

TOOLBOX TALKS

Machining Centers – Drill, Bore and Shape

SAFETY.CAT.COM™

Toolbox Talks are intended to facilitate health and safety discussions on the job site. For additional Toolbox Talks, please visit SAFETY.CAT.COM™

TOPIC: Machining Centers – Drill, Bore and Shape

The following Tool Box Talk provides tips for safely using drill presses, lathes, boring machines and small CNC machining centers. There are a variety of hazards associated with machining based on the type of material used, the age and type of the equipment, and the machined features. It is the machinist's responsibility to know and understand these safety hazards and how to control them.

Setting Up and Tool Changing:

- Dissipate and lock out all energy** before conducting a tool change.
- Verify the **tooling is in good condition and made of the proper material** to do the task. This will help reduce risk of breakage or overheating.
- Ensure the proper **stroke lengths and/or CNC programs have been validated** to prevent breakage of the work piece or tool.
- Verify the machines **rpm settings are proper** for the task.

Before and During Operation:

- Wear all proper PPE.** Eye and ear protection, as well as heat-resistant work gloves and steel-toed shoes are very applicable. Face shields and heavy-duty aprons may also be required.
- Verify lubricant, coolant levels and systems** are adequate and work well and watch for slip hazards.
- Guard against flying chips and debris.** Objects in the eye are one of the most common safety hazards for machinists.
- Ensure all **machine guarding** is properly fastened and proper for the task.
- Avoid all pinch-point areas. **Secure loose clothing, jewelry and hair.**
- The work piece may be hot** due to friction. Wear heat resistant gloves and keep the work piece away from flammable and combustible materials.

Cleaning Up:

- Always sweep chips** into the dustpan or waste receptacle. Do not use compressed air to clean the area.
- Verify machine guarding and gauges are in good condition.**
- Pick up or wipe clean any slip or trip hazards.**

Questions to Generate Discussion

- Why do we want to sweep chips instead of using compressed air?
- What are the most common injuries related to machining centers?

Discussion Date: _____

Employee Participants:

The material in this document is provided for informational purposes only and not as a comprehensive or exhaustive resource on this topic. This material has been compiled from a multitude of sources believed to be accurate; however, Caterpillar Inc. assumes no responsibility for the accuracy or currency of this information and encourages you to consult experts in this area for more information. In no event does the content of this document supersede any applicable local, state, or federal statutes or regulations.

Control ID: V0211.1

SAFETY.CAT.COM™
<http://safety.cat.com/toolbox>

CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow" and the POWER EDGE trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission. © 2009 Caterpillar All Rights Reserved

