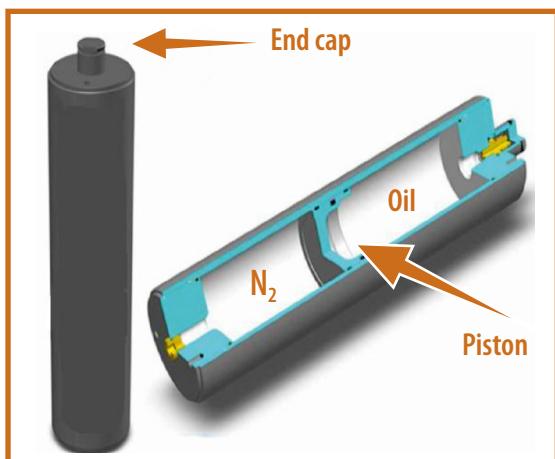


HAZARD ALERT

EXPLODING HYDRAULIC PISTON ACCUMULATOR

An industrial mechanic was killed when the hydraulic piston accumulator he was repairing exploded. To fix a leaky seal inside the accumulator, he drained the hydraulic oil, but not the nitrogen gas (N₂). He did not realize the N₂ had produced extreme pressure on the accumulator's end-cap and piston, which blew out in an explosion and struck his abdomen.



Hydraulic accumulators are pressure storage reservoirs that use nitrogen gas to act as a shock absorber for hydraulic systems.

Recommended Preventive Action

- Before disassembling any type of accumulator, always release the gas to reduce the internal pressure to atmospheric.
- When releasing the gas, have it dissolve in a bucket of water.
- Always use N₂ when pressurizing accumulators.
- Never carry out welding or tapping on accumulators.
- All service, repairs and troubleshooting should be done by trained, authorized persons only.
- Provide suitable training so maintenance personnel can learn how to use, service and repair equipment safely and effectively.
- Discuss proper use of service and repair equipment at safety meetings.
- Discuss medical complications associated with oil and air injection injuries.
- Always follow the manufacturer's recommendations.
- Write a job safety analysis (JSA) of correct techniques for servicing or repairing gas-charged hydraulic accumulators.