

FOD PREVENTION ASSESSMENT CRITERIA ASSESSMENT TOOL DEVELOPED FROM NAS - 412

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Metrics

METRICS	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
<p>Measuring performance via Metrics which provide visibility to problem areas, trends, inspection, results, incidents or mishap reports & feed back progress.</p> <p>Metric may include:</p> <ul style="list-style-type: none"> •Visibility charts •Trend analysis •Report cards •Performance •Reviews •Customer comments •Customer Concerns •Customer Complaints 	<p>No Formalized metrics exist</p>	<p>Metrics exist in some areas or existing metrics providing viability to some types of information</p>	<p>Metrics are used in all areas to track performance</p>	<p>Manufacturing management uses the metrics to measure & manage performance</p>	<p>Manufacturing management uses the metrics to measure & manage performance including implementation of prevention of action.</p>

Training

Training	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
<p>Training program with the primary objective of increasing the employee's awareness to the causes of FOD & the promotion of active involvement through specific techniques & the stressing of good work habits through work disciplines</p>	<p>General one time FOD Information Training</p>	<p>One time FOD training that includes the control of personnel items equipment & consumables. The care & protection of end items & quality workmanship. ("Clean as you go") work practices. Accountability/ Control of tools & or hardware & general house keeping principals</p>	<p>Periodic FOD training that includes the control of personnel items equipment & consumables. The care & protection of end items & quality workmanship. ("Clean as you go") work practices. Accountability/ Control of tools & or hardware & general house keeping principals</p>	<p>One time FOD training that includes the control of personnel items equipment & consumables. The care & protection of end items & quality workmanship. ("Clean as you go") work practices. Accountability/ Control of tools & or hardware & general house keeping principals FOD prevention training is supported by visual media in the work place & employees are trained on how to report FOD incidents</p>	<p>Periodic FOD training that includes the control of personnel items equipment & consumables. The care & protection of end items & quality workmanship. ("Clean as you go") work practices. Accountability/ Control of tools & or hardware & general house keeping principals. The proper storage, shipping & handling of materials, components & equipment FOD prevention training is supported by visual media in the work place & employees are trained on how to report actual or potential FOD incidents.</p>

Incident Reporting

Incident Reporting	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
Reporting & investigation of FOD Incidents	No requirements to investigate actual or potential FOD Incidents	No requirements to investigate actual or potential FOD Incident, no requirements exist to report or investigate potential FOD incidents	Reporting & to investigating procedure exist for actual FOD & requires immediate cease of work in the area. Root cause determination. Implementation of corrective action & sharing of lessons learned is implemented	Reporting & to investigating procedure exist for actual FOD & requires immediate cease of work in the area. Root cause determination. Implementation of corrective action & sharing of lessons learned is implemented	Reporting & to investigating procedure exist for actual FOD & require immediate cease of work in the area. Root cause determination. Implementation of corrective action & sharing of lessons learned is implemented. In addition metrics on actual & potential incidents are tracked by senior manufacturing management

FOD Focal

FOD FOCAL	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
<p>FOD prevention focal point develops and/or implements plans & programs to prevent hardware damage during manufacturing, assembly, test, integration, acceptance, packing, handling, storage, & shipment. The FOD Focal point should be appointed by the Chief of Operations.</p>	<p>No evidence of FOD FOCAL point exists</p>	<p>A FOD Focal point has been named, but has limited authority and experience.</p>	<p>A FOD Focal point has been named, has a limited prevention plan, & has limited authority and freedom.</p>	<p>A FOD Focal point has been named, has an aggressive prevention plan, & has sufficient authority and freedom.</p>	<p>A FOD Focal point has been named, has an active prevention plan, & has sufficient authority and resources to fully support manufacturing & product support functional areas</p>

Material handling

Handling of Materials	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
Material handling and parts protection.	No Material handling and parts protection plan in place.	Employees are briefed on compliance requirements. Materials used in the packing , handling, shipping and storage, are clean and free from any contamination.	Employees are trained in compliance requirements. Materials used in the packing , handling, shipping and storage, are clean and free from any contamination. Parts & assemblies are packed to mitigate FOD issues.	Employees are trained in compliance requirements. Materials used in the packing , handling, shipping and storage, are clean and free from any contamination. Parts & assemblies are packed to mitigate FOD issues and protective devices, (<u>that do not cause FOD</u>) are installed.	Employees are trained in compliance requirements. Materials used in the packing , handling, shipping and storage, are clean and free from any contamination. Parts & assemblies are packed to mitigate FOD issues and protective devices, (<u>that do not cause FOD</u>) are installed. Static sensitive devices are protected & all containers are visually inspected for Foreign objects, before closing.

