QUEENSLAND MINING INDUSTRY Health & Safety Conference 2017

HYDRAULIC IMPLEMENT PRESSURE RELEASE STATION (HIPRS)

Paul Hutchins Mobile Plant Technical Advisor

New Hope Group

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THE PROBLEM: Stored Energy

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1. Working on high pressure hydraulic systems places our Maintenance Personnel at **RISK** of an uncontrolled lease of stored energy in the form of pressurized hydraulic oil





THE RISK: Maintenance personnel exposed to uncontrolled hydraulic oil pressure releases

> Fluid injection injury

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 Burns injury from hot oil
Crush injury from unplanned movement of implement



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storv



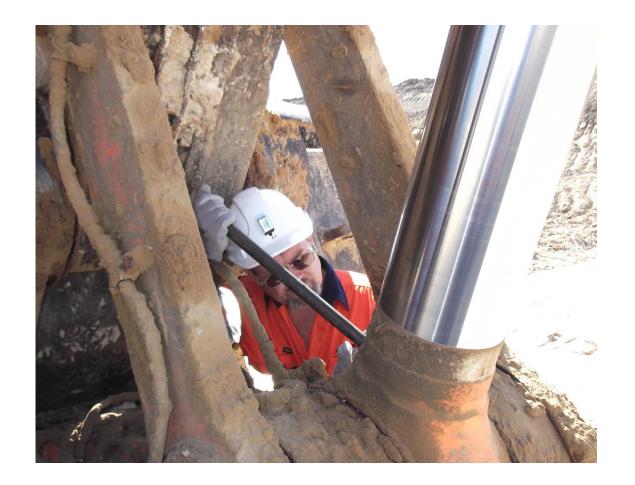
THE RISK: Maintenance personnel exposed to uncontrolled hydraulic oil pressure:

> Fluid injection injury

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- > Burns injury from hot oil
- Crush injury from unplanned movement of implement



The good old days... or were they?

Pressure controls:

Move hydraulic control lever to release pressure in hydraulic circuits.

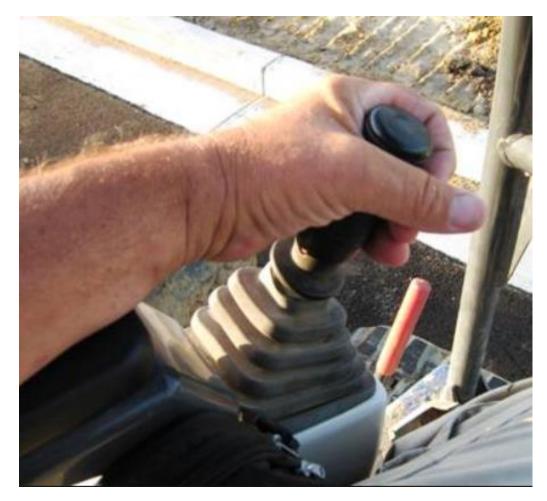
Problems:

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• OEMs don't allow sufficient pilot oil storage in accumulators for multiple circuit pressure release.

• Can't check for dead/ verify zero pressure.





The good old days... or were they?

Pressure controls:

Rag and boot.

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The good old days... or were they?

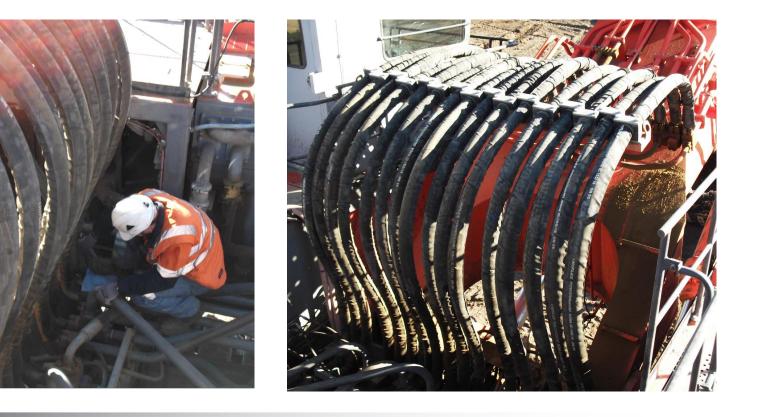
Pressure controls:

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Have your work mate undo the other end first!



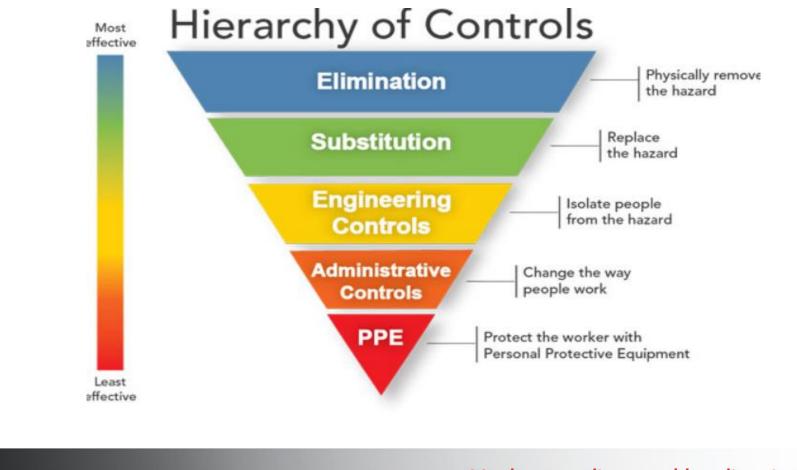


BEST PRACTICE:

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Control of stored energy = Engineering control to isolate people from the hazard



SOLUTION:

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Hydraulic Implement Pressure Release Station



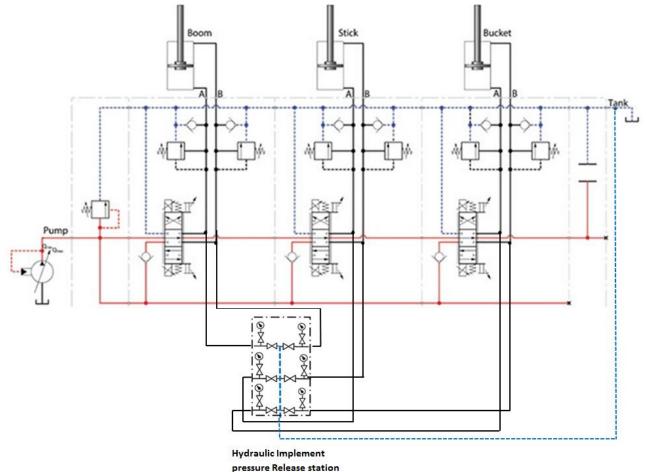
SOLUTION:

Hydraulic Implement Pressure Release Station

Excavator

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USES for the Hydraulic Implement Pressure Release Station:

- Stored Energy release (hydraulic implement oil pressure).
- Test for dead (verification of zero pressure).
- Hydraulic system testing & adjusting.

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- Diagnostic tool for cylinder piston seal bypass.
- Dead man system to lower implements during engine failure.



APPLICATIONS for the Hydraulic Implement Pressure Release Station:



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