



# DMM Safety Alert: Jaw Crusher Operator Injured

On December 4, 2012, a miner was seriously injured at a Virginia mineral mine while tightening the tension rod assembly on a TelSmith 36X48 jaw crusher. The miner was working with a crew that had just re-installed the tension rod assembly after completing repairs and maintenance to the crusher. After the rods were re-installed, the miner used an impact wrench to tighten the nuts on each rod to compress the springs to a pre-determined setting. After starting the crusher, the crew determined that the toggle plate was bumping and that the tension rods needed additional adjustment. While the crusher was operating, the miner tightened the nut on the left tension rod until the toggle stopped bumping. As the miner tightened the nut on the right tension rod, the rod snapped and the built up pressure in the compressed spring instantly pushed the rod and impact wrench back crushing the employee's right hand between the wrench and the catwalk toe board. The miner's middle finger was deeply lacerated and his ring finger was severely torn and crushed. Emergency surgery was necessary to restore blood flow to the ring finger. Additional surgeries will be required to replace the crushed bone and reconstruct this finger. To prevent a similar type of injury from occurring, the Virginia Division of Mineral Mining recommends the following:

- Follow the manufacturer's recommendations regarding procedures and tools to be used during equipment maintenance.
- Review maintenance procedures prior to starting a job to ensure all hazards have been identified and addressed.
- Comply with 4VAC25-40-350, which states "Repairs and maintenance shall not be performed on machinery until the power is off, the power supply is locked out and tagged, and the machinery is blocked against motion, except where machinery motion is necessary to make adjustments."
- If adjustments have to be made while machinery is in operation, take proper precautionary measures to ensure the safety of personnel.



Tension rod assembly involved in this accident.