

## Abrasive wheels

<b>Reason</b>	Many accidents involving abrasive wheels are caused by wheels being fitted incorrectly, using the wrong type of wheel on the material being cut and operators not being appropriately trained. Without the correct knowledge, workers are at risk and accidents will continue to happen.
<b>Outline</b>	This talk covers general precautions when using portable and bench-mounted abrasive wheels.



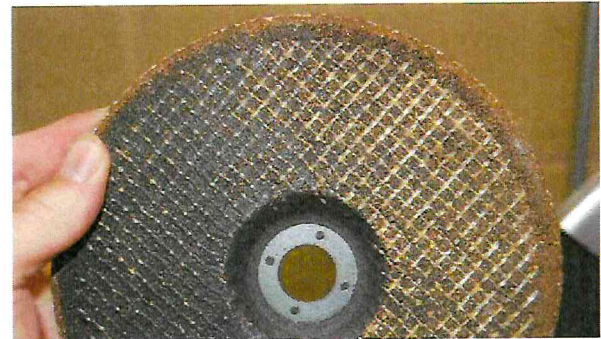
*Abrasive wheel too small due to excessive use, and a snagging hazard*



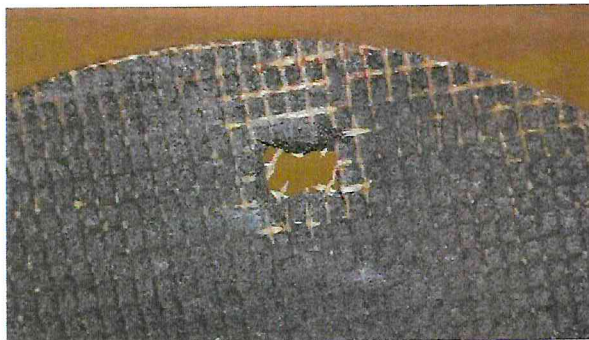
*Failure caused by poor storage or age of disc*



*Extreme thermal damage caused by faulty machine bearings*



*Damage caused by poor machine maintenance*



*Damage caused by heavy use*



*Damage caused by poor manufacturing quality*



**Abrasive wheels must only be fitted and used by trained, competent and authorised people.**



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### General precautions

1. The speed of the machine must not exceed the maximum permissible speed identified on the wheel. Many accidents are caused by the wheel overspeeding.
2. Don't mount an abrasive wheel unless you are authorised and trained to do so.
3. Don't exert heavy pressure on the wheel.
4. Never use the side of the wheel unless it is designed to be used in this way.
5. Respiratory protective equipment (RPE), hearing protection and high-impact eye protection must always be worn.
6. Use wet-cutting equipment or on-tool extraction to suppress or collect dust.
7. Use the correct grade of wheel for the material and task.

### Safe use of portable abrasive wheels

1. Always use reinforced discs on hand-held machines.
2. Never use any equipment without a guard. Adjust the guard to expose the minimum wheel surface necessary for the operation. The machine must be isolated during this activity.
3. Be aware of other workers in your area and don't put them at risk by your actions.
4. Depending upon what is being cut, it is possible that appropriate RPE will be needed. Always refer to the risk assessment provided for the task.
5. Be aware of noise and vibration hazards and take appropriate preventative or protective actions.

### Safe use of bench-mounted abrasive wheels

1. Adjust the tool rest to be as close as possible to the face of the wheel and keep the protective screen in the safety position.
2. Keep your fingers below the tool rest level.
3. Keep the face of the wheel evenly dressed and don't use the side of the wheel.
4. After fitting, run a replacement wheel for a full minute before attempting to use it. Stand clear during the test.
5. Allow the wheel to stop before leaving the machine unattended.
6. It is likely that dust extraction and RPE will be necessary, along with other items of personal protective equipment (PPE).
7. Do not wear loose clothing that could become entangled in the rotating wheel.



**Why is the rated speed of the wheel important?**

**What grade of eye protection should you wear when using an abrasive wheel?**

**Where should the tool rest be positioned?**

**For how long should a replacement wheel be run before using it?**

**What must be worn when using abrasive wheels?**

**Which part of a wheel should not be used?**

**Who should mount and adjust abrasive wheels?**



**Abrasive wheels on portable machines rotate at speeds in excess of 170 mph. Make sure that you have the correct grade of eye protection.**