House Keeping

Housekeeping	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
Housekeeping. The state of an area	<p>Laboratory, Cleanroom, general manufacturing areas, work surfaces & stations, floors, cabinets, No house keeping for external contractors "Clean as you go" is the goal, but evidence of implementation is severely lacking.</p>	<p>Facilities Laboratory, Cleanroom, general manufacturing areas, all work surfaces & stations, floors, cabinets, are cleaned periodically. All external contractors are given FOD awareness briefings" Clean as you go" is the goal.</p>	<p>Facilities, Laboratory, Cleanroom, general manufacturing areas, all work surfaces & stations, floors, cabinets, are cleaned periodically. "Clean as you go" Cleaning process is defined, & records cleaning logs are kept. All external contractors are given FOD awareness briefings" Clean as you go" is the goal.</p>	<p>A formalized housekeeping program is in place in most areas of the facility, Laboratory, Cleanroom, general manufacturing areas, all work surfaces & stations, floors, cabinets, the cleaning process is defined, "Clean as you go" & records of cleaning logs kept. Cleaning records are verified by Quality. External contractors maintain FO control while on site.</p>	<p>A formalized housekeeping program is in place in all areas of the facility, Laboratory, Cleanroom, general manufacturing areas, all work surfaces & stations, floors, cabinets, the cleaning process is defined, & records of cleaning logs kept. "Clean as you go" Cleaning records are verified by Quality. External contractors maintain FO control while on site.</p>

Tool Control & Containment

Tool Control	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
Tool accountability	No evidence of tool accountability or tool control containment	Tool accountability procedure exist in appropriate areas of facility. No evidence of tool containment compliance	Tool accountability procedure exist in appropriate areas of facility. No evidence of tool containment include such methods as the use of tool containment tray, shadow / boxing bar coding chit system, or consolidated tool kitting	Tool accountability procedure exist in appropriate areas of facility. No evidence of tool containment include such methods as the use of tool containment tray, shadow / boxing bar coding chit system, or consolidated tool kitting. Tools are tethered or suitably restrained.	Tool accountability procedure exist in appropriate areas of facility. No evidence of tool containment include such methods as the use of tool containment tray, shadow / boxing bar coding chit system, or consolidated tool kitting Tools are tethered or suitably restrained. Loose tools are carried or stored on tray or other containers, A system is in place for consumable tools. Personal tools are Prohibited in all work areas.

Accountability of Personnel Items

Control of Personnel items	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
<p>Employ actions in or around production areas such as: The search for lost items and the use of protective gear.</p>	<p>No evidence of personnel accountability or preventative methods</p>	<p>Personnel accountability & preventative procedures exist and is tracked in appropriate areas of facility.</p>	<p>Some personnel items are restricted to specific areas & accountability & preventative procedures exist in appropriate areas of facility.</p>	<p>All Personnel items, jewelry, rings watches, earrings, necklaces are restricted to specific production areas. Special Lab coats, smocks, or frocks are used & accountability & preventative procedures exist in appropriate areas of facility</p>	<p>All Personnel items to include jewelry, rings watches, earrings, necklaces makeup and heavy perfumes and colognes are restricted to specific production areas. All Loose items are removed or restrained. (Glasses) Special Lab coats, smocks, or frocks are used & accountability & preventative procedures exist in appropriate areas of facility</p>

Design Considerations

Design Considerations	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
Product design considerations	No evidence of FOD awareness in the design process or preventative methods	Employees involved in the design process are given FOD awareness briefing.	Processes & procedures exist which facilitate the consideration of FOD in the design process.	Processes & procedures exist which facilitate the consideration of FOD in the design / part selection and build sequence process.	Processes & procedures exist which facilitate the consideration of FOD in the design process. Part selection and build sequence process Procedure include provisions for FOD incident reports and appropriate corrective actions.

Production Modifications

Production Modifications	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
Production & Modifications Operations	No evidence of FOD awareness in the maintenance & manufacturing cycles	Limited evidence of FOD awareness in the maintenance & manufacturing cycles	FOD Inspection checks are planned and sequenced into the manufacturing task.	FOD Inspection checks are planned and sequenced into the manufacturing task. Process exist to verify that required protective devices are properly installed & produce tooling is cleaned and inspected to minimize the potential of FOD. Evidence of OFD Barriers in use in assembly process	FOD Inspection checks are planned and sequenced into the manufacturing task. Process exist to verify that required protective devices are properly installed & produce tooling is cleaned and inspected to minimize the potential of FOD. Evidence of OFD Barriers in use in assembly process. Sensitive areas & FOD entrapment areas are fully protected during production and non production times.

Hardware Accountability

Hardware Accountability	Performed informally Level I	Planned & Tracked Level II	Well Defined Level III	Quantitatively Controlled Level IV	Continuous Improvement Level V
<p>Hardware (i.e. pan stock fasteners, nuts bolts, rivets, washers, clips.) Hardware accountably with the objective of preventing hardware from migrating into the product. Various methods can include the use of trays bins boxes, that kit specific amount of hardware needed for any one assembly.</p>	<p>No evidence hardware control procedure in place during the manufacturing cycle</p>	<p>Limited evidence of hardware control procedure in place during the manufacturing cycle</p>	<p>Specific areas have appropriate level of hardware control procedures or methods in place during the manufacturing cycle</p>	<p>All areas have appropriate level of hardware control procedures or methods in place during the manufacturing cycle. Clean as you go is fully integrated. .</p>	<p>All areas have appropriate level of hardware control procedures or methods in place during the manufacturing cycle. Clean as you go is fully integrated. Hardware is kitted. Paper work or software is used to track amount of fasteners devices consumed by production. Stock bins have min and max defined.</p>