PMA General Machine Guarding Checklist

PMA developed this checklist that either one person at a facility or a full safety committee can use to identify potential safety issues in the plant. This is not an exhaustive list. Rather, it is a list to identify basic requirements commonly encountered in industrial facilities.

For the user's convenience, an "action notes" section is included at the bottom of the checklist so that any items that may need to be corrected or further explored can be recorded. A reference section is also included at the end of the checklist to offer additional helpful resources related to this topic.

Program Elements	Yes	No	N/A
1. Does the company have written policies and procedures for safe machine and equipment operation?	☐	☐	☐
2. Are there consequences for failure to follow written policies and procedures for safe machine and equipment operation?	☐	☐	☐
3. Does the company have a training program to instruct employees on safe machine operation and shutdown?	☐	☐	☐
4. Are "authorized," "affected," and "other" employees trained in accordance with the training requirements outlined in 29 CFR 1910.147, Control of Hazardous Energy?	☐	☐	☐
5. Are there proper documentation and audits to ensure that employees are following safe machine operating procedures?	☐	☐	☐
6. Does the company have a regular inspection program for machinery and equipment safeguarding, including regular and preventive maintenance?	☐	☐	☐
7. Is all machinery kept clean and properly maintained?	☐	☐	☐
8. Is there an established process for operators to report equipment/guarding concerns and/or failures?	☐	☐	☐
9. Are there checks and balances to ensure employee concerns are addressed and that consequences are administered timely, fairly and consistently?	☐	☐	☐
10. Is sufficient clearance provided around and between machines to allow for safe operation, set up and servicing, material handling, and waste removal?	☐	☐	☐
11. If two-hand controls are used, are they at an appropriately safe distance and positioned as ergonomically as possible?	☐	☐	☐
12. If there is more than one operator, are separate two-hand controls provided or are there other effective guards and devices being used to protect the operators?	☐	☐	☐
13. Are machinery and equipment that pose a danger of tipping or other movement securely placed or anchored?	☐	☐	☐
14. Is there an electrical disconnect switch or a red emergency stop device (such as buttons, rope pulls, cable-pulls, or pressure-sensitive body bars) on the machine or near the operator's position at each machine?	☐	☐	☐

Program Elements	Yes	No	N/A
15. Are the various power sources (electric, hydraulic, pneumatic, thermal) for each machine capable of being locked only in the "off" position?	☐	☐	☐
16. Are foot-operated controls guarded or arranged to prevent unintended machine activation (starting) by employees accidentally stepping on it or by falling objects?	☐	☐	☐
17. Are manually operated shutoff valves and disconnect switches that control machinery/equipment operation clearly identified and readily accessible?	☐	☐	☐
18. Are all moving parts located less than seven feet above the floor or working level properly guarded?	☐	☐	☐
19. Are employees protected from point-of-operation hazards, ingoing nip points, rotating parts, flying chips, and sparks?	☐	☐	☐
20. Are machinery guards arranged so that they do not pose a hazard in their use?	☐	☐	☐
21. Are the tools used for placing and removing material the appropriate length, type and size to avoid having an operator's hands in the machine?	☐	☐	☐
22. Are hand tools for placing and removing materials being used in conjunction with safeguarding (not in lieu of guards)?	☐	☐	☐
23. Are the openings in fan blade guards no larger than one-half inch for fans located less than seven feet above the floor or working level?	☐	☐	☐
24. Are the on/off switches constructed in a manner that they cannot be accidently turned on?	☐	☐	☐
25. Is stop time calibration included in the PM program?	☐	☐	☐
26. Are employees trained on setting adjustable barrier guards with proper distance/opening criteria?	☐	☐	☐
27. Are revolving drums, barrels, and containers guarded by an enclosure, which is interlocked with the drive mechanism, so that the barrel, drum, or container cannot revolve unless the guard enclosure is in place (if relevant)?	☐	☐	☐
28. When employees are required to remove or bypass a guard or other safety device, are lockout procedures followed?	☐	☐	☐

Action Notes: _____

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References:

OSHA Standards (www.osha.gov):

29 CFR 1910.212	General Requirements for All Machines
29 CFR 1910.217	Mechanical Power Presses
29 CFR 1910.147	The Control of Hazardous Energy (Lockout/Tagout)
29 CFR 1910.137	Electrical Protective Devices

OSHA eTool:

Machine Guarding
http://www.osha.gov/SLTC/etools/machineguarding/index.html

OSHA Publication:

Safeguarding Equipment and Protecting Employees from Amputations
http://www.osha.gov/Publications/osha3170.pdf

OSHA Checklist: www.osha.gov/Publications/Mach_SafeGuard/checklist.html

Note that this checklist provides assistance to identify general machine guarding problems; however, certain machinery, such as a mechanical power press, has additional safety requirements covered under different OSHA standards (29 CFR 1910.217, Mechanical Power Presses). PMA also has a checklist, developed through the PMA-OSHA alliance, dedicated to mechanical power presses (http://www.pma.org/osha/docs/mechanical-power-press-checklist.pdf).

Through the OSHA and Precision Metalforming Association (PMA) Alliance, PMA developed this checklist for informational purposes only. It does not necessarily reflect the official views of OSHA or the U.S. Department of Labor. March 2012.