



Automotive	Chemicals	Cutting Tools/ Abrasives	Electrical	Fasteners	Fluid Power	Safety/ Material Handling	Shop Supplies/ Hand Tools	Welding
Farming	Industrial	Manufacturing	Military	Mining	Recreation	Service		

Using Recommended Installation Torque Can Help Eliminate Premature Fastener Failure

Problem

3/4"-10 Socket Head Capscrews were constantly failing at elevated temperatures (600°F plus) in a mold die head.

Review

- Fasteners were arranged in a circular pattern.
- Tightened in a cross-pattern sequence.
- Torque wrench was set at 150-200 ft.lbs.

Assessment

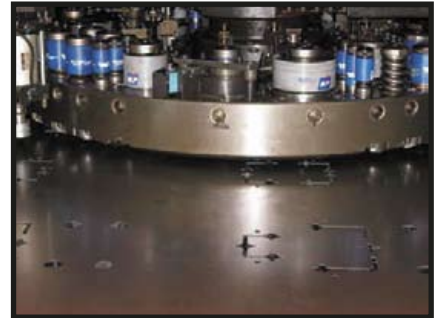
Insufficient torque was used to hold die head in place, allowing movement leading to premature failure.

Recommendation

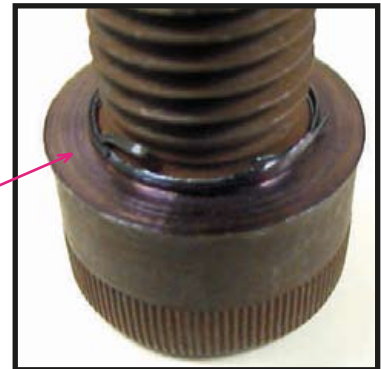
- Use recommended torque for 3/4"-10 Socket Head Capscrew: 423 ft.lbs.
- Anti-seize may be required to aid in fastener removal when used in high-temperature applications.
- Torque value should be decreased 20%-30% if antiseize is used.
- Use Supertanium Socket Cap Washers to provide a consistent low-friction seating pad.

Result

- Less down time, due to fasteners not breaking
- Elimination of die damage due to slippage of die head
- Extended life of die, due to proper alignment.



Mold die head



Burnishing



Failed bolts



Fasteners, torque wrench, and anti-seize