



## MSHA's Accident Prevention Program Safety Idea

Safety and  
Health are  
Values!

### Longwall Hydraulics Maintenance

Mine Type: **Underground Coal and Underground Nonmetal**  
Category(s): **Longwalls**

Longwall systems utilize shield supports with electro-hydraulic shield control systems that provide automatic or manual operations. Components do occasionally fail and require maintenance or replacement. Accidents involving hydraulic pressure can be fatal as evidenced by fatalities in MSHA Coal District 9 in 1989 and 2000. It is important to protect the miners from potential accidents involving the high pressure hydraulics when performing maintenance by:



- Educating and Training all workers for the specific maintenance tasks as per technical service manuals. Emphasizing to all miners the extremely high pressures and the hazards associated with these pressures.
- Disconnecting the high pressure circuit on each shield with the high pressure valves and the electro-hydraulic isolation control buttons.
- Never working on a circuit unless the pressure is off and any locked in pressures have been released.
- Never working on a shield component unless it is blocked against inadvertent motion.
- Looking for damaged hoses or controls. Do not locate high pressure hoses in travel ways or in areas where miners would be regularly exposed to them.
- Educating miners that certain cylinders contain high pressure after shutting off the valves. Check valves keep the pressure in the cylinders to keep the roof supported.

**If you have a tip you would like to pass on, you can e-mail it to [zzMSHA-MinersTips@dol.gov](mailto:zzMSHA-MinersTips@dol.gov). If your tip is selected, you will receive credit in this space.**

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