

Abrasive Wheels — Training Delivery Pack

Deliver this in house. Roughly 90 minutes. No external trainer needed.

This is the session content. Work through it with the group, then test with AW-05 and assess practically with AW-06. Delivered by a competent supervisor, this satisfies the basic and job-specific stages. AW-06 covers familiarisation on your own machines.

Session 1 — Why this matters (10 minutes)

- An abrasive wheel is a consumable running at very high speed. It is designed to break down as it works. If it fails, fragments leave at high velocity.
- Injuries from abrasive wheels are typically severe and permanent: amputations, degloving, blindness, deep lacerations to the face and thigh.
- The slow injuries are just as serious. HAVS is permanent nerve and circulatory damage. Silicosis is irreversible and often fatal.
- Explain the legal position: the 1970 regulations are gone, PUWER applies, and the requirement is demonstrable competence.

Session 2 — Wheel types and selection (15 minutes)

Type	Use	Key point
Vitrified (glass bonded)	Bench and pedestal grinding	Can be ring tested. Brittle, damaged by impact and damp
Resin / organic bonded	Cutting discs, depressed centre discs	CANNOT be ring tested. Carry an expiry date. Inspect visually with care
Depressed centre grinding disc	Angle grinder, grinding	Thicker. For face grinding, not for cutting
Cut-off / slitting disc	Angle grinder, cutting	Thin. NEVER use the side for grinding
Diamond blade	Stone, concrete, tile	Generates silica. Extraction or water always

Every wheel is marked with its maximum operating speed. Every machine is marked with its spindle speed. The wheel must be rated equal to or faster than the machine. This is the single most important check and it takes five seconds.

Session 3 — Storage, handling and inspection (10 minutes)

- Store dry, racked, and supported so wheels cannot fall or lean.
- Damp and frost damage wheels. So does dropping one.
- Rotate stock. Resin bonded discs expire.
- Inspect every wheel before it goes on. Any crack or chip and it goes in the bin, not back on the shelf.
- Demonstrate the ring test on a vitrified wheel. Let them hear a good one and, if you have a scrap cracked wheel, a bad one. Explain clearly why it does not work on resin bonded or thin discs.

Session 4 — Mounting (20 minutes, practical demonstration)

Walk through AW-02 mounting steps physically on a real machine. Cover isolation, ring test, bore fit, blotters, matched flanges of at least one third wheel diameter, correct tightening, guard refitting, work rest and tongue guard reset, and the one minute run up with everyone standing clear.

Emphasise: never bore out a wheel, never force one on, never overtighten, never run a machine with the guard off.

Session 5 — Safe use (20 minutes)

- Body position out of the line of the wheel.
- Clamp the work. Demonstrate why hand holding small items against a wheel is dangerous.
- Correct disc for the material. Show a cutting disc and a grinding disc side by side.
- Kickback: what causes it and how to avoid it.
- Let the wheel run down on its own.
- Guard adjustment and the 3mm work rest gap. Measure it in front of them.

Session 6 — Health hazards and PPE (15 minutes)

- Eye protection to BS EN 166 plus a face shield. For everyone in the area.
- Dust: what silica is, which materials produce it, why extraction or water is not optional, and what silicosis does.
- Noise: why hearing protection is needed and what happens without it.
- Vibration: trigger time, why breaks matter, and the duty to report tingling or numbness the same day.
- Gloves: useful on portable tools for grip and burns, but an entanglement hazard on fixed machines. Explain the difference.

Close

Confirm everyone knows: they must be authorised in writing before using or mounting; they stop and ask if unsure; they report defects and symptoms immediately. Then run AW-05.

Trainer	Date	Duration	Location

Scope and limitations — read before use

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