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	STANDARD: **OSHA 29 CFR 1910.212 & ISO 45001:2018**	AUDIT FREQUENCY: **Daily Pre-Shift**

Assembly Line Quality Control Safety Audit Checklist

Operational Scope: This assembly line quality control safety audit checklist governs mechanical integrity, ergonomic safety, and hazard mitigation across all high-speed production sectors. Compliance with this protocol is mandatory to prevent operational failures, mechanical entrapment, and product contamination.

MANDATORY PPE:	Safety Glasses with Side Shields (ANSI Z87.1), Steel-Toe Boots (ASTM F2413), Cut-Resistant Mechanics Gloves (ANSI/ISEA 105), High-Visibility Vest, Hearing Protection (NRR 25dB+)
PREREQUISITES:	Verify Zero Energy State via Lockout/Tagout (LOTO) logs prior to internal mechanical entry. | Ensure the immediate assembly zone is fully cleared of unauthorized personnel and slip hazards.

MACHINE SAFEGUARDING & EMERGENCY STOPPING SYSTEMS

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Emergency E-Stop Pull Cords and Push Buttons**	Test all operational E-stops along the assembly line; system must halt all motion instantly within 0.5 seconds of actuation without bypass failure.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
2	**Physical Interlock Guards and Safety Light Curtains**	Inspect perimeter guarding for secure mounting and test optical light curtains; breaking the plane must trip an immediate safety relay stop.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
3	**Pneumatic Pressure Regulators & Dump Valves**	Verify air supply lines are free of leaks, pressures do not exceed max threshold rating (90 PSI), and pneumatic dump valves release pressure safely upon shutdown.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A

ERGONOMICS, MATERIAL HANDLING & QUALITY CONTROL INTERFACE

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
4	**Workstation Height and Part Positioning Hoists**	Adjustable lifting tables and gravity fed racks operate smoothly without jerky motion, eliminating repetitive strain injuries for operators.	**Standard**	[ ] PASS [ ] FAIL [ ] N/A
5	**Automated Vision and Defect Rejection Sensors**	Check camera lenses and laser alignment for dust/obstructions; test reject arm mechanism to ensure non-conforming parts are securely pushed off the line.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
6	**Torque Verification Tools and Calibrated Drivers**	Confirm digital fastening tools display active calibration stickers and pass automated torque verification cycles for critical fastener joints.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A

HOUSEKEEPING, ELECTRICAL & EGRESS SAFETY

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
7	**Floor Walkways and Designated Clearance Lanes**	Yellow safety floor lines are fully visible; aisles, escape routes, and electrical panel access points remain 100% unobstructed by WIP (Work-in-Process) bins.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
8	**Conveyor Belt Tracking and Pinch Point Shields**	Inspect conveyor belting for excessive fraying, side tracking, or exposed tail-pulley pinch points; all nip guards must be securely bolted in place.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
9	**Control Panel Enclosures and Wiring Integrity**	All electrical cabinets and HMI touchscreens are securely latched, free of exposed wiring, and free from internal dust or oil ingress.	**Standard**	[ ] PASS [ ] FAIL [ ] N/A

Certified Inspector / Lead Operator Signature: _____	**Date / Time:** _____	**Badge / Cert #:** _____
Site Safety Supervisor / Operations Manager Sign-off: _____	**Review Date:** _____	**Audit Status:** [ ] Approved [ ] Rectify

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