

# CASE STUDY

## Underground Coal Mine : Mitigates the Risk of Fire by Using Fire-Resistant Hydraulic Fluid

QUINTOLUBRIC® 888-68

### The Challenge

- In coal mining operations, a fire can increase the risk of personal injuries, as well as heighten the likelihood of losses in both capital and production.
- One major cause of fire can be the ignition of mineral oil hydraulic fluids.

### The Solution

To mitigate the risks of using a mineral oil based hydraulic fluid a large underground coal mine in southern West Virginia was using QUINTOLUBRIC® 888-68 an MSHA approved fire-resistant hydraulic fluid in their hydraulic systems.

### Customer Testimonial



The southern West Virginia mine stated that if any other oil product had been used a raging fire would have developed, and credits QUINTOLUBRIC® 888-68 with supporting the safety of the mine workers.

### The Product

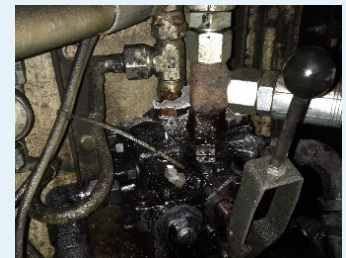
QUINTOLUBRIC® 888-68 was designed to replace anti-wear, mineral oil-based hydraulic fluids used in applications where fire hazards exist. QUINTOLUBRIC® 888-68 can also be used in environmentally sensitive hydraulic applications without compromising the overall hydraulic system operations. This fluid does not contain water, mineral oil, or phosphate ester, and is based on high-quality, synthetic, organic esters and carefully selected additives to achieve excellent hydraulic fluid performance. QUINTOLUBRIC® 888-68 offers the lubrication level of premium, anti-wear hydraulic oils, and can be used with hydraulic components from all major manufacturers.

### The Benefits

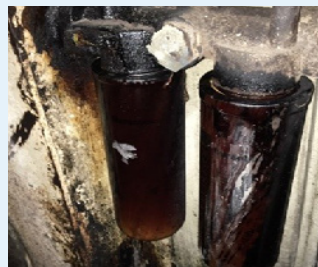
At the mine a hydraulic power pack used for a belt take up underground overheated, due to an electronic solenoid that was stuck open, causing the hydraulic pump, valving controls and hydraulic fluid to overheat. As a result the hydraulic line melted and sprayed hydraulic fluid everywhere. Because the mine was using QUINTOLUBRIC® 888-68 fire-resistant hydraulic fluid a fire did not erupt.



Melted hydraulic line



Burnt valves from hydraulic fluid spray



Fluid in the tank became so hot that it melted and blistered the paint off the bottom of the tank

The mine is not required to use a fire-resistant hydraulic fluid in this part of their operation, and very easily could have been using a mineral oil based product that would have caused a large fire. A large fire underground has the potential to cause major downtime in a best case scenario, and a catastrophe including, explosions, loss of life, and loss of the mine in a worst case scenario.

