Common Mistakes

Rivets are simple to install, but small errors can lead to weak joints, misalignment, or failed assemblies in FRC robots.

Incorrect Hole Size

- Using a hole that is too large reduces holding strength
- Using a hole that is too small can deform the rivet or prevent installation

Always match the drilled hole size to the rivet specification.

Wrong Grip Range

- Too short → rivet may not fully set or can pull out
- Too long → joint will be loose and weak

Grip range must match the total material thickness.

Poor Alignment

- Rivets installed at an angle weaken the joint
- Misaligned holes can cause stress on the connection
- Parts may not sit flush against each other

Not Deburring Holes

- Sharp edges can prevent proper seating
- Burrs may interfere with rivet expansion
- Can lead to uneven or weak joints

Incomplete Setting

- Rivet not fully pulled can loosen over time

- Mandrel should snap cleanly when properly installed

Overusing Rivets

- Using too many rivets can add unnecessary weight
- Can weaken material if holes are too close together

Key Idea

Strong riveted joints depend on correct hole size, proper grip range, clean installation, and good alignment. Most rivet failures come from small setup mistakes rather than the rivet itself.

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