Foreign Object Damage (Debris)

Foreign Object Damage (FOD) – Any damage attributed to a foreign object that can be expressed in physical or economic (monetary) terms which may or may not degrade a product’s required safety and/or performance characteristics.

Many of our products are sensitive to debris that can be produced during contractor work activities in manufacturing areas. The following requirements must be implemented for all work performed in manufacturing areas to protect our products from FOD:

- All items brought into the work area should be accounted for, this includes personal items (watch, jewelry, cell phone, food, etc).
- Tools - All hand and power tools should be accounted for during work. At the end of the day or operation, ensure that all tools, bits, fixtures are present.
- Tool breakage- should a tool break or be determined to be missing (or any personal items), contact the Contractor Coordinator to ensure that the tool and all parts can be located.
- Parts/Materials –
  - Debris that is produced during work needs to be cleaned at logical intervals to preclude migration to sensitive areas.
  - Control of parts - nuts, bolts, straps, tie-wraps, should be contained to prevent spillage and should be monitored to prevent migration.
  - Consumables - rags, sanding materials, nails, etc should be used and discarded during cleaning intervals with debris, including end of shift.
- Every effort should be taken to prevent contractor work items from migrating or mingling with shop tools, parts and compartments. Should this occur, work should cease and control and/or separation of contractor/shop materials should take place.
  - Do not move any shop parts or equipment
  - Do not place any items on surfaces used for UTC processes
  - Do not remove any items from areas posted as quarantine
• When performing elevated work including scaffolds, cranes, hoists, aerial lifts and overhead work: Increased diligence regarding the above will be required. No tools, parts or materials should be taken overhead that are not needed or accountable since their descent will make relocation of those parts even more difficult.

• Every effort should be made to prevent any and all debris or parts to fall from overhead/aerial work areas.

• At the completion of work, all items are cleaned and accounted for. All work areas are cleaned of debris and consumables that were produced during work.
Powered Industrial Vehicles (PIVs)

All fork trucks that have a sit down, non-elevating operator position are required to have a restraint system (such as a seatbelt) installed and available for use.

All fork trucks shall have protective overhead guards to prevent objects from falling onto the operator.

All fork trucks are required to have flashing lights at all times of operation, and audible alarms when operating in reverse. Audible alarms must be of sufficient sound level to be heard over ambient noise.

In manufacturing areas, high pedestrian areas, and areas with other potential significant risks, the PIV speed will be limited to 6-mph/10-kph (approximately twice walking speed).

PIV operators are not allowed to talk on a cell phone or wear headphones while operating any PIV to avoid distracted driving. However, noise protection devices such as earmuffs or earplugs are permitted.
Cardinal Rule Violations:

Contractor employees who are observed violating a Cardinal Rule (Elevated Work, Lockout/Tagout, Confined Space, Machine Guarding, GFCI) are subject to having their contractor clearance suspended. The length of suspension will be determined by the Contractor EHS Review Board in consideration of the facts from the incident investigation. The employee will be required to surrender his/her contractor clearance card and if applicable, his/her picture badge. The employee will also be required to retake the online Contractor EHS Training and provide proof of completion to have their card/badge returned when the suspension expires.

Injuries:

In the event a contractor requires medical attention for a work-related or potentially work-related injury or illness, or periodic medical evaluations, the contractor must use the clinic selected by his or her company. The Pratt & Whitney onsite medical clinics provide clinical evaluation and treatment to contractors in the following situations only:

- FAA mandated testing (e.g. drug and alcohol testing)
- In emergency medical situations when not transported directly offsite by the fire department/plant protection
- Hydrofluoric Acid (HF) exposure

Fabricated rigging systems designs shall:

- have a safety factor of 2.5
- be approved by a structural engineer if the system will attach to a building structure
• shall account for accidental side loading of up to 60 degrees from vertical even if the design is for a vertical lift only

Contractor Training
All contractors and their subcontractors performing level III jobs on a P&W premises shall ensure that all of their employees assigned to perform work have been properly trained in accordance with the hazards of the planned activities before permitting the employee(s) to begin work.

• Training may include, but is not limited to, on-the-job (OJT) training, tool box sessions, internal or external formal training, etc. The training must meet the minimum criteria set forth by the state, federal, national, provincial, and local requirements regarding the specific subject matter.

• Contractor(s) and subcontractor(s) shall maintain, on the P&W premises, a summary of training information depicting the training/certification/licensure as required for all employees assigned to perform work on the project. Form is available on the internet at www.pw.utc.com/contractorehs via the Pratt & Whitney link.

• Actual documentation of training is subject to review upon request by P&W. Examples of actual training documentation include class rosters, toolbox notes and attendance, certificates, official letter of completion, etc.

Footwear in Shop Areas:
Due to the various hazards in shop areas and the different types of shop floor material, footwear worn in shop areas must:
• be closed toed
• be closed heeled
• have a substantial sole (e.g. no moccasins)
• have a maximum heel height of 2.5 inches, including the sole
• have a minimum heel floor contact dimension of 1.5 inch by 1.5 inch
Soil and Groundwater (East Hartford only):

All excavations, soil removals, and subsurface work must be reviewed and approved by P&W. Soil and groundwater may contain pollutants that require workers to have specialized training, hazardous communication, personal protective equipment, and/or special instructions for proper handling of soils and groundwater at the site. Some examples of these activities include: machine pit excavations, fence post installations and removals, underground utility work, soil and groundwater sampling, etc.
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Universal Waste:
Regulated universal wastes include the following:

**Bulbs and Lamps:**
Fluorescent, high intensity discharge, neon, mercury vapor, and high-pressure sodium, metal halide

**Mercury Devices:**
Thermometers, Thermostats, Mercury Switches, PCB Ballasts

**Batteries:**
Nickel Cadmium (Ni-Cad), Nickel Metal Hydride (Ni-MH), Lead Acid, Lithium, Mercuric Oxide, Zinc Air, Silver Oxide button batteries

All Universal Wastes are to be disposed of in the 708 Crib, located near column H-26, see crib attendant for assistance. Contact the EH&S department for any questions.