heat causes thermal expansion of the fluid, increasing the pressure. Always relieve hydraulic pressure before loosening hydraulic fittings. Injury can result from the hot, high pressure spray of the hydraulic fluid.

Growing Forward 2

Ontario

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AGRICULTURAL SAFETY TOPICS – HYDRAULIC SYSTEMS

Before Servicing Hydraulic Powered or Controlled Equipment:

- Shut off hydraulic pump power.
- Lower the implement to the ground.
- Move the hydraulic control lever back and forth several times to relieve pressure.
- Follow the instructions in the operator's manual. Specific procedures for servicing hydraulic systems provide safety guidelines.
- Stay away from pinholes and nozzles which eject fluid under pressure.
- Promptly seek medical attention if fluid is injected into the skin.

Review The Following Points:

- Adjusting and removing equipment when hydraulic fluid is under pressure can be hazardous.
- Keep all body parts away from pinholes and nozzles which eject fluid under pressure.
- Never cross hydraulic lines on equipment.
- Always lower the implement to the ground before servicing and relieve pressure.

Based upon: Ohio State University Extension. *Hydraulics*. Retrieved from website http://ohioline.osu.edu/atts/modules.html

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