

# Basic Training in Foreign Object Damage Prevention

- Safeguarding Your Manufacturing Environment
- Safeguarding Your Company's Reputation

# Key Terms

- FO (Foreign Objects)
- FOD (Foreign Object Damage or Foreign Object Debris)
- FOD Program
- FOD Inspection
- FOD Sensitive Areas
- Clean-As-You-Go
- Consumables
- Small Parts
- Tool Accountability
- 6S
- FOD Point Of Contact



# FOD Is Serious!

- Foreign Object Damage Costs!
- The cost can be measured in:
  - Delays
  - Returns
  - Reputation
  - Military Readiness
  - Jobs
  - Lives



# Potential FOD Threats

- Almost anything can be a FOD threat
  - Pens, Coins, Wire Scraps, Cups, Staples, Paperclips, Tape, Nuts, Bolts.
  - Cameras, Hair Pins, Keys, Paper, Badges, Water Bottles, Soda Cans, Cell Phones.
  - Grease, Paint, Cleaning Solvents, Lubricant Oils, Tacky Residue (from masking tape, etc.)
  - Birds, Rodents, Snakes, Insects (and that old Pizza Crust too!)



# How Do I Prevent FOD?

- Practice Good Housekeeping.
- Clean As You Go!
- Know the FOD Sensitive Areas in your facility.
- Tool Accountability.
- Hardware Accountability.
- Report Missing, Lost, and Found Items.
- Always be prepared for FOD Inspections.
- Know your FOD Point Of Contact.



# Housekeeping

- The largest contributor to FOD is uncleanliness.
- Use the 6S concept to organize your work area
  - Sort
  - Straighten
  - Shine
  - Standardize
  - Safety
  - Sustain



# Clean As You Go!

- Keep your house in order!
- Ensure that all space and surfaces in close proximity to the product during every phase of manufacturing, testing, transportation, and storage are free from foreign objects.
- Cleaning as you go ensures that immediate risks to the product are removed ASAP.



# FOD Control Areas

- Areas within the facility are organized according to their sensitivity to FOD damage.
- FOD Awareness Areas are at a relatively low risk level for FOD incidents. Be aware!
- FOD Control Areas are at a medium risk for FOD incidents. Be cautious!
- FOD Critical Areas are at a high risk level for FOD incidents. Be vigilant!





# Tool Accountability

- Tool control and effective FOD prevention are critically linked.
- You must control your tools, parts, and equipment.
- Available Methods
  - Shadow Boxes
  - Tethers
  - Chit Systems
  - Tool Inventory Sheets
  - Tool Kits
  - Sponge Count Sheets



# Hardware Accountability

- Small parts and loose hardware pose a major FOD risk in manufacturing environments.
- This includes new hardware used during assembly and older hardware replaced during maintenance activities.
- Kitting is the process of preparing the exact amount of hardware necessary for a particular task (no more and no less).



# Report Missing, Lost, and Found Items.

- This is a critical component to our FOD Prevention Program.
- All employees **MUST** report lost or unaccounted for hardware and tools.
- This is not about punishing a mistake, it is about preventing potential damage **BEFORE** something happens.



# FOD Audits

- FOD Audits and Inspections can happen at anytime.
- Findings are used to identify problems and to help develop lasting solutions.
- Always be prepared for company – it could be a customer, the tool representative, or an auditor.
- Keep your house in order.



# Your FOD Point Of Contact

- All FOD incidents must be brought to the attention of your FOD Point Of Contact for investigation, cause and corrective action.
- All Foreign Object Damage should be reported immediately and investigated as soon as possible.
- We can only improve that which we track.