Proper Feed Pressure and Speed

Proper feed pressure and drill speed are important for producing clean holes, extending tool life, and improving safety.

Feed Pressure

Feed pressure is the amount of force applied while drilling.

- Apply steady, consistent pressure
- Let the drill bit do the cutting
- Do not force the drill through the material

Too much pressure can:

- Break drill bits
- Create oversized holes
- Cause the drill to grab the material

Too little pressure can:

- Generate excessive heat
- Dull the drill bit
- Produce poor surface finish

Drill Speed

Different materials and bit sizes require different speeds.

- **Small drill bits:** Higher speeds
- **Large drill bits:** Lower speeds
- **Aluminum:** Moderate to high speeds

If the drill bit becomes extremely hot or produces poor chips, adjust the speed or feed pressure.

Signs of Proper Drilling

- Continuous metal chips are produced
- The drill cuts smoothly
- Minimal vibration occurs
- The hole is clean and round

Common Mistakes

- Pushing too hard on the drill
- Running large bits at high speed
- Using excessive force when the bit becomes dull
- Continuing to drill if the material is vibrating or moving

Key Idea

Use steady pressure and the proper drill speed for the material and bit size. Let the drill bit cut the material rather than forcing it through.

